Minutes

Lockyer Valley REGIONAL COUNCIL

ORDINARY MEETING OF COUNCIL

MINUTES

15 FEBRUARY 2023

TABLE OF CONTENTS

Item	Subject	Page No.
1.0	**Meeting Opened**	**5**
1.1	Acknowledgement of Country	5
1.2	Opening Prayer	5
2.0	**Leave of Absence**	**5**
3.0	**Condolences/Get Well Wishes**	**6**
3.1	Condolences/Get Well Wishes	6
4.0	**Declaration of any Prescribed conflicts of interests/Declarable conflicts of interest by councillors**	**7**
4.1	Declaration of Prescribed Conflict of Interest on any Item of Business	7
4.2	Declaration of Declarable Conflict of Interest on any Item of Business	7
5.0	**Mayoral Minute**	**8**
6.0	**Confirmation of Minutes**	**8**
6.1	Confirmation of Ordinary Meeting Minutes - 18 January 2023	8
7.0	**Business Arising from Minutes**	**9**
8.0	**Committee Reports**	**9**
8.1	Receipt of the Minutes of the Lake Apex Community Advisory Committee Meeting - 29 November 2022	9
9.0	**Deputations/Presentations**	**13**
10.0	**Executive Office Reports**	**79**
10.1	Summary of Council Actual Performance v Budget - 31 January 2023	79
10.2	Minor Inrastructure Program - Grant Application	101
10.3	Appointment of Acting Chief Executive Officer	123
10.4	Gatton Golf Club Drainage Works	125
10.5	Renewal of Lease over Land No. 142601, 142621, 142631, 142651 and 142671	129
Cr Holstein returned to the meeting at 9:28am.		**136**
11.0	**People, Customer and Corporate Services Reports**	**136**
11.1	Simultaneous Road Closure and Opening Application - Part of Rosier Road, Iredale within Property No. 260690	136
11.2	Application for Permit to Occupy - Bore Site within Land No. 77061	143
11.3	Request for Renewal of Lease over Property No. 220150	147
12.0	**Community and Regional Prosperity Reports**	**151**
12.1	MC2021/0042 & RL2021/0021 Development Application for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a lot for Subdivision and Operational Works for Advertising Device – Rosewood Laidley Road, Laidley	151

12.2 Healthy Land and Water Member Agreement 693
12.3 2022 Laidley Spring Festival Outcome Report 696
12.4 Library Services Purchasing....724
12.5 Library Opening Hours 727
13.0 Infrastructure Reports 729
14.0 Items for information 729
14.1 Chief Executive Officer's Monthly Report - January 2023 729
14.2 Group Manager People Customer Corporate Services Monthly Report - January 2023....747
14.3 Group Manager Community and Regional Prosperity Monthly Report - January 2023....757
14.4 Group Manager Infrastructure Monthly Report - January 2023 770
15.0 Confidential Items 783
15.1 Request for Compensation - Lot 5 on RP189652 (Property ID 183650) 784
16.0 Meeting Closed.... 784

ATTENDANCE:

Councillors Present

- **Cr Jason Cook (Deputy Mayor) (Chairperson)**
- **Cr Brett Qualischefski**
- **Cr Janice Holstein**
- **Cr Chris Wilson**
- **Cr Michael Hagan**
- **Cr Rick Vela**

Apologies

- **Cr Tanya Milligan (Mayor)**

Officers Present

- **Ian Church, Chief Executive Officer**
- **Amanda Pugh, Group Manager Community & Regional Prosperity**
- **John Keen, Group Manager Infrastructure**
- **Richard Marshall, Chief Financial Officer**
- **Bella Greinke, Council Business Officer**
- **Lacee Martell, Media and Communications Officer**
- **Madonna Brennan, Risk, Audit and Corporate Planning Advisor (part of meeting)**
- **Caitlan Natalier, Coordinator Governance and Property (part of meeting)**
- **Annette Doherty, Manager Planning, Policy and Community Wellbeing (part of meeting)**
- **Tammee Van Bael, Acting Senior Planner (part of meeting)**
- **Kate Burns, Coordinator Growth and Policy (part of meeting)**
- **Renee Sternberg, Senior Environmental Planner (part of meeting)**
- **Jason Harm, Manager Communities (part of meeting)**
- **Tracy Vellacott, Coordinator Special Projects and Tourism (part of meeting)**
- **Nicole Kilah, Coordinator Libraries and Galleries (part of meeting)**
- **Jaclyn McPherson, Library Assistant (part of meeting)**
- **Stephen Hart, Senior Advisor Advocacy (part of meeting)**
- **John Holdcroft, Coordinator Disaster Management Resilence (part of meeting)**
- **Suzanne Oweczkin, Grants Officer (part of meeting)**
- **Susan Boland, Senior Governance Officer (part of meeting)**
- **Erin Neumann, Governance Officer (part of meeting)**
- **Wesley Davis, Manager Infrstructure and Engineering Services (part of meeting)**

Media Present

- **Jacob Hayden, The Lockyer and Somerset Independent**

1.0 MEETING OPENED

The Deputy Mayor, Cr Cook as Chairperson, opened the meeting at 9:00am and welcomed all present.

1.1 Acknowledgement of Country

The Chairperson acknowledged the traditional owners of the land on which the meeting is being held.

1.2 Opening Prayer

Cr. Janice Holstein led the meeting in prayer, following a minute's silence for those persons recently deceased.

2.0 LEAVE OF ABSENCE

RESOLUTION

THAT leave of absence be granted to Mayor Tanya Milligan from this meeting due to illness.

Moved By: Cr Qualischefski Seconded By: Cr Vela

Resolution Number: 20-24/0738

CARRIED
6/0

3.0 CONDOLENCES/GET WELL WISHES

3.1 Condolences/Get Well Wishes

Author: Bella Greinke, Council Business Officer
Responsible Officer: Ian Church, Chief Executive Officer

Officer's Recommendation:

THAT letters of condolence be forwarded to the families of recently deceased persons from within, or associated with, the Lockyer Valley region.

RESOLUTION
THAT letters of condolence be forwarded to the families of recently deceased persons from within, or associated with, the Lockyer Valley region.

Moved By: Cr Holstein **Seconded By:** Cr Hagan
Resolution Number: 20-24/0739

CARRIED
6/0

4.0 DECLARATION OF ANY PRESCRIBED CONFLICTS OF INTERESTS/DECLARABLE CONFLICTS OF INTEREST BY COUNCILLORS

4.1 Declaration of Prescribed Conflict of Interest on any Item of Business

Pursuant to Chapter 5B, Part 2 of the *Local Government Act 2009*, a councillor who has a prescribed conflict of interest in an issue to be considered at a meeting of a local government, or any of its committees must:

(a) inform the meeting of the prescribed conflict of interest in the matter, including the following about the interest –
    i. if it arises because of a gift, loan or contract, the value of the gift, loan or contract
    ii. if it arises because of an application or submission, the subject of the application or submission
    iii. the name of any entity other than the councillor that has an interest in the matter
    iv. the nature of the councillor's relationship with the entity that has an interest in a matter
    v. details of the councillor's and any other entity's interest in the matter; and

(b) leave the meeting room, including any area set aside for the public, and stay out of the meeting room while the matter is being discussed and voted on unless the subject councillor has written notice from the Minister to participate in the matter.

4.2 Declaration of Declarable Conflict of Interest on any Item of Business

Pursuant to Chapter 5B, Part 3 of the *Local Government Act 2009*, a councillor who has a declarable conflict of interest in a matter to be considered at a meeting of the local government or any of its committees must inform the meeting about the personal interest in the matter, including the following particulars about the interests:

(a) the nature of the interests
(b) if it arises because of the councillor's relationship with a related party:
    i. the name of the related party to the councillor
    ii. the nature of the relationship of the related party to the councillor
    iii. the nature of the related party's interest in the matter
(c) if it arises because of a gift or loan from another person to the councillor or a related party:
    i. the name of the other person
    ii. the nature of the relationship of the other person to the councillor or related party
    iii. the nature of the other person's interest in the matter
    iv. the value of the gift or loan and the date the gift or loan was made.
(d) how the councillor intends to handle the matter i.e. leave the meeting or proposes to stay in a meeting.

In accordance with Section 150EQ of the Local Government Act 2009, Councillor Wilson informed the meeting that he has a declarable conflict of interest in Item 10.4, "Gatton Golf Club Drainage Works". The nature of the interest is that Councillor Wilson's business, Blue Dogs Sports, supplies apparel to the Gatton Golf Club in the normal course of business.

Although Councillor Wilson has a declarable conflict of interest, he believes a reasonable person would perceive him to be impartial because the dealings his business has with the Gatton Golf Club are open, transparent and at arm's length. Councillor Wilson has a high level of knowledge about the adverse impacts of flooding on the Gatton Golf Club and can make a valuable contribution to the discussion and decision.

Therefore, Councillor Wilson wished to remain in the meeting and asked the eligible Councillors to decide if he may participate, despite his declarable conflict of interest.

RESOLUTION
THAT Councillor Wilson participate in the discussion and vote on item 10.4 'Gatton Golf Club Drainage Works' as this is in the public interest.

Moved By: **Cr Holstein** **Seconded By:** **Cr Hagan**
Resolution Number: 20-24/0740

CARRIED
5/0
Councillors Cook, Holstein, Hagan, Vela and Qualischefski voted for the motion.
Cr Wilson refrained from voting on the motion.

5.0 MAYORAL MINUTE

No Mayoral Minute.

6.0 CONFIRMATION OF MINUTES

6.1 Confirmation of Ordinary Meeting Minutes - 18 January 2023

Author: Ian Church, Chief Executive Officer
Responsible Officer: Ian Church, Chief Executive Officer

Officer's Recommendation:

THAT the Minutes of the Ordinary Meeting of the Lockyer Valley Regional Council held on Wednesday 18 January 2023 be taken as read and confirmed.

RESOLUTION

THAT the Minutes of the Ordinary Meeting of the Lockyer Valley Regional Council held on Wednesday 18 January 2023 be taken as read and confirmed.

Moved By: **Cr Vela** **Seconded By:** **Cr Hagan**
Resolution Number: 20-24/0741

CARRIED
6/0

7.0 BUSINESS ARISING FROM MINUTES

No Business Arising from Minutes.

8.0 COMMITTEE REPORTS

8.1 Receipt of the Minutes of the Lake Apex Community Advisory Committee Meeting - 29 November 2022

Author: Sara Rozynski, Personal Assistant Infrastructure
Responsible Officer: John Keen, Group Manager Infrastructure

Officer's Recommendation:

THAT Council receive and note the unconfirmed minutes of the Lake Apex Community Advisory Committee meeting held on 29 November 2022.

RESOLUTION
THAT Council receive and note the unconfirmed minutes of the Lake Apex Community Advisory Committee meeting held on 29 November 2022.

Moved By: Cr Holstein Seconded By: Cr Hagan
Resolution Number: 20-24/0742

CARRIED
6/0

LAKE APEX COMMUNITY ADVISORY COMMITTEE (LACAC) MEETING MINUTES

REGIONAL COUNCIL

MEETING:	Lake Apex Community Advisory Committee (LACAC) Meeting
TIME OF MEETING:	1.30pm – 2.30pm
DATE OF MEETING:	29 November 2022
LOCATION OF MEETING:	Theatrette, Lockyer Valley Cultural Centre
CHAIRPERSON:	Cr Janice Holstein
MINUTES:	Brendan Sippel

ATTENDANCE

PRESENT

Name	Position Title	Name	Position Title
Cr Janice Holstein	Councillor – LVRC	Brendan Sippel	Manager Community Facilities
Di Lewin	Friends of Lake Apex	Barry Hoffmann	Gatton and District Historical Society
Alan Willson	Lockyer Valley Billy Cart Association	Cr Michael Hagan	Councillor - LVRC
Maree Rosier	Guest – Gatton Village Markets	Graham Voss	Lights on the Hill
		Julie Hewitt	Guest - Gatton Village Markets

APOLOGIES			
Name	Position Title	Name	Position Title
Annette Doherty	Acting Manager Planning, Policy and Community Wellbeing	Kate Burns	LVRC Coordinator Growth and Policy
Beth Clark	2nd Light Horse Lockyer Troop	Bill Beckmann	Lockyer Chamber of Commerce and Industry
Tara Stone	parkrun	Renee Sternberg	Senior Environmental Planner
Mauricce Hennessey	Gatton Village Markets	Sara Rozynski	Personal Assistant
Jason Whiting	Coordinator Parks, Recreation and Cemeteries		

AGENDA ITEMS

ITEM	DESCRIPTION	RECORD MATTERS FOR ACTION	RESPONSIBLE OFFICER	BY WHEN
1.	**Apologies if Applicable** *(Chair)*	Apologies as above.	NA	
2.	**Confirmation of previous minutes** *(Chair)*	Minutes from 24/08/2022 ECM 4383453.	NA	
3.	**Outstanding Actions**	Refer to the outstanding actions items document ECM 3161961	NA	
4.	**Lakes Precinct Project Update**	$130,000 has been allocated in the 2022/23 Budget towards the Lake Apex Environmental Rehabilitation Project. The project included engagement of consultants to undertake the project, approvals, update the masterplan, prepare a lake management policy, and detail design for operational works.	NA	
5.	**Park Security**	There are a few items at Lake Apex that are damaged they are detailed below. • Bird-hide: Wetland Birds poster, knife damage on the viewing ledge and other wooden surfaces, graffiti. • Bollards are knocked over or removed • Signs damaged or stolen. • Cars driving on the grass leading to potholes • Damage caused by cars doing "donuts" on the grass after rain events. • A *Volunteers Please!* Sign has been removed Items noted and repairs are being undertaken to some of the matters raised.	Jason Whiting	
6.	**Location of the Gatton Village Markets**	A general discussion was held around the change of location of the Gatton Village Markets. Suggestions included the Gatton State School grounds or the Gatton Showgrounds. Julie to investigate utilising the Gatton Showgrounds outside of this meeting. No further action required at this meeting.	NA	

ITEM	DESCRIPTION	RECORD MATTERS FOR ACTION	RESPONSIBLE OFFICER	BY WHEN
7.	**Snake/Swooping birds seasonal signage**	It was requested snake/swooping bird signage to be designed and brought back to the LACAC meeting for discussion. Additional signs were also requested as below: - The miller metal signs near the bird hide need replacing - Move some other miscellaneous signs to a new location – Jason to liaise further with Di regarding the location - Signage to advise people to use bins for cigarette butts.	Brendan/Jason	
8.	**General business (All)**	**FOLA** • Di read out a thank to the Parks team and the job that they are doing at Lake Apex, main street especially the kangaroo paw plants in Gatton main street. • FOLA are unable to continue to spread the mulch in the Dry Rainforest Arboretum and adjoining areas. Council agreed to commence mulching this garden where resources permit. **Lockyer Valley Billy Cart Association** • Allan provided an update on the Billy Cart Derby in October 2022. The Billy Cart Association would like more levelling up of the Billy Cart track.	Jason	

Documents Tabled: NA

Next meeting: 22 February 2023

9.0 DEPUTATIONS/PRESENTATIONS

Councillor Hagan, in his capacity as Environment Portfolio Councillor, presented a petition calling on the Lockyer Valley Regional Council to; a) refuse the Development Application for Stage 2 of the Helidon Rocket Engine Testing Facility and, b) strictly enforce compliance with the approval conditions of Stage 1 of the Facility.

The petition was deemed valid in accordance with Council's Code of Meeting Practice.

RESOLUTION

THAT Council:

1. **Receive the petition; and**
2. **Refer the petition to the Group Manager Community and Regional Prosperity for consideration in the assessment of the Development Application for Stage 2 of the Helidon Rocket Engine Testing Facility.**

Moved By: **Cr Hagan** **Seconded By:** **Cr Vela**

Resolution Number: 20-24/0743

CARRIED
6/0

Attachments

1 Petition 65 Pages

Hanneke Nooren
[redacted]

14 February 2023

RECEIVED
14 FEB 2023
LVRC RECORDS

Councillor Michael Hagan
Lockyer Valley Regional Council

Re: Petition to present to the Council meeting on 15 February 2023

Dear Councillor Hagan,

Thank you for agreeing to present the enclosed petition to the Council meeting tomorrow.

As I explained earlier, the petition calls on the Lockyer Valley Regional Council to:
(a) refuse the Development Application for Stage 2 of the Helidon rocket engine testing facility; and (b) strictly enforce compliance with the approval conditions of Stage 1 of the facility.

A total of 400 people have signed the petition. The majority of these are people who live in the Lockyer Valley Region, with many residing in the Helidon and Grantham area. There is growing concern and anger among this group about the noise and pollution impacts associated with the rocket engine testing. Many of the signatories are also deeply concerned about the noise impacts on the koalas and other wildlife.

This petition includes signatures from residents of Toowoomba. This includes people who live near the edge of the escarpment, between Mt. Lofty and Highfields (approximately 18km away), and can hear noise generated by the rocket engine tests being conducted under the Stage 1 approval. It also includes signatures of many who regularly visit the Helidon Hills area for recreational purposes, like bird-watching, hiking, nature photography, or as part of their nature-based businesses.

In addition, there are signatures from people who live in other localities outside of the Lockyer Valley. A number of these are absentee landowners (i.e. ratepayers) with properties in Helidon Hills, and members of their extended families who tend to use these properties as weekend retreats. Others regularly visit the Lockyer National Park for a range of recreational pursuits.

Your sincerely,

Hanneke Nooren

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Version: 1, Version Date: 14/02/2023

Rocket engine test facility - Calling on Council to stop the proposed expansion (Stage 2) and strictly enforce the conditions of the current facility (Stage 1)

We oppose the expansion of the Helidon rocket engine testing facility, because this is not the right place to carry out rocket engine tests. The current facility's operation (Stage 1) already affects residents, wildlife and the environment over a large area. The proposed expansion of the facility (Stage 2) would multiply the impacts and risks.

The site borders Lockyer National Park, Lockyer State Forest and privately held bushland. This is all core koala habitat that is designated Koala Priority Area. It is critical for the survival of the endangered koala. Loud noise can cause stress in koalas and result in them moving away or developing fatal diseases.

The rocket engine testing has many impacts, including: noise impacts (tests can be heard up to 18km away), increased bushfire risk, air pollution, water pollution and soil pollution.

We, the undersigned, call on the Lockyer Valley Regional Council to:
(a) refuse the Development Application for Stage 2 of the testing facility; and
(b) strictly enforce compliance with the approval conditions of Stage 1.

[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
1.	Johanna Maria Petronella (Hanneke) Nooren	[redacted]	4343	[redacted]
2.	[illegible]	[redacted]	[illegible]	[redacted]
3.	C. Redinger	[redacted]	4342	[redacted]
4.	B GROFSKI	[redacted]	4343	[redacted]
5.	P HENNESSY	[redacted]	4343	[redacted]
6.	Emma Spring	[redacted]	4347	[redacted]
7.	Hannah Harm	[redacted]	4343	[redacted]
8.	[illegible]	[redacted]	4313	[redacted]
9.	E. Wa[illegible]	[redacted]	4341	[redacted]

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
10.	MITCHELL WATTERS	[redacted]	4344	[redacted]
11.	Mandy Storey		4344	
12.	BARRY KLUPFEL		4343	
	ROOF DES JARDINS		4343	
13.	Amanda Harvey		4344	
14.	Kathleen Ninnes		4344	
15.	Tiffany Ninnes		4344	
	Joanne Churchil		4352	
16.	RODERICK BOWMAN		4344.	

Rocket engine test facility - Calling on Council to stop the proposed expansion (Stage 2) and strictly enforce the conditions of the current facility (Stage 1)

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
17.	E. Brumm	[redacted]	4350	[redacted]
18.	Elwin Gasparovski		4350	
19.	M. Reeve		4350	
20.	A Tuck		4347	
21.	A. Gasparovski		4344	
22.	E J HEDGES		4344	
23.	J. Tomlinson		4311	
24.	Clare Kopp		4344	
25.	Stephen Mawder		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
	G H. Hagedoorn	[redacted]	4344	[redacted]
	Mesfin Bahiru		4343	
26.	LISA BROTCHIE		4344	
27.	CRAIG BROTCHIE		4344	
28.	ROZY PARTRIDGE		4344	
29.	SHELLEY PARTRIDGE		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
30.	SANDRA [redacted]	[redacted]	4344	[redacted]
31.	D Preston		4311	
32.	O Davis		4312	
33.	Donna Maupin		4344	
	N. Zdeal			
	M. Zdeal			
	J. Warrington			
34.	J. Cole		4345	
35.	Dinei Weber		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
36.	Bruce Storey	[redacted]	4344	[redacted]
37.	Ray Newing		4343	
38.	Margaret Mck.		4343	
39.	DAVID ZISKIKE		4343	
40.	Greg Muir		4343	
41.	JACQUELINE OLSSEN		4343	
42.	TROY OSMAN		4343	
43.	Anne FitzGerald		4343	
44.	Hazel Norden		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
45.	JILL CATHERINE SCANLAN	[redacted]	4344	[redacted]
46.	JAMES SCANLAN		4344	
47.	Martha Scanlan		4344	
48.	JIM KERR		4343	
49.	Dianne White		4343	
50.	Brian Uhr		4343	
51.	[redacted]		4343	
	Maxine Hook		[redacted]	
52.	Helen Wegner		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
53.	PAUL STEVENS	[redacted]	4347	[redacted]
54.	DIANE GUTHRIE		4347	
	PETER DARVALL		nt 4344	
	ELSPETH DARVALL		4344	
55.	Samantha Gehrmann		4347	
56	GIA SCHIAVI		4347	
57.	MONIKA KORTA		4343	
58.	Adam SUTTON		4347	
59.	JANET SCANLAN		4347	

Rocket engine test facility - Calling on Council to stop the proposed expansion (Stage 2) and strictly enforce the conditions of the current facility (Stage 1)

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(b) strictly enforce compliance with the approval conditions of Stage 1.

[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
60.	Mary M. Glynn	[redacted]	4343	[redacted]
	RON CAMERON		4343	
61.	Kelly Qualischefski		4343	
62.	Sean Burke		4341	
63.	N. K. Patel		4343	
64.	Anika Wulff		4311	
65.	Connor Cross		4343	
66.	Danielle Delaney		4343	

9.

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
67.	Chris Lee	[redacted]	4343	[redacted]
68.	Kim Thopson		4207	
69.	JOHN ALBERT		4343	
70.	Denise Kafton		4343	
71.	Kelli Plotz		4343	
72.	Paul Plotz		"	
73.	[illegible]		4343	
74.	Weiwei Yin		4343	
75.	Donna Love		4311	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
76.	Sharon Morgan	[redacted]	4343	[redacted]
77.	Helen Herrman		4311	
78.	KEN [illegible]		4343	
79.	[illegible]		4343	
80.	[illegible]		4343	
81.	Pam Beall		4344	
82.	COLIN DORBER		4344	
83.	Jason Templeton		4342	
84.	Chantelle Templeton		4342	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
85.	M Harrington	[redacted]	4344	[redacted]
86.	R. Banjuri.		4680	
	Tesla		4344	
87.	Mckenzie		4207	
88.	[illegible]		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
89.	Eileen Munro	[redacted]	4350	[redacted]
90.	Genevieve Reeves		4350	
91.	Shinya, Kiku		4343	
92.	Gayle Lesley Pilon		4341	
93.	JENNY KIPANG		4342	
94.	Lavina Marriott		4343	
95.	Karen Tisher		4343	
96.	Jennine Phipps		4343	
97.	SHINYA SUZUKI		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
98.	WILLIAM SWANN	[redacted]	4350	[redacted]
99.	SUSAN SWANN		4350	
100.	Rob Scrubison		4350	
101.	MAURICE GARRETT		4344	
102.	Vicki Garrett		4344	
	Derek Ubong		4343	
	Britt Ubong		4343	
103.	ROBYN KAVANAGH		4344	
104.	NEIL WHITE		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
105.	Judith Whistler	[redacted]	4347	[redacted]
106.	Ovida Ratapu	[redacted]	4343	[redacted]
107.	[illegible]	[redacted]	"	[redacted]
108.	Helen Smythe	[redacted]	4305	[redacted]
109.	Don Walker	[redacted]	4305	[redacted]
110.	Laura Montoro	[redacted]	4105	[redacted]
111.	Peter Denham	[redacted]	4343	[redacted]
112.	Leah Stott	[redacted]	4343	[redacted]
113.	Sam Case	[redacted]	4343	[redacted]

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

15.

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
114.	Beth Cameron	[redacted]	4341	[redacted]
115.	PAUL SMITH	[redacted]	4341	[redacted]
116.	Harold Hastie	[redacted]	4341	[redacted]
	MICHAEL [illegible]	[redacted]	4342	[redacted]
	[illegible]	[redacted]	4349	[redacted]
	Shane Delaney	[redacted]	4343	[redacted]
	Mark Blasdall	[redacted]	4343	[redacted]
117.	PAMELA CURRY	[redacted]	4306	[redacted]
118.	STEPHEN BULL	[redacted]	4306	[redacted]

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
119.	JOANN SUTTON	[redacted]	4347	[redacted]
120.	BARBARA SANCHEZ		4343	
121.	CHRIS DUNCAN		4347	
122.	JUNE EVANS		4347	
123.	Karen Conder		4341	
124.	Shannon Portelli		4311	
125.	Aaron Portelli		4311	
126.	Amy Dries		4311	
127.	BRETT WINSTONE		4340	

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
128.	Natalie Garrow	[redacted]	4352	[redacted]
129.	ALISON EVANS		4352	
130.	DEB FORD		4350	
131.	JEAN CUNDRY		4352	
132.	Bryson Dyke		4350	
133.	Mary Petr		4350	
134.	GARY HENKE		4401	
	Glenda Walter			
135.	Sandy Easton		4350	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
136.	Natarie Potter	[redacted]	4343	[redacted]
137.	TONY HEIDRICH		4347	
138.	Colleen Darnell		4343	
139.	Benadette Pye		4343	
140.	DONNA CUSSACK		4343	
141.	Kaitlyn Reedy		4311	
142.	Jan Tobin		4311	
	PORTER		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
143.	FRANCIS MANGUBHAI	[redacted]	4350	[redacted]
144.	BEN GUNDRY		4352	
145.	Mike FORD		4350	
146.	LINDA MANGUB [illegible]		4350	
147.	CLAUDIA STEPHENSON		4350	
148.	TRACIA ALLEN		4355	
[redacted]	Lauren Mark		[redacted]	
149. [redacted]	Philip HAXEN		4350	
150.	Cheryl Haxen		4350	

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

20.

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
151.	DINO GREENCEES	[redacted]	4352	[redacted]
152.	MARION ELVERY		4350	
153.	ANDREW ELLERY		4350	
154.	S. Hazell		4350	
155.	PAM WILSON		4350	
156.	Chris Rattray		4352	
157.	LORETTA WAINWRIGHT		4350	
158.	Noel Keller		4350	
159.	KENT SMITH		4340	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
160.	Joan Quinn	[redacted]	4347	[redacted]
161.	Sharon Vine		4341	
162.	Ben Jeffery		4345	
163.	P. Raynham		4343	
164.	Celina Wood		4341	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
	Jo't KHAM	[redacted]	4344	[redacted]
165.	GAIL HAZELL		4350	
166.	Maxine Gallagher		4350	
167.	Kilamay Robert		4350	
168.	Alisan N. Beattie		4350	
	HELEN POPE		4352	
169.	Bernard Talbot		4350	
170.	MICHAEL MURTAGH		4350	
	Eileen Munro		4350	

(double) i.e. signed twice)

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	Full name	Email / Contact	Postcode	Signature
171.	Jill Fenn	[redacted]	4341	[redacted]
172.	Lisa Proud		4343	
173.	Janet Maguire		4343	
174.	Nathan Rd (		[redacted]	
175.	Jonathan Thompson		7342	

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	Full name	Email / Contact	Postcode	Signature
176.	Cassie Joyce Manders	[redacted]	4343	[redacted]
177.	Nathan Wyllie		4343	
178.	Cath Rose		4312	
179.	Evie Winter		4312	
180.	Sandra Ryan		4343	
181.	Sam Ryan		4343	
182.	Ledean Luck		4343	
183.	P Selva		4343	
184.	K J. ILKA		4340	

6

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
185.	Kelly o P.	[redacted]	4343	[redacted]
186.	Catherine Anahan		4343	
187.	Danny O'Brien		4343	
188.	Abhishek Rana		4343 [redacted]	

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(a) refuse the Development Application for Stage 2 of the testing facility; and
(b) strictly enforce compliance with the approval conditions of Stage 1.

[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
189.	Elizabeth Nielsen	[redacted]	4343	[redacted]
190.	V. South	[redacted]	4343	[redacted]
191.	R. South	[redacted]	4343	[redacted]
192.	Ahmad Seumanutafa	[redacted]	4280	[redacted]
193.	Imond Gendow	[redacted]	4343	[redacted]
194.	Liam Fulcser	[redacted]	4510	[redacted]
195	Mark Shaplan	[redacted]	4510	[redacted]
196.	Robert Evans	[redacted]	4330	[redacted]
*	Junior	[redacted]	4342	[redacted]

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

27.

Rocket engine test facility - Calling on Council to stop the proposed expansion (Stage 2) and strictly enforce the conditions of the current facility (Stage 1)

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
197.	Jamie Cross	[redacted]	4343	[redacted]
198.	Vicky Doevendans		4343	
199.	Chantelle Chapman		4342	
200.	Frances Day		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]]

	Full name	Email / Contact	Postcode	Signature
201.	Jade mccoll	[redacted]	4306	[redacted]
202.	Michelle McColl	[redacted]	4306	[redacted]
203.	HARRY SWEET	[redacted]	4343	[redacted]
204.	SALLY PABST-REEVE	[redacted]	4312	[redacted]
205.	Annie Pabst-Reeves	[redacted]	4312	[redacted]
206.	E a Schuy	[redacted]	4343	[redacted]
207.	Neville Thompson	[redacted]	4341	[redacted]
		[redacted]		[redacted]

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

29.

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
208.	V. Sauerbrey	[redacted]	4633	[redacted]
209.	D O'Brien		4343	
210.	Stan Smith		4345	
211.	Michael Tui		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
212.	E PICKERING	[redacted]	4347	[redacted]
213.	Carissa Mason		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
214.	Paul Sutton	[redacted]	434[illegible]	[redacted]
215.	Kimberley Thomas	[redacted]	4343	[redacted]
216.	MARITA FitzGerald		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
217.	KAREN HOWIE	[redacted]	4347	[redacted]
218.	Cameron Gord		4347	
219.	ALLAN MACRAE		4347	
220.	Vicki Harlen		4344	
221.	mick BLOW		4347	
222.	Kerryn Keehn		4347	
223.	Keryn Gill		4343	
224.	Andrew Taylor		4343	
225.	DAVID PRIDGEON		4347	

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	Full name	Email / Contact	Postcode	Signature
	Richard Hancock	[redacted]	4341	[redacted]
226.	Don Lovenay		4347	
227.	Debbra Dionysiou		4343	
	M. HEARN		4347	
	L-Woolnough		4344	
228.	A Sternberg		4363	
229.	B-BARON		4347	
	Marianne Goosen		4347	
230.	A. Dawkins		4347	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	[redacted]
231.	LINDA. VANZELST	[redacted]	4347	[redacted]
232.	Dan Clark		4347	
233.	Christine Kay Brassington		4343	
234.	Scott Dietz		4342	
235.	Boof Dall		4343	
236.	Elizabeth Jones.		4343	
	Heath		4347	
237.	J. JOHNSON		4347	
238.	G HAHN		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
239.	Caitlyn Cresswell	[redacted]	4347	[redacted]
240.	Lexi McG		4343	
241.	Megan Bucknall		4343	
242.	Becky Bayley		4343	
243.	Chantelle Austin		4343	
	Samantha Jones		4350	
244.	Heather Lee		4344	
245.	Jayden Rogg.		4347	
246.	Verity Paul		4347	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
247.	Jane Cox	[redacted]	4347	[redacted]
248.	GREG VAN ZEIJ		4347	
249.	PAT HOWIE		4347	
250.	Les. Johnson		4347	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
251.	ROSS HANSON	[redacted]	4348	[redacted]
252.	ROBERT BROWN		4347	
253.	THERESE WEBSTER		4659	
254.	Geoff Webster		4659	
	Mick Webster		4659	
255.	LISETTE SCHULZ		4347	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
256.	[illegible]	[redacted]	4343	[redacted]
257.	Samantha Corseldine		4343	
258.	SHARLAYNE STEGGALL		4343	
259.	PETER STEGGALL		4343	
260.	JOAN REIMANN		4343	
261.	WAYNE REIMANN		4343	
262.	IVY REUTER		4343	
263.	MARY REUTER		4343	
264.	JOHN McKAY		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
265.	Alistair Hartley	[redacted]	4344	[redacted]
266.	Loretta Hartley		4344	
267.	KASANDRA MITCHELL		4344	
268.	Scott Mitchell		4344	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
269.	Asher Mercer	[redacted]	4350	[redacted]
270.	Elnish Gaffudy		4344	
271.	Derek Frost		4344	
	Tyler Damrow		4344	
272.	Mitchell Damrow		4344	
273.	Jordan Kilah		4344	
274.	Patricia Damrow		4344	
275.	Sage Waylie		4344	
276.	Shannie Stiles		4350	

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[This petition's principal petitioner: Hanneke Nooren [redacted]

	Full name	Email / Contact	Postcode	Signature
277.	Jacqueline Pepi	[redacted]	4344	[redacted]
278.	Daphne Brassington		4344	
279.	Letitia Roberts		4344	
280.	Matt Paynter		4344	
281.	Claire Murphy		4346	
282.	Prosyn Frost		4344	
283.	Sandra Pepi		4344	
284.	RICHARD PEPI		4344	

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[This petition's principal petitioner: Hanneke Nooren [redacted]

	Full name	Email / Contact	Postcode	Signature
285.	Anthony Bond	[redacted]	4352	[redacted]
286.	Sharon Warne		4355	

43.

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
287.	Shirley Dunsdon	[redacted]	4350	[redacted]
288.	Jane Butler	[redacted]	4352 [redacted]	[redacted]
289.	David Butler	[redacted]	4352	[redacted]
290.	Bev Yates	[redacted]	4350 .com	[redacted]
291.	Jenny Nuthall	[redacted]	4350 [redacted]	[redacted]
292.	Lisa Lobrandie	[redacted]	4350 [redacted]	[redacted]
293.	CHRISTINA HAYES	[redacted]	4352	[redacted]
294.	Adrienne Jacumsen	[redacted]	4352	[redacted]
295.	BRYCE ALCOCK	[redacted]	4350	[redacted]

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
296.	SUE-ELLEN JAENSCH	[redacted]	4350	[redacted]
297.	MARIE GITTINS		4350	

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
298.	ANN ALCOCK	[redacted]	4350 com	[redacted]
299.	Mike McGoldrick		4350	
300.	CORAL SHARROCK		4350	
301.	Kay Krenske		4350	
302.	Tom Esplin		4350	
303.	Gary Ballinger		4350	
304.	Tegan Ballinger		4350	
305.	Anne-Marie Hecke		4350	
306.	Hugh Krenske		4350	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

Full name	Email / Contact	Postcode	Signature
307. Scot McPhie	[redacted]	4312	[redacted]

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Full name	Email / Contact	Postcode	Signature
308. STEVEN DOYLE	[redacted]	4350	[redacted]

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	Full name	Email / Contact	Postcode	Signature
309.	PHILIP SIMMIE	[redacted]	4350	[redacted]
310.	Alba Simmie		4350	
311.	Toby Thelander		4350	
312.	Dana Sweetapple		4350	
313.	Jim Sampson		4350	
314.	Lynne Smith		4350	
315.	ROB LEGG		4350	
316.	Jesse Muller		4350	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]]

Full name	Email / Contact	Postcode	Signature
317. ROGER PAUL JAENSCH	[redacted]	4350	[redacted]

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

50.

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
318.	YVONNE S. WOODLAY	[redacted]	4350	[redacted]
319.	Karen Cannia		4350	
320.	KEITH CANNING		4350	
321.	GAVAN REILLY		4350	
322.	Brenda Reilly		4350	
323.	GEOFF WOODLOCK		4350	
324.	NIEVES WOODLOCK		4350	
325.	Jo Thelander		4350	
326.	LORRAINE MCCARTHY.		4350	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
327.	AINO JAATINEN	[redacted]	4350	[redacted]
328.	Beatrice Ciaimo		4350	
329.	Elizabeth Klimkowicz		4350	
330.	Sheryl Kreusler		4350	
331.	Jennifer Wright		4350	
332.	Annica Sheppard		4352	
	Wendy Bates		4352	
	Elaine Coates		4350	
	Robyn Coutts		4350	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
333.	Ram Acharya	[redacted]	4350	[redacted]
	Jodie Croft			

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
	Kumaresh [redacted]	[redacted]		[redacted]
334.	Vanessa Grodowski		4343	
335.	Gordon Claridge		4343	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

Full name	Email / Contact	Postcode	Signature
336. GERAINT HUDSON	[redacted]	4343	[redacted]

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Full name	Email / Contact	Postcode	Signature
[redacted]	[redacted]	4344	[redacted]
[redacted]		4344	

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	Full name	Email / Contact	Postcode	Signature
337.	Kylie Bickle	[redacted]	4520	[redacted]
338.	GREG DURRINGTON		4520	
339.	DANIEL REHDER		4105	
340.	Willow Durrington		4105	
341.	Genevieve Durrington		4068	
342.	Gaynor Durrington		4075	
343.	ROBERT JOHN DURRINGTON		4071	
344.	[illegible]		4068	
345.	Phoebe Trafford		4077	

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	Full name	Email / Contact	Postcode	Signature
346.	SEAN WATSON	[redacted]	4075	[redacted]
347.	Tina Corbett		4075	
348.	ANTHONY DURRINGTON		4077	

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	Full name	Email / Contact	Postcode	Signature
349.	FRANCIS MCMAHON	[redacted]	4075	[redacted]
350.	RAYMOND MOFFITT		4075	
351.	William Barker.		4075	
352.	Darryl Bymock		4075	
353.	Colin Rice		4077	
354.	PAUL WATKINS		4075	
355.	Trevor ARMSTRONG		4075	
356.	BRYAN CLAIRE		4075	
357.	JOHN MCMURRAY		4074	

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	Full name	Email / Contact	Postcode	Signature
358.	Sarah Trafford	[redacted]	4209	[redacted]
359.	Charlotte Purkis		4207	
360.	Lyn CROCKER		4207	
361.	Nadine Thomas		4128	
362.	Marietta Noest		4127	
363.	Hannah Buckley		4163	
364.	Charley Gentle		4124	
365.	Jessica Dravenski		4300	
366.	Cacey LEE		4132	

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	Full name	Email / Contact	Postcode	Signature
367.	DAVE SHORER	[redacted]	4075	[redacted]
368.	JIM GASCOIGNE		4075	
369.	BRIAN GORDON		4074	
370.	JEREMY WILLSON		4075	
371.	DOROTHY WATSON		4075	
372.	Chad Cunnington		4075	
373.	Steve Gray		4075	
374.	ROSS GARDNER		4075	
375.	DAVID WILLIAMS		4076	

Document Set ID: 4457529
Version: 1, Version Date: 14/02/2023

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	Full name	Email / Contact	Postcode	Signature
376.	Michael Reynolds	[redacted]	4075	[redacted]
377.	Allan Smith		4350	
378.	D. Watson		4075	
379.	G. Jebreen		4113	
380.	J. Grover		4124	
381.	G. VELLACOTT		4503	
382.	M. KANE		4209	
383.	S. TITH		409	
384.	Tony Lemus		4306	

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	Full name	Email / Contact	Postcode	Signature
385.	Debby Mahoney	[redacted]	4300	[redacted]
386.	Rebecca Kelly		430	
387.	Susan Bedford		4076	
388.	Andrew Simpson		4119	
389.	Tom GARRAD		4165	
390.	Simon Hinton		4160	
391.	STEVE BUCKLE		4118	
392.	NICHOLAS DYER		4129	
393.	Lisa Parkes		4305	

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[This petition's principal petitioner: Hanneke Nooren / [redacted]

	Full name	Email / Contact	Postcode	Signature
394.	Craig Hardy	[redacted]	4077	[redacted]
395.	John Hewitt		4027	
396.	Ray Tubman		4157	
397.	Clayton Johnston		4305	
398.	PAUL HARRIS		4077	
399.	PETER DARMODY		4069	
400.	COURTNEY CLOTWORTHY		4077	

64.

10.0 EXECUTIVE OFFICE REPORTS

10.1 Summary of Council Actual Performance v Budget - 31 January 2023

Author: Dee Stewart, Coordinator Accounting Services
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:

The purpose of this report is to provide Council with an update of Council's financial performance against budget for the financial year to 31 January 2023.

Officer's Recommendation:
THAT Council receive and note the Summary of Council Actual Financial Performance versus Budget to 31 January 2023.

RESOLUTION

THAT Council receive and note the Summary of Council Actual Financial Performance versus Budget to 31 January 2023.

Moved By: **Cr Wilson** **Seconded By:** **Cr Hagan**
Resolution Number: 20-24/0744

CARRIED
6/0

Executive Summary

In accordance with Section 204 of the *Local Government Regulation 2012*, a financial report summarising the progress of Council's actual performance against budget is to be presented to Council. This report provides a summary of Council's financial performance against budget for the financial year to 31 January 2023.

At 31 January 2023, revenues are above target and expenditures are under target.

Proposal

Monthly reporting of Council's financial performance is a legislative requirement and reinforces sound financial management practices throughout the organisation. The following report provides a summary of Council's financial performance against budget to 31 January 2023.

Operating Revenue - Year to date target $33.18 million actual $37.07 million or 111.71%

At 31 January 2023, overall operating revenue for the year to date is above target.

Rates and Utility Charges (Gross) on target
The first rates levy for 2022/2023 was raised in September with a due date of 12 October 2022. Rates will be closely monitored throughout the year regarding cash flow and overdue balances as well as whether growth

targets are being achieved as forecast. 94.40% of the rates levy was collected as at 27 January 2023. The second rate levy for 2022/2023 will be issued on the 13 February 2023 with a due date of 15 March 2023.

Fees and Charges over budget by $0.20 million
The favourable variances in fees and charges relate predominately to higher than expected income from plumbing and building fees ($0.17 million) and waste disposal fees ($0.11 million) Offsetting these items which are over budget are state fire collection fees which will be due to timing differences and are not of a concern.

Operating Grants and Subsidies over budget by $3.36 million
This line item is over budget due to the receipt of $1.53 million for counter disaster operations and an extra $1.80 million for emergency works. This will be included as revenue for the 2022/2023 financial year as part of the next budget amendment. It is also worth noting operating grants and subsidies has decreased from the previous month due to the reclassification of the voluntary home buy back from operational to capital.

Revenue – Contract/Recoverable Works over budget by $.29 million
This line item is performing above budget due to increased income from the Routine Maintenance Performance Contract (RMPC) with the Department of Transport and Main Roads at this time of the year.

Operating Expenditure - Year to date target $40.37 million actual $38.00 million or 94.12%

Employee Costs under budget by $0.70 million
This line item is showing an underspend due the timing of annual leave and staff taking leave over the Christmas break with leave taken reducing the provision on the balance sheet as opposed to an expense on the Income Statement. Employee costs are, also, under target due to vacant positions within Council's establishment. This is being offset by an underspend on capital wages ($0.54 million). The underspend on capital wages is mostly due to infrastructure staff focusing work on the emergent works flood recovery projects during the earlier weeks of the financial year. This is funded works and therefore the underspend on capital wages will have no impact on the bottom line. Capital wages will be closely monitored throughout the year for possible adjustments at quarterly budget review.

Goods and Services under budget by $1.87 million
Goods and services are showing as under budget mostly due to timing difference in the delivery of asset management condition assessment, ICT, community engagement and regional development projects. These will be investigated and the timing of the delivery of the project budgets adjusted accordingly.

Offsetting the underspends on goods and services is a budget overspend due to increased operating expenditure on flood recovery works. This is funded works and will not affect the bottom line. There is an overspend of operating expenditure on the Restoration of Essential Public Assets (REPA) flood reconstruction works of $0.67 million. All REPA works are currently budgeted as capital works. The REPA budget will be reviewed during the next quarterly budget amendment for a possible transfer of funds from capital to operating expenditure. The flood recovery works will be closely monitored for budget amendment as the restoration work continues. There is also an underspend on the capital plant budget of $0.21 million which has an adverse effect on the operational budget for civil operations. Council has expended $5.11 million on flood restoration and recovery works this financial year.

Capital Project Expenditure – Year to date target $17.43 million actual $9.30 million or 53.37%

At 31 January 2023, Council has expended $9.30 million on its capital works program with a further $7.79 million in committed costs for works currently in progress. The focus of Council's infrastructure works teams, this financial year to date, has been on emergency works and flood restoration activities which are an

operational expense. The capital works budget will be reviewed for project delivery and timing of delivery at the next budget amendment.

Additional detail is provided in the capital works program within the attachment.

Statement of Financial Position

The Statement of Financial Position provides information on the breakdown of Council's assets and liabilities at a point in time. At 31 January 2023, Council had $57.41 million in current assets compared to $22.53 million in current liabilities with a ratio of 2.55:1. This means that for every dollar of current liability, there is $2.55 in assets to cover it.

Statement of Cash Flows

The Statement of Cash Flows provides information on the amount of cash coming in and going out. As at 31 January 2023, there has been a net cash inflow of $2.18 million with $2.30 million inflow from operating activities; and a net cash inflow of $0.70 million from investing activities including capital revenue and expenditure.

The Statement of Cash Flows is important as it shows the real movement in Council's cash balances, as opposed to the accounting movements shown in the Statement of Income and Expenditure. To maintain adequate working capital, it is estimated that Council needs around $11.00 million cash at any one time. As at 31 January, Council's cash balance was $50.03 million. Unexpended grant funds which are restricted to be spent in accordance with the terms of the grant are $12.07 million.

Options

Option 1
THAT Council receive and note the Summary of Council Actual Financial Performance versus Budget to 31 January 2023.

Or

Option 2
THAT Council do not receive and note the Summary of Council Actual Financial Performance versus Budget to 31 January 2023.

Previous Council Resolutions
Nil

Critical Dates
Nil

Strategic Implications

Corporate Plan
Leadership and Council
Outcome:
5.1 Undertake robust and accountable financial, resource and infrastructure planning and management to ensure affordable and sustainable outcomes for our community.
5.7 Compliant with relevant legislation

Finance and Resource
Monitoring of budgets and actuals will remain important if Council is to achieve the financial results adopted as part of the 2022-23 Budget.

Legislation and Policy
In accordance with section 204 of the *Local Government Regulation 2012*, a financial report summarising the progress of Council's actual performance against budgeted performance is to be provided to Council.

Risk Management

Key Corporate Risk Category:	FE2
Reference and Risk Description:	Finance and Economic Decision making governance, due diligence, accountability and sustainability.

Consultation

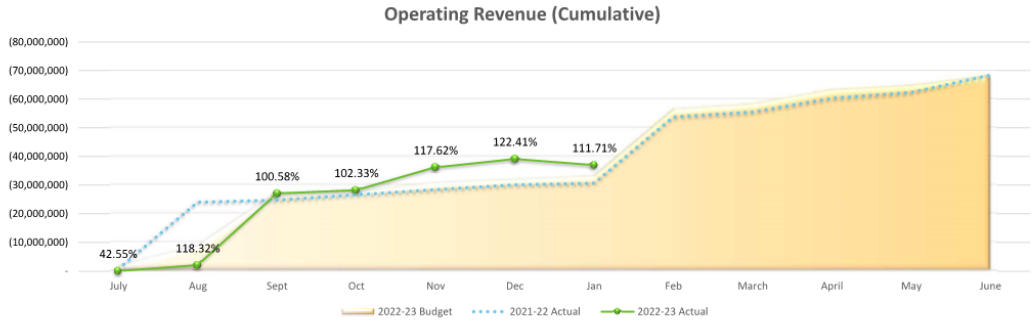
Internal Consultation

- Managers and Group Managers
- Finance Team
- Portfolio Councillor Consultation

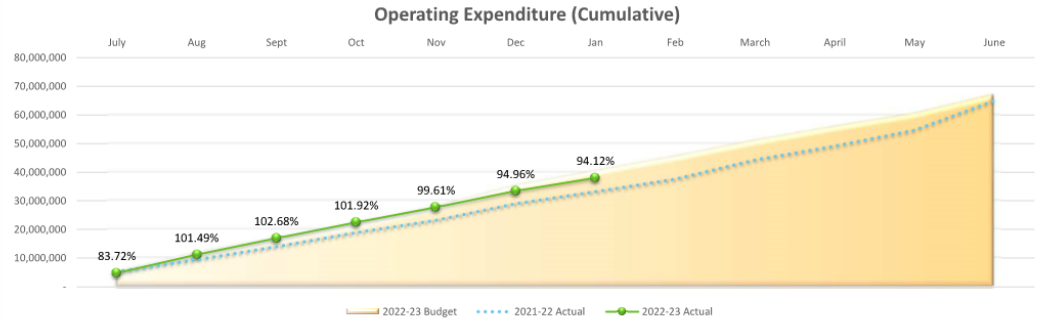
Attachments

1⇩ Monthly Financial Statements - January 2023 18 Pages

LOCKYER VALLEY REGIONAL COUNCIL
Operating Revenue and Expenditure Dashboard
For the Period Ending 31st January, 2023

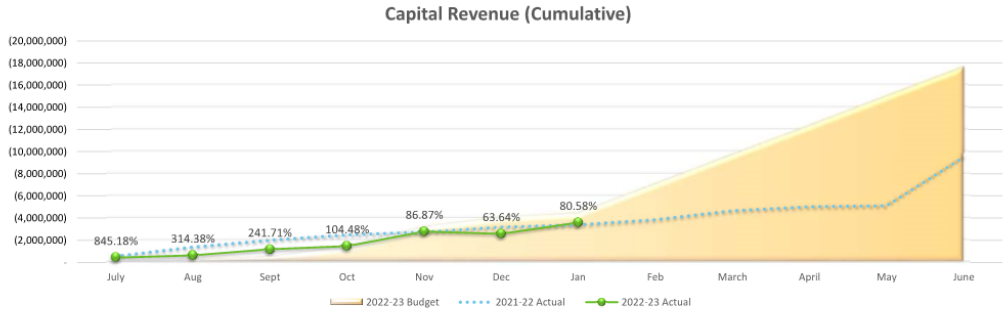


REVENUE TO DATE by Type	Rates and Utility Charges (Gross)	Discount	Charges and Fees	Interest	Operating Grants and Subsidies	Operating Contributions and Donations	Revenue - Contract/Recoverable Works	Other Revenue	Profit from Investments	Total
Actual	(22,394,712)	941,894	(3,359,927)	(1,251,021)	(8,689,586)	(48,357)	(901,331)	(1,365,528)	-	**(37,068,567)**
Budget	(22,426,163)	946,008	(3,159,345)	(1,033,675)	(5,326,339)	(327,500)	(612,500)	(1,244,313)	-	**(33,183,827)**
Variance	*(31,451)*	*4,114*	*200,581*	*217,346*	*3,363,247*	*(279,143)*	*288,831*	*121,215*	-	***3,884,740***
Target %	**99.86%**	**99.57%**	**106.35%**	**121.03%**	**163.14%**	**14.77%**	**147.16%**	**109.74%**	-	**111.71%**
Movement to Prior Month Target %	→	→	↓	↑	→	→	↓	↓	→	→



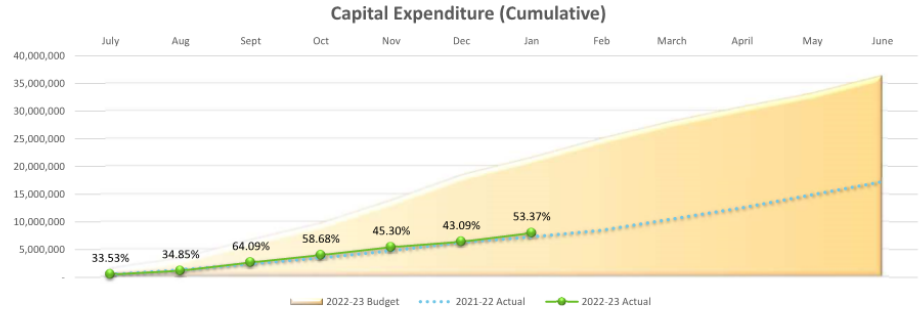
EXPENDITURE TO DATE by Type	Employee Costs	Goods and Services	Finance Costs	Depreciation	Total
Actual	16,070,835	14,137,625	552,079	7,236,539	**37,997,078**
Budget	16,770,216	16,009,737	535,611	7,053,774	**40,369,337**
Variance	*699,381*	*1,872,112*	*(16,468)*	*(182,764)*	***2,372,259***
Target %	**95.83%**	**88.31%**	**103.07%**	**102.59%**	**94.12%**
Movement to Prior Month Target %	→	→	→	→	→

LOCKYER VALLEY REGIONAL COUNCIL
Capital Revenue and Expenditure Dashboard
For the Period Ending 31st January, 2023



REVENUE TO DATE by Type	Capital Grants, Subsidies and Contributions	Profit (Loss) on Disposal of Non Current Assets	Total
Actual	(3,596,840)	22,569	**(3,574,271)**
Budget	(4,435,890)	-	**(4,435,890)**
Variance	*(839,050)*	*(22,569)*	**(861,619)**
Target %	**81.08%**	**-**	**80.58%**
Movement to Prior Month Target %	→	→	→

Note: Graph above is reflecting capital grants and subsidies and developer contributed assets only



EXPENDITURE TO DATE by Group	People, Customer and Corporate Services	Executive Office	Infrastructure	Community and Regional Prosperity	Total
Actual	40,073	38,736	9,213,791	12,138	**9,304,737**
Budget	1,954,870	504,915	13,586,603	1,388,572	**17,434,960**
Target %	**2.05%**	**7.67%**	**67.82%**	**0.87%**	**53.37%**
Movement to Prior Month Target %	→	→	↑	→	↑

Lockyer Valley Regional Council (Whole Council)
Statement of Comprehensive Income
For the Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Rates and Utility Charges (Gross)	44,854,076	22,394,712	22,426,163	31,451	0.14%
Discount	(1,892,017)	(941,894)	(946,008)	(4,114)	0.43%
Charges and Fees	5,668,783	3,359,927	3,159,345	(200,581)	-6.35%
Interest	1,850,320	1,251,021	1,033,675	(217,346)	-21.03%
Operating Grants and Subsidies	11,952,947	8,689,586	5,326,339	(3,363,247)	-63.14%
Operating Contributions and Donations	705,000	48,357	327,500	279,143	85.23%
Revenue - Contract/Recoverable Works	1,050,000	901,331	612,500	(288,831)	-47.16%
Other Revenue	2,231,861	1,365,528	1,244,313	(121,215)	-9.74%
Profit from Investments	1,805,837	-	-	-	0.00%
Total Recurrent Revenue	68,226,807	37,068,567	33,183,827	(3,884,740)	-11.71%
Capital Revenue					
Capital Grants, Subsidies and Contributions	17,646,544	3,596,840	4,435,890	839,050	18.92%
Total Revenue	85,873,351	40,665,406	37,619,717	(3,045,690)	-8.10%
Capital Income	-	-	-	-	0.00%
Total Income	**85,873,351**	**40,665,406**	**37,619,717**	**(3,045,690)**	**-8.10%**
Expenses					
Recurrent Expenses					
Employee Costs	28,097,936	16,070,835	16,770,216	699,381	4.17%
Goods and Services	25,798,525	14,137,625	16,009,737	1,872,112	11.69%
Finance costs	1,047,789	552,079	535,611	(16,468)	-3.07%
Depreciation	12,092,184	7,236,539	7,053,774	(182,764)	-2.59%
Total Recurrent Expenses	67,036,433	37,997,078	40,369,337	2,372,259	5.88%
Capital Expenses	-	30,569	-	(30,569)	0.00%
Loss on Sale	(81,465)	22,569	(40,733)	(63,301)	155.41%
Total Expenses	**66,954,968**	**38,050,215**	**40,328,605**	**2,278,389**	**5.65%**
Net Recurrent Result/Operating Surplus/(Deficit)	**1,190,374**	**(928,511)**	**(7,185,511)**	**(6,257,000)**	**87.08%**
NET RESULT AFTER CAPITAL ITEMS	**18,918,383**	**2,615,191**	**(2,708,888)**	**(5,324,079)**	**196.54%**

Lockyer Valley Regional Council (Executive Office)
Statement of Comprehensive Income
For Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Rates and Utility Charges (Gross)	35,704,270	17,880,202	17,851,302	(28,901)	(0.16)
Discount	(1,642,017)	(831,188)	(821,008)	10,180	(1.24)
Charges and Fees	370,693	132,663	248,609	115,946	46.64
Interest	1,817,320	1,224,997	1,014,425	(210,572)	(20.76)
Operating Grants and Subsidies	4,333,105	1,047,179	1,226,988	179,808	14.65
Revenue - Contract/Recoverable Works	-	661	-	(661)	-
Other Revenue	1,176,652	801,148	631,797	(169,351)	(26.80)
Profit from Investments	1,805,837	-	-	-	-
Total Recurrent Revenue	43,565,860	20,255,664	20,152,112	(103,551)	(0.51)
Capital Revenue					
Capital Grants, Subsidies and Contributions	1,013,125	185,994	208,832	22,838	10.94
Total Revenue	44,578,985	20,441,657	20,360,944	(80,713)	(0.40)
Capital Income	-	-	-	-	-
Total Income	**44,578,985**	**20,441,657**	**20,360,944**	**(80,713)**	(0.40)
Expenses					
Recurrent Expenses					
Employee Costs	4,339,234	2,988,832	2,031,021	(957,810)	(47.16)
Goods and Services	3,267,900	1,299,802	1,948,622	648,820	33.30
Finance costs	662,744	342,041	342,372	331	0.10
Depreciation	10,330,804	6,227,585	6,026,302	(201,283)	(3.34)
Total Recurrent Expenses	18,600,682	10,858,259	10,348,318	(509,942)	(4.93)
Capital Expenses	-	-	-	-	-
Loss on Sale	-	-	-	-	-
Total Expenses	**18,600,682**	**10,858,259**	**10,348,318**	**(509,942)**	(4.93)
Net Recurrent Result/Operating Surplus/(Deficit)	**24,965,178**	**9,397,404**	**9,803,794**	**406,390**	**4.15**
NET RESULT AFTER CAPITAL ITEMS	**25,978,303**	**9,583,398**	**10,012,626**	**429,229**	**4.29**

Lockyer Valley Regional Council (People, Customer and Corporate Services)
Statement of Comprehensive Income
For Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Rates and Utility Charges (Gross)	7,966,562	3,925,463	3,983,239	57,777	1.45
Discount	(250,000)	(110,706)	(125,000)	(14,294)	11.44
Charges and Fees	579,540	523,922	338,065	(185,857)	(54.98)
Interest	32,000	25,068	18,667	(6,401)	(34.29)
Operating Grants and Subsidies	131,500	280,588	131,500	(149,088)	(113.38)
Operating Contributions and Donations	50,000	-	-	-	-
Other Revenue	542,000	274,981	310,666	35,686	11.49
Total Recurrent Revenue	9,051,602	4,919,316	4,657,138	(262,179)	(5.63)
Capital Revenue					
Capital Grants, Subsidies and Contributions	1,796,065	(173,689)	170,000	343,689	202.17
Total Revenue	10,847,667	4,745,627	4,827,138	81,510	1.69
Capital Income	-	-	-	-	-
Total Income	**10,847,667**	**4,745,627**	**4,827,138**	**81,510**	1.69
Expenses					
Recurrent Expenses					
Employee Costs	6,003,710	3,417,149	3,729,242	312,093	8.37
Goods and Services	9,882,360	5,096,535	5,602,915	506,380	9.04
Finance costs	89,019	57,450	44,676	(12,774)	(28.59)
Depreciation	595,940	297,336	347,632	50,296	14.47
Total Recurrent Expenses	16,571,028	8,868,471	9,724,464	855,994	8.80
Capital Expenses	-	-	-	-	-
Loss on Sale	-	-	-	-	-
Total Expenses	**16,571,028**	**8,868,471**	**9,724,464**	**855,994**	8.80
Net Recurrent Result/Operating Surplus/(Deficit)	**(7,519,426)**	**(3,949,154)**	**(5,067,327)**	**(1,118,173)**	**22.07**
NET RESULT AFTER CAPITAL ITEMS	**(5,723,361)**	**(4,122,843)**	**(4,897,327)**	**(774,484)**	**15.81**

Lockyer Valley Regional Council (Community and Regional Prosperity)
Statement of Comprehensive Income
For Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Rates and Utility Charges (Gross)	319,104	156,976	159,552	2,576	1.61
Charges and Fees	4,368,550	2,494,964	2,368,504	(126,459)	(5.34)
Interest	1,000	956	583	(372)	(63.82)
Operating Grants and Subsidies	1,269,764	866,546	821,519	(45,027)	(5.48)
Operating Contributions and Donations	655,000	45,857	327,500	281,643	86.00
Revenue - Contract/Recoverable Works	-	4,469	-	(4,469)	-
Other Revenue	53,209	32,868	33,551	683	2.04
Total Recurrent Revenue	6,666,627	3,602,635	3,711,209	108,574	2.93
Capital Revenue					
Capital Grants, Subsidies and Contributions	95,000	181	-	(181)	-
Total Revenue	6,761,627	3,602,816	3,711,209	108,393	2.92
Capital Income	-	-	-	-	-
Total Income	**6,761,627**	**3,602,816**	**3,711,209**	**108,393**	2.92
Expenses					
Recurrent Expenses					
Employee Costs	7,158,885	4,004,808	4,396,668	391,860	8.91
Goods and Services	5,105,032	1,939,121	2,839,165	900,045	31.70
Finance costs	6,600	2,041	3,850	1,809	46.99
Depreciation	26,540	15,236	15,482	246	1.59
Total Recurrent Expenses	12,297,057	5,961,205	7,255,165	1,293,960	17.84
Capital Expenses	-	-	-	-	-
Loss on Sale	-	-	-	-	-
Total Expenses	**12,297,057**	**5,961,205**	**7,255,165**	**1,293,960**	17.84
Net Recurrent Result/Operating Surplus/(Deficit)	**(5,630,430)**	**(2,358,570)**	**(3,543,956)**	**(1,185,386)**	**33.45**
NET RESULT AFTER CAPITAL ITEMS	**(5,535,430)**	**(2,358,389)**	**(3,543,956)**	**(1,185,567)**	**33.45**

Lockyer Valley Regional Council (Infrastructure)
Statement of Comprehensive Income
For Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Rates and Utility Charges (Gross)	864,140	432,070	432,070	-	-
Charges and Fees	350,000	208,378	204,167	(4,211)	(2.06)
Operating Grants and Subsidies	4,255,578	1,183,333	1,183,333	-	-
Operating Contributions and Donations	-	2,500	-	(2,500)	-
Revenue - Contract/Recoverable Works	1,050,000	896,201	612,500	(283,701)	(46.32)
Other Revenue	460,000	256,531	268,298	11,768	4.39
Total Recurrent Revenue	6,979,718	2,979,012	2,700,368	(278,644)	(10.32)
Capital Revenue					
Capital Grants, Subsidies and Contributions	7,742,354	3,339,093	3,757,058	417,965	11.12
Total Revenue	14,722,072	6,318,105	6,457,426	139,321	2.16
Capital Income	-	-	-	-	-
Total Income	**14,722,072**	**6,318,105**	**6,457,426**	**139,321**	2.16
Expenses					
Recurrent Expenses					
Employee Costs	10,095,107	5,077,067	6,112,284	1,035,217	16.94
Goods and Services	5,816,732	3,430,280	3,892,535	462,255	11.88
Finance costs	289,426	150,548	144,713	(5,835)	(4.03)
Depreciation	1,138,900	696,381	664,358	(32,023)	(4.82)
Total Recurrent Expenses	17,340,166	9,354,276	10,813,890	1,459,614	13.50
Capital Expenses	-	30,569	-	(30,569)	-
Loss on Sale	(81,465)	22,569	(40,733)	(63,301)	155.41
Total Expenses	**17,258,701**	**9,407,414**	**10,773,158**	**1,365,744**	12.68
Net Recurrent Result/Operating Surplus/(Deficit)	**(10,360,448)**	**(6,375,264)**	**(8,113,522)**	**(1,738,258)**	**21.42**
NET RESULT AFTER CAPITAL ITEMS	**(2,536,629)**	**(3,089,308)**	**(4,315,732)**	**(1,226,423)**	**28.42**

Lockyer Valley Regional Council (2021/2022 Flood Events)
Statement of Comprehensive Income
For Period Ending January 2023

	Current Annual Budget	Actuals YTD	Budget YTD	Variance Amount YTD	Variance % YTD
Income					
Revenue					
Recurrent Revenue					
Operating Grants and Subsidies	1,963,000	5,311,940	1,963,000	(3,348,940)	(170.60)
Total Recurrent Revenue	1,963,000	5,311,940	1,963,000	(3,348,940)	(170.60)
Capital Revenue					
Capital Grants, Subsidies and Contributions	7,000,000	503,379	300,000	(203,379)	(67.79)
Total Revenue	8,963,000	5,815,318	2,263,000	(3,552,318)	(156.97)
Capital Income	-	-	-	-	-
Total Income	**8,963,000**	**5,815,318**	**2,263,000**	**(3,552,318)**	(156.97)
Expenses					
Recurrent Expenses					
Employee Costs	501,000	582,979	501,000	(81,979)	(16.36)
Goods and Services	1,726,500	2,377,006	1,726,500	(650,506)	(37.68)
Total Recurrent Expenses	2,227,500	2,959,985	2,227,500	(732,485)	(32.88)
Capital Expenses	-	-	-	-	-
Loss on Sale	-	-	-	-	-
Total Expenses	**2,227,500**	**2,959,985**	**2,227,500**	**(732,485)**	(32.88)
Net Recurrent Result/Operating Surplus/(Deficit)	**(264,500)**	**2,351,955**	**(264,500)**	**(2,616,455)**	**989.21**
NET RESULT AFTER CAPITAL ITEMS	**6,735,500**	**2,855,334**	**35,500**	**(2,819,834)**	**(7,943.19)**

LOCKYER VALLEY REGIONAL COUNCIL
Statement of Cash Flows
For the Period Ending 31 January, 2023

	2022-2023 Annual Budget	2022-2023 YTD Actuals
Cash flows from operating activities:		
Receipts		
Receipts from customers	63,980,000	38,687,381
Dividend received	-	-
Interest received	1,850,000	1,251,021
Payments		
Payments to suppliers and employees	(54,960,000)	(37,162,166)
Interest expense	(620,000)	(479,752)
Net cash inflow (outflow) from operating activities	10,250,000	2,296,483
Cash flows from investing activities:		
Capital grants, subsidies and contributions	17,650,000	8,382,715
Payments for property, plant and equipment	(36,340,000)	(7,336,661)
Payments for investment property	-	-
Net transfer (to) from cash investments	1,170,000	-
Proceeds from sale of property plant and equipment	300,000	(342,690)
Net cash inflow (outflow) from investing activities	(17,220,000)	703,364
Cash flows from financing activities:		
Repayment of borrowings	(7,720,000)	(817,458)
Proceeds from borrowings	-	-
Net cash inflow (outflow) from financing activities	(7,720,000)	(817,458)
Net increase (decrease) in cash and cash equivalents held	(14,690,000)	2,182,389
Cash and cash equivalents at beginning of the financial year	44,090,000	47,845,646
Cash and cash equivalents at end of the financial year	29,400,000	50,028,035

LOCKYER VALLEY REGIONAL COUNCIL
STATEMENT OF FINANCIAL POSITION
As at 31 January, 2023

	2022-2023 Annual Budget	2022-2023 YTD Actual
Current Assets		
Cash assets and cash equivalents	29,400,000	31,028,035
Cash investments	-	19,000,000
Trade and other receivables	4,510,000	5,223,190
Inventories	630,000	625,823
Contract Receivable	-	1,529,962
Non-current assets classified as held for sale	-	-
Total Current Assets	34,540,000	57,407,009
Non Current Assets		
Trade and other receivables	14,740,000	14,734,969
Equity investments	32,890,000	32,289,074
Investment properties	1,610,000	1,693,275
Property, plant and equipment	552,330,000	574,033,072
Intangible assets	660,000	90,028
Total Non Current Assets	602,230,000	622,840,418
TOTAL ASSETS	636,770,000	680,247,428
Current Liabilites		
Trade and other payables	5,000,000	5,872,162
Provisions	8,190,000	7,922,958
Borrowings	1,120,000	880,457
Contract Liability Grants	-	7,856,960
Total Current Liabilities	14,300,000	22,532,537
Non Current Liabilities		
Provisions	28,680,000	41,342,520
Borrowings	11,100,000	18,285,910
Total Non Current Liabilities	39,790,000	59,628,430
TOTAL LIABILITIES	54,080,000	82,160,967
NET COMMUNITY ASSETS	**582,680,000**	**598,086,461**
Community Equity		
Retained surplus (deficiency)	425,070,000	382,162,882
Asset revaluation surplus	156,420,000	211,955,962
Reserves	-	4,896,128
Current Surplus/(Deficit)	1,190,000	(928,511)
TOTAL COMMUNITY EQUITY	**582,680,000**	**598,086,461**

LOCKYER VALLEY REGIONAL COUNCIL
For Period Ended January, 2023

CAPITAL WORKS PROGRAM

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
INFRASTRUCTURE										
Cost Centre: Parks & Open Spaces										
Program: Parks and Open Spaces Projects										
Fairways Park Retention Dam Design	25,000	4,433	17,700	22,133	2,867	-	25,000	100	20	
Fairways Parking and Traffic Controls	30,000	24,716	-	24,716	5,284	-	30,000	100	70	
Fairways Shade and Drainage Improvements	20,000	14,264	-	14,264	5,736	-	20,000	100	70	
FH Tennis Club Synthetic Court Renewal	59,000	-	-	-	59,000	25,000	34,000	100	0	
Jean Biggs Disability Parking	42,000	4,864	-	4,864	37,136	-	42,000	80	0	
Lions Park Laidley Seat Replacement	9,500	9,130	-	9,130	370	-	9,500	100	90	
LRR Bubbler Renewal	5,000	404	-	404	4,596	-	5,000	100	20	
McNulty Park Bubbler	5,000	404	-	404	4,596	-	5,000	100	20	
Murphys Creek Ground Playground Renewal	136,000	5,967	105,180	111,147	24,853	-	136,000	100	10	
Parks and Open Spaces Projects Total	331,500	*64,182*	*122,880*	187,062	144,438	25,000	306,500	100		
Cost Centre: Capital Program Delivery										
Program: Asphalt Resheet Programme										
21/22 Asphalt Renewal Gttn CBD (LRC1182)	164,757	155,338	-	155,338	9,419	153,206	11,551	100	100	
22/23 Asphalt Resheet	500,000	126,828	24,939	151,767	348,233	-	500,000	Not applicable	80	
Asphalt Reshеet Programme Projects Total	664,757	*282,166*	*24,939*	307,105	357,652	153,206	511,551			
Program: Culvert Renewal Programme										
21/22 Culvert Renewal Program (SEQCSP)	241,137	61,866	549	62,415	178,722	238,677	2,460	100	95	
Culvert Renewal Programme Projects Total	241,137	*61,866*	*549*	62,415	178,722	238,677	2,460			
Program: Future Design Works Programme										
23/24 Culvert Renewal Program	-	5,850	-	5,850	(5,850)	-	-	50	Not applicable	
23/24 Floodway Renewal Program	-	45,063	71,305	116,368	(116,368)	-	-	30	Not applicable	
Biggs Road, Withcott	-	4,258	-	4,258	(4,258)	-	-	5	Not applicable	
Cemetery Road/Victor Court Intersection	-	964	-	964	(964)	-	-	30	Not applicable	
Cochrane/Maitland/Riddell/Stubbersfield	-	344	-	344	(344)	-	-	80	Not applicable	
Dayne Street, Withcott	-	86	-	86	(86)	-	-	2	Not applicable	
Douglas Mcinnes Drive	-	1,165	-	1,165	(1,165)	-	-	2	Not applicable	
Footpath Missing Links - Fairway Drive	-	786	-	786	(786)	-	-	5	Not applicable	
Footpath Missing Links - Jones Road	-	5,063	-	5,063	(5,063)	-	-	5	Not applicable	
Footpath Missing Links - William Street	-	364	-	364	(364)	-	-	5	Not applicable	
Future Design - 23/24 Footpath Renewal	-	761	-	761	(761)	-	-	0	Not applicable	
Future Project Design-Budget Only	350,000	-	-	-	350,000	-	350,000	0	Not applicable	Design Budget Holding Project.
Gehrke/Forest Avenue	-	333	434	767	(767)	-	-	0	Not applicable	
John Street South, Laidley	-	4,011	3,860	7,871	(7,871)	-	-	15	Not applicable	
Laidley CBD Accessibility Review	-	118	-	118	(118)	-	-	1	Not applicable	
Lawlers Road/Sandy Creek Intersection	-	1,058	-	1,058	(1,058)	-	-	30	Not applicable	
Main Camp Creek Road (BSBR)	-	507	-	507	(507)	-	-	5	Not applicable	
Mountain Rd/Range Crescent Intersection	-	3,419	-	3,419	(3,419)	-	-	30	Not applicable	
North Street, Gatton	-	105	-	105	(105)	-	-	0	Not applicable	
Postmans Ridge Road Rehab (FDW)	-	2,064	-	2,064	(2,064)	-	-	5	Not applicable	
Tenthill Ropeley Rockside Steinhardt	-	838	-	838	(838)	-	-	5	Not applicable	

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
Waterhouse Road	-	2,994	-	2,994	(2,994)	-	-	100	Not applicable	
William St, Forest Hill (Future Design)	-	4,165	-	4,165	(4,165)	-	-	95	Not applicable	
Woodlands Road (Schroeders Road Bends)	-	2,998	3,947	6,944	(6,944)	-	-	5	Not applicable	
Future Design Works Programme Projects Total	350,000	*87,312*	*79,546*	166,858	183,142	-	350,000			
Program: Footpath Renewal Programme										
21/22 Footpath Renewal Program (SEQCSP)	339,976	7,021	-	7,021	332,955	339,976	-	100	50	
Murphys Creek Road, Footpath (LRCI2)	7,850	-	-	-	7,850	7,850	-	100	95	
Footpath Renewal Programme Projects Total	347,826	*7,021*	-	7,021	340,805	347,826	-			
Program: Floodway Renewal Programme										
21/22 Floodway Renewal Program (SEQCSP)	400,000	7,544	991,323	998,867	(598,867)	383,000	17,000	100	0	Budget review next quarter.
Floodway Renewal Programme Projects Total	400,000	*7,544*	*991,323*	998,867	(598,867)	383,000	17,000			
Program: Other Infrastructure Projects										
Betterment Design Projects	150,000	-	-	-	150,000	-	150,000	0	0	
Bridge Improvements	100,000	-	-	-	100,000	-	100,000	0	0	
Bus Shelter Drayton St (BSSP + PTAIP)	32,000	213	980	1,193	30,807	27,686	4,314	100	0	
Digital Signage (LER)	431,293	167,667	214,196	381,863	49,430	431,293	-	100	10	
Flagstone Cr/Lockyer Cr Rd (HVSPP)	613,250	292,481	-	292,481	320,769	225,000	388,250	100	95	
Flagstone Creek Rd/Carpendale Rd (HVSPP)	-	103,694	-	103,694	(103,694)	-	-	100	100	
Gatton Central Drainage Upgrade - Design	338,943	22,576	-	22,576	316,368	-	338,943	6	Not Applicable	
Gatton Industrial Estate (HVSPP)	640,000	418,877	-	418,877	221,123	225,000	415,000	100	95	
Gehrke Road/Lorikeet Road (BS)	450,000	57,363	108,793	166,156	283,844	224,500	225,500	100		
Grantham Scrub/Grantham Winwill (HVSPP)	1,000,000	97,494	79,729	177,223	822,777	167,220	832,780	100	30	
Lake Clarendon Way (LRCI3)	799,158	36,858	1,039,300	1,076,157	(276,999)	799,158	-	100	0	Budget review next quarter.
North East St Stormwater Renewal(SEQCSP)	208,000	104,748	14,708	119,456	88,544	208,000	-	100	75	
North East Street Kerb & Chanel (SEQCSP)	300,000	58,960	131,232	190,192	109,808	300,000	-	100	50	
North Street / East Street, Gatton (BS)	302,000	49,100	45,583	94,683	207,317	262,000	40,000	100	10	
Safe Schools Program - TIDS 21/22&22/23	118,134	127,115	46,991	174,107	(55,973)	59,067	59,067	100	85	
Spencer & Maitland (Black Spot 22/23)	219,000	25,693	-	25,693	193,307	189,000	30,000	96	0	
Spencer Street/East Street, Gatton (BS)	74,205	58,873	-	58,873	15,332	74,205	-	100	100	
Springbrook Park Entry Upgrade (LRCI3)	450,000	359,421	95,281	454,701	(4,701)	450,000	-	100	80	
Other Infrastructure Projects Total	6,225,983	*1,981,133*	*1,776,792*	3,757,925	2,468,058	3,642,129	2,583,854			
Program: Pavement Renewal Programme										
Gehrke Road, Plainland - TIDS 21/22	505,861	449,091	-	449,091	56,770	505,861	-	100	95	
Pavement Renewal Programme Projects Total	505,861	*449,091*	-	449,091	56,770	505,861	-			
Program: Pavement Widening Programme										
Grantham Scrub Road - TIDS 21/22&23/23	2,699,983	939,653	558,362	1,498,014	1,201,969	974,429	1,725,554	100	25	
Woodlands Rd Pavement Rehab (LRCI2)	84,959	929	-	929	84,030	84,959	-	0	0	
Pavement Widening Programme Projects Total	2,784,942	*940,581*	*558,362*	1,498,943	1,285,999	1,059,388	1,725,554			
Program: Seal Renewal Programme										
21/22 Bitumen Reseal Program (RTR)	-	58,112	-	58,112	(58,112)	-	-	100	100	
22/23 Bitumen Reseal (R2R)	1,700,000	378,554	1,191,642	1,570,196	129,804	927,079	772,921	Not applicable	25	Budget amendment required.
Seal Renewal Programme Projects Total	1,700,000	*436,666*	*1,191,642*	1,628,308	71,692	927,079	772,921			
Program: Seal Road Upgrade Programme										
Twidales Rd Helidon Spa Upgrade (SEQCSP)	13,368	-	-	-	13,368	13,368	-	0	0	
Seal Road Upgrade Programme Projects Total	13,368	-	-	-	13,368	13,368	-			

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
Cost Centre: DRFA New Event - REPA										
Program: REPA Programme										
DRFA - Feb 2022 - Rockmount Road CH 3220	-	36,600	52,109	88,710	(88,710)	-	-	0	0	Temporary traffic management.
DRFA - Feb 2022 - Roches Road CH 1250	-	38,165	12,974	51,139	(51,139)	-	-	0	0	Temporary traffic management.
DRFA - Feb 2022 - Abbotts Road Culvert CH 430	-	556	-	556	(556)	-	-	5	0	Survey only.
DRFA - Feb 2022 - Abbotts Road Culvert CH 630	-	556	-	556	(556)	-	-	5	0	Survey only.
DRFA - Feb 2022 - Unsealed Zone 7	-	33,838	1,051	34,889	(34,889)	-	-	Not Applicable	2	
DRFA - Feb 2022 - Unsealed Zone 9	-	152,773	3,576	156,349	(156,349)	-	-	Not Applicable	100	
DRFA - Feb 2022 - Unsealed Zone 1	-	206,765	54,354	261,120	(261,120)	-	-	Not Applicable	100	
DRFA - Feb 2022 - Unsealed Zone 8, pt 2	-	229,506	91,488	320,995	(320,995)	-	-	Not Applicable	37	
DRFA - Feb 2022 - Unsealed Zone 8, pt 1	-	172,191	59,044	231,235	(231,235)	-	-	Not Applicable	29	
DRFA - Feb 2022 - Unsealed Zone 8, pt 3	-	182,655	9,760	192,414	(192,414)	-	-	Not Applicable	38	
DRFA - Feb 2022 - Woolshed Ck Rd Floodway	-	16,244	449,704	465,948	(465,948)	-	-	100	5	
DRFA - Feb 2022 - Berlin Road Landslip	-	30,429	25,971	56,400	(56,400)	-	-	5	0	Investigations only.
DRFA - Feb 2022 - Main Camp Ck Rd Floodway	-	989	-	989	(989)	-	-	5	0	Survey only.
DRFA - Feb 2022 - Sealed Zone 5	-	1,853	-	1,853	(1,853)	-	-	2	2	
DRFA - Feb 2022 - Adare Road Floodway	-	2,721	-	2,721	(2,721)	-	-	5	0	Survey only.
DRFA - Feb 2022 - Guardrail Repairs	-	2,222	79,830	82,052	(82,052)	-	-	Not Applicable	20	
DRFA - Feb 2022 - Sealed Zone 8	-	907	-	907	(907)	-	-	1	1	Survey only.
DRFA - May 2022 - Mountain View Dr Landslip	-	13,360	21,758	35,118	(35,118)	-	-	1	0	Investigations only.
DRFA - May 2022 - Steinke's Bridge	-	8,592	5,598	14,190	(14,190)	-	-	1	0	Investigations and temporary traffic management.
DRFA - May 2022 - Lithn Bridge	-	13,360	19,258	32,618	(32,618)	-	-	1	0	Investigations only.
DRFA - May 2022 - East Egypt Rd Lanslip	-	29,341	43,579	72,920	(72,920)	-	-	1	0	Investigations and temporary traffic management.
REPA (Holding Project)	7,000,000	-	-	-	7,000,000	7,000,000	-	Not Applicable	Not Applicable	
REPA Programme Projects Total	*7,000,000*	*1,173,624*	*930,055*	*2,103,680*	*4,896,320*	*7,000,000*	-			
Program: REPA Complimentory Works Programme										
DRFA - Feb 2022 - Complementary Works	-	129,580	90,130	219,710	(219,710)	-	-	Not applicable	5	
REPA Complimentary Gravel Works Program	1,000,000	-	-	-	1,000,000	1,000,000	-	Not applicable	Not applicable	
REPA Complimentary Works Programme Projects Total	*1,000,000*	*129,580*	*90,130*	*219,710*	*780,290*	-	*1,000,000*			
Cost Centre: Fleet										
Program: Fleet Projects										
21/22 Earthmoving Equipment Replacement	1,170,000	797,404	336,980	1,134,384	35,616	358,000	812,000	Not Applicable	Not Applicable	
21/22 Light Commercials Replacement	133,238	97,389	44,834	142,223	(8,985)	16,000	117,238	Not Applicable	Not Applicable	
21/22 Mowers Replacement	205,555	214,455	-	214,455	(8,900)	-	205,555	Not Applicable	Not Applicable	
21/22 Passenger Vehicles	55,075	24,629	-	24,629	30,446	55,075	-	Not Applicable	Not Applicable	
21/22 Tractors Replacement	80,000	64,500	-	64,500	15,500	-	80,000	Not Applicable	Not Applicable	
21/22 Trailers Replacement	270,000	-	178,844	178,844	91,156	-	270,000	Not Applicable	Not Applicable	
21/22 Trucks Replacement	696,370	117,917	562,783	680,700	15,670	-	696,370	Not Applicable	Not Applicable	
22/23 Earthmoving Equipment	949,700	-	-	-	949,700	-	949,700	Not Applicable	Not Applicable	
22/23 Light Commercials	80,000	85,418	169,834	255,252	(175,252)	-	80,000	Not Applicable	Not Applicable	
22/23 Light Trucks	705,000	-	-	-	705,000	138,000	567,000	Not Applicable	Not Applicable	
22/23 Mowers	150,000	-	-	-	150,000	23,150	126,850	Not Applicable	Not Applicable	
22/23 Passenger Vehicles	200,000	-	104,547	104,547	95,453	2,925	197,075	Not Applicable	Not Applicable	
22/23 Trailers	80,000	-	-	-	80,000	48,500	31,500	Not Applicable	Not Applicable	
22/23 Trucks	270,000	-	-	-	270,000	60,000	210,000	Not Applicable	Not Applicable	
New Light Commercial	45,000	-	-	-	45,000	-	45,000	Not Applicable	Not Applicable	
Fleet Projects Projects Total	*5,089,938*	*1,401,712*	*1,397,821*	*2,799,534*	*2,290,404*	*701,650*	*4,388,288*			

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
Cost Centre: Cemetery										
Program: Cemetery Projects										
Gatton Cemetery Seam Strip Installation	35,000	4,861	765	5,627	29,373	-	35,000	100	0	
Gatton Cemetery Seating	6,000	3,732	-	3,732	2,268	-	6,000	100	0	
Laidley Cemet Seam Strip Install (LRCI1)	70,000	60,948	-	60,948	9,052	50,000	20,000	100	100	
Laidley Cemetery Seam Strip Renewal	35,000	324	-	324	34,676	-	35,000	100	0	
Cemetery Projects Projects Total	146,000	*69,865*	765	70,631	75,369	50,000	96,000			
Cost Centre: Camping Grounds										
Program: Camping Grounds Projects										
Disabled Toilet Lake Dyer	25,000	3,979	-	3,979	21,021	-	25,000	100	0	
Picnic Setting Renewal	27,000	2,749	-	2,749	24,251	-	27,000	100	0	
Camping Grounds Projects Total	52,000	*6,728*	-	6,728	45,272	-	52,000			
Cost Centre: Facilities										
Program: Facilities Projects										
Alex Geddes Hall Upgrade	-	5,428	26,105	31,533	(31,533)	-	-	100	0	New Project - Budget to come from BSBR Projects.
Bore Infrastructure Improvements(SEQCSP)	32,007	13,470	-	13,470	18,537	32,007	-	100	100	
Cahill Park Machinery Shed (SEQCSP)	21,567	13,602	-	13,602	7,965	21,567	-	100	100	
Catering Equipment Colonial Cafe	25,000	-	-	-	25,000	-	25,000	Not applicable	0	
Community Facilities Design Packages	70,000	-	-	-	70,000	-	70,000	Not applicable	Not applicable	
Depot Containers	10,000	-	-	-	10,000	-	10,000	100	0	
Electrical Infrastructure Program	98,527	99,016	591	99,607	(1,080)	-	98,527	100	100	
Electrical Upgrades	159,300	13,266	-	13,266	146,034	-	159,300	80	50	
Gatton Admin Building Works (LRCI3)	510,000	321,966	32,942	354,908	155,092	510,000	-	100	70	
Gatton Depot Action Plan	17,772	22,485	3,715	26,200	(8,428)	-	17,772	100	90	
Gatton Depot Fuel Tank	58,415	50,310	9,500	59,810	(1,395)	-	58,415	100	100	
Gatton Shire Hall (BSBR)	210,000	-	-	-	210,000	210,000	-	0	0	Transfer funding to Alex Geddes Hall.
Gatton Showgrounds Program	-	407	-	407	(407)	-	-	100	100	Final project costs received in 22/23.
Grantham Butter Factory Upgrade (LER)	32,555	20,088	3,067	23,155	9,400	-	32,555	100	100	
GSH External Cladding and Gutters	370,000	30,992	2,400	33,392	336,608	-	370,000	100	10	
Helidon Community Centre (BSBR)	55,000	-	-	-	55,000	55,000	-	0	0	Transfer funding to Alex Geddes Hall.
Hydraulic Renewal Program	72,068	20,577	-	20,577	51,491	-	72,068	100	100	
Laidley Cultural Centre (BSBR)	210,000	-	-	-	210,000	210,000	-	0	0	Transfer funding to Alex Geddes Hall.
Laidley IGA Carpark	60,000	-	-	-	60,000	-	60,000	100	0	
Laidley Rec Grounds Program	75,000	53,336	-	53,336	21,664	-	75,000	100	100	
Laidley Saleyards Program (SEQCSP)	56,413	-	-	-	56,413	56,413	-	100	75	
Laidley Showgrounds Bore Pump	12,500	14,025	-	14,025	(1,525)	-	12,500	100	100	
Lake Apex Amphitheatre (SEQCSP)	365,026	-	-	-	365,026	365,026	-	100	0	Project has been deffered as per November Council resolution.
LVSAC Pool Side Grates	35,000	30,607	-	30,607	4,393	-	35,000	100	100	
LVSAC Revitalisation (SEQCSP)	165,179	162,169	-	162,169	3,010	165,179	-	100	100	
Murphy's Creek Community Centre (BSBR)	30,000	-	-	-	30,000	30,000	-	0	0	Transfer funding to Alex Geddes Hall.
Solar to Gatton Depot Workshop	22,392	20,909	-	20,909	1,483	-	22,392	100	100	
Withcott Sports Centre (BSBR)	100,000	-	-	-	100,000	100,000	-	100	100	Transfer funding to Alex Geddes Hall.
Facilities Projects Projects Total	2,873,721	*892,652*	*78,320*	970,971	1,902,750	1,755,192	1,118,529	0	0	
Total for Group	**$ 29,727,033**	**$ 7,991,725**	**$ 7,243,124**	**$ 15,234,848**	**$ 14,492,185**	**$ 16,802,376**	**$ 12,924,657**			

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
PEOPLE AND BUSINESS PERFORMANCE										
Cost Centre: Information Communication Technology										
Program: Information Communication Technology Projects										
22/23 LVCC Audio Visual Renewals	71,000	-	-	-	71,000	-	71,000	10	0	
Library People Counter Renewals	8,000	-	-	-	8,000	-	8,000	0	0	
Network Perimeter Security (Firewalls)	34,000	-	-	-	34,000	-	34,000	0	0	
UPS Renewal	50,000	-	-	-	50,000	-	50,000	0	0	
Information Communication Technology Projects Projects To	163,000	-	-	-	163,000	-	163,000			
Cost Centre: Waste Disposal										
Program: Waste Disposal Projects										
Laidley Leachate Tank Replacement	125,000	-	-	-	125,000	-	125,000	0	0	
Waste Disposal Projects Projects Total	125,000	-	-	-	125,000	-	125,000			
Cost Centre: Transfer Stations										
Program: Transfer Station Projects										
Gatton Landfill Cell 5 (SEQCSP)	3,796,065	26,310	369,757	396,067	3,399,998	1,796,065	2,000,000	10	0	
Laidley Landfill Capping Design	12,070	8,800	-	8,800	3,270	-	12,070	0	0	
Materials Recov Fac Asphalt Replacement	70,000	-	-	-	70,000	-	70,000	100	100	
Materials Recovery Facility Fire Systems	80,000	-	13,110	13,110	66,890	-	80,000	10	0	
Old Gatton Landfill Capping	8,550	-	23,716	23,716	(15,166)	-	8,550	0	0	
Transfer Station Projects Projects Total	3,966,685	35,110	406,583	441,693	3,524,992	1,796,065	2,170,620			
Cost Centre: Public Order & Safety										
Program: Public Order and Safety Projects										
22/23 LVRC CCTV	44,000	-	-	-	44,000	-	44,000	Not applicable	0	
LVRC CCTV	5,000	4,781	-	4,781	219	-	5,000	Not applicable	100	
Public Order and Safety Projects Projects Total	49,000	4,781	-	4,781	44,219	-	49,000			
Total for Group	**$ 4,303,685**	**$ 39,892**	**$ 406,583**	**$ 446,474**	**$ 3,857,211**	**$ 1,796,065**	**$ 2,507,620**			

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
COMMUNITY AND REGIONAL PROSPERITY										
Cost Centre: Regional Development										
Program: Regional Developments Projects										
Strategic Land Acquisition	1,250,000	-	-	-	1,250,000	-	1,250,000	Not applicable	0	
Regional Developments Projects Projects Total	1,250,000	-	-	-	1,250,000	-	1,250,000			
Cost Centre: Tourism Initiatives										
Program: Tourism Projects										
FH Rec Grounds Parking & Viewing Silos	100,000	-	-	-	100,000	-	100,000	5	0	
Tourism Projects Projects Total	100,000	-	-	-	100,000	-	100,000			
Cost Centre: Pest Management										
Program: Pest Management Projects										
Loan Spray Equipment	20,000	-	-	-	20,000	-	20,000	Not applicable	10	
Pest Management Projects Projects Total	20,000	-	-	-	20,000	-	20,000			
Cost Centre: Gatton Child Care Centre										
Program: Gatton Child Care Projects										
Gatton Childcare Centre Refurbishment	13,155	*11,956*	-	11,956	1,199	-	13,155	100	100	
Gatton Child Care Projects Projects Total	13,155	11,956	-	11,956	1,199	-	13,155			
Cost Centre: Art Galleries & RADF										
Program: Art Gallery & RADF Projects										
Art Gallery Lighting Upgrade (LRCI3)	95,000	*181*	*75,730*	75,911	19,089	95,000	-	100	0	
Art Gallery & RADF Projects Projects Total	95,000	181	75,730	75,911	19,089	95,000	-			
Total for Group	**$ 1,478,155**	**$ *12,138***	**$ *75,730***	**$ 87,868**	**$ 1,390,287**	**$ 95,000**	**$ 1,383,155**			

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget	Total Amount of Funding	Council Contribution	Design Completion %	Construction Completion %	Comments
EXECUTIVE OFFICE										
Cost Centre: Disaster Management										
Program: Disaster Management Projects										
DM Donga Pathway	30,000	-	-	-	30,000	-	30,000	5	0	
DM Evacuation Centre Trailer	16,000	7,753	-	7,753	8,247	16,000	-	100	100	
Flood Intelligence Infrastructure	135,000	-	-	-	135,000	-	135,000	10	0	
Flood Warning System Upgrade	23,500	-	-	-	23,500	-	23,500	10	0	
QRRRF Flood Cameras & Electronic Signage	600,000	7,257	39,500	46,757	553,243	540,000	60,000	5	0	
Upgrade Flood Cameras Equipmen (SEQCSP)	25,832	11,070	27,305	38,375	(12,543)	25,832	-	100	100	
Disaster Management Projects Projects Total	830,332	26,080	66,805	92,885	737,447	581,832	248,500			
Total for Group	**$ 830,332**	**$ 26,080**	**$ 66,805**	**$ 92,885**	**$ 737,447**	**$ 581,832**	**$ 248,500**			
Total for Council	**$ 36,339,205**	**$ 8,069,834**	**$ 7,792,241**	**$ 15,862,075**	**$ 20,477,130**	**$ 19,275,273**	**$ 17,063,932**			

LOCKYER VALLEY REGIONAL COUNCIL
For Period Ended January, 2023

CAPITAL WORKS PROGRAM SUMMARY

	Budget	Actual	Committed	Total (includes committed costs)	Remaining Budget
INFRASTRUCTURE					
Camping Grounds	52,000	*6,728*	-	6,728	45,272
Capital Program Delivery	14,233,874	*4,382,962*	*4,713,283*	9,096,240	5,137,634
Cemetery	146,000	*69,865*	*765*	70,631	75,369
DRFA New Event - REPA	7,000,000	*1,173,624*	*930,055*	2,103,680	4,896,320
Facilities	2,873,721	*892,652*	*78,320*	970,972	1,902,749
Fleet	5,089,938	*1,401,712*	*1,397,821*	2,799,534	2,290,404
Parks & Open Spaces	331,500	*64,182*	*122,880*	187,062	144,438
Total for Group	**$ 29,727,033**	***$ 7,991,725***	***$ 7,243,124***	**$ 15,234,848**	**$ 14,492,185**
PEOPLE AND BUSINESS PERFORMANCE					
Information Communication Technology	163,000	-	-	-	163,000
Public Order & Safety	49,000	*4,781*	-	4,781	44,219
Transfer Stations	3,966,685	*35,110*	*406,583*	441,693	3,524,992
Waste Disposal	125,000	-	-	-	125,000
Total for Group	**$ 4,303,685**	***$ 39,891***	***$ 406,583***	**$ 446,474**	**$ 3,857,211**
COMMUNITY AND REGIONAL PROSPERITY					
Art Galleries & RADF	95,000	*181*	*75,730*	75,911	19,089
Gatton Child Care Centre	13,155	*11,956*	-	11,956	1,199
Pest Management	20,000	-	-	-	20,000
Regional Development	1,250,000	-	-	-	1,250,000
Tourism Initiatives	100,000	-	-	-	100,000
Total for Group	**$ 1,478,155**	***$ 12,138***	***$ 75,730***	**$ 87,868**	**$ 1,390,287**
EXECUTIVE OFFICE					
Disaster Management	830,332	*26,080*	*66,805*	92,885	737,447
Total for Group	**$ 830,332**	***$ 26,080***	***$ 66,805***	**$ 92,885**	**$ 737,447**
Total for Council	**$ 36,339,205**	***$ 8,069,834***	***$ 7,792,241***	**$ 15,862,075**	**$ 20,477,130**

10.2 Minor Infrastructure Program - Grant Application

Author: Suzanne Oweczkin, Grants Officer
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:

The purpose of this report is to seek Council's endorsement of the two projects submitted for funding under the Minor Infrastructure Program.

Officer's Recommendation:
THAT Council endorse the following projects nominated for funding under the Minor Infrastructure Program:

- **Upgrade Lighting at the Laidley Recreation Reserve Softball, Cricket and Netball Fields to the value of $175,000, including a 20% contribution of $35,000 to be made by Council.**
- **Floor repair at the Springbrook Park Indoor Sports Complex to the value of $347,600, including a 20% contribution of $69,520 plus the balance of $28,080 (total $97,600) to be made by Council.**

The Council contribution is to be made from existing capital budget allocations.

RESOLUTION

THAT Council endorse the following projects nominated for funding under the Minor Infrastructure Grants Program:

- **Upgrade Lighting at the Laidley Recreation Reserve Softball, Cricket and Netball Fields to the value of $175,000, including a 20% contribution of $35,000 to be made by Council.**
- **Floor repair at the Springbrook Park Indoor Sports Complex to the value of $347,600, including a contribution of $97,600 to be made by Council.**

The Council contribution is to be made from existing capital budget allocations.

Moved By: Cr Wilson Seconded By: Cr Qualischefski
Resolution Number: 20-24/0745

CARRIED
6/0

Executive Summary

A new sports and infrastructure grant called the Minor Infrastructure Grants Program was launched on 31 January 2023. Under the Program competitive grants from $50,000 to $415,000 are available. It should be noted that Lockyer Valley Regional Council is eligible for funding of between $50,000 and $250,000 due to our location, with a 20% contribution required towards eligible project costs.

The funding is available for community-based sport and active recreation clubs, state and national level sporting organisations and Councils.

The Minor Infrastructure Program aims to enhance our States great lifestyle and encourage more young Queenslanders to stay active and healthy.

The objective of the program is to enhance community sport and active recreation participation opportunities through the provision of spaces that enable quality, accessible, inclusive, safe and more efficient activities:

- **Safe:** reduce exposure to health and safety risk
- **Quality:** meeting the standard required for community level preparation
- **Efficient:** more efficient use of the places and spaces (can be used by more people, cater for more activities, be used for longer hours)
- **Inclusive and accessible:** enhancing usability of places and spaces and ensuring no one is excluded from participation.

Proposal

In assessing the funding opportunities, officers have identified two priority projects that meet the grant objectives.

The potential projects were workshopped with Council on Tuesday 7 February 2023. During this workshop it was requested that the scope of Project 1 – Upgrade Lighting at the Laidley Recreation Reserve – Softball & Cricket Fields is updated to include additional lighting upgrades at the Netball courts. This was investigated by the Senior Project Officer and the Netball courts have previously been upgraded with LED lighting. It is also understood that officers are awaiting price confirmation for a swipe to pay system for the Netball courts, the cost of which will be added to the project once known.

Project	Nominating Officer	Estimated Total Cost	Council Contribution
Upgrade Lighting at Laidley Recreation Reserve - Softball & Cricket Fields	Debra Moore	$175,000.00	$35,000.00
Description	The lighting around the softball and cricket fields at the Laidley Recreation Reserve is old infrastructure and beginning to deteriorate. The switchboard is unsafe and at maximum capacity. Some of the lights no longer work and the electrical equipment inside the poles is beginning to fail. • Aim is to replace and upgrade the lights to modern LED lights and rectify the light poles on the softball and cricket fields at Laidley Recreational Reserve (refer attachment#) • Prevent high cost and difficulty in sourcing old materials to maintain current lighting		
Springbrook Park Sports Complex Indoor Sports Centre Floor Repair	Debra Moore	$347,600.00	$97,600.00
Description	The floor surface at the indoor sports court located in the Withcott Sports Centre is tearing and the original slab and joint layout was not designed to accommodate shrinkage cracking. Movement of the floor has been further exacerbated by the heavy rain events experienced in 2021/2022. • Aim is to repair the concrete slab and replace the sports court floor which will be required to be removed during the concrete slab repairs		

	• Reduce the impacts to public health and safety, with the court being available again to the public if completed. • Note that the Council contribution of $97,600 includes 20% of eligible project costs of $69,520 and the balance of $28,080 to achieve the total project cost of $347,600.

Options
Council can endorse the projects nominated toward the Minor Infrastructure Program or amend the projects.

Previous Council Resolutions
Nil

Critical Dates

Date	Milestone
2 March 2023	Minor Infrastructure Program Application Deadline
June 2023	Project Commencement
December 2024	Project Completion

Strategic Implications

Corporate Plan
Lockyer Community:

- Council optimises the use of its open spaces and facilities by improving access to and the quality of the facilities for individuals and groups for cultural, recreational and community activities.
- Enhanced wellbeing and safety of the community.

Lockyer Planned:

- Provision of fit-for-purpose infrastructure which meets the current and future needs of the region.
- Development is consistent with legislation, best practice and community expectations and is guided by relevant plans and strategies.

Finance and Resource
Council contribution of $132,600.00 towards the total project cost estimate of $522,600.00 (two applications) of competitive applications for the Minor Infrastructure Program (pending outcome).

Legislation and Policy
N/A

Risk Management

Key Corporate Risk Category:	FE1
Reference & Risk Descriptor:	Finance & Economic Financial sustainability to support the achievement of strategy, goals and objectives in the medium to long term.
Key Corporate Risk Category:	IA2
Reference & Risk Descriptor:	Infrastructure & Assets Delivering major projects (time, cost, scope and quality)
Key Corporate Risk Category:	P1
Reference & Risk Descriptor:	Political

	Intergovernmental relationships/relationships with other key stakeholders
Key Corporate Risk Category:	R1
Reference & Risk Descriptor:	Reputation Reputation and Goodwill

Consultation

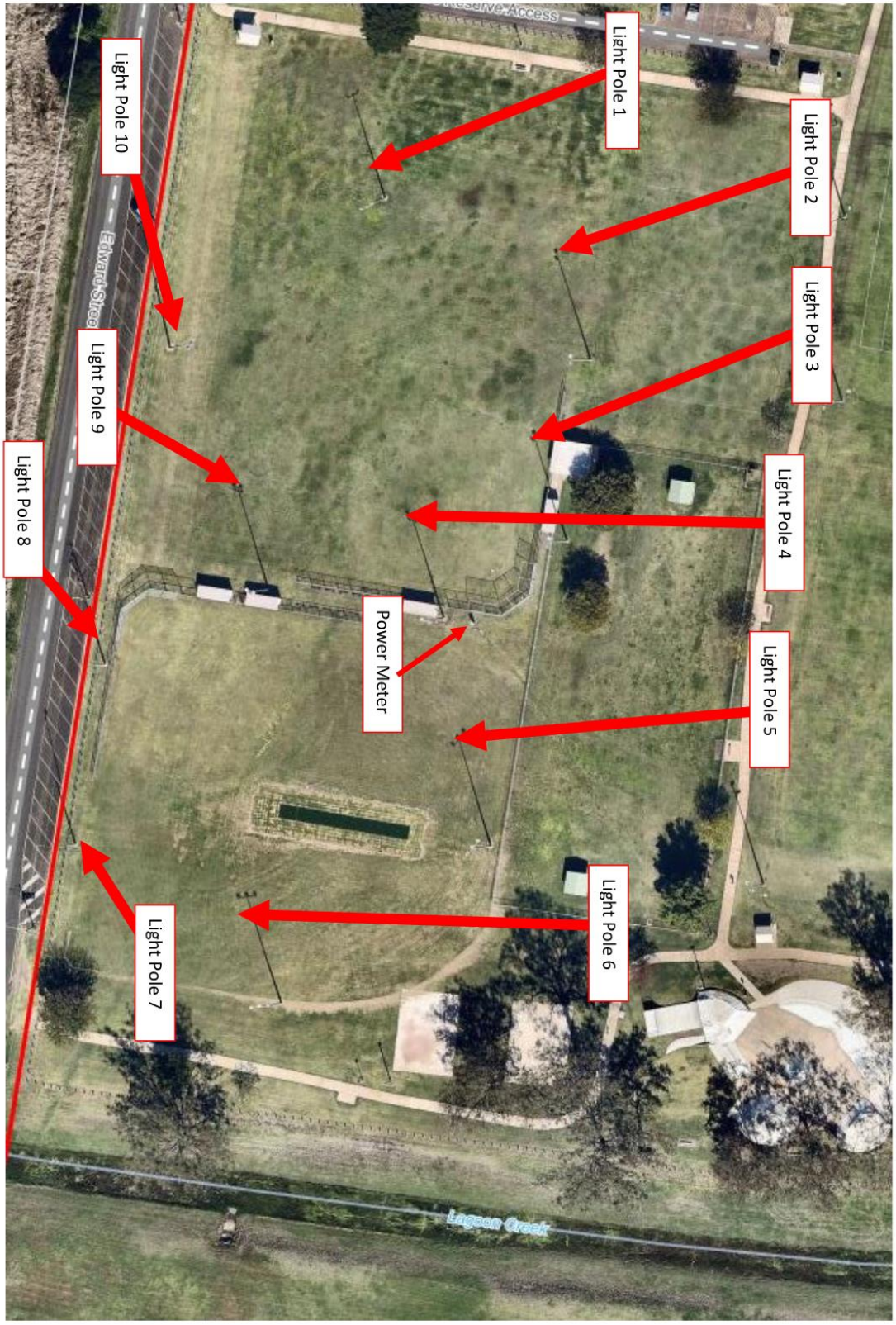
Portfolio Councillor Consultation
Deputy Mayor Jason Cook

Internal Consultation
Group Manager Infrastructure
A/Principal Facilities
Senior Project Officer
Electrical Maintenance Lead
Chief Financial Officer
Coordinator Accounting Services
Grants Officer

External Consultation

Attachments

1⇩	Image - Laidley Recreation Reserve - Softball & Cricket Field Lighting Locations	1 Page
2⇩	Project Brief - Laidley Recreation Reserve Softball and Cricket lighting	8 Pages
3⇩	Project Brief - Springbrook Park Sports Complex Flooring	9 Pages


Light Pole 1
Light Pole 2
Light Pole 3
Light Pole 4
Light Pole 5
Light Pole 6
Light Pole 7
Light Pole 8
Light Pole 9
Light Pole 10
Power Meter
Edward Street
Lagoon Creek

PROJECT TITLE : Upgrade Lighting at Laidley Recreation Reserve – Softball & Cricket Fields

Original Budget Year: 2023

Group: Infrastructure

Branch: Community Recreation and Facilities

Responsible Manager: Debra Moore

Project Complexity: Small Project (7)

PREPARED by	Kenny Mostyn	**DATE:**	01/02/2023
(for acceptance)			
ACCEPTED by	Debra Moore	**DATE:**	
(for release)			

Participating Organisations:	Lockyer Valley Regional Council
Background/Context:	The lighting around the softball and cricket fields at the Laidley Recreation Reserve is old infrastructure and beginning to deteriorate. The switchboard is unsafe and at maximum capacity. Some of the lights no longer work and the electrical equipment inside the poles is beginning to fail. The softball and cricket fields are unsuitable for night games to be played. Each time work is required on the light poles there is a minimum hire of $5000 for a cherry picker plus materials and labour. As the lighting infrastructure ages and fails, parts are costly and becoming increasingly difficult to source.
Project Overview, Aims & Objective/Benefits:	The aim of this project is to replace and upgrade the 28 lights and controllers to modern LED lights and recertify the light poles. The switchboard will also be upgraded as part of this project. Part of this project will also be to install a card payment system which community users will swipe to cover the electricity and maintenance costs of the lights. With the increase to cricket games and the installation of another pitch as well as the return of softball games, improvement to the lighting will support the community groups by bringing this field up to Australian standards. Council will also benefit from cost savings on energy consumption and maintenance and being able to on charge electricity costs to .
Linkage to Key Council Documents:	*The project can be linked to the Corporate Plan 2022-2027:* *4. Lockyer Planned –* • Provision of fit-for-purpose infrastructure which meets the current and future needs of the region. • Development is consistent with legislation, best practice and community expectations and is guided by relevant plans and strategies.
How will the success of the project be measured?	The success of the project will be measured through an improvement to the field lighting and improvement to energy efficiency leading to long term cost savings. Larger timeframes community and sporting groups can use the facility (night games).
Output(s):	Greater use of facility Increase cost savings by lower maintenance requirements and ability to pass on costs to the end user
Stakeholders:	Lockyer Valley Regional Council Users of Council facilities
Assumptions and Constraints:	• That the successful contractor will understand the project and that their reporting will align with Council standards for ease of input into Tech One. • That this project will be able to proceed pending successful Grant Application
Project Risk:	Minor L40

Major Risks and Minimisation Strategies:	Rising cost of Labour and Materials • There is enough contingency to cover any price rises Procurement Strategy and Advertising Mediums • Devise a suitable procurement strategy and utilise an advertising medium that provides wide coverage of contractors Procurement Evaluation Risk • Evaluation Plan identifying the process of selection and who is on the panel • Review and acceptance of the Work Health and Safety Documents with the quote submission of the preferred contractor
Related Projects:	None
Alternate Options Considered:	No alternatives considered other than to not carry out the works

Project Activities & Milestones:

List the major activities, scheduled start, scheduled finish and who has been assigned accountability. Milestones are indicated by a blank scheduled start date. The activities appearing in the predecessor column must be completed before the activity described can begin.

Description	***Who***	***Scheduled Start***	***Scheduled Finish***	***Predecessor***
Procure contractors to recertify light poles, design and installation of new light fittings and controls to Australian standards and supply and install a card reading payment system	Senior Project Officer / Electrical Maintenance Lead	September 2023	December 2023	

Costs and Resources:

Capital Expenditure:

Project Item *(e.g.: Design, Construct)*	***Cost Type***	***Year 1***	***Year 2***	***Year 3***

	(e.g.: Plant / Labour / Material / Contractors / Professional Fees)			
Supply and Replace Lighting and engineering certificate for existing lighting pole re-certification	Materials and Labour	$151,358.00		
Supply and replace switchboard	Materials and Labour	$6,394.00		
Supply and install payment system				

Operating Expenditure:

Project Item *(e.g.: Design, Construct)*	***Cost Type*** *(e.g.: Plant / Labour / Material / Contractors / Professional Fees)*	***Year 1***	***Year 2***	***Year 3***

Other Expenditure:

Description	***Percentage Allocation %***	***Year 1***	***Year 2***	***Year 3***
Project Management	5%	$7,888.00		
Contingency	5%	$7,888.00		
PROJECT TOTAL EXPENDITURE		**$173,528.00**		

Funding Source:

Funding Source	***Funding Body***	***Year 1***	***Year 2***	***Year 3***
Federal Government Grant				
State Government Grant		$138,822.40		
Other Grants				
Developer Contributions				
Sale of Assets				
Reserves				
Other				
PROJECT TOTAL FUNDING		$138,822.40	**$**	**$**

What is the degree of accuracy (%) of the budget presented? *Is detailed design complete? Have quotes been sourced?*	90% Quotes and Estimates.
Are "Whole of Life" costs known? (yes/no)	No
If Yes – What is the estimated annual operating and maintenance cost (excluding depreciation)?	
What is the expected Life of Asset (years)?	15
Will this project boost the local economy? i.e. create or sustain employment Please provide details.	Local contractors to install.

Appendix A – Complexity Matrix

Project Complexity Assessment		To be completed by Project Manager								
	Criteria	**Description**	**Score**	**Description**	**Score**	**Description**	**Score**	**Description**	**Score**	**Row Score**
A	Level of impact on identified stakeholders (aligned to Community Engagement Framework)	Low impact on area or group	1	High impact on area or group	**2**	Low on community or organisation	3	High impact on community or organisation	4	2
B	Total project budget? $34,280 over 3 years _____	≤$50,000	1	$50,001 - $200,000	**2**	$200,001 - $500,000	3	> $500,000	4	2
C	Risk (align to Risk Management Framework)	Low Risk	1	Low – Medium Risk	**2**	Medium – High Risk	3	Extreme Risk	4	2
D	Change management required for success of project	Minimal	1	Low	**2**	Moderate	3	High	4	1
	TOTAL (A+B+C+D ROW) Scores								**Complexity Score**	7

Complexity Score	Project Category
4-6	Minor Project
7-10	Small Project
11-13	Medium Project
14-16	Major Project

Appendix B – Risk Assessment

Consequence Matrix

Consequence	Business Continuity and Business Systems	Environmental and Community	Financial and Economic	Work Health and Safety	Staff	Reputation	Infrastructure and Assets	Political	Legal Compliance and Liability
Catastrophic	Permanent loss of activity.	Widespread and irreversible environmental damage / harm attributed by the courts to be negligent or incompetent actions of Council.	Financial impact jeopardises Council as a going concern.	Any fatality or significant irreversible disability.	Staff issues cause continuing failure to deliver essential services.	Loss of State Government support with scathing criticism and removal of the Council. Negative National media exposure against Council.	Widespread, long term loss of substantial key assets, infrastructure, corporate information and/or IT network/hardware.	Loss of power and influence restricting decision making and capabilities. Dismissal of Council by State Government.	Major civil lawsuit and/or criminal charges with prosecution.
Major	Significant disruption which has a serious impact on business activity, stakeholders or regulatory compliance resulting in contingency plans being invoked.	Severe environmental or community/planning impact requiring significant remedial action. Penalties and/or direction or compliance order incurred.	Financial impact limiting the capacity of the Council to achieve objectives.	Extensive injuries. Lost time of more than 4 working days.	Staff issues cause widespread failure to deliver several major strategic objectives and long-term failure of day to day service delivery.	State media and public concern / exposure with adverse attention and long-term loss of support from Lockyer Valley residents.	Widespread, short to medium term loss of key assets, infrastructure, corporate information and/or IT network/hardware.	Adverse impact and intervention by State Government, including loss of power and also added responsibilities and duties without resources.	Breach of regulation resulting in substantial fine, civil law suit, loss of contract/license, future transactions affected.
Moderate	Some disruption with unacceptable impact on business activity, stakeholders or regulatory compliance.	Moderate impact on the environment and or community/planning; no long term or irreversible damage. May incur cautionary notice or infringement notice.	Financial impact requiring reallocation of funds across directorates.	Medical treatment. Lost time of up to 4 working days.	Staff issues cause failure to deliver minor strategic objectives and temporary and recoverable failure of day to day service delivery.	Significant local concern / exposure and short to mid-term loss of support from residents.	Short to medium term loss of key assets, infrastructure, corporate information and/or IT network/hardware.	Adverse impact and intervention by another local government & LGAQ.	Breach of regulation resulting in significant fine, threat of legal action or threat of loss of contract/licence.
Minor	Temporary and recoverable disruption with minor impact on business activity, stakeholders or regulatory compliance.	Minor environmental or community/planning damage such as remote temporary pollution.	Financial impact that can be absorbed and dealt with at the directorate level.	First aid treatment. No lost time.	Staff issues cause several days interruption of day to day service delivery.	Minor local community concern manageable through good public relations.	Minor loss/damage. Repairs required.	Adverse impact by another local government.	Breach of regulation resulting in infringement notice, isolated threat of legal action, isolated threat of loss of contract/licence.
Insignificant	Disruption with negligible impact on business activity, stakeholders, or regulatory compliance.	Brief, non-hazardous, transient pollution or damage.	Financial impact that can be absorbed and dealt with at the individual activity/project level.	Slight injury or health effect not requiring first aid.	Staff issues Short term low staffing level/performance temporarily reduces activity quality, but there is no impact on stakeholders.	Transient matter, e.g. customer complaint, resolved in day-to-day management.	Damage where repairs are required however facility/ infrastructure/ network/hardware are still operational.	Negligible impact from another local government.	Minor complaint, incident or contract issue resolved by management.

Likelihood Matrix

Rating	Description	Likelihood of Occurrence	Probability
5	Almost Certain	Incidents will occur frequently each year	Multiple times per year
4	Likely	Incidents will almost certainly occur each year	1 per year
3	Possible	Incidents will possibly occur every 2 to 3 years	1 in 2 - 3 years
2	Unlikely	Incidents are unlikely; every 3 to 5 years	1 in 3 - 5 years
1	Rare	Incidents possible in exceptional circumstances	1 in 5+ years

Risk Level Matrix

Likelihood	Rating	Consequence				
		1	2	3	4	5
		Insignificant	Minor	Moderate	Major	Catastrophic
A - Almost certain	5	M 52	H 64	H 76	E 88	E 100
B - Likely	4	L 44	M 56	H 68	H 80	E 92
C - Possible	3	L 36	M 48	M 60	H 72	E 84
D - Unlikely	2	L 28	L 40	M 52	H 64	H 76
E - Rare	1	L 20	L 32	L 44	M 56	H 68

SPRINGBROOK PARK SPORTS COMPLEX (Withcott) INDOOR SPORTS CENTRE FLOOR REPAIR

Original Budget Year: 2023

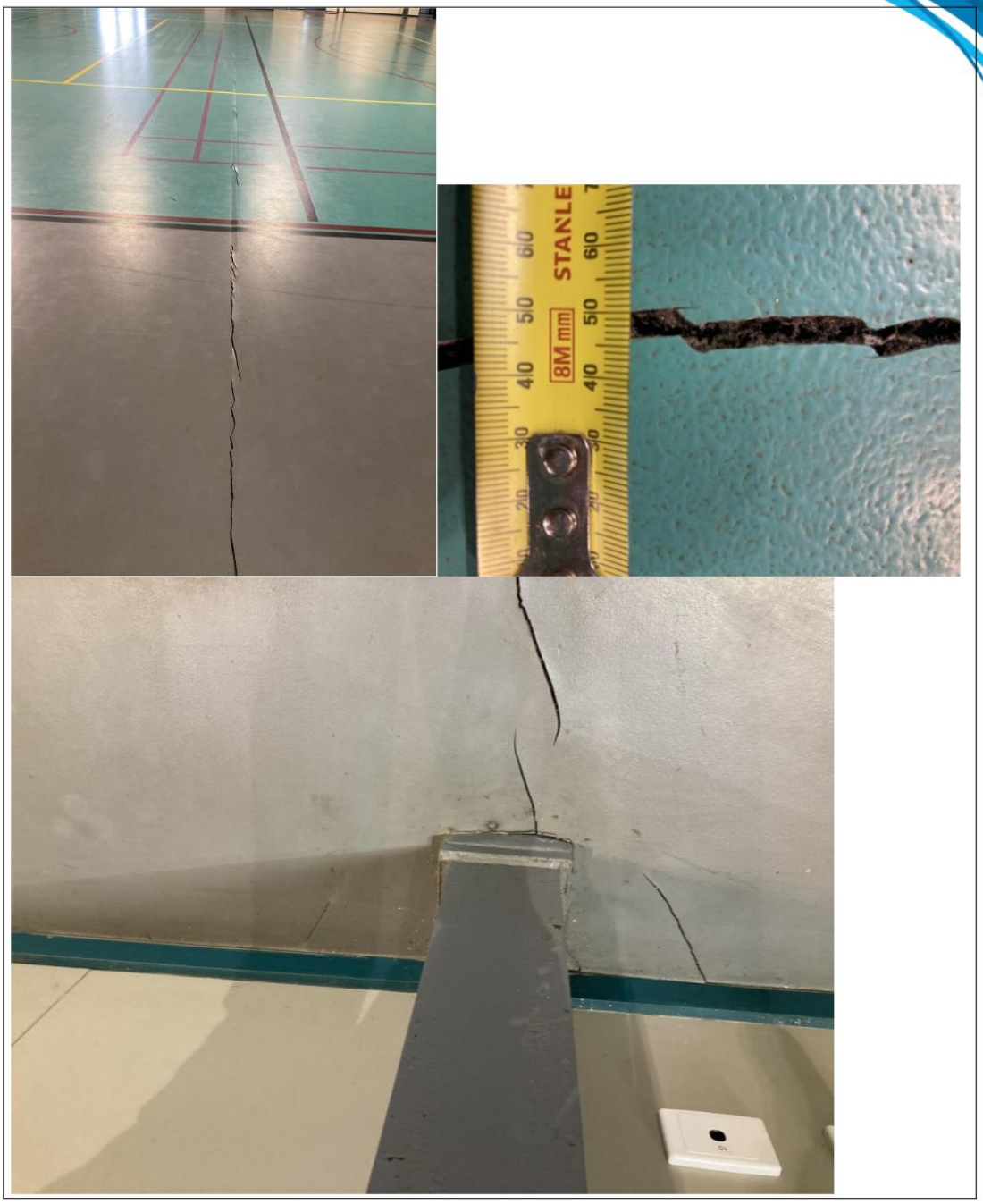
Group: Infrastructure

Branch: Community Recreation and Facilities

Responsible Manager: Debra Moore

Project Complexity: Small Project (8)

PREPARED by (for acceptance)	Kenny Mostyn	**DATE**	
ACCEPTED by (for release)	Debra Moore	**DATE**	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8M mm

Participating Organisations	Lockyer Valley Regional Council Users of Council facilities Lockyer Valley Regional Council
Background/Context	The Withcott Sports Centre was originally built in 2007. Although the majority of the building is in good condition, there are some structural issues with the differential settlement of the floor slabs under the Main Court Area. This has caused the Vinyl playing surface to crack along the concrete slab joints underneath it. A Structural Report has been done by FSA Consulting Engineering that has made recommendations to repair. The tearing and the original slab and joint layout was not designed to accommodate shrinkage cracking (particularly in long direction). Movement of the floor has further been exacerbated by storm water during heaving rain events in 2022. Drainage has been installed across the back of the centre to help stormwater runoff. The sports court is currently unable to be used due to the tearing of the sports floor and the differing levels which is a trip hazard. Requests by sports user group to use the court has had to be declined due to the health and safety risks.
Project Overview, Aims & Objective/Benefits	The aim of this project is to repair the concrete slab and replace the sports court floor which will be required to be removed during the concrete slab repairs. Repairing the floor will reduce impacts to the health and safety of the public and the court will be able to be used again by members of the public. LVRC will be able start taking booking again and further promote the facility once it has been repaired.
Linkage to Key Council Documents	<u>Corporate Plan</u> Lockyer Community – Outcome: Council optimises the use of its open spaces and facilities by improving access to and the quality of the facilities for individuals and groups for cultural, recreational and community activities. Lockyer Community – Outcome: Enhanced wellbeing and safety of the community.
How the success of the project will be measured	Through the repairs of the concrete floor and increased community usage.
Outputs	Greater use of facility.
Stakeholders	Lockyer Valley Regional Council Users of Council facilities
Assumptions and Constraints	That the successful contractor will understand the project brief and that their reporting will align with Council standards.
Project Risk	Moderate H76

Major Risks and Minimisation Strategies	Procurement Strategy and Advertising Mediums • Devise a suitable procurement strategy and utilise an advertising medium that provides wide coverage of contractors Procurement Evaluation Risk • Evaluation Plan identifying the process of selection and who is on the panel • Review and acceptance of the Work Health and Safety Documents with the quote submission of the preferred contractor Material Costs • Estimates were done in June 2022 and there has been a rise in costs of materials and labour.
Related Projects	None
Alternate Options Considered	Temporary floor repairs and levelling were considered however the concrete floor will continue to move and permanent repairs will still be required.

Project Activities & Milestones

Description	Who	Scheduled Start	Scheduled Finish	Predecessor
Procurement for Concrete Repairs	Senior Project Officer	June 2023	June 2023	
Concrete Repairs Contractor	Senior Project Officer	June 2023	July 2023	
New Sports floor Procurement	Senior Project Officer	June 2023	July 2023	
New Sports floor contractor	Senior Project Officer	July 2023	September 2023	

Costs and Resources

Capital Expenditure

Project Item (e.g. Design, Construct)	**Cost Type** (e.g. Plant / Labour / Material / Contractors / Professional Fees)	Year 1	Year 2	Year 3
Concrete Repairs	Material and Labour	$66,000.00		
New Sports Floor	Materials and Labour	$250,000.00		

Operating Expenditure

Project Item (e.g. Design, Construct)	Cost Type (e.g. Plant / Labour / Material / Contractors / Professional Fees)	Year 1	Year 2	Year 3

Other Expenditure

Description	Percentage Allocation %	Year 1	Year 2	Year 3
Project Management	5%	$15,800		
Contingency	5%	$15,800		
PROJECT TOTAL EXPENDITURE		**$347,600**	**$**	**$**

Funding Source

Funding Source	Funding Body	Year 1	Year 2	Year 3
Federal Government Grant				
State Government Grant		$250,000.00		
Other Grants				
Developer Contributions				
Sale of Assets				
Reserves				
Other				
PROJECT TOTAL FUNDING		**$250,000.00**	**$**	**$**

What is the degree of accuracy (%) of the budget presented?	90% based on design, quotes and estimates.
Are "Whole of Life" costs known? (yes/no)	No
If Yes – What is the estimated annual operating and maintenance cost (excluding depreciation)?	
What is the expected Life of Asset (years)?	50
Will this project boost the local economy?	Local contractors to install.

Appendix A – Complexity Matrix

To be completed by Project Manager.

Criteria		Description	Score	Description	Score	Description	Score	Description	Score	Row Score
A	Level of impact on identified stakeholders (aligned to Community Engagement Framework)	Low impact on area or group	1	High impact on area or group	2	Low on community or organisation	3	High impact on community or organisation	4	1
B	Total project budget? $_____	≤$50 000	1	$50 001 - $200 000	2	$200 001 - $500 000	3	> $500 000	4	3
C	Risk (align to Risk Management Framework)	Low Risk	1	Low – Medium Risk	2	Medium – High Risk	3	Extreme Risk	4	3
D	Change management required for success of project	Minimal	1	Low	2	Moderate	3	High	4	1
TOTAL (A+B+C+D) Scores		Complexity Score								8

Complexity Score	Project Category
4-6	Minor Project
7-10	Small Project
11-13	Medium Project
14-16	Major Project

Appendix B – Risk Assessment

Consequence Matrix

Consequence	Business Continuity and Business Systems	Environmental and Community	Financial and Economic	Work Health and Safety	Staff	Reputation	Infrastructure and Assets	Political	Legal Compliance and Liability
Catastrophic	Permanent loss of activity.	Widespread and irreversible environmental damage / harm attributed by the courts to be negligent or incompetent actions of Council.	Financial impact jeopardises Council as a going concern.	Any fatality or significant irreversible disability.	Staff issues cause continuing failure to deliver essential services.	Loss of State Government support with scathing criticism and removal of the Council. Negative National media exposure against Council.	Widespread, long term loss of substantial key assets, infrastructure, corporate information and/or IT network/hardware.	Loss of power and influence restricting decision making and capabilities. Dismissal of Council by State Government.	Major civil lawsuit and/or criminal charges with prosecution.
Major	Significant disruption which has a serious impact on business activity, stakeholders or regulatory compliance resulting in contingency plans being invoked.	Severe environmental or community/planning impact requiring significant remedial action. Penalties and/or direction or compliance order incurred.	Financial impact limiting the capacity of the Council to achieve objectives.	Extensive injuries. Lost time of more than 4 working days.	Staff issues cause widespread failure to deliver several major strategic objectives and long-term failure of day to day service delivery.	State media and public concern / exposure with adverse attention and long-term loss of support from Lockyer Valley residents.	Widespread, short to medium term loss of key assets, infrastructure, corporate information and/or IT network/hardware.	Adverse impact and intervention by State Government, including loss of power and also added responsibilities and duties without resources.	Breach of regulation resulting in substantial fine, civil law suit, loss of contract/license, future transactions affected.
Moderate	Some disruption with unacceptable impact on business activity, stakeholders or regulatory compliance.	Moderate impact on the environment and or community/planning; no long term or irreversible damage. May incur cautionary notice or infringement notice.	Financial impact requiring reallocation of funds across directorates.	Medical treatment. Lost time of up to 4 working days.	Staff issues cause failure to deliver minor strategic objectives and temporary and recoverable failure of day to day service delivery.	Significant local concern / exposure and short to mid-term loss of support from residents.	Short to medium term loss of key assets, infrastructure, corporate information and/or IT network/hardware.	Adverse impact and intervention by another local government & LGAQ.	Breach of regulation resulting in significant fine, threat of legal action or threat of loss of contract/licence.
Minor	Temporary and recoverable disruption with minor impact on business activity, stakeholders or regulatory compliance.	Minor environmental or community/planning damage such as remote temporary pollution.	Financial impact that can be absorbed and dealt with at the directorate level.	First aid treatment. No lost time.	Staff issues cause several days interruption of day to day service delivery.	Minor local community concern manageable through good public relations.	Minor loss/damage. Repairs required.	Adverse impact by another local government.	Breach of regulation resulting in infringement notice, isolated threat of legal action, isolated threat of loss of contract/licence.
Insignificant	Disruption with negligible impact on business activity, stakeholders, or regulatory compliance.	Brief, non-hazardous, transient pollution or damage.	Financial impact that can be absorbed and dealt with at the individual activity/project level.	Slight injury or health effect not requiring first aid.	Staff issues Short term low staffing level/performance temporarily reduces activity quality, but there is no impact on stakeholders.	Transient matter, e.g. customer complaint, resolved in day-to-day management.	Damage where repairs are required however facility/ infrastructure/ network/hardware are still operational.	Negligible impact from another local government.	Minor complaint, incident or contract issue resolved by management.

Likelihood Matrix

Rating	Description	Likelihood of Occurrence	Probability
5	Almost Certain	Incidents will occur frequently each year	Multiple times per year
4	Likely	Incidents will almost certainly occur each year	1 per year
3	Possible	Incidents will possibly occur every 2 to 3 years	1 in 2 - 3 years
2	Unlikely	Incidents are unlikely; every 3 to 5 years	1 in 3 - 5 years
1	Rare	Incidents possible in exceptional circumstances	1 in 5+ years

Risk Level Matrix

Likelihood	Rating	Consequence									
		1		2		3		4		5	
		Insignificant		Minor		Moderate		Major		Catastrophic	
A - Almost certain	5	M	52	H	64	H	76	E	88	E	100
B - Likely	4	L	44	M	56	H	68	H	80	E	92
C - Possible	3	L	36	M	48	M	60	H	72	E	84
D - Unlikely	2	L	28	L	40	M	52	H	64	H	76
E - Rare	1	L	20	L	32	L	44	M	56	H	68

10.3 Appointment of Acting Chief Executive Officer

Author: Vickie Wieland, Executive Assistant Chief Executive Officer
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:
The purpose of this report is to request Council appoint an Acting Chief Executive Officer from Monday 27 February to Monday 6 March 2023 inclusive, for the period of the Chief Executive Officer's annual leave, in accordance with Section 195 of the *Local Government Act 2009*.

Officer's Recommendation:
THAT Council appoint the Group Manager Community & Regional Prosperity as the Acting Chief Executive Officer, in accordance with Section 195 of the *Local Government Act 2009*, for the period Monday 27 February to Monday 6 March 2023, inclusive.

RESOLUTION

THAT Council appoint the Group Manager Community & Regional Prosperity as the Acting Chief Executive Officer, in accordance with Section 195 of the *Local Government Act 2009*, for the period Monday 27 February to Monday 6 March 2023, inclusive.

Moved By: Cr Hagan Seconded By: Cr Vela
Resolution Number: 20-24/0746

CARRIED
6/0

Executive Summary
Councils are required by the *Local Government Act 2009* (LGA) to employ a Chief Executive Officer (CEO). Section 195 of the LGA provides a mechanism for the appointment of an Acting Chief Executive Officer (A/CEO) when the current CEO is absent.

Proposal

The appointment of an A/CEO can be made under Section 195 of the LGA; however, it is worth noting that an appointment under Section 195 need not be by resolution, providing the CEO or Mayor have been given delegated power under Section 257 of the LGA to make an acting appointment as the need arises.

Section 195 of the *LGA* states that:

"A Local Government may appoint a qualified person to act as the CEO during:
- *a) Any vacancy, or all vacancies, in the position*
- *b) Any period, or all periods, when the CEO is absent from duty or cannot, for another reason perform the CEO's responsibilities."*

The CEO will be on annual leave for the period 27 February to 6 March 2023. Council is required to appoint an A/CEO to fulfil the duties and responsibilities of the position for that period.

It is recommended that Council appoint the Group Manager People, Community & Regional Prosperity as the A/CEO for the period stated above. The Group Manager People, Community & Regional Prosperity will be provided with the required delegated authority to carry out the role.

Options
Council could appoint another member of the Executive Leadership Team as A/CEO.

Previous Council Resolutions
Council has resolved to appoint an A/CEO on several occasions in the past.

Critical Dates
The period of leave being from 27 February to 6 March 2023 inclusive.

Strategic Implications
Corporate Plan
The appointment of an A/CEO for the period of the CEO's absence contributes to achieving the "Lockyer Leadership and Council" Corporate Plan strategic vision of a well-managed, transparent, and accountable organisation.

Finance and Resource
When a staff member is appointed to an acting role for a period of time, it is usual practice to make an additional payment part way between the staff members existing remuneration and that of the position they are appointed to.

Legislation and Policy
A resolution to appoint an A/CEO in accordance with the LGA ensures legislative compliance regarding this matter.

Risk Management
The appointment of an A/CEO reduces any residual risk to the organisation that may be created by not having a responsible Officer in that position for a period of time.

Consultation
Portfolio Councillor Consultation
Consultation was undertaken with the Mayor and members of the Executive Leadership Team.

Internal Consultation
All staff and key contacts will be advised by email of the CEO's absence and the appointment of an A/CEO for the period of absence.

External Consultation
Nil

Community Engagement
Nil

Attachments

There are no attachments for this report.

10.4 Gatton Golf Club Drainage Works

Author: Ian Church, Chief Executive Officer
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:

The purpose of this report is to request Council approve a financial contribution to the Gatton Jubilee Golf Club for earthworks to remedy flooding which closes access to a significant part of the course.

Officer's Recommendation:
THAT Council approve a one-off financial contribution of $13,000 to the Gatton Jubilee Golf Club for the purpose of improving drainage so that Holes 11 to 17 can remain playable subsequent to a rainfall event; in accordance with the quote provided by the Club.

RESOLUTION

THAT Council approve a one-off financial contribution of $13,000 to the Gatton Jubilee Golf Club for the purpose of improving drainage so that Holes 11 to 17 can remain playable after a rainfall event, in accordance with the quote provided by the Club.

Moved By: Cr Hagan **Seconded By:** Cr Wilson
Resolution Number: 20-24/0747

CARRIED
6/0

Executive Summary

The area of the Gatton Jubilee Golf Club located between Chadwick Road and Golf Links Drive covers holes 11 to 17 is subject to flooding, even in relatively small rainfall events. The flooding renders play in this area impossible and reduces revenue available to the Club, particularly during tournaments.

This has been an ongoing problem for many years as demonstrated by reports to Council on the subject in 2014, 2015 and 2016. Previous reports authorised Council to de-silt a dam to allow it to be utilised more effectively for drainage purposes. In addition, a resolution was made at the April 2016 Council meeting to provide a one-off contribution towards the cost of cleaning out the main Golf Club dam of up to $20,000. Council contributed $18,555 towards the work in July 2017.

Proposal

Several Council stormwater systems flow into the portion of the Golf Club property located between Chadwick Road and Golf Links Drive. Silt also flows from upstream catchments, possibly from the Showground land and private property developments. The silt deposits have filled the pond and downstream dam which renders them ineffective for their intended purposes.

Councillors and staff met Golf Club representatives on-site several weeks ago and discussed what works could be undertaken on the Golf Club land to alleviate flooding. It was decided that some minor earthworks could be

completed to improve the capacity of the table drain as well as ensuring that the stormwater flows are directed into the dam. The proposed works would reduce the impact of flooding in a minor storm event.

Options

- Approve the financial contribution of $13,000 per the quote.
- Approve a different amount as a financial contribution.
- Not approve a financial contribution.
- Consider Council undertaking the project.

Previous Council Resolutions

February 2014

That Council approve the installation of culvert to increase drainage capacity under Chadwick Road and that Council liaise with the Gatton Golf Club to remove silt from the downstream small silt pond and examine other minor constraints in this drainage system.

September 2015

The Acting CEO investigate the quote provided for the works in order to assist with providing trucks to complete works at the Gatton Golf Club.

October 2015

THAT Council authorise the Chief Executive Officer to immediately undertake works, at cost of Council, to rectify the siltation problems involving the drain and silt trap at the Gatton Golf Club; Further; THAT Council authorise the Chief Executive Officer to undertake negotiations with the Gatton Golf Club for the future maintenance of the drains and silt trap; And further; THAT Council authorise the Chief Executive Officer to investigate and report back to Council on the costs associated with the cleaning out of the main Golf Club dam due to siltation.

April 2016

THAT Council authorise the Chief Executive Officer to forward correspondence to the Gatton Golf Club advising that Council will continue to undertake maintenance of the silt trap; And further; THAT Council authorise the Chief Executive Officer to forward correspondence to the Gatton Golf Club advising that Council as a one off arrangement will contribute to the costs of the Club cleaning out of the main Golf Club dam and will pay invoices up to a value of $20,000 (excluding GST) for that purpose

Critical Dates

Nil

Strategic Implications

Corporate Plan

Lockyer Community – Council seeks to understand community needs, resulting in partnerships that realise long term benefits for the community in a timely manner.

Finance and Resource

Should the recommendation be adopted it will cost Council $13,000. The amount can be allocated from Councils Infrastructure capital works budget. By reducing flooding of the area containing holes 11 to 17, the works will contribute towards reducing the risk of tournaments held by the Club having to be cancelled due to rain and the subsequent damage to the Club's reputation and finances.

Legislation and Policy

Not applicable.

Risk Management
The works will mitigate the risk of damage to Golf Club property caused by further rain events.

Consultation

Portfolio Councillor Consultation
Councillor Cook

Internal Consultation
Manager Infrastructure Delivery

External Consultation
Gatton Jubilee Golf Club Secretary and President and other representatives.

Community Engagement
Not applicable.

Attachments

1⇩	Gatton Jubilee Golf Club	1 Page


Hickey Street
Wilkes Park
Eastern Drive
Crescent Street
Spencer Street
Chadwick Road
Yates Street
Golfview Court

In accordance with Section 150EQ of the Local Government Act 2009, Councillor Holstein informed the meeting that she has a declarable conflict of interest in Item 10.5, 'Renewal of Lease over Land No. 142601, 142621, 142631, 142651 and 142671'. The nature of the interest is that Councillor Holstein is an organiser of the Lockyer Valley Foothills Art Show, which has received sponsorship from Rugby Farms Pty Ltd. Councillor Holstein left the meeting room at 9:20am (including any area set aside for the public) while the matter was discussed and voted upon.

10.5 Renewal of Lease over Land No. 142601, 142621, 142631, 142651 and 142671

Author: Ian Church, Chief Executive Officer
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:

The purpose of this report is to consider the future use of Land No. 142601, 142621, 142631, 142651 and 142671 situated at Smithfield Road, Gatton and applying the exception from tendering in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* to enable a new lease to be offered to the current tenant.

Officer's Recommendation:
THAT in relation to the future use of Land No. 142601, 142621, 142651 and 142671 Council resolve to:

a) **apply the exception contained in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* and offer a new Lease to the current tenant on terms satisfactory to Council;**

b) **offer a licence to the current tenant for the balance of the Land which may be required for future use and disposal on terms satisfactory to Council; and**

c) **delegate authority to the Chief Executive Officer to negotiate terms and enter into a lease and licence with the current tenant.**

RESOLUTION

THAT in relation to the future use of Land No. 142601, 142621, 142651 and 142671 Council resolve to:

a) **apply the exception contained in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* and offer a new Lease to the current tenant on terms satisfactory to Council;**

b) **offer a licence to the current tenant for the balance of the Land which may be required for future use and disposal on terms satisfactory to Council; and**

c) **delegate authority to the Chief Executive Officer to negotiate terms and enter into a lease and licence with the current tenant.**

Moved By: Cr Qualischefski Seconded By: Cr Hagan
Resolution Number: 20-24/0748

CARRIED
5/0

Executive Summary

The purpose of this report is to consider the future use of Land No. 142601, 142621, 142631, 142651 and 142671 situated at Smithfield Road, Gatton ('the Land') and to consider whether or not to apply the exception from tendering in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* and offer a new lease to the current tenant.

Proposal

The current tenant owns various properties which adjoin the Land. They also currently lease the whole of the Land for the purpose of agricultural and grazing use under the holding over provisions of a lease that commenced on 1 January 2004.

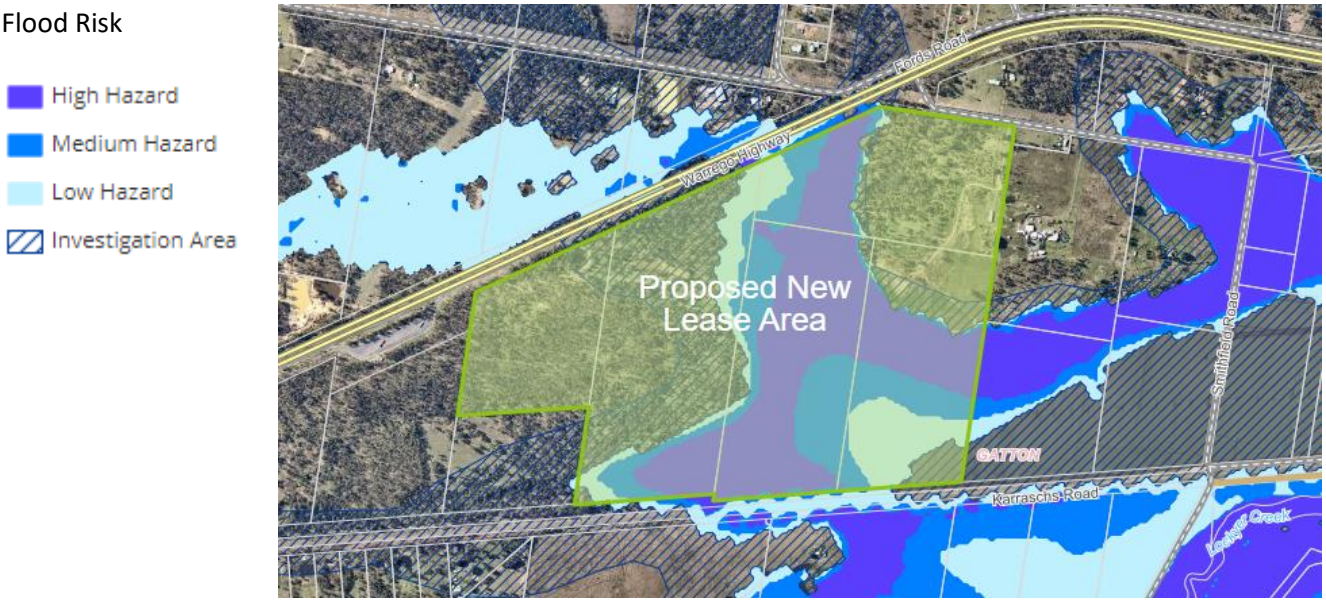
The current Lease area is shown below:

Area (approx.) 182.4424 hectares

As the western part of the current lease area has been identified for potential future use in relation to projects associated with Inland Rail, it is proposed that a new lease to the current tenant be offered over only that area of land shown below:

Area (approx.)	149.3912 hectares
Tenure	Freehold
Zoning	Rural Agricultural, Rural General

Flood Risk

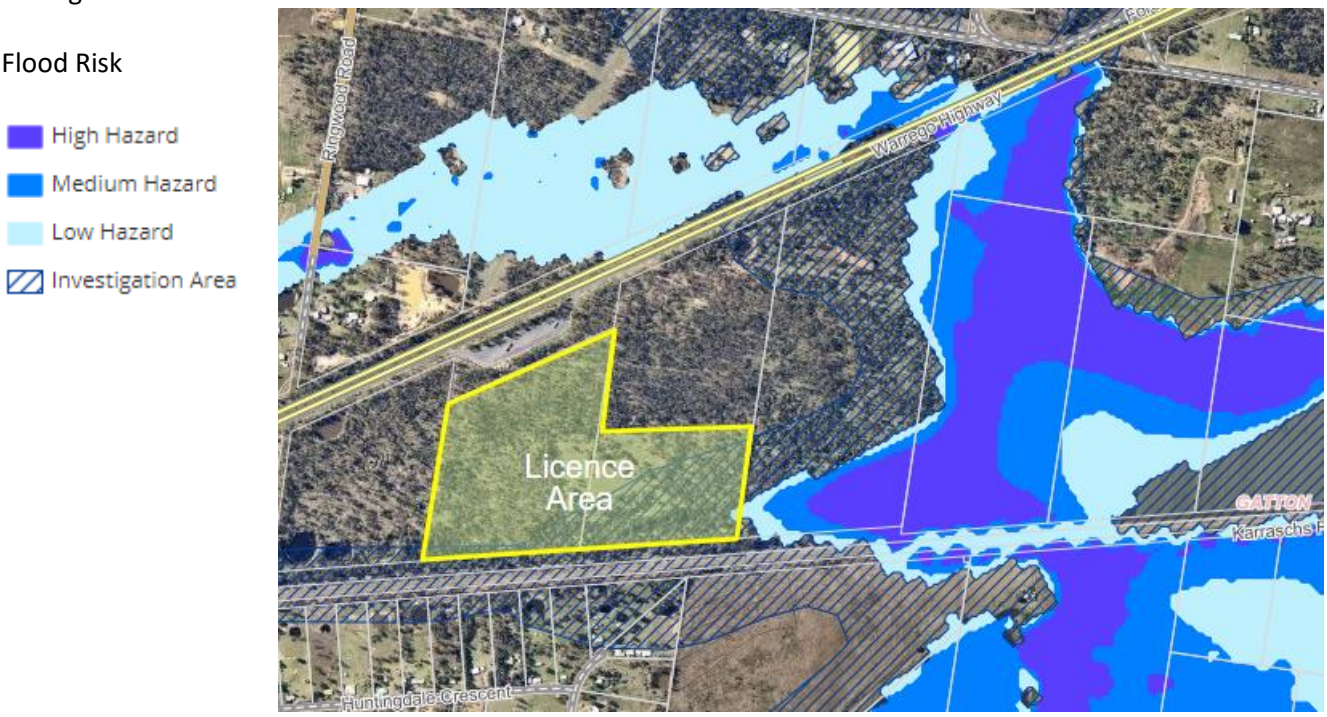


Note: This will include all improvements on the land, though no residential use will be permitted under the lease terms.

The balance of the land that the tenant currently leases, is proposed to be licenced to them for use on the same terms and conditions as the lease subject to Council having the right to terminate the licence without penalty if the land is required for other purposes. This could include use for projects associated with Inland Rail, or other disposal. The proposed licence area is shown below:

Area (approx.)	33.2785 hectares
Tenure	Freehold
Zoning	Rural General

Flood Risk



An Aerial Plan showing the proposed lease and licence areas and the Lessee's adjoining land is **Attachment 1** to this report.

Options

Option 1 – Apply the exception contained in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* and offer a new Lease and Licence to the current tenant.

Option 2 - Apply the exception contained in Section 236(1)(c)(iii) of the *Local Government Regulation 2012* and offer a new Lease over the proposed new lease area to the current tenant.

Option 3 - Invite tenders to lease the land (proposed lease area only) for agricultural and grazing purposes with a purchase option.

Strategic Implications

Corporate Plan

Lockyer Leadership and Council

- Excellence in customer service to our community
- Compliant with relevant legislation

Finance and Resource

The tenant currently pays rental of $22,000.00 per annum including GST. If a new lease is offered, the tenant will be required to pay rent at least equal to market rent for the land. This will be determined by a valuation obtained by Council.

Council's Property Officer can prepare the relevant documentation to give effect to Council's resolution, regardless of which option Council adopts.

Legislation and Policy

Council must apply the exception from tendering for the lease of the land in section 236(1)(c)(iii) of the *Local Government Regulation 2012* before a new lease to the current tenant can be offered. This exception is applicable where the disposal of the interest in the land (i.e.. a lease) is for the purpose of renewing the lease of land to the existing tenant of the land.

The Land was originally leased to six related individuals (parents, children and spouses) who operated under a business name of D & J Hood Farming. Two of these individuals (the parents) are no longer involved in the business operations and haven't been for some time. The remaining individuals have since established Rugby Farm Pty Ltd Pty Ltd and continue to operate the business, including the lease operations, in this name. It is proposed that Rugby Farm Pty Ltd Pty Ltd, which for all intents and purposes is the current tenant, would be the lessee and licensee under any new lease and licence offered.

By offering a licence over the western part of the current leased land that may be required for future use or disposal, Council will be able to terminate the licence and make the land available when required without impacting the lease which will continue for the lease term. A licence does not constitute a disposal of an interest in land requiring the application of an exception under Section 236 of the *Local Government Regulation 2012*.

The current tenant had indicated a desire to lease the land for three years on terms that include a purchase option, however in order to comply with Council's contracting obligations under the *Local Government Regulation 2012* Council would need to first invite tenders for a lease on these terms. The tenant has been informed of this and it is proposed that a lease for a term of three years without a purchase option will be offered, with the intention for Council to go to market for sale of the land or a lease with a purchase option at the end of the lease term.

Risk Management

Key Corporate Risk Code and Category:	LCL1
Key Corporate Risk Descriptor:	Legal Compliance and Liability Compliance management – regulatory or contract compliance, litigation, liability and prosecution

Consultation

Internal Consultation

- ✓ Community and Regional Prosperity
- ✓ People, Customer and Corporate Services
- ✓ Infrastructure
- ✓ Finance

External Consultation

The Chief Executive Officer, Group Manager Community and Regional Prosperity and the Manager Planning, Policy & Community Wellbeing have met with the tenant on two occasions this year to discuss the lease and use of the land. The tenant is aware that a recommendation will be made to Council for a lease to be offered for three years on terms that don't include a purchase option. After this time, Council may go to market for sale of the land.

Attachments

1⇩ Aerial Plan 1 Page

User: JC
Date: 09/02/2023
Scale (A4): 1:30000
Projection: GDA94 / MGA94 Zone 56

N

Attachment 1

CR HOLSTEIN RETURNED TO THE MEETING AT 9:28AM.

11.0 PEOPLE, CUSTOMER AND CORPORATE SERVICES REPORTS

11.1 Simultaneous Road Closure and Opening Application - Part of Rosier Road, Iredale within Property No. 260690

Author: Julie Lyons, Property Officer
Responsible Officer: Dan McPherson, Group Manager People, Customer and Corporate Services

Purpose:

The purpose of this Report is to consider an application for the simultaneous road closure and opening of the road reserve within Property No. 260690.

Officer's Recommendation:
THAT with respect to the request by Clark Town Planning acting on behalf of the owners of Property No. 260690 for Council's views as road manager in relation to their proposed simultaneous road closure and opening application within Property No. 260690, Council resolve to respond to the Applicant by completing the Part C Statement in relation to an application under the *Land Act 1994* to offer no objection to the application and require that the closed road area be amalgamated into Property No. 260690 if the application is approved.

RESOLUTION

THAT with respect to the request by Clark Town Planning acting on behalf of the owners of Property No. 260690 for Council's views as road manager in relation to their proposed simultaneous road closure and opening application within Property No. 260690, Council resolve to respond to the Applicant by completing the Part C Statement in relation to an application under the *Land Act 1994* to offer no objection to the application and require that the closed road area be amalgamated into Property No. 260690 if the application is approved.

Moved By: **Cr Holstein** **Seconded By:** **Cr Wilson**
Resolution Number: 20-24/0749

CARRIED
6/0

Executive Summary

The purpose of this report is to consider an application for the simultaneous road closure and opening of the road reserve within Property No. 260690.

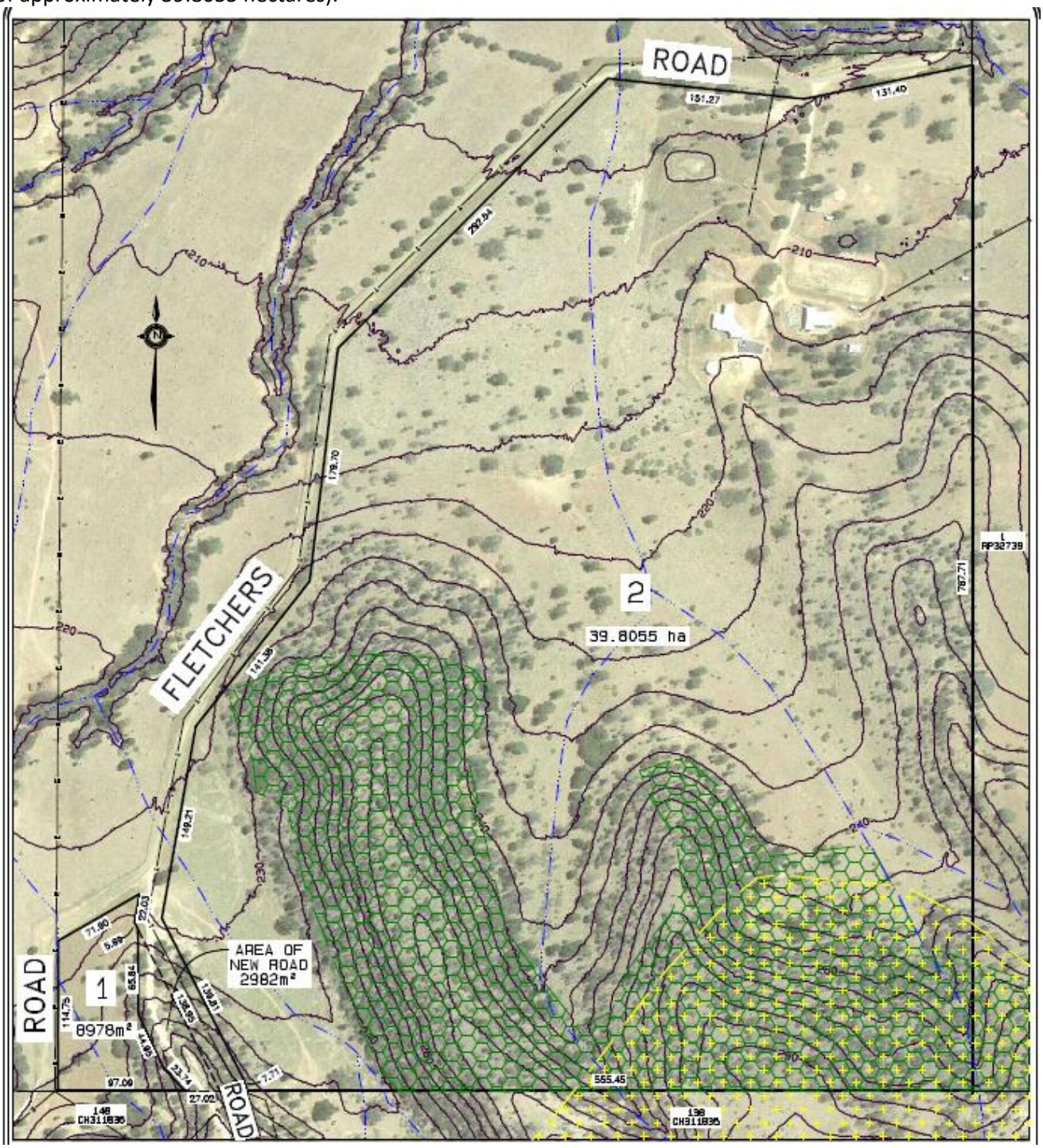
Proposal

Council has received a request from Clark Town Planning who are acting for the owners of Property No. 260690 (Applicant) for Council to provide its views in relation to the proposed application for Simultaneous Road Closure and Opening of the road reserve within Property No. 260690. This is a pre-requisite step before

an application can be lodged with the Department of Resources (DR) for consideration. Council is required to complete the "Part C Statement in relation to an application under the *Land Act 1994* over State Land" with its views so that the relevant form can be submitted with the application.

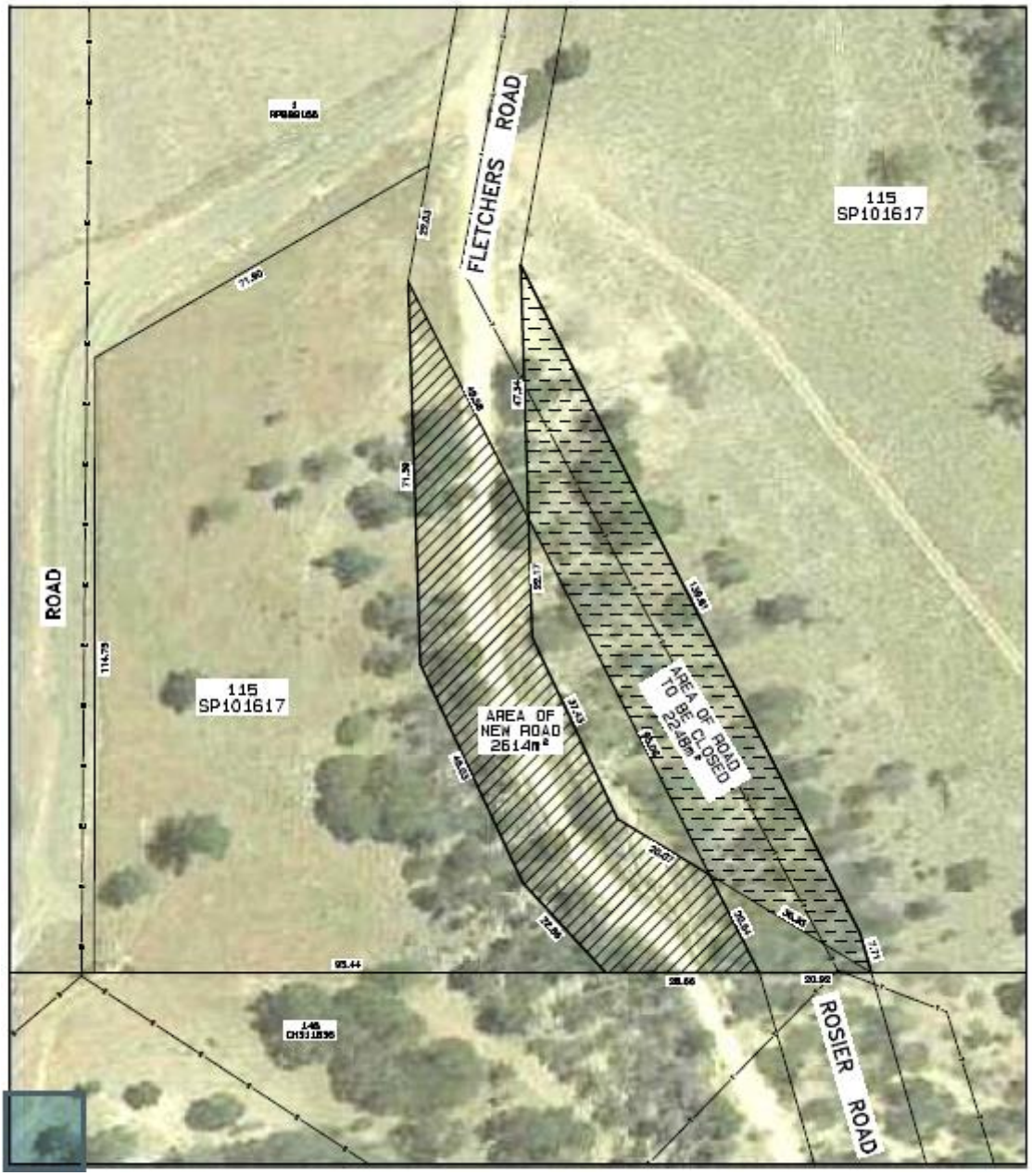
The Applicant is also in the process of an Application for Reconfiguring a Lot for Subdivision (1 into 2 Lots) over Property No. 260690 and have been advised by Council's Planning Team that the alignment of the road reserve would be required to be resolved. If the application is successful, the effect will be that the dedicated road will align with the constructed road.

The 1 into 2 Lot subdivision is shown below (Lot 1 comprising of approximately 8978m² and Lot 2 comprising of approximately 39.8055 hectares):



The Road Reserve area and the constructed road area is shown below:

The proposed road closure and road opening is shown below (road closure area approximately 2248m² and road opening area approximately 2614m²):



An Aerial Map showing the surrounding areas is **Attachment 1** to this Report.

The Recommendation in this Report will enable the Applicant to make a formal application for Simultaneous Road Closure and Opening to the DR for consideration. Whether or not the application is approved is a decision that rests with the DR.

The DR is responsible for publishing the proposed simultaneous road closure and opening and engaging with any other interested parties and agencies to determine whether there are any objections to the application.

Any objections received by the DR may be viewed by other parties interested in the proposed simultaneous road closure and opening in accordance with the provisions of the *Right to Information Act 2009*.

Options

Option 1 Council support the application and provide any views.
Option 2 Council objects to the application and provide reasons.

Strategic Implications

Corporate Plan

Lockyer Leadership and Council
- Excellence in customer service to our community
- Compliant with relevant legislation

Finance and Resource

No financial or resource implications for Council have been identified.

If the application is successful, the DR will notify Council of any update to the land areas and values for rating purposes.

Legislation and Policy

An Application for Simultaneous Road Closure and Opening can be used when:

- a road is to be opened in a lot and at the same time a road is to be closed in the same lot or adjoining lot;
- the road to be opened is a replacement for the road being closed because of a realignment of the road network.

If the land is freehold land, the simultaneous road closure and opening can only occur when:

- the road being opened is a replacement for the road being closed because of a realignment of the road network;
- the road being opened and closed is in the same lot or an adjoining lot held by the same registered owner;
- the roads being opened and closed are for the benefit of the public.

If the application is successful the Applicants will receive a written offer from the DR and conditions may include:

- payment of the purchase price (including GST);
- payment of stamp duty on the sale;
- lodgement of a plan of survey;
- payment of all regulatory fees and charges.

Council's consideration of this application, and the issue of the completed Part C Statement in relation to an application under the *Land Act 1994* over State land with Council's views, comply with the DR's policy requirements for the assessment of such applications.

Risk Management

Key Corporate Risk Code and Category:	LCL1
Key Corporate Risk Descriptor:	Legal Compliance and Liability Compliance management – regulatory or contract compliance, litigation, liability and prosecution
Key Corporate Risk Code and Category:	IA1
Key Corporate Risk Descriptor:	Infrastructure and Assets Planning, managing and maintaining assets for the future

Consultation

Internal Consultation

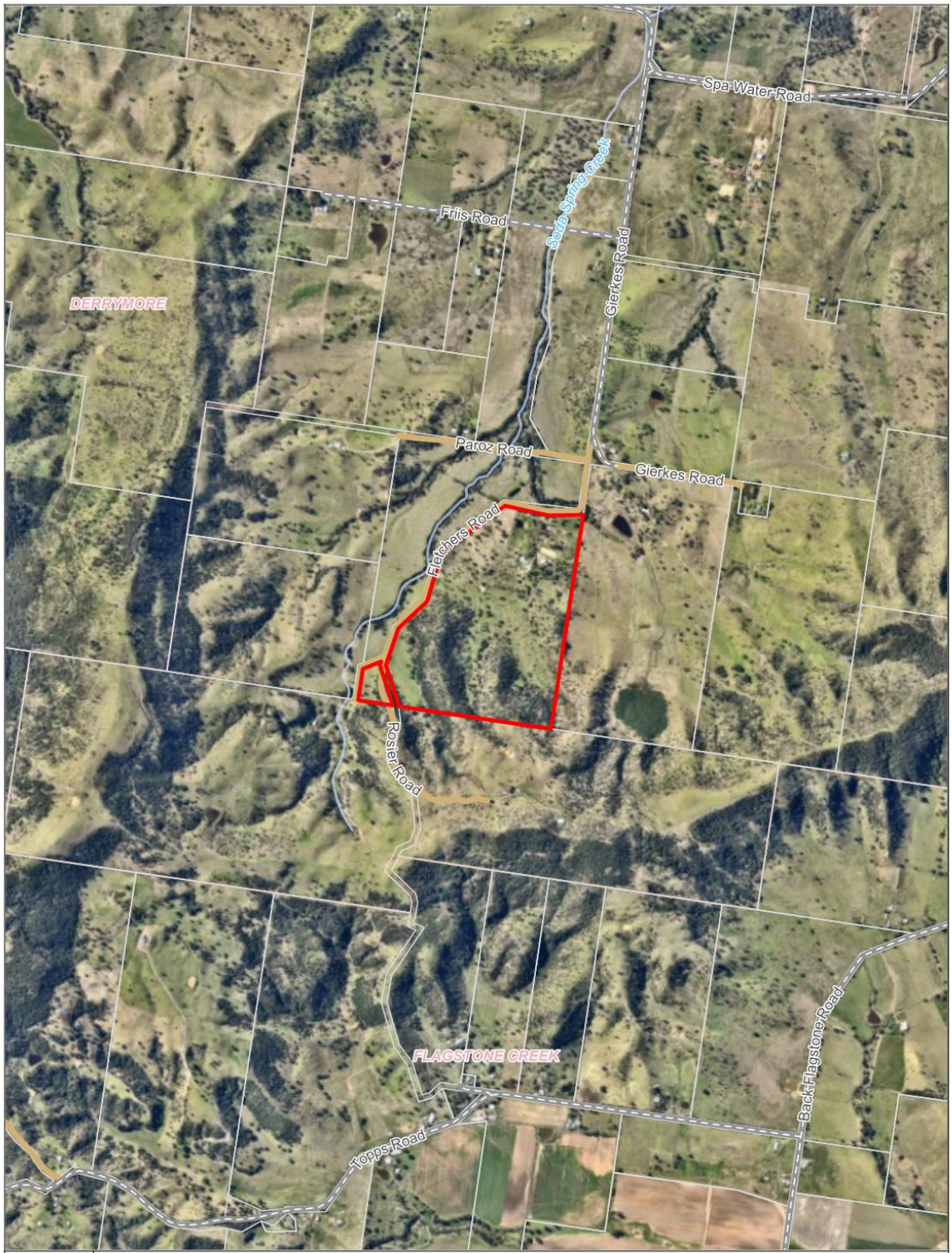
- ✓ Community and Regional Prosperity
- ✓ People, Customer and Corporate Services
- ✓ Infrastructure
- ✓ Finance

The Applicant has had discussions with Council's Planning Team in relation to the Application for Reconfiguring a Lot for Subdivision (1 into 2 Lots) over Property No. 260690. Council's Planning Team advised the Applicants the main issues relate to the proposed Lot 1 and the opening of the new road. Council's Planning Team advised the Applicants that their preference to deal with the road area would be a simultaneous road closure and opening application with the DR and that the road reserve width remains the same (20m). The existing road reserve being closed would then be incorporated into the proposed Lot 2.

Council's Group Manager of Infrastructure has advised that Council maintains the constructed section of road reserve area within Property No. 260690.

Attachments

1⇩ Attachment 1 1 Page



User: JC
Date: 20/01/2023
Scale (A4): 1:18056
Projection: GDA94 / MGA94 Zone 56

N

Attachment 1

11.2 Application for Permit to Occupy - Bore Site within Land No. 77061

Author: Julie Lyons, Property Officer
Responsible Officer: Dan McPherson, Group Manager People, Customer and Corporate Services

Purpose:

The purpose of this report is to consider an application for a Permit to Occupy over a Bore Site within Land No. 77061.

Officer's Recommendation:
THAT with respect to the request received from the owner of Land No. 77071 for Council's views in relation to the proposed Application for a Permit to Occupy over a Bore Site within Land No. 77061, Council resolve to respond to the Applicant by completing the Part C Statement in relation to an application under the *Land Act 1994* and advise that Council has no objection to the proposed Application for a Permit to Occupy over a Bore Site within Land No. 77061.

RESOLUTION

THAT with respect to the request received from the owner of Land No. 77071 for Council's views in relation to the proposed Application for a Permit to Occupy over a Bore Site within Land No. 77061, Council resolve to respond to the Applicant by completing the Part C Statement in relation to an application under the *Land Act 1994* and advise that Council has no objection to the proposed Application for a Permit to Occupy over a Bore Site within Land No. 77061.

Moved By: Cr Vela Seconded By: Cr Wilson
Resolution Number: 20-24/0750

CARRIED
6/0

Executive Summary

The purpose of this report is to consider an Application for a Permit to Occupy over a Bore Site within Land No. 77061 and for Council to provide its views in relation to the proposed Application for a Permit to Occupy by completing the "Part C Statement in relation to an application under the *Land Act 1994* over State Land" with its views so that the relevant form can be submitted with the application.

Proposal

Council has received a request from the new owner of Land No. 77071 (Applicant) for Council to provide its views in relation to the proposed Application for a Permit to Occupy over a bore site within Land No. 77061 (Bore Site Area) in which Council is Trustee. This is a pre-requisite step before an application can be lodged with the Department of Resources (DR) for consideration. Council is required to complete the "Part C Statement in relation to an application under the *Land Act 1994* over State Land" with its views so that the relevant form can be submitted with the application.

The Bore Site Area is shown below:

Area	28.1664 m2
Tenure	Reserve for Water Supply
Zoning	Rural Agricultural Land

The Applicants property (Land No 77071) and the Bore Site Area is shown below:

The Applicant has recently purchased Land No. 77071 from the previous Registered Permittee of the Bore Site Area and the Applicant now wishes to become the Registered Permittee of the Bore Site Area to be used in conjunction with Land No. 77071. The previous Permit to Occupy was issued for a Water Facility for the use on Land No. 77071 and it was a condition of the Permit to Occupy that upon the transfer or disposal of Land No. 77071 the Permit to Occupy was required to be cancelled.

A Permit to Occupy may be issued over unallocated State Land, a reserve or a road although this tenure cannot be sold, sublet or mortgaged. It does not create an interest in land or provide exclusive occupation.

Generally, before a Permit to Occupy is granted for a bore site, the Applicant needs to demonstrate that it is not possible to locate the bore on their own land. As the bore is an existing bore used by the previous owners, it is implied that these issues have been considered and resolved. Permits to Occupy are the appropriate short-term tenure when occupation of State-controlled land is required. A Permit to Occupy may be cancelled at short notice (generally 3 months) with no compensation.

The Recommendation in this Report will enable the Applicant to make a formal application for a Permit to Occupy to the DR for consideration. Whether or not the application is approved is a decision that rests with the DR.

The DR is responsible for publishing the proposed Permit to Occupy and engaging with any other interested parties and agencies to determine whether there are any objections to the application.

Any objections received by the DR may be viewed by other parties interested in the proposed Permit to Occupy in accordance with the provisions of the *Right to Information Act 2009*.

Options

Option 1 Council doesn't object to the proposed Permit to Occupy application.
Option 2 Council objects to the proposed Permit to Occupy application and provide reasons.

Strategic Implications

Corporate Plan

Lockyer Leadership and Council
- Excellence in customer service to our community
- Compliant with relevant legislation

Finance and Resource

No financial or resource implications for Council have been identified.

Legislation and Policy

Council's consideration of this application, and the issue of the completed Part C Statement in relation to an application under the *Land Act 1994* over State land with Council's views, comply with the DR's policy requirements for the assessment of such application.

If successful, the Application will be required to pay an annual occupation fee to DR. The Applicant will also be required to obtain public liability insurance in respect of the Permit to Occupy area.

Risk Management

Key Corporate Risk Code and Category:	LCL1
Key Corporate Risk Descriptor:	Legal Compliance and Liability Compliance management – regulatory or contract compliance, litigation, liability and prosecution
Key Corporate Risk Code and Category:	IA1
Key Corporate Risk Descriptor:	Infrastructure and Assets Planning, managing and maintaining assets for the future

Consultation

Internal Consultation

- ✓ Community and Regional Prosperity
- ✓ People, Customer and Corporate Services
- ✓ Infrastructure
- ✓ Finance

Attachments

There are no attachments for this report.

11.3 Request for Renewal of Lease over Property No. 220150

Author: Julie Lyons, Property Officer
Responsible Officer: Dan McPherson, Group Manager People, Customer and Corporate Services

Purpose:

The purpose of this report is to consider a request from the current Lessee to enter into a new lease over Property No. 220150 situated at Fairway Drive, Kensington Grove and comply with Council's obligations under Section 236 of the *Local Government Regulation 2012*.

Officer's Recommendation:
THAT in relation to the request for the renewal of the lease over Property No. 220150 by the current lessee, Council resolve to:

a) **Apply the exception contained in Section 236(1)(c)(iii) of the Local Government Regulation 2012 and offer a new Trustee Lease to the current Lessee on terms satisfactory to Council; and**

b) **Delegate authority to the Chief Executive Officer to do all things necessary to give effect to this resolution.**

RESOLUTION

THAT in relation to the request for the renewal of the lease over Property No. 220150 by the current lessee, Council resolve to:

a) **Apply the exception contained in Section 236(1)(c)(iii) of the Local Government Regulation 2012 and offer a new Trustee Lease to the current Lessee on terms satisfactory to Council; and**

b) **Delegate authority to the Chief Executive Officer to do all things necessary to give effect to this resolution.**

Moved By: **Cr Wilson** **Seconded By:** **Cr Qualischefski**
Resolution Number: 20-24/0751

CARRIED
6/0

Executive Summary

This report is presented for Council's consideration to comply with Council's obligations under Section 236 of the *Local Government Regulation 2012* and relevant statutes and decide how to respond to the current Lessee's request for a new lease over Property No. 220150 situated at Fairway Drive, Kensington Grove ('the Land').

Proposal

The Lessee owns Property No. 219870 which adjoins the Land and leases the Land for the purpose of stock grazing. The lease commenced on 1 September 2018 and is due to expire on 31 August 2023. The Lessee has requested a further term of 5 years.

The Land details are:

Area	3.7864 hectares
Tenure	Reserve for Park
Zoning	Rural Landscape
Flood Risk	Investigation Area

An Aerial Plan showing the Land and surrounding area is **Attachment 1** to this report.

Options

Option 1 – Apply the exception contained in Section 236(1)€(iii) of the *Local Government Regulation 2012* and offer a new Trustee Lease to the current Lessee.

Option 2 – Refuse the Lessee's request and provide reasons.

Previous Council Resolutions

Resolution Number 16-20/1051 – 8 August 2018

- Apply the exception contained in Section 236(1)€(iv) of the Local Government Regulation 2012 in order for a Trustee Lease to be entered into with the interested adjoining landowner.

Strategic Implications

Corporate Plan

Lockyer Leadership and Council

- Excellence in customer service to our community
- Compliant with relevant legislation

Finance and Resource

The Lessee currently pays $5,238.72 per annum including GST with annual CPI increases. It is proposed the rental for the new lease will continue from the rental the Lessee is currently paying with annual CPI increases.

The Lessee will also be responsible for maintaining public liability insurance and the costs of registering the lease with Titles Queensland.

The Lease will be prepared by Council's Property Officer.

Legislation and Policy

Council must comply with section 236 of the *Local Government Regulation 2012* before a new lease to the current Lessee can be offered.

Risk Management

Key Corporate Risk Code and Category:	LCL1
Key Corporate Risk Descriptor:	Legal Compliance and Liability Compliance management – regulatory or contract compliance, litigation, liability and prosecution

Consultation

Internal Consultation

- ✓ Community and Regional Prosperity
- ✓ People, Customer and Corporate Services
- ✓ Infrastructure
- ✓ Finance

Attachments

1⇩ Attachment 1 1 Page


Riley Court
Harwood Street
Thompson Court
Fairway Drive
Lowien Close
Stephenson Crescent
Hannant Road
Baker-Finch Place
219870
220150
Sunview Crescent
Parkdale Place
Lakesfront Place
Scott Place
Moore Close
Fairway Drive
Graham Court
Nichlaus Court
Pemberton Place
Lockyer Valley
REGIONAL COUNCIL
Disclaimer:
This information has been prepared for Council's internal purposes and for no other purpose. No statement is made about the accuracy or suitability of the information for use for any purpose (whether the purpose has been notified to Council or not). While every care is taken to ensure the accuracy of this data, neither the Lockyer Valley Regional Council nor the Department of Environment and Resource Management makes any representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which you might incur as a result of the data being inaccurate or incomplete in any way or for any reason.© The State of Queensland (Department of Environment and Resource Management) 2017 © Lockyer Valley Regional Council 2017.
User: JC
Date: 24/01/2023
Scale (A4): 1:7500
Projection: GDA94 / MGA94 Zone 56
N
Attachment 1

12.0 COMMUNITY AND REGIONAL PROSPERITY REPORTS

12.1 MC2021/0042 & RL2021/0021 Development Application for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a lot for Subdivision and Operational Works for Advertising Device – Rosewood Laidley Road, Laidley

Author: Tammee Van Bael, Planning Officer
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

The purpose of this report is to consider an application (MC2021/0042 and RL2021/0021) for a Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 lot into 13 lots) and Operational Works for Advertising Device on Lot 1 SP104184 at Rosewood Laidley Road, Laidley.

The application has been assessed in accordance with the requirements of the *Planning Act 2016* and it is recommended that the application be approved subject to conditions.

Officer's Recommendation:
THAT the application MC2021/0042 and RL2021/0021 for a Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 lot into 13 lots) and Operational Works for Advertising Device on Lot 1 SP104184 at Rosewood Laidley Road, Laidley, be approved subject to the following conditions:

Schedule 1 – Development Permit for Material Change of Use for Service Station and Refreshment Service and Operational Works for Advertising Device Conditions

<table>
<tr><th>No.</th><th>Condition</th><th>Timing</th></tr>
<tr><td colspan="3">APPROVED PLANS AND DOCUMENTS</td></tr>
<tr><td>1.</td><td>APPROVED PLANS & DOCUMENTS
Undertake the approved development generally in accordance with the approved plans and documents, including any amendments where in red on the approved plan(s) or document(s):

<table>
<tr><th>Title</th><th>Plan No.</th><th>Revision / Amended</th><th>Date</th><th>Prepared By</th></tr>
<tr><td>Site Plan</td><td>M0112 Sheet 02 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Site Plan</td><td>M0112 Sheet 03 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Floor Plans</td><td>M0112 Sheet 04 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Elevations</td><td>M0112 Sheet 05 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
</table>
</td><td>At all times</td></tr>
</table>

	<table><tr><th>Title</th><th>Document No.</th><th>Revision / Amended</th><th>Date</th><th>Prepared By</th></tr><tr><td>Civil Engineering Report</td><td>BE210316 -RPCER-02</td><td>02</td><td>10-22</td><td>Burchills Engineering Pty Ltd</td></tr><tr><td>Conceptual Stormwater Management Plan</td><td>BE210316 -RP-CSMP-02</td><td>02</td><td>25-10-22</td><td>Burchills Engineering Pty Ltd</td></tr><tr><td>Traffic Impact Assessment</td><td>BE210316 -RP-TIA-04</td><td>04</td><td>5-05-22</td><td>Burchills Engineering Pty Ltd</td></tr></table>	
2.	**CONDITIONS OF APPROVAL AND APPROVED PLANS** Where there is a conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval take precedence.	At all times
GENERAL		
3.	**WORKS – APPLICANT'S EXPENSE** The cost of all works associated with the development and construction of the development, including services, facilities and/or public utility alterations required are met at no cost to the Council or relevant utility provider, unless otherwise stated in a development condition.	At all times
4.	**INFRASTRUCTURE CONDITIONS** All development conditions contained in this development approval about infrastructure under Chapter 4 of the *Planning Act 2016* (the Act), should be read as being non-trunk infrastructure conditioned under section 145 of the Act, unless otherwise stated.	At all times
5.	**WORKS – DEVELOPER RESPONSIBILITY** The applicant must repair any damage to existing infrastructure (e.g. kerb and channel, footpath or roadway) that may have occurred during any works undertaken as part of the development. Any damage that is deemed to create a hazard to the community, must be repaired immediately.	At all times
6.	**WORKS – DESIGN & STANDARD** Unless otherwise stated, all works must be designed, constructed, and maintained in accordance with the relevant Council policies, guidelines and standards.	At all times
7.	**WORKS – SPECIFICATION & CONSTRUCTION** All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant Australian Standards and must be approved, supervised, and certified by a Registered Professional Engineer of Queensland (RPEQ).	At all times
8.	**MAINTAIN APPROVED DEVELOPMENT** The development is to be constructed and maintained in accordance with the approved drawing(s) and/or document, and any relevant approvals.	At all times
9.	**COMMENCEMENT OF USE** The use must not commence until all conditions of this approval have been complied with.	At all times
ENGINEERING WORK – STORMWATER DRAINAGE WORKS		

10.	**STORMWATER DRAINAGE WORKS** Undertake the development such that all stormwater (except for rainwater captured on-site in rainwater tanks) is to be drained from the site and conveyed without causing annoyance or nuisance to any person. All works must be designed in accordance with the Queensland Urban Drainage Manual (QUDM).	At all times
11.	**STORMWATER DRAINAGE WORKS – DESIGN, CONSTRUCTION & MAINTENANCE** Design all necessary internal and external stormwater drainage to service the development. Such drainage works must be designed by a Registered Professional Engineer Queensland (RPEQ) and constructed in accordance with the Queensland Urban Drainage Manual and State Planning Policy (SPP) such that the overall drainage system caters for a storm event with a 1% annual exceedance probability (AEP). Design, construction and maintenance of stormwater drainage must comply with a Development Permit for Operational Work.	Prior to the commencement of any stormwater works and at all times thereafter
12.	**SUBMIT STORMWATER MANAGEMENT PLAN** Submit to Council, a detailed Site-based Stormwater Management Plan (SBSMP) certified by a Registered Professional Engineer of Queensland. In addition to other relevant stormwater quantity and quality management issues, the SBSMP must include the following: (a) A suitably scaled plan showing the stormwater catchment and sub-catchments for pre-development and post-developed scenarios; (b) Include full calculations, including where necessary electronic files from industry standard modelling software (including both electronic model files and results files) and all details of the modelling assumptions to support both the proposed water quantity and quality management strategy; € Include detailed engineering plans with details of any new drainage systems, or amendments and upgrading of existing drainage systems to implement the proposed drainage strategy; and (d) Incorporate details of ongoing maintenance and management actions required about any proposed detention basin and retention systems. The SBSMP must demonstrate the development: (a) Achieves no increase in peak stormwater runoff from pre-developed conditions for a selected range of storm events up to and including the 1% annual exceedance probability (AEP) for the post development condition; and (b) Provides for stormwater quality treatment measures that achieve the applicable design objectives listed in Part G, Appendix 2 (Stormwater management design objectives) of the State Planning Policy.	At the same time as a development application for Operational Work
EROSION AND SEDIMENT CONTROL		
13.	**SUBMIT EROSION & SEDIMENT CONTROL PLAN** Submit a 'For construction' Erosion and Sediment Control Plan (ESCP) as part of the Operational Works application. The ESCP must:	As indicated

	(a) be prepared by suitably qualified and experience Registered Professional Engineer of Queensland and Certified Professional in Erosion and Sediment Control (CPESC); (b) relate to each phase of the works (including but not limited to, clearing, earthworks, manage, flows and capture sediment); *Note: Very rarely can erosion and sediment control requirements for a single stage, be communicated and detailed effectively and a whole of site plan should be prepared for each stage. Standard notes and drawings do not form an ESCP as they provide no guidance to the Contractor on-site.* € be consistent with current best practice standards to the extent that the standards are not inconsistent with the conditions of approval and consider all environmental constraint including erosion hazard, season, climate, soil, and proximity to waterways; (d) provide sufficient detail to ensure compliance with all conditions of this permit relating to erosion and sediment control is achieved; € include details of the proposed flocculants and automatic dosing systems for sediment basins, including jar testing results; (f) demonstrate the suitability of the proposed flocculants having regard to the downstream receiving environment and water quality; and (g) include the results of all soil investigations undertaken for the whole development site.	
14.	**IMPLEMENT EROSION & SEDIMENT CONTROL PLAN** Implement and maintain the Erosion and Sediment Control Plan (ESCP) for the duration of the construction works, and until such time all exposed soil areas are permanently stabilised (e.g. turfed, hydro mulched, concreted or landscaped etc.). The ESCP must be available on-site for inspection by Council Officers during the works.	As indicated
ENGINEERING WORK – CARPARKING AND ACCESS		
15.	**ON-SITE CAR PARKING AND VEHICULAR ACCESS** Design, construct and maintain all car parking and access works generally in accordance with the approved plans AS2890-1: 2004 Parking facilities – Off-street car parking, AS/NZS2890.6: 2009 Parking facilities – Off-street car parking for people with disabilities, Manual of Uniform Traffic Control Devices (Queensland).	At all times
16.	**VEHICULAR ACCESS – DESIGN** Design any new crossovers such that the edge of the crossover is no closer than 1 metre to any existing or proposed infrastructure, including any stormwater gully pit, maintenance hole, service infrastructure (e.g. power pole, telecommunications pit), and road infrastructure (e.g. street sign, street tree, etc). Design the re-location of any infrastructure services to meet the above criteria as required.	At the same time as a development application for Operational Work
17.	**SIGNAGE AND LINE MARKING** Signage and line marking must be provided in accordance with AS1742 Manual of Uniform Traffic Control Devices and in accordance with the Manual of Uniform Traffic Control Device (MUTCD).	At all times

18.	**ON-SITE CAR PARKING** Provide and retain a minimum of 15 car parking spaces on-site in accordance with the approved plans. All car parking spaces must be given an imperviously sealed surface treatment.	At all times
19.	**ON-SITE CAR PARKING – PEOPLE WITH DISABILITIES** Ensure parking spaces for people with disabilities and access to them complies with AS1428.1:2009 Design for access and mobility – General requirements for access – New building work and AS/NZS 2890.6:2009 Parking facilities – Off-street parking for people with disabilities.	At all times
20.	**DRIVEWAYS AND ON SITE MANOUERVING** Design, construct and maintain all driveways, internal circulation areas, manoeuvring areas, loading and unloading areas and refuse collection facilities in accordance with the standards specified in AS2890.2: 2018 – Parking facilities – Off-street commercial vehicle facilities and AS2890.5:1993 – Parking facilities – On-street parking.	At all times
21.	**VEHICULAR ACCESS** Vehicular access is only permitted at the approved crossover locations as shown on the approved plans. Vehicles are not permitted to enter or exit the site in any other location.	At all times
22.	Provide vehicle bollards or wheel stops to control vehicular access and to protect landscaping or pedestrian areas to all car parking spaces that abut landscaping or pedestrian areas.	Prior to commencement of the use and at all times thereafter
EXCAVATING AND FILLING		
23.	**OPERATIONAL WORK – EARTHWORKS PLAN** Provide an earthworks plan that clearly identifies the following: (a) The location of cut and/or fill; (b) The type of fill to be used and the compaction standards; € The quantum of fill to be deposited or removed and finished cut and/or fill levels; (d) Retaining structures (if necessary); and € Surface and sub-surface drainage controls (if applicable).	As part of a development application for Operational Work (Excavating and Filling)
24.	**EXCAVATING AND FILLING** Carry out excavating (cut) and filling activities in accordance with the AS3798-2007 Guidelines on earthworks for residential and commercial developments, the approved plans and the complies with a Development Permit for Operational Works (Excavating and Filling).	At all times
25.	**EXCAVATING AND FILLING** Ensure the excavating or filling does not concentrate or divert stormwater onto adjoining land to a degree which is worse than that which existed prior to the works.	At all times
26.	**EXCAVATING & FILLING** Ensure the excavating or filling does not result in the ponding or permanent retention of surface water either on the site or on adjoining land.	At all times
27.	**EXCAVATING & FILLING** Ensure areas of fill and excavation are graded, compacted and planted and/or mulched, unless otherwise approved, immediately after the excavation/filling is complete, and at all times thereafter.	At all times

LANDSCAPING		
28.	**OPERATIONAL WORK – LANDSCAPING** Submit as part of the first Operational Works application a Landscaping Plan, prepared by a suitably qualified Landscape Architect in accordance with the *Laidley Shire Planning Scheme 2003*. The extent and location of landscaping must be generally in accordance with the approved plans and documents and the following: (a) Landscaping plans; (b) Provide a planting schedule and maintenance plan which includes: € Botanical names, mature heights and widths of plants, pot sizes, different key symbols and numbers of plants; (d) Planting bed preparation details including any topsoil depth, subgrade preparation, mulch type and depth, and type of turfing used; € Any hardscaping details including pebbled, paved or garden edged areas; (f) Ongoing maintenance schedule for plants; and (g) Irrigation system details (if any).	As indicated
29.	**ESTABLISHMENT OF LANDSCAPING WORKS** Establish, maintain and retain all landscaping generally in accordance with the approved Landscaping Plan. The landscaped areas must be subject to ongoing maintenance and a replanting programme (if necessary).	At all times
WASTE MANAGEMENT		
30.	**WASTE STORAGE** Store all waste within a waste storage area (e.g. general waste, recyclable waste, pallets, empty drums, etc.) as shown on the approved plans. The waste storage area must be: (a) Designed to not cause nuisance to neighbouring properties; (b) Screened from any road frontage and adjoining property; € Of a sufficient size to accommodate commercial type bins that will be serviced by a commercial contractor plus clearance around the bins for manoeuvring and cleaning; (d) Provided with a tap and hose at the waste storage area, and washdown must be drained to the sewer and fitted with an approved stormwater diversion valve arrangement in accordance with the provisions of a Trade Waste Permit and the *Plumbing and Drainage Act 2018*.	At all times
AMENITY – GENERAL		
31.	**AMENITY – GENERAL** Install and maintain suitable screening to all air conditioning and plant and service facilities located on the top or external face of the building. The screening structures must be constructed from materials that are consistent with materials used elsewhere on the façade of the building.	At all times
AMENITY – LIGHT		
32.	**AMENITY – LIGHTING**	At all times

	Maintain outdoor lighting to comply with AS4282:1997 – Control of the obtrusive effects of outdoor lighting. Light sources at the premises must be positioned and shielded to prevent light spillage outside the boundaries of the premises.	
SERVICE STATION		
33.	**LOCATION OF FUEL PUMPS** Locate all fuel pumps in accordance with Australian Standard AS1940 – The storage and handling of flammable and combustible liquids.	At all times
34.	**LOCATION OF FUEL PUMPS** All fuel bowsers and dispensers must be designed to comply with AS/NZ2299 Fuel dispensing equipment for explosive atmospheres and be located to comply with AS1940 The storage and handling of flammable and combustible liquids.	Prior to commencement of the use and at all times thereafter
35.	**INLETS – BULK FUEL STORAGE TANKS** Locate inlets to bulk fuel storage tanks that ensures tankers, while discharging fuel, are standing wholly within the site and are on level ground.	At all times
36.	**UNDERGROUND TANKS** All underground bulk fuel storage tanks utilised for the storage system must be manufactured to comply with AS1692 Steel Tanks for Flammable and Combustible Liquids and be located to comply with AS1940 The storage and handling of flammable and combustible liquids.	Prior to commencement of the use and at all times thereafter
37.	**LP GAS** If LP Gas is to be provided on site, the design and layout of the Service Station must comply with the requirements of AS1596 series – Storage and handling of LP Gas.	Prior to commencement of the use and at all times thereafter
38.	**REFUELLING VEHICLE** The largest vehicle approved for the bulk refuelling of underground fuel storage tanks is a 20m Articulated Vehicle(AV).	At all times
39.	**COMMISSIONING** The new underground petroleum storage system must not be commissioned unless the system includes the following mandatory pollution protection equipment: (a) Non-corrodible tanks/s and non-corrodible piping; (b) Secondary containment for tank/s and piping; € Dispenser sump/s; (d) Fill point spill containment equipment; € Overfill prevention protection equipment; (f) Tank pit observation well/s; and (g) Equipment that earths a storage system.	At all times
40.	**FUEL DISPENSING AREAS** Fuel dispensing areas must be clearly delineated from other areas such as remote air/water supply areas, uncovered forecourt areas, access roads and general parking bays by methods such as a painted lines on the ground, roll-over bunds or different coloured concrete. Fuel dispensing areas must be designed so that no vehicle may be refuelled outside the delineated areas.	Prior to commencement of the use and at all times thereafter
41.	**FUEL DISPENSING AREAS**	Prior to commencement of

	The fuel dispensing area must be graded to the containment vessel (SPEL Triceptor/Puraceptor). The fuel dispensing area must be designed and constructed to ensure that stormwater is diverted away from this area. The installation of SPEL Triceptor/Puraceptor (and SPEL Filter Cartridges/Round Tank) must be installed in accordance with the Stormwater Management Plan for the site.	the use and at all times thereafter
42.	**CONTAINMENT VESSEL** The containment vessel (SPEL Triceptor/Puraceptor) must contain both a volume equivalent to at least the volume of the largest tanker compartment likely to be delivering fuel to the site plus a nominal allowance for windblown rain.	Prior to commencement of the use and at all times thereafter
43.	**CONTAINMENT VESSEL** The containment vessel (SPEL Triceptor/Puraceptor) must be fitted with high level alarms to notify operators that the tank requires emptying. All liquid and sludge waste must be disposed of in accordance with the requirements of the *Environmental Protection Regulation 2019*.	Prior to commencement of the use and at all times thereafter
44.	**STORMWATER TREATMENT SYSTEMS** Stormwater treatment systems (SPEL Triceptor/Puraceptor and SPEL Filters Cartridges/Round Tank) and drains must be inspected and maintained in accordance with the manufacturer's recommendations. Records of regular inspections, oil and sediment checks and contractor receipts must be available for inspection at any time.	Prior to commencement of the use and at all times thereafter
45.	**SPILLS AND LEAKS** Leakage and spills of oil and/or other fluids from cars entering forecourt areas must be cleaned up as soon as practicable to prevent access of contaminants to stormwater drains.	At all times
46.	**SPILLS AND LEAKS** All spills and leaks from bulk fuel transfer activities must be contained on-site. Fuel delivery standing areas outside of the canopy must be designed so that run-off is automatically diverted to the underground containment vessel during bulk fuel transfers.	At all times
47.	**LEAK DETECTION** All practicable measures must be taken to prevent loss of containment from any underground petroleum storage system. An approved leak detection system must be installed and operated at sufficient frequency, sensitivity and reliability to provide a high level of confidence that a release of a petroleum product will be detected in sufficient time for a response to be implemented before an unacceptable risk is posed to human health, property or the environment. As a minimum standard, all underground petroleum storage systems are required to be monitored using a system that: (a) Can detect a leak from any portion of the underground storage system; (b) Uses equipment that has been installed, calibrated and commissioned in accordance with the manufacturer's instructions;	Prior to commencement of the use and at all times thereafter

	€ Is capable of detecting a leak at a rate of 0.76 litres per hour or more with at least 95% accuracy and a probability of false detection of 0.05 or less (USEPA); (d) Has been certified by an independent third party, consistent with the current USEPA protocols and system of verification (USEPA); € Reports with a frequency of not less than monthly; and (f) Is operated by a suitably trained person.	
48.	**GROUNDWATER MONITORING** Groundwater monitoring well(s) must be installed on site, if the site is deemed suitable by a suitably qualified and experienced person with experience in hydrology. The number and location of groundwater monitoring wells to be installed on site is also to be determined by a suitably qualified and experienced person with a view to maximising the likelihood that the wells will intercept contaminated groundwater, whatever the groundwater flow conditions. A survey of groundwater movement across the site and assessment of the suitability of the use of groundwater monitoring wells in accordance with section 4.5.7.1 of AS4897 – 2008 – 'The design, installation and operation of underground petroleum storage systems' must be undertaken as part of this process.	Prior to commencement of the use and at all times thereafter
49.	**VAPOUR RECOVERY** Stage 1 Vapour Recovery Systems (VR1) must be installed for all tanks used for the storage of petroleum on the site to return displaced vapour to the delivery vehicle during filling of the underground petroleum storage system. The Vapour Recovery System must be designed and installed in compliance with the following: (a) Mixing of product must be prevented in pipework common to more than one tank; and (b) Spring-loaded vapour return adaptor, which closes when the hose is disconnected, must be installed in the top of the riser; and The vapour recovery point must be located within 2 metres of the respective fill point.	Prior to commencement of the use and at all times thereafter
50.	**IMPERVIOUS AREAS** Provide and maintain sealed impervious surfaces in areas where potential spills of contaminants may occur.	Prior to commencement of the use and at all times thereafter
51.	**FORECOURT AREAS** Construct and maintain all uncovered forecourt areas liable to contamination from vehicular activities using impermeable materials, free of gaps and cracks.	At all times
52.	**FUEL DISPENSING AREAS** Construct and maintain all Fuel Dispensing Areas (FDA) using impermeable materials, free of gaps and cracks. Suitable materials include waterproofed and reinforced concrete.	At all times
53.	**DECOMMISSIONING** Decommissioning of the underground fuel tank must be carried out in accordance with the AS4976 The removal and disposal of underground petroleum storage tanks, or where the storage system cannot be removed safely without serious risk to the safety of people	At the time of decommissioning of the underground petroleum storage system

	or adjoining infrastructure, the tanks must be decommissioned in-situ, in accordance with AS4976, without being removed.	
54.	**DECOMMISSIONING** Where decommissioning is carried out, provide certification to Council from a suitably qualified person which certifies that the system is transported and disposed of in accordance with the above standards and legislation.	Within ten (10) business days of the decommissioning of the underground petroleum storage system
55.	**DECOMMISSIONING** All records associated with the decommissioning of tanks must be maintained for a minimum of seven years after removal of the tank. During this seven year period, these records are to be provide to any new owners to ensure all practicable measures have been implemented to prevent site contamination.	As indicated
ADVERTISING DEVICE		
56.	The advertising devices are approved to advertise the Service Station and Refreshment Service on the subject land only.	At all times
57.	The advertising devices must be wholly located within the boundary of the premises.	At all times
58.	Where illuminated from within, the advertising device must not flash, blink or pulse.	At all times

Schedule 2 – Development Permit for Reconfiguring a Lot for Subdivision (1 lot into 13 lots) Conditions

No.	Condition	Timing
APPROVED PLANS AND DOCUMENTS		
1.	**APPROVED PLANS & DOCUMENTS** Undertake the approved development generally in accordance with the approved plans and documents, including any amendments where in red on the approved plan(s) or document(s):	At all times

Title	Plan No.	Revision / Amended	Date	Prepared By
Building Envelope Plan	SDC1655-216	Sch 1	20-12-22	Santoshi Development Consultants

Title	Document No.	Revision / Amended	Date	Prepared By
Civil Engineering Report	BE210316-RPCER-02	02	10-22	Burchills Engineering Pty Ltd
Conceptual Stormwater Management Plan	BE210316-RP-CSMP-02	02	25-10-22	Burchills Engineering Pty Ltd
Traffic Impact Assessment	BE210316-RP-TIA-04	04	5-05-22	Burchills Engineering Pty Ltd

	Vegetation, Fauna & Koala Management Plan	BE210316-RP-VFKMP-01	01	10-05-22	Burchills Engineering Pty Ltd	
	Covenant Management Plan	BE210316-RP-CMP-00	00	10-05-22	Burchills Engineering Pty Ltd	
2.	**CONDITIONS OF APPROVAL AND APPROVED PLANS** Where there is a conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval take precedence.					At all times
GENERAL						
3.	**WORKS – APPLICANT'S EXPENSE** The cost of all works associated with the development and construction of the development, including services, facilities and/or public utility alterations required are met at no cost to the Council or relevant utility provider, unless otherwise stated in a development condition.					At all times
4.	**INFRASTRUCTURE CONDITIONS** All development conditions contained in this development approval about infrastructure under Chapter 4 of the *Planning Act 2016* (the Act), should be read as being non-trunk infrastructure conditioned under section 145 of the Act, unless otherwise stated.					At all times
5.	**WORKS – DEVELOPER RESPONSIBILITY** The applicant must repair any damage to existing infrastructure (e.g. kerb and channel, footpath or roadway) that may have occurred during any works undertaken as part of the development. Any damage that is deemed to create a hazard to the community, must be repaired immediately.					At all times
6.	**WORKS – DESIGN & STANDARD** Unless otherwise stated, all works must be designed, constructed, and maintained in accordance with the relevant Council policies, guidelines and standards.					At all times
7.	**WORKS – SPECIFICATION & CONSTRUCTION** All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant Australian Standards and must be approved, supervised, and certified by a Registered Professional Engineer of Queensland (RPEQ).					At all times
8.	**MAINTAIN APPROVED DEVELOPMENT** The development is to be constructed and maintained in accordance with the approved drawing(s) and/or document, and any relevant approvals.					At all times
COVENANT						
9.	**COVENANT** (a) Enter into an environmental covenant with Locker Valley Regional Council, which complies with Section 97A of the *Land Title Act 1994*, for the enhancement and preservation of ecological values, connectivity and wildlife habitat within the Covenant Area, as identified on the Approved Plans. (b) Submit to Locker Valley Regional Council the covenant for endorsement. The covenant must detail the responsibilities,					(a) Prior to endorsement of survey plan (h) Prior to an application for plan sealing with

	liabilities, measures, remedies and intents as necessary to the enhancement and preservation of ecological values, connectivity, and wildlife habitat within the Covenant Area. € Lodge the endorsed Covenant Form 31 with the Queensland Titles Registry. (d) Submit to Locker Valley Regional Council, a copy of the registered Covenant Form 31. € Carry out the responsibilities, liabilities, measures, remedies and intents to achieve the enhancement and preservation of ecological values, connectivity, and wildlife habitat within the Covenant Area.	the local government (h) €Within 6 months of the local government's notation of the plan of subdivision (h) Within 2 weeks of the registration of the covenant € As indicated
10	**CONSERVATION COVENANT STANDARD TERMS** A standard terms vegetation covenant document is available from Council. The below matters are to be detailed in the covenant document or outlined in a Council approved Restoration Plan which is referenced in the covenant document: (a) All existing and revegetated native vegetation within the covenant area is to be managed and retained in perpetuity; (b) All environmental weeds are to be managed in perpetuity; € All buildings, infrastructure and associated facilities must be located outside of the covenant area. This includes stormwater infrastructure, wastewater treatment, parking, access and manoeuvring; (d) Any building envelope, infrastructure and necessary bushfire hazard setback is to be placed outside the covenant area; € Wildlife-friendly fencing, as described in the Koala sensitive Design Guideline, is the only structure permitted within the covenant area; (f) The covenant boundary is to be marked with star pickets and if required 2 strands of plain wire with a "Protected Rehabilitation Area" sign permanently fixed to the fence; (g) Domestic animals are to be kept secured outside of the covenant area; (h) The covenant area is not to be used for any activity that is not commensurate with conservation and preservation of ecological values.	At all times.
ROAD NAME		
11	**OPERATIONAL WORKS – ROADWORKS** Submit to and have approved by Council a request for naming of the proposed new road prior to or concurrently with any application to Council for operational works for constructing the proposed new road. The request must include: (a) A minimum of three (3) proposed names for each new road; (b) The reasons for selection of the proposed names;	As indicated

	€ Proposed names that: (i) Are not offensive, profane or racist; (ii) Are not the name of another road in the local government area; (iii) Are not difficult to spell; (iv) Allow for logical and unambiguous street number in accordance with the road/street hierarchy; (v) Are single names rather than double or hyphenated names; and (vi) Enable Emergency Services to readily locate properties.	
ENGINEERING		
12	**OPERATIONAL WORK – GENERAL** Obtain a Development Permit for Operational Works for stormwater drainage works, erosion and sediment control, excavating and filling, road works and landscaping.	Prior to the commencement of any site works
ENGINEERING WORK – STORMWATER DRAINAGE WORKS		
13	**STORMWATER DRAINAGE WORKS – DESIGN, CONSTRUCTION & MAINTENANCE** Design all necessary internal and external stormwater drainage to service the development. Such drainage works must be designed by a Registered Professional Engineer Queensland (RPEQ) and constructed in accordance with the Queensland Urban Drainage Manual 2017 such that the overall drainage system caters for a storm event with a 1% annual exceedance probability (AEP). Design, construction and maintenance of stormwater drainage must comply with a Development Permit for Operational Work.	Prior to the commencement of any stormwater works and at all times thereafter
14	**SUBMIT STORMWATER MANAGEMENT PLAN** Submit to Council a detailed site-based stormwater management plan certified by a Registered Professional Engineer of Queensland. In addition to other relevant stormwater quantity and quality management issues, the report must include the following: (a) Be prepared generally in accordance with the approved Conceptual Stormwater Management Plan subject to the following changes: (i) An embankment must be provided around the full perimeter of perimeter of the detention basin, having a minimum width of 3.0m; (ii) All batters that are 1 in 4 or greater must be landscaped; and (iii) Water smart trees are not permitted by Council; (b) A suitably scaled plan showing the stormwater catchment and sub-catchments for pre-development and post-developed scenarios; € Include full calculations, including where necessary electronic files from industry standard modelling software (including both electronic model files and results files) and all details of the modelling assumptions to support both the proposed water quantity and quality management strategy; (d) Include detailed engineering plans with details of any new drainage systems, or amendments and upgrading of existing drainage systems to implement the proposed drainage strategy; and	At the same time as a development application for Operational Work

	€ Incorporate details of ongoing maintenance and management actions required about any proposed detention basin and retention systems.	
15	**STORMWATER MANAGEMENT PLAN** The stormwater management plan must demonstrate the development: (a) Achieves no increase in peak stormwater runoff from pre-developed conditions for a selected range of storm events up to and including the 1% annual exceedance probability for the post development condition; and (b) Provides stormwater quality treatment measures meeting the design objectives listed in Part G, Appendix 2 (Stormwater management design objectives) of the State Planning Policy 2017.	At the same time as a development application for Operational Work
EROSION AND SEDIMENT CONTROL		
16	**SUBMIT EROSION & SEDIMENT CONTROL PLAN** Submit a 'For construction' Erosion and Sediment Control Plan (ESCP) as part of the Operational Works application. The ESCP must: (a) be prepared by suitably qualified and experienced Register Profession Engineer of Queensland and/or Certified Professional in Erosion and Sediment Control; (b) relate to each phase of the works (including but not limited to, clearing, earthworks, manage, flows and capture sediment; *Note: Very rarely can erosion and sediment control requirements for a single stage, be communicated and detailed effectively and a whole of site plan should be prepared for each stage. Standard notes and drawings do not form an ESCP as they provide no guidance to the Contractor on-site.* € be consistent with current best practice standards to the extent that the standards are not inconsistent with the conditions of approval and consider all environmental constraint including erosion hazard, season, climate, soil, and proximity to waterways; (d) provide sufficient detail to ensure compliance with all conditions of this permit relating to erosion and sediment control is achieved; € include details of the proposed flocculants and automatic dosing systems for sediment basins, including jar testing results; (f) demonstrate the suitability of the proposed flocculants having regard to the downstream receiving environment and water quality; and (g) include the results of all soil investigations undertaken for the whole development site.	At the same time as a development application for Operational Work
17	**IMPLEMENT EROSION & SEDIMENT CONTROL PLAN** Implement and maintain the ESCP for the duration of the construction works, and until such time all exposed soil areas are permanently stabilised (e.g. turfed, hydro mulched, concreted on landscaped etc.).	As indicated
GENERAL WATER AND SEWERAGE INFRASTRUCTURE		
18	**WATER & SEWERAGE – GENERAL** Ensure that each lot is serviced by water distributor-retailer's water supply and sewerage infrastructure. Submit to Council evidence of connection (i.e. connection certificate) from the relevant service provider.	Prior to endorsement of Survey Plan
ENGINEERING WORK – ROAD WORKS		

19	**KERB, CHANNEL & DRAINAGE INFRASTRUCTURE** Design and construct Road 1, as identified on the approved plans, of the site to an Industrial Collector Street standard, with kerb and channel and drainage infrastructure, in accordance with the Lockyer Valley Regional Council Road Hierarchy Table, Austroads, Manual of Uniform Traffic Control Devices, approved plans and the provisions of a Development Permit for operational Works (Engineering Work – Road Works).	Prior to endorsement of Survey Plan
20	**LINE MARKING & SIGNAGE** Establish line marking and signage in accordance with the Manual of Uniform Traffic Control Devices.	Prior to endorsement of Survey Plan
21	**ENGINEERING WORK – ROAD WORKS** Design and construct a 1.5 metre wide concrete pathway within the road verge of Road 1 as shown on the approved plans in accordance with the Lockyer Valley Regional Council Road Hierarchy Table and the provisions of a Development Permit for Operational Works (Engineering work – Road works).	Prior to endorsement of Survey Plan
22	**ENGINEERING WORK – ROAD WORKS** Design and construct the intersection of Road 1 and Rosewood Laidley Road, in accordance with the approved plans, AUSTROADS 2009 Guide to Road Design, Part 4A, Unsignalised and Signalised Intersections and the provisions of a Development Permit for Operational Works (Engineering work – Road works).	Prior to endorsement of Survey Plan
STREET LIGHTING		
23	**LIGHTING – DESIGN & CONSTRUCTION** Design and construct street lighting to a minimum of "P4" Standard in accordance with AS/NZS 1158.3.1:2015 – Lighting for Roads and Public Areas. Lighting is to be designed and certified by a Registered Professional Engineer of Queensland.	Prior to endorsement of Survey Plan
24	**STREET & PATH LIGHT SYSTEM** Install a street and path light system on all roads within and bounding the site on footpaths and road reserves associated with the development at no cost to Council. The street and path light system must be designed in accordance with the 'Crime prevention through environmental design: Guidelines for Queensland' produced by the Queensland Government unless otherwise approved by Council in writing, be powered using underground power.	Prior to endorsement of Survey Plan
EXCAVATING AND FILLING		
25	**OPERATIONAL WORK – EARTHWORKS PLAN** Provide an earthworks plan that clearly identifies the following: (a) The location of cut and/or fill; (b) The type of fill to be used and the compaction standards; € The quantum of fill to be deposited or removed and finished cut and/or fill levels; (d) Retaining structures (if necessary); and € Surface and sub-surface drainage controls (if applicable).	As part of a development application for Operational Work (Excavating and Filling)
26	**EXCAVATING (CUT) & FILLING** Carry out Excavating (Cut) and Filling activities in accordance with the *Laidley Shire Planning Scheme 2003*, AS3798-2007 Guidelines on earthworks for residential and commercial developments, the	Prior to endorsement of Survey Plan

	approved plans and the provisions of a development permit for Operational Work (Excavating and Filling).	
27	**EXCAVATING & FILLING** Ensure the excavating or filling does not concentrate or divert stormwater onto adjoining land to a degree which is worse than that which existed prior to the works.	Prior to endorsement of Survey Plan and at all times thereafter
28	**EXCAVATING & FILLING** Ensure the excavation or filling does not result in the ponding or permanent retention of surface water either on the site or on adjoining land.	Prior to endorsement of Survey Plan and at all times thereafter
29	**EXCAVATING & FILLING** Ensure areas of fill and excavation are graded, compacted and planted and/or mulched, unless otherwise approved, immediately after the excavation/filling is complete and at all times thereafter.	As indicated
WORKS OVER OR NEAR COUNCIL INFRASTRUCTURE		
30	**WORKS NEAR OR OVER COUNCIL INFRASTRUCTURE** Ensure building work or operational work near or over Council's stormwater infrastructure complies with the *Laidley Shire Planning Scheme 2003* as it relates to works over or near stormwater drainage infrastructure.	At all times
TELECOMMUNICATION AND ELECTRICITY		
31	**ELECTRICITY & TELECOMMUNICATIONS** Connect each lot to reticulated electricity and telecommunications to the standard of the relevant service provider. Submit to Council evidence of connection from the relevant service provider.	Prior to endorsement of survey plan
32	**ELECTRICITY INFRASTRUCTURE** Electricity infrastructure must be provided underground. No overhead powerlines are permitted.	Prior to endorsement of survey plan
LANDSCAPING		
33	**OPERATIONAL WORK – LANDSCAPING** Submit as part of the first Operational Works application a Landscaping Plan including streetscape planting, prepared by a suitably qualified Landscape Architect in accordance with the Preferred Native Landscape Shrubs, Park and Street Trees 2012. The extent and location of landscaping must be generally in accordance with the approved plans and documents. The Landscape plan is to include the following: (a) Landscaping plans; (b) The design standards in *Road Reserve: Street tree and landscape guidelines 2017*; € IPWEA standard drawing GS-010 Street Tree planting details including root barriers; (d) IPWEA standard drawing GS-012 Landscaping – street tree planting details narrow median; € Spacing of 1 street tree for every 10m of road frontage; (f) Each street tree is minimum 45 litre pot plant stock size; (g) Quality requirements specified in the NATSPEC Guidelines: Specifying Trees; (h) Trees within the landscape buffer along the eastern side boundary having a maximum height at maturity of 4 metres;	As indicated

	(i) Landscaping in front of the retaining walls along the boundary of proposed lots 2 to 5 where it fronts Rosewood Laidley Road (landscaping must be wholly contained within the property); (j) A water and maintenance plan during the establishment phase, and an ongoing maintenance and replanting programme; and (k) Provide a planting schedule and maintenance plan which includes: (i) Botanical names, mature heights and widths of plants, pot sizes, different key symbols and numbers of plants; (ii) Planting bed preparation details including any topsoil depth, subgrade preparation, mulch type and depth, and type of turfing used; (iii) Any hardscaping details including pebbled, paved or garden edged areas; (iv) Ongoing maintenance schedule for plants; and (v) Irrigation system details (if any).	
FENCING		
34	**SCREEN FENCING** Construct an acoustic fence having a minimum height of two (2) metres for the full length of the eastern side boundary of proposed Lot 5.	Prior to endorsement of Survey Plan
REVEGETATION AND REHABILITATION		
35	**RESTORATION AND REHABILITATION** Undertake restoration and rehabilitation in accordance with the approved Covenant Management Plan.	Prior to endorsement of Survey Plan and at all times thereafter
36	**REHABILITATION** Rehabilitation is to be implemented and monitored by a suitably qualified restoration ecologist with at least 5 years relevant experience in restoration ecology in South East Queensland.	At all times during rehabilitation and maintenance works
37	**REHABILITATION CERTIFICATION** Submit to Council a certification of compliance from a suitably qualified restoration ecologist with at least 5 years relevant experience in restoration ecology in South East Queensland confirming that all rehabilitation works have been undertaken in accordance with relevant conditions and management plans.	Prior to endorsement of Survey Plan
38	**COMPENSATORY PLANTING** Plant compensatory plants/trees in accordance with the approved Covenant Management Plan to compensate for the plants removed through the development.	Prior to endorsement of Survey Plan
39	**VEGETATION CLEARING AND FAUNA MANAGEMENT PLAN – IMPLEMENTATION** Undertake vegetation clearing in accordance with the approved Vegetation Clearing and Fauna Management Plan (VCFMP) and conditions of this development approval and ensure a legible copy of the approved VCFMP and approval conditions are available on-site during construction.	At all times during site works
40	**FAUNA MANAGEMENT** All vegetation clearing is to occur in a manner which directs fauna towards areas of intact bushland and away from roads.	At all times during site works

41	**FAUNA MANAGEMENT** Ensure that an accredited Fauna Spotter/Wildlife Consultant is present to check all potential habitat prior to vegetation removal or earthworks, which includes: (a) Inspect vegetation approved for removal (or any dams to be removed or dewatered) and advise contractors when it is appropriate to commence works; (b) Be present during topsoil stripping and supervise further earthworks in that area where native fauna may be located (i.e. subterranean species of reptiles or amphibians); € Clearly mark (flag) vegetation found to contain fauna or fauna habitat (such as tree hollows, arboreal termite mounds, stick nests or possum drays with flagging tape), and visually and verbally communicate this information to the tree feller to ensure flagged trees are not felled until authorised and instructed to by the Fauna Spotter/Wildlife Consultant; (d) Where native vertebrate animals are found, clearing must only continue in coordination with a Fauna Spotter/Wildlife Consultant. All native vertebrate animals located within, on and amongst vegetation or areas of vegetation approved for clearing, are only to be managed under the guidance of the Fauna Spotter/Wildlife Consultant; € Keep and maintain accurate records for the site including: (i) the number of and types of habitat features identified prior to clearing; (ii) how these habitat features were treated during clearing; (iii) number and species of any animals observed, captured, relocated or injured; (iv) treatments rendered, location of treatment; and (v) release sites; and (f) submit a pre and post clearing report to Council and other relevant authorities within 3 weeks of vegetation clearing. **Advisory note:** An accredited Fauna Spotter/ Wildlife Consultant is a person or company holding a current Rehabilitation Permit – Spotter Catcher issued by the Department of Environment and Science under the *Nature Conservation (Animals) Regulation 2020*.	As indicated
42	**FAUNA MANAGEMENT** Ensure all vacant hollows and nests are relocated or temporarily made unusable to prohibit fauna returning to them during clearing works.	At all times during clearing
43	**FAUNA MANAGEMENT** Limit the felling of habitat and hollow bearing trees to the following methods: a) Segmental removal of the tree, with hollow-bearing limbs being checked by the wildlife spotter and cleared of fauna using a cherry picker; b) Segmental removal of the tree, with hollow-bearing limbs plugged and lowered to the ground for inspection by the wildlife spotter; c) Use of an excavator with vertical grab to lower the main trunk; or d) A combination of the above methods.	At all times

44	**FAUNA MANAGEMENT** Preserve valuable habitat features such as large fallen logs, log piles, rock piles or outcrops wherever practicable through the translocation and re-establishment in coordination with an accredited Fauna Spotter/Wildlife Consultant. **Advisory note:** An accredited Fauna Spotter/ Wildlife Consultant is a person or company holding a current Rehabilitation Permit – Spotter Catcher issued by the Department of Environment and Science under the *Nature Conservation (Animals) Regulation 2020*.	At all times
45	**TREE PROTECTION** Protect trees identified on the approved plans to be retained by implementing tree protection measures in accordance with Australian Standard AS4970-2009 – Protection of Trees on Development Sites and undertake the following: (a) install protective fencing to prevent any damage to areas not in the approved vegetation clearing area in general accordance with Section 4.3 of AS 4970 – 2009; (b) provide signs identifying the 'Tree Protection Zone' on exclusion fencing that are clearly visible from all areas within the development site within 20 metres of the exclusion fencing; and € ensure all trees to be retained within allotments are protected from harm during works on site. Ensure activities such as traffic, stockpiling and compaction are excluded from areas of retained vegetation particularly within the tree protection zones of retained trees and within covenant areas.	At all times during clearing
46	**VEGETATION DISPOSAL** Ensure all vegetation cleared as a result of this development approval and requiring disposal is disposed of: (a) on the premises for landscaping and sediment and erosion control purposes (for example as mulch); and/or (b) at a waste disposal facility; € in such other environmentally responsible manner; and (d) ensure any vegetation cleared as a result of this development is not burnt or incinerated except for the purpose of domestic heating inside a dwelling.	At all times
47	Organise and have a pre-start meeting prior to vegetation clearing where Council environment officers sign-off on fauna spotter's qualifications, licences and references, and ensure the pre-clear survey and contractor pre-start meeting have been appropriately undertaken.	Prior to commencement of vegetation clearing
48	Provide Council with a pre and post clearing activity report, to be completed by the supervising Fauna Spotter, including: (a) The number and species of any animals observed during clearing; (b) The actions taken to deal with observed animals; € The number of any animals that were required to be relocated; (d) The release site for any relocated animals; € The number (if any) of animals injured during clearing; (f) The treatment provided; (g) The outcome of any treatment; and (h) The location of the treatment (e.g. on-site, at veterinary clinic).	With endorsement of survey plan

RESOLUTION

THAT the application MC2021/0042 and RL2021/0021 for a Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 lot into 13 lots) and Operational Works for Advertising Device on Lot 1 SP104184 at Rosewood Laidley Road, Laidley, be approved subject to the following conditions:

Schedule 1 – Development Permit for Material Change of Use for Service Station and Refreshment Service and Operational Works for Advertising Device Conditions

<table>
<tr><th>No.</th><th>Condition</th><th>Timing</th></tr>
<tr><td colspan="3">APPROVED PLANS AND DOCUMENTS</td></tr>
<tr><td>1.</td><td>APPROVED PLANS & DOCUMENTS
Undertake the approved development generally in accordance with the approved plans and documents, including any amendments where in red on the approved plan(s) or document(s):

<table>
<tr><th>Title</th><th>Plan No.</th><th>Revision / Amended</th><th>Date</th><th>Prepared By</th></tr>
<tr><td>Site Plan</td><td>M0112 Sheet 02 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Site Plan</td><td>M0112 Sheet 03 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Floor Plans</td><td>M0112 Sheet 04 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
<tr><td>Elevations</td><td>M0112 Sheet 05 of 05</td><td>D</td><td>16-11-21</td><td>Mi.Co Design and Drafting</td></tr>
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The cost of all works associated with the development and construction of the development, including services, facilities and/or public utility alterations required are met at no cost to the Council or</td><td>At all times</td></tr>
</table>

	relevant utility provider, unless otherwise stated in a development condition.	
4.	**INFRASTRUCTURE CONDITIONS** All development conditions contained in this development approval about infrastructure under Chapter 4 of the *Planning Act 2016* (the Act), should be read as being non-trunk infrastructure conditioned under section 145 of the Act, unless otherwise stated.	At all times
5.	**WORKS – DEVELOPER RESPONSIBILITY** The applicant must repair any damage to existing infrastructure (e.g. kerb and channel, footpath or roadway) that may have occurred during any works undertaken as part of the development. Any damage that is deemed to create a hazard to the community, must be repaired immediately.	At all times
6.	**WORKS – DESIGN & STANDARD** Unless otherwise stated, all works must be designed, constructed, and maintained in accordance with the relevant Council policies, guidelines and standards.	At all times
7.	**WORKS – SPECIFICATION & CONSTRUCTION** All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant Australian Standards and must be approved, supervised, and certified by a Registered Professional Engineer of Queensland (RPEQ).	At all times
8.	**MAINTAIN APPROVED DEVELOPMENT** The development is to be constructed and maintained in accordance with the approved drawing(s) and/or document, and any relevant approvals.	At all times
9.	**COMMENCEMENT OF USE** The use must not commence until all conditions of this approval have been complied with.	At all times
ENGINEERING WORK – STORMWATER DRAINAGE WORKS		
10.	**STORMWATER DRAINAGE WORKS** Undertake the development such that all stormwater (except for rainwater captured on-site in rainwater tanks) is to be drained from the site and conveyed without causing annoyance or nuisance to any person. All works must be designed in accordance with the Queensland Urban Drainage Manual (QUDM).	At all times
11.	**STORMWATER DRAINAGE WORKS – DESIGN, CONSTRUCTION & MAINTENANCE** Design all necessary internal and external stormwater drainage to service the development. Such drainage works must be designed by a Registered Professional Engineer Queensland (RPEQ) and constructed in accordance with the Queensland Urban Drainage Manual and State Planning Policy (SPP) such that the overall drainage system caters for a storm event with a 1% annual exceedance probability (AEP). Design, construction and maintenance of stormwater drainage must comply with a Development Permit for Operational Work.	Prior to the commencement of any stormwater works and at all times thereafter
12.	**SUBMIT STORMWATER MANAGEMENT PLAN** Submit to Council, a detailed Site-based Stormwater Management Plan (SBSMP) certified by a Registered Professional Engineer of	At the same time as a development application for Operational Work

	Queensland. In addition to other relevant stormwater quantity and quality management issues, the SBSMP must include the following: (a) A suitably scaled plan showing the stormwater catchment and sub-catchments for pre-development and post-developed scenarios; (b) Include full calculations, including where necessary electronic files from industry standard modelling software (including both electronic model files and results files) and all details of the modelling assumptions to support both the proposed water quantity and quality management strategy; € Include detailed engineering plans with details of any new drainage systems, or amendments and upgrading of existing drainage systems to implement the proposed drainage strategy; and (d) Incorporate details of ongoing maintenance and management actions required about any proposed detention basin and retention systems. The SBSMP must demonstrate the development: (a) Achieves no increase in peak stormwater runoff from pre-developed conditions for a selected range of storm events up to and including the 1% annual exceedance probability (AEP) for the post development condition; and (b) Provides for stormwater quality treatment measures that achieve the applicable design objectives listed in Part G, Appendix 2 (Stormwater management design objectives) of the State Planning Policy.		
EROSION AND SEDIMENT CONTROL			
13.	**SUBMIT EROSION & SEDIMENT CONTROL PLAN** Submit a 'For construction' Erosion and Sediment Control Plan (ESCP) as part of the Operational Works application. The ESCP must: (a) be prepared by suitably qualified and experience Registered Professional Engineer of Queensland and Certified Professional in Erosion and Sediment Control (CPESC); (b) relate to each phase of the works (including but not limited to, clearing, earthworks, manage, flows and capture sediment); *Note: Very rarely can erosion and sediment control requirements for a single stage, be communicated and detailed effectively and a whole of site plan should be prepared for each stage. Standard notes and drawings do not form an ESCP as they provide no guidance to the Contractor on-site.* € be consistent with current best practice standards to the extent that the standards are not inconsistent with the conditions of approval and consider all environmental constraint including erosion hazard, season, climate, soil, and proximity to waterways; (d) provide sufficient detail to ensure compliance with all conditions of this permit relating to erosion and sediment control is achieved; € include details of the proposed flocculants and automatic dosing systems for sediment basins, including jar testing results;	As indicated	

	(f) demonstrate the suitability of the proposed flocculants having regard to the downstream receiving environment and water quality; and (g) include the results of all soil investigations undertaken for the whole development site.	
14.	**IMPLEMENT EROSION & SEDIMENT CONTROL PLAN** Implement and maintain the Erosion and Sediment Control Plan (ESCP) for the duration of the construction works, and until such time all exposed soil areas are permanently stabilised (e.g. turfed, hydro mulched, concreted or landscaped etc.). The ESCP must be available on-site for inspection by Council Officers during the works.	As indicated
ENGINEERING WORK – CARPARKING AND ACCESS		
15.	**ON-SITE CAR PARKING AND VEHICULAR ACCESS** Design, construct and maintain all car parking and access works generally in accordance with the approved plans AS2890-1: 2004 Parking facilities – Off-street car parking, AS/NZS2890.6: 2009 Parking facilities – Off-street car parking for people with disabilities, Manual of Uniform Traffic Control Devices (Queensland).	At all times
16.	**VEHICULAR ACCESS – DESIGN** Design any new crossovers such that the edge of the crossover is no closer than 1 metre to any existing or proposed infrastructure, including any stormwater gully pit, maintenance hole, service infrastructure (e.g. power pole, telecommunications pit), and road infrastructure (e.g. street sign, street tree, etc). Design the re-location of any infrastructure services to meet the above criteria as required.	At the same time as a development application for Operational Work
17.	**SIGNAGE AND LINE MARKING** Signage and line marking must be provided in accordance with AS1742 Manual of Uniform Traffic Control Devices and in accordance with the Manual of Uniform Traffic Control Device (MUTCD).	At all times
18.	**ON-SITE CAR PARKING** Provide and retain a minimum of 15 car parking spaces on-site in accordance with the approved plans. All car parking spaces must be given an imperviously sealed surface treatment.	At all times
19.	**ON-SITE CAR PARKING – PEOPLE WITH DISABILITIES** Ensure parking spaces for people with disabilities and access to them complies with AS1428.1:2009 Design for access and mobility – General requirements for access – New building work and AS/NZS 2890.6:2009 Parking facilities – Off-street parking for people with disabilities.	At all times
20.	**DRIVEWAYS AND ON SITE MANOUERVING** Design, construct and maintain all driveways, internal circulation areas, manoeuvring areas, loading and unloading areas and refuse collection facilities in accordance with the standards specified in AS2890.2: 2018 – Parking facilities – Off-street commercial vehicle facilities and AS2890.5:1993 – Parking facilities – On-street parking.	At all times
21.	**VEHICULAR ACCESS** Vehicular access is only permitted at the approved crossover locations as shown on the approved plans. Vehicles are not permitted to enter or exit the site in any other location.	At all times

22.	Provide vehicle bollards or wheel stops to control vehicular access and to protect landscaping or pedestrian areas to all car parking spaces that abut landscaping or pedestrian areas.	Prior to commencement of the use and at all times thereafter
EXCAVATING AND FILLING		
23.	**OPERATIONAL WORK – EARTHWORKS PLAN** Provide an earthworks plan that clearly identifies the following: (a) The location of cut and/or fill; (b) The type of fill to be used and the compaction standards; € The quantum of fill to be deposited or removed and finished cut and/or fill levels; (d) Retaining structures (if necessary); and € Surface and sub-surface drainage controls (if applicable).	As part of a development application for Operational Work (Excavating and Filling)
24.	**EXCAVATING AND FILLING** Carry out excavating (cut) and filling activities in accordance with the AS3798-2007 Guidelines on earthworks for residential and commercial developments, the approved plans and the complies with a Development Permit for Operational Works (Excavating and Filling).	At all times
25.	**EXCAVATING AND FILLING** Ensure the excavating or filling does not concentrate or divert stormwater onto adjoining land to a degree which is worse than that which existed prior to the works.	At all times
26.	**EXCAVATING & FILLING** Ensure the excavating or filling does not result in the ponding or permanent retention of surface water either on the site or on adjoining land.	At all times
27.	**EXCAVATING & FILLING** Ensure areas of fill and excavation are graded, compacted and planted and/or mulched, unless otherwise approved, immediately after the excavation/filling is complete, and at all times thereafter.	At all times
LANDSCAPING		
28.	**OPERATIONAL WORK – LANDSCAPING** Submit as part of the first Operational Works application a Landscaping Plan, prepared by a suitably qualified Landscape Architect in accordance with the *Laidley Shire Planning Scheme 2003*. The extent and location of landscaping must be generally in accordance with the approved plans and documents and the following: (a) Landscaping plans; (b) Provide a planting schedule and maintenance plan which includes: € Botanical names, mature heights and widths of plants, pot sizes, different key symbols and numbers of plants; (d) Planting bed preparation details including any topsoil depth, subgrade preparation, mulch type and depth, and type of turfing used; € Any hardscaping details including pebbled, paved or garden edged areas; (f) Ongoing maintenance schedule for plants; and (g) Irrigation system details (if any).	As indicated

29.	**ESTABLISHMENT OF LANDSCAPING WORKS** Establish, maintain and retain all landscaping generally in accordance with the approved Landscaping Plan. The landscaped areas must be subject to ongoing maintenance and a replanting programme (if necessary).	At all times
WASTE MANAGEMENT		
30.	**WASTE STORAGE** Store all waste within a waste storage area (e.g. general waste, recyclable waste, pallets, empty drums, etc.) as shown on the approved plans. The waste storage area must be: (a) Designed to not cause nuisance to neighbouring properties; (b) Screened from any road frontage and adjoining property; € Of a sufficient size to accommodate commercial type bins that will be serviced by a commercial contractor plus clearance around the bins for manoeuvring and cleaning; (d) Provided with a tap and hose at the waste storage area, and washdown must be drained to the sewer and fitted with an approved stormwater diversion valve arrangement in accordance with the provisions of a Trade Waste Permit and the *Plumbing and Drainage Act 2018*.	At all times
AMENITY – GENERAL		
31.	**AMENITY – GENERAL** Install and maintain suitable screening to all air conditioning and plant and service facilities located on the top or external face of the building. The screening structures must be constructed from materials that are consistent with materials used elsewhere on the façade of the building.	At all times
AMENITY – LIGHT		
32.	**AMENITY – LIGHTING** Maintain outdoor lighting to comply with AS4282:1997 – Control of the obtrusive effects of outdoor lighting. Light sources at the premises must be positioned and shielded to prevent light spillage outside the boundaries of the premises.	At all times
SERVICE STATION		
33.	**LOCATION OF FUEL PUMPS** Locate all fuel pumps in accordance with Australian Standard AS1940 – The storage and handling of flammable and combustible liquids.	At all times
34.	**LOCATION OF FUEL PUMPS** All fuel bowsers and dispensers must be designed to comply with AS/NZ2299 Fuel dispensing equipment for explosive atmospheres and be located to comply with AS1940 The storage and handling of flammable and combustible liquids.	Prior to commencement of the use and at all times thereafter
35.	**INLETS – BULK FUEL STORAGE TANKS** Locate inlets to bulk fuel storage tanks that ensures tankers, while discharging fuel, are standing wholly within the site and are on level ground.	At all times
36.	**UNDERGROUND TANKS** All underground bulk fuel storage tanks utilised for the storage system must be manufactured to comply with AS1692 Steel Tanks for Flammable and Combustible Liquids and be located to comply with	Prior to commencement of the use and at all times thereafter

	AS1940 The storage and handling of flammable and combustible liquids.	
37.	**LP GAS** If LP Gas is to be provided on site, the design and layout of the Service Station must comply with the requirements of AS1596 series – Storage and handling of LP Gas.	Prior to commencement of the use and at all times thereafter
38.	**REFUELLING VEHICLE** The largest vehicle approved for the bulk refuelling of underground fuel storage tanks is a 20m Articulated Vehicle(AV).	At all times
39.	**COMMISSIONING** The new underground petroleum storage system must not be commissioned unless the system includes the following mandatory pollution protection equipment: (a) Non-corrodible tanks/s and non-corrodible piping; (b) Secondary containment for tank/s and piping; € Dispenser sump/s; (d) Fill point spill containment equipment; € Overfill prevention protection equipment; (f) Tank pit observation well/s; and (g) Equipment that earths a storage system.	At all times
40.	**FUEL DISPENSING AREAS** Fuel dispensing areas must be clearly delineated from other areas such as remote air/water supply areas, uncovered forecourt areas, access roads and general parking bays by methods such as a painted lines on the ground, roll-over bunds or different coloured concrete. Fuel dispensing areas must be designed so that no vehicle may be refuelled outside the delineated areas.	Prior to commencement of the use and at all times thereafter
41.	**FUEL DISPENSING AREAS** The fuel dispensing area must be graded to the containment vessel (SPEL Triceptor/Puraceptor). The fuel dispensing area must be designed and constructed to ensure that stormwater is diverted away from this area. The installation of SPEL Triceptor/Puraceptor (and SPEL Filter Cartridges/Round Tank) must be installed in accordance with the Stormwater Management Plan for the site.	Prior to commencement of the use and at all times thereafter
42.	**CONTAINMENT VESSEL** The containment vessel (SPEL Triceptor/Puraceptor) must contain both a volume equivalent to at least the volume of the largest tanker compartment likely to be delivering fuel to the site plus a nominal allowance for windblown rain.	Prior to commencement of the use and at all times thereafter
43.	**CONTAINMENT VESSEL** The containment vessel (SPEL Triceptor/Puraceptor) must be fitted with high level alarms to notify operators that the tank requires emptying. All liquid and sludge waste must be disposed of in accordance with the requirements of the *Environmental Protection Regulation 2019*.	Prior to commencement of the use and at all times thereafter
44.	**STORMWATER TREATMENT SYSTEMS** Stormwater treatment systems (SPEL Triceptor/Puraceptor and SPEL Filters Cartridges/Round Tank) and drains must be inspected and maintained in accordance with the manufacturer's recommendations. Records of regular inspections, oil and sediment	Prior to commencement of the use and at all times thereafter

	checks and contractor receipts must be available for inspection at any time.		
45.	**SPILLS AND LEAKS** Leakage and spills of oil and/or other fluids from cars entering forecourt areas must be cleaned up as soon as practicable to prevent access of contaminants to stormwater drains.	At all times	
46.	**SPILLS AND LEAKS** All spills and leaks from bulk fuel transfer activities must be contained on-site. Fuel delivery standing areas outside of the canopy must be designed so that run-off is automatically diverted to the underground containment vessel during bulk fuel transfers.	At all times	
47.	**LEAK DETECTION** All practicable measures must be taken to prevent loss of containment from any underground petroleum storage system. An approved leak detection system must be installed and operated at sufficient frequency, sensitivity and reliability to provide a high level of confidence that a release of a petroleum product will be detected in sufficient time for a response to be implemented before an unacceptable risk is posed to human health, property or the environment. As a minimum standard, all underground petroleum storage systems are required to be monitored using a system that: (a) Can detect a leak from any portion of the underground storage system; (b) Uses equipment that has been installed, calibrated and commissioned in accordance with the manufacturer's instructions; € Is capable of detecting a leak at a rate of 0.76 litres per hour or more with at least 95% accuracy and a probability of false detection of 0.05 or less (USEPA); (d) Has been certified by an independent third party, consistent with the current USEPA protocols and system of verification (USEPA); € Reports with a frequency of not less than monthly; and (f) Is operated by a suitably trained person.	Prior to commencement of the use and at all times thereafter	
48.	**GROUNDWATER MONITORING** Groundwater monitoring well(s) must be installed on site, if the site is deemed suitable by a suitably qualified and experienced person with experience in hydrology. The number and location of groundwater monitoring wells to be installed on site is also to be determined by a suitably qualified and experienced person with a view to maximising the likelihood that the wells will intercept contaminated groundwater, whatever the groundwater flow conditions. A survey of groundwater movement across the site and assessment of the suitability of the use of groundwater monitoring wells in accordance with section 4.5.7.1 of AS4897 – 2008 – 'The design, installation and operation of underground petroleum storage systems' must be undertaken as part of this process.	Prior to commencement of the use and at all times thereafter	
49.	**VAPOUR RECOVERY** Stage 1 Vapour Recovery Systems (VR1) must be installed for all tanks used for the storage of petroleum on the site to return displaced vapour to the delivery vehicle during filling of the underground	Prior to commencement of the use and at all times thereafter	

	petroleum storage system. The Vapour Recovery System must be designed and installed in compliance with the following: (a) Mixing of product must be prevented in pipework common to more than one tank; and (b) Spring-loaded vapour return adaptor, which closes when the hose is disconnected, must be installed in the top of the riser; and The vapour recovery point must be located within 2 metres of the respective fill point.	
50.	**IMPERVIOUS AREAS** Provide and maintain sealed impervious surfaces in areas where potential spills of contaminants may occur.	Prior to commencement of the use and at all times thereafter
51.	**FORECOURT AREAS** Construct and maintain all uncovered forecourt areas liable to contamination from vehicular activities using impermeable materials, free of gaps and cracks.	At all times
52.	**FUEL DISPENSING AREAS** Construct and maintain all Fuel Dispensing Areas (FDA) using impermeable materials, free of gaps and cracks. Suitable materials include waterproofed and reinforced concrete.	At all times
53.	**DECOMMISSIONING** Decommissioning of the underground fuel tank must be carried out in accordance with the AS4976 The removal and disposal of underground petroleum storage tanks, or where the storage system cannot be removed safely without serious risk to the safety of people or adjoining infrastructure, the tanks must be decommissioned in-situ, in accordance with AS4976, without being removed.	At the time of decommissioning of the underground petroleum storage system
54.	**DECOMMISSIONING** Where decommissioning is carried out, provide certification to Council from a suitably qualified person which certifies that the system is transported and disposed of in accordance with the above standards and legislation.	Within ten (10) business days of the decommissioning of the underground petroleum storage system
55.	**DECOMMISSIONING** All records associated with the decommissioning of tanks must be maintained for a minimum of seven years after removal of the tank. During this seven year period, these records are to be provide to any new owners to ensure all practicable measures have been implemented to prevent site contamination.	As indicated
ADVERTISING DEVICE		
56.	The advertising devices are approved to advertise the Service Station and Refreshment Service on the subject land only.	At all times
57.	The advertising devices must be wholly located within the boundary of the premises.	At all times
58.	Where illuminated from within, the advertising device must not flash, blink or pulse.	At all times

Schedule 2 – Development Permit for Reconfiguring a Lot for Subdivision (1 lot into 13 lots) Conditions

<table>
<tr><th>No.</th><th>Condition</th><th>Timing</th></tr>
<tr><td colspan="3">APPROVED PLANS AND DOCUMENTS</td></tr>
<tr><td>1.</td><td>APPROVED PLANS & DOCUMENTS
Undertake the approved development generally in accordance with the approved plans and documents, including any amendments where in red on the approved plan(s) or document(s):

<table>
<tr><th>Title</th><th>Plan No.</th><th>Revision / Amended</th><th>Date</th><th>Prepared By</th></tr>
<tr><td>Building Envelope Plan</td><td>SDC1655-216</td><td>Sch 1</td><td>20-12-22</td><td>Santoshi Development Consultants</td></tr>
</table>

<table>
<tr><th>Title</th><th>Document No.</th><th>Revision / Amended</th><th>Date</th><th>Prepared By</th></tr>
<tr><td>Civil Engineering Report</td><td>BE210316-RPCER-02</td><td>02</td><td>10-22</td><td>Burchills Engineering Pty Ltd</td></tr>
<tr><td>Conceptual Stormwater Management Plan</td><td>BE210316-RP-CSMP-02</td><td>02</td><td>25-10-22</td><td>Burchills Engineering Pty Ltd</td></tr>
<tr><td>Traffic Impact Assessment</td><td>BE210316-RP-TIA-04</td><td>04</td><td>5-05-22</td><td>Burchills Engineering Pty Ltd</td></tr>
<tr><td>Vegetation, Fauna & Koala Management Plan</td><td>BE210316-RP-VFKMP-01</td><td>01</td><td>10-05-22</td><td>Burchills Engineering Pty Ltd</td></tr>
<tr><td>Covenant Management Plan</td><td>BE210316-RP-CMP-00</td><td>00</td><td>10-05-22</td><td>Burchills Engineering Pty Ltd</td></tr>
</table>
</td><td>At all times</td></tr>
<tr><td>2.</td><td>CONDITIONS OF APPROVAL AND APPROVED PLANS
Where there is a conflict between the conditions of this approval and the details shown on the approved plans and documents, the conditions of approval take precedence.</td><td>At all times</td></tr>
<tr><td colspan="3">GENERAL</td></tr>
<tr><td>3.</td><td>WORKS – APPLICANT’S EXPENSE
The cost of all works associated with the development and construction of the development, including services, facilities and/or public utility alterations required are met at no cost to the Council or relevant utility provider, unless otherwise stated in a development condition.</td><td>At all times</td></tr>
<tr><td>4.</td><td>INFRASTRUCTURE CONDITIONS
All development conditions contained in this development approval about infrastructure under Chapter 4 of the Planning Act 2016 (the Act), should be read as being non-trunk infrastructure conditioned under section 145 of the Act, unless otherwise stated.</td><td>At all times</td></tr>
<tr><td>5.</td><td>WORKS – DEVELOPER RESPONSIBILITY</td><td>At all times</td></tr>
</table>

	The applicant must repair any damage to existing infrastructure (e.g. kerb and channel, footpath or roadway) that may have occurred during any works undertaken as part of the development. Any damage that is deemed to create a hazard to the community, must be repaired immediately.	
6.	**WORKS – DESIGN & STANDARD** Unless otherwise stated, all works must be designed, constructed, and maintained in accordance with the relevant Council policies, guidelines and standards.	At all times
7.	**WORKS – SPECIFICATION & CONSTRUCTION** All engineering drawings/specifications, design and construction works must comply with the requirements of the relevant Australian Standards and must be approved, supervised, and certified by a Registered Professional Engineer of Queensland (RPEQ).	At all times
8.	**MAINTAIN APPROVED DEVELOPMENT** The development is to be constructed and maintained in accordance with the approved drawing(s) and/or document, and any relevant approvals.	At all times
COVENANT		
9.	**COVENANT** (a) Enter into an environmental covenant with Locker Valley Regional Council, which complies with Section 97A of the *Land Title Act 1994*, for the enhancement and preservation of ecological values, connectivity and wildlife habitat within the Covenant Area, as identified on the Approved Plans. (b) Submit to Locker Valley Regional Council the covenant for endorsement. The covenant must detail the responsibilities, liabilities, measures, remedies and intents as necessary to the enhancement and preservation of ecological values, connectivity, and wildlife habitat within the Covenant Area. € Lodge the endorsed Covenant Form 31 with the Queensland Titles Registry. (d) Submit to Locker Valley Regional Council, a copy of the registered Covenant Form 31. € Carry out the responsibilities, liabilities, measures, remedies and intents to achieve the enhancement and preservation of ecological values, connectivity, and wildlife habitat within the Covenant Area.	(a) Prior to endorsement of survey plan (h) Prior to an application for plan sealing with the local government (h) €Within 6 months of the local government' s notation of the plan of subdivision (h) Within 2 weeks of the registration of the covenant € As indicated
10	**CONSERVATION COVENANT STANDARD TERMS** A standard terms vegetation covenant document is available from Council. The below matters are to be detailed in the covenant document or outlined in a Council approved Restoration Plan which is referenced in the covenant document:	At all times.

	(a) All existing and revegetated native vegetation within the covenant area is to be managed and retained in perpetuity; (b) All environmental weeds are to be managed in perpetuity; € All buildings, infrastructure and associated facilities must be located outside of the covenant area. This includes stormwater infrastructure, wastewater treatment, parking, access and manoeuvring; (d) Any building envelope, infrastructure and necessary bushfire hazard setback is to be placed outside the covenant area; € Wildlife-friendly fencing, as described in the Koala sensitive Design Guideline, is the only structure permitted within the covenant area; (f) The covenant boundary is to be marked with star pickets and if required 2 strands of plain wire with a "Protected Rehabilitation Area" sign permanently fixed to the fence; (g) Domestic animals are to be kept secured outside of the covenant area; (h) The covenant area is not to be used for any activity that is not commensurate with conservation and preservation of ecological values.	
ROAD NAME		
11	**OPERATIONAL WORKS – ROADWORKS** Submit to and have approved by Council a request for naming of the proposed new road prior to or concurrently with any application to Council for operational works for constructing the proposed new road. The request must include: (a) A minimum of three (3) proposed names for each new road; (b) The reasons for selection of the proposed names; € Proposed names that: (i) Are not offensive, profane or racist; (ii) Are not the name of another road in the local government area; (iii) Are not difficult to spell; (iv) Allow for logical and unambiguous street number in accordance with the road/street hierarchy; (v) Are single names rather than double or hyphenated names; and (vi) Enable Emergency Services to readily locate properties.	As indicated
ENGINEERING		
12	**OPERATIONAL WORK – GENERAL** Obtain a Development Permit for Operational Works for stormwater drainage works, erosion and sediment control, excavating and filling, road works and landscaping.	Prior to the commencement of any site works
ENGINEERING WORK – STORMWATER DRAINAGE WORKS		
13	**STORMWATER DRAINAGE WORKS – DESIGN, CONSTRUCTION & MAINTENANCE** Design all necessary internal and external stormwater drainage to service the development. Such drainage works must be designed by a Registered Professional Engineer Queensland (RPEQ) and constructed in accordance with the Queensland Urban Drainage Manual 2017 such that the overall drainage system caters for a storm event with a 1%	Prior to the commencement of any stormwater works and at all times thereafter

	annual exceedance probability (AEP). Design, construction and maintenance of stormwater drainage must comply with a Development Permit for Operational Work.	
14	**SUBMIT STORMWATER MANAGEMENT PLAN** Submit to Council a detailed site-based stormwater management plan certified by a Registered Professional Engineer of Queensland. In addition to other relevant stormwater quantity and quality management issues, the report must include the following: (a) Be prepared generally in accordance with the approved Conceptual Stormwater Management Plan subject to the following changes: (i) An embankment must be provided around the full perimeter of perimeter of the detention basin, having a minimum width of 3.0m; (ii) All batters that are 1 in 4 or greater must be landscaped; and (iii) Water smart trees are not permitted by Council; (b) A suitably scaled plan showing the stormwater catchment and sub-catchments for pre-development and post-developed scenarios; € Include full calculations, including where necessary electronic files from industry standard modelling software (including both electronic model files and results files) and all details of the modelling assumptions to support both the proposed water quantity and quality management strategy; (d) Include detailed engineering plans with details of any new drainage systems, or amendments and upgrading of existing drainage systems to implement the proposed drainage strategy; and € Incorporate details of ongoing maintenance and management actions required about any proposed detention basin and retention systems.	At the same time as a development application for Operational Work
15	**STORMWATER MANAGEMENT PLAN** The stormwater management plan must demonstrate the development: (a) Achieves no increase in peak stormwater runoff from pre-developed conditions for a selected range of storm events up to and including the 1% annual exceedance probability for the post development condition; and (b) Provides stormwater quality treatment measures meeting the design objectives listed in Part G, Appendix 2 (Stormwater management design objectives) of the State Planning Policy 2017.	At the same time as a development application for Operational Work
EROSION AND SEDIMENT CONTROL		
16	**SUBMIT EROSION & SEDIMENT CONTROL PLAN** Submit a 'For construction' Erosion and Sediment Control Plan (ESCP) as part of the Operational Works application. The ESCP must: (a) be prepared by suitably qualified and experienced Register Profession Engineer of Queensland and/or Certified Professional in Erosion and Sediment Control; (b) relate to each phase of the works (including but not limited to, clearing, earthworks, manage, flows and capture sediment; *Note: Very rarely can erosion and sediment control requirements for a single stage, be communicated and detailed effectively and a whole of site plan should be prepared for each stage. Standard notes and drawings do not form an ESCP as they provide no guidance to the Contractor on-site.*	At the same time as a development application for Operational Work

	€ be consistent with current best practice standards to the extent that the standards are not inconsistent with the conditions of approval and consider all environmental constraint including erosion hazard, season, climate, soil, and proximity to waterways; (d) provide sufficient detail to ensure compliance with all conditions of this permit relating to erosion and sediment control is achieved; € include details of the proposed flocculants and automatic dosing systems for sediment basins, including jar testing results; (f) demonstrate the suitability of the proposed flocculants having regard to the downstream receiving environment and water quality; and (g) include the results of all soil investigations undertaken for the whole development site.	
17	**IMPLEMENT EROSION & SEDIMENT CONTROL PLAN** Implement and maintain the ESCP for the duration of the construction works, and until such time all exposed soil areas are permanently stabilised (e.g. turfed, hydro mulched, concreted on landscaped etc.).	As indicated
GENERAL WATER AND SEWERAGE INFRASTRUCTURE		
18	**WATER & SEWERAGE – GENERAL** Ensure that each lot is serviced by water distributor-retailer's water supply and sewerage infrastructure. Submit to Council evidence of connection (i.e. connection certificate) from the relevant service provider.	Prior to endorsement of Survey Plan
ENGINEERING WORK – ROAD WORKS		
19	**KERB, CHANNEL & DRAINAGE INFRASTRUCTURE** Design and construct Road 1, as identified on the approved plans, of the site to an Industrial Collector Street standard, with kerb and channel and drainage infrastructure, in accordance with the Lockyer Valley Regional Council Road Hierarchy Table, Austroads, Manual of Uniform Traffic Control Devices, approved plans and the provisions of a Development Permit for operational Works (Engineering Work – Road Works).	Prior to endorsement of Survey Plan
20	**LINE MARKING & SIGNAGE** Establish line marking and signage in accordance with the Manual of Uniform Traffic Control Devices.	Prior to endorsement of Survey Plan
21	**ENGINEERING WORK – ROAD WORKS** Design and construct a 1.5 metre wide concrete pathway within the road verge of Road 1 as shown on the approved plans in accordance with the Lockyer Valley Regional Council Road Hierarchy Table and the provisions of a Development Permit for Operational Works (Engineering work – Road works).	Prior to endorsement of Survey Plan
22	**ENGINEERING WORK – ROAD WORKS** Design and construct the intersection of Road 1 and Rosewood Laidley Road, in accordance with the approved plans, AUSTROADS 2009 Guide to Road Design, Part 4A, Unsignalised and Signalised Intersections and the provisions of a Development Permit for Operational Works (Engineering work – Road works).	Prior to endorsement of Survey Plan
STREET LIGHTING		

23	**LIGHTING – DESIGN & CONSTRUCTION** Design and construct street lighting to a minimum of "P4" Standard in accordance with AS/NZS 1158.3.1:2015 – Lighting for Roads and Public Areas. Lighting is to be designed and certified by a Registered Professional Engineer of Queensland.	Prior to endorsement of Survey Plan
24	**STREET & PATH LIGHT SYSTEM** Install a street and path light system on all roads within and bounding the site on footpaths and road reserves associated with the development at no cost to Council. The street and path light system must be designed in accordance with the 'Crime prevention through environmental design: Guidelines for Queensland' produced by the Queensland Government unless otherwise approved by Council in writing, be powered using underground power.	Prior to endorsement of Survey Plan
EXCAVATING AND FILLING		
25	**OPERATIONAL WORK – EARTHWORKS PLAN** Provide an earthworks plan that clearly identifies the following: (a) The location of cut and/or fill; (b) The type of fill to be used and the compaction standards; € The quantum of fill to be deposited or removed and finished cut and/or fill levels; (d) Retaining structures (if necessary); and € Surface and sub-surface drainage controls (if applicable).	As part of a development application for Operational Work (Excavating and Filling)
26	**EXCAVATING (CUT) & FILLING** Carry out Excavating (Cut) and Filling activities in accordance with the *Laidley Shire Planning Scheme 2003*, AS3798-2007 Guidelines on earthworks for residential and commercial developments, the approved plans and the provisions of a development permit for Operational Work (Excavating and Filling).	Prior to endorsement of Survey Plan
27	**EXCAVATING & FILLING** Ensure the excavating or filling does not concentrate or divert stormwater onto adjoining land to a degree which is worse than that which existed prior to the works.	Prior to endorsement of Survey Plan and at all times thereafter
28	**EXCAVATING & FILLING** Ensure the excavation or filling does not result in the ponding or permanent retention of surface water either on the site or on adjoining land.	Prior to endorsement of Survey Plan and at all times thereafter
29	**EXCAVATING & FILLING** Ensure areas of fill and excavation are graded, compacted and planted and/or mulched, unless otherwise approved, immediately after the excavation/filling is complete and at all times thereafter.	As indicated
WORKS OVER OR NEAR COUNCIL INFRASTRUCTURE		
30	**WORKS NEAR OR OVER COUNCIL INFRASTRUCTURE** Ensure building work or operational work near or over Council's stormwater infrastructure complies with the *Laidley Shire Planning Scheme 2003* as it relates to works over or near stormwater drainage infrastructure.	At all times
TELECOMMUNICATION AND ELECTRICITY		
31	**ELECTRICITY & TELECOMMUNICATIONS**	Prior to endorsement of survey plan

	Connect each lot to reticulated electricity and telecommunications to the standard of the relevant service provider. Submit to Council evidence of connection from the relevant service provider.	
32	**ELECTRICITY INFRASTRUCTURE** Electricity infrastructure must be provided underground. No overhead powerlines are permitted.	Prior to endorsement of survey plan
LANDSCAPING		
33	**OPERATIONAL WORK – LANDSCAPING** Submit as part of the first Operational Works application a Landscaping Plan including streetscape planting, prepared by a suitably qualified Landscape Architect in accordance with the Preferred Native Landscape Shrubs, Park and Street Trees 2012. The extent and location of landscaping must be generally in accordance with the approved plans and documents. The Landscape plan is to include the following: (a) Landscaping plans; (b) The design standards in *Road Reserve: Street tree and landscape guidelines 2017*; € IPWEA standard drawing GS-010 Street Tree planting details including root barriers; (d) IPWEA standard drawing GS-012 Landscaping – street tree planting details narrow median; € Spacing of 1 street tree for every 10m of road frontage; (f) Each street tree is minimum 45 litre pot plant stock size; (g) Quality requirements specified in the NATSPEC Guidelines: Specifying Trees; (h) Trees within the landscape buffer along the eastern side boundary having a maximum height at maturity of 4 metres; (i) Landscaping in front of the retaining walls along the boundary of proposed lots 2 to 5 where it fronts Rosewood Laidley Road (landscaping must be wholly contained within the property); (j) A water and maintenance plan during the establishment phase, and an ongoing maintenance and replanting programme; and (k) Provide a planting schedule and maintenance plan which includes: (i) Botanical names, mature heights and widths of plants, pot sizes, different key symbols and numbers of plants; (ii) Planting bed preparation details including any topsoil depth, subgrade preparation, mulch type and depth, and type of turfing used; (iii) Any hardscaping details including pebbled, paved or garden edged areas; (iv) Ongoing maintenance schedule for plants; and (v) Irrigation system details (if any).	As indicated
FENCING		
34	**SCREEN FENCING** Construct an acoustic fence having a minimum height of two (2) metres for the full length of the eastern side boundary of proposed Lot 5.	Prior to endorsement of Survey Plan
REVEGETATION AND REHABILITATION		

35	**RESTORATION AND REHABILITATION** Undertake restoration and rehabilitation in accordance with the approved Covenant Management Plan.	Prior to endorsement of Survey Plan and at all times thereafter
36	**REHABILITATION** Rehabilitation is to be implemented and monitored by a suitably qualified restoration ecologist with at least 5 years relevant experience in restoration ecology in South East Queensland.	At all times during rehabilitation and maintenance works
37	**REHABILITATION CERTIFICATION** Submit to Council a certification of compliance from a suitably qualified restoration ecologist with at least 5 years relevant experience in restoration ecology in South East Queensland confirming that all rehabilitation works have been undertaken in accordance with relevant conditions and management plans.	Prior to endorsement of Survey Plan
38	**COMPENSATORY PLANTING** Plant compensatory plants/trees in accordance with the approved Covenant Management Plan to compensate for the plants removed through the development.	Prior to endorsement of Survey Plan
39	**VEGETATION CLEARING AND FAUNA MANAGEMENT PLAN – IMPLEMENTATION** Undertake vegetation clearing in accordance with the approved Vegetation Clearing and Fauna Management Plan (VCFMP) and conditions of this development approval and ensure a legible copy of the approved VCFMP and approval conditions are available on-site during construction.	At all times during site works
40	**FAUNA MANAGEMENT** All vegetation clearing is to occur in a manner which directs fauna towards areas of intact bushland and away from roads.	At all times during site works
41	**FAUNA MANAGEMENT** Ensure that an accredited Fauna Spotter/Wildlife Consultant is present to check all potential habitat prior to vegetation removal or earthworks, which includes: (a) Inspect vegetation approved for removal (or any dams to be removed or dewatered) and advise contractors when it is appropriate to commence works; (b) Be present during topsoil stripping and supervise further earthworks in that area where native fauna may be located (i.e. subterranean species of reptiles or amphibians); € Clearly mark (flag) vegetation found to contain fauna or fauna habitat (such as tree hollows, arboreal termite mounds, stick nests or possum drays with flagging tape), and visually and verbally communicate this information to the tree feller to ensure flagged trees are not felled until authorised and instructed to by the Fauna Spotter/Wildlife Consultant; (d) Where native vertebrate animals are found, clearing must only continue in coordination with a Fauna Spotter/Wildlife Consultant. All native vertebrate animals located within, on and amongst vegetation or areas of vegetation approved for clearing, are only to be managed under the guidance of the Fauna Spotter/Wildlife Consultant;	As indicated

	€ Keep and maintain accurate records for the site including: (i) the number of and types of habitat features identified prior to clearing; (ii) how these habitat features were treated during clearing; (iii) number and species of any animals observed, captured, relocated or injured; (iv) treatments rendered, location of treatment; and (v) release sites; and (f) submit a pre and post clearing report to Council and other relevant authorities within 3 weeks of vegetation clearing. **Advisory note:** An accredited Fauna Spotter/ Wildlife Consultant is a person or company holding a current Rehabilitation Permit – Spotter Catcher issued by the Department of Environment and Science under the *Nature Conservation (Animals) Regulation 2020*.		
42	**FAUNA MANAGEMENT** Ensure all vacant hollows and nests are relocated or temporarily made unusable to prohibit fauna returning to them during clearing works.	At all times during clearing	
43	**FAUNA MANAGEMENT** Limit the felling of habitat and hollow bearing trees to the following methods: a) Segmental removal of the tree, with hollow-bearing limbs being checked by the wildlife spotter and cleared of fauna using a cherry picker; b) Segmental removal of the tree, with hollow-bearing limbs plugged and lowered to the ground for inspection by the wildlife spotter; c) Use of an excavator with vertical grab to lower the main trunk; or d) A combination of the above methods.	At all times	
44	**FAUNA MANAGEMENT** Preserve valuable habitat features such as large fallen logs, log piles, rock piles or outcrops wherever practicable through the translocation and re-establishment in coordination with an accredited Fauna Spotter/Wildlife Consultant. **Advisory note:** An accredited Fauna Spotter/ Wildlife Consultant is a person or company holding a current Rehabilitation Permit – Spotter Catcher issued by the Department of Environment and Science under the *Nature Conservation (Animals) Regulation 2020*.	At all times	
45	**TREE PROTECTION** Protect trees identified on the approved plans to be retained by implementing tree protection measures in accordance with Australian Standard AS4970-2009 – Protection of Trees on Development Sites and undertake the following: (a) install protective fencing to prevent any damage to areas not in the approved vegetation clearing area in general accordance with Section 4.3 of AS 4970 – 2009; (b) provide signs identifying the 'Tree Protection Zone' on exclusion fencing that are clearly visible from all areas within the development site within 20 metres of the exclusion fencing; and € ensure all trees to be retained within allotments are protected from harm during works on site. Ensure activities such as traffic,	At all times during clearing	

	stockpiling and compaction are excluded from areas of retained vegetation particularly within the tree protection zones of retained trees and within covenant areas.	
46	**VEGETATION DISPOSAL** Ensure all vegetation cleared as a result of this development approval and requiring disposal is disposed of: (a) on the premises for landscaping and sediment and erosion control purposes (for example as mulch); and/or (b) at a waste disposal facility; € in such other environmentally responsible manner; and (d) ensure any vegetation cleared as a result of this development is not burnt or incinerated except for the purpose of domestic heating inside a dwelling.	At all times
47	Organise and have a pre-start meeting prior to vegetation clearing where Council environment officers sign-off on fauna spotter's qualifications, licences and references, and ensure the pre-clear survey and contractor pre-start meeting have been appropriately undertaken.	Prior to commencement of vegetation clearing
48	Provide Council with a pre and post clearing activity report, to be completed by the supervising Fauna Spotter, including: (a) The number and species of any animals observed during clearing; (b) The actions taken to deal with observed animals; € The number of any animals that were required to be relocated; (d) The release site for any relocated animals; € The number (if any) of animals injured during clearing; (f) The treatment provided; (g) The outcome of any treatment; and (h) The location of the treatment (e.g. on-site, at veterinary clinic).	With endorsement of survey plan

Moved By: **Cr Vela** **Seconded By:** **Cr Wilson**

Resolution Number: 20-24/0752

CARRIED
6/0

Executive Summary

This report considers a development application (MC2021/0042 & RL2021/0021) for a Development Permit for Material Change of use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 lot into 13 lots) and Operational Works for Advertising Device at Rosewood Laidley Road, Laidley. The following table summarises the application details.

APPLICATION SUMMARY	
Applicant:	RU & AR Patel C/- Santoshi Development Consultants
Landowner:	RU & AR Patel
Proposal:	Development Permit for Material Change of Use for Service Station and Refreshment Service; Development Permit for Reconfiguring a Lot for Subdivision (1 lot into 13 lots); and

	Development Permit for Operational Works for Advertising Device
Properly Made Date:	11 June 2021
Street Address:	Rosewood Laidley Road, Laidley
RP Description:	Lot 1 SP104184
Assessment Type:	Impact
Number of Submissions:	One (1) properly made submission
State Referral Agencies:	State Assessment and Referral Agency: • Development site within 25m of state-controlled road (Rosewood Laidley Road); • Development impacting on State transport infrastructure and thresholds; and • Interfering with Koala habitat.
Referred Internal Specialists:	• Development Engineer • Senior Environmental Planner • Building Certifier • Plumbing Inspector
Decision Due Date:	20 January 2023

The application has been assessed in accordance with the requirements of the *Planning Act 2016*. The development complies with the applicable assessment benchmarks, subject to reasonable and relevant conditions.

Proposal

The application seeks approval for a Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 lot into 13 lots) and Operational Works for Advertising Device at Rosewood Laidley Road, Laidley.

Figure 1: Aerial image of subject site

Material Change of Use for Service Station and Refreshment Service

The development includes a Service Station with an ancillary car wash, and a Refreshment Service which is located in the same building as the Service Station.

The Refreshment Service will have a gross floor area of 200m^2, including kitchen and dining areas, and includes a drive through facility.

The plans identify 12 fuel dispensing stations which are covered by a canopy. The canopy is connected to the Service Station and Refreshment Service building. Access to the Service Station and Refreshment Service will be an entry and exit point to Rosewood Laidley Road, left out only exit to Rosewood Laidley Road, and an entry and exit point to a proposed new road. Landscaping is incorporated into the development fronting Rosewood Laidley Road and the new road, as well as within the site.

MATERIAL CHANGE OF USE	*DEVELOPMENT PARAMETERS*
	Proposed
Gross Floor Area	408m^2 (208m^2 Service Station + 200m^2 Refreshment Service)
Building Height/ Storeys	5.7m / 1 storey
Setbacks	Front: 8.77m (Rosewood Laidley Road), 2.94m (new road) Side/Rear: 5.55m (south), 14.91m (east)
Site Cover	6.6%
Parking	15 car parking spaces

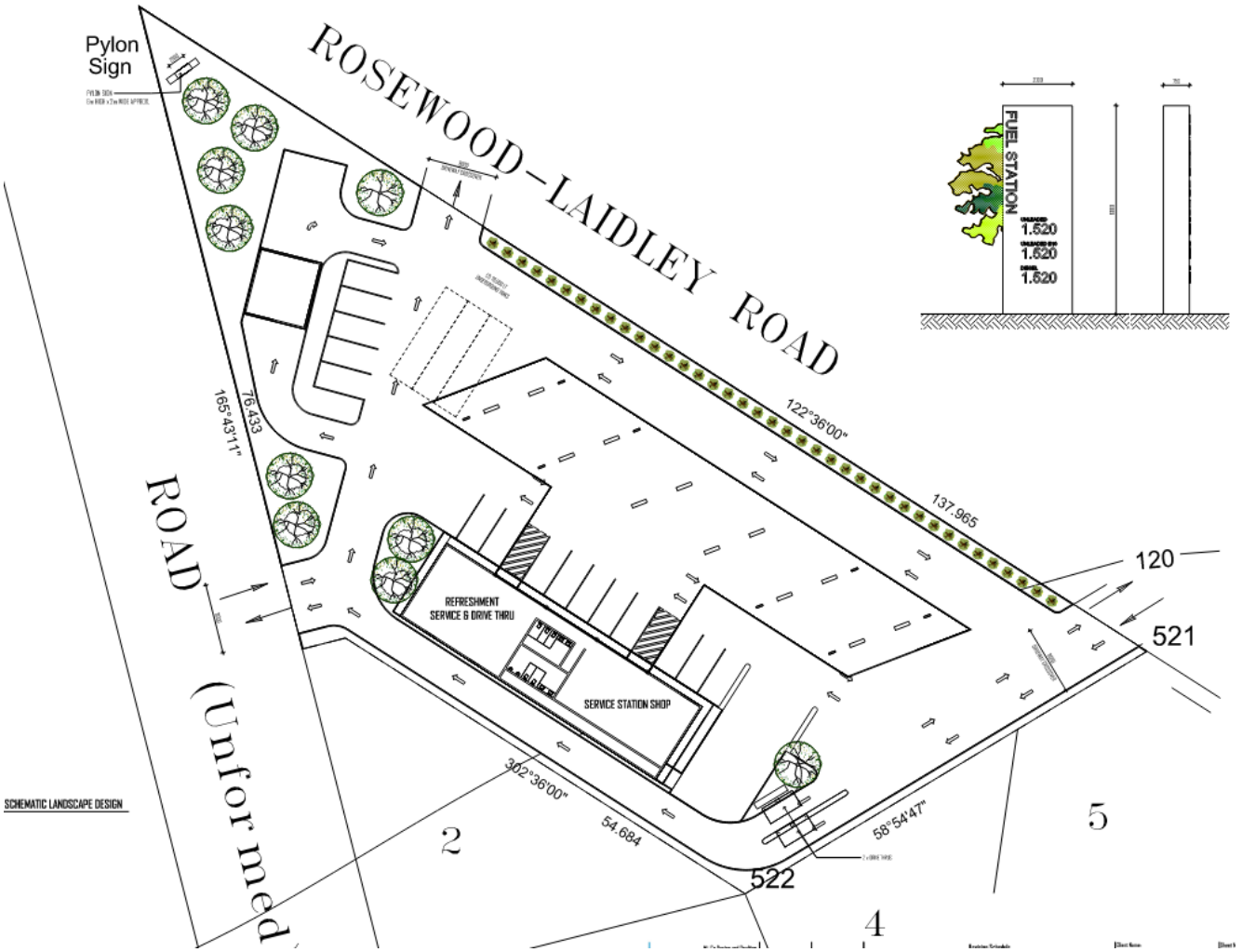


Figure 2: Service Station and Refreshment Service site plan

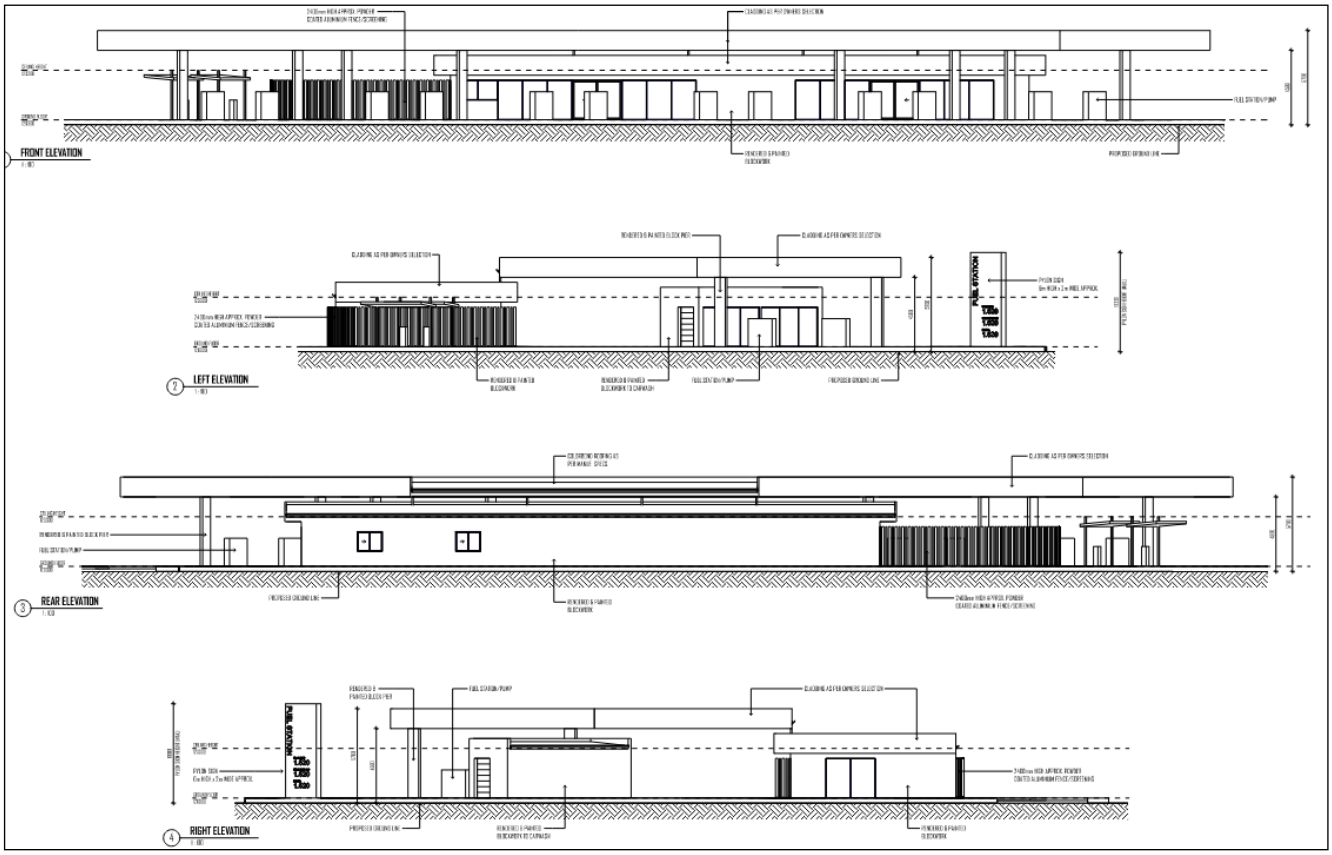


Figure 3: Service Station and Refreshment Service elevations

Operational Works for Advertising Device

A pylon sign is proposed in the northwest corner of the site to advertise the Service Station including current fuel price. This sign is 6 metres in height and 2 metres wide.

Reconfiguring a Lot for Subdivision

The development includes subdivision of the land into 13 lots plus a lot containing a detention basin. Proposed Lot 1 will incorporate the Service Station and Refreshment Service. Lot sizes range from 2,027m^2 to 4,842m^2. Proposed Lot 9 includes a covenant for vegetation protection purposes. Easements A to D are proposed on Lots 7 to 9 for bushfire maintenance by the applicant. Council would not be a party to these easements. With the exception of proposed Lot 1, all lots will gain access via a proposed new road.

Due to the topography of the land, substantial earthworks are required as part of the development to provide for developable industrial lots. As a result, retaining walls are proposed throughout the development, including to proposed Lots 3 to 5 which front Rosewood Laidley Road. A landscaping buffer is proposed in front of the retaining wall to improve the visual appearance from Rosewood Laidley Road. A landscape buffer is also proposed to the eastern boundary to provide visual screening to dwellings to the east.

The site is situated within the Industrial Area under the *Laidley Shire Planning Scheme 2003*. The tables of assessment for the Industrial Area (Part 4, Division 7, Table 13) identifies a Service Station as being subject to Impact assessment, and the Refreshment Service, Subdivision and Advertising Device are subject to Code assessment.

RECONFIGURING A LOT	*DEVELOPMENT PARAMETERS*
Number of Proposed Lots	13 lots
Size of Proposed Lots	2,027m^2 to 4,842m^2
Easements	Easements A to D for fire trails
Covenants	Covenant A on Lot 9 for vegetation protection – 13, 230m^2

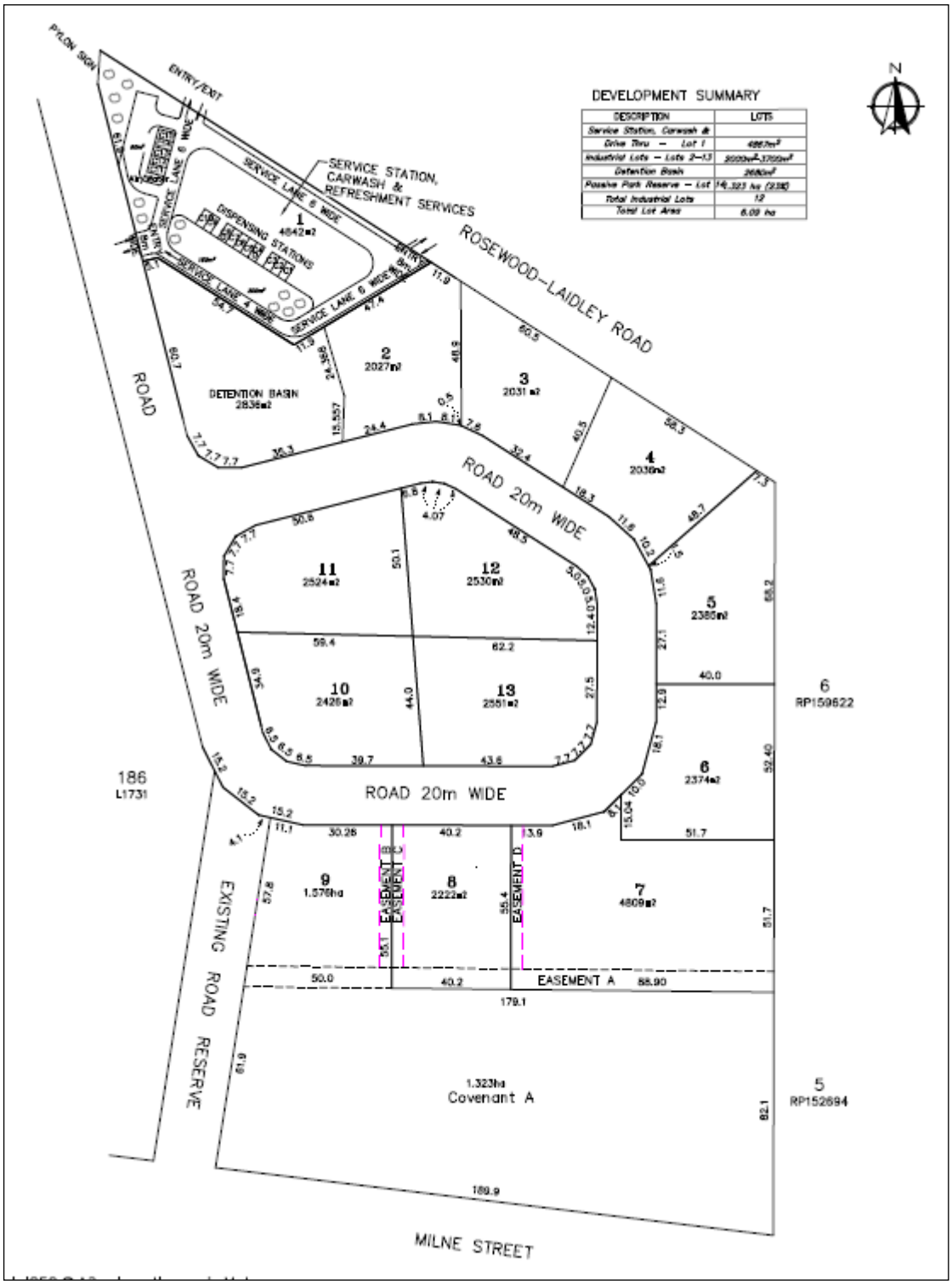
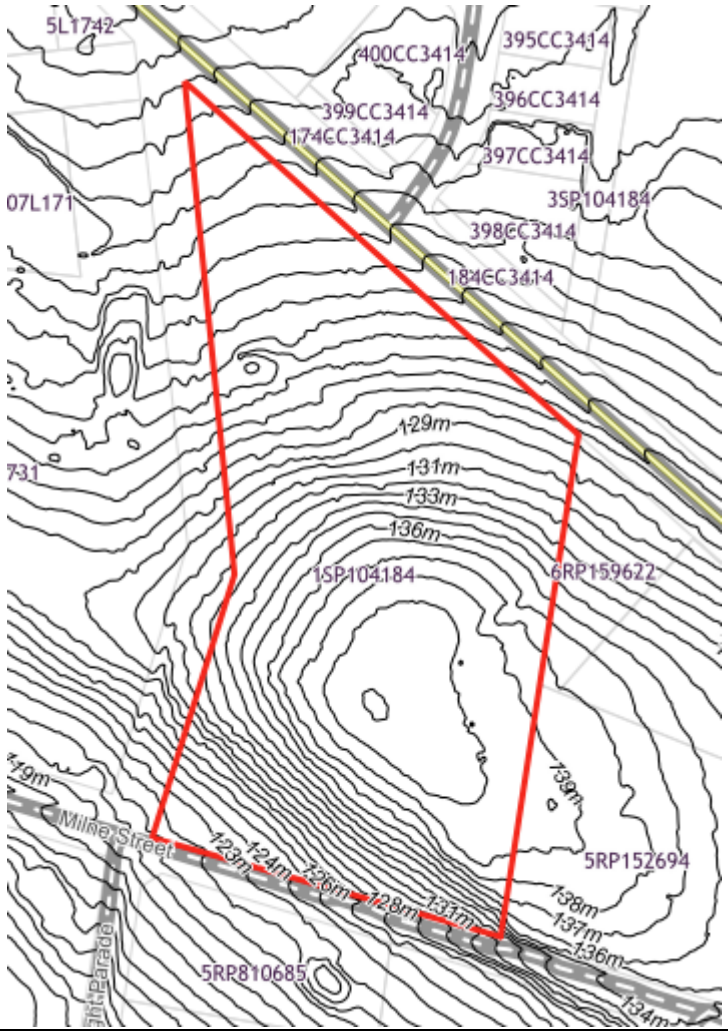


Figure 3: proposed subdivision lot layout plan

Site Details

SITE AND LOCALITY DESCRIPTION	
Land Area:	6.1 hectares
Existing Use of Land:	Vacant
Road Frontage:	Rosewood Laidley Road: 279m (constructed – bitumen sealed) Milne Street: 192m (constructed – bitumen sealed) Jordan Street: 406m (unconstructed)
Significant Site Features:	Heavily vegetated. Hill in the south east portion of the site.
Topography:	Slopes from 140m AHD down to 115m AHD. Slopes greater than 15% in on part of the property. 
Surrounding Land Uses:	Industrial uses to the north, dwelling houses to the east and south, saleyards to the west

ASSESSMENT:

Framework for Assessment

Categorising Instruments for Statutory Assessment

For the *Planning Act 2016*, the following categorising instruments may contain Assessment Benchmarks applicable to development applications:

- the *Planning Regulation 2017*
- the Planning Scheme for the local government area
- any Temporary Local Planning Instrument
- any Variation Approval

The planning instruments relevant to this application are discussed in this report.

Assessment Benchmarks Pertaining to the *Planning Regulation 2017*

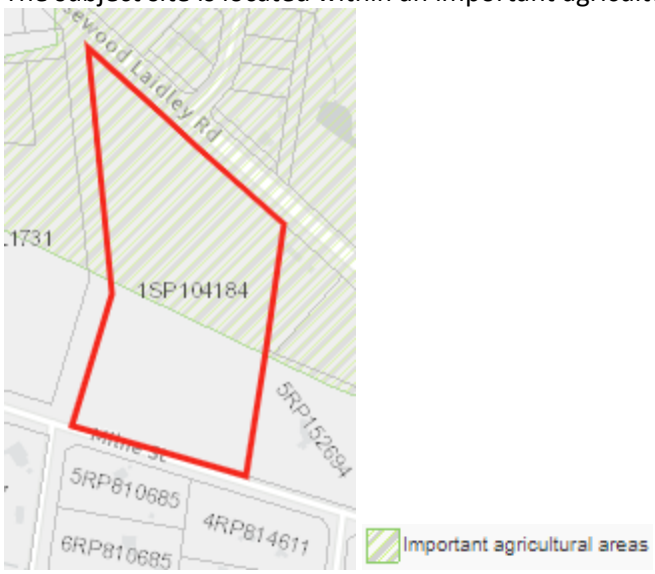
The following Assessment Benchmarks from the *Planning Regulation 2017* are applicable to this application:

PLANNING REGULATION 2017 DETAILS	
Assessment Benchmarks:	State Planning Policy: • Agriculture • Biodiversity • Water quality • Natural hazards, risk and resilience • Transport infrastructure
SEQ Regional Plan 2017 (ShapingSEQ) Designation:	Urban Footprint

State Planning Policy

Agriculture

The subject site is located within an important agricultural area.



Given the small size, slope, protected vegetation and location within the urban footprint, the use of the land for agricultural purposes is constrained. The proposal will not adversely impact any agricultural use or land. Subsequently, the proposed development has minimal impact on agricultural areas and complies with the SPP's requirements for agriculture.

Biodiversity

The subject site includes the following Matters of State Environmental Significance (MSES):

- Wildlife habitat (special least concern animal);
- Wildlife habitat (koala habitat areas – core);
- Regulated vegetation (category C); and
- Regulated vegetation (essential habitat).

The development results in the clearing of 5.26ha of vegetation. A 1.56ha area has been nominated for protection within an environmental covenant. To offset impacts to vegetation, rehabilitation is also proposed within the covenant area incorporating a variety of native plant species (canopy, understorey and shrub species).

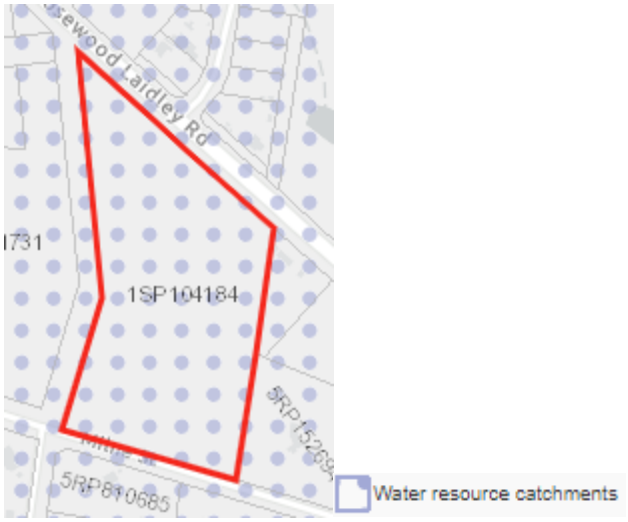
The development application was referred to SARA in relation to the State's interest in clearing of the koala habitat area. SARA issued its referral response with conditions which require a covenant with the Department of Environment and Science (DES) for protection of vegetation, undertaking restoration and rehabilitation, and delivering an environmental offset.

The implementation of covenant areas, rehabilitation and delivery of an offset will minimise impacts to the MSES. The covenant areas and rehabilitation areas proposed by Council align with those required by SARA. Based on the above assessment, the proposed development complies with the SPP's requirements for Biodiversity.

Figure 5: Vegetation Clearing Plan

Water Quality

The subject site is located within a water resource catchment.



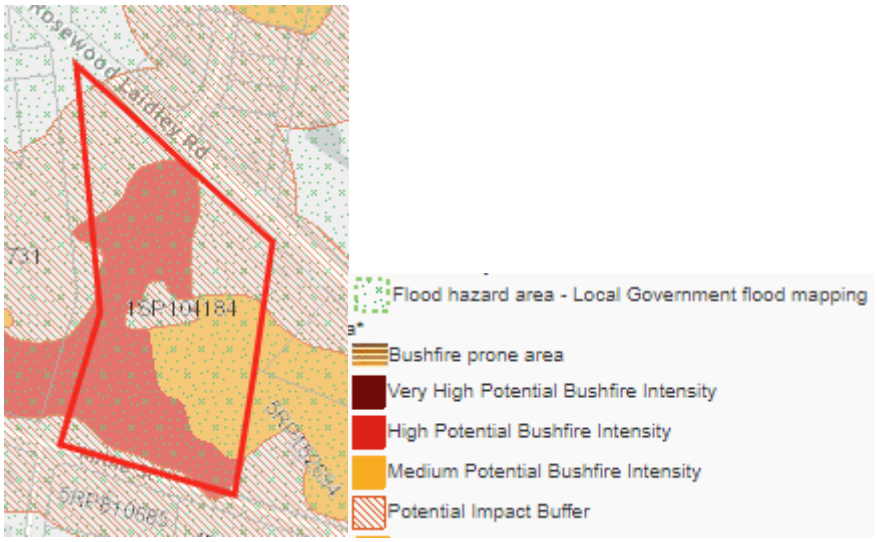
A Conceptual Stormwater Management Plan (CSWMP) was submitted with the application which detailed stormwater quality management as part of the development. The water quality management incorporates a treatment train with a bioretention basin, water smart trees and swales. Water smart trees are generally costly from a maintenance perspective, therefore it is recommended that these are not approved by Council

and an alternative water quality measure implemented. These changes to water quality management can be addressed through a subsequent operational works application. The CSWMP demonstrates that the development will not cause adverse water quality impacts and complies with the relevant water quality requirements under the SPP. Conditions have been recommended in relation to the design and construction of water quality infrastructure. Based on the above assessment, the proposed development complies with the SPP's requirements for water quality.

Natural Hazards, Risk and Resilience

The subject site is located within the flood hazard area – Local Government flood mapping area. An assessment addressing Council's flood mapping is provided below under the 'Assessment Benchmarks Pertaining to a Temporary Local Planning Instrument' section.

The subject site is located within a medium and high potential bushfire intensity and potential impact buffer.



The development involves clearing a significant portion of the subject site. Therefore, the bushfire risk will be reduced for the majority of the property. The remaining bushfire risk will be located within the covenant area. Easements are proposed on Lots 7, 8 and 9 for bushfire purposes. Council will not be a party to these easements. Nor are these easements required for firefighting purposes, due to the retaining walls between the easement and bushfire risk area, therefore no conditions are required relating to these easements. This will provide for a fire break to reduce the bushfire risk to the adjoining industry properties. All lots will be connected to reticulated water. All lots will have access and frontage to the new road to allow for evacuation in the event of a bushfire.

Based on the above assessment, the proposed development complies with the SPP's requirements for natural hazards, risk and resilience.

Transport Infrastructure

The site fronts Rosewood Laidley Road which is a State-controlled Road. The development proposes new access points to Rosewood Laidley Road. The development application was referred to SARA in relation to the State's interest in transport infrastructure. SARA issued its referral response with conditions which require roadworks and upgrades to Rosewood Laidley Road. Based on the above assessment, the proposed development complies with the SPP's requirements for transport infrastructure.

South East Queensland Regional Plan 2017 (ShapingSEQ)

The site is located within the Urban Footprint under ShapingSEQ. The proposed development for industrial/commercial uses and subdivision within an industrial zoned property is consistent with the outcomes sought under the Urban Footprint designation.

Assessment Benchmarks Pertaining to the Planning Scheme

The applicable planning scheme for the application is *Laidley Shire Planning Scheme 2003*. The following sections relate to the provisions of the Planning Scheme.

Planning Scheme:	*Laidley Shire Planning Scheme 2003*
Zone:	Industrial
Overlay/s:	Areas of Natural and Environmental Significance overlay: • Moderate ecological significance; • Slopes greater than 15%; and • Medium bushfire prone area *Temporary Local Planning Instrument 2022 Flood Regulation* Overland Flow Paths
Assessment Benchmarks:	Planning Scheme in its entirety

Desired Environmental Outcomes

The Desired Environmental Outcomes (DEOs) are:

- Environment;
- Economic; and
- Community Wellbeing and Lifestyle.

The application has been assessed against each of the matters above and found to be generally consistent with each DEO.

Assessment Benchmarks – Planning Scheme Codes

The following codes are relevant to assessment of the application:

- Industrial Area Code;
- Areas of Natural and Environmental Significance Overlay Code;
- Commercial/Retail Uses Code;
- Industrial Uses Code;
- Advertising Devices Code;
- Building Dimensions Code;
- Reconfiguring a Lot Code; and
- Vehicle Access and Parking Code.

The application has been assessed against each of the applicable codes and found to be compliant or can be conditioned to comply. The pertinent issues arising out of assessment against the codes are discussed below:

Zone Code

Industrial Area Code

The site is located within the Industrial Area. The proposed development is for a subdivision for future industrial purposes and uses, being Service Station and Refreshment Service, that is compatible with the outcomes sought for the Industrial Area. A Refreshment Service is a consistent use within the area.

A Specific Outcome of the Code seeks "*Amenity is maintained for surrounding land uses by buffering industrial uses*". To the east and south of the property are residential dwellings. Properties to the south are buffered by the existing vegetation which will be retained within a covenant area in the south of the site. Along the eastern boundary, the applicant has proposed a landscaped buffer to provide screening. A condition has been recommended for the subdivision component of the development requiring landscaping to be provided within this buffer area. To further buffer the industrial development, it is recommended that a screen fence be provided along the rear boundary of proposed Lot 5 to ensure screening from the industrial development (refer to Figure 6).

Accordingly, the proposal complies with the Industrial Area Code.

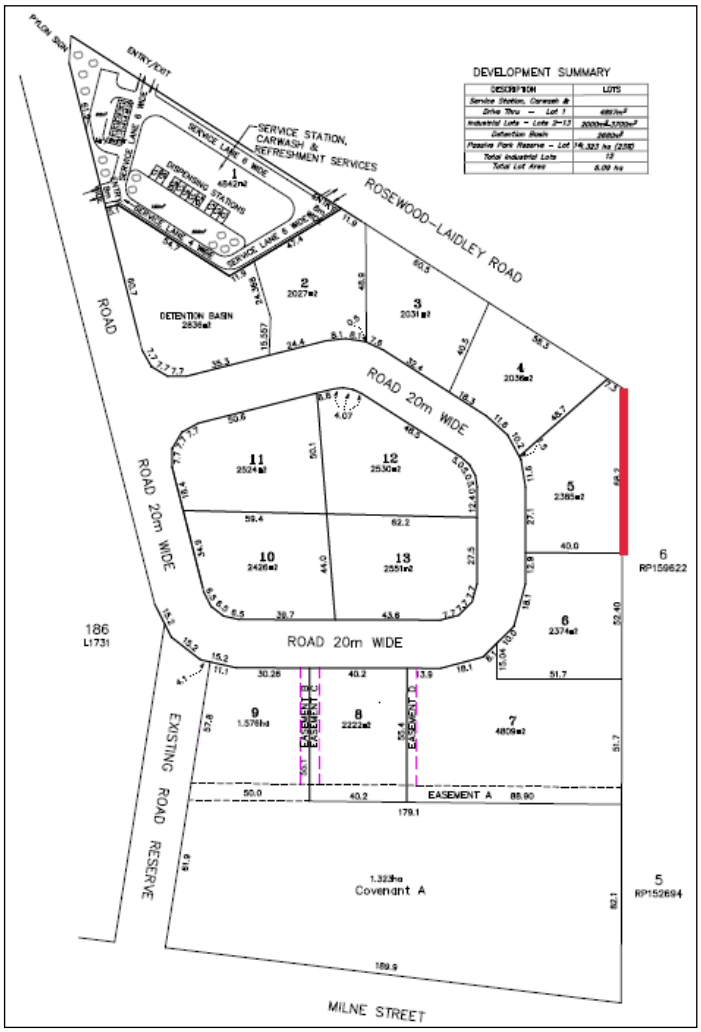


Figure 6: Red line identifies lcoation of screening to be provided

Development Codes

Commercial/Retail Uses Code

The Service Station and Refreshment Service complies with the outcomes sought under the Code. Conditions are recommended relating to outdoor lighting to ensure it does not cause nuisance to nearby properties or road users to comply with Acceptable Solution 4.1. The development will be designed, constructed and maintained to provide new road accesses for up to an Articulated Vehicle (AV), which complies with Specific Outcome 7. All stormwater will discharge to the legal point of discharge in the northwest corner of the site. All stormwater discharge can be managed to not increase beyond the pre-development condition, which complies with Specific Outcome 6. Accordingly, the proposal complies with the Commercial/Retail Uses Code.

Industrial Uses Code

The development proposes a front setback of 2.94m from the new road and 8.77m from Rosewood Laidley Road. This does not comply with Acceptable Solution 3.2 which requires a minimum setback of 9.0m. The side and rear setbacks comply with the 3.0m minimum (refer to Figures 2 and 3 below).

Specific Outcome 3 seeks "*the development is of a scale generally compatible with nearby buildings and achieves a standard of amenity having regard to the existing character of the locality*". The buildings that do not comply with the setback requirements are the car wash and canopy over the fuel dispensing stations. The development incorporates landscaping between the buildings and front boundaries, which will improve the amenity of the site to reduce the impact of a reduced front setback. The car wash building (which is located within 2.94m of the front setback of the new road) is of small scale (58m^2) and height (3.8m) which reduce the visual impact of the building from the road. To the north of the site is a small scale industrial area within Crown Street, which includes a number of existing industrial uses. There is a number of buildings and structures within this area which are located within the required setback of 9.0m. As the reduced setback is generally compatible with the nearby buildings, it is considered the development complies with Specific Outcome 3 of the code.

Accordingly, the proposal complies with the Industrial Uses Code.

Advertising Devices Code

A pylon sign is proposed in the northwest corner of proposed Lot 1. The pylon sign will include business name branding of the Service Station and Refreshment Service and fuel prices. The sign will be 6 metres high and 2 metres wide.

The sign does not comply with Acceptable Solution 2.1(b) which seeks "*for a business name sign for another use the signface shall be no greater than 4m^2 and the sign shall be wholly contained within the premises or on a fence facing the road*".

The higher order Specific Outcome 2 seeks "*sign face area and size, take into consideration, predominant land uses, the built environment, and orientation of the site with respect to adjacent roads and buildings".* The sign is located in close proximity to the front boundary to maximise visibility from the road. The signage will be limited to advertising businesses operating on the subject site. The height of the sign also generally aligns with the height of the proposed building (5.7m), which is a 300mm difference. It is therefore considered that that sign complies with Specific Outcome 2.

Accordingly, the proposal complies with the Advertising Devices Code.

Building Dimensions Code

The maximum building and structure height is 10 metres in the Industrial Area. The building height is 5.7m and sign height is 6m. Accordingly, the proposal complies with the Building Dimensions Code.

Reconfiguring a Lot Code

A condition is recommended to provide footpaths within the development site on the new/existing road reserves, to comply with Specific Outcome 1. No public open space is provided as part of the development.

A Conceptual Stormwater Management Plan (CSWMP) was submitted with the application which detailed the stormwater management as part of the development. Stormwater drainage will be captured within an underground stormwater pipe system through the development site, which will discharge into a detention basin. Stormwater generated will ultimately discharge to the northwest corner of the site to Rosewood Laidley Road, being the lawful point of discharge. The stormwater discharge has been modelled for a range of AEP events and it has been determined that the peak runoff will not worsen pre-development conditions. Conditions have been recommended requiring the design and construction of stormwater infrastructure in accordance with the CSWMP.

A new road is proposed utilising part of the existing road reserve to the west of the site. The new intersection with Rosewood Laidley Road has been assessed by SARA to ensure the safe and efficient movements of vehicles.

No minimum lot size is identified for the Industrial Area under the Code. The smallest lot proposed is 2,027m^2. The lot sizes are generally consistent with the existing industrial lots to the north of the subject site and are sufficient to cater for a range of smaller scale industry uses.

A condition has been recommended requiring all lots to be connected to Urban Utilities' reticulated water supply and sewerage networks.

Accordingly, the proposal complies with the Reconfiguring a Lot Code.

Vehicle Access and Parking Code

The Service Station and Refreshment Service has been designed to allow for internal movements for up to a 20m Articulated Vehicle (AV), this includes entering and exiting the site in a forward gear. The code requires car parking to be provided at a rate of 5 spaces for the first lubricating bay and 4 spaces for each additional bay for the Service Station and 1 space for every 15m^2 of gross floor area for the Refreshment Service. It is noted that there are no lubricating bays associated with the Service Station. The Refreshment Service requires a minimum of 10 car parking spaces (based on a gross floor area of 150m^2) to be provided. There are 15 car parking spaces proposed. There will be five (5) car parking spaces provided for the Service Station component. Sufficient space is provided at each fuel dispensing station for a car to park whilst fuelling. It is considered that the car parking provided is sufficient for the use. The uses generally involve a high turnover of traffic. Whilst the Service Station provides a low number (five) of car parking spaces, the majority of users of the Service Station will be parked at one of the 12 dispensing bays. The Service Station and Refreshment Service are located within the same building, which will limit any parking conflicts between the two uses. Conditions have been recommended in relation to the design, construction and maintenance of the car parking, driveway and access areas.

Accordingly, the proposal complies with the Vehicle Access and Parking Code.

Overlay Codes

Areas of Natural and Environmental Significance Overlay Code

The subject site is located within the moderate ecological significance, slopes greater than 15% and medium bushfire prone area.

Moderate ecological significance

The development will result in a significant portion of the site being cleared (refer to Figure 5). To compensate for this clearing, it is proposed to retain a portion of the existing vegetation within a covenant area. This area will be further enhanced by rehabilitation and restoration being undertaken within this area. The vegetation within the covenant area is identified as the most significant vegetation on the subject site in terms of habitat values. The other areas to be removed are of less significance, being previously disturbed and regrowth. The retained vegetation will also continue to provide linkages to the predominant vegetation in the area towards the southern part of the property.

The proposed development includes clearing associated with Reconfiguring a Lot. Clearing of vegetation associated with Reconfiguring a Lot does not trigger an application for Operational Works, as per Part 5, Division 1, Table 24A of the Planning Scheme. Therefore, conditions are recommended for vegetation clearing that would ordinarily be included as part of an Operational Works permit.

Due to the existing site topography, the development will require significant earthworks to provide developable building envelopes on each new lot. As a result, retaining walls are required throughout the development site. To reduce visual amenity impacts, as per Specific Outcome 14 which states "*development does not compromise visual amenity on land with slope greater than 15%*", landscaping is proposed in front of the retaining walls that front Rosewood Laidley Road and conditions are recommended requiring this landscaping. In addition, the development has been designed to reduce the amount of earthworks required and reduce the height of the retaining walls. The other retaining walls throughout the site will be buffered by buildings and development on the future lots. It is therefore considered the development complies with Specific Outcome 14.

Slopes greater than 15%

The development involves clearing a significant portion of the subject site. Therefore, the bushfire risk will be reduced for the majority of the property. The remaining area of medium bushfire risk will be within the covenant area. A fire trail is provided between the covenant area and adjoining lots to allow for emergency access during a fire event. This will provide for a fire break to reduce the bushfire risk to the adjoining industry properties. All lots will be connected to reticulated water. All lots will have access and frontage to the new road to allow for evacuation in the event of a bushfire.

Medium bushfire prone area

Accordingly, the proposal complies with the Areas of Natural and Environmental Significance Overlay Code.

Temporary Local Planning Instrument

Flood Hazard Overlay Code

The subject site contains overland flow paths under the *Temporary Local Planning Instrument 2022 Flood Regulation* (TLPI). Council's latest flood modelling (refer to Figure 7 below) identifies minimal flooding within the subject site in a 1%AEP flood event. The development will be designed and constructed to have all stormwater and flooding discharge to the detention basin and ultimately the legal point of discharge in the northwest corner to Rosewood Laidley Road. The flooding is predominantly less than 10mm (excluding the

dam to be filled). Given the minimal flooding it is unlikely to cause adverse impacts to the proposed development, or result in worsening or nuisance off site. Accordingly, the proposal complies with the Flood Hazard Overlay Code.

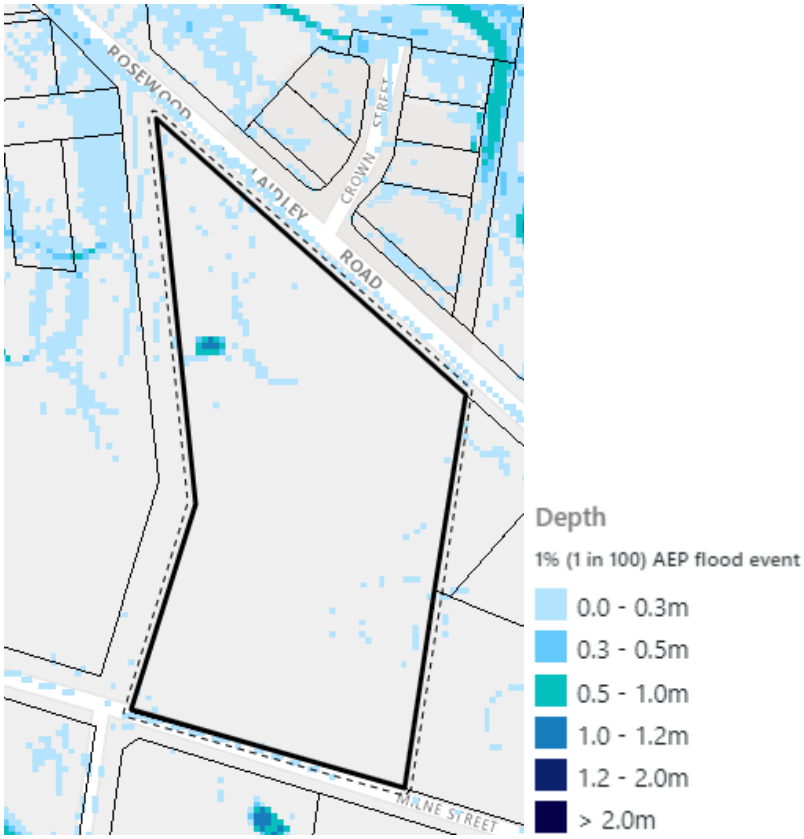


Figure 7: Council's 1% AEP depth mapping

Adopted Infrastructure Charges Resolution

In accordance with section 13 of the *Lockyer Valley Adopted Infrastructure Charges Resolution (No. 6) 2022*, a levied charge is applicable to the development proposal and has been calculated as shown in the below table taking into consideration any applicable credits or offsets. If the application is approved, an infrastructure charges notice will be issued.

Consultation

Internal Consultation
The application was internally referred to Council's Development Engineer, Senior Environmental Planner, Building Certifier and Plumbing Inspector.

External Consultation
The application was referred to the following Referral Agencies in accordance with the *Planning Act 2016* and the *Planning Regulation 2017*:

Referral Status	Referral Agency	Referral Trigger of *Planning Regulation 2017*	Response
Concurrence	State Assessment and Referral Agency (SARA)	Schedule 10, part 9, division 4, subdivision 1, table 1, item 1 – state transport infrastructure generally Schedule 10, part 9, division 4, subdivision 2 table 1, item 1 and table 4, item 1 – development within 25m of State-controlled road Schedule 10, part 10, division 3, table 1, item 1 – koala habitat in SEQ region	The agency provided its response on 31 My 2022 (Reference No. 2106-23287 SRA). A copy of the response is attached.

State Assessment and Referral Agency (SARA)

The response from SARA included conditions requiring road works to Rosewood Laidley Road (refer to Figure 8) below due to the new accesses the development creates off Rosewood Laidley Road, which includes:

- Westbound Channelised Right Turn treatment and eastbound Basic Left Turn treatment to Rosewood Laidley Road and Crown Street intersection;
- Eastbound Channelised Right Turn treatment at the Rosewood-Laidley Road and easternmost service station intersection (opposite Crown Street);
- Left out movements only from the service station to Rosewood Laidley Road; and
- Basic Left Turn (BAL) and Basic Right Turn (BAR) turn treatments for to Rosewood Laidley Road and the new road intersection.

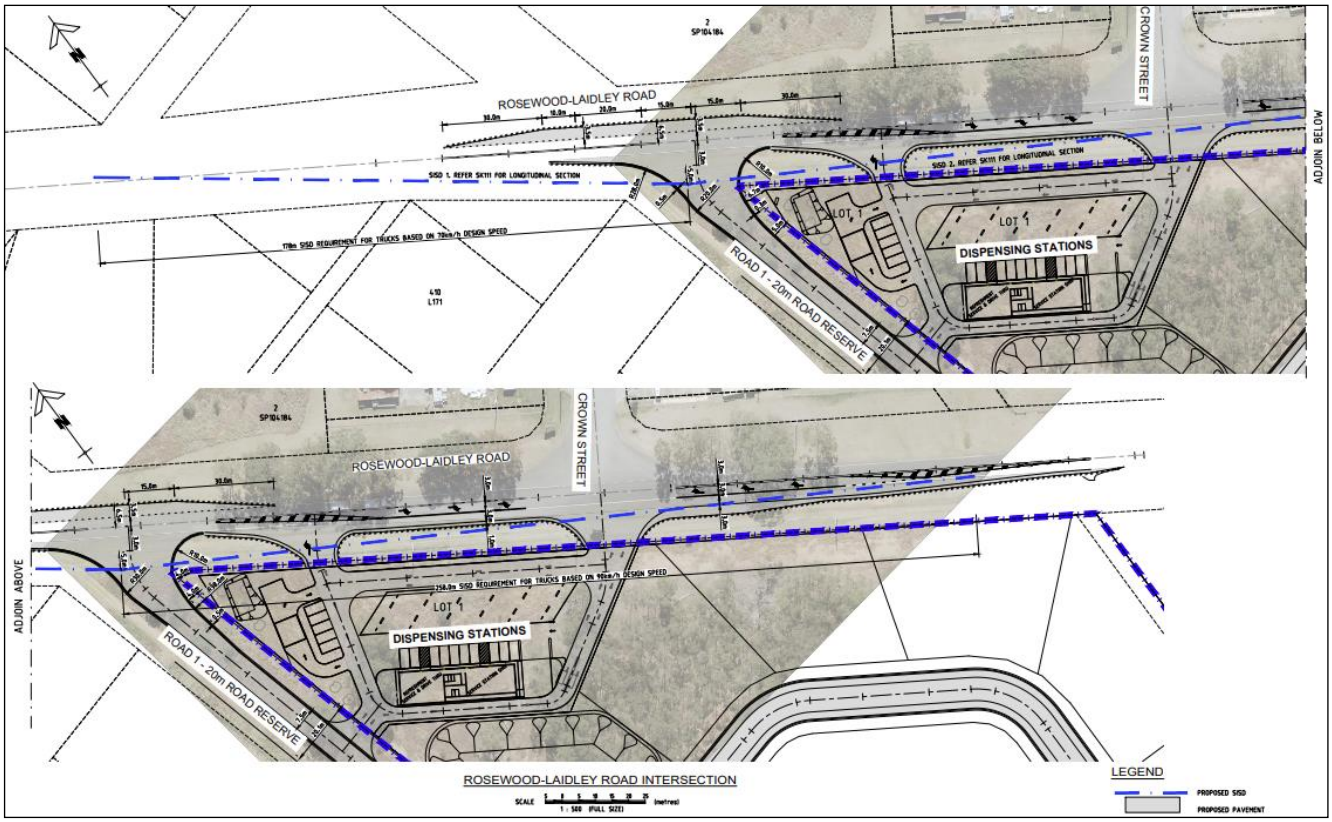


Figure 8: SARA's roadworks requirements

SARA also included conditions relating to interfering with Koala Habitat area, which includes limiting clearing to 385 non-juvenile koala habitat trees, entering into a covenant, undertaking restoration and rehabilitation within the covenant area, and delivering an environmental offset.

Community Engagement
The application was publicly notified for 21 business days from 10 January 2022 to 9 February 2022 in accordance with the requirements of the *Planning Act 2016*. One (1) properly made submission was received.

The following table provides a summary and assessment of the issues raised by the submitter.

ISSUES	***COMMENTS***
This area of land shown as a landscaped buffer has historically been maintained by the submitter. There are concerns about maintenance of this buffer. There are concerns that this buffer will impact upon the power lines within this area and will also cause a bushfire hazard.	Maintenance of the landscape buffer will be the responsibility of the landowner. It is noted that the powerlines within this area are not located within an easement. All landscaping will incorporate species with a maximum height of four metres or less to ensure compliance with Energex standards for planting under powerlines. The majority of the subject site will be cleared, therefore reducing the bushfire risk to the majority of the property, with the exception of the covenant area.
The adjoining property to the east has an existing dwelling in close proximity which may experience adverse impacts such as a noise and dust. Suitable fencing should be provided along this boundary to ensure there are no impacts.	The Industrial zoned property adjoins Rural zoned properties with dwelling houses. Industrial uses may in the future create amenity issues for residents of these dwellings. To ensure a high level of amenity is maintained, it is recommended a condition be included requiring a screen fence be provided along the eastern boundary of proposed Lot 5.
The site was previously used as the Laidley Hospital (1915 – 1922), the development should incorporate an acknowledgement of this site's historical significance.	The subject site is not identified as being located within the Council's Places/Areas of Cultural Heritage Significance Overlay Code. As such there is no mechanism to require the incorporation of an acknowledgement of previous uses on the site.

Material Change of Use for Service Station and Refreshment Service

LOCKYER VALLEY REGIONAL COUNCIL				
Charge Type	Description	Demand Units	Rate	TOTAL
PROPOSED DEMAND				
Charge	Commercial (retail) – Other	408	$115.95	$47,307.60
			TOTAL PROPOSED DEMAND	$47,307.60
EXISTING DEMAND				
Credit	Existing Allotment	1	-$13,297.13	-$13,297.13
			TOTAL EXISTING DEMAND CREDIT	-$13,297.13
			TOTAL PAYABLE	**$34,010.47**

Reconfiguring a Lot for Subdivision

LOCKYER VALLEY REGIONAL COUNCIL				
Charge Type	Description	Demand Units	Rate	TOTAL
PROPOSED DEMAND				
Charge	New Allotment	13	$13,297.13	$172,862.69

			TOTAL PROPOSED DEMAND	$172,862.69
EXISTING DEMAND				
Credit	Existing Allotment	1	-$13,297.13	-$13,297.13
			TOTAL EXISTING DEMAND CREDIT	-$13,297.13
			TOTAL PAYABLE	**$159,565.56**

Options
Option A: Approve the development application subject to reasonable and relevant conditions.
Option B: Approve the development application in part subject to reasonable and relevant conditions.
Option C: Refuse the development application.

Critical Dates
A decision on the application must be made by 20 January 2023.

Strategic Implications

Corporate Plan
Lockyer Planned – A development assessment process that delivers quality development that is consistent with legislation, best practice and community expectations.

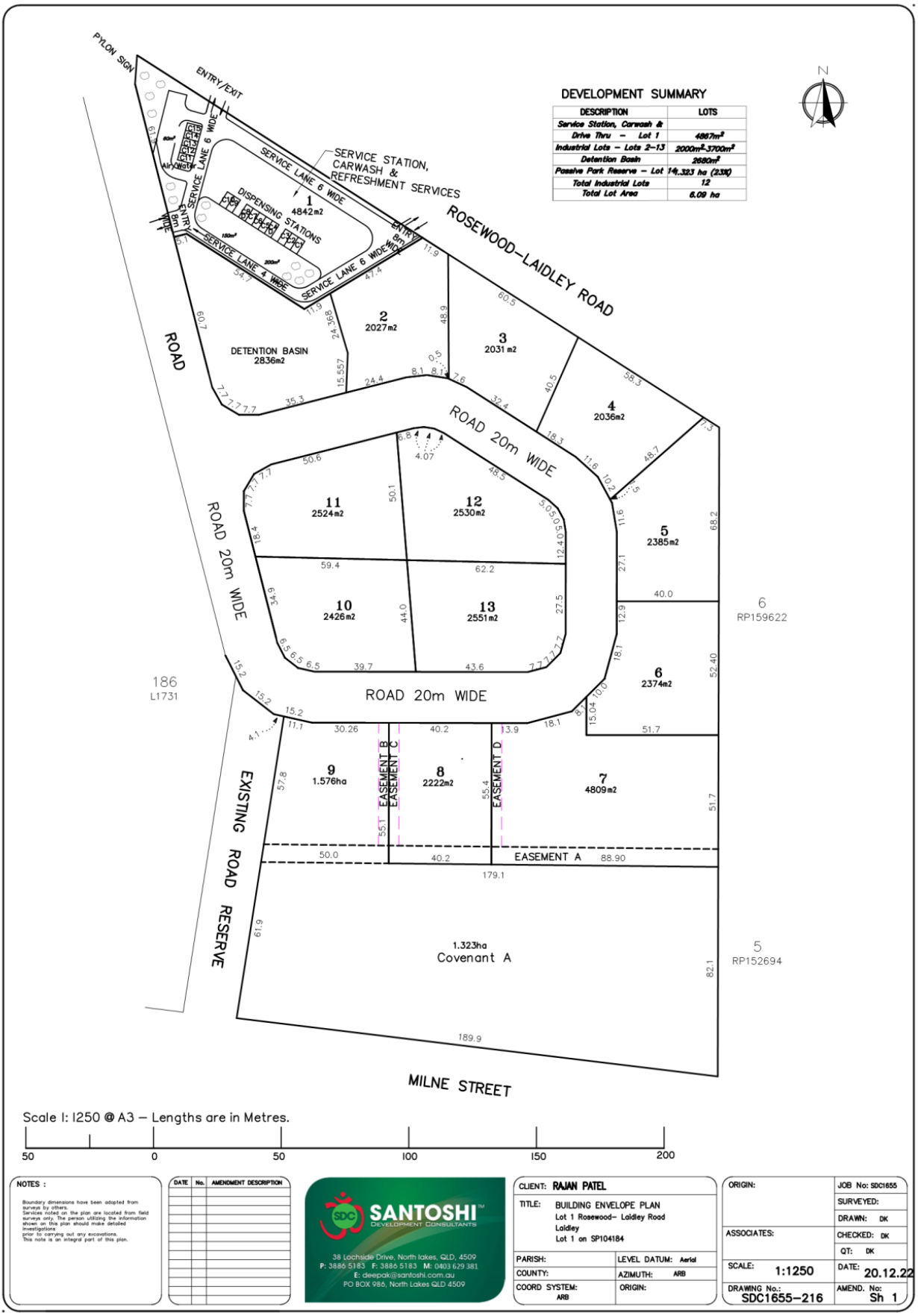
Finance and Resource
Should the decision be contested in the Planning and Environment Court financial implications may occur.

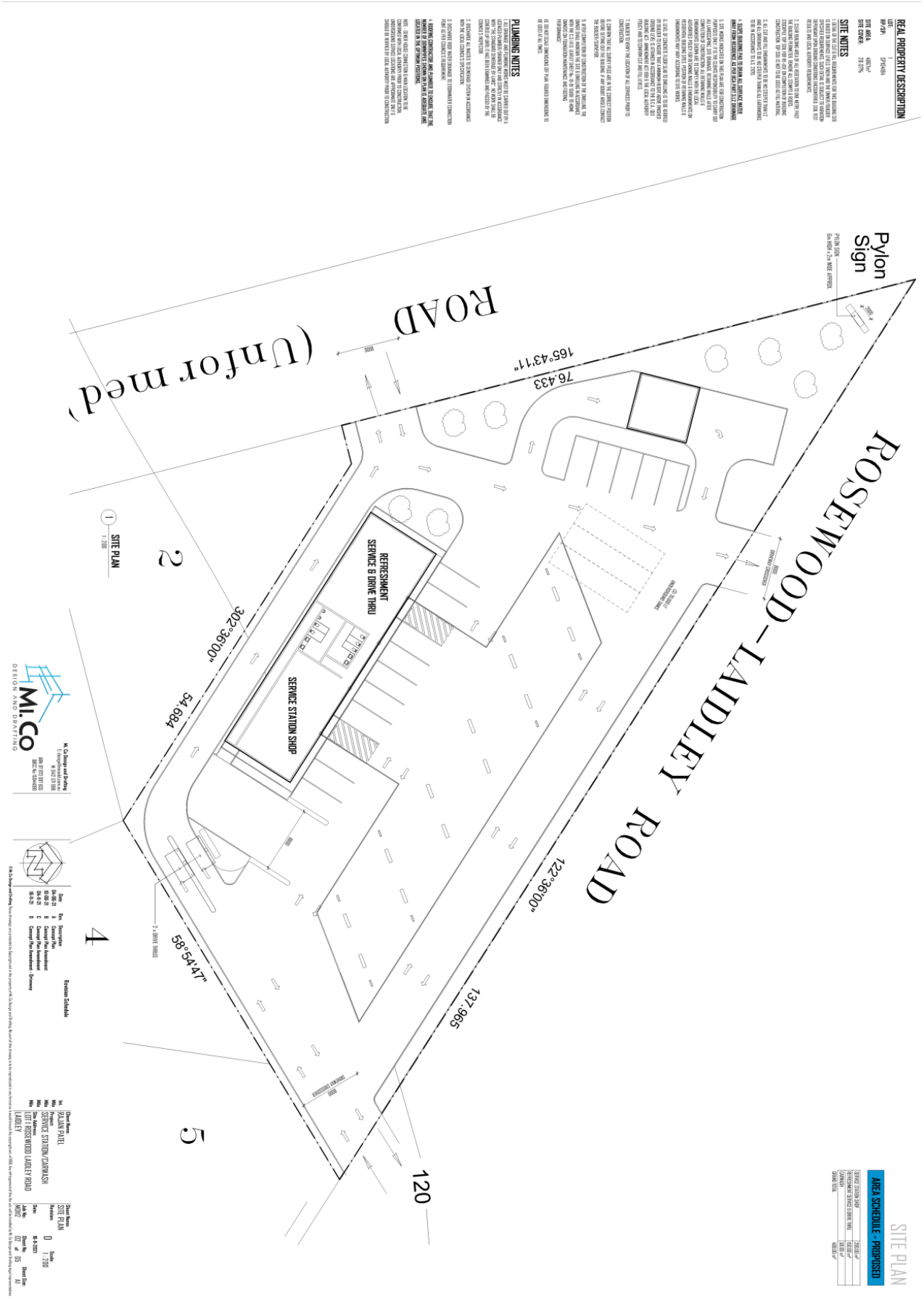
Legislation and Policy
The application has been assessed in accordance with the requirements of the *Planning Act 2016*. Legal implications arising from the recommendation provided in this report are that the applicant and/or submitter may appeal the decision to the Planning and Environment Court.

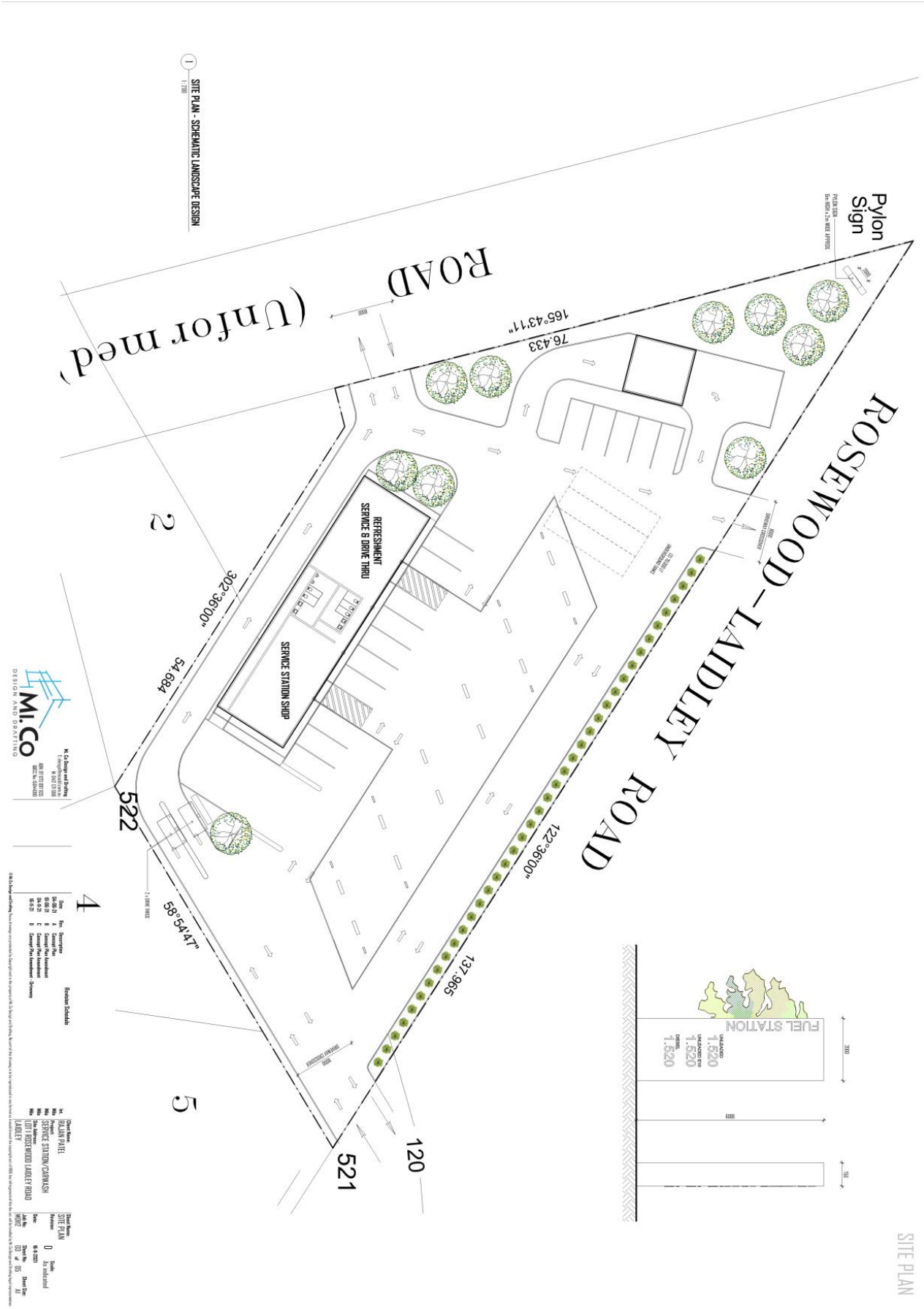
Risk Management
The application has been assessed in accordance with the *Planning Act 2016*. Any risks have been mitigated through the assessment of the application in accordance with legislative requirements and the recommendation of reasonable and relevant conditions.

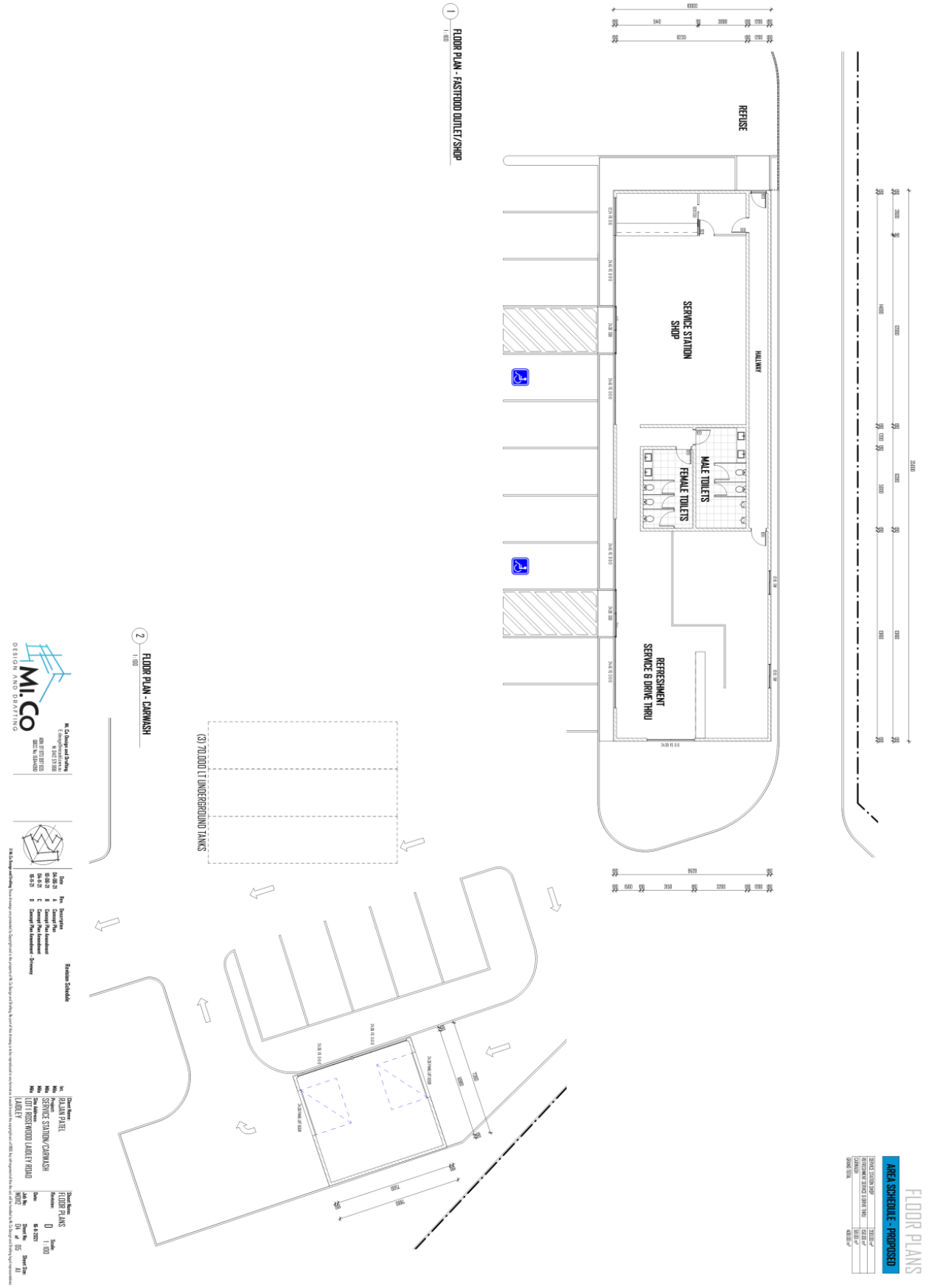
Attachments

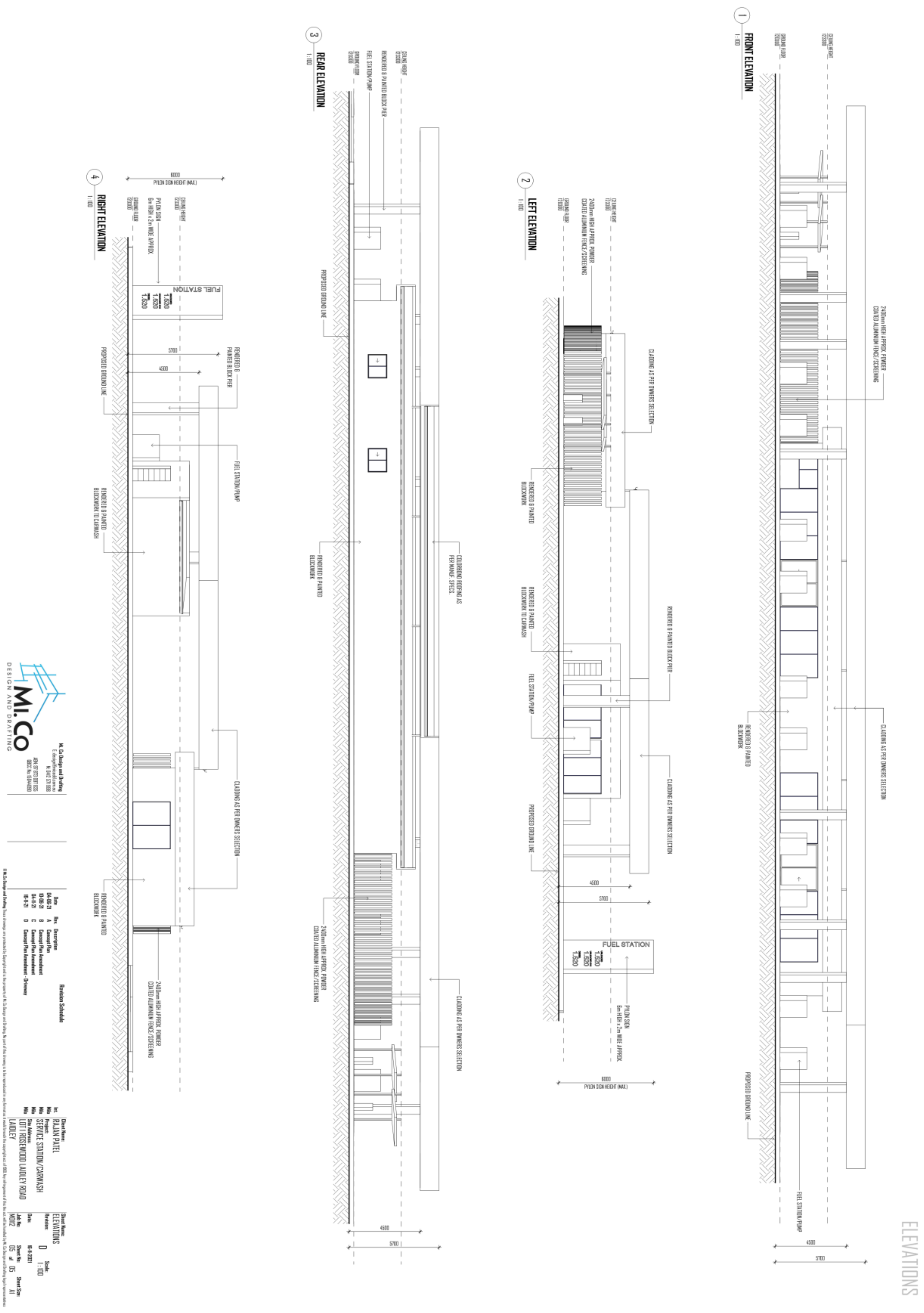
1⇩	MC2021/0042 & RL2021/0021 Approved Plans	5 Pages
2⇩	MC2021/0042 & RL2021/0021 Approved Document - Civil Engineering Report	39 Pages
3⇩	MC2021/0042 & RL2021/0021 Approved Document - Conceptual Stormwater Management Plan	56 Pages
4⇩	MC2021/0042 & RL2021/0021 Approved Document - Traffic Impact Assessment	75 Pages
5⇩	MC2021/0042 & RL2021/0021 Approved Document - Vegetation, Fauna & Koala Management Plan	38 Pages
6⇩	MC2021/0042 & RL2021/0021 Approved Document - Covenant Management Plan	68 Pages
7⇩	MC2021/0042 & RL2021/0021 SARA Referral Agency Response	203 Pages


DEVELOPMENT SUMMARY
DESCRIPTION | LOTS
Service Station, Carwash & Drive Thru – Lot 1 | 4867m²
Industrial Lots – Lots 2–13 | 2000m²-3700m²
Detention Basin | 2680m²
Passive Park Reserve – Lot 14 | 1.323 ha (2.3%)
Total Industrial Lots | 12
Total Lot Area | 6.09 ha
N
PYLON SIGN
ENTRY/EXIT
SERVICE STATION, CARWASH & REFRESHMENT SERVICES
DISPENSING STATIONS
SERVICE LANE 6 WIDE
SERVICE LANE 4 WIDE
ROSEWOOD–LAIDLEY ROAD
DETENTION BASIN 2836m2
ROAD 20m WIDE
EXISTING ROAD RESERVE
EASEMENT A
EASEMENT B
EASEMENT C
EASEMENT D
1 4842m2
2 2027m2
3 2031 m2
4 2036m2
5 2385m2
6 2374m2
7 4809m2
8 2222m2
9 1.576ha
10 2426m2
11 2524m2
12 2530m2
13 2551m2
186 L1731
6 RP159622
5 RP152694
1.323ha Covenant A
MILNE STREET
Scale 1: 1250 @ A3 – Lengths are in Metres.
50 0 50 100 150 200
NOTES :
Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field surveys only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations.
This note is an integral part of this plan.
DATE | No. | AMENDMENT DESCRIPTION
SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North Lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509
CLIENT: RAJAN PATEL
TITLE: BUILDING ENVELOPE PLAN
Lot 1 Rosewood– Laidley Road
Laidley
Lot 1 on SP104184
PARISH:
COUNTY:
COORD SYSTEM: ARB
LEVEL DATUM: Aerial
AZIMUTH: ARB
ORIGIN:
ORIGIN:
ASSOCIATES:
SCALE: 1:1250
DRAWING No.: SDC1655–216
JOB No: SDC1655
SURVEYED:
DRAWN: DK
CHECKED: DK
QT: DK
DATE: 20.12.22
AMEND. No: Sh 1


REAL PROPERTY DESCRIPTION
SITE NOTES
PLUMBING NOTES
Pylon Sign
ROAD (Unformed)
ROSEWOOD – LAIDLEY ROAD
REFRESHMENT SERVICE & DRIVE THRU
SERVICE STATION SHOP
SITE PLAN
1:200
76.433
165°43'11"
302°36'00"
54.684
122°36'00"
137.965
58°54'47"
120
2
4
5
AREA SCHEDULE - PROPOSED
SITE PLAN


SITE PLAN - SCHEMATIC LANDSCAPE DESIGN
ROAD (Unformed)
Pylon Sign
165°43'11"
76.433
302°36'00"
54.684
REFRESHMENT SERVICE & DRIVE THRU
SERVICE STATION SHOP
ROSEWOOD – LAIDLEY ROAD
122°36'00"
137.965
58°54'47"
522
521
120
2
4
5
FUEL STATION
UNLEADED 1.520
DIESEL 1.520
LPG 1.520
MI.Co
DESIGN AND DRAFTING
SITE PLAN


1 FLOOR PLAN - FASTFOOD OUTLET/SHOP 1:100
REFUSE
SERVICE STATION SHOP
HALLWAY
MALE TOILETS
FEMALE TOILETS
REFRESHMENT SERVICE & DRIVE THRU
2 FLOOR PLAN - CARWASH 1:100
(3) 70,000 LT UNDERGROUND TANKS
AREA SCHEDULE - PROPOSED
FLOOR PLANS


FRONT ELEVATION
LEFT ELEVATION
REAR ELEVATION
RIGHT ELEVATION
FUEL STATION
ELEVATIONS

BURCHILLS
ENGINEERING SOLUTIONS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Lot 1 Rosewood Laidley Road, Laidley

Civil Engineering Report

Client: RU & AR Patel
Project No: BE210316
Document No: BE210316-RP-CER-02

October 2022

www.burchills.com.au

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Document Control Record

Prepared by:	Harrison Lister
Position:	Civil Engineer
Signed:	
Date:	October 2022

Approved by:	Rod Barry
Position:	Principal Engineer
Signed:	
Date:	October 2022

Version No.	Description	Date	Prepared	Approved
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01	Layout Amendment	09/05/2022	F.L	R.B
02	Layout Amendment #2	10/2022	H.L	R.B

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Table of Contents

1. Introduction 1
1.1 Scope of Report 1
2. Project Identification 2
2.1 Real Property Description 2
2.2 Physical Description 3
3. Proposed Development 4
4. Site Earthworks 6
4.1 Sediment and Erosion Control 6
4.1.1 Phase 1 – Stripping and Bulk Earthworks 6
4.1.2 Phase 2 – Infrastructure, Building and Roadworks 7
4.1.3 Phase 3 – Finishing Works and Defects Liability Period 7
5. Roadworks, Access and Traffic 8
6. Stormwater Drainage 10
7. Water Supply 11
7.1 Water Demand Calculation 11
8. Sewer Reticulation 13
8.1 Sewer Demand Calculation 13
9. Electrical and Telecommunications 15
10. Conclusion 16

Tables

Table 3.1 Development Summary 5
Table 7.1 Potable Water Supply Demand and Peaking Factor 11
Table 7.2 Potable Water Pressure Parameters 11
Table 7.3 Fire Fighting Parameters 12
Table 7.4 Water Supply Demand Calculations 12
Table 8.1 Sewer Flow Generation Parameters 13
Table 8.2 Pipe Design Parameters 13
Table 8.3 Minimum Pipe Capacity – New Sewers Flowing ¾ Full 14
Table 8.4 Sewer Demand Calculation 14

Figures

Figure 2.1 Site Locality Plan 2
Figure 3.1 Proposed Plan of Subdivision 4

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Appendices

Appendix A – Site Layout Plan

Appendix B – Detailed Site Survey

Appendix C – Engineering Plans

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1. Introduction

RU & AR Patel has engaged Burchills Engineering Solutions to prepare a Civil Engineering Report to be considered as part of a Development Application for a 12 Lot Industrial Subdivision and Service Station located at Lot 1 Rosewood Laidley Road, Laidley

This report determined that the site is suitable for the proposed development, in relation to matters concerning civil engineering design parameters and site constraints. The development can be undertaken in accordance with the current Lockyer Valley Regional Council guidelines, SEQ Water Supply and Sewerage, Design and Construction Code and best management practices.

1.1 Scope of Report

This report describes the existing physical conditions of the site, and suitability for the proposed development with particular respect to:

- Project Identification;
- Proposed Development;
- Site Earthworks;
- Roadworks, Access and Traffic;
- Stormwater Drainage;
- Water Supply;
- Sewer Reticulation; and
- Electricity and Telecommunications Supply.

This report represents an assessment of the facts and circumstances pertaining to these matters, as they are known to the writer at the time of preparation.

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2. Project Identification

2.1 Real Property Description

The subject site is located at Lot 1 Rosewood Laidley Road, Laidley, and is legally described as Lot 1 on SP104184. The site is generally rectangular and occupies an area of approximately 6.125 ha.

The site to be developed is shown on the Plan of Development prepared by Santoshi Development Consultants, Drawing No. SDC1655-215-1, which is included within Appendix A of this report. The location of the subject site is shown on Figure 2.1 below.

Figure 2.1 Site Locality Plan

2.2 Physical Description

The site has dual road frontage with Rosewood Laidley Road fronting the site's Northern property boundary, and Milne Street fronting its Southern property boundary. The highest point in the site is a crest positioned centrally within the Southern third of the site at RL 140.4m AHD. All remaining portions of the site fall away from this crest generally towards the Northern corner at RL 115m AHD, and the South-Western corner at RL 121m AHD. The site is currently vacant and consists of grass coverage, moderate vegetation, and a dam.

The site is bounded by the following existing land uses:

North:	Rosewood Laidley Road;
South:	Milne Street;
East:	2 x Rural Lots with Dwellings; and
West:	Unformed Road reserve and Industrial & Agricultural Facilities.

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3. Proposed Development

The subject site is proposed to be subdivided into 12 industrial allotments, a service station, and a balance park reserve allotment. The proposed development layout is shown below in Figure 3.1 and on the Plan of Development prepared by Santoshi Development Consultants, Drawing No. SDC1655-215-1, which is included within Appendix A of this report.

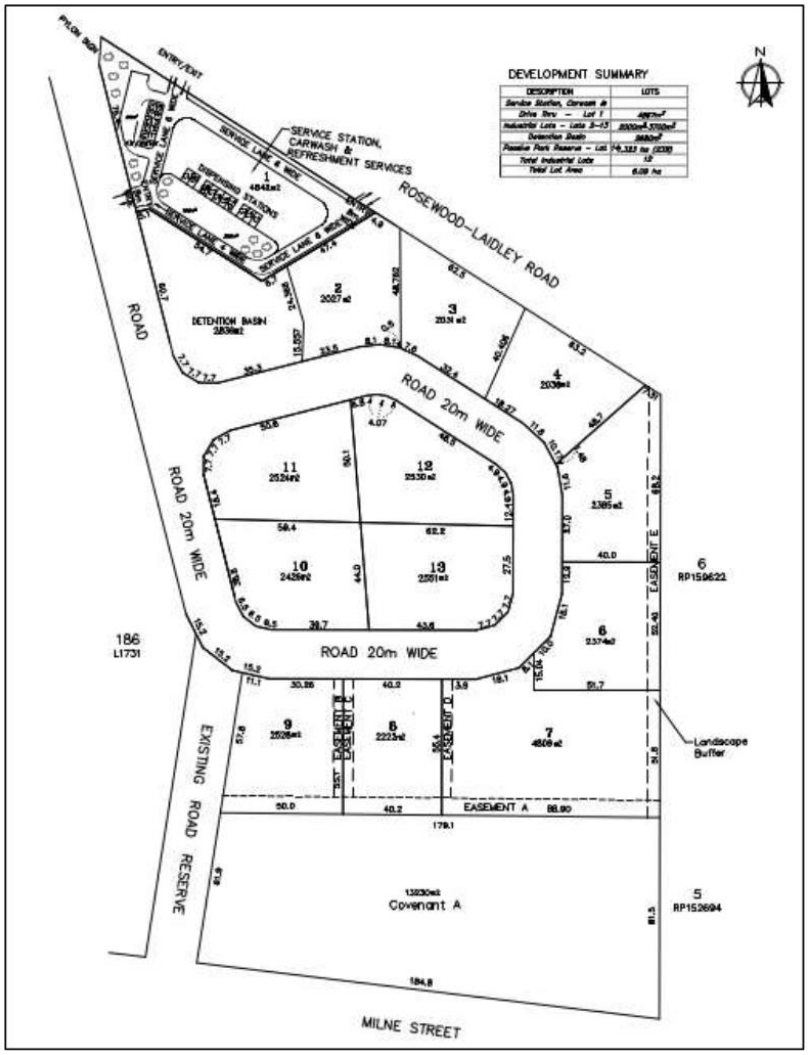

Figure 3.1 Proposed Plan of Subdivision

Based on the SEQ Water Supply and Sewerage Design & Construction Code, the Equivalent Tenements (ET) and Equivalent Population (EP) for the proposed development is shown in Table 3.1.

Table 3.1 Development Summary

Use	Unit	Total Units (Ha)	EP's/Unit	Total EP
12 Industrial Allotments	Hectares (Total)	3.3267	36.0 per Hectare	119.8
Service Station (Commercial Use)	Hectares (Total)	0.487	48.0 per Hectare	23.4
Total	**-**		**-**	**143.2**

4. Site Earthworks

It is anticipated that earthworks associated with the proposed development will involve general cutting and filling associated with road construction, trenching of services, detention/bioretention basin and alterations to levels to allow for level building pads.

The earthworks layout plan, Drawing No. BE210316-SK05-B, demonstrates the areas of cut and fill, and finished surface levels and is included within Appendix C.

4.1 Sediment and Erosion Control

The best management practices will be implemented according to the IECA Best Practice Erosion and Sediment Control (2008) guidelines.

The following is a proposed procedure of water quality controls to be implemented for the construction stage of the development.

4.1.1 Phase 1 – Stripping and Bulk Earthworks

- Identify and mark all trees to be retained and erect exclusions zones, if required.
- Prior to any demolition, stripping or bulk earthworks on site, sediment fences, inlet traps, gully protection and entry/exit pad shall be put in place.
- A wash-down area and entry/exit pad will be provided at the construction site entrance to minimise the amount of sediment being tracked off the site.
- The wash down area will be drained to a suitable sediment capture device installed downstream of the construction entry.
- Sediment fences are to be installed along the downstream property boundaries prior to stripping and earthworks commencing.
- Construct an appropriately sized sediment basin for the development.
- If refuelling of machinery is to occur on site, appropriate absorbent products for cleaning oil spills will be provided.
- Provide bins on site for the disposal of waste and building debris.
- All fresh water upstream of disturbed areas and stockpiles is to be diverted around the disturbed area to minimise the amount of sediment mobilization.
- If it is anticipated that stockpiled material will not be used for a period of two weeks or more, a polythene cover (or equivalent) shall be used to prevent sediment transport by rain during wet periods. Conversely during dry spells a cover shall be used to prevent fine sediments becoming airborne.
- The contractor shall provide on-going maintenance of sediment and erosion control devices around the site.
- The contractor is to stage all works so that disturbed areas remain exposed for a short a period as practicable.

Measures to minimise airborne pollutants during construction in the form of dust during dry and/or windy weather shall include the following:

- Exposed soils shall be kept damp to prevent particulates becoming airborne; and

- Stockpiles exposed for more than two weeks shall be covered to prevent wind erosion.

4.1.2 Phase 2 – Infrastructure, Building and Roadworks

- The site stormwater pipes and pits shall be installed with drop inlets provided to all pits.
- Provide sediment fences, sandbags or fine mesh cover to all gully pits.
- Monitoring of new stormwater pipes and infrastructure (including the storm water quality improvement devices) to ensure they are free of sediment and debris.
- Maintain shake down and wash down area at entry/exit.
- All disturbed areas are to be surfaced or landscaped/grassed (maintained to minimum 70% ground cover) as soon as practicable after completion of localized works.

4.1.3 Phase 3 – Finishing Works and Defects Liability Period

All erosion and sediment control measures, including sediment fences and inlet traps shall be maintained until completion of surface finishes including landscaping and turfing:

- Maintain sediment fences.
- Tend to landscaped areas to maintain ground cover.

5. Roadworks, Access and Traffic

Access to the proposed Service Station will be gained via vehicle crossover to Rosewood Laidley Road. Access to the industrial subdivision component of the development will be gained via construction of new Council road within the adjacent road reserve bounding the site to the West. This road is to link to the subdivision's internal road network via two (2) priority intersections.

The proposed public road network will have a 20.0m wide road reserve, where Road 1 will have a 7.5m wide pavement width (kerb to kerb), and Road 2 will have a 12.0m pavement width. Kerb and channel will be constructed with a two-way cross fall, grading away from the centre. Design and grading of the new road will be in accordance with Laidley Shire Council Development Guidelines.

An assessment of the impact of the proposed development on the external road network has been conducted and is included within the Traffic Assessment Report prepared by Burchills Engineering Solutions (BE210316-RP-TIA-04). From this study, the following conclusions have been drawn:

Service Station Component of the Development:

- Service Station access to the wider road network is proposed via two access driveways off Rosewood Laidley Road. Access driveways have been designed to accommodate 20.0m AV accessing the site. The proposed service station dual access arrangement allows cars to arrive, utilise a service station and exit the site in a forward gear. The visibility at access driveway meets AS2890.1 standards for the 80km/h frontage road speed limit for cars and commercial vehicles. Due to the low traffic volumes along Rosewood Laidley Road, turn lanes are not warranted.
- The 15 car spaces provided for the service station are also 4 car parking spaces above the minimum Laidley Shire Council requirement. In addition, 10 queueing spaces have been provided for a drive-through facility ensuring that parking demand can be maintained entirely within the site.

Industrial Component of the Development:

- Access to the wider road network from the proposed industry development subdivision, will be provided via a new public road and two new intersections as follows:
  - the priority intersection with Rosewood Laidley Road to the north, and;
  - the priority intersection with Milne Street to the south.
- All trips in and out from the industrial development will travel north along new road towards a new priority intersection Rosewood Laidley Road. Due to the development trips turning in and out of the new road from Rosewood Laidley Road, a BAR treatment with passing lane for a rural intersection is recommended at the New Road / Rosewood Laidley Road priority intersection as per TMR standard detail.
- The proposed intersection is designed to cater for a 20.0m Articulated Vehicles (AV) movements. The intersection design achieves a key objective of minimizing the interference between vehicles manoeuvring into and out of the new road and vehicles travelling through Rosewood Laidley Road. A 20.0m AV doesn't not cross the centre-line of Rosewood Laidley Road to the extent that there is any interaction with the opposing direction of travel. The

above ensures minimal delay to through traffic along Rosewood Laidley Road, and that safety and efficiency of the state-controlled road are maintained post development.

- The visibility at the new road / Rosewood Laidley Road priority intersection meets Austroads SISD requirements for the 80km/h design speed for eastbound traffic and 100km/h design speed for westbound traffic.
- The Milne Street / New Road priority intersection has been designed to cater for occasional AV access.

6. Stormwater Drainage

The access roads will collect stormwater runoff and convey it to inlet pits within the kerbs. These pits will be connected through a series of stormwater drain lines, discharging into the proposed bioretention/detention basin, which then discharges into the existing table drain infrastructure in Rosewood Laidley Road. Note that runoff from the Service Station component of the development will not be conveyed to the proposed detention basin. It will instead discharge to an internal private bio basin within the Service Station area, where outflows are then directed to Rosewood Laidley Road.

A Conceptual Stormwater Management Plan, BE210316-RP-CSMP-02, has been prepared by Burchills Engineering Solutions. This study has reviewed the hydrology and hydraulics of the site for pre-development and post-development conditions and investigated the impact of the proposed development on the downstream receiving water.

Based on this study, the following conclusions have been drawn:

Stormwater Quantity

- As a result of the proposed development, the magnitude of peak stormwater discharge exiting the site has increased.
- The Lawful Points of Discharge (LPD) for the site have been defined as the northern point of the site and the southern boundary along Milne St
- A detention basin has been proposed to mitigate peak flows discharging the site.
    - 1% AEP Volume: 1318 m^3

Erosion and Sediment Control

- An Erosion Hazard Assessment in accordance with Best Practice Erosion and Sediment Control (IECA, 2008) and has identified that the site is high-risk with regard to erosion potential.
- It has been identified that the construction site will require Type 2 sediment control techniques.

Stormwater Quality

- To achieve Water Quality Objectives specified by the Lockyer Valley Regional Council, State Planning Policy (SPP) & Seqwater Development Guidelines, it is proposed to use two (2) bioretention systems, and water smart street trees to treat stormwater runoff for the site.
- The Water Quality Treatment Devices will have the following parameters:
    - Catchment A1 (Industrial Sub-division) – Filter Area: 675 m^2
    - Catchment A2 (Service Station) - Filter Area: 50 m^2
    - Catchment A3 (Road 1) – 4 x Water Smart Trees – Filter Area 12 m^2

7. Water Supply

There is an existing 100mm diameter water main fronting the site on Rosewood Laidley Road. The development will gain its potable water supply via connection to this main.

The Services Layout Plan, Burchills Engineering Solutions Drawing No. BE210316-SK02-B, shows the intended layout and connection points for water reticulation, and is included within Appendix C.

We note that this internal schematic is intended for preliminary purposes only and is subject to a more detailed assessment, including a detailed sizing of mains during the detailed design phase.

It should be noted that no Detailed Water Supply Analysis has been undertaken on the existing water supply infrastructure.

7.1 Water Demand Calculation

To determine suitable pipe sizing for the proposed development, water demands are calculated according to the intended new development. The water criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 03-2013 Water Supply Code of Australia, Part 1: Planning and Design.

The service mains internal of each building will be designed and constructed in accordance with AS/NZS 3500.1:2003 Plumbing and Drainage – Water services (Standards Australia, 2003).

The water flow parameters shown in Table 7.1, 7.2 and 7.3 required to meet Council's Standards of Service and have been based on Single Supply (Drinking Water Only) Network parameters shown in SEQ Design Criteria Table 4.1.

Table 7.1 Potable Water Supply Demand and Peaking Factor

Property Type	Average Day Demand L/EP/day	Non-Revenue L/EP/day	Peaking Factors		
			MDMM	PD	PH
Commercial / Industrial	230	30	1.5	1.4	2.8

Notes:

MDMM	Mean Day Maximum Month Demand
PD	Peak Day Demand
AD	Average Day Demand
PH	Peak Hour Demand

Table 7.2 Potable Water Pressure Parameters

Item	Pressure Parameter
Minimum Service Pressure	22 metres (adjoining the property boundary)
Maximum Service Pressure	Target 55 metres (at the property boundary) Max. 80 metres (subject to installation of pressure reducing valves)

Table 7.3 Fire Fighting Parameters

Item	Pressure Parameter
Minimum Residential Mains Pressure (Emergency Fire operating conditions)	12 metres at the main at the property boundary 6 metres elsewhere
Fire Flow Urban Residential	15 L/s for a duration of 2 hrs
Fire Flow Commercial	45 L/s for a duration of 4 hrs
Background Demand	2/3 x Peak Hour demand (not less than Average Day demand)

The calculated water supply demand for the proposed development is shown in Table 7.4.

Table 7.4 Water Supply Demand Calculations

Use	EP	AD Flow	Non-Revenue	AD (kL/day)	PH (L/s)
Industrial	143.2	230	30	37.23	1.12

Calculations of maximum peak hour demand (excluding fire flow) and demand multiplier for the development are based on an allowance of 230 L/EP/day and a peak hour factor of 2.8 while applying the Non-Revenue flows of 30 L/EP/day, as follows:

Maximum PH Demand = PHF x Demand Rate x EP's + NR

= (2.8 x 230 x 143.2) + (30 x 143.2)

= 96,516.8 L/day

= 1.12 L/s

Demand Multiplier = Maximum Demand / EP's

= 0.0078 L/sec/EP

8. Sewer Reticulation

There is an existing 150mm gravity sewer main just north-west of the site on Rosewood Laidley Road. Wastewater generated by the development will be conveyed to this existing sewer infrastructure.

The Services Layout Plan, Burchills Engineering Solutions Drawing No. BE210316-SK02-B, shows the intended layout for sewer reticulation, and is included within Appendix C.

8.1 Sewer Demand Calculation

The sewer criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 02-2014 Sewerage Code of Australia, Part 1: Planning and Design.

The sewer flow generation, pipe design parameters, minimum sewer pipe grades and maximum capacity are shown below in Table 8.1, 8.2 and 8.3. The following parameters are based on NuSewer:

Table 8.1 Sewer Flow Generation Parameters

Flow	Parameter
Average Dry Weather Flow (ADWF)	180 L/EP/d
Peak Dry Weather Flow (PDWF)	d x SF + GWI Where: d=6.29 SF = Sanitary Flow of 150 L/EP/day GWI = 30L/EP/d
Peak Wet Weather Flow (PWWF)	PDWF + RDF Where RDF = 360L/EP/day

Table 8.2 Pipe Design Parameters

Flow	Parameter
Mannings 'n'	0.013
Minimum velocity @ PDWF	0.7 m/s
Depth of Flow @ PWWF – Existing system	Up to 1.0 m below MH cover level and no spillage through overflow structures
Depth of Flow @ PWWF – Proposed sewers	Max flow depth shall not exceed ¾ pipe full (75% d/D).

Table 8.3 Minimum Pipe Capacity – New Sewers Flowing ¾ Full

Pipe Size (mm)	Min Pipe Grade (1 in x)	Capacity (L/s)
150	180	10.4
225	300	23.6
300	400	44.1
525	750	143.0
1200	2400	796.1

The total development yield has been taken into account, not just the increase in equivalent persons on the subject site. The calculated sewer demand generation for the proposed development is shown in Table 8.4.

Table 8.4 Sewer Demand Calculation

	EP	ADWF Rate	ADWF (L/d)	PDWF (L/d)	PWWF (L/d)	PWWF (L/s)
Total	143.2	180	25,776	139,405.2	190,957.2	2.21

The calculations indicate that the total post development demand at PWWF will be approximately 2.21 L/s. It should be noted that no Detailed Sewer Capacity Assessment has been undertaken on the existing downstream sewer infrastructure at this stage. It has only been assumed that the downstream infrastructure has capacity to cater for the proposed development.

9. Electrical and Telecommunications

A detailed site survey has been prepared by Santoshi Development Consultants and is included in Appendix B. The survey indicates that there are existing electrical and telecommunications services in the immediate area of Rosewood Laidley Road. It is envisaged that adequate power supply can be provided to the site from the existing infrastructure. However, a specialist electrical consultant will need to be engaged to provide advice in relation to internal electrical reticulation requirements, pad mount transformer requirements, and to prepare detailed designs and liaise with the relevant authorities.

10. Conclusion

The findings of this Civil Engineering Report support the site use proposed in this development application to Laidley Regional Council.

It is anticipated that earthworks associated with the proposed development will involve general cutting and filling associated with road construction, trenching of services, detention basin and alterations to levels to allow for level building pads.

Access to the proposed Service Station will be gained via vehicle crossover to Rosewood Laidley Road. Access to the industrial subdivision component of the development will be gained via construction of new Council road within the adjacent road reserve bounding the site to the West. This road is to link to the subdivision's internal road network via two (2) priority intersections. Design and grading of the new road will be in accordance with Laidley Shire Council Development Guidelines.

All necessary stormwater drainage infrastructure can be provided to satisfy site constraints. The access roads will collect stormwater runoff and convey it to inlet pits within the kerbs. These pits will be connected through a series of stormwater drain lines, discharging into the proposed bioretention/detention basin, which then discharges into the existing table drain infrastructure in Rosewood Laidley Road. Note that runoff from the Service Station component of the development will not be conveyed to the proposed detention basin. It will instead discharge to an internal private bio basin within the Service Station area, where outflows are then directed to Rosewood Laidley Road.

There is an existing 100mm diameter water main fronting the site on Rosewood Laidley Road. It is anticipated that the development will gain its potable water supply via connection to this main.

There is an existing 150mm gravity sewer main just North-West of the site on Rosewood Laidley Road. Wastewater generated by the development will be conveyed to this existing sewer infrastructure.

All required essential services can be suitably provided to the development, including:

- Stormwater Drainage;
- Reticulated Water Services;
- Reticulated Sewerage Services;
- Electricity and Telecommunications Supp

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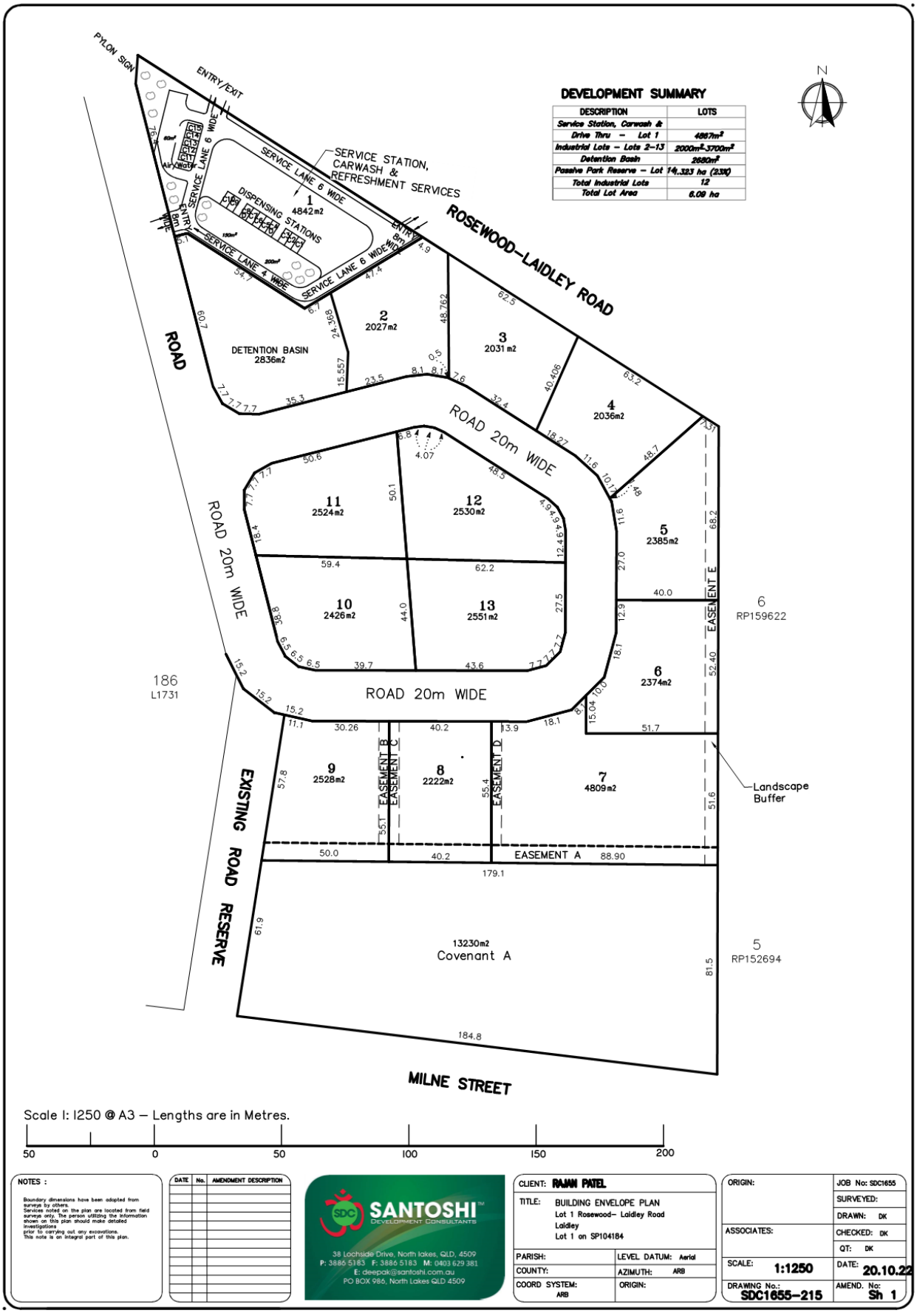
Appendix A – Site Layout Plan



DEVELOPMENT SUMMARY

DESCRIPTION	LOTS
Service Station, Carwash & Drive Thru – Lot 1	4867m²
Industrial Lots – Lots 2–13	2000m²-3700m²
Detention Basin	2680m²
Passive Park Reserve – Lot 14	3.323 ha (33%)
Total Industrial Lots	12
Total Lot Area	6.09 ha

NOTES :

Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field surveys only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations. This note is an integral part of this plan.

DATE	No.	AMENDMENT DESCRIPTION

SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509

CLIENT:	RAJAN PATEL
TITLE:	BUILDING ENVELOPE PLAN Lot 1 Rosewood– Laidley Road Laidley Lot 1 on SP104184
PARISH:	LEVEL DATUM: Aerial
COUNTY:	AZIMUTH: ARB
COORD SYSTEM: ARB	ORIGIN:

ORIGIN:	JOB No: SDC1655
	SURVEYED:
	DRAWN: DK
ASSOCIATES:	CHECKED: DK
	QT: DK
SCALE: 1:1250	DATE: 20.10.22
DRAWING No.: SDC1655–215	AMEND. No: Sh 1

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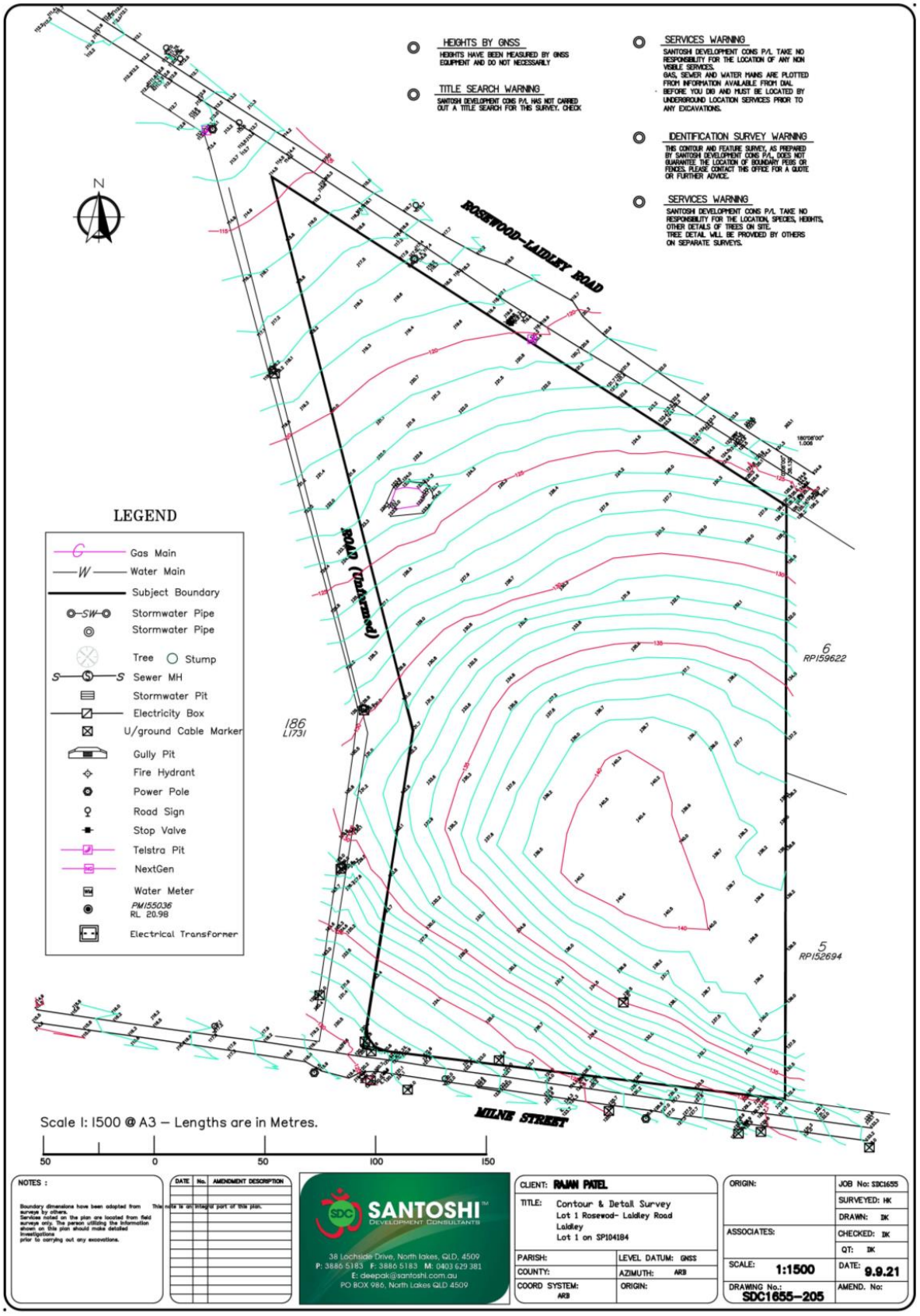
Appendix B – Detailed Site Survey


HEIGHTS BY GNSS
HEIGHTS HAVE BEEN MEASURED BY GNSS EQUIPMENT AND DO NOT NECESSARILY
TITLE SEARCH WARNING
SANTOSHI DEVELOPMENT CONS P/L HAS NOT CARRIED OUT A TITLE SEARCH FOR THIS SURVEY. CHECK
SERVICES WARNING
SANTOSHI DEVELOPMENT CONS P/L TAKE NO RESPONSIBILITY FOR THE LOCATION OF ANY NON VISIBLE SERVICES. GAS, SEWER AND WATER MAINS ARE PLOTTED FROM INFORMATION AVAILABLE FROM DIAL BEFORE YOU DIG AND MUST BE LOCATED BY UNDERGROUND LOCATION SERVICES PRIOR TO ANY EXCAVATIONS.
IDENTIFICATION SURVEY WARNING
THIS CONTOUR AND FEATURE SURVEY, AS PREPARED BY SANTOSHI DEVELOPMENT CONS P/L, DOES NOT GUARANTEE THE LOCATION OF BOUNDARY PEGS OR FENCES. PLEASE CONTACT THIS OFFICE FOR A QUOTE OR FURTHER ADVICE.
SERVICES WARNING
SANTOSHI DEVELOPMENT CONS P/L TAKE NO RESPONSIBILITY FOR THE LOCATION, SPECIES, HEIGHTS, OTHER DETAILS OF TREES ON SITE. TREE DETAIL WILL BE PROVIDED BY OTHERS ON SEPARATE SURVEYS.
N
ROSEWOOD-LAIDLEY ROAD
ROAD (Unformed)
MILNE STREET
186 L1731
6 RP159622
5 RP152694
LEGEND
Gas Main
Water Main
Subject Boundary
Stormwater Pipe
Stormwater Pipe
Tree
Stump
Sewer MH
Stormwater Pit
Electricity Box
U/ground Cable Marker
Gully Pit
Fire Hydrant
Power Pole
Road Sign
Stop Valve
Telstra Pit
NextGen
Water Meter
PM155036 RL 20.98
Electrical Transformer
Scale 1: 1500 @ A3 – Lengths are in Metres.
50
0
50
100
150
NOTES :
Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field surveys only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations.
This note is an integral part of this plan.
DATE
No.
AMENDMENT DESCRIPTION
SANTOSHI
DEVELOPMENT CONSULTANTS
38 Lochside Drive, North lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509
CLIENT: RAJAN PATEL
TITLE: Contour & Detail Survey
Lot 1 Rosewod- Laidley Road
Laidley
Lot 1 on SP104184
PARISH:
LEVEL DATUM: GNSS
COUNTY:
AZIMUTH: ARB
COORD SYSTEM: ARB
ORIGIN:
ORIGIN:
JOB No: SDC1655
SURVEYED: HK
DRAWN: DK
ASSOCIATES:
CHECKED: DK
QT: DK
SCALE: 1:1500
DATE: 9.9.21
DRAWING No.: SDC1655–205
AMEND. No:

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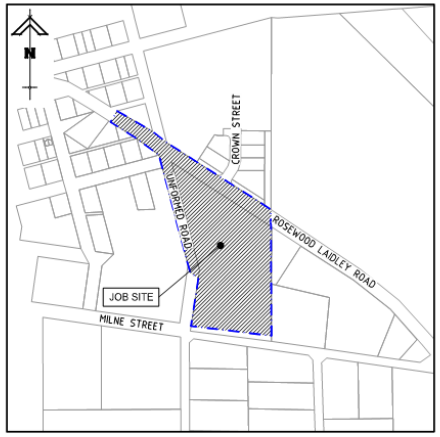
Appendix C – Engineering Plans

PROPOSED INDUSTRIAL SUBDIVISION

LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD

CONCEPT DESIGN



LOCALITY PLAN
NOT TO SCALE

SCHEDULE OF DRAWINGS

Drawing No.	Drawing Title
SK00	COVER SHEET
SK01	OVERALL LAYOUT PLAN
SK02	SERVICES LAYOUT PLAN
SK03	TYPICAL ROAD CROSS SECTIONS AND DETAILS
SK04	TYPICAL RETAINING WALL NOTES AND DETAILS
SK05	BULK EARTHWORKS LAYOUT PLAN
SK06	BULK EARTHWORKS SECTIONS
SK07	LANDSCAPE BUFFER SECTIONS
SK08	ROADWORKS LAYOUT PLAN
SK09	ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
SK10	ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
SK11	ROSEWOOD-LAIDLEY ROAD INTERSECTION
SK12	BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 1
SK13	BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 2

PREPARED FOR

RU & AR PATEL

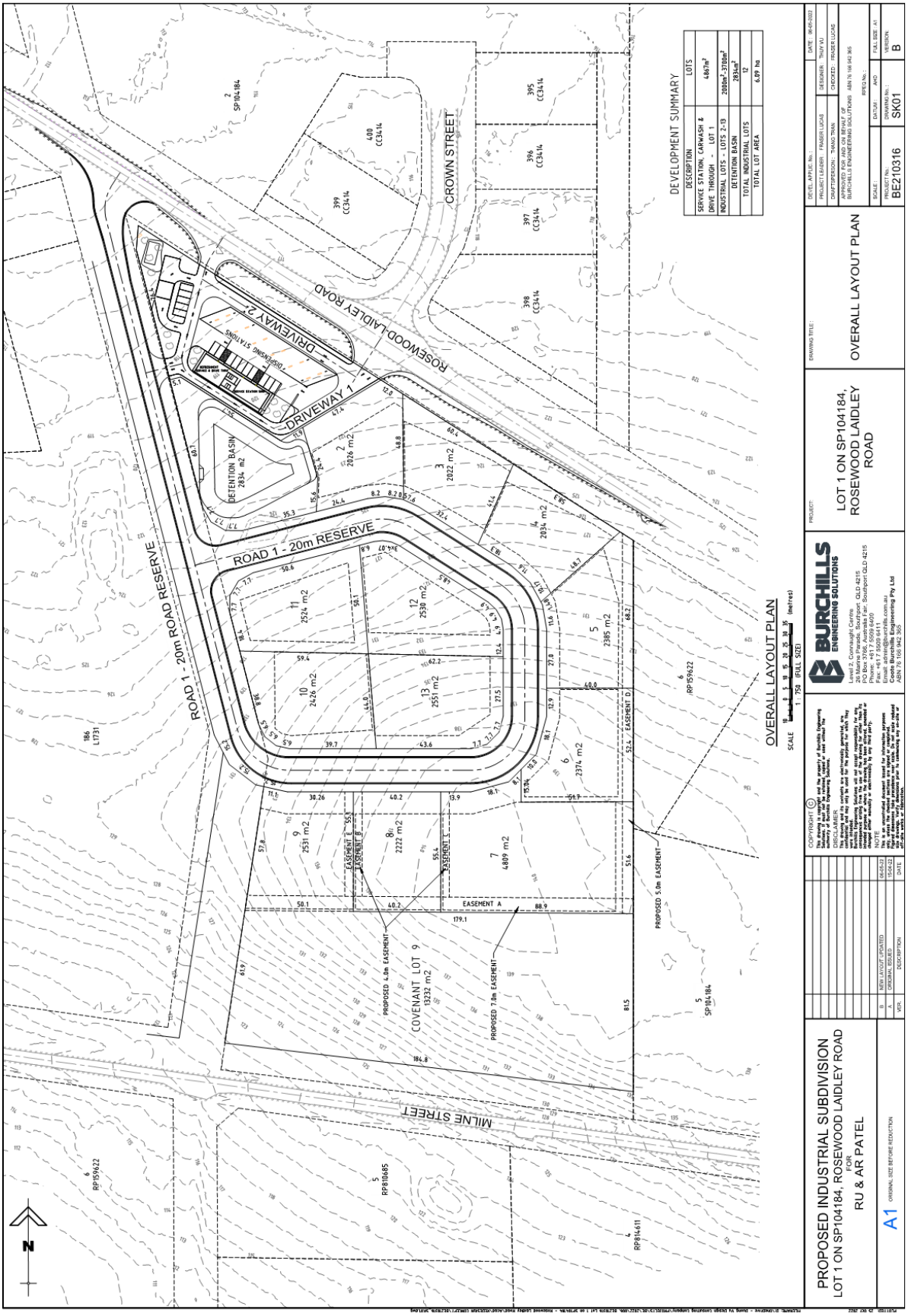
PREPARED BY

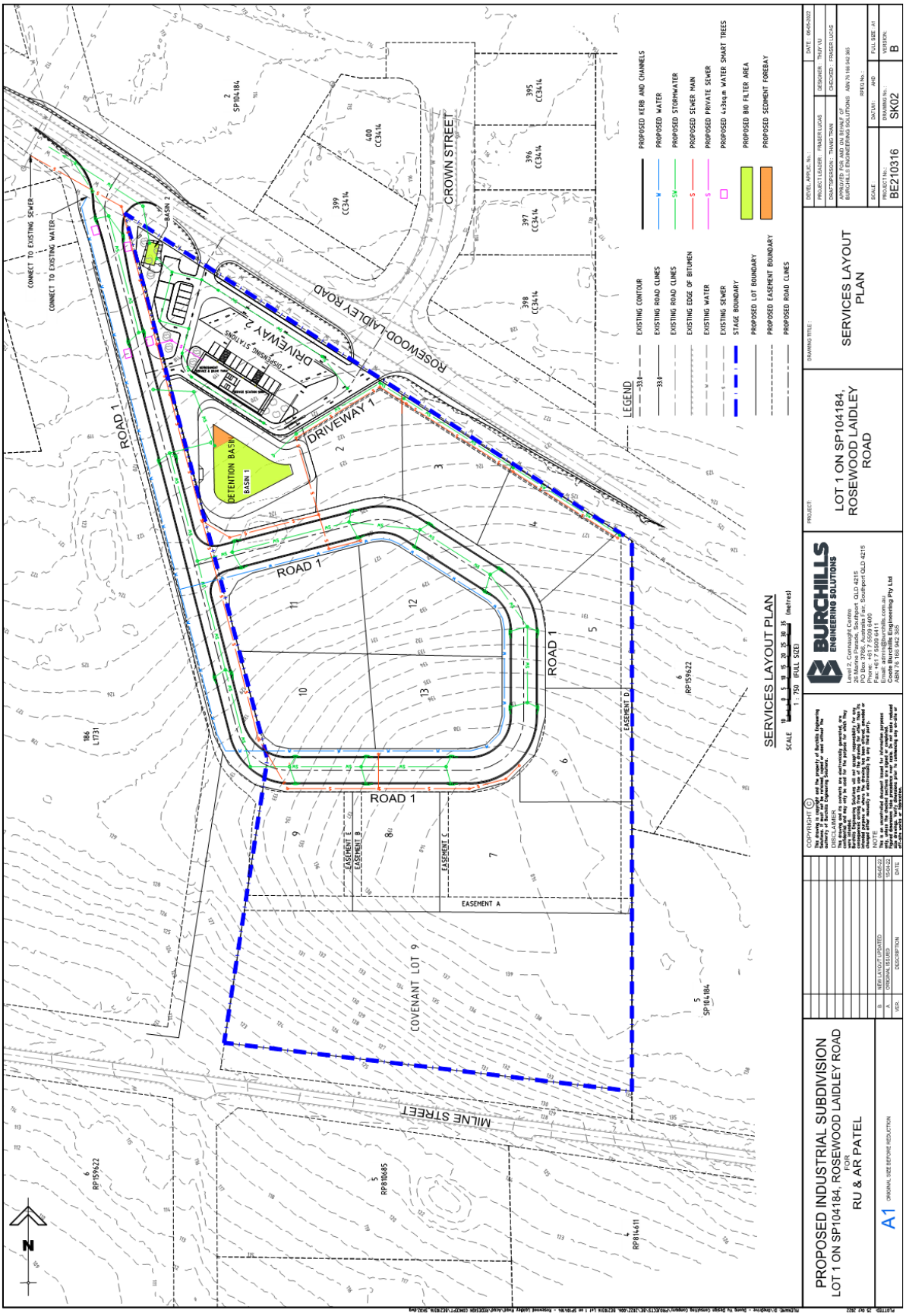
BURCHILLS
ENGINEERING SOLUTIONS

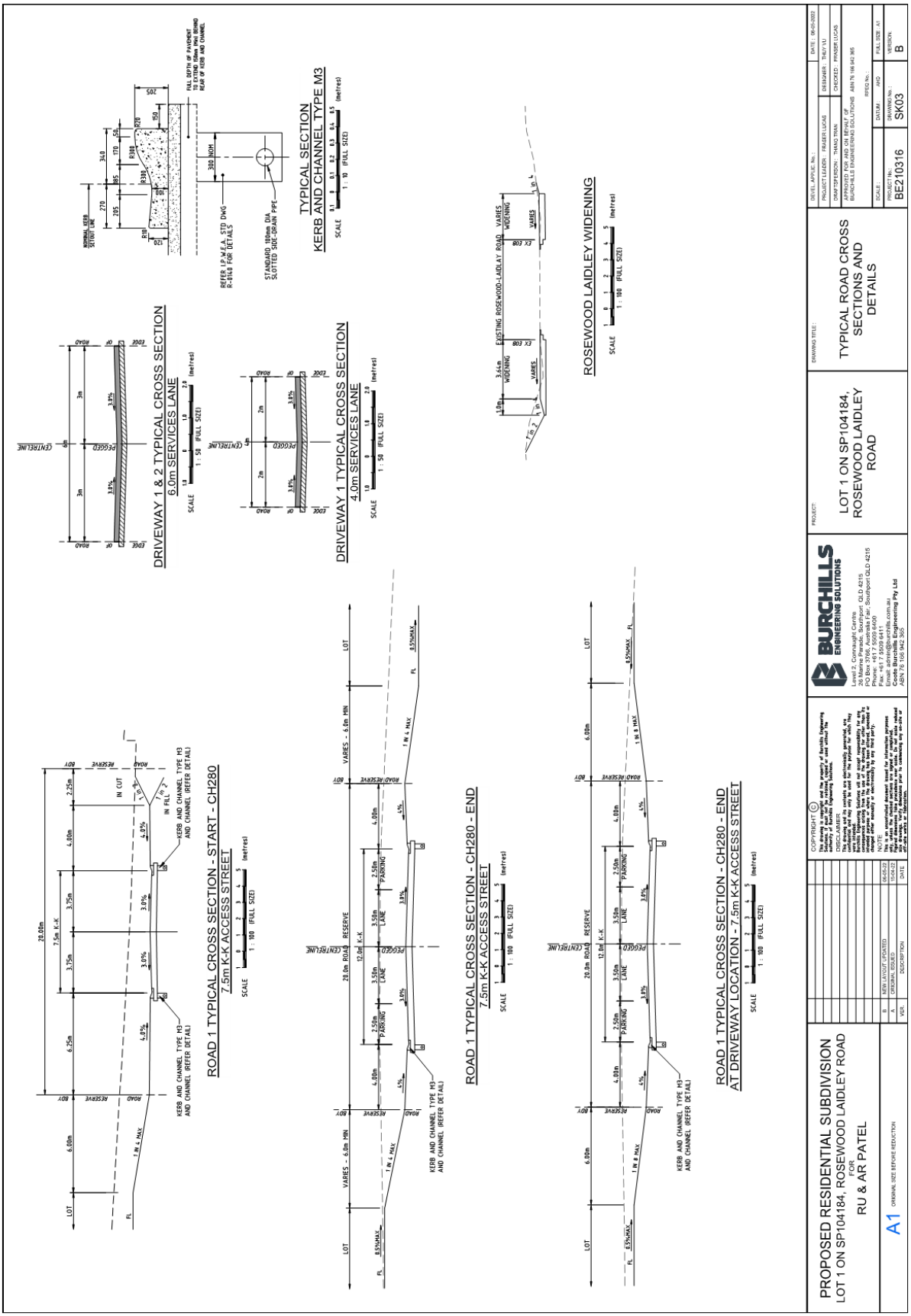
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

DATE : 06-05-2023

PROJECT No.	DRAWING No. :	VERSION:
BE210316	SK00	B


DEVELOPMENT SUMMARY
DESCRIPTION
LOTS
SERVICE STATION, CARWASH & DRIVE THROUGH - LOT 1
4867m²
INDUSTRIAL LOTS - LOTS 2-13
2000m² - 2700m²
DETENTION BASIN
2834m²
TOTAL INDUSTRIAL LOTS
12
TOTAL LOT AREA
6.09 ha
CROWN STREET
ROSEWOOD-LAIDLEY ROAD
DRIVEWAY 2
DRIVEWAY 1
DISPENSING STATIONS
DETENTION BASIN 2834 m2
ROAD 1 - 20m RESERVE
ROAD 1 - 20m ROAD RESERVE
EASEMENT A
EASEMENT B
EASEMENT C
EASEMENT D
PROPOSED 4.8m EASEMENT
PROPOSED 7.0m EASEMENT
PROPOSED 5.0m EASEMENT
COVENANT LOT 9
13232 m2
MILNE STREET
OVERALL LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
N
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ORIGINAL SIZE BEFORE REDUCTION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
OVERALL LAYOUT PLAN
BURCHILLS ENGINEERING SOLUTIONS
PROJECT No.: BE210316
DRAWING No.: SK01
VERSION: B
DATE: 06-09-2021
DESIGNED: THUY VU
CHECKED: FRASER LUCAS
DRAFTSPERSON: THANG TRAN
PROJECT LEADER: FRASER LUCAS


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
SERVICES LAYOUT PLAN
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BURCHILLS ENGINEERING SOLUTIONS
SERVICES LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
LEGEND
EXISTING CONTOUR
EXISTING ROAD CLINES
EXISTING EDGE OF BITUMEN
EXISTING WATER
EXISTING SEWER
STAGE BOUNDARY
PROPOSED LOT BOUNDARY
PROPOSED EASEMENT BOUNDARY
PROPOSED ROAD CLINES
PROPOSED KERB AND CHANNELS
PROPOSED WATER
PROPOSED STORMWATER
PROPOSED SEWER MAIN
PROPOSED PRIVATE SEWER
PROPOSED 4x3kg/m WATER SMART TREES
PROPOSED BIO FILTER AREA
PROPOSED SEDIMENT FOREBAY
CROWN STREET
ROSEWOOD-LAIDLEY ROAD
ROAD 1
DRIVEWAY 1
DRIVEWAY 2
DETENTION BASIN
BASIN 1
BASIN 2
EASEMENT A
EASEMENT C
EASEMENT D
EASEMENT E
EASEMENT G
COVENANT LOT 9
MILNE STREET
CONNECT TO EXISTING SEWER
CONNECT TO EXISTING WATER
DISPENSING STATIONS
N


TYPICAL SECTION
KERB AND CHANNEL TYPE M3
DRIVEWAY 1 & 2 TYPICAL CROSS SECTION
6.0m SERVICES LANE
DRIVEWAY 1 TYPICAL CROSS SECTION
4.0m SERVICES LANE
ROAD 1 TYPICAL CROSS SECTION - START - CH280
7.5m K-K ACCESS STREET
ROAD 1 TYPICAL CROSS SECTION - CH280 - END
7.5m K-K ACCESS STREET
ROAD 1 TYPICAL CROSS SECTION - CH280 - END
AT DRIVEWAY LOCATION - 7.5m K-K ACCESS STREET
ROSEWOOD LAIDLEY WIDENING
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TYPICAL ROAD CROSS SECTIONS AND DETAILS
BURCHILLS ENGINEERING SOLUTIONS
PROJECT No.: BE210316
DRAWING No.: SK03
VERSION: B
SCALE: 1:100 (FULL SIZE)
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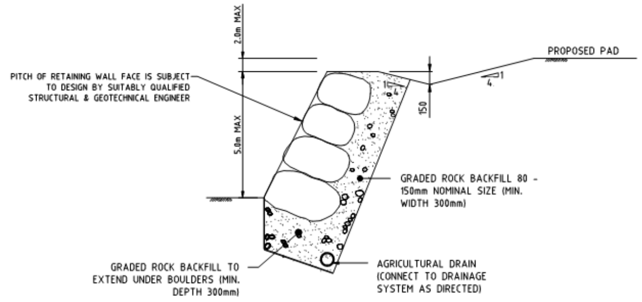
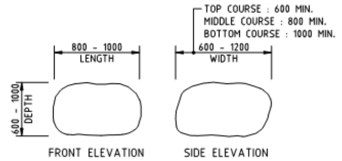
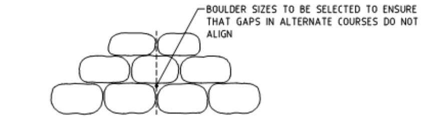


TYPICAL BOULDER WALL SECTION
NTS



TYPICAL BOULDER DETAILS
N.T.S.



ELEVATION - TYPICAL COURSING DETAILS

BOULDER WALL NOTES:

1. BOULDERS SHALL BE DENSE, SOUND, RESISTANT TO ABRASION AND FREE FROM CRACKS, CLEAVAGE PLANES, SEAMS AND OTHER DEFECTS OF ANY KIND WHICH COULD RESULT IN BREAKDOWN OF THE BOULDER IN ITS PROPOSED ENVIRONMENT.

2. THE MINIMUM WIDTH OF GRADED ROCK BACKFILL TO BOULDER WALLS IS TO BE 300mm.

3. THE MINIMUM COMPACTION STANDARD FOR SUB-GRADE MATERIAL BELOW BOULDER WALL FOOTINGS IS TO BE :
TOP 300mm DEPTH :
: 98% STANDARD DENSITY RATIO - COHESIVE MATERIAL
: 80% DENSITY INDEX - NON-COHESIVE MATERIAL
BELOW THE TOP 300mm DEPTH :
: 95% STANDARD DENSITY RATIO - COHESIVE MATERIAL
: 70% DENSITY INDEX - NON-COHESIVE MATERIAL

4. GEOTEXTILE FOR USE IN WALL CONSTRUCTION IS TO BE "TERRAFIX 360R" OR APPROVED EQUIVALENT.

5. THE CONTRACTOR IS TO TAKE CARE TO SWEEP THE MAJOR BOULDERS AND BLOCKS CLEAN PRIOR TO PLACEMENT OF THE NEXT COURSE TO ENSURE SMALLER ROCKS DO NOT FALL BETWEEN FACES OF THE MAJOR BOULDERS.

6. A SPECIALIST SUB-CONTRACTOR IS TO DESIGN, DETAIL, SUPPLY, CONSTRUCT AND CERTIFY RETAINING WALLS COMPLETE.

7. WALL IS TO BE DESIGNED TO NOMINATED PROFILE TO SUIT GEOTECHNICAL CONDITIONS WITH ADEQUATE DRAINAGE, AND IS TO HAVE A FACTOR OF SAFETY OF 2.0 FOR SLIDING AND 2.0 FOR OVER-TURNING.

8. THE CONTRACTOR IS TO PROVIDE DESIGN AND CONSTRUCTION COMPLIANCE CERTIFICATES FROM RPEQ TOGETHER WITH ENGINEERING REPORT INCLUDING SITE INVESTIGATIONS FROM GEOTECHNICAL ENGINEERING CONFIRMING LONG TERM STABILITY AND SAFETY.

9. RETAINING WALLS MUST BE DESIGNED SO AS TO ACHIEVE THE DESIGN CRITERIA AND RECOMMENDATIONS DETAILED IN THE GEOTECHNICAL INVESTIGATION 0906.1000 REV 1 DATED 8 FEBRUARY 2011, PREPARED BY GROUND ENVIRONMENTS PTY LTD.

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
B	NEW LAYOUT UPDATED	06-05-22
A	ORIGINAL ISSUED	15-04-22

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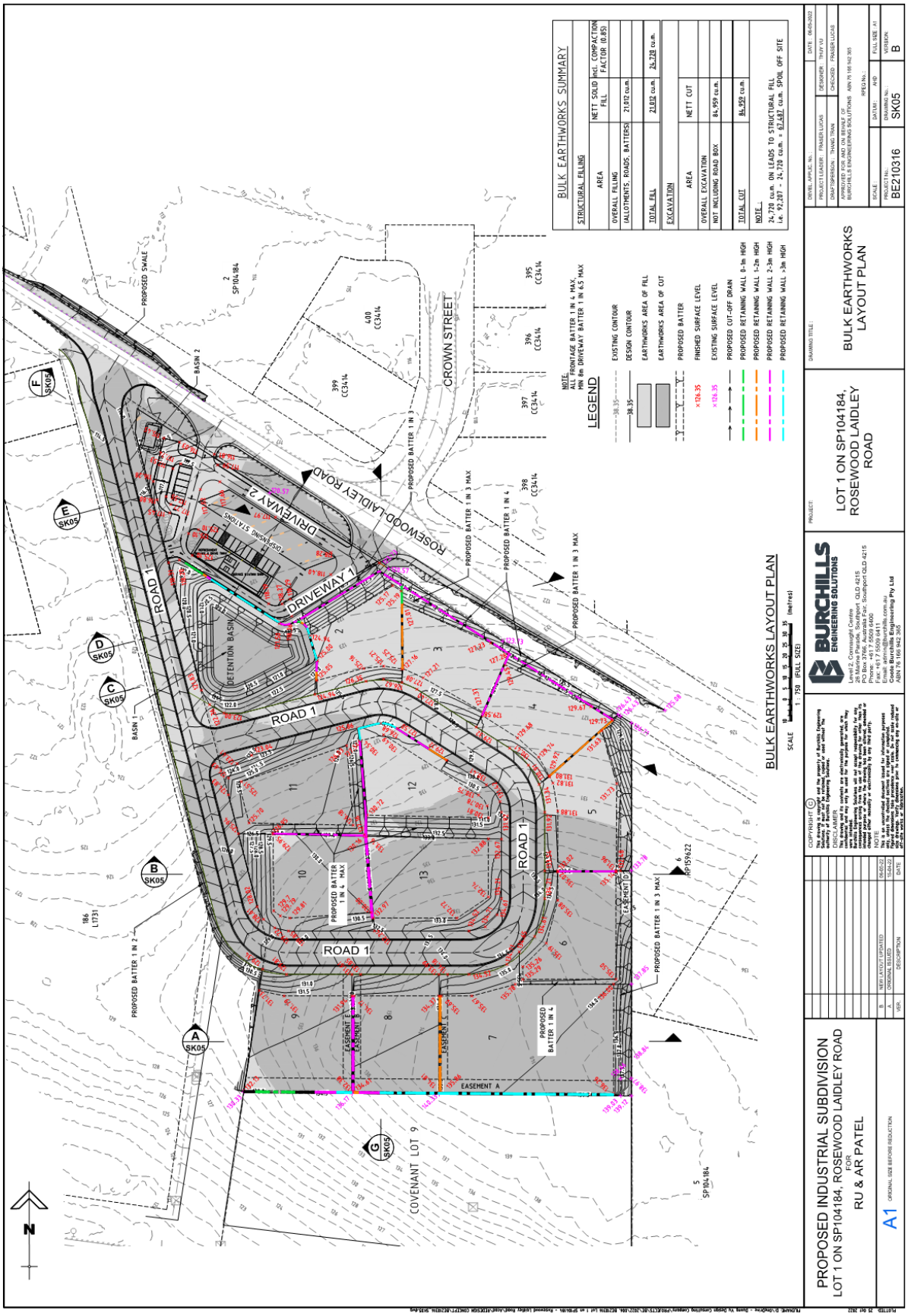
NOTE

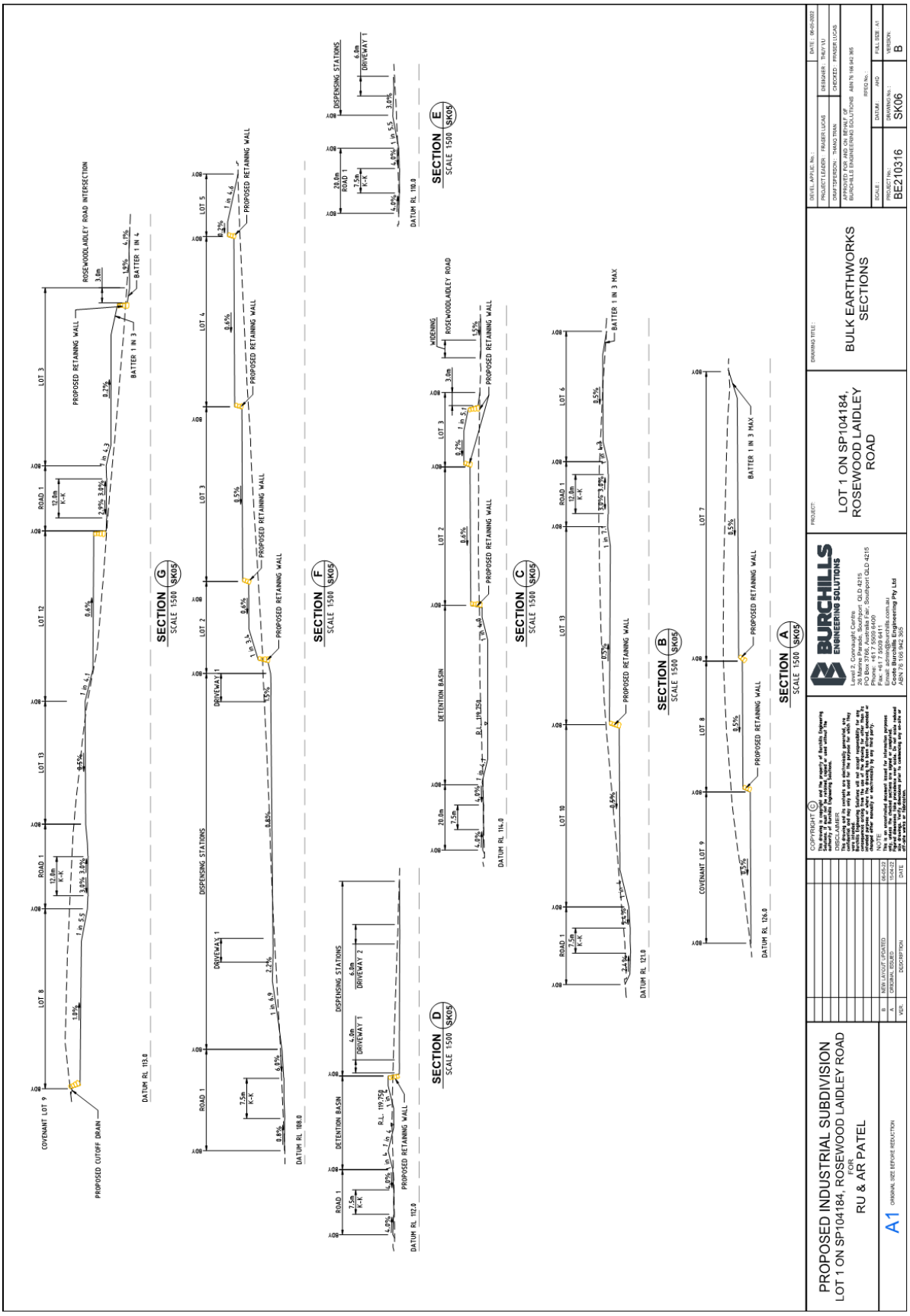
BURCHILLS ENGINEERING SOLUTIONS
Level 2, Connaught Centre
26 Marine Parade, Southport QLD 4215
PO Box 3766, Australia Fair, Southport QLD 4215
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

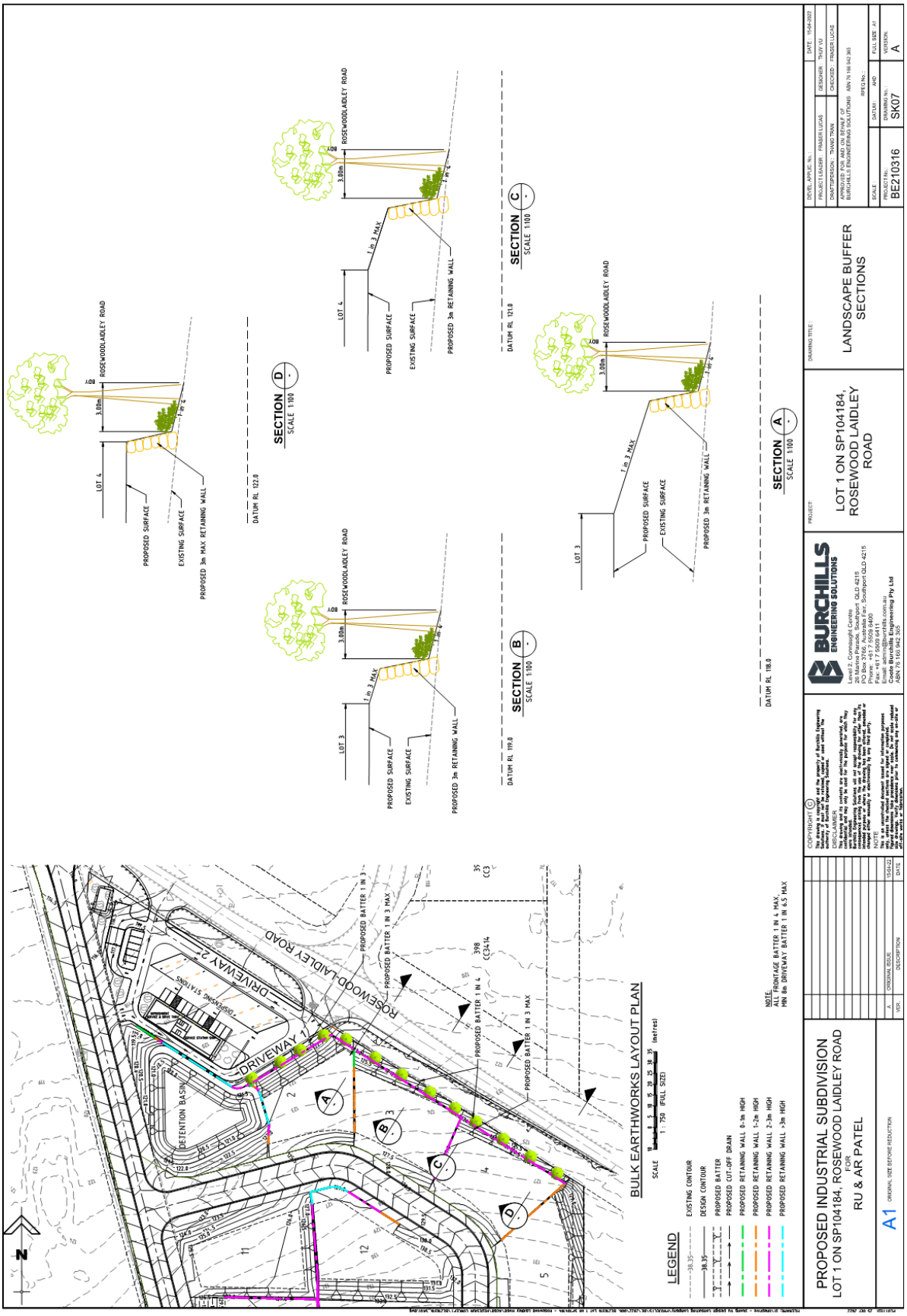
PROJECT:
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD

DRAWING TITLE:
TYPICAL RETAINING WALL NOTES AND DETAILS

DEVEL. APPLIC. No. : | DATE : 06-05-2022
PROJECT LEADER : FRASER LUCAS | DESIGNER : THUY VU
DRAFTSPERSON : THANG TRAN | CHECKED : FRASER LUCAS
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365
RPEQ No. :
SCALE : | DATUM : AHD | FULL SIZE : A1
PROJECT No. : BE210316 | DRAWING No. : SK04 | VERSION : B


BULK EARTHWORKS SUMMARY
STRUCTURAL FILLING
AREA
NETT SOLID FILL
Incl. COMPACTION FACTOR (0.85)
OVERALL FILLING
(ALLOTMENTS, ROADS, BATTERS)
21,912 cu.m.
TOTAL FILL
21,912 cu.m.
24,238 cu.m.
EXCAVATION
AREA
NETT CUT
OVERALL EXCAVATION
NOT INCLUDING ROAD BOX
84,959 cu.m.
TOTAL CUT
84,722 cu.m.
NOTE :
24,720 cu.m. ON LEADS TO STRUCTURAL FILL
i.e. 92,207 - 24,720 cu.m. = 67,487 cu.m. SPOIL OFF SITE
NOTE
ALL FRONTAGE BATTER 1 IN 4 MAX.
MIN 8m DRIVEWAY BATTER 1 IN 6.5 MAX
LEGEND
EXISTING CONTOUR
DESIGN CONTOUR
EARTHWORKS AREA OF FILL
EARTHWORKS AREA OF CUT
PROPOSED BATTER
FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
PROPOSED CUT-OFF DRAIN
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
CROWN STREET
ROSEWOOD-LAIDLEY ROAD
DRIVEWAY 1
DRIVEWAY 2
ROAD 1
DETENTION BASIN
PROPOSED SWALE
BASIN 2
BASIN 1
EASEMENT A
COVENANT LOT 9
PROPOSED BATTER 1 IN 3 MAX
PROPOSED BATTER 1 IN 4 MAX
PROPOSED BATTER 1 IN 2
PROPOSED BATTER 1 IN 4
BULK EARTHWORKS LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BULK EARTHWORKS LAYOUT PLAN
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BE210316
SK05
B


SECTION A
SCALE 1500
SECTION B
SCALE 1500
SECTION C
SCALE 1500
SECTION D
SCALE 1500
SECTION E
SCALE 1500
SECTION F
SCALE 1500
SECTION G
SCALE 1500
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BULK EARTHWORKS SECTIONS
BURCHILLS ENGINEERING SOLUTIONS
PROJECT No: BE210316
DRAWING No.: SK06
VERSION: B
A1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LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
BULK EARTHWORKS LAYOUT PLAN
LEGEND
EXISTING CONTOUR
DESIGN CONTOUR
PROPOSED BATTER
PROPOSED CUT-OFF DRAIN
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
ROSEWOOD-LAIDLEY ROAD
DRIVEWAY 1
DRIVEWAY 2
DETENTION BASIN
PROPOSED BATTER 1 IN 3 MAX
PROPOSED BATTER 1 IN 4
NOTE
ALL FRONTAGE BATTER 1 IN 4 MAX.
MIN 8m DRIVEWAY BATTER 1 IN 6.5 MAX
SECTION A
SECTION B
SECTION C
SECTION D
SCALE 1:100
DATUM RL 119.0
DATUM RL 121.0
DATUM RL 122.0
LOT 3
LOT 4
PROPOSED SURFACE
EXISTING SURFACE
PROPOSED 3m RETAINING WALL
PROPOSED 3m MAX RETAINING WALL
1 in 3 MAX
1 in 4
3.00m
BOT
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
LANDSCAPE BUFFER SECTIONS
BURCHILLS ENGINEERING SOLUTIONS
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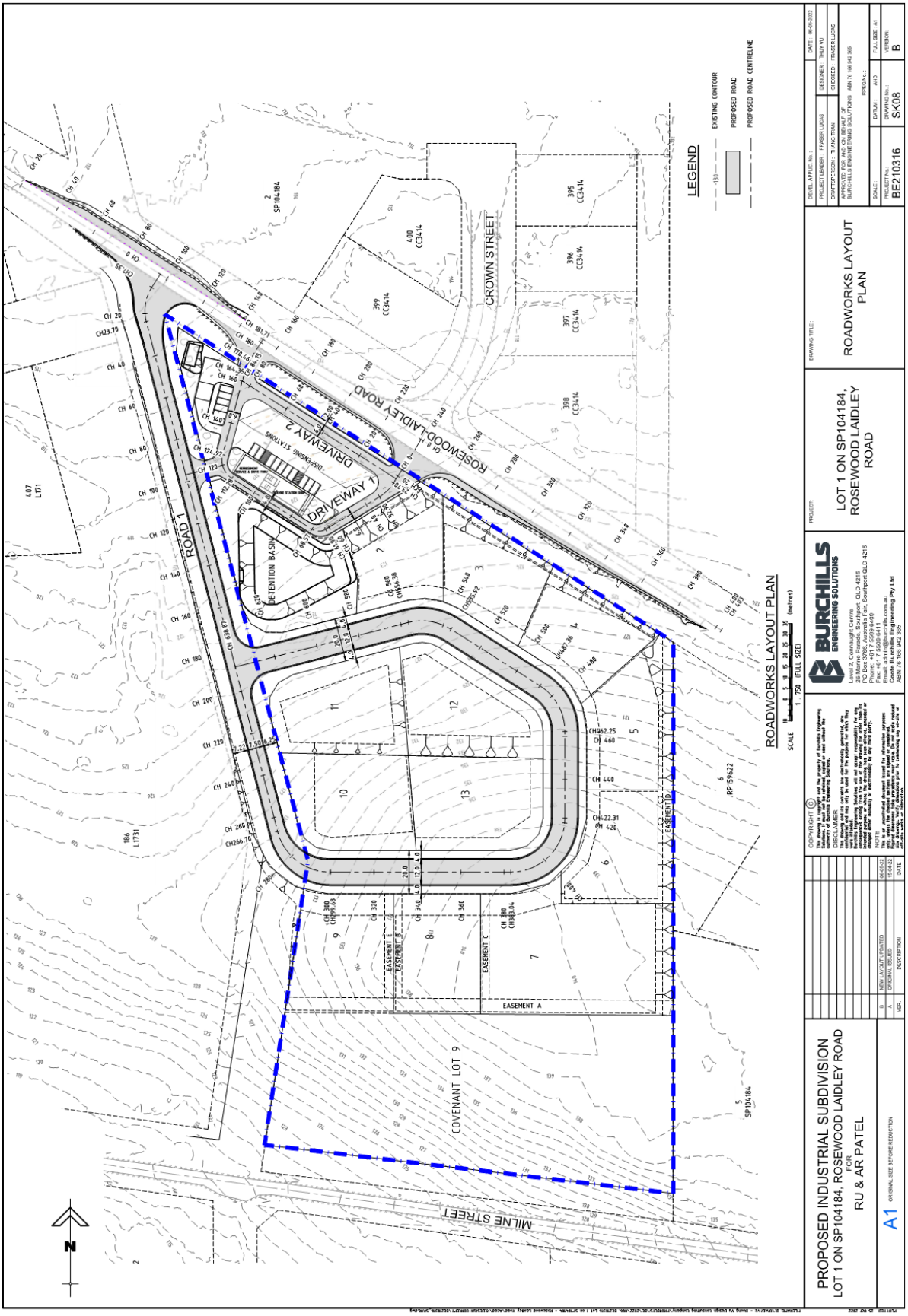
DRAWING No: SK07
VERSION: A
A1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EXISTING CONTOUR
PROPOSED ROAD
PROPOSED ROAD CENTRELINE
ROSEWOOD-LAIDLEY ROAD
CROWN STREET
MILNE STREET
ROAD 1
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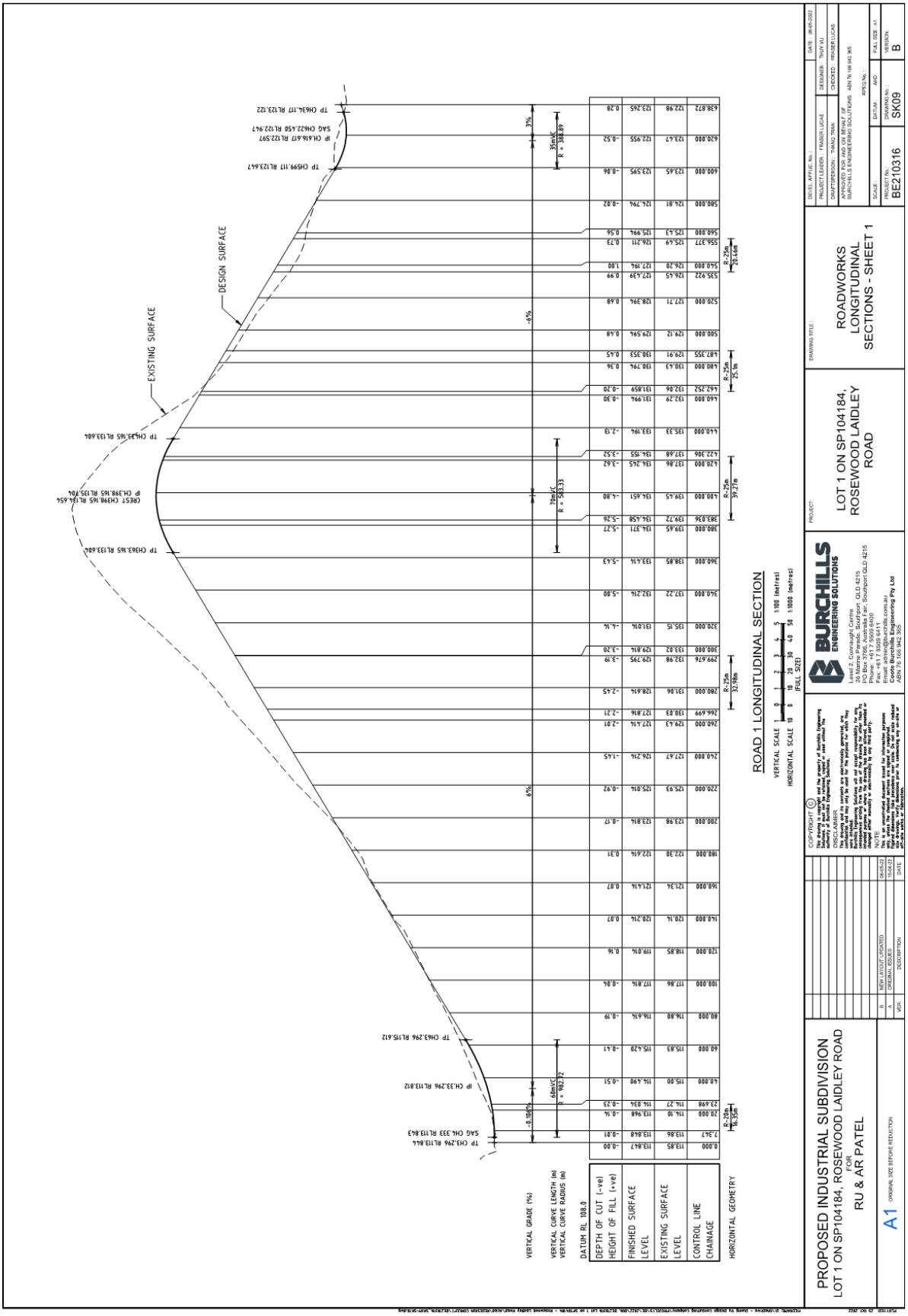
DRIVEWAY 2
DETENTION BASIN
EASEMENT A
EASEMENT B
EASEMENT C
EASEMENT D
COVENANT LOT 9
ROADWORKS LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
N
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LAYOUT PLAN
BURCHILLS ENGINEERING SOLUTIONS
PROJECT No.: BE210316
DRAWING No.: SK08
VERSION: B
DATE: 06-09-2022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HORIZONTAL SCALE 1:1000 (metres)
(FULL SIZE)
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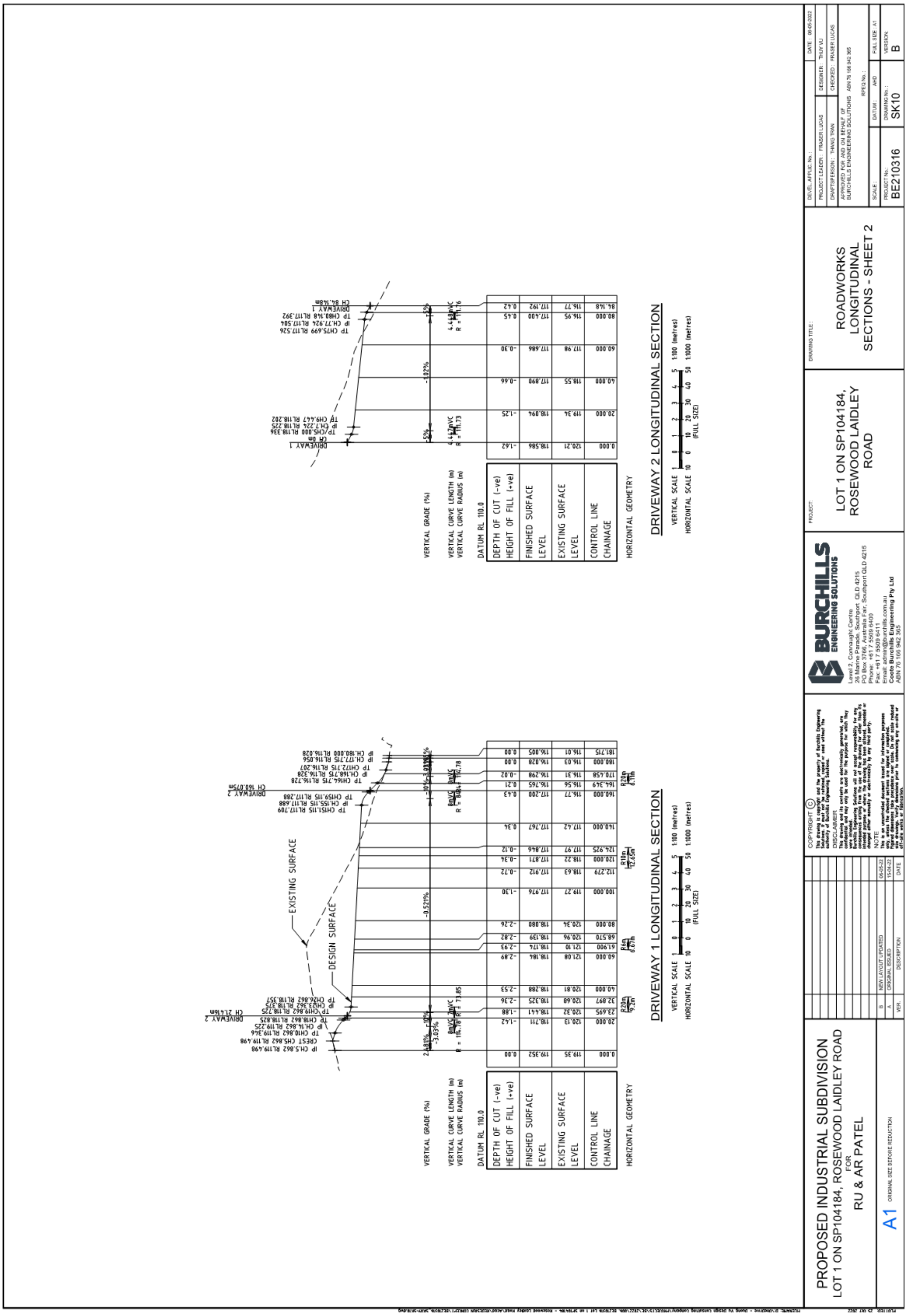
DESIGN SURFACE
HORIZONTAL GEOMETRY
VERTICAL GRADE (%)
VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
DATUM RL 108.0
DEPTH OF CUT (-ve) HEIGHT OF FILL (+ve)
FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
CONTROL LINE CHAINAGE
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ORIGINAL SIZE BEFORE REDUCTION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
BURCHILLS ENGINEERING SOLUTIONS
PROJECT No.: BE210316
DRAWING No.: SK09
VERSION: B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DRIVEWAY 1 LONGITUDINAL SECTION
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(FULL SIZE)
VERTICAL GRADE (%)
VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
DATUM RL 110.0
DEPTH OF CUT (-ve)
HEIGHT OF FILL (+ve)
FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
CONTROL LINE CHAINAGE
HORIZONTAL GEOMETRY
EXISTING SURFACE
DESIGN SURFACE
BURCHILLS ENGINEERING SOLUTIONS
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
BE210316
SK10
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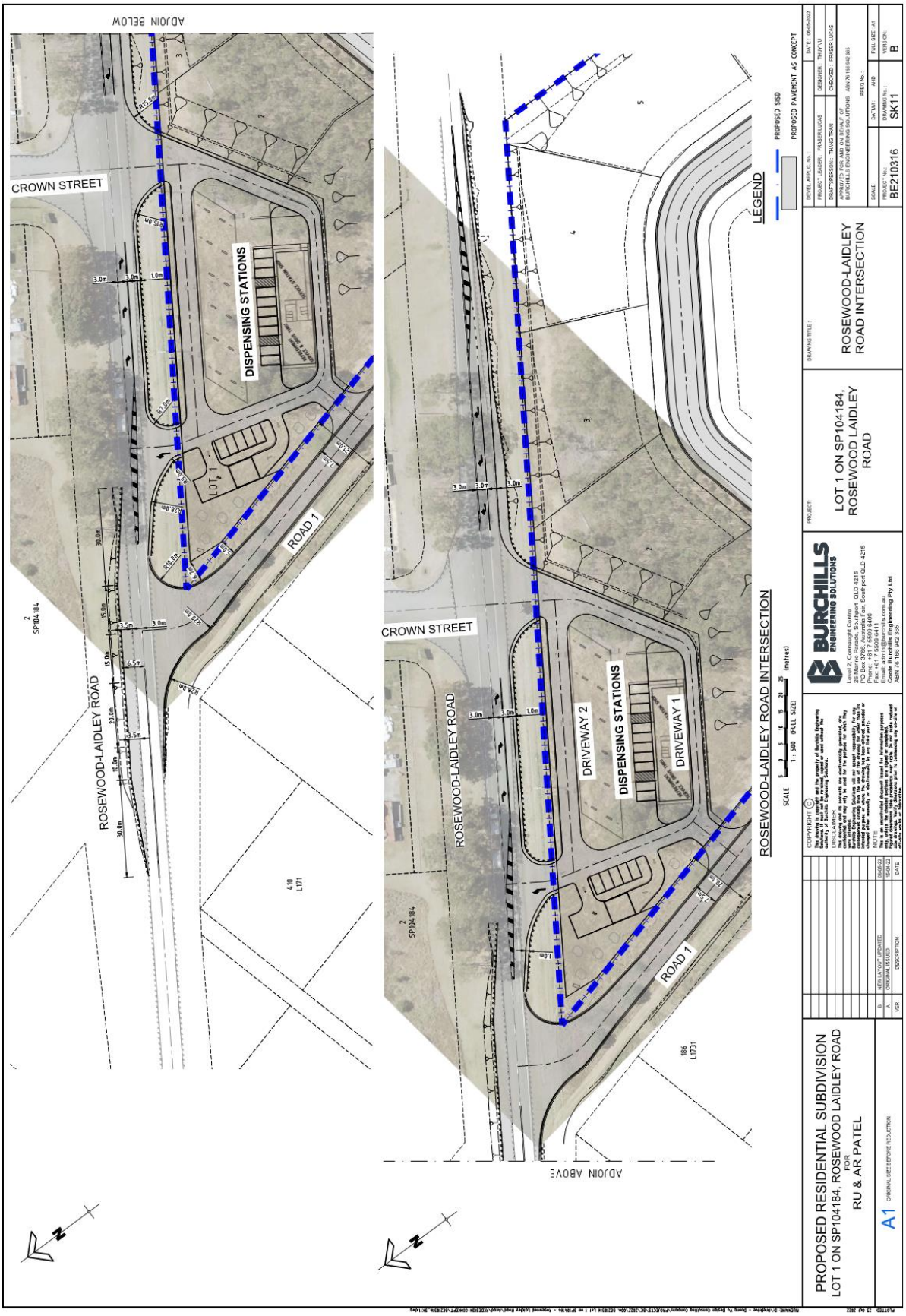
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CROWN STREET
DISPENSING STATIONS
ROAD 1
ROSEWOOD-LAIDLEY ROAD
LOT 1
ADJOIN ABOVE
LEGEND
PROPOSED SSD
PROPOSED PAVEMENT AS CONCEPT
ROSEWOOD-LAIDLEY ROAD INTERSECTION
SCALE 1 : 500 (FULL SIZE)
DRIVEWAY 1
DRIVEWAY 2
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROSEWOOD-LAIDLEY ROAD INTERSECTION
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
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BE210316
SK11
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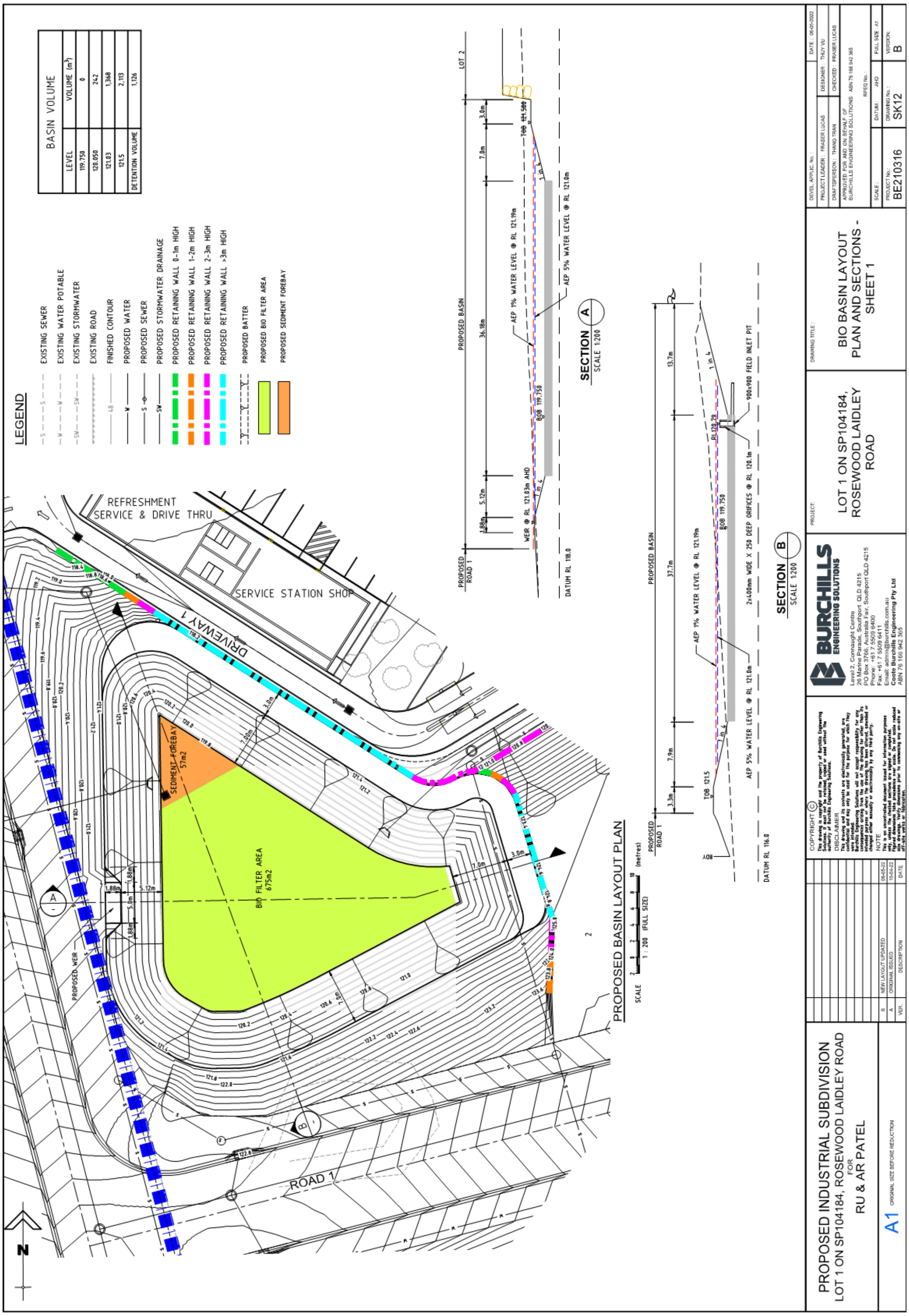
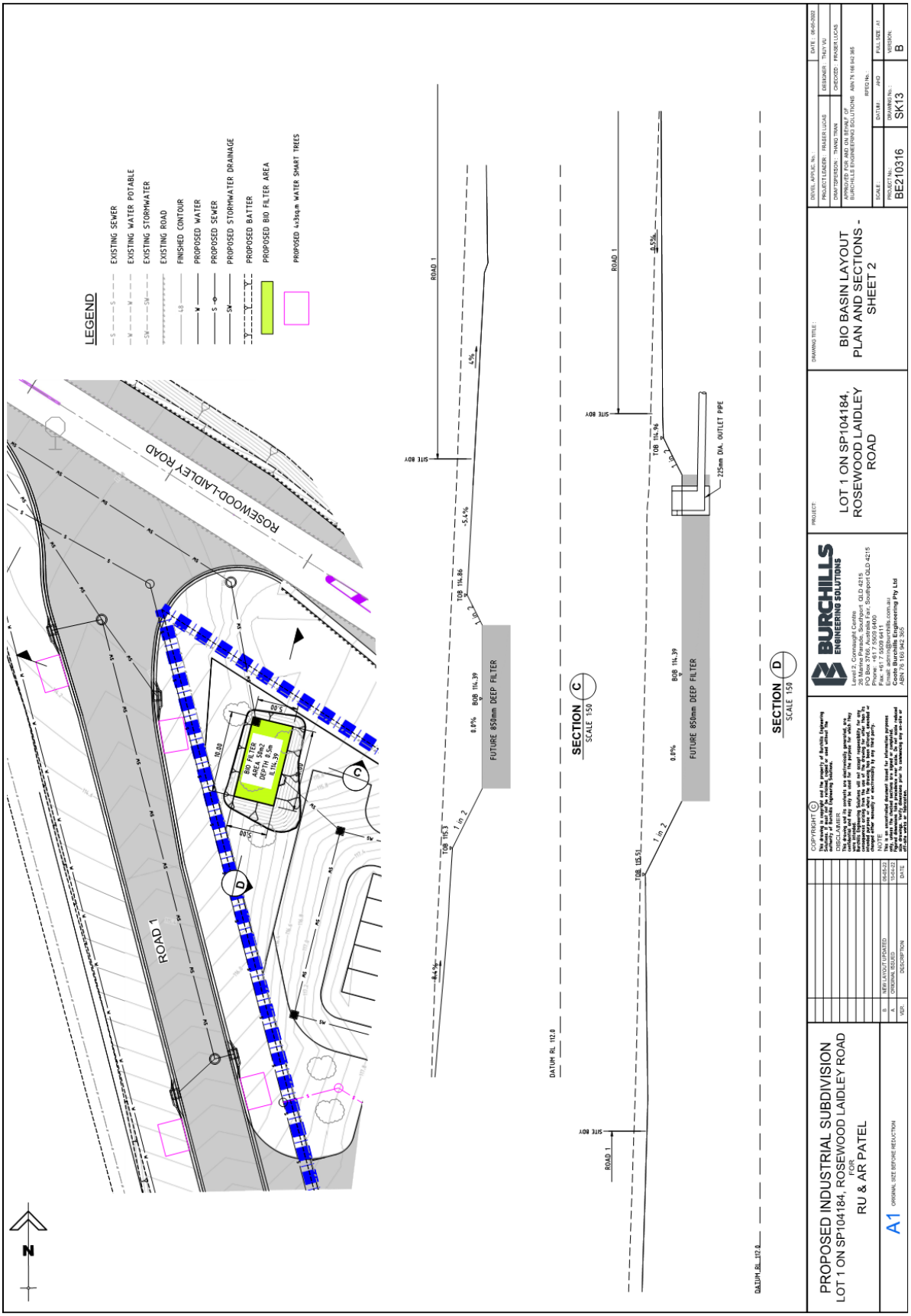


BASIN VOLUME
LEVEL | VOLUME (m³)
119.750 | 0
120.050 | 242
121.03 | 1,368
121.5 | 2,113
DETENTION VOLUME | 1,126
LEGEND
EXISTING SEWER
EXISTING WATER POTABLE
EXISTING STORMWATER
EXISTING ROAD
FINISHED CONTOUR
PROPOSED WATER
PROPOSED SEWER
PROPOSED STORMWATER DRAINAGE
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
PROPOSED BATTER
PROPOSED BIO FILTER AREA
PROPOSED SEDIMENT FOREBAY
REFRESHMENT SERVICE & DRIVE THRU
SERVICE STATION SHOP
DRIVEWAY 1
SEDIMENT FOREBAY 57m2
BIO FILTER AREA 675m2
PROPOSED WEIR
ROAD 1
PROPOSED BASIN LAYOUT PLAN
SCALE 1:200 (FULL SIZE)
SECTION A SCALE 1:200
SECTION B SCALE 1:200
AEP 1% WATER LEVEL @ RL 121.19m
AEP 5% WATER LEVEL @ RL 121.0m
WEIR @ RL 121.03m AHD
DATUM RL 118.0
DATUM RL 116.0
900x900 FIELD INLET PIT
2x400mm WIDE X 250 DEEP ORIFICES @ RL 120.1m
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 1
PROPOSED INDUSTRIAL SUBDIVISION LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD FOR RU & AR PATEL
BE210316
SK12
B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EXISTING ROAD
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PROPOSED WATER
PROPOSED SEWER
PROPOSED STORMWATER DRAINAGE
PROPOSED BATTER
PROPOSED BIO FILTER AREA
PROPOSED 4x35qm WATER SMART TREES
ROSEWOOD-LAIDLEY ROAD
ROAD 1
BIO FILTER AREA 50m2 DEPTH 0.9m
SECTION C
SCALE 1:50
SECTION D
SCALE 1:50
FUTURE 850mm DEEP FILTER
225mm DIA. OUTLET PIPE
SITE BDY
DATUM RL 112.0
PROJECT
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
DRAWING TITLE:
BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 2
BURCHILLS ENGINEERING SOLUTIONS
PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
PROJECT No: BE210316
DRAWING No: SK13
VERSION: B

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Rosewood Laidley Road, Laidley

Conceptual Stormwater Management Plan

Client: RU & AR Patel
Project No: BE210316
Document No: BE210316-RP-CSMP-02

October 2022

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Document Control Record

Prepared by:	Joshua Micallef
Position:	Civil & Water Engineer
Signed:	
Date:	25/10/2022

Approved by:	Rod Barry
Position:	Principal Engineer
Signed:	
Date:	25/10/2022

Version No.	Description	Date	Prepared	Approved
00	Initial Issue	8/12/2021	JM	RB
01	RFI Response	9/05/2022	JM	RB
02	Further RFI Response	25/10/2022	JM	RB

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Executive Summary

This Conceptual Stormwater Management Plan (CSMP) has been prepared in accordance with the Laidely Shire Planning Scheme 2003 and is to accompany the development application over this site for a service station and industrial sub-division. The CSMP has referenced relevant guidelines relating to stormwater management to form the conceptual basis of the stormwater plan. The following conclusions have been made as a result of this study.

Stormwater Quantity

- As a result of the proposed development, the magnitude of peak stormwater discharge exiting the site has increased.
- The Lawful Points of Discharge (LPD) for the site have been defined as the northern point of the site and the southern boundary along Milne St
- A detention basin has been proposed to mitigate peak flows discharging the site.
    - 1% AEP Volume: 1318 m^3

Erosion and Sediment Control

- An Erosion Hazard Assessment in accordance with Best Practice Erosion and Sediment Control (IECA, 2008) and has identified that the site is high-risk with regard to erosion potential.
- It has been identified that the construction site will require Type 2 sediment control techniques.

Stormwater Quality

- To achieve Water Quality Objectives specified by the Lockyer Valley Regional Council, State Planning Policy (SPP) & Seqwater Development Guidelines, it is proposed to use two (2) bioretention systems, and water smart street trees to treat stormwater runoff for the site.
- The Water Quality Treatment Devices will have the following parameters:
    - Catchment A1 (Industrial Sub-division) – Filter Area: 675 m^2
    - Catchment A2 (Service Station) - Filter Area: 50 m^2
    - Catchment A3 (Road 1) – 4 x Water Smart Trees – Filter Area 12 m^2

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Table of Contents

1. Introduction 1
1.1 Background 1
1.2 RFI Response 1
1.3 Purpose 2
1.4 Scope 2
1.5 Regulatory Requirements and Technical Guidelines 3
1.6 Site Details 3
1.7 Downstream Environment 5
1.8 Rainfall 5
1.9 Proposed Development 5
2. Stormwater Quantity Management Plan 7
2.1 Overview 7
2.2 Drainage Catchment Parameters 7
2.2.1 Conveyance of Flows 7
2.3 XP-SWMM Analysis 8
2.3.1 Rational Method Comparison 9
2.4 XP-SWMM Results 10
2.4.1 Performance of OSD 10
2.5 On Site Detention (OSD) Details 11
3. Stormwater Quality Management Plan 12
3.1 Water Quality Objective (WQO) 12
3.2 Treatment Train 12
3.2.1 Water Smart Trees 14
3.2.2 Swales 15
3.3 MUSIC Results 16
4. Erosion and Sediment Control Plan 17
4.1 Best Management Practices 17
4.2 Erosion Hazard Assessment 17
4.3 Sediment Loss Estimate 17
4.3.1 Sediment Control Standard 18
5. Conclusion 20

Figures

Figure 1.1 Site Locality Map (LVRC, 2019) 4
Figure 1.2 Aerial Image of the Subject Site (LVRC, 2019) 5

Figure 1.3 Proposed Site Layout 6
Figure 2.1 XP-SWMM Model Set Up 9
Figure 3.1 Typical bioretention basin (Water By Design, 2014) 13
Figure 3.2 Typical Bioretention Drainage Profile (Water By Design, 2014) 13
Figure 3.3 Water Smart Tree – Typical Section (Brisbane City Council, 2016) 15
Figure 3.4 Treatment Train Layout & MUSIC Results 16

Appendices

Appendix A Proposed Plans of Development
Appendix B Time of Concentration and Rational Method Calculations
Appendix C XP-SWMM Input Parameters
Appendix D MUSIC Input Parameters
Appendix E Burchills Engineering Solutions Conceptual Stormwater Management Drawings
Appendix F Burchills Engineering Solutions Civil Drawings
Appendix G Brisbane City Council Standard Drawings – Water Smart Trees

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1. Introduction

1.1 Background

This Conceptual Stormwater Management Plan (CSMP) has been prepared for RU & AR Patel, the proponent of this Development Application. The proponent is seeking Development Approval for a Material Change of Use (MCU) for a service station and refreshment service, a Reconfiguring of Lot (ROL) for subdivision (1 Lot into 16 Lots) and an Operational Works (OW) for an advertising device for a proposed development located on Rosewood Laidley Road, Laidley, properly described as Lot 1 on SP104184 (the subject site).

The subject site is situated within the Lockyer Valley Regional Council Local Government Area (LGA) and is zoned by the Laidely Shire Planning Scheme 2003 as 'Industrial'.

1.2 RFI Response

Item	Response
1. a) Table 2 on page 6 states that runoff up to and including the 10%AEP will be captured and conveyed to the detention basin, with flows in excess of the 10% AEP conveyed undetained to the legal point of discharge as overland flow. Using this philosophy, it will not be possible to keep post development flow rates for the 1%AEP to the predeveloped flow rates, as the flow bypassing the detention basin in a 1%AEP event is already greater than the predeveloped 1%AEP flow rate (even before adding detained flows from the basin).	XPSWMM modelling results indicate that the flows at LPD A have been mitigated under the proposed design scenario (with flows in excess of the 10% AEP conveyed undetained to the legal point of discharge as overland flow). Due to the attenuation provided by the proposed detention basin, the timing of peak flows are altered and it has been demonstrated in section 2.4 of this report that Post-Development flows have been mitigated. In events larger than 10% AEP the piped system will convey slightly more that the 10% AEP peak flows due to additional capacity in the system.
1. b) Unless the detention basins are used to detain the full 1% AEP flows from Catchment A, Table 2.4 of the report is incorrect.	This is not required as it has been demonstrated that peak flows at LPD A have been mitigated to pre-developed levels in the post developed scenario. Results of this are shown in Table 2.4.
1. c) If the detention basins are used to detain the full 1% AEP flows from Catchment A, the SMP needs to be updated to state this so that it is clear that the site drainage system will need to be designed at OW stage to achieve this	It is still proposed that flows in excess of the 10% AEP are conveyed undetained to the legal point of discharge as overland flow.
1 d) The area of the catchment A that cannot be captured and directed to the basin will need to be included in the model as discharging	Catchment mapping and modelling has been amended to account for 'Catchment A3. Please refer to Section 2 of the report and the post

undetained. Note that the schematic location of the gullies on Road 1 that capture flows and discharge to the basin don't work, as the surface levels of the gullies is similar to the floor levels of the basin. In order for the basin to work, the gullies need to positioned so that their surface level is above the 1%AEP water level in the basin. Therefore the undetained area of Catchment A will need to be larger than currently allowed for if the current gully pit locations have been used.	developed catchment map within Appendix E of this report.

1.3 Purpose

The main objectives of this CSMP have been established from the criteria set out in the Laidley Shire Council Planning Scheme 2003 and are summarised as follows:

- To prevent any detrimental impact upon adjoining properties or infrastructure resulting from stormwater runoff.
- To avoid emission of contaminants to surface and groundwater.
- To prevent increased in-stream erosion downstream of urban areas by controlling the magnitude and duration of sediment-transporting flows;
- Protect surrounding ecosystems from any change in quality/quantity of stormwater as a result of the development.

1.4 Scope

To achieve the above-mentioned objectives, this CSMP details the following:

- Site description including:
  - Topography;
  - Existing Land Use; and
  - Vegetation.
- Stormwater Quantity:
  - Control measures to ensure no net increase in peak discharge from the subject site (up to the 1% Average Exceedance Probability (AEP)).
- Stormwater Quality
  - Control measures to ensure that the Water Quality Objectives outlined by Lockyer Valley Regional Council SPP & the SEQ Development Guidelines are achieved.

To minimise the impact of the proposed development on the external environment and to avoid significant and / or sustained deterioration in downstream water quality the proponent shall implement this CSMP. This CSMP may be amended as required, in response to a monitoring and maintenance program.

1.5 Regulatory Requirements and Technical Guidelines

The strategies proposed in this CSMP have been developed to address the requirements of the Laidely Shire Planning Scheme 2003, and have also been prepared in accordance with the following guidelines:

- *State Planning Policy July 2014* (DSPIP, 2014)*;*
- Seqwater Water Development Guidelines Water Quality Management in Drink Water Catchments (Seqwater, 2017)
- Queensland Urban Drainage Manual (QUDM) Fourth Edition (IPWEAQ, 2017);
- Australian Rainfall & Runoff: A Guide to Flood Estimation (Ball J, 2016);
- Australian Government – Bureau of Meteorology (Bureau of Meteorology, n.d.);
- Water by Design, MUSIC Modelling Guidelines for South East Queensland, 2010.
- Water by Design, Water Sensitive Urban Design Technical Design Guidelines for Southeast Queensland, 2006.
- Best Practice Erosion and Sediment Control (IECA, 2008).
- Best Practice Erosion and Sediment Control Appendix B - Draft Document Revision December 2016 (IECA, 2016)

1.6 Site Details

Important information about the subject site has been included in Table 1.1. A site locality map is presented in Figure 1.1 and an aerial image of the site in its current state is included in Figure 1.2. For further detail regarding the proposed development layout, please refer to the complete and latest development plans attached within Appendix A.

Table 1.1 Site Details

Subject	Description
Address	Rosewood Laidley Road, Laidley
Lot / Plan	Lot 1 SP104184
Local Government Area	Lockyer Valley Regional Council
Zoning	Industrial
Area	6.09 ha (with additional 0.546 ha of road reserve)
Existing Land Use	The site is currently vacant lot.
Existing Vegetation	The site contains scattered native regrowth vegetation throughout the majority of site with a cleared area in the northwestern corner. The vegetation appears from review of aerial imagery and Google Maps Street View to be dominated by eucalypt open forest species.
Topography	The overall topography of the site is relatively steep due to the peak of a hill being located close to the centre of the site. This peak is the highest point of the site at approximately 141 mAHD. The rest of the subject site slopes down from the hill peak at the centre of site, with the north-western corner being the lowest point of the site at approximately 114 mAHD. It is noted however that the southward slope of the hill has the steepest grade.

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Figure 1.1 Site Locality Map (LVRC, 2019)

Figure 1.2 Aerial Image of the Subject Site (LVRC, 2019)

1.7 Downstream Environment

The subject site is located on local catchment boundaries and therefore has more than one overland flow path. The northern half of the site has a northward overland flow path into an existing drainage channel parallel to the northern boundary. From here runoff is conveyed along Rosewood Laidley Road, into an existing drainage channel. The southern half of the site has a southward overland flow path into an existing drainage channel parallel to the southern boundary. From here runoff is conveyed along Milne Street toward floodplains in the southeast.

1.8 Rainfall

Mean annual rainfall for the site has been estimated at 765.6 mm from the data set obtained from the nearest Bureau of Meteorology (BOM) station number 040082 at The University of Queensland Gatton Campus (BOM, 2021).

1.9 Proposed Development

The development application proposes the establishment of a 1 into 16 lot subdivision which shall include:

- Service station, including
    - Dispensing stations

- Refreshment station with drive thru
- Carwash with drive thru
- Several parking spaces

- (14) industrial lots
- Detention basin
- Passive park reserve

Figure 1.3 below shows the proposed development layout. For further details regarding the proposed layout, please refer to the complete architectural plans attached within Appendix A.

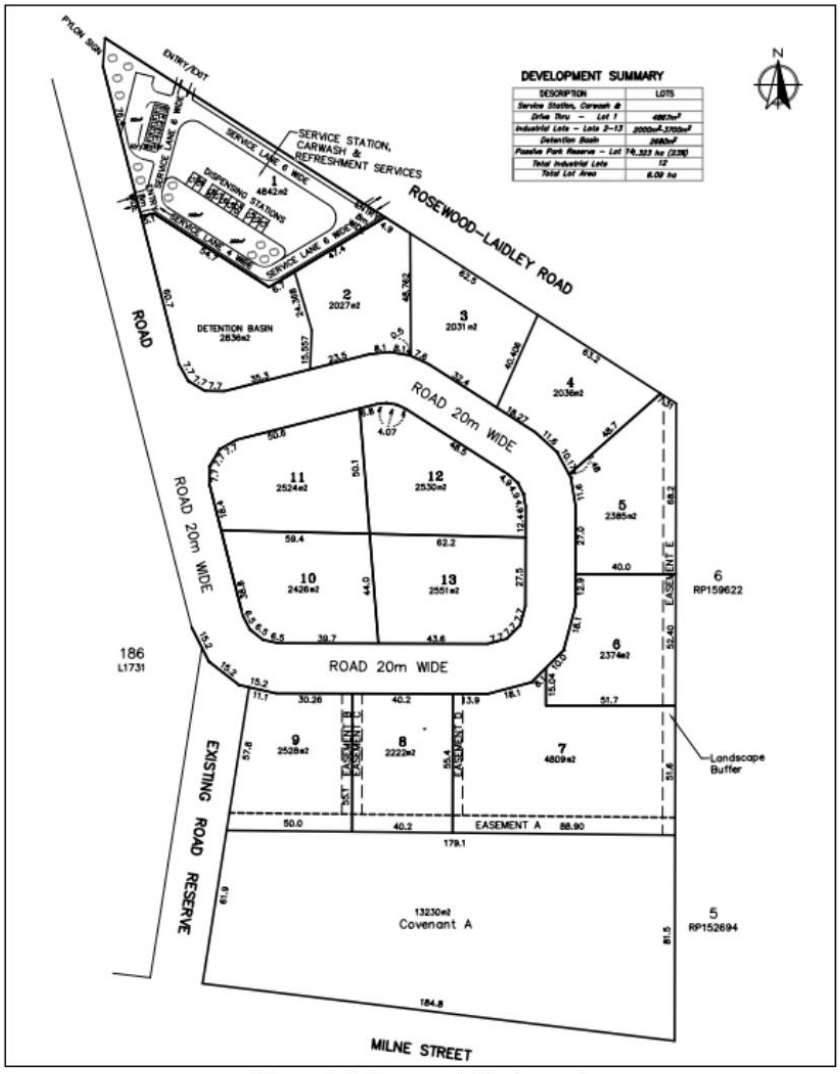

Figure 1.3 Proposed Site Layout

2. Stormwater Quantity Management Plan

2.1 Overview

The following section of this report outlines the measures required to meet the above-mentioned objective regarding stormwater quantity. In order to meet these objectives, it is necessary to ensure that post development discharge from the site will not create a worse situation for downstream property owners than that which existed prior to the development (i.e. non-worsening) (IPWEAQ, 2017).

Due to the increase in impervious areas within the proposed development, peak stormwater flow rates will increase. To mitigate these flow rates from the developed site it is proposed to implement an On-Site Detention (OSD) system. OSD systems temporarily store stormwater runoff and release flows at a controlled rate that is no greater than the pre-developed peak rate.

2.2 Drainage Catchment Parameters

Drainage catchments have been delineated using site survey, aerial imagery, and development plans in the post developed scenario. Pre and post development catchment parameters are summarised in Table 2.1. Further catchment parameters used within the XP-SWMM model are included in Appendix C. Catchment plans are provided in Appendix D.

Table 2.1 Catchment Parameters

Scenario	Catchment ID	Total Area (ha)	Impervious %	Catchment Slope (%)
Pre-developed	A	3.708	0	7
	B	1.975	0	14
	C	1.222	0	7
Post-developed	A1	4.233	84	4
	A2	0.469	95	1
	A3	0.322	38	4
	B	1.874	0	14

2.2.1 Conveyance of Flows

Important information about the conveyance of flows for the pre-development and post-development scenarios are included in Table 2.2 below.

Table 2.2 Conveyance of Flows

Subject	Description
Lawful Points of Discharge (LPD)	• Three LPD's exist for the subject site. Firstly, for the northern catchment (Catchment A), the LPD is the existing drainage channel located along the north site boundary. The LPD, for the southern catchment (Catchment B), is the existing drainage channel along

	the south site boundary. The LPD for the eastern catchment (Catchment C) is the eastern site boundary and the drainage channel along the northern site boundary. • To maintain the peak flow at each LPD, it is proposed to optimise catchment sizes and install a detention basin for the industrial subdivision.
Pre-development	• Catchment A (internal) is conveyed via overland flow to the site's northern boundary and discharges to a swale drain at LPD A. • Catchment B (internal) is conveyed via overland flow to the site's southern boundary and discharges to a swale drain at LPD B • Catchment C (internal) is conveyed via overland flow to the site's southern boundary and discharges to a swale drain at LPD C • Runoff for Catchment A & C and Catchment B is discharged onto the existing grass drainage channel, then downstream over Rosewood Laidley Road and Milne Street respectively
Post-development	• Catchment A1 is conveyed to the detention basin via the internal drainage network. This system will convey runoff for up to and including the 10% AEP event to the stormwater basin. • Flows in exceedance of the 10% AEP will not be detained and will be conveyed to LPA A via overland flow • Runoff conveyed to the stormwater basin will be detained before discharging to the LPD. • Catchment A2 & A3 will be conveyed to LPD A undetained. • Conditions at Catchment B will remain the same post-development.

2.3 XP-SWMM Analysis

XP-SWMM (version 2019.1) software was utilised to model the performance of the proposed stormwater quantity control measures. This modelling software is a link-node model capable of performing hydrology and hydraulics of stormwater drainage systems simultaneously.

Laurenson's Hydrology has been adopted as the runoff routing method within XP-SWMM. Sub-catchment routing in this method is carried out using the Muskingum procedure, which is a storage routing method based on the storage equation.

Details of the assumptions and input parameters used within the XP-SWMM model inputs are included in Appendix C. Shown below in Figure 2.1 is an excerpt from XP-SWMM of the model.

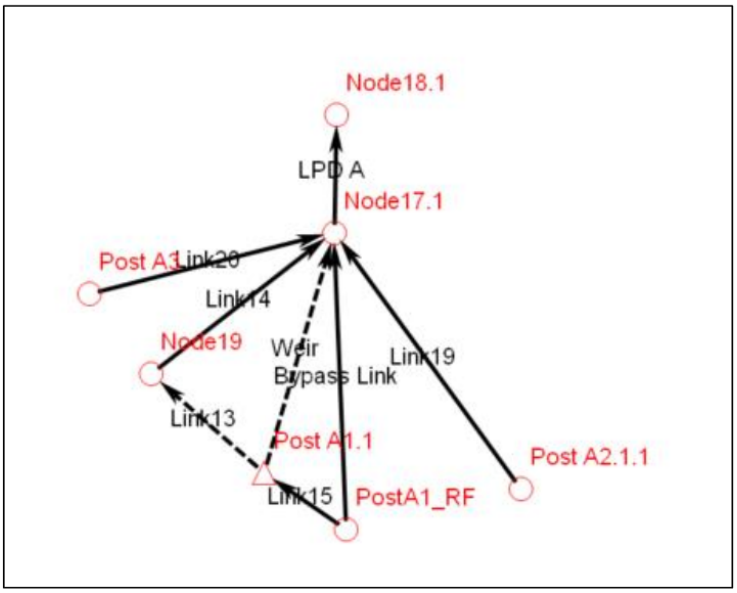

Figure 2.1 XP-SWMM Model Set Up

2.3.1 Rational Method Comparison

The Rational Method has been used to gain an initial understanding of the relative impact of the proposed development on peak flow rates at the site's LPD. The Rational Method is a basic method for assessing peak flow rates and is considered suitable given the catchment area is less than 500 ha and the time of concentration within the contributing catchments is less than 30 minutes (IPWEAQ, 2017).

It should be noted that although the Rational Method has been used as an initial estimate of site peak flows, it has not been used for the design of any mitigation measures nor has been used for calibration of the runoff XP-SWMM model. A comparison between the peak discharge values obtained using the Rational Method and the XP-SWMM model for the 1% AEP event at the Lawful Point of Discharge is contained in Table 2.3 below.

Table 2.3 Rational Method vs XP-SWMM Generated Peak Discharges

Scenario	Catchment ID	Rational (m^3/s)	XP-SWMM (m^3/s)	Difference (%)
Pre-developed	A	1.31	1.54	15
	B	0.83	0.88	15
Post-developed	A1	3.00	2.77	8
	A2	0.345	0.33	4
	A3	0.2	0.15	25

The peak discharges generated by XP-SWMM and the Rational Method compare well and are considered acceptable for this assessment.

2.4 XP-SWMM Results

2.4.1 Performance of OSD

To confirm the performance of the proposed OSD system, a pre- and post-development model was constructed. These models compare the discharge hydrographs for a range of storm durations at the existing Lawful Points of Discharge. A full range of events have been simulated for critical events.

A summary of the modelling results for different ARI events and peak flows at LPD A is contained in Table 2.4. Results of the modelling indicate the proposed system is capable of maintaining the pre-development peak discharges for the all storm events up to the 1% AEP event at LPD A.

A summary of the modelling results for different ARI events and peak flows at LPD B is contained in Table 2.5. It should be noted that although the imperviousness area has been increased, the area of Catchment B has been slightly reduced. Results indicate that peak flows will not increase at LPD B as a result of the development.

Table 2.4 Pre-Development vs Post-Development (Mitigated) Peak Discharges at LPD A

AEP Event (%)	Pre-Development		Post-Development			
	Median Critical Event	Peak Discharge (m^3/s)	Storm Adopted (Pre-Critical)	Peak Discharge (m^3/s)	Storm Adopted (Post-Critical)	Peak Discharge (m^3/s)
1%	25 min TP5	1.54	25 min TP5	1.50	15 min TP2	1.49
2%	25 min TP8	1.31	25 min TP8	1.08	15 min TP2	1.11
5%	30 min TP4	0.99	30 min TP4	0.87	15 min TP10	0.90
10%	45 min TP5	0.78	45 min TP5	0.73	15 min TP10	0.63
0.2 EY	60 min TP7	0.53	60 min TP7	0.52	10 min TP3	0.40
0.5 EY	90 min TP7	0.35	90 min TP7	0.35	10 min TP7	0.27

Table 2.5 Pre-Development vs Post-Development (Unmitigated) Peak Discharges at LPD B

AEP Event (%)	Pre-Development		Post-Development	
	Peak Discharge (m3/sec)	Critical Duration (mins)	Peak Discharge (m3/sec)	Critical Duration (mins)
1%	1.00	15	0.95	15
2%	0.83	25	0.79	25
5%	0.64	20	0.61	20
10%	0.48	30	0.45	30
18%	0.37	30	0.36	30
39%	0.18	60	0.17	60

2.5 On Site Detention (OSD) Details

The proposed OSD system is to be implemented to ensure a non-worsening of peak discharges at the LPD. Please note there is a bioretention basin located within the detention basin therefore the 300 mm of Extended Detention Depth (EDD) is for water quality treatment and has not been included as detention volume. Details of the proposed basin can be found in Appendix F.

Table 2.6 below contains the details of the proposed OSD systems within the subject site.

Table 2.6 OSD Details

Detention ID	Outlet Structures				1% AEP Detention Volume (m^3)
	Orifice	Pit	Outlet Pipe	Weir	
A	2 x 400 x 250,, mm @ RL 120.1 m AHD	900 mm x 900 mm Square pit @ 120.79 m AHD	450 mm dia. @ 119 m AHD	5 m Crest @ 121.5 m AHD	1318

3. Stormwater Quality Management Plan

3.1 Water Quality Objective (WQO)

In accordance with the Laidely Shire Planning Scheme 2003 and Seqwater Development Guidelines, the total effect of permanent water quality control measures is to achieve reductions in the mean annual load generated by the development site at a minimum of:

- 95% for Gross Pollutants (>5mm);
- 85% for Total Suspended solids (TSS);
- 65% for Total Phosphorus (TP); and
- 45% for Total Nitrogen (TN).

This will ensure the environmental values of the downstream receiving waters are maintained and have been chosen as the WQO for the development.

3.2 Treatment Train

To ensure the above WQO's can be met at the site's LPD, a treatment train was proposed for the developed site and modelled using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) software.

The conceptual parameters of the proposed bioretention basins and water smart trees are presented in Table 3-1, and Table 3-2, with further detail of the input parameters used within MUSIC are included in Appendix D. The location of the proposed treatment train elements is indicated on the Services Layout Plan (BE210316-SK02-B) in Appendix F.

Typical sections of a bioretention basin have been included in Figure 3.1 and Figure 3.2. The bioretention systems will been designed in accordance with the Water By Design Bioretention Technical Design Guidelines during the detailed design phase of the development (Water By Design, 2014).

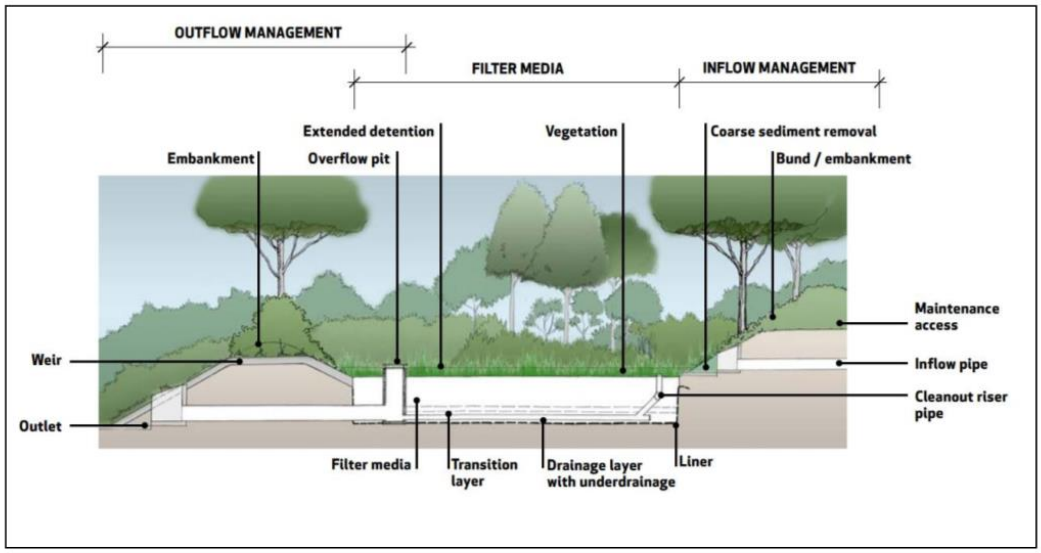

Figure 3.1 Typical bioretention basin (Water By Design, 2014)

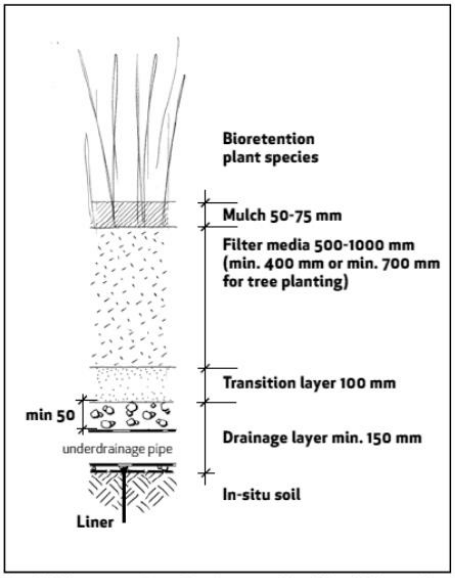

Figure 3.2 Typical Bioretention Drainage Profile (Water By Design, 2014)

Table 3-1 Proposed Bio-retention Basin A1 Parameters

Basin ID	Parameter	Value
A1	Extended Detention Depth	0.30m
	Filter Media Area	675m^2
	Filter Media Depth	0.60m
	Transition Layer	0.10m
	Drainage Layer	0.15m

Table 3-2 Proposed Bio-retention Basin A2 Parameters

Basin ID	Parameter	Value
A2	Extended Detention Depth	0.30m
	Filter Media Area	70m^2
	Filter Media Depth	0.6m
	Transition Layer	0.10m
	Drainage Layer	0.15m

3.2.1 Water Smart Trees

It is proposed to use Water Smart Trees to treat a portion of Road 1 which is to bypass the bioretention basins on site. The trees are to be designed and installed in accordance with Brisbane City Council's standard drawings BSD-9034 and BSD-9035 (see Appendix G). Shown below in Figure 3.4 is a typical cross section of a water smart tree. MUSIC input parameters are shown below in and Table 3-3.

Table 3-3 Proposed Water Smart Tree Parameters

Basin ID	Parameter	Value
A2	Extended Detention Depth	0.10m
	Filter Media Area	12m^2
	Filter Media Depth	0.6m
	Transition Layer	0.10m
	Drainage Layer	0.2m

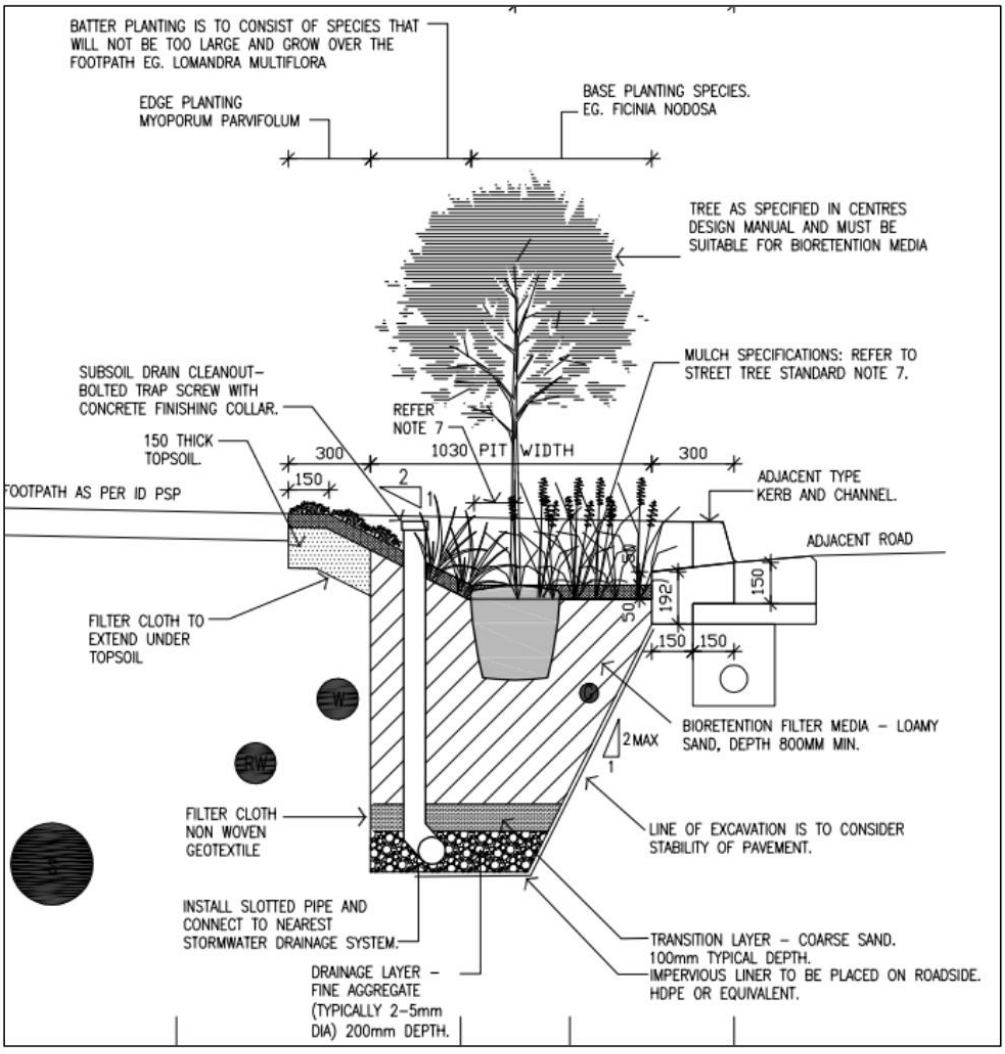

Figure 3.3 Water Smart Tree – Typical Section (Brisbane City Council, 2016)

3.2.2 Swales

Swale treatment nodes have been used to represent the verge alongside a portion of Road 1 which bypasses the bioretention basins in the MUSIC model. It should be noted that swales were only used to treat flows from Catchment A3 and not Catchments A1 and A2.

3.3 MUSIC Results

Results of the MUSIC modelling for the treatment train effectiveness are summarised in Table 3-4. The results indicate the 85%, 66%, 45% and 90% reduction target for TSS, TP, TN and gross pollutants respectively are achieved for the rainfall data set simulated.

Table 3-4 Treatment Train Effectiveness

Pollutant	Inflows (kg/yr)	Outflows (kg/yr)	Reduction Achieved (%)	Water Quality Objective (%)
TSS	3617	526.1	85.45	85
TP	8.03	1.77	77.96	65
TN	52.97	22.66	57.22	45
GP	623.9	11.21	98.2	95

NOTE: All simulations have been run with pollutant export estimation set to “stochastic generation”.

A screen capture of the MUSIC model and treatment train effectiveness results is presented in Figure 3.4.

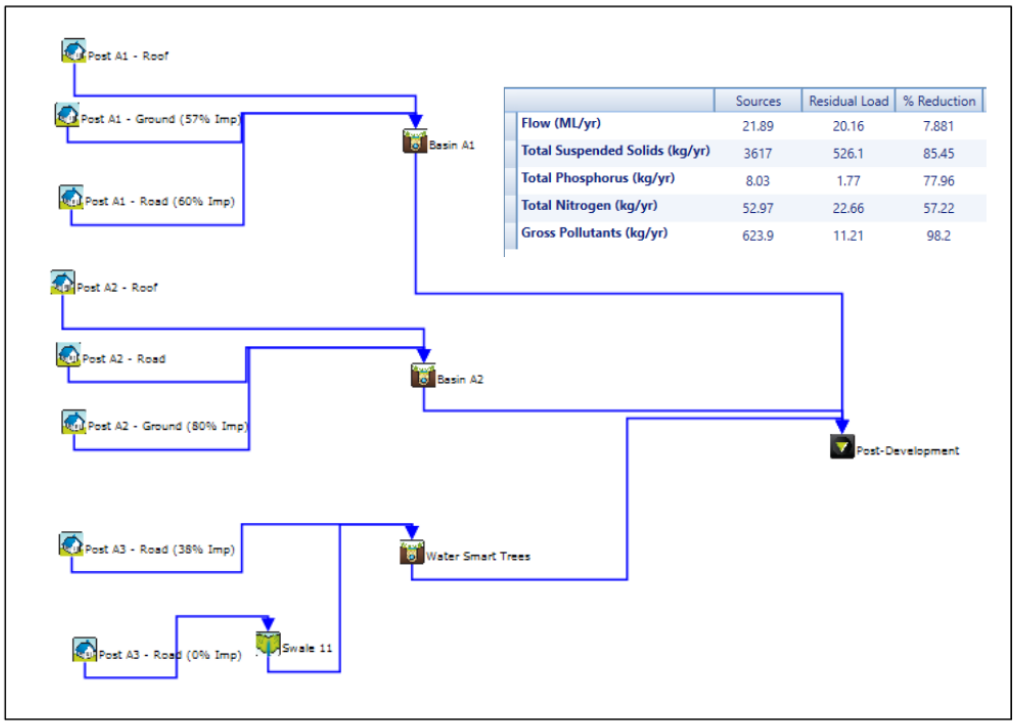

Figure 3.4 Treatment Train Layout & MUSIC Results

4. Erosion and Sediment Control Plan

4.1 Best Management Practices

Stormwater runoff quality during the construction phase of this development shall be managed in accordance with Best Practice Erosion and Sediment Control (IECA, 2008), which is the current recognised construction industry best management practice (BMP) for erosion and sediment control.

Erosion and Sediment Control (ESC) plans are required to be implemented during the construction phase to minimise environmental harm to on-site stormwater treatment devices and downstream receiving waters.

It is important to note that the measures identified below are a generic approach to construction phase stormwater quality management. Erosion and sediment control is highly dependent on local site conditions and staging of the proposed earth disturbing activities. Therefore, further details of the erosion and sediment control systems and procedures will be provided at the detailed design stage when more information is available regarding in-situ soils and development staging.

4.2 Erosion Hazard Assessment

As part of the IECA guidelines, an erosion hazard assessment is completed to identify low-risk and high-risk short-term land disturbances within a given region (IECA, 2008). This Erosion Hazard Assessment estimates a TASK number which triggers if a site should be treated as high or low risk in regard to erosion control measures. A trigger value for high-risk site of 200 has been adopted as recommended by (IECA, 2008). Table 4.1 below show the values used for the estimation of the TASK number.

Table 4.1 Erosion Hazard Assessment

Catchment ID	Area (m^2)	Duration of Disturbance (months)	Slope Factor	K Factor	TASK Number
A1	46,140	3	1.08	0.056	8371.6
A2	4,930	3	0.73	0.056	604.6

From Table 4.1 the results show that the subject site requires a high-risk ESC treatment for Catchments A1 & A2. Given the development proposal is at a conceptual phase, further details of the erosion and sediment control systems and procedures will be provided at the detailed design stage.

4.3 Sediment Loss Estimate

The site has been classified as high-risk, therefore a sediment loss estimate has been included to indicate the recommended sediment control techniques.

The potential volume of sediment loss from the subject site has been estimated using the Revised Universal Soil Loss Equation (RUSLE).

RUSLE calculates annual soil loss rates based on:

$$A = R. K. LS. C. P$$

Where:

A = annual soil loss due to erosion (t/ha/yr)

R = rainfall erosivity factor

K = soil erodibility factor

LS = topographic factor derived from slope length and slope gradient

C = cover and management factor

P = erosion control practice factor

Table 4-2 Potential Sediment Loss (RUSLE)

Catch. ID	Area (ha)	Slope length (m)	Slope Grade (%)	Intensity $^{6}I_2$ (mm/hr)	R	K	LS	C	P	A (t/ha/yr)	Yeild (m^3/yr)
A1	4.614	220	7.00	9.9	2172	0.025	3.12	1	1.3	220.2	781.7
A2	0.493	120	5.00	9.9	2172	0.025	1.524	1	1.3	107.6	40.8

*Note soil testing will need to be carried out to confirm soil type.

4.3.1 Sediment Control Standard

Section 4 of Best Practice Erosion and Sediment Control (IECA, 2008) outlines the recommended type of control standard based on the soil loss rate determined in the section above. Shown below in Table 4-3 is the default sediment control standard based on soil loss rate.

Table 4-3 Control Standard based on Soil Loss Rates (IECA, 2008)

Area limit (m^2) [1]	Soil loss rate limit (t/ha/yr) [2]			Soil loss rate limit (t/ha/month) [3]		
	Type 1	Type 2	Type 3	Type 1	Type 2	Type 3
250	N/A	N/A	[4]	N/A	N/A	[4]
1000	N/A	N/A	All cases	N/A	N/A	All cases
2500	N/A	> 75	75	N/A	> 6.25	6.25
>2500	> 150	150	75	> 12.5	12.5	6.25

It was determined that Catchment A1's sediment loss rate would be approximately 781.7 t/ha/yr and the sites area is greater than 2500 m^2 requiring a type 2 control standard for the site. Catchment A2 will not require any sediment loss treatment.

A list of Type 2 and supplementary sediment control techniques is provided in

Table 4-4 based on Table 4.5.3 and Table 4.5.4 of the guidelines (IECA, 2008). These control techniques provide a guide that is recommended to be used to minimise the downstream effect of sediments.

Table 4-4 Sediment Control techniques

Techniques	Type 2	Supplementary
Sheet flow treatment	• Buffer Zone • Excavated Drop Inlet Protection • Filter Fence • Sediment Fence • Modular Sediment Trap	• Grass Filter Strips • Fibre Rolls
Concentrated flow treatment	• Filter Tube Dam • Rock Filter Tube • Sediment Trench	• Straw Bale Barrier
De-watering sediment control	• Filter Bag • Settling Pond	• Grass Filter bed
Instream sediment control	• Modular Sediment Barrier • Filter Tube Barrier	• Grass Filter bed
Other		• Construction exits (Rock Pads, Wash Bays)

It should be noted that detailed ESC controls and drawings will be provided at a later date during detailed deign.

5. Conclusion

The stormwater management outlined in this report has addressed the objectives set by the Lockyer Valley Regional Council with respect to the control of runoff quantity and quality. Peak runoff at the proposed development's LPD has been maintained in all AEP events through the utilisation of onsite detention.

Stormwater infrastructure associated with the industrial subdivision (Catchment A1) is to be owned and maintained by Lockyer Valley Regional Council and Stormwater infrastructure associated with the service station is to be owned and maintained by said stations owners.

Runoff from frequent events that discharges the subject site are treated by proposed bioretention basins, water smart trees and roadside swales. The proposed treatment trains were modelled using MUSIC in order to determine if Water Quality Objectives were met. The quality of site runoff meets the WQOs of the Lockyer Valley Regional Council, SPP and Seq Water Development Guidelines

Due to the site's classification of high erosion risk, type 2 sediment control techniques will be implemented to mitigate sediment run off and erosion risks. Details of sediment controls will be included in detailed design at a later date.

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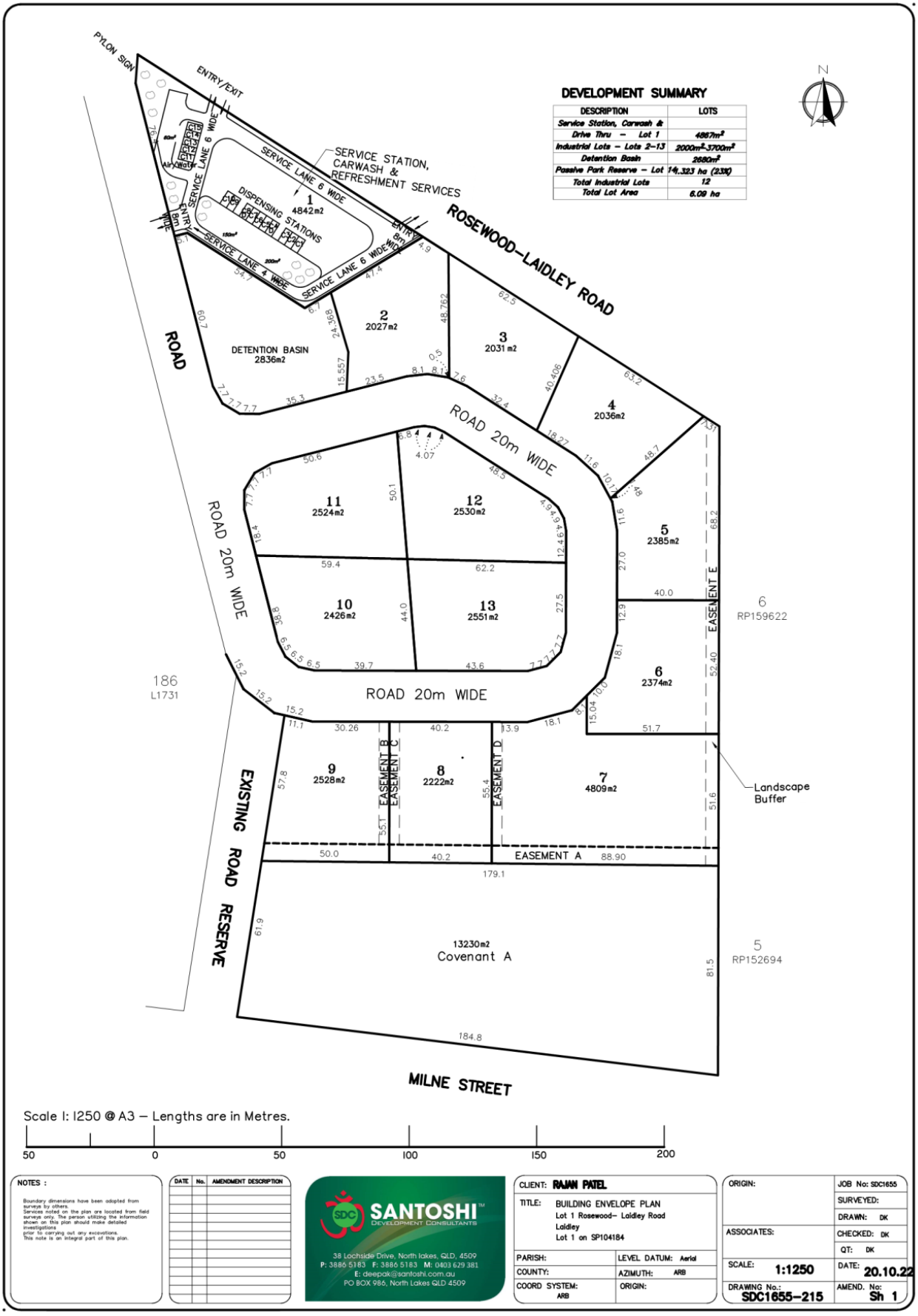
Appendix A Proposed Plans of Development



DESCRIPTION	LOTS
Service Station, Carwash & Drive Thru – Lot 1	4867m²
Industrial Lots – Lots 2–13	2000m²-3700m²
Detention Basin	2680m²
Passive Park Reserve – Lot 14	3.323 ha (23%)
Total Industrial Lots	12
Total Lot Area	6.09 ha

Appendix B Time of Concentration and Rational Method Calculations

Pre-Development Hydrology

The natural hydrology of the site has been assessed in accordance with QUDM (IPWEAQ, 2017) Section 4.1. The time of concentration for all catchments has been determined using Bransby-Williams' Equation as per QUDM Section 4.6.11.

$$\textit{Bransby-Williams' } tc = 58L/(A^{0.1}*S^{0.2})$$

Table B.5.1 presents a summary of the catchment parameters used within Bransby-Williams' Equation and the calculated time of concentration for the pre-development scenario.

Table B.5.1 Time of Concentration for Pre-Development Scenario

Catchment ID	Pre_A	Pre_B	B
Standard Inlet Time	N/A	N/A	N/A
Overland Flow			
Estimated L of Sheet (Table 4.06.3)	100	50	100
Hortons Roughness Value	0.035	0.035	0.035
Slope (%)	8	12	4
tc (minutes)	11.45	8.38	13.15
Channel/Creek Flow			
Length of Channel Flow (m)	263	100	122
Velocity (m/s) - assumes 1.5	1.5	1.5	1.5
tc (minutes)	2.92	1.11	1.36
TOTAL tc (minutes)	14.37	9.49	14.51

Post-Development Hydrology – Unmitigated

Table B.5.2 presents a summary of the catchment parameters used for the calculated time of concentration for the post-development scenario. The time of concentration for the external catchment is presented in Table B.5.1 above.

Table B.5.2 Time of Concentration for Post-Development Scenario

Catchment ID	Post_A.1	Post_A.2	Post_A.3	B
Standard Inlet Time	5	5		-
Slope (%)	**4**	**-**		-
Length of Pipe Flow (m)	267	-		-
Velocity (m/s)	1	-		-
Pipe Flow Time	4.45	-		-
Length of Flow Path (km)	-	-		-
Area (ha)	-	-		-
Overland Flow Time	0	0	6.45	-
TOTAL tc (minutes)	**9.45**	**5.00**	**6.45**	**9.49**

Design storm event flows across the site were derived using the Rational Method as per the above-mentioned manuals. This involved:

- Determination of a C10 value (derived in accordance with QUDM Table 4.05.3(b) and Council guidelines). A value of 0.53 was applied to the pre-development catchments and 0.9 and 0.6 were applied to Catchment A and Catchment B respectively;
- Adoption of design rainfall using BoM IFD data; and
- Calculation of design flows through the site for Q100, Q50, Q20, Q10, Q5, Q2, and $Q3_{month}$, where $Q3_{month}$ is deemed to be 50% of Q1.

Summaries of the hydrologic calculations are contained in Table B.5.3 and Table B.5.4 for pre and post-development (un-mitigated) scenarios respectively.

Table B.5.3 Pre-Development Hydrology

Catch.	Area (ha)	t_c (min)	I_{100} (mm/hr)	C	Q_{100} (m^3/s)	I_{50} (mm/hr)	C	Q_{50} (m^3/s)	I_{20} (mm/hr)	C	Q_{20} (m^3/s)	I_{10} (mm/hr)	C	Q_{10} (m^3/s)	I_5 (mm/hr)	C	Q_5 (m^3/s)	I_2 (mm/hr)	C	Q_2 (m^3/s)	I_1 (mm/hr)	C	Q_{3month} (m^3/s)
A	3.71	14.37	200.39	0.64	**1.31**	179.01	0.61	**1.12**	151.39	0.56	**0.87**	129.88	0.53	**0.71**	108.38	0.50	**0.56**	76.14	0.45	**0.35**	65.90	0.42	**0.29**
B	1.98	9.49	236.67	0.64	**0.83**	211.96	0.61	**0.71**	179.05	0.56	**0.55**	153.54	0.53	**0.45**	127.94	0.50	**0.35**	90.30	0.45	**0.22**	78.15	0.42	**0.18**
C	1.22	14.51	199.44	0.64	**0.43**	178.14	0.61	**0.37**	150.65	0.56	**0.28**	129.26	0.53	**0.23**	107.87	0.50	**0.18**	75.76	0.45	**0.12**	65.58	0.42	**0.09**

Table B.5.4 Un-Mitigated Post-Development Hydrology

Catch.	Area (ha)	t_c (min)	I_{100} (mm/hr)	C	Q_{100} (m^3/s)	I_{50} (mm/hr)	C	Q_{50} (m^3/s)	I_{20} (mm/hr)	C	Q_{20} (m^3/s)	I_{10} (mm/hr)	C	Q_{10} (m^3/s)	I_5 (mm/hr)	C	Q_5 (m^3/s)	I_2 (mm/hr)	C	Q_2 (m^3/s)	I_1 (mm/hr)	C	Q_{3month} (m^3/s)
A.1	**4.23**	**7.50**	**259.00**	**0.98**	3.00	**231.50**	**0.94**	2.57	**195.00**	**0.86**	1.97	**167.50**	**0.82**	1.62	**139.50**	**0.78**	1.28	**98.15**	**0.70**	0.80	**85.05**	**0.66**	0.66
A.2	A.2	**0.47**	**7.00**	**264.60**	**1.00**	0.34	**236.40**	**0.98**	0.30	**199.00**	**0.89**	0.23	**171.00**	**0.85**	0.19	**142.40**	**0.81**	0.15	**100.12**	**0.72**	0.09	**86.78**	**0.68**
A3	**0.32**	**0.00**	**270.76**	**0.82**	**0.20**	**241.79**	**0.78**	**0.17**	**203.40**	**0.71**	**0.13**	**174.85**	**0.68**	**0.11**	**145.59**	**0.65**	**0.08**	**102.29**	**0.58**	**0.05**	**88.68**	**0.54**	**0.04**
B	**1.87**	**9.49**	**236.67**	**0.64**	0.78	**211.96**	**0.61**	0.67	**179.05**	**0.56**	0.52	**153.54**	**0.53**	0.42	**127.94**	**0.50**	0.34	**90.30**	**0.45**	0.21	**78.15**	**0.42**	0.17

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Appendix C XP-SWMM Input Parameters

Laurenson Routing Parameters

In this study, the "Laurenson" routing method was applied to XP-SWMM for hydrograph generation. To enable this method to be used, each catchment must be split into pervious (undeveloped) and impervious (developed) portions. Adopted parameters for the Laurenson routing method included:

The fraction impervious has been determined by analysis of aerial photographs and the proposed development layout;

- Manning Roughness coefficient (n):
  - Pervious portion: 0.035; and
  - Impervious portion: 0.015.

Initial Loss (IL) and Continuing Losses (CL) have been applied to the hydrologic model. Details of IL and CL parameters applied in the XP-SWMM model are presented in Table C.5.1.

Table C.5.1 Adopted Initial & Continuing Losses

Impervious Area		Pervious Area	
IL (mm)	CL (mm/hr)	IL (mm)	CL (mm/hr)
4	1	25	1.4

Analysis of the catchment has been undertaken to determine the average slope, with the results of this being applied to the model.

Table C.5.2 Pre-Development Catchment Parameters

Catchment	Impervious Area			Pervious Area		
	Area (ha)	Fraction Impervious (%)	Slope (%)	Area (ha)	Fraction Impervious (%)	Slope (%)
Pre A	0.00	100	-	3.84	0	7
Pre B	0.00	100	-	1.98	0	14

Table C.5.3 Post-Development Catchment Parameters

Catchment	Impervious Area			Pervious Area		
	Area (ha)	Fraction Impervious (%)	Slope (%)	Area (ha)	Fraction Impervious (%)	Slope (%)
Post A1	3.54	100	4	0.7	0	4
Post A2	0.435	100	1	0.063	0	1
Post A3	0.12	100	4	0.2	0	4
Post B	0	100	14	1.874	0	14

Appendix D MUSIC Input Parameters

Rainfall and Evapotranspiration Parameters

MUSIC modelling was based on 6-minute interval data obtained from the Bureau of Meteorology (BOM) for rainfall station University of Queensland, Gatton, as summarised in Table D.1.

Table D.1 Meteorological and Rainfall Runoff Data Reporting Table

Input	Data Used in Modelling
Rainfall station	40082 GATTON
Time step	6 minute
Modelling period	4/06/2000 to 30/06/2010 (10 years)
Evapotranspiration	Monthly Pattern
Rainfall runoff parameters	Industrial
Pollutant export parameters	Industrial

Catchment Parameters

Based on the proposed land uses within the development, the Site has been modelled as urban land use as detailed in Table D.2. The Site has been divided into roof and ground level source nodes as per the architectural drawings included in Appendix A.

Table D.2 Land Use Parameters

Connected Bio.	Catchment ID	Land use	Total Impervious (%)
A1	A1 - Roof	Urban – Industrial	100
	A1 – Ground	Urban – Industrial	57
	A1 - Road	Urban – Industrial	50
A2	A2 - Roof	Urban – Commercial	100
	A2 – Ground	Urban – Commercial	80
	A2 - Road	Urban – Commercial	100
A3	A3 - Road	Urban – Industrial	38

The MUSIC catchment plan with full breakdown of Industrial Lots, Service Station, Roads and Parklands is presented in Appendix. The pollutant loads and runoff parameters for each source node have been based on the data from the Water by Design MUSIC Modelling Guidelines (2010), as summarised in Table D.3 and Table D.4

Table D.3 Rainfall Runoff Parameters

Parameter	Node
Landuse	Urban – Ind. & Com.
Rainfall threshold (mm)	1
Soil storage capacity (mm)	18
Initial storage (% capacity)	10
Field capacity (mm)	80
Infiltration capacity coefficient a	243
Infiltration capacity exponent b	0.6
Initial depth (mm)	50
Daily recharge rate (%)	0
Daily baseflow rate (%)	31
Daily deep seepage rate (%)	0

Table D.4 Pollutant Load Parameters

Split - Urban Industrial	Total Suspended Solids (log mg/L)		Total Phosphorous (log mg/L)		Total Nitrogen (log mg/L)	
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.
Storm Flow Concentration	1.30(1) 2.43(2) 1.92(3)	0.44(1,2,3)	-0.89(1) -0.30(2) -0.59(3)	0.36(1,2,3)	0.25(1,2,3)	0.32(1,2,3)
Base Flow Concentration	N/A(1) 0.78(2,3)	N/A (1) 0.45(2,3)	N/A(1) -1.11(2,3)	N/A(1) 0.48(2,3)	N/A(1) 0.14(2,3)	N/A(1) 0.20(2,3)

Split - Urban Commercial	Total Suspended Solids (log mg/L)		Total Phosphorous (log mg/L)		Total Nitrogen (log mg/L)	
	Mean	Std Dev.	Mean	Std Dev.	Mean	Std Dev.
Storm Flow Concentration	1.30(1) 2.43(2) 2.16(3)	0.38(1,2,3)	-0.89(1) -0.30(2) -0.39(3)	0.34(1,2,3)	0.37(1,2,3)	0.34(1,2,3)
Base Flow Concentration	N/A(1) 0.78(2,3)	N/A (1) 0.39(2,3)	N/A(1) -0.60(2,3)	N/A(1) 0.50(2,3)	N/A(1) 0.32(2,3)	N/A(1) 0.3(2,3)

NOTE: (1) Values applied to "Roof" areas
(2) Values applied to "Road" areas
(3) Values applied to "Ground" areas

Treatment Node Parameters

The following sections describe the modelling parameters applied to MUSIC for each of the treatment nodes included as part of the water quality assessment.

Bioretention System

The input parameters for the bioretention system are summarised in Table and Table D.6 for the Subdivision and Service Station Bioretention basin, respectively.

Table D.5 Bioretention A1 Parameters

ID	A1
Surface area (m^2)	675
Has the filter area been calculated appropriately? (Y / N / N/A)	Y
Extended detention depth (m)	0.3
Filter area (m^2)	675
Unlined filter media perimeter (m)	0.1
Saturated hydraulic conductivity (mm/hour)	200
Filter depth (m)	0.6
TN content of filter media (mg/kg)	400
Orthophosphate content of filter media (mg/kg)	30
Is the base lined? (Y/N)	Yes
Effectiveness of plant TN removal (effective/ineffective/unvegetated)	Effective
Overflow weir width (m)	5
Exfiltration rate (mm/hr)	0.00
If an exfiltration rate has been used, have node water balance losses been used in calculation of treatment train effectiveness? (Y / N / N/A)	N/A
If exfiltration rate has been used, is the exfiltration rate justified? (Y / N / N/A)	N/A
Underdrain present? (Y/N)	Yes
Submerged zone with carbon present?	No
Depth of submerged zone (m)	0
Confirmation that K and C* remain default? (Y/N)	Yes

Table D.6. Service Station Bioretention Parameters

ID	A2
Surface area (m^2)	50
Has the filter area been calculated appropriately? (Y / N / N/A)	Y
Extended detention depth (m)	0.3
Filter area (m^2)	50
Unlined filter media perimeter (m)	0.1
Saturated hydraulic conductivity (mm/hour)	200
Filter depth (m)	0.6
TN content of filter media (mg/kg)	400
Orthophosphate content of filter media (mg/kg)	30
Is the base lined? (Y/N)	Yes
Effectiveness of plant TN removal (effective/ineffective/unvegetated)	Effective
Overflow weir width (m)	3
Exfiltration rate (mm/hr)	0.00
If an exfiltration rate has been used, have node water balance losses been used in calculation of treatment train effectiveness? (Y / N / N/A)	N/A
If exfiltration rate has been used, is the exfiltration rate justified? (Y / N / N/A)	N/A
Underdrain present? (Y/N)	Yes
Submerged zone with carbon present?	No
Depth of submerged zone (m)	
Confirmation that K and C* remain default? (Y/N)	Yes

Table D.7. Water Smart Tree Parameters

ID	A3
Surface area (m^2)	12
Has the filter area been calculated appropriately? (Y / N / N/A)	Y
Extended detention depth (m)	0.1
Filter area (m^2)	12
Unlined filter media perimeter (m)	0.1
Saturated hydraulic conductivity (mm/hour)	100
Filter depth (m)	0.6
TN content of filter media (mg/kg)	400
Orthophosphate content of filter media (mg/kg)	30
Is the base lined? (Y/N)	No
Effectiveness of plant TN removal (effective/ineffective/unvegetated)	Effective
Overflow weir width (m)	12
Exfiltration rate (mm/hr)	0.00
If an exfiltration rate has been used, have node water balance losses been used in calculation of treatment train effectiveness? (Y / N / N/A)	N/A
If exfiltration rate has been used, is the exfiltration rate justified? (Y / N / N/A)	N/A
Underdrain present? (Y/N)	No
Submerged zone with carbon present?	No
Depth of submerged zone (m)	
Confirmation that K and C* remain default? (Y/N)	Yes

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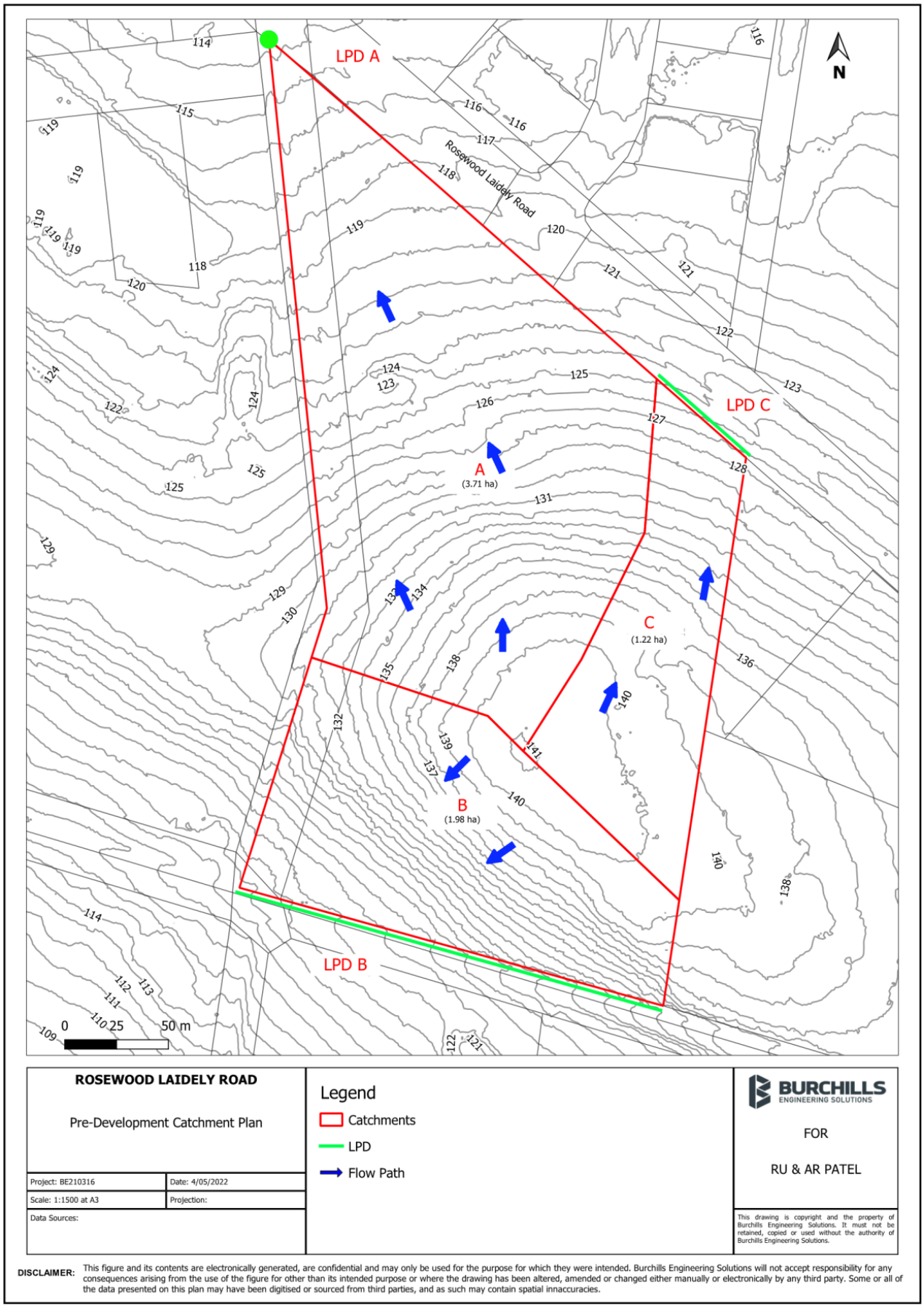
Appendix E Burchills Engineering Solutions Conceptual Stormwater Management Drawings


LPD A
LPD B
LPD C
A
(3.71 ha)
B
(1.98 ha)
C
(1.22 ha)
Rosewood Laidley Road
N
0
25
50 m
ROSEWOOD LAIDELY ROAD
Pre-Development Catchment Plan
Project: BE210316
Date: 4/05/2022
Scale: 1:1500 at A3
Projection:
Data Sources:
Legend
Catchments
LPD
Flow Path
BURCHILLS
ENGINEERING SOLUTIONS
FOR
RU & AR PATEL
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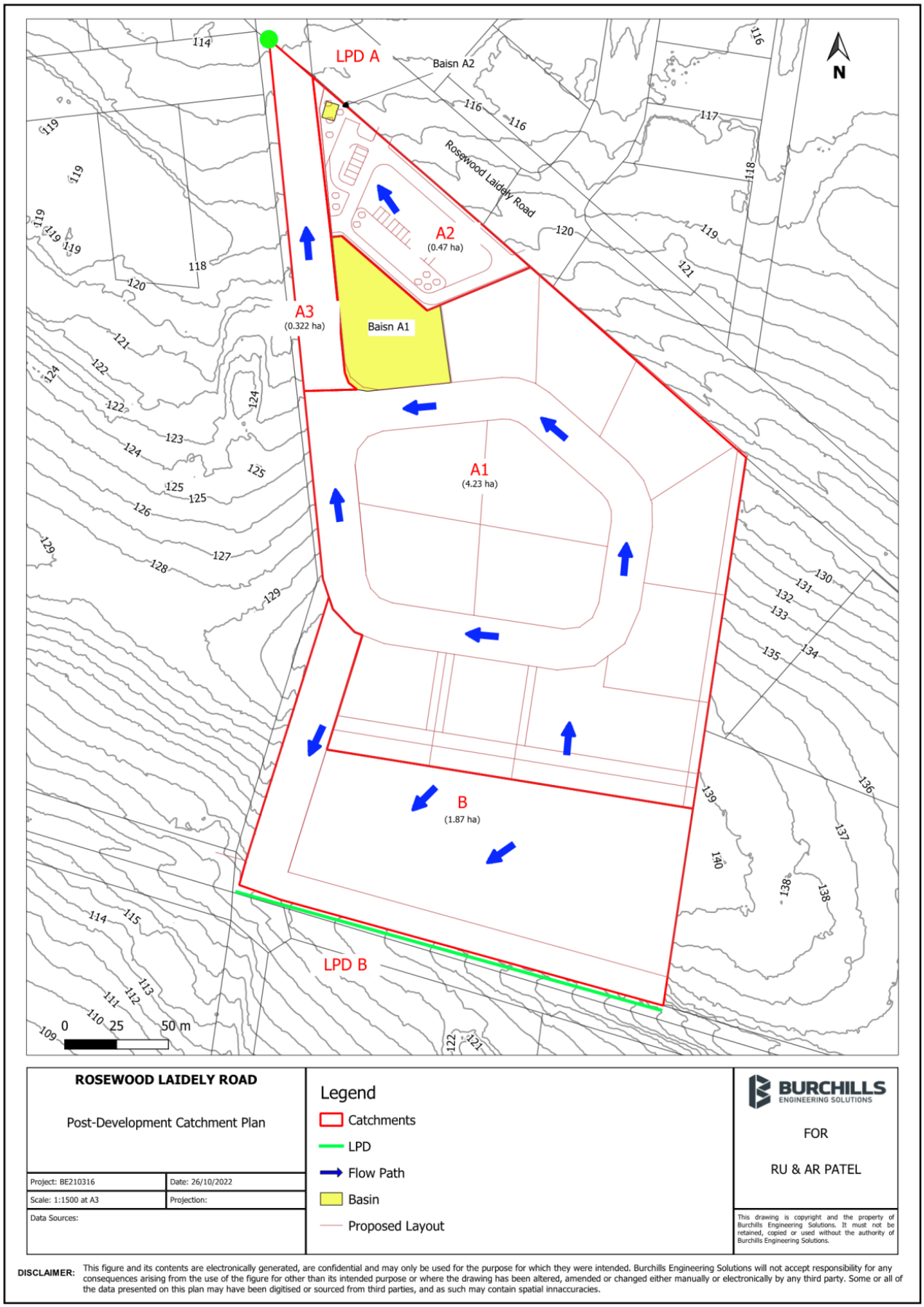
LPD A
Baisn A2
Rosewood Laidley Road
A2
(0.47 ha)
A3
(0.322 ha)
Baisn A1
A1
(4.23 ha)
B
(1.87 ha)
LPD B
N
0
25
50 m
ROSEWOOD LAIDELY ROAD
Post-Development Catchment Plan
Project: BE210316
Date: 26/10/2022
Scale: 1:1500 at A3
Projection:
Data Sources:
Legend
Catchments
LPD
Flow Path
Basin
Proposed Layout
BURCHILLS
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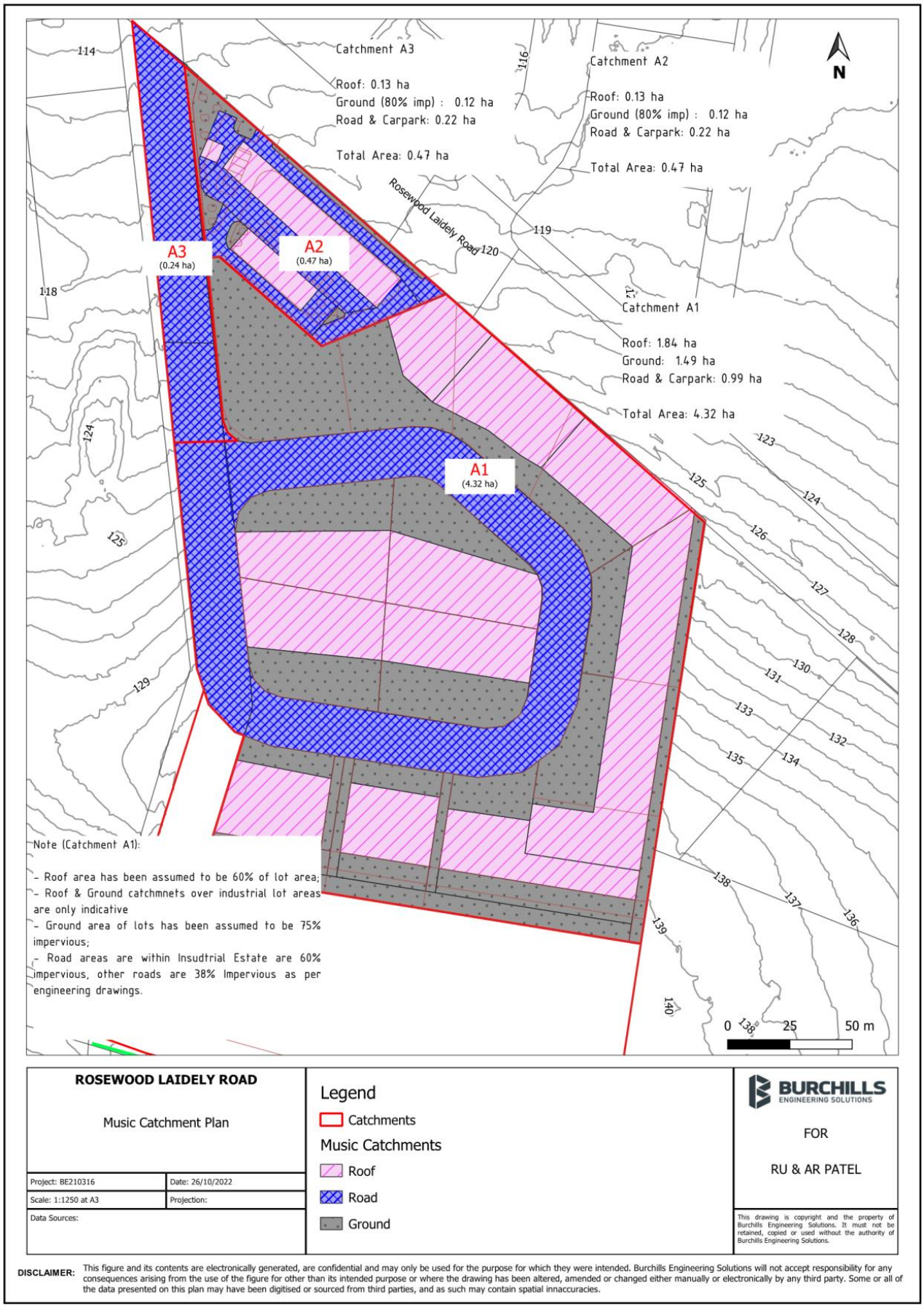

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Appendix F Burchills Engineering Solutions Civil Drawings

PROPOSED INDUSTRIAL SUBDIVISION

LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD

CONCEPT DESIGN

PREPARED FOR
RU & AR PATEL

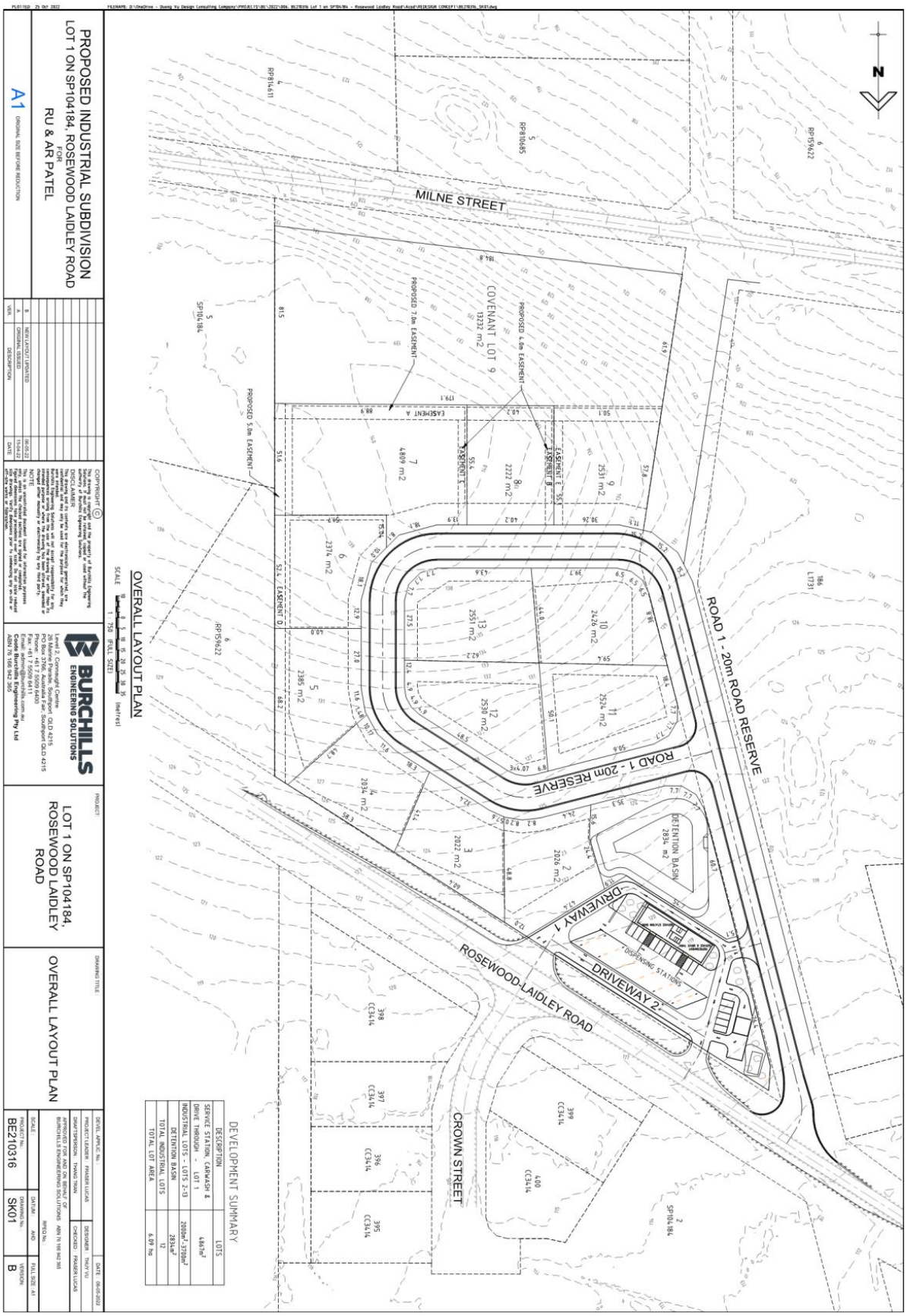
LOCALITY PLAN
NOT TO SCALE

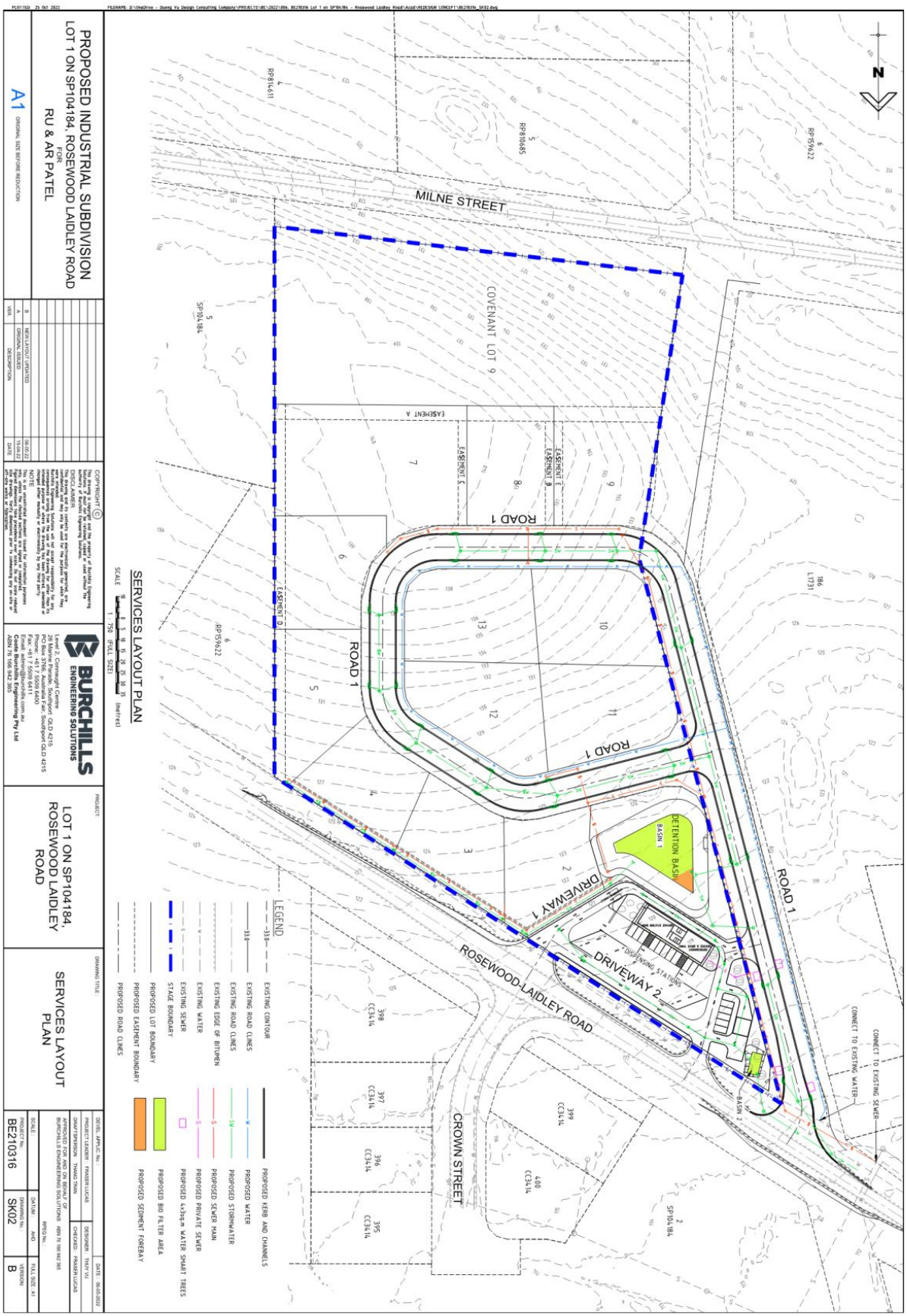
SCHEDULE OF DRAWINGS

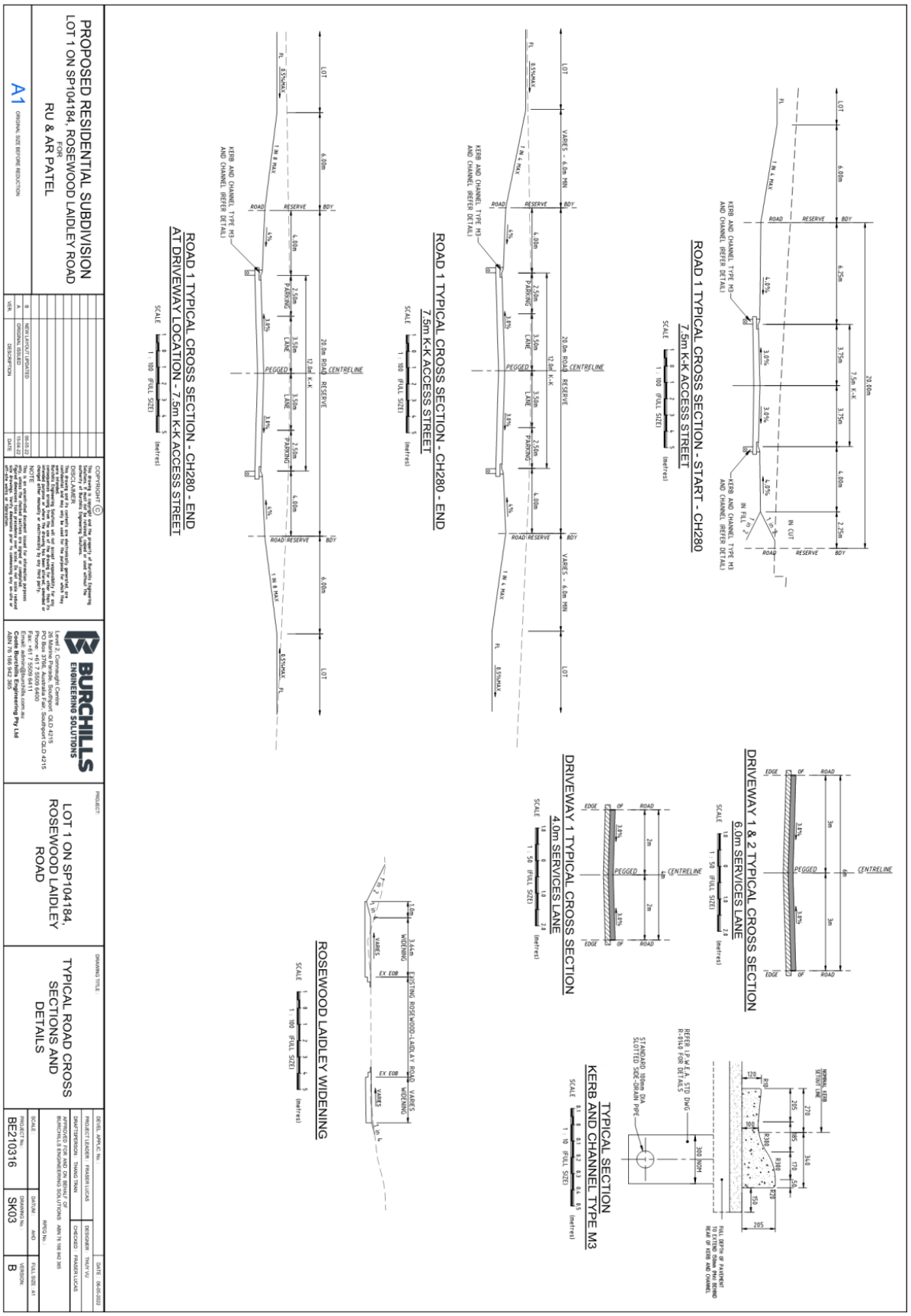
Drawing No.	Drawing Title
SK00	COVER SHEET
SK01	OVERALL LAYOUT PLAN
SK02	SERVICES LAYOUT PLAN
SK03	TYPICAL ROAD CROSS SECTIONS AND DETAILS
SK04	TYPICAL RETAINING WALL NOTES AND DETAILS
SK05	BULK EARTHWORKS LAYOUT PLAN
SK06	BULK EARTHWORKS SECTIONS
SK07	LANDSCAPE BUFFER SECTIONS
SK08	ROADWORKS LAYOUT PLAN
SK09	ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
SK10	ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
SK11	ROSEWOOD-LAIDLEY ROAD INTERSECTION
SK12	BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 1
SK13	BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 2

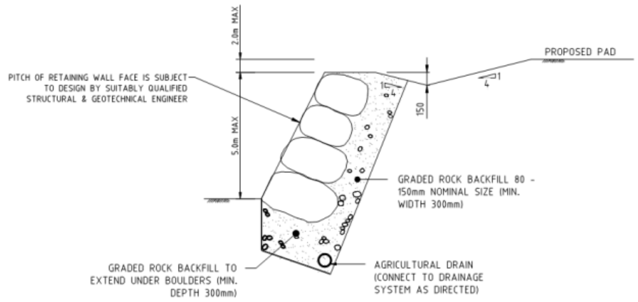
PREPARED BY
BURCHILLS
ENGINEERING SOLUTIONS
Gold Coast | Brisbane | Toowoomba
Ipswich | Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT No.	DRAWING No.	VERSION	DATE
BE210316	SK00	B	26-09-2022


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ORIGINAL SIZE BEFORE REDUCTION
OVERALL LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
OVERALL LAYOUT PLAN
BE210316
SK01
B
MILNE STREET
ROAD 1 - 20m ROAD RESERVE
ROSEWOOD-LAIDLEY ROAD
DRIVEWAY 1
DRIVEWAY 2
DETENTION BASIN 2834 m2
COVENANT LOT 9 13232 m2
CROWN STREET
DEVELOPMENT SUMMARY
DESCRIPTION | LOTS
SERVICE STATION, CARWASH & DRIVE THROUGH - LOT 1 | 4867m²
INDUSTRIAL LOTS - LOTS 2-13 | 2010m² - 2708m²
DETENTION BASIN | 2834m²
TOTAL INDUSTRIAL LOTS | 12
TOTAL LOT AREA | 6.09 ha

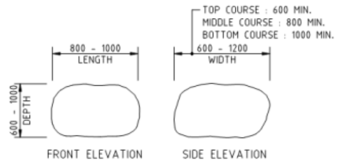

PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
SERVICES LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
LEGEND
EXISTING CONTOUR
EXISTING ROAD CLINES
EXISTING EDGE OF BITUMEN
EXISTING WATER
EXISTING SEWER
STAGE BOUNDARY
PROPOSED LOT BOUNDARY
PROPOSED EASEMENT BOUNDARY
PROPOSED ROAD CLINES
PROPOSED KERB AND CHANNELS
PROPOSED WATER
PROPOSED STORMWATER
PROPOSED SEWER MAIN
PROPOSED PRIVATE SEWER
PROPOSED 433sqm WATER SMART TREES
PROPOSED BIO FILTER AREA
PROPOSED SEDIMENT FOREBAY
MILNE STREET
ROSEWOOD-LAIDLEY ROAD
ROAD 1
DRIVEWAY 1
DRIVEWAY 2
DETENTION BASIN
BASIN 1
BASIN 2
COVENANT LOT 9
CROWN STREET
CONNECT TO EXISTING WATER
CONNECT TO EXISTING SEWER
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
SERVICES LAYOUT PLAN
BE210316
SK02
B


ROAD 1 TYPICAL CROSS SECTION - START - CH280
7.5m K-K ACCESS STREET
ROAD 1 TYPICAL CROSS SECTION - CH280 - END
7.5m K-K ACCESS STREET
ROAD 1 TYPICAL CROSS SECTION - CH280 - END
AT DRIVEWAY LOCATION - 7.5m K-K ACCESS STREET
DRIVEWAY 1 & 2 TYPICAL CROSS SECTION
6.0m SERVICES LANE
DRIVEWAY 1 TYPICAL CROSS SECTION
4.0m SERVICES LANE
TYPICAL SECTION
KERB AND CHANNEL TYPE M3
ROSEWOOD LAIDLEY WIDENING
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TYPICAL ROAD CROSS SECTIONS AND DETAILS
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK03
B
A1



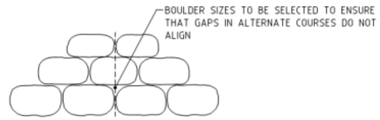
TYPICAL BOULDER WALL SECTION

NTS



TYPICAL BOULDER DETAILS

N.T.S.



ELEVATION - TYPICAL COURSING DETAILS

BOULDER WALL NOTES:

1. BOULDERS SHALL BE DENSE, SOUND, RESISTANT TO ABRASION AND FREE FROM CRACKS, CLEAVAGE PLANES, SEAMS AND OTHER DEFECTS OF ANY KIND WHICH COULD RESULT IN BREAKDOWN OF THE BOULDER IN ITS PROPOSED ENVIRONMENT.
2. THE MINIMUM WIDTH OF GRADED ROCK BACKFILL TO BOULDER WALLS IS TO BE 300mm.
3. THE MINIMUM COMPACTION STANDARD FOR SUB-GRADE MATERIAL BELOW BOULDER WALL FOOTINGS IS TO BE :
   TOP 300mm DEPTH :
   : 98% STANDARD DENSITY RATIO - COHESIVE MATERIAL
   : 80% DENSITY INDEX - NON-COHESIVE MATERIAL
   BELOW THE TOP 300mm DEPTH :
   : 95% STANDARD DENSITY RATIO - COHESIVE MATERIAL
   : 70% DENSITY INDEX - NON-COHESIVE MATERIAL
4. GEOTEXTILE FOR USE IN WALL CONSTRUCTION IS TO BE "TERRAFIX 360R" OR APPROVED EQUIVALENT.
5. THE CONTRACTOR IS TO TAKE CARE TO SWEEP THE MAJOR BOULDERS AND BLOCKS CLEAN PRIOR TO PLACEMENT OF THE NEXT COURSE TO ENSURE SMALLER ROCKS DO NOT FALL BETWEEN FACES OF THE MAJOR BOULDERS.
6. A SPECIALIST SUB-CONTRACTOR IS TO DESIGN, DETAIL, SUPPLY, CONSTRUCT AND CERTIFY RETAINING WALLS COMPLETE.
7. WALL IS TO BE DESIGNED TO NOMINATED PROFILE TO SUIT GEOTECHNICAL CONDITIONS WITH ADEQUATE DRAINAGE, AND IS TO HAVE A FACTOR OF SAFETY OF 2.0 FOR SLIDING AND 2.0 FOR OVER-TURNING.
8. THE CONTRACTOR IS TO PROVIDE DESIGN AND CONSTRUCTION COMPLIANCE CERTIFICATES FROM RPEQ TOGETHER WITH ENGINEERING REPORT INCLUDING SITE INVESTIGATIONS FROM GEOTECHNICAL ENGINEERING CONFIRMING LONG TERM STABILITY AND SAFETY.
9. RETAINING WALLS MUST BE DESIGNED SO AS TO ACHIEVE THE DESIGN CRITERIA AND RECOMMENDATIONS DETAILED IN THE GEOTECHNICAL INVESTIGATION 0906.1000 REV 1 DATED 8 FEBRUARY 2011, PREPARED BY GROUND ENVIRONMENTS PTY LTD.

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
B	NEW LAYOUT UPDATED	06-05-22
A	ORIGINAL ISSUED	15-04-22

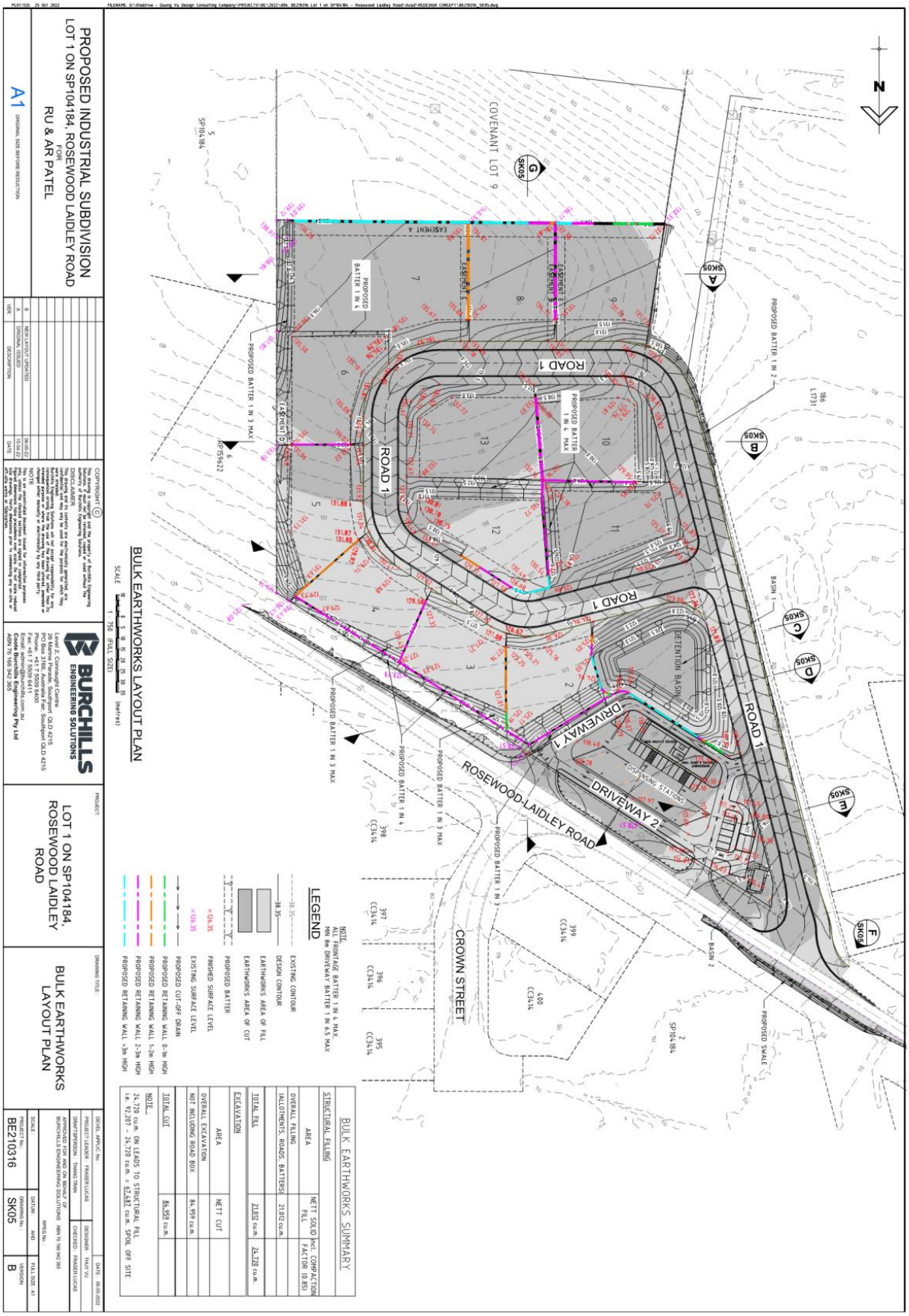
NOTE
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed.
Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.

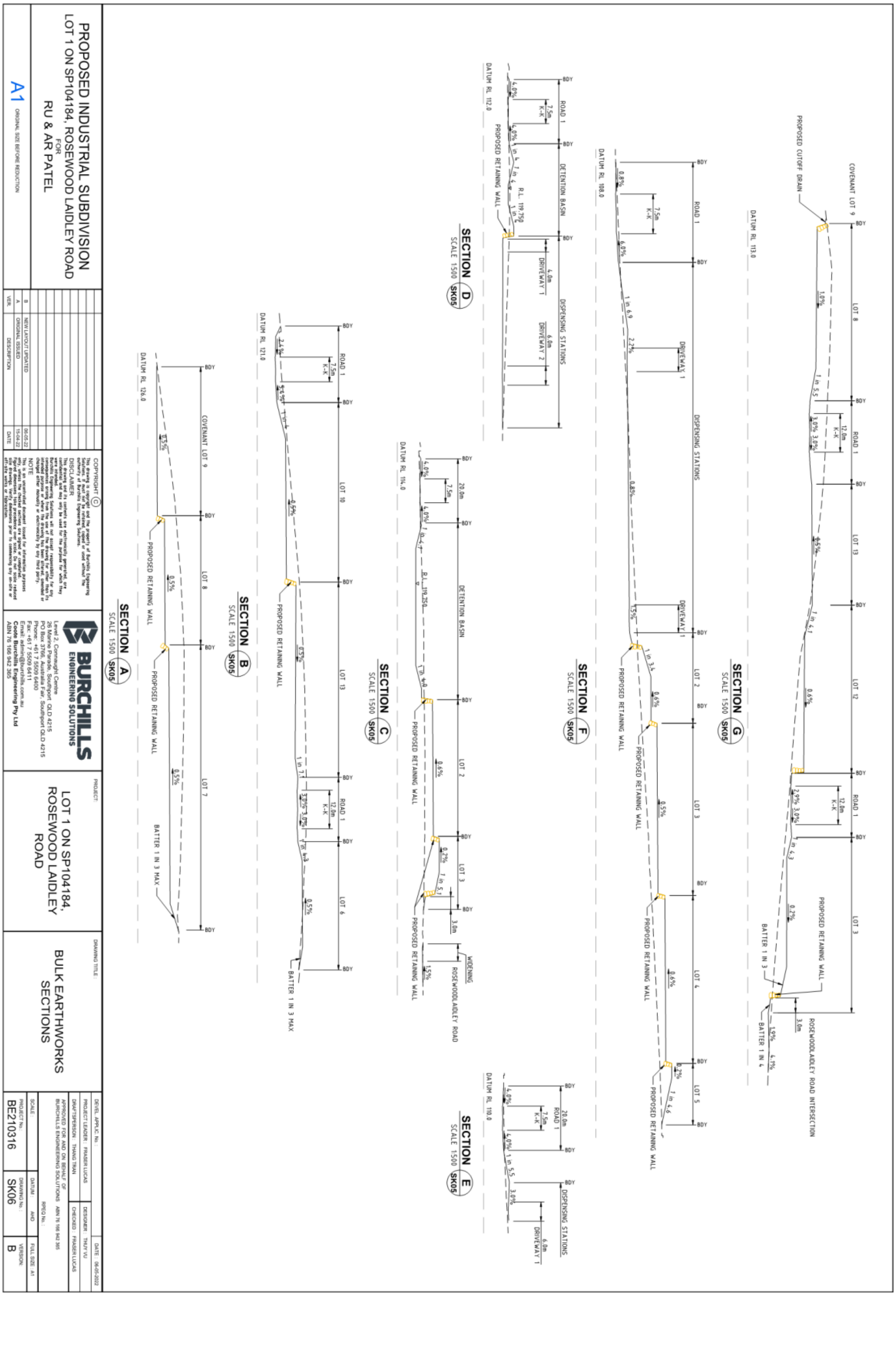
BURCHILLS ENGINEERING SOLUTIONS
Level 2, Connaught Centre
26 Marine Parade, Southport QLD 4215
PO Box 3766, Australia Fair, Southport QLD 4215
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

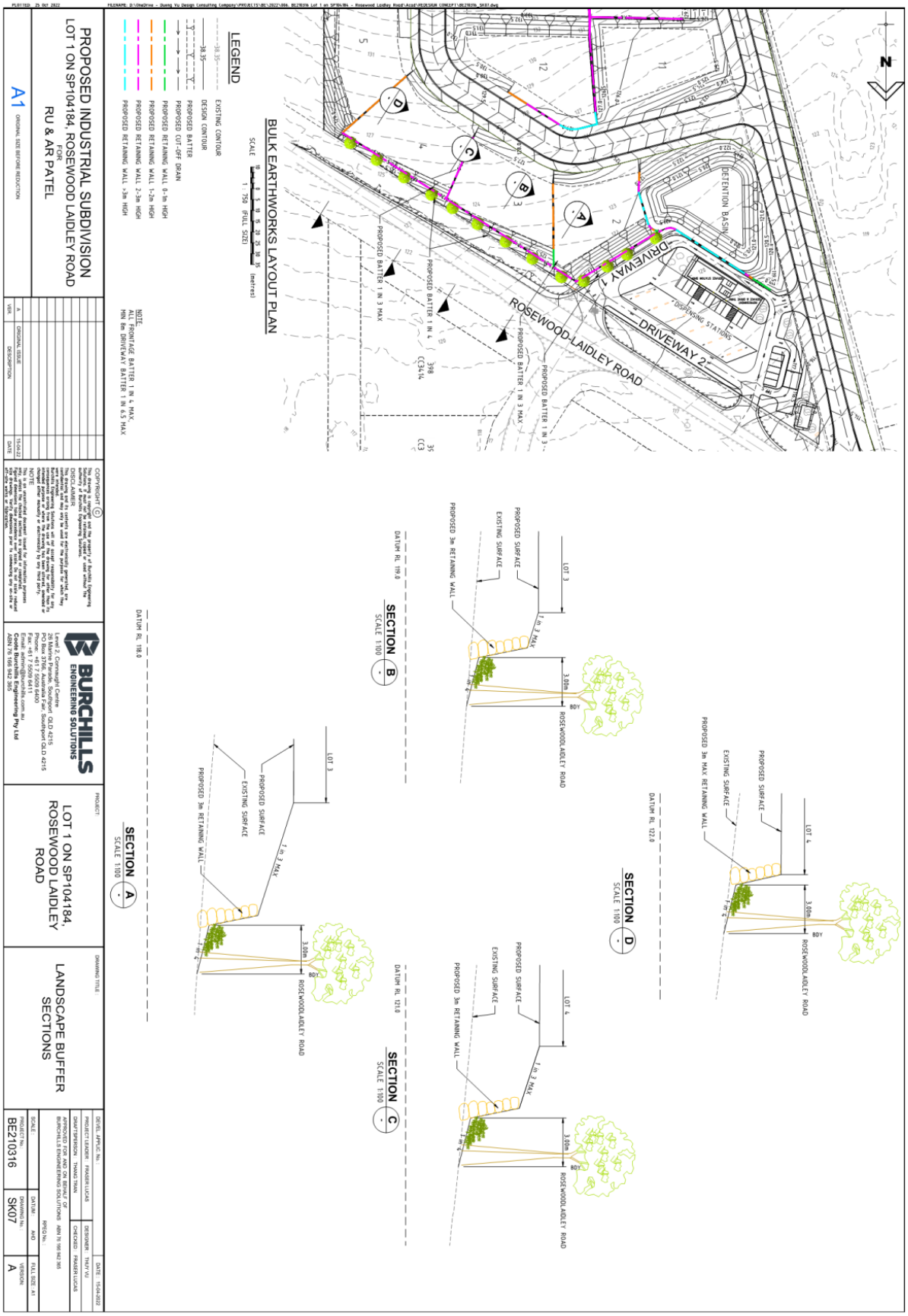
PROJECT:
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD

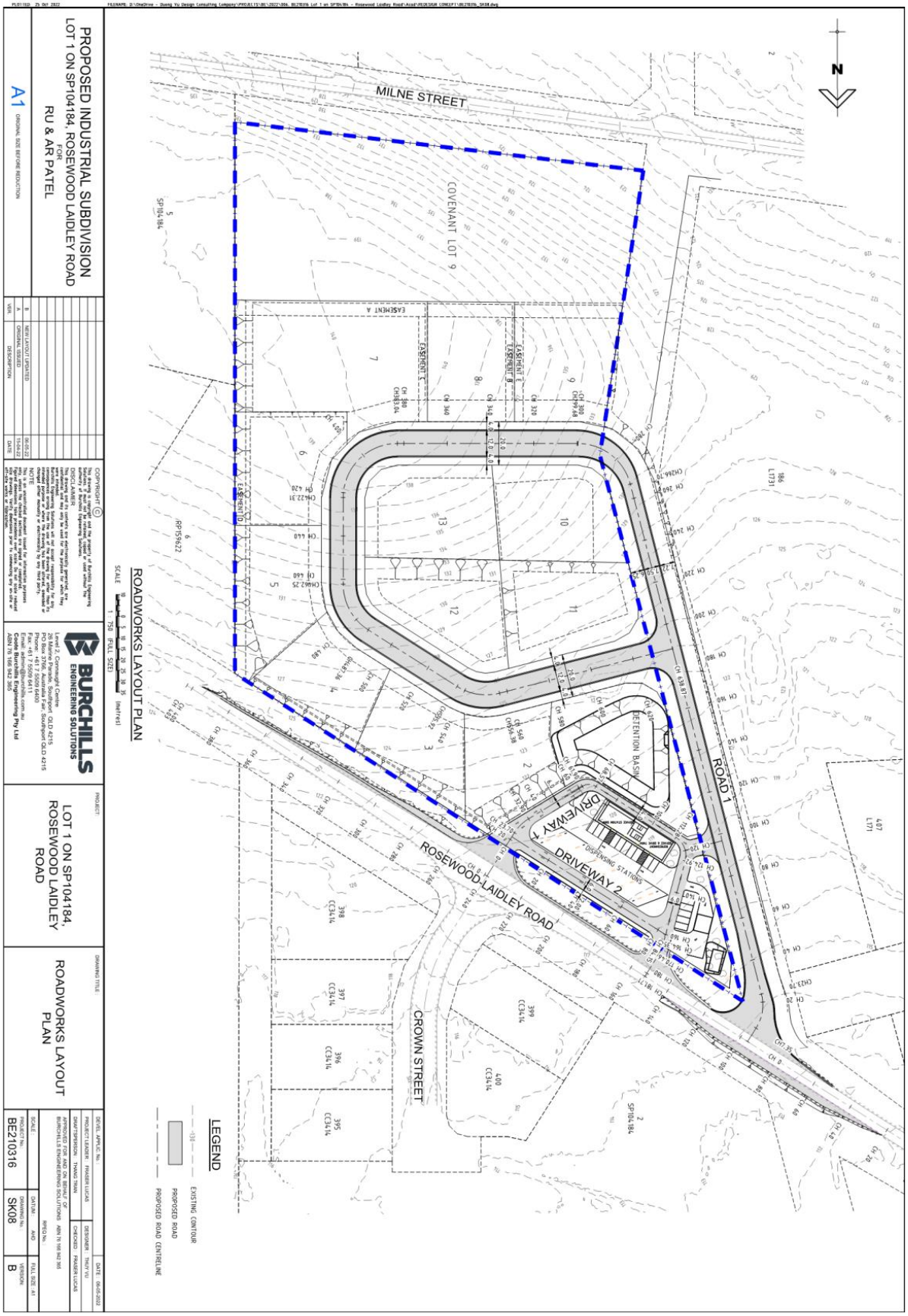
DRAWING TITLE:
TYPICAL RETAINING WALL NOTES AND DETAILS

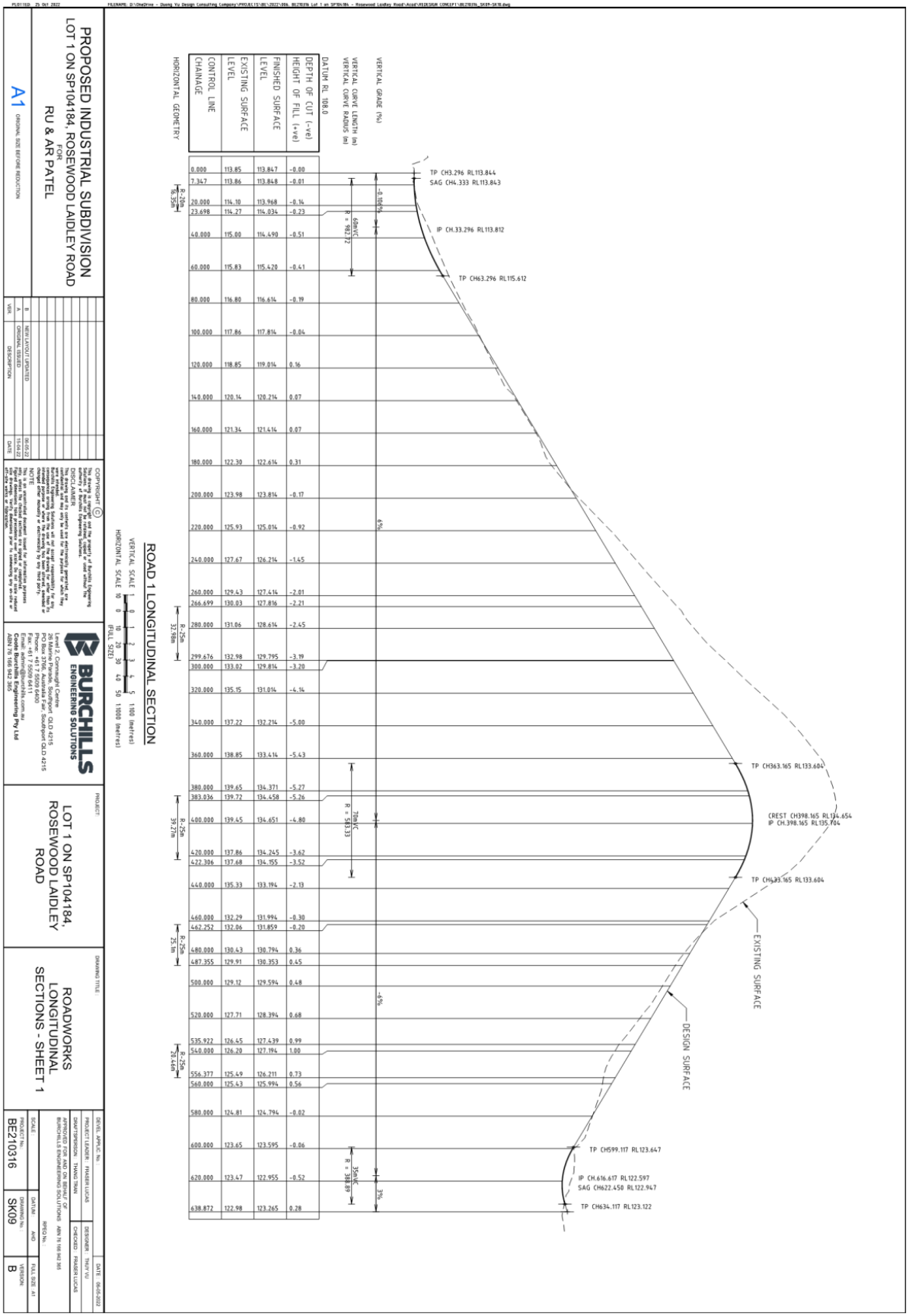
DEVEL. APPLIC. No. : | DATE : 06-05-2022
PROJECT LEADER : FRASER LUCAS | DESIGNER : THUY VU
DRAFTSPERSON : THANG TRAN | CHECKED : FRASER LUCAS
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365
RPEQ No. :
SCALE : | DATUM : AHD | FULL SIZE : A1
PROJECT No.: BE210316 | DRAWING No. : SK04 | VERSION: B


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BULK EARTHWORKS LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BURCHILLS ENGINEERING SOLUTIONS
BULK EARTHWORKS LAYOUT PLAN
BE210316
SK05
B
LEGEND
EXISTING CONTOUR
DESIGN CONTOUR
EARTHWORKS AREA OF FILL
EARTHWORKS AREA OF CUT
PROPOSED BATTER
FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
PROPOSED CUT-OFF DRAIN
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
NOTE
ALL FRONTAGE BATTER 1 IN 4 MAX
AND 4m DRIVEWAY BATTER 1 IN 6.5 MAX
BULK EARTHWORKS SUMMARY
STRUCTURAL FILLING
AREA
NETT SOLID INCL. COMPACTION FACTOR (0.95)
OVERALL FILLING
(ALLOTMENTS, ROADS, BATTERS)
21,002 cu.m.
TOTAL FILL
21,002 cu.m.
24,739 cu.m.
EXCAVATION
AREA
NETT CUT
OVERALL EXCAVATION
NOT INCLUDING ROAD BOX
84,959 cu.m.
TOTAL CUT
84,959 cu.m.
NOTE:
24,739 cu.m. ON LEADS TO STRUCTURAL FILL
i.e. 92,207 - 24,739 cu.m. = 67,467 cu.m. SPOIL OFF SITE
ROAD 1
DRIVEWAY 1
DRIVEWAY 2
ROSEWOOD-LAIDLEY ROAD
CROWN STREET
DETENTION BASIN
DRIVE-THRU STACKING AREA
PROPOSED BATTER 1 IN 3 MAX
PROPOSED BATTER 1 IN 4
PROPOSED BATTER 1 IN 6 MAX
EASEMENT A
EASEMENT B
EASEMENT C
COVENANT LOT 9
PROPOSED SWALE
BASIN 1
BASIN 2
N


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BULK EARTHWORKS SECTIONS
BE210316
SK06
B
SECTION A SCALE 1:500
SECTION B SCALE 1:500
SECTION C SCALE 1:500
SECTION D SCALE 1:500
SECTION E SCALE 1:500
SECTION F SCALE 1:500
SECTION G SCALE 1:500


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LEGEND
EXISTING CONTOUR
DESIGN CONTOUR
PROPOSED BATTER
PROPOSED CUT-OFF DRAIN
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
BULK EARTHWORKS LAYOUT PLAN
SCALE 1 : 750 (FULL SIZE)
NOTE
ALL FRONTAGE BATTER 1 IN 4 MAX
MIN 6m DRIVEWAY BATTER 1 IN 6.5 MAX
DETENTION BASIN
DRIVEWAY 1
DRIVEWAY 2
ROSEWOOD-LAIDLEY ROAD
PROPOSED BATTER 1 IN 3 MAX
PROPOSED BATTER 1 IN 4
DISPENSING STATIONS
SECTION A
SECTION B
SECTION C
SECTION D
DATUM RL 118.0
DATUM RL 119.0
DATUM RL 121.0
DATUM RL 122.0
PROPOSED SURFACE
EXISTING SURFACE
PROPOSED 3m RETAINING WALL
PROPOSED 3m MAX RETAINING WALL
LOT 3
LOT 4
1 in 3 MAX
3.00m
BDY
ROSEWOOD-LAIDLEY ROAD
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
LANDSCAPE BUFFER SECTIONS
BE210316
SK07
A


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ROADWORKS LAYOUT PLAN
SCALE
1 : 750 (FULL SIZE)
(metres)
MILNE STREET
COVENANT LOT 9
EASEMENT A
EASEMENT B
EASEMENT C
ROAD 1
DETENTION BASIN
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
ROSEWOOD-LAIDLEY ROAD
CROWN STREET
LEGEND
EXISTING CONTOUR
PROPOSED ROAD
PROPOSED ROAD CENTRELINE
N
BURCHILLS
ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LAYOUT PLAN
BE210316
SK08
B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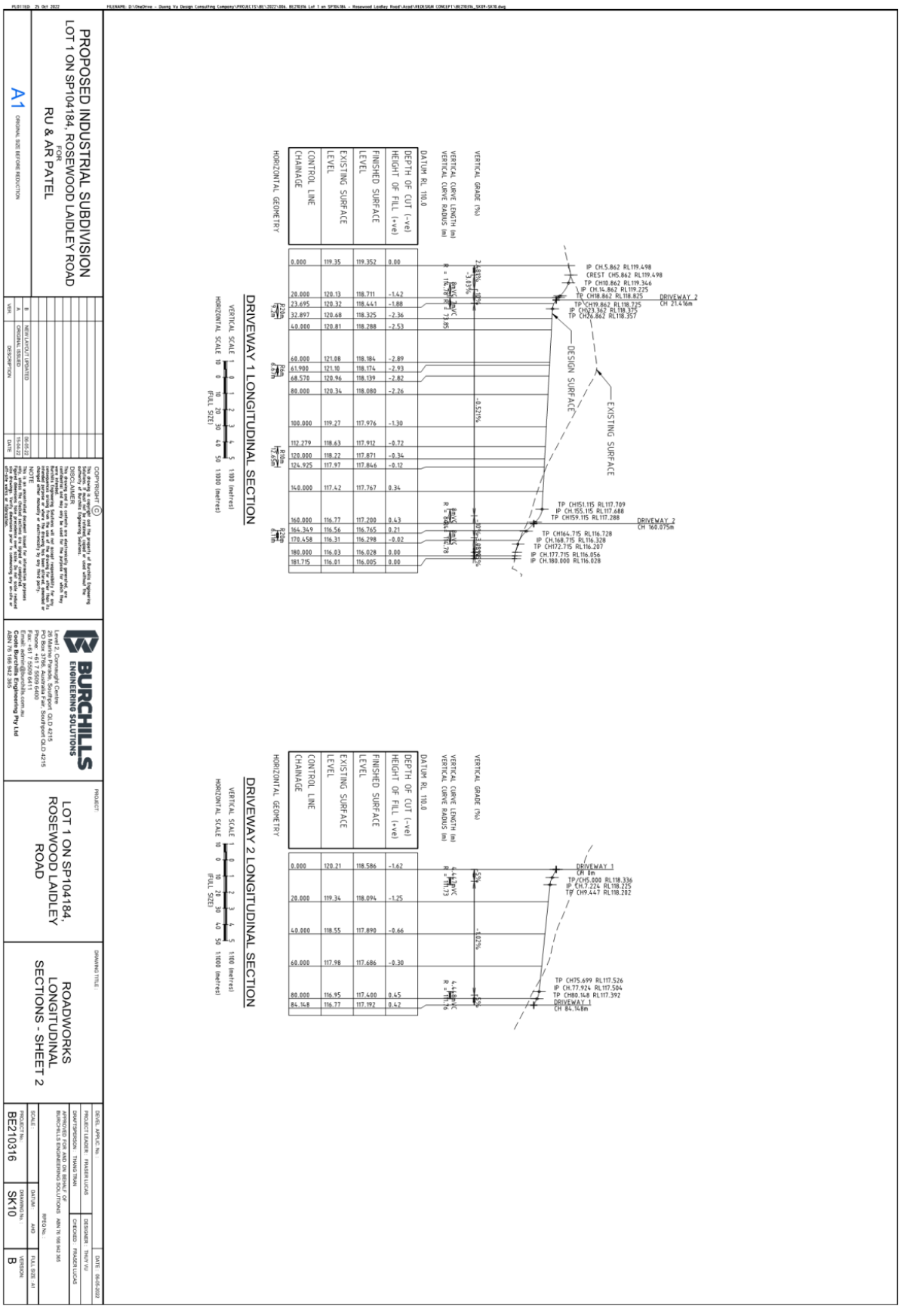
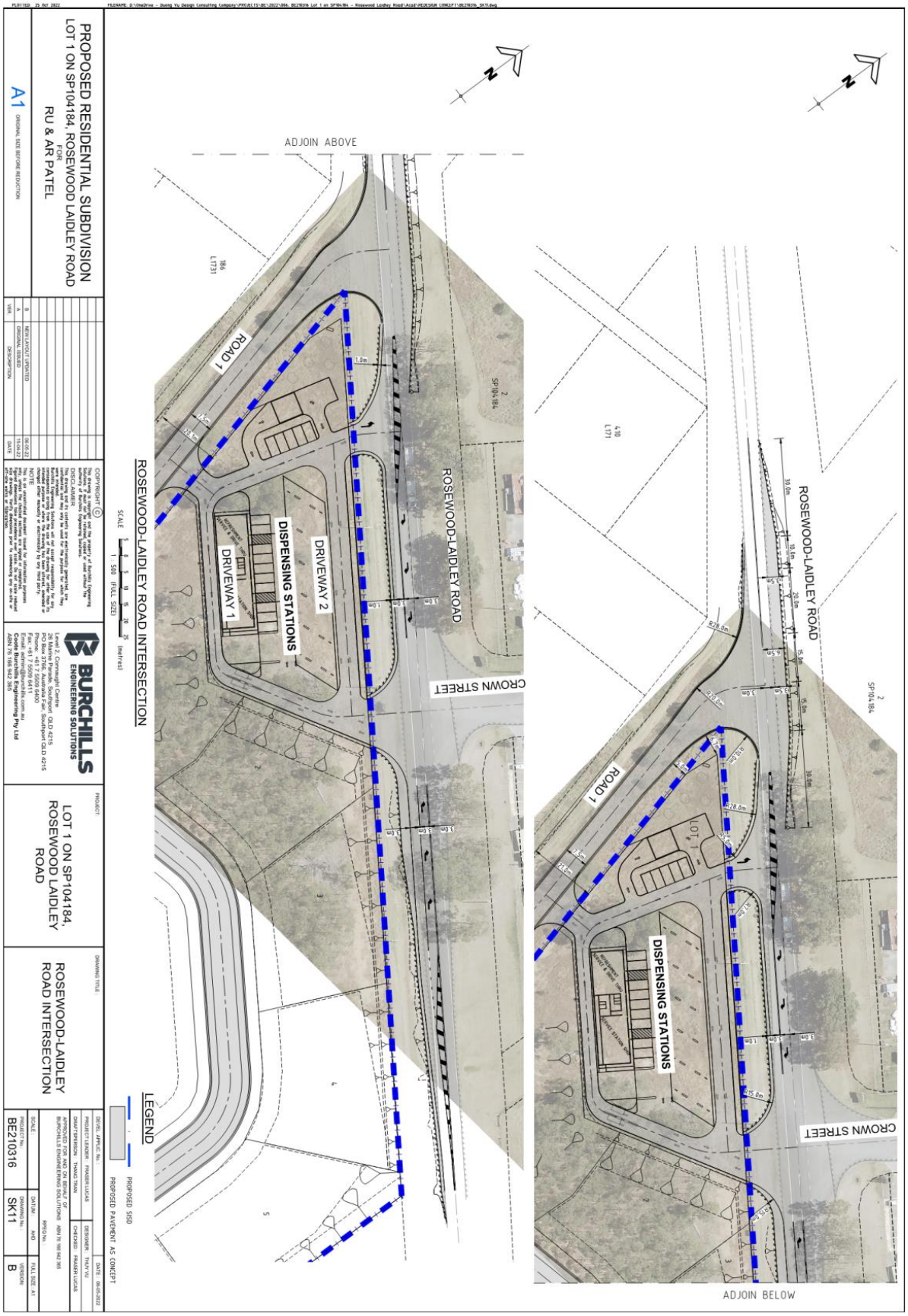
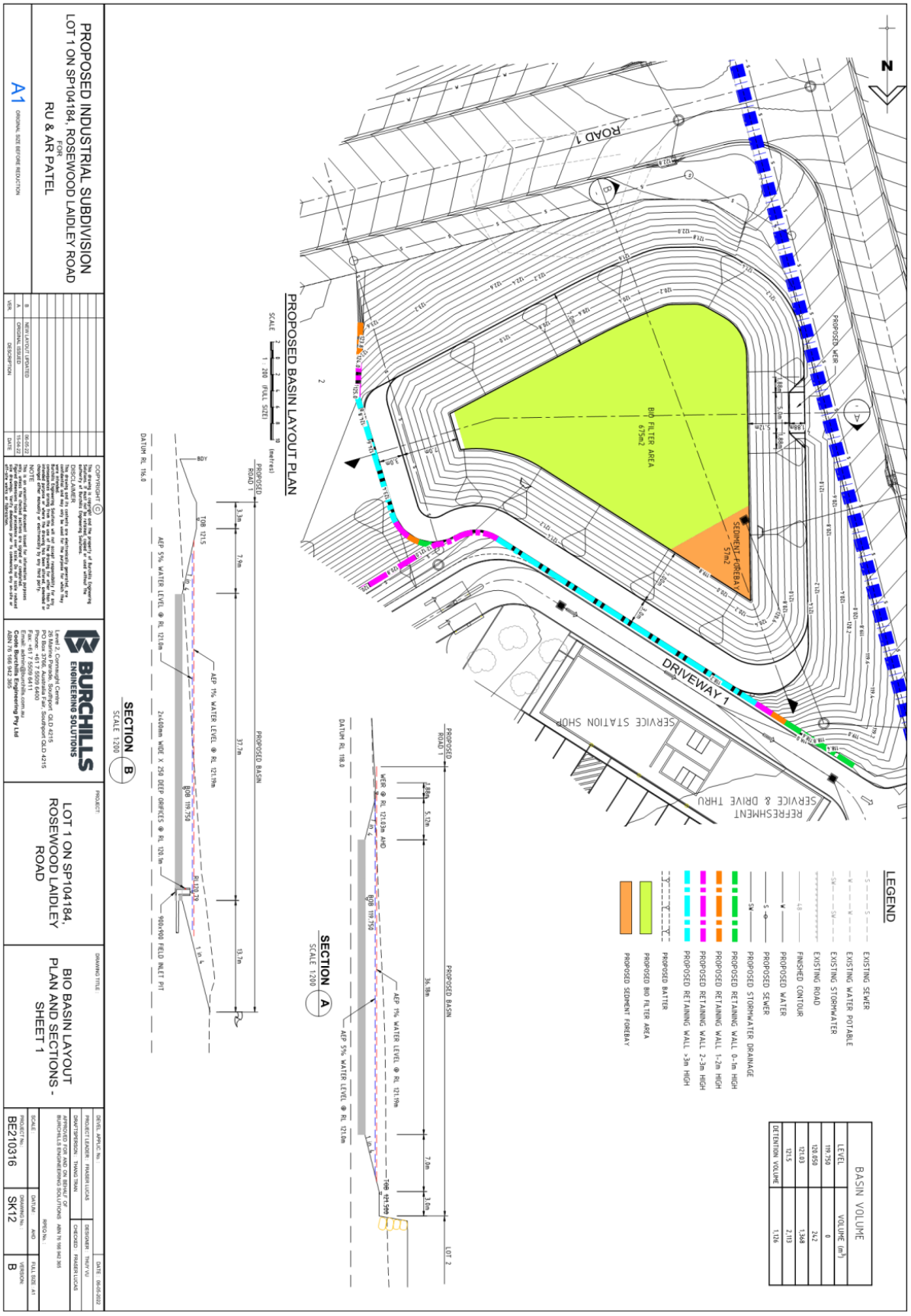
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ROAD 1 LONGITUDINAL SECTION
VERTICAL SCALE 1:100 (metres)
HORIZONTAL SCALE 1:1000 (metres)
(FULL SIZE)
HORIZONTAL GEOMETRY
CONTROL LINE CHAINAGE
EXISTING SURFACE LEVEL
FINISHED SURFACE LEVEL
DEPTH OF CUT (-ve)
HEIGHT OF FILL (+ve)
DATUM RL 108.0
VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
VERTICAL GRADE (%)
TP CH3.296 RL113.844
SAG CH4.333 RL113.843
IP CH.33.296 RL113.812
TP CH63.296 RL115.612
TP CH363.165 RL133.604
CREST CH398.165 RL134.654
IP CH.398.165 RL135.704
TP CH433.165 RL133.604
TP CH599.117 RL123.647
IP CH.616.617 RL122.597
SAG CH622.450 RL122.947
TP CH634.117 RL123.122
EXISTING SURFACE
DESIGN SURFACE
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK09
B


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ORIGINAL SIZE BEFORE REDUCTION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
BURCHILLS ENGINEERING SOLUTIONS
DRIVEWAY 1 LONGITUDINAL SECTION
DRIVEWAY 2 LONGITUDINAL SECTION
DESIGN SURFACE
EXISTING SURFACE
SK10
BE210316
B


PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ROSEWOOD-LAIDLEY ROAD INTERSECTION
SCALE
1 : 500 (FULL SIZE)
ADJOIN ABOVE
ADJOIN BELOW
ROSEWOOD-LAIDLEY ROAD
CROWN STREET
ROAD 1
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
LEGEND
PROPOSED SIGD
PROPOSED PAVEMENT AS CONCEPT
BURCHILLS
ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROSEWOOD-LAIDLEY ROAD INTERSECTION
BE210316
SK11
B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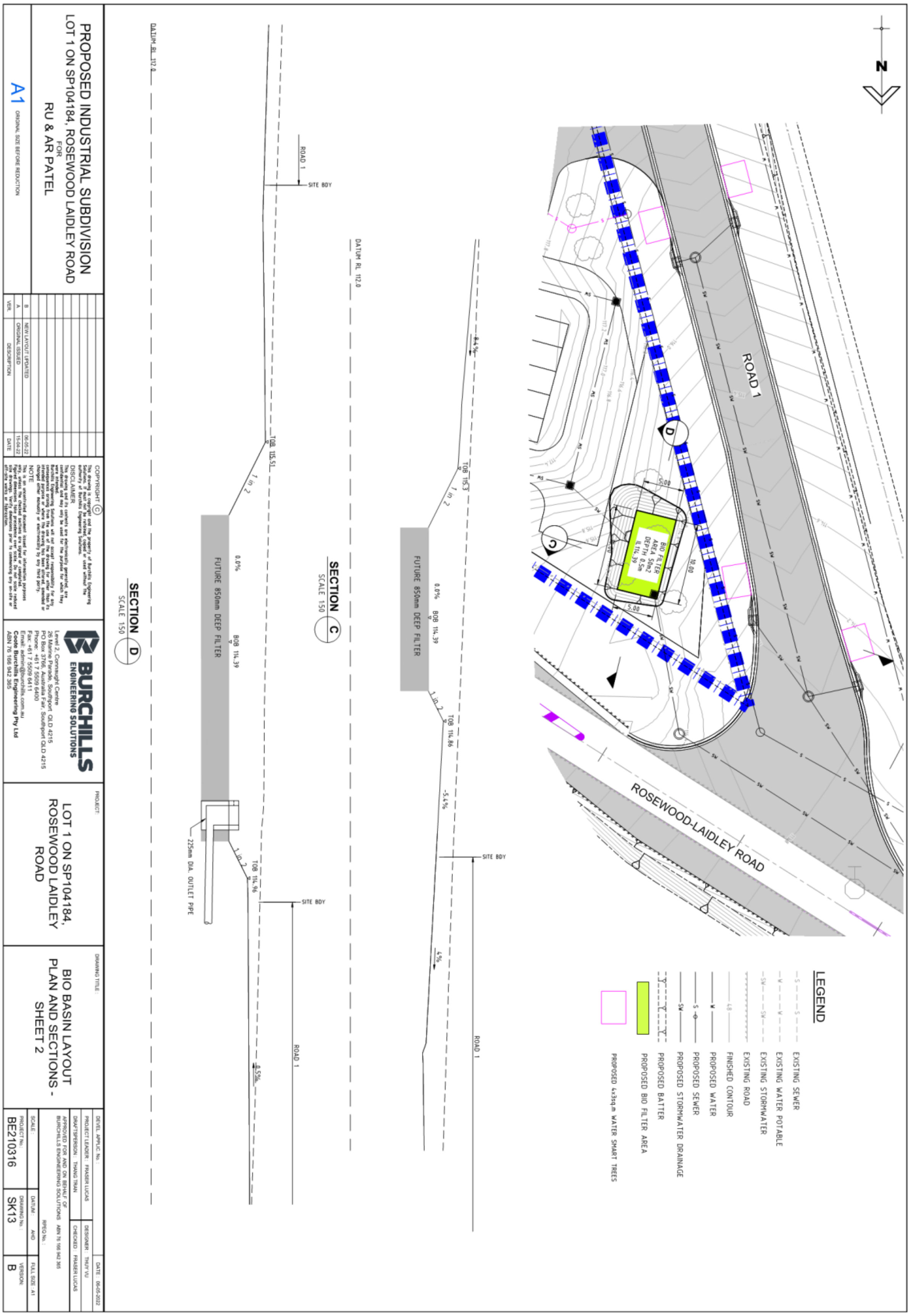
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ORIGINAL SIZE BEFORE REDUCTION
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 1
BE210316
SK12
B
PROPOSED BASIN LAYOUT PLAN
SCALE 1:200 (FULL SIZE)
SECTION A
SCALE 1:200
SECTION B
SCALE 1:200
LEGEND
EXISTING SEWER
EXISTING WATER POTABLE
EXISTING STORMWATER
EXISTING ROAD
FINISHED CONTOUR
PROPOSED WATER
PROPOSED SEWER
PROPOSED STORMWATER DRAINAGE
PROPOSED RETAINING WALL 0-1m HIGH
PROPOSED RETAINING WALL 1-2m HIGH
PROPOSED RETAINING WALL 2-3m HIGH
PROPOSED RETAINING WALL >3m HIGH
PROPOSED BATTER
PROPOSED BIO FILTER AREA
PROPOSED SEDIMENT FOREBAY
BASIN VOLUME
LEVEL
VOLUME (m³)
DETENTION VOLUME
ROAD 1
DRIVEWAY 1
SERVICE STATION SHOP
REFRESHMENT SERVICE & DRIVE THRU
BIO FILTER AREA 675m2
SEDIMENT FOREBAY 57m2
PROPOSED WEIR
PROPOSED BASIN
PROPOSED ROAD 1
AEP 5% WATER LEVEL @ RL 121.0m
AEP 1% WATER LEVEL @ RL 121.19m
2x600mm WIDE X 250 DEEP ORIFICES @ RL 120.1m
900x900 FIELD INLET PIT
DATUM RL 116.0
DATUM RL 118.0
BDY
LOT 2


PROPOSED INDUSTRIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BIO BASIN LAYOUT PLAN AND SECTIONS - SHEET 2
BE210316
SK13
B
ROAD 1
ROSEWOOD-LAIDLEY ROAD
SECTION C
SCALE 150
SECTION D
SCALE 150
FUTURE 850mm DEEP FILTER
225mm DIA. OUTLET PIPE
SITE BDY
LEGEND
EXISTING SEWER
EXISTING WATER POTABLE
EXISTING STORMWATER
EXISTING ROAD
FINISHED CONTOUR
PROPOSED WATER
PROPOSED SEWER
PROPOSED STORMWATER DRAINAGE
PROPOSED BATTER
PROPOSED BIO FILTER AREA
PROPOSED 4x3sq.m WATER SMART TREES

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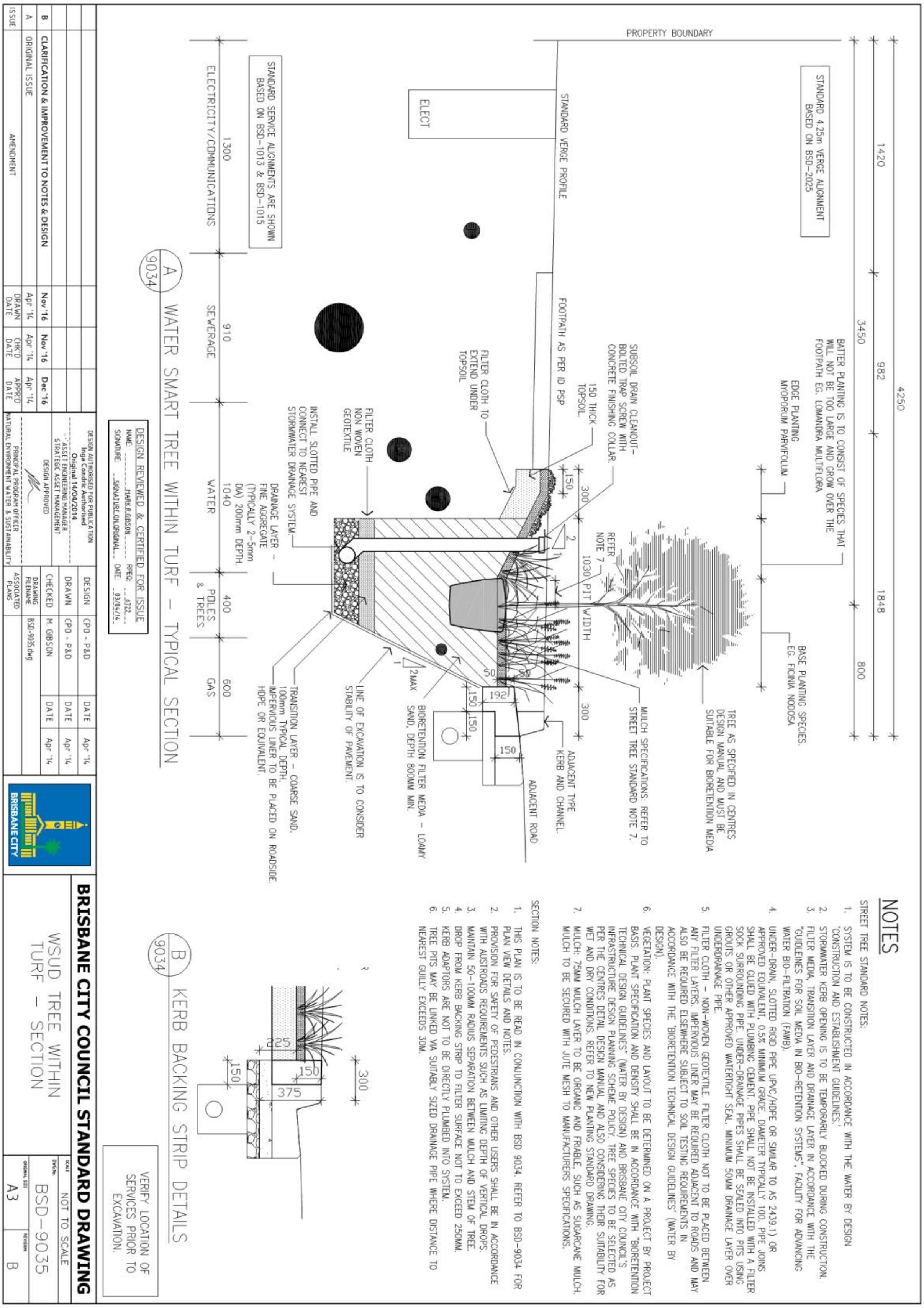
Appendix G Brisbane City Council Standard Drawings – Water Smart Trees


4250
1420
982
1848
3450
800
STANDARD 4.25m VERGE ALIGNMENT BASED ON BSD-2025
BATTER PLANTING IS TO CONSIST OF SPECIES THAT WILL NOT BE TOO LARGE AND GROW OVER THE FOOTPATH EG. LOMANDRA MULTIFLORA
EDGE PLANTING MYOPORUM PARVIFOLUM
BASE PLANTING SPECIES. EG. FICINIA NODOSA
TREE AS SPECIFIED IN CENTRES DESIGN MANUAL AND MUST BE SUITABLE FOR BIORETENTION MEDIA
PROPERTY BOUNDARY
SUBSOIL DRAIN CLEANOUT- BOLTED TRAP SCREW WITH CONCRETE FINISHING COLLAR.
MULCH SPECIFICATIONS: REFER TO STREET TREE STANDARD NOTE 7.
REFER NOTE 7
150 THICK TOPSOIL.
300
1030 PIT WIDTH
300
150
2
ADJACENT TYPE KERB AND CHANNEL.
STANDARD VERGE PROFILE
FOOTPATH AS PER ID PSP
ADJACENT ROAD
FILTER CLOTH TO EXTEND UNDER TOPSOIL
ELECT
BIORETENTION FILTER MEDIA - LOAMY SAND, DEPTH 800MM MIN.
2MAX
FILTER CLOTH NON WOVEN GEOTEXTILE
LINE OF EXCAVATION IS TO CONSIDER STABILITY OF PAVEMENT.
INSTALL SLOTTED PIPE AND CONNECT TO NEAREST STORMWATER DRAINAGE SYSTEM.
TRANSITION LAYER - COARSE SAND. 100mm TYPICAL DEPTH.
IMPERVIOUS LINER TO BE PLACED ON ROADSIDE. HDPE OR EQUIVALENT.
STANDARD SERVICE ALIGNMENTS ARE SHOWN BASED ON BSD-1013 & BSD-1015
DRAINAGE LAYER - FINE AGGREGATE (TYPICALLY 2-5mm DIA) 200mm DEPTH.
1300 ELECTRICITY/COMMUNICATIONS
910 SEWERAGE
1040 WATER
400 POLES & TREES
600 GAS
A 9034 WATER SMART TREE WITHIN TURF - TYPICAL SECTION
DESIGN REVIEWED & CERTIFIED FOR ISSUE
NAME: MARK R GIBSON RPEQ: 6722
SIGNATURE: SIGNATURE ON ORIGINAL DATE: 03/04/14
NOTES
STREET TREE STANDARD NOTES:
1. SYSTEM IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE WATER BY DESIGN 'CONSTRUCTION AND ESTABLISHMENT GUIDELINES.'
2. STORMWATER KERB OPENING IS TO BE TEMPORARILY BLOCKED DURING CONSTRUCTION.
3. FILTER MEDIA, TRANSITION LAYER AND DRAINAGE LAYER IN ACCORDANCE WITH THE "GUIDLEINES FOR SOIL MEDIA IN BIO-RETENTION SYSTEMS", FACILITY FOR ADVANCING WATER BIO-FILTRATION (FAWB).
4. UNDER-DRAIN, SLOTTED RIGID PIPE UPVC/HDPE OR SIMILAR TO AS 2439.1) OR APPROVED EQUIVALENT, 0.5% MINIMUM GRADE. DIAMETER TYPICALLY 100. PIPE JOINS SHALL BE GLUED WITH PLUMBING CEMENT. PIPE SHALL NOT BE INSTALLED WITH A FILTER SOCK SURROUNDING PIPE. UNDER-DRAINAGE PIPES SHALL BE SEALED INTO PITS USING GROUTS OR OTHER APPROVED WATERTIGHT SEAL. MINIMUM 50MM DRAINAGE LAYER OVER UNDERDRAINAGE PIPE.
5. FILTER CLOTH - NON-WOVEN GEOTEXTILE. FILTER CLOTH NOT TO BE PLACED BETWEEN ANY FILTER LAYERS. IMPERVIOUS LINER MAY BE REQUIRED ADJACENT TO ROADS AND MAY ALSO BE REQUIRED ELSEWHERE SUBJECT TO SOIL TESTING REQUIREMENTS IN ACCORDANCE WITH THE 'BIORETENTION TECHNICAL DESIGN GUIDELINES' (WATER BY DESIGN).
6. VEGETATION: PLANT SPECIES AND LAYOUT TO BE DETERMINED ON A PROJECT BY PROJECT BASIS. PLANT SPECIFICATION AND DENSITY SHALL BE IN ACCORDANCE WITH "BIORETENTION TECHNICAL DESIGN GUIDELINES" (WATER BY DESIGN) AND BRISBANE CITY COUNCIL'S INFRASTRUCTURE DESIGN PLANNING SCHEME POLICY. TREE SPECIES TO BE SELECTED AS PER THE CENTRES DETAIL DESIGN MANUAL AND ALSO CONSIDERING THEIR SUITABILITY FOR WET AND DRY CONDITIONS. REFER TO NEW PLANTING STANDARD DRAWING.
7. MULCH: 75MM MULCH LAYER TO BE ORGANIC AND FRIABLE, SUCH AS SUGARCANE MULCH. MULCH TO BE SECURED WITH JUTE MESH TO MANUFACTURERS SPECIFICATIONS.
SECTION NOTES:
1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH BSD 9034. REFER TO BSD-9034 FOR PLAN VIEW DETAILS AND NOTES.
2. PROVISION FOR SAFETY OF PEDESTRIANS AND OTHER USERS SHALL BE IN ACCORDANCE WITH AUSTROADS REQUIREMENTS SUCH AS LIMITING DEPTH OF VERTICAL DROPS.
3. MAINTAIN 50-100MM RADIUS SEPARATION BETWEEN MULCH AND STEM OF TREE.
4. DROP FROM KERB BACKING STRIP TO FILTER SURFACE NOT TO EXCEED 250MM.
5. KERB ADAPTORS ARE NOT TO BE DIRECTLY PLUMBED INTO SYSTEM.
6. TREE PITS MAY BE LINKED VIA SUITABLY SIZED DRAINAGE PIPE WHERE DISTANCE TO NEAREST GULLY EXCEEDS 30M.
300
150
225
375
150
B 9034 KERB BACKING STRIP DETAILS
VERIFY LOCATION OF SERVICES PRIOR TO EXCAVATION.
B CLARIFICATION & IMPROVEMENT TO NOTES & DESIGN Nov '16 Nov '16 Dec '16
A ORIGINAL ISSUE Apr '14 Apr '14 Apr '14
ISSUE AMENDMENT DRAWN DATE CHK'D DATE APPR'D DATE
DESIGN AUTHORISED FOR PUBLICATION Inga Condric Authorised Original 14/04/2014
ASSET ENGINEERING MANAGER STRATEGIC ASSET MANAGEMENT
DESIGN APPROVED
PRINCIPAL PROGRAM OFFICER NATURAL ENVIRONMENT WATER & SUSTAINABILITY
DESIGN CPO - P&D DATE Apr '14
DRAWN CPO - P&D DATE Apr '14
CHECKED M. GIBSON DATE Apr '14
DRAWING FILENAME BSD-9035.dwg
ASSOCIATED PLANS
BRISBANE CITY
BRISBANE CITY COUNCIL STANDARD DRAWING
WSUD TREE WITHIN TURF - SECTION
SCALE NOT TO SCALE
DWG No. BSD-9035
ORIGINAL SIZE A3
REVISION B

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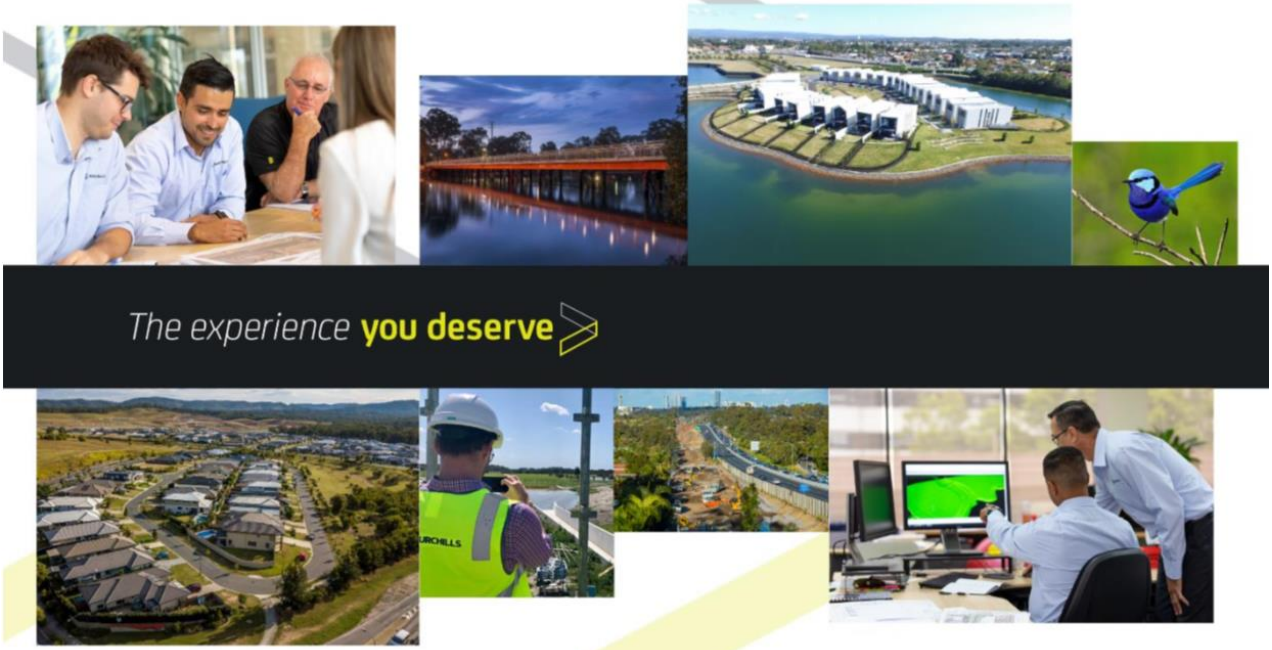
ENGINEERING SOLUTIONS



Rosewood Laidley Road, Laidley
Service Station and Light Industry Development
Lot 1 on SP104184

Traffic Impact Assessment
Including SARA Information Request Response

Client: RU & AR Patel
Project No: BE210316
Document No: BE210316-RP-TIA-04

May 2022

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Document Control Record

Prepared by:	Aga Szewczak	Approved by:	Dale Kleimeyer
Position:	Senior Traffic Engineer	Position:	Principal Traffic Engineer RPEQ 6876
Signed:		Signed:	
Date:	5th May 2022	Date:	5th May 2022

Version No.	Description	Date	Approved By
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03	Draft IR Issue	10th February 2022	Dale Kleimeyer
04	Final Issue	5th May 2022	Dale Kleimeyer

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347

Email: admin@burchills.com.au

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Executive Summary

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the Service Station including the Fast-Food drive-through facility and Industry Development. This report has been updated to include Information Request response to the Queensland State Government Assessment and Referral Agency (SARA).

Service Station including Fast-Food drive-through

Service Station access to the wider road network is proposed via two access driveways off Rosewood Laidley Road. Access driveways have been designed to accommodate 20.0m AV accessing the site. The proposed service station dual access arrangement allows cars to arrive, utilise a service station and exit the site in a forward gear. The visibility at access driveway meets AS2890.1 standards for the 80km/h frontage road speed limit for cars and commercial vehicles. Due to the low traffic volumes along Rosewood Laidley Road, turn lanes are not warranted at the north western access driveway. The south eastern access driveway has been formalised into a 4-way priority intersection with Crown Street and includes CHR(s) lanes and BAL into the proposed development site.

The 15 car spaces provided for the service station are also 1 car parking spaces above the minimum Lockyer Valley Regional Shire Council requirement. In addition, 10 queueing spaces have been provided for a drive-through facility ensuring that parking demand can be maintained entirely within the site.

Industry Development

Access to the wider road network from the proposed industry development subdivision, will be provided via a new public road and new intersection as follows:

- the priority intersection with Rosewood Laidley Road to the north.

All trips in and out from the industrial development will travel north along new road towards a new priority intersection Rosewood Laidley Road. Due to the development trips turning in and out of the new road from Rosewood Laidley Road, a BAR treatment with passing lane for a rural intersection is recommended at the New Road / Rosewood Laidley Road priority intersection as per TMR standard detail.

The proposed intersection is designed to cater for a 20.0m Articulated Vehicles (AV) movements. The intersection design achieves a key objective of minimizing the interference between vehicles manoeuvring into and out of the new road and vehicles travelling through Rosewood Laidley Road. A 20.0m AV doesn't not cross the centre-line of Rosewood Laidley Road to the extent that there is any interaction with the opposing direction of travel. The above ensures minimal delay to through traffic along Rosewood Laidley Road, and that safety and efficiency of the state-controlled road are maintained post development. The visibility at the new road / Rosewood Laidley Road priority

intersection meets Austroads SISD requirements for the 80km/h design speed for eastbound traffic and 100km/h design speed for westbound traffic.

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Table of Contents

1. Introduction 1
1.1 Background 1
1.1 SARA Information Request 1
1.2 Scope of this Report 2
2. Existing Conditions 3
2.1 Subject Site 3
2.2 Local Road Network 4
2.2.1 Rosewood Laidley Road 4
2.2.2 Milne Street 5
2.3 Traffic Surveys 5
2.3.1 Existing Traffic Data 6
2.3.2 Road Safety Review 7
3. Proposed Development 9
3.1 Development Access 10
3.1.1 Industry Development 10
3.1.2 Service Station 12
3.2 Internal Roads 14
3.3 Car Parking Requirements 16
3.3.1 Car Parking Spaces Supplied 16
3.3.2 Design of Car Parking Areas 17
3.4 Service Vehicles 17
3.5 Pedestrian Safety 18
4. Trip Generation 19
4.1 Pre-Development Traffic 19
4.2 Crown Street Catchment Development Traffic 19
4.2.1 Background Traffic Growth Rates 20
4.2.2 Future Year Traffic Volumes 20
4.3 Development Traffic 21
4.3.1 Trip Generation 21
4.3.2 Drop-in and Shared Trips 22
4.4 Post-Development Traffic 26
5. Operational Assessment 27
5.1 Turning Treatment Assessment 27

5.1.1 New Road / Rosewood Laidley Road Priority Intersection 29
5.1.2 Northwestern Site Access Driveway / Rosewood Laidley Road 30
5.1.3 Southeastern Site Access Driveway / Rosewood Laidley Road 31
6. Conclusions 34
7. References 35

Tables

Table 1.1 Response to SARA Information Requested Summary 1
Table 2.1 Historical AADT Flows along Rosewood Laidley Road 6
Table 3.1 Laidley Shire Council Planning Scheme Car Parking Requirements 16
Table 3.2 Proposed Development Car Parking Provisions 16
Table 4.1 Crown Street Catchment Trip Rates and In/Out Distribution Split 20
Table 4.2 Traffic Growth Factors 20
Table 4.3 Proposed Development Trip Rates and In/Out Distribution Split 22
Table 4.4 Proposed Development Trip Rates and In/Out Distribution Split 22
Table 4.5 Development New, Pass-by and Linked Trips 23
Table 5.1 Turn Lane Descriptions 27
Table 5.2 Assessment of Turn Warrants for Rosewood Laidley Road / New Internal Road Intersection 29
Table 5.3 The Rosewood Laidley Road / North Western Site Access Driveway Turn Warrant Assessment 30
Table 5.4 The Rosewood Laidley Road / South Eastern Site Access Driveway Turn Warrant Assessment 31
Table 5.5 Assessment of Turn Warrants for the Crown St / Rosewood Laidley Road Intersection 32

Figures

Figure 2.1 Subject Site Location 3
Figure 2.2 Subject Site Zoning 4
Figure 2.3 Rosewood Laidley Road adjacent to Subject Site (Facing South) 4
Figure 2.4 Milne Street adjacent to Subject Site 5
Figure 2.5 2010-2020 Historical AADT along Rosewood Laidley Road 6
Figure 2.6 % of AADT during Peak Hours along Rosewood Laidley Road 7
Figure 2.7 2019 Rosewood Laidley Road Peak Hour Traffic 7
Figure 2.8 5-Year Crash Data 8
Figure 3.1 Proposed Development 9
Figure 3.2 Sight Distance to a Through Vehicle from a Vehicle Turning Left 10
Figure 3.3 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - West 11
Figure 3.4 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - East 11

Figure 3.5 New Road (1) / Rosewood Laidley Road Intersection Sight Line Elevation Assessment 12
Figure 3.6 New Road / Rosewood Laidley Road Intersection AV Swept Paths 12
Figure 3.7 New Access / Rosewood Laidley Rd Intersection Sight Distance 13
Figure 3.8 Service Station Access Driveway Assessment 14
Figure 3.9 New Road / Industry Development Internal Road AV Swept Path 15
Figure 3.10 Internal Road AV Swept Path 15
Figure 3.11 Internal Service Station Aisles B99 Car Swept Path 17
Figure 3.12 Service Station Service Vehicles Refuse, HRV and AV Tanker 18
Figure 3.13 Service Station Footpath Connections 18
Figure 4.1 Existing Crown Street Catchment 19
Figure 4.2 2022 Background Traffic Flows 21
Figure 4.3 2032 Background Traffic Flows 21
Figure 4.4 Trips Segmentations 23
Figure 4.5 Proposed Service Station and Fast-Food New Trips 24
Figure 4.6 Proposed Service Station and Fast-Food Drop-in Trips 24
Figure 4.7 Proposed Service Station and Fast-Food Total Trips 25
Figure 4.8 Proposed Industry Development Traffic Flows 25
Figure 4.9 2022 with Proposed Development Traffic Flows 26
Figure 4.10 2032 with Proposed Development Traffic Flows 26
Figure 5.1 Warrants for Turn Treatments for Roads with a Design Speed < 70 kph 27
Figure 5.2 Warrants for Turn Treatments for Roads with a Design Speed 70 kph <Design Speed <100km/h 28
Figure 5.3 Calculation of the Major Road Traffic Volume Parameter 'Q_m' 28
Figure 5.4 Basic Right (BAR) Turn Treatment on a Two-lane Rural Road (Source: DTMR) 30
Figure 5.5 CHR(s) Turn Treatment on a Two-lane Rural Road (Source: DTMR) 33

Appendices

Appendix A – Proposed Development Layout
Appendix B – SARA and Lockyer Valley IR Letter
Appendix C – Traffic Survey Data
Appendix D – Swept Path Analysis and Crown St Intersection

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1. Introduction

1.1 Background

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the proposed service station and light industry development as follows:

- Service Station;
  - Shop GFA - 560m²
  - Drive-through food and drink facility GFA - 560m²
  - Car Wash
- 14 Light Industry Lots - Total GFA 17,532 m² assuming GFA as 60% of lot are;
- 15 car parking spaces; and
- 10 queueing spaces for a drive-through facility.

The proposed development layout plan is attached as Appendix A to this report.

The primary objective of this Traffic Impact Assessment report is to assess traffic impacts associated with the changes to the development layout compared with the existing site use.

1.1 SARA Information Request

This report refers to the Information Request received from the State Assessment and Referral Agency (SARA) attached as Appendix B. The items relating to transport in the Information Request are listed in the below Table 1.1 and the report response reference is shown opposite as follows:

Table 1.1 Response to SARA Information Requested Summary

Item	Information Requested	Report Response Reference
1.	The application hasn't demonstrated that the two proposed accesses to the service station from Rosewood Laidley Road are safe and meet the requirements of Performance Outcome (PO) 16 and PO20 of the State Development Assessment Provisions (SDAP) version 2.6, State code 1: Development in a state-controlled road environment (state code 1) and PO1 of SDAP, State code 6: Protection of state transport networks (state code 6). The meeting of 19 January 2022 discussed: • The proposed two accesses to the service station off Rosewood Laidley Road and their safety in relation to the intersections at New Road and Crown Street • The option of limiting the north-western access off Rosewood Laidley Road to a left in left out only because of concerns with its proximity to the intersection with the New Road immediately to the west • Further analysis being undertaken to demonstrate the safety of the proposed south-eastern access to the service station off Rosewood Laidley Road because of its proximity to the intersection with Crown Street.	The north-western Service Centre driveway access off Rosewood Laidley Road is limited to a left-in / left-out only. Refer to Appendix D for functional layout plan and swept path analysis. Due to the proximity of the proposed access driveway to the existing intersection with Crown Street opposite, the site access strategy for the service station includes upgrading the existing Crown Street intersection to a 4-way intersection including CHR(s) lanes ensuring Rosewood Laidley Road safety. Refer Appendix D Drawing BE210316- SK108.

	Action: • It is recommended that an amended TIA be prepared and submitted which assesses the traffic impacts on the state-controlled road network as a result of the proposal and identifies mitigation measures and works required to achieve compliance with PO16 and PO20 of state code 1 and PO1 of State code 6, that: - Must include a turn warrant assessment for both accesses to the service station on Rosewood Laidley Road and the intersection with New Road including proposed design solutions where applicable such as those discussed in the meeting of 19 January 2022 - Demonstrate that the proposed Service Station and reconfiguration does not result in a worsening of the safety and operating conditions on Rosewood-Laidley Road - Include details of the mitigation measures proposed to address any traffic impacts on the state-controlled road network by the proposed development. Any mitigation measures must be prepared in accordance with the DTMR Road Planning and Design Manual (RPDM) - Be prepared in accordance with the Department of Transport and Main Roads' (DTMR) Guide to Traffic Impact Assessment 2018 (GTIA) - Be certified by a Registered Professional Engineer Queensland (RPEQ). • Appendix A of the GTIA includes a set of standard input parameters for use in traffic impact assessments that will be acceptable to DTMR in the majority of situations. • The DTMR's GTIA can be accessed and downloaded from www.tmr.qld.gov.au.	Turn Warrant Assessment has been undertaken for the proposed Service Station access driveways. In summary, the south eastern access warrants CHR(s) and BAL treatments. Safety of Rosewood-Laidley Road is maintained by the provision of CHR(s) lanes improving safety of the existing Crown Street intersection. The proposed Crown Street intersection upgrade has been prepared in line with DTMR standards. TIA has been prepared in line with the Department of Transport and Main Roads' (DTMR) Guide to Traffic Impact Assessment 2018 (GTIA) This report is certified by Dale Kleimeyer Principal Traffic Engineer RPEQ 6876

1.2 Scope of this Report

This report investigates the likely effect of proposed changes to the development site land use, including pedestrian connectivity and safety, vehicle access, car and bicycle parking provisions and service vehicles. Comparison of trip generation has been made in order to forecast the increase in traffic associated with the new Hotel and bottle shop development proposal.

The structure of this report is summarised below:

Section 2 Outlines existing traffic conditions in the vicinity of the site;
Section 3 Outlines the relevant characteristics of the proposed change to development including access and parking arrangements;
Section 4 Estimate the additional traffic generated by the proposed development compared to the existing situation;
Undertake a qualitative assessment of the traffic impact of the development traffic on the surrounding road network relative to the existing development scheme;
Section 5 Operational Assessment
Section 6 Conclusions; and
Section 7 References.

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2. Existing Conditions

2.1 Subject Site

The subject site is located at Lot 1 on SP104184 Rosewood Laidley Road in Laidley.

As shown in Figure 2.1 below, the subject site is bordered to the north by Rosewood Laidley Road, to the south by Milne Street to the east by vacant land and to the west by Road Reserve.

Figure 2.1 Subject Site Location

Laidley is a rural town in the Lockyer Valley Region Local Authority with approximately 3,808 population (Census 2016). Brisbane is some 82 km to the northeast.

The proposed development site is located within Industrial Zone as shown in Figure 2.2 below.

In line with Laidley Shire Council Planning Scheme – Division 2 – Planning Scheme Structural Elements, if the road or watercourse is adjoined on both sides by land in the same Area - the road or watercourse has the same Area classification as the adjoining land. Based on the above, the proposed road between Rosewood – Laidley Road and Milne Street up to the site entrance has been designed as Industrial Access Street with 20m road reserve and 7.5m road width.

Figure 2.2 Subject Site Zoning

2.2 Local Road Network

2.2.1 Rosewood Laidley Road

Rosewood Laidley Road is a two-way, two-lane State-controlled roadway. In the vicinity of the subject site, it has a road reserve of approximately 33m. The road benefits from a 6.0m pavement and 13.0m wide northern verge and 14.0m wide southern verge.

The posted speed limit along Rosewood Laidley Road in the vicinity of the subject site is 80 km/h. A 60km/h speed limit starts from the proposed new road boundary towards the village.

The following Figure 2.3 shows the cross-sectional elevation of Rosewood Laidley Road facing a south direction in the vicinity of the development site.

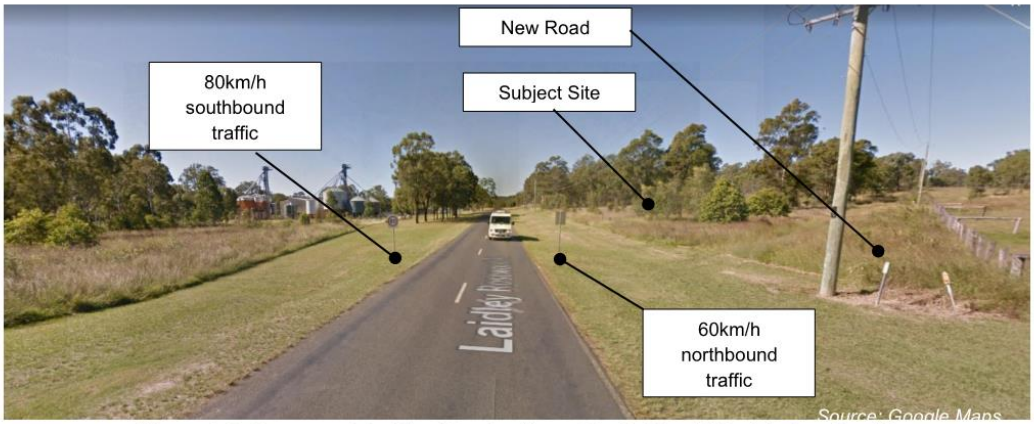


Figure 2.3 Rosewood Laidley Road adjacent to Subject Site (Facing South)

The traffic impact of the proposed development onto the local road network has been based on traffic volumes along Rosewood Laidley Road provided by TMR (2011-2020 AATDs traffic Census data). The 2020 Annual Average Daily Traffic (AADT) along Rosewood Laidley Road was recorded as 1,876 vehicles.

2.2.2 Milne Street

Milne Street is a two-way, two-lane local controlled road, benefiting from 17m Road Reserve and 6.0m road pavement. The existing road northern verge adjacent to the proposed development land, is between 0.5m to 1.5m. As part of the pre-lodgement meeting, the Council requested a land dedication along the southern property boundary to match the existing road reserve width (Milne Street) immediately to the west (i.e. to match the property boundary for Lot 186 L1731

QLD roads are subject to a default speed of 50km/hr (for built-up residential areas), and 100km/hr (roads in rural areas). The above speed limits are usually not signposted, and still require drivers to adjust their speeds depending on the conditions when and where necessary. Milne Street north of the priority intersection with Old Mulgowie Road is subject to a 50km/h posted speed limit. In the vicinity of the proposed development, Milne Street is subject to a default road speed in a rural area (100km/h).

To the east Milne Street connects with Rosewood Laidley Road via an existing priority intersection.

Milne Street is flat and benefits from straight alignment with good forward visibility. Figure 2.4 shows the cross-sectional of Milne Street facing an east direction at the approach to the Moonlight Parade priority intersection.

Figure 2.4 Milne Street adjacent to Subject Site

2.3 Traffic Surveys

The traffic impact of the proposed development will be assessed within the development's 'area of influence'. The implications of the proposed development on the operation of the Rosewood Laidley Road Service Station access driveways and the Rosewood Laidley Road were considered as part of the Traffic Impact Assessment.

2.3.1 Existing Traffic Data

The proposed development site is located adjacent to Rosewood Laidley Road.

Rosewood Laidley Road Annual Average Daily Traffic (AADT) data was provided by TMR (2010-2020 AATDs traffic Census data). Table 2.1 and Figure 2.5 below shows a summary of the recorded Annual Average Daily Traffic (AADT) in the vicinity of the proposed development site.

Table 2.1 Historical AADT Flows along Rosewood Laidley Road

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AADT	1,512	1,631	1,411	2,069	2,004	1,969	1,920	1,801	2,054	2,005	1,876

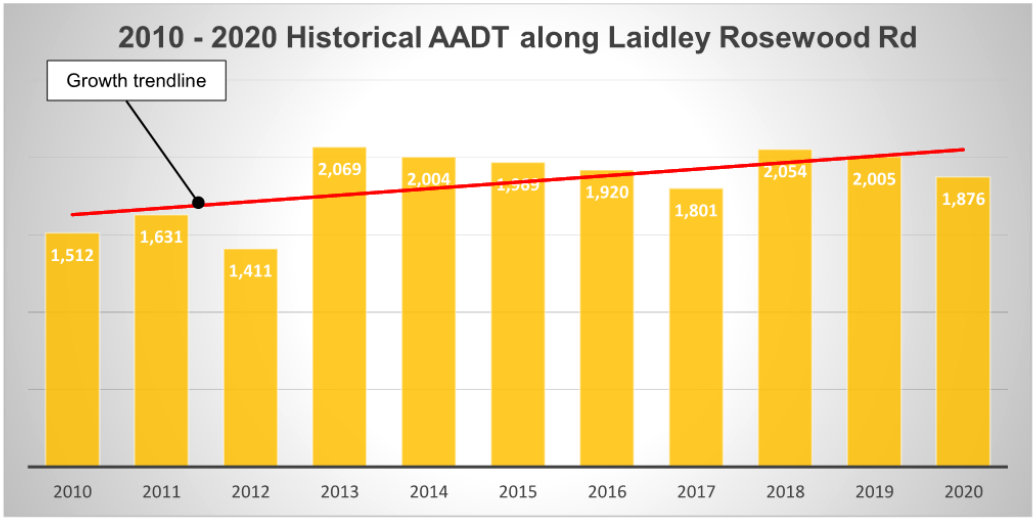


Figure 2.5 2010-2020 Historical AADT along Rosewood Laidley Road

As shown in Figure 2.5, the traffic along Rosewood Laidley Road in the last 10 years grew at an inconsistent level, with negative growth in the last 5 years. For robust assessment, 2020 AADT data were excluded from the assessment, and a higher 10-year growth rate was adopted for a Turn Warrant Assessment.

2.74% per annum traffic growth rate has been adopted, which represents 10-year growth per annum between 2009 and 2019. The above growth rate has been adopted to forecast 2019 historical traffic data to 2022 and 2032 base year.

Figure 2.6 below shows the % of AADT during peak hours. In summary, AM peak accounted for 8.15% of AADTs during weekdays and PM peak accounted for 10.25% during weekdays.

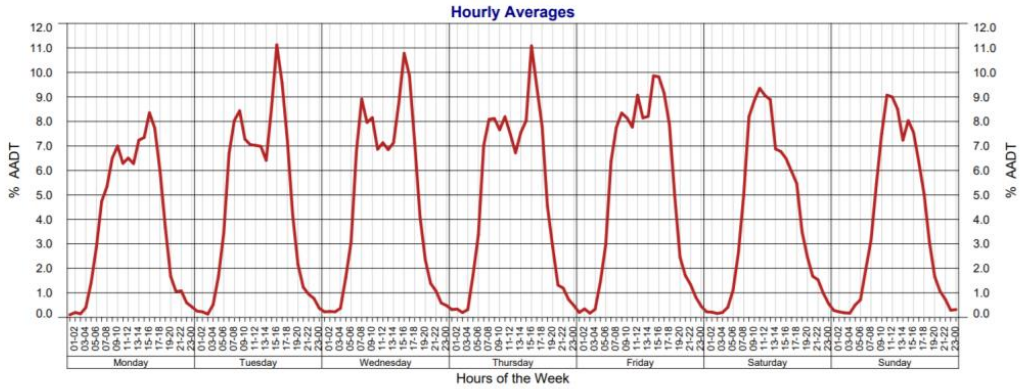


Figure 2.6 % of AADT during Peak Hours along Rosewood Laidley Road

Figure 2.7 below shows the calculated peak hour volumes along Rosewood Laidley Road based on the 50/50 northbound / southbound distribution split.

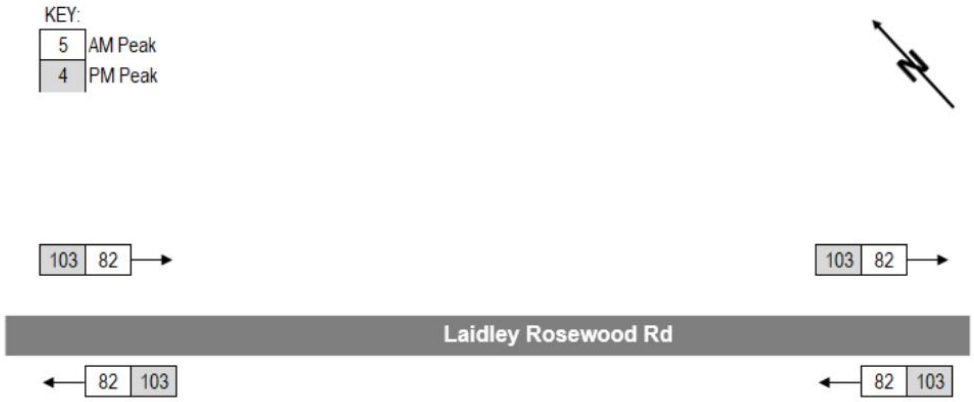


Figure 2.7 2019 Rosewood Laidley Road Peak Hour Traffic

2.3.2 Road Safety Review

The latest 5-year crash data review identified that there were no accidents recorded in the vicinity of the subject site.

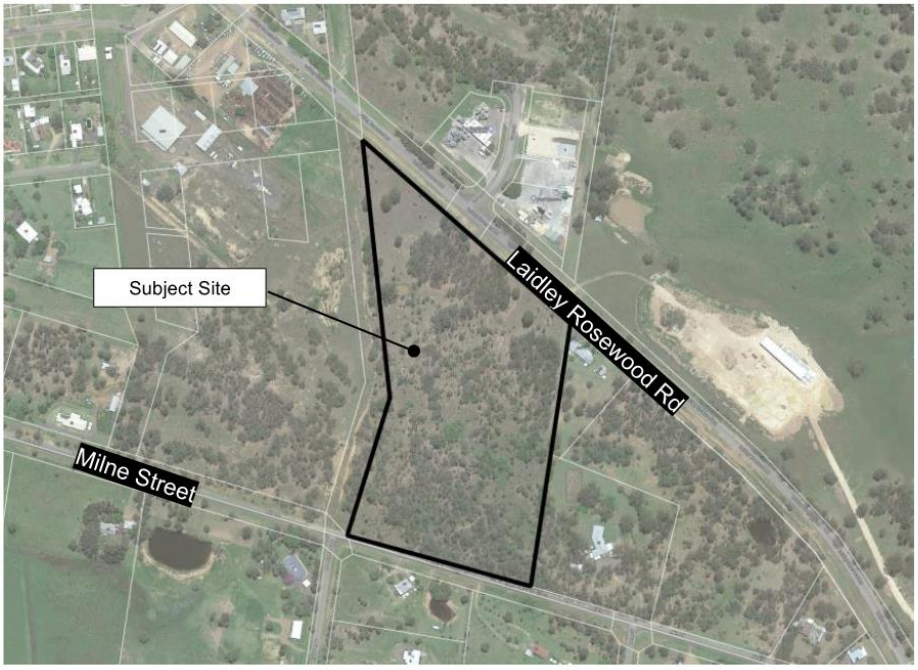


Figure 2.8 5-Year Crash Data

The experience you deserve

3. Proposed Development

The proposal includes 14 industrial lots and a service station with a car wash and a fast-food drive-through facility as shown in Figure 3.1 below.

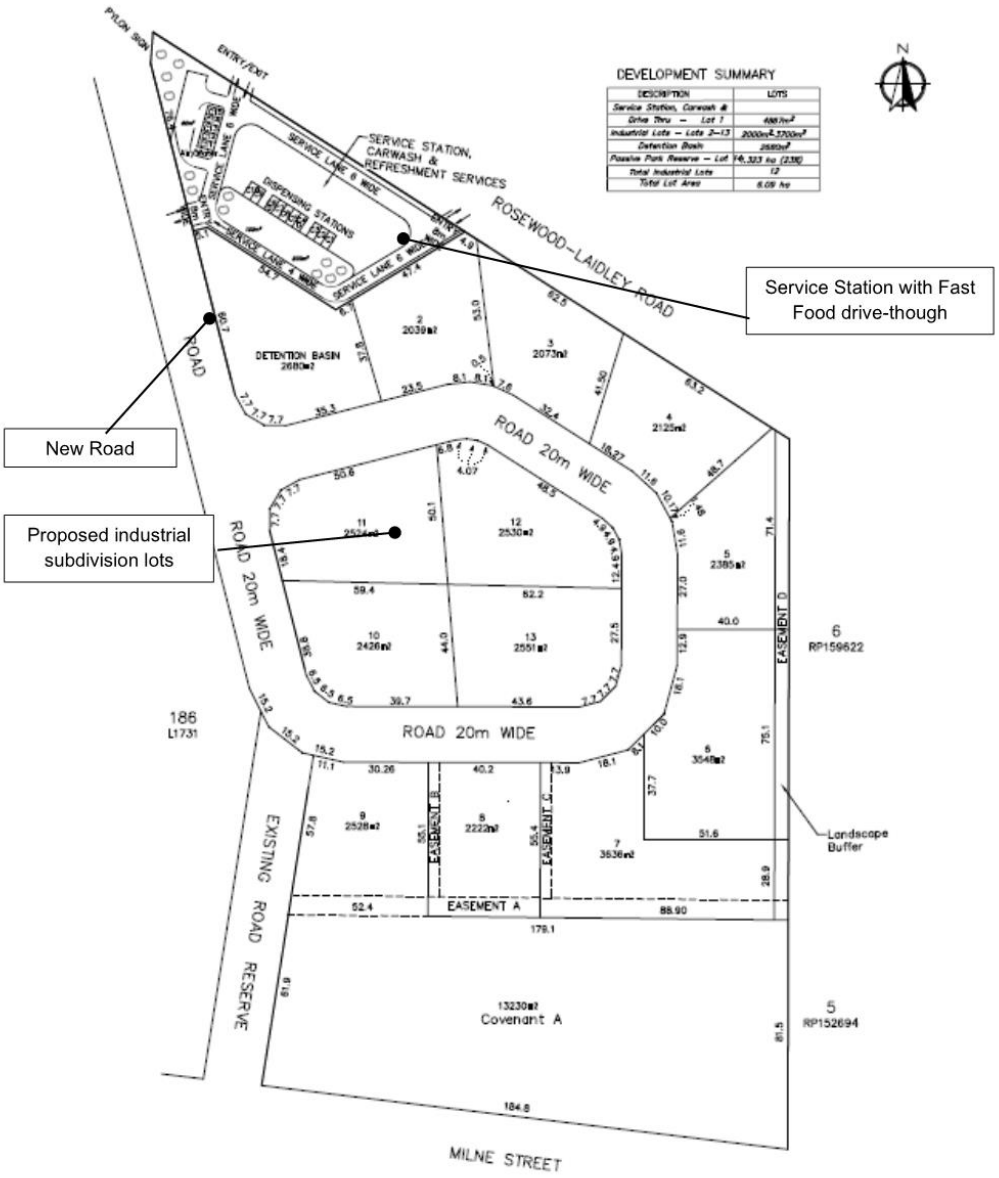


Figure 3.1 Proposed Development

The experience you deserve

Majority of the proposed industry lots have been designed with a minimum frontage of 40m.

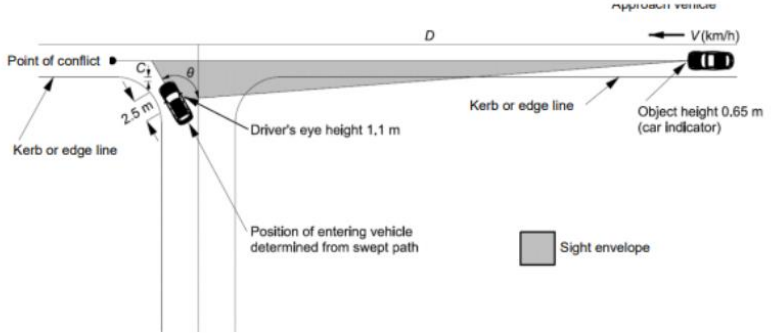
3.1 Development Access

3.1.1 Industry Development

The proposed light industry development vehicular access arrangements to the wider road network are via a new road intersection with Rosewood Laidley Road to the north.

Visibility Assessment at new intersections has been undertaken to ensure that the proposed intersections are safe and there is no obstruction to visibility. The proposed new intersection with Rosewood Laidley Road is located 160 metres north from the Rosewood Laidley Road / Crown Street intersection.

The proposed intersections are designed in line with Austroads requirements. Figure 3.2 shows requirements for a sight distance to a through vehicle from a vehicle turning left extract from Austroads *"Guide to Road Design Part 4A: Unsignalised and Signalised Intersections".*



Notes:
Sight envelope:
- *Assess sight distance both horizontally and vertically within this envelope.*
- *For rural areas – there should be no obstructions to sight lines in this area.*
- *For urban areas – fixed objects should not cause entering vehicles to lose sight of approaching vehicles.*

θ observation angle for new or reconstructed work maximum 120°.
C 0.5 m from kerb or edgeline projection or
1.0 m from stop or give way line.
D minimum distance travelled by approaching vehicle in 5 seconds at design speed (V km/h).
Minimum distance travelled by approaching vehicle in 5 seconds based on ta for left-turn from Table 3.5.

Source: Department of Main Roads (2006)[12].

Figure 3.2 Sight Distance to a Through Vehicle from a Vehicle Turning Left

The proposed new road intersection with Rosewood Laidley Road has a 120-degree observation angle in line with Figure 3.2 above.

Safe Intersection Sight Distance (SISD) requirements at the New Road / Rosewood Laidley Road Intersection are summarised below:

- SISD to the left for trucks – 178m for 70km/h Design Speed; and
- SISD to the right for trucks – 258m for 90km/h Design Speed.

Figure 3.3 and Figure 3.4 show that required SISD at the New Road / Rosewood Laidley Road Intersection are achieved in line with Austroads requirements.

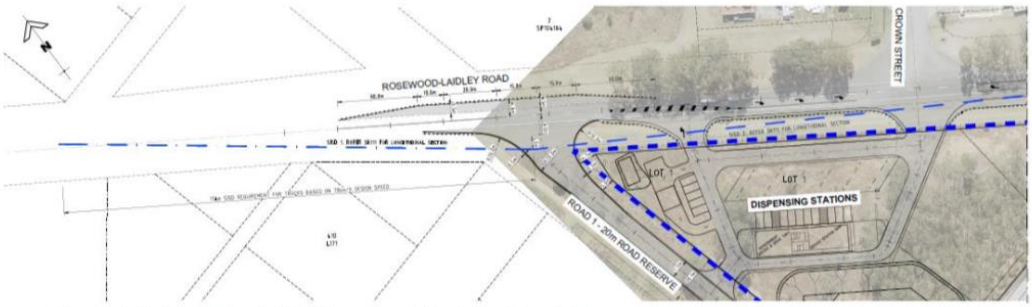


Figure 3.3 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - West

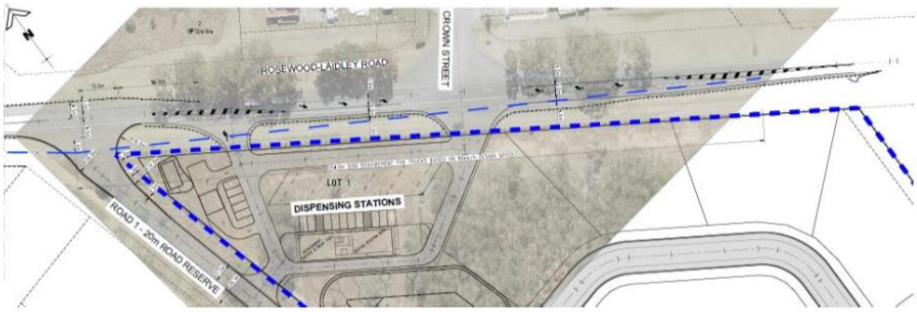


Figure 3.4 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - East

The new road intersection with Rosewood Laidley Road benefits from the passing lane. The proposed intersection is in line with Turn Warrant Assessment findings (Refer Section 5).

Figure 3.5 below shows the elevation of the sight lines at the intersection with Rosewood Laidley Road. Also refer Appendix D -Swept Paths

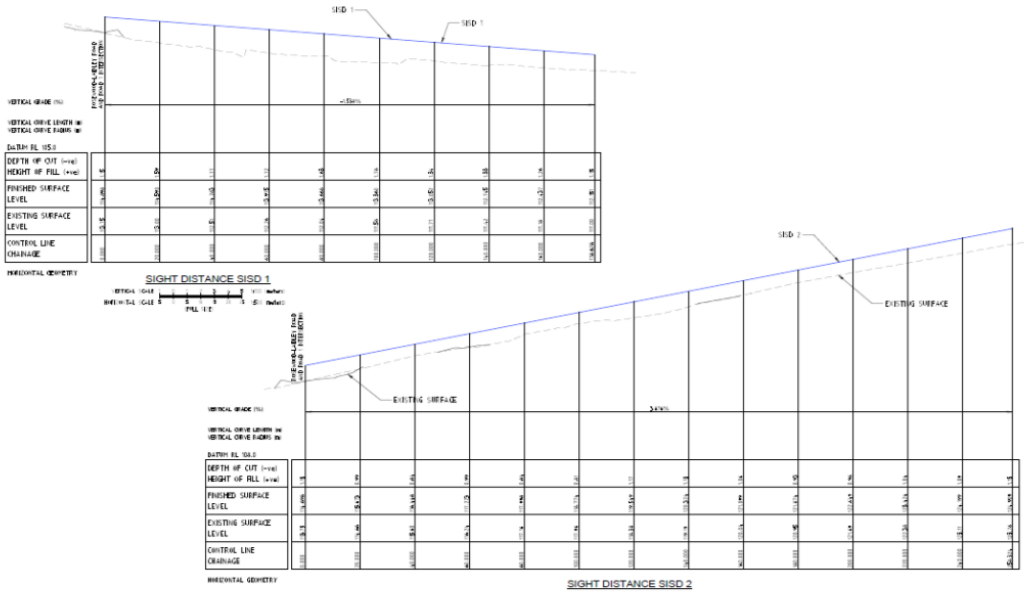


Figure 3.5 New Road (1) / Rosewood Laidley Road Intersection Sight Line Elevation Assessment

Figure 3.6 below shows a 20.0m AV swept path analysis at the proposed intersection with Rosewood Laidley Road.

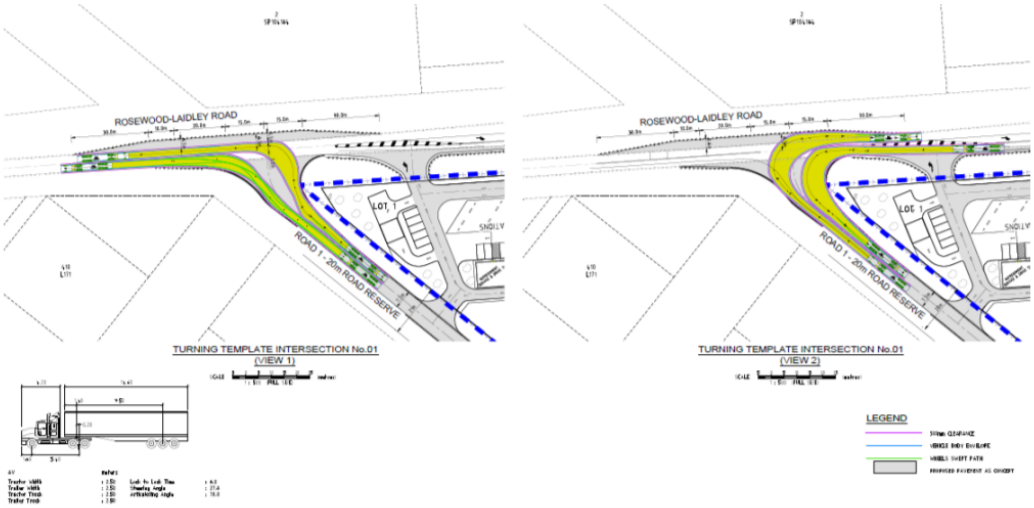
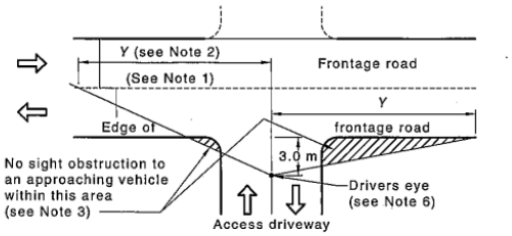


Figure 3.6 New Road / Rosewood Laidley Road Intersection AV Swept Paths

3.1.2 Service Station

The proposed site access strategy for service station includes left-in/left-out only access driveway at the north western end and the upgraded Crown Street priority intersection to include forth arm at the

south eastern end. The north western access meets Australian Standards AS2890.1-2004 and AS2890.2:2018 visibility requirements. 97m visibility splays are achievable for the 80km/h frontage speed limit for cars and 111m visibility are achievable for the 80km/h frontage speed limit for trucks based on 5 second gap. Figure 3.7 below shows the visibility requirement at access driveway for commercial vehicles (Source:AS2890.2:2018).



Frontage road speed (see Note 4) km/h	Distance (Y) along frontage road (see Note 5) m	
	5 s gap	8 s gap
40	55	89
50	69	111
60	83	133
70	97	156
80	111	178
90	125	200
100	139	222
110	153	244

Figure 3.7 New Access / Rosewood Laidley Rd Intersection Sight Distance

Rosewood Laidley Road at the approach to the proposed access driveway is flat and benefits from good forward visibility as shown in Figure 3.8.

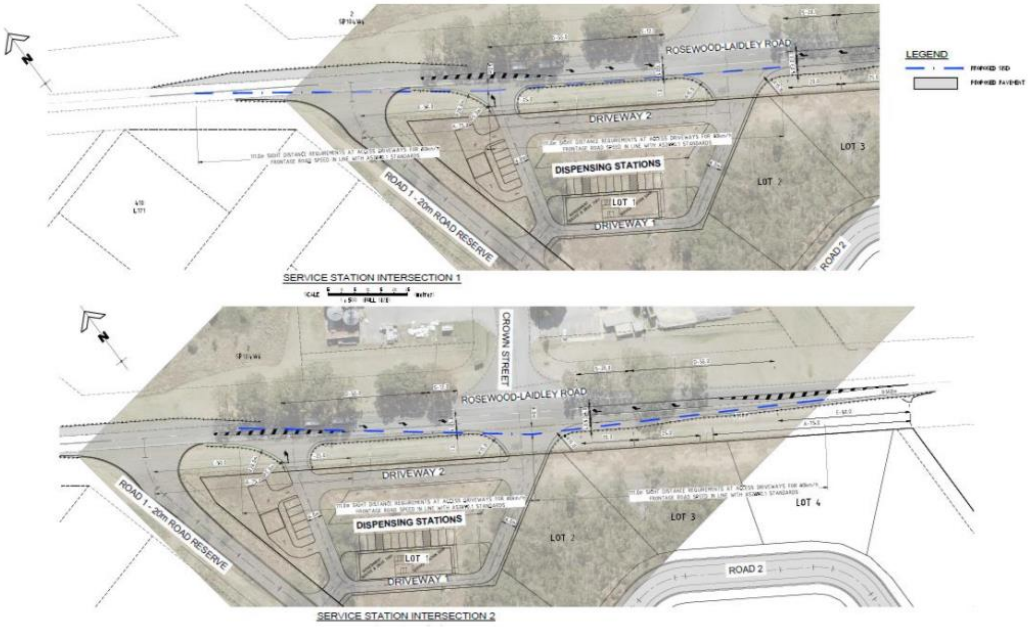


Figure 3.8 Service Station Access Driveway Assessment

The proposed upgraded to the existing Crown Street / Rosewood Laidley Road priority intersection is also shown in Figure 3.10 above. The proposed upgrades to Crown Street / Rosewood Laidley Road intersection benefits from the CHR(s) and BAL treatments. The proposed intersection is in line with Turn Warrant Assessment findings (Refer Section 5). The drawing is included in Appendix D Drawing BE210316 - SK107. All swept path drawings, sight line drawings, intersection setout dimensions are contained in Appendix D.

3.2 Internal Roads

The proposed internal road within the proposed industry subdivision benefits from 12.0m pavement width and 4.0m verge on both sides of the road in line with Industrial Access Street standards requirement as specified in the Laidley Shire Council Planning Scheme. Figure 3.9, and Figure 3.10 show the internal roads swept path analysis.

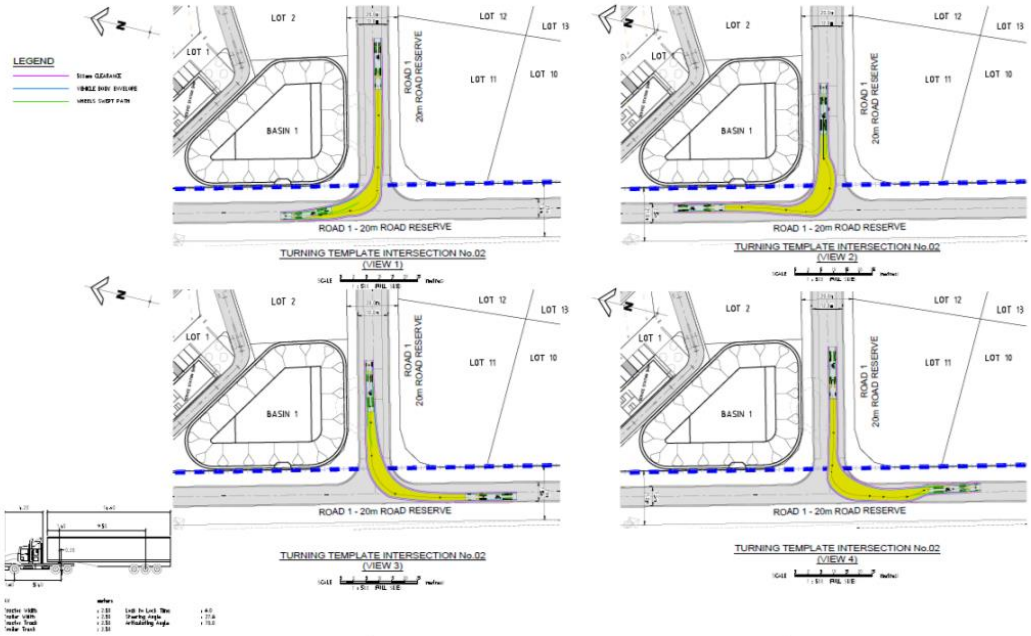


Figure 3.9 New Road / Industry Development Internal Road AV Swept Path

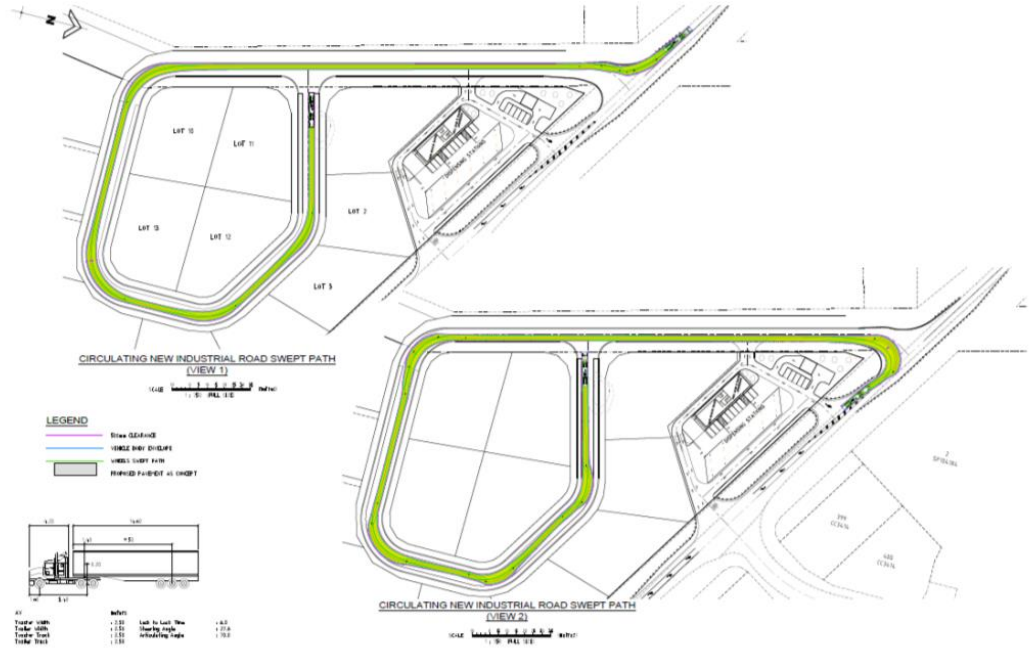


Figure 3.10 Internal Road AV Swept Path

Refer Appendix D for all swept path Drawings.

3.3 Car Parking Requirements

Car parking rates are determined by the Laidley Shire Council Planning Scheme requirement in Table 9 – General Parking Requirements

Table 3.1 Laidley Shire Council Planning Scheme Car Parking Requirements

Land Use	Car Parking Rates	Car Parking Requirements
Service Station **Shop (200m²)**	*5 spaces for the first lubricating bay and 4 spaces for each additional bay. (doesn't apply)* 1 space for every 15m² of gross floor area (adopted car parking rate)	14
Refreshment Service Incl. Fast food shops (150m²)	1 space for every 15m² of gross floor area	10
Industry (all classes) (17,532m²)	1 space for every employee and 1 space for every 100m² of gross floor area, or if no building on site, 1 space for each 200m² of site area used for the industry.	To be identified as part of detailed design

As shown in Table 3.1 above, based on the Laidley Shire Council Planning Scheme car parking requirements, the proposed service station development is required to provide a minimum 24 car parking spaces for visitors including queuing space for 10 cars for a drive-in fast-food facility. Car wash is considered to be an auxiliary use of a service station.

Car parking for individual lot for industry will be determined as part at the later date once the tenancies are known.

3.3.1 Car Parking Spaces Supplied

The proposed development benefits from the provision of 15 car parking spaces for visitors of a service station and car wash and 10 queueing spaces for the proposed drive-in fast-food facility. Table 3.2 shows a summary of the proposed number of car spaces.

Table 3.2 Proposed Development Car Parking Provisions

Lot	Land Use	Car Parking Provisions	Difference
1	**Service Station (200m²)**	15 car parking spaces	+1 car parking spaces (Compliant with parking requirements)
	Refreshment Service Incl. Fast food shops (150m²)	10 vehicle queuing area for fast food drive through	0 (Compliant with parking requirements)

The above car parking provisions are 1 car parking spaces above the minimum Laidley Shire Council Planning Scheme requirement.

Car wash benefits from the queuing are in front of washing bays ensuring car parking demand is meet.

3.3.2 Design of Car Parking Areas

The proposed car parking area is designed in line with Australian Standards AS/NZ2890.1. The following minimum dimensions were adopted:

- Visitor Car Parking (User Class 3*) - 2.6m x 5.4m parking bays and min 6.6m wide aisles

**User Class 3 is suitable for short term, high turnover parking at shopping centres*

The following Figure 3.11 shows the car circulation within the Service Station.

Figure 3.11 Internal Service Station Aisles B99 Car Swept Path

The diagram shows the B99 can successfully maneuver throughout the service station.

3.4 Service Vehicles

Industry Development

The proposed internal roads have been designed to cater for the AV access. Refer to Appendix C for swept path drawings.

Service Station

The proposed service station development will be serviced by a 20.0m Articulated Vehicle (AV), Heavy Rigid Vehicle (HRV) and Refuse Vehicle. Refer the following Figure 3.122.

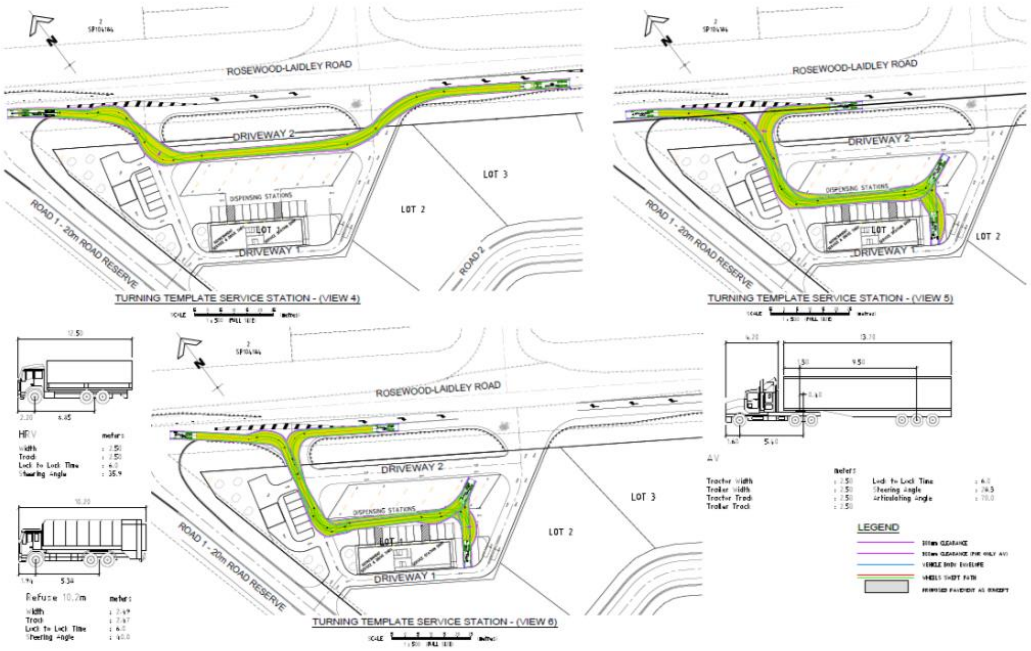


Figure 3.122 Service Station Service Vehicles Refuse, HRV and AV Tanker.

Swept Path analysis for the service vehicles is contained in Appendix D.

3.5 Pedestrian Safety

Figure 3.13 shows to the proposed two pedestrian crossings and footpaths within the site, linking car parking areas ensuring pedestrian safety is achieved within the site. The disabled ramp access from PWD carparks onto concrete paths has been provided as shown in Figure 3.13.

Figure 3.13 Service Station Footpath Connections

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4. Trip Generation

In order to assess the relative impact of the proposal on the surrounding road network, it is necessary to define the existing traffic demands on the road network and estimate future traffic demands on key intersections.

The existing traffic demands as defined in traffic surveys are forecast to the future assessment years. These volumes represent the "Pre-Development" scenario.

The traffic generated by the proposed development is estimated, along with its distribution across the surrounding road network. These volumes are added to the "Pre-Development" scenario to provide the "Post Development" traffic scenario.

4.1 Pre-Development Traffic

4.2 Crown Street Catchment Development Traffic

Before considering the implications of the proposed development it is considered appropriate to summarise the Crown Street Catchment traffic flows. Crown Street currently serves various industry allotments within the following lots:

- Lot 397 – Area 8,656.9m²
- Lot 400 – Area 2,141.2m²
- Lot 174 – Area 2,163.2m²

The existing industry developments accessible via Crown Street are shown on Figure 4.1 below and discussed separately below.

Figure 4.1 Existing Crown Street Catchment

In total there are 6 Industry Lots including one unoccupied, with a total area of 12,961m². Assuming GFA as 50% of a lot area, the above equals to 6,481m² of GFA, which has been used to calculate Crown Street Catchment trip generation.

Industry trip rates are based on the TMR published traffic generation surveys of existing developments similar to the proposed land use as follows:

- Industrial Estate
  - Average AM peak period trip rate adopted as 0.575 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 0.809 veh/hr/100 m² gross floor area.

The existing Crown Street Industry Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Table 4.1 below.

Table 4.1 Crown Street Catchment Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Industrial Estate	6,481	0.0058	50%	50%	0.0081	50%	50%
Trip Generation		**38**	19	19	**52**	26	26

As shown in Table 4.1 above, the existing Crown Street catchment is forecast to generate 38 two-way trips in the AM Peak and 52 two-way trips in the PM Peak.

4.2.1 Background Traffic Growth Rates

2.72% per annum traffic growth rate has been adopted to forecast 2019 traffic peak hour flows (Refer Figure 2.7) to 2022 and 2032 base years.

Table 4.2 below summarises growth rates used in the traffic impact assessment based on the 2.72% p.a. compound growth.

Table 4.2 Traffic Growth Factors

	2019 to 2022	2022 to 2032
Rosewood Laidley Road	1.084	1.310

4.2.2 Future Year Traffic Volumes

Growth factors summarised in Table 4.2 have been applied to the 2019 Traffic Volumes (Figure 2.7) to identify the future traffic flows in 2022 and 2032. The resultant future traffic for the years 2022 and 2032 AM and PM peak hours is shown in Figure 4.2 and Figure 4.3 respectively.

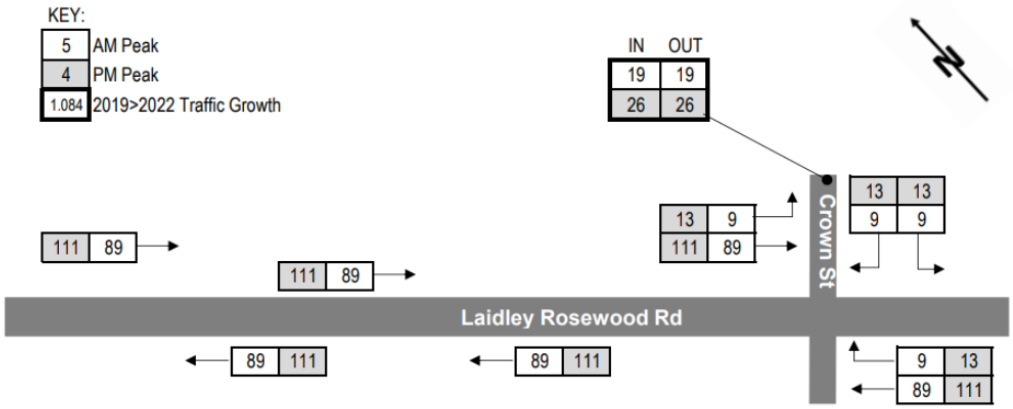

Figure 4.2 2022 Background Traffic Flows

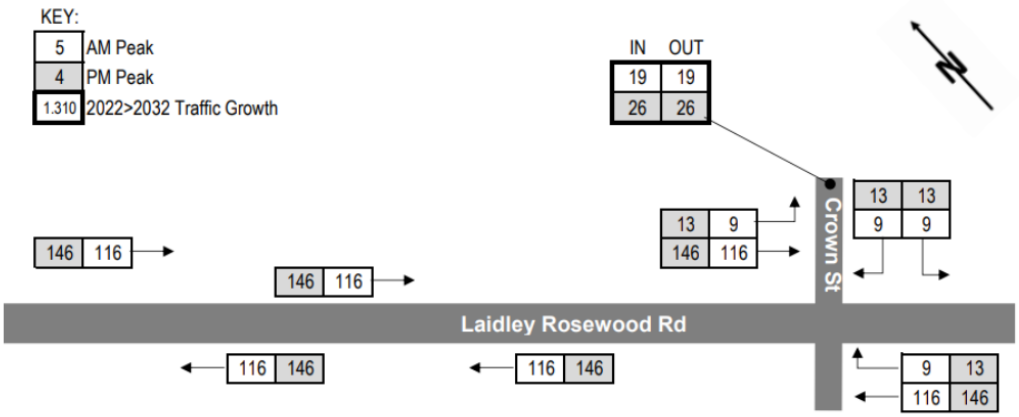

Figure 4.3 2032 Background Traffic Flows

4.3 Development Traffic

4.3.1 Trip Generation

Industry, Service Station and Fast-Food trip rates are based on the TMR published traffic generation surveys of existing developments similar to the proposed land use as follows:

- Industrial Estate
  - Average AM peak period trip rate adopted as 0.575 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 0.809 veh/hr/100 m² gross floor area.
- Service Station
  - Average AM peak period trip rate adopted as 31.37 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 27.95 veh/hr/100 m² gross floor area.

- Fast Food with Drive Through
    - Average AM peak period trip rate adopted as 32.05 veh/hr/100 m² gross floor area.
    - Average PM peak period trip rate adopted as 40.57 veh/hr/100 m² gross floor area.

The proposed Industry Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Table 4.3 below.

Table 4.3 Proposed Development Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Industrial Estate	17,532	0.0058	50%	50%	0.0081	50%	50%
Trip Generation		**101**	50	50	**142**	71	71

The total industrial lot area (lots 2-13) is 28,587m^2 and the GFA represents approximately 60% of the total lot areas for the purpose of the trips generated. As shown in Table 4.3, the proposed industry development is forecast to generate 101 two-way trips during the morning peak and 142 two-way trips during the evening peak.

The proposed Service Station Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Figure 4.4 below.

Table 4.4 Proposed Development Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Service Station	200	0.314	50%	50%	0.280	50%	50%
Trip Generation		**63**	31	31	**56**	28	28
Fast Food Drive Through	150	0.320	50%	50%	0.406	50%	50%
Trip Generation		**48**	24	24	**61**	30	30
Total		**111**	55	55	**117**	58	58

As shown in Table 4.4, the proposed service station development including fast food drive though is forecast to generate 111 two-way trips during the morning peak and 117 two-way trips during the evening peak.

4.3.2 Drop-in and Shared Trips

The distribution of the development drop-in and multi-purpose trips have been based on the advice given in the DTMR Guidelines for Assessment of Road Impacts of Development, 2006, the State of Queensland (Department of Transport and Main Roads) document (GARID). Extract relating to appropriate proportion of trips for each development type is shown in Figure 4.4 below.

The experience you deserve

Guidelines for Assessment of Road Impacts of Development Appendix F

The segmentation of traffic generation for shopping centres and fast food outlets is shown below:

Table F.1

Development	Trip Segmentation		
	New (%)	Diverted Drop In (%)	Undiverted Drop In (%)
Shopping Centres >20 000 m²	63	18	19
Shopping Centre 3 000 m² – 20 000 m²	50	22	28
Shopping Centres <3 000 m²	50	32	18
Fast Food Outlets	40	25	35

Figure 4.4 Trips Segmentations

The Queensland Department of Transport and Main Roads Guidelines for Assessment of Road Impacts of Development, recommends for Fast Food Outlets that; 40% of trips are new trips; 25% are diverted drop in trips and 35% are undiverted drop in trips. It has been assumed that 35% of trips generated from and to the food and drink outlet are pass by trips, 40% are new trips.

Considering the above reductions and composition of the proposed development, an overall average reduction of 25% to the gross trips generated by Food and Drink outlets has been allowed for multi-purpose trips. No reductions for multi-purpose trips associated with the proposed service station have been made.

The trips generated for each land use for the morning and evening peak hour and percentages entering and leaving are shown in the following Table 4.5.

Table 4.5 Development New, Pass-by and Linked Trips

Trips	GFA (m²)	AM Peak		PM Peak	
		In	Out	In	Out
Service Station Total Trips	200	31	31	28	28
New Trips	65%	20	20	18	18
Pass-by Trips	35%	11	11	10	10
Linked Trips	0%	0	0	0	0
Fast Food Drive Through	15	24	24	30	30
New Trips	40%	10	10	12	12
Pass-by Trips	35%	8	8	11	11
Linked Trips	25%	6	6	8	8

Figure 4.5 below shows the proposed service station and fast-food drive through development NEW trip distribution onto the local road network.

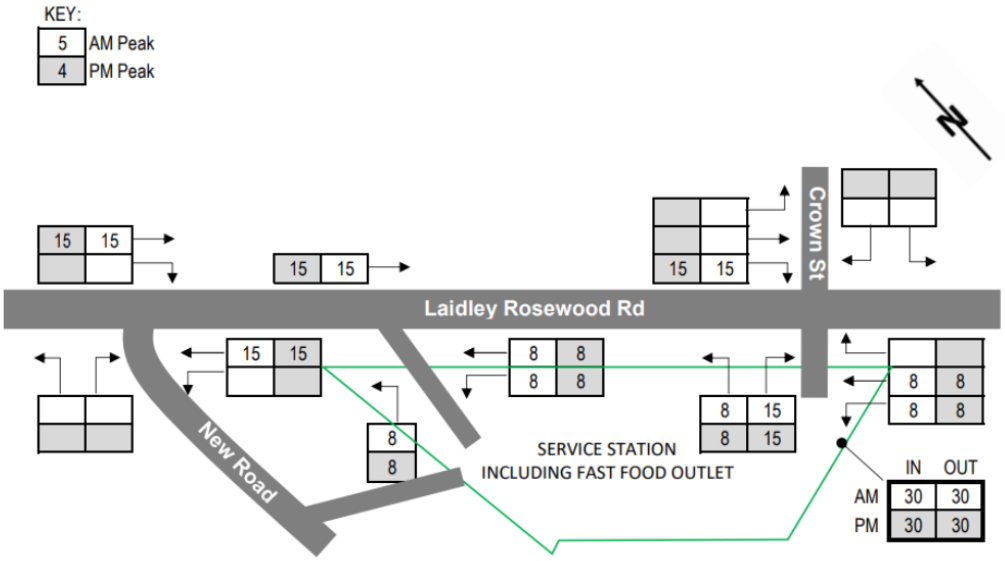

Figure 4.5 Proposed Service Station and Fast-Food New Trips

Figure 4.6 below shows the proposed service station and fast-food drive through development DROP-IN trips.

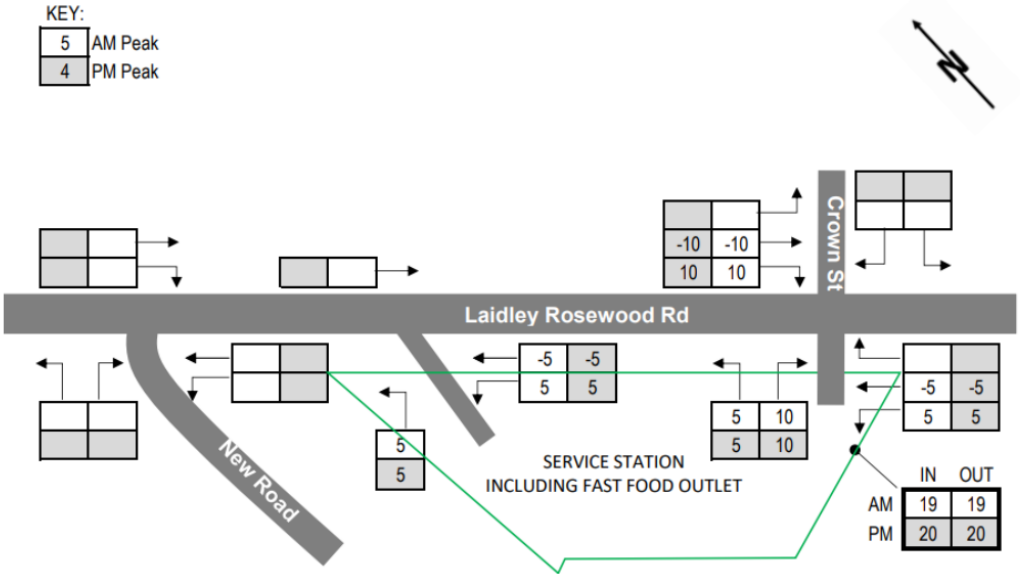

Figure 4.6 Proposed Service Station and Fast-Food Drop-in Trips

Figure 4.7 below shows the proposed service station and fast-food drive through development total trips.

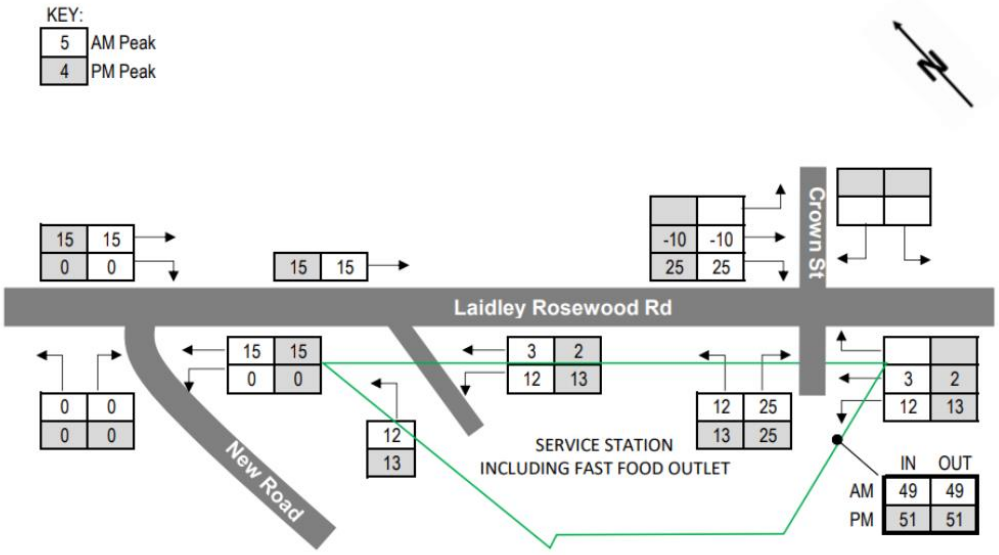

Figure 4.7 Proposed Service Station and Fast-Food Total Trips

Figure 4.8 shows the proposed Industry Development trip distribution onto the local road network.

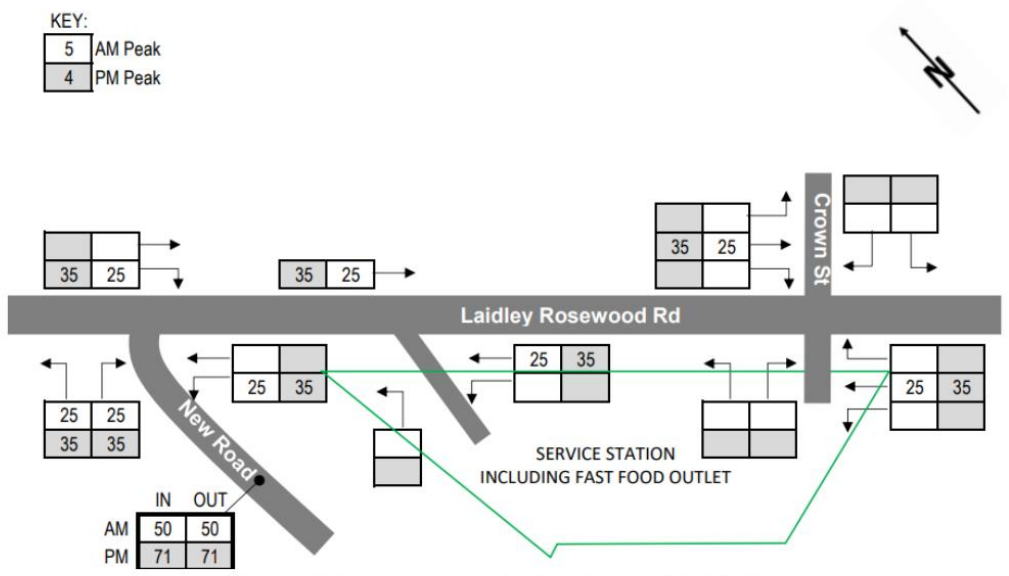

Figure 4.8 Proposed Industry Development Traffic Flows

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4.4 Post-Development Traffic

The development traffic Figures (Figure 4.5-Figure 4.8) has been added to the background traffic demands (Figure 4.2 and Figure 4.3) to provide the Post Development traffic scenarios. The Post Development traffic demands for the 2022 and 2032 design years are shown in Figure 4.9 and Figure 4.10 respectively.

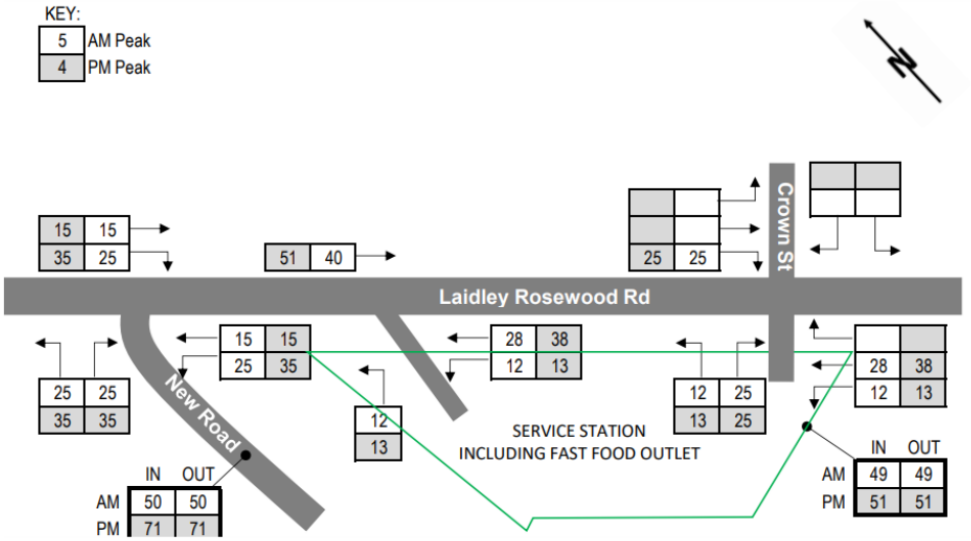


Figure 4.9 2022 with Proposed Development Traffic Flows

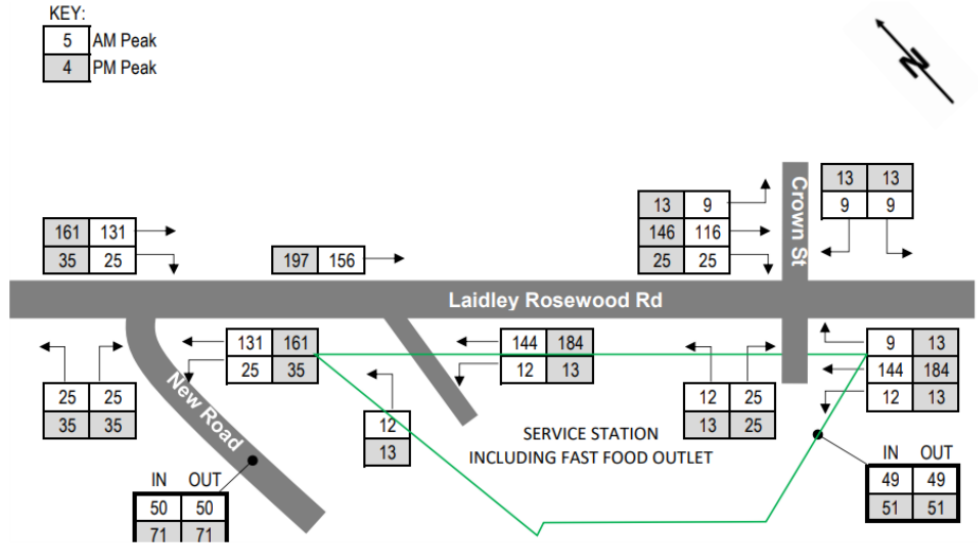


Figure 4.10 2032 with Proposed Development Traffic Flows

5. Operational Assessment

This section addresses the surrounding road network giving consideration to turning treatments at the proposed access locations.

5.1 Turning Treatment Assessment

Turn warrants have been developed in relation to safety. The warrants have been developed around the relationship between traffic volumes, speed environments and accident statistics, employing a Benefit Cost Ratio (BCR) across an assumed design life.

The warrants are based on the construction of intersections on new roads, i.e., “greenfield” sites. For existing intersections, they provide a reference point, however are not strictly applied as the BCRs in established locations often do not support upgrades, due to the existing physical constraints (e.g. services, road reserve, drainage structures, etc). A brief summary of turn treatments is provided in Table 5.1 below. Assessment of turn warrants has been carried out using Figure 5.1 and Table 5.1 a guide (DTMR Road Planning and Design Manual Chapter 13*: Intersections at Grade*)

Table 5.1 Turn Lane Descriptions

Turn Treatment	Description
BAL	Basic Left Turn Lane
CHL	Channelised Left Turn Lane
AUL (s)	Shortened Auxiliary Left Turn Lane
AUL	Full Length Auxiliary Left Turn Lane
BAR	Basic Right Turn Lane
CHR (s)	Shortened Channelised Right Turn Lane
CHR	Channelised Right Turn Lane

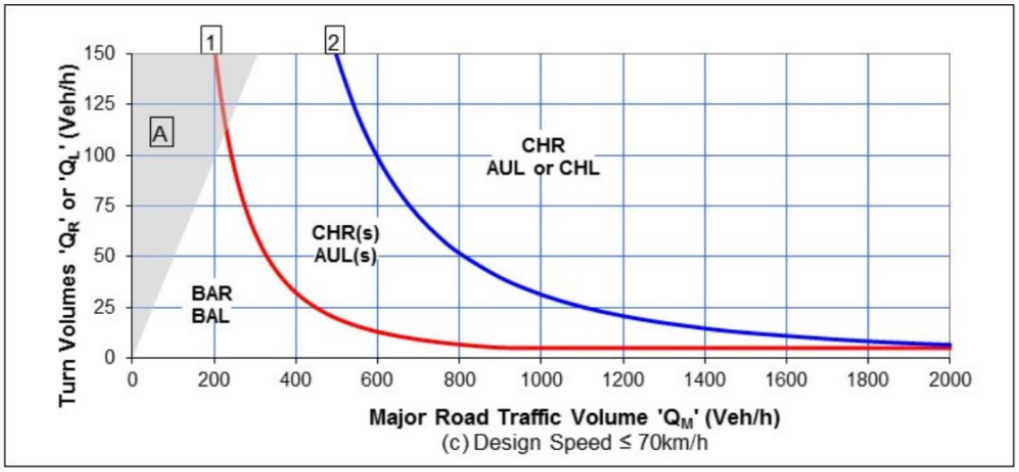


Figure 5.1 Warrants for Turn Treatments for Roads with a Design Speed < 70 kph

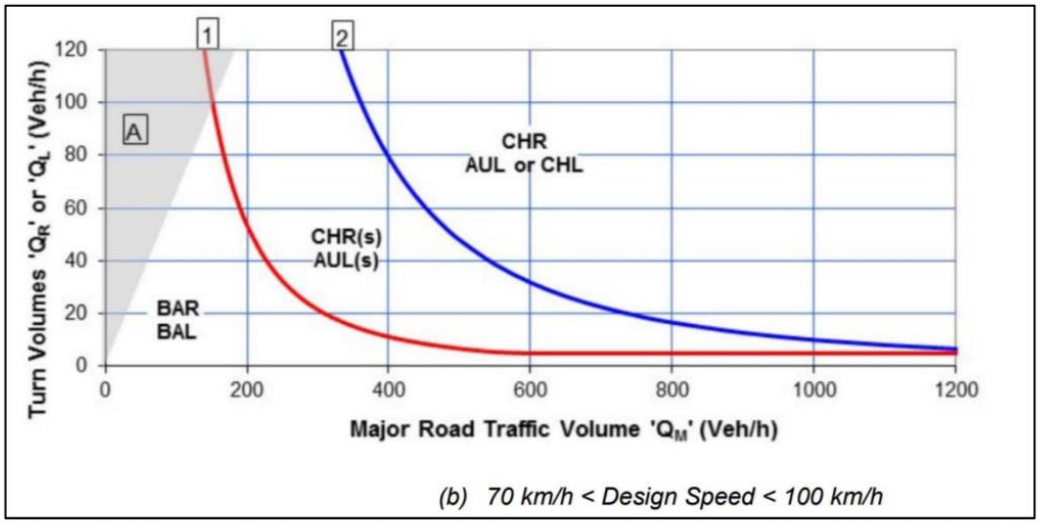
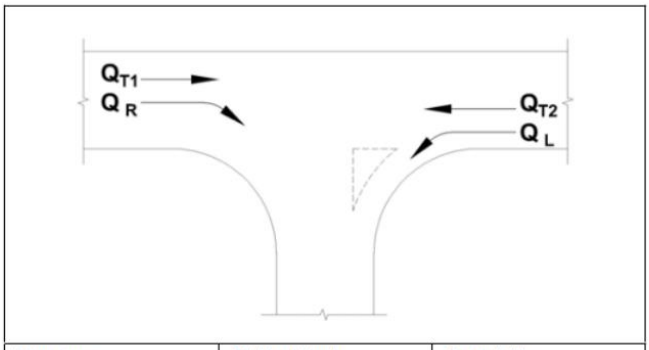


Figure 5.2 Warrants for Turn Treatments for Roads with a Design Speed 70 kph <Design Speed <100km/h

Calculation of the values of Q_m, Q_r and Q_l for use with Figure 5.1 and Figure 5.2 is in accordance with Figure 5.3 (DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade*, Fig 13.24).



Turn type	Splitter island	Q_M (veh/h)
Right	No	$= Q_{T1} + Q_{T2} + Q_L$
Right	Yes	$= Q_{T1} + Q_{T2}$
Left	No/Yes	$= Q_{T2}$

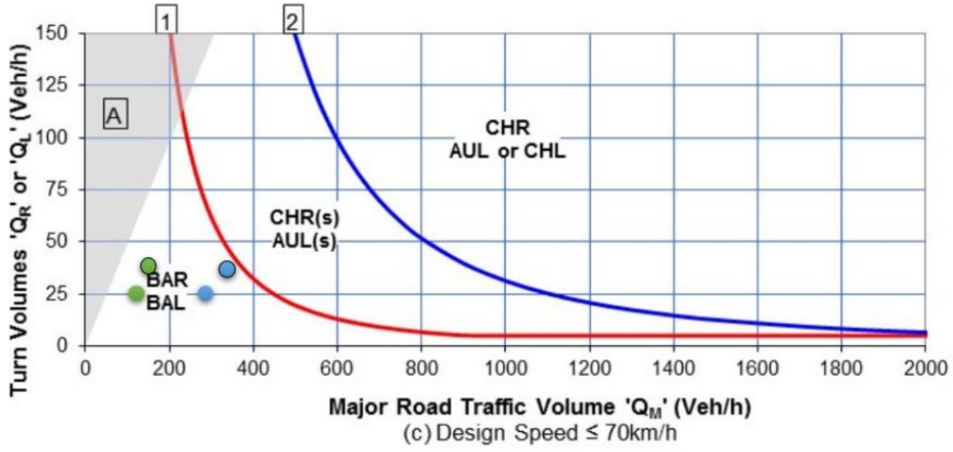
Figure 5.3 Calculation of the Major Road Traffic Volume Parameter 'Q_m'

5.1.1 New Road / Rosewood Laidley Road Priority Intersection

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / New Road priority intersection are summarised in Table 5.2.

Table 5.2 Assessment of Turn Warrants for Rosewood Laidley Road / New Internal Road Intersection

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	131	131	287	25	BAR	25	BAL
2032 PM	161	161	358	35	BAR	35	BAL



As demonstrated, due to the addition of development trips, doesn't warrant dedicated left or right turn lanes.

Basic Right Turn Lane treatment on a two-lane rural road has been proposed in line with DTMR recommendations as shown in Figure 5.4 below.

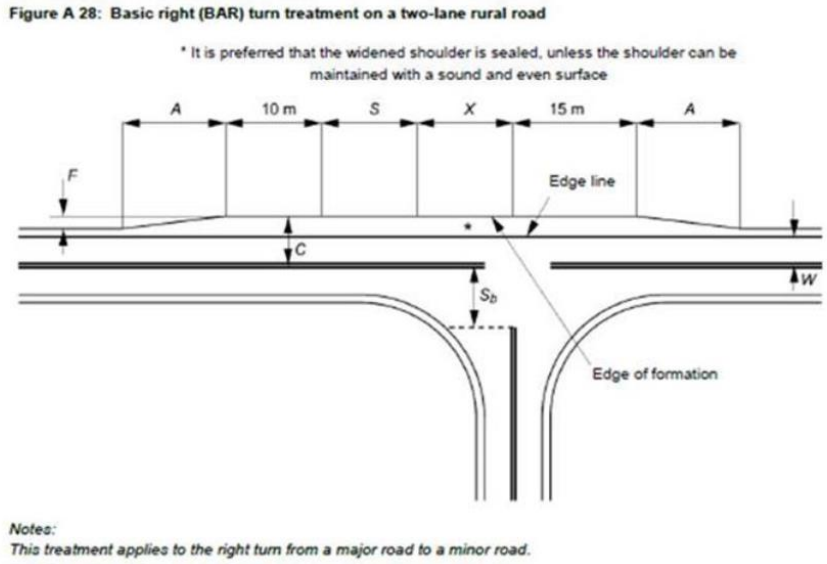


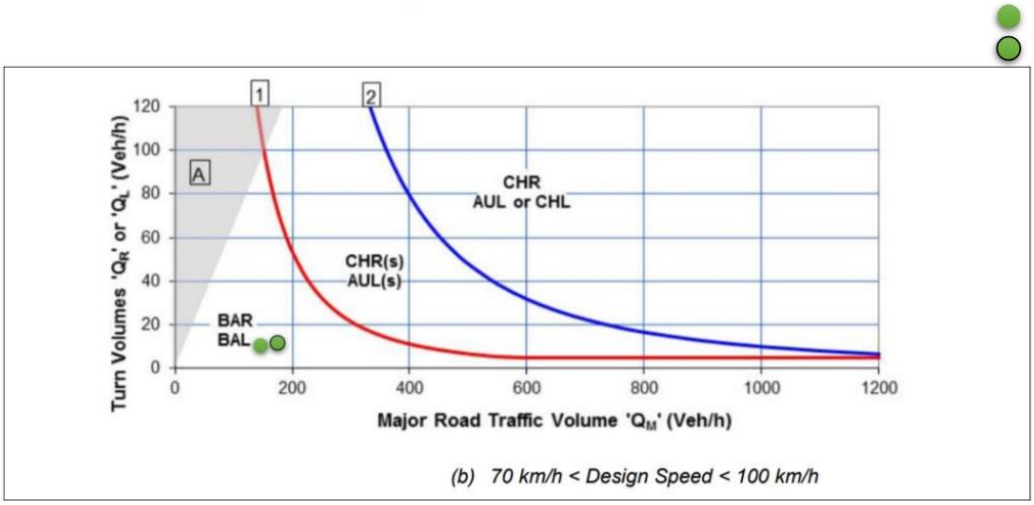
Figure 5.4 Basic Right (BAR) Turn Treatment on a Two-lane Rural Road (Source: DTMR)

5.1.2 Northwestern Site Access Driveway / Rosewood Laidley Road

The left turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the north western site access with Rosewood Laidley Road are summarised in Table 5.3.

Table 5.3 The Rosewood Laidley Road / North Western Site Access Driveway Turn Warrant Assessment

Scenario	Left Turn		
	Q_M	Q_L	Treatment
2032 AM	144	12	BAL
2032 PM	184	13	BAL



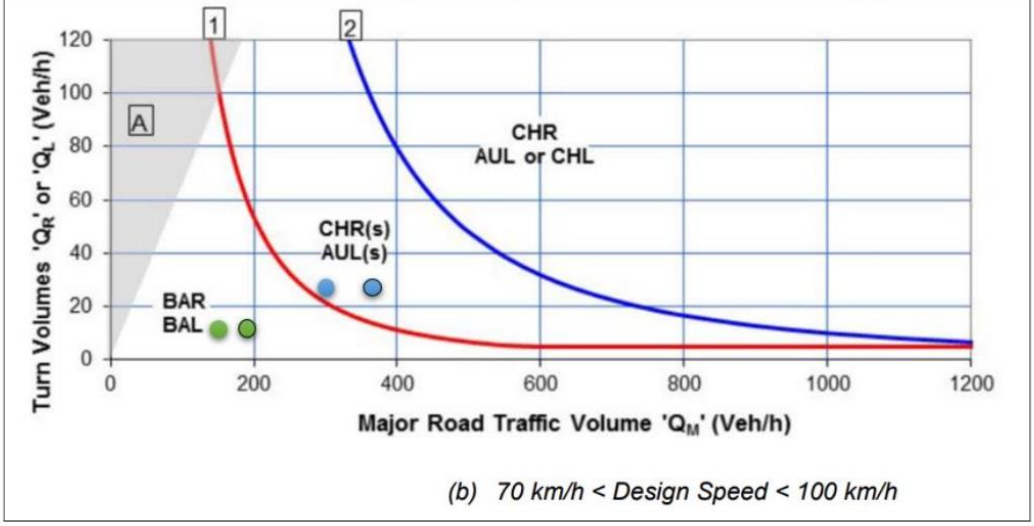
(b) 70 km/h < Design Speed < 100 km/h

5.1.3 Southeastern Site Access Driveway / Rosewood Laidley Road

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / South Eastern Site Access driveway are summarised in Table 5.4.

Table 5.4 The Rosewood Laidley Road / South Eastern Site Access Driveway Turn Warrant Assessment

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	126	153	291	25	CHR(S)	12	BAL
2032 PM	159	197	369	25	CHR(S)	13	BAL

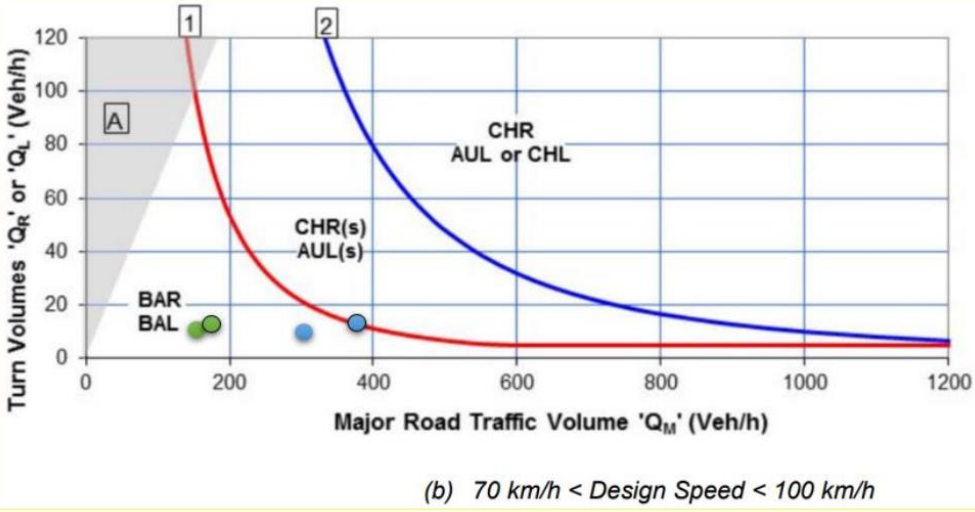


(b) 70 km/h < Design Speed < 100 km/h

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / Crown Street priority intersection are summarised in Table 5.5.

Table 5.5 Assessment of Turn Warrants for the Crown St / Rosewood Laidley Road Intersection

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	156	141	307	9	BAR	9	BAL
2032 PM	197	171	381	13	CHR(S)	13	BAL



CHR(s) lane treatment on a two-lane rural road has been proposed in line with DTMR recommendations as shown in Figure 5.5 below.

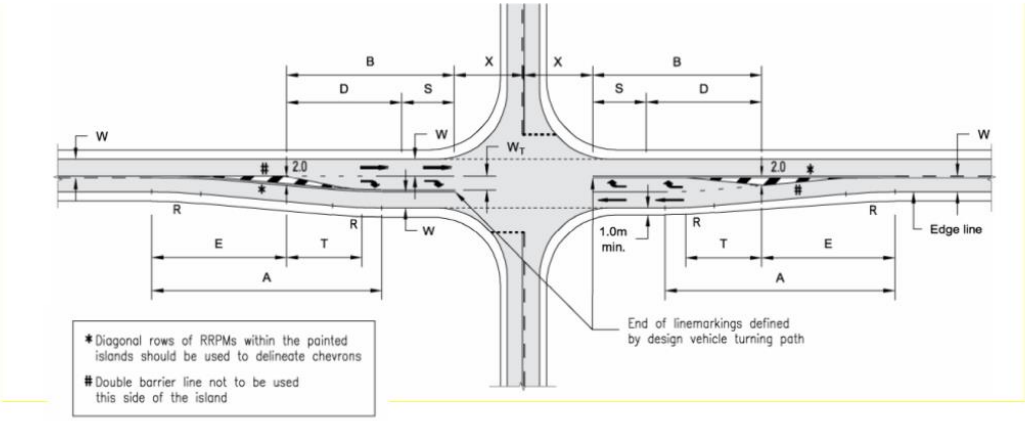


Table 7.1: Dimensions of urban CHR(S) treatment for various design speeds

Design speed of major road approach (km/h)	Lateral movement length *A* (m)[1]	Diverge/deceleration length *D* (m)[2]	Desirable radius *R* (m)	Taper length *T* (m)
50	40[3]	15	110	15
60	50[3]	25	175	15
70	60	35	240	20
80	65	45	280	20
90	75	55	350	25

Figure 5.5 CHR(s) Turn Treatment on a Two-lane Rural Road (Source: DTMR)

6. Conclusions

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the Service Station including the Fast-Food drive-through facility and Industry Development. This report has been updated to include Information Request response to the Queensland State Government Assessment and Referral Agency (SARA).

Service Station including Fast-Food drive-through

Service Station access to the wider road network is proposed via two access driveways off Rosewood Laidley Road. Access driveways have been designed to accommodate 20.0m AV accessing the site. The proposed service station dual access arrangement allows cars to arrive, utilise a service station and exit the site in a forward gear. The visibility at access driveway meets AS2890.1 standards for the 80km/h frontage road speed limit for cars and commercial vehicles. Due to the low traffic volumes along Rosewood Laidley Road, auxiliary turn lanes are not warranted at the north western access driveway. The south eastern access driveway has been formalised into a 4-way priority intersection with Crown Street and includes CHR(s) lanes and BAL into the proposed development site.

The 15 car spaces provided for the service station are also 1 car parking spaces above the minimum Lockyer Valley Regional Council requirement. In addition, 10 queueing spaces have been provided for a drive-through facility ensuring that parking demand can be maintained entirely within the site.

Industry Development

Access to the wider road network from the proposed industry development subdivision, will be provided via a new public road and new intersection as follows:

- the priority intersection with Rosewood Laidley Road to the north; and

All trips in and out from the industrial development will travel north along new road towards a new priority intersection Rosewood Laidley Road. Due to the development trips turning in and out of the new road from Rosewood Laidley Road, a BAR treatment with passing lane for a rural intersection is recommended at the New Road / Rosewood Laidley Road priority intersection as per TMR standard detail.

The proposed intersection is designed to cater for a 20.0m Articulated Vehicles (AV) movements. The intersection design achieves a key objective of minimizing the interference between vehicles manoeuvring into and out of the new road and vehicles travelling through Rosewood Laidley Road. A 20.0m AV doesn't not cross the centre-line of Rosewood Laidley Road to the extent that there is any interaction with the opposing direction of travel. The above ensures minimal delay to through traffic along Rosewood Laidley Road, and that safety and efficiency of the state-controlled road are maintained post development. The visibility at the new road / Rosewood Laidley Road priority intersection meets Austroads SISD requirements for the 80km/h design speed for eastbound traffic and 100km/h design speed for westbound traffic.

7. References

Roads and Traffic Authority 2002, *Guide to Traffic Generating Developments, Roads and Traffic Authority*, Sydney.

Austroads Guide to Road Design Part 4A *Unsignalised and Signalised Intersections.*

Australian Standards AS/NZ2890.1-2004.

Lockyer Valley Regional Council bicycle and car parking Rates.

Department of Transport and Main Roads *Guide to Traffic Impact Assessments*

Department of Transport and Main Roads *Guidelines for Assessment of Road Impacts of Development*

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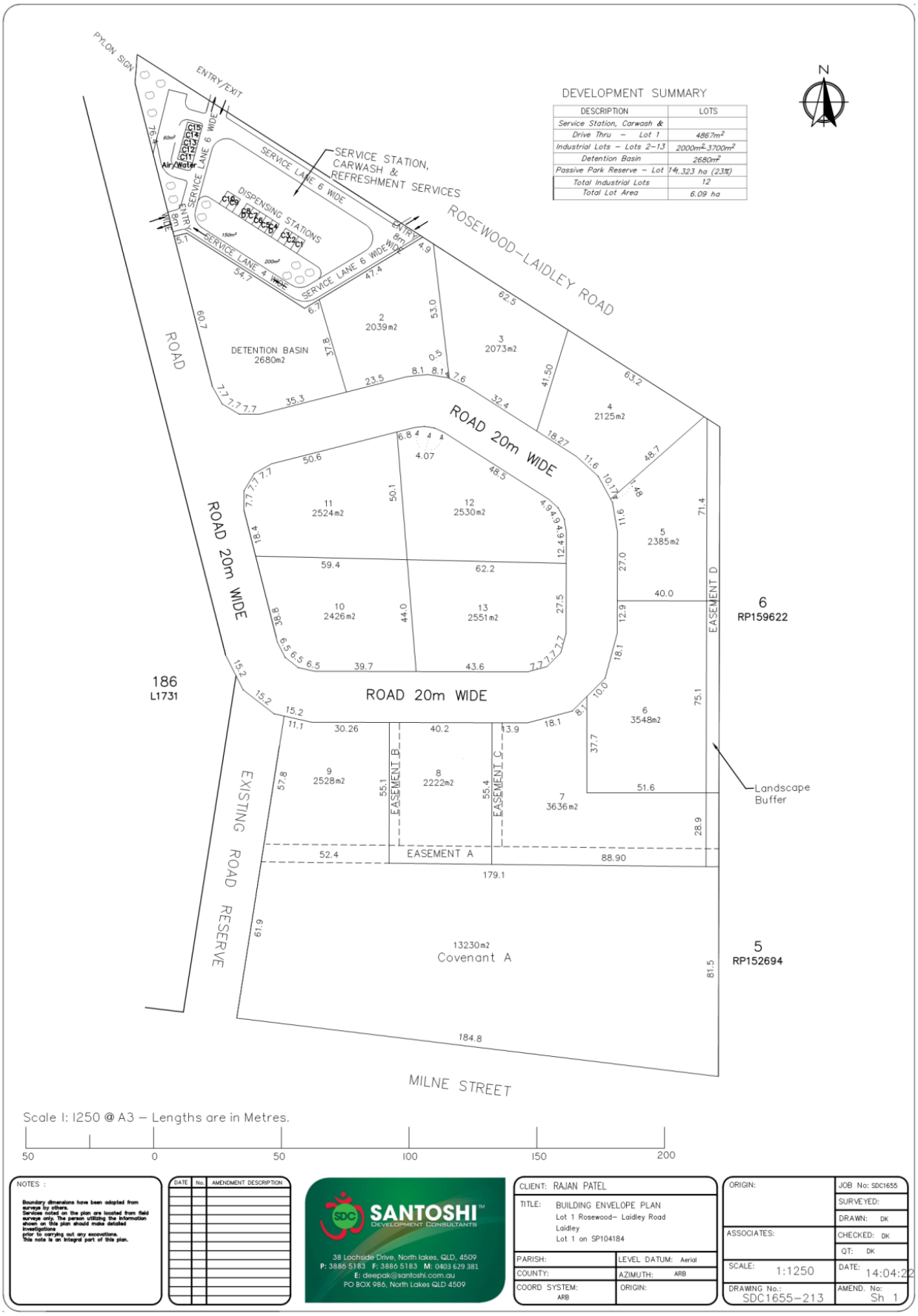
Appendix A – Proposed Development Layout



DEVELOPMENT SUMMARY

DESCRIPTION	LOTS
Service Station, Carwash & Drive Thru – Lot 1	4867m²
Industrial Lots – Lots 2–13	2000m²-3700m²
Detention Basin	2680m²
Passive Park Reserve – Lot 14	1.323 ha (23%)
Total Industrial Lots	12
Total Lot Area	6.09 ha

NOTES :

Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field survey only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations.
This note is an integral part of this plan.

DATE	No.	AMENDMENT DESCRIPTION

SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509

CLIENT: RAJAN PATEL		ORIGIN:	JOB No: SDC1655
TITLE: BUILDING ENVELOPE PLAN Lot 1 Rosewood– Laidley Road Laidley Lot 1 on SP104184			SURVEYED:
			DRAWN: DK
		ASSOCIATES:	CHECKED: DK
			QT: DK
PARISH:	LEVEL DATUM: Aerial	SCALE: 1:1250	DATE: 14:04:22
COUNTY:	AZIMUTH: ARB		
COORD SYSTEM: ARB	ORIGIN:	DRAWING No.: SDC1655–213	AMEND. No: Sh 1

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Appendix B – SARA and Lockyer Valley IR Letter

GE77-N

Queensland Government

SARA reference: 2106-23287 SRA
Council reference: MC2021/0042 & RL2021/0021

20 January 2022

Messrs Rajankumar Umedbhai Patel and Amrutaben Rajankumar Patel
C/- Santoshi Development Consultants
PO Box 986
NORTH LAKES QLD 4509
himaansu@santoshi.com.au

Attention: Mr Himaansu Kumar

Dear Mr Kumar

SARA advice notice - Rosewood Laidley Road, Laidley

(Advice notice given under section 35 of the Development Assessment Rules)

The State Assessment and Referral Agency (SARA) advises that your development application has not adequately demonstrated compliance with the State Development Assessment Provisions.

Subsequent to your response of 21 December 2021 to SARA's information request, SARA has reviewed the information you provided and as discussed in the meeting with you on 18 January 2022 the following issue(s) with the proposed development application have been identified:

State transport infrastructure	
Traffic Impact Assessment – Safety of service station access	
1.	**Issue:** The application hasn't demonstrated that the two proposed accesses to the service station from Rosewood Laidley Road are safe and meet the requirements of Performance Outcome (PO) 16 and PO20 of the State Development Assessment Provisions (SDAP) version 2.6, State code 1: Development in a state-controlled road environment (state code 1) and PO1 of SDAP, State code 6: Protection of state transport networks (state code 6). The meeting of 19 January 2022 discussed: • The proposed two accesses to the service station off Rosewood Laidley Road and their safety in relation to the intersections at New Road and Crown Street • The option of limiting the north-western access off Rosewood Laidley Road to a left in left out only because of concerns with its proximity to the intersection with the New Road immediately to the west

South East Queensland (West) regional office
Level 4, 117 Brisbane Street, Ipswich
PO Box 2390, North Ipswich QLD 4305

2106-23287 SRA

	• Further analysis being undertaken to demonstrate the safety of the proposed south-eastern access to the service station off Rosewood Laidley Road because of its proximity to the intersection with Crown Street. **Action:** • It is recommended that an amended TIA be prepared and submitted which assesses the traffic impacts on the state-controlled road network as a result of the proposal and identifies mitigation measures and works required to achieve compliance with PO16 and PO20 of state code 1 and PO1 of State code 6, that: – Must include a turn warrant assessment for both accesses to the service station on Rosewood Laidley Road and the intersection with New Road including proposed design solutions where applicable such as those discussed in the meeting of 19 January 2022 – Demonstrate that the proposed Service Station and reconfiguration does not result in a worsening of the safety and operating conditions on Rosewood-Laidley Road – Include details of the mitigation measures proposed to address any traffic impacts on the state-controlled road network by the proposed development. Any mitigation measures must be prepared in accordance with the DTMR *Road Planning and Design Manual* (RPDM) – Be prepared in accordance with the Department of Transport and Main Roads' (DTMR) *Guide to Traffic Impact Assessment 2018* (GTIA) – Be certified by a Registered Professional Engineer Queensland (RPEQ). • Appendix A of the GTIA includes a set of standard input parameters for use in traffic impact assessments that will be acceptable to DTMR in the majority of situations. • The DTMR's GTIA can be accessed and downloaded from www.tmr.qld.gov.au.

Please note that unlike an information request, assessment timeframes do not stop when advice is provided by SARA.

How to respond

It is recommended that you address these issues promptly and provide a response to SARA by 25 January 2022. If you decide not to respond, your application will be assessed and decided based on the information provided to date.

Under the Development Assessment Rules (DA Rules), the issuing of advice does not stop the assessment timeframes. If you intend to provide additional information, it should be provided in a timely manner to allow sufficient time for the information to be considered. As such, you are strongly encouraged to consider using the 'stop the clock' provisions under s32 of the DA rules, to allow sufficient time for you to consider and respond to SARA's advice; and for SARA to consider any new or changed material provided.

If you wish to utilise the 'stop the clock' provisions, you should give notice to the assessing authority (assessment manager or referral agency) whose current period you wish to stop. This can be done through MyDAS2 or via correspondence.

You are requested to upload your response and complete the relevant tasks in MyDAS2.

If you require further information or have any questions about the above, please contact Darrian Borick, Principal Planner, on 3432 2411 or via email IpswichSARA@dsdilgp.qld.gov.au who will be pleased to assist.

2106-23287 SRA

Yours sincerely

Kieran Hanna
Principal Planning Officer

cc Lockyer Valley Regional Council, mailbox@lvrc.qld.gov.au

Development details		
Description:	Development permit	Material change of use for Service Station and Refreshment Service Reconfiguring a Lot for Subdivision (1 Lot into 34 Lots) Operational Works for Advertising Device
SARA role:	Referral agency	
SARA trigger:	Schedule 10, part 10, division 3, subdivision 3, table 1 item 1	Koala habitat area in SEQ region
	Schedule 10, part 9, division 4, subdivision 1, table 1, item 1	Infrastructure - state transport infrastructure
	Schedule 10, part 9, division 4, subdivision 2, table 1, item 1	State transport corridors and future State transport corridors
	Schedule 10, part 9, division 4, subdivision 2, table 4, item 1	State transport corridors and future State transport corridors
SARA reference:	2106-23287 SRA	
Assessment criteria:	State Development Assessment Provisions (SDAP) version 2.6: State code 25: Development in South East Queensland koala habitat areas State code 6: Protection of state transport networks State code 1: Development in a state-controlled road environment	

Lockyer Valley Regional Council
26 Railway Street, PO Box 82, Gatton Qld 4343
All official correspondence to be addressed to the CEO
Telephone 1300 005 872 | Facsimile (07) 5462 3269
Email mailbox@lvrc.qld.gov.au | www.lockyervalley.qld.gov.au

Application Id: MC2021/0042 & RL2021/0021
Enquiries: Tammee Van Bael
Your Reference: -
Contact: 5462 0382

15 February 2022

RU & AR Patel
C/- Santoshi Development Consultants
PO Box 986
NORTH LAKES QLD 4509

Dear Mr Kumar

Further Advice – Development Application
Planning Act 2016

I refer to your application. Council wishes to provide you with further advice about the application in accordance with the provisions of the *Development Assessment Rules 2017*.

APPLICATION DETAILS

Application No:	MC2021/0042 & RL2021/0021
Proposal:	Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 Lot into 34 Lots) and Operational Works for Advertising Device
Street Address:	Rosewood Laidley Road LAIDLEY QLD 4341
Real Property Description:	Lot 1 SP 104184
Planning Scheme:	Laidley Shire Planning Scheme 2003

FURTHER ADVICE

You are advised that:-

Council has undertaken a review of your Response to Information Request 20 and 21 December 2021. However, there is outstanding information that Council requires further information on to satisfactorily assess the proposal.

Issue
Proposed Lots 7 and 8 are identified as being rear access handle allotments. Council does not accept rear access handle allotments in industrial subdivision. All lots must have a minimum frontage width of 40m. It is also noted that there are a number of other proposed lots that do not have a minimum width of 40m including Proposed Lots 2, 9 and 13.

Information Required

1 Provide an amended lot layout plan identifying that all lots have a minimum frontage width of 40m and minimum lot size of 2,000m^2. Lots proposed to have an access handle are not supported.

Issue

The proposed layout plan identifies easements on Proposed Lots 8 to 10. The purpose of these easements is unclear. The Bushfire Management Report identifies that there should be for pedestrian fire trails. However, it is unclear as to why a pedestrian fire trail is necessary in this location. In addition, the accessibility of these fire trails is significantly constrained due to the significant earthworks proposed, including batters and retaining walls, to be undertaken adjacent to the fire trail. This would also result in difficultly in maintenance being in accessible.

Information Required

2 Provide further information on the purpose of the easements on Proposed Lots 8 to 10.

Issue

The State Planning Policy (SPP) requires development to avoid natural hazards (including bushfire), or where not possible to avoid, development must mitigate the risk to persons and property to an acceptable or tolerable level. The submitted Bushfire Management Report does not adequately address the outcomes of the SPP to demonstrate that the bushfire risk is avoided, or where not possible to avoid, the risk to persons and property is mitigated to a tolerable level. In addition, the report has not demonstrated that the development avoids an increase in the severity of bushfire and potential for damage on adjoining properties. The Bushfire Management Report has not included information demonstrating the need for the bushfire trail.

Information Required

3 Provide an amended Bushfire Management Report prepared by a suitably qualified person that addresses the outcomes of the State Planning Policy, including demonstrating that the bushfire risk is avoided or where not possible to avoid, risk to persons and property is mitigated to a tolerable or acceptable level.

Issue

The proposal plan and supporting information identifies Proposed Lot 16 as being utilised as a reserve and handed over to Council for future management. This is not an accepted outcome as Council will not be taking over ownership of the lot as Council generally does not accept conservation land as a dedication. Conservation areas are generally restored and protected with a covenant. Proposed Lot 16 must be retained in private ownership

Information Required

4 Provide amended documents identifying that area within Proposed Lot 16 as being retained for conservation purposes, protected with a covenant and retained in private ownership. It is recommended Proposed Lot 16 be incorporated into an adjoining lot, as no further development will be permitted within the conservation area.

5 Submit a Management Plan outlining the roles and responsibilities for restoring and maintaining the conservation area in perpetuity.

Issue
No qualifications have been provided on the ecological consultants.

Information Required
6 Provide the CV of the ecological consultants who undertook on-ground assessments and prepared the reports to demonstrate they hold suitable qualifications in accordance with Councils standards as provided in the Information Request.

Issue
The rehabilitation species list contains species that are not representative of the pre-clear regional ecosystem present within Lot 16.

Information Required
7 Delete the following species from the rehabilitation list due to not being grown locally or not suited to pre-clear RE 12.9-10.7:
(a) Angophora woodsiana
(b) Eucalyptus carnea
(c) Eucalyptus moluccana
(d) Eucalyptus resinifera
(e) Eucalyptus tindaliae
(f) Corymbia gummifera
(g) Lophostemon confertus
(h) Allocasuarina torulosa
(i) Elaeocarpus reticulatus
(j) Endiandra pubens
(k) Glochidion ferdinandi var. ferdinandi
(l) Glochidion sumatranum
(m) Guioa semiglauca
(n) Homalanthus nutans
(o) Neolitsea dealbata
(p) Psychotria loniceroides
(q) Leucopogon juniperinus
(r) Zieria smithii

- Additional species can be added back in, but only those found on the rehabilitation species list for 12.9-10.7.

Issue
The weed control methods require review in the Table 5.1 of the Rehabilitation Management Plan.

Information Required
8 Provide an amended Rehabilitation Management Plan with the following amendments to Table 5.1:

Scientific Name	Common Name	Family	Qld Status	Control Method
Opuntia stricta	Prickly pear	Cactaceae	RIP	~~Ploughing~~; Small areas: spray; Biological control: Cactoblastis or Cochineal.
Opuntia tomentosa	Velvet tree oear	Cactaceae	RIP	~~Ploughing~~; Small areas: spray; Biological control: Cactoblastis or Cochineal.

Bryophyllum delagoense	Mother-of-millions	Crassulaceae	RIP	~~Hand pull, bag and dispose offsite~~; spray G1:200 + MM or MM.
Macfadyena unguis-cati	Cat's claw creeper	Bignoniaceae	RIP	~~Seedlings, vines and runners: Hand pull, roll up and hang to dry;~~ spray G1:100 or G1:100 + MM. Larger stems, roots, nodes, vines: CSP G1:1.5; Spray G1:100 + MM. Underground tubers: Dig up or crown; gouge and paint G1:1.5.

Issue

No Traffic Impact Assessment was provided to the Council with lodgement of the planning application. The comments and issues identified below are based on the Traffic Impact Assessment, Version 2 prepared by Burchills Engineering Solutions and dated 9 December 2020 submitted in response to Council's Information Request. It is proposed to provide a priority intersection with Milne Street to the south to cater for occasional Articulate Vehicles (AV) access, however this arrangement will create the opportunity for any commercial , industrial or any other additional traffic that will be generated from the new subdivision and service station to access Milne Street. The above proposed intersection with Milne Street will not be supported by the Council due to the following reasons:

a) The proposed access would direct industrial and commercial traffic through the existing residential area.
b) The longitudinal grade of the road section that is proposed to be connected is for Industrial/Commercial vehicles and does not comply with *Laidley Shire Council Planning Scheme 2003*, Schedule 3, Division 3, Table 10, as it well exceeds the absolute maximum carriageway grade of 6%.
c) Milne street and Pioneer Street (to the west of the site) road pavements are not designed to industrial or commercial traffic.

Incorporating changes to address the above would impact the ultimate traffic flow conditions on the proposed roads and the intersections. It is noted that the swept paths provided indicate that AV are crossing the centre line of the proposed roads during turning movements which is not acceptable.

For the Service Station, it is noted that the submitted Traffic Impact Assessment (TIA) provides conflicting traffic flow directional drawings with the drawings within the TIA and Drawing Number M0112 Sheet No. 02 of 05, Revision D, *Site Plan*, prepared by Mi. Co Design and Drafting and dated 16-11-21. The drawings provide for two-way directional traffic along the north-western access and road.

As shown in Drawing Number SK016 prepared by Burchills Engineering Solutions, the Heavy Rigid Vehicles (HRV) and refuse vehicle would require reversing to the fuel pump areas under the canopy. The above vehicle movement would be unsafe to the users of the development (public) and pose a risk of collision with fuel pumps and associated risk of fire.

Information Required

9 Submit an amended Traffic Impact Assessment, prepared by a suitably qualified Registered Professional Engineer Queensland (RPEQ) incorporating the layout and changes to the traffic flows. Ensure that Department of Transport and Main Roads (DTMR) have been notified of

any changes to traffic flow conditions due to the above amendments and provide the final response from DTMR on the final Traffic Impact Assessment. Ensure that the Traffic Impact Assessment and any other plans are amended to take into account the correct traffic flow movements for the Service Station.

10 Provide appropriate changes to truncations and/or road reserve widening to accommodate future road radii widening to ensure centre lines of the proposed roads are not crossed during AV turning movements at intersections of new roads.

11 Submit to Council amended vehicle swept paths, certified by a suitably qualified RPEQ and clearly indicate the centre lines of proposed new roads.

12 Provide evidence of DTMR approval for the Service Station access arrangement as referred to in item 26 of the Council Information Request. Incorporate any resultant changes to the final Traffic Impact Assessment.

13 Provide an alternative location/solution for HRV and refuse vehicle servicing for the Service Station use to ensure that the public safety and hazards are not compromised.

Issue

No Stormwater Management Plan was provided to the Council with lodgement of the planning application. The comments and issues identified below are based on the Conceptual Stormwater Management Plan, Version 00 prepared by Burchills Engineering Solutions 8 December 2020. It is noted the drawings attached to the Conceptual Stormwater Management Plan show that retaining walls are proposed as part of stormwater basin works are extending into the road reserve for roads 1 and 2. Furthermore, the retaining walls are proposed to be partially extending to a future drainage reserve maintained by the Council. 'MUSIC' modelling data files have not been submitted as outlined in Council's Information Request dated 8 July 2021.

Information Required

14 Submit 'MUSIC' modelling data files for Council review.

15 Investigate the possibility of removing the proposed retaining walls within the any future stormwater basins maintained by the Council.

16 Remove all retaining walls proposed on existing or proposed road reserves as shown in the drawings (SK11, section A) attached to the Conceptual Stormwater Management Plan.

17 Ensure that retaining walls constructed for retaining of soil on a private property do not encroach onto the proposed future drainage reserves as shown in the drawings (SK11, section B) attached to the Conceptual Stormwater Management Plan.

18 Provide clarification on thick lines described as proposed kerb & channels as shown in Drawing No. SK02, A of the Conceptual Stormwater Management Plan.

Issue

The submitted Bulk Earthworks Layout Plan identifies substantial earthworks to be undertaken including batters and retaining walls. The batters are generally located within the property boundaries. The submitted building envelope plan does not take into consideration the batters and therefore the potential development envelope is substantially smaller. The proposed batters are generally between 1 in 6 to 1 in 3 which has a slope of 16% to 33%. Some of these batters are located between the property boundary and the road reserve. This potentially creates an access issue to lots.

The substantial earthworks will also result in a dramatically changed landform, which is inconsistent with the outcomes of the Areas of Natural and Environmental Significance Overlay Code where development must be compatible with natural landforms.

Information Required

19 Provide an amended Building Envelope Plan that takes into account the identified batters on the Bulk Earthworks Layout Plan.

20 Provide plans demonstrating that all lots have a suitable access point for industrial purposes having a maximum slope of 12.5%.

21 Provide amended plans demonstrating that the proposed lot layout and resultant earthworks are undertaken in a manner so as to reduce the amount of earthworks required and protects the natural landform.

Issue

No response has been provided to items 28 and 32-34 of Council's Information Request dated 8 July 2021. The subject site is impacted by Council's Slopes greater than 15% overlay under the Planning Scheme. The proposed development requires significant bulk earthworks including cut/fill batters and/or retaining structures to achieve the desired finished levels for the construction of infrastructure and the creation of proposed lots within Slopes greater than 15% area.

The development of land or any part of land greater than 15% requires a slope stability analysis assessment report prepared by a suitably experienced and a suitably qualified RPEQ in accordance with *Australian Geomechanics Society's Practice Note Guidelines for Landslide Risk Management 2007*. The proposed layout shows a new road extended into and adjacent to steep areas. It is Council's preference that roads are not constructed within steep slope areas due to erosion, drainage and difficulty experienced in stabilisation of batters in developments with similar soil characteristics and topography. Further, there would be potential issues in establishing batters with vegetation cover if dispersive soils are present.

Information Required

22 Engage a suitably experienced RPEQ to undertake a Geotechnical Assessment in accordance with the *Australian Geomechanics Society's Practice Note Guidelines for Landslide Risk Management 2007* (including all records/forms in support of assessment as outlined in Appendix D – Example Forms). As a minimum, the report must include an analysis of the following:

(a) A review of the site and surrounding areas;
(b) Assessment on proposed cross sections for proposed building envelopes;
(c) Site investigation including site mapping, borehole and/or test pit investigation, soil or rock characteristics, groundwater conditions;
(d) A detailed assessment of the risk posed by geotechnical hazards for works (building works, vegetation clearing, driveway/drainage construction, etc.) undertaken or required to be undertaken on the site for the proposed development;
(e) Stability assessment of cut/ fill batters using software such as *SLOPE/W by Geoslope* (www.geoslope.com) or equivalent software and stability assessment of any proposed retaining structures; and
(f) Recommendations of works to be undertaken to remove, reduce or manage the risks to both property and persons to either "very low" or "low".

Geotechnical Certifications

23 In addition to undertaking a landslide risk assessment, provide geotechnical certification from a RPEQ specialising in geotechnical engineering (evidence on qualifications must be provided) for any proposed development works within landslide hazard areas.

24 If the landslide risk assessment determines the lot or development envelope area has a landslide risk rating of 'low' or 'very low', a certification from a RPEQ specialising in geotechnical engineering must be provided confirming the proposed development is appropriate for:
- (a) the sloping nature of the site;
- (b) the risk of landslide on the subject lot or lots adversely affecting the proposed development and adjoining properties or structures; and
- (c) the risk of landslide to any upslope and downslope external properties impacting the proposed development is 'low' or 'very low'.

25 If the landslide risk assessment determines the lot or development envelope area has a landslide risk rating of 'moderate', 'high' or 'very high', certification from a RPEQ specialising in geotechnical engineering must be provided confirming the proposed development is appropriate for:
- (a) the sloping nature of the site;
- (b) the risk of landslide on the subject site or lot (or each of the proposed lots for reconfiguring a lot development applications) adversely affecting the proposed development and adjoining properties or structures; and
- (c) the risk of landslide to any upslope and downslope external properties impacting the proposed development will be reduced to 'low' or 'very low', providing the risk mitigation measures and engineering recommendations of the report are followed.

Issue

No response has been provided to item 35 of Council's Information Request dated 8 July 2021. It is likely that the soils within the site have dispersive characteristics. Further, no soils erodibility and erosion hazard assessment has been undertaken. It is noted that extensive earthworks (cut/fill) are required as a part of development works and there will be earthworks undertaken to construct stormwater quality and quantity mitigation measures. The presence of dispersive and/or sodic soil would have an impact on works proposed and may impact the proposed lot configuration and road layout.

Information Required

26 Engage a suitably experienced professional to undertake soil testing covering the areas where extensive earthworks are proposed. Submit a Dispersive Soil Management Plan (DSMP) prepared by a suitably qualified and experienced person. The DSMP must include but is not limited to the following:
- (a) Bore hole test and comprehensive analysis of results;
- (b) Recommendations for undertaking earthworks for the proposed works (roadworks, drainage, structures stormwater mitigation, etc.);
- (c) Review on the suitability of the proposed earthworks as a part of the development works for the site as indicated in the submitted engineering drawings;
- (d) The strategy for managing the dispersive and sodic soils during the construction and establishment phases; and

(e) Method(s) to stabilise/cap the dispersive, acidic and saline soils within and in the immediately surrounding areas to ensure long term stability and integrity of the proposed works.

Note:

- The information required in relation to above issues are likely to impact the final lot sizes, lot and road layout of the proposed subdivision and the proposed layout of the Service Station and Refreshment Service, therefore the above matters must be resolved as a part of current development application for a Material Change of Use and Reconfiguring a Lot. These matters cannot be deferred to Operational Works.

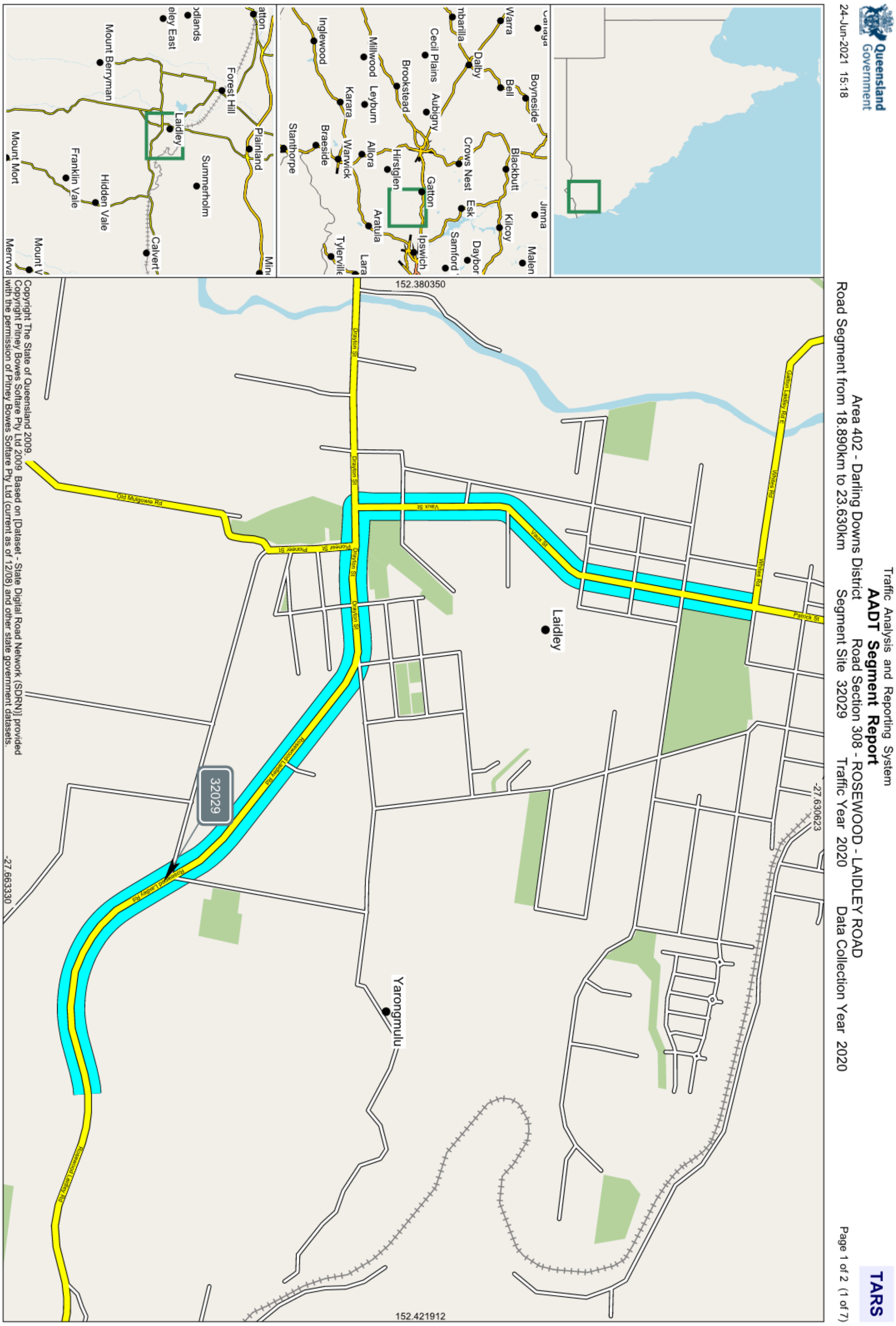
If you have any further queries in relation to the above, please contact Tammee Van Bael on 07 54620 382.

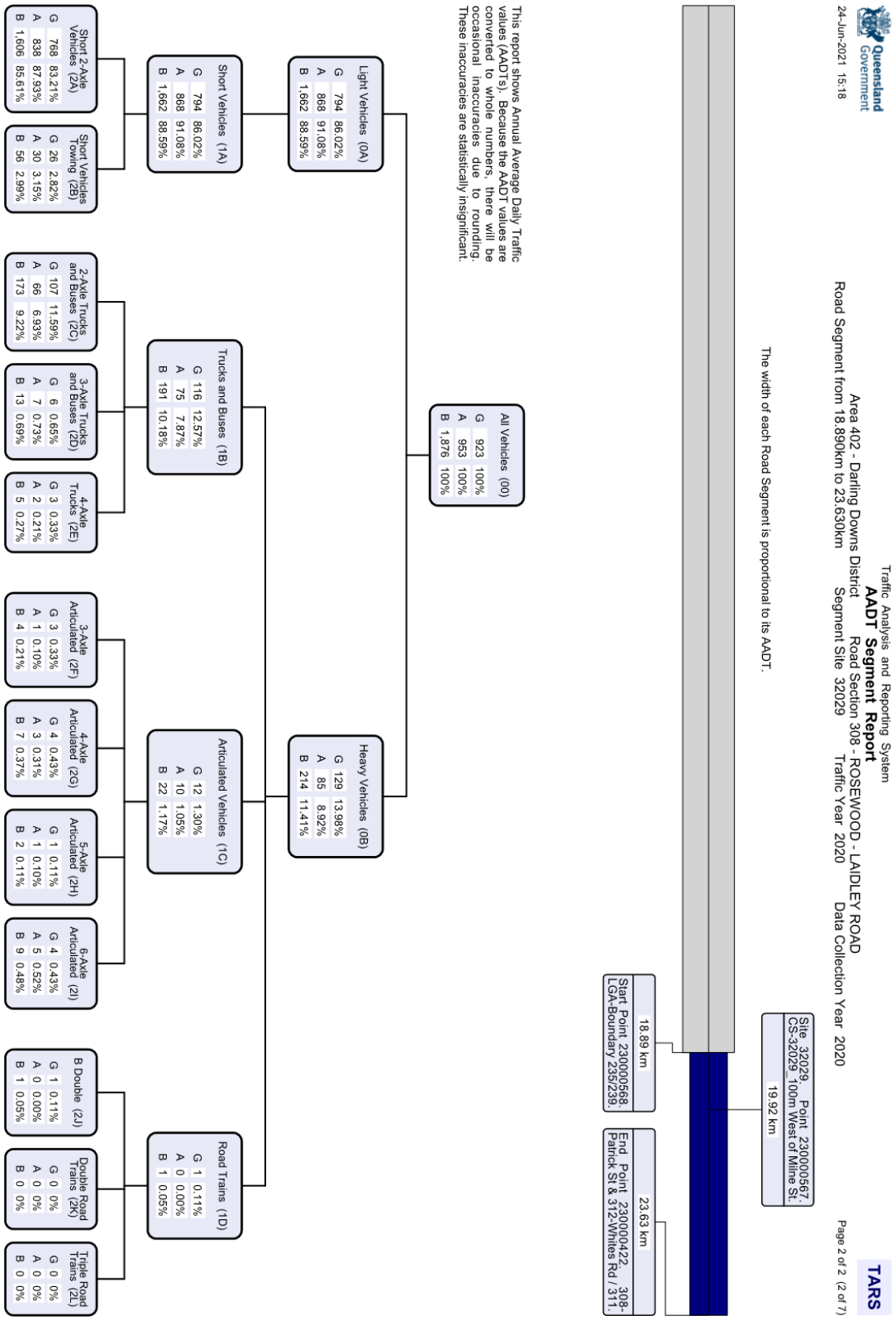
Yours faithfully

Tanya O'Brien
ACTING COORDINATOR DEVELOPMENT ASSESSMENT

The experience **you deserve**

Appendix C – Traffic Survey Data


Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
AADT Segment Report
Area 402 - Darling Downs District
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Road Segment from 18.890km to 23.630km
Segment Site 32029
Traffic Year 2020
Data Collection Year 2020
Page 1 of 2 (1 of 7)
TARS
Laidley
Yarongmulu
32029
152.380350
152.421912
-27.630623
-27.663330
Copyright The State of Queensland 2009.
Copyright Pitney Bowes Software Pty Ltd 2009. Based on [Dataset - State Digital Road Network (SDRN)] provided with the permission of Pitney Bowes Software Pty Ltd (current as of 12/08) and other state government datasets.


Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
AADT Segment Report
Area 402 - Darling Downs District
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Road Segment from 18.890km to 23.630km
Segment Site 32029
Traffic Year 2020
Data Collection Year 2020
TARS
Page 2 of 2 (2 of 7)
The width of each Road Segment is proportional to its AADT.
Site 32029, Point 230000567, CS-32029_100m West of Milne St.
19.92 km
18.89 km
Start Point 230000568, LGA-Boundary 235/239.
23.63 km
End Point 230000422, 308-Patrick St & 312-Whites Rd / 311.
This report shows Annual Average Daily Traffic values (AADTs). Because the AADT values are converted to whole numbers, there will be occasional inaccuracies due to rounding. These inaccuracies are statistically insignificant.
All Vehicles (00)
G 923 100%
A 953 100%
B 1,876 100%
Light Vehicles (0A)
G 794 86.02%
A 868 91.08%
B 1,662 88.59%
Short Vehicles (1A)
G 794 86.02%
A 868 91.08%
B 1,662 88.59%
Short 2-Axle Vehicles (2A)
G 768 83.21%
A 838 87.93%
B 1,606 85.61%
Short Vehicles Towing (2B)
G 26 2.82%
A 30 3.15%
B 56 2.99%
Heavy Vehicles (0B)
G 129 13.98%
A 85 8.92%
B 214 11.41%
Trucks and Buses (1B)
G 116 12.57%
A 75 7.87%
B 191 10.18%
2-Axle Trucks and Buses (2C)
G 107 11.59%
A 66 6.93%
B 173 9.22%
3-Axle Trucks and Buses (2D)
G 6 0.65%
A 7 0.73%
B 13 0.69%
4-Axle Trucks (2E)
G 3 0.33%
A 2 0.21%
B 5 0.27%
Articulated Vehicles (1C)
G 12 1.30%
A 10 1.05%
B 22 1.17%
3-Axle Articulated (2F)
G 3 0.33%
A 1 0.10%
B 4 0.21%
4-Axle Articulated (2G)
G 4 0.43%
A 3 0.31%
B 7 0.37%
5-Axle Articulated (2H)
G 1 0.11%
A 1 0.10%
B 2 0.11%
6-Axle Articulated (2I)
G 4 0.43%
A 5 0.52%
B 9 0.48%
Road Trains (1D)
G 1 0.11%
A 0 0.00%
B 1 0.05%
B Double (2J)
G 1 0.11%
A 0 0.00%
B 1 0.05%
Double Road Trains (2K)
G 0 0%
A 0 0%
B 0 0%
Triple Road Trains (2L)
G 0 0%
A 0 0%
B 0 0%

Queensland Government

Traffic Analysis and Reporting System
Report Notes for AADT Segment Report

TARS

24-Jun-2021 15:18

AADT Segment Annual Volume Report
Provides summary data for the selected AADT Segment of a Road Section. Summary data is presented as both directional information and a combined bi-directional figure. The data is then broken down by Traffic Class, when available. The report also includes maps displaying the location of both the AADT Segment and the traffic count site.

Annual Average Daily Traffic (AADT)
Annual Average Daily Traffic (AADT) is the number of vehicles passing a point on a road in a 24 hour period, averaged over a calendar year.

AADT Segments
The State declared road network is broken into Road Sections and then further broken down into AADT Segments. An AADT Segment is a sub-section of the declared road network where traffic volume is similar along the entire AADT Segment.

Area
For administration purposes the Department of Transport and Main Roads has divided Queensland into 12 Districts. The Area field in TSDM reports displays the District Name and Number.

District Name	District
Central West District	401
Darling Downs District	402
Far North District	403
Fitzroy District	404
Mackay/Whitsunday District	405
Metropolitian District	406
North Coast District	407
North West District	409
Northern District	408
South Coast District	410
South West District	411
Wide Bay/Burnett District	412

AADT Values
AADT values are displayed by direction of travel as:

- G Traffic flow in gazettal direction
- A Traffic flow against gazettal direction
- B Traffic flow in both directions

Data Collection Year
Is the most recent year that data was collected at the data collection site.

Please Note:
Due to location and/or departmental policy, some sites are not counted every year.

Gazettal Direction
Is the direction of the traffic flow. It can be easily recognised by referring to the name of the road eg. Road Section: 10A Brisbane - Gympie denotes that the gazettal direction is from Brisbane to Gympie.

Maps
Display the selected location from a range of viewing levels, the start and end position details for the AADT Segment and the location of the traffic count site.

Road Section
Is the Gazetted road from which the traffic data is collected. Each Road Section is given a code, allocated sequentially in Gazettal Direction. Larger roads are broken down into sections and identified by an ID code with a suffix for easier data collection and reporting (eg. 10A, 10B, 10C). Road Sections are then broken into AADT Segments which are determined by traffic volume.

Segment Site
Is the unique identifier for the traffic count site representing the traffic flow within the AADT Segment.

Site
The physical location of a traffic counting device. Sites are located at a specified Through Distance along a Road Section.

Site Description
The description of the physical location of the traffic counting device.

Start and End Point
The unique identifier for the Through Distance along a Road Section.

Vehicle Class
Traffic is categorised as per the Austroads Vehicle Classification scheme. Traffic classes are in the following hierarchical format:

Volume or All Vehicles
00 = 0A + 0B

Light Vehicles
0A = 1A
1A = 2A + 2B

Heavy Vehicles
0B = 1B + 1C + 1D
1B = 2C + 2D + 2E
1C = 2F + 2G + 2H + 2I
1D = 2J + 2K + 2L

The following classes are the categories for which data can be captured:

Volume
00 All vehicles

2-Bin
0A Light vehicles
0B Heavy vehicles

4-Bin
1A Short vehicles
1B Truck or bus
1C Articulated vehicles
1D Road train

12-Bin
2A Short 2 axle vehicles
2B Short vehicles towing
2C 2 axle truck or bus
2D 3 axle truck or bus
2E 4 axle truck
2F 3 axle articulated vehicle
2G 4 axle articulated vehicle
2H 5 axle articulated vehicle
2I 6 axle articulated vehicle
2J B double
2K Double road train
2L Triple road train


Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
Annual Volume Report
Area 402 - Darling Downs District
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Site 32029 - 308-100m West of Milne St
TDist 19.920km
Speed Limit 100
TARS
Page 1 of 3 (4 of 7)
Rosewood Laidley Rd
Beames Dr
Milne St
Crown St
Southern St
32029
152.397949
152.414551
-27.649045
-27.662109
Laidley
Yarongmulu
Copyright The State of Queensland 2009.
Copyright Pitney Bowes Softare Pty Ltd 2009. Based on [Dataset - State Digital Road Network (SDRN)] provided with the permission of Pitney Bowes Softare Pty Ltd (current as of 12/08) and other state government datasets.

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Traffic Analysis and Reporting System
Annual Volume Report

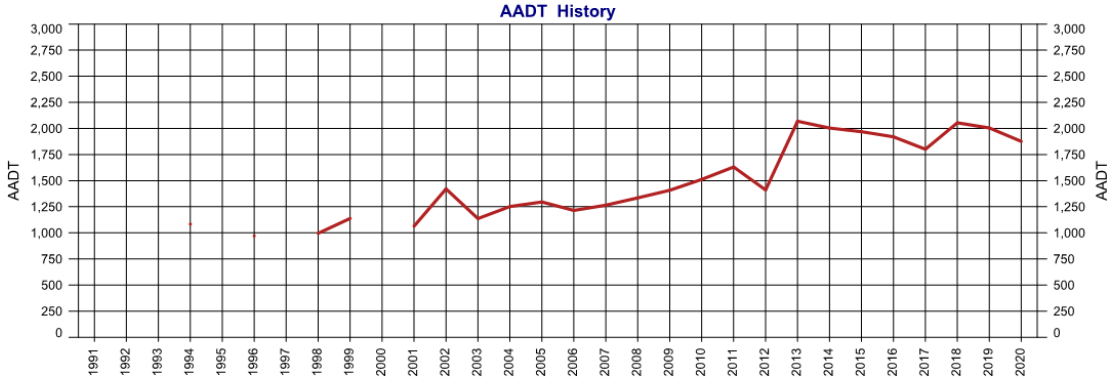
TARS

24-Jun-2021 15:18

Area	402 - Darling Downs District
Road Section	308 - ROSEWOOD - LAIDLEY ROAD
Site	32029 - 308-100m West of Milne St
Thru Dist	19.92
Type	C - Coverage
Stream	TB - Bi-directional traffic flow

Year	2020	Growth last Year	-6.43%
AADT	1,876	Growth last 5 Yrs	-0.83%
Avg Week Day	2,044	Growth last 10 Yrs	1.08%
Avg Weekend Day	1,725		

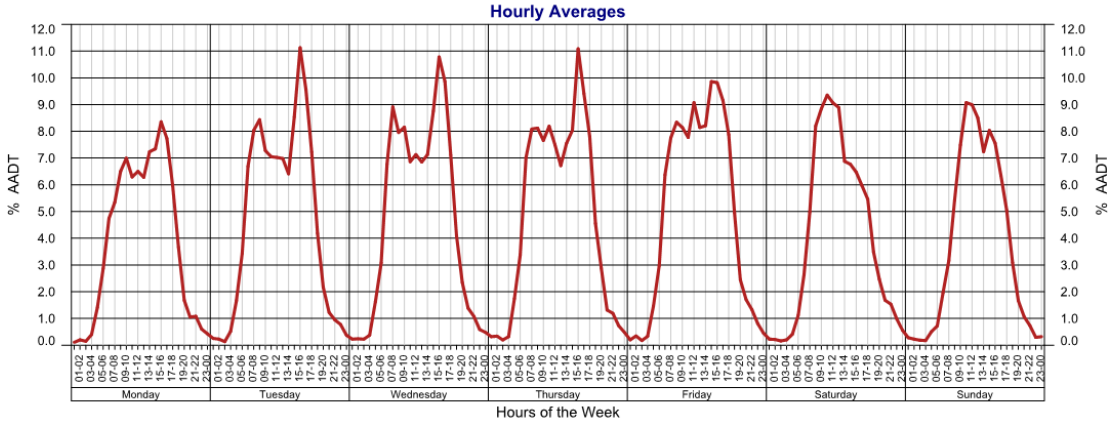
AADT History



Year	AADT	1-Year Growth	5-Year Growth	10-Year Growth
2020	1,876	-6.43%	-0.83%	1.08%
2019	2,005	-2.39%	0.72%	2.74%
2018	2,054	14.05%	0.83%	3.83%
2017	1,801	-6.20%	0.19%	2.66%
2016	1,920	-2.49%	3.16%	4.39%
2015	1,969	-1.75%	5.52%	5.27%
2014	2,004	-3.14%	7.89%	6.01%
2013	2,069	46.63%	10.58%	7.11%
2012	1,411	-13.49%	0.90%	1.26%
2011	1,631	7.87%	6.49%	4.00%
2010	1,512	7.39%	4.65%	
2009	1,408	5.47%	3.01%	2.40%
2008	1,335	5.53%	2.56%	2.20%
2007	1,265	4.12%	-0.24%	
2006	1,215	-6.25%	0.20%	1.66%

Year	AADT	1-Year Growth	5-Year Growth	10-Year Growth
2005	1,296	3.51%		
2004	1,252	10.11%	2.09%	2.39%
2003	1,137	-19.99%	1.24%	
2002	1,421	33.55%		
2001	1,064		1.38%	
2000				
1999	1,138	14.26%	2.47%	
1998	996			
1997				
1996	971			
1995				
1994	1,084			
1993				
1992				
1991				

Hourly Averages



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Traffic Analysis and Reporting System
Annual Volume Report

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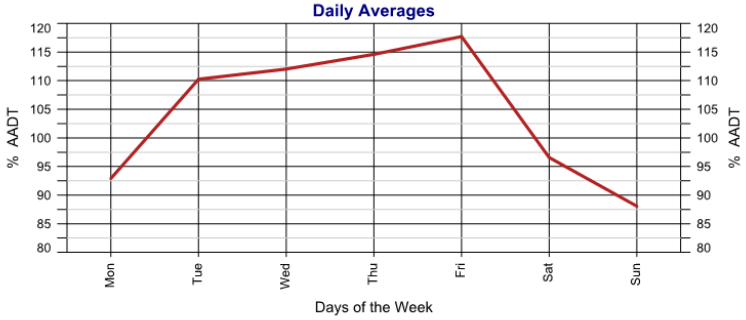
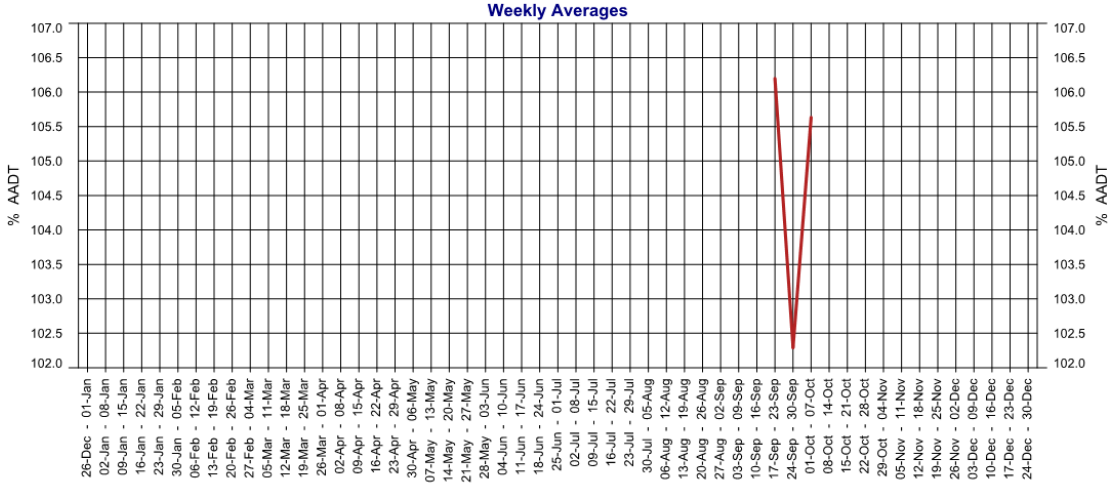
Daily Averages



Weekly Averages



2020 Calendar

January

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

March

M	T	W	T	F	S	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

April

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August

M	T	W	T	F	S	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

September

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November

M	T	W	T	F	S	S
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

December

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Days on which traffic data was collected.

Queensland Government

Traffic Analysis and Reporting System
Report Notes for Annual Volume Report

TARS

24-Jun-2021 15:18

Annual Volume Report
Displays AADT history with hourly, daily and weekly patterns by Stream in addition to annual data for AADT figures with 1 year, 5 year and 10 year growth rates.

Annual Average Daily Traffic (AADT)
Annual Average Daily Traffic (AADT) is the number of vehicles passing a point on a road in a 24 hour period, averaged over a calendar year.

AADT History
Displays the years when traffic data was collected at this count site.

Area
For administration purposes the Department of Transport and Main Roads has divided Queensland into 12 Districts. The Area field in TSDM reports displays the District Name and Number.

District Name	District
Central West District	401
Darling Downs District	402
Far North District	403
Fitzroy District	404
Mackay/Whitsunday District	405
Metropolitian District	406
North Coast District	407
North West District	409
Northern District	408
South Coast District	410
South West District	411
Wide Bay/Burnett District	412

Avg Week Day
Average daily traffic volume during the week days, Monday to Friday.

Avg Weekend Day
Average daily traffic volume during the weekend, Saturday and Sunday.

Calendar
Days on which traffic data was collected are highlighted in green.

Gazettal Direction
The Gazettal Direction is the direction of the traffic flow. It can be easily recognised by referring to the name of the road eg. Road Section: 10A Brisbane - Gympie denotes that the gazettal direction is from Brisbane to Gympie.

- G Traffic flowing in Gazettal Direction
- A Traffic flowing against Gazettal Direction
- B The combined traffic flow in both Directions

Growth Percentage
Represents the increase or decrease in AADT, using a exponential fit over the previous 1, 5 or 10 year period.

Hour, Day & Week Averages
The amount of traffic on the road network will vary depending on the time of day, the day of the week and the week of the year. The ebb and flow of traffic travelling through a site over a period of time forms a pattern. The Hour, Day and Week Averages are then used in the calculation of AADT.

Road Section
Is the Gazetted road from which the traffic data is collected. Each Road Section is given a code, allocated sequentially in Gazettal Direction. Larger roads are broken down into sections and identified by an ID code with a suffix for easier data collection and reporting (eg. 10A, 10B, 10C). Road Sections are then broken into AADT Segments which are determined by traffic volume.

Site
The unique identifier and description of the physical location of a traffic counting device. Sites are located at a Through Distance along a Road Section.

Stream
The lane in which the traffic is travelling in. This report provides data for the combined flow of traffic in both directions.

Thru Dist or TDist
The distance from the beginning of the Road Section, in kilometres.

Type
There are two types of traffic counting sites, Permanent and Coverage. Permanent means the traffic counting device is in place 24/7. Coverage means the traffic counting device is in place for a specified period of time.

Year
Is the current year for the report. Where an AADT Year record is missing a traffic count has not been conducted, for that year.

From: Vincent J Garty
To: Dale Kleimeyer
Subject: RE: Rosewood Laidley Rd Laidley Traffic census data
Date: Tuesday, 12 October 2021 9:08:51 AM
Attachments: image005.png
image006.png
image007.png
image008.png
AADT Segment And Annual Volume Report-308-32029.pdf

Hi Dale,

I believe the site you are after is site number 32029. I have attached a report for this site.

We do publish all our annual average daily traffic (AADT) data on the Queensland Government's Open Data site at :

https://www.data.qld.gov.au/dataset/traffic-census-for-the-queensland-state-declared-road-network

This has the data in csv (Excel) and Google Earth formats.

Kind Regards,
Vince Garty
Analyst (Traffic Data) | Data Solutions & Insights
Traffic Engineering, Technology & Systems| Department of Transport and Main Roads

Floor 11 | 313 Adelaide Street | Brisbane Qld 4000
GPO Box 1412 | Brisbane Qld 4001
P: (07) 30666971 | F: (07) 30663401
W: www.tmr.qld.gov.au

From: Dale Kleimeyer <dale.kleimeyer@burchills.com.au>
Sent: Monday, 11 October 2021 11:34 AM
To: Vincent J Garty <vincent.j.garty@tmr.qld.gov.au>
Subject: Rosewood Laidley Rd Laidley Traffic census data

Hi Vincent
We have been engaged to prepare a traffic report of a DA for a service station and subdivision for the lot opposite Crown Street in Laidley as per below.
Can we request Traffic census data for the vicinity please plus any other turning volume surveys near-by please.
Also can you advise any future road widening in the area please.
Kind Regards

Dale Kleimeyer
Principal Engineer – Traffic

P 07 5509 6400 | **M** 0417 195 543
E dale.kleimeyer@burchills.com.au | www.burchills.com.au

Gold Coast | Brisbane | Ipswich | Moreton Bay

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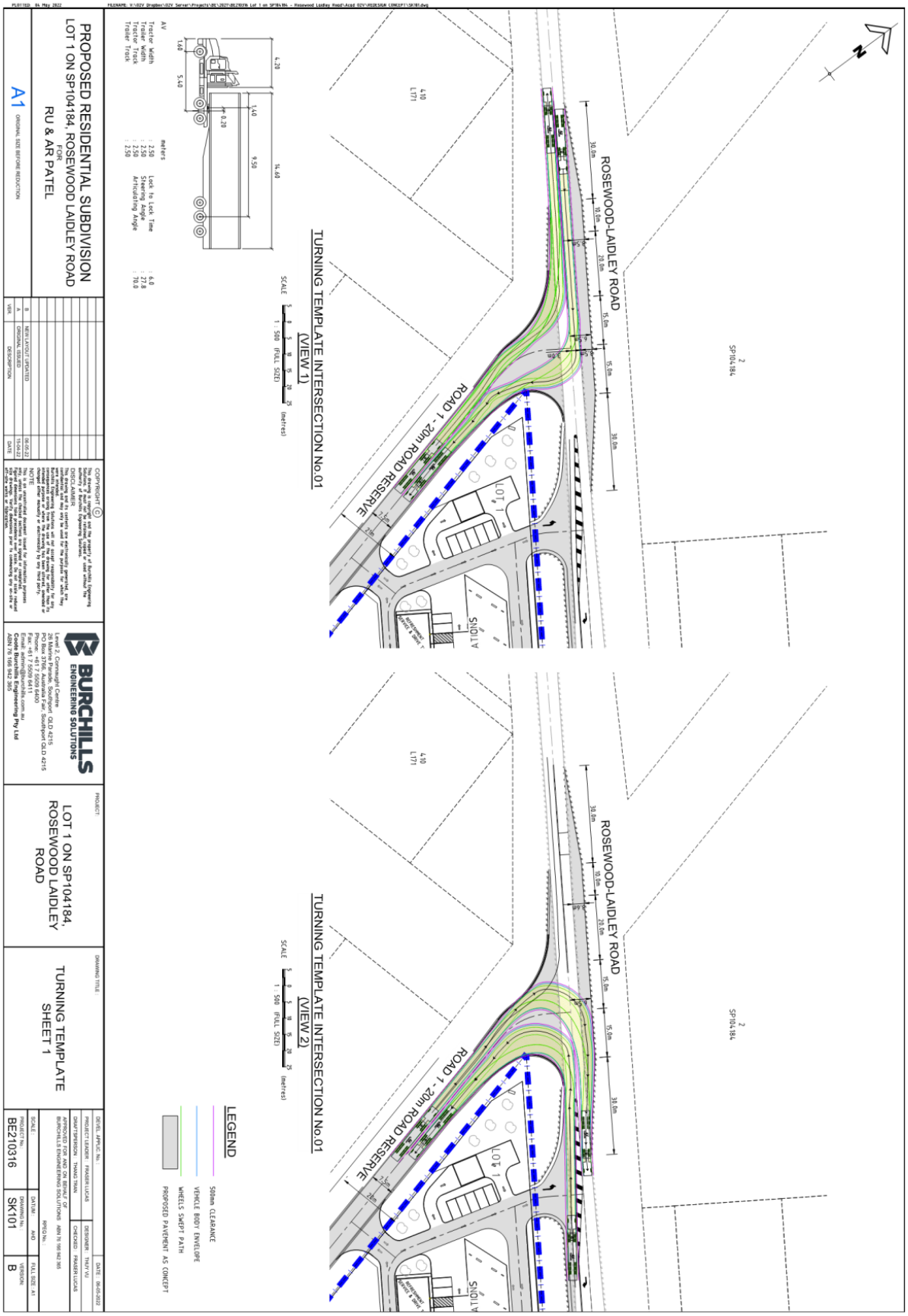
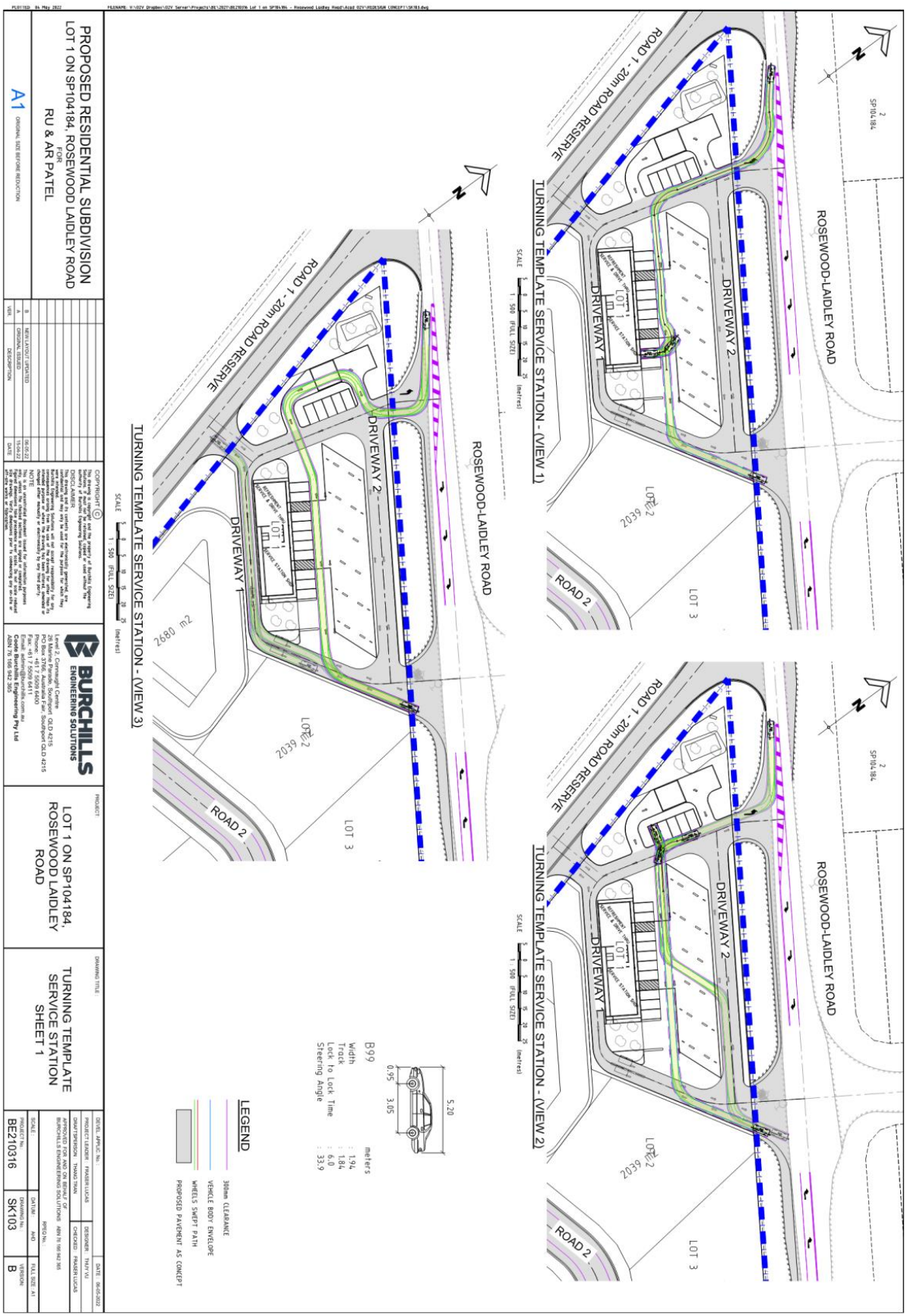
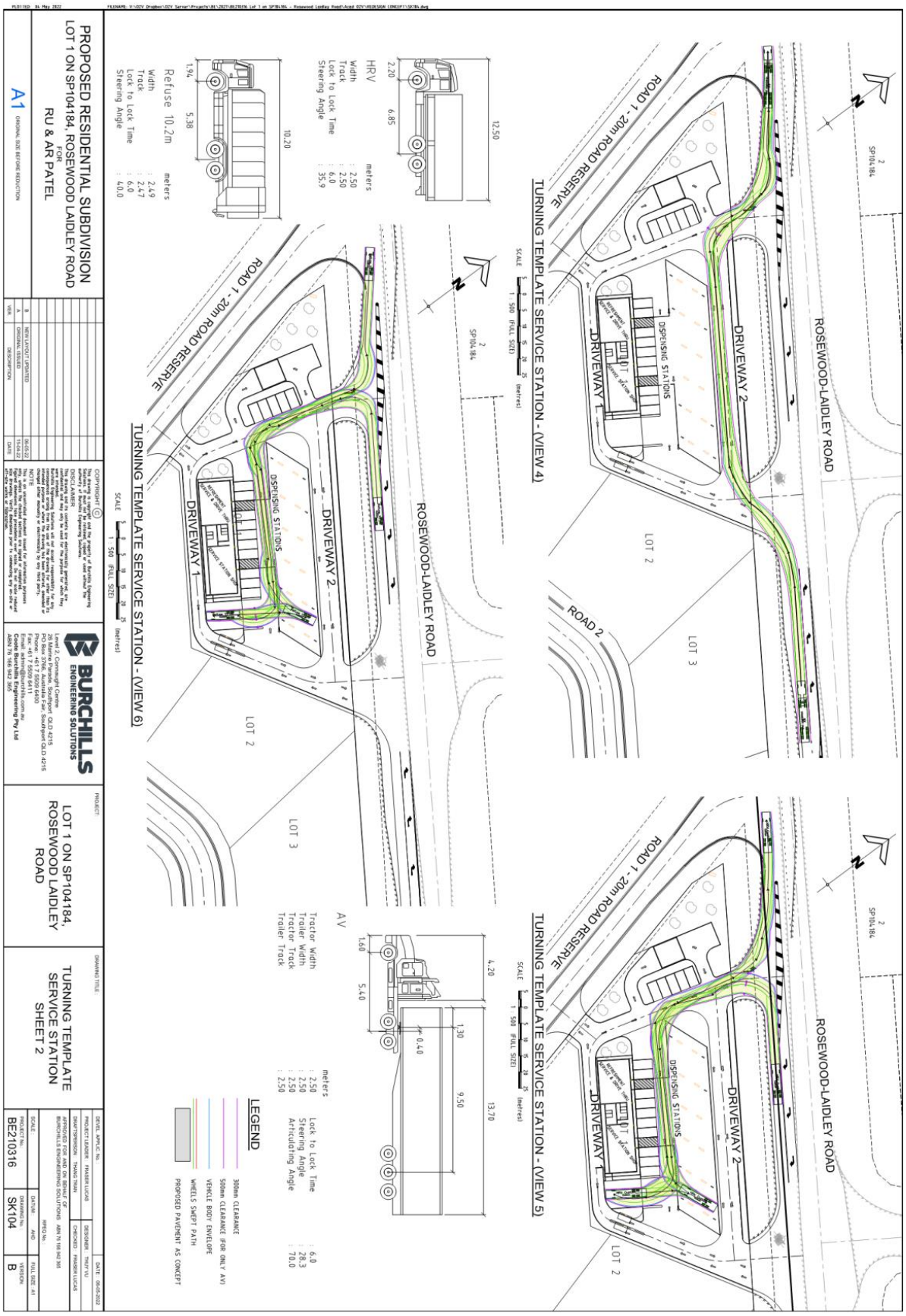
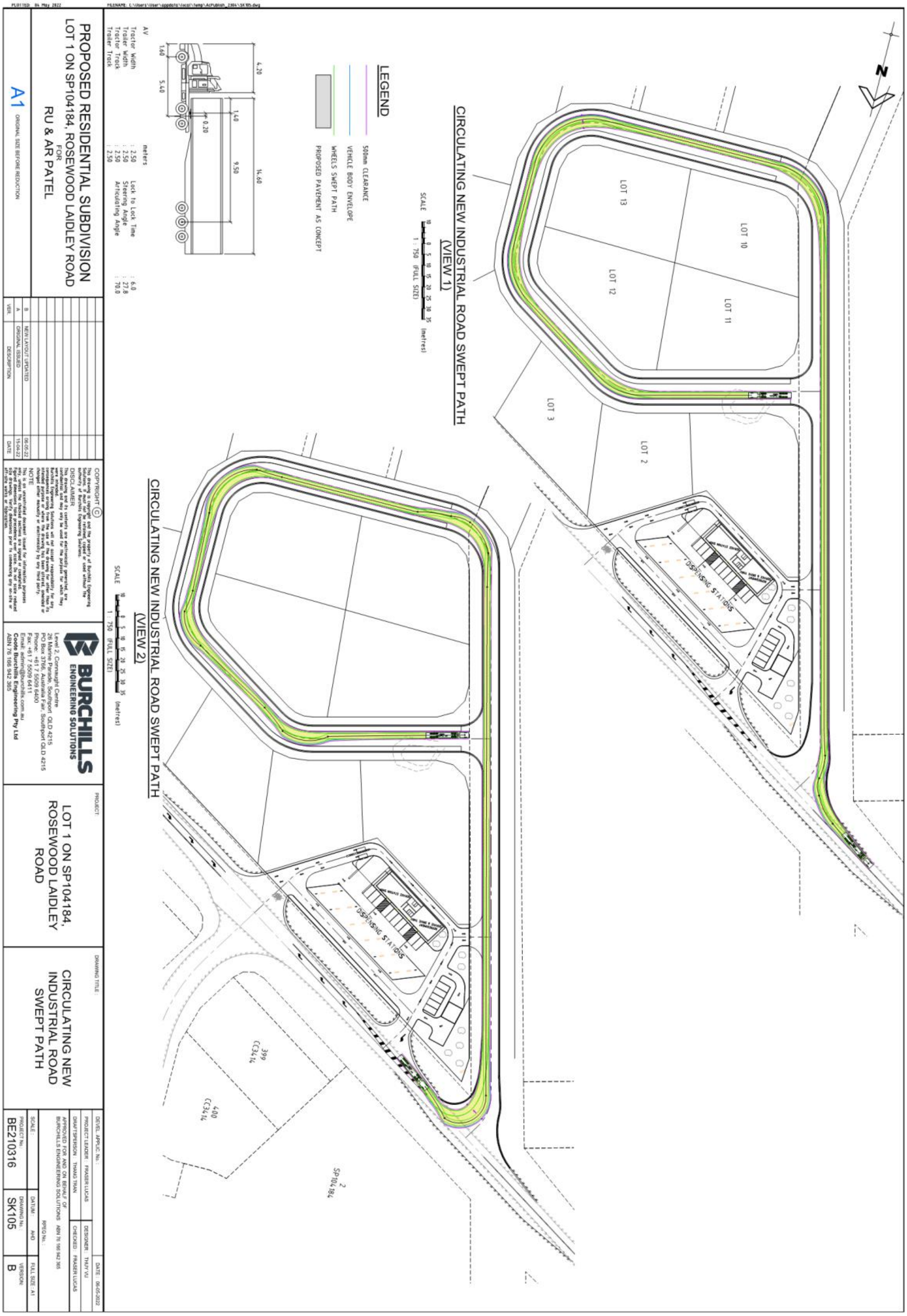
Appendix D – Swept Path Analysis and Crown St Intersection

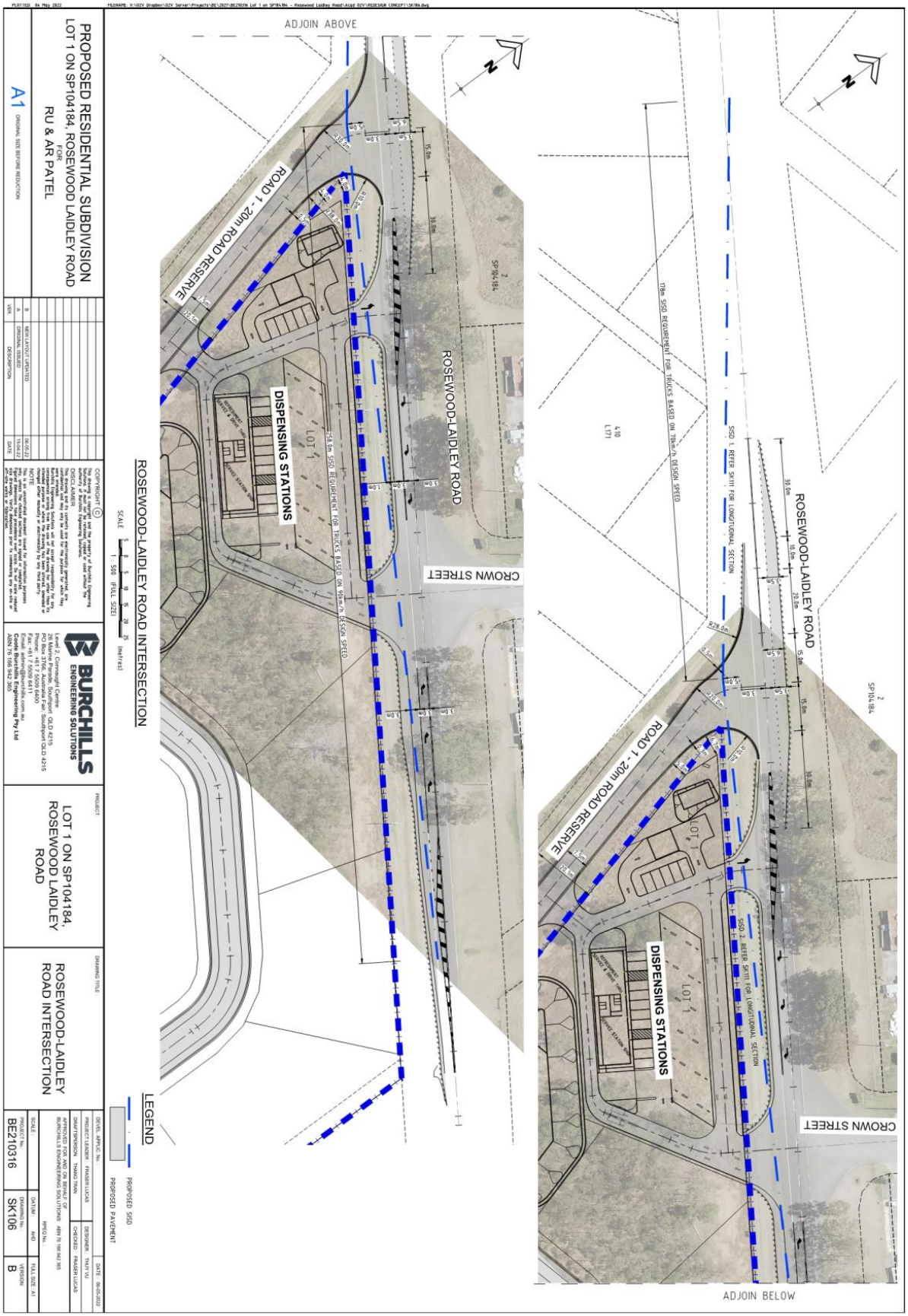

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SHEET 1
BURCHILLS ENGINEERING SOLUTIONS
TURNING TEMPLATE INTERSECTION No.01 (VIEW 1)
TURNING TEMPLATE INTERSECTION No.01 (VIEW 2)
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
LOT 1
SP104184
LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
BE210316
SK101
B

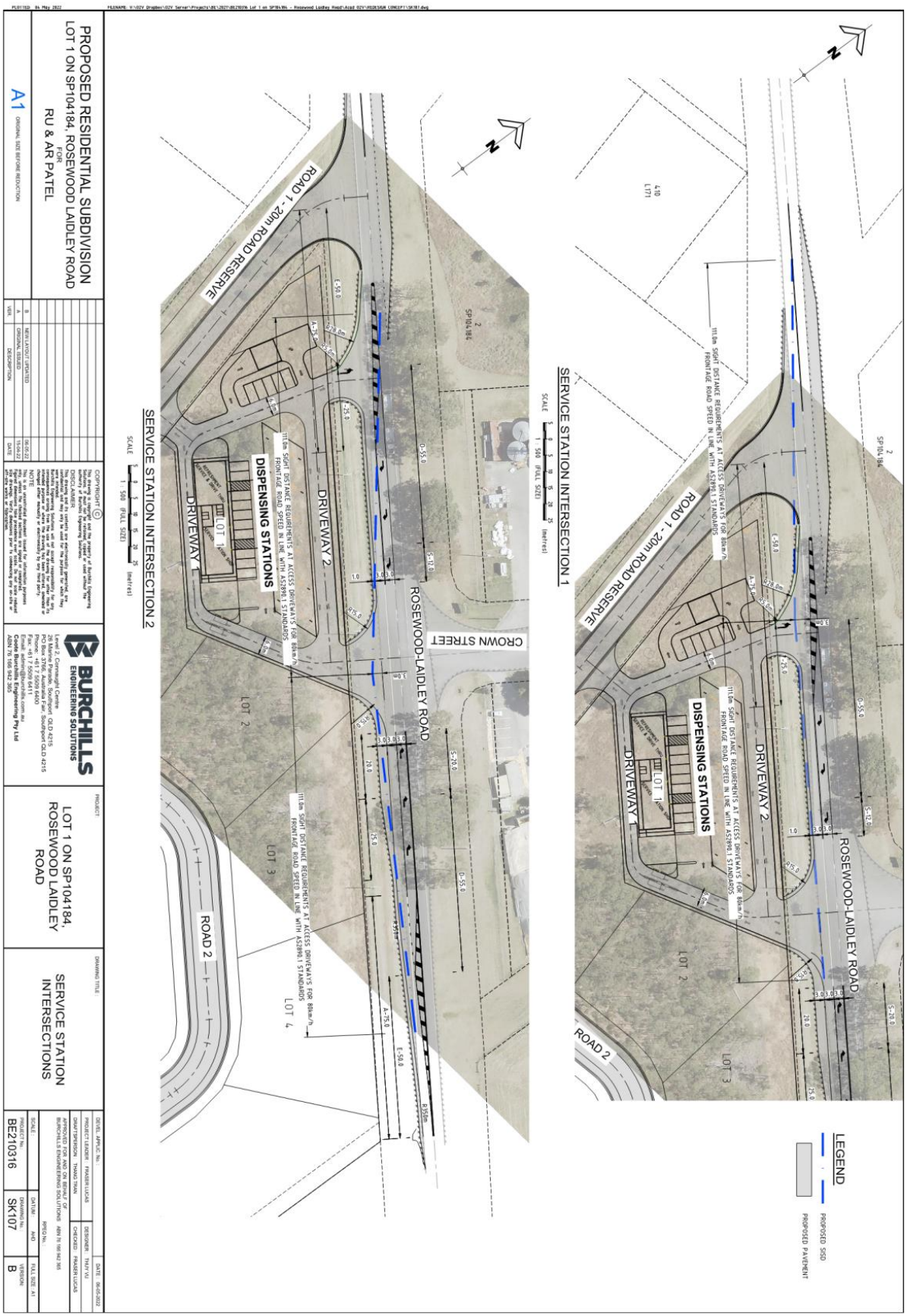

LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
TURNING TEMPLATE INTERSECTION No.02 (VIEW 1)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 2)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 3)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 4)
ROAD 1 - 20m ROAD RESERVE
ROAD 1
20m ROAD RESERVE
BASIN 1
LOT 1
LOT 2
LOT 10
LOT 11
LOT 12
LOT 13
SERVICE STATION SIGN
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1 ORIGINAL SIZE BEFORE REDUCTION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SHEET 2
BURCHILLS ENGINEERING SOLUTIONS
PROJECT LEADER: FRASER LUCAS
DESIGNER: THUY VU
CHECKED: FRASER LUCAS
PROJECT No: BE210316
DRAWING No: SK102
VERSION: B

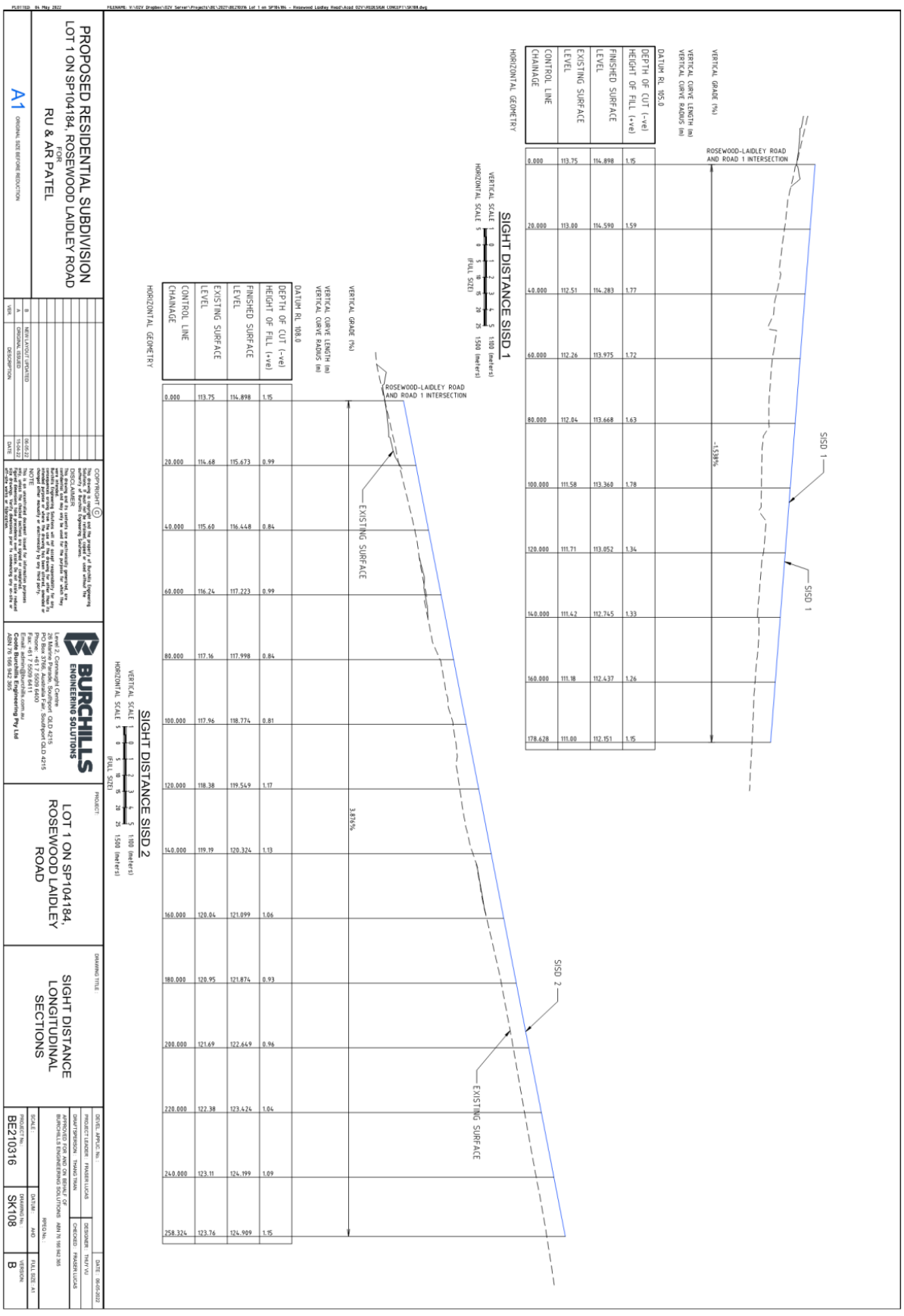

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
DRIVEWAY 1
DRIVEWAY 2
ROAD 2
LOT 1
LOT 2
LOT 3
2039 m2
2680 m2
TURNING TEMPLATE SERVICE STATION - (VIEW 1)
TURNING TEMPLATE SERVICE STATION - (VIEW 2)
TURNING TEMPLATE SERVICE STATION - (VIEW 3)
SCALE 1 : 500 (FULL SIZE)
LEGEND
300mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
B99
Width : 1.94
Track : 1.84
Lock to Lock Time : 6.0
Steering Angle : 33.9
meters
5.20
0.95
3.05
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SERVICE STATION SHEET 1
BE210316
SK103
B


PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SERVICE STATION SHEET 2
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK104
B
TURNING TEMPLATE SERVICE STATION - (VIEW 4)
TURNING TEMPLATE SERVICE STATION - (VIEW 5)
TURNING TEMPLATE SERVICE STATION - (VIEW 6)
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
ROAD 2
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
LOT 2
LOT 3
SP104184
HRV
Refuse 10.2m
AV
LEGEND
300mm CLEARANCE
500mm CLEARANCE (FOR ONLY AV)
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT


CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH (VIEW 1)
CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH (VIEW 2)
LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
LOT 10
LOT 11
LOT 12
LOT 13
LOT 3
LOT 2
DISPENSING STATIONS
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH
BE210316
SK105
B
A1


ADJOIN ABOVE
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
DISPENSING STATIONS
CROWN STREET
ROSEWOOD-LAIDLEY ROAD INTERSECTION
SCALE 1 : 500 (FULL SIZE)
LEGEND
PROPOSED SISD
PROPOSED PAVEMENT
ADJOIN BELOW
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROSEWOOD-LAIDLEY ROAD INTERSECTION
BE210316
SK106
B


PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
SERVICE STATION INTERSECTIONS
BURCHILLS ENGINEERING SOLUTIONS
SERVICE STATION INTERSECTION 1
SERVICE STATION INTERSECTION 2
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
ROAD 2
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
CROWN STREET
LOT 1
LOT 2
LOT 3
LOT 4
LEGEND
PROPOSED SSD
PROPOSED PAVEMENT


PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
SIGHT DISTANCE LONGITUDINAL SECTIONS
BURCHILLS ENGINEERING SOLUTIONS
SIGHT DISTANCE SISD 1
SIGHT DISTANCE SISD 2
ROSEWOOD-LAIDLEY ROAD AND ROAD 1 INTERSECTION
EXISTING SURFACE
SISD 1
SISD 2
-1.538%
3.876%
VERTICAL GRADE (%)
VERTICAL CURVE LENGTH (m)
VERTICAL CURVE RADIUS (m)
HORIZONTAL GEOMETRY
CONTROL LINE CHAINAGE
EXISTING SURFACE LEVEL
FINISHED SURFACE LEVEL
DEPTH OF FILL (+ve)
DEPTH OF CUT (-ve)
DATUM RL 105.0
DATUM RL 108.0
HORIZONTAL SCALE
VERTICAL SCALE
(FULL SIZE)
BE210316
SK108
B

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Rosewood Laidley Road, Laidley
Vegetation, Fauna & Koala Management Plan

Client: RAMA Real Estate
Project No: BE210316
Document No: BE210316-RP-VFKMP-01

May 2022

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Document Control Record

Prepared by:	Kaidon Anderson
Position:	Environmental Scientist
Date:	May 2022

Approved by:	Caroline Kelly
Position:	Principle Environmental Scientist
Date:	May 2022

Version No.	Description	Date	Prepared	Approved
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01	Revised Issue	10.05.2022	KA	CK

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Executive Summary

Burchills were engaged by RAMA Real Estate to prepare a Vegetation, Fauna and Koala Management Plan for a propsoed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

Field surveys were undertaken during August and November 2021. Three (3) vegetation associations were classified across the site including:

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. Of these species recorded on-site, 40 were native and four (4) were introduced. No conservation significant species of fauna were encountered on-site, nor was any direct or indirect evidence observed that would suggest the site is utilised by conservation significant fauna species.

Clearing of the entirety of Vegetation Unit A and majority of Vegetation Unit C will be required to facilitate the works. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B. The layout was designed to avoid and minimise impacts on the areas of the site with the highest value Core Koala Habitat to the greatest extent possible. Significant Residual Impacts are proposed to be mitigated by a combined financial and restoration offset to achieve a suitable conservation outcome.

This management plan provides recommendations for the clearing, construction and restoration works to mitigate impacts on vegetation and fauna and incorporates a Koala Management Plan that provides specific recommendations for this conservation significant species.

All works will be undertaken in accordance with this management plan and the conditions of approval.

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Table of Contents

1. Introduction 7
1.1 Scope 7
1.2 Proposed Development 7
2. Site Description 9
2.1 Location Context 9
2.2 Existing vegetation 11
2.3 Fauna Survey Results 13
2.4 Topography and Drainage 13
3. Site Constraints 15
4. Responsibilities and Roles 17
5. Vegetation Clearing 18
6. Vegetation Management Plan 19
6.1 Pre-operational Works Actions 19
6.1.1 Site Inductions 19
6.1.2 Tree Protection Fencing 19
6.2 Operational Works 21
6.3 Methods of Vegetation Removal and Disposal 21
6.4 Protection of Vegetation to be Retained 22
6.5 Erosion and Sediment Control 22
7. Fauna Management Measures 23
7.1 Pre-operational Works Actions 23
7.2 Operational Works Actions 24
7.2.1 Habitat Features 27
7.2.2 Terrestrial Species 27
7.2.3 Native Bees 27
7.2.4 Dam Dewatering 28
7.2.5 Injured Wildlife 28
7.3 Post-Clearing Works Actions 28
7.3.1 Reporting 28
8. Koala Management Plan 29
9. Conclusions 30
10. References 31

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Tables

Table 3.1 Management Constraints for Subject Site 15
Table 4.1 Roles and Responsibilities 17
Table 7.1 Pre-clearing Fauna Mitigation Strategy 24
Table 7.2 Vegetation Clearing Fauna Management Measures 26

Figures

Figure 1.1 Proposed Plan of Development (Santoshi Development Consultants 2021) 8
Figure 2.1 Site Location (Google Maps, 2021) 9
Figure 2.2 Site Aerial Photography (MetroMap 2021) 10
Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)* 10
Figure 2.4 Mapped vegetation associations 12
Figure 2.5 Site Topography 14
Figure 6.1 Tree Protection Fencing Detail 20

Appendices

Appendix A – Vegetation Clearing and Retention Plan
Appendix B – Fauna Species Recorded On-Site
Appendix C – Emergency and Veterinarian Contact Details

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Definitions and Acronyms

AS4970	Australian Standard AS4970: Protection of trees on development sites
DBH	Diameter at Breast Height measured in accordance with AS4970
DES	Queensland Department of Environment and Science
LVRC	Lockyer Valley Regional Council
Koala Spotter	A person who has qualifications and experience, or demonstrated skills and knowledge in (a) locating koalas in koala habits; or (b) conducting arboreal fauna surveys
Project Arborist	Minimum AQF Level 5 Arborist as identified in this s4 of this VMP
Site Supervisor	Person responsible for all site works
Spotter Catcher	DES licensed fauna spotter catcher
TPZ	Tree Protection Zone as determined in accordance with AS4970

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1. Introduction

This Vegetation, Fauna & Koala Management Plan (VFKMP) has been prepared for RAMA Real Estate for a proposed industrial subdivision at Lot 1 SP104184 Rosewood Laidley Road, Laidley, within the Lockyer Valley Local Government Area (the subject site).

This plan has been prepared in accordance with industry guidelines and standards and outlines all reasonable measures to be undertaken during the construction phase of the development to minimise and / or prevent harm to native fauna and flora on and adjacent to the subject site.

1.1 Scope

The scope and objectives of this VFKMP are to:

- Summary of existing environment including vegetation communities, koala habitat and other ecological values based on the results of the Ecological Site Assessment;
- Provide a description of vegetation and habitat values impacted by proposed clearing;
- Determine the level of fauna management required based on site observations;
- Outline management strategies and actions to be implemented to mitigate the risk of harm to native fauna and retained vegetation on site; and
- Provide a management plan specific to the koala (*Phascolarctos cinereus*) including:
  (a) all potential risks to koalas for all construction activities associated with the proposed development including (but not limited to) clearing, earthworks and building works
  (b) all management measures that will be implemented to address those risks
  (c) the process and measures to address accidental injury of death of koalas
  (d) the process for implementing the management plan including:
  (i) identifying the person responsible for implementing the plan (e.g., site supervisor, foreman)
  (ii) the process for training all contractors working on the site to comply with the plan; and
  (e) the proposed approach to ensuring compliance with the clearing requirements prescribed in section 10 and 11 of the Nature Conservation (Koala) Conservation Plan 2017.

1.2 Proposed Development

The proposal seeks to reconfigure the existing 6.09ha lot into 13 lots, comprising one (1) 4,867m² lot that will house a service station in the northwest of the site, 12 industrial lots across the balance of the site varying between 2,000m² and 3,700m², one (1) 2,680m² detention basin. One (1) 13,230m² environmental covenant is proposed to be registered over Lot 9 within the south of the site. The northern portion of the currently undeveloped road reserve on the site's western boundary will be constructed to facilitate site access. The southern portion of the site fronting Milne Road is proposed to be resumed by Lockyer Valley Regional Council.

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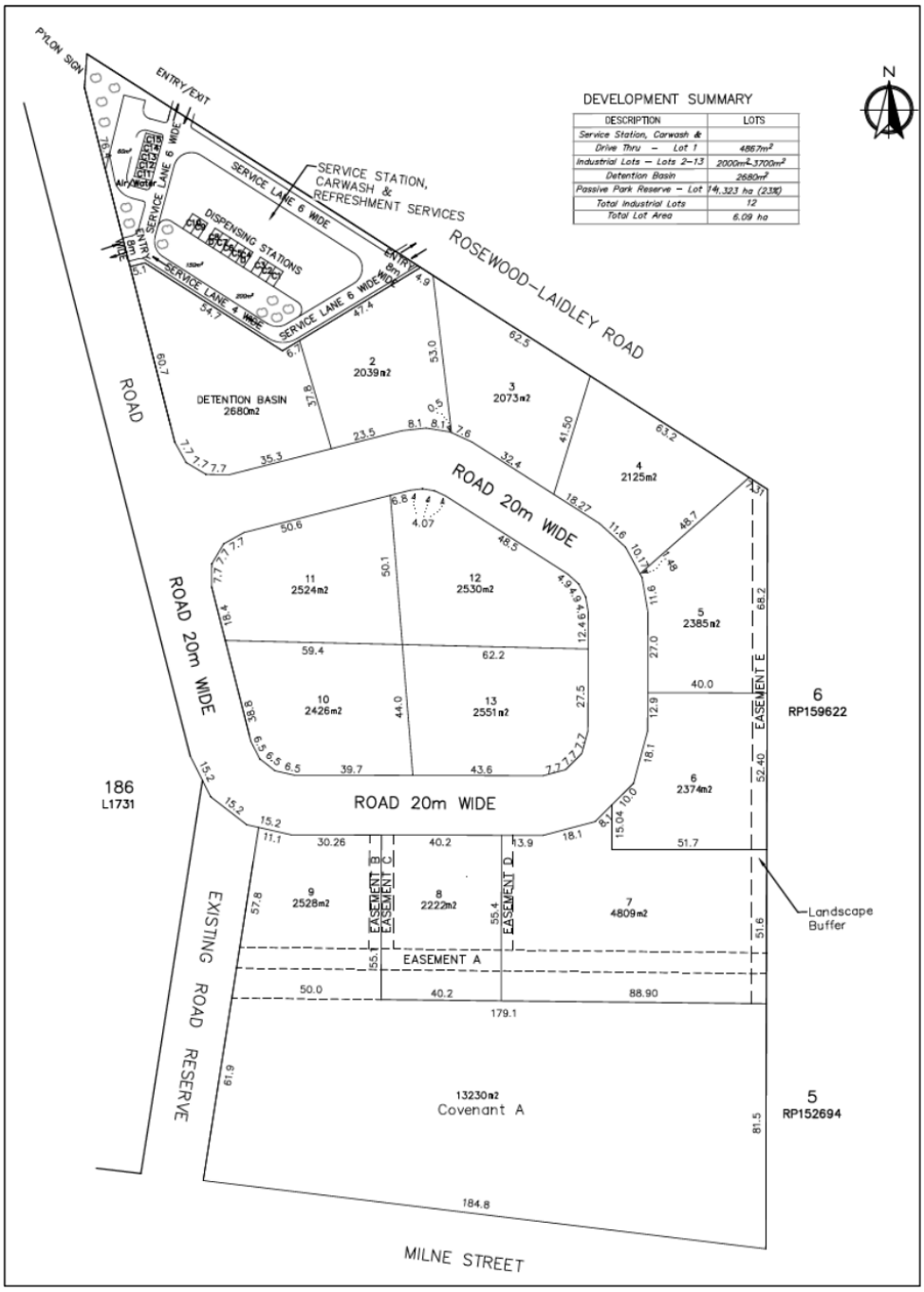

Figure 1.1 Proposed Plan of Development (Santoshi Development Consultants 2021)

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2. Site Description

2.1 Location Context

The subject site is located within Laidley, approximately 2.5km south of the town centre and occupies an area of approximately 6.09ha (Figure 2.1). The site is mostly vegetated with no existing dwellings or structures (Figure 2.2). A small constructed dam is present within the northwest part of the site

The site falls within the Urban Footprint under the *Southeast Queensland Regional Plan 2017* and is zoned as Industrial under the *Laidley Shire Planning Scheme 2003 Version 3* (Figure 2.3). The surrounding land use pattern is generally industrial and rural.

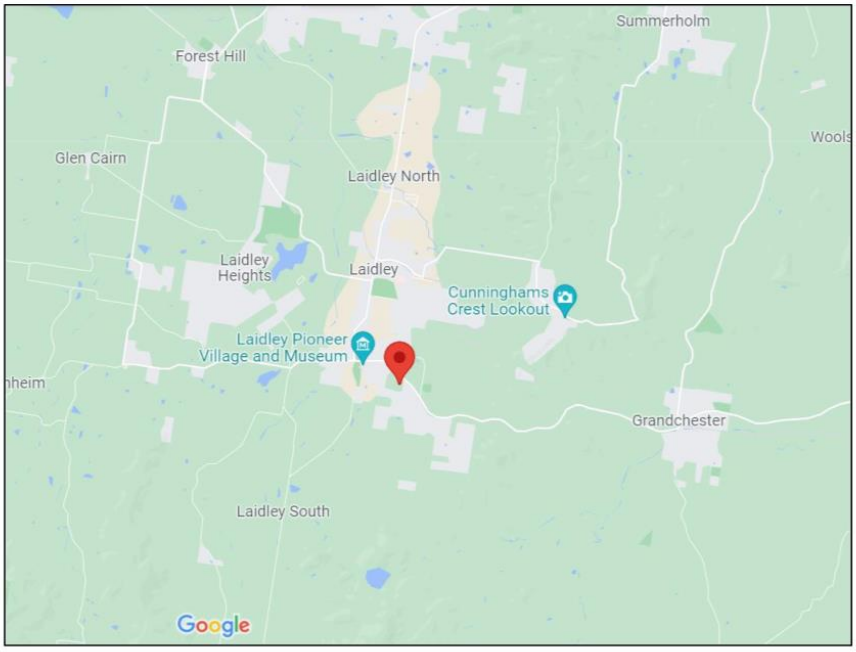

Figure 2.1 Site Location (Google Maps, 2021)

Figure 2.2 Site Aerial Photography (MetroMap 2021)

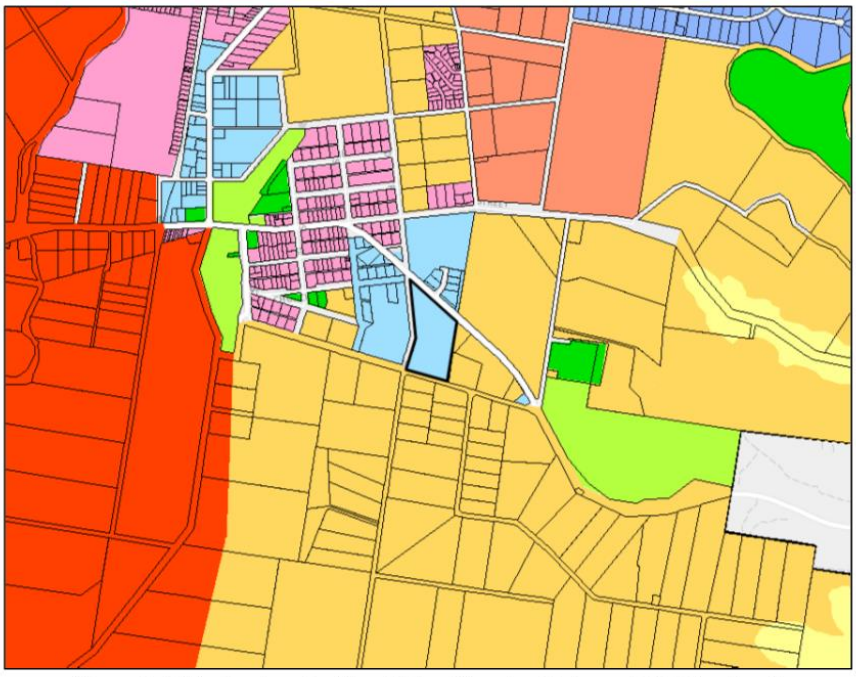

Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)*

2.2 Existing vegetation

The Ecological Site Assessment (ESA; Burchills, 2022b) recorded a total of 51 species of flora comprising of 18 native species and 33 non-native species, including nine (9) species identified as Restricted Invasive Plants under the *Biosecurity Act 2014*.

Three (3) vegetation associations were mapped over the site (Figure 2.4):

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation. details regarding the mapped vegetation associations are provided in the Ecological Site Assessment (Burchills, 2022b).


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0 10 20 30 40 50m
Lot 1 Rosewood Laidley Road, Laidley
Figure 2.4
Vegetation Units
N
Location of the site within Lockyer Valley Region
Legend
Site Location
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-11-2021
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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2.3 Fauna Survey Results

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. A list of these species is provided in Appendix B.

For this report, a habitat tree is defined as *"a living or dead tree greater than 80 centimetres diameter at 1.4 metres that has one or more hollows within its trunk or branches greater than 10 centimetres in entrance diameter".* One (1) tree meeting this criteria was present on the site – a stag located in Vegetation Unit C (refer to Figure 2.4).

No species scheduled as Endangered, Vulnerable or Near Threatened (EVNT) under the Queensland NCA and / or Commonwealth EPBC Act were observed within the subject site during surveys. Targeted searches for EVNT fauna (e.g. Koala SAT surveys) did not identify any use of these species on the site.

Three (3) conservation significant species are identified as possibly occurring within the subject site based on presence of suitable habitat and / or foraging resources: *Hirundapus caudacutus* (White-throated needletail), *Phascolarctos cinereus* (Koala) and *Pteropus poliocephalus* (Grey-headed flying-fox). The complete results for this analysis including a description of habitat requirements for each species are presented in the Ecological Site Assessment (Burchills 2022b).

2.4 Topography and Drainage

The subject site falls within the Laidley Creek sub-catchment, which is a tributary of Lockyer Creek, and the Brisbane River. No waterways or drainage lines are present on the site, although a small constructed dam is present. The site rises to an elevation of 141m AHD within its centre, falling to northwesterly to 115m AHD and southeasterly to 121m AHD on its northern and southern boundaries, respectively. At a site level, stormwater is conveyed via sheetflow to both the northwest and southwest of the site from this central point.

Figure 2.5 Site Topography

3. Site Constraints

A summary of the major management constraints present on the site is outlined in Table 3.1

Table 3.1 Management Constraints for Subject Site

Constraint	Present	Absent	Comments
Easements and/or Restrictions on Title		x	No easements are present on the site[1].
Zoning Provisions		x	The subject site is zoned as Commercial[2].
Biodiversity, Waterways and Wetlands	x		The subject site is mapped within the Moderate Environmental Significance Area[2]. No wetlands or watercourses are mapped within the site[2].
Bushfire Risk	x		Approximately 50% of the site is mapped as Medium Potential Bushfire Risk[2].
Nature Conservation Areas		x	There are no Nature Conservation Areas present on the site[2].
Airport Environs		x	There are no Airport Environs present on the subject site[2].
Aboriginal Cultural Heritage		x	No known Aboriginal cultural heritage areas are present on the subject site[2].
European Cultural Heritage		x	No known European cultural heritage areas are present on the subject site[2].
Acid Sulfate Soils - Risk		x	The entirety of the subject site is present above Land at or Below 20m AHD[1].
Flood Prone		x	No flood hazard is present on the site[2].
Landslide Hazard and Steep Land	x		Areas of Slopes Greater than 15% are mapped within the site[2].
Tree Preservation Order		x	No Tree Preservation Orders are present on the subject site[2].
Mapped Vegetation	x		Category C High Value Regrowth Vegetation is mapped over the majority of the site[1].
Mapped Essential Habitat	x		Mapped Essential Habitat for *Phascolarctos cinereus* (Koala) and *Adelotus brevis* (Tusked frog) is present on the subject site[3].
Wildlife Online – Threatened Species	x		Wildlife Online search indicates that one (1) species of threatened flora and two (2) species of threatened fauna and five (5) Special Least Concern species of fauna have been recorded within 2km of the site[3].
Observed Threatened Species - Fauna		x	No evidence of conservation significant fauna was observed on the site[4].
Observed Threatened Species - Flora		x	No evidence of conservation significant flora was observed on the site[4].

Constraint	Present	Absent	Comments
South East Queensland Koala Conservation Strategy	x		Core Koala Habitat is mapped within the site. The site is not within a Koala Priority Area[1].

Notes:

[1] – As identified in Queensland Globe (2021)

[2] – As identified in the Laidley Shire Planning Scheme Version 3 Interactive Mapping

[3] – As identified by Wildlife Online Species Search results.

[4] – As identified in the Ecological Site Assessment (Burchills 2021).

4. Responsibilities and Roles

The site construction manager (Superintendent) is responsible for:

- All site works including overseeing vegetation clearing, health and safety of fauna and adhering to the development Conditions, Council guidelines and Australian Standards including AS4970.
- Overseeing implementation of this Vegetation and Fauna Management;
- Provision of advice in regard to tender and contract specifications and documentation;
- Provision of advice to site contractors; and
- Inductions for all site workers.

Roles and Responsibilities are further detailed in sections 5 and 6 of this VFMP and summarised in Table 4.1. Contact details should be completed prior to the commencement of works.

Table 4.1 Roles and Responsibilities

Requirement	Responsibility	Contact Details
Engage Project Arborist	Project Manager Superintendent	
Engage a registered fauna spotter-catcher	Project Manager Superintendent	
Undertake arboricultural impact assessment of trees to be retained – if required	Project Arborist	
Undertake Preclearing Fauna Assessment	Spotter Catcher	
Awareness of roles and responsibilities	Site Supervisor	
Supervise works within/near TPZs of retained trees – if required	Project Arborist	
Mark all habitat features such as hollows, wood stockpiles and nest sites	Spotter-catcher	
Mark 'no-go' zones around vegetation to be retained	Superintendent	
Relocate habitat features	Spotter-catcher	
Fauna flushed or hand caught prior to clearing	Spotter-catcher	

5. Vegetation Clearing

Clearing of all of Vegetation Units A and majority of Vegetation Unit C within the site will be required to facilitate the proposed works, including earthworks within the site and the road reserve in the west. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B.

The proposed vegetation clearing will be mitigated through a financial offset that is detailed in the KHVA (Burchills 2022c).

Recommendations are provided in Section 7 of this report to mitigate impacts and minimise the risk of physical harm to fauna during the proposed works.

The Tree Clearing Plan provided in Appendix A shows the impact area, vegetation to be removed and retained, clearing direction and vegetation protection fencing that is required to be in place during clearing works.

The experience you deserve

6. Vegetation Management Plan

The actions outlined in the following sections are to be adhered to during operational works on the subject site.

6.1 Pre-operational Works Actions

Prior to the commencement of works the Superintendent is responsible for ensuring that the following occurs:

- Tree protection fencing has been installed around the Tree Protection Zones of protected vegetation to be retained on adjoining sites; and
- Any required remedial and / or protective tree works (e.g. root pruning, canopy pruning, etc).

6.1.1 Site Inductions

A responsibility of the Superintendent will include provision of site inductions for all staff who will be working on site. The purpose of the site induction is to instruct all contractors and sub-contractors on their responsibilities regarding the protection of vegetation. All site workers must attend an induction; a record will be kept of all persons attending inductions and cards will be issued to site workers upon completion. This procedure will enable Lockyer Valley Regional Council Officers to ensure that all site workers have been made fully aware of their responsibilities associated with vegetation management.

6.1.2 Tree Protection Fencing

To ensure the ongoing viability of trees to be retained, tree protection fencing is to be installed in accordance with *AS4970-2009: Protection of trees on development sites* (Figure 6.1). The fencing will ensure that no earthworks or prohibited activities occur within areas that could adversely impact upon trees to be retained.

Tree protection fencing must comply with the following:

- In accordance with *AS4970-2009 Protection of trees on development sites*, fencing is to be installed before any machinery or materials are brought onto the site;
- Fencing is to be installed prior to any pre-start meetings with Lockyer Valley Regional Council Officers;
- Fencing is to remain in place for the duration of operational works (as determined by the Superintendent);
- Signage is to be displayed on the exterior of the tree protection fence that displays contact details for the civil contractor;
- Signs must be made in accordance with *Australian Standard AS 1319-1994; Safety signs for the occupational environment*; and
- Signage is to remain in place for the duration of the operational works.

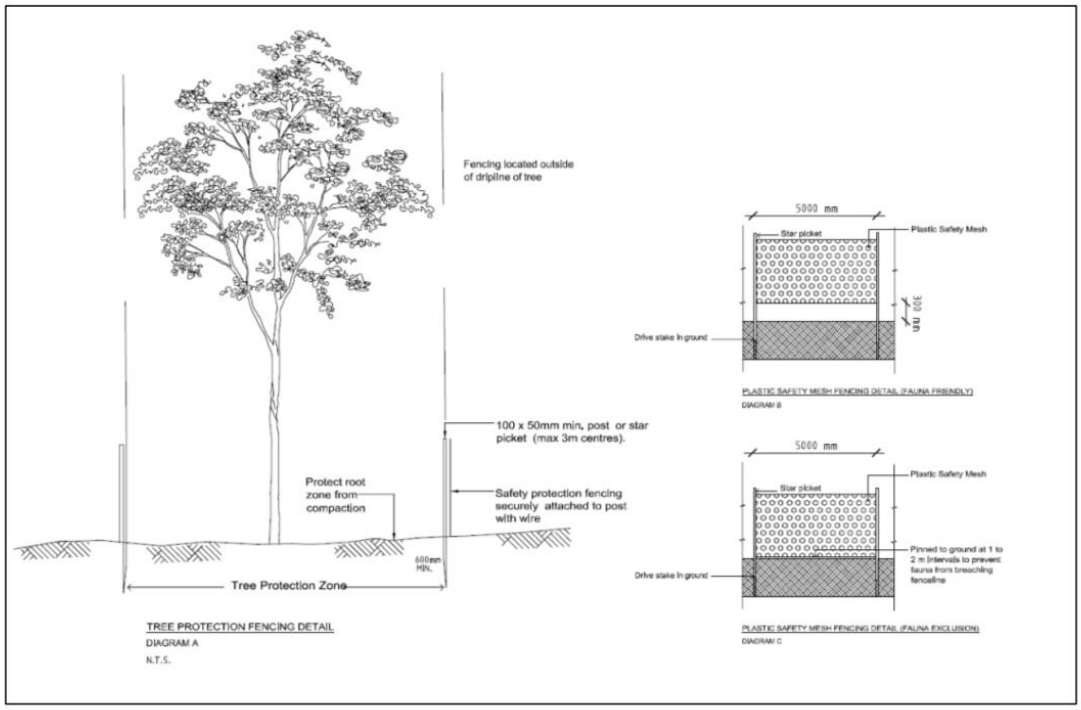

Figure 6.1 Tree Protection Fencing Detail

Non-essential works are to be excluded from the Tree Protection Zones and all construction related activities are to be in accordance with approved plans. If temporary or permanent vehicle access is required through Tree Protection Zones, compaction bridging is to be installed and maintained in accord with *AS4970-2009: Protection of trees on development sites.*

Within the Tree Protection Zone, the following activities are not permitted:

- Storage and mixing of materials;
- Construction of unapproved pathways / trails;
- Vehicle parking;
- Earthworks;
- Construction of site office or shed;
- Storage of machinery and / or vehicles;
- Dumping of site waste;
- Liquid disposal;
- Stockpiling of mulch / chipped material / soil, rubble or debris;
- Refuelling of machinery;
- Wash down and clearing of equipment;
- Lighting of fires;
- Unauthorised application of pesticide, herbicides or chemicals;

- Erosion resulting from site works;
- Unauthorised vegetation removal; and
- Introduction of non-native species.

6.2 Operational Works

To minimise disturbances to environmental values during the Construction Phase, the following general recommendations are provided:

- All parties involved in construction works of the site should be aware of:
  - 'No go' areas, such as drainage lines, tree protection zones and areas of vegetation to be retained, where construction vehicles are not permitted; and
  - The importance of the nature conservation values associated with the site;
- Penalty provisions for non-compliant construction contractors should be considered by the development proponent. For example, a damage clause could be incorporated into the contract document such that where any vegetation or habitat values, which are identified as a 'no go' area, are damaged, the contractor will pay to the proponent a specified monetary penalty;
- Appropriate scale machinery should be used;
- Construction methods used should support the retention of important natural values;
- Undergrowth should be retained where possible during construction. Surface grass cover, leaf litter and mulch should be retained to minimise erosion and runoff;
- Machinery used in weed infested areas should be quarantined or thoroughly cleaned before use in areas of little or no weed infestation;
- Site entry / exit points should be limited and clearly identified on the ground (e.g. with star pickets); and
- Vehicle servicing should be conducted off site in a suitable location to avoid the risk of fuel / chemical spillage.
- Maintain a high standard of housekeeping and ensure that materials are not left where they can be washed or blown away;
- Regularly remove waste from the site during construction.

6.3 Methods of Vegetation Removal and Disposal

In order to minimise waste from the site, all felled timber will be recycled. Tree species suitable for milling will be removed from the site and transported to a timber milling establishment. Remaining timber is to be chipped and mulched on-site. Where possible, chipped and mulched material is to be used on site for the restoration works and batter stabilisation or other approved site works. This material will be stockpiled for a minimum of six (6) weeks prior to use on-site to prevent nitrogen drawdown.

Non-recyclable debris is to be transported from the site and disposed of at an approved Council waste facility. Pit burning or any other method of combustion of vegetation is prohibited, both on or off-site. Any declared and / or environmental weeds removed from the site are to be disposed of at an approved Council green waste facility.

6.4 Protection of Vegetation to be Retained

Vegetation on adjoining properties will be protected during the clearing and operational stages of the development. The following general protective measures apply to this vegetation:

- Tree Protection Zones are to be fenced in accordance with this report and construction activities are to be confined to the approved development footprint;
- Stem wraps or other protective devices are to be implemented where deemed necessary by the Superintendent to protect trunks and branches from damage during specific demolition and construction activities;
- Where a protected tree's tree protection zone (TPZ), root zone and / or trunk could be damaged by the proposed earthworks, a qualified (AQF5) Arborist should be contracted to:
    - Provide advice regarding the protection of the subject tree(s);
    - Treat any roots that may be exposed during the construction; and
    - Treat any damage that may occur during construction.
- No materials, substances (e.g. herbicides, fuel, concrete, etc.) or machinery are to be stored within Tree Protection Zones. Any potentially hazardous substances are to be safely stored within a secure area away from vegetation to be retained;
- Sufficient training is to be provided to all site staff in relation to vegetation protection measures;
- Pruning of protected trees is to occur as only where determined necessary by a qualified (AQF5) Arborist (e.g. crown thinning, removal of dead wood or damaged or overhanging limbs to promote sound tree form and health) – any such work on the trunk, foliage, or root system of the tree must adhere to the *Australian Standard AS 4373-2007: Pruning of amenity trees;*
- No protected tree is to be 'topped' and 'spur' or 'spike' climbing of any protected tree is to be avoided;
- If root pruning of a protected tree is required, it is to be undertaken using a high pressure, needle point water jet; and
- Regular assessment of trees is to occur to ensure ongoing health during operational works.

Any damage to protected trees, or surrounding soil, is to be remedied as soon as is practicable.

6.5 Erosion and Sediment Control

An Erosion and Sediment Control Plan (ESCP) will be prepared for the proposed works at Detailed Design / Operational Works phase. The ESCP will be prepared in accordance with the *Planning Scheme's Sediment and Erosion Control Constraint Code*, the *Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites* (The Institution of Engineers, Australia Queensland Division, June 1996) and industry best practices.

7. Fauna Management Measures

The actions outlined in the following sections are to be adhered to during the operational works on the subject site. They have been adapted or directly taken from the *Queensland Code of Practice for the Welfare of Wild Animals Affected by Land-Clearing and other Habitat Impacts and Wildlife Spotter/Catchers* (Hanger and Nottidge, 2009).

The principal management strategies are to:

- Identify wildlife and habitat features;
- Avoid impacting wildlife and habitat features where possible; and
- Mitigate and minimise these impacts

Wildlife is often unpredictable and highly mobile. Mitigating impacts is necessary in the overall management of fauna. Where wildlife is present, vegetation clearing should not commence until fauna have relocated or appropriate mitigation and management measure have been implemented.

7.1 Pre-operational Works Actions

All fauna management procedures shall be undertaken by a qualified wildlife specialist who holds a spotter-catcher licence issues by the Queensland Department of Environment and Science (DES). The spotter-catcher must undertake a pre-clearing clearing inspection of the site to identify and mark (i.e. using flagging tape) all potential habitat values (e.g. tree hollows, nests, fissures, dreys, arboreal termitaria, ground resources) that require specific management during clearing operations. A pre-clearing assessment must be undertaken by the spotter-catcher no more than two (2) weeks prior to the commencement of clearing and the pre-clearing inspection report provided to Council at least two (2) business days prior to the pre-start meeting for vegetation clearing.

The spotter-catcher Pre-Clearing report should identify the location of habitat features and specific operational works actions required prior to / during and after clearing.

The Pre-Clearing Report will include at a minimum:

- Habitat features identified and / or marked on site (hollow-bearing trees, nests, water bodies etc.)
- Fauna species observed during the assessment and expected to be encountered during works;
- Available habitat on and / or adjacent to the site suitable for release of fauna expected to be encountered; and
- Protection measure to be implemented including emergency contact information for nearest vet clinic and / or wildlife carer.

The spotter-catcher will be engaged to assess the level of use of native fauna and management of fauna during construction activities. The number of wildlife specialists contracted during works shall be determined by the number of machinery pieces in operation used for clearing. Typically, one (1) spotter-catcher will be required per machine.

A summary of the pre-clearing fauna mitigation strategies is presented in Table 7.1.

Vehicle exclusions and vegetation protection fencing measures must be in place prior to the pre-start meeting. All site staff are to be made aware of the no-go zones on site and the management measures adopted to minimise impacts to both fauna and flora.

Table 7.1 Pre-clearing Fauna Mitigation Strategy

Activity	Management Measure	Responsibility
Engage a registered fauna spotter-catcher	A registered spotter-catcher will need to be present on site for the duration of vegetation clearing activities. One spotter-catcher is required per machine. The spotter-catcher is the only person permitted to handle wildlife. The spotter-catcher is to be present at the pre-start meeting.	Superintendent / Project Manager
Awareness of roles and responsibilities	At the pre-start meeting, all site personnel will be made aware of their roles and responsibilities in relation to the welfare of wildlife.	Superintendent / Project Manager
Mark all habitat features such as hollows and nest sites	Nest and hollows should be clearly marked prior to clearing. Machinery operators made aware of these markings. Active nests should be avoided where possible. Marked trees / habitat features to be removed in the presence of the spotter-catcher.	Spotter-catcher
Mark 'no-go' zones around vegetation to be retained	Exclusion fencing or bunting should be erected around vegetation that is to be retained in accordance with this VFKMP. All site personnel made aware of the no-go zones on site.	Superintendent
Fauna flushed or hand caught prior to clearing	Immediately prior to the commencement of clearing works each day, the spotter-catcher is to examine the canopy and area to be cleared and remove nests, fauna or habitat features as required. Mobile species should be flushed towards retained vegetation on site or in adjacent areas. Species that are not highly mobile (e.g. skinks, snakes, small mammals), should be hand caught and relocated to suitable vegetation. Any dams or waterbodies to be filled are to be netted and fauna relocated in accordance with the conditions of the Spotter Catcher's license.	Spotter-catcher

7.2 Operational Works Actions

A licensed spotter-catcher must be present during all clearing activities. The site should be inspected by a spotter-catcher immediately prior to clearing and trees with hollows, termitaria and / or active nests clearly marked. The spotter-catcher will be in constant radio communication with machinery operators and on-ground clearing crews.

If clearing is undertaken over multiple days, prior to the commencement of works for clearing each day, the spotter-catcher is to examine the canopy and area to be cleared for arboreal mammals, nests and terrestrial habitat features, and remove and relocate fauna, nests or habitat features as

required. All terrestrial fauna should be flushed from the vegetation remnants immediately prior to clearing.

A cherry-picker is to be used for the removal of nests and for the dismantling of hollow bearing trees where necessary. However, this will only be undertaken where access and stable foundations for the cherry picker are available and where the operation of the cherry picker will achieve compliance with *Interim Australian Standard AS1418.10 [Int-2004]: Cranes, hoists and winches. Part 10: Elevating work platforms* and any other applicable Occupational Health and Safety requirements. The wildlife specialist will determine the requirement for use of the cherry picker on a case by case basis, considering the associated access and safety considerations. The instances in which the cherry picker will be used during clearing activities will be at the sole discretion of the wildlife specialist.

In instances where a cherry-picker cannot safely be used, an alternative is to leave hollow-bearing trees and remove surrounding vegetation. Hollow-bearing trees should be left standing at least overnight to allow for hollow-dwelling species, such as possums and gliders, to move from the site. Any hollow-bearing trees or those with arboreal termitaria are to be felled under the supervision of the spotter-catcher.

It is the responsibility of the spotter-catcher to identify significant wildlife safety risks both for wildlife retained on-site, as well as wildlife in adjacent areas or widely ranging wildlife that may use, or move through, the site during operational works.

Under-scrubbing of shrub and understorey vegetation is to take place prior to the clearing of mature and over-mature trees.

Clearing is to be directed towards the retained vegetation, as per the Tree Clearing Plan. Clearing must be completed by 6 p.m. and not commence before 6 a.m.

For this site, relocation of fauna to the retained vegetation of the site, or within other vegetation in the immediate area is considered a suitable option. However, the final relocation site will be determined at the discretion of the spotter-catcher.

Euthanasia should not be undertaken unless the animal is severely injured, or a listed pest species under local, State or Commonwealth legislation. In order of preference, outcomes for removed wildlife are as follows:

- Translocation to suitable retained vegetation on-site within the nominated area;
- Translocation to distant suitable habitat;
- Placement in an institution for rehabilitation and release, or where this is not possible for educational, conservation or research purposes; or
- Euthanasia.

Note: Euthanasia of animals must be carried out in accordance with the provisions of the Queensland *Animal Care and Protection Act 2001*. This will generally involve euthanasia being performed by a registered veterinarian following anaesthesia of the animal. Contact details of veterinarians located within the vicinity of the site are provided in Appendix C.

Where project timelines allow for flexibility in the scheduling of operational works, clearing should be timed to not take place in the main breeding period of Spring-Summer.

Any dogs brought onto the site must be on leash or contained at all times to avoid any harm to fauna. All site personnel will be made aware of this requirement during site induction.

A summary of the vegetation clearing fauna mitigation strategy is presented in Table 7.2.

Table 7.2 Vegetation Clearing Fauna Management Measures

Activity	Management Measure	Responsibility
Communication	The spotter-catcher is required to be in communication with machinery operators during the clearing operations, either by hand signals or two-way radio.	Spotter-catcher Machinery operator(s)
Direction of clearing	Clearing is to be directed towards to the ecological corridor within the centre of the site in order to direct wildlife to the retained vegetation (i.e. clearing on the western side of the site is to commence in an easterly / south-easterly direction and clearing on the eastern side of the site is to commence in a southerly direction, as outlined on the Tree Clearing Plan). Flushing of wildlife towards the adjacent road corridors should be avoided. Machine operators are to be made aware of the direction of clearing at the site pre-start meeting.	Superintendent
Clearing hollow-bearing or those with termitaria	Hollow-bearing trees should be left standing for at least 24 hours after surrounding vegetation has been cleared. This will allow any resident fauna a chance to move on their own volition. Trees with hollows should first be 'shaken' using the blades of the machinery where possible. This is to allow any resident arboreal fauna to escape prior to the tree being felled. Where possible, trees should be felled with the hollows / termitaria receiving minimal contact on impact. This can often be achieved through strategic excavation of select root structure and the weight of the machine incorporated to assist in the laying down of the tree on the ground. Adjacent felled trees may also be used to absorb the impact. Trees are to be inspected post felling. If an animal remains within the hollow / termitaria, the spotter-catcher will decide to either remove the animal or remove the section of tree containing the animal. This will then be relocated within adjacent vegetation.	Spotter-catcher Machine operator(s)
Restraining fauna	Terrestrial species captured during clearing shall be restrained using appropriate bags or traps and released into habitat at the discretion of the spotter-catcher. Any nocturnal species will be kept in a bag in a dark, well ventilated, quiet area and released within 1km of the subject site at dusk in suitable habitat	Spotter-catcher
Injured wildlife	Any injured animal will be taken directly to a veterinary clinic for treatment. Treatment costs will be the responsibility of the site developers. Displaced young will be taken to a registered Wildlife Carer. Locations of nearby vet clinics are provided in Appendix C.	Spotter-catcher
Removing trees with nests	Where project timelines allow, vegetation clearing be conducted outside of the main breeding season of many wildlife species (spring and early summer). Trees with active nests should be retained where possible.	Spotter-catcher

Activity	Management Measure	Responsibility
	A crane platform or cherry picker should be used to remove the nest and / or eggs or chicks prior to felling. However, this will only be undertaken where access and stable foundations for the cherry picker are available and where the operation of the cherry picker will achieve compliance with *Interim Australian Standard AS1418.10 [Int-2004]: Cranes, hoists and winches. Part 10: Elevating work platforms* and any other Occupational Health and Safety requirements. The spotter-catcher will determine the requirement for use of the cherry picker on a case by case basis, taking into account the associated access and safety considerations.	
Removing habitat features	A spotter-catcher needs to be present when potential habitat such as log piles, mulch heaps or rock piles are removed to check for any sheltering wildlife.	Spotter-catcher
Stockpiles	Cleared vegetation and construction equipment should not be stockpiled where it will impede fauna movement into adjacent habitat.	Superintendent Project Manager
Reporting	All wildlife that is hand-caught and moved to adjacent habitat will be recorded and details reported to QPWS.	Spotter-catcher

7.2.1 Habitat Features

Piles of rubble, felled timber or any other material, proposed to be chipped, are not to be left to serve as a refuge for displaced or roaming wildlife. Old piles of felled vegetation or other material must be treated in the same way as any other potential wildlife habitat, and must be assumed to be inhabited by wildlife, unless proven otherwise. Appropriate risk mitigation measures include immediate destruction or removal of such materials, or erection of wildlife-proof barriers to prevent wildlife use.

Other valuable habitat features such as large fallen logs, log piles or outcrops shall be preserved, translocated and re-established at appropriate habitat close to their site of removal (e.g. covenant areas). Sites for relocation of these features will be determined at the discretion of the wildlife specialist.

Any hollow branches identified during clearing operations must be utilised as ground hollows. Locations for ground hollows are to be determined on-site by either a Council Ecological Assessment Officer or a DES-approved spotter-catcher.

7.2.2 Terrestrial Species

Terrestrial species captured during clearing shall be restrained using appropriate bags or traps and released into habitat at the discretion of the spotter-catcher. Retained vegetation within the site, or other retained vegetation in the immediate area is considered a suitable option for the relocation of most terrestrial species. Nocturnal species shall be released after dusk. Until they can be released, these animals should be placed in a soft bag in a cool, quiet place.

7.2.3 Native Bees

Any native bee hives identified during clearing operations are to be preserved without damage, whether the hives are located in limbs or tree trunks. Native bee hives are to be relocated by a DES-

approved spotter-catcher from areas to be cleared, prior to any works commencing on the site, to those areas where vegetation is to be retained and / or rehabilitated.

The new location of the native bee hive is to be submitted to Council (with GPS coordinates) and included within the post clearing fauna summary, prior to the release of the vegetation performance bond.

7.2.4 Dam Dewatering

The site's constructed dam is to be dewatered prior to being filled. The dewatering will occur at a slow rate to allow for any fauna relocation should it be required. All works will be supervised by a licenced spotter catcher, who shall:

- Undertake pre-dewatering surveys prior to works commencing and provide Council with the survey results, management actions and procedures to be employed during dewatering;
- supervise all dewatering works;
- provide post-works audit reports on any fauna encountered, salvaged and or relocated. The fauna spotter catchers will manage the relocation of fauna to suitable local release sites; and
- all works are to be in accordance with the conditions of their scientific purposes and rehabilitation permits from the Department of Environment and Science and any other relevant permits as required (e.g. a general fisheries permit from the Department of Agriculture and Fisheries may also be required).

7.2.5 Injured Wildlife

In some cases, a native animal captured by the spotter-catcher may require hand-rearing (in the case of dependent young) or rehabilitation because of injury or illness. In such cases, the animal shall be placed in the care of a suitable qualified wildlife carer or wildlife hospital, preferably in the vicinity of the subject site. Any costs associated with the care of displaced or injured wildlife will be the responsibility of the proponent. Appendix C provides a list of local vet clinics and wildlife hospitals.

7.3 Post-Clearing Works Actions

7.3.1 Reporting

A post-clearing fauna summary must be submitted to Council within five (5) business days of vegetation clearing being completed. The post-clearing fauna summary is to be undertaken by the DES-approved spotter-catcher on site during the clearing works and must include the following as a minimum:

- Fauna species identified during clearing;
- Fauna species captured, including any native bees captured and relocated;
- Release sites for any fauna relocated with GPS coordinates to be provided for native bee hives; and
- Details of any fauna injuries or incidents.

8. Koala Management Plan

The site is in a Koala Habitat Area and Koalas will potentially be encountered during clearing and construction operations. All activities during the clearing and construction works have the potential to increase the risk of stress, injury or death of koalas including vehicle strike, felling of trees, inappropriate storage of materials, blocking movement paths etc. In addition to the management actions outlined in this VFKMP, this section prescribes specific actions for the protection of the Koala during the clearing and construction operations.

The Superintendent and the Spotter Catcher will be responsible for implementing the provisions all actions in this VFKMP.

All works are to be undertaken in accordance with the following provisions which are compliant with Part 3 of the *Queensland Nature Conservation (Koala) Conservation Plan 2017* (Koala Plan):

1. To meet the provisions of Part 11 of the Koala Plan the Spotter Catcher will either be supervised by a **Koala Spotter**[1] or qualify as a Koala Spotter during all site clearing works;
2. Immediately prior (no more than 24 hours before clearing commences), the Spotter Catcher must inspect the vegetation to be cleared for the presence of Koalas and other fauna. The Spotter Catcher must continue to monitor vegetation for fauna for the duration of clearing activities;
3. The clearing works should be sequenced and directed towards protected areas to ensure that koalas have time to move on without human intervention. Clearing directions are indicated in Appendix A.
4. Clearing is carried out in a way that allows koalas on the site to move out of the site or to protected areas of the site;
5. If any koalas are located prior to clearing or during clearing activities, the tree containing the individual shall be clearly marked and any other trees with canopies touching the primary tree shall also be clearly marked. A corridor of trees that will enable the individual to evacuate the works area to an area of vegetation that supports suitable habitat trees is to remain undisturbed until the individual has moved. All machinery operators are to be informed of the presence and location of the individual, and all relevant trees that have been marked to prevent disturbance.
6. No tree in which a koala is located and no tree with a crown overlapping a tree in which a koala is present may be cleared.
7. These trees must not be disturbed in any form until the individual has moved on by its own accord and the re-commencement of works is to be confirmed by the Spotter Catcher.
8. Dogs are to be discouraged from the work site. Any dogs on-site are to be restrained appropriately and not allowed to move freely within the site.
9. Operation of heavy vehicles and machinery must be limited to between the hours of 6:00 a.m. and 6:00 p.m. Clearing must be completed by 6:00 p.m. on each day and must not commence within the next stage until at least 6:00 a.m. on the following day.
10. To mitigate impacts on koala habitat associated with the clearing and achieve a conservation outcome all clearing will be offset in accordance with this VFKMP.
11. If any displaced fauna listed as threatened under State or Commonwealth legislation are captured by the Spotter Catcher, DES must be notified prior to release of the animal.

[1] *Koala Spotter means a person who has qualifications and experience or demonstrated skills and knowledge in (a) locating koalas in koala habits; or (b) conducting arboreal fauna surveys*.

9. Conclusions

Burchills were engaged by RAMA Real Estate to prepare a Vegetation, Fauna and Koala Management Plan for a propsoed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

Field surveys were undertaken during August and November 2021. Three (3) vegetation associations were classified across the site including:

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. Of these species recorded on-site, 40 were native and four (4) were introduced. No conservation significant species of fauna were encountered on-site, nor was any direct or indirect evidence observed that would suggest the site is utilised by conservation significant fauna species.

Clearing of the entirety of Vegetation Unit A and majority of Vegetation Unit C will be required to facilitate the works. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B. The layout was designed to avoid and minimise impacts on the areas of the site with the highest value Core Koala Habitat to the greatest extent possible. Significant Residual Impacts are proposed to be mitigated by a combined financial and restoration offset to achieve a suitable conservation outcome.

This management plan provides recommendations for the clearing, construction and restoration works to mitigate impacts on vegetation and fauna and incorporates a Koala Management Plan that provides specific recommendations for this conservation significant species.

All works will be undertaken in accordance with this management plan and the conditions of approval.

10. References

Australian Koala Foundation (AKF) (2015). National Koala Tree Planting List. Online resource. <https://www.savethekoala.com/sites/savethekoala.com/files/uploads/20150212_AKF_National_Koala_Tree_Planting_List.pdf> Accessed April 2020

Batianoff, G.N. and Butler, D.W. (2002). Assessment of invasive naturalised plants in south-east Queensland. Environmental Protection Agency, Brisbane.

Burchills (2022a). *Covenant Management Plan – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Burchills (2022b). *Ecological Site Assessment – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Burchills (2022c). *Koala Habitat Value Assessment – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Chenoweth EPLA and Bushland Restoration Services (2012). South East Queensland Ecological Restoration Framework. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.

Department of Natural Resources, Mines and Energy (2004). Geoscience Data, Queensland Mapping Data (GEOLDATA) More_1. Department of Natural Resources, Mines and Energy, Brisbane.

Hnatiuk, R.J., Thackway, R. and Walker, J. (2009). Vegetation. In Australian soil and land survey field handbook (3rd edn). National Committee on Soil and Terrain. CSIRO Publishing, Melbourne.

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Addicott, E.P. and Appelman, C.N. (2020) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 5.1. Updated March 2020. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

Walker, J. and Hopkins, M.S. (1990). Vegetation. In: McDonald, R.C., Isbell, R.F., Speight, J.G., Walker J. and Hopkins, M.S. (eds.), Australian Soil and Land Survey – Field Handbook. Inkata Press, Melbourne.

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Appendix A – Vegetation Clearing and Retention Plan


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Lot 1 Rosewood Laidley Road, Laidley
Tree Clearing Plan
Page 1 of 2
Location of the site within Lockyer Valley Region
N
Legend
Site Location
Impact Area/Earthworks Extent - 5.26ha
Vegetation to be Retained - 1.56ha
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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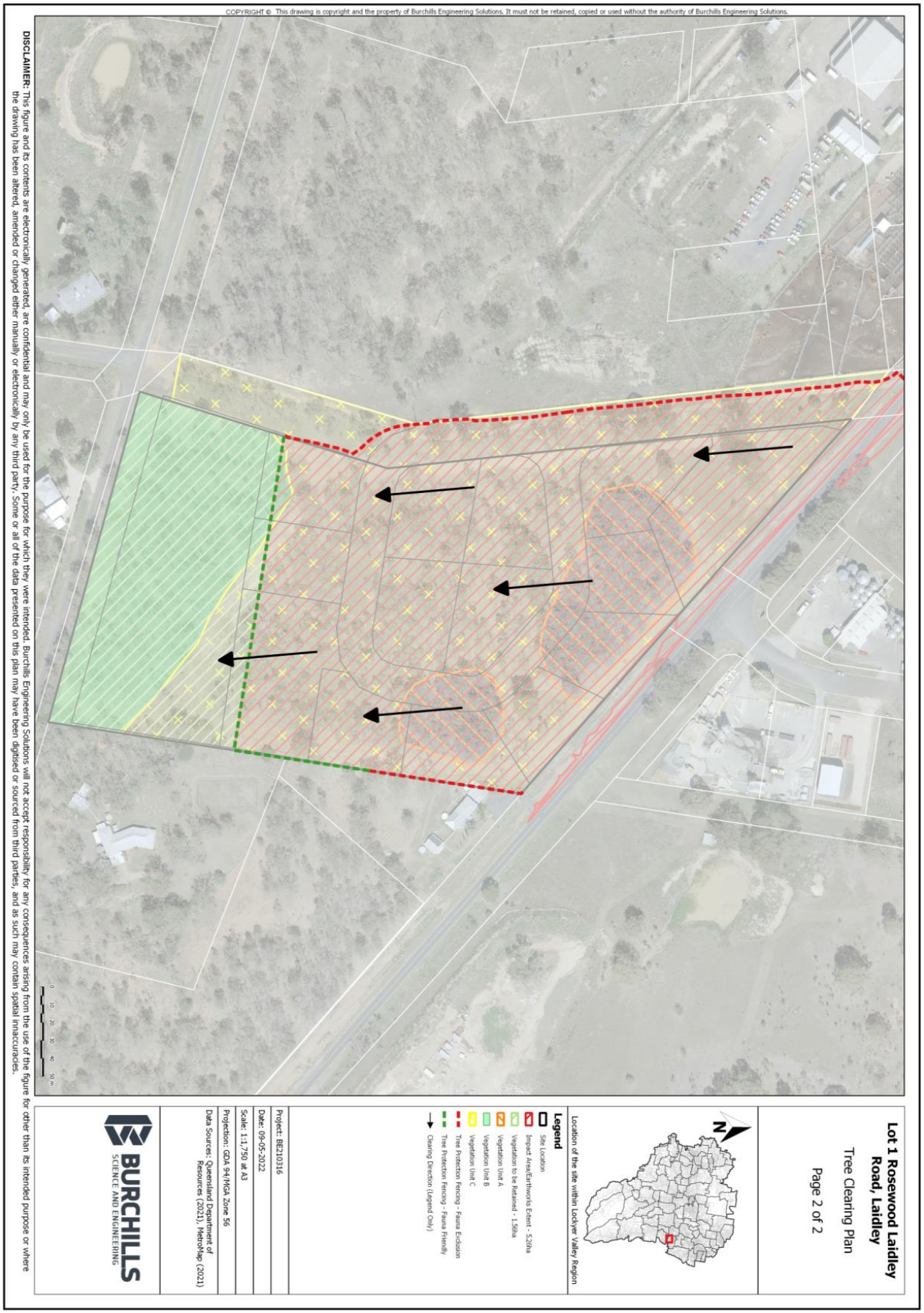
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Lot 1 Rosewood Laidley Road, Laidley
Tree Clearing Plan
Page 2 of 2
N
Location of the site within Lockyer Valley Region
Legend
Site Location
Impact Area/Earthworks Extent - 5.26ha
Vegetation to be Retained - 1.56ha
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Tree Protection Fencing - Fauna Exclusion
Tree Protection Fencing - Fauna Friendly
Clearing Direction (Legend Only)
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), Metrohlp (2021)
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Appendix B – Fauna Species Recorded On-Site

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Amphibians						
Bufonidae	*Rhinella marina*	Cane toad	I	V	W	OO
Hylidae	*Cyclorana alboguttata*	Striped burrowing frog	C	H	W	SS
Hylidae	*Litoria brevipalmata*	Green thighed frog	C	H	W	SS
Hylidae	*Litoria fallax*	Eastern sedge frog	C	H	W	OO
Hylidae	*Litoria rubella*	Red tree frog	C	V	W	SS
Limnodynastidae	*Limnodynastes peronii*	Striped marsh frog	C	H	W	OO
Reptiles						
Colubridae	*Boiga irregularis*	Brown tree snake	C	V	W	SS
Scincidae	*Lampropholis delicata*	Grass skink	C	V	W	GDRS
Birds						
Acanthizidae	*Gerygone olivacea*	White-throated gerygone	C	V	W	DBS
Accipitridae	*Haliastur sphenurus*	Whistling kite	C	V	W	DBS
Anatidae	*Dendrocygna eytoni*	Plumed whistling duck	C	V	W	DBS
Ardeidae	*Ardea intermedia*	Intermediate egret	C	V	W	DBS
Artamidae	*Cracticus torquatus*	Grey butcherbird	C	V	W	DBS
Artamidae	*Gymnorhina tibicen*	Magpie	C	V	W	DBS
Cacatuidae	*Cacatua tenuirostris*	Corella	C	V	W	DBS
Cacatuidae	*Calyptorhynchus funereus*	Yellow-tail black-cockatoo	C	V	W	DBS

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Campephagidae	*Coracina novaehollandiae*	Black-faced cuckoo-shrike	C	V	W	DBS
Climacteridae	*Climacteris picumnus*	Brown treecreeper	C	V	W	DBS
Columbidae	*Ocyphaps lophotes*	Crested pigeon	C	V	W	DBS
Corvidae	*Corvus orru*	Torresian crow	C	V	W	DBS
Cuculidae	*Scythrops novaehollandiae*	Channel-billed cuckoo	C	V	W	DBS
Dicruridae	*Grallina cyanoleuca*	Magpie lark	C	V	W	DBS
Dicruridae	*Rhipidura leucophrys*	Willie wagtail	C	V	W	DBS
Halcyonidae	*Dacelo novaeguineae*	Laughing kookaburra	C	V	W	DBS
Maluridae	*Malurus melanocephalus*	Red-backed fairy wren	C	V	W	DBS
Meliphagidae	*Anthochaera chrysoptera*	Little wattlebird	C	V	W	DBS
Meliphagidae	*Manorina melanocephala*	Noisy miner	C	V	W	DBS
Meliphagidae	*Myzomela sanguinolenta*	Crimson honeyeater	C	V	W	DBS
Meliphagidae	*Philemon corniculatus*	Noisy friarbird	C	V	W	DBS
Meropidae	*Merops ornatus*	Rainbow bee-eater	C	V	W	DBS
Passeridae	*Daeniopygia bichenovii*	Double-barred finch	C	V	W	DBS
Petroicidae	*Eopsaltria australis*	Eastern yellow robin	C	V	W	DBS
Phasianidae	*Coturnix australis*	Brown quail	C	V	W	DBS
Psittacidae	*Trichoglossus haematodus*	Rainbow lorikeet	C	H	W	DBS
Psophodidae	*Psophodes olivaceus*	Eastern whipbird	C	H	W	DBS
Threskiornithidae	*Threskiornis Molucca*	Australian white ibis	C	V	W	DBS
Mammals						
Felidae	*Felis catus*	Domestic cat	I	S	W	OO

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Leporidae	*Lepus capensis*	Brown hare	I	V	W	OO
Macropodidae	*Macropus giganteus*	Eastern grey kangaroo	C	V	W	OO
Macropodidae	*Wallabia bicolor*	Swamp wallaby	C	V	W	OO
Petauridae	*Petaurus breviceps*	Sugar glider	C	V	W	NS
Phalangeridae	*Trichosurus vulpecula*	Common brushtail possum	C	V	W	NS
Pteropodidae	*Pteropus alecto*	Black flying-fox	C	V	W	NS
Fish						
Poecilidae	*Gambusia holbrooki*	Gambusia	I			

*Status: As listed under the NCA: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern, C = Least Concern.

As listed under the EPBC: CE# = Critically Endangered, E# = Endangered, V# = Vulnerable, CD# = Conservation Dependent, MT = Migratory (Terrestrial Species), MW = Migratory (Wetland Species), M = Marine Species, I# = Introduced Species

**Primary method of identification: C = hand caught, H = heard, V = visually observed, T = trapped, S = other signs of presence (e.g. scats, traces etc).

†Survey type: DBS = bird survey; NS = Nocturnal survey; GDRS = ground dwelling reptile survey; OO = opportunistic observation.

††Location: W = species observed within subject property; E = species observed external but close (within 100m) to subject site.

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Appendix C – Emergency and Veterinarian Contact Details

Laidley Veterinary Surgery

44 Vax Street
Laidley QLD 4341

Ph: (07) 5465 1259

Operating Hours:

Mon-Fri: 08:30 to 17:30
Saturday: 09:00 to 12:00
Sunday: Closed

UQ VETS Small Animal Hospital

Building 8156, The University of Queensland
Main Drive and Outer Ring Road

Ph: (07) 5460 1788

Operating Hours:

Mon-Sun: Open 24 hours

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Lot 1 Rosewood Laidley Road, Laidley

Covenant Management Plan

Client: RAMA Real Estate
Project No: BE210316
Document No: BE210316-RP-CMP-00

May 2022

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Document Control Record

Prepared by:	Kaidon Anderson
Position:	Environmental Scientist
Date:	May 2022

Approved by:	Caroline Kelly
Position:	Principal Environmental Scientist
Date:	May 2022

Version No.	Description	Date	Prepared	Approved
00	Initial Issue	10.05.2022	KA	CK

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Executive Summary

Burchills were engaged by RAMA Real Estate to prepare a Covenant Management Plan for a proposed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

This Covenant Management Plan provides guidance for the restoration of 1.32ha of vegetation that is to be retained and protected within the proposed Environmental Covenant registered over Lot 9 in the south of the subject site. The purpose of the registered Covenant is to provide for the protection, conservation and enhancement of the environmental values of this area which forms Core Koala Habitat.

Rehabilitation works in this area will include weed removal and revegetation with species from the pre-clearing community with existing native trees and vegetation retained and protected.

Specific restoration objectives identified in this report include:

- Restore and enhance the existing vegetation within the rehabilitation area to stabilise disturbed areas and mitigate erosion;
- Restore vegetation communities to resemble pre-clearing vegetation and enhance corridors for wildlife movement; and
- Use best practice methods for restoration works to minimise impacts on existing ecological values.

All restoration works are to be conducted by a suitably qualified bush regenerator. Monitoring and reporting will be conducted by an ecologist experienced in ecological restoration monitoring. Rehabilitation works will be subject to a 12 months Establishment and 12 months On-Maintenance periods.

The Covenant is registered against the title and survey plan of new allotments and administered under the Qld *Land Titles Act 1994*. The registered Covenant is an agreement entered into between a Covenantor (the property owner) and the Covenantee (Queensland Department of Environment and Science).

This CMP outlines the required long-term management actions of the Covenant Area required to meet the conditions of the registered Covenant including permitted and prohibited actions within the Covenant Area, monitoring, weed removal and supplementary revegetation if required.

Ongoing protection and restoration of the Covenant Area will be undertaken in perpetuity by the Covenantor in accordance with this CMP and the conditions of the registered Covenant.

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Table of Contents

1. Introduction 2
1.1 Scope and Objectives 2
1.2 Proposed Development 2
2. Site Description 4
2.1 Location Context 4
2.2 Existing vegetation 6
2.3 Topography and Drainage 8
2.4 Rainfall 9
2.5 Soils and Geology 9
2.6 Site Constraints 9
3. Purpose of Covenant 11
4. Restoration Strategy 12
4.1 Site Strategy 13
4.2 Restoration Management Areas 13
5. Restoration Methodology 16
5.1 Compliance 16
5.2 Vegetation Protection 16
5.3 Weed Control 16
5.4 Fauna Habitat 22
5.5 Revegetation 22
5.5.1 Revegetation Protocol 24
5.6 Plant Procurement 26
5.6.1 Collection of Seeds and Vegetative Material 26
5.7 Supplementary Planting 27
5.8 Schedule of Rehabilitation Works 27
5.8.1 Establishment Period 27
5.8.2 On-Maintenance Period 28
5.8.3 Management Period 29
5.9 Qualifications of Personnel Involved in CMP Implementation 29
5.10 Daily Record Keeping 29
6. Covenant Management 30
6.1 Permissible Actions and Structures 30
6.2 Prohibited Actions 30
6.3 Covenant Area Fencing 30
6.4 Monitoring 31

6.4.1 Management Benchmarks 32
6.5 Management Agreement 32
6.5.1 Covenantor Requirements 32
6.5.2 Evaluation and Review 32
6.5.3 Amendments to the Covenant Management Plan 33
6.5.4 Duration of Management Agreement 33
7. Definitions 34
8. References 35

Tables

Table 2.1 Rainfall Data for Forest Hill (Station ID: 040079; Bureau of Meteorology, 2021) 9
Table 2.2 Management Constraints for Subject Site 9
Table 4.1 Restoration Management Areas (RMA) 14
Table 5.1 Specific Weed Control Methodology 18
Table 5.2 General Weed Control Methods 21
Table 5.3 Revegetation Planting List – RMA 1 and 2 ('k' denotes koala tree) 22
Table 5.4 Revegetation Protocol 24
Table 5.5 Establishment Period Schedule of Works 27
Table 5.6 On-Maintenance Period Schedule of Works 28
Table 5.7 Works Schedule for General Management Phase 29
Table 6.1 Management Benchmarks 32

Figures

Figure 1.1 Proposed Plan of Development and Covenant A (Santoshi Development Consultants 2022) 3
Figure 2.1 Site Location (Google Maps, 2021) 4
Figure 2.2 Site Aerial Photography (MetroMap 2021) 5
Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)* 5
Figure 2.4 Mapped vegetation associations 7
Figure 2.5 Local Contours and Waterways 8
Figure 4.1 Graphical Representation of Ecosystem Transitional States (Chenoweth EPLA and Bushland Restoration Services, 2012) 12
Figure 4.2 Preclearing Regional Ecosystems – 12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 in Covenant Area (Qld Globe 2021) 13
Figure 4.3 Rehabilitation Management Areas 15
Figure 5.1 Typical Tubestock Planting Details 25
Figure 5.2 Planting Method for Slopes Greater than 1:3 25
Figure 6.1 Example of fauna friendly fencing for domestic animal exclusion (© Replas) 31

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Appendices

Appendix A – Plan of Development
Appendix B – Daily Record Sheet
Appendix C – Risk Assessment Form and Matrix
Appendix D - Monitoring and Evaluation Proforma
Appendix E – Environmental Weed Descriptions
Appendix F – Stewardship Proforma
Appendix G – Amendments to the Covenant Management Plan

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This Covenant Management Plan has effect through a statutory environmental covenant registered on the title pursuant to Section 97A of the Qld *Land Title Act 1994*.

The Covenant is registered over the land and is a legally binding agreement committing current and future owners to the land management requirements outlined in this Covenant Management Plan.

The Covenantee and party to this agreement is the Queensland Department of Environment and Science.

The Covenantor and party to this agreement is the current or any future landholder of the subject lot that the Covenant is registered to.

The principal objective of registering the Covenant over the subject property, is to protect and preserve the environmental values of the Covenant Area in perpetuity.

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1. Introduction

Burchills were engaged by RAMA Real Estate (the Applicant) to prepare a Covenant Management Plan (CMP) for a proposed development at Lot 1 on SP104184, Rosewood Laidley Road, Laidley within the Lockyer Valley Local Government Area (the subject site). This CMP has been prepared to support a development application for an industrial subdivision. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

This CMP has been prepared in accordance with:

- The South-East Queensland Ecological Restoration Framework (Chenoweth EPLA and Bushland Restoration Services, 2012).

1.1 Scope and Objectives

The scope and objectives of this CMP are to provide guidance and management strategies for the restoration and protection of the Environmental Covenant area along the southern boundary of the site.

Specifically, the scope of the report is to:

- Plans depicting the covenant area and a description of the existing environment within and adjoining the covenant area based on desktop assessments;
- A staged restoration strategy for works to be undertaken in the Covenant area including weed removal and revegetation with local native species that are typically found in the pre-clearing vegetation communities;
- A long-term monitoring program for the covenant area to ensure the restoration objectives are achieved; and
- Description of allowable/prohibited activities within the covenant area.

1.2 Proposed Development

The proposal seeks to reconfigure the existing 6.09ha lot into 13 lots, comprising one (1) 4,867m² lot that will house a service station in the northwest of the site, 12 industrial lots across the balance of the site varying between 2,000m² and 3,700m², one (1) 2,680m² detention basin. One (1) 13,230m² environmental covenant is proposed to be registered over Lot 9 within the south of the site. The northern portion of the currently undeveloped road reserve on the site's western boundary will be constructed to facilitate site access. The southern portion of the site fronting Milne Road is proposed to be resumed by Lockyer Valley Regional Council.

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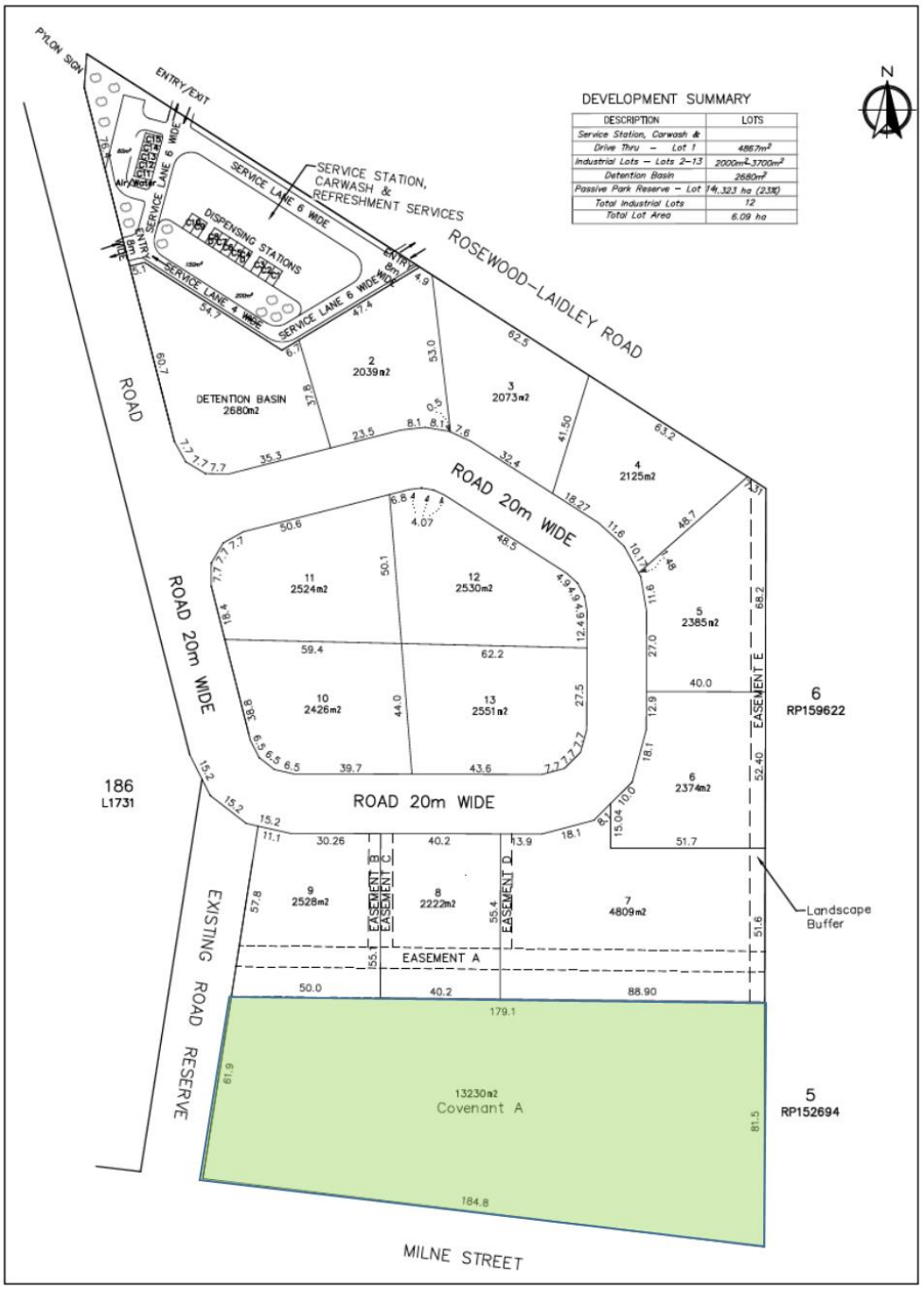

Figure 1.1 Proposed Plan of Development and Covenant A (Santoshi Development Consultants 2022)

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2. Site Description

2.1 Location Context

The subject site is located within Laidley, approximately 2.5km south of the town centre and occupies an area of approximately 6.09ha (Figure 2.1). The site is mostly vegetated with no existing dwellings or structures (Figure 2.2). A small constructed dam is present within the northwest part of the site.

The site falls within the Urban Footprint under the *Southeast Queensland Regional Plan 2017* and is zoned as Industrial under the *Laidley Shire Planning Scheme 2003 Version 3* (Figure 2.3). The surrounding land use pattern is generally industrial and rural.

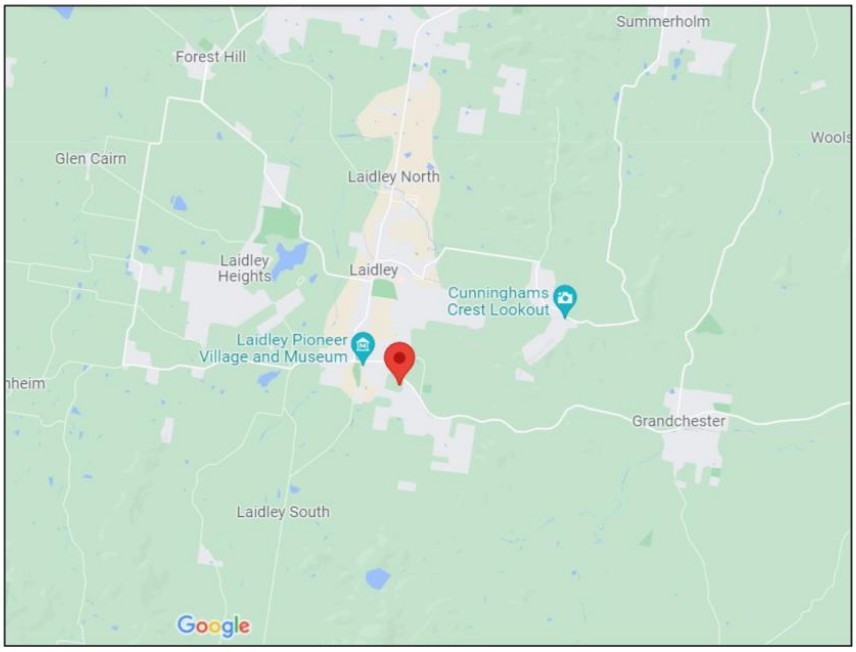

Figure 2.1 Site Location (Google Maps, 2021)

Figure 2.2 Site Aerial Photography (MetroMap 2021)

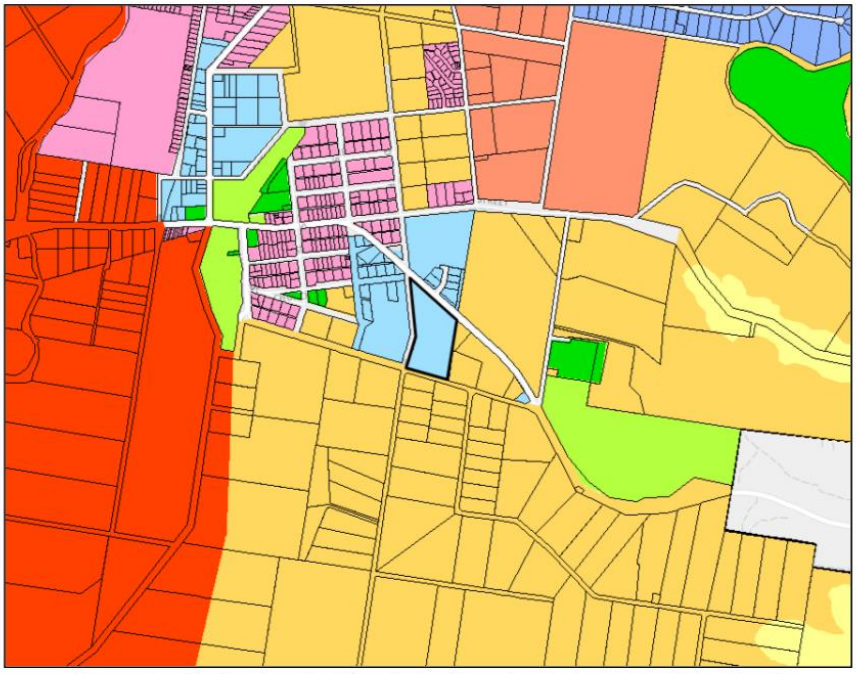

Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)*

2.2 Existing vegetation

The Ecological Site Assessment (ESA; Burchills, 2022a) recorded a total of 51 species of flora comprising 18 native species and 33 non-native species, including nine (9) species identified as Restricted Invasive Plants under the *Biosecurity Act 2016*.

Three (3) vegetation associations were mapped over the site (Figure 2.4):

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Further details regarding the mapped vegetation associations are provided in the ESA (Burchills, 2022a).


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0 10 20 30 40 50m
Lot 1 Rosewood Laidley Road, Laidley
Figure 2.4
Vegetation Units
N
Location of the site within Lockyer Valley Region
Legend
Site Location
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-11-2021
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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2.3 Topography and Drainage

The subject site falls within the Laidley Creek sub-catchment. Laidley Creek is a tributary of the Brisbane River. No waterways or drainage lines are present on the site, although a small constructed dam is present in the northwest of the site. The site rises to an elevation of 141m AHD within its centre, falling to northwesterly to 115m AHD and southeasterly to 121m AHD on its northern and southern boundaries, respectively. At a site level, stormwater is conveyed via sheetflow to both the northwest and southwest of the site from this central point.

Figure 2.5 Local Contours and Waterways

2.4 Rainfall

Mean annual rainfall for the local region is 770.3mm based on statistics available for the nearest Bureau of Meteorology (BOM) station with more than five (5) years of data (Station ID: 040079, Forest Hill). Average monthly rainfall is presented in Table 2.1. The monthly averages (since 2000) indicate rainfall is typically heaviest during December to March which reflects the growing season for SEQ.

Table 2.1 Rainfall Data for Forest Hill (Station ID: 040079; Bureau of Meteorology, 2021)

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	113.6	99.8	76.6	45.2	42.0	40.6	35.2	25.2	34.5	62.7	78.3	102.5	770.3
Lowest	0.0	0.0	0.0	0.0	12.0	5.0	0.0	1.0	0.0	5.0	0.5	0.0	315.9
5th %ile	25.2	8.6	4.7	0.7	0.5	0.0	0.1	0.0	0.9	8.0	9.4	23.1	448.6
10th %ile	32.9	21.6	10.8	3.0	4.2	2.1	1.3	1.8	3.5	10.6	21.0	31.6	504.8
Median	101.6	78.6	68.6	34.4	26.1	26.3	24.6	19.3	27.4	52.0	70.4	89.3	772.0
90th %ile	204.9	190.1	139.0	97.6	94.8	87.8	80.4	53.0	76.8	130.5	142.6	195.8	1040.7
95th %ile	287.5	267.2	201.6	123.4	124.9	124.8	107.8	64.0	96.5	157.9	173.4	225.7	1087.9
Highest	521.3	374.4	273.4	354.9	430.8	301.6	264.0	95.8	166.6	257.7	240.6	296.3	1132.2

2.5 Soils and Geology

The Geological Survey of Queensland (DNRM 2011) indicates that the site's geology consists wholly of Gatton Sandstone, comprising lithic labile and feldspathic labile sandstone. This geological and soils association aligns with Land Zone 9-10 under the Qld regional ecosystem (RE) framework for land classification.

2.6 Site Constraints

A summary of the major management constraints present on the site is outlined in Table 2.2

Table 2.2 Management Constraints for Subject Site

Constraint	Present	Absent	Comments
Easements and/or Restrictions on Title		x	No easements are present on the site[1].
Zoning Provisions		x	The subject site is zoned as Commercial[2].
Biodiversity, Waterways and Wetlands	x		The subject site is mapped within the Moderate Environmental Significance Area[2]. No wetlands or watercourses are mapped within the site[2].
Bushfire Risk	x		Approximately 50% of the site is mapped as Medium Potential Bushfire Risk[2].
Nature Conservation Areas		x	There are no Nature Conservation Areas present on the site[2].
Airport Environs		x	There are no Airport Environs present on the subject site[2].

Constraint	Present	Absent	Comments
Aboriginal Cultural Heritage		x	No known Aboriginal cultural heritage areas are present on the subject site[2].
European Cultural Heritage		x	No known European cultural heritage areas are present on the subject site[2].
Acid Sulfate Soils - Risk		x	The entirety of the subject site is present above Land at or Below 20m AHD[1].
Flood Prone		x	No flood hazard is present on the site[2].
Landslide Hazard and Steep Land	x		Areas of Slopes Greater than 15% are mapped within the site[2].
Tree Preservation Order		x	No Tree Preservation Orders are present on the subject site[2].
Mapped Vegetation	x		Category C High Value Regrowth Vegetation is mapped over the majority of the site[1].
Mapped Essential Habitat	x		Mapped Essential Habitat for *Phascolarctos cinereus* (Koala) and *Adelotus brevis* (Tusked frog) is present on the subject site[3].
Wildlife Online – Threatened Species	x		Wildlife Online search indicates that one (1) species of threatened flora and two (2) species of threatened fauna and five (5) Special Least Concern species of fauna have been recorded within 2km of the site[3].
Observed Threatened Species - Fauna		x	No evidence of conservation significant fauna was observed on the site[4].
Observed Threatened Species - Flora		x	No evidence of conservation significant flora was observed on the site[4].
South East Queensland Koala Conservation Strategy	x		Core Koala Habitat is mapped within the site. The site is not within a Koala Priority Area[1].

Notes:

[1] – As identified in Queensland Globe (2021)

[2] – As identified in the Laidley Shire Planning Scheme Version 3 Interactive Mapping

[3] – As identified by Wildlife Online Species Search results.

[4] – As identified in the Ecological Site Assessment (Burchills 2021a).

3. Purpose of Covenant

On registration, a covenant attaches to the land and binds the landowner (the Covenantor) and all successors in title to a long-term commitment to managing the Covenant Area in accordance with the provisions of the Covenant Management Plan.

Statutory covenants are binding on the current and all future landowners. By registering a covenant on the title of the lot, it is the intention that the Covenantor will enter into a long-term commitment to maintaining, managing and rehabilitating (where required) the Covenant Area within the site. Managing the Covenant Area will assist in preventing future degradation of the environmental values associated with the site.

In accordance with the conditions of approval a covenant will be registered on the title of the new allotments. The Covenant Area will achieve the following objectives:

- Provide habitat for native plants and animals;
- Provide clear access for Council to ensure the Developer and successors in title, or their agents do not intentionally or wilfully clear, damage or destroy any area relating to the conservation of the physical feature or natural feature subject of the Covenant; and
- Conservation of water, animals and plants, which are to be managed in accordance with an approved Covenant Management Plan.

A covenant restoration strategy has been included as part of this CMP, describing the Covenant Area and type of works to be undertaken. All future landowners will be bound as Covenantors and will be required to undertake ongoing management in accordance with this CMP.

This CMP may be amended (e.g. to update management strategies to accord with future accepted best practice, or to undertake adaptive or reactive management) with the written agreement of the Covenantee – Queensland Department of Environment and Science (DES). All amendments however must:

- Be consistent with the purpose of the covenant;
- Not alter the Covenant Area; and
- Not add or remove a party to the covenant.

Management requirements within the Covenant Area are detailed in Section 3 of this CMP.

4. Restoration Strategy

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. The main objective of restoration is to rehabilitate vegetation communities to the extent that they will be self-sustaining and resilient to environmental stressors (such as drought, fire and flood).

The variety in the nature and severity of disturbances that can occur within natural ecosystems dictates that a generic approach to rehabilitating ecological functions and processes is unlikely to be effective. The likelihood of successfully realising the objectives of a rehabilitation project will be greatly increased if the project is managed in accordance with a strategy that is responsive to the specific ecological parameters, functions and processes within the rehabilitation area.

A restoration strategy that is targeted toward site-specific conditions should not only prevent the inefficient expenditure of resources, but also effectively utilise natural ecological processes to enhance the integrity of the native plant community. The main objective of ecological restoration is to restore an ecosystem to the point where it becomes self-sustaining. The approach taken to achieve this objective is dependent on the existing biotic and abiotic conditions and the transitional state of the ecosystem (Figure 4.1).

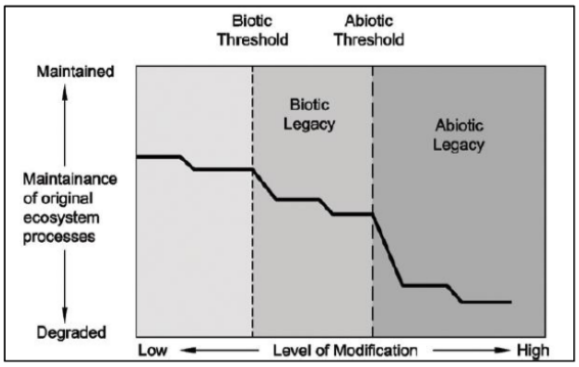

Figure 4.1 Graphical Representation of Ecosystem Transitional States (Chenoweth EPLA and Bushland Restoration Services, 2012)

There are generally two (2) main types of natural bushland restoration – **assisted natural regeneration** and **reconstruction** (Chenoweth EPLA and Bushland Restoration Services, 2012). Assisted natural regeneration is appropriate for areas that may require weed removal, but with a healthy seedbank and signs of active natural regeneration of the preclearing community. Targeted revegetation may be required where intensive weed removal has resulted in an area denuded of cover with little capacity to naturally regenerate.

Reconstruction is suited to areas that need assistance with recruitment due to factors such as a lack of canopy cover, lack of connectivity and / or highly disturbed conditions. Reconstruction typically includes initial weed treatment followed by revegetation that may be required in a number of stages. This method is appropriate for areas that have little to no natural canopy cover due to weed removal and very low natural regeneration due to seedbank suppression from weeds.

4.1 Site Strategy

The Environmental Covenant area is 1.149ha in total and has been subjected to moderate disturbance including partial clearing and unmanaged weed infestations.

The objective of the rehabilitation site strategy is to restore the preclearing vegetation community within the Environmental Covenant area formally mapped as RE12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 (Figure 4.2) but found to be generally be representative (e.g. high natural regeneration evident) of 12.9-10.7/12.9-10.2 (Vegetation Association B). Given the varying levels of disturbance present, both Assisted Natural Regeneration and Reconstruction are proposed for this area.

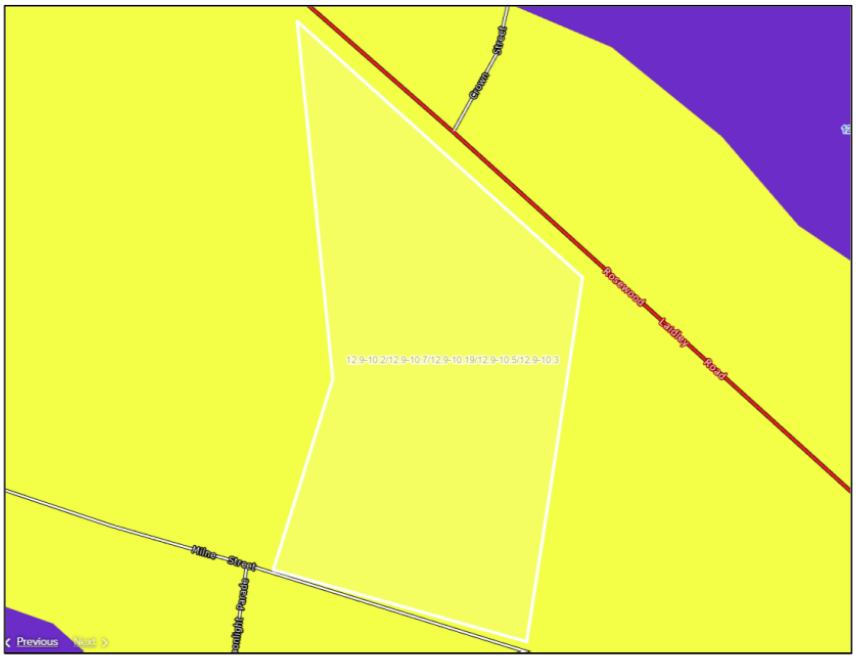

Figure 4.2 Preclearing Regional Ecosystems – 12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 in Covenant Area (Qld Globe 2021)

4.2 Restoration Management Areas

The Restoration Management Area for the subject site is presented in Figure 4.3, and comprises the southern portion of Lot 9 of the development. The area of road resumption is not proposed to be rehabilitated, given its intention for future designation as a road by Lockyer Valley Regional Council. Table 4.1 summarises the required works within this area. The following sections provide further details of these works.

Table 4.1 Restoration Management Areas (RMA)

RMA	Area (ha)	Existing Vegetation	Preclearing Regional Ecosystem	Ecosystem Resilience	Strategy	Actions Required
1	1.07	Dry Eucalypt Forest (Veg Unit B)	12.9-10.7/ 12.9-10.2	Medium to High	Assisted Natural Regeneration	The vegetation within this area comprises Remnant Vegetation of RE 12.9-10.7/12.9-10.2. However, historical disturbances (such as selective clearing and heavy weed infestations through the shrub and ground strata) have occurred. Assisted Natural Regeneration is the proposed rehabilitation strategy. Restoration of this zone will include: • Weed control targeting weeds per this CMP; • Monitor for weeds and natural recruitment of local native species as per this report; and • Infill planting of canopy and understorey species to achieve overall density of 1 plant per 5m²
2	0.25	Disturbed Dry Eucalypt Forest (Veg Unit C)	12.9-10.7/ 12.9-10.2	Low to Medium	Reconstruction	The vegetation within this area has suffered significant historical disturbances including clearing and heavy weed infestations through the shrub and ground strata. Reconstruction is the proposed rehabilitation strategy. Restoration of this zone will include: • Weed control targeting weeds per this CMP; • Monitor for weeds and natural recruitment of local native species as per this report; and Infill planting of native species to achieve overall density of 1 plant per 1m²


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0 50 100 150 200 250m
Lot 1 Rosewood Laidley Road, Laidley
Figure 4.3
Rehabilitation Management Areas
N
Location of the site within Lockyer Valley Region
Legend
Site Location
RM41 - 1.07ha
RM42 - 0.23ha
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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5. Restoration Methodology

The following sections outline the actions that are to be implemented to achieve a successful restoration outcome on the site.

5.1 Compliance

It is the contractor's responsibility to ensure that the regeneration works required on the site comply with all current and relevant legislation and standards requirements, including, but not limited to:

- *Environmental Protection Act 1994* (EP Act.);
- *Work and Healthy Safety Act* (the WHS Act);
- *Construction Work: Code of Practice* (Safe Work Australia);
- *Excavation – Work Code of Practice* (Safe Work Australia);
- *Environmental Protection (Water) Policy 2009;*
- *Australian Standard AS 4373 Pruning of amenity trees*;
- *Australian Standard AS 4419 Soils for landscaping and garden use;*
- *Australian Standard AS 4454 Composts, soil conditioners and mulches; and*
- *Australian Standard AS 4970 Protection of trees on development sites*.

5.2 Vegetation Protection

The following provides general requirements apply to any vegetation to be retained on-site:

- As above, all vegetation protection measures must conform to the requirements of *Australian Standard 4970-2009: Protection of Trees on Development Sites* (AS 4970-2009);
- Prior to the commencement of any vegetation clearing operations, the limits of all vegetation to be retained must be clearly delineated. The storage and operation of construction equipment and machinery is to be located within the extent of earthworks delineation. No construction equipment and machinery are to disturb retained trees, waterways and remnant vegetation where approval to clear has not been received;
- Sediment runoff from all earthworks is to be prevented from entering the areas of retained vegetation (e.g. through use of filter cloth fences);
- All batters are to be erosion protected and planted with appropriate species; and
- The Principal Contractor is responsible for ensuring that all operational works are undertaken in accordance with approved Development Permits.

5.3 Weed Control

The Queensland *Biosecurity Act 2014* requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. For the purposes of this report, a weed has been defined as a species that is not native to the Lockyer Valley region and is recognised as an invasive under the Queensland *Biosecurity Act 2014*, recognised as an invasive species in South East Queensland by the Queensland Herbarium (Batianoff and Butler, 2002), Qld Department of Agriculture and Fisheries (as regulated under the *Biosecurity Act 2014*) or recognised as an environmental weed or undesirable species by a SEQ Regional Council by way of policy.

The ESA (Burchills, 2022a) recorded a total of 33 invasive weeds present within the subject site, including nine (9) Restricted Invasive Plants listed under the Qld *Biosecurity Act 2014*.

Table 5.1 provides specific weed control and removal methods for weed species recorded. Where additional weed species are observed on-site that do not have a control technique listed in Table 5.1 an appropriate weed control methodology will be used based on the general guidelines provided in Table 5.2.

Herbicide application is to be undertaken in accordance with the *South East Queensland Restoration Framework* (Chenoweth EPLA and Bushland Restoration Services, 2012). Treatment is to target introduced species only and be carried out in a manner that minimises disturbance to native plants. When undertaking herbicide application for weed control, care will be taken to ensure that no off-target damage occurs to native vegetation. All weed control on-site must be undertaken in a manner that does not promote erosion or instability of soil, particularly in and around waterways and / or high velocity flow areas.

Table 5.1 Specific Weed Control Methodology

Scientific Name	Common Name	Family	Qld Status	Control Method
Ambrosia psilostachya	Perennial ragweed	Asteraceae		Hand pull and hang to dry; spray G1:100 or G1:100 + MM or MM.
Argemone ochroleuca	Prickly poppy	Papaveraceae		Hand pull; spray G1:100 or G1:100 + MM or MM.
Ageratina adenophora	Crofton weed	Asteraceae	OIP	Hand pull and hang to dry; spray G1:200 or G1:200 + MM or MM.
Ageratum houstonianum	Blue billygoat weed	Asteraceae		Hand pull; spray G1:100.
Asparagus aethiopicus cv. Sprengeri	**Asparagus fern**	**Asparagaceae**	**RIP**	**Crown then hang up to dry; spray G1:100 + MM or MM. Best results from herbicide application will be obtained when plant is between flowering and berry formation.**
Asparagus africanus	**Climbing asparagus**	**Asparagaceae**	**RIP**	**Rhizomes: Crown and hang up to dry; gouge and paint G1:1.5. Stems: Wind up and spray G1:210 or G1:200 + MM, or cut high and low and spray regrowth G1:200 or G1:200 + MM.**
Bidens pilosa	Cobbler's pegs	Asteraceae		Hand pull; spray G1:100 or G1:100 + MM or MM.
Bryophyllum delagoense	**Mother-of-millions**	**Crassulaceae**	**RIP**	**Spray G1:200 + MM or MM.**
Bryophyllum fedtschenkoi	Lavender scallops	Crassulaceae		Hand pull, bag and dispose offsite; spray G1:200 + MM or MM.
Cirsium vulgare	Spear thistle	Asteraceae		Spray G1:100 or G1:100 + MM or MM.
Conyza sumatrensis	Tall fleabane	Asteraceae		Hand pull; spray G1:100 or G1:100 + MM or MM; CSP G1:1.5.
Macfadyena unguis-cati	**Cat's claw creeper**	**Bignoniaceae**	**RIP**	**Spray G1:100 or G1:100 + MM. Larger stems, roots, nodes, vines: CSP G1:1.5; Spray G1:100 + MM. Underground tubers: Dig up or crown; gouge and paint G1:1.5.**
Gomphocarpus physocarpus	**Balloon cotton bush**	Asclepiadaceae		Hand pull; spray G1:100.
Heliotropium amplexicaule	**Blue heliotrope**	Boraginaceae		physical removal of all the crown and root material. Spray G1:100.
Hypoestes phyllostachya	polka dot plant	Acanthaceae		Hand pull or crown; spray G1:200 or + G1.5:200 MM.
Jacaranda mimosifolia	Jacaranda	Bignoniaceae		Seedlings: Hand pull; spray G1:200. Saplings: Cut and paint stumps G1:1.5. Trees: SI G1:1.5.
Lantana camara	**Lantana**	**Verbenaceae**	**RIP**	**Seedlings and regrowth: Spray 40ml/10L (Spring, summer) 60ml/10L (Atumn, winter) Shrubs: Lop into 50 cm pieces and CSP base G1:1.5. Dense and large infestations: Overspray using G1:100. Best results will be obtained when plant is undergoing active growth.**

Scientific Name	Common Name	Family	Qld Status	Control Method
Megathyrsus maximus	Guinea grass	Poaceae		Hand pull or dig up; spray G1:100.
Ochna serrulata	Mickey Mouse bush	Ochnaceae		Seedlings: Hand pull; spray G1:100 + MM or MM. Vines CSP G1:1.5.
Opuntia stricta	**Prickly pear**	**Cactaceae**	**RIP**	**Small areas: spray; Biological control: Cactoblastis or Cochineal.**
Opuntia tomentosa	**Velvet tree oear**	**Cactaceae**	**RIP**	**Small areas: spray; Biological control: Cactoblastis or Cochineal.**
Paspalum dilatatum	Paspalum	Poaceae		Hand pull or dig up; spray G1:100.
Ricinus communis	Castor oil bush	Euphorbiaceae		Seedlings: Hand pull; spray G1:200. Shrubs and small trees: CSP G1:1.5; SI G1:1.5.
Scheffiera actinophylla	Umbrella tree	Araliaceae	OIP	Seedlings: Hand pull or spray G1:200 or G1:200 + MM. Saplings: CSP G1:1.5, stack branches above the ground to dry and prevent reshooting. Trees: SI G1:1.5. **(Do NOT stem inject when tree is in flower, this can have toxic effects on nectar feeding birds).**
Schinus terebinthifolius	**Broadleaved pepper bush**	**Anacardiaceae**	**RIP**	**Seedlings: Hand pull; spray G1:200. Saplings: CSP G1:1.5. Trees: SI G1:1.5.**
Senecio madagascariensis	**Fireweed**	**Asteraceae**	**RIP**	**This species is resistant to Glyphosate and Metusulfuron Methyl. Can be weeded manually by hand or by chipping out. Can be shaded out by regenerating vegetation over the longer term.**
Senna pendula var. *glabrata*	Easter cassia	Caesalpiniaceae	OIP	Seedlings and regrowth: Hand pull or spray G1:200 or G1:200 + MM or MM. Shrubs: CSP G1:1.5 or SI 1:1.5. Where possible, bag seed pods and dispose off-site.
Setaria sphacelata	Pigeon grass	Poaceae		Hand pull or dig up; spray G1:100.
Solanum chrysotrichum	Giant devil's fig	Solanaceae		Seedlings: Hand pull or spray G1:200. Shrubs: CSP G1:1.5; SI G1:1.5.
Solanum mauritianum	Wild tobacco	Solanaceae	OIP	Seedlings: Hand pull or spray G1:200. Shrubs: CSP G1:1.5; SI G1:1.5.
Solanum seaforthianum	Brazilian nightshade	Solanaceae		Seedlings and regrowth: Spray 30ml/10L of FLUX or G1 G1:100 + MM. Vines: CSP G1:1.5.
Stenotaphrum secundatum	Buffalo grass	Poaceae		Dig up; spray G1:100.

*Notes:

1. Species specific weed control methodology has been extracted from the *South East Queensland Restoration Framework* (Chenoweth EPLA and Bushland Restoration Services, 2012).

2. Control Methods: G = Glyphoshate (e.g. Weedmaster Duo ®, Roundup Biactive ®), MM = Metsulfuron Methyl (e.g. Brushoff ®, Brushkiller ®, Associate ®), S = Surfactant (e.g. L1700 ®, Prosil ®, Pulse ®), A = spray adjuvant (e.g. Agral ®, Protec ®, Codacide ®), D = colour marking dye (e.g. Herbi [red or blue] Liquid Dye ®), CSP = cut, scrape and paint, SI = stem inject.
3. Rates: G1:100 = Glyphosate at a rate of 100mL/10L, G1:200 = Glyphosate at a rate of 100mL/20L, G1:1.15 = Glyphosate at a rate of 400mL/600mL and MM = Metsulfuron Methyl at a rate of 1.5g/10L.
4. Glyphosate formulations, as referred to above, will be "frog-friendly".
5. It is recommended to add spray adjuvant to improve adhesion to and penetration of herbicide spray into the target species.
6. Adjuvants are not to be allowed to come into contact with natural water bodies when either mixing or spraying herbicide.
7. When not spraying directly adjacent to natural water bodies, the recommended broad-spectrum herbicide mix for treatment of all species is Glyphosate 1:100 for seedlings and Metsulfuron Methyl 1g/10L plus adjuvant.

Table 5.2 General Weed Control Methods

Method	Application	Procedure
Cut-scrape-paint	All woody shrubs and trees Some vines	• Prepare herbicide with 1-part of Glyphosate[1] to 1.5-parts water; • Cut plant low to ground at an angle and apply herbicide with a paintbrush; • Scrape sides lightly to reveal green tissue and apply the herbicide to the scraped area; • Ensure that the brush is not contaminated with soil; and • All species with seeds that have high viability or longevity (e.g. *Senna spp.*, some members of the Fabaceae family, or plants with high invasive potential such as *Heptapleurem actinophyllum*) must be removed from the parent and either composted on-site or removed from the site.
Stem injection	All woody trees and shrubs with a diameter of 6-10cm or greater	• Prepare herbicide with 1-part of Glyphosate[1] to 1.5-parts water; • With a tomahawk or saw, make a slightly angled cut approximately 1.5cm wide and 1.5cm deep into the trunk and apply herbicide immediately into the cut using a tree-injecting device; • Repeat this process in a brickwork pattern around the circumference of the tree, as close to the ground as possible; and • Two (2) rows of cuts will be sufficient for trees with trunks of 6-10cm; larger trunk diameters will require more rows.
Spraying	Dense infestations of shrubs and groundcover with no native species interspersed.	• Using a 15L spray backpack with a nozzle providing a solid spray pattern, spray herbicide on the infestation[2]; and • If Glyphosate[1] is to be utilised as the herbicide, dilution rates are to be in accordance with the manufacturer's recommendations.
Overspray	Plants with large, dense infestations (such as Lantana camara) Where dead plants should be intact to prevent erosion and over-exposure of large areas, protect native seedlings from predators and avoid trampling of the area by humans	• Prepare a solution of 1-part Glyphosate[1] to 100-parts water; • Spray over the top of the infestation[2]; • Leave the sprayed plants intact so that native seedlings can establish under the shelter provided; and • Weeds can be cut and flattened with bush-hooks or loppers and the subsequent regrowth sprayed with Glyphosate
Crowning	Weeds which have their growing points beneath the surface in the form of corms, bulbs, rhizomes, clumped or fibrous root systems or similar structures (e.g. *Asparagus aethiopicus, Chlorophytum comosum* and Poaceae species)	• Grasp the leaves or stems and hold them tightly so that the base of the plant is visible. Plants with sharp leaves or stems should be cut back first; • Insert a knife close to the base of the plant at a slight angle with the tip well under the system; • Cut through the roots close to the base. Depending on the size of the plant, two (2) or more cuts may be needed to sever the roots; and • Remove the plant and make sure that the base of the plant where the roots begin is completely removed

Notes:
[1] – Due to the proximity of the site to watercourses, where Glyphosate is indicated for use in chemical treatments, Glyphosate Biactive or an equivalent 'Frog Friendly' herbicide must be used. Dilution rates should always be in line with the manufacturer's recommendations and any variation requires a permit from the National Registration Authority.
[2] - To prevent any unnecessary and excessive use of herbicides during weed control activities, a vegetable-based dye will be mixed with all herbicides to be used for spraying and overspraying.

5.4 Fauna Habitat

The following works are to be undertaken to supplement and enhance the existing habitat values within the Covenant area:

- Following clearing operations, at least four (4) felled logs (minimum 1m long and 20cm in diameter) are to be relocated into the Environmental Covenant area to supplement any existing ground hollows;
- Installation of three (3) artificial nest hollows within the Environmental Covenant area in each lot including the following:
    - arboreal mammal nest box (possum / gliders);
    - parrot / rosella box; and
    - microbats nest box.

A specialist next box contractor is to be engaged to select and install the appropriate nest boxes.

5.5 Revegetation

A species list for the revegetation works, representing the ground truthed Regional Ecosystems (RE 12.9-10.7/12.9-10.2) is provided in Table 5.3. Species noted with 'k' are koala food trees. The planting palette includes canopy, understorey and shrub species given the presence of existing native ground cover in both RMAs and the recovery capacity following the weeding evident in this stratum (natural regeneration).

Given high levels of natural regeneration, revegetation within RMA 1 is limited to supplementary planting in canopy gaps greater than 25m^2 following the initial weed removal works in accordance with Table 5.3. This supplementary planting density is to be undertaken at one (1) tube (canopy/understorey species only) per 5m^2. Planting within RMA 2 is to achieve a density of one (1) plant per 1m², and is to include canopy, understorey, shrub and groundcover species.

Where minor earthworks incursions are present within either RMA, replanting is to be undertaken at one (1) tube per 1m². The Koala Habitat Value Assessment (Burchills 2022b) found the density of Non-Juvenile Koala Habitat Trees (NJKHT) to be 200 NJKHT/ha within Vegetation Unit B (RMA 1) and 88 NJKHT/ha within Vegetation Unit C (RMA 2). This is 50 NJKHT/ha less and 162 NJKHT/ha less than the Qld average of 250 NJKHT/ha, respectively.

Table 5.3 Revegetation Planting List – RMA 1 and 2 ('k' denotes koala tree)

Scientific Name	Common Name	Form / Stratum
Angophora leiocarpa[k]	Smooth-barked apple	Canopy
Corymbia citriodora subsp. variegata[k]	Spotted gum	Canopy
Corymbia intermedia[k]	Pink bloodwood	Canopy
Corymbia tessellaris[k]	Moreton Bay ash	Canopy
Eucalyptus crebra[k]	Narrow-leaved ironbark	Canopy
Eucalyptus melanophloia[k]	Silver leaved ironbark	Canopy
Eucalyptus siderophloia[k]	Grey ironbark	Canopy
Eucalyptus tereticornis[k]	Qld blue gum	Canopy
Ajuga australis	Australian bugle	Groundcover
Bothriochloa decipiens	Pitted bluegrass	Groundcover

The experience you deserve

Scientific Name	Common Name	Form / Stratum
Cymbopogon refractus	Barbed wire grass	Groundcover
Dianella caerulea	Blue flax lily	Groundcover
Goodenia rotundifolia	Star goodenia	Groundcover
Heteropogon contortus	Black speargrass	Groundcover
Imperata cylindrica	Blady grass	Groundcover
Lomandra multiflora	Many-flowered matrush	Groundcover
Themeda triandra	Kangaroo grass	Groundcover
Cassinia laevis	Cough bush	Shrub
Chrysocephalum apiculatum	Yellow buttons	Shrub
Dodonaea viscosa	Hops bush	Shrub
Grewia latifolia	Dysentery plant	Shrub
Indigofera australis	Native indigo	Shrub
Pittosporum angustifolium	Weeping pittosporum	Shrub
Acacia concurrens	Late-flowering hickory	Understorey
Acacia disparrima	Hickory wattle	Understorey
Acacia falcata	Sickle-leaf wattle	Understorey
Acacia leiocalyx	Black wattle	Understorey
Acacia maidenii	Maiden's wattle	Understorey
Acacia salicina	Willow wattle	Understorey
Allocasuarina littoralis	Black she oak	Understorey
Alphitonia excelsa	Soap ash	Understorey
Jacksonia scoparia	Dogwood	Understorey

5.5.1 Revegetation Protocol

Table 5.4 outlines the procedure for revegetation planting works.

Table 5.4 Revegetation Protocol

Item	Description
1.	Local provenance tube stock is to be utilised for all restoration works. Where this is not possible due to circumstances out of the control of the applicant, Council approval must be sought.
2.	Plants are to be vigorous, well established, hardened off, consistent with naturally occurring species or varieties (no cultivars), free from disease and insect pests, with large root systems and no evidence of having been restricted or damaged.
3.	Plants are to be planted immediately after delivery to the planting site. If not possible, they are to be stored in the shade and watered sufficiently daily.
4.	Excavate planting medium to a depth suitable for the installation of tube or pot specimens (Figure 5.1). In areas where the planting substrate is deemed to be very poor (compacted, nutrient depauperate, hydrophobic, etc.) and above areas of potential frequent inundation and water flow, soil shall be suitably prepared (e.g. through use of fertiliser, and mechanical ripping where required) and sufficient topsoil to sustain long term plant growth shall be used.
5.	Pre-water plant hole if soil is dry in order to decrease root stress upon planting and assess the infiltration of water through the soil.
6.	A complete, slow release fertiliser is recommended, and is to be administered appropriately during planting. Top dressing with slow release fertiliser is preferred to avoid toxic levels of fertiliser accumulating in the plant hole around the plant roots.
7.	Place plant into hole and backfill ensuring that the plant is upright and the stem is not covered in any less than 10mm or any more than 20mm of planting medium.
8.	Plants are to be watered thoroughly immediately after planting (ensure deep irrigation) and thereafter as required depending on climatic conditions. Creation of a concave hollow around the base of each plant will aid water infiltration to the plant roots.
9.	To ensure successful establishment, all planting surfaces must be covered in either a 10cm layer of high quality composted chip mulch free of weeds and debris (Note: to avoid possible stem rot in some 'drier' species ensure mulch is 'dished' and not covering plant stem by more than 2cm); or suitable individual anchored natural fibre weed mat (e.g. jute mat) in areas subject to high velocity flows or on slopes greater than 1:3 (Figure 5.2).
10.	As presented within other sections, where available mulch material will be sourced from cleared vegetation material if adequately seasoned (i.e. stockpiled for at least 6 weeks to prevent nitrogen drawdown).
11.	Monitoring and maintenance (watering, weed control, stock replacement, fertilising, managing inappropriate site access, etc.) is to occur monthly for the period from October to May and bi-monthly for June to September during the Establishment period.
12.	Where specimens show signs of very poor health, do not replace unless the plant is determined to be dead below ground. Many species are capable of strongly recovering from transplant stress or adjustment to site conditions. If a particular species is consistently doing poorly in certain site conditions, it is recommended to replace with an alternate species.
13.	A minimum 90% survival rate must be achieved for all planted stock at all milestones. Where this is not achieved, supplementary planting must be undertaken (refer to Section 5.7).

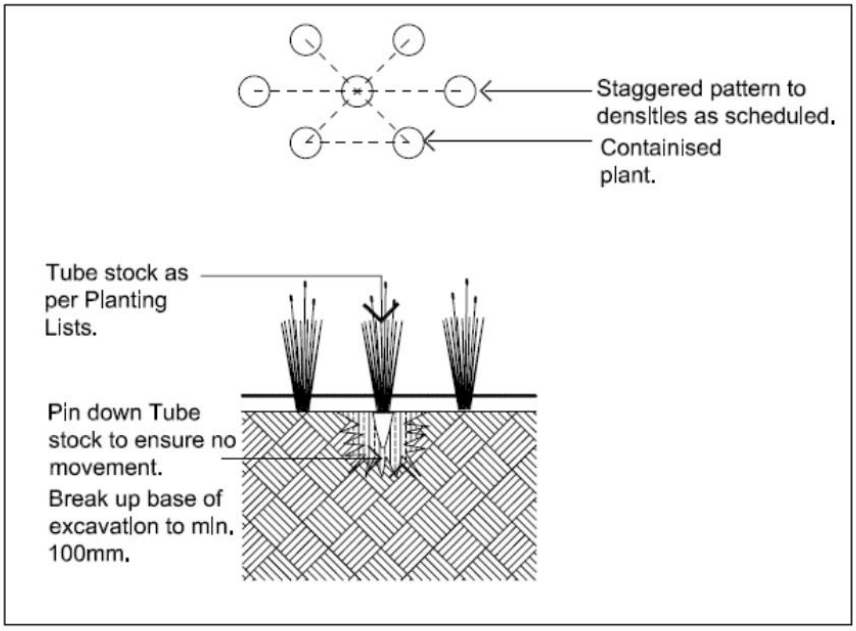

Figure 5.1 Typical Tubestock Planting Details

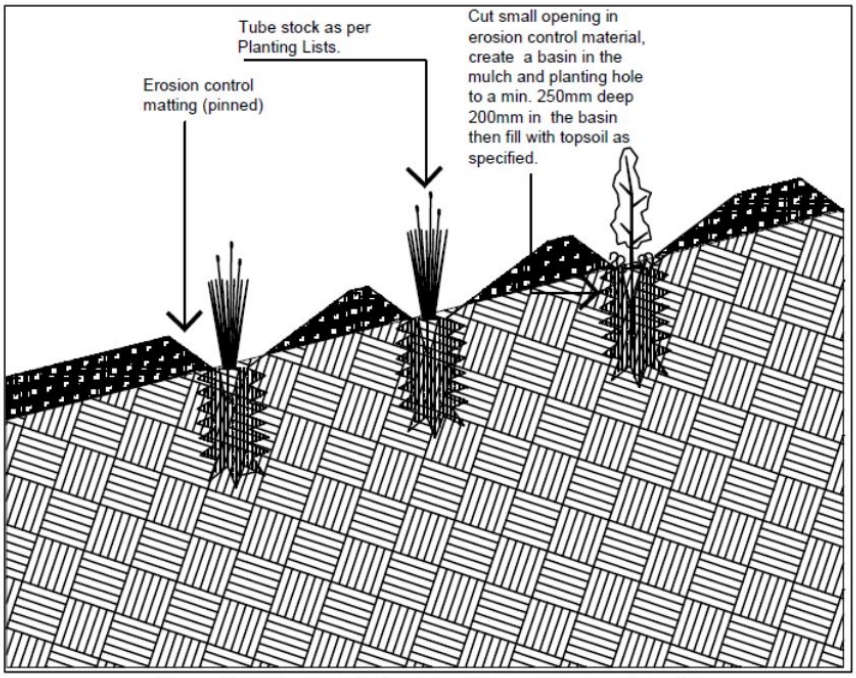

Figure 5.2 Planting Method for Slopes Greater than 1:3

5.6 Plant Procurement

Local provenance tube stock is to utilised for all restoration works involving planting. Where this is not possible due to circumstances out of the control of the applicant, Council approval must be sought. This will help to ensure that the genetic composition of the area is maintained. The following sections provide a guide to seed and vegetation material collection and installation protocol.

5.6.1 Collection of Seeds and Vegetative Material

The use of propagated plants in restoration / rehabilitation projects may be necessary if sufficient local viable seed is not available or if germination of seeds is prolonged, erratic or difficult. Vegetation propagation can be a useful tool, especially when propagating ground layer plants that spread by bulbs, corms, rhizomes or stolons.

Vegetative propagation includes the use of stem or root cutting, aerial layering or division and plants produced through these methods are generally identical to parent plants. There is alack of genetic variability within planted vegetation communities, and thus the possibility of increased susceptibility to disease and insect attack.

A harvesting licence may be required before harvesting protected plants in the wild. These are issued and managed by the Department of Environment and Science (DES). The Protected Plant Harvesting Licence authorises the sustainable harvesting of Endangered, Vulnerable or Near Threatened (EVNT) and Special Least Concern plants. A harvester will be required to operate under a sustainable plant harvest plan that demonstrates the long-term sustainability of the relevant activity. The Protected Plant Growing Licence authorises the propagation and cultivation of EVNT and Special Least Concern plants taken from the wild. The harvesting of restricted species under this licence must comply with the code of practice for the taking and use of protected plants. The code allows the taking of small quantities of seed and propagating material for growing protected plants.

The following general guidelines for collection of seeds and other vegetative material are recommended:

- Collect from an area within the local catchment, preferably with the same aspect and from no further than a 20km radius;
- Collect material from as many “wild” growing plants as possible to ensure variation within the parent plants. Seeds should not always be gathered from a favourite or easy-to-access site, nor should they be picked only from well-laden or easy-to-reach specimens;
- Collect material from several (at least 10) well-spaced plants to reduce the possibility of parent plants being related. Mix together equal amounts of seed from each plants before planting;
- If the planting program is to be ongoing, identify each collection plant so that different plants can be used in the following years;
- Do not collect only from well-conditioned specimens. Such plants may only be in this condition because they are responding to temporary favourable environmental conditions. If these conditions change, so may their ability to survive;
- Propagative material collected from isolated plants as self-pollination and / or inbreeding may have occurred and this can often yield low quality seed;

- Collection from plantations and other planted specimens requires extra caution. These will be a poor source of vegetative material if derived from inbred plants of suitable provenance;
- Seed collected from woodlands or forests where only a few trees have flowered well will also tend to be more inbred than seed collected after a heavy flowering year when it is likely that greater rates of out-crossing have occurred; and
- Over-harvesting may negatively impact on the local seed banks available for natural regeneration, as well as remove food sources for wildlife.

5.7 Supplementary Planting

Supplementary planting should be undertaken in areas where plants have failed to thrive or where weed removal activities have resulted in site disturbance. The process of supplementary planting should consider the existing species composition – for example, in areas with good canopy cover but degraded lower strata, ground cover and understorey species are to form the predominant part of the revegetation planting.

5.8 Schedule of Rehabilitation Works

5.8.1 Establishment Period

Following initial rehabilitation works, the Environmental Covenant area is to undergo an Establishment period of 12 months, during which time the developer will be responsible for undertaking and / or organising monitoring and maintenance requirements. Table 5.5 outlines the schedule of maintenance and benchmarks for the Establishment Period.

Table 5.5 Establishment Period Schedule of Works

Activity	Frequency	Commencement	Details
Fencing and Signage	Once	Prior to Works	Fencing is required to be installed around the RMA in order to deter unauthorised access.
Weed Control	Monthly	Initial period	This will comprise initial weed control and following up treatments. By the end of the Establishment Period, the restoration area will be 90% free of weeds.
Initial Revegetation Works	Once but follow up required	Following weed control	Works to include soil preparation (soil wetting agent may be required), planting, fertilising (slow release for native plants), mulching and installation of stakes and seedling protection covers where deemed appropriate by the revegetation contractor. All reconstruction works are to achieve a minimum survival rate of 90% at the end of the establishment period.
Irrigation	Weekly/As required	At reconstruction planting	Irrigation requirements will depend on rainfall events. Irrigation will be undertaken at a minimum every three (3) to five (5) days for first eight (8) weeks depending on rainfall.

Activity	Frequency	Commencement	Details
Routine Inspection and Reporting	Weekly/Monthly	Following weeding and planting out	Inspections will be undertaken weekly for the first month following reconstruction works; then monthly for the remainder of the establishment period.
Follow up Revegetation Planting	As required	Following inspection and as required	Replace dead plants; and/or add additional mulch/fertiliser; and/or replace stakes/protective covers where required as determined at the routine inspections.
Photo-monitoring	Every three (3) months	Prior to rehabilitation works, then immediately upon completion of reconstruction works.	Photographs taken from fixed points, determined by the landowner, to record changes in the rehabilitating vegetation community every three (3) months for the duration of the rehabilitation project.

5.8.2 On-Maintenance Period

Following completion and acceptance by Council of the 12 month Establishment period, the developer will be responsible for maintenance and monitoring for the 12 Month On Maintenance period. Council will undertake a final inspection at the end of the On-Maintenance period to determine whether the Environmental Covenant Area meets the restoration benchmarks and objectives outlined in this CMP. This inspection will determine whether the restoration works can go 'Off Maintenance' and the Environmental Covenant moves into the perpetual 'management phase'.

Table 5.6 outlines the schedule of activities and maintenance to be undertaken during the On-Maintenance period.

Table 5.6 On-Maintenance Period Schedule of Works

Activity	Frequency	Commencement	Details
Weed Control	Every three (3) months	Following completion of establishment period	Three (3) monthly and reactive based on monitoring results.
Irrigation	As required	Following completion of establishment period	Irrigation requirements during this stage will be reactive based on the monitoring results and rainfall events.
Routine Inspection and Reporting	Every three (3) months	Following completion of establishment period	Inspections will be undertaken every three (3) months during this period.
Follow up Revegetation Planting	As required	Following completion of establishment period	Replace dead plants; and/or add additional mulch/fertiliser; and/or replace stakes/protective covers where required as determined at the routine inspections.

Activity	Frequency	Commencement	Details
Photo-monitoring	Every three (3) months	Following completion of establishment period	Photographs taken from fixed points, determined by the landowner, to record changes in the rehabilitating vegetation community every three (3) months for the duration of the rehabilitation project.

5.8.3 Management Period

Once certification for Off Maintenance is received from the Covenantee, the Covenantor will be responsible for all maintenance and monitoring in accordance with this CMP as per Table 6.6.

Table 5.7 Works Schedule for General Management Phase

Activity	Frequency	Commencement	Area	Details
Chemical Weed Removal	As required	Certification of Off Maintenance	Covenant area	Covenant Area should be kept 90% free of Declared and Environmental weeds.
Inspection and Reporting	Annual	Certification of Off Maintenance	Covenant area	Inspections and reporting to be undertaken bi-annually.

5.9 Qualifications of Personnel Involved in CMP Implementation

On-ground restoration works must be undertaken by persons with qualifications in the field of bush regeneration. Minimum qualifications and experience to undertake on-ground restoration works should comprise Certificate III in Conservation Land Management (Natural Area Restoration) or equivalent and two (2) years' experience working on the vegetation type(s) at the site. Equivalent qualifications and / or experience will require the provision of successful on-ground examples under the responsibility of the applicant or referee reports from experienced practitioners eligible for Australian Association of Bush Regeneration accreditation. Proof of qualifications and experience of on-ground personnel is required to be submitted to Council prior to commencement of works.

Bush regenerators are to hold a current Chemical Users Certificate and other relevant legislative requirements (e.g. harvesters' licence to work with threatened flora).

Monitoring and reporting are to be undertaken by a suitably qualified ecologist with experience in monitoring natural areas and quantitative analysis.

5.10 Daily Record Keeping

To comply with the *Chemical Usage (Agricultural and Veterinary) Control Act 1988*, a daily record sheet which includes records of chemicals used must be kept. An example of a Daily Record Sheet is included as Appendix B.

To comply with the *Work Health & Safety Act 2011* a daily record sheet for on-site staff involved in the restoration work will need to be kept. A sample Job Risk Assessment Form and Matrix is included within Appendix C.

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6. Covenant Management

This section details the activities that are either prohibited or permitted in the Covenant Area and apply to the Covenantor and the successors in title. The following management actions are to be adhered to at all times within the covenant area as part ongoing management.

Note: The term 'vegetation' means, trees, bushes, plants, shrubs, flowers and other flora including (where the context so admits or requires) grasses, algae, fungi and the like but excluding declared noxious weeds and other vegetation declared by the Council by way of policy.

6.1 Permissible Actions and Structures

The following actions and structures are permissible in the Covenant Area:

- Boundary fences and fences to define the interface of the Covenant Area in accordance with the provisions of this Covenant Management Plan (refer to Section 6.3).

6.2 Prohibited Actions

The Covenantor and successors in title, or their agents must not in the covenant area:

- Erect any new fixtures or improvements, including buildings or their structures (with the exception of 'permissible structures' as listed in Section 6.1);
- Construct any new trails or paths;
- Deposit any fill, soil, rock, rubbish, ashes, garbage, waste or other foreign material aside unless approved by Council or the State Government (e.g. approved rectification works);
- Clear, lop or remove of any native trees or shrubs unless approved by Council;
- Keep domestic or farm or production animals; and
- Perform any other acts on or in respect of the covenant area that may have any detrimental environmental impact.

6.3 Covenant Area Fencing

The Covenant Area boundary has been visually delineated by the developer for maintenance and inspection purposes (e.g. by way of star pickets). If there is the possibility of domestic animals (e.g. cattle, horses) entering the Covenant Area, fauna friendly fencing must be installed. Fauna friendly fencing permits native wildlife (e.g. wallabies, koalas) to pass through safely. An example of fauna friendly fencing is shown in Figure 6.1. No fencing is to be constructed along the Covenant boundaries which restricts native fauna movement or that would harm fauna (e.g. barbed wire or electrified fencing). The fencing may comprise post and rail or pickets with three strand wire fencing with minimum 50cm gap between the ground and the lowest strand and minimum 30cm gaps between rails / remaining strands.

Where no domestic animals are present that could enter the Covenant Area, permanent visual delineation should be constructed. This may comprise wooden bollards at regular intervals (20-30m spacings) and change of boundary direction to create a visual sightline of the covenant boundary.

Building envelopes should also be suitably fenced to detain domestic fauna (e.g. cats and dogs) within the building envelopes, prohibiting access into the Covenant Area ('fauna-proof' or 'fauna-exclusion' fencing).

Figure 6.1 Example of fauna friendly fencing for domestic animal exclusion (© Replas)

6.4 Monitoring

Monitoring of the Covenant Area by the Covenantor is to be undertaken annually. This can be achieved using the Stewardship Proforma in Appendix F and photo-monitoring – a simple and very useful technique for recording the rate and extent of change within rehabilitating vegetation communities over time.

Photo-monitoring is best employed over the longer term (i.e. years) and consists of keeping photographic records of the rehabilitation project, which are taken at fixed points at regular annual inspections.

Photo-monitoring points are to consist of a marker or a feature (e.g. a survey peg or stake in the ground) that is not likely to change dramatically over time. To provide accurate and reliable data, photographs should be taken from exactly the same location, height and direction, and with the same lens. GPS co-ordinates of each photo-monitoring point should be accurately recorded. A prominent feature of the landscape that is unlikely to change over time (e.g. a large dead tree) should be visible in each photo. This will assist with the recognition and comparison of any changes in the vegetation.

Whilst photo-monitoring alone is useful for recording changes within vegetation structure, the technique does have limitations. For example, it does not provide quantitative information related to

species composition or recruitment, nor does it provide information about regenerating ecological functions and processes.

6.4.1 Management Benchmarks

The Covenantor will be responsible for all maintenance and monitoring in accordance with this CMP to ensure benchmarks are met as outlined in Table 6.1.

Table 6.1 Management Benchmarks

Activity	Frequency	Details
Weed Control	As required	Covenant Area should be kept 90% free of Declared and Environmental weeds in accordance with this CMP.
Supplementary revegetation	As required	Any failed revegetation stock is to be replaced to ensure the original planting densities are maintained in accordance with Table 3.1.
Habitat Enhancement	As required	Fallen timber is to be retained in place and not removed from the Covenant Area (unless it is weed material eg Camphor laurel). Nest boxes are to be maintained and monitored in accordance with this CMP.
Fencing	As required	Fencing or markers delineating the Covenant boundary are to be maintained in accordance with this CMP.
Inspection and Reporting	Annual	Inspections and reporting to be undertaken annually in accordance with this CMP.

6.5 Management Agreement

6.5.1 Covenantor Requirements

The Covenantor shall undertake monitoring in accordance with this CMP using the Stewardship Report in Appendix F annually to ensure weeds are controlled and revegetation is maintained. Inspections by the Covenantee may be conducted at any time to ensure ecological values within the Covenant Area are retained and protected, with the first Stewardship Report functioning as a benchmark for subsequent surveys. The Stewardship Report has been designed to ensure consistent monitoring of the site over a long period and shall be adhered to during each property inspection. Additionally, where photo-monitoring has been implemented, photographs taken from specified monitoring points / landmarks may be used to monitor changes over time in the Covenant Area.

6.5.2 Evaluation and Review

The Covenantee has an obligation to provide land management advice, where necessary, to the Covenantor. The Covenantee is to provide management advice if requested and shall aim to undertake annual site inspections wherever possible to provide an opportunity to discuss management issues on-site.

6.5.3 Amendments to the Covenant Management Plan

Any amendments made to this Covenant Management Plan as a result of monitoring must be submitted to Council to be assessed and approved to the satisfaction of the Chief Executive Officer, with the amended copy stamped and returned to the Covenantor. Updated versions of this Covenant Management Plan must be numbered successively (e.g. the original being Covenant Management Plan Version 00, as shown on the document transmittal page of this document) and dated to allow easy identification of the most recent document. In addition, all amendments to successive plans must be listed in Appendix E of the plan.

6.5.4 Duration of Management Agreement

This Covenant Management Plan remains applicable / active indefinitely unless changes are submitted to Council and are assessed / approved to the satisfaction of the Chief Executive Officer. This Covenant Management Plan will be reviewed in consultation and agreement with the owner of the property and may be amended pursuant to that review. This Covenant Management Plan may be immediately reviewed in consultation with the owner, and amended pursuant to that review, if circumstances arise which require prompt action to be taken to rectify or minimise the effect of a threat to the protected vegetation. In these situations, both parties to the covenant must be in agreement to the changes proposed.

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7. Definitions

AMS	Adaptive Management Strategy
CMP	Covenant Management Plan
DES	Department of Environment and Science
ESA	Ecological Site Assessment
DoR	Department of Resources (formerly DNRME)
DNRME	Department of Natural Resources, Mines and Energy
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
EVNT	Endangered, Vulnerable or Near Threatened
LVRC	Lockyer Valley Regional Council
NCA	*Nature Conservation Act 1992*
RE	Regional Ecosystem
VMA	*Vegetation Management Act 1999*

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8. References

Chenoweth EPLA and Bushland Restoration Services (2012). *South East Queensland Ecological Restoration Framework: Code of Practice*. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.

Burchills (2022a). *Ecological Site Assessment – Rosewood Laidley Road, Laidley*, Burchills Engineering Solutions, Gold Coast.

Burchills (2022a). *Koala Habitat Value Assessment – Rosewood Laidley Road, Laidley*, Burchills Engineering Solutions, Gold Coast

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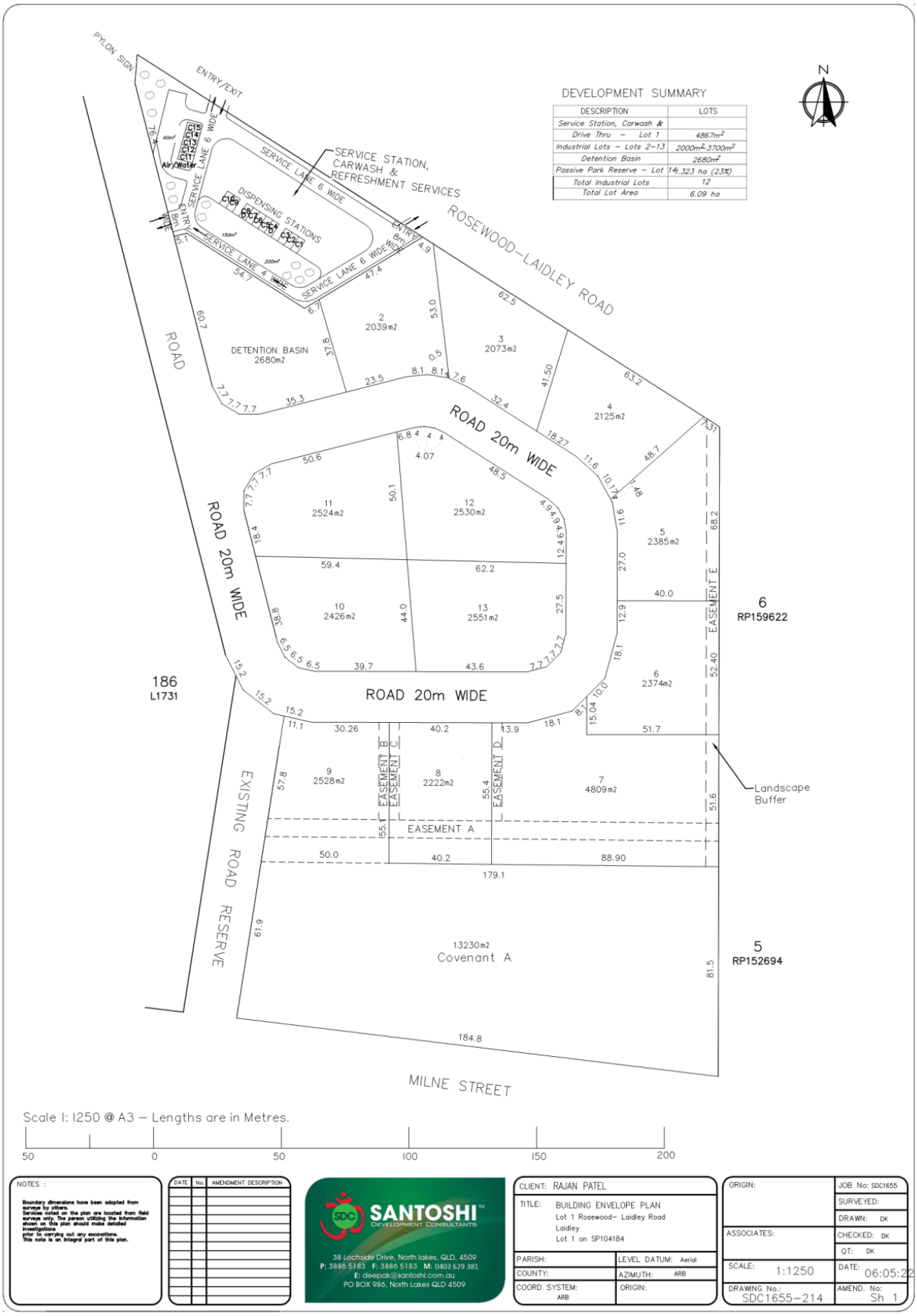
Appendix A – Plan of Development



NOTES :

Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field survey only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations.
This note is an integral part of this plan.

DATE	No.	AMENDMENT DESCRIPTION

SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509

CLIENT: RAJAN PATEL	
TITLE: BUILDING ENVELOPE PLAN Lot 1 Rosewood– Laidley Road Laidley Lot 1 on SP104184	
PARISH:	LEVEL DATUM: Aerial
COUNTY:	AZIMUTH: ARB
COORD SYSTEM: ARB	ORIGIN:

ORIGIN:	JOB No: SDC1655
	SURVEYED:
	DRAWN: DK
ASSOCIATES:	CHECKED: DK
	QT: DK
SCALE: 1:1250	DATE: 06:05:22
DRAWING No.: SDC1655–214	AMEND. No: Sh 1

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Appendix B – Daily Record Sheet

DAILY RECORD SHEET

Site Name / Location: _____

Date: _____ Time: _____ to _____

Team / Staff: _____

Growing Conditions	Temperature / Humidity	Weather Conditions	Wind Speed and direction

Zone	Hours	Weeds treated	Method	New species encountered / location

CHEMICAL INFORMATION

Equipment used	Glycophosphate	Met-methyl	Herbicide	Additive	Other	Water	Number mixed
Daily chemical totals							

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Appendix C – Risk Assessment Form and Matrix

HAZARD IDENTIFIED	RISK RATING	CONTROL MEASURE RISK ASSESSMENT
Traffic Hazard **Working in close proximity to roads**		☐Use traffic controller ☐Use of safety signs ☐Use of witches hats or temporary barrier ☐High visibility clothing
Sun Exposure **Hot conditions**		☐Reduce exposure time – rest breaks ☐Provide ample water ☐Protective clothing and sunscreen
Working With Chemicals		☐Current MSDS held ☐Adequate washing facilities ☐Hazardous substances stored and labelled correctly ☐Use of personal protective clothing ☐Rotate tasks to avoid prolonged exposure
Biological Hazard **Needle stick injury**		☐Inspect site before work commences ☐Provide appropriate waste disposal container ☐Personal protective equipment
Manual Handling **Handling heavy objects**		☐Use correct lifting and carrying techniques ☐Use lifting aids ☐Use wheelbarrow etc wherever possible ☐Ensure clear area before lifting ☐Share the load ☐Rotate activities or rest breaks ☐Appropriate personal protective clothing
Crush Impact **Cut, crush and impact**		☐Knowledge and correct use of tools ☐Appropriate personal protective clothing ☐Correct tool for job
Slips, Trips and Falls		☐Avoid carrying awkward or heavy objects on uneven ground ☐Remove all potential hazards if possible or mark with coloured tape ☐Do not leave tools lying in pathways ☐Do not run ☐Ensure boots are firmly laced
Hazardous Plants **Plants that may cause allergic reaction**		☐Identify plants which may cause allergic reactions ☐Mark area with coloured tape
Bites and Stings		☐Create disturbance on site before beginning work ☐Apply insect repellent ☐Wear appropriate personal protective equipment

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Risk Assessment Matrix

How severely could it hurt someone Or How ill could it make someone	Very likely - could happen anytime	Likely - could happen sometime	Unlikely - could happen, but very rarely	Very unlikely - could happen, but probably never will
Kill or cause permanent disability or ill health	1	1	2	3
Long term illness or serious injury	1	2	3	4
Medical attention and several days off work	2	3	4	5
First aid needed	3	4	5	6

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Appendix D - Monitoring and Evaluation Proforma

This form should be completed for each management zone within a work site. Assessment should be made of the zone as a whole.

Date		Observer	
Site name		Site location	
Zone		Area	

Dominant vegetation community

Dominant Species Canopy			
Dominant Species Mid			
Dominant Species Ground			

Notes and Comments

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Quad	Species	Height (m)	Veg type	No. in quad	Stems/100m2	Av health (outlier)	Mulch depth % cover
X							
1							
2							
3							
4							
5							
6							
7							
Y							

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Appendix E – Environmental Weed Descriptions

Environmental Weed Descriptions

The following weed descriptions and figures have been reproduced from the City of Gold Coast publication titled *Environmental Weeds of the Gold Coast* (June, 2006). Weeds are categorised by growth form (i.e. groundcovers, vines, shrubs and scramblers, and trees), aquatic weeds have not been included. Within each category, weeds are listed alphabetically by common name.

Note that the following weeds are recognised by the City of Gold Coast to commonly occur throughout the City. They are not to be considered an inventory of weed species occurring on the subject site.

Groundcovers

Asparagus Fern

Asparagus aethiopicus

Herbaceous perennial with persistent, many-branched stems up to 2m long. 'Leaves' (actually short stems) up to 2.5cm, single or in clusters, pale green with a distinct mid-rib and abrupt point. Flowers are small to 0.5cm, bell-shaped and white to pale pink. Fruit is a pale green berry that matures to bright red in late winter/early spring. Able to form dense mats of tuberous roots. Spread by birds and garden dumping.

Balsam/Busy Lizzy

Impatiens walleriana

A perennial herb growing to 60cm. Stems erect, succulent and thick. Leaves ovate and serrated with a pointed tip. Brightly-coloured flowers in spring, varying in colour between pink, purplish pink, red or rose. Plants can regrow from a stem part containing a node and can also spread by seed. Grows in moist, shady areas and is particularly invasive along creeks. Often spread by garden dumping.

Bamboo

Phyllostachys spp. and Arundanaria spp. Also known as: Running bamboo

Perennial woody grasses of varying heights, 1–15m high forming dense groves. Stems erect and woody. Leaves alternating and grass-like. Reshoots from underground stems or suckers enabling it to escape from gardens. Dense growth excludes other vegetation.

Environmental Weed Descriptions

Coral Berry

Ardisia crenata, A. humilis. Also known as: A. crispa, A. crenulata

Note: Description is for *A. crenata* not *A. humilis.* Compact shrub to 1m, often single-stemmed. Leaves dark green, thick, glossy, with tightly waved edges. Flowers small, white or reddish, fragrant, in clusters. Fruit glossy, bright red and persistent on plant for a long time if not removed. Seeds germinate readily under dense canopy. Spread by birds.

Creeping Lantana

Lantana montevidensis

Perennial, sprawling, lantana species up to 25cm tall. Thin wiry stems. Leaves in opposite pairs, dark green, 2–3cm long, oval with finely-serrated margins and strong smelling when crushed. Flowers are small and either purple with a yellow or white centre in symmetrical clusters or full yellow. Small purplish to black berries in autumn. Often spread by dumping of garden waste or by seed and can invade understorey of open forest and woodland surviving on dry ridge tops and slopes with shallow, stony soils.

Crofton Weed

Ageratina adenophora

Erect, perennial herb to 1m with woody roots. Leaves opposite, trowel-shaped, bright green, 5–8cm long, 2– 5cm wide with toothed edges. White flowers in small dense clusters at the ends of branches in spring. Seeds are slender, angular, 2mm long, almost black, with fine white hairs at their tip. Colonises forest margins, stream banks and disturbed areas, preferring shaded wetter areas.

Elephant Grass and Bana Grass

Pennisetum purpureum and P. purpureum x typhoides

Tufted perennial grasses growing to 4m, resembling sugar cane in general appearance. Pale green leaves up to 4cm in width, with a strong mid-rib tapering to a fine point. The flower heads are up to 30cm in length and range in colour from yellow to purple. Forms bamboo-like, densely tufted clumps on creek banks and roadsides.

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Environmental Weed Descriptions

Fishbone Fern

Nephrolepis cordifolia

A widely cultivated native plant now growing as a weed outside its pre-European range. Wiry, scaly stems branch and spread over the ground, sometimes bearing fleshy tubers. Can grow densely and expand rapidly to dominate the ground surface. Fronds erect or arching to 75cm long. Spread by dumping garden waste and by spores carried by wind or water. Where fishbone fern appears to be growing naturally in undisturbed bushland and is not apparently a garden escapee it should not be removed.

Glory Lily

Gloriosa superba

Herbaceous perennial, stems to 4m that flower, produce fruit and die back annually. Leaves grow directly from stems, do not have a leafstalk and tips form a tendril. Large flowers with yellow/orange/red petals October–May. Large green capsule fruit that dries and opens to expose bright orange/brown seeds. Extremely difficult to control (regrows readily from seed and underground tubers). Spread by birds, garden and soil dumping.

Mistflower

Ageratina riparia

Sprawling, perennial herb to 60cm. Numerous branching stems produce roots at ground level. Leaves opposite to 8cm long and 2.5cm wide, with toothed edges. Flowers white, in small dense clusters at ends of branches in winter. Seeds slender, angular, 2mm long, black with fine white hairs at tip. Grows on damp hillsides and creek banks and rapidly invades disturbed areas.

Molasses Grass

Melinis minutiflora

A spreading, densely smothering perennial mat grass. Stems branched and up to 90cm long. Foliage usually sticky and with strong odour resembling molasses. Slender flower heads, in winter, are 10–20cm long and purplish in colour when young. Grows thickly from rooted runners. Spreads from disturbed areas adjacent to native forest e.g. roads and tracks. Highly flammable but recovers rapidly from fire and colonises burnt areas at the expense of native vegetation.

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Environmental Weed Descriptions

Mossman River Grass

Cenchrus echinatus

Clumping, annual grass to 80cm high. Flowers in a cylindrical spike of up to 50 burrs, each burr about 4- 10mm long. Leaves to about 12mm wide. Burrs attach to animal fur and clothing and are also spread by water. Often found on sandy coastal soils.

Mother-in-law Tongue

Sansevieria trifasciata

Dense, clumping groundcover preferring moist shady sites. Long, succulent, mottled greenish-yellow leaves to 1m. Often introduced to bushland by garden dumping and can be difficult to eradicate once established.

Mother of Millions

Bryophyllum delagoense, B. daigremontianum x B. delagoense and B. pinnatum.

Also known as Resurrection plant.

Bryophyllums are succulent, perennial herbs. All have fleshy stems and leaves. Flowers are orange, yellow or red on stalks held above the foliage. Plantlets may form on the parent plant or regrowth may occur from tiny leaves or stems on the ground. Numerous seeds. Spread by water, garden dumping and vegetative spread.

Para Grass

Urochloa mutica

Perennial grass up to 1m. Robust, hollow stems have a prostrate growth habit sprouting new roots wherever nodes touch the ground. End of stems erect. Leaves are hairy and dark green, up to 15cm long and 1cm wide, tapering to long, fine point. Leaf sheaths also hairy where they join stem. Flower heads to 18cm long composed of several spikes about 5cm long. Thrives on creek banks and in wetlands.

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Environmental Weed Descriptions

Paspalum Grass

Paspalum conjugatum, P. dilatatum, P. wettsteinii

A tough, clump-forming perennial to about 1m high with leaves to 15mm wide. Seed head on terminal stalks with 3 to 7 long, thin, finger-like spikes carrying many seeds in summer. Spikes grow horizontally outwards from stalk. Seeds are sticky and are spread by disturbance such as mowing and slashing and via birds. Other paspalum species are also weedy.

Polka Dot Plant/Freckle Face

Hypoestes phyllostachya

Small, shade-tolerant perennial herb to about 0.5m. Numerous cultivars display different foliage colours and patterns but typically have soft green leaves with white to pink spots or mottled patterns. Small lavender blue flowers in summer.

Silverleaf Desmodium/Velcro Vine

Desmodium uncinatum

A perennial, scrambling leguminous vine with deep tap root and thick stems, rooting at the nodes. Leaflets egg-shaped and covered in fine hairs, with pale silver stripe along mid-rib. Flowers are pink, mauve or blue up to 1cm long, usually appearing in early autumn. Brown seed pods have many fine velcro-like hooked hairs which attach to clothing or animals. This weed can cause a skin reaction.

Singapore Daisy

Sphagneticola trilobata

Forms dense mats of runners on the ground surface that smother native plants. Leaves are glossy, notched, somewhat fleshy and often lobed. Flowers are a bright yellow daisy. Able to reproduce by small seeds, but more likely to grow from a section of stem or root. Spread by water, garden dumping, mowing and vegetative spread.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

South African Pigeon Grass

Setaria sphacelata and other introduced Setaria spp.

Tufted perennial grass to 1.8m commonly found bordering waterways and in damp areas. Inflorescence is a spike up to 25cm long. Leaves bluish-green up to 2cm wide.

Striped Trad

Tradescantia zebrina

Succulent, perennial creeper with stems that branch and spread over the ground, able to put down roots at each node (leaf joint). Leaves to 6cm long, purple underneath and with silvery-white stripes above. Small pink-purple flowers in spring/summer. Produces seed but commonly spread in garden waste.

Tradescantia

Tradescantia fluminensis.

Also known as Trad or Wandering Jew.

Vigorous perennial creeper forming dense mats up to 60cm deep. Stems are succulent and brittle, up to 4m long. Flowers small, white in clusters at the ends of branches. Leaves are glossy, somewhat fleshy, up to 2.5cm long with parallel veins and fine hairs along the edges. Spread by water, garden dumping, mowing and vegetative spread.

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Environmental Weed Descriptions

Vines

Balloon Vine

Cardiospermum grandiflorum

Perennial climber to 10m or more. Stems hairy, green with ribs often streaked red, becoming thick and woody with age. Leaves divided into 9 leaflets arranged in groups of 3. Leaflets soft, hairy, clearly-veined, with broadly toothed edges. Flowers small, 4 petals, white in clusters. Fruit a papery green capsule maturing to light brown in autumn which is dispersed by water, wind and gravity.

Black-eyed Susan

Thunbergia alata

Herbaceous perennial twiner. Leaves 3-pointed, triangular or shaped like an arrow head to 7cm long, leaf stalks to 4cm. Flowers borne singly on stalks to 6cm long, orange or yellow, usually with black centre. Fruit a hairy capsule with few small seeds. Spread by garden dumping and vegetative spread.

Blue Thunbergia

Thunbergia grandiflora

Vigorous climber to 5m. Stems become woody with age. Leaves rough with toothed edges. Flowers bell or trumpet-shaped, lavender blue, throat white, about 6cm across, single flower grows from leaf joint. Once established this plant can smother its supporting vegetation and prevent new growth. Spread by vegetative spread, water and garden dumping.

Brazilian Nightshade/Climbing Nightshade

Solanum seaforthianum

Perennial shrub or twining climber from South America. Stems mostly hairless. Leaves deeply lobed, hairless except edges and veins on under surface. Flowers mauve-blue, 2–3 cm across in groups of up to 50 in spring and autumn. Fruit a bright red berry about 1cm across. Seeds spread by birds and water.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Cats Claw Creeper

Macfadyena unguis-cati

Tuberous perennial climber to 30+m. Stems red-brown ageing to green then becoming woody, to 15cm thick. Leaves divided into 3, tip leaflet forms a small, 3– clawed tendril, other leaflets to 8cm, red-brown ageing to dark green above and paler below. Flowers single or small clusters, yellow, trumpet-like, to 8cm, 5 petals. Thin capsule fruit to 45cm, green, ripening to brown in summer, with winged seeds. Tuberous, deep, extensive roots dispersed by floods and humans. Seeds dispersed by wind and water.

Climbing Asparagus Fern

Protasparagus africanus, Asparagus plumosus

Perennial twining climber with scattered spines on stems. Branches more or less horizontal. 'Leaves' (actually short stems called cladodes) to 0.7cm long. Small green-white flowers on the tips of branches followed by berries about 0.5cm across, blue-black and ripe in autumn/winter. Roots (rhizomes) fibrous and fleshy. Spread by birds and garden dumping.

Dutchman's Pipe

Aristolochia elegans

Fast growing perennial creepers. Stems age to woody. Leaves fleshy, heart shaped, paler underneath to 10cm, with long, kinked leaf stalk. Leaves and stems strongly scented. Flowers roughly pipe shaped, striking maroon colour with white thread-like markings. Fruit a capsule, green maturing to brown and opening parachute-like to release many fertile seeds. Mainly spread by wind, water and gravity.

Glycine

Neonotonia wightii

A vigorous, twining, perennial vine with a woody base. Leaves consist of 3 leaflets, dark green and broadly egg-shaped. Prolific, bean-like seed pods up to 3.5cm long contain rectangular-shaped seeds. Inconspicuous creamy flowers in late autumn. Smothers native trees and understorey vegetation.

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ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Kudzu

Pueraria lobata

Vigorous trailing or twining perennial herb with a large tuber. One vine may cover a vast area. Stems hairy, up to 3m long. Large leaves divided into 3 leaflets, leaflets often lobed, upper surface green, greyish underneath. Flowers purple, blue or pink, up to 90 per stem in summer. Fruit a hairy pod to 9cm long. Kudzu dies down for up to 6 months a year, so the opportunities for controlling this plant are limited. Spread mainly by water, soil dumping and vegetative spread.

Madeira Vine

Anredera cordifolia

Vigorous climber up to 30m. Stems slender, climbing, becoming softly woody with age. Mature stems produce aerial tubers which is the way the plant reproduces. Leaves fleshy, heart shaped, tips rounded or shallow-indented, base lobed. Flowers cream- coloured, numerous in drooping clusters up to 20cm long, short-lived. Spread vegetatively by water, garden and soil dumping, shoe and tyre tread and animals.

Mile-a-minute / Coastal Morning Glory

Ipomoea cairica

Perennial trailing or climbing vine to 5m. Stems hairless, readily set roots when in touch with the earth. Leaves hairless to 9cm long with 5–7 lobes, middle lobe the largest. Flowers purple, pink or whitish pink, to 8cm across, solitary or in groups of 2–3. Fruit a 4- valved capsule, about 1cm across, each valve with 1 seed. Seed with wispy hairs attached. Spread by wind, water and vegetative spread.

Morning Glory

Ipomoea indica, I. purpurea

Vigorous, perennial climber to 15m. Stems twining. Flowers blue/purple/violet up to 8cm across, grouped together, sepals up to 1.5cm long. Leaves broadly egg shaped with smooth or 3 lobed edges. Stems readily set new roots even from small segments. Spread by wind, water and vegetative spread.

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Environmental Weed Descriptions

Passionflower

Passiflora suberosa (Corky passionflower) and P. subpeltata (White passionflower)

Slender vines with tendrils and raised glands on leaf stalks. Leaves usually 3-lobed with leaf tips of white passionflower more rounded. Corky passionflower has green stems becoming corky with age, small white to greenish flowers and a 1.5cm purple-black berry. White passionflower has larger flowers about 5cm across tinged with green and green, inedible fruit about 4cm long. Spread by dumping, birds, animals, water and gravity.

Siratro

Macroptilium atropurpureum

Creeping or climbing legume. Bright green leaflets are grouped in threes, the two lower leaflets often with a rounded lobe. Dark red purple flowers are borne on long spikes most of the year followed by narrow pods 5–10cm long. Smothers native vegetation adjoining disturbed areas and disused pastures. Seeds have a long viability.

Shrubs and Scramblers

Brazilian Cherry

Eugenia uniflora

Evergreen tree to 8m. Stems brown, new growth reddish. Leaves usually in pairs, bases rounded, dark green, glossy, aromatic, to 5cm long. Flowers 4 petals, white, solitary about 1cm across, in early spring and summer/autumn. Fruit an orange-red berry maturing to crimson, about 2cm across. Spread by birds, animals, water and ornamental plantings.

Buddleia/Butterfly Bush

Buddleja madagascariensis, B. davidii

Scrambling shrubs to 4m or climbers to 10m. Branches can be white or greyish when young and sometimes hairy. Leaves to 20cm entire or sometimes notched, scalloped or finely toothed. Dark green above and white or yellowish below. Flowers are small and tubular or funnel-shaped, yellow-orange *(B. madagascariensis)* or white to lilac purple *(B. davidii),* sweetly scented in spring-summer. Mainly spread through dumping garden clippings and vegetative growth.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Castor Oil Plant

Ricinus communis

Perennial shrub to 5m. Stout hollow branches are dull, pale green or red turning greyish with age. Large leaves (to 60cm across) grow on long, stout, hollow stalks attached off-centre to bottom of leaf. Leaves divided into 7–9 pointed triangular segments with toothed edges and conspicuous veins. Leaves glossy, dark reddish-green when young, glossy green when mature. Fruits, to about 2.5cm diameter, are spiny, exploding, when ripe, to throw seeds several metres. Can occur in high densities along creeks and floodplains. Seeds are toxic to humans and animals.

Duranta

Duranta spp. e.g. D. erecta.

Also known as: Sky Flower, Pigeon Berry, Geisha Girl, Sheena's Gold

Shrub or small tree with drooping, occasionally spiny branches. Leaves in pairs or threes, oval, occasionally toothed, to 8cm long with a short leaf stalk. Flowers blue or pale purple, often with 2 darker stripes, trumpet shaped, in clusters in summer /autumn. Fruit rounded, orange or yellow, about 1cm across, in large clusters. Colonises forested areas, especially near waterways. Spread mainly by birds and ornamental plantings.

Easter Cassia/Winter Senna

Senna pendula var. glabrata

Shrubs that may scramble up to 3m. Compound leaves. Leaflet tips rounded, pods long and cylindrical. Flowers showy yellow. Fruit a green pod, drying with age. Seed to 0.5cm across, very long lived. Seeds spread by birds, insects, gravity and garden dumping.

Groundsel Bush

Baccharis halimifolia

Perennial shrub to 4m. Densely branched. Leaves dull or pale green, alternate, wedge-shaped and lobed in the upper part, 2.5–5cm long. Flowers male (yellow, globular) and female (white florets at end of branches) are present on different plants, 6mm across and numerous. Fruit, straw-coloured or brown, ribbed, 3mm long, topped by tufts of fluffy white hair, making it readily wind-dispersed. Flowers in autumn.

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Environmental Weed Descriptions

Lantana

Lantana camara

Scrambling evergreen, thicket-forming shrub to 4m though can climb to a height of 20m. Stems woody, prickly and often 4-sided. Leaves coarse, veins prominent, margins serrated, finely haired, strongly scented. Flowers in combinations of pink, yellow, red, orange and cream. Fruit round to 0.8cm across, green maturing to shiny black in clusters. Roots shallow. Mainly spread by birds, animals, water and garden dumping.

NOTE: Hybrid varieties of lantana have been promoted as ornamentals including so-called 'sterile varieties'. All forms of lantana are considered environmental weeds and should not be planted.

Leucaena

Leucaena leucocephala

Shrub or small tree to 6m. Leaves compound (bipinnate). Flowers greenish to creamy-white in round flower heads about 2cm across in summer. Fruit a flat pod to 18cm long with 10–25 seeds. Seeds numerous and long-lived. A particularly bad weed along watercourses. Spread by animals, gravity and water.

Ochna/Mickey Mouse Plant

Ochna serrulata

Shrub to 3m. Bark on branches has numerous lenticels (small corky spots). Leaves to 6cm long, edges toothed and often wavy. Short leaf stalk. Flowers yellow, petals each 1cm long. After flowering sepals turn red as fruit develops. Fruit black, glossy, single- seeded. Seeds germinate readily in deep shade. A difficult weed to control as it readily re-shoots. Contact a local expert or NAMU for specific advice on how to control this weed. Spread mainly by birds.

Privet (small leaf)

Ligustrum sinense

Shrub up to 4m or more if supported. Leaves in pairs, variable in size and shape to 7cm long, short hairs on veins and stalks of young leaves. Flowers small, white with 4 petals heavily scented, in masses. Fruit oval berry to 0.6cm across in dense clusters, green maturing to purple-black, in winter. Spread mainly by birds, animals and seed fall.

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Environmental Weed Descriptions

Yellow Bells

Tecoma stans

Shrub or tree to 7m high. Leaves compound with up to 13 leaflets. Leaflets to 10cm long, pointed with toothed edges. Flowers showy, yellow with reddish lines in throat, in spring/ summer. Fruit a long narrow capsule to 22cm, split when mature to release seeds. Seeds winged, about 1.5cm long, numerous. Mainly spread by wind.

Trees

African Tulip Tree

Spathodea campanulata

Evergreen tree to 25m. Bark rough and greenish-grey. Leaves glossy green, made up of 7 to 19 oval leaflets. Flowers scarlet, fringed with yellow and bell-shaped. Fruit is a long, woody capsule. Spreads by suckering and seed.

Broad-leaf Pepper Tree

Schinus terebinthifolius

Tree to 10m, short trunk, many branches. Stems pink- brown, hairy, with lenticels (small corky spots). Leaves compound, with a small 'wing' along leaf stalk. Leaflets to 8cm long, mid to yellow-green, sometimes red- tinged, pepper aroma when crushed. Flowers small, 5 petals, cream to white in clusters at ends of branches. Fruit many, round, green berries, ripening to orange/red, about 0.5cm across. Spread mainly by birds and water.

Cadaghi

Corymbia torelliana

Evergreen tree from North Queensland, to 30m. Trunk has a 'stocking' of grey scaly bark at the base, smooth pale green bark above. Leaves pale green, sometimes with a pink tinge, shape variable, wavy edges to 16cm long. Flowers in masses of scented, cream-coloured balls. Fruit almost round, woody capsule with many tiny seeds. Mainly spread by wind and ornamental plantings. Known to negatively impact on native bees.

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Environmental Weed Descriptions

Camphor Laurel

Cinnamomum camphora

Large spreading tree to 20m. Bark greyish with prominent vertical cracks on trunk. Young leaves and stems with a reddish tinge. Mature leaves green above, dull green below, strongly scented of camphor when crushed. Small pale flowers. Fruit a 1cm berry, green, ageing to black. Mainly spread by birds and seed fall.

Chinese Celtis

Celtis sinensis

Large, semi-deciduous tree to 20m. Stems smooth, light grey with prominent lenticels (small corky spots). Leaves to 8cm long, dark green above, paler below. Upper leaf edge coarsely toothed, leaf bases uneven. Flowers tiny, greenish, in spring/summer. Fruit about 0.5cm, green ageing to orange/red in summer/autumn. Spread mainly by birds and water.

Cocos Palm

Syagrus romanzoffianum.

Also known as: Queen palm Arecastrum romanzoffiana, Cocos plumosa

Fast-growing tree to 21m. Sturdy ridged trunk. Leaves green to 4.5m long with long, strappy leaflets radiating from the central leaf stem. Flowers small and inconspicuous. Fruit a fleshy orange berry up to 2.5cm long. Spread by flying foxes, birds, gardening dumping and other animals.

Coral Tree

Erythrina indica, E. crista galli and E. sykesii

Thorny deciduous trees with bright red flowers. Has ability to spread by suckering or from broken off pieces (the wood is soft) of trunk or branches. Leaves bright green consisting of 3 large leaflets, the central one on a longer stalk. Thrives on disturbance and is spread by dumping and suckering. Spread by water (i.e. segments in flood waters).

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Environmental Weed Descriptions

Privet (large leaf)

Ligustrum lucidum. Also known as: Broad-leaf Privet

Fast-growing evergreen large shrub or tree to 10m. Stems with many small corky dots (lenticels). Leaves to 12cm long, dark shiny green above, paler and dull below, hairless, pointed at tip. Leaf stalk hairless, 1– 2cm long. White, scented flowers each 0.5cm, conical clusters to 25cm on branch tips. Fruits fleshy, oval- round, to 0.9cm, ripen in winter from green/red/black. Spread by birds, animals, and water.

Slash Pine

Pinus elliotii/Pinus radiata

Leaves 20–30cm long, female cones lopsided. Evergreen, resinous and aromatic trees to 50m. Leaves long, needle-like in bundles. Flowers in separate male and female cones. Female cones open to release dark seeds with wings 2–3cm long. Spread by wind and from old plantations and gardens.

Umbrella Tree

Schefflera actinophylla

Tree to 10m, often multi-stemmed. Leaves compound with stalks up to 40cm long. Leaflets arranged umbrella-like (palmately), up to 30cm long. Small red flowers in sprays held above the foliage. Fruit dark red to 0.5cm long with a single seed. North Queensland native invading local bushland. Spread readily by birds, bats and garden dumping.

Note: Do not inject stem while plant is in flower (affects parrots feeding on the nectar).

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Appendix F – Stewardship Proforma

Stewardship Proforma

STEWARDSHIP REPORT

Property Address: _____

_____

_____

Mailing Address _____

_____

_____

Covenant Area: _____

File no. _____

Owner: _____ Contact: _____ Phone no. _____

Visited by: _____ Previous Visit: _____ Next visit: _____

Date:_____ Date:_____

GENERAL

Total native vegetation cover
Indicate total percentage of covenant area occupied by native vegetation
<5%
5-20%
20-50%
50-75%
75-100%

Tree Cover
Indicate total percentage of covenant area occupied by trees greater than 4m high
<5%
5-20%
20-50%
50-75%
75-100%

Understorey Cover
Indicate total percentage of covenant area occupied by understorey shrubs
<5%
5-20%
20-50%
50-75%
75-100%

Vegetation replacement
Natural regeneration is occurring in:
☐ tree species
☐ shrub species
☐ native groundcover species

Ecological Processes
There is evidence of:
☐ seed set
☐ pollination
☐ invertebrate diversity

Habitat Diversity
There is evidence of:
☐ trees with hollows
☐ leaf litter
☐ fallen logs & timber
☐ trees with hollows

Fence Condition
Where covenant areas are fenced, its condition:
☐ good
☐ in need of minor repair
☐ poor

Modifications
Have there been any structural additions (eg. New tracks, buildings) to the covenant area since the last visit?
_____
_____
_____

Landholder Observations
Note any changes in flora and fauna that may have disappeared or reappeared; changes in population sizes; successful breeding; significant even ts such as fire, floods or storms.

_____
_____
_____
_____
_____

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Stewardship Proforma

THREATS

Pest Plants

Major Species	Extent of Cover (%)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Pest Animals

Indicate the presence of the following:

- ☐ Cats
- ☐ Dogs
- ☐ Foxes
- ☐ Rabbits
- ☐ Mynahs
- ☐ Other

Other Threats

Indicate the presence of the following:

- ☐ Erosion
- ☐ Soil Disturbance
- ☐ Soil Compaction
- ☐ Rubbish Dumping
- ☐ Firewood Collection
- ☐ Nutrient Input
- ☐ Spray Drift
- ☐ Other

Dieback

Is there any evidence of vegetation dieback?

_____

Extent of covenant affected:

_____ _____

Main species affected:

_____

Likely cause(s):

_____

MANAGEMENT ACTIONS UNDERTAKEN

Pest Plant Removal

Species	Removal Technique	Year	Area
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Pest Animal Removal

Species	Removal Technique	Year
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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Appendix G – Amendments to the Covenant Management Plan

List of Amendments to Covenant Management Plan

All amendments to successive issues of this Covenant Management Plan are to be listed in the table below.

Issue No.	Date of Issue	Amendments Made		
		Section	Page No.	Amendment

RA6-N

Queensland Government

SARA reference: 2106-23287 SRA
Council reference: MC2021/0042 & RL2021/0021

31 May 2022

Chief Executive Officer
Lockyer Valley Regional Council
PO Box 82
GATTON QLD 4343
mailbox@lvrc.qld.gov.au

Dear Sir/Madam

SARA response—Rosewood Laidley Road, Laidley

(Referral agency response given under section 56 of the *Planning Act 2016*)

The development application described below was confirmed as properly referred by the State Assessment and Referral Agency (SARA) on 30 June 2021.

Response

Outcome:	Referral agency response – with conditions.
Date of response:	31 May 2022
Conditions:	The conditions in **Attachment 1** must be attached to any development approval.
Advice:	Advice to the applicant is in **Attachment 2**.
Reasons:	The reasons for the referral agency response are in **Attachment 3**.

Development details

Description:	Development permit	Material Change Of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 Lot into 13 Lots), Operational Works for Advertising Device
SARA role:	Referral agency	
SARA trigger:	Schedule 10, part 9, division 4, subdivision 1, table 1, item 1 (Planning Regulation 2017) State transport infrastructure generally Schedule 10, part 9, division 4, subdivision 2, table 1, item 1 (Planning Regulation 2017)	

South East Queensland (West) regional office
Level 4, 117 Brisbane Street, Ipswich
PO Box 2390, North Ipswich QLD 4305

	Development application for reconfiguring a lot within 25m of a State-controlled road Schedule 10, part 9, division 4, subdivision 2, table 4, item 1 (Planning Regulation 2017) Development application for material change of use within 25m of a State-controlled road Schedule 10, part 10, division 3, subdivision 3, table 1, item 1 (Planning Regulation 2017) Koala habitat in SEQ region
SARA reference:	2106-23287 SRA
Assessment Manager:	Lockyer Valley Regional Council
Street address:	Rosewood Laidley Road, Laidley
Real property description:	Lot 1 on SP104184
Applicant name:	Rajankumar Umedbhai Patel and Amrutaben Rajankumar Patel
Applicant contact details:	PO Box 986 North Lakes Qld 4509 himaansu@santoshi.com.au
State-controlled road access permit:	This referral included an application for a road access location, under section 62A(2) of *Transport Infrastructure Act 1994*. Below are the details of the decision: • Approved • Reference: TMR21-033401 • Date: 7 March 2022 If you are seeking further information on the road access permit, please contact the Department of Transport and Main Roads at Downs.South.West.IDAS@tmr.qld.gov.au

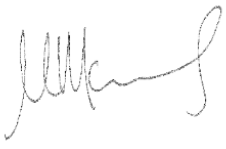
Representations

An applicant may make representations to a concurrence agency, at any time before the application is decided, about changing a matter in the referral agency response (section 30 of the Development Assessment Rules). Copies of the relevant provisions are in **Attachment 4**.

A copy of this response has been sent to the applicant for their information.

For further information please contact Darrian Borick, Principal Planner, on (07) 3432 2411 or via email IpswichSARA@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely



Ursula McInnes
Planning Manager

2106-23287 SRA

enc Attachment 1 - Referral agency conditions
Attachment 2 - Advice to the applicant
Attachment 3 - Reasons for referral agency response
Attachment 4 - Representations provisions
Attachment 5 - Approved plans and specifications

cc Rajankumar Umedbhai Patel and Amrutaben Rajankumar Patel, himaansu@santoshi.com.au

2106-23287 SRA

Attachment 1—Referral agency conditions

(Under section 56(1)(b)(i) of the *Planning Act 2016* the following conditions must be attached to any development approval relating to this application) (Copies of the plans and specifications referenced below are found at Attachment 5)

No.	Conditions	Condition timing
Development permit for material change of use for service station and refreshment service, and reconfiguring a lot for subdivision (1 lot into 13 lots)		
Schedule 10, part 9, division 4, subdivision 1, table 1, item 1 and Schedule 10, part 9, division 4, subdivision 2, table 1, item 1 and Schedule 10, part 9 division 4, subdivision 2, table 4, item 1—The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Transport and Main Roads to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
1.	Any excavation, filling/backfilling/compaction, retaining structures, stormwater management measures, batters and other works involving ground disturbance must not encroach or de-stabilise the state-controlled road or the land supporting this infrastructure, or cause similar adverse impacts.	At all times.
2.	(a) Road works comprising the following turn treatments must be provided: • A westbound Channelised Right Turn treatment at the Rosewood-Laidley Road and Crown Street intersection • An eastbound Basic Left Turn treatment at the Rosewood-Laidley Road and Crown Street intersection • An eastbound Channelised Right Turn treatment at the Rosewood-Laidley Road and easternmost service station intersection (opposite Crown Street). (b) The road works are to be generally in accordance with Figure 3.8 of the Traffic Impact Assessment prepared by Burchills Engineering Solutions dated 5 May 2022, Draft IR Issue (Version 04) as amended in red by SARA on 31 May 2022. (c) The road works must be designed and constructed in accordance with the Department of Transport and Main Roads' *Road Planning & Design Manual (2nd Edition)*.	Prior to the commencement of use.
3.	(a) Stormwater management of the development must ensure no worsening or actionable nuisance to the state-controlled road. (b) Any works on the land must not: (i) create any new discharge points for stormwater runoff onto the state-controlled road; (ii) interfere with and/or cause damage to the existing stormwater drainage on the state-controlled road; (iii) surcharge any existing culvert or drain on the state-controlled road; (iv) reduce the quality of stormwater discharge onto the state-controlled road. (c) RPEQ certification with supporting documentation must be provided to the Department of Transport and Main Roads (Downs.South.West.IDAS@tmr.qld.gov.au), confirming that the	(a) At all times. (b) At all times. (c) Prior to the commencement of the use.

	development has been designed and constructed in accordance with parts (a) and (b) of this condition.	
4.	(a) The road access locations are to be located generally in accordance with the plan titled "*Service Station Intersections*" prepared by Burchills Engineering Solutions, dated 6 May 2022, reference Project No. BE210306 – Drawing No. SK107 (Version B). (b) Road access works comprising commercial standard driveway crossovers, (at the road access locations) must be provided generally in accordance the plan titled "*Service Station Intersections*" prepared by Burchills Engineering Solutions, dated 6 May 2022, reference Project No. BE210306 – Drawing No. SK107 (Version B), subject to the following amendments as amended in red by SARA on 31 May 2022: • The western access intersection with Rosewood-Laidley Road is to be restricted to LEFT-OUT movements only. • The western access intersection with Rosewood-Laidley Road is to be designed and constructed with a high angle alignment to prevent vehicles turning right out from within the site. • Signage and/or linemarking must be provided in proximity to the western site access indicating "no entry" (*from Rosewood-Laidley Road)* is permitted and "left out only" (*from within the development site*). • Double barrier lines are to be provided along the chevron of the eastbound Channelised Right Turn treatment at the Rosewood-Laidley Road and easternmost service station intersection (opposite Crown Street), referred to in Condition 2. (c) The road works must be designed and constructed in accordance with the Department of Transport and Main Roads' *Road Planning & Design Manual (2nd Edition).*	(a) At all times. (b) and (c) Prior to the commencement of use.
5.	(a) Road works comprising a Basic Left Turn (BAL) and Basic Right Turn (BAR) turn treatments must be provided at the Rosewood-Laidley Road / New Road intersection. (b) The road works must be provided generally in accordance with the drawing title "Rosewood-Laidley Road Intersection prepared by Burchills Engineering Solutions dated 6 May 2022, reference Project No. BE210306 – Drawing No. SK106 (Version B) as amended in red by SARA on 31 May 2022. (c) The road works must be designed and constructed in accordance with the Department of Transport and Main Roads' *Road Planning & Design Manual (2nd Edition).*	Prior to submitting the Plan of Survey to the local government for approval.
Schedule 10, part 10, division 3, subdivision 3, table 1, item 1—The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Environment and Science to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
6.	Clearing is limited to 385 non-juvenile koala habitat trees in the area marked as 'Clearing Extent' as shown on Building Envelope Plan, Lot 1 Rosewood-Laidley Road, Laidley, Lot 1 on SP104184, prepared by	At all times.

	Santoshi Development Consultants, drawing number SDC1655-214, and dated 6 May 2022, as amended in red by SARA on 31 May 2022., and is not to be cleared for any purpose unless: - The clearing is to manage non-native or declared pest plant species; - The clearing is no more than five (5) metres wide to construct or maintain access and fencing on any property boundary	
7.	(a) Enter into a preservation covenant for the purpose of preserving koala habitat with the Department of Environment and Science (DES), which complies with Section 97A of the *Land Title Act 1993*; and (b) The covenant must be for the area identified as Covenant A on the Figure 1.1 Proposed Plan of Development and Covenant A (Santoshi Development Consultants 2022) and include the covenant management actions identified at section 6 in the Covenant Management Plan, prepared by Burchills, document number BE210316-RP-CMP-00, and dated 10 May 2022 as amended in red by SARA on 31 May 2022.	Prior to sealing the plan of subdivision with the local government and to be maintained at all times.
8.	Provide the restoration strategy and restoration methodology generally in accordance with sections 4 and 5 of the Covenant Management Plan, prepared by Burchills, document number BE210316-RP-CMP-00, and dated 10 May 2022, as amended in red by SARA on 31 May 2022.	At all times.
9.	All clearing activities must be carried out generally in accordance with the Vegetation, Fauna & Koala Management Plan, prepared by Burchills, document number BE210316-RP-VFKMP-01, dated 10 May 2022.	During all clearing and construction works.
10.	Deliver an environmental offset in accordance with the *Environmental Offsets Act 2014* to counterbalance the significant residual impacts on the matter/s of state environmental significance being 385 non-juvenile koala habitat trees within the area identified as 'Clearing Extent' as shown Building Envelope Plan, Lot 1 Rosewood-Laidley Road, Laidley, Lot 1 on SP104184, prepared by Santoshi Development Consultants, drawing number SDC1655-214, and dated 6 May 2022, as amended in red by SARA on 31 May 2022.	Prior to the commencement of the clearing.
11.	Notify the Department of Environment and Science at koala.compliance@des.qld.gov.au of: • the expected date the clearing activity will commence; and • the expected duration of the clearing activity; and • the name, contact details and authority number of the koala spotter that has been contracted for the clearing activity.	Prior to the commencement of clearing.

2106-23287 SRA

Attachment 2—Advice to the applicant

General advice	
1.	Terms and phrases used in this document are defined in the *Planning Act 2016*, its regulation, or the State Development Assessment Provisions (SDAP) v2.6. If a word remains undefined it has its ordinary meaning.
2.	**Road access works approval** Under sections 62 and 33 of the *Transport Infrastructure Act 1994, w*ritten approval is required from the Department of Transport and Main Roads to carry out road works that are road access works (including driveways) on a state-controlled road. Please contact the Department of Transport and Main Roads on 07 4639 0828 to make an application for road works approval. This approval must be obtained prior to commencing any works on the state-controlled road reserve. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). The road access works approval process takes time – please contact Transport and Main Roads as soon as possible to ensure that gaining approval does not delay construction. The applicant should note that reference to the approved plans imply conceptual approval only. Further modifications and inclusions are likely to be required in order for submitted detailed designs to comply with TMR standards at the roadworks application (s33 TIA) stage. In particular, detailed designs may require, but should not limited to, necessary lane widening for provision of cycle lanes, lengthening of turn lanes, installation of lighting, signage and line marking, pavements, utilities and services, and roadsides and roadside furniture.
3.	Any advertising devices visible from the state-controlled road are to be located and designed in accordance with the Roadside Advertising Guide, 2nd Edition, Department of Transport and Main Roads, 2017.
4.	The Nature Conservation (Koala) Conservation Plan 2017 includes mandatory requirements that applies to all persons undertaking the clearing of koala habitat trees, including that clearing be undertaken sequentially and in the presence of a koala spotter. Penalties for non-compliance apply. For further information please contact the Department of Environment and Science.
5.	Despite this development approval, other permits or approvals may be required for the clearing of koala habitat. To determine if the proposed clearing requires other approvals under other local, State or federals laws go to www.qld.gov.au (search ‘vegetation clearing requirements’).

2106-23287 SRA

Attachment 3—Reasons for referral agency response

(Given under section 56(7) of the *Planning Act 2016*)

The reasons for SARA's decision are:

- The proposed development meets State Code 1 and State Code 6 of the SDAP. Specifically, the development:
  - does not create a safety hazard for users of a state-controlled road
  - does not compromise the structural integrity of state-controlled roads, road transport infrastructure or road works
  - does not result in a worsening of the physical condition or operating performance of state-controlled roads and the surrounding road network
  - does not compromise the state's ability to construct, or significantly increase the cost to construct state-controlled roads and future state-controlled roads
  - does not compromise the state's ability to maintain and operate state-controlled roads, or significantly increase the cost to maintain and operate state-controlled roads
  - does not compromise the structural integrity of public passenger transport infrastructure or compromise the operating performance of public passenger transport services

- The proposed development meets State Code 25 of the SDAP. Specifically, the development:
  - results in no net loss of koala habitat area
  - does not contribute to fragmentation of koala habitat areas
  - maintains connectivity within and between koala habitat areas to ensure safe koala movement
  - is constructed and undertaken in a way that does not increase the risk of injury to, or death of koalas
  - where avoidance is not reasonably possible, minimised and mitigates impacts and provides an offset for significant residual impacts to matters of state environmental significance that are prescribed environmental matters.

Material used in the assessment of the application:

- The development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- The *State Development Assessment Provisions* (version 2.6), as published by SARA
- The Development Assessment Rules
- SARA DA Mapping system
- State Planning Policy mapping system.

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Attachment 4—Change representation provisions

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Attachment 5—Approved plans and specifications

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PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

Queensland Government

SARA ref: 2106-23287 SRA

Date: 31 May 2022

Amended in red by SARA on 31 May 2022

Rosewood Laidley Road, Laidley
Service Station and Light Industry Development
Lot 1 on SP104184

Traffic Impact Assessment
Including SARA Information Request Response

Client: RU & AR Patel
Project No: BE210316
Document No: BE210316-RP-TIA-04

May 2022

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Document Control Record

Prepared by:	Aga Szewczak	Approved by:	Dale Kleimeyer
Position:	Senior Traffic Engineer	Position:	Principal Traffic Engineer RPEQ 6876
Signed:		Signed:	
Date:	5th May 2022	Date:	5th May 2022

Version No.	Description	Date	Approved By
01	Final Issue 1	3rd December 2021	Dale Kleimeyer
02	Final Issue 2	9th December 2021	Dale Kleimeyer
03	Draft IR Issue	10th February 2022	Dale Kleimeyer
04	Final Issue	5th May 2022	Dale Kleimeyer

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347

Email: admin@burchills.com.au

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Executive Summary

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the Service Station including the Fast-Food drive-through facility and Industry Development. This report has been updated to include Information Request response to the Queensland State Government Assessment and Referral Agency (SARA).

Service Station including Fast-Food drive-through

Service Station access to the wider road network is proposed via two access driveways off Rosewood Laidley Road. Access driveways have been designed to accommodate 20.0m AV accessing the site. The proposed service station dual access arrangement allows cars to arrive, utilise a service station and exit the site in a forward gear. The visibility at access driveway meets AS2890.1 standards for the 80km/h frontage road speed limit for cars and commercial vehicles. Due to the low traffic volumes along Rosewood Laidley Road, turn lanes are not warranted at the north western access driveway. The south eastern access driveway has been formalised into a 4-way priority intersection with Crown Street and includes CHR(s) lanes and BAL into the proposed development site.

The 15 car spaces provided for the service station are also 1 car parking spaces above the minimum Lockyer Valley Regional Shire Council requirement. In addition, 10 queueing spaces have been provided for a drive-through facility ensuring that parking demand can be maintained entirely within the site.

Industry Development

Access to the wider road network from the proposed industry development subdivision, will be provided via a new public road and new intersection as follows:

- the priority intersection with Rosewood Laidley Road to the north.

All trips in and out from the industrial development will travel north along new road towards a new priority intersection Rosewood Laidley Road. Due to the development trips turning in and out of the new road from Rosewood Laidley Road, a BAR treatment with passing lane for a rural intersection is recommended at the New Road / Rosewood Laidley Road priority intersection as per TMR standard detail.

The proposed intersection is designed to cater for a 20.0m Articulated Vehicles (AV) movements. The intersection design achieves a key objective of minimizing the interference between vehicles manoeuvring into and out of the new road and vehicles travelling through Rosewood Laidley Road. A 20.0m AV doesn't not cross the centre-line of Rosewood Laidley Road to the extent that there is any interaction with the opposing direction of travel. The above ensures minimal delay to through traffic along Rosewood Laidley Road, and that safety and efficiency of the state-controlled road are maintained post development. The visibility at the new road / Rosewood Laidley Road priority

intersection meets Austroads SISD requirements for the 80km/h design speed for eastbound traffic and 100km/h design speed for westbound traffic.

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Table of Contents

1. Introduction 1
1.1 Background 1
1.1 SARA Information Request 1
1.2 Scope of this Report 2
2. Existing Conditions 3
2.1 Subject Site 3
2.2 Local Road Network 4
2.2.1 Rosewood Laidley Road 4
2.2.2 Milne Street 5
2.3 Traffic Surveys 5
2.3.1 Existing Traffic Data 6
2.3.2 Road Safety Review 7
3. Proposed Development 9
3.1 Development Access 10
3.1.1 Industry Development 10
3.1.2 Service Station 12
3.2 Internal Roads 14
3.3 Car Parking Requirements 16
3.3.1 Car Parking Spaces Supplied 16
3.3.2 Design of Car Parking Areas 17
3.4 Service Vehicles 17
3.5 Pedestrian Safety 18
4. Trip Generation 19
4.1 Pre-Development Traffic 19
4.2 Crown Street Catchment Development Traffic 19
4.2.1 Background Traffic Growth Rates 20
4.2.2 Future Year Traffic Volumes 20
4.3 Development Traffic 21
4.3.1 Trip Generation 21
4.3.2 Drop-in and Shared Trips 22
4.4 Post-Development Traffic 26
5. Operational Assessment 27
5.1 Turning Treatment Assessment 27

5.1.1 New Road / Rosewood Laidley Road Priority Intersection 29
5.1.2 Northwestern Site Access Driveway / Rosewood Laidley Road 30
5.1.3 Southeastern Site Access Driveway / Rosewood Laidley Road 31
6. Conclusions 34
7. References 35

Tables

Table 1.1 Response to SARA Information Requested Summary 1
Table 2.1 Historical AADT Flows along Rosewood Laidley Road 6
Table 3.1 Laidley Shire Council Planning Scheme Car Parking Requirements 16
Table 3.2 Proposed Development Car Parking Provisions 16
Table 4.1 Crown Street Catchment Trip Rates and In/Out Distribution Split 20
Table 4.2 Traffic Growth Factors 20
Table 4.3 Proposed Development Trip Rates and In/Out Distribution Split 22
Table 4.4 Proposed Development Trip Rates and In/Out Distribution Split 22
Table 4.5 Development New, Pass-by and Linked Trips 23
Table 5.1 Turn Lane Descriptions 27
Table 5.2 Assessment of Turn Warrants for Rosewood Laidley Road / New Internal Road Intersection 29
Table 5.3 The Rosewood Laidley Road / North Western Site Access Driveway Turn Warrant Assessment 30
Table 5.4 The Rosewood Laidley Road / South Eastern Site Access Driveway Turn Warrant Assessment 31
Table 5.5 Assessment of Turn Warrants for the Crown St / Rosewood Laidley Road Intersection 32

Figures

Figure 2.1 Subject Site Location 3
Figure 2.2 Subject Site Zoning 4
Figure 2.3 Rosewood Laidley Road adjacent to Subject Site (Facing South) 4
Figure 2.4 Milne Street adjacent to Subject Site 5
Figure 2.5 2010-2020 Historical AADT along Rosewood Laidley Road 6
Figure 2.6 % of AADT during Peak Hours along Rosewood Laidley Road 7
Figure 2.7 2019 Rosewood Laidley Road Peak Hour Traffic 7
Figure 2.8 5-Year Crash Data 8
Figure 3.1 Proposed Development 9
Figure 3.2 Sight Distance to a Through Vehicle from a Vehicle Turning Left 10
Figure 3.3 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - West 11
Figure 3.4 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - East 11

Figure 3.5 New Road (1) / Rosewood Laidley Road Intersection Sight Line Elevation Assessment 12
Figure 3.6 New Road / Rosewood Laidley Road Intersection AV Swept Paths 12
Figure 3.7 New Access / Rosewood Laidley Rd Intersection Sight Distance 13
Figure 3.8 Service Station Access Driveway Assessment 14
Figure 3.9 New Road / Industry Development Internal Road AV Swept Path 15
Figure 3.10 Internal Road AV Swept Path 15
Figure 3.11 Internal Service Station Aisles B99 Car Swept Path 17
Figure 3.12 Service Station Service Vehicles Refuse, HRV and AV Tanker 18
Figure 3.13 Service Station Footpath Connections 18
Figure 4.1 Existing Crown Street Catchment 19
Figure 4.2 2022 Background Traffic Flows 21
Figure 4.3 2032 Background Traffic Flows 21
Figure 4.4 Trips Segmentations 23
Figure 4.5 Proposed Service Station and Fast-Food New Trips 24
Figure 4.6 Proposed Service Station and Fast-Food Drop-in Trips 24
Figure 4.7 Proposed Service Station and Fast-Food Total Trips 25
Figure 4.8 Proposed Industry Development Traffic Flows 25
Figure 4.9 2022 with Proposed Development Traffic Flows 26
Figure 4.10 2032 with Proposed Development Traffic Flows 26
Figure 5.1 Warrants for Turn Treatments for Roads with a Design Speed < 70 kph 27
Figure 5.2 Warrants for Turn Treatments for Roads with a Design Speed 70 kph <Design Speed <100km/h 28
Figure 5.3 Calculation of the Major Road Traffic Volume Parameter 'Q_m' 28
Figure 5.4 Basic Right (BAR) Turn Treatment on a Two-lane Rural Road (Source: DTMR) 30
Figure 5.5 CHR(s) Turn Treatment on a Two-lane Rural Road (Source: DTMR) 33

Appendices

Appendix A – Proposed Development Layout
Appendix B – SARA and Lockyer Valley IR Letter
Appendix C – Traffic Survey Data
Appendix D – Swept Path Analysis and Crown St Intersection

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1. Introduction

1.1 Background

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the proposed service station and light industry development as follows:

- Service Station;
  - Shop GFA - 560m²
  - Drive-through food and drink facility GFA - 560m²
  - Car Wash
- 14 Light Industry Lots - Total GFA 17,532 m² assuming GFA as 60% of lot are;
- 15 car parking spaces; and
- 10 queueing spaces for a drive-through facility.

The proposed development layout plan is attached as Appendix A to this report.

The primary objective of this Traffic Impact Assessment report is to assess traffic impacts associated with the changes to the development layout compared with the existing site use.

1.1 SARA Information Request

This report refers to the Information Request received from the State Assessment and Referral Agency (SARA) attached as Appendix B. The items relating to transport in the Information Request are listed in the below Table 1.1 and the report response reference is shown opposite as follows:

Table 1.1 Response to SARA Information Requested Summary

Item	Information Requested	Report Response Reference
1.	The application hasn't demonstrated that the two proposed accesses to the service station from Rosewood Laidley Road are safe and meet the requirements of Performance Outcome (PO) 16 and PO20 of the State Development Assessment Provisions (SDAP) version 2.6, State code 1: Development in a state-controlled road environment (state code 1) and PO1 of SDAP, State code 6: Protection of state transport networks (state code 6). The meeting of 19 January 2022 discussed: • The proposed two accesses to the service station off Rosewood Laidley Road and their safety in relation to the intersections at New Road and Crown Street • The option of limiting the north-western access off Rosewood Laidley Road to a left in left out only because of concerns with its proximity to the intersection with the New Road immediately to the west • Further analysis being undertaken to demonstrate the safety of the proposed south-eastern access to the service station off Rosewood Laidley Road because of its proximity to the intersection with Crown Street.	The north-western Service Centre driveway access off Rosewood Laidley Road is limited to a left-in / left-out only. Refer to Appendix D for functional layout plan and swept path analysis. Due to the proximity of the proposed access driveway to the existing intersection with Crown Street opposite, the site access strategy for the service station includes upgrading the existing Crown Street intersection to a 4-way intersection including CHR(s) lanes ensuring Rosewood Laidley Road safety. Refer Appendix D Drawing BE210316- SK108.

	Action: • It is recommended that an amended TIA be prepared and submitted which assesses the traffic impacts on the state-controlled road network as a result of the proposal and identifies mitigation measures and works required to achieve compliance with PO16 and PO20 of state code 1 and PO1 of State code 6, that: - Must include a turn warrant assessment for both accesses to the service station on Rosewood Laidley Road and the intersection with New Road including proposed design solutions where applicable such as those discussed in the meeting of 19 January 2022 - Demonstrate that the proposed Service Station and reconfiguration does not result in a worsening of the safety and operating conditions on Rosewood-Laidley Road - Include details of the mitigation measures proposed to address any traffic impacts on the state-controlled road network by the proposed development. Any mitigation measures must be prepared in accordance with the DTMR Road Planning and Design Manual (RPDM) - Be prepared in accordance with the Department of Transport and Main Roads' (DTMR) Guide to Traffic Impact Assessment 2018 (GTIA) - Be certified by a Registered Professional Engineer Queensland (RPEQ). • Appendix A of the GTIA includes a set of standard input parameters for use in traffic impact assessments that will be acceptable to DTMR in the majority of situations. • The DTMR's GTIA can be accessed and downloaded from www.tmr.qld.gov.au.	Turn Warrant Assessment has been undertaken for the proposed Service Station access driveways. In summary, the south eastern access warrants CHR(s) and BAL treatments. Safety of Rosewood-Laidley Road is maintained by the provision of CHR(s) lanes improving safety of the existing Crown Street intersection. The proposed Crown Street intersection upgrade has been prepared in line with DTMR standards. TIA has been prepared in line with the Department of Transport and Main Roads' (DTMR) Guide to Traffic Impact Assessment 2018 (GTIA) This report is certified by Dale Kleimeyer Principal Traffic Engineer RPEQ 6876

1.2 Scope of this Report

This report investigates the likely effect of proposed changes to the development site land use, including pedestrian connectivity and safety, vehicle access, car and bicycle parking provisions and service vehicles. Comparison of trip generation has been made in order to forecast the increase in traffic associated with the new Hotel and bottle shop development proposal.

The structure of this report is summarised below:

Section 2 Outlines existing traffic conditions in the vicinity of the site;
Section 3 Outlines the relevant characteristics of the proposed change to development including access and parking arrangements;
Section 4 Estimate the additional traffic generated by the proposed development compared to the existing situation;
Undertake a qualitative assessment of the traffic impact of the development traffic on the surrounding road network relative to the existing development scheme;
Section 5 Operational Assessment
Section 6 Conclusions; and
Section 7 References.

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2. Existing Conditions

2.1 Subject Site

The subject site is located at Lot 1 on SP104184 Rosewood Laidley Road in Laidley.

As shown in Figure 2.1 below, the subject site is bordered to the north by Rosewood Laidley Road, to the south by Milne Street to the east by vacant land and to the west by Road Reserve.

Figure 2.1 Subject Site Location

Laidley is a rural town in the Lockyer Valley Region Local Authority with approximately 3,808 population (Census 2016). Brisbane is some 82 km to the northeast.

The proposed development site is located within Industrial Zone as shown in Figure 2.2 below.

In line with Laidley Shire Council Planning Scheme – Division 2 – Planning Scheme Structural Elements, if the road or watercourse is adjoined on both sides by land in the same Area - the road or watercourse has the same Area classification as the adjoining land. Based on the above, the proposed road between Rosewood – Laidley Road and Milne Street up to the site entrance has been designed as Industrial Access Street with 20m road reserve and 7.5m road width.

Figure 2.2 Subject Site Zoning

2.2 Local Road Network

2.2.1 Rosewood Laidley Road

Rosewood Laidley Road is a two-way, two-lane State-controlled roadway. In the vicinity of the subject site, it has a road reserve of approximately 33m. The road benefits from a 6.0m pavement and 13.0m wide northern verge and 14.0m wide southern verge.

The posted speed limit along Rosewood Laidley Road in the vicinity of the subject site is 80 km/h. A 60km/h speed limit starts from the proposed new road boundary towards the village.

The following Figure 2.3 shows the cross-sectional elevation of Rosewood Laidley Road facing a south direction in the vicinity of the development site.

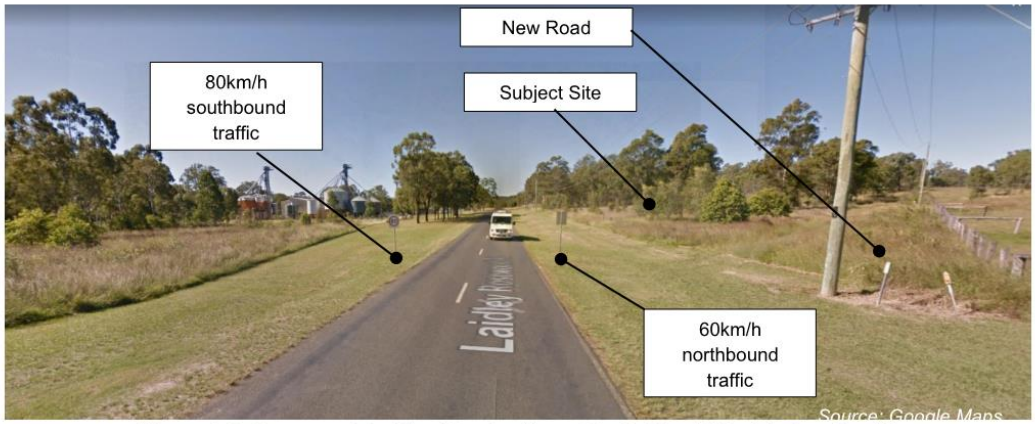

Figure 2.3 Rosewood Laidley Road adjacent to Subject Site (Facing South)

The traffic impact of the proposed development onto the local road network has been based on traffic volumes along Rosewood Laidley Road provided by TMR (2011-2020 AATDs traffic Census data). The 2020 Annual Average Daily Traffic (AADT) along Rosewood Laidley Road was recorded as 1,876 vehicles.

2.2.2 Milne Street

Milne Street is a two-way, two-lane local controlled road, benefiting from 17m Road Reserve and 6.0m road pavement. The existing road northern verge adjacent to the proposed development land, is between 0.5m to 1.5m. As part of the pre-lodgement meeting, the Council requested a land dedication along the southern property boundary to match the existing road reserve width (Milne Street) immediately to the west (i.e. to match the property boundary for Lot 186 L1731

QLD roads are subject to a default speed of 50km/hr (for built-up residential areas), and 100km/hr (roads in rural areas). The above speed limits are usually not signposted, and still require drivers to adjust their speeds depending on the conditions when and where necessary. Milne Street north of the priority intersection with Old Mulgowie Road is subject to a 50km/h posted speed limit. In the vicinity of the proposed development, Milne Street is subject to a default road speed in a rural area (100km/h).

To the east Milne Street connects with Rosewood Laidley Road via an existing priority intersection.

Milne Street is flat and benefits from straight alignment with good forward visibility. Figure 2.4 shows the cross-sectional of Milne Street facing an east direction at the approach to the Moonlight Parade priority intersection.

Figure 2.4 Milne Street adjacent to Subject Site

2.3 Traffic Surveys

The traffic impact of the proposed development will be assessed within the development's 'area of influence'. The implications of the proposed development on the operation of the Rosewood Laidley Road Service Station access driveways and the Rosewood Laidley Road were considered as part of the Traffic Impact Assessment.

2.3.1 Existing Traffic Data

The proposed development site is located adjacent to Rosewood Laidley Road.

Rosewood Laidley Road Annual Average Daily Traffic (AADT) data was provided by TMR (2010-2020 AATDs traffic Census data). Table 2.1 and Figure 2.5 below shows a summary of the recorded Annual Average Daily Traffic (AADT) in the vicinity of the proposed development site.

Table 2.1 Historical AADT Flows along Rosewood Laidley Road

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
AADT	1,512	1,631	1,411	2,069	2,004	1,969	1,920	1,801	2,054	2,005	1,876

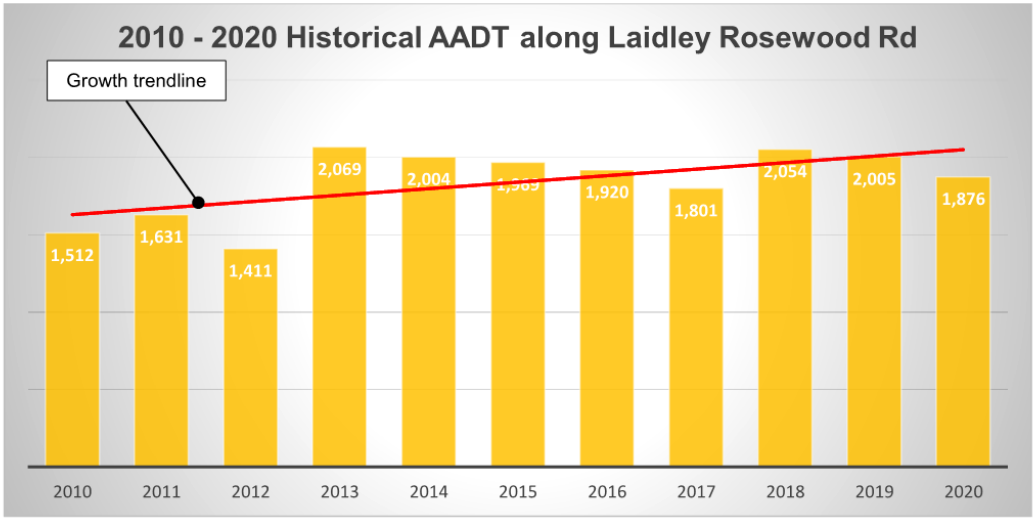

Figure 2.5 2010-2020 Historical AADT along Rosewood Laidley Road

As shown in Figure 2.5, the traffic along Rosewood Laidley Road in the last 10 years grew at an inconsistent level, with negative growth in the last 5 years. For robust assessment, 2020 AADT data were excluded from the assessment, and a higher 10-year growth rate was adopted for a Turn Warrant Assessment.

2.74% per annum traffic growth rate has been adopted, which represents 10-year growth per annum between 2009 and 2019. The above growth rate has been adopted to forecast 2019 historical traffic data to 2022 and 2032 base year.

Figure 2.6 below shows the % of AADT during peak hours. In summary, AM peak accounted for 8.15% of AADTs during weekdays and PM peak accounted for 10.25% during weekdays.

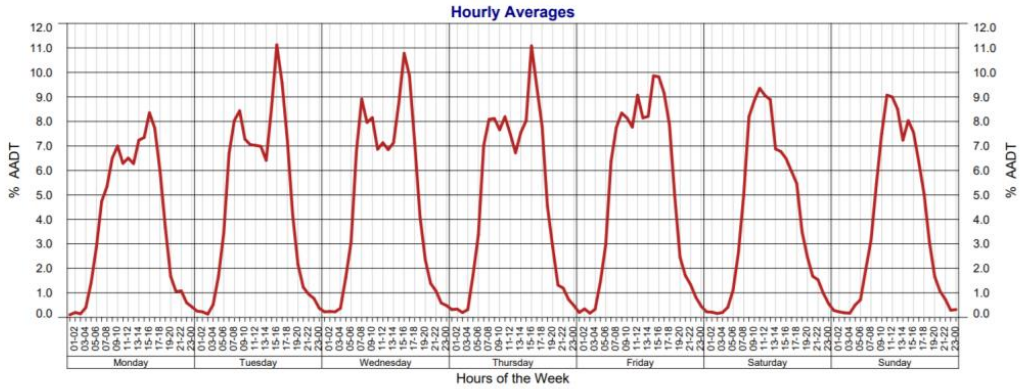

Figure 2.6 % of AADT during Peak Hours along Rosewood Laidley Road

Figure 2.7 below shows the calculated peak hour volumes along Rosewood Laidley Road based on the 50/50 northbound / southbound distribution split.

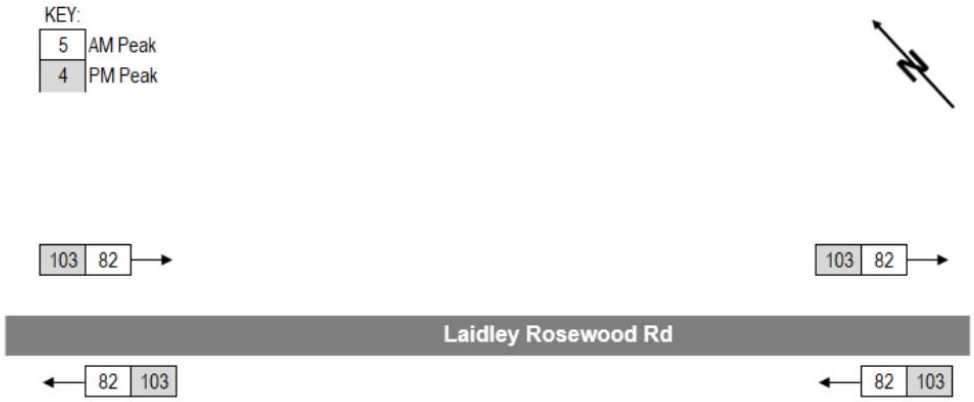

Figure 2.7 2019 Rosewood Laidley Road Peak Hour Traffic

2.3.2 Road Safety Review

The latest 5-year crash data review identified that there were no accidents recorded in the vicinity of the subject site.

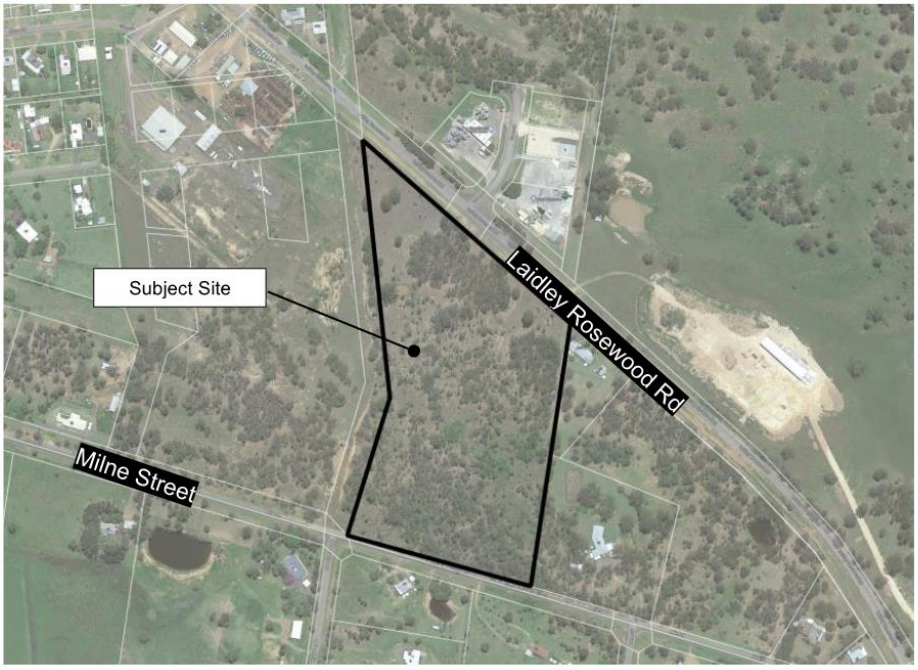

Figure 2.8 5-Year Crash Data

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3. Proposed Development

The proposal includes 14 industrial lots and a service station with a car wash and a fast-food drive-through facility as shown in Figure 3.1 below.

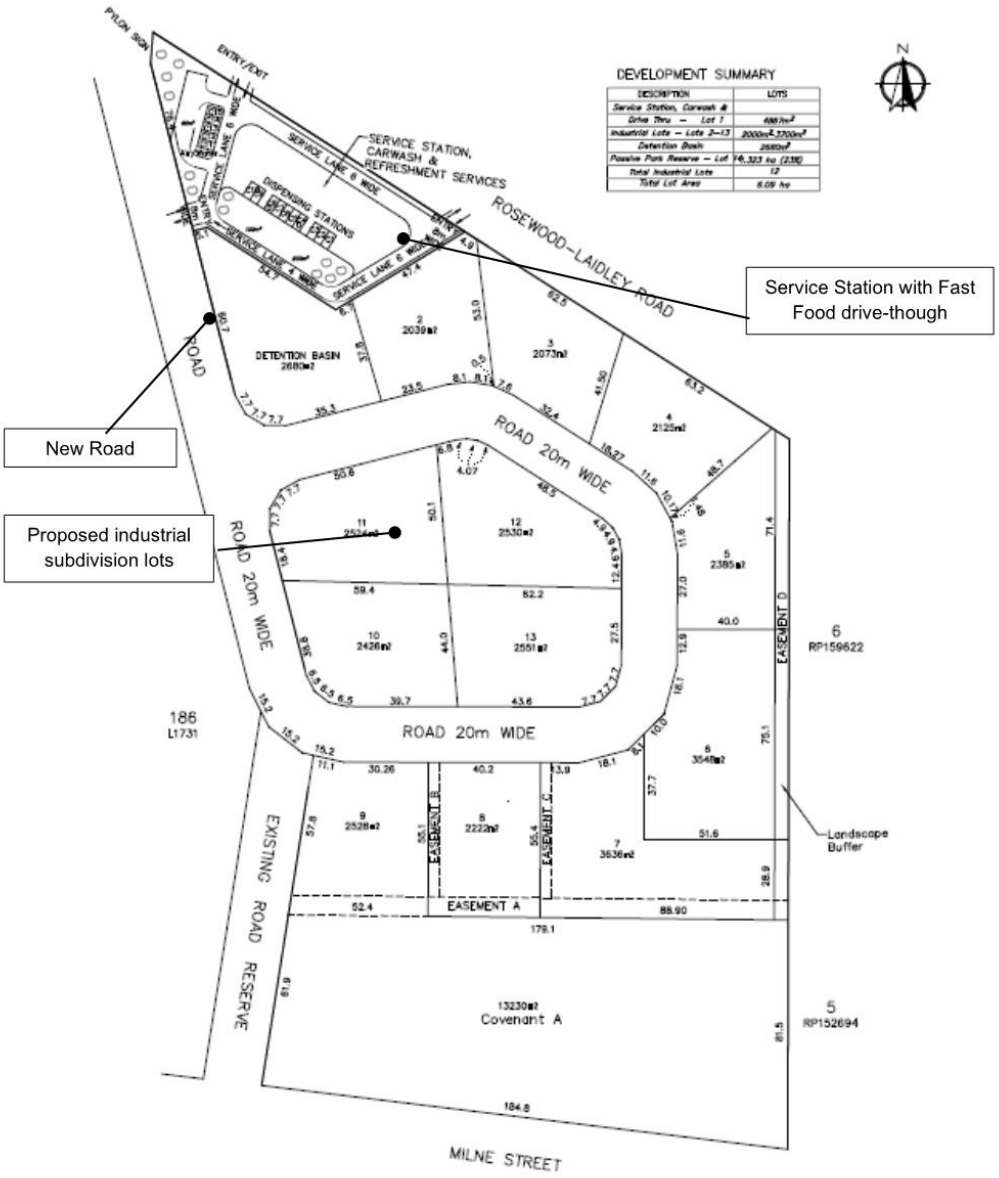


Figure 3.1 Proposed Development

Majority of the proposed industry lots have been designed with a minimum frontage of 40m.

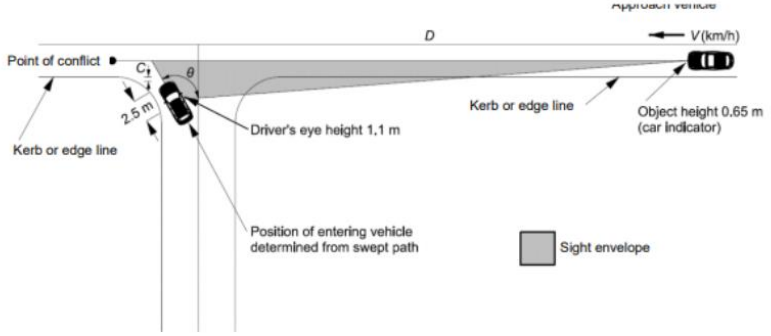
3.1 Development Access

3.1.1 Industry Development

The proposed light industry development vehicular access arrangements to the wider road network are via a new road intersection with Rosewood Laidley Road to the north.

Visibility Assessment at new intersections has been undertaken to ensure that the proposed intersections are safe and there is no obstruction to visibility. The proposed new intersection with Rosewood Laidley Road is located 160 metres north from the Rosewood Laidley Road / Crown Street intersection.

The proposed intersections are designed in line with Austroads requirements. Figure 3.2 shows requirements for a sight distance to a through vehicle from a vehicle turning left extract from Austroads *"Guide to Road Design Part 4A: Unsignalised and Signalised Intersections".*



Notes:
Sight envelope:
- *Assess sight distance both horizontally and vertically within this envelope.*
- *For rural areas – there should be no obstructions to sight lines in this area.*
- *For urban areas – fixed objects should not cause entering vehicles to lose sight of approaching vehicles.*

θ observation angle for new or reconstructed work maximum 120°.
C 0.5 m from kerb or edgeline projection or
1.0 m from stop or give way line.
D minimum distance travelled by approaching vehicle in 5 seconds at design speed (V km/h).
Minimum distance travelled by approaching vehicle in 5 seconds based on ta for left-turn from Table 3.5.

Source: Department of Main Roads (2006)[12].

Figure 3.2 Sight Distance to a Through Vehicle from a Vehicle Turning Left

The proposed new road intersection with Rosewood Laidley Road has a 120-degree observation angle in line with Figure 3.2 above.

Safe Intersection Sight Distance (SISD) requirements at the New Road / Rosewood Laidley Road Intersection are summarised below:

- SISD to the left for trucks – 178m for 70km/h Design Speed; and
- SISD to the right for trucks – 258m for 90km/h Design Speed.

Figure 3.3 and Figure 3.4 show that required SISD at the New Road / Rosewood Laidley Road Intersection are achieved in line with Austroads requirements.

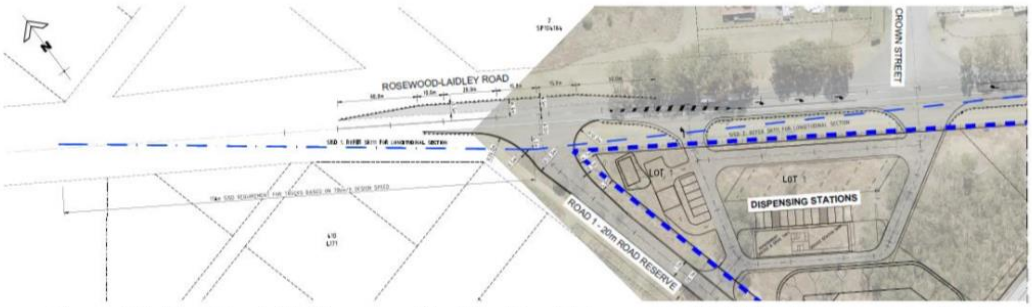


Figure 3.3 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - West

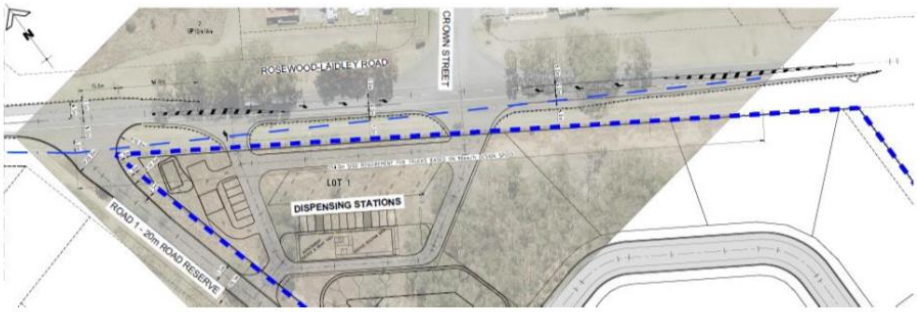


Figure 3.4 New Road (1) / Rosewood Laidley Road Intersection Visibility Assessment - East

The new road intersection with Rosewood Laidley Road benefits from the passing lane. The proposed intersection is in line with Turn Warrant Assessment findings (Refer Section 5).

Figure 3.5 below shows the elevation of the sight lines at the intersection with Rosewood Laidley Road. Also refer Appendix D -Swept Paths

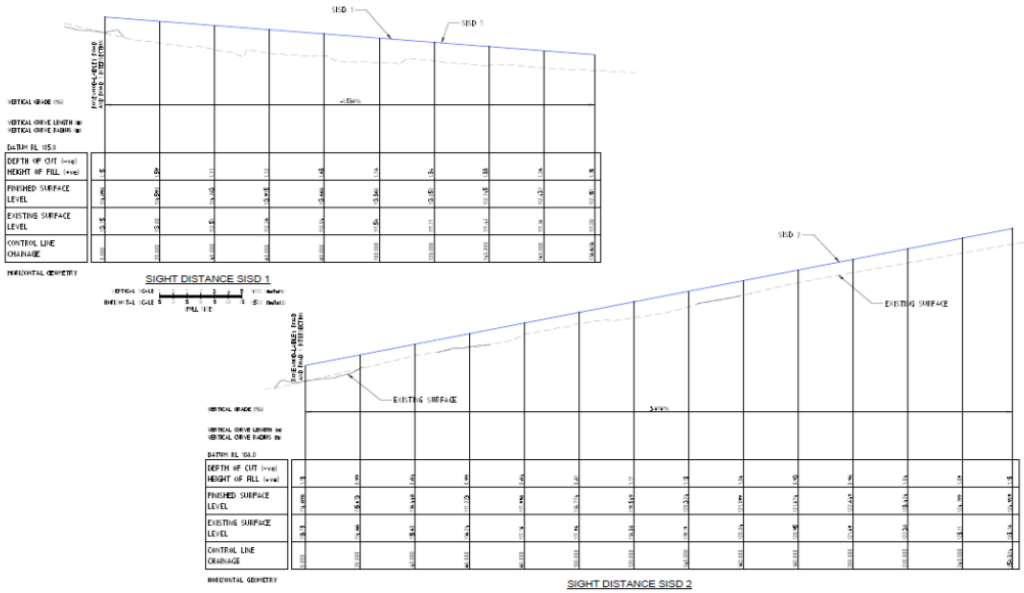


Figure 3.5 New Road (1) / Rosewood Laidley Road Intersection Sight Line Elevation Assessment

Figure 3.6 below shows a 20.0m AV swept path analysis at the proposed intersection with Rosewood Laidley Road.

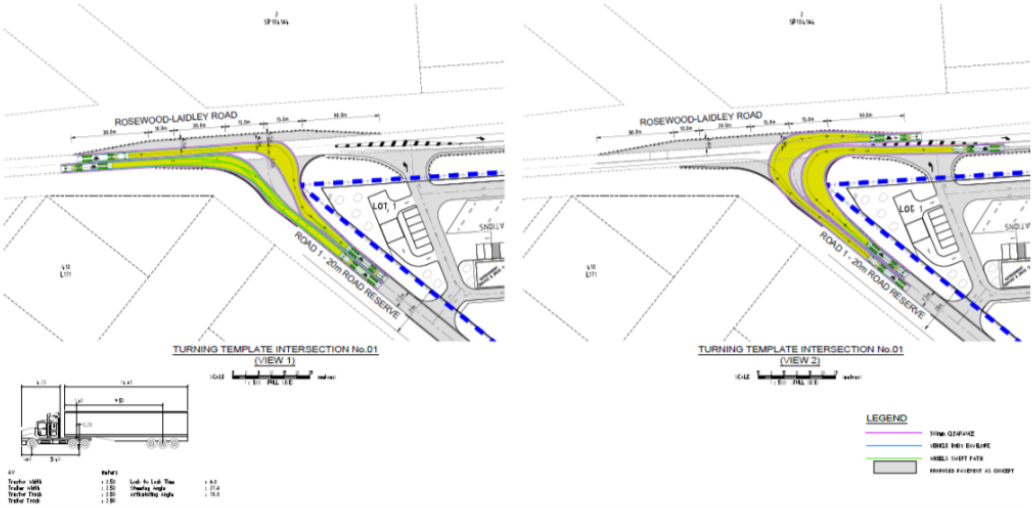
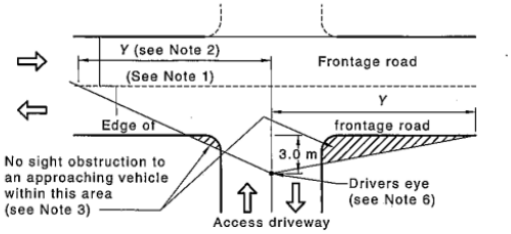


Figure 3.6 New Road / Rosewood Laidley Road Intersection AV Swept Paths

3.1.2 Service Station

The proposed site access strategy for service station includes left-in/left-out only access driveway at the north western end and the upgraded Crown Street priority intersection to include forth arm at the

south eastern end. The north western access meets Australian Standards AS2890.1-2004 and AS2890.2:2018 visibility requirements. 97m visibility splays are achievable for the 80km/h frontage speed limit for cars and 111m visibility are achievable for the 80km/h frontage speed limit for trucks based on 5 second gap. Figure 3.7 below shows the visibility requirement at access driveway for commercial vehicles (Source:AS2890.2:2018).



Frontage road speed (see Note 4) km/h	Distance (Y) along frontage road (see Note 5) m	
	5 s gap	8 s gap
40	55	89
50	69	111
60	83	133
70	97	156
80	111	178
90	125	200
100	139	222
110	153	244

Figure 3.7 New Access / Rosewood Laidley Rd Intersection Sight Distance

Rosewood Laidley Road at the approach to the proposed access driveway is flat and benefits from good forward visibility as shown in Figure 3.8.

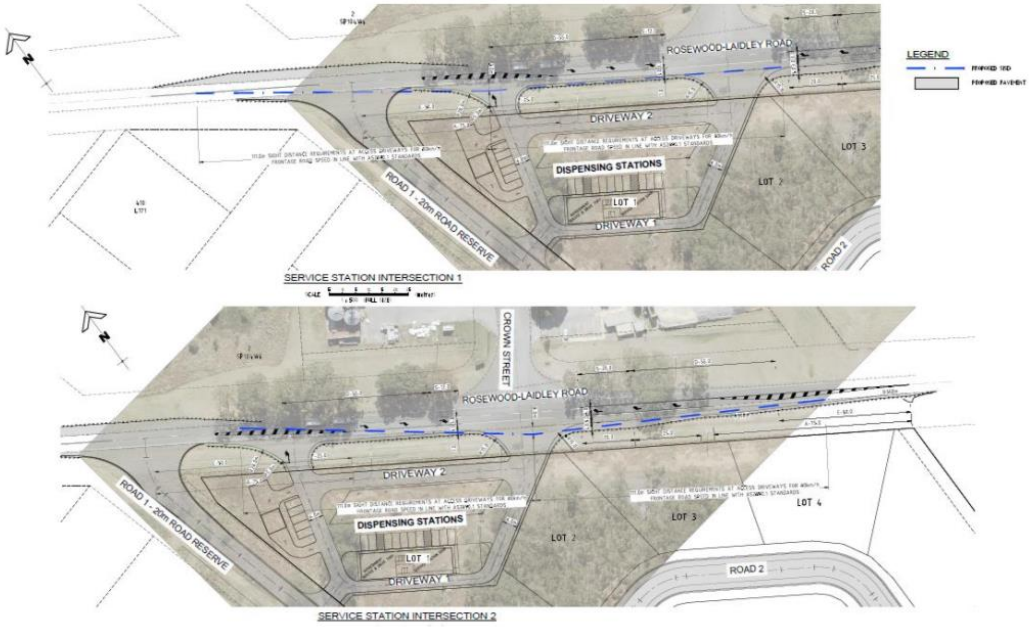


Figure 3.8 Service Station Access Driveway Assessment

The proposed upgraded to the existing Crown Street / Rosewood Laidley Road priority intersection is also shown in Figure 3.10 above. The proposed upgrades to Crown Street / Rosewood Laidley Road intersection benefits from the CHR(s) and BAL treatments. The proposed intersection is in line with Turn Warrant Assessment findings (Refer Section 5). The drawing is included in Appendix D Drawing BE210316 - SK107. All swept path drawings, sight line drawings, intersection setout dimensions are contained in Appendix D.

3.2 Internal Roads

The proposed internal road within the proposed industry subdivision benefits from 12.0m pavement width and 4.0m verge on both sides of the road in line with Industrial Access Street standards requirement as specified in the Laidley Shire Council Planning Scheme. Figure 3.9, and Figure 3.10 show the internal roads swept path analysis.

Road works to be generally in accordance with Condition 2 of the referral agency response.

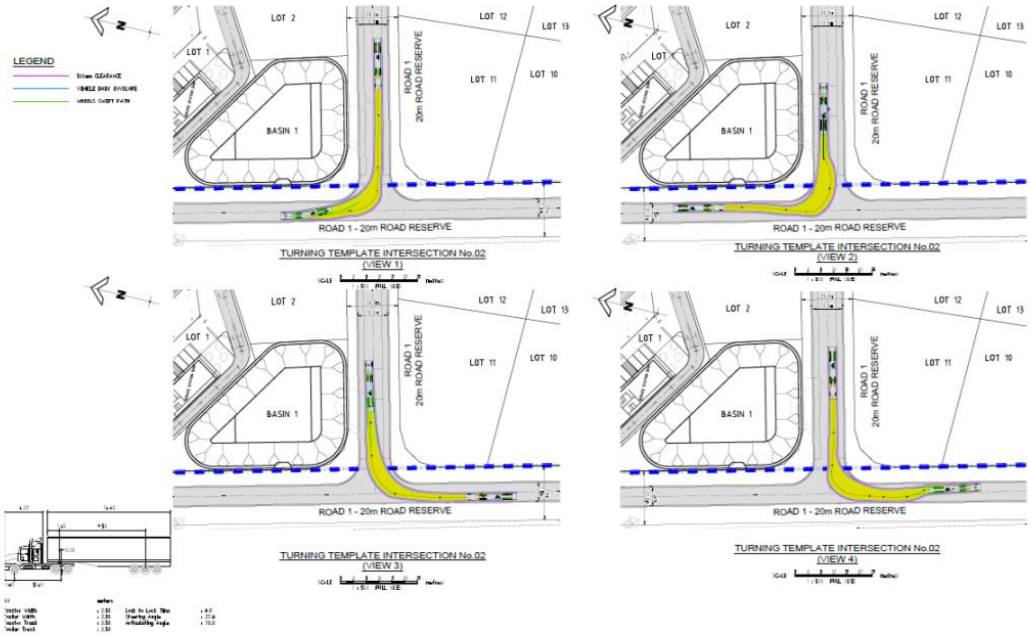


Figure 3.9 New Road / Industry Development Internal Road AV Swept Path

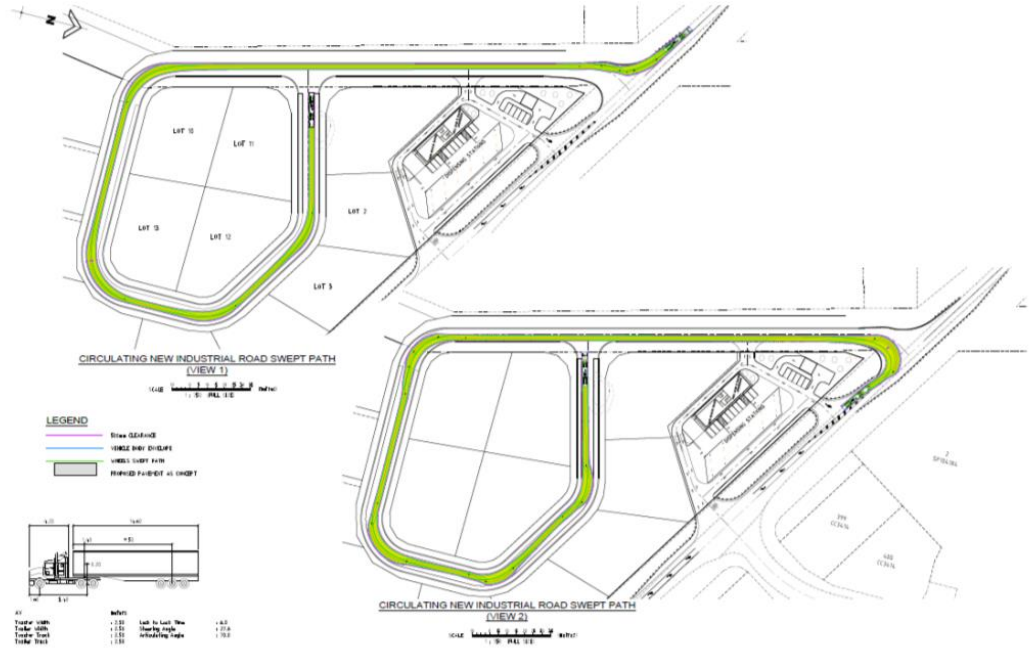


Figure 3.10 Internal Road AV Swept Path

Refer Appendix D for all swept path Drawings.

3.3 Car Parking Requirements

Car parking rates are determined by the Laidley Shire Council Planning Scheme requirement in Table 9 – General Parking Requirements

Table 3.1 Laidley Shire Council Planning Scheme Car Parking Requirements

Land Use	Car Parking Rates	Car Parking Requirements
Service Station **Shop (200m²)**	*5 spaces for the first lubricating bay and 4 spaces for each additional bay. (doesn't apply)* 1 space for every 15m² of gross floor area (adopted car parking rate)	14
Refreshment Service Incl. Fast food shops (150m²)	1 space for every 15m² of gross floor area	10
Industry (all classes) (17,532m²)	1 space for every employee and 1 space for every 100m² of gross floor area, or if no building on site, 1 space for each 200m² of site area used for the industry.	To be identified as part of detailed design

As shown in Table 3.1 above, based on the Laidley Shire Council Planning Scheme car parking requirements, the proposed service station development is required to provide a minimum 24 car parking spaces for visitors including queuing space for 10 cars for a drive-in fast-food facility. Car wash is considered to be an auxiliary use of a service station.

Car parking for individual lot for industry will be determined as part at the later date once the tenancies are known.

3.3.1 Car Parking Spaces Supplied

The proposed development benefits from the provision of 15 car parking spaces for visitors of a service station and car wash and 10 queueing spaces for the proposed drive-in fast-food facility. Table 3.2 shows a summary of the proposed number of car spaces.

Table 3.2 Proposed Development Car Parking Provisions

Lot	Land Use	Car Parking Provisions	Difference
1	**Service Station (200m²)**	15 car parking spaces	+1 car parking spaces (Compliant with parking requirements)
	Refreshment Service Incl. Fast food shops (150m²)	10 vehicle queuing area for fast food drive through	0 (Compliant with parking requirements)

The above car parking provisions are 1 car parking spaces above the minimum Laidley Shire Council Planning Scheme requirement.

Car wash benefits from the queuing are in front of washing bays ensuring car parking demand is meet.

3.3.2 Design of Car Parking Areas

The proposed car parking area is designed in line with Australian Standards AS/NZ2890.1. The following minimum dimensions were adopted:

- Visitor Car Parking (User Class 3*) - 2.6m x 5.4m parking bays and min 6.6m wide aisles

**User Class 3 is suitable for short term, high turnover parking at shopping centres*

The following Figure 3.11 shows the car circulation within the Service Station.

Figure 3.11 Internal Service Station Aisles B99 Car Swept Path

The diagram shows the B99 can successfully maneuver throughout the service station.

3.4 Service Vehicles

Industry Development

The proposed internal roads have been designed to cater for the AV access. Refer to Appendix C for swept path drawings.

Service Station

The proposed service station development will be serviced by a 20.0m Articulated Vehicle (AV), Heavy Rigid Vehicle (HRV) and Refuse Vehicle. Refer the following Figure 3.122.

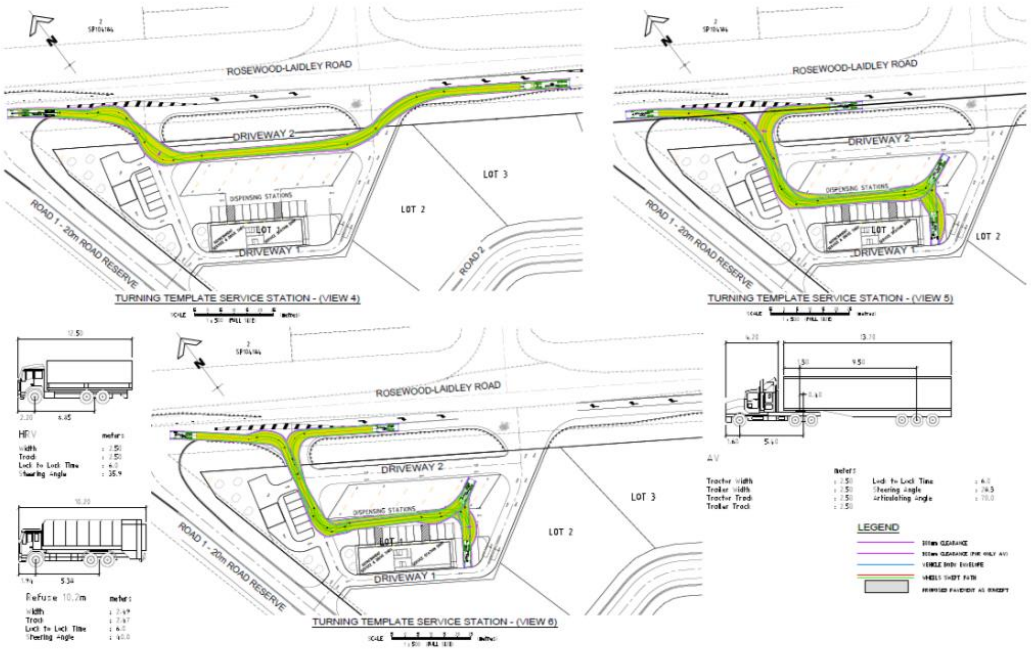


Figure 3.122 Service Station Service Vehicles Refuse, HRV and AV Tanker.

Swept Path analysis for the service vehicles is contained in Appendix D.

3.5 Pedestrian Safety

Figure 3.13 shows to the proposed two pedestrian crossings and footpaths within the site, linking car parking areas ensuring pedestrian safety is achieved within the site. The disabled ramp access from PWD carparks onto concrete paths has been provided as shown in Figure 3.13.

Figure 3.13 Service Station Footpath Connections

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4. Trip Generation

In order to assess the relative impact of the proposal on the surrounding road network, it is necessary to define the existing traffic demands on the road network and estimate future traffic demands on key intersections.

The existing traffic demands as defined in traffic surveys are forecast to the future assessment years. These volumes represent the "Pre-Development" scenario.

The traffic generated by the proposed development is estimated, along with its distribution across the surrounding road network. These volumes are added to the "Pre-Development" scenario to provide the "Post Development" traffic scenario.

4.1 Pre-Development Traffic

4.2 Crown Street Catchment Development Traffic

Before considering the implications of the proposed development it is considered appropriate to summarise the Crown Street Catchment traffic flows. Crown Street currently serves various industry allotments within the following lots:

- Lot 397 – Area 8,656.9m²
- Lot 400 – Area 2,141.2m²
- Lot 174 – Area 2,163.24m²

The existing industry developments accessible via Crown Street are shown on Figure 4.1 below and discussed separately below.

Figure 4.1 Existing Crown Street Catchment

In total there are 6 Industry Lots including one unoccupied, with a total area of 12,961m². Assuming GFA as 50% of a lot area, the above equals to 6,481m² of GFA, which has been used to calculate Crown Street Catchment trip generation.

Industry trip rates are based on the TMR published traffic generation surveys of existing developments similar to the proposed land use as follows:

- Industrial Estate
  - Average AM peak period trip rate adopted as 0.575 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 0.809 veh/hr/100 m² gross floor area.

The existing Crown Street Industry Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Table 4.1 below.

Table 4.1 Crown Street Catchment Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Industrial Estate	6,481	0.0058	50%	50%	0.0081	50%	50%
Trip Generation		**38**	19	19	**52**	26	26

As shown in Table 4.1 above, the existing Crown Street catchment is forecast to generate 38 two-way trips in the AM Peak and 52 two-way trips in the PM Peak.

4.2.1 Background Traffic Growth Rates

2.72% per annum traffic growth rate has been adopted to forecast 2019 traffic peak hour flows (Refer Figure 2.7) to 2022 and 2032 base years.

Table 4.2 below summarises growth rates used in the traffic impact assessment based on the 2.72% p.a. compound growth.

Table 4.2 Traffic Growth Factors

	2019 to 2022	2022 to 2032
Rosewood Laidley Road	1.084	1.310

4.2.2 Future Year Traffic Volumes

Growth factors summarised in Table 4.2 have been applied to the 2019 Traffic Volumes (Figure 2.7) to identify the future traffic flows in 2022 and 2032. The resultant future traffic for the years 2022 and 2032 AM and PM peak hours is shown in Figure 4.2 and Figure 4.3 respectively.

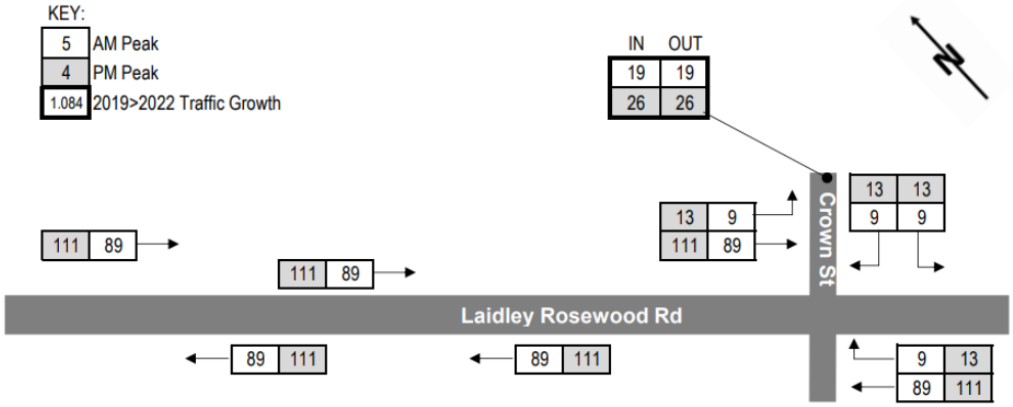

Figure 4.2 2022 Background Traffic Flows

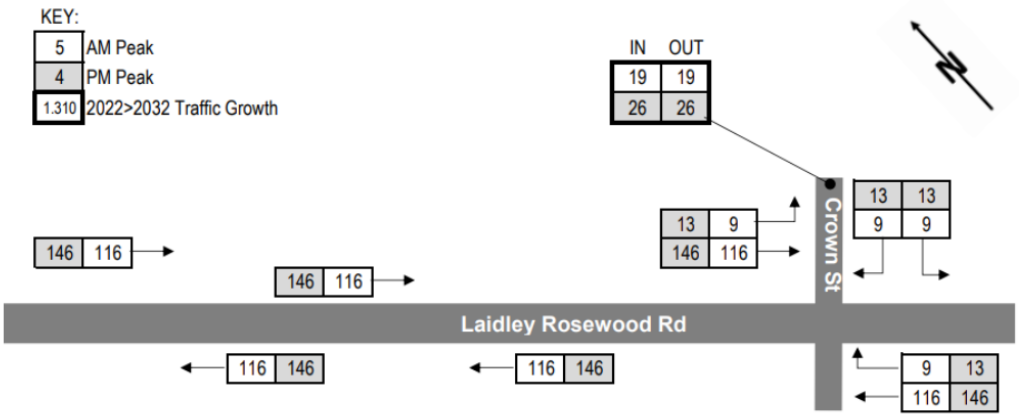

Figure 4.3 2032 Background Traffic Flows

4.3 Development Traffic

4.3.1 Trip Generation

Industry, Service Station and Fast-Food trip rates are based on the TMR published traffic generation surveys of existing developments similar to the proposed land use as follows:

- Industrial Estate
  - Average AM peak period trip rate adopted as 0.575 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 0.809 veh/hr/100 m² gross floor area.
- Service Station
  - Average AM peak period trip rate adopted as 31.37 veh/hr/100 m² gross floor area.
  - Average PM peak period trip rate adopted as 27.95 veh/hr/100 m² gross floor area.

- Fast Food with Drive Through
    - Average AM peak period trip rate adopted as 32.05 veh/hr/100 m² gross floor area.
    - Average PM peak period trip rate adopted as 40.57 veh/hr/100 m² gross floor area.

The proposed Industry Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Table 4.3 below.

Table 4.3 Proposed Development Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Industrial Estate	17,532	0.0058	50%	50%	0.0081	50%	50%
Trip Generation		**101**	50	50	**142**	71	71

The total industrial lot area (lots 2-13) is 28,587m^2 and the GFA represents approximately 60% of the total lot areas for the purpose of the trips generated. As shown in Table 4.3, the proposed industry development is forecast to generate 101 two-way trips during the morning peak and 142 two-way trips during the evening peak.

The proposed Service Station Development Trip Rates and in/out trip distribution used in this Traffic Impact Assessment are summarised in Figure 4.4 below.

Table 4.4 Proposed Development Trip Rates and In/Out Distribution Split

Land Use	GFA (m²)	AM Peak			PM Peak		
		Trip Rate	In	Out	Trip Rate	In	Out
Service Station	200	0.314	50%	50%	0.280	50%	50%
Trip Generation		**63**	31	31	**56**	28	28
Fast Food Drive Through	150	0.320	50%	50%	0.406	50%	50%
Trip Generation		**48**	24	24	**61**	30	30
Total		**111**	55	55	**117**	58	58

As shown in Table 4.4, the proposed service station development including fast food drive though is forecast to generate 111 two-way trips during the morning peak and 117 two-way trips during the evening peak.

4.3.2 Drop-in and Shared Trips

The distribution of the development drop-in and multi-purpose trips have been based on the advice given in the DTMR Guidelines for Assessment of Road Impacts of Development, 2006, the State of Queensland (Department of Transport and Main Roads) document (GARID). Extract relating to appropriate proportion of trips for each development type is shown in Figure 4.4 below.

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Guidelines for Assessment of Road Impacts of Development — Appendix F

The segmentation of traffic generation for shopping centres and fast food outlets is shown below:

Table F.1

Development	Trip Segmentation		
	New (%)	Diverted Drop In (%)	Undiverted Drop In (%)
Shopping Centres >20 000 m²	63	18	19
Shopping Centre 3 000 m² – 20 000 m²	50	22	28
Shopping Centres <3 000 m²	50	32	18
Fast Food Outlets	40	25	35

Figure 4.4 Trips Segmentations

The Queensland Department of Transport and Main Roads Guidelines for Assessment of Road Impacts of Development, recommends for Fast Food Outlets that; 40% of trips are new trips; 25% are diverted drop in trips and 35% are undiverted drop in trips. It has been assumed that 35% of trips generated from and to the food and drink outlet are pass by trips, 40% are new trips.

Considering the above reductions and composition of the proposed development, an overall average reduction of 25% to the gross trips generated by Food and Drink outlets has been allowed for multi-purpose trips. No reductions for multi-purpose trips associated with the proposed service station have been made.

The trips generated for each land use for the morning and evening peak hour and percentages entering and leaving are shown in the following Table 4.5.

Table 4.5 Development New, Pass-by and Linked Trips

Trips	GFA (m²)	AM Peak		PM Peak	
		In	Out	In	Out
Service Station Total Trips	200	31	31	28	28
New Trips	65%	20	20	18	18
Pass-by Trips	35%	11	11	10	10
Linked Trips	0%	0	0	0	0
Fast Food Drive Through	15	24	24	30	30
New Trips	40%	10	10	12	12
Pass-by Trips	35%	8	8	11	11
Linked Trips	25%	6	6	8	8

Figure 4.5 below shows the proposed service station and fast-food drive through development NEW trip distribution onto the local road network.

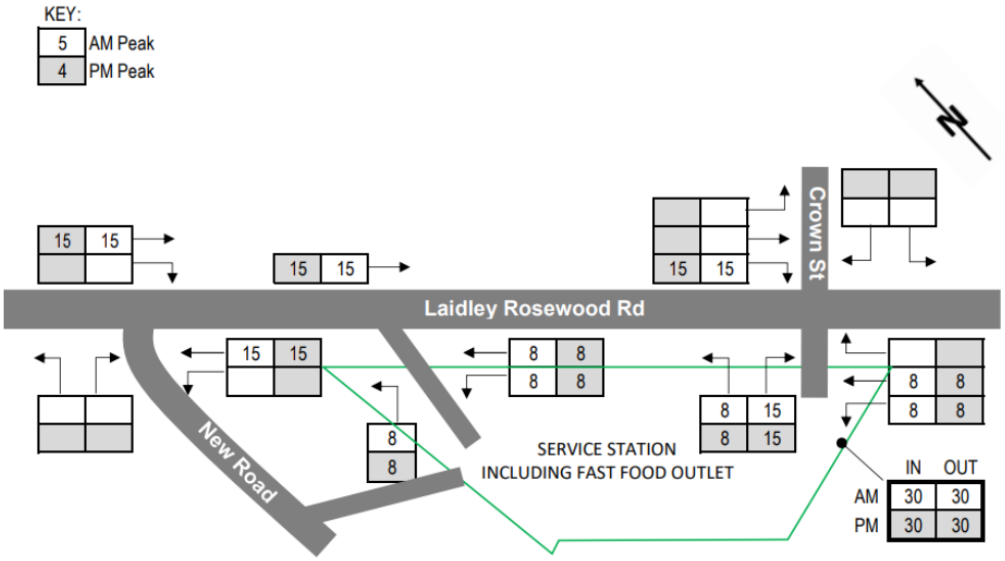

Figure 4.5 Proposed Service Station and Fast-Food New Trips

Figure 4.6 below shows the proposed service station and fast-food drive through development DROP-IN trips.

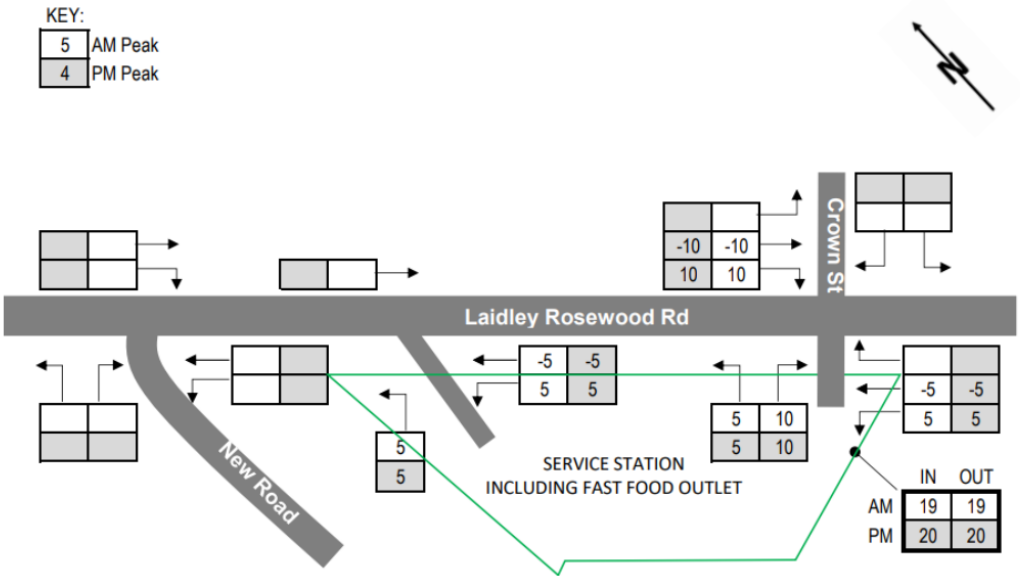

Figure 4.6 Proposed Service Station and Fast-Food Drop-in Trips

Figure 4.7 below shows the proposed service station and fast-food drive through development total trips.

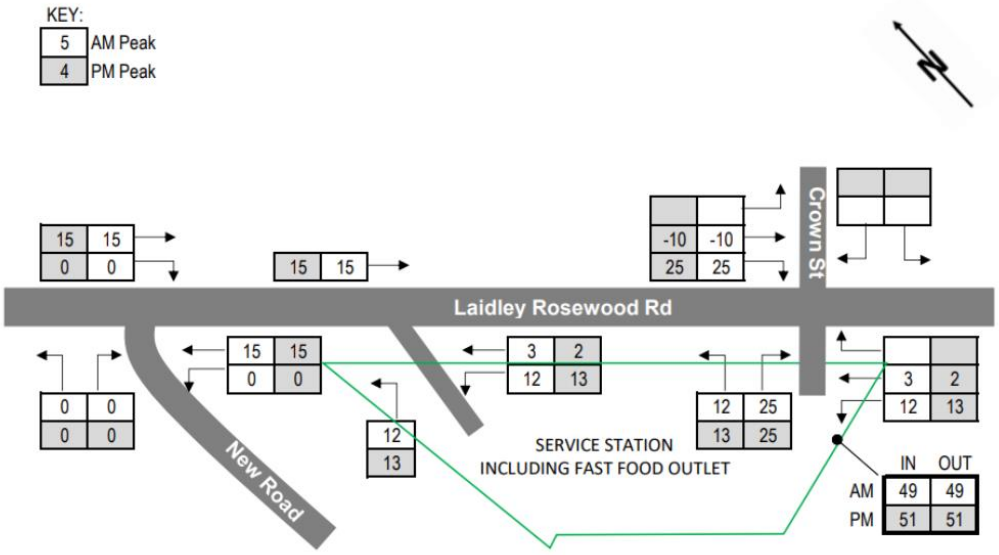

Figure 4.7 Proposed Service Station and Fast-Food Total Trips

Figure 4.8 shows the proposed Industry Development trip distribution onto the local road network.

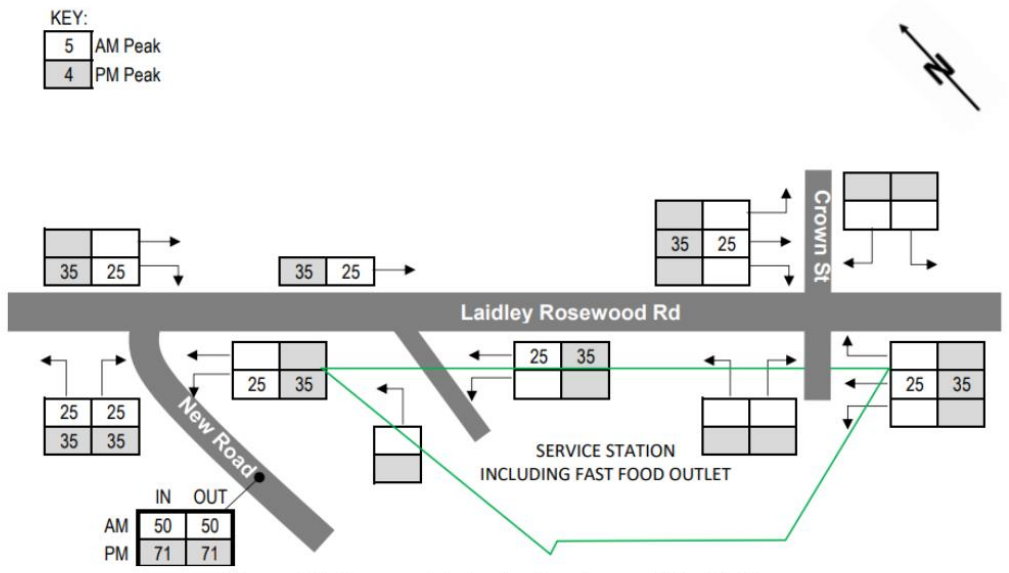

Figure 4.8 Proposed Industry Development Traffic Flows

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4.4 Post-Development Traffic

The development traffic Figures (Figure 4.5-Figure 4.8) has been added to the background traffic demands (Figure 4.2 and Figure 4.3) to provide the Post Development traffic scenarios. The Post Development traffic demands for the 2022 and 2032 design years are shown in Figure 4.9 and Figure 4.10 respectively.

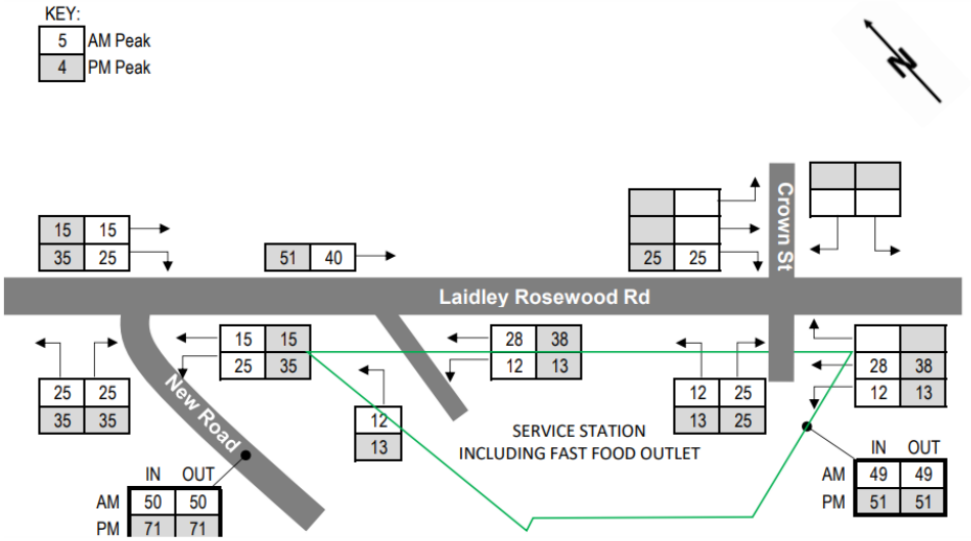


Figure 4.9 2022 with Proposed Development Traffic Flows

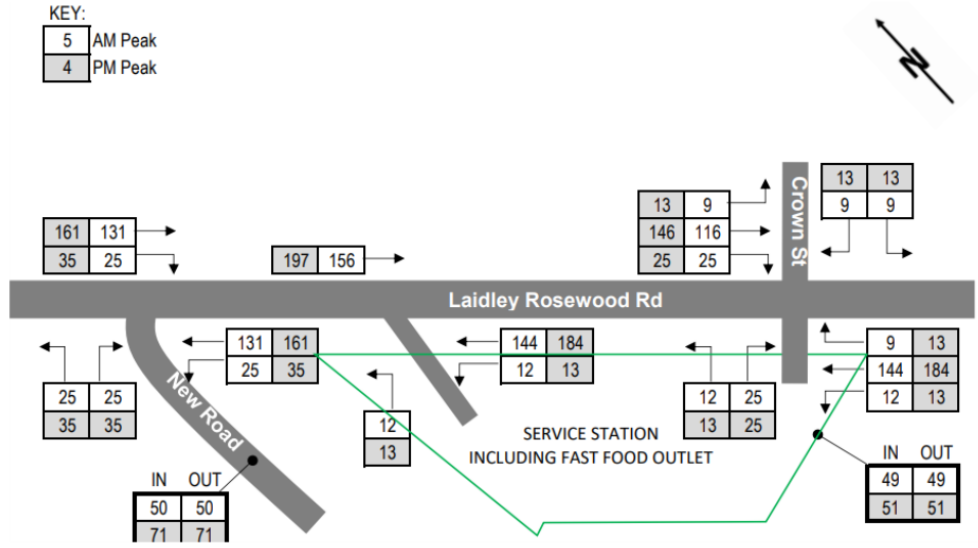


Figure 4.10 2032 with Proposed Development Traffic Flows

5. Operational Assessment

This section addresses the surrounding road network giving consideration to turning treatments at the proposed access locations.

5.1 Turning Treatment Assessment

Turn warrants have been developed in relation to safety. The warrants have been developed around the relationship between traffic volumes, speed environments and accident statistics, employing a Benefit Cost Ratio (BCR) across an assumed design life.

The warrants are based on the construction of intersections on new roads, i.e., “greenfield” sites. For existing intersections, they provide a reference point, however are not strictly applied as the BCRs in established locations often do not support upgrades, due to the existing physical constraints (e.g. services, road reserve, drainage structures, etc). A brief summary of turn treatments is provided in Table 5.1 below. Assessment of turn warrants has been carried out using Figure 5.1 and Table 5.1 a guide (DTMR Road Planning and Design Manual Chapter 13*: Intersections at Grade*)

Table 5.1 Turn Lane Descriptions

Turn Treatment	Description
BAL	Basic Left Turn Lane
CHL	Channelised Left Turn Lane
AUL (s)	Shortened Auxiliary Left Turn Lane
AUL	Full Length Auxiliary Left Turn Lane
BAR	Basic Right Turn Lane
CHR (s)	Shortened Channelised Right Turn Lane
CHR	Channelised Right Turn Lane

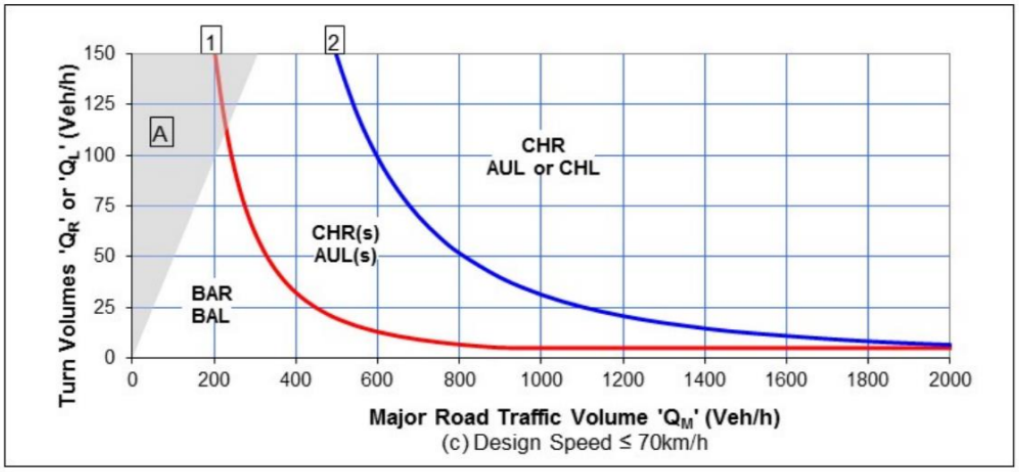


Figure 5.1 Warrants for Turn Treatments for Roads with a Design Speed < 70 kph

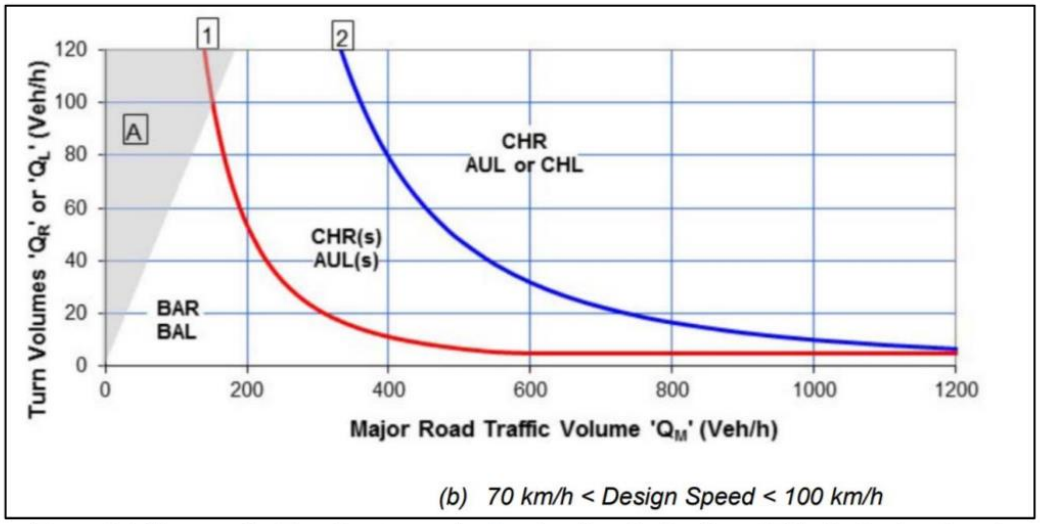
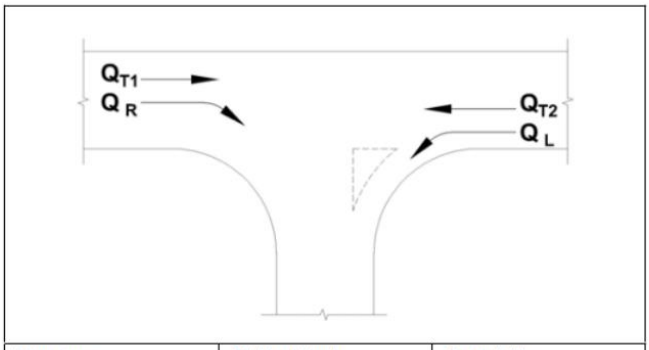


Figure 5.2 Warrants for Turn Treatments for Roads with a Design Speed 70 kph <Design Speed <100km/h

Calculation of the values of Q_m, Q_r and Q_l for use with Figure 5.1 and Figure 5.2 is in accordance with Figure 5.3 (DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade*, Fig 13.24).



Turn type	Splitter island	Q_M (veh/h)
Right	No	= Q_{T1} + Q_{T2} + Q_L
Right	Yes	= Q_{T1} + Q_{T2}
Left	No/Yes	= Q_{T2}

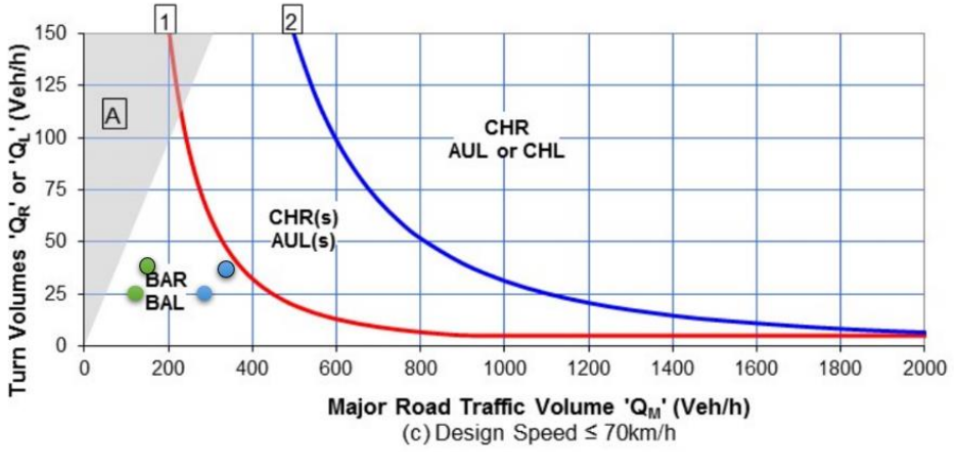
Figure 5.3 Calculation of the Major Road Traffic Volume Parameter 'Q_m'

5.1.1 New Road / Rosewood Laidley Road Priority Intersection

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / New Road priority intersection are summarised in Table 5.2.

Table 5.2 Assessment of Turn Warrants for Rosewood Laidley Road / New Internal Road Intersection

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	131	131	287	25	BAR	25	BAL
2032 PM	161	161	358	35	BAR	35	BAL



As demonstrated, due to the addition of development trips, doesn't warrant dedicated left or right turn lanes.

Basic Right Turn Lane treatment on a two-lane rural road has been proposed in line with DTMR recommendations as shown in Figure 5.4 below.

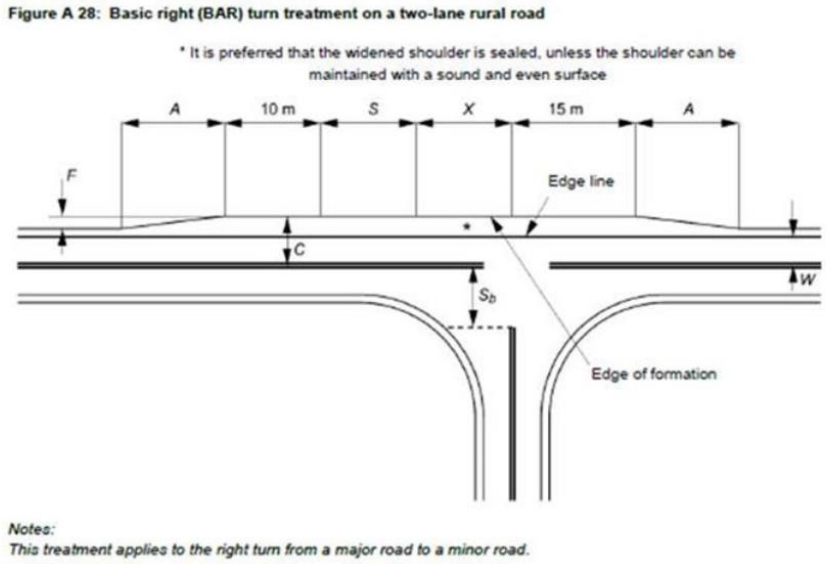


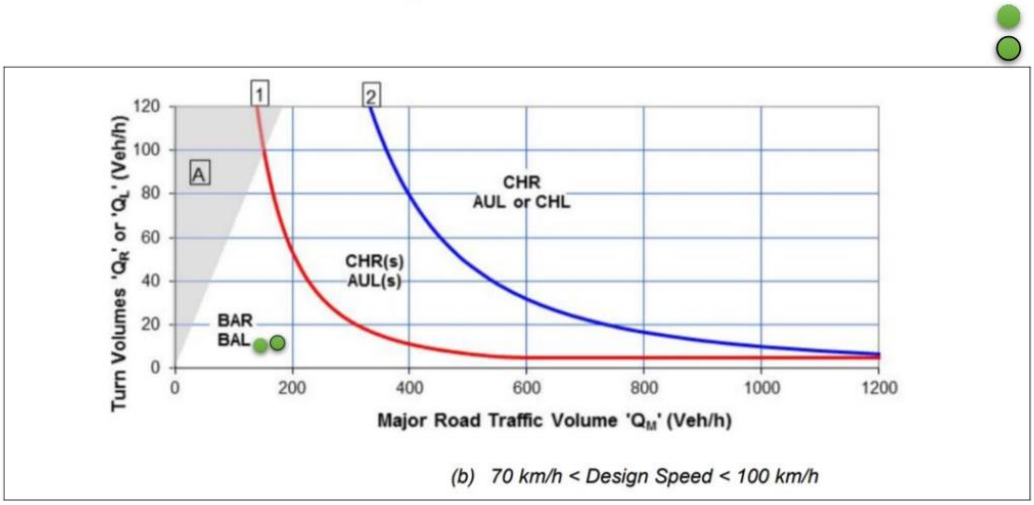
Figure 5.4 Basic Right (BAR) Turn Treatment on a Two-lane Rural Road (Source: DTMR)

5.1.2 Northwestern Site Access Driveway / Rosewood Laidley Road

The left turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the north western site access with Rosewood Laidley Road are summarised in Table 5.3.

Table 5.3 The Rosewood Laidley Road / North Western Site Access Driveway Turn Warrant Assessment

Scenario	Left Turn		
	Q_M	Q_L	Treatment
2032 AM	144	12	BAL
2032 PM	184	13	BAL



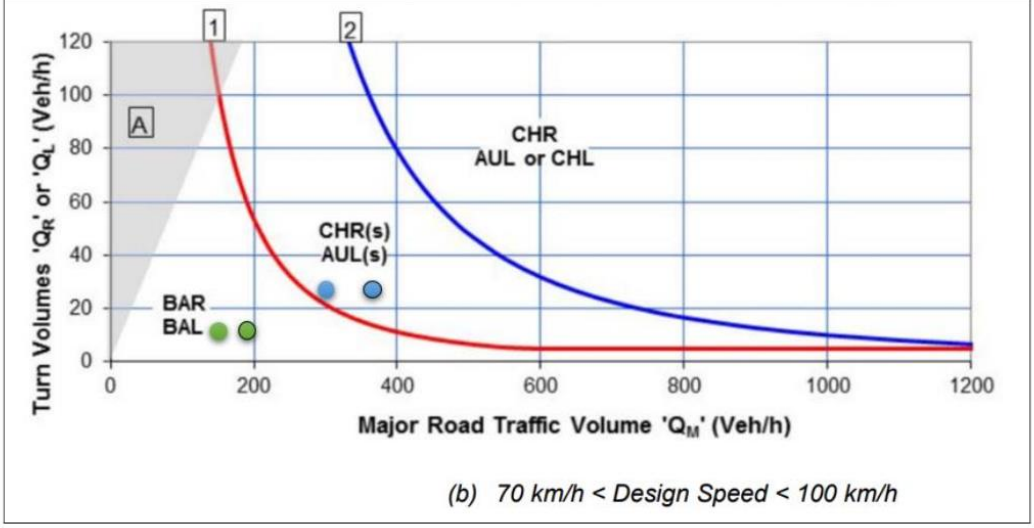
(b) 70 km/h < Design Speed < 100 km/h

5.1.3 Southeastern Site Access Driveway / Rosewood Laidley Road

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / South Eastern Site Access driveway are summarised in Table 5.4.

Table 5.4 The Rosewood Laidley Road / South Eastern Site Access Driveway Turn Warrant Assessment

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	126	153	291	25	CHR(S)	12	BAL
2032 PM	159	197	369	25	CHR(S)	13	BAL

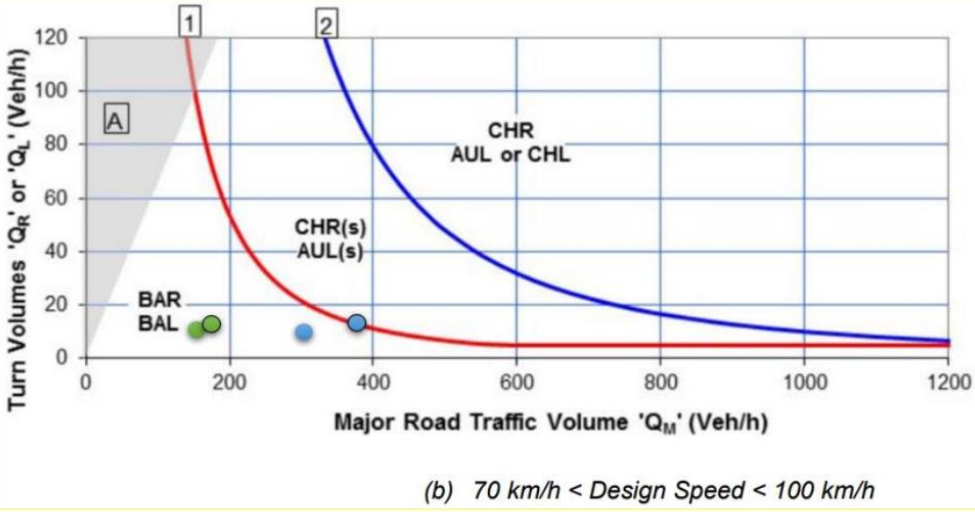


(b) 70 km/h < Design Speed < 100 km/h

The right turn treatment suggested by the DTMR *Road Planning and Design Manual Chapter 13: Intersections at Grade* warrants for the Rosewood Laidley Road / Crown Street priority intersection are summarised in Table 5.5.

Table 5.5 Assessment of Turn Warrants for the Crown St / Rosewood Laidley Road Intersection

Scenario	Right Turn					Left Turn	
	Q_{T1}	Q_{T2}	Q_M	Q_R	Treatment	Q_L	Treatment
2032 AM	156	141	307	9	BAR	9	BAL
2032 PM	197	171	381	13	CHR(S)	13	BAL



(b) 70 km/h < Design Speed < 100 km/h

CHR(s) lane treatment on a two-lane rural road has been proposed in line with DTMR recommendations as shown in Figure 5.5 below.

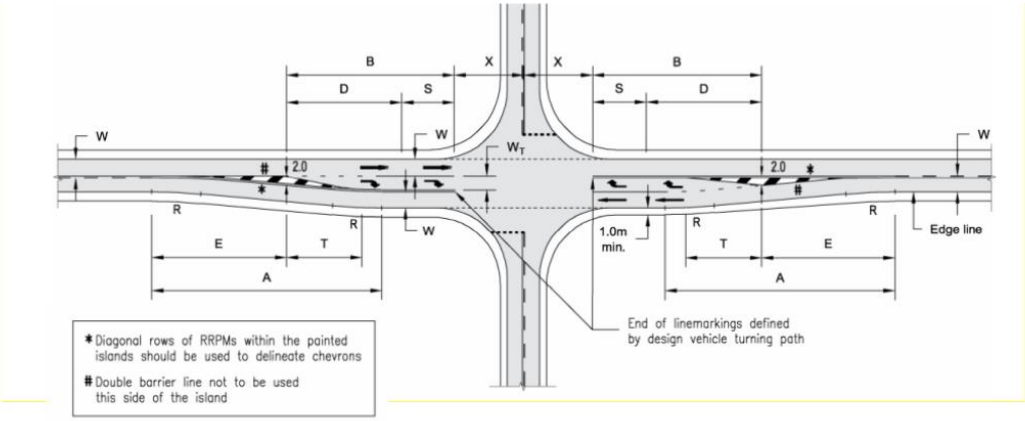


Table 7.1: Dimensions of urban CHR(S) treatment for various design speeds

Design speed of major road approach (km/h)	Lateral movement length *A* (m)[1]	Diverge/deceleration length *D* (m)[2]	Desirable radius *R* (m)	Taper length *T* (m)
50	40[3]	15	110	15
60	50[3]	25	175	15
70	60	35	240	20
80	65	45	280	20
90	75	55	350	25

Figure 5.5 CHR(s) Turn Treatment on a Two-lane Rural Road (Source: DTMR)

6. Conclusions

Burchills Engineering Solutions have been commissioned by RU & AR Patel to produce a Traffic Impact Assessment report in support of a development application for the Service Station including the Fast-Food drive-through facility and Industry Development. This report has been updated to include Information Request response to the Queensland State Government Assessment and Referral Agency (SARA).

Service Station including Fast-Food drive-through

Service Station access to the wider road network is proposed via two access driveways off Rosewood Laidley Road. Access driveways have been designed to accommodate 20.0m AV accessing the site. The proposed service station dual access arrangement allows cars to arrive, utilise a service station and exit the site in a forward gear. The visibility at access driveway meets AS2890.1 standards for the 80km/h frontage road speed limit for cars and commercial vehicles. Due to the low traffic volumes along Rosewood Laidley Road, auxiliary turn lanes are not warranted at the north western access driveway. The south eastern access driveway has been formalised into a 4-way priority intersection with Crown Street and includes CHR(s) lanes and BAL into the proposed development site.

The 15 car spaces provided for the service station are also 1 car parking spaces above the minimum Lockyer Valley Regional Council requirement. In addition, 10 queueing spaces have been provided for a drive-through facility ensuring that parking demand can be maintained entirely within the site.

Industry Development

Access to the wider road network from the proposed industry development subdivision, will be provided via a new public road and new intersection as follows:

- the priority intersection with Rosewood Laidley Road to the north; and

All trips in and out from the industrial development will travel north along new road towards a new priority intersection Rosewood Laidley Road. Due to the development trips turning in and out of the new road from Rosewood Laidley Road, a BAR treatment with passing lane for a rural intersection is recommended at the New Road / Rosewood Laidley Road priority intersection as per TMR standard detail.

The proposed intersection is designed to cater for a 20.0m Articulated Vehicles (AV) movements. The intersection design achieves a key objective of minimizing the interference between vehicles manoeuvring into and out of the new road and vehicles travelling through Rosewood Laidley Road. A 20.0m AV doesn't not cross the centre-line of Rosewood Laidley Road to the extent that there is any interaction with the opposing direction of travel. The above ensures minimal delay to through traffic along Rosewood Laidley Road, and that safety and efficiency of the state-controlled road are maintained post development. The visibility at the new road / Rosewood Laidley Road priority intersection meets Austroads SISD requirements for the 80km/h design speed for eastbound traffic and 100km/h design speed for westbound traffic.

7. References

Roads and Traffic Authority 2002, *Guide to Traffic Generating Developments, Roads and Traffic Authority*, Sydney.

Austroads Guide to Road Design Part 4A *Unsignalised and Signalised Intersections.*

Australian Standards AS/NZ2890.1-2004.

Lockyer Valley Regional Council bicycle and car parking Rates.

Department of Transport and Main Roads *Guide to Traffic Impact Assessments*

Department of Transport and Main Roads *Guidelines for Assessment of Road Impacts of Development*

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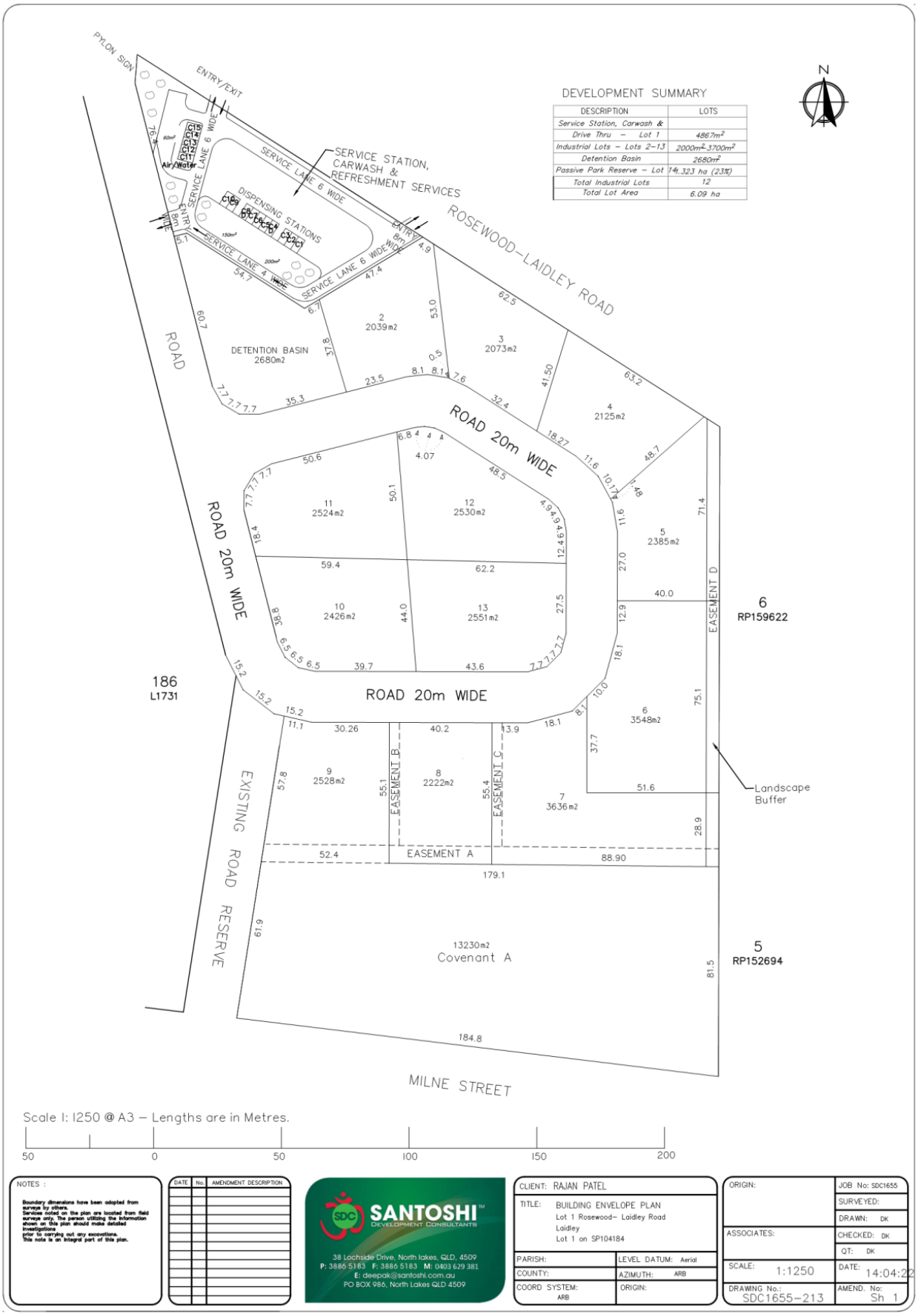
Appendix A – Proposed Development Layout


PYLON SIGN
ENTRY/EXIT
SERVICE STATION, CARWASH & REFRESHMENT SERVICES
SERVICE LANE 6 WIDE
DISPENSING STATIONS
ROSEWOOD–LAIDLEY ROAD
SERVICE LANE 4 WIDE
DETENTION BASIN 2680m2
ROAD
ROAD 20m WIDE
EASEMENT A
EASEMENT B
EASEMENT C
EASEMENT D
EXISTING ROAD RESERVE
Landscape Buffer
13230m2 Covenant A
MILNE STREET
186 L1731
6 RP159622
5 RP152694
DEVELOPMENT SUMMARY
DESCRIPTION | LOTS
Service Station, Carwash & Drive Thru – Lot 1 | 4867m²
Industrial Lots – Lots 2–13 | 2000m²-3700m²
Detention Basin | 2680m²
Passive Park Reserve – Lot 14 | 1.323 ha (23%)
Total Industrial Lots | 12
Total Lot Area | 6.09 ha
N
Scale 1: 1250 @ A3 – Lengths are in Metres.
50 0 50 100 150 200
NOTES :
Boundary dimensions have been adopted from surveys by others.
Services noted on the plan are located from field survey only. The person utilizing the information shown on this plan should make detailed investigations prior to carrying out any excavations.
This note is an integral part of this plan.
DATE | No. | AMENDMENT DESCRIPTION
SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509
CLIENT: RAJAN PATEL
TITLE: BUILDING ENVELOPE PLAN
Lot 1 Rosewood– Laidley Road
Laidley
Lot 1 on SP104184
PARISH:
LEVEL DATUM: Aerial
COUNTY:
AZIMUTH: ARB
COORD SYSTEM: ARB
ORIGIN:
ORIGIN:
JOB No: SDC1655
SURVEYED:
DRAWN: DK
ASSOCIATES:
CHECKED: DK
QT: DK
SCALE: 1:1250
DATE: 14:04:22
DRAWING No.: SDC1655–213
AMEND. No: Sh 1

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Appendix B – SARA and Lockyer Valley IR Letter

GE77-N

Queensland Government

SARA reference: 2106-23287 SRA
Council reference: MC2021/0042 & RL2021/0021

20 January 2022

Messrs Rajankumar Umedbhai Patel and Amrutaben Rajankumar Patel
C/- Santoshi Development Consultants
PO Box 986
NORTH LAKES QLD 4509
himaansu@santoshi.com.au

Attention: Mr Himaansu Kumar

Dear Mr Kumar

SARA advice notice - Rosewood Laidley Road, Laidley

(Advice notice given under section 35 of the Development Assessment Rules)

The State Assessment and Referral Agency (SARA) advises that your development application has not adequately demonstrated compliance with the State Development Assessment Provisions.

Subsequent to your response of 21 December 2021 to SARA's information request, SARA has reviewed the information you provided and as discussed in the meeting with you on 18 January 2022 the following issue(s) with the proposed development application have been identified:

State transport infrastructure	
Traffic Impact Assessment – Safety of service station access	
1.	**Issue:** The application hasn't demonstrated that the two proposed accesses to the service station from Rosewood Laidley Road are safe and meet the requirements of Performance Outcome (PO) 16 and PO20 of the State Development Assessment Provisions (SDAP) version 2.6, State code 1: Development in a state-controlled road environment (state code 1) and PO1 of SDAP, State code 6: Protection of state transport networks (state code 6). The meeting of 19 January 2022 discussed: • The proposed two accesses to the service station off Rosewood Laidley Road and their safety in relation to the intersections at New Road and Crown Street • The option of limiting the north-western access off Rosewood Laidley Road to a left in left out only because of concerns with its proximity to the intersection with the New Road immediately to the west

South East Queensland (West) regional office
Level 4, 117 Brisbane Street, Ipswich
PO Box 2390, North Ipswich QLD 4305

2106-23287 SRA

	• Further analysis being undertaken to demonstrate the safety of the proposed south-eastern access to the service station off Rosewood Laidley Road because of its proximity to the intersection with Crown Street. **Action:** • It is recommended that an amended TIA be prepared and submitted which assesses the traffic impacts on the state-controlled road network as a result of the proposal and identifies mitigation measures and works required to achieve compliance with PO16 and PO20 of state code 1 and PO1 of State code 6, that: – Must include a turn warrant assessment for both accesses to the service station on Rosewood Laidley Road and the intersection with New Road including proposed design solutions where applicable such as those discussed in the meeting of 19 January 2022 – Demonstrate that the proposed Service Station and reconfiguration does not result in a worsening of the safety and operating conditions on Rosewood-Laidley Road – Include details of the mitigation measures proposed to address any traffic impacts on the state-controlled road network by the proposed development. Any mitigation measures must be prepared in accordance with the DTMR *Road Planning and Design Manual* (RPDM) – Be prepared in accordance with the Department of Transport and Main Roads' (DTMR) *Guide to Traffic Impact Assessment 2018* (GTIA) – Be certified by a Registered Professional Engineer Queensland (RPEQ). • Appendix A of the GTIA includes a set of standard input parameters for use in traffic impact assessments that will be acceptable to DTMR in the majority of situations. • The DTMR's GTIA can be accessed and downloaded from www.tmr.qld.gov.au.

Please note that unlike an information request, assessment timeframes do not stop when advice is provided by SARA.

How to respond

It is recommended that you address these issues promptly and provide a response to SARA by 25 January 2022. If you decide not to respond, your application will be assessed and decided based on the information provided to date.

Under the Development Assessment Rules (DA Rules), the issuing of advice does not stop the assessment timeframes. If you intend to provide additional information, it should be provided in a timely manner to allow sufficient time for the information to be considered. As such, you are strongly encouraged to consider using the 'stop the clock' provisions under s32 of the DA rules, to allow sufficient time for you to consider and respond to SARA's advice; and for SARA to consider any new or changed material provided.

If you wish to utilise the 'stop the clock' provisions, you should give notice to the assessing authority (assessment manager or referral agency) whose current period you wish to stop. This can be done through MyDAS2 or via correspondence.

You are requested to upload your response and complete the relevant tasks in MyDAS2.

If you require further information or have any questions about the above, please contact Darrian Borick, Principal Planner, on 3432 2411 or via email IpswichSARA@dsdilgp.qld.gov.au who will be pleased to assist.

2106-23287 SRA

Yours sincerely

Kieran Hanna
Principal Planning Officer

cc Lockyer Valley Regional Council, mailbox@lvrc.qld.gov.au

Development details		
Description:	Development permit	Material change of use for Service Station and Refreshment Service Reconfiguring a Lot for Subdivision (1 Lot into 34 Lots) Operational Works for Advertising Device
SARA role:	Referral agency	
SARA trigger:	Schedule 10, part 10, division 3, subdivision 3, table 1 item 1	Koala habitat area in SEQ region
	Schedule 10, part 9, division 4, subdivision 1, table 1, item 1	Infrastructure - state transport infrastructure
	Schedule 10, part 9, division 4, subdivision 2, table 1, item 1	State transport corridors and future State transport corridors
	Schedule 10, part 9, division 4, subdivision 2, table 4, item 1	State transport corridors and future State transport corridors
SARA reference:	2106-23287 SRA	
Assessment criteria:	State Development Assessment Provisions (SDAP) version 2.6: State code 25: Development in South East Queensland koala habitat areas State code 6: Protection of state transport networks State code 1: Development in a state-controlled road environment	

Lockyer Valley Regional Council
26 Railway Street, PO Box 82, Gatton Qld 4343
All official correspondence to be addressed to the CEO
Telephone 1300 005 872 | Facsimile (07) 5462 3269
Email mailbox@lvrc.qld.gov.au | www.lockyervalley.qld.gov.au

Application Id: MC2021/0042 & RL2021/0021
Enquiries: Tammee Van Bael
Your Reference: -
Contact: 5462 0382

15 February 2022

RU & AR Patel
C/- Santoshi Development Consultants
PO Box 986
NORTH LAKES QLD 4509

Dear Mr Kumar

Further Advice – Development Application
Planning Act 2016

I refer to your application. Council wishes to provide you with further advice about the application in accordance with the provisions of the *Development Assessment Rules 2017*.

APPLICATION DETAILS

Application No:	MC2021/0042 & RL2021/0021
Proposal:	Development Permit for Material Change of Use for Service Station and Refreshment Service, Reconfiguring a Lot for Subdivision (1 Lot into 34 Lots) and Operational Works for Advertising Device
Street Address:	Rosewood Laidley Road LAIDLEY QLD 4341
Real Property Description:	Lot 1 SP 104184
Planning Scheme:	Laidley Shire Planning Scheme 2003

FURTHER ADVICE

You are advised that:-

Council has undertaken a review of your Response to Information Request 20 and 21 December 2021. However, there is outstanding information that Council requires further information on to satisfactorily assess the proposal.

Issue
Proposed Lots 7 and 8 are identified as being rear access handle allotments. Council does not accept rear access handle allotments in industrial subdivision. All lots must have a minimum frontage width of 40m. It is also noted that there are a number of other proposed lots that do not have a minimum width of 40m including Proposed Lots 2, 9 and 13.

Information Required

1 Provide an amended lot layout plan identifying that all lots have a minimum frontage width of 40m and minimum lot size of 2,000m^2. Lots proposed to have an access handle are not supported.

Issue

The proposed layout plan identifies easements on Proposed Lots 8 to 10. The purpose of these easements is unclear. The Bushfire Management Report identifies that there should be for pedestrian fire trails. However, it is unclear as to why a pedestrian fire trail is necessary in this location. In addition, the accessibility of these fire trails is significantly constrained due to the significant earthworks proposed, including batters and retaining walls, to be undertaken adjacent to the fire trail. This would also result in difficultly in maintenance being in accessible.

Information Required

2 Provide further information on the purpose of the easements on Proposed Lots 8 to 10.

Issue

The State Planning Policy (SPP) requires development to avoid natural hazards (including bushfire), or where not possible to avoid, development must mitigate the risk to persons and property to an acceptable or tolerable level. The submitted Bushfire Management Report does not adequately address the outcomes of the SPP to demonstrate that the bushfire risk is avoided, or where not possible to avoid, the risk to persons and property is mitigated to a tolerable level. In addition, the report has not demonstrated that the development avoids an increase in the severity of bushfire and potential for damage on adjoining properties. The Bushfire Management Report has not included information demonstrating the need for the bushfire trail.

Information Required

3 Provide an amended Bushfire Management Report prepared by a suitably qualified person that addresses the outcomes of the State Planning Policy, including demonstrating that the bushfire risk is avoided or where not possible to avoid, risk to persons and property is mitigated to a tolerable or acceptable level.

Issue

The proposal plan and supporting information identifies Proposed Lot 16 as being utilised as a reserve and handed over to Council for future management. This is not an accepted outcome as Council will not be taking over ownership of the lot as Council generally does not accept conservation land as a dedication. Conservation areas are generally restored and protected with a covenant. Proposed Lot 16 must be retained in private ownership

Information Required

4 Provide amended documents identifying that area within Proposed Lot 16 as being retained for conservation purposes, protected with a covenant and retained in private ownership. It is recommended Proposed Lot 16 be incorporated into an adjoining lot, as no further development will be permitted within the conservation area.

5 Submit a Management Plan outlining the roles and responsibilities for restoring and maintaining the conservation area in perpetuity.

Issue
No qualifications have been provided on the ecological consultants.

Information Required
6 Provide the CV of the ecological consultants who undertook on-ground assessments and prepared the reports to demonstrate they hold suitable qualifications in accordance with Councils standards as provided in the Information Request.

Issue
The rehabilitation species list contains species that are not representative of the pre-clear regional ecosystem present within Lot 16.

Information Required
7 Delete the following species from the rehabilitation list due to not being grown locally or not suited to pre-clear RE 12.9-10.7:
(a) Angophora woodsiana
(b) Eucalyptus carnea
(c) Eucalyptus moluccana
(d) Eucalyptus resinifera
(e) Eucalyptus tindaliae
(f) Corymbia gummifera
(g) Lophostemon confertus
(h) Allocasuarina torulosa
(i) Elaeocarpus reticulatus
(j) Endiandra pubens
(k) Glochidion ferdinandi var. ferdinandi
(l) Glochidion sumatranum
(m) Guioa semiglauca
(n) Homalanthus nutans
(o) Neolitsea dealbata
(p) Psychotria loniceroides
(q) Leucopogon juniperinus
(r) Zieria smithii

- Additional species can be added back in, but only those found on the rehabilitation species list for 12.9-10.7.

Issue
The weed control methods require review in the Table 5.1 of the Rehabilitation Management Plan.

Information Required
8 Provide an amended Rehabilitation Management Plan with the following amendments to Table 5.1:

Scientific Name	Common Name	Family	Qld Status	Control Method
Opuntia stricta	Prickly pear	Cactaceae	RIP	~~Ploughing~~; Small areas: spray; Biological control: Cactoblastis or Cochineal.
Opuntia tomentosa	Velvet tree oear	Cactaceae	RIP	~~Ploughing~~; Small areas: spray; Biological control: Cactoblastis or Cochineal.

Bryophyllum delagoense	Mother-of-millions	Crassulaceae	RIP	~~Hand pull, bag and dispose offsite~~; spray G1:200 + MM or MM.
Macfadyena unguis-cati	Cat's claw creeper	Bignoniaceae	RIP	~~Seedlings, vines and runners: Hand pull, roll up and hang to dry;~~ spray G1:100 or G1:100 + MM. Larger stems, roots, nodes, vines: CSP G1:1.5; Spray G1:100 + MM. Underground tubers: Dig up or crown; gouge and paint G1:1.5.

Issue

No Traffic Impact Assessment was provided to the Council with lodgement of the planning application. The comments and issues identified below are based on the Traffic Impact Assessment, Version 2 prepared by Burchills Engineering Solutions and dated 9 December 2020 submitted in response to Council's Information Request. It is proposed to provide a priority intersection with Milne Street to the south to cater for occasional Articulate Vehicles (AV) access, however this arrangement will create the opportunity for any commercial , industrial or any other additional traffic that will be generated from the new subdivision and service station to access Milne Street. The above proposed intersection with Milne Street will not be supported by the Council due to the following reasons:

a) The proposed access would direct industrial and commercial traffic through the existing residential area.
b) The longitudinal grade of the road section that is proposed to be connected is for Industrial/Commercial vehicles and does not comply with *Laidley Shire Council Planning Scheme 2003*, Schedule 3, Division 3, Table 10, as it well exceeds the absolute maximum carriageway grade of 6%.
c) Milne street and Pioneer Street (to the west of the site) road pavements are not designed to industrial or commercial traffic.

Incorporating changes to address the above would impact the ultimate traffic flow conditions on the proposed roads and the intersections. It is noted that the swept paths provided indicate that AV are crossing the centre line of the proposed roads during turning movements which is not acceptable.

For the Service Station, it is noted that the submitted Traffic Impact Assessment (TIA) provides conflicting traffic flow directional drawings with the drawings within the TIA and Drawing Number M0112 Sheet No. 02 of 05, Revision D, *Site Plan*, prepared by Mi. Co Design and Drafting and dated 16-11-21. The drawings provide for two-way directional traffic along the north-western access and road.

As shown in Drawing Number SK016 prepared by Burchills Engineering Solutions, the Heavy Rigid Vehicles (HRV) and refuse vehicle would require reversing to the fuel pump areas under the canopy. The above vehicle movement would be unsafe to the users of the development (public) and pose a risk of collision with fuel pumps and associated risk of fire.

Information Required

9 Submit an amended Traffic Impact Assessment, prepared by a suitably qualified Registered Professional Engineer Queensland (RPEQ) incorporating the layout and changes to the traffic flows. Ensure that Department of Transport and Main Roads (DTMR) have been notified of

any changes to traffic flow conditions due to the above amendments and provide the final response from DTMR on the final Traffic Impact Assessment. Ensure that the Traffic Impact Assessment and any other plans are amended to take into account the correct traffic flow movements for the Service Station.

10 Provide appropriate changes to truncations and/or road reserve widening to accommodate future road radii widening to ensure centre lines of the proposed roads are not crossed during AV turning movements at intersections of new roads.

11 Submit to Council amended vehicle swept paths, certified by a suitably qualified RPEQ and clearly indicate the centre lines of proposed new roads.

12 Provide evidence of DTMR approval for the Service Station access arrangement as referred to in item 26 of the Council Information Request. Incorporate any resultant changes to the final Traffic Impact Assessment.

13 Provide an alternative location/solution for HRV and refuse vehicle servicing for the Service Station use to ensure that the public safety and hazards are not compromised.

Issue

No Stormwater Management Plan was provided to the Council with lodgement of the planning application. The comments and issues identified below are based on the Conceptual Stormwater Management Plan, Version 00 prepared by Burchills Engineering Solutions 8 December 2020. It is noted the drawings attached to the Conceptual Stormwater Management Plan show that retaining walls are proposed as part of stormwater basin works are extending into the road reserve for roads 1 and 2. Furthermore, the retaining walls are proposed to be partially extending to a future drainage reserve maintained by the Council. 'MUSIC' modelling data files have not been submitted as outlined in Council's Information Request dated 8 July 2021.

Information Required

14 Submit 'MUSIC' modelling data files for Council review.

15 Investigate the possibility of removing the proposed retaining walls within the any future stormwater basins maintained by the Council.

16 Remove all retaining walls proposed on existing or proposed road reserves as shown in the drawings (SK11, section A) attached to the Conceptual Stormwater Management Plan.

17 Ensure that retaining walls constructed for retaining of soil on a private property do not encroach onto the proposed future drainage reserves as shown in the drawings (SK11, section B) attached to the Conceptual Stormwater Management Plan.

18 Provide clarification on thick lines described as proposed kerb & channels as shown in Drawing No. SK02, A of the Conceptual Stormwater Management Plan.

Issue

The submitted Bulk Earthworks Layout Plan identifies substantial earthworks to be undertaken including batters and retaining walls. The batters are generally located within the property boundaries. The submitted building envelope plan does not take into consideration the batters and therefore the potential development envelope is substantially smaller. The proposed batters are generally between 1 in 6 to 1 in 3 which has a slope of 16% to 33%. Some of these batters are located between the property boundary and the road reserve. This potentially creates an access issue to lots.

The substantial earthworks will also result in a dramatically changed landform, which is inconsistent with the outcomes of the Areas of Natural and Environmental Significance Overlay Code where development must be compatible with natural landforms.

Information Required

19 Provide an amended Building Envelope Plan that takes into account the identified batters on the Bulk Earthworks Layout Plan.

20 Provide plans demonstrating that all lots have a suitable access point for industrial purposes having a maximum slope of 12.5%.

21 Provide amended plans demonstrating that the proposed lot layout and resultant earthworks are undertaken in a manner so as to reduce the amount of earthworks required and protects the natural landform.

Issue

No response has been provided to items 28 and 32-34 of Council's Information Request dated 8 July 2021. The subject site is impacted by Council's Slopes greater than 15% overlay under the Planning Scheme. The proposed development requires significant bulk earthworks including cut/fill batters and/or retaining structures to achieve the desired finished levels for the construction of infrastructure and the creation of proposed lots within Slopes greater than 15% area.

The development of land or any part of land greater than 15% requires a slope stability analysis assessment report prepared by a suitably experienced and a suitably qualified RPEQ in accordance with *Australian Geomechanics Society's Practice Note Guidelines for Landslide Risk Management 2007*. The proposed layout shows a new road extended into and adjacent to steep areas. It is Council's preference that roads are not constructed within steep slope areas due to erosion, drainage and difficulty experienced in stabilisation of batters in developments with similar soil characteristics and topography. Further, there would be potential issues in establishing batters with vegetation cover if dispersive soils are present.

Information Required

22 Engage a suitably experienced RPEQ to undertake a Geotechnical Assessment in accordance with the *Australian Geomechanics Society's Practice Note Guidelines for Landslide Risk Management 2007* (including all records/forms in support of assessment as outlined in Appendix D – Example Forms). As a minimum, the report must include an analysis of the following:

(a) A review of the site and surrounding areas;
(b) Assessment on proposed cross sections for proposed building envelopes;
(c) Site investigation including site mapping, borehole and/or test pit investigation, soil or rock characteristics, groundwater conditions;
(d) A detailed assessment of the risk posed by geotechnical hazards for works (building works, vegetation clearing, driveway/drainage construction, etc.) undertaken or required to be undertaken on the site for the proposed development;
(e) Stability assessment of cut/ fill batters using software such as *SLOPE/W by Geoslope* (www.geoslope.com) or equivalent software and stability assessment of any proposed retaining structures; and
(f) Recommendations of works to be undertaken to remove, reduce or manage the risks to both property and persons to either "very low" or "low".

Geotechnical Certifications

23 In addition to undertaking a landslide risk assessment, provide geotechnical certification from a RPEQ specialising in geotechnical engineering (evidence on qualifications must be provided) for any proposed development works within landslide hazard areas.

24 If the landslide risk assessment determines the lot or development envelope area has a landslide risk rating of 'low' or 'very low', a certification from a RPEQ specialising in geotechnical engineering must be provided confirming the proposed development is appropriate for:
- (a) the sloping nature of the site;
- (b) the risk of landslide on the subject lot or lots adversely affecting the proposed development and adjoining properties or structures; and
- (c) the risk of landslide to any upslope and downslope external properties impacting the proposed development is 'low' or 'very low'.

25 If the landslide risk assessment determines the lot or development envelope area has a landslide risk rating of 'moderate', 'high' or 'very high', certification from a RPEQ specialising in geotechnical engineering must be provided confirming the proposed development is appropriate for:
- (a) the sloping nature of the site;
- (b) the risk of landslide on the subject site or lot (or each of the proposed lots for reconfiguring a lot development applications) adversely affecting the proposed development and adjoining properties or structures; and
- (c) the risk of landslide to any upslope and downslope external properties impacting the proposed development will be reduced to 'low' or 'very low', providing the risk mitigation measures and engineering recommendations of the report are followed.

Issue

No response has been provided to item 35 of Council's Information Request dated 8 July 2021. It is likely that the soils within the site have dispersive characteristics. Further, no soils erodibility and erosion hazard assessment has been undertaken. It is noted that extensive earthworks (cut/fill) are required as a part of development works and there will be earthworks undertaken to construct stormwater quality and quantity mitigation measures. The presence of dispersive and/or sodic soil would have an impact on works proposed and may impact the proposed lot configuration and road layout.

Information Required

26 Engage a suitably experienced professional to undertake soil testing covering the areas where extensive earthworks are proposed. Submit a Dispersive Soil Management Plan (DSMP) prepared by a suitably qualified and experienced person. The DSMP must include but is not limited to the following:
- (a) Bore hole test and comprehensive analysis of results;
- (b) Recommendations for undertaking earthworks for the proposed works (roadworks, drainage, structures stormwater mitigation, etc.);
- (c) Review on the suitability of the proposed earthworks as a part of the development works for the site as indicated in the submitted engineering drawings;
- (d) The strategy for managing the dispersive and sodic soils during the construction and establishment phases; and

(e) Method(s) to stabilise/cap the dispersive, acidic and saline soils within and in the immediately surrounding areas to ensure long term stability and integrity of the proposed works.

Note:

- The information required in relation to above issues are likely to impact the final lot sizes, lot and road layout of the proposed subdivision and the proposed layout of the Service Station and Refreshment Service, therefore the above matters must be resolved as a part of current development application for a Material Change of Use and Reconfiguring a Lot. These matters cannot be deferred to Operational Works.

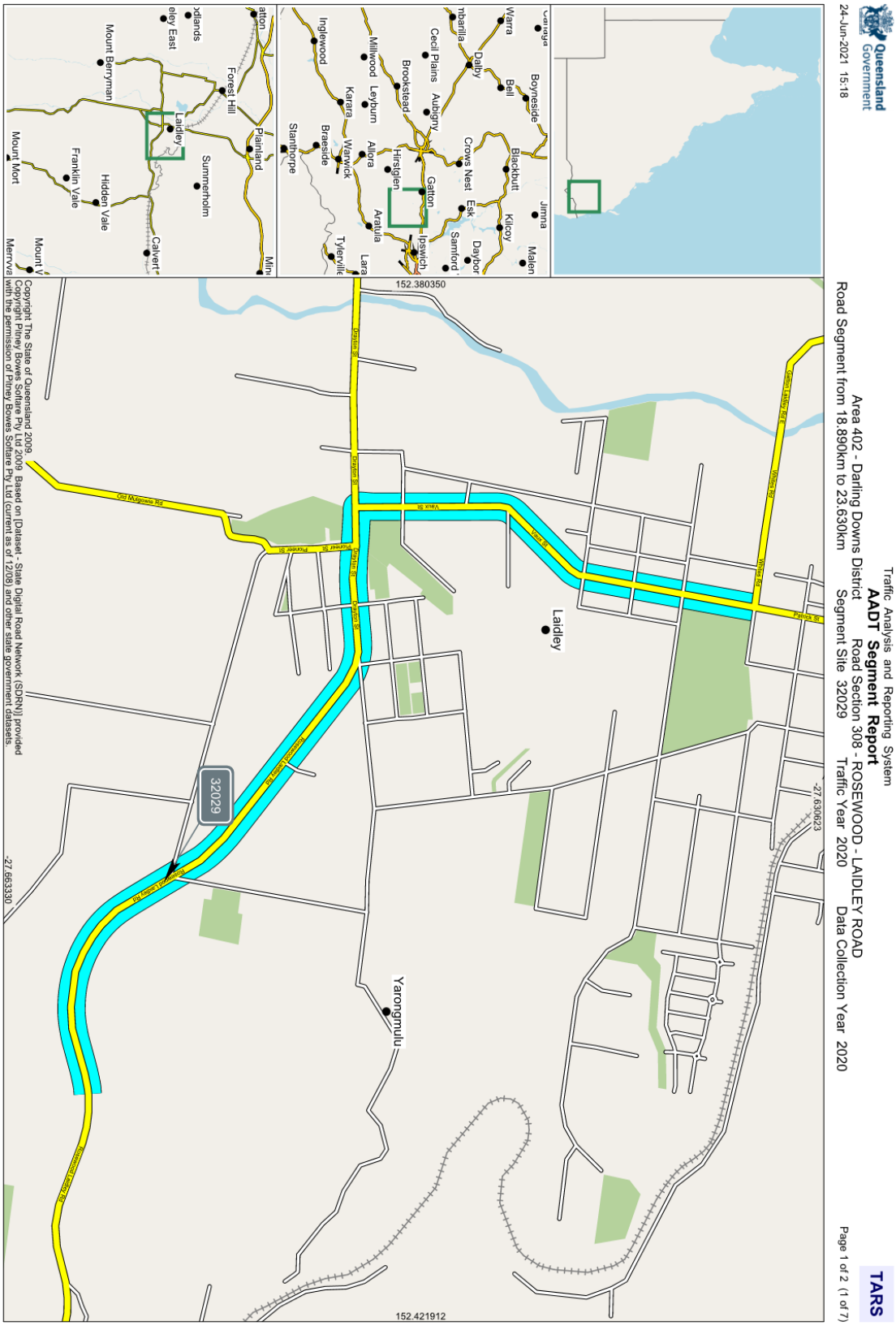
If you have any further queries in relation to the above, please contact Tammee Van Bael on 07 54620 382.

Yours faithfully

Tanya O'Brien
ACTING COORDINATOR DEVELOPMENT ASSESSMENT

The experience you deserve

Appendix C – Traffic Survey Data


Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
AADT Segment Report
Area 402 - Darling Downs District
Road Segment from 18.890km to 23.630km
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Segment Site 32029
Traffic Year 2020
Data Collection Year 2020
TARS
Page 1 of 2 (1 of 7)
Laidley
Yarongmulu
32029
152.380350
152.421912
-27.630623
-27.663330
Copyright The State of Queensland 2009. Based on [Dataset - State Digital Road Network (SDRN)] provided with the permission of Pitney Bowes Software Pty Ltd (current as of 12/08) and other state government datasets.
Copyright Pitney Bowes Software Pty Ltd 2009

Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
AADT Segment Report
Area 402 - Darling Downs District
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Road Segment from 18.890km to 23.630km
Segment Site 32029
Traffic Year 2020
Data Collection Year 2020
TARS
Page 2 of 2 (2 of 7)
The width of each Road Segment is proportional to its AADT.
Site 32029, Point 23000567, CS-32029_100m West of Milne St.
19.92 km
18.89 km
Start Point 23000568, LGA-Boundary 235/239.
23.63 km
End Point 23000422, 308-Patrick St & 312-Whites Rd / 311.
This report shows Annual Average Daily Traffic values (AADTs). Because the AADT values are converted to whole numbers, there will be occasional inaccuracies due to rounding. These inaccuracies are statistically insignificant.
All Vehicles (00)
G 923 100%
A 953 100%
B 1,876 100%
Light Vehicles (0A)
G 794 86.02%
A 868 91.08%
B 1,662 88.59%
Short Vehicles (1A)
G 794 86.02%
A 868 91.08%
B 1,662 88.59%
Short 2-Axle Vehicles (2A)
G 768 83.21%
A 838 87.93%
B 1,606 85.61%
Short Vehicles Towing (2B)
G 26 2.82%
A 30 3.15%
B 56 2.99%
Heavy Vehicles (0B)
G 129 13.98%
A 85 8.92%
B 214 11.41%
Trucks and Buses (1B)
G 116 12.57%
A 75 7.87%
B 191 10.18%
2-Axle Trucks and Buses (2C)
G 107 11.59%
A 66 6.93%
B 173 9.22%
3-Axle Trucks and Buses (2D)
G 6 0.65%
A 7 0.73%
B 13 0.69%
4-Axle Trucks (2E)
G 3 0.33%
A 2 0.21%
B 5 0.27%
Articulated Vehicles (1C)
G 12 1.30%
A 10 1.05%
B 22 1.17%
3-Axle Articulated (2F)
G 3 0.33%
A 1 0.10%
B 4 0.21%
4-Axle Articulated (2G)
G 4 0.43%
A 3 0.31%
B 7 0.37%
5-Axle Articulated (2H)
G 1 0.11%
A 1 0.10%
B 2 0.11%
6-Axle Articulated (2I)
G 4 0.43%
A 5 0.52%
B 9 0.48%
Road Trains (1D)
G 1 0.11%
A 0 0.00%
B 1 0.05%
B Double (2J)
G 1 0.11%
A 0 0.00%
B 1 0.05%
Double Road Trains (2K)
G 0 0%
A 0 0%
B 0 0%
Triple Road Trains (2L)
G 0 0%
A 0 0%
B 0 0%

Queensland Government

Traffic Analysis and Reporting System
Report Notes for AADT Segment Report

TARS

24-Jun-2021 15:18

AADT Segment Annual Volume Report
Provides summary data for the selected AADT Segment of a Road Section. Summary data is presented as both directional information and a combined bi-directional figure. The data is then broken down by Traffic Class, when available. The report also includes maps displaying the location of both the AADT Segment and the traffic count site.

Annual Average Daily Traffic (AADT)
Annual Average Daily Traffic (AADT) is the number of vehicles passing a point on a road in a 24 hour period, averaged over a calendar year.

AADT Segments
The State declared road network is broken into Road Sections and then further broken down into AADT Segments. An AADT Segment is a sub-section of the declared road network where traffic volume is similar along the entire AADT Segment.

Area
For administration purposes the Department of Transport and Main Roads has divided Queensland into 12 Districts. The Area field in TSDM reports displays the District Name and Number.

District Name	District
Central West District	401
Darling Downs District	402
Far North District	403
Fitzroy District	404
Mackay/Whitsunday District	405
Metropolitian District	406
North Coast District	407
North West District	409
Northern District	408
South Coast District	410
South West District	411
Wide Bay/Burnett District	412

AADT Values
AADT values are displayed by direction of travel as:

- G Traffic flow in gazettal direction
- A Traffic flow against gazettal direction
- B Traffic flow in both directions

Data Collection Year
Is the most recent year that data was collected at the data collection site.

Please Note:
Due to location and/or departmental policy, some sites are not counted every year.

Gazettal Direction
Is the direction of the traffic flow. It can be easily recognised by referring to the name of the road eg. Road Section: 10A Brisbane - Gympie denotes that the gazettal direction is from Brisbane to Gympie.

Maps
Display the selected location from a range of viewing levels, the start and end position details for the AADT Segment and the location of the traffic count site.

Road Section
Is the Gazetted road from which the traffic data is collected. Each Road Section is given a code, allocated sequentially in Gazettal Direction. Larger roads are broken down into sections and identified by an ID code with a suffix for easier data collection and reporting (eg. 10A, 10B, 10C). Road Sections are then broken into AADT Segments which are determined by traffic volume.

Segment Site
Is the unique identifier for the traffic count site representing the traffic flow within the AADT Segment.

Site
The physical location of a traffic counting device. Sites are located at a specified Through Distance along a Road Section.

Site Description
The description of the physical location of the traffic counting device.

Start and End Point
The unique identifier for the Through Distance along a Road Section.

Vehicle Class
Traffic is categorised as per the Austroads Vehicle Classification scheme. Traffic classes are in the following hierarchical format:

Volume or All Vehicles
00 = 0A + 0B

Light Vehicles
0A = 1A
1A = 2A + 2B

Heavy Vehicles
0B = 1B + 1C + 1D
1B = 2C + 2D + 2E
1C = 2F + 2G + 2H + 2I
1D = 2J + 2K + 2L

The following classes are the categories for which data can be captured:

Volume
00 All vehicles

2-Bin
0A Light vehicles
0B Heavy vehicles

4-Bin
1A Short vehicles
1B Truck or bus
1C Articulated vehicles
1D Road train

12-Bin
2A Short 2 axle vehicles
2B Short vehicles towing
2C 2 axle truck or bus
2D 3 axle truck or bus
2E 4 axle truck
2F 3 axle articulated vehicle
2G 4 axle articulated vehicle
2H 5 axle articulated vehicle
2I 6 axle articulated vehicle
2J B double
2K Double road train
2L Triple road train


Queensland Government
24-Jun-2021 15:18
Traffic Analysis and Reporting System
Annual Volume Report
Area 402 - Darling Downs District
Road Section 308 - ROSEWOOD - LAIDLEY ROAD
Site 32029 - 308-100m West of Milne St
TDist 19.920km
Speed Limit 100
TARS
Page 1 of 3 (4 of 7)
152.397949
152.414551
-27.649045
-27.662109
Rosewood Laidley Rd
Crown St
Beames Dr
Milne St
Southern St
32029
Laidley
Yarongmulu
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Copyright Pitney Bowes Softare Pty Ltd 2009. Based on [Dataset - State Digital Road Network (SDRN)] provided with the permission of Pitney Bowes Softare Pty Ltd (current as of 12/08) and other state government datasets.

Queensland Government

Traffic Analysis and Reporting System
Annual Volume Report

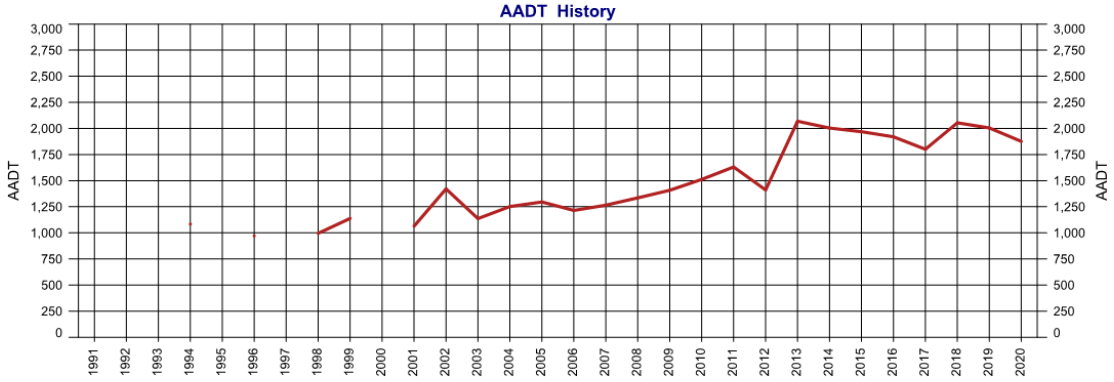
TARS

24-Jun-2021 15:18

Area	402 - Darling Downs District
Road Section	308 - ROSEWOOD - LAIDLEY ROAD
Site	32029 - 308-100m West of Milne St
Thru Dist	19.92
Type	C - Coverage
Stream	TB - Bi-directional traffic flow

Year	2020	Growth last Year	-6.43%
AADT	1,876	Growth last 5 Yrs	-0.83%
Avg Week Day	2,044	Growth last 10 Yrs	1.08%
Avg Weekend Day	1,725		

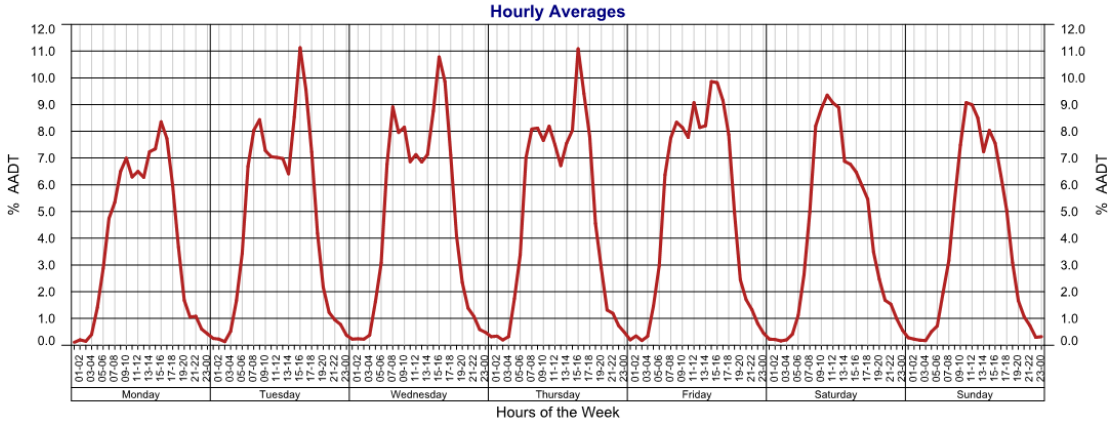
AADT History



Year	AADT	1-Year Growth	5-Year Growth	10-Year Growth
2020	1,876	-6.43%	-0.83%	1.08%
2019	2,005	-2.39%	0.72%	2.74%
2018	2,054	14.05%	0.83%	3.83%
2017	1,801	-6.20%	0.19%	2.66%
2016	1,920	-2.49%	3.16%	4.39%
2015	1,969	-1.75%	5.52%	5.27%
2014	2,004	-3.14%	7.89%	6.01%
2013	2,069	46.63%	10.58%	7.11%
2012	1,411	-13.49%	0.90%	1.26%
2011	1,631	7.87%	6.49%	4.00%
2010	1,512	7.39%	4.65%	
2009	1,408	5.47%	3.01%	2.40%
2008	1,335	5.53%	2.56%	2.20%
2007	1,265	4.12%	-0.24%	
2006	1,215	-6.25%	0.20%	1.66%

Year	AADT	1-Year Growth	5-Year Growth	10-Year Growth
2005	1,296	3.51%		
2004	1,252	10.11%	2.09%	2.39%
2003	1,137	-19.99%	1.24%	
2002	1,421	33.55%		
2001	1,064		1.38%	
2000				
1999	1,138	14.26%	2.47%	
1998	996			
1997				
1996	971			
1995				
1994	1,084			
1993				
1992				
1991				

Hourly Averages



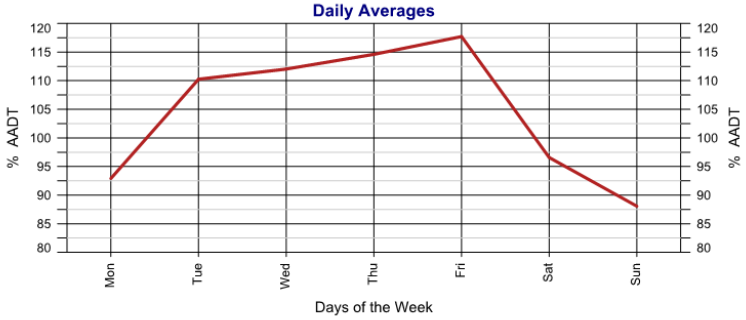
Queensland Government

Traffic Analysis and Reporting System
Annual Volume Report

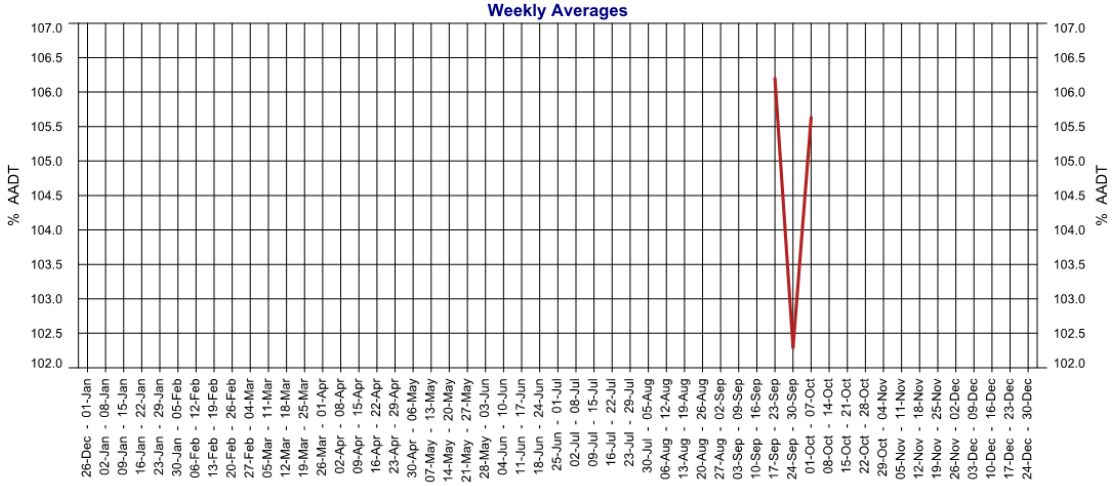
TARS

24-Jun-2021 15:18

Daily Averages



Weekly Averages



2020 Calendar

January

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

March

M	T	W	T	F	S	S
30	31					1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

April

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August

M	T	W	T	F	S	S
31					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

September

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October

M	T	W	T	F	S	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November

M	T	W	T	F	S	S
30						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

December

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Days on which traffic data was collected.

Queensland Government

Traffic Analysis and Reporting System
Report Notes for Annual Volume Report

TARS

24-Jun-2021 15:18

Annual Volume Report
Displays AADT history with hourly, daily and weekly patterns by Stream in addition to annual data for AADT figures with 1 year, 5 year and 10 year growth rates.

Annual Average Daily Traffic (AADT)
Annual Average Daily Traffic (AADT) is the number of vehicles passing a point on a road in a 24 hour period, averaged over a calendar year.

AADT History
Displays the years when traffic data was collected at this count site.

Area
For administration purposes the Department of Transport and Main Roads has divided Queensland into 12 Districts. The Area field in TSDM reports displays the District Name and Number.

District Name	District
Central West District	401
Darling Downs District	402
Far North District	403
Fitzroy District	404
Mackay/Whitsunday District	405
Metropolitian District	406
North Coast District	407
North West District	409
Northern District	408
South Coast District	410
South West District	411
Wide Bay/Burnett District	412

Avg Week Day
Average daily traffic volume during the week days, Monday to Friday.

Avg Weekend Day
Average daily traffic volume during the weekend, Saturday and Sunday.

Calendar
Days on which traffic data was collected are highlighted in green.

Gazettal Direction
The Gazettal Direction is the direction of the traffic flow. It can be easily recognised by referring to the name of the road eg. Road Section: 10A Brisbane - Gympie denotes that the gazettal direction is from Brisbane to Gympie.

- G Traffic flowing in Gazettal Direction
- A Traffic flowing against Gazettal Direction
- B The combined traffic flow in both Directions

Growth Percentage
Represents the increase or decrease in AADT, using a exponential fit over the previous 1, 5 or 10 year period.

Hour, Day & Week Averages
The amount of traffic on the road network will vary depending on the time of day, the day of the week and the week of the year. The ebb and flow of traffic travelling through a site over a period of time forms a pattern. The Hour, Day and Week Averages are then used in the calculation of AADT.

Road Section
Is the Gazetted road from which the traffic data is collected. Each Road Section is given a code, allocated sequentially in Gazettal Direction. Larger roads are broken down into sections and identified by an ID code with a suffix for easier data collection and reporting (eg. 10A, 10B, 10C). Road Sections are then broken into AADT Segments which are determined by traffic volume.

Site
The unique identifier and description of the physical location of a traffic counting device. Sites are located at a Through Distance along a Road Section.

Stream
The lane in which the traffic is travelling in. This report provides data for the combined flow of traffic in both directions.

Thru Dist or TDist
The distance from the beginning of the Road Section, in kilometres.

Type
There are two types of traffic counting sites, Permanent and Coverage. Permanent means the traffic counting device is in place 24/7. Coverage means the traffic counting device is in place for a specified period of time.

Year
Is the current year for the report. Where an AADT Year record is missing a traffic count has not been conducted, for that year.

From: Vincent J Garty
To: Dale Kleimeyer
Subject: RE: Rosewood Laidley Rd Laidley Traffic census data
Date: Tuesday, 12 October 2021 9:08:51 AM
Attachments: image005.png
image006.png
image007.png
image008.png
AADT Segment And Annual Volume Report-308-32029.pdf

Hi Dale,

I believe the site you are after is site number 32029. I have attached a report for this site.

We do publish all our annual average daily traffic (AADT) data on the Queensland Government's Open Data site at :

https://www.data.qld.gov.au/dataset/traffic-census-for-the-queensland-state-declared-road-network

This has the data in csv (Excel) and Google Earth formats.

Kind Regards,
Vince Garty
Analyst (Traffic Data) | Data Solutions & Insights
Traffic Engineering, Technology & Systems| Department of Transport and Main Roads

Floor 11 | 313 Adelaide Street | Brisbane Qld 4000
GPO Box 1412 | Brisbane Qld 4001
P: (07) 30666971 | F: (07) 30663401
W: www.tmr.qld.gov.au

From: Dale Kleimeyer <dale.kleimeyer@burchills.com.au>
Sent: Monday, 11 October 2021 11:34 AM
To: Vincent J Garty <vincent.j.garty@tmr.qld.gov.au>
Subject: Rosewood Laidley Rd Laidley Traffic census data

Hi Vincent
We have been engaged to prepare a traffic report of a DA for a service station and subdivision for the lot opposite Crown Street in Laidley as per below.
Can we request Traffic census data for the vicinity please plus any other turning volume surveys near-by please.
Also can you advise any future road widening in the area please.
Kind Regards

Dale Kleimeyer
Principal Engineer – Traffic

P 07 5509 6400 | **M** 0417 195 543
E dale.kleimeyer@burchills.com.au | www.burchills.com.au

Gold Coast | Brisbane | Ipswich | Moreton Bay

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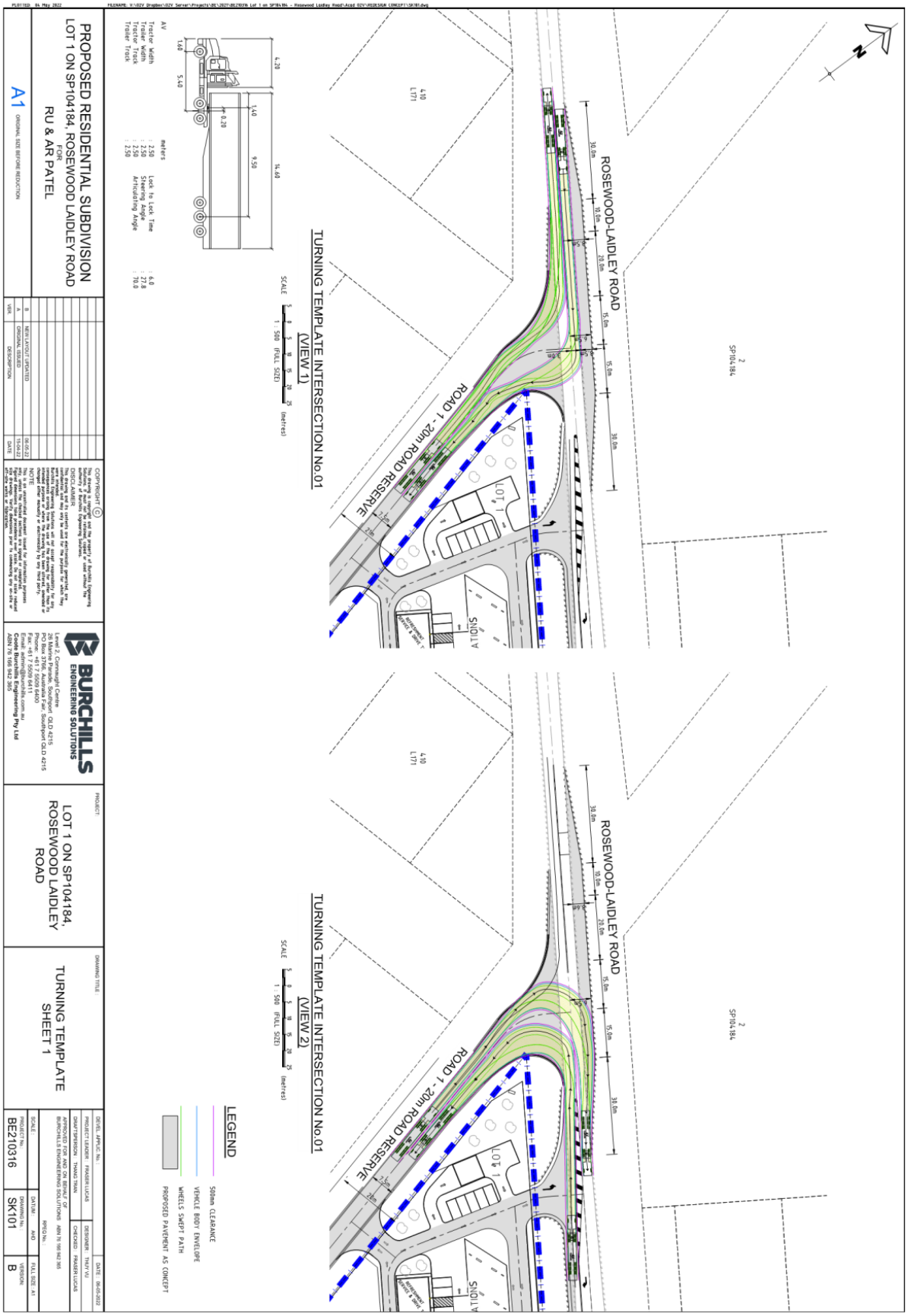
Appendix D – Swept Path Analysis and Crown St Intersection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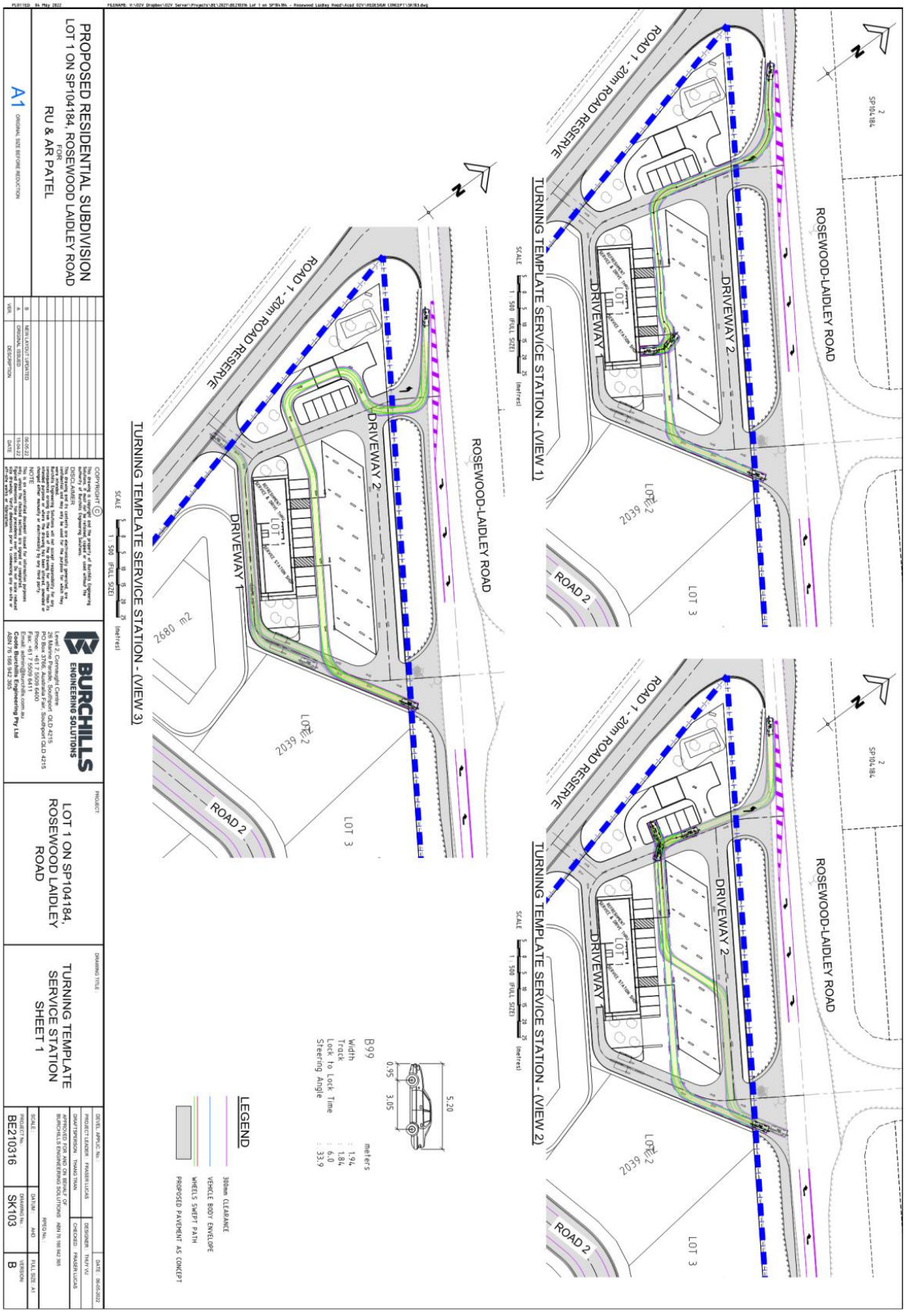
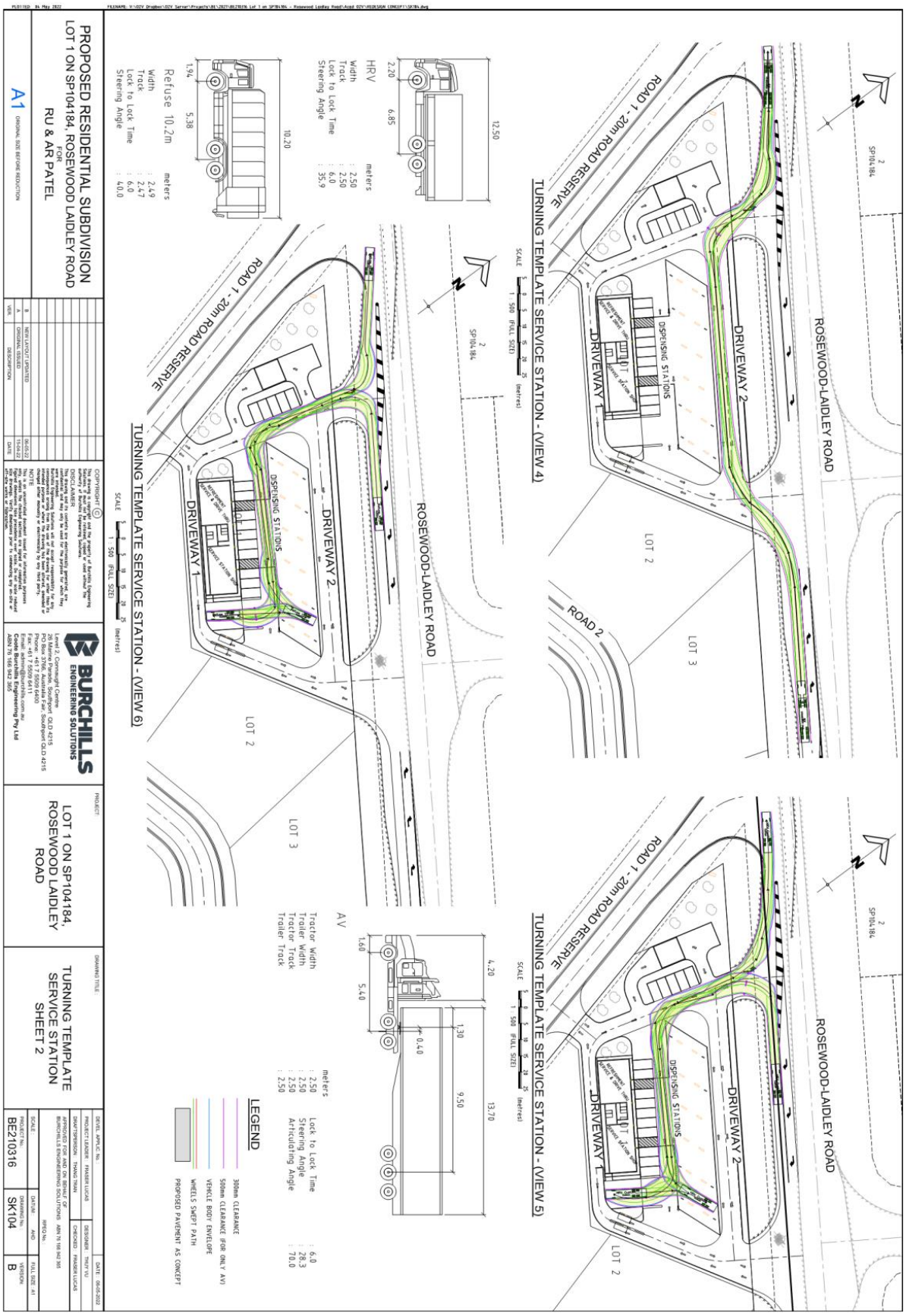
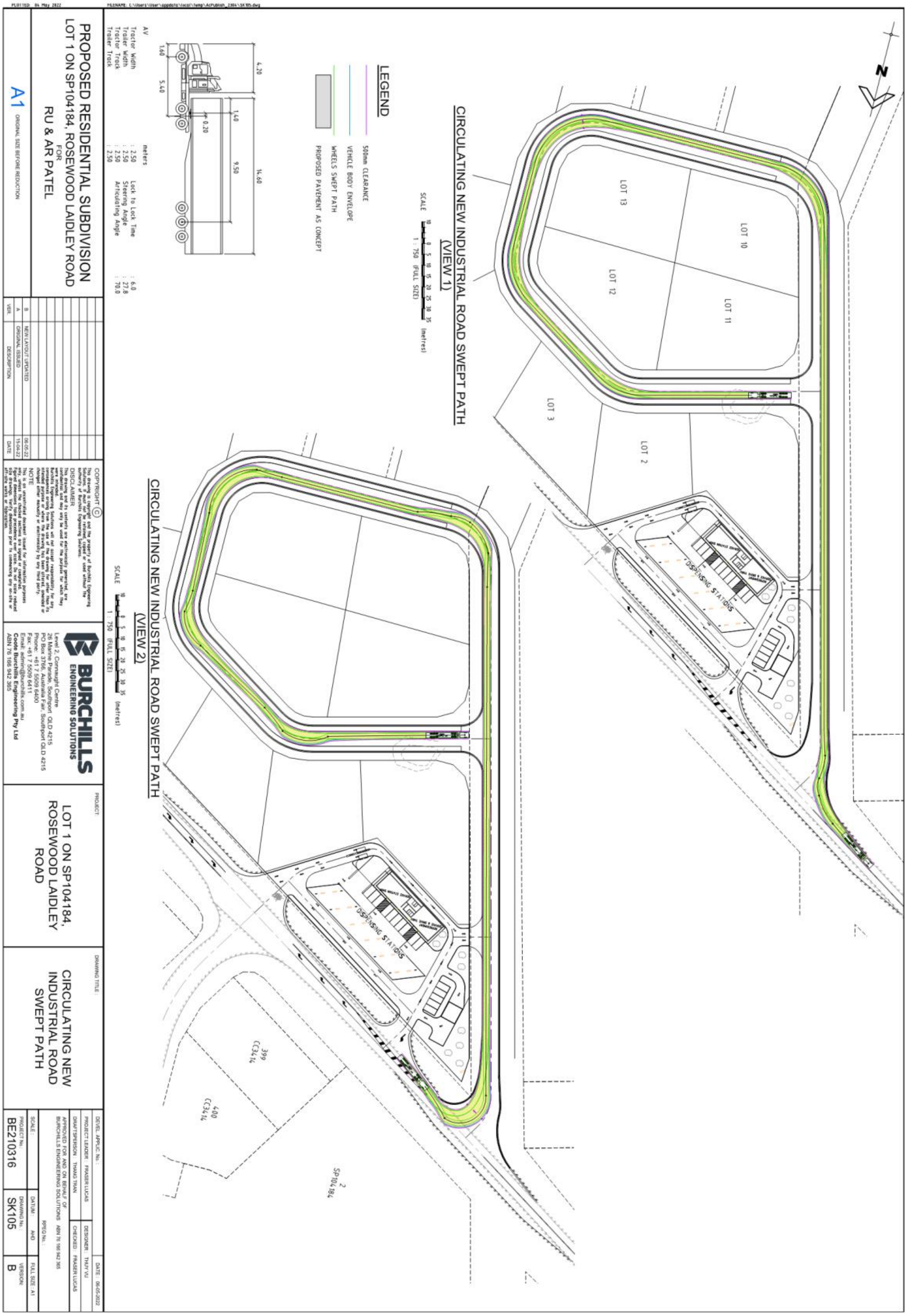
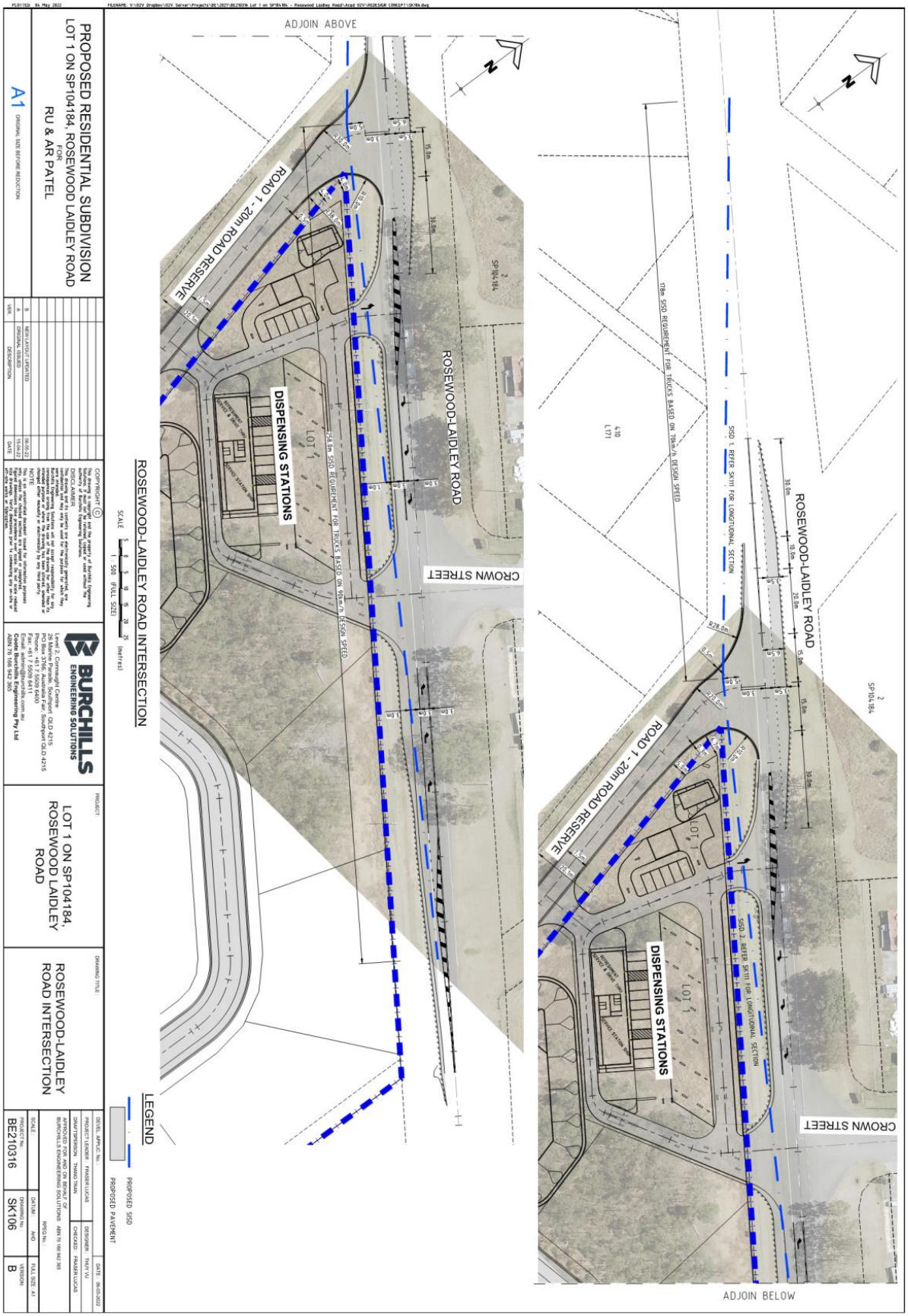
TURNING TEMPLATE INTERSECTION No.01 (VIEW 2)
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
LOT 1
SP104184
LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
RU & AR
FOR
RU & AR PATEL
TURNING TEMPLATE SHEET 1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK101
B
A1

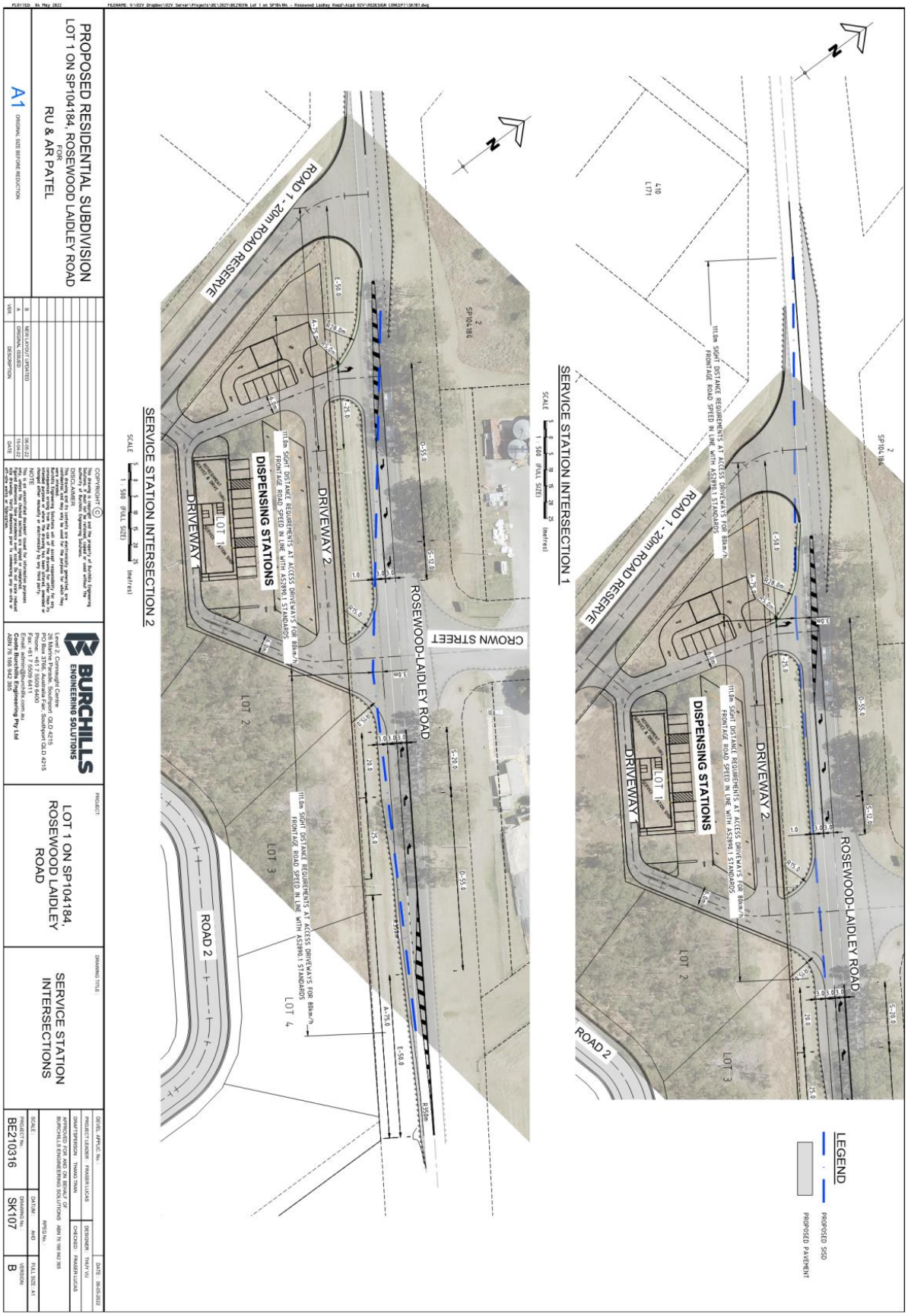

LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
TURNING TEMPLATE INTERSECTION No.02 (VIEW 1)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 2)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 3)
TURNING TEMPLATE INTERSECTION No.02 (VIEW 4)
ROAD 1 - 20m ROAD RESERVE
ROAD 1
20m ROAD RESERVE
BASIN 1
LOT 1
LOT 2
LOT 10
LOT 11
LOT 12
LOT 13
SERVICE STATION SHOP
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SHEET 2
BE210316
SK102
B

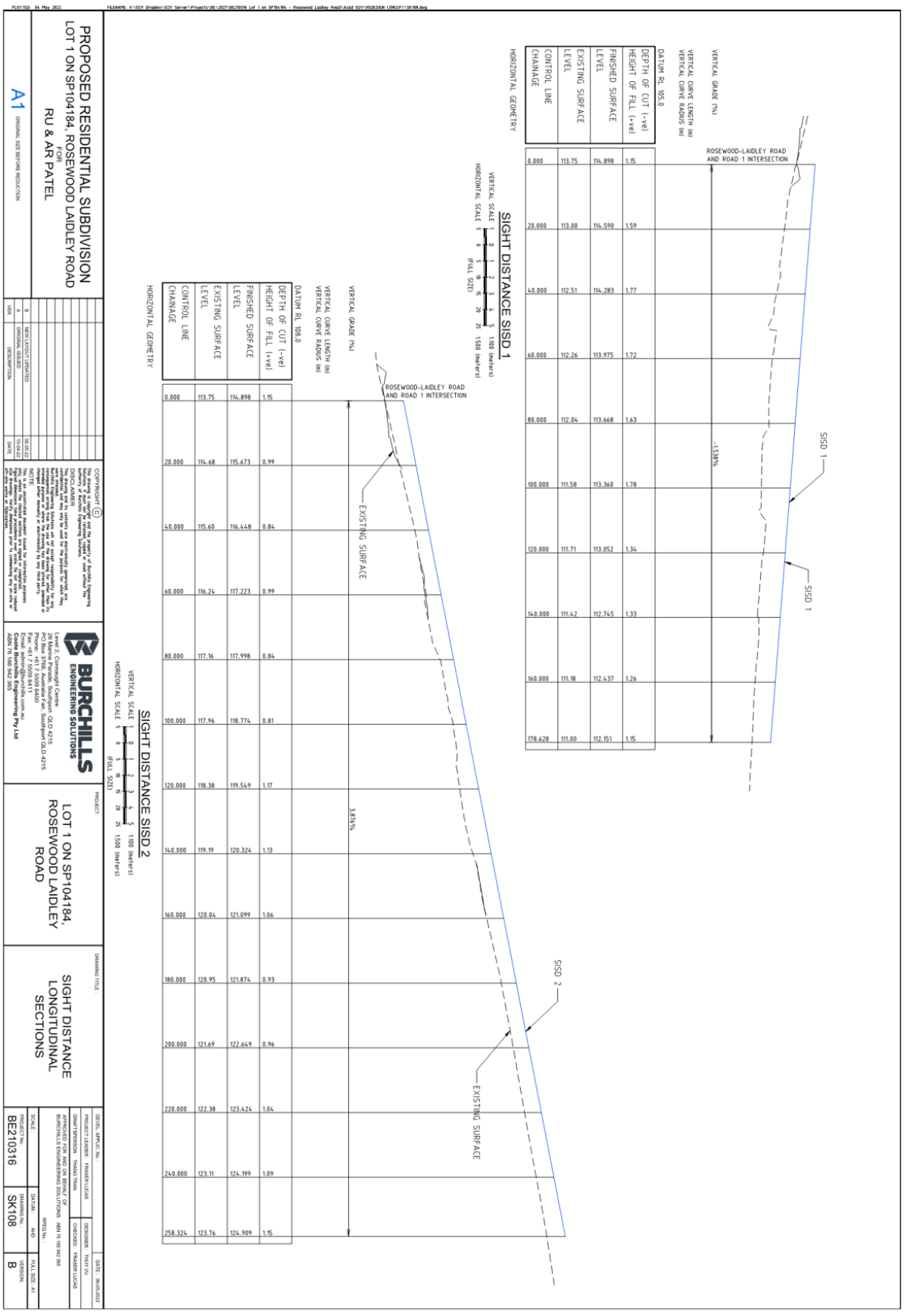

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
TURNING TEMPLATE SERVICE STATION - (VIEW 1)
TURNING TEMPLATE SERVICE STATION - (VIEW 2)
TURNING TEMPLATE SERVICE STATION - (VIEW 3)
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
DRIVEWAY 1
DRIVEWAY 2
ROAD 2
LOT 1
LOT 2
LOT 3
2039 m2
2680 m2
LEGEND
300mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
B99
Width : 1.94
Track : 1.84
Lock to Lock Time : 6.0
Steering Angle : 33.9
meters
5.20
0.95
3.05
BURCHILLS
ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SERVICE STATION SHEET 1
BE210316
SK103
B


PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
TURNING TEMPLATE SERVICE STATION - (VIEW 4)
TURNING TEMPLATE SERVICE STATION - (VIEW 5)
TURNING TEMPLATE SERVICE STATION - (VIEW 6)
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
ROAD 2
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
LOT 2
LOT 3
HRV
Refuse 10.2m
AV
LEGEND
300mm CLEARANCE
500mm CLEARANCE (FOR ONLY AV)
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
TURNING TEMPLATE SERVICE STATION SHEET 2
BE210316
SK104
B


CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH (VIEW 1)
CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH (VIEW 2)
LEGEND
500mm CLEARANCE
VEHICLE BODY ENVELOPE
WHEELS SWEPT PATH
PROPOSED PAVEMENT AS CONCEPT
LOT 13
LOT 10
LOT 12
LOT 11
LOT 3
LOT 2
DISPENSING STATIONS
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
CIRCULATING NEW INDUSTRIAL ROAD SWEPT PATH
BE210316
SK105
B

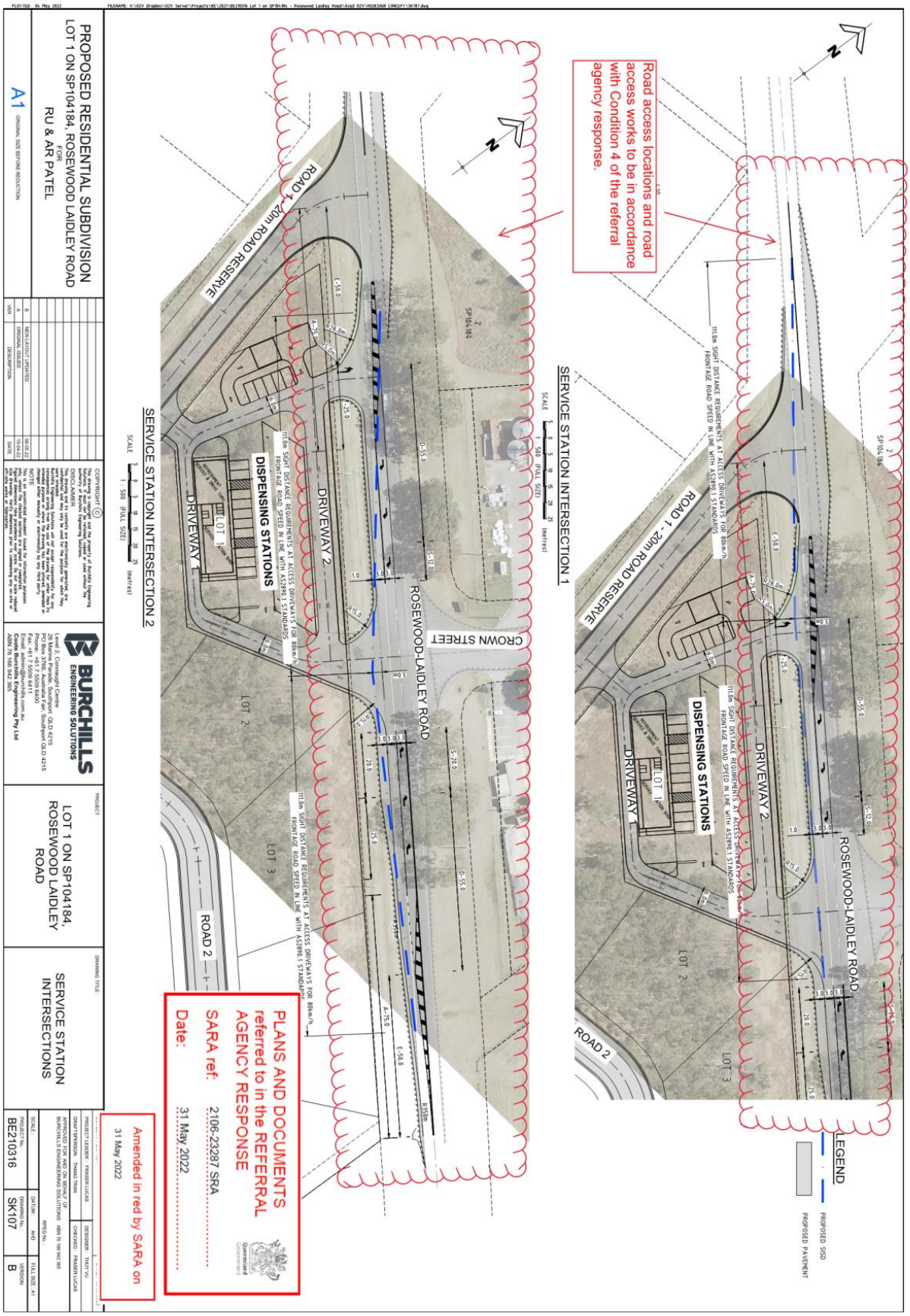

ADJOIN ABOVE
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
DISPENSING STATIONS
CROWN STREET
ADJOIN BELOW
LEGEND
PROPOSED SISD
PROPOSED PAVEMENT
ROSEWOOD-LAIDLEY ROAD INTERSECTION
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROSEWOOD-LAIDLEY ROAD INTERSECTION
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK106
B

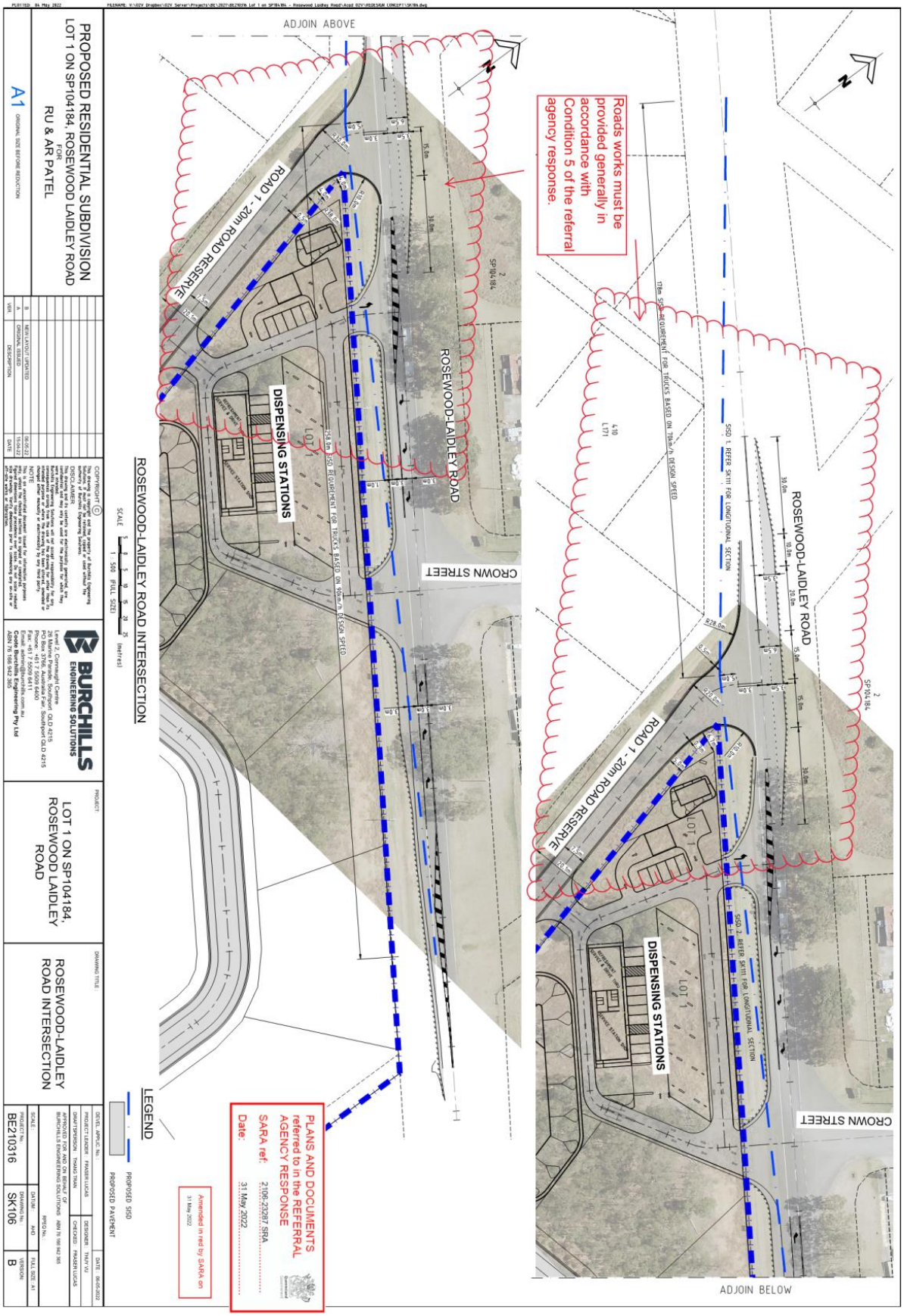

PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
A1
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
SERVICE STATION INTERSECTIONS
BURCHILLS ENGINEERING SOLUTIONS
SERVICE STATION INTERSECTION 1
SERVICE STATION INTERSECTION 2
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
ROAD 2
CROWN STREET
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
LOT 1
LOT 2
LOT 3
LOT 4
111.0m SIGHT DISTANCE REQUIREMENTS AT ACCESS DRIVEWAYS FOR 80km/h FRONTAGE ROAD SPEED IN LINE WITH AS2890.1 STANDARDS
LEGEND
PROPOSED SSD
PROPOSED PAVEMENT
BE210316
SK107
B

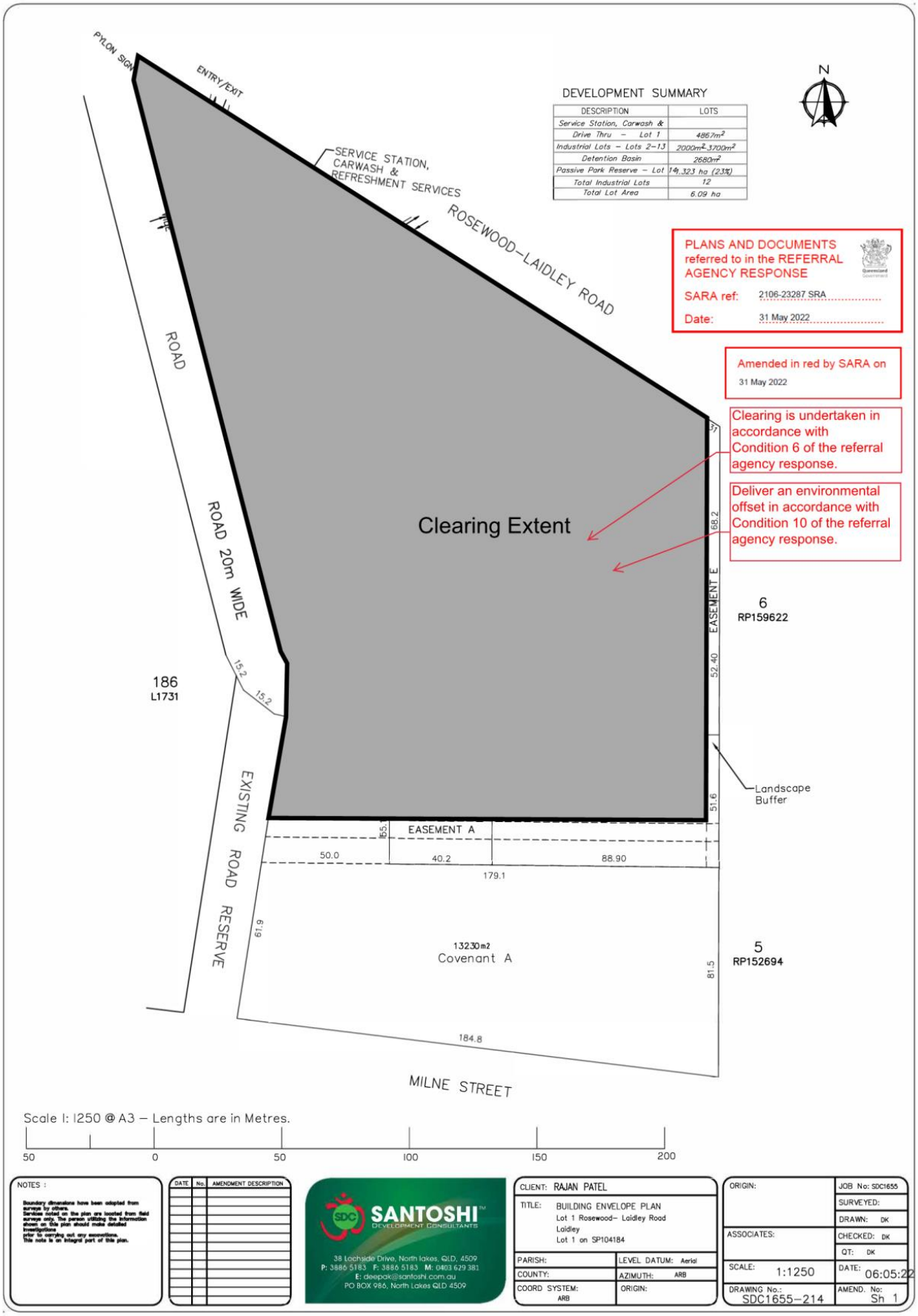


CONTROL LINE CHAINAGE	EXISTING SURFACE LEVEL	FINISHED SURFACE LEVEL	DEPTH OF CUT (-ve) HEIGHT OF FILL (+ve)
0.000	113.75	114.898	1.15
20.000	113.00	114.590	1.59
40.000	112.51	114.283	1.77
60.000	112.26	113.975	1.72
80.000	112.04	113.668	1.63
100.000	111.58	113.360	1.78
120.000	111.71	113.052	1.34
140.000	111.42	112.745	1.33
160.000	111.18	112.437	1.26
178.628	111.00	112.151	1.15

CONTROL LINE CHAINAGE	EXISTING SURFACE LEVEL	FINISHED SURFACE LEVEL	DEPTH OF CUT (-ve) HEIGHT OF FILL (+ve)
0.000	113.75	114.898	1.15
20.000	114.68	115.673	0.99
40.000	115.60	116.448	0.84
60.000	116.24	117.223	0.99
80.000	117.16	117.998	0.84
100.000	117.96	118.774	0.81
120.000	118.38	119.549	1.17
140.000	119.19	120.324	1.13
160.000	120.04	121.099	1.06
180.000	120.95	121.874	0.93
200.000	121.69	122.649	0.96
220.000	122.38	123.424	1.04
240.000	123.11	124.199	1.09
258.324	123.76	124.909	1.15


Road access locations and road access works to be in accordance with Condition 4 of the referral agency response.
SERVICE STATION INTERSECTION 1
SERVICE STATION INTERSECTION 2
ROAD 1 - 20m ROAD RESERVE
ROSEWOOD-LAIDLEY ROAD
CROWN STREET
DRIVEWAY 1
DRIVEWAY 2
DISPENSING STATIONS
ROAD 2
LOT 1
LOT 2
LOT 3
LEGEND
PROPOSED SSD
PROPOSED PAVEMENT
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2106-23287 SRA
Date: 31 May 2022
Amended in red by SARA on 31 May 2022
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
SERVICE STATION INTERSECTIONS
BURCHILLS ENGINEERING SOLUTIONS
BE210316
SK107
B
A1


ADJOIN ABOVE
ADJOIN BELOW
ROSEWOOD-LAIDLEY ROAD
ROAD 1 - 20m ROAD RESERVE
CROWN STREET
DISPENSING STATIONS
LOT 1
SP104184
Roads works must be provided generally in accordance with Condition 5 of the referral agency response.
SSD 1. REFER SK111 FOR LONGITUDINAL SECTION
SSD 2. REFER SK111 FOR LONGITUDINAL SECTION
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2106-23287 SRA
Date: 31 May 2022
Amended in red by SARA on 31 May 2022
LEGEND
PROPOSED SSD
PROPOSED PAVEMENT
PROPOSED RESIDENTIAL SUBDIVISION
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
FOR
RU & AR PATEL
ROSEWOOD-LAIDLEY ROAD INTERSECTION
SCALE 1 : 500 (FULL SIZE)
A1 ORIGINAL SIZE BEFORE REDUCTION
BURCHILLS ENGINEERING SOLUTIONS
LOT 1 ON SP104184, ROSEWOOD LAIDLEY ROAD
ROSEWOOD-LAIDLEY ROAD INTERSECTION
BE210316
SK106
B


PYLON SIGN
ENTRY/EXIT
SERVICE STATION, CARWASH & REFRESHMENT SERVICES
ROSEWOOD–LAIDLEY ROAD
ROAD
ROAD 20m WIDE
EXISTING ROAD RESERVE
MILNE STREET
Clearing Extent
EASEMENT E
EASEMENT A
Landscape Buffer
Covenant A
13230m2
186
L1731
6
RP159622
5
RP152694
DEVELOPMENT SUMMARY
DESCRIPTION | LOTS
Service Station, Carwash & Drive Thru – Lot 1 | 4867m²
Industrial Lots – Lots 2–13 | 2000m²–3700m²
Detention Basin | 2680m²
Passive Park Reserve – Lot 14 | 3.323 ha (23%)
Total Industrial Lots | 12
Total Lot Area | 6.09 ha
PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE
SARA ref: 2106-23287 SRA
Date: 31 May 2022
Amended in red by SARA on 31 May 2022
Clearing is undertaken in accordance with Condition 6 of the referral agency response.
Deliver an environmental offset in accordance with Condition 10 of the referral agency response.
Scale 1: 1250 @ A3 – Lengths are in Metres.
50 0 50 100 150 200
SANTOSHI DEVELOPMENT CONSULTANTS
38 Lochside Drive, North Lakes, QLD, 4509
P: 3886 5183 F: 3886 5183 M: 0403 629 381
E: deepak@santoshi.com.au
PO BOX 986, North Lakes QLD 4509
CLIENT: RAJAN PATEL
TITLE: BUILDING ENVELOPE PLAN
Lot 1 Rosewood– Laidley Road
Laidley
Lot 1 on SP104184
DRAWING No.: SDC1655–214

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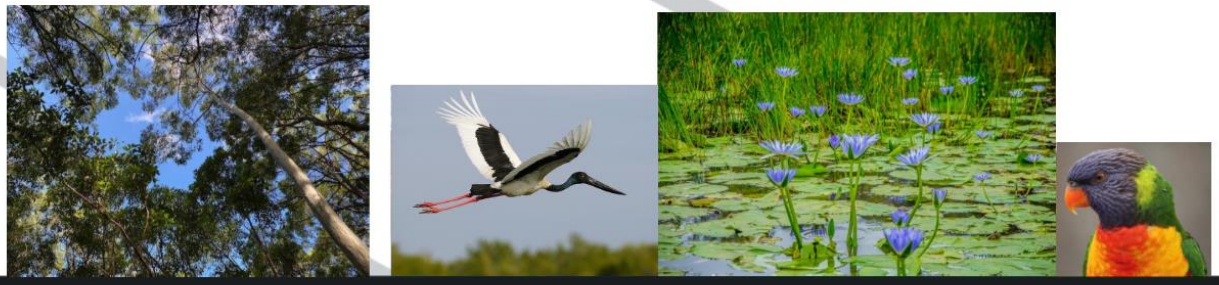

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PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

Queensland Government

SARA ref: 2106-23287 SRA

Date: 31 May 2022

Amended in red by SARA on 31 May 2022

Lot 1 Rosewood Laidley Road, Laidley

Covenant Management Plan

Client: RAMA Real Estate
Project No: BE210316
Document No: BE210316-RP-CMP-00

May 2022

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Document Control Record

Prepared by:	Kaidon Anderson
Position:	Environmental Scientist
Date:	May 2022

Approved by:	Caroline Kelly
Position:	Principal Environmental Scientist
Date:	May 2022

Version No.	Description	Date	Prepared	Approved
00	Initial Issue	10.05.2022	KA	CK

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Executive Summary

Burchills were engaged by RAMA Real Estate to prepare a Covenant Management Plan for a proposed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

This Covenant Management Plan provides guidance for the restoration of 1.32ha of vegetation that is to be retained and protected within the proposed Environmental Covenant registered over Lot 9 in the south of the subject site. The purpose of the registered Covenant is to provide for the protection, conservation and enhancement of the environmental values of this area which forms Core Koala Habitat.

Rehabilitation works in this area will include weed removal and revegetation with species from the pre-clearing community with existing native trees and vegetation retained and protected.

Specific restoration objectives identified in this report include:

- Restore and enhance the existing vegetation within the rehabilitation area to stabilise disturbed areas and mitigate erosion;
- Restore vegetation communities to resemble pre-clearing vegetation and enhance corridors for wildlife movement; and
- Use best practice methods for restoration works to minimise impacts on existing ecological values.

All restoration works are to be conducted by a suitably qualified bush regenerator. Monitoring and reporting will be conducted by an ecologist experienced in ecological restoration monitoring. Rehabilitation works will be subject to a 12 months Establishment and 12 months On-Maintenance periods.

The Covenant is registered against the title and survey plan of new allotments and administered under the Qld *Land Titles Act 1994*. The registered Covenant is an agreement entered into between a Covenantor (the property owner) and the Covenantee (Queensland Department of Environment and Science).

This CMP outlines the required long-term management actions of the Covenant Area required to meet the conditions of the registered Covenant including permitted and prohibited actions within the Covenant Area, monitoring, weed removal and supplementary revegetation if required.

Ongoing protection and restoration of the Covenant Area will be undertaken in perpetuity by the Covenantor in accordance with this CMP and the conditions of the registered Covenant.

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Table of Contents

Provide restoration actions in accordance with Condition 8 of the referral agency response.

1. Introduction 2
1.1 Scope and Objectives 2
1.2 Proposed Development 2
2. Site Description 4
2.1 Location Context 4
2.2 Existing vegetation 6
2.3 Topography and Drainage 8
2.4 Rainfall 9
2.5 Soils and Geology 9
2.6 Site Constraints 9
3. Purpose of Covenant 11
4. Restoration Strategy 12
4.1 Site Strategy 13
4.2 Restoration Management Areas 13
5. Restoration Methodology 16
5.1 Compliance 16
5.2 Vegetation Protection 16
5.3 Weed Control 16
5.4 Fauna Habitat 22
5.5 Revegetation 22
5.5.1 Revegetation Protocol 24
5.6 Plant Procurement 26
5.6.1 Collection of Seeds and Vegetative Material 26
5.7 Supplementary Planting 27
5.8 Schedule of Rehabilitation Works 27
5.8.1 Establishment Period 27
5.8.2 On-Maintenance Period 28
5.8.3 Management Period 29
5.9 Qualifications of Personnel Involved in CMP Implementation 29
5.10 Daily Record Keeping 29
6. Covenant Management 30
6.1 Permissible Actions and Structures 30
6.2 Prohibited Actions 30
6.3 Covenant Area Fencing 30
6.4 Monitoring 31

Client: RAMA Real Estate
Doc No.: BE210316-RP-CMP-00
Doc Title: Covenant Management Plan – Rosewood Laid

The covenant must include the covenant management actions in accordance with Condition 7 of the referral agency response.

The covenant must include the covenant management actions in accordance with Condition 7 of the referral agency response.

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6.4.1 Management Benchmarks 32
6.5 Management Agreement 32
6.5.1 Covenantor Requirements 32
6.5.2 Evaluation and Review 32
6.5.3 Amendments to the Covenant Management Plan 33
6.5.4 Duration of Management Agreement 33
7. Definitions 34
8. References 35

Tables

Table 2.1 Rainfall Data for Forest Hill (Station ID: 040079; Bureau of Meteorology, 2021) 9
Table 2.2 Management Constraints for Subject Site 9
Table 4.1 Restoration Management Areas (RMA) 14
Table 5.1 Specific Weed Control Methodology 18
Table 5.2 General Weed Control Methods 21
Table 5.3 Revegetation Planting List – RMA 1 and 2 ('k' denotes koala tree) 22
Table 5.4 Revegetation Protocol 24
Table 5.5 Establishment Period Schedule of Works 27
Table 5.6 On-Maintenance Period Schedule of Works 28
Table 5.7 Works Schedule for General Management Phase 29
Table 6.1 Management Benchmarks 32

Figures

Figure 1.1 Proposed Plan of Development and Covenant A (Santoshi Development Consultants 2022) 3
Figure 2.1 Site Location (Google Maps, 2021) 4
Figure 2.2 Site Aerial Photography (MetroMap 2021) 5
Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)* 5
Figure 2.4 Mapped vegetation associations 7
Figure 2.5 Local Contours and Waterways 8
Figure 4.1 Graphical Representation of Ecosystem Transitional States (Chenoweth EPLA and Bushland Restoration Services, 2012) 12
Figure 4.2 Preclearing Regional Ecosystems – 12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 in Covenant Area (Qld Globe 2021) 13
Figure 4.3 Rehabilitation Management Areas 15
Figure 5.1 Typical Tubestock Planting Details 25
Figure 5.2 Planting Method for Slopes Greater than 1:3 25
Figure 6.1 Example of fauna friendly fencing for domestic animal exclusion (© Replas) 31

Appendices

Appendix A – Plan of Development
Appendix B – Daily Record Sheet
Appendix C – Risk Assessment Form and Matrix
Appendix D - Monitoring and Evaluation Proforma
Appendix E – Environmental Weed Descriptions
Appendix F – Stewardship Proforma
Appendix G – Amendments to the Covenant Management Plan

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This Covenant Management Plan has effect through a statutory environmental covenant registered on the title pursuant to Section 97A of the Qld *Land Title Act 1994*.

The Covenant is registered over the land and is a legally binding agreement committing current and future owners to the land management requirements outlined in this Covenant Management Plan.

The Covenantee and party to this agreement is the Queensland Department of Environment and Science.

The Covenantor and party to this agreement is the current or any future landholder of the subject lot that the Covenant is registered to.

The principal objective of registering the Covenant over the subject property, is to protect and preserve the environmental values of the Covenant Area in perpetuity.

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1. Introduction

Burchills were engaged by RAMA Real Estate (the Applicant) to prepare a Covenant Management Plan (CMP) for a proposed development at Lot 1 on SP104184, Rosewood Laidley Road, Laidley within the Lockyer Valley Local Government Area (the subject site). This CMP has been prepared to support a development application for an industrial subdivision. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

This CMP has been prepared in accordance with:

- The South-East Queensland Ecological Restoration Framework (Chenoweth EPLA and Bushland Restoration Services, 2012).

1.1 Scope and Objectives

The scope and objectives of this CMP are to provide guidance and management strategies for the restoration and protection of the Environmental Covenant area along the southern boundary of the site.

Specifically, the scope of the report is to:

- Plans depicting the covenant area and a description of the existing environment within and adjoining the covenant area based on desktop assessments;
- A staged restoration strategy for works to be undertaken in the Covenant area including weed removal and revegetation with local native species that are typically found in the pre-clearing vegetation communities;
- A long-term monitoring program for the covenant area to ensure the restoration objectives are achieved; and
- Description of allowable/prohibited activities within the covenant area.

1.2 Proposed Development

The proposal seeks to reconfigure the existing 6.09ha lot into 13 lots, comprising one (1) 4,867m² lot that will house a service station in the northwest of the site, 12 industrial lots across the balance of the site varying between 2,000m² and 3,700m², one (1) 2,680m² detention basin. One (1) 13,230m² environmental covenant is proposed to be registered over Lot 9 within the south of the site. The northern portion of the currently undeveloped road reserve on the site's western boundary will be constructed to facilitate site access. The southern portion of the site fronting Milne Road is proposed to be resumed by Lockyer Valley Regional Council.

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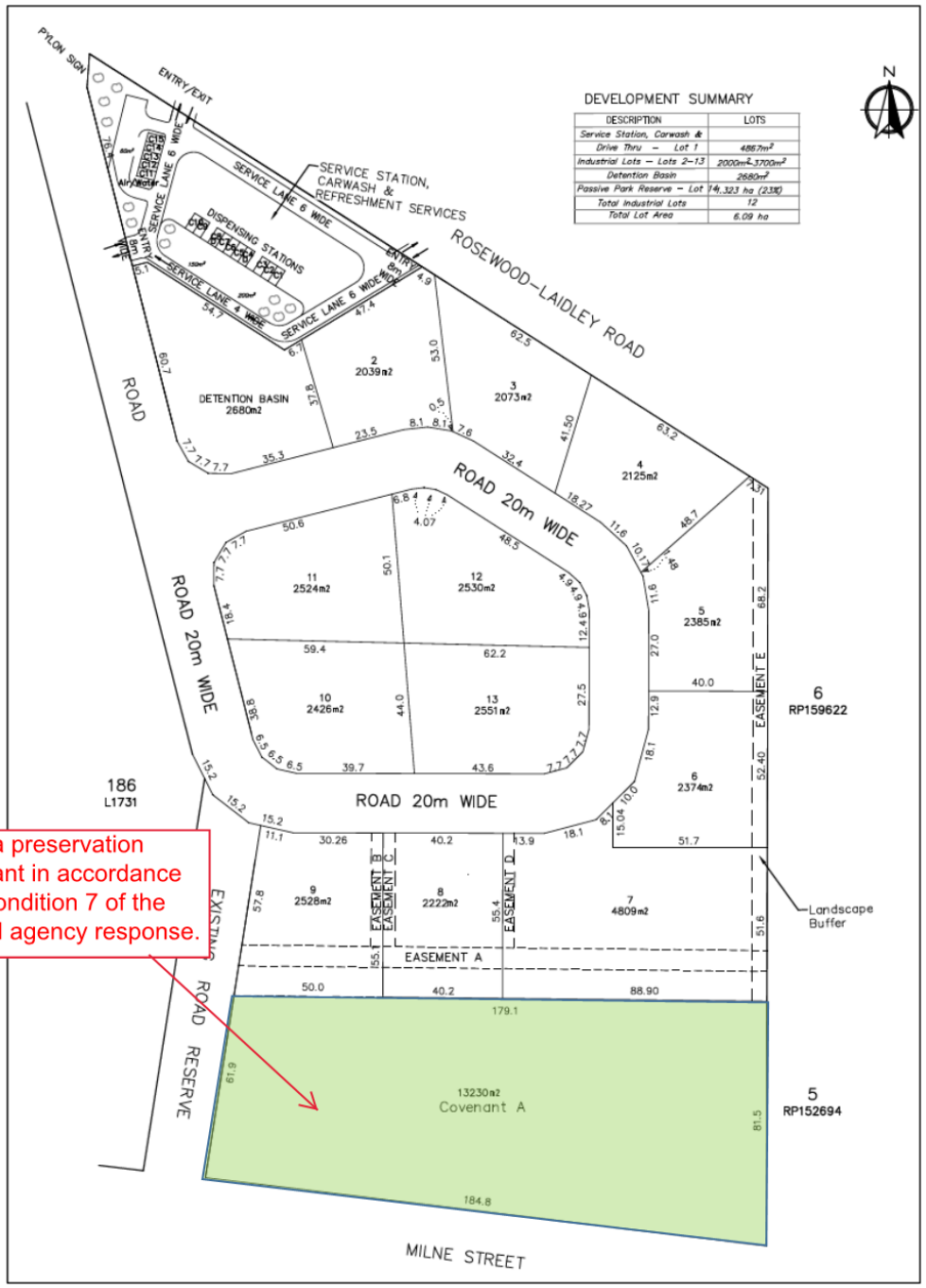

Figure 1.1 Proposed Plan of Development and Covenant A (Santoshi Development Consultants 2022)

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2. Site Description

2.1 Location Context

The subject site is located within Laidley, approximately 2.5km south of the town centre and occupies an area of approximately 6.09ha (Figure 2.1). The site is mostly vegetated with no existing dwellings or structures (Figure 2.2). A small constructed dam is present within the northwest part of the site.

The site falls within the Urban Footprint under the *Southeast Queensland Regional Plan 2017* and is zoned as Industrial under the *Laidley Shire Planning Scheme 2003 Version 3* (Figure 2.3). The surrounding land use pattern is generally industrial and rural.

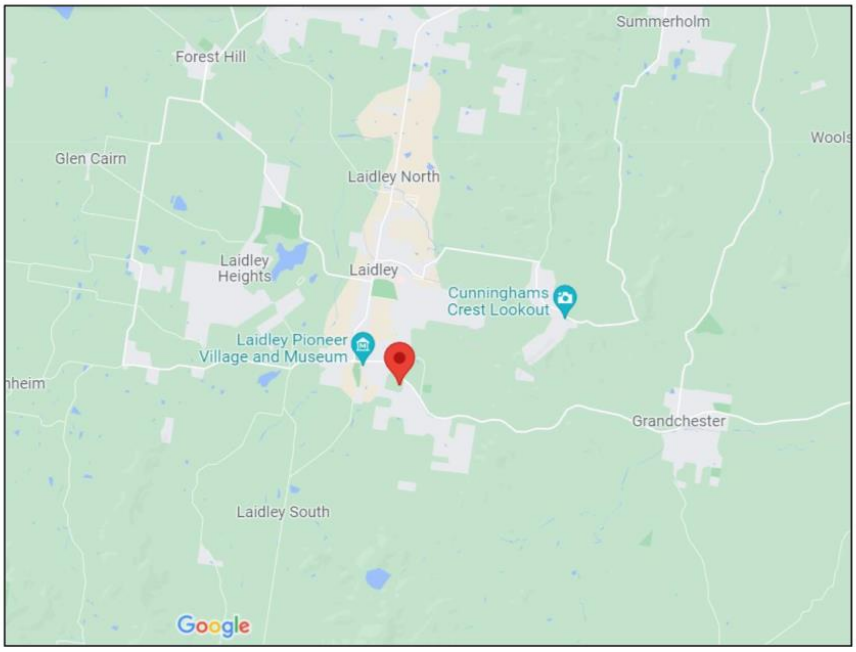

Figure 2.1 Site Location (Google Maps, 2021)

Figure 2.2 Site Aerial Photography (MetroMap 2021)

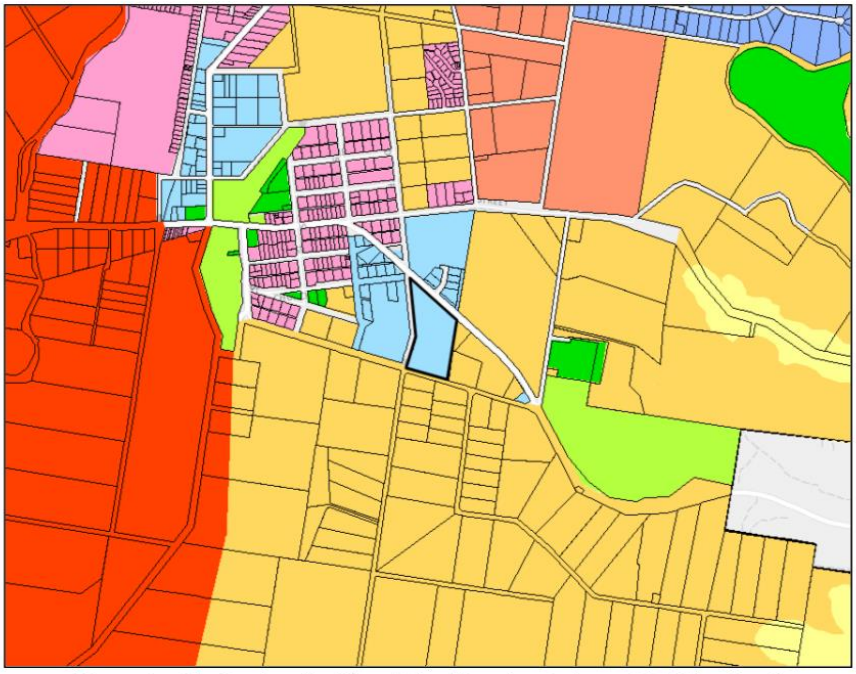

Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)*

2.2 Existing vegetation

The Ecological Site Assessment (ESA; Burchills, 2022a) recorded a total of 51 species of flora comprising 18 native species and 33 non-native species, including nine (9) species identified as Restricted Invasive Plants under the *Biosecurity Act 2016*.

Three (3) vegetation associations were mapped over the site (Figure 2.4):

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Further details regarding the mapped vegetation associations are provided in the ESA (Burchills, 2022a).


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0 10 20 30 40 50m
Lot 1 Rosewood Laidley Road, Laidley
Figure 2.4
Vegetation Units
Location of the site within Lockyer Valley Region
N
Legend
Site Location
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-11-2021
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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2.3 Topography and Drainage

The subject site falls within the Laidley Creek sub-catchment. Laidley Creek is a tributary of the Brisbane River. No waterways or drainage lines are present on the site, although a small constructed dam is present in the northwest of the site. The site rises to an elevation of 141m AHD within its centre, falling to northwesterly to 115m AHD and southeasterly to 121m AHD on its northern and southern boundaries, respectively. At a site level, stormwater is conveyed via sheetflow to both the northwest and southwest of the site from this central point.

Figure 2.5 Local Contours and Waterways

2.4 Rainfall

Mean annual rainfall for the local region is 770.3mm based on statistics available for the nearest Bureau of Meteorology (BOM) station with more than five (5) years of data (Station ID: 040079, Forest Hill). Average monthly rainfall is presented in Table 2.1. The monthly averages (since 2000) indicate rainfall is typically heaviest during December to March which reflects the growing season for SEQ.

Table 2.1 Rainfall Data for Forest Hill (Station ID: 040079; Bureau of Meteorology, 2021)

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean	113.6	99.8	76.6	45.2	42.0	40.6	35.2	25.2	34.5	62.7	78.3	102.5	770.3
Lowest	0.0	0.0	0.0	0.0	12.0	5.0	0.0	1.0	0.0	5.0	0.5	0.0	315.9
5th %ile	25.2	8.6	4.7	0.7	0.5	0.0	0.1	0.0	0.9	8.0	9.4	23.1	448.6
10th %ile	32.9	21.6	10.8	3.0	4.2	2.1	1.3	1.8	3.5	10.6	21.0	31.6	504.8
Median	101.6	78.6	68.6	34.4	26.1	26.3	24.6	19.3	27.4	52.0	70.4	89.3	772.0
90th %ile	204.9	190.1	139.0	97.6	94.8	87.8	80.4	53.0	76.8	130.5	142.6	195.8	1040.7
95th %ile	287.5	267.2	201.6	123.4	124.9	124.8	107.8	64.0	96.5	157.9	173.4	225.7	1087.9
Highest	521.3	374.4	273.4	354.9	430.8	301.6	264.0	95.8	166.6	257.7	240.6	296.3	1132.2

2.5 Soils and Geology

The Geological Survey of Queensland (DNRM 2011) indicates that the site's geology consists wholly of Gatton Sandstone, comprising lithic labile and feldspathic labile sandstone. This geological and soils association aligns with Land Zone 9-10 under the Qld regional ecosystem (RE) framework for land classification.

2.6 Site Constraints

A summary of the major management constraints present on the site is outlined in Table 2.2

Table 2.2 Management Constraints for Subject Site

Constraint	Present	Absent	Comments
Easements and/or Restrictions on Title		x	No easements are present on the site[1].
Zoning Provisions		x	The subject site is zoned as Commercial[2].
Biodiversity, Waterways and Wetlands	x		The subject site is mapped within the Moderate Environmental Significance Area[2]. No wetlands or watercourses are mapped within the site[2].
Bushfire Risk	x		Approximately 50% of the site is mapped as Medium Potential Bushfire Risk[2].
Nature Conservation Areas		x	There are no Nature Conservation Areas present on the site[2].
Airport Environs		x	There are no Airport Environs present on the subject site[2].

Constraint	Present	Absent	Comments
Aboriginal Cultural Heritage		x	No known Aboriginal cultural heritage areas are present on the subject site[2].
European Cultural Heritage		x	No known European cultural heritage areas are present on the subject site[2].
Acid Sulfate Soils - Risk		x	The entirety of the subject site is present above Land at or Below 20m AHD[1].
Flood Prone		x	No flood hazard is present on the site[2].
Landslide Hazard and Steep Land	x		Areas of Slopes Greater than 15% are mapped within the site[2].
Tree Preservation Order		x	No Tree Preservation Orders are present on the subject site[2].
Mapped Vegetation	x		Category C High Value Regrowth Vegetation is mapped over the majority of the site[1].
Mapped Essential Habitat	x		Mapped Essential Habitat for *Phascolarctos cinereus* (Koala) and *Adelotus brevis* (Tusked frog) is present on the subject site[3].
Wildlife Online – Threatened Species	x		Wildlife Online search indicates that one (1) species of threatened flora and two (2) species of threatened fauna and five (5) Special Least Concern species of fauna have been recorded within 2km of the site[3].
Observed Threatened Species - Fauna		x	No evidence of conservation significant fauna was observed on the site[4].
Observed Threatened Species - Flora		x	No evidence of conservation significant flora was observed on the site[4].
South East Queensland Koala Conservation Strategy	x		Core Koala Habitat is mapped within the site. The site is not within a Koala Priority Area[1].

Notes:

[1] – As identified in Queensland Globe (2021)

[2] – As identified in the Laidley Shire Planning Scheme Version 3 Interactive Mapping

[3] – As identified by Wildlife Online Species Search results.

[4] – As identified in the Ecological Site Assessment (Burchills 2021a).

3. Purpose of Covenant

On registration, a covenant attaches to the land and binds the landowner (the Covenantor) and all successors in title to a long-term commitment to managing the Covenant Area in accordance with the provisions of the Covenant Management Plan.

Statutory covenants are binding on the current and all future landowners. By registering a covenant on the title of the lot, it is the intention that the Covenantor will enter into a long-term commitment to maintaining, managing and rehabilitating (where required) the Covenant Area within the site. Managing the Covenant Area will assist in preventing future degradation of the environmental values associated with the site.

In accordance with the conditions of approval a covenant will be registered on the title of the new allotments. The Covenant Area will achieve the following objectives:

- Provide habitat for native plants and animals;
- Provide clear access for Council to ensure the Developer and successors in title, or their agents do not intentionally or wilfully clear, damage or destroy any area relating to the conservation of the physical feature or natural feature subject of the Covenant; and
- Conservation of water, animals and plants, which are to be managed in accordance with an approved Covenant Management Plan.

A covenant restoration strategy has been included as part of this CMP, describing the Covenant Area and type of works to be undertaken. All future landowners will be bound as Covenantors and will be required to undertake ongoing management in accordance with this CMP.

This CMP may be amended (e.g. to update management strategies to accord with future accepted best practice, or to undertake adaptive or reactive management) with the written agreement of the Covenantee – Queensland Department of Environment and Science (DES). All amendments however must:

- Be consistent with the purpose of the covenant;
- Not alter the Covenant Area; and
- Not add or remove a party to the covenant.

Management requirements within the Covenant Area are detailed in Section 3 of this CMP.

4. Restoration Strategy

Ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. The main objective of restoration is to rehabilitate vegetation communities to the extent that they will be self-sustaining and resilient to environmental stressors (such as drought, fire and flood).

The variety in the nature and severity of disturbances that can occur within natural ecosystems dictates that a generic approach to rehabilitating ecological functions and processes is unlikely to be effective. The likelihood of successfully realising the objectives of a rehabilitation project will be greatly increased if the project is managed in accordance with a strategy that is responsive to the specific ecological parameters, functions and processes within the rehabilitation area.

A restoration strategy that is targeted toward site-specific conditions should not only prevent the inefficient expenditure of resources, but also effectively utilise natural ecological processes to enhance the integrity of the native plant community. The main objective of ecological restoration is to restore an ecosystem to the point where it becomes self-sustaining. The approach taken to achieve this objective is dependent on the existing biotic and abiotic conditions and the transitional state of the ecosystem (Figure 4.1).

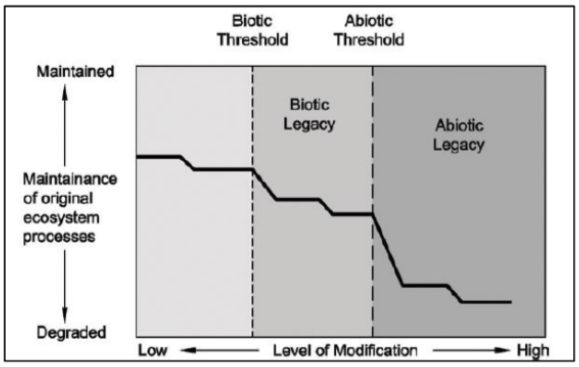

Figure 4.1 Graphical Representation of Ecosystem Transitional States (Chenoweth EPLA and Bushland Restoration Services, 2012)

There are generally two (2) main types of natural bushland restoration – **assisted natural regeneration** and **reconstruction** (Chenoweth EPLA and Bushland Restoration Services, 2012). Assisted natural regeneration is appropriate for areas that may require weed removal, but with a healthy seedbank and signs of active natural regeneration of the preclearing community. Targeted revegetation may be required where intensive weed removal has resulted in an area denuded of cover with little capacity to naturally regenerate.

Reconstruction is suited to areas that need assistance with recruitment due to factors such as a lack of canopy cover, lack of connectivity and / or highly disturbed conditions. Reconstruction typically includes initial weed treatment followed by revegetation that may be required in a number of stages. This method is appropriate for areas that have little to no natural canopy cover due to weed removal and very low natural regeneration due to seedbank suppression from weeds.

4.1 Site Strategy

The Environmental Covenant area is 1.149ha in total and has been subjected to moderate disturbance including partial clearing and unmanaged weed infestations.

The objective of the rehabilitation site strategy is to restore the preclearing vegetation community within the Environmental Covenant area formally mapped as RE12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 (Figure 4.2) but found to be generally be representative (e.g. high natural regeneration evident) of 12.9-10.7/12.9-10.2 (Vegetation Association B). Given the varying levels of disturbance present, both Assisted Natural Regeneration and Reconstruction are proposed for this area.

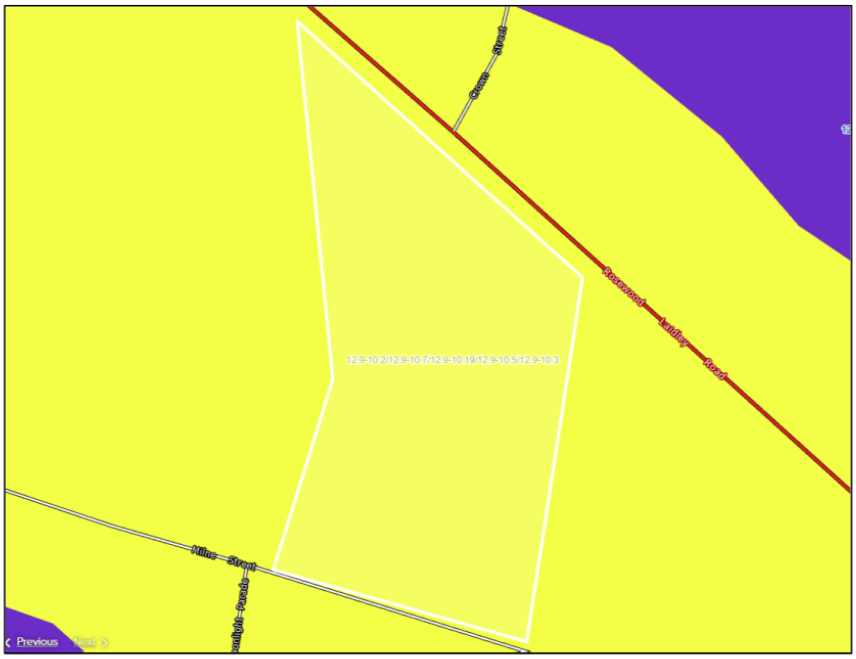

Figure 4.2 Preclearing Regional Ecosystems – 12.9-10.2/12.9-10.3/12.9-10.5/12.9-10.7/12.9-10.19 in Covenant Area (Qld Globe 2021)

4.2 Restoration Management Areas

The Restoration Management Area for the subject site is presented in Figure 4.3, and comprises the southern portion of Lot 9 of the development. The area of road resumption is not proposed to be rehabilitated, given its intention for future designation as a road by Lockyer Valley Regional Council. Table 4.1 summarises the required works within this area. The following sections provide further details of these works.

Table 4.1 Restoration Management Areas (RMA)

RMA	Area (ha)	Existing Vegetation	Preclearing Regional Ecosystem	Ecosystem Resilience	Strategy	Actions Required
1	1.07	Dry Eucalypt Forest (Veg Unit B)	12.9-10.7/ 12.9-10.2	Medium to High	Assisted Natural Regeneration	The vegetation within this area comprises Remnant Vegetation of RE 12.9-10.7/12.9-10.2. However, historical disturbances (such as selective clearing and heavy weed infestations through the shrub and ground strata) have occurred. Assisted Natural Regeneration is the proposed rehabilitation strategy. Restoration of this zone will include: • Weed control targeting weeds per this CMP; • Monitor for weeds and natural recruitment of local native species as per this report; and • Infill planting of canopy and understorey species to achieve overall density of 1 plant per 5m²
2	0.25	Disturbed Dry Eucalypt Forest (Veg Unit C)	12.9-10.7/ 12.9-10.2	Low to Medium	Reconstruction	The vegetation within this area has suffered significant historical disturbances including clearing and heavy weed infestations through the shrub and ground strata. Reconstruction is the proposed rehabilitation strategy. Restoration of this zone will include: • Weed control targeting weeds per this CMP; • Monitor for weeds and natural recruitment of local native species as per this report; and Infill planting of native species to achieve overall density of 1 plant per 1m²


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0 40 80 120 160 200m
Lot 1 Rosewood Laidley Road, Laidley
Figure 4.3
Rehabilitation Management Areas
N
Location of the site within Lockyer Valley Region
Legend
Site Location
RM41 - 1.07ha
RM42 - 0.23ha
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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5. Restoration Methodology

The following sections outline the actions that are to be implemented to achieve a successful restoration outcome on the site.

5.1 Compliance

It is the contractor's responsibility to ensure that the regeneration works required on the site comply with all current and relevant legislation and standards requirements, including, but not limited to:

- *Environmental Protection Act 1994* (EP Act.);
- *Work and Healthy Safety Act* (the WHS Act);
- *Construction Work: Code of Practice* (Safe Work Australia);
- *Excavation – Work Code of Practice* (Safe Work Australia);
- *Environmental Protection (Water) Policy 2009;*
- *Australian Standard AS 4373 Pruning of amenity trees*;
- *Australian Standard AS 4419 Soils for landscaping and garden use;*
- *Australian Standard AS 4454 Composts, soil conditioners and mulches; and*
- *Australian Standard AS 4970 Protection of trees on development sites*.

5.2 Vegetation Protection

The following provides general requirements apply to any vegetation to be retained on-site:

- As above, all vegetation protection measures must conform to the requirements of *Australian Standard 4970-2009: Protection of Trees on Development Sites* (AS 4970-2009);
- Prior to the commencement of any vegetation clearing operations, the limits of all vegetation to be retained must be clearly delineated. The storage and operation of construction equipment and machinery is to be located within the extent of earthworks delineation. No construction equipment and machinery are to disturb retained trees, waterways and remnant vegetation where approval to clear has not been received;
- Sediment runoff from all earthworks is to be prevented from entering the areas of retained vegetation (e.g. through use of filter cloth fences);
- All batters are to be erosion protected and planted with appropriate species; and
- The Principal Contractor is responsible for ensuring that all operational works are undertaken in accordance with approved Development Permits.

5.3 Weed Control

The Queensland *Biosecurity Act 2014* requires everyone to take all reasonable and practical steps to minimise the risks associated with invasive plants under their control. For the purposes of this report, a weed has been defined as a species that is not native to the Lockyer Valley region and is recognised as an invasive under the Queensland *Biosecurity Act 2014*, recognised as an invasive species in South East Queensland by the Queensland Herbarium (Batianoff and Butler, 2002), Qld Department of Agriculture and Fisheries (as regulated under the *Biosecurity Act 2014*) or recognised as an environmental weed or undesirable species by a SEQ Regional Council by way of policy.

The ESA (Burchills, 2022a) recorded a total of 33 invasive weeds present within the subject site, including nine (9) Restricted Invasive Plants listed under the Qld *Biosecurity Act 2014*.

Table 5.1 provides specific weed control and removal methods for weed species recorded. Where additional weed species are observed on-site that do not have a control technique listed in Table 5.1 an appropriate weed control methodology will be used based on the general guidelines provided in Table 5.2.

Herbicide application is to be undertaken in accordance with the *South East Queensland Restoration Framework* (Chenoweth EPLA and Bushland Restoration Services, 2012). Treatment is to target introduced species only and be carried out in a manner that minimises disturbance to native plants. When undertaking herbicide application for weed control, care will be taken to ensure that no off-target damage occurs to native vegetation. All weed control on-site must be undertaken in a manner that does not promote erosion or instability of soil, particularly in and around waterways and / or high velocity flow areas.

Table 5.1 Specific Weed Control Methodology

Scientific Name	Common Name	Family	Qld Status	Control Method
Ambrosia psilostachya	Perennial ragweed	Asteraceae		Hand pull and hang to dry; spray G1:100 or G1:100 + MM or MM.
Argemone ochroleuca	Prickly poppy	Papaveraceae		Hand pull; spray G1:100 or G1:100 + MM or MM.
Ageratina adenophora	Crofton weed	Asteraceae	Q1P	Hand pull and hang to dry; spray G1:200 or G1:200 + MM or MM.
Ageratum houstonianum	Blue billygoat weed	Asteraceae		Hand pull; spray G1:100.
Asparagus aethiopicus cv. Sprengeri	**Asparagus fern**	**Asparagaceae**	**RIP**	**Crown then hang up to dry; spray G1:100 + MM or MM. Best results from herbicide application will be obtained when plant is between flowering and berry formation.**
Asparagus africanus	**Climbing asparagus**	**Asparagaceae**	**RIP**	**Rhizomes: Crown and hang up to dry; gouge and paint G1:1.5. Stems: Wind up and spray G1:210 or G1:200 + MM, or cut high and low and spray regrowth G1:200 or G1:200 + MM.**
Bidens pilosa	Cobbler's pegs	Asteraceae		Hand pull; spray G1:100 or G1:100 + MM or MM.
Bryophyllum delagoense	**Mother-of-millions**	**Crassulaceae**	**RIP**	**Spray G1:200 + MM or MM.**
Bryophyllum fedtschenkoi	Lavender scallops	Crassulaceae		Hand pull, bag and dispose offsite; spray G1:200 + MM or MM.
Cirsium vulgare	Spear thistle	Asteraceae		Spray G1:100 or G1:100 + MM or MM.
Conyza sumatrensis	Tall fleabane	Asteraceae		Hand pull; spray G1:100 or G1:100 + MM or MM; CSP G1:1.5.
Macfadyena unguis-cati	**Cat's claw creeper**	**Bignoniaceae**	**RIP**	**Spray G1:100 or G1:100 + MM. Larger stems, roots, nodes, vines: CSP G1:1.5; Spray G1:100 + MM. Underground tubers: Dig up or crown; gouge and paint G1:1.5.**
Gomphocarpus physocarpus	**Balloon cotton bush**	Asclepiadaceae		Hand pull; spray G1:100.
Heliotropium amplexicaule	**Blue heliotrope**	Boraginaceae		physical removal of all the crown and root material. Spray G1:100.
Hypoestes phyllostachya	polka dot plant	Acanthaceae		Hand pull or crown; spray G1:200 or + G1.5:200 MM.
Jacaranda mimosifolia	Jacaranda	Bignoniaceae		Seedlings: Hand pull; spray G1:200. Saplings: Cut and paint stumps G1:1.5. Trees: SI G1:1.5.
Lantana camara	**Lantana**	**Verbenaceae**	**RIP**	**Seedlings and regrowth: Spray 40ml/10L (Spring, summer) 60ml/10L (Atumn, winter) Shrubs: Lop into 50 cm pieces and CSP base G1:1.5. Dense and large infestations: Overspray using G1:100. Best results will be obtained when plant is undergoing active growth.**

Scientific Name	Common Name	Family	Qld Status	Control Method
Megathyrsus maximus	Guinea grass	Poaceae		Hand pull or dig up; spray G1:100.
Ochna serrulata	Mickey Mouse bush	Ochnaceae		Seedlings: Hand pull; spray G1:100 + MM or MM. Vines CSP G1:1.5.
Opuntia stricta	**Prickly pear**	**Cactaceae**	**RIP**	**Small areas: spray; Biological control: Cactoblastis or Cochineal.**
Opuntia tomentosa	**Velvet tree oear**	**Cactaceae**	**RIP**	**Small areas: spray; Biological control: Cactoblastis or Cochineal.**
Paspalum dilatatum	Paspalum	Poaceae		Hand pull or dig up; spray G1:100.
Ricinus communis	Castor oil bush	Euphorbiaceae		Seedlings: Hand pull; spray G1:200. Shrubs and small trees: CSP G1:1.5; SI G1:1.5.
Scheffiera actinophylla	Umbrella tree	Araliaceae	OIP	Seedlings: Hand pull or spray G1:200 or G1:200 + MM. Saplings: CSP G1:1.5, stack branches above the ground to dry and prevent reshooting. Trees: SI G1:1.5. **(Do NOT stem inject when tree is in flower, this can have toxic effects on nectar feeding birds).**
Schinus terebinthifolius	**Broadleaved pepper bush**	**Anacardiaceae**	**RIP**	**Seedlings: Hand pull; spray G1:200. Saplings: CSP G1:1.5. Trees: SI G1:1.5.**
Senecio madagascariensis	**Fireweed**	**Asteraceae**	**RIP**	**This species is resistant to Glyphosate and Metusulfuron Methyl. Can be weeded manually by hand or by chipping out. Can be shaded out by regenerating vegetation over the longer term.**
Senna pendula var. *glabrata*	Easter cassia	Caesalpiniaceae	OIP	Seedlings and regrowth: Hand pull or spray G1:200 or G1:200 + MM or MM. Shrubs: CSP G1:1.5 or SI 1:1.5. Where possible, bag seed pods and dispose off-site.
Setaria sphacelata	Pigeon grass	Poaceae		Hand pull or dig up; spray G1:100.
Solanum chrysotrichum	Giant devil's fig	Solanaceae		Seedlings: Hand pull or spray G1:200. Shrubs: CSP G1:1.5; SI G1:1.5.
Solanum mauritianum	Wild tobacco	Solanaceae	OIP	Seedlings: Hand pull or spray G1:200. Shrubs: CSP G1:1.5; SI G1:1.5.
Solanum seaforthianum	Brazilian nightshade	Solanaceae		Seedlings and regrowth: Spray 30ml/10L of FLUX or G1 G1:100 + MM. Vines: CSP G1:1.5.
Stenotaphrum secundatum	Buffalo grass	Poaceae		Dig up; spray G1:100.

*Notes:

1. Species specific weed control methodology has been extracted from the *South East Queensland Restoration Framework* (Chenoweth EPLA and Bushland Restoration Services, 2012).

2. Control Methods: G = Glyphoshate (e.g. Weedmaster Duo ®, Roundup Biactive ®), MM = Metsulfuron Methyl (e.g. Brushoff ®, Brushkiller ®, Associate ®), S = Surfactant (e.g. L1700 ®, Prosil ®, Pulse ®), A = spray adjuvant (e.g. Agral ®, Protec ®, Codacide ®), D = colour marking dye (e.g. Herbi [red or blue] Liquid Dye ®), CSP = cut, scrape and paint, SI = stem inject.
3. Rates: G1:100 = Glyphosate at a rate of 100mL/10L, G1:200 = Glyphosate at a rate of 100mL/20L, G1:1.15 = Glyphosate at a rate of 400mL/600mL and MM = Metsulfuron Methyl at a rate of 1.5g/10L.
4. Glyphosate formulations, as referred to above, will be "frog-friendly".
5. It is recommended to add spray adjuvant to improve adhesion to and penetration of herbicide spray into the target species.
6. Adjuvants are not to be allowed to come into contact with natural water bodies when either mixing or spraying herbicide.
7. When not spraying directly adjacent to natural water bodies, the recommended broad-spectrum herbicide mix for treatment of all species is Glyphosate 1:100 for seedlings and Metsulfuron Methyl 1g/10L plus adjuvant.

Table 5.2 General Weed Control Methods

Method	Application	Procedure
Cut-scrape-paint	All woody shrubs and trees Some vines	• Prepare herbicide with 1-part of Glyphosate[1] to 1.5-parts water; • Cut plant low to ground at an angle and apply herbicide with a paintbrush; • Scrape sides lightly to reveal green tissue and apply the herbicide to the scraped area; • Ensure that the brush is not contaminated with soil; and • All species with seeds that have high viability or longevity (e.g. *Senna spp.*, some members of the Fabaceae family, or plants with high invasive potential such as *Heptapleurem actinophyllum*) must be removed from the parent and either composted on-site or removed from the site.
Stem injection	All woody trees and shrubs with a diameter of 6-10cm or greater	• Prepare herbicide with 1-part of Glyphosate[1] to 1.5-parts water; • With a tomahawk or saw, make a slightly angled cut approximately 1.5cm wide and 1.5cm deep into the trunk and apply herbicide immediately into the cut using a tree-injecting device; • Repeat this process in a brickwork pattern around the circumference of the tree, as close to the ground as possible; and • Two (2) rows of cuts will be sufficient for trees with trunks of 6-10cm; larger trunk diameters will require more rows.
Spraying	Dense infestations of shrubs and groundcover with no native species interspersed.	• Using a 15L spray backpack with a nozzle providing a solid spray pattern, spray herbicide on the infestation[2]; and • If Glyphosate[1] is to be utilised as the herbicide, dilution rates are to be in accordance with the manufacturer's recommendations.
Overspray	Plants with large, dense infestations (such as Lantana camara) Where dead plants should be intact to prevent erosion and over-exposure of large areas, protect native seedlings from predators and avoid trampling of the area by humans	• Prepare a solution of 1-part Glyphosate[1] to 100-parts water; • Spray over the top of the infestation[2]; • Leave the sprayed plants intact so that native seedlings can establish under the shelter provided; and • Weeds can be cut and flattened with bush-hooks or loppers and the subsequent regrowth sprayed with Glyphosate
Crowning	Weeds which have their growing points beneath the surface in the form of corms, bulbs, rhizomes, clumped or fibrous root systems or similar structures (e.g. *Asparagus aethiopicus, Chlorophytum comosum* and Poaceae species)	• Grasp the leaves or stems and hold them tightly so that the base of the plant is visible. Plants with sharp leaves or stems should be cut back first; • Insert a knife close to the base of the plant at a slight angle with the tip well under the system; • Cut through the roots close to the base. Depending on the size of the plant, two (2) or more cuts may be needed to sever the roots; and • Remove the plant and make sure that the base of the plant where the roots begin is completely removed

Notes:
[1] – Due to the proximity of the site to watercourses, where Glyphosate is indicated for use in chemical treatments, Glyphosate Biactive or an equivalent 'Frog Friendly' herbicide must be used. Dilution rates should always be in line with the manufacturer's recommendations and any variation requires a permit from the National Registration Authority.
[2] - To prevent any unnecessary and excessive use of herbicides during weed control activities, a vegetable-based dye will be mixed with all herbicides to be used for spraying and overspraying.

5.4 Fauna Habitat

The following works are to be undertaken to supplement and enhance the existing habitat values within the Covenant area:

- Following clearing operations, at least four (4) felled logs (minimum 1m long and 20cm in diameter) are to be relocated into the Environmental Covenant area to supplement any existing ground hollows;
- Installation of three (3) artificial nest hollows within the Environmental Covenant area in each lot including the following:
    - arboreal mammal nest box (possum / gliders);
    - parrot / rosella box; and
    - microbats nest box.

A specialist next box contractor is to be engaged to select and install the appropriate nest boxes.

5.5 Revegetation

A species list for the revegetation works, representing the ground truthed Regional Ecosystems (RE 12.9-10.7/12.9-10.2) is provided in Table 5.3. Species noted with 'k' are koala food trees. The planting palette includes canopy, understorey and shrub species given the presence of existing native ground cover in both RMAs and the recovery capacity following the weeding evident in this stratum (natural regeneration).

Given high levels of natural regeneration, revegetation within RMA 1 is limited to supplementary planting in canopy gaps greater than 25m^2 following the initial weed removal works in accordance with Table 5.3. This supplementary planting density is to be undertaken at one (1) tube (canopy/understorey species only) per 5m^2. Planting within RMA 2 is to achieve a density of one (1) plant per 1m², and is to include canopy, understorey, shrub and groundcover species.

Where minor earthworks incursions are present within either RMA, replanting is to be undertaken at one (1) tube per 1m². The Koala Habitat Value Assessment (Burchills 2022b) found the density of Non-Juvenile Koala Habitat Trees (NJKHT) to be 200 NJKHT/ha within Vegetation Unit B (RMA 1) and 88 NJKHT/ha within Vegetation Unit C (RMA 2). This is 50 NJKHT/ha less and 162 NJKHT/ha less than the Qld average of 250 NJKHT/ha, respectively.

Table 5.3 Revegetation Planting List – RMA 1 and 2 ('k' denotes koala tree)

Scientific Name	Common Name	Form / Stratum
Angophora leiocarpa[k]	Smooth-barked apple	Canopy
Corymbia citriodora subsp. variegata[k]	Spotted gum	Canopy
Corymbia intermedia[k]	Pink bloodwood	Canopy
Corymbia tessellaris[k]	Moreton Bay ash	Canopy
Eucalyptus crebra[k]	Narrow-leaved ironbark	Canopy
Eucalyptus melanophloia[k]	Silver leaved ironbark	Canopy
Eucalyptus siderophloia[k]	Grey ironbark	Canopy
Eucalyptus tereticornis[k]	Qld blue gum	Canopy
Ajuga australis	Australian bugle	Groundcover
Bothriochloa decipiens	Pitted bluegrass	Groundcover

Scientific Name	Common Name	Form / Stratum
Cymbopogon refractus	Barbed wire grass	Groundcover
Dianella caerulea	Blue flax lily	Groundcover
Goodenia rotundifolia	Star goodenia	Groundcover
Heteropogon contortus	Black speargrass	Groundcover
Imperata cylindrica	Blady grass	Groundcover
Lomandra multiflora	Many-flowered matrush	Groundcover
Themeda triandra	Kangaroo grass	Groundcover
Cassinia laevis	Cough bush	Shrub
Chrysocephalum apiculatum	Yellow buttons	Shrub
Dodonaea viscosa	Hops bush	Shrub
Grewia latifolia	Dysentery plant	Shrub
Indigofera australis	Native indigo	Shrub
Pittosporum angustifolium	Weeping pittosporum	Shrub
Acacia concurrens	Late-flowering hickory	Understorey
Acacia disparrima	Hickory wattle	Understorey
Acacia falcata	Sickle-leaf wattle	Understorey
Acacia leiocalyx	Black wattle	Understorey
Acacia maidenii	Maiden's wattle	Understorey
Acacia salicina	Willow wattle	Understorey
Allocasuarina littoralis	Black she oak	Understorey
Alphitonia excelsa	Soap ash	Understorey
Jacksonia scoparia	Dogwood	Understorey

5.5.1 Revegetation Protocol

Table 5.4 outlines the procedure for revegetation planting works.

Table 5.4 Revegetation Protocol

Item	Description
1.	Local provenance tube stock is to be utilised for all restoration works. Where this is not possible due to circumstances out of the control of the applicant, Council approval must be sought.
2.	Plants are to be vigorous, well established, hardened off, consistent with naturally occurring species or varieties (no cultivars), free from disease and insect pests, with large root systems and no evidence of having been restricted or damaged.
3.	Plants are to be planted immediately after delivery to the planting site. If not possible, they are to be stored in the shade and watered sufficiently daily.
4.	Excavate planting medium to a depth suitable for the installation of tube or pot specimens (Figure 5.1). In areas where the planting substrate is deemed to be very poor (compacted, nutrient depauperate, hydrophobic, etc.) and above areas of potential frequent inundation and water flow, soil shall be suitably prepared (e.g. through use of fertiliser, and mechanical ripping where required) and sufficient topsoil to sustain long term plant growth shall be used.
5.	Pre-water plant hole if soil is dry in order to decrease root stress upon planting and assess the infiltration of water through the soil.
6.	A complete, slow release fertiliser is recommended, and is to be administered appropriately during planting. Top dressing with slow release fertiliser is preferred to avoid toxic levels of fertiliser accumulating in the plant hole around the plant roots.
7.	Place plant into hole and backfill ensuring that the plant is upright and the stem is not covered in any less than 10mm or any more than 20mm of planting medium.
8.	Plants are to be watered thoroughly immediately after planting (ensure deep irrigation) and thereafter as required depending on climatic conditions. Creation of a concave hollow around the base of each plant will aid water infiltration to the plant roots.
9.	To ensure successful establishment, all planting surfaces must be covered in either a 10cm layer of high quality composted chip mulch free of weeds and debris (Note: to avoid possible stem rot in some 'drier' species ensure mulch is 'dished' and not covering plant stem by more than 2cm); or suitable individual anchored natural fibre weed mat (e.g. jute mat) in areas subject to high velocity flows or on slopes greater than 1:3 (Figure 5.2).
10.	As presented within other sections, where available mulch material will be sourced from cleared vegetation material if adequately seasoned (i.e. stockpiled for at least 6 weeks to prevent nitrogen drawdown).
11.	Monitoring and maintenance (watering, weed control, stock replacement, fertilising, managing inappropriate site access, etc.) is to occur monthly for the period from October to May and bi-monthly for June to September during the Establishment period.
12.	Where specimens show signs of very poor health, do not replace unless the plant is determined to be dead below ground. Many species are capable of strongly recovering from transplant stress or adjustment to site conditions. If a particular species is consistently doing poorly in certain site conditions, it is recommended to replace with an alternate species.
13.	A minimum 90% survival rate must be achieved for all planted stock at all milestones. Where this is not achieved, supplementary planting must be undertaken (refer to Section 5.7).

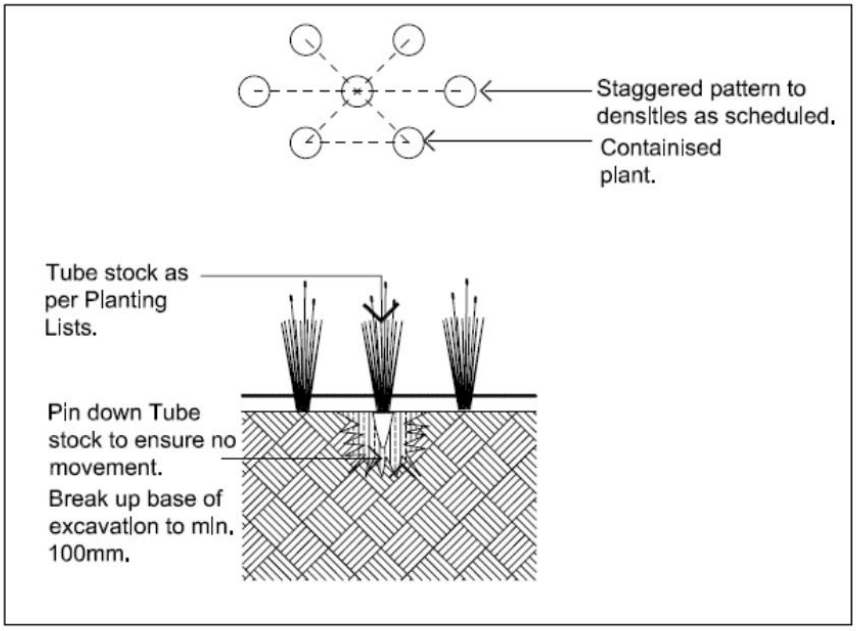

Figure 5.1 Typical Tubestock Planting Details

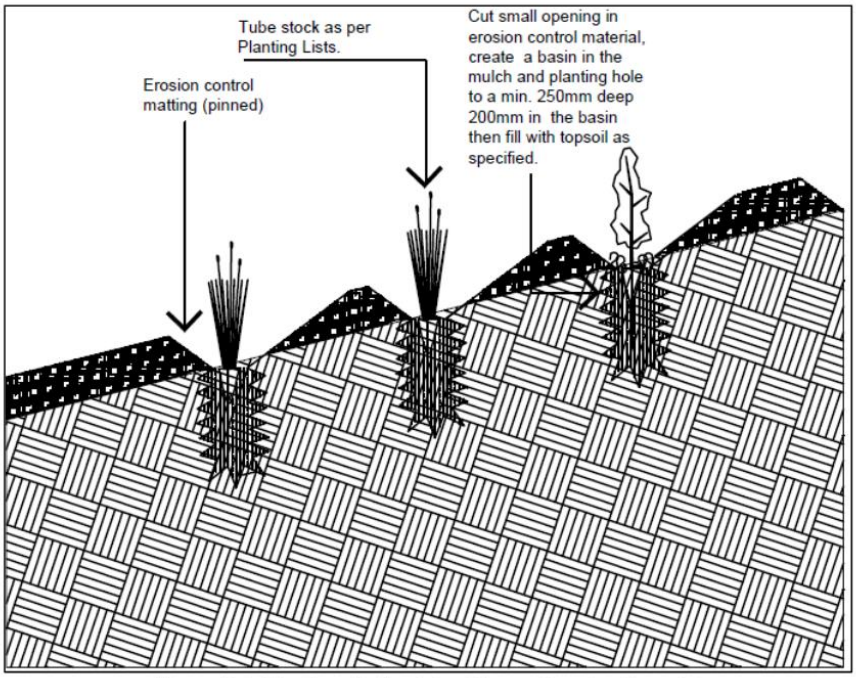

Figure 5.2 Planting Method for Slopes Greater than 1:3

5.6 Plant Procurement

Local provenance tube stock is to utilised for all restoration works involving planting. Where this is not possible due to circumstances out of the control of the applicant, Council approval must be sought. This will help to ensure that the genetic composition of the area is maintained. The following sections provide a guide to seed and vegetation material collection and installation protocol.

5.6.1 Collection of Seeds and Vegetative Material

The use of propagated plants in restoration / rehabilitation projects may be necessary if sufficient local viable seed is not available or if germination of seeds is prolonged, erratic or difficult. Vegetation propagation can be a useful tool, especially when propagating ground layer plants that spread by bulbs, corms, rhizomes or stolons.

Vegetative propagation includes the use of stem or root cutting, aerial layering or division and plants produced through these methods are generally identical to parent plants. There is alack of genetic variability within planted vegetation communities, and thus the possibility of increased susceptibility to disease and insect attack.

A harvesting licence may be required before harvesting protected plants in the wild. These are issued and managed by the Department of Environment and Science (DES). The Protected Plant Harvesting Licence authorises the sustainable harvesting of Endangered, Vulnerable or Near Threatened (EVNT) and Special Least Concern plants. A harvester will be required to operate under a sustainable plant harvest plan that demonstrates the long-term sustainability of the relevant activity. The Protected Plant Growing Licence authorises the propagation and cultivation of EVNT and Special Least Concern plants taken from the wild. The harvesting of restricted species under this licence must comply with the code of practice for the taking and use of protected plants. The code allows the taking of small quantities of seed and propagating material for growing protected plants.

The following general guidelines for collection of seeds and other vegetative material are recommended:

- Collect from an area within the local catchment, preferably with the same aspect and from no further than a 20km radius;
- Collect material from as many “wild” growing plants as possible to ensure variation within the parent plants. Seeds should not always be gathered from a favourite or easy-to-access site, nor should they be picked only from well-laden or easy-to-reach specimens;
- Collect material from several (at least 10) well-spaced plants to reduce the possibility of parent plants being related. Mix together equal amounts of seed from each plants before planting;
- If the planting program is to be ongoing, identify each collection plant so that different plants can be used in the following years;
- Do not collect only from well-conditioned specimens. Such plants may only be in this condition because they are responding to temporary favourable environmental conditions. If these conditions change, so may their ability to survive;
- Propagative material collected from isolated plants as self-pollination and / or inbreeding may have occurred and this can often yield low quality seed;

- Collection from plantations and other planted specimens requires extra caution. These will be a poor source of vegetative material if derived from inbred plants of suitable provenance;
- Seed collected from woodlands or forests where only a few trees have flowered well will also tend to be more inbred than seed collected after a heavy flowering year when it is likely that greater rates of out-crossing have occurred; and
- Over-harvesting may negatively impact on the local seed banks available for natural regeneration, as well as remove food sources for wildlife.

5.7 Supplementary Planting

Supplementary planting should be undertaken in areas where plants have failed to thrive or where weed removal activities have resulted in site disturbance. The process of supplementary planting should consider the existing species composition – for example, in areas with good canopy cover but degraded lower strata, ground cover and understorey species are to form the predominant part of the revegetation planting.

5.8 Schedule of Rehabilitation Works

5.8.1 Establishment Period

Following initial rehabilitation works, the Environmental Covenant area is to undergo an Establishment period of 12 months, during which time the developer will be responsible for undertaking and / or organising monitoring and maintenance requirements. Table 5.5 outlines the schedule of maintenance and benchmarks for the Establishment Period.

Table 5.5 Establishment Period Schedule of Works

Activity	Frequency	Commencement	Details
Fencing and Signage	Once	Prior to Works	Fencing is required to be installed around the RMA in order to deter unauthorised access.
Weed Control	Monthly	Initial period	This will comprise initial weed control and following up treatments. By the end of the Establishment Period, the restoration area will be 90% free of weeds.
Initial Revegetation Works	Once but follow up required	Following weed control	Works to include soil preparation (soil wetting agent may be required), planting, fertilising (slow release for native plants), mulching and installation of stakes and seedling protection covers where deemed appropriate by the revegetation contractor. All reconstruction works are to achieve a minimum survival rate of 90% at the end of the establishment period.
Irrigation	Weekly/As required	At reconstruction planting	Irrigation requirements will depend on rainfall events. Irrigation will be undertaken at a minimum every three (3) to five (5) days for first eight (8) weeks depending on rainfall.

Activity	Frequency	Commencement	Details
Routine Inspection and Reporting	Weekly/Monthly	Following weeding and planting out	Inspections will be undertaken weekly for the first month following reconstruction works; then monthly for the remainder of the establishment period.
Follow up Revegetation Planting	As required	Following inspection and as required	Replace dead plants; and/or add additional mulch/fertiliser; and/or replace stakes/protective covers where required as determined at the routine inspections.
Photo-monitoring	Every three (3) months	Prior to rehabilitation works, then immediately upon completion of reconstruction works.	Photographs taken from fixed points, determined by the landowner, to record changes in the rehabilitating vegetation community every three (3) months for the duration of the rehabilitation project.

5.8.2 On-Maintenance Period

Following completion and acceptance by Council of the 12 month Establishment period, the developer will be responsible for maintenance and monitoring for the 12 Month On Maintenance period. Council will undertake a final inspection at the end of the On-Maintenance period to determine whether the Environmental Covenant Area meets the restoration benchmarks and objectives outlined in this CMP. This inspection will determine whether the restoration works can go 'Off Maintenance' and the Environmental Covenant moves into the perpetual 'management phase'.

Table 5.6 outlines the schedule of activities and maintenance to be undertaken during the On-Maintenance period.

Table 5.6 On-Maintenance Period Schedule of Works

Activity	Frequency	Commencement	Details
Weed Control	Every three (3) months	Following completion of establishment period	Three (3) monthly and reactive based on monitoring results.
Irrigation	As required	Following completion of establishment period	Irrigation requirements during this stage will be reactive based on the monitoring results and rainfall events.
Routine Inspection and Reporting	Every three (3) months	Following completion of establishment period	Inspections will be undertaken every three (3) months during this period.
Follow up Revegetation Planting	As required	Following completion of establishment period	Replace dead plants; and/or add additional mulch/fertiliser; and/or replace stakes/protective covers where required as determined at the routine inspections.

Activity	Frequency	Commencement	Details
Photo-monitoring	Every three (3) months	Following completion of establishment period	Photographs taken from fixed points, determined by the landowner, to record changes in the rehabilitating vegetation community every three (3) months for the duration of the rehabilitation project.

5.8.3 Management Period

Once certification for Off Maintenance is received from the Covenantee, the Covenantor will be responsible for all maintenance and monitoring in accordance with this CMP as per Table 6.6.

Table 5.7 Works Schedule for General Management Phase

Activity	Frequency	Commencement	Area	Details
Chemical Weed Removal	As required	Certification of Off Maintenance	Covenant area	Covenant Area should be kept 90% free of Declared and Environmental weeds.
Inspection and Reporting	Annual	Certification of Off Maintenance	Covenant area	Inspections and reporting to be undertaken bi-annually.

5.9 Qualifications of Personnel Involved in CMP Implementation

On-ground restoration works must be undertaken by persons with qualifications in the field of bush regeneration. Minimum qualifications and experience to undertake on-ground restoration works should comprise Certificate III in Conservation Land Management (Natural Area Restoration) or equivalent and two (2) years' experience working on the vegetation type(s) at the site. Equivalent qualifications and / or experience will require the provision of successful on-ground examples under the responsibility of the applicant or referee reports from experienced practitioners eligible for Australian Association of Bush Regeneration accreditation. Proof of qualifications and experience of on-ground personnel is required to be submitted to Council prior to commencement of works.

Bush regenerators are to hold a current Chemical Users Certificate and other relevant legislative requirements (e.g. harvesters' licence to work with threatened flora).

Monitoring and reporting are to be undertaken by a suitably qualified ecologist with experience in monitoring natural areas and quantitative analysis.

5.10 Daily Record Keeping

To comply with the *Chemical Usage (Agricultural and Veterinary) Control Act 1988*, a daily record sheet which includes records of chemicals used must be kept. An example of a Daily Record Sheet is included as Appendix B.

To comply with the *Work Health & Safety Act 2011* a daily record sheet for on-site staff involved in the restoration work will need to be kept. A sample Job Risk Assessment Form and Matrix is included within Appendix C.

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6. Covenant Management

This section details the activities that are either prohibited or permitted in the Covenant Area and apply to the Covenantor and the successors in title. The following management actions are to be adhered to at all times within the covenant area as part ongoing management.

Note: The term 'vegetation' means, trees, bushes, plants, shrubs, flowers and other flora including (where the context so admits or requires) grasses, algae, fungi and the like but excluding declared noxious weeds and other vegetation declared by the Council by way of policy.

6.1 Permissible Actions and Structures

The following actions and structures are permissible in the Covenant Area:

- Boundary fences and fences to define the interface of the Covenant Area in accordance with the provisions of this Covenant Management Plan (refer to Section 6.3).

6.2 Prohibited Actions

The Covenantor and successors in title, or their agents must not in the covenant area:

- Erect any new fixtures or improvements, including buildings or their structures (with the exception of 'permissible structures' as listed in Section 6.1);
- Construct any new trails or paths;
- Deposit any fill, soil, rock, rubbish, ashes, garbage, waste or other foreign material aside unless approved by Council or the State Government (e.g. approved rectification works);
- Clear, lop or remove of any native trees or shrubs unless approved by Council;
- Keep domestic or farm or production animals; and
- Perform any other acts on or in respect of the covenant area that may have any detrimental environmental impact.

6.3 Covenant Area Fencing

The Covenant Area boundary has been visually delineated by the developer for maintenance and inspection purposes (e.g. by way of star pickets). If there is the possibility of domestic animals (e.g. cattle, horses) entering the Covenant Area, fauna friendly fencing must be installed. Fauna friendly fencing permits native wildlife (e.g. wallabies, koalas) to pass through safely. An example of fauna friendly fencing is shown in Figure 6.1. No fencing is to be constructed along the Covenant boundaries which restricts native fauna movement or that would harm fauna (e.g. barbed wire or electrified fencing). The fencing may comprise post and rail or pickets with three strand wire fencing with minimum 50cm gap between the ground and the lowest strand and minimum 30cm gaps between rails / remaining strands.

Where no domestic animals are present that could enter the Covenant Area, permanent visual delineation should be constructed. This may comprise wooden bollards at regular intervals (20-30m spacings) and change of boundary direction to create a visual sightline of the covenant boundary.

Building envelopes should also be suitably fenced to detain domestic fauna (e.g. cats and dogs) within the building envelopes, prohibiting access into the Covenant Area ('fauna-proof' or 'fauna-exclusion' fencing).

Figure 6.1 Example of fauna friendly fencing for domestic animal exclusion (© Replas)

6.4 Monitoring

Monitoring of the Covenant Area by the Covenantor is to be undertaken annually. This can be achieved using the Stewardship Proforma in Appendix F and photo-monitoring – a simple and very useful technique for recording the rate and extent of change within rehabilitating vegetation communities over time.

Photo-monitoring is best employed over the longer term (i.e. years) and consists of keeping photographic records of the rehabilitation project, which are taken at fixed points at regular annual inspections.

Photo-monitoring points are to consist of a marker or a feature (e.g. a survey peg or stake in the ground) that is not likely to change dramatically over time. To provide accurate and reliable data, photographs should be taken from exactly the same location, height and direction, and with the same lens. GPS co-ordinates of each photo-monitoring point should be accurately recorded. A prominent feature of the landscape that is unlikely to change over time (e.g. a large dead tree) should be visible in each photo. This will assist with the recognition and comparison of any changes in the vegetation.

Whilst photo-monitoring alone is useful for recording changes within vegetation structure, the technique does have limitations. For example, it does not provide quantitative information related to

species composition or recruitment, nor does it provide information about regenerating ecological functions and processes.

6.4.1 Management Benchmarks

The Covenantor will be responsible for all maintenance and monitoring in accordance with this CMP to ensure benchmarks are met as outlined in Table 6.1.

Table 6.1 Management Benchmarks

Activity	Frequency	Details
Weed Control	As required	Covenant Area should be kept 90% free of Declared and Environmental weeds in accordance with this CMP.
Supplementary revegetation	As required	Any failed revegetation stock is to be replaced to ensure the original planting densities are maintained in accordance with Table 3.1.
Habitat Enhancement	As required	Fallen timber is to be retained in place and not removed from the Covenant Area (unless it is weed material eg Camphor laurel). Nest boxes are to be maintained and monitored in accordance with this CMP.
Fencing	As required	Fencing or markers delineating the Covenant boundary are to be maintained in accordance with this CMP.
Inspection and Reporting	Annual	Inspections and reporting to be undertaken annually in accordance with this CMP.

6.5 Management Agreement

6.5.1 Covenantor Requirements

The Covenantor shall undertake monitoring in accordance with this CMP using the Stewardship Report in Appendix F annually to ensure weeds are controlled and revegetation is maintained. Inspections by the Covenantee may be conducted at any time to ensure ecological values within the Covenant Area are retained and protected, with the first Stewardship Report functioning as a benchmark for subsequent surveys. The Stewardship Report has been designed to ensure consistent monitoring of the site over a long period and shall be adhered to during each property inspection. Additionally, where photo-monitoring has been implemented, photographs taken from specified monitoring points / landmarks may be used to monitor changes over time in the Covenant Area.

6.5.2 Evaluation and Review

The Covenantee has an obligation to provide land management advice, where necessary, to the Covenantor. The Covenantee is to provide management advice if requested and shall aim to undertake annual site inspections wherever possible to provide an opportunity to discuss management issues on-site.

6.5.3 Amendments to the Covenant Management Plan

Any amendments made to this Covenant Management Plan as a result of monitoring must be submitted to Council to be assessed and approved to the satisfaction of the Chief Executive Officer, with the amended copy stamped and returned to the Covenantor. Updated versions of this Covenant Management Plan must be numbered successively (e.g. the original being Covenant Management Plan Version 00, as shown on the document transmittal page of this document) and dated to allow easy identification of the most recent document. In addition, all amendments to successive plans must be listed in Appendix E of the plan.

6.5.4 Duration of Management Agreement

This Covenant Management Plan remains applicable / active indefinitely unless changes are submitted to Council and are assessed / approved to the satisfaction of the Chief Executive Officer. This Covenant Management Plan will be reviewed in consultation and agreement with the owner of the property and may be amended pursuant to that review. This Covenant Management Plan may be immediately reviewed in consultation with the owner, and amended pursuant to that review, if circumstances arise which require prompt action to be taken to rectify or minimise the effect of a threat to the protected vegetation. In these situations, both parties to the covenant must be in agreement to the changes proposed.

7. Definitions

AMS	Adaptive Management Strategy
CMP	Covenant Management Plan
DES	Department of Environment and Science
ESA	Ecological Site Assessment
DoR	Department of Resources (formerly DNRME)
DNRME	Department of Natural Resources, Mines and Energy
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999*
EVNT	Endangered, Vulnerable or Near Threatened
LVRC	Lockyer Valley Regional Council
NCA	*Nature Conservation Act 1992*
RE	Regional Ecosystem
VMA	*Vegetation Management Act 1999*

8. References

Chenoweth EPLA and Bushland Restoration Services (2012). *South East Queensland Ecological Restoration Framework: Code of Practice*. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.

Burchills (2022a). *Ecological Site Assessment – Rosewood Laidley Road, Laidley*, Burchills Engineering Solutions, Gold Coast.

Burchills (2022a). *Koala Habitat Value Assessment – Rosewood Laidley Road, Laidley*, Burchills Engineering Solutions, Gold Coast

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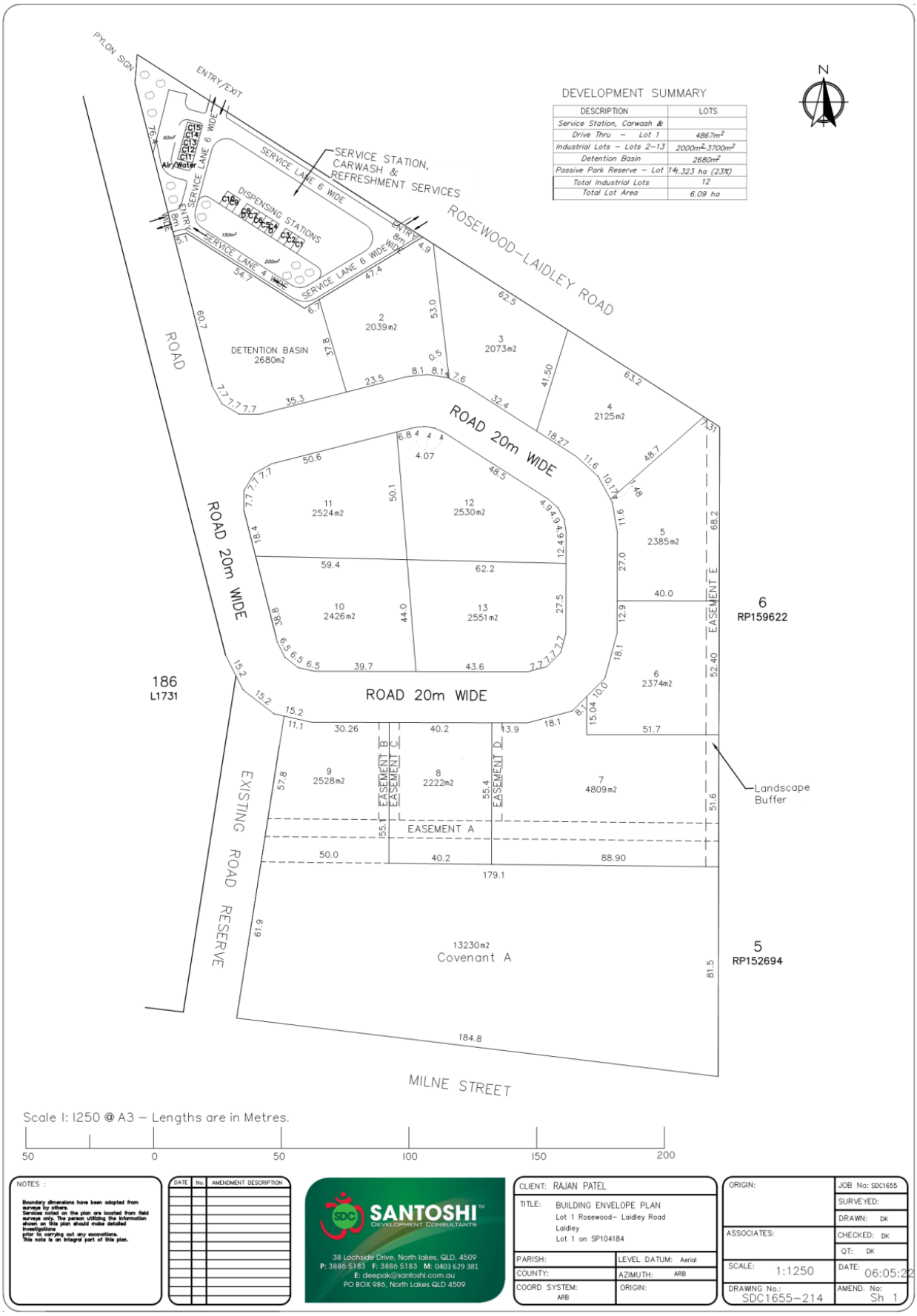
Appendix A – Plan of Development



DESCRIPTION	LOTS
Service Station, Carwash & Drive Thru – Lot 1	4867m²
Industrial Lots – Lots 2–13	2000m²-3700m²
Detention Basin	2680m²
Passive Park Reserve – Lot 14	1.323 ha (23%)
Total Industrial Lots	12
Total Lot Area	6.09 ha

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Appendix B – Daily Record Sheet

DAILY RECORD SHEET

Site Name / Location: _____

Date: _____ Time: _____ to _____

Team / Staff: _____

Growing Conditions	Temperature / Humidity	Weather Conditions	Wind Speed and direction

Zone	Hours	Weeds treated	Method	New species encountered / location

CHEMICAL INFORMATION

Equipment used	Glycophosphate	Met-methyl	Herbicide	Additive	Other	Water	Number mixed
Daily chemical totals							

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Appendix C – Risk Assessment Form and Matrix

HAZARD IDENTIFIED	RISK RATING	CONTROL MEASURE RISK ASSESSMENT
Traffic Hazard **Working in close proximity to roads**		☐Use traffic controller ☐Use of safety signs ☐Use of witches hats or temporary barrier ☐High visibility clothing
Sun Exposure **Hot conditions**		☐Reduce exposure time – rest breaks ☐Provide ample water ☐Protective clothing and sunscreen
Working With Chemicals		☐Current MSDS held ☐Adequate washing facilities ☐Hazardous substances stored and labelled correctly ☐Use of personal protective clothing ☐Rotate tasks to avoid prolonged exposure
Biological Hazard **Needle stick injury**		☐Inspect site before work commences ☐Provide appropriate waste disposal container ☐Personal protective equipment
Manual Handling **Handling heavy objects**		☐Use correct lifting and carrying techniques ☐Use lifting aids ☐Use wheelbarrow etc wherever possible ☐Ensure clear area before lifting ☐Share the load ☐Rotate activities or rest breaks ☐Appropriate personal protective clothing
Crush Impact **Cut, crush and impact**		☐Knowledge and correct use of tools ☐Appropriate personal protective clothing ☐Correct tool for job
Slips, Trips and Falls		☐Avoid carrying awkward or heavy objects on uneven ground ☐Remove all potential hazards if possible or mark with coloured tape ☐Do not leave tools lying in pathways ☐Do not run ☐Ensure boots are firmly laced
Hazardous Plants **Plants that may cause allergic reaction**		☐Identify plants which may cause allergic reactions ☐Mark area with coloured tape
Bites and Stings		☐Create disturbance on site before beginning work ☐Apply insect repellent ☐Wear appropriate personal protective equipment

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Risk Assessment Matrix

How severely could it hurt someone Or How ill could it make someone	Very likely - could happen anytime	Likely - could happen sometime	Unlikely - could happen, but very rarely	Very unlikely - could happen, but probably never will
Kill or cause permanent disability or ill health	1	1	2	3
Long term illness or serious injury	1	2	3	4
Medical attention and several days off work	2	3	4	5
First aid needed	3	4	5	6

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Appendix D - Monitoring and Evaluation Proforma

This form should be completed for each management zone within a work site. Assessment should be made of the zone as a whole.

Date		Observer	
Site name		Site location	
Zone		Area	

Dominant vegetation community

Dominant Species Canopy			
Dominant Species Mid			
Dominant Species Ground			

Notes and Comments

Quad	Species	Height (m)	Veg type	No. in quad	Stems/100m2	Av health (outlier)	Mulch depth % cover
X							
1							
2							
3							
4							
5							
6							
7							
Y							

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Appendix E – Environmental Weed Descriptions

Environmental Weed Descriptions

The following weed descriptions and figures have been reproduced from the City of Gold Coast publication titled *Environmental Weeds of the Gold Coast* (June, 2006). Weeds are categorised by growth form (i.e. groundcovers, vines, shrubs and scramblers, and trees), aquatic weeds have not been included. Within each category, weeds are listed alphabetically by common name.

Note that the following weeds are recognised by the City of Gold Coast to commonly occur throughout the City. They are not to be considered an inventory of weed species occurring on the subject site.

Groundcovers

Asparagus Fern

Asparagus aethiopicus

Herbaceous perennial with persistent, many-branched stems up to 2m long. 'Leaves' (actually short stems) up to 2.5cm, single or in clusters, pale green with a distinct mid-rib and abrupt point. Flowers are small to 0.5cm, bell-shaped and white to pale pink. Fruit is a pale green berry that matures to bright red in late winter/early spring. Able to form dense mats of tuberous roots. Spread by birds and garden dumping.

Balsam/Busy Lizzy

Impatiens walleriana

A perennial herb growing to 60cm. Stems erect, succulent and thick. Leaves ovate and serrated with a pointed tip. Brightly-coloured flowers in spring, varying in colour between pink, purplish pink, red or rose. Plants can regrow from a stem part containing a node and can also spread by seed. Grows in moist, shady areas and is particularly invasive along creeks. Often spread by garden dumping.

Bamboo

Phyllostachys spp. and Arundanaria spp. Also known as: Running bamboo

Perennial woody grasses of varying heights, 1–15m high forming dense groves. Stems erect and woody. Leaves alternating and grass-like. Reshoots from underground stems or suckers enabling it to escape from gardens. Dense growth excludes other vegetation.

Environmental Weed Descriptions

Coral Berry

Ardisia crenata, A. humilis. Also known as: A. crispa, A. crenulata

Note: Description is for *A. crenata* not *A. humilis.* Compact shrub to 1m, often single-stemmed. Leaves dark green, thick, glossy, with tightly waved edges. Flowers small, white or reddish, fragrant, in clusters. Fruit glossy, bright red and persistent on plant for a long time if not removed. Seeds germinate readily under dense canopy. Spread by birds.

Creeping Lantana

Lantana montevidensis

Perennial, sprawling, lantana species up to 25cm tall. Thin wiry stems. Leaves in opposite pairs, dark green, 2–3cm long, oval with finely-serrated margins and strong smelling when crushed. Flowers are small and either purple with a yellow or white centre in symmetrical clusters or full yellow. Small purplish to black berries in autumn. Often spread by dumping of garden waste or by seed and can invade understorey of open forest and woodland surviving on dry ridge tops and slopes with shallow, stony soils.

Crofton Weed

Ageratina adenophora

Erect, perennial herb to 1m with woody roots. Leaves opposite, trowel-shaped, bright green, 5–8cm long, 2– 5cm wide with toothed edges. White flowers in small dense clusters at the ends of branches in spring. Seeds are slender, angular, 2mm long, almost black, with fine white hairs at their tip. Colonises forest margins, stream banks and disturbed areas, preferring shaded wetter areas.

Elephant Grass and Bana Grass

Pennisetum purpureum and P. purpureum x typhoides

Tufted perennial grasses growing to 4m, resembling sugar cane in general appearance. Pale green leaves up to 4cm in width, with a strong mid-rib tapering to a fine point. The flower heads are up to 30cm in length and range in colour from yellow to purple. Forms bamboo-like, densely tufted clumps on creek banks and roadsides.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Fishbone Fern

Nephrolepis cordifolia

A widely cultivated native plant now growing as a weed outside its pre-European range. Wiry, scaly stems branch and spread over the ground, sometimes bearing fleshy tubers. Can grow densely and expand rapidly to dominate the ground surface. Fronds erect or arching to 75cm long. Spread by dumping garden waste and by spores carried by wind or water. Where fishbone fern appears to be growing naturally in undisturbed bushland and is not apparently a garden escapee it should not be removed.

Glory Lily

Gloriosa superba

Herbaceous perennial, stems to 4m that flower, produce fruit and die back annually. Leaves grow directly from stems, do not have a leafstalk and tips form a tendril. Large flowers with yellow/orange/red petals October–May. Large green capsule fruit that dries and opens to expose bright orange/brown seeds. Extremely difficult to control (regrows readily from seed and underground tubers). Spread by birds, garden and soil dumping.

Mistflower

Ageratina riparia

Sprawling, perennial herb to 60cm. Numerous branching stems produce roots at ground level. Leaves opposite to 8cm long and 2.5cm wide, with toothed edges. Flowers white, in small dense clusters at ends of branches in winter. Seeds slender, angular, 2mm long, black with fine white hairs at tip. Grows on damp hillsides and creek banks and rapidly invades disturbed areas.

Molasses Grass

Melinis minutiflora

A spreading, densely smothering perennial mat grass. Stems branched and up to 90cm long. Foliage usually sticky and with strong odour resembling molasses. Slender flower heads, in winter, are 10–20cm long and purplish in colour when young. Grows thickly from rooted runners. Spreads from disturbed areas adjacent to native forest e.g. roads and tracks. Highly flammable but recovers rapidly from fire and colonises burnt areas at the expense of native vegetation.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Mossman River Grass

Cenchrus echinatus

Clumping, annual grass to 80cm high. Flowers in a cylindrical spike of up to 50 burrs, each burr about 4- 10mm long. Leaves to about 12mm wide. Burrs attach to animal fur and clothing and are also spread by water. Often found on sandy coastal soils.

Mother-in-law Tongue

Sansevieria trifasciata

Dense, clumping groundcover preferring moist shady sites. Long, succulent, mottled greenish-yellow leaves to 1m. Often introduced to bushland by garden dumping and can be difficult to eradicate once established.

Mother of Millions

Bryophyllum delagoense, B. daigremontianum x B. delagoense and B. pinnatum.

Also known as Resurrection plant.

Bryophyllums are succulent, perennial herbs. All have fleshy stems and leaves. Flowers are orange, yellow or red on stalks held above the foliage. Plantlets may form on the parent plant or regrowth may occur from tiny leaves or stems on the ground. Numerous seeds. Spread by water, garden dumping and vegetative spread.

Para Grass

Urochloa mutica

Perennial grass up to 1m. Robust, hollow stems have a prostrate growth habit sprouting new roots wherever nodes touch the ground. End of stems erect. Leaves are hairy and dark green, up to 15cm long and 1cm wide, tapering to long, fine point. Leaf sheaths also hairy where they join stem. Flower heads to 18cm long composed of several spikes about 5cm long. Thrives on creek banks and in wetlands.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Paspalum Grass

Paspalum conjugatum, P. dilatatum, P. wettsteinii

A tough, clump-forming perennial to about 1m high with leaves to 15mm wide. Seed head on terminal stalks with 3 to 7 long, thin, finger-like spikes carrying many seeds in summer. Spikes grow horizontally outwards from stalk. Seeds are sticky and are spread by disturbance such as mowing and slashing and via birds. Other paspalum species are also weedy.

Polka Dot Plant/Freckle Face

Hypoestes phyllostachya

Small, shade-tolerant perennial herb to about 0.5m. Numerous cultivars display different foliage colours and patterns but typically have soft green leaves with white to pink spots or mottled patterns. Small lavender blue flowers in summer.

Silverleaf Desmodium/Velcro Vine

Desmodium uncinatum

A perennial, scrambling leguminous vine with deep tap root and thick stems, rooting at the nodes. Leaflets egg-shaped and covered in fine hairs, with pale silver stripe along mid-rib. Flowers are pink, mauve or blue up to 1cm long, usually appearing in early autumn. Brown seed pods have many fine velcro-like hooked hairs which attach to clothing or animals. This weed can cause a skin reaction.

Singapore Daisy

Sphagneticola trilobata

Forms dense mats of runners on the ground surface that smother native plants. Leaves are glossy, notched, somewhat fleshy and often lobed. Flowers are a bright yellow daisy. Able to reproduce by small seeds, but more likely to grow from a section of stem or root. Spread by water, garden dumping, mowing and vegetative spread.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

South African Pigeon Grass

Setaria sphacelata and other introduced Setaria spp.

Tufted perennial grass to 1.8m commonly found bordering waterways and in damp areas. Inflorescence is a spike up to 25cm long. Leaves bluish-green up to 2cm wide.

Striped Trad

Tradescantia zebrina

Succulent, perennial creeper with stems that branch and spread over the ground, able to put down roots at each node (leaf joint). Leaves to 6cm long, purple underneath and with silvery-white stripes above. Small pink-purple flowers in spring/summer. Produces seed but commonly spread in garden waste.

Tradescantia

Tradescantia fluminensis.

Also known as Trad or Wandering Jew.

Vigorous perennial creeper forming dense mats up to 60cm deep. Stems are succulent and brittle, up to 4m long. Flowers small, white in clusters at the ends of branches. Leaves are glossy, somewhat fleshy, up to 2.5cm long with parallel veins and fine hairs along the edges. Spread by water, garden dumping, mowing and vegetative spread.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Vines

Balloon Vine

Cardiospermum grandiflorum

Perennial climber to 10m or more. Stems hairy, green with ribs often streaked red, becoming thick and woody with age. Leaves divided into 9 leaflets arranged in groups of 3. Leaflets soft, hairy, clearly-veined, with broadly toothed edges. Flowers small, 4 petals, white in clusters. Fruit a papery green capsule maturing to light brown in autumn which is dispersed by water, wind and gravity.

Black-eyed Susan

Thunbergia alata

Herbaceous perennial twiner. Leaves 3-pointed, triangular or shaped like an arrow head to 7cm long, leaf stalks to 4cm. Flowers borne singly on stalks to 6cm long, orange or yellow, usually with black centre. Fruit a hairy capsule with few small seeds. Spread by garden dumping and vegetative spread.

Blue Thunbergia

Thunbergia grandiflora

Vigorous climber to 5m. Stems become woody with age. Leaves rough with toothed edges. Flowers bell or trumpet-shaped, lavender blue, throat white, about 6cm across, single flower grows from leaf joint. Once established this plant can smother its supporting vegetation and prevent new growth. Spread by vegetative spread, water and garden dumping.

Brazilian Nightshade/Climbing Nightshade

Solanum seaforthianum

Perennial shrub or twining climber from South America. Stems mostly hairless. Leaves deeply lobed, hairless except edges and veins on under surface. Flowers mauve-blue, 2–3 cm across in groups of up to 50 in spring and autumn. Fruit a bright red berry about 1cm across. Seeds spread by birds and water.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Cats Claw Creeper

Macfadyena unguis-cati

Tuberous perennial climber to 30+m. Stems red-brown ageing to green then becoming woody, to 15cm thick. Leaves divided into 3, tip leaflet forms a small, 3– clawed tendril, other leaflets to 8cm, red-brown ageing to dark green above and paler below. Flowers single or small clusters, yellow, trumpet-like, to 8cm, 5 petals. Thin capsule fruit to 45cm, green, ripening to brown in summer, with winged seeds. Tuberous, deep, extensive roots dispersed by floods and humans. Seeds dispersed by wind and water.

Climbing Asparagus Fern

Protasparagus africanus, Asparagus plumosus

Perennial twining climber with scattered spines on stems. Branches more or less horizontal. 'Leaves' (actually short stems called cladodes) to 0.7cm long. Small green-white flowers on the tips of branches followed by berries about 0.5cm across, blue-black and ripe in autumn/winter. Roots (rhizomes) fibrous and fleshy. Spread by birds and garden dumping.

Dutchman's Pipe

Aristolochia elegans

Fast growing perennial creepers. Stems age to woody. Leaves fleshy, heart shaped, paler underneath to 10cm, with long, kinked leaf stalk. Leaves and stems strongly scented. Flowers roughly pipe shaped, striking maroon colour with white thread-like markings. Fruit a capsule, green maturing to brown and opening parachute-like to release many fertile seeds. Mainly spread by wind, water and gravity.

Glycine

Neonotonia wightii

A vigorous, twining, perennial vine with a woody base. Leaves consist of 3 leaflets, dark green and broadly egg-shaped. Prolific, bean-like seed pods up to 3.5cm long contain rectangular-shaped seeds. Inconspicuous creamy flowers in late autumn. Smothers native trees and understorey vegetation.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Kudzu

Pueraria lobata

Vigorous trailing or twining perennial herb with a large tuber. One vine may cover a vast area. Stems hairy, up to 3m long. Large leaves divided into 3 leaflets, leaflets often lobed, upper surface green, greyish underneath. Flowers purple, blue or pink, up to 90 per stem in summer. Fruit a hairy pod to 9cm long. Kudzu dies down for up to 6 months a year, so the opportunities for controlling this plant are limited. Spread mainly by water, soil dumping and vegetative spread.

Madeira Vine

Anredera cordifolia

Vigorous climber up to 30m. Stems slender, climbing, becoming softly woody with age. Mature stems produce aerial tubers which is the way the plant reproduces. Leaves fleshy, heart shaped, tips rounded or shallow-indented, base lobed. Flowers cream- coloured, numerous in drooping clusters up to 20cm long, short-lived. Spread vegetatively by water, garden and soil dumping, shoe and tyre tread and animals.

Mile-a-minute / Coastal Morning Glory

Ipomoea cairica

Perennial trailing or climbing vine to 5m. Stems hairless, readily set roots when in touch with the earth. Leaves hairless to 9cm long with 5–7 lobes, middle lobe the largest. Flowers purple, pink or whitish pink, to 8cm across, solitary or in groups of 2–3. Fruit a 4- valved capsule, about 1cm across, each valve with 1 seed. Seed with wispy hairs attached. Spread by wind, water and vegetative spread.

Morning Glory

Ipomoea indica, I. purpurea

Vigorous, perennial climber to 15m. Stems twining. Flowers blue/purple/violet up to 8cm across, grouped together, sepals up to 1.5cm long. Leaves broadly egg shaped with smooth or 3 lobed edges. Stems readily set new roots even from small segments. Spread by wind, water and vegetative spread.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Passionflower

Passiflora suberosa (Corky passionflower) and P. subpeltata (White passionflower)

Slender vines with tendrils and raised glands on leaf stalks. Leaves usually 3-lobed with leaf tips of white passionflower more rounded. Corky passionflower has green stems becoming corky with age, small white to greenish flowers and a 1.5cm purple-black berry. White passionflower has larger flowers about 5cm across tinged with green and green, inedible fruit about 4cm long. Spread by dumping, birds, animals, water and gravity.

Siratro

Macroptilium atropurpureum

Creeping or climbing legume. Bright green leaflets are grouped in threes, the two lower leaflets often with a rounded lobe. Dark red purple flowers are borne on long spikes most of the year followed by narrow pods 5–10cm long. Smothers native vegetation adjoining disturbed areas and disused pastures. Seeds have a long viability.

Shrubs and Scramblers

Brazilian Cherry

Eugenia uniflora

Evergreen tree to 8m. Stems brown, new growth reddish. Leaves usually in pairs, bases rounded, dark green, glossy, aromatic, to 5cm long. Flowers 4 petals, white, solitary about 1cm across, in early spring and summer/autumn. Fruit an orange-red berry maturing to crimson, about 2cm across. Spread by birds, animals, water and ornamental plantings.

Buddleia/Butterfly Bush

Buddleja madagascariensis, B. davidii

Scrambling shrubs to 4m or climbers to 10m. Branches can be white or greyish when young and sometimes hairy. Leaves to 20cm entire or sometimes notched, scalloped or finely toothed. Dark green above and white or yellowish below. Flowers are small and tubular or funnel-shaped, yellow-orange *(B. madagascariensis)* or white to lilac purple *(B. davidii),* sweetly scented in spring-summer. Mainly spread through dumping garden clippings and vegetative growth.

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Castor Oil Plant

Ricinus communis

Perennial shrub to 5m. Stout hollow branches are dull, pale green or red turning greyish with age. Large leaves (to 60cm across) grow on long, stout, hollow stalks attached off-centre to bottom of leaf. Leaves divided into 7–9 pointed triangular segments with toothed edges and conspicuous veins. Leaves glossy, dark reddish-green when young, glossy green when mature. Fruits, to about 2.5cm diameter, are spiny, exploding, when ripe, to throw seeds several metres. Can occur in high densities along creeks and floodplains. Seeds are toxic to humans and animals.

Duranta

Duranta spp. e.g. D. erecta.

Also known as: Sky Flower, Pigeon Berry, Geisha Girl, Sheena's Gold

Shrub or small tree with drooping, occasionally spiny branches. Leaves in pairs or threes, oval, occasionally toothed, to 8cm long with a short leaf stalk. Flowers blue or pale purple, often with 2 darker stripes, trumpet shaped, in clusters in summer /autumn. Fruit rounded, orange or yellow, about 1cm across, in large clusters. Colonises forested areas, especially near waterways. Spread mainly by birds and ornamental plantings.

Easter Cassia/Winter Senna

Senna pendula var. glabrata

Shrubs that may scramble up to 3m. Compound leaves. Leaflet tips rounded, pods long and cylindrical. Flowers showy yellow. Fruit a green pod, drying with age. Seed to 0.5cm across, very long lived. Seeds spread by birds, insects, gravity and garden dumping.

Groundsel Bush

Baccharis halimifolia

Perennial shrub to 4m. Densely branched. Leaves dull or pale green, alternate, wedge-shaped and lobed in the upper part, 2.5–5cm long. Flowers male (yellow, globular) and female (white florets at end of branches) are present on different plants, 6mm across and numerous. Fruit, straw-coloured or brown, ribbed, 3mm long, topped by tufts of fluffy white hair, making it readily wind-dispersed. Flowers in autumn.

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ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Lantana

Lantana camara

Scrambling evergreen, thicket-forming shrub to 4m though can climb to a height of 20m. Stems woody, prickly and often 4-sided. Leaves coarse, veins prominent, margins serrated, finely haired, strongly scented. Flowers in combinations of pink, yellow, red, orange and cream. Fruit round to 0.8cm across, green maturing to shiny black in clusters. Roots shallow. Mainly spread by birds, animals, water and garden dumping.

NOTE: Hybrid varieties of lantana have been promoted as ornamentals including so-called 'sterile varieties'. All forms of lantana are considered environmental weeds and should not be planted.

Leucaena

Leucaena leucocephala

Shrub or small tree to 6m. Leaves compound (bipinnate). Flowers greenish to creamy-white in round flower heads about 2cm across in summer. Fruit a flat pod to 18cm long with 10–25 seeds. Seeds numerous and long-lived. A particularly bad weed along watercourses. Spread by animals, gravity and water.

Ochna/Mickey Mouse Plant

Ochna serrulata

Shrub to 3m. Bark on branches has numerous lenticels (small corky spots). Leaves to 6cm long, edges toothed and often wavy. Short leaf stalk. Flowers yellow, petals each 1cm long. After flowering sepals turn red as fruit develops. Fruit black, glossy, single- seeded. Seeds germinate readily in deep shade. A difficult weed to control as it readily re-shoots. Contact a local expert or NAMU for specific advice on how to control this weed. Spread mainly by birds.

Privet (small leaf)

Ligustrum sinense

Shrub up to 4m or more if supported. Leaves in pairs, variable in size and shape to 7cm long, short hairs on veins and stalks of young leaves. Flowers small, white with 4 petals heavily scented, in masses. Fruit oval berry to 0.6cm across in dense clusters, green maturing to purple-black, in winter. Spread mainly by birds, animals and seed fall.

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ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Yellow Bells

Tecoma stans

Shrub or tree to 7m high. Leaves compound with up to 13 leaflets. Leaflets to 10cm long, pointed with toothed edges. Flowers showy, yellow with reddish lines in throat, in spring/ summer. Fruit a long narrow capsule to 22cm, split when mature to release seeds. Seeds winged, about 1.5cm long, numerous. Mainly spread by wind.

Trees

African Tulip Tree

Spathodea campanulata

Evergreen tree to 25m. Bark rough and greenish-grey. Leaves glossy green, made up of 7 to 19 oval leaflets. Flowers scarlet, fringed with yellow and bell-shaped. Fruit is a long, woody capsule. Spreads by suckering and seed.

Broad-leaf Pepper Tree

Schinus terebinthifolius

Tree to 10m, short trunk, many branches. Stems pink- brown, hairy, with lenticels (small corky spots). Leaves compound, with a small 'wing' along leaf stalk. Leaflets to 8cm long, mid to yellow-green, sometimes red- tinged, pepper aroma when crushed. Flowers small, 5 petals, cream to white in clusters at ends of branches. Fruit many, round, green berries, ripening to orange/red, about 0.5cm across. Spread mainly by birds and water.

Cadaghi

Corymbia torelliana

Evergreen tree from North Queensland, to 30m. Trunk has a 'stocking' of grey scaly bark at the base, smooth pale green bark above. Leaves pale green, sometimes with a pink tinge, shape variable, wavy edges to 16cm long. Flowers in masses of scented, cream-coloured balls. Fruit almost round, woody capsule with many tiny seeds. Mainly spread by wind and ornamental plantings. Known to negatively impact on native bees.

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ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Camphor Laurel

Cinnamomum camphora

Large spreading tree to 20m. Bark greyish with prominent vertical cracks on trunk. Young leaves and stems with a reddish tinge. Mature leaves green above, dull green below, strongly scented of camphor when crushed. Small pale flowers. Fruit a 1cm berry, green, ageing to black. Mainly spread by birds and seed fall.

Chinese Celtis

Celtis sinensis

Large, semi-deciduous tree to 20m. Stems smooth, light grey with prominent lenticels (small corky spots). Leaves to 8cm long, dark green above, paler below. Upper leaf edge coarsely toothed, leaf bases uneven. Flowers tiny, greenish, in spring/summer. Fruit about 0.5cm, green ageing to orange/red in summer/autumn. Spread mainly by birds and water.

Cocos Palm

Syagrus romanzoffianum.

Also known as: Queen palm Arecastrum romanzoffiana, Cocos plumosa

Fast-growing tree to 21m. Sturdy ridged trunk. Leaves green to 4.5m long with long, strappy leaflets radiating from the central leaf stem. Flowers small and inconspicuous. Fruit a fleshy orange berry up to 2.5cm long. Spread by flying foxes, birds, gardening dumping and other animals.

Coral Tree

Erythrina indica, E. crista galli and E. sykesii

Thorny deciduous trees with bright red flowers. Has ability to spread by suckering or from broken off pieces (the wood is soft) of trunk or branches. Leaves bright green consisting of 3 large leaflets, the central one on a longer stalk. Thrives on disturbance and is spread by dumping and suckering. Spread by water (i.e. segments in flood waters).

BURCHILLS
ENGINEERING SOLUTIONS

Environmental Weed Descriptions

Privet (large leaf)

Ligustrum lucidum. Also known as: Broad-leaf Privet

Fast-growing evergreen large shrub or tree to 10m. Stems with many small corky dots (lenticels). Leaves to 12cm long, dark shiny green above, paler and dull below, hairless, pointed at tip. Leaf stalk hairless, 1– 2cm long. White, scented flowers each 0.5cm, conical clusters to 25cm on branch tips. Fruits fleshy, oval- round, to 0.9cm, ripen in winter from green/red/black. Spread by birds, animals, and water.

Slash Pine

Pinus elliotii/Pinus radiata

Leaves 20–30cm long, female cones lopsided. Evergreen, resinous and aromatic trees to 50m. Leaves long, needle-like in bundles. Flowers in separate male and female cones. Female cones open to release dark seeds with wings 2–3cm long. Spread by wind and from old plantations and gardens.

Umbrella Tree

Schefflera actinophylla

Tree to 10m, often multi-stemmed. Leaves compound with stalks up to 40cm long. Leaflets arranged umbrella-like (palmately), up to 30cm long. Small red flowers in sprays held above the foliage. Fruit dark red to 0.5cm long with a single seed. North Queensland native invading local bushland. Spread readily by birds, bats and garden dumping.

Note: Do not inject stem while plant is in flower (affects parrots feeding on the nectar).

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Appendix F – Stewardship Proforma

Stewardship Proforma

STEWARDSHIP REPORT

Property Address:	Mailing Address	Covenant
_____	_____	Area: _____
_____	_____	File no. _____
_____	_____	
Owner: _____	Contact: _____	Phone no. _____
Visited by: _____	Previous Visit: _____	Next visit: _____
Date:_____	Date:_____	

GENERAL

Total native vegetation cover	**Tree Cover**	**Understorey Cover**
Indicate total percentage of covenant area occupied by native vegetation	Indicate total percentage of covenant area occupied by trees greater than 4m high	Indicate total percentage of covenant area occupied by understorey shrubs
<5%	<5%	<5%
5-20%	5-20%	5-20%
20-50%	20-50%	20-50%
50-75%	50-75%	50-75%
75-100%	75-100%	75-100%

Vegetation replacement	**Ecological Processes**	**Habitat Diversity**
Natural regeneration is occurring in:	There is evidence of:	There is evidence of:
☐ tree species	☐ seed set	☐ trees with hollows
☐ shrub species	☐ pollination	☐ leaf litter
☐ native groundcover species	☐ invertebrate diversity	☐ fallen logs & timber
		☐ trees with hollows

Fence Condition

Where covenant areas are fenced, its condition:

☐ good
☐ in need of minor repair
☐ poor

Modifications

Have there been any structural additions (eg. New tracks, buildings) to the covenant area since the last visit?

_____
_____
_____

Landholder Observations

Note any changes in flora and fauna that may have disappeared or reappeared; changes in population sizes; successful breeding; significant even ts such as fire, floods or storms.

_____
_____
_____
_____
_____

BURCHILLS ENGINEERING SOLUTIONS

Stewardship Proforma

THREATS

Pest Plants

Major Species	Extent of Cover (%)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Pest Animals

Indicate the presence of the following:

- ☐ Cats
- ☐ Dogs
- ☐ Foxes
- ☐ Rabbits
- ☐ Mynahs
- ☐ Other

Other Threats

Indicate the presence of the following:

- ☐ Erosion
- ☐ Soil Disturbance
- ☐ Soil Compaction
- ☐ Rubbish Dumping
- ☐ Firewood Collection
- ☐ Nutrient Input
- ☐ Spray Drift
- ☐ Other

Dieback

Is there any evidence of vegetation dieback?

_____

Extent of covenant affected:

_____ _____

Main species affected:

_____

Likely cause(s):

_____

MANAGEMENT ACTIONS UNDERTAKEN

Pest Plant Removal

Species	Removal Technique	Year	Area
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Pest Animal Removal

Species	Removal Technique	Year
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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Appendix G – Amendments to the Covenant Management Plan

List of Amendments to Covenant Management Plan

All amendments to successive issues of this Covenant Management Plan are to be listed in the table below.

Issue No.	Date of Issue	Amendments Made		
		Section	Page No.	Amendment

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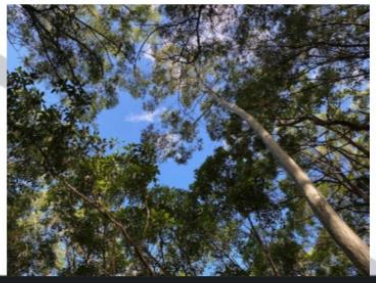
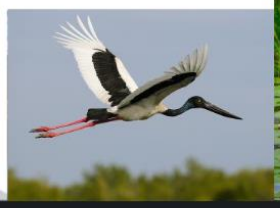

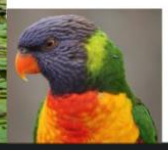

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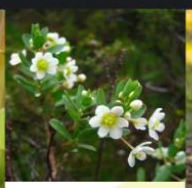


PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

Queensland Government

SARA ref: 2106-23287 SRA

Date: 31 May 2022

Rosewood Laidley Road, Laidley
Vegetation, Fauna & Koala Management Plan

Client: RAMA Real Estate
Project No: BE210316
Document No: BE210316-RP-VFKMP-01

May 2022

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Document Control Record

Prepared by:	Kaidon Anderson
Position:	Environmental Scientist
Date:	May 2022

Approved by:	Caroline Kelly
Position:	Principle Environmental Scientist
Date:	May 2022

Version No.	Description	Date	Prepared	Approved
0	Initial Issue	15.12.2021	KA	CK
01	Revised Issue	10.05.2022	KA	CK

Recipients are responsible for eliminating all superseded documents in their possession

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400

Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email: admin@burchills.com.au

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Executive Summary

Burchills were engaged by RAMA Real Estate to prepare a Vegetation, Fauna and Koala Management Plan for a propsoed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

Field surveys were undertaken during August and November 2021. Three (3) vegetation associations were classified across the site including:

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. Of these species recorded on-site, 40 were native and four (4) were introduced. No conservation significant species of fauna were encountered on-site, nor was any direct or indirect evidence observed that would suggest the site is utilised by conservation significant fauna species.

Clearing of the entirety of Vegetation Unit A and majority of Vegetation Unit C will be required to facilitate the works. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B. The layout was designed to avoid and minimise impacts on the areas of the site with the highest value Core Koala Habitat to the greatest extent possible. Significant Residual Impacts are proposed to be mitigated by a combined financial and restoration offset to achieve a suitable conservation outcome.

This management plan provides recommendations for the clearing, construction and restoration works to mitigate impacts on vegetation and fauna and incorporates a Koala Management Plan that provides specific recommendations for this conservation significant species.

All works will be undertaken in accordance with this management plan and the conditions of approval.

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Table of Contents

1. Introduction 7
1.1 Scope 7
1.2 Proposed Development 7
2. Site Description 9
2.1 Location Context 9
2.2 Existing vegetation 11
2.3 Fauna Survey Results 13
2.4 Topography and Drainage 13
3. Site Constraints 15
4. Responsibilities and Roles 17
5. Vegetation Clearing 18
6. Vegetation Management Plan 19
6.1 Pre-operational Works Actions 19
6.1.1 Site Inductions 19
6.1.2 Tree Protection Fencing 19
6.2 Operational Works 21
6.3 Methods of Vegetation Removal and Disposal 21
6.4 Protection of Vegetation to be Retained 22
6.5 Erosion and Sediment Control 22
7. Fauna Management Measures 23
7.1 Pre-operational Works Actions 23
7.2 Operational Works Actions 24
7.2.1 Habitat Features 27
7.2.2 Terrestrial Species 27
7.2.3 Native Bees 27
7.2.4 Dam Dewatering 28
7.2.5 Injured Wildlife 28
7.3 Post-Clearing Works Actions 28
7.3.1 Reporting 28
8. Koala Management Plan 29
9. Conclusions 30
10. References 31

Tables

Table 3.1 Management Constraints for Subject Site 15
Table 4.1 Roles and Responsibilities 17
Table 7.1 Pre-clearing Fauna Mitigation Strategy 24
Table 7.2 Vegetation Clearing Fauna Management Measures 26

Figures

Figure 1.1 Proposed Plan of Development (Santoshi Development Consultants 2021) 8
Figure 2.1 Site Location (Google Maps, 2021) 9
Figure 2.2 Site Aerial Photography (MetroMap 2021) 10
Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)* 10
Figure 2.4 Mapped vegetation associations 12
Figure 2.5 Site Topography 14
Figure 6.1 Tree Protection Fencing Detail 20

Appendices

Appendix A – Vegetation Clearing and Retention Plan
Appendix B – Fauna Species Recorded On-Site
Appendix C – Emergency and Veterinarian Contact Details

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Definitions and Acronyms

AS4970	Australian Standard AS4970: Protection of trees on development sites
DBH	Diameter at Breast Height measured in accordance with AS4970
DES	Queensland Department of Environment and Science
LVRC	Lockyer Valley Regional Council
Koala Spotter	A person who has qualifications and experience, or demonstrated skills and knowledge in (a) locating koalas in koala habits; or (b) conducting arboreal fauna surveys
Project Arborist	Minimum AQF Level 5 Arborist as identified in this s4 of this VMP
Site Supervisor	Person responsible for all site works
Spotter Catcher	DES licensed fauna spotter catcher
TPZ	Tree Protection Zone as determined in accordance with AS4970

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1. Introduction

This Vegetation, Fauna & Koala Management Plan (VFKMP) has been prepared for RAMA Real Estate for a proposed industrial subdivision at Lot 1 SP104184 Rosewood Laidley Road, Laidley, within the Lockyer Valley Local Government Area (the subject site).

This plan has been prepared in accordance with industry guidelines and standards and outlines all reasonable measures to be undertaken during the construction phase of the development to minimise and / or prevent harm to native fauna and flora on and adjacent to the subject site.

1.1 Scope

The scope and objectives of this VFKMP are to:

- Summary of existing environment including vegetation communities, koala habitat and other ecological values based on the results of the Ecological Site Assessment;
- Provide a description of vegetation and habitat values impacted by proposed clearing;
- Determine the level of fauna management required based on site observations;
- Outline management strategies and actions to be implemented to mitigate the risk of harm to native fauna and retained vegetation on site; and
- Provide a management plan specific to the koala (*Phascolarctos cinereus*) including:
  (a) all potential risks to koalas for all construction activities associated with the proposed development including (but not limited to) clearing, earthworks and building works
  (b) all management measures that will be implemented to address those risks
  (c) the process and measures to address accidental injury of death of koalas
  (d) the process for implementing the management plan including:
  (i) identifying the person responsible for implementing the plan (e.g., site supervisor, foreman)
  (ii) the process for training all contractors working on the site to comply with the plan; and
  (e) the proposed approach to ensuring compliance with the clearing requirements prescribed in section 10 and 11 of the Nature Conservation (Koala) Conservation Plan 2017.

1.2 Proposed Development

The proposal seeks to reconfigure the existing 6.09ha lot into 13 lots, comprising one (1) 4,867m² lot that will house a service station in the northwest of the site, 12 industrial lots across the balance of the site varying between 2,000m² and 3,700m², one (1) 2,680m² detention basin. One (1) 13,230m² environmental covenant is proposed to be registered over Lot 9 within the south of the site. The northern portion of the currently undeveloped road reserve on the site's western boundary will be constructed to facilitate site access. The southern portion of the site fronting Milne Road is proposed to be resumed by Lockyer Valley Regional Council.

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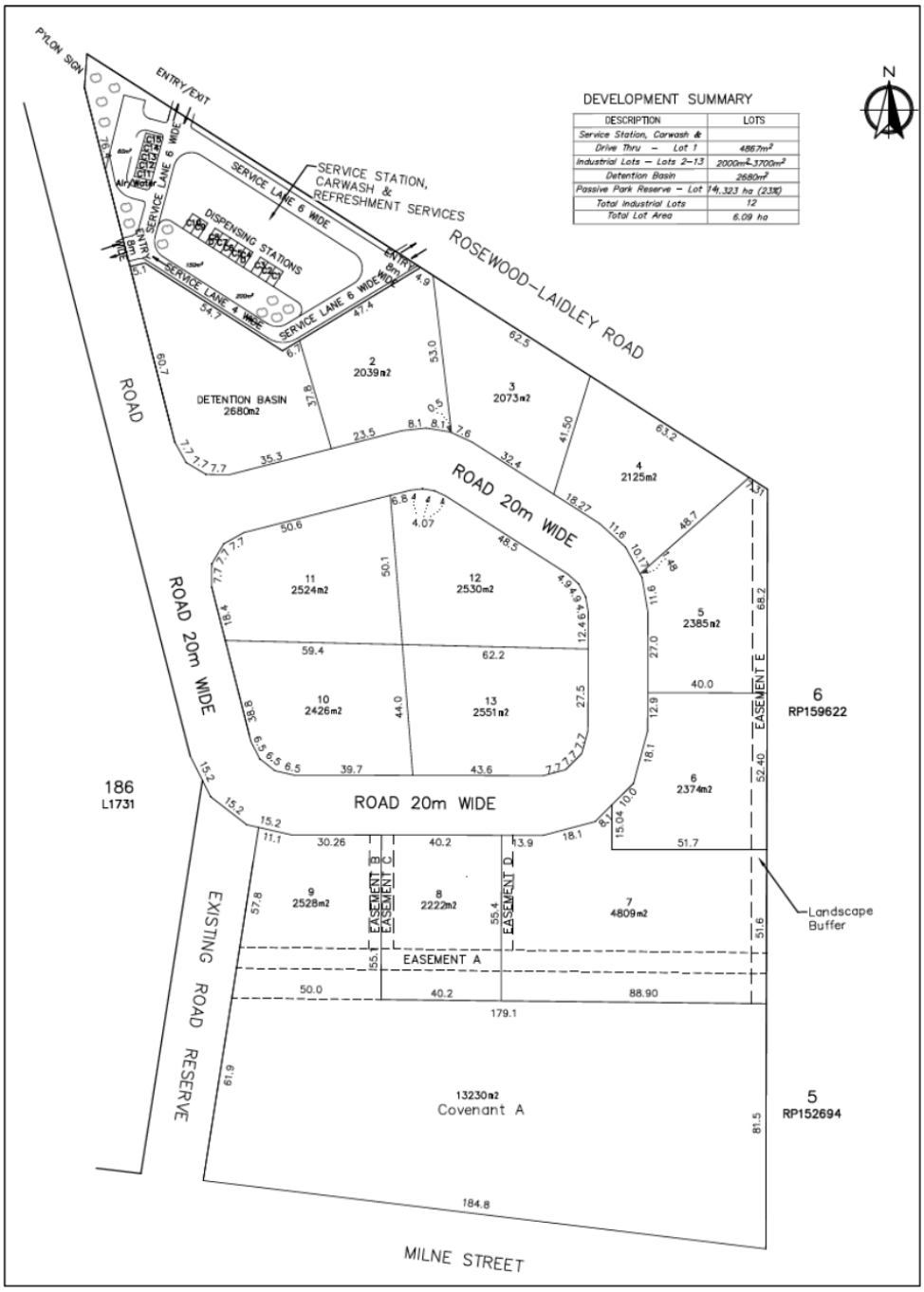

Figure 1.1 Proposed Plan of Development (Santoshi Development Consultants 2021)

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2. Site Description

2.1 Location Context

The subject site is located within Laidley, approximately 2.5km south of the town centre and occupies an area of approximately 6.09ha (Figure 2.1). The site is mostly vegetated with no existing dwellings or structures (Figure 2.2). A small constructed dam is present within the northwest part of the site

The site falls within the Urban Footprint under the *Southeast Queensland Regional Plan 2017* and is zoned as Industrial under the *Laidley Shire Planning Scheme 2003 Version 3* (Figure 2.3). The surrounding land use pattern is generally industrial and rural.

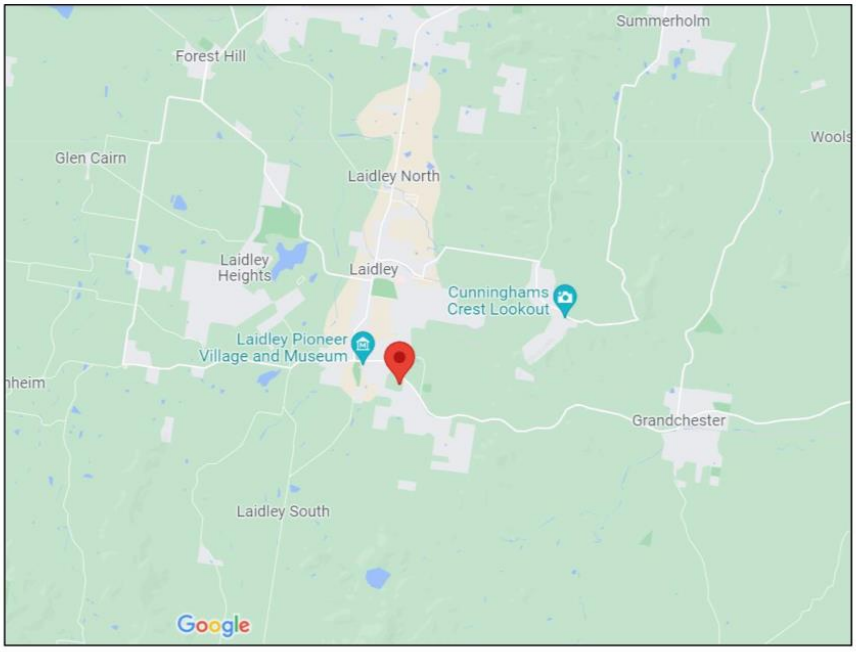

Figure 2.1 Site Location (Google Maps, 2021)

Figure 2.2 Site Aerial Photography (MetroMap 2021)

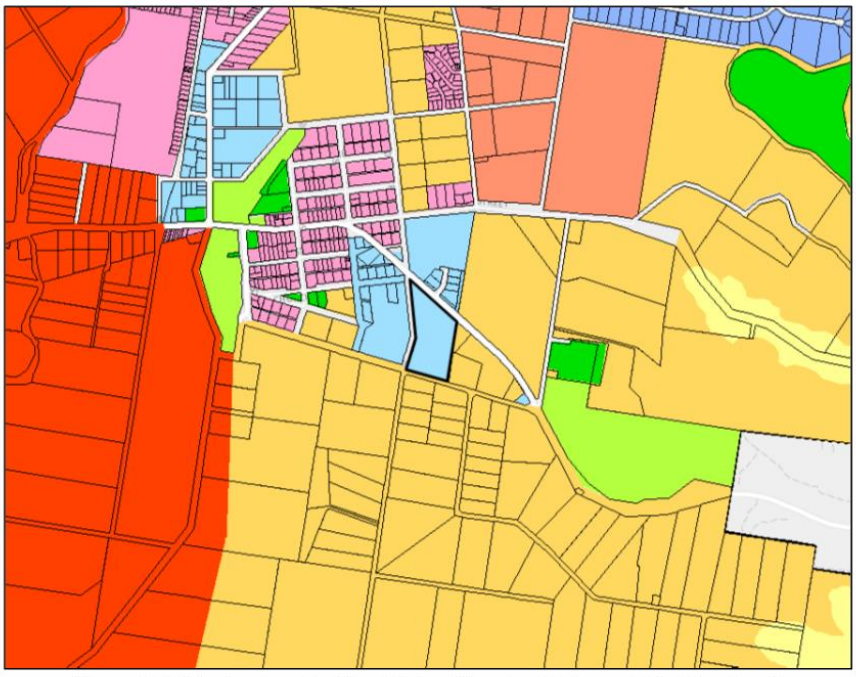

Figure 2.3 Site Zoning (*Laidley Shire Planning Scheme 2003 Version 3)*

2.2 Existing vegetation

The Ecological Site Assessment (ESA; Burchills, 2022b) recorded a total of 51 species of flora comprising of 18 native species and 33 non-native species, including nine (9) species identified as Restricted Invasive Plants under the *Biosecurity Act 2014*.

Three (3) vegetation associations were mapped over the site (Figure 2.4):

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation. details regarding the mapped vegetation associations are provided in the Ecological Site Assessment (Burchills, 2022b).


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0 10 20 30 40 50m
Lot 1 Rosewood Laidley Road, Laidley
Figure 2.4
Vegetation Units
Location of the site within Lockyer Valley Region
N
Legend
Site Location
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-11-2021
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
BURCHILLS
SCIENCE AND ENGINEERING

2.3 Fauna Survey Results

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. A list of these species is provided in Appendix B.

For this report, a habitat tree is defined as *"a living or dead tree greater than 80 centimetres diameter at 1.4 metres that has one or more hollows within its trunk or branches greater than 10 centimetres in entrance diameter".* One (1) tree meeting this criteria was present on the site – a stag located in Vegetation Unit C (refer to Figure 2.4).

No species scheduled as Endangered, Vulnerable or Near Threatened (EVNT) under the Queensland NCA and / or Commonwealth EPBC Act were observed within the subject site during surveys. Targeted searches for EVNT fauna (e.g. Koala SAT surveys) did not identify any use of these species on the site.

Three (3) conservation significant species are identified as possibly occurring within the subject site based on presence of suitable habitat and / or foraging resources: *Hirundapus caudacutus* (White-throated needletail), *Phascolarctos cinereus* (Koala) and *Pteropus poliocephalus* (Grey-headed flying-fox). The complete results for this analysis including a description of habitat requirements for each species are presented in the Ecological Site Assessment (Burchills 2022b).

2.4 Topography and Drainage

The subject site falls within the Laidley Creek sub-catchment, which is a tributary of Lockyer Creek, and the Brisbane River. No waterways or drainage lines are present on the site, although a small constructed dam is present. The site rises to an elevation of 141m AHD within its centre, falling to northwesterly to 115m AHD and southeasterly to 121m AHD on its northern and southern boundaries, respectively. At a site level, stormwater is conveyed via sheetflow to both the northwest and southwest of the site from this central point.

Figure 2.5 Site Topography

3. Site Constraints

A summary of the major management constraints present on the site is outlined in Table 3.1

Table 3.1 Management Constraints for Subject Site

Constraint	Present	Absent	Comments
Easements and/or Restrictions on Title		x	No easements are present on the site[1].
Zoning Provisions		x	The subject site is zoned as Commercial[2].
Biodiversity, Waterways and Wetlands	x		The subject site is mapped within the Moderate Environmental Significance Area[2]. No wetlands or watercourses are mapped within the site[2].
Bushfire Risk	x		Approximately 50% of the site is mapped as Medium Potential Bushfire Risk[2].
Nature Conservation Areas		x	There are no Nature Conservation Areas present on the site[2].
Airport Environs		x	There are no Airport Environs present on the subject site[2].
Aboriginal Cultural Heritage		x	No known Aboriginal cultural heritage areas are present on the subject site[2].
European Cultural Heritage		x	No known European cultural heritage areas are present on the subject site[2].
Acid Sulfate Soils - Risk		x	The entirety of the subject site is present above Land at or Below 20m AHD[1].
Flood Prone		x	No flood hazard is present on the site[2].
Landslide Hazard and Steep Land	x		Areas of Slopes Greater than 15% are mapped within the site[2].
Tree Preservation Order		x	No Tree Preservation Orders are present on the subject site[2].
Mapped Vegetation	x		Category C High Value Regrowth Vegetation is mapped over the majority of the site[1].
Mapped Essential Habitat	x		Mapped Essential Habitat for *Phascolarctos cinereus* (Koala) and *Adelotus brevis* (Tusked frog) is present on the subject site[3].
Wildlife Online – Threatened Species	x		Wildlife Online search indicates that one (1) species of threatened flora and two (2) species of threatened fauna and five (5) Special Least Concern species of fauna have been recorded within 2km of the site[3].
Observed Threatened Species - Fauna		x	No evidence of conservation significant fauna was observed on the site[4].
Observed Threatened Species - Flora		x	No evidence of conservation significant flora was observed on the site[4].

Constraint	Present	Absent	Comments
South East Queensland Koala Conservation Strategy	x		Core Koala Habitat is mapped within the site. The site is not within a Koala Priority Area[1].

Notes:

[1] – As identified in Queensland Globe (2021)

[2] – As identified in the Laidley Shire Planning Scheme Version 3 Interactive Mapping

[3] – As identified by Wildlife Online Species Search results.

[4] – As identified in the Ecological Site Assessment (Burchills 2021).

4. Responsibilities and Roles

The site construction manager (Superintendent) is responsible for:

- All site works including overseeing vegetation clearing, health and safety of fauna and adhering to the development Conditions, Council guidelines and Australian Standards including AS4970.
- Overseeing implementation of this Vegetation and Fauna Management;
- Provision of advice in regard to tender and contract specifications and documentation;
- Provision of advice to site contractors; and
- Inductions for all site workers.

Roles and Responsibilities are further detailed in sections 5 and 6 of this VFMP and summarised in Table 4.1. Contact details should be completed prior to the commencement of works.

Table 4.1 Roles and Responsibilities

Requirement	Responsibility	Contact Details
Engage Project Arborist	Project Manager Superintendent	
Engage a registered fauna spotter-catcher	Project Manager Superintendent	
Undertake arboricultural impact assessment of trees to be retained – if required	Project Arborist	
Undertake Preclearing Fauna Assessment	Spotter Catcher	
Awareness of roles and responsibilities	Site Supervisor	
Supervise works within/near TPZs of retained trees – if required	Project Arborist	
Mark all habitat features such as hollows, wood stockpiles and nest sites	Spotter-catcher	
Mark 'no-go' zones around vegetation to be retained	Superintendent	
Relocate habitat features	Spotter-catcher	
Fauna flushed or hand caught prior to clearing	Spotter-catcher	

5. Vegetation Clearing

Clearing of all of Vegetation Units A and majority of Vegetation Unit C within the site will be required to facilitate the proposed works, including earthworks within the site and the road reserve in the west. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B.

The proposed vegetation clearing will be mitigated through a financial offset that is detailed in the KHVA (Burchills 2022c).

Recommendations are provided in Section 7 of this report to mitigate impacts and minimise the risk of physical harm to fauna during the proposed works.

The Tree Clearing Plan provided in Appendix A shows the impact area, vegetation to be removed and retained, clearing direction and vegetation protection fencing that is required to be in place during clearing works.

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6. Vegetation Management Plan

The actions outlined in the following sections are to be adhered to during operational works on the subject site.

6.1 Pre-operational Works Actions

Prior to the commencement of works the Superintendent is responsible for ensuring that the following occurs:

- Tree protection fencing has been installed around the Tree Protection Zones of protected vegetation to be retained on adjoining sites; and
- Any required remedial and / or protective tree works (e.g. root pruning, canopy pruning, etc).

6.1.1 Site Inductions

A responsibility of the Superintendent will include provision of site inductions for all staff who will be working on site. The purpose of the site induction is to instruct all contractors and sub-contractors on their responsibilities regarding the protection of vegetation. All site workers must attend an induction; a record will be kept of all persons attending inductions and cards will be issued to site workers upon completion. This procedure will enable Lockyer Valley Regional Council Officers to ensure that all site workers have been made fully aware of their responsibilities associated with vegetation management.

6.1.2 Tree Protection Fencing

To ensure the ongoing viability of trees to be retained, tree protection fencing is to be installed in accordance with *AS4970-2009: Protection of trees on development sites* (Figure 6.1). The fencing will ensure that no earthworks or prohibited activities occur within areas that could adversely impact upon trees to be retained.

Tree protection fencing must comply with the following:

- In accordance with *AS4970-2009 Protection of trees on development sites*, fencing is to be installed before any machinery or materials are brought onto the site;
- Fencing is to be installed prior to any pre-start meetings with Lockyer Valley Regional Council Officers;
- Fencing is to remain in place for the duration of operational works (as determined by the Superintendent);
- Signage is to be displayed on the exterior of the tree protection fence that displays contact details for the civil contractor;
- Signs must be made in accordance with *Australian Standard AS 1319-1994; Safety signs for the occupational environment*; and
- Signage is to remain in place for the duration of the operational works.

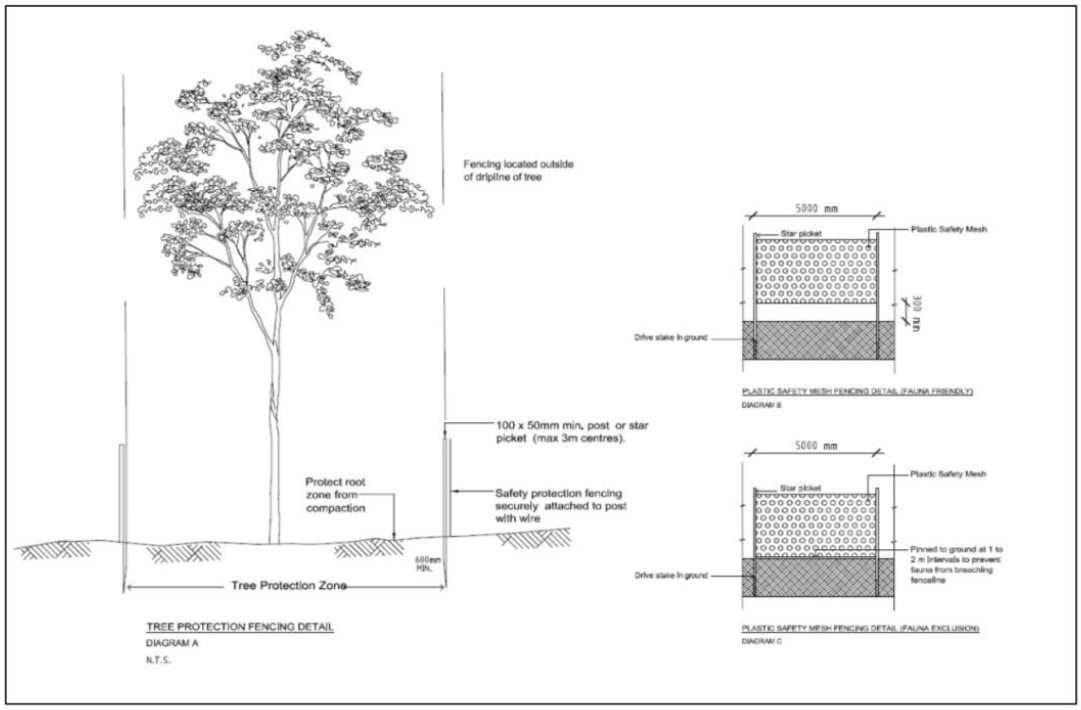

Figure 6.1 Tree Protection Fencing Detail

Non-essential works are to be excluded from the Tree Protection Zones and all construction related activities are to be in accordance with approved plans. If temporary or permanent vehicle access is required through Tree Protection Zones, compaction bridging is to be installed and maintained in accord with *AS4970-2009: Protection of trees on development sites.*

Within the Tree Protection Zone, the following activities are not permitted:

- Storage and mixing of materials;
- Construction of unapproved pathways / trails;
- Vehicle parking;
- Earthworks;
- Construction of site office or shed;
- Storage of machinery and / or vehicles;
- Dumping of site waste;
- Liquid disposal;
- Stockpiling of mulch / chipped material / soil, rubble or debris;
- Refuelling of machinery;
- Wash down and clearing of equipment;
- Lighting of fires;
- Unauthorised application of pesticide, herbicides or chemicals;

- Erosion resulting from site works;
- Unauthorised vegetation removal; and
- Introduction of non-native species.

6.2 Operational Works

To minimise disturbances to environmental values during the Construction Phase, the following general recommendations are provided:

- All parties involved in construction works of the site should be aware of:
  - 'No go' areas, such as drainage lines, tree protection zones and areas of vegetation to be retained, where construction vehicles are not permitted; and
  - The importance of the nature conservation values associated with the site;
- Penalty provisions for non-compliant construction contractors should be considered by the development proponent. For example, a damage clause could be incorporated into the contract document such that where any vegetation or habitat values, which are identified as a 'no go' area, are damaged, the contractor will pay to the proponent a specified monetary penalty;
- Appropriate scale machinery should be used;
- Construction methods used should support the retention of important natural values;
- Undergrowth should be retained where possible during construction. Surface grass cover, leaf litter and mulch should be retained to minimise erosion and runoff;
- Machinery used in weed infested areas should be quarantined or thoroughly cleaned before use in areas of little or no weed infestation;
- Site entry / exit points should be limited and clearly identified on the ground (e.g. with star pickets); and
- Vehicle servicing should be conducted off site in a suitable location to avoid the risk of fuel / chemical spillage.
- Maintain a high standard of housekeeping and ensure that materials are not left where they can be washed or blown away;
- Regularly remove waste from the site during construction.

6.3 Methods of Vegetation Removal and Disposal

In order to minimise waste from the site, all felled timber will be recycled. Tree species suitable for milling will be removed from the site and transported to a timber milling establishment. Remaining timber is to be chipped and mulched on-site. Where possible, chipped and mulched material is to be used on site for the restoration works and batter stabilisation or other approved site works. This material will be stockpiled for a minimum of six (6) weeks prior to use on-site to prevent nitrogen drawdown.

Non-recyclable debris is to be transported from the site and disposed of at an approved Council waste facility. Pit burning or any other method of combustion of vegetation is prohibited, both on or off-site. Any declared and / or environmental weeds removed from the site are to be disposed of at an approved Council green waste facility.

6.4 Protection of Vegetation to be Retained

Vegetation on adjoining properties will be protected during the clearing and operational stages of the development. The following general protective measures apply to this vegetation:

- Tree Protection Zones are to be fenced in accordance with this report and construction activities are to be confined to the approved development footprint;
- Stem wraps or other protective devices are to be implemented where deemed necessary by the Superintendent to protect trunks and branches from damage during specific demolition and construction activities;
- Where a protected tree's tree protection zone (TPZ), root zone and / or trunk could be damaged by the proposed earthworks, a qualified (AQF5) Arborist should be contracted to:
    - Provide advice regarding the protection of the subject tree(s);
    - Treat any roots that may be exposed during the construction; and
    - Treat any damage that may occur during construction.
- No materials, substances (e.g. herbicides, fuel, concrete, etc.) or machinery are to be stored within Tree Protection Zones. Any potentially hazardous substances are to be safely stored within a secure area away from vegetation to be retained;
- Sufficient training is to be provided to all site staff in relation to vegetation protection measures;
- Pruning of protected trees is to occur as only where determined necessary by a qualified (AQF5) Arborist (e.g. crown thinning, removal of dead wood or damaged or overhanging limbs to promote sound tree form and health) – any such work on the trunk, foliage, or root system of the tree must adhere to the *Australian Standard AS 4373-2007: Pruning of amenity trees;*
- No protected tree is to be 'topped' and 'spur' or 'spike' climbing of any protected tree is to be avoided;
- If root pruning of a protected tree is required, it is to be undertaken using a high pressure, needle point water jet; and
- Regular assessment of trees is to occur to ensure ongoing health during operational works.

Any damage to protected trees, or surrounding soil, is to be remedied as soon as is practicable.

6.5 Erosion and Sediment Control

An Erosion and Sediment Control Plan (ESCP) will be prepared for the proposed works at Detailed Design / Operational Works phase. The ESCP will be prepared in accordance with the *Planning Scheme's Sediment and Erosion Control Constraint Code*, the *Soil Erosion and Sediment Control Engineering Guidelines for Queensland Construction Sites* (The Institution of Engineers, Australia Queensland Division, June 1996) and industry best practices.

7. Fauna Management Measures

The actions outlined in the following sections are to be adhered to during the operational works on the subject site. They have been adapted or directly taken from the *Queensland Code of Practice for the Welfare of Wild Animals Affected by Land-Clearing and other Habitat Impacts and Wildlife Spotter/Catchers* (Hanger and Nottidge, 2009).

The principal management strategies are to:

- Identify wildlife and habitat features;
- Avoid impacting wildlife and habitat features where possible; and
- Mitigate and minimise these impacts

Wildlife is often unpredictable and highly mobile. Mitigating impacts is necessary in the overall management of fauna. Where wildlife is present, vegetation clearing should not commence until fauna have relocated or appropriate mitigation and management measure have been implemented.

7.1 Pre-operational Works Actions

All fauna management procedures shall be undertaken by a qualified wildlife specialist who holds a spotter-catcher licence issues by the Queensland Department of Environment and Science (DES). The spotter-catcher must undertake a pre-clearing clearing inspection of the site to identify and mark (i.e. using flagging tape) all potential habitat values (e.g. tree hollows, nests, fissures, dreys, arboreal termitaria, ground resources) that require specific management during clearing operations. A pre-clearing assessment must be undertaken by the spotter-catcher no more than two (2) weeks prior to the commencement of clearing and the pre-clearing inspection report provided to Council at least two (2) business days prior to the pre-start meeting for vegetation clearing.

The spotter-catcher Pre-Clearing report should identify the location of habitat features and specific operational works actions required prior to / during and after clearing.

The Pre-Clearing Report will include at a minimum:

- Habitat features identified and / or marked on site (hollow-bearing trees, nests, water bodies etc.)
- Fauna species observed during the assessment and expected to be encountered during works;
- Available habitat on and / or adjacent to the site suitable for release of fauna expected to be encountered; and
- Protection measure to be implemented including emergency contact information for nearest vet clinic and / or wildlife carer.

The spotter-catcher will be engaged to assess the level of use of native fauna and management of fauna during construction activities. The number of wildlife specialists contracted during works shall be determined by the number of machinery pieces in operation used for clearing. Typically, one (1) spotter-catcher will be required per machine.

A summary of the pre-clearing fauna mitigation strategies is presented in Table 7.1.

Vehicle exclusions and vegetation protection fencing measures must be in place prior to the pre-start meeting. All site staff are to be made aware of the no-go zones on site and the management measures adopted to minimise impacts to both fauna and flora.

Table 7.1 Pre-clearing Fauna Mitigation Strategy

Activity	Management Measure	Responsibility
Engage a registered fauna spotter-catcher	A registered spotter-catcher will need to be present on site for the duration of vegetation clearing activities. One spotter-catcher is required per machine. The spotter-catcher is the only person permitted to handle wildlife. The spotter-catcher is to be present at the pre-start meeting.	Superintendent / Project Manager
Awareness of roles and responsibilities	At the pre-start meeting, all site personnel will be made aware of their roles and responsibilities in relation to the welfare of wildlife.	Superintendent / Project Manager
Mark all habitat features such as hollows and nest sites	Nest and hollows should be clearly marked prior to clearing. Machinery operators made aware of these markings. Active nests should be avoided where possible. Marked trees / habitat features to be removed in the presence of the spotter-catcher.	Spotter-catcher
Mark 'no-go' zones around vegetation to be retained	Exclusion fencing or bunting should be erected around vegetation that is to be retained in accordance with this VFKMP. All site personnel made aware of the no-go zones on site.	Superintendent
Fauna flushed or hand caught prior to clearing	Immediately prior to the commencement of clearing works each day, the spotter-catcher is to examine the canopy and area to be cleared and remove nests, fauna or habitat features as required. Mobile species should be flushed towards retained vegetation on site or in adjacent areas. Species that are not highly mobile (e.g. skinks, snakes, small mammals), should be hand caught and relocated to suitable vegetation. Any dams or waterbodies to be filled are to be netted and fauna relocated in accordance with the conditions of the Spotter Catcher's license.	Spotter-catcher

7.2 Operational Works Actions

A licensed spotter-catcher must be present during all clearing activities. The site should be inspected by a spotter-catcher immediately prior to clearing and trees with hollows, termitaria and / or active nests clearly marked. The spotter-catcher will be in constant radio communication with machinery operators and on-ground clearing crews.

If clearing is undertaken over multiple days, prior to the commencement of works for clearing each day, the spotter-catcher is to examine the canopy and area to be cleared for arboreal mammals, nests and terrestrial habitat features, and remove and relocate fauna, nests or habitat features as

required. All terrestrial fauna should be flushed from the vegetation remnants immediately prior to clearing.

A cherry-picker is to be used for the removal of nests and for the dismantling of hollow bearing trees where necessary. However, this will only be undertaken where access and stable foundations for the cherry picker are available and where the operation of the cherry picker will achieve compliance with *Interim Australian Standard AS1418.10 [Int-2004]: Cranes, hoists and winches. Part 10: Elevating work platforms* and any other applicable Occupational Health and Safety requirements. The wildlife specialist will determine the requirement for use of the cherry picker on a case by case basis, considering the associated access and safety considerations. The instances in which the cherry picker will be used during clearing activities will be at the sole discretion of the wildlife specialist.

In instances where a cherry-picker cannot safely be used, an alternative is to leave hollow-bearing trees and remove surrounding vegetation. Hollow-bearing trees should be left standing at least overnight to allow for hollow-dwelling species, such as possums and gliders, to move from the site. Any hollow-bearing trees or those with arboreal termitaria are to be felled under the supervision of the spotter-catcher.

It is the responsibility of the spotter-catcher to identify significant wildlife safety risks both for wildlife retained on-site, as well as wildlife in adjacent areas or widely ranging wildlife that may use, or move through, the site during operational works.

Under-scrubbing of shrub and understorey vegetation is to take place prior to the clearing of mature and over-mature trees.

Clearing is to be directed towards the retained vegetation, as per the Tree Clearing Plan. Clearing must be completed by 6 p.m. and not commence before 6 a.m.

For this site, relocation of fauna to the retained vegetation of the site, or within other vegetation in the immediate area is considered a suitable option. However, the final relocation site will be determined at the discretion of the spotter-catcher.

Euthanasia should not be undertaken unless the animal is severely injured, or a listed pest species under local, State or Commonwealth legislation. In order of preference, outcomes for removed wildlife are as follows:

- Translocation to suitable retained vegetation on-site within the nominated area;
- Translocation to distant suitable habitat;
- Placement in an institution for rehabilitation and release, or where this is not possible for educational, conservation or research purposes; or
- Euthanasia.

Note: Euthanasia of animals must be carried out in accordance with the provisions of the Queensland *Animal Care and Protection Act 2001*. This will generally involve euthanasia being performed by a registered veterinarian following anaesthesia of the animal. Contact details of veterinarians located within the vicinity of the site are provided in Appendix C.

Where project timelines allow for flexibility in the scheduling of operational works, clearing should be timed to not take place in the main breeding period of Spring-Summer.

Any dogs brought onto the site must be on leash or contained at all times to avoid any harm to fauna. All site personnel will be made aware of this requirement during site induction.

A summary of the vegetation clearing fauna mitigation strategy is presented in Table 7.2.

Table 7.2 Vegetation Clearing Fauna Management Measures

Activity	Management Measure	Responsibility
Communication	The spotter-catcher is required to be in communication with machinery operators during the clearing operations, either by hand signals or two-way radio.	Spotter-catcher Machinery operator(s)
Direction of clearing	Clearing is to be directed towards to the ecological corridor within the centre of the site in order to direct wildlife to the retained vegetation (i.e. clearing on the western side of the site is to commence in an easterly / south-easterly direction and clearing on the eastern side of the site is to commence in a southerly direction, as outlined on the Tree Clearing Plan). Flushing of wildlife towards the adjacent road corridors should be avoided. Machine operators are to be made aware of the direction of clearing at the site pre-start meeting.	Superintendent
Clearing hollow-bearing or those with termitaria	Hollow-bearing trees should be left standing for at least 24 hours after surrounding vegetation has been cleared. This will allow any resident fauna a chance to move on their own volition. Trees with hollows should first be 'shaken' using the blades of the machinery where possible. This is to allow any resident arboreal fauna to escape prior to the tree being felled. Where possible, trees should be felled with the hollows / termitaria receiving minimal contact on impact. This can often be achieved through strategic excavation of select root structure and the weight of the machine incorporated to assist in the laying down of the tree on the ground. Adjacent felled trees may also be used to absorb the impact. Trees are to be inspected post felling. If an animal remains within the hollow / termitaria, the spotter-catcher will decide to either remove the animal or remove the section of tree containing the animal. This will then be relocated within adjacent vegetation.	Spotter-catcher Machine operator(s)
Restraining fauna	Terrestrial species captured during clearing shall be restrained using appropriate bags or traps and released into habitat at the discretion of the spotter-catcher. Any nocturnal species will be kept in a bag in a dark, well ventilated, quiet area and released within 1km of the subject site at dusk in suitable habitat	Spotter-catcher
Injured wildlife	Any injured animal will be taken directly to a veterinary clinic for treatment. Treatment costs will be the responsibility of the site developers. Displaced young will be taken to a registered Wildlife Carer. Locations of nearby vet clinics are provided in Appendix C.	Spotter-catcher
Removing trees with nests	Where project timelines allow, vegetation clearing be conducted outside of the main breeding season of many wildlife species (spring and early summer). Trees with active nests should be retained where possible.	Spotter-catcher

Activity	Management Measure	Responsibility
	A crane platform or cherry picker should be used to remove the nest and / or eggs or chicks prior to felling. However, this will only be undertaken where access and stable foundations for the cherry picker are available and where the operation of the cherry picker will achieve compliance with *Interim Australian Standard AS1418.10 [Int-2004]: Cranes, hoists and winches. Part 10: Elevating work platforms* and any other Occupational Health and Safety requirements. The spotter-catcher will determine the requirement for use of the cherry picker on a case by case basis, taking into account the associated access and safety considerations.	
Removing habitat features	A spotter-catcher needs to be present when potential habitat such as log piles, mulch heaps or rock piles are removed to check for any sheltering wildlife.	Spotter-catcher
Stockpiles	Cleared vegetation and construction equipment should not be stockpiled where it will impede fauna movement into adjacent habitat.	Superintendent Project Manager
Reporting	All wildlife that is hand-caught and moved to adjacent habitat will be recorded and details reported to QPWS.	Spotter-catcher

7.2.1 Habitat Features

Piles of rubble, felled timber or any other material, proposed to be chipped, are not to be left to serve as a refuge for displaced or roaming wildlife. Old piles of felled vegetation or other material must be treated in the same way as any other potential wildlife habitat, and must be assumed to be inhabited by wildlife, unless proven otherwise. Appropriate risk mitigation measures include immediate destruction or removal of such materials, or erection of wildlife-proof barriers to prevent wildlife use.

Other valuable habitat features such as large fallen logs, log piles or outcrops shall be preserved, translocated and re-established at appropriate habitat close to their site of removal (e.g. covenant areas). Sites for relocation of these features will be determined at the discretion of the wildlife specialist.

Any hollow branches identified during clearing operations must be utilised as ground hollows. Locations for ground hollows are to be determined on-site by either a Council Ecological Assessment Officer or a DES-approved spotter-catcher.

7.2.2 Terrestrial Species

Terrestrial species captured during clearing shall be restrained using appropriate bags or traps and released into habitat at the discretion of the spotter-catcher. Retained vegetation within the site, or other retained vegetation in the immediate area is considered a suitable option for the relocation of most terrestrial species. Nocturnal species shall be released after dusk. Until they can be released, these animals should be placed in a soft bag in a cool, quiet place.

7.2.3 Native Bees

Any native bee hives identified during clearing operations are to be preserved without damage, whether the hives are located in limbs or tree trunks. Native bee hives are to be relocated by a DES-

approved spotter-catcher from areas to be cleared, prior to any works commencing on the site, to those areas where vegetation is to be retained and / or rehabilitated.

The new location of the native bee hive is to be submitted to Council (with GPS coordinates) and included within the post clearing fauna summary, prior to the release of the vegetation performance bond.

7.2.4 Dam Dewatering

The site's constructed dam is to be dewatered prior to being filled. The dewatering will occur at a slow rate to allow for any fauna relocation should it be required. All works will be supervised by a licenced spotter catcher, who shall:

- Undertake pre-dewatering surveys prior to works commencing and provide Council with the survey results, management actions and procedures to be employed during dewatering;
- supervise all dewatering works;
- provide post-works audit reports on any fauna encountered, salvaged and or relocated. The fauna spotter catchers will manage the relocation of fauna to suitable local release sites; and
- all works are to be in accordance with the conditions of their scientific purposes and rehabilitation permits from the Department of Environment and Science and any other relevant permits as required (e.g. a general fisheries permit from the Department of Agriculture and Fisheries may also be required).

7.2.5 Injured Wildlife

In some cases, a native animal captured by the spotter-catcher may require hand-rearing (in the case of dependent young) or rehabilitation because of injury or illness. In such cases, the animal shall be placed in the care of a suitable qualified wildlife carer or wildlife hospital, preferably in the vicinity of the subject site. Any costs associated with the care of displaced or injured wildlife will be the responsibility of the proponent. Appendix C provides a list of local vet clinics and wildlife hospitals.

7.3 Post-Clearing Works Actions

7.3.1 Reporting

A post-clearing fauna summary must be submitted to Council within five (5) business days of vegetation clearing being completed. The post-clearing fauna summary is to be undertaken by the DES-approved spotter-catcher on site during the clearing works and must include the following as a minimum:

- Fauna species identified during clearing;
- Fauna species captured, including any native bees captured and relocated;
- Release sites for any fauna relocated with GPS coordinates to be provided for native bee hives; and
- Details of any fauna injuries or incidents.

8. Koala Management Plan

The site is in a Koala Habitat Area and Koalas will potentially be encountered during clearing and construction operations. All activities during the clearing and construction works have the potential to increase the risk of stress, injury or death of koalas including vehicle strike, felling of trees, inappropriate storage of materials, blocking movement paths etc. In addition to the management actions outlined in this VFKMP, this section prescribes specific actions for the protection of the Koala during the clearing and construction operations.

The Superintendent and the Spotter Catcher will be responsible for implementing the provisions all actions in this VFKMP.

All works are to be undertaken in accordance with the following provisions which are compliant with Part 3 of the *Queensland Nature Conservation (Koala) Conservation Plan 2017* (Koala Plan):

1. To meet the provisions of Part 11 of the Koala Plan the Spotter Catcher will either be supervised by a **Koala Spotter**[1] or qualify as a Koala Spotter during all site clearing works;
2. Immediately prior (no more than 24 hours before clearing commences), the Spotter Catcher must inspect the vegetation to be cleared for the presence of Koalas and other fauna. The Spotter Catcher must continue to monitor vegetation for fauna for the duration of clearing activities;
3. The clearing works should be sequenced and directed towards protected areas to ensure that koalas have time to move on without human intervention. Clearing directions are indicated in Appendix A.
4. Clearing is carried out in a way that allows koalas on the site to move out of the site or to protected areas of the site;
5. If any koalas are located prior to clearing or during clearing activities, the tree containing the individual shall be clearly marked and any other trees with canopies touching the primary tree shall also be clearly marked. A corridor of trees that will enable the individual to evacuate the works area to an area of vegetation that supports suitable habitat trees is to remain undisturbed until the individual has moved. All machinery operators are to be informed of the presence and location of the individual, and all relevant trees that have been marked to prevent disturbance.
6. No tree in which a koala is located and no tree with a crown overlapping a tree in which a koala is present may be cleared.
7. These trees must not be disturbed in any form until the individual has moved on by its own accord and the re-commencement of works is to be confirmed by the Spotter Catcher.
8. Dogs are to be discouraged from the work site. Any dogs on-site are to be restrained appropriately and not allowed to move freely within the site.
9. Operation of heavy vehicles and machinery must be limited to between the hours of 6:00 a.m. and 6:00 p.m. Clearing must be completed by 6:00 p.m. on each day and must not commence within the next stage until at least 6:00 a.m. on the following day.
10. To mitigate impacts on koala habitat associated with the clearing and achieve a conservation outcome all clearing will be offset in accordance with this VFKMP.
11. If any displaced fauna listed as threatened under State or Commonwealth legislation are captured by the Spotter Catcher, DES must be notified prior to release of the animal.

[1] *Koala Spotter means a person who has qualifications and experience or demonstrated skills and knowledge in (a) locating koalas in koala habits; or (b) conducting arboreal fauna surveys*.

9. Conclusions

Burchills were engaged by RAMA Real Estate to prepare a Vegetation, Fauna and Koala Management Plan for a propsoed industrial subdivision at Lot 1 on SP104184, Rosewood Laidley Road, Laidley. The proposed development will subdivide the site into 13 lots, comprising one (1) lot for a proposed service station and 12 industry lots. An environmental covenant is proposed to be registered on one (1) lot in the south of the site.

Field surveys were undertaken during August and November 2021. Three (3) vegetation associations were classified across the site including:

- Vegetation Unit A – *Corymbia citriodora* subsp. *variegata* Regrowth Open Forest;
- Vegetation Unit B – Dry Eucalypt Open Forest / Woodland; and
- Vegetation Unit C – Disturbed Dry Eucalypt Open Forest / Woodland.

Vegetation Unit B represented the structure and floristics of an ecotonal community of remnant vegetation based on the Qld Herbarium benchmark criteria for the Of Concern preclearing regional ecosystem RE 12.9-10.7 and Least Concern preclearing regional ecosystem RE 12.9-10.2. The vegetation structure of Vegetation Units A and C is consistent with high value regrowth vegetation.

Forty-four (44) species of fauna were observed within the subject site during surveys including six (6) amphibian species, two (2) reptile species, 28 bird species, seven (7) mammal species and one (1) fish species. Of these species recorded on-site, 40 were native and four (4) were introduced. No conservation significant species of fauna were encountered on-site, nor was any direct or indirect evidence observed that would suggest the site is utilised by conservation significant fauna species.

Clearing of the entirety of Vegetation Unit A and majority of Vegetation Unit C will be required to facilitate the works. A total of 1.56ha of vegetation will be retained, mostly comprising Vegetation Unit B. The layout was designed to avoid and minimise impacts on the areas of the site with the highest value Core Koala Habitat to the greatest extent possible. Significant Residual Impacts are proposed to be mitigated by a combined financial and restoration offset to achieve a suitable conservation outcome.

This management plan provides recommendations for the clearing, construction and restoration works to mitigate impacts on vegetation and fauna and incorporates a Koala Management Plan that provides specific recommendations for this conservation significant species.

All works will be undertaken in accordance with this management plan and the conditions of approval.

10. References

Australian Koala Foundation (AKF) (2015). National Koala Tree Planting List. Online resource. <https://www.savethekoala.com/sites/savethekoala.com/files/uploads/20150212_AKF_National_Koala_Tree_Planting_List.pdf> Accessed April 2020

Batianoff, G.N. and Butler, D.W. (2002). Assessment of invasive naturalised plants in south-east Queensland. Environmental Protection Agency, Brisbane.

Burchills (2022a). *Covenant Management Plan – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Burchills (2022b). *Ecological Site Assessment – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Burchills (2022c). *Koala Habitat Value Assessment – Rosewood Laidley Road, Laidley*. Prepared for RAMA Real Estate.

Chenoweth EPLA and Bushland Restoration Services (2012). South East Queensland Ecological Restoration Framework. Prepared on behalf of SEQ Catchments and South East Queensland Local Governments, Brisbane.

Department of Natural Resources, Mines and Energy (2004). Geoscience Data, Queensland Mapping Data (GEOLDATA) More_1. Department of Natural Resources, Mines and Energy, Brisbane.

Hnatiuk, R.J., Thackway, R. and Walker, J. (2009). Vegetation. In Australian soil and land survey field handbook (3rd edn). National Committee on Soil and Terrain. CSIRO Publishing, Melbourne.

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Addicott, E.P. and Appelman, C.N. (2020) Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 5.1. Updated March 2020. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

Walker, J. and Hopkins, M.S. (1990). Vegetation. In: McDonald, R.C., Isbell, R.F., Speight, J.G., Walker J. and Hopkins, M.S. (eds.), Australian Soil and Land Survey – Field Handbook. Inkata Press, Melbourne.

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Appendix A – Vegetation Clearing and Retention Plan

Client: RAMA Real Estate
Doc No.: BE210316-RP-VFKMP-01
Doc Title: Vegetation, Fauna & Koala Management Plan – Rosewood Laidley Road, Laidley


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Lot 1 Rosewood Laidley Road, Laidley
Tree Clearing Plan
Page 1 of 2
Location of the site within Lockyer Valley Region
Legend
Site Location
Impact Area/Earthworks Extent - 5.26ha
Vegetation to be Retained - 1.56ha
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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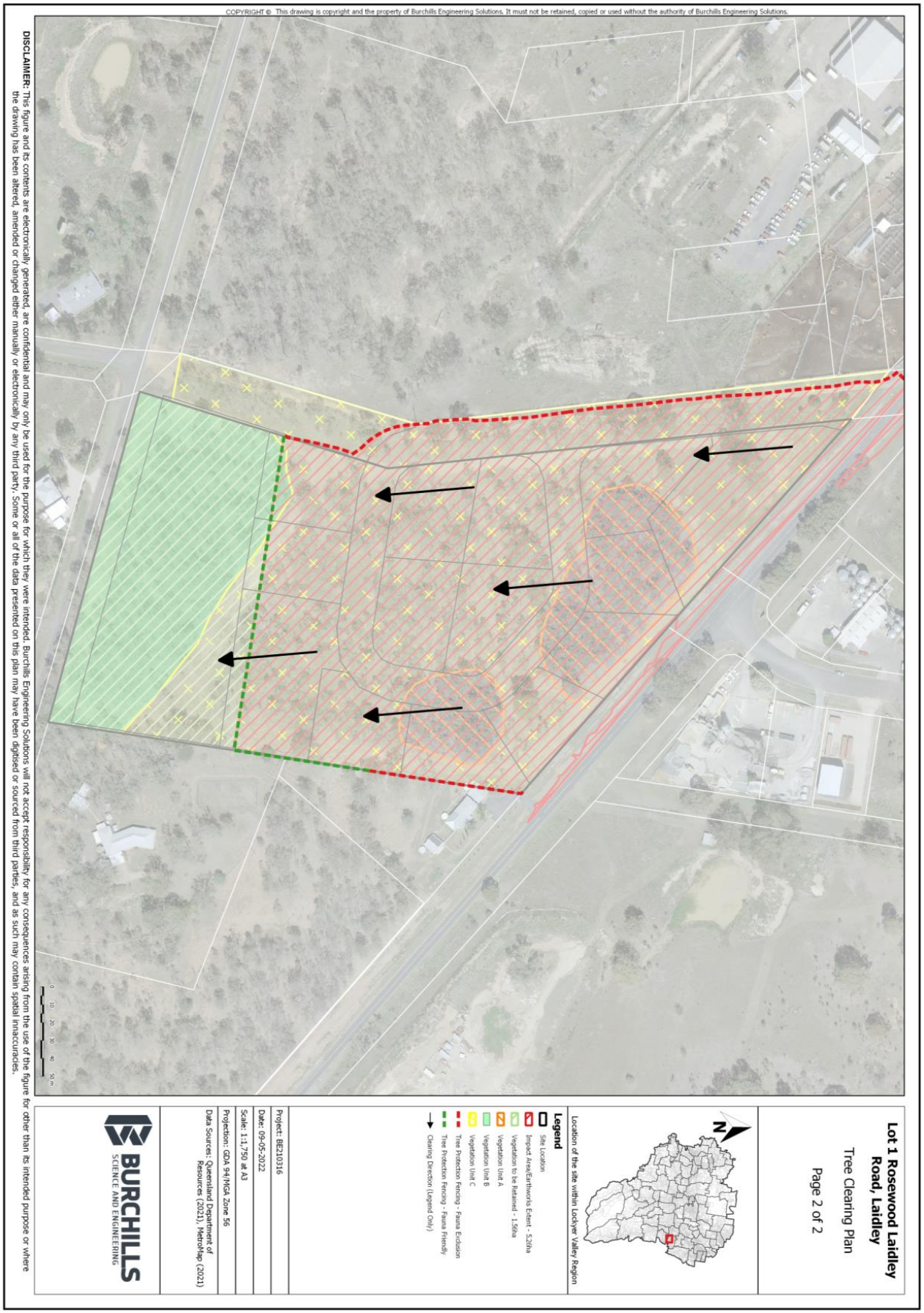
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Lot 1 Rosewood Laidley Road, Laidley
Tree Clearing Plan
Page 2 of 2
N
Location of the site within Lockyer Valley Region
Legend
Site Location
Impact Area/Earthworks Extent - 5.26ha
Vegetation to be Retained - 1.56ha
Vegetation Unit A
Vegetation Unit B
Vegetation Unit C
Tree Protection Fencing - Fauna Exclusion
Tree Protection Fencing - Fauna Friendly
Clearing Direction (Legend Only)
Project: BE210316
Date: 09-05-2022
Scale: 1:1,750 at A3
Projection: GDA 94/MGA Zone 56
Data Sources: Queensland Department of Resources (2021), MetroMap (2021)
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Appendix B – Fauna Species Recorded On-Site

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Amphibians						
Bufonidae	*Rhinella marina*	Cane toad	I	V	W	OO
Hylidae	*Cyclorana alboguttata*	Striped burrowing frog	C	H	W	SS
Hylidae	*Litoria brevipalmata*	Green thighed frog	C	H	W	SS
Hylidae	*Litoria fallax*	Eastern sedge frog	C	H	W	OO
Hylidae	*Litoria rubella*	Red tree frog	C	V	W	SS
Limnodynastidae	*Limnodynastes peronii*	Striped marsh frog	C	H	W	OO
Reptiles						
Colubridae	*Boiga irregularis*	Brown tree snake	C	V	W	SS
Scincidae	*Lampropholis delicata*	Grass skink	C	V	W	GDRS
Birds						
Acanthizidae	*Gerygone olivacea*	White-throated gerygone	C	V	W	DBS
Accipitridae	*Haliastur sphenurus*	Whistling kite	C	V	W	DBS
Anatidae	*Dendrocygna eytoni*	Plumed whistling duck	C	V	W	DBS
Ardeidae	*Ardea intermedia*	Intermediate egret	C	V	W	DBS
Artamidae	*Cracticus torquatus*	Grey butcherbird	C	V	W	DBS
Artamidae	*Gymnorhina tibicen*	Magpie	C	V	W	DBS
Cacatuidae	*Cacatua tenuirostris*	Corella	C	V	W	DBS
Cacatuidae	*Calyptorhynchus funereus*	Yellow-tail black-cockatoo	C	V	W	DBS

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Campephagidae	*Coracina novaehollandiae*	Black-faced cuckoo-shrike	C	V	W	DBS
Climacteridae	*Climacteris picumnus*	Brown treecreeper	C	V	W	DBS
Columbidae	*Ocyphaps lophotes*	Crested pigeon	C	V	W	DBS
Corvidae	*Corvus orru*	Torresian crow	C	V	W	DBS
Cuculidae	*Scythrops novaehollandiae*	Channel-billed cuckoo	C	V	W	DBS
Dicruridae	*Grallina cyanoleuca*	Magpie lark	C	V	W	DBS
Dicruridae	*Rhipidura leucophrys*	Willie wagtail	C	V	W	DBS
Halcyonidae	*Dacelo novaeguineae*	Laughing kookaburra	C	V	W	DBS
Maluridae	*Malurus melanocephalus*	Red-backed fairy wren	C	V	W	DBS
Meliphagidae	*Anthochaera chrysoptera*	Little wattlebird	C	V	W	DBS
Meliphagidae	*Manorina melanocephala*	Noisy miner	C	V	W	DBS
Meliphagidae	*Myzomela sanguinolenta*	Crimson honeyeater	C	V	W	DBS
Meliphagidae	*Philemon corniculatus*	Noisy friarbird	C	V	W	DBS
Meropidae	*Merops ornatus*	Rainbow bee-eater	C	V	W	DBS
Passeridae	*Daeniopygia bichenovii*	Double-barred finch	C	V	W	DBS
Petroicidae	*Eopsaltria australis*	Eastern yellow robin	C	V	W	DBS
Phasianidae	*Coturnix australis*	Brown quail	C	V	W	DBS
Psittacidae	*Trichoglossus haematodus*	Rainbow lorikeet	C	H	W	DBS
Psophodidae	*Psophodes olivaceus*	Eastern whipbird	C	H	W	DBS
Threskiornithidae	*Threskiornis Molucca*	Australian white ibis	C	V	W	DBS
Mammals						
Felidae	*Felis catus*	Domestic cat	I	S	W	OO

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Leporidae	*Lepus capensis*	Brown hare	I	V	W	OO
Macropodidae	*Macropus giganteus*	Eastern grey kangaroo	C	V	W	OO
Macropodidae	*Wallabia bicolor*	Swamp wallaby	C	V	W	OO
Petauridae	*Petaurus breviceps*	Sugar glider	C	V	W	NS
Phalangeridae	*Trichosurus vulpecula*	Common brushtail possum	C	V	W	NS
Pteropodidae	*Pteropus alecto*	Black flying-fox	C	V	W	NS
Fish						
Poecilidae	*Gambusia holbrooki*	Gambusia	I			

*Status: As listed under the NCA: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern, C = Least Concern.

As listed under the EPBC: CE# = Critically Endangered, E# = Endangered, V# = Vulnerable, CD# = Conservation Dependent, MT = Migratory (Terrestrial Species), MW = Migratory (Wetland Species), M = Marine Species, I# = Introduced Species

**Primary method of identification: C = hand caught, H = heard, V = visually observed, T = trapped, S = other signs of presence (e.g. scats, traces etc).

†Survey type: DBS = bird survey; NS = Nocturnal survey; GDRS = ground dwelling reptile survey; OO = opportunistic observation.

††Location: W = species observed within subject property; E = species observed external but close (within 100m) to subject site.

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Appendix C – Emergency and Veterinarian Contact Details

Laidley Veterinary Surgery

44 Vax Street
Laidley QLD 4341

Ph: (07) 5465 1259

Operating Hours:

Mon-Fri: 08:30 to 17:30
Saturday: 09:00 to 12:00
Sunday: Closed

UQ VETS Small Animal Hospital

Building 8156, The University of Queensland
Main Drive and Outer Ring Road

Ph: (07) 5460 1788

Operating Hours:

Mon-Sun: Open 24 hours

Our ref TMR21-033401
Your ref
Enquiries Lachlan Jones

Queensland Government

Department of
Transport and Main Roads

7 March 2022

Decision Notice – Permitted Road Access Location
(s62(1) *Transport Infrastructure Act 1994*)

This is not an authorisation to commence work on a state-controlled road[1]

Development application reference number MC2021/0042 & RL2021/0021, lodged with Lockyer Valley Regional Council involves constructing or changing a vehicular access between Lot 1SP1041847, the land the subject of the application, and Rosewood-Laidley Road (a state-controlled road).

In accordance with section 62A(2) of the *Transport Infrastructure Act 1994* (TIA), this development application is also taken to be an application for a decision under section 62(1) of TIA.

Applicant Details

Name and address	RU & AR Patel c/- Santoshi Development Consultants PO Box 986 North Lakes QLD 4509

Application Details

Address of Property	Rosewood-Laidley Road, Laidley QLD 4341
Real Property Description	1SP1041847
Aspect/s of Development	Material Change of Use for Service Station and Refreshment Services

Decision (given under section 67 of TIA)

It has been decided to approve the application, subject to the following conditions:

No.	Conditions of Development Approval	Condition Timing
Vehicular Access to state-controlled road		
1	(a) The road access locations are to be located generally in accordance with the plan titled "*Service Station Intersections*" prepared by Burchills Engineering Solutions, dated 25 November 2021, reference Project No. BE210306 – Drawing No. SK110 (Version A). (b) Road access works comprising commercial standard driveway crossovers, (at the road access locations) must be provided generally in accordance the plan titled "*Service Station Intersections*" prepared by Burchills Engineering	(a) At all times. (b) and (c): Prior to the commencement of use.

[1] Please refer to the further approvals required under the heading 'Further approvals'

Program Delivery and Operations
Southern Queensland Region
Floor 2 1-5 Phillip Street Toowoomba QLD 4350
Locked Bag 1 Warwick QLD 4370

Telephone +61 7 (07) 4639 0737
Website www.tmr.qld.gov.au
Email Downs.South.West.IDAS@tmr.qld.gov.au
ABN: 39 407 690 291

No.	Conditions of Development Approval	Condition Timing
	Solutions, dated 25 November 2021, reference Project No. BE210306 – Drawing No. SK110 (Version A), subject to the following amendments: • The western access intersection with Rosewood-Laidley Road is to be restricted to LEFT-OUT movements only. • The western access intersection with Rosewood-Laidley Road is to be designed and constructed with a high angle alignment to prevent vehicles turning right out from within the site. • Signage and/or linemarking must be provided in proximity to the western site access indicating "no entry" (*from Rosewood-Laidley Road)* is permitted and "left out only" (*from within the development site*). • Double barrier lines are to be provided along the chevron of the eastbound Channelised Right Turn treatment at the Rosewood-Laidley Road and easternmost service station intersection (opposite Crown Street), referred to in Condition 2. (c) The road works must be designed and constructed in accordance with the Department of Transport and Main Roads' *Road Planning & Design Manual (2nd Edition)*.	

Reasons for the decision
The reasons for this decision are as follows:

a) To maintain the safety, efficiency, and operation of the state-controlled road network

Please refer to **Attachment A** for the findings on material questions of fact and the evidence or other material on which those findings were based.

Information about the Decision required to be given under section 67(2) of TIA

1. There is no guarantee of the continuation of road access arrangements, as this depends on future traffic safety and efficiency circumstances.

2. In accordance with section 70 of the TIA, the applicant for the planning application is bound by this decision. A copy of section 70 is attached as **Attachment B**, as required, for information.

Further information about the decision

1. In accordance with section 67(7) of TIA, this decision notice:
   a) starts to have effect when the development approval has effect; and
   b) stops having effect if the development approval lapses or is cancelled; and
   c) replaces any earlier decision made under section 62(1) in relation to the land.

2. In accordance with section 485 of the TIA and section 31 of the *Transport Planning and Coordination Act 1994* (TPCA), a person whose interests are affected by this decision may apply for a review of this decision only within 28 days after notice of the decision was given under the TIA. A copy of the review provisions under TIA and TPCA are attached in **Attachment C** for information.

3. In accordance with section 485B of the TIA and section 35 of TPCA a person may appeal against a reviewed decision. The person must have applied to have the decision reviewed before an appeal about the decision can be lodged in the Planning and Environment Court. A copy of the Appeal Provisions under TIA and TPCA is attached in **Attachment C** for information.

Further approvals
The Department of Transport and Main Roads also provides the following information in relation to this approval:

1. Road Access Works Approval Required – Written approval is required from the department to carry out road works that are road access works (including driveways) on a state-controlled road in accordance with section 33 of the TIA. This approval must be obtained prior to commencing any works on the state-controlled road. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). Please contact the department to make an application.

If further information about this approval or any other related query is required, Mr Lachlan Jones, Planner should be contacted by email at lachlan.s.jones@tmr.qld.gov.au or on (07) 4639 0759.

Yours sincerely

Scott McDonald
Senior Planner

Attachments: Attachment A – Decision evidence and findings
Attachment B - Section 70 of TIA
Attachment C - Appeal Provisions

Attachment A

Decision Evidence and Findings

Findings on material questions of fact:

- Development application material submitted in support of Lockyer Valley Regional Council development application MC2021/0042 & RL2021/0021
- State Development Assessment Provisions –Assessment Code 1 (Development in a state-controlled road environment)
- State Development Assessment Provisions –Assessment Code 6 (Protection of state transport networks)
- Department of Transport and Main Roads' *Road Planning and Design Manual, 2nd Edition*
- *Planning Act (2016)*
- *Planning Regulations (2017)*
- *Transport Infrastructure Act (1997)*

Attachment B

Section 70 of TIA

Transport Infrastructure Act 1994
Chapter 6 Road transport infrastructure
Part 5 Management of State-controlled roads

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70 Offences about road access locations and road access works, relating to decisions under s 62(1)

(1) This section applies to a person who has been given notice under section 67 or 68 of a decision under section 62(1) about access between a State-controlled road and adjacent land.

(2) A person to whom this section applies must not—

(a) obtain access between the land and the State-controlled road other than at a location at which access is permitted under the decision; or

(b) obtain access using road access works to which the decision applies, if the works do not comply with the decision and the noncompliance was within the person's control; or

(c) obtain any other access between the land and the road contrary to the decision; or

(d) use a road access location or road access works contrary to the decision; or

(e) contravene a condition stated in the decision; or

(f) permit another person to do a thing mentioned in paragraphs (a) to (e); or

(g) fail to remove road access works in accordance with the decision.

Maximum penalty—200 penalty units.

(3) However, subsection (2)(g) does not apply to a person who is bound by the decision because of section 68.

Attachment C

Appeal Provisions

Transport Infrastructure Act 1994
Chapter 16 General provisions

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485 Internal review of decisions

(1) A person whose interests are affected by a decision described in schedule 3 (the ***original decision***) may ask the chief executive to review the decision.

(2) The person is entitled to receive a statement of reasons for the original decision whether or not the provision under which the decision is made requires that the person be given a statement of reasons for the decision.

(3) The *Transport Planning and Coordination Act 1994*, part 5, division 2—

(a) applies to the review; and

(b) provides—

(i) for the procedure for applying for the review and the way it is to be carried out; and

(ii) that the person may apply to QCAT to have the original decision stayed.

485B Appeals against decisions

(1) This section applies in relation to an original decision if a court (the appeal court) is stated in schedule 3 for the decision.

(2) If the reviewed decision is not the decision sought by the applicant for the review, the applicant may appeal against the reviewed decision to the appeal court.

(3) The Transport Planning and Coordination Act 1994, part 5, division 3—

(a) applies to the appeal; and

(b) provides—

(i) for the procedure for the appeal and the way it is to be disposed of; and

(ii) that the person may apply to the appeal court to have the original decision stayed.

(4) Subsection (5) applies if—

(a) a person appeals to the Planning and Environment Court against a decision under section 62(1) on a planning application that is taken, under section 62A(2), to also be an application for a decision under section 62(1); and

(b) a person appeals to the Planning and Environment Court against a decision under the Planning Act on the planning application.

(5) The court may order—

(a) the appeals to be heard together or 1 immediately after the other; or

(b) 1 appeal to be stayed until the other is decided.

(6) Subsection (5) applies even if all or any of the parties to the appeals are not the same.

(7) In this section—

original decision means a decision described in schedule 3.

reviewed decision means the chief executive's decision on a review under section 485.

Transport Planning and Coordination Act 1994
Part 5, Division 2 – Review of Original Decisions

31 Applying for review

(1) A person may apply for a review of an original decision only within 28 days after notice of the original decision was given to the person under the transport Act.

(2) However, if—

(a) the notice did not state the reasons for the original decision; and

(b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)

the person may apply within 28 days after the person is given the statement of the reasons.

(3) In addition, the chief executive may extend the period for applying.

(4) An application must be written and state in detail the grounds on which the person wants the original decision to be reviewed.

32 Stay of operation of original decision

(1) If a person applies for review of an original decision, the person may immediately apply for a stay of the decision to the relevant entity.

(2) The relevant entity may stay the original decision to secure the effectiveness of the review and any later appeal to or review by the relevant entity.

(3) In setting the time for hearing the application, the relevant entity must allow at least 3 business days between the day the application is filed with it and the hearing day.

(4) The chief executive is a party to the application.

(5) The person must serve a copy of the application showing the time and place of the hearing and any document filed in the relevant entity with it on the chief executive at least 2 business days before the hearing.

(6) The stay—

(a) may be given on conditions the relevant entity considers appropriate; and

(b) operates for the period specified by the relevant entity; and

(c) may be revoked or amended by the relevant entity.

(7) The period of a stay under this section must not extend past the time when the chief executive reviews the original decision and any later period the relevant entity allows the applicant to enable the applicant to appeal against the decision or apply for a review of the decision as provided under the QCAT Act.

(8) The making of an application does not affect the original decision, or the carrying out of the original decision, unless it is stayed.

(9) In this section—

relevant entity means—

(a) if the reviewed decision may be reviewed by QCAT—QCAT; or

(b) if the reviewed decision may be appealed to the appeal court—the appeal court.

35 Time for making appeals

(1) A person may appeal against a reviewed decision only within—

(a) if a decision notice is given to the person—28 days after the notice was given to the person; or

(b) if the chief executive is taken to have confirmed the decision under section 34(5)—56 days after the application was made.

(2) However, if—

(a) the decision notice did not state the reasons for the decision; and

(b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)(a);

the person may apply within 28 days after the person is given a statement of the reasons.

(3) Also, the appeal court may extend the period for appealing.

12.2 Healthy Land and Water Member Agreement

Author: Kate Burns, Coordinator Growth and Policy
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

The purpose of this report is to provide an overview of Healthy Land and Water's proposed Member Agreement and seek direction from Council on future involvement in the Ecosystem Health Monitoring Program (EHMP).

Officer's Recommendation:
THAT Council negotiate improved service levels with Healthy Land and Water, including negotiating the terms of a 12-month Ecosystem Health Monitoring Program Member Agreement.

RESOLUTION

THAT Council negotiate improved service levels with Healthy Land and Water, including negotiating the terms of a 12-month Ecosystem Health Monitoring Program Member Agreement.

Moved By: Cr Holstein Seconded By: Cr Hagan
Resolution Number: 20-24/0753

CARRIED
6/0

Executive Summary

Council has provided an annual contribution to Healthy Land and Water (HLW) as 'network members' under a recurring three-year Member Agreement to participate in the Ecosystem Health Monitoring Program (EHMP). HLW is South East Queensland's (SEQ) peak environmental group.

Despite significant investment by HLW and others in the Lockyer Catchment over an extended period of time, the ratings of the EHMP report card continue to remain disappointingly low with no identified pathway for improvement.

Other member local governments have questioned the value of the EHMP program and how it aligns with their catchment and water quality objectives and have opted to either renegotiate the terms of their agreements or leave the program.

Whilst being a member organisation of the EHMP has some demonstrated value, Council seeks to renegotiate the terms of its involvement and seek to ensure the program delivery better aligns with Council's strategic direction.

Proposal

Healthy Land and Water (HLW) is the peak environmental group in South-East Queensland (SEQ) and coordinates the Ecosystem Health Monitoring Program (EHMP), a regional waterway monitoring program of which the Lockyer Valley is a headwater contributor.

The EHMP collects environmental and social data at a waterway and catchment scale that are combined and analysed to provide a catchment specific annual report card. The EHMP output is utilised as a support mechanism to the investment and actions of the Council of Mayors' Resilient Rivers Initiative (RRI). Locally, the RRI supports the Lockyer Catchment Action Plan (LCAP), the primary focus of which is to address the very high risk of sediment movement from the Lockyer catchment (as identified in key State and Local Government and Seqwater investigations into the 2011 flood event and January 2013 weather event). The EHMP report card provides a scientific means of confirming if the actions of the RRI are beneficial to both the Lockyer catchment, greater Brisbane catchments and Moreton Bay.

As 'network members', Council provides an annual contribution to HLW under a three-year Member Agreement. Council's required contribution for the 2022/23 financial year of $17,100.

The EHMP Member Agreement sets out the core deliverables for the EHMP including water condition assessments (up to 14 sites), (rain) event monitoring, sediment loads, community and social benefit surveys, engagement and communication of the report card in addition to program governance, expert panels, monitoring and evaluation steering committee.

The report card's goal is to *"Enhance community quality of life by fostering stewardship to protect and restore waterway health"*. This goal is to be accomplished by achieving the four aims of the EHMP to:

(a) Inspire action;
(b) Identify priority areas for investment and support members to identify and implement actions;
(c) Provide an assessment of the effectiveness of management actions and progress towards targets; and
(d) Provide data relevant for researchers, managers and the wider community that contributes to greater understanding of waterways.

The results of the EHMP report card have continuously determined the Lockyer Catchment to be poorly performing (scorecard F and D). Of major concern to Council is the peak body not meeting aim (b) by providing clear pathways and advice to prioritise areas for investment that are fundamental to realise improvements in the catchment health and overall score. Further, Council officers have questioned whether the frequency, location and performance measures of the EHMP are providing the most accurate picture of the Lockyer catchment waterway health.

Whilst Council could move away from the EHMP and commence an in-house monitoring program, the cost to undertake the monitoring would significantly outweigh the expense of the annual contribution to HLW.

It is apparent that the EHMP provides HLW with a means to prioritise and target activities where they are most needed and to source significant funding to undertake priority actions. The Lockyer catchment has been the beneficiary of several on-ground projects, investments and value-added programs (workshops, studies) over time, however the prioritising and source funding for these activities is undertaken by HLW in isolation without Council collaboration.

The preferred approach is taking the results of the EHMP report card, the broad objectives of the RRI and LCAP and working in collaboration with HLW to mutually agree to priority investment areas and programs that may improve catchment health. A stronger collaboration with HLW as the peak environmental group, would also enable Council and HLW to access sources of funding that deliver on the objectives of Council's strategies (Environment, Economic Development and Tourism strategies).

It has been demonstrated that the EHMP provides some value to Council from a data collection perspective. Council could not fund or resource the data collection to the extent currently applied nor apply for and deliver the type and scale of projects that support good environmental and catchment outcomes. To this end, Council

could negotiate the terms of a one-year Member Agreement to seek to establish stronger collaboration with HLW to support water quality data collection with additional local data, and to scrutinise and prioritise catchment solutions at the scoping stage of projects that better reflect the objectives of Council's strategies and RRI and LCAP commitments.

Options

1. Council enters a three-year EHMP Member Agreement with HLW as per their proposal; or
2. Council enters a one-year EHMP Member Agreement with HLW commencing July 2023 and renegotiate the terms of the agreement to provide greater benefit to Council including securing future value add programs; or
3. Decline to enter into a EHMP Member Agreement with HLW.

Strategic Implications

Corporate Plan
Lockyer Nature – Deliver the strategic priorities of the Environment Strategy; Advocate and deliver funding to support environmental projects; Advocate for the delivery of education programs in land conservation and waterways management

Finance and Resource
Annual contributions are required as part of the EHMP Member Agreement. Budget provision has been made for the 2023/24 contribution.

Legislation and Policy
There are no legislative of policy implications.

Risk Management
The request to provide a financial contribution under the EHMP Member Agreement has been considered and any risks identified and addressed through the report.

Consultation
Portfolio Councillor Consultation
The HLW Member Agreement was workshopped with Council on 11 January 2023.

Internal Consultation
Members of both the Growth and Policy and Community Wellbeing teams have consulted with HLW on the specifics of the EHMP.

External Consultation
The EHMP deliverables have been discussed with other member Councils.

Council officers will notify HLW of the outcome of the Council meeting.

Attachments

There are no attachments for this report.

12.3 2022 Laidley Spring Festival Outcome Report

Author: Tracy Vellacott, Senior Tourism and Events Officer
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

The purpose of this report is to provide information to Council on the outcomes of the 2022 Laidley Spring Festival.

Officer's Recommendation:
THAT Council:

1. **Receive and note the 2022 Laidley Spring Festival Outcome Report;**
2. **Make an allocation of $25,000 for the Laidley Spring Festival 2023 event in the December Budget Review; and**
3. **Make an allocation of $50,000 in the 2023/2024 Budget for the Laidley Spring Festival 2023 event.**

RESOLUTION

THAT Council:

1. **Receive and note the 2022 Laidley Spring Festival Outcomes Report.**
2. **Make an allocation of $25,000 for the Laidley Spring Festival 2023 event in the December Budget Review.**
3. **Make an allocation of $75,000 in the 2023/2024 Budget for the 2023 Laidley Spring Festival.**

Moved By: Cr Holstein Seconded By: Cr Wilson
Resolution Number: 20-24/0754

CARRIED
6/0

Executive Summary

After a two-year hiatus due to Covid-19, the Laidley Spring Festival successfully relaunched on 8-9 September 2022, offering traditional and new events to give the festival a refreshed vibe.

Laidley Spring Festival is a town-wide activation currently across two days, sitting under the seasonal umbrella of Spring. The event gives profile to the many groups, organisations and businesses that make up the fabric of a small community, and allows them the opportunity to highlight their purpose, engage new participants and raise funds.

Council facilitates planning of the overall festival but engages with the Laidley Spring Festival Committee and other key stakeholders to ensure the smooth running of the event – media, sponsors, grant funding partners, market organiser, entertainers, traffic management, infrastructure providers etc.

Outcomes

The Laidley Spring Festival has been an integral part of life in Laidley for 59 years. The festival provides immense social benefit to the people of Laidley and the wider Lockyer Valley community by building a sense of local pride, fostering confidence, and providing a much-needed economic stimulus as visitors travel from up to 300km to attend the festival.

Traditionally, the festival program includes a street parade, the annual Horticultural Expo, Spring Orchid Show, Quilt and Craft Expo, Spring Gem Show, church displays, Under 5's day, art shows and more. In 2022 the festival flourished with new events, venues, and experiences complementing festival favourites.

In 2022, three new elements were introduced.

1. **Twilight Feast and Fest -** Friday 9 September 2022 at Laidley Recreation Reserve, Whites Road, Laidley
   A relaxed Friday night vibe with free live entertainment, local and international food trucks, and stalls in a park atmosphere. Targeted at the local community to encourage community recovery and resilience.
   Outcome: This event was very successful and has a strong foundation to build on. Well attended by the Laidley community who saw it as 'their' event.

2. **Buy From the Bush Qld Markets -** Friday 9 & Saturday 10 September 2022 at Laidley Recreation Reserve and Ferrari Park, Whites Road, Laidley
   A marketplace of Australian bush businesses - the best makers, creators, retailers, and artists from the bush came together with local and regional market vendors to share their products and stories.
   Outcome: The partnership with BFTBQ worked well with over 140 stallholders registered. Social media reach was a significant benefit of the partnership with an overall following of 35K people. Their Saturday market FB event interested 5.3K.

3. **Garden Party -** Saturday 10 September 2022 at Laidley Golf Club, Laidley
   Attendees were invited to enjoy a luncheon from the marquee overlooking Lake Dyer, complemented by lawn games and modern jazz from a live band.
   Outcome: Cancelled due to lack of ticket sales.

Existing Council led events

Street Parade
The street parade reflected the region's community spirit with 21 entrants ranging from local schools, community groups, sporting clubs and businesses to a Light Horse Troop. This was a major highlight of the event and space for spectators was near capacity on Patrick and Williams Streets.
Debrief discussions included reviewing the parade route and parade length - with the goal to increase the number of floats and incorporate more music and performance into the parade.

Show and Shine
Council partnered with Lockyer Antique Motor Vehicle Association (LAMA) to deliver the Show and Shine, held in Ferrari Park. There were eight pre-registered entrants and five entries received on the day, totalling 13. Festival attendees enjoyed casting their vote for the People's Choice Winner. During the debrief it was discussed to open this up to all car clubs and explore opportunities to expand.

Resources

Venues: All venues saw an increase in attendees from 2019. Attendance numbers at community led events on Friday morning were affected due to a band of storms moving through the region. Fortunately, the weather cleared by lunchtime and attendees enjoyed perfect weather right through to Saturday afternoon when the event finished.

Staffing: All community led events were staffed by their own members and volunteers. Council staffed the following elements:

- Event bump-in/bump-out
- Friday night Twilight Feast and Fest
- Show and Shine
- Lawn games
- Information tent, tourism and library displays as part of the markets
- Stage program

Budget:

- Council increased the budget allocation by $11k to allow for the significant increase in traffic management and suppliers' costs.
- The event refresh focused on utilising the budget differently to previous years, with a considerable amount being reallocated from amusement rides into the stage entertainment and marketing costs.
- An additional $9K was secured from external sponsorships.

Community groups: Ten community groups were involved in the delivery of the two-day festival:

1. Das Neumann House – Markets, Museum, Café, live music
2. Laidley District State School – Under 5's Event: Building Bright Futures
3. Laidley Garden Club – Horticultural Expo
4. Laidley Pioneer Village and Museum – Open Day
5. Laidley Uniting Church – Quilt and Craft Expo
6. Lockyer Valley Orchid Society – Show and Markets
7. Gatton Lapidary Club – Gem Show
8. Lockyer Valley Art Society (LASI) – Art Show
9. Laidley Lutheran Church – Floral Displays and Markets
10. Lockyer Valley Arts Trail

Other:

- Open Gardens – eight entries across the region

Attendance

Anticipated 7000+ attendees across the two-day festival and the event strategy catered to both the local and the three-hour drive market.

- Southern Qld Country Tourism (SQCT) data - report attached.

Marketing

- 2022 Laidley Spring Festival Digital Marketing Report attached.
- The festival had a significant increase in budget allocation from previous years, focusing on social media and radio advertising over print.
- The management of the website and social media content was executed by the Tourism team.
- Associated communication plan executed by Council's Comms team.
- Tandem E. Tandem Design Studio was engaged to lift the standard of branding and collateral.

- Imagine Media was engaged to capture video footage of the festival for future event promotion.
- A professional event photographer was contracted to provide broad coverage of all festival venues and locations. The festival now has an image library for future event promotion.

Feedback
Overall event feedback was very positive.

"The LVRC team did an amazing job putting the festival together – such a credit to all involved. It's been my pleasure to be part of this project, and really looking forward to working together with you all again next year as the Spring Festival turns 60!" Kate Jones, The Independent

"I just wanted to say what a wonderful time we all had on Saturday at the Laidley Spring Fair. Thank you for looking after us… the tourist booklet you gave Catherine and myself inspired us to come back the day after and travel to the various towns that make up the Lockyer Valley." David Coombes, Izit Entertainment (provider of roving entertainers)

Buy From the Bush Qld Markets
Owner Kerri Brennan provided the following feedback:

- Was a big event for BFTBQM – very time intensive.
- Exhibitors very happy – over 50% said it was the best day they'd ever had for sales revenue. Two unhappy.
- Friday's weather and the consequent changes required to the site plan were tricky and very stressful - 15 cancellations due to weather.
- Visitors were very happy with the scale of the BFTBQM event and believe BFTBQM delivered on their brand promise.
- LASI committee representative, Coralie Grant noted that the success of the BFTBQM ensured that the main aim of attracting new visitors and exhibitors to the festival was met.

Debrief feedback suggested more food operators, as queues were long and up to 30 mins to receive orders. Power requirements of food vendors to be better estimated.

Das Neumann House
Recorded 97 attendees on Friday and 184 on Saturday.
Café revenue boosted by $2500 and craft sales of $200 over the two days.

Laidley Lutheran Church – Floral Displays and Markets
The Lutheran church had a steady flow of people over the two days - no count taken. There were positive comments even though organisers scaled back the event this year.

Laidley Anglican Church – Devonshire Tea and Lockyer Valley Arts Trail
Anglican Church disappointed in attendance numbers (estimated 60). Events were not advertised in the hard copy of the program due to missing deadlines.

Lockyer Valley Arts Trail - Workshops were very well received however the Arts Trail initiative didn't reach anticipated success and organisers were unhappy. The group is reviewing their involvement for 2023. Note that Council provided this group with additional design support for their flyer and ensured it was part of the special feature publication in The Independent, as well as providing social media coverage and website presence.

Gem Show
Overall organisers were happy with the Gem Show and are happy to be part of 2023 festival. They had a steady stream of visitors through on both days, mostly locals. No visitors from the buses that pulled up in front of the church, despite good signage. The Gem Show was not shown on the map of event locations - identified that the map needed improvement.

LASI Art Show
Very happy with sales. Would like to see the festival keep people longer on the Saturday.

Laidley District State School – Under 5's Event
A terrific turn out despite inclement weather. Weather resulted in cancellation of llamas, ponies and petting farm but families still enjoyed a great morning. Over 230 through the doors and positive feedback from stallholders and grant providers, Queensland Family and Child Commission, Child Protection Week. Assistant Regional Director attended - the event was commended as very successful and a significant event for families. Feedback from families suggests even greater numbers next year.

Laidley Cultural Centre – Horticultural Expo
Visitors to the Horticultural Expo noted that it was a great facility, with great parking and that vendors were all of a high class and the set up and displays were excellent.

Orchid Show
A very successful event financially and the venue was excellent. There were transport issues associated with the site – courtesy buses didn't drop passengers where they were supposed to, which was not ideal for their elderly demographic. Alternate sites that could accommodate greater mobility and transport options were flagged.

Laidley Pioneer Village and Museum
Organisers had a reasonable day. Expect they would do the same next year. Particularly enjoyed the parade and being able to showcase the Village & Museum in the lead up to their 50th Anniversary event.

Laidley Uniting Church – Quilt and Craft Expo
Successful couple of days – took in two days what they had previously done in three. Happy with the restart after two years – comments reflected that it was bigger and better than ever, with people not seen before. Noted that the Council programs were fantastic – just need them out earlier.

Laidley Business Community
The Council officers responsible for coordinating the festival visited business operators in Laidley CBD in the days directly after the festival, seeking their feedback. It was overwhelmingly positive, noting a considerable increase in out-of-towners (especially caravanners) and increased sales and visitation to their businesses. Only one business noted a reduction in sales – the Fruit & Veg shop.

Outcomes
The 2022 festival achieved its goals:

- To bring visitors to the region for the weekend or extended stay – motels in the local area were at 100% occupancy, Laidley Showgrounds and Lake Dyer were well utilised, Mulgowie Hall had 70 caravans via a Qld Caravan Club.
- Work collaboratively with community groups to attract new drive markets.
- Refreshed Laidley Spring Festival was well received by the Lockyer Valley community.
- Friday Night Feast & Fest – the free concert event was well attended by locals, achieving the goal of reconnecting the community and its spirit.

- The strong marketing campaign was successful in growing the festival brand and social media following.

2023 Considerations

- **Significance of the Diamond Anniversary** and the opportunity to grow the festival into a regionally significant event.
- **Gala Ball to launch festival** – Saturday, 2 September 2023 - to be held in the Laidley Cultural Centre. 200pax with 3 course dinner, live stage show and entertainment.
- **New activation** – Sunday, 10 September 2023 in Forest Hill offering local supplier workshops and a Teddy Bears picnic.
- **Forest Hill Silo Project** – ability to leverage the Laidley Spring with the anticipated opening of the Forest Hill Silo Project.
- **Ambassador/celebrity host** – to further develop and market the festival to attract new audiences.
- **LVRC street parade floats –** potential for a feature float to lead the Diamond Anniversary parade, plus a 2023 Wellbeing Committee float.
- **Inaugural Heather King Open Garden Award -** in recognition of her service and commitment to the festival for 50+ years.
- **Garden Precinct** – Laidley Cultural Centre with workshops, presentations and entertainment coordinated by Council.
- **Hospitality Precinct** - offering premium festival packages with local produce, bar and seating.
- **Market operator contract** – recommended to go to RFQ as other operators have expressed interest in the opportunity.

Strategic Implications

Corporate Plan

1. Lockyer Community – Events and activities that bring together and support greater connectivity in the community.
2. Lockyer Business, Farming and Livelihood – Promote and market the Lockyer Valley as a destination for commerce, tourism and lifestyle.

Tourism Strategy 2021-2026

Delivery of the 2022 Laidley Spring Festival, aligned with three of the five Strategic Priorities of the Strategy:

- SP 2 – Develop and implement a comprehensive and innovative marketing campaign to foster destination awareness and promote the Lockyer Valley as a region with bespoke and authentic visitor experiences.
- SP 3 – Collaborate with our strategic partners to build the capacity of the region's tourism operators by fostering collaborative initiatives that promote industry development and networking opportunities.
- SP 5 – Leverage our collaborative relationships with our strategic partners to promote the Lockyer Valley.

Legislation and Policy

Nil implications.

Risk Management

Loss of momentum built from the 2022 event.

Consultation

Portfolio Councillor Consultation
Festival debrief with the Mayor and Councillors.

Internal Consultation
Festival debrief held with Council's Tourism & Events team.
Festival debrief held with all departmental sections involved in the festival delivery.

External Consultation
Laidley Spring Festival Committee meeting.
Feedback requested from all stakeholder groups and event partners.

Attachments

1⇩	2022 Laidley Spring Festival Report - Southern Qld Country Tourism	17 Pages
2⇩	2022 Laidley Spring Festival Digital Marketing Report	4 Pages

Southern
Queensland Country
Laidley Spring Festival
9 – 10 September 2022

Contents

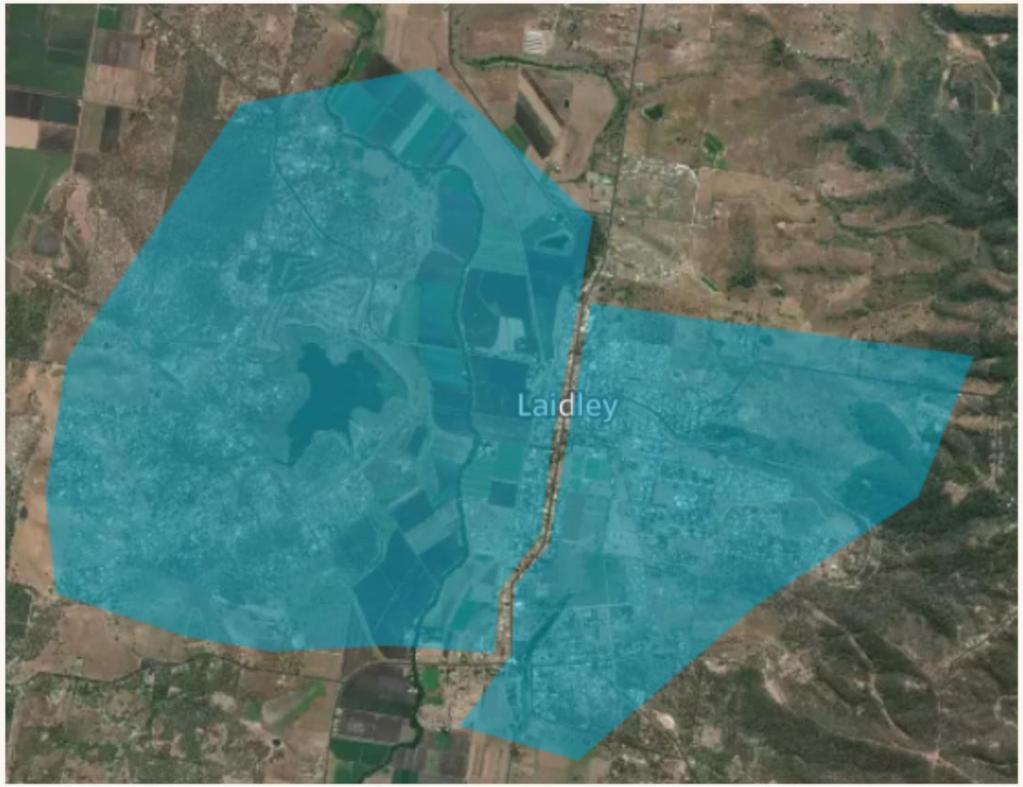
03 Methodology
04 Geofencing
05 Visitation
07 Helix Personas
12 2021 vs 2022 Event Comparison
13 Journey Map
14 Postcode Origins
15 Conclusion
16 SQCT Event Promotion
17 Contact Us

Methodology

This report examines the data collected from mobile phones to provide greater insight into visitation numbers, overnight stays and expenditure, Helix Personas recorded during the 2022 event, and a comparison between the 2021 and 2022 Laidley Spring Festival.

Geofencing

The section displays the geofenced area identified for the 2022 Laidley Spring Festival.



Visitation: 2022 Laidley Spring Festival

Southern Queensland Country

BETWEEN 9 - 10 SEPTEMBER 2022 APPROX. PEOPLE RECORDED AT THE EVENT

17,201

(includes locals and visitors)

Intrastate

95% (16,324)

Interstate

4% (741)

International

1% (136)

Visitation: 2022 Laidley Spring Festival

Southern Queensland Country

3,763

Estimated visitors

58%

Estimated day trippers

42%

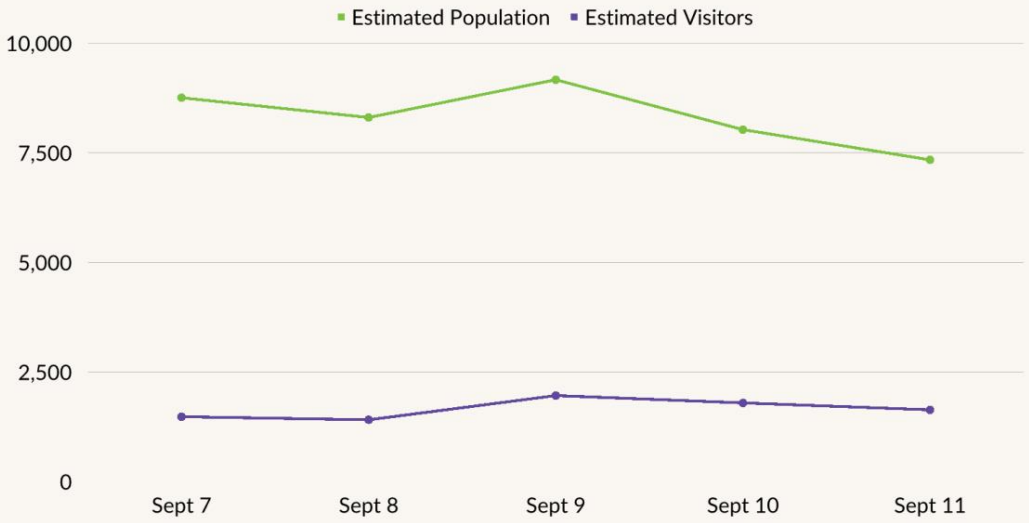
Estimated overnight visitors

$154

Typical spend per night per stay

Estimated Population: people who were in the area during the event period (includes locals and visitors)

Estimated Visitors: people that travelled >50km



Note: Estimated Population and Estimated Visitors values are based on ages 14+.

Although there were approximately **17,201 people (Estimated Population)** recorded at the Laidley Spring Festival, about **78%** of those are **locals** or **live close** to the area. This explains why there is a higher proportion of day trippers in comparison to overnight stays.

Helix Personas

The aspect of someone's character

WHAT ARE THEY?

- Australia's most advanced psychographic customer segmentation and data integration tool
- A unique and powerful methodology that combines sophisticated psychographic, attitudinal and behavioural data
- Segments consumers into targetable groups
- Discovers who your customers and potential customers really are, where to find them and how to reach them

> Helix Personas unlock who your customers and potential customers really are - beyond demographics to illuminate the true things that drive their behaviour and choices: mindset, values and motivation.

Helix Personas

The aspect of someone's character

Helix Personas includes 54 Personas grouped into 6 Communities. They each have key indicators to help target communications more effectively, according to socio-economic scale and household life cycle, and value-based and technology adoption.

Helix Personas and Community helps to understand more about customers':

- Values
- Attitudes
- Key demographics
- Activities
- Technology adoption
- Media consumption habits

Helix Persona | The aspect of someone's character

Top 3 Helix Personas - Identified | 2022 Estimated Visitors

504 HOME ENTERTAINMENT

5.2% of total

Average age: 38 years

Average household income: $76,000

Likes:

- Radio
- Newspapers
- Free-to-air (FTA) television

402 WORKING HARD

4.8% of total

Average age: 34 years

Average household income: $97,000

Likes:

- Community/local papers
- Pay TV/SVOD
- Catalogues

606 BASIC LIFESTYLE

4.4% of total

Average age: 43 years

Average household income: $49,000

Likes:

- Newspapers
- Catalogues
- FTA TV

Southern Queensland Country

Helix Persona | The aspect of someone's character

Top 3 Helix Personas - Identified (cont.) | 2022 Estimated Visitors

504 HOME ENTERTAINMENT

73% prefer holidays with local culture.

7% more likely to day-trip by car.

Communication:

- Keep things **simple** and **down to earth** when you talk to me

402 WORKING HARD

11% more likely to go away for weekends.

Light to Medium Spenders

Communication:

- Keep things **simple** and **direct** when you talk to me

606 BASIC LIFESTYLE

48% think that holidays are for downtime.

43% have day-tripped by car in the last 3 months.

Communication:

- Be **direct** - 'what are you offering and why should I choose you?'

Southern Queensland Country

Helix Persona | The aspect of someone's character

Top 3 Helix Personas - Identified | 2021 Estimated Visitors

401 HOME IMPROVERS

25% of total

Average age: 38 years

Average household income: $109,000

Likes:

- Community/local papers
- Pay TV/SVOD
- Radio
- Newspapers

101 BLUECHIP

11% of total

Average age: 38 years

Average household income: $184,000

Likes:

- Community/local papers
- Cinema
- Newspapers

504 HOME ENTERTAINMENT

11% of total

Average age: 38 years

Average household income: $76,000

Likes:

- Radio
- Newspapers
- Free-to-air (FTA) television

Southern Queensland Country

2021 vs 2022 Event Comparison

This sections offers a brief overview of the change in devices recorded during the 2021 Laidley Spring Festival (10 -11 September) and the 2022 Laidley Spring Festival (9 - 10 September).

ESTIMATED POPULATION

1.4%

CHANGE IN DEVICES RECORDED

2021	2022
16,960	17,201

ESTIMATED VISITORS

251.8%

CHANGE IN DEVICES RECORDED

2021	2022
1,069	3,763

Overall, there was significantly more attendance at the 2022 Laidley Spring Festival.

There were **2,690+ more Visitors** to the 2022 event.

The 2021 event was impacted due to the COVID-19 pandemic and associated restrictions. This explains this substantial **increase** in estimated visitation seen at the 2022 event.

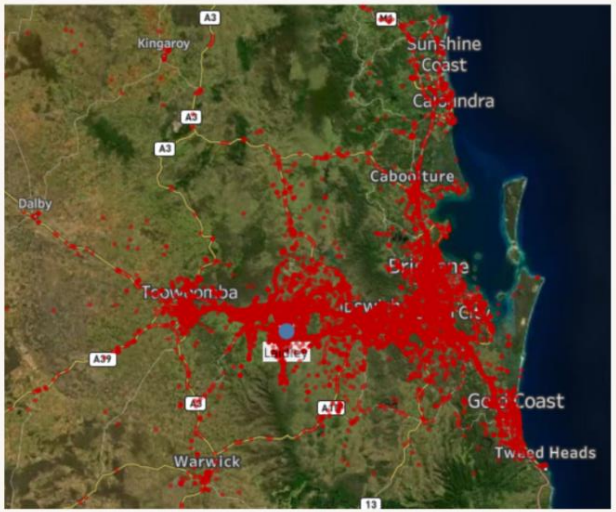
HELIX PERSONAS COMPARISON

There was a more even split between the top 3 Helix Personas identified at the 2022 Festival, indicating that more Personas attended overall. This can be attributed to the increased visitation.

Journey Map (± 7 days)

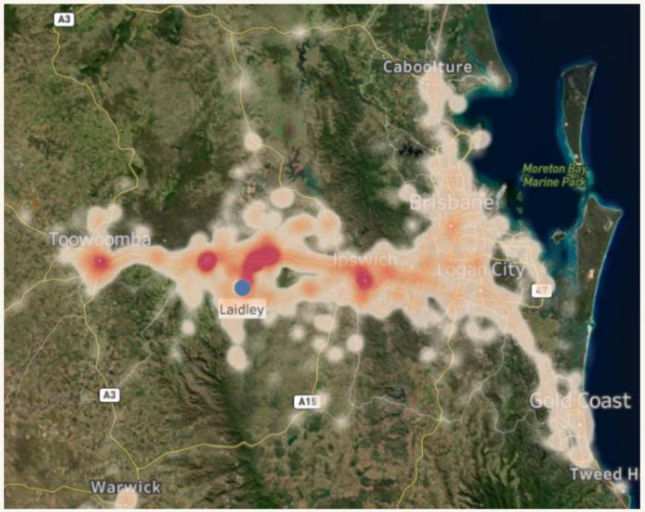
The Journey Map visualises the path taken by Visitors in the week before and after visiting Laidley.

Circle Map



The Circle Map shows that a majority of Visitors come from/go to the Lockyer Valley area and greater Brisbane areas.

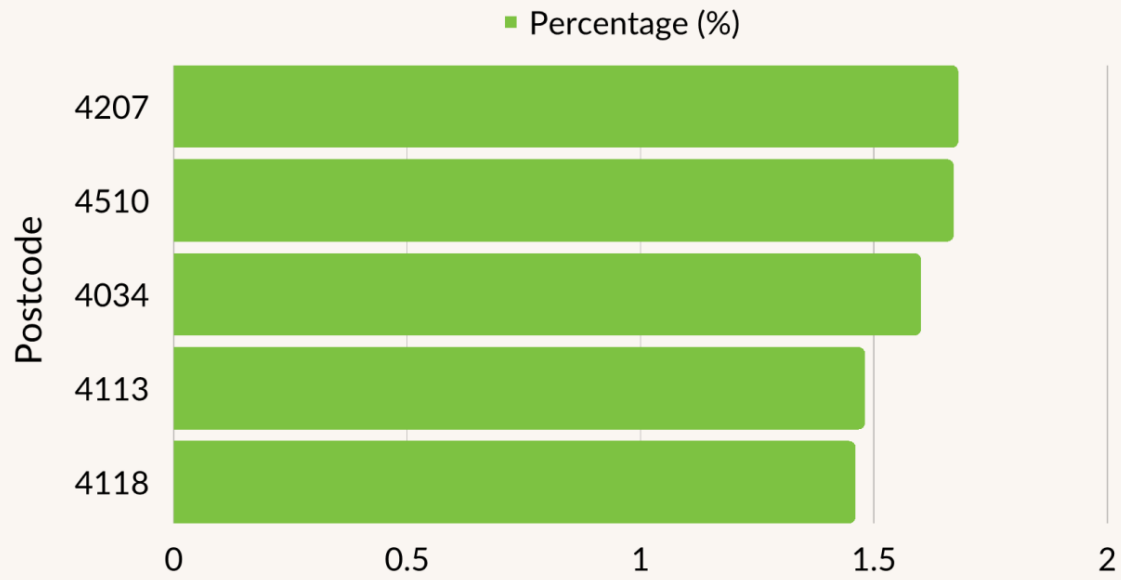
Density Map



The Density Map indicate that clusters of visitors come from/go to Gatton, Plainland, Ipswich, and Toowoomba.

Postcode Origins

Origin postcodes for the Estimated Visitors to Laidley in the **last 12 months.**



Visitors (travelled >50km) mainly originate from the Logan area (1.68%) and Caboolture (1.67%).

However, this data is not specific to the event period.

Conclusion

Approximately **17,201 people** attended the 2022 Laidley Spring Festival. Although, there was a +1.4% change in the Estimated Population compared to 2021, the **251.8% increase in Estimated Visitors** indicates that significantly more people recorded in the area were not local and travelled greater than 50km during the event period. COVID-19 restrictions lessening may have also impacted the significant change and increase in visitation numbers during the 2022 event.

The top 3 Helix Personas recorded at the 2022 Laidley Spring Festival share similar holiday attitudes and communication preferences.

Overall, there were more **day trippers (58%)** to the 2022 event, indicating that visitors lived in the region or day-tripped by car.

Journey Map information indicates most visitors travel to/from the greater Lockyer Valley region (i.e., Plainland and Gatton), Ipswich and, Toowoomba.

SQCT Event Promotion

Contact us

E-mail admin@sqct.com.au

Website www.southernqueenslandcountry.com.au

Phone 07 4632 1988

Address 10 Rens Street
Toowoomba QLD 4350


LAIDLEY
SPRING
FESTIVAL
DIGITAL MARKETING REPORT
Laidley Spring Festival Website
7,777
WEBSITE VIEWS
5,512
UNIQUE PAGE VIEWS
76
NEW LEADS
Audience
5,937
BRISBANE
245
SYDNEY
117
GOLD COAST
112
GATTON
67
TOOWOOMBA
72
MELBOURNE
55
SUNSHINE COAST
Lockyer Valley
REGIONAL COUNCIL

LAIDLEY SPRING FESTIVAL

DIGITAL MARKETING REPORT

Laidley Spring Festival Facebook

98,988
PAGE REACH

5,512
UNIQUE PAGE VIEWS

69
POSTS

Paid Advertising

$897.40
AMOUNT SPENT

109,934
PAGE REACH

258,916
PAID IMPRESSIONS

Audience

32.2%
BRISBANE

11.4%
LAIDLEY

5.4%
GATTON

5.2%
TOOWOOMBA

2.5%
GOLD COAST

Lockyer Valley REGIONAL COUNCIL

LAIDLEY SPRING FESTIVAL

DIGITAL MARKETING REPORT

EDM Newsletter

1,115
DATABASE SIZE

4
TOTAL EDM SENT

614
OPENS

Audience

538
AUSTRALIA

71
UNITED STATES OF AMERICA

2
FIJI

2
NEW ZEALAND

2
UNITED KINGDOM

Lockyer Valley REGIONAL COUNCIL

LAIDLEY SPRING FESTIVAL

DIGITAL MARKETING REPORT

Luvya Lockyer Website

22,565
TOTAL IMPRESSIONS

749
TOTAL CLICKS

Other Advertising - No Reporting Data

ATDW:
No reporting tool

SEQ Food Trails:
No reporting tool

SQCT
No Data provided

River 9.49
No Data provided

Independent
No Data provided

12.4 Library Services Purchasing

Author: Nicole Kilah, Coordinator Libraries & Galleries
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

The purpose of this report is to seek Council's endorsement on the continuation of consortia purchasing for library services and electronic resources, when possible, with Scenic Rim and Somerset Regional Councils.

Officer's Recommendation:
THAT Council approve the continuation of the consortia purchasing method with Scenic Rim and Somerset Regional Councils for the supply of its library resourcing requirements.

RESOLUTION

THAT Council approve the continuation of the consortia purchasing method with Scenic Rim and Somerset Regional Councils for the supply of its library resourcing requirements.

Moved By: **Cr Hagan** **Seconded By:** **Cr Wilson**
Resolution Number: 20-24/0755

CARRIED
6/0

Executive Summary

In 2017, Lockyer Valley and Scenic Rim Regional Libraries commenced discussions in relation to integrating their existing Spydus Databases to a shared Library Management System (LMS) to offer enhanced services to their respective communities. During this time, conversations also included Somerset Regional Council who were not using the same Library Management System at the time, however were offering similar databases. In 2018, this process commenced with the integration of the LMS for Scenic Rim and the purchase of eResources with Scenic Rim as well as Somerset Regional Councils. Combined purchasing of databases offers sustainable, logical and local cooperation for enhanced user benefits.

It is recommended that Council endorse this practice for the continued purchasing as a consortia where possible.

Proposal

Lockyer Valley Regional Council and Scenic Rim Regional Council have been operating on a shared Library Management system since June 2018. During this time, Lockyer Valley, Scenic Rim and Somerset Regional Councils have also been purchasing Electronic Resources (eResources) as a consortium.

There are many benefits to do this including:

- Improved and consistent level of service to library users across the respective regions.
- Easy access to a wider range of resources.
- Significant saving to participating regions in setup, implementation, and ongoing support costs.

- Sustainable, local cooperation for enhanced user benefits.
- Ease of a centralised database and network administration support.
- Greater access to a wider range of resources due to cost scalability.

Following the initial setup in 2018, Lockyer Valley and Scenic Rim have extended the Library Management System consortia from the original scope of being a centralised database to enable library users to access a wider range of resources (as inter-library-loans), increase modules offered and to provide shared documentation for system upgrades and training.

This type of collaboration is in line with local, regional and state-wide best practice. Examples of this include the Queensland Regional Libraries Consortium where public libraries could opt-in for an eBook consortium and State Library of Queensland purchasing eResources as a State-wide subscription product.

There is an existing Memorandum of Understanding (MOU) between Lockyer Valley and Scenic Rim Regional Councils for the LMS which is reviewed annually, with amendments agreed by all parties and resigned.

There is also an existing MOU for eResources between Lockyer Valley, Scenic Rim and Somerset Regional Councils. This MOU determines the scope, outcomes, roles and responsibilities as well as the pricing structure for the eResources. It is reviewed biennially and re-signed by all parties.

There are risks associated with purchasing as a network (consortia) however the MOU details how each Council can opt in/out of the resource and the flow on affect. There is also an option for individual purchases for eResources by all parties that do not have the capacity to offer their items as a consortia. To determine value for money, quotes are obtained for the individual library and the consortia and then assessed.

This assists with meeting the 'Five Sound" contracting principles detailed in the *Local Government Act 2009* Chapter 4, Section 104 (3);

1. Value for money.
2. Open and effective competition.
3. Development of competitive local business and industry.
4. Environmental protection.
5. Ethical behaviour and fair dealing.

eResource vendors use various methods to determine a fee structure based on:

- the population as a scale. The combined population of the local group is still smaller than Fraser Coast and Mackay Regions and considerably smaller than the Regions of Ipswich, Toowoomba and many other Southeast Queensland Councils.
  An example of this is a recent quote for an online database. Cost for Lockyer Valley's population was $4990, however the cost for all three libraries, purchasing as a consortium was $6500.

- a flat rate with usage limits.
  An example of this was the purchase of one eResource (book, magazine, audiobook) for $250. This resource can be used up to 100 times simultaneously. As an individual library service of our size, it is rare to reach more than 20 loans at one time, yet the cost is still $250. The ability to share this purchase means that the cost reduces for each library involved in the consortia or the cost stays the same and we offer additional titles to our community.

Purchasing as a group enables value for money as well as increased resources for our community.

Options

1. Approve the continuation of consortia purchasing for eResources and the Library Management System when shown to be cost effective.
2. Cease purchasing as a consortia. This will result in the loss of some eResource titles / collections and will be more costly to Council.

Previous Council Resolutions

There are no previous Council Resolutions regarding this however the Consortium idea was presented at a Council workshop in 2017.

Critical Dates

June 2023 – The five-year Managed Service Agreement between Council and Civica expires.
June 2023 – Lockyer Valley, Scenic Rim and Somerset Regional Council Libraries assess the eMagazine subscription.

Strategic Implications

Corporate Plan

1	Lockyer Community	Advocate on behalf of the community for access to services and facilities
5	Lockyer Leadership	To be financially sustainable

Finance and Resource

Failure to adopt the consortia purchasing will result in either an increase in fees for eResources and the Library Management System or a decrease in service offerings to our community for eResources.

Risk Management

Key Corporate Risk code and Category: Finance and Economic FE2
Key Corporate Risk Descriptor: Decision making governance, due diligence, accountability and sustainability.

Consultation

Portfolio Councillor Consultation
Councillor Hagan has been advised on this matter.

Internal Consultation
Janet McDonald – Coordinator Procurement
Susan Boland – Senior Governance Officer
Madonna Brennan - Risk, Audit and Corporate Planning Advisor

Attachments

There are no attachments for this report.

12.5 Library Opening Hours

Author: Nicole Kilah, Coordinator Libraries & Galleries
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

The purpose of this report is to seek Council's endorsement to trial extended opening hours at the Gatton Library for a six-month period. After this time, the library opening hours will be reassessed.

Officer's Recommendation:
THAT Council approve opening the Gatton Library on a Saturday morning, between the hours of 9am and 11.30am, for a trial period of six-months commencing 4 March 2023.

RESOLUTION

THAT Council approve opening the Gatton Library on Saturday mornings, between the hours of 9am and 11.30am, for a trial period of six-months commencing 4 March 2023.

Moved By: **Cr Hagan** **Seconded By:** **Cr Qualischefski**
Resolution Number: 20-24/0756

CARRIED
6/0

Executive Summary

Lockyer Valley Libraries ceased offering a Saturday library service during the COVID pandemic in 2020. Having access to a library service on Saturday mornings will help remove barriers for any library members who are unable to visit during business hours. At the recent Library Customer Survey, 56% of respondents requested to see the library open on Saturday.

It is recommended that Council approves reopening the Gatton Library on a Saturday morning for a six-month trial period, commencing 4 March 2023.

Proposal

Prior to March 2020 (COVID restrictions), both the Gatton and Laidley Libraries were open 9am to 12 noon on Saturdays. Both libraries closed in March 2020, reopened to restricted hours in June 2020 and reopened 9am to 5pm weekdays in February 2021. However, Saturday morning openings have not been reinstated.

A Library Customer Survey was conducted in July 2022. One survey outcome was to obtain preferred opening hours from library attendees, particularly on evenings and weekends. 56% of respondents indicated they would prefer a Saturday morning opening, 7% indicated a weekday evening with 36% had no preference.

Following on from this, the State Librarian has encouraged Council to reopen the library on a Saturday morning to provide a service to members unable to visit during business hours. It is also expected that the additional opening hours are likely to contribute to an increase in visitation and an improvement in collection usage.

To open a library with 2 casual staff doing a 3-hour shift is approximately $325 including on-costs or approximately $6,500 for the 6-month trial period which has already been budgeted for. It is expected that library staff will run some Saturday programs to activate the library opening hours which will be 9am to 11.30am. On completion of the trial, consideration will be given the Laidley Library operating hours.

Options
There were several options considered for reopening the libraries. Over the past 3 years, there have been many changes in our community and how people engage, access, and depend on services. Trialling the hours at the Gatton Library will ensure this reflects the community's current needs.
Other options included:

- Reopening alternate libraries
- Reopening both libraries.

Critical Dates
If approved, it is anticipated that the Gatton Library will reopen for the trial commencing, Saturday 4 March 2023.

Strategic Implications
Corporate Plan
Lockyer Community: Provide and maintain spaces and facilities that are appropriate for the needs of individuals, groups, and the community as a whole

Finance and Resource
In anticipation that the libraries would extend their opening hours during this financial year, a budget was allocated.

Legislation and Policy
Nil

Risk Management
State Library of Queensland's Standards for Operations requires a minimum weekly opening hours of 84 for both library branches. Opening an extra 2.5 hours a week will help Council continue to work towards meeting this goal.

Consultation
Portfolio Councillor Consultation
Cr Hagan has been consulted about the library opening hours. A Council workshop was held on the 7 February 2023 with Councillors to discuss the feedback from the Customer Satisfaction Survey and library opening hours.

Internal Consultation
Casual library staff have been consulted about the potential date of reopening the Gatton Library.

Community Engagement
The community were asked their preferred option during the July 2022 Library Customer Service Survey.

Attachments

There are no attachments for this report.

13.0 INFRASTRUCTURE REPORTS

No Infrastructure Reports.

14.0 ITEMS FOR INFORMATION

GENERAL BUSINESS

THAT Council receive and note the following items for information:

14.1 - Chief Executive Officer's Monthly Report - January 2023

14.2 - Group Manager People Customer Corporate Services Monthly Report - January 2023

14.3 - Group Manager Community and Regional Prosperity Monthly Report - January 2023

14.4 - Group Manager Infrastructure Monthly Report - January 2023

Moved By: **Cr Holstein** **Seconded By:** **Cr Hagan**

Resolution Number: 20-24/0757

CARRIED
6/0

14.1 Chief Executive Officer's Monthly Report - January 2023

Author: Ian Church, Chief Executive Officer
Responsible Officer: Ian Church, Chief Executive Officer

Purpose:

This report provides Council with a summary of key operational activities undertaken by the Chief Executive Officer's Group during January 2023.

This document is for Council's information only.

Executive Summary

The activities covered in this report include Strategic Planning; Internal Audit and Risk; Procurement; Disaster Management; Community Development and Engagement and Advocacy. The Finance function is subject to separate reporting.

Proposal

That this report be received and noted.

Attachments

1⇩ Chief Executive Officer's Monthly Report- January 2023 17 Pages

Executive Office

MONTHLY GROUP REPORT
January 2023

Lockyer Valley
REGIONAL COUNCIL

HIGHLIGHTS

Flood Restoration Program Update

Expenditure incurred during and after the three declared events has been substantial and it is important to ensure all eligible costs are reimbursed. The following table provides a snapshot of costs submitted for reimbursement and approved. Report as at 7 February 2023.

TOTAL FOR IMMEDIATE RECONSTURCTION WORKS	$ 22,799		$ -	$ 22,799	$ 22,799
Fred Thomas Pedestrian Bridge	$ 220,159		$ 55,040	$ 165,119	$ 49,536
Unsealed Roads Zone 9	$ 234,227		$ 58,557	$ 175,670	$ 117,339
Unsealed Roads Zone 2	$ 234,376		$ -	$ 185,977	$ 55,793
Unsealed Roads Zone 3	$ 388,212		$ -	$ 375,636	$ 112,691
Unsealed Roads Zone 1	$ 535,405		$ 129,831	$ 403,859	$ 121,158
Liftin Bridge	$ 3,653,571		$ 243,428	$ 2,339,379	$ 701,814
Unsealed Roads Zone 8 Part 2	$ 566,782		$ -	$ 515,749	$ 180,773
Unsealed Roads Zone 8 Part 1	$ 689,045		$ -	$ 641,853	$ 192,556
Unsealed Roads Zone 8 Part 3	$ 410,118		$ -	$ 298,007	$ 177,428
Sealed Roads Zones 1,2,and 3 Submission 1	$ 246,646		$ -	$ 241,352	$ 72,406
Unsealed Roads Zone 10 - Part 1	$ 689,329		$ -	$ 686,822	$ 206,047
Old Laidley Forest Hill Road CH 1800	$ 269,006		$ -	$ -	$ -
Unsealed Roads Zone 4 - Part 1	$ 1,178,564		$ -	$ 867,359	$ 260,208
Unsealed Roads Zone 4 - Part 2	$ 1,146,515		$ -	$ 1,121,366	$ 336,410
Unsealed Roads Zones 11-18	$ 152,130		$ -	$ 129,407	$ 38,822
Woolshed Creek Road Floodway CH 400	$ 442,230		$ -	$ 339,694	$ 101,908
RCP and RCBC Desilting and Clean Outs	$ 211,064		$ -	$ 184,538	$ 55,361
East Egypt Road Landslip	$ 4,112,342		$ -	$ 2,293,795	$ 688,139
Berlin Road Landslip	$ 2,588,719		$ -	$ 1,978,528	$ 593,558
Sealed Roads Zone 9	$ 432,350		$ -	$ 342,109	$ 102,633
Sealed Roads Zone 5	$ 1,275,573		$ -	$ 557,741	$ 167,322
Adare Road Floodway	$ 183,831		$ -	$ 183,831	$ 55,149
Guardrail Restoration	$ 238,986		$ -	$ 232,394	$ 69,718
Sealed Roads Zone 4	$ 149,844		$ -	$ -	$ -
Sealed Roads Zone 3	$ 149,098		$ -	$ -	$ -
Brightview Road	$ 2,635,900		$ -	$ -	$ -
Sealed Roads Zone 11 – 18	$ 203,344		$ -	$ 157,467	$ 47,240
Mountain View Drive Landslip	$ 1,740,043		$ -	$ 1,531,190	$ 459,357
Sealed Roads Zone 1 and Town Extras	$ 1,276,265		$ -	$ -	$ -
East Egypt Road Landslip - Site 3	$ 118,098		$ -	$ -	$ -
Unsealed Roads Zone 5	$ 1,083,272		$ -	$ -	$ -
Unsealed Roads Zone 6	$ 1,628,561		$ -	$ -	$ -
Unsealed Roads - Zone 10 - Part 2	$ 740,144		$ -	$ -	$ -
Sealed Roads Zone 10	$ 195,683		$ -	$ -	$ -
Sealed Roads Zone 8	$ 991,305		$ -	$ -	$ -
Unsealed Roads Zone 10 - Part 3	$ 1,179,746		$ -	$ -	$ -

Sealed Roads Zone 2	$ 636,899	$ -	$ -	$ -	
Sealed Roads Zone 6	$ 199,291	$ -	$ -	$ -	
Sealed Roads Zone 7	$ 136,076	$ -	$ -	$ -	
Unsealed Roads Zone 7	$ 1,443,213	$ -	$ -	$ -	
Roches Road Ch 1250	$ -	$ -	$ -	$ -	
Steinke's Bridge	$ -	$ -	$ -	$ -	
Project Management Expenditure included in all submissions	$ -	$ -	$ -	$ -	
TOTAL FOR REPA	**$ 34,605,962**	**$ 486,856**	**$ 15,948,841**	**$ 4,963,365**	

TOTAL FOR DRFA PROGRAM	**$ 44,628,689**	**$ 724,055**	**$ 21,260,781**	**$ 10,275,304**

*$93 955 of the $152 375 deemed ineligible for May CDO was approved in separate submissions.

BUSINESS IMPROVEMENT & STRATEGY

Audit and Risk Management

The Audit and Risk Management function links to the Corporate Plan by assisting to provide; "*Compliance with Legislation".*

Audit and Risk Management Committee

As noted in the previous Executive Office monthly report, the next meeting of the Audit and Risk Management Committee is scheduled for Thursday 9 March 2023. The key focus of this meeting will be the annual review of Council's 3-year Internal Audit Plan and review of performance of Council's Internal Audit provider.

Audit Register Status

The following table provides insight into the status of the internal and external audit recommendations captured on Council's Audit Register. The table identifies the number of current active action items on the Audit Register by their level of risk to Council.

There has been no change to the content of the table as included in last month's Executive Office report.

Internal Review (audit)	Total No of Rec.	Number of Current Active Recommendations by Risk Level				Completed Rec.
		High	Medium	Low	Improve	
Tendered Contract Review	17	0	3	1	1	12
Project Management Practices	11	0	1	1	0	9
Review of Legislative Compliance	6	0	1	0	0	5
Payroll and Remuneration Processes	10	1	0	1	0	8
Payroll and Vendor Analytics	9	0	3	0	0	6
Lessons Learned from Pandemic	4	3	1	0	0	0
Property Management Review	10	4	1	1	1	3
Disaster Response (On Ground)	14	8	4	0	0	2
Plant and Fleet Utilisation Review	19	2	9	8	0	0
Development Applications Review	8	0	2	6	0	0
External Audit Items	3	0	2	0	0	1
Total	111	18	27	18	2	46

A draft "Audit Recommendations Management Guideline" and supporting process maps have been developed and are currently being reviewed by the Executive Leadership Team. The purpose of the Guideline is to detail the approval, implementation, oversight, and reporting processes required to ensure internal and external audit recommendations are properly captured in Council's Audit Register and followed up by responsible staff. The Guideline will improve the governance of Council's internal audit process and management of recommendations made from audits and reviews completed within Council.

This Guideline applies to all recommendations arising from internal and external audit reports, and management reviews undertaken.

A further review of the outstanding recommendations on the Audit Register is planned prior to the next meeting of the Audit and Risk Management Committee.

Internal Audit Planning

Annual planning for the internal audit function was conducted during the month of January. Council's Internal Auditor met with ELT representatives to discuss possible internal audits to be recommended to the Audit and Risk Committee for completion during the 2023/2024 year. The Internal Audit Planning Approach includes identifying risks, opportunities and potential audit topics, reviewing and approving the list of potential audits and draft internal audit plans and developing an annual and strategic internal audit plan.

A number of areas were considered for internal audit during 2023-2024, including:

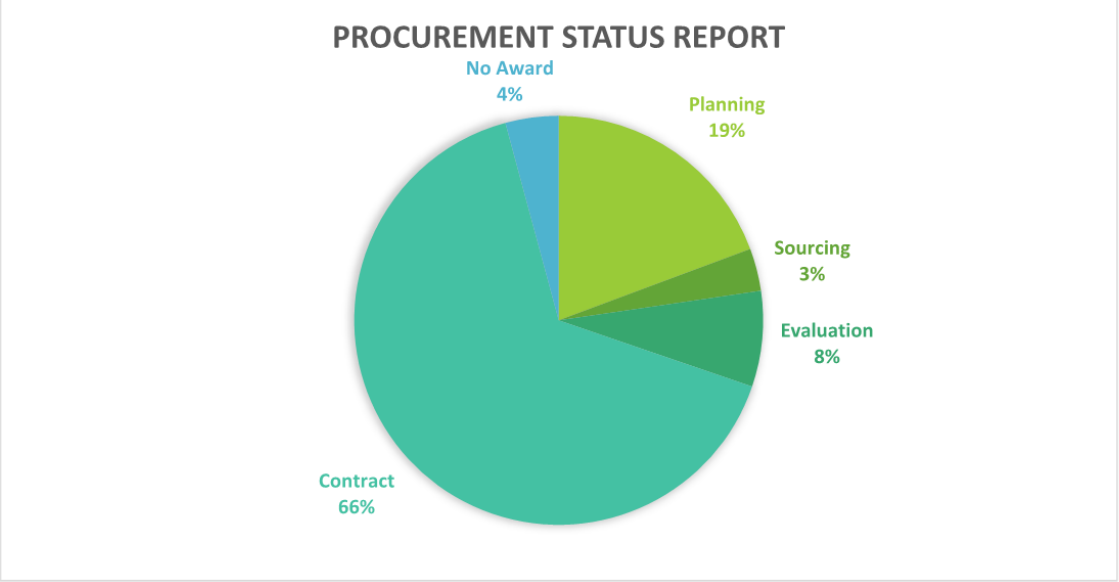
- Four reviews for the year of outstanding items on the audit register to help control these.
- Sport and Recreation including inconsistencies across aspects of the arrangements with groups
- Revenue Management Review in relation to Waste Fees and Charges (as they are processed outside TechOne) and collection and submission of the Waste Levy.
- Fuel Management Review (how we procure fuel, fuel card process, fuel usage reconciliations, security of fuel).

PROCUREMENT

Group	Progress		
Infrastructure Delivery	**January 2023**	**February 2023**	**March 2023**
LVRC-22-037 Tyres & Tyre repairs	Planning for tender process		
LVRC-22-165 North & East St Roundabout Asphalt	Evaluation of tenders - closed 16/12/22		
LVRC-22-042 Gatton Stormwater Condition Survey	Evaluation of tenders - closed 22/9/22		
LVRC-22-036 Fred Thomas Bridge Replacement	Evaluation of RFQ closed - 22/8/22		
LVRC-22-046 Gatton Central Drainage Design	No award in Nov, documents being revised prior to re-release		
LVRC-22-068 Building Condition Assessments	Contract being negotiated		
Infrastructure Fleet			
LVRC-22-070 Multiple Earthmoving Plant	Evaluation of RFQ - closed 20/1/23		
LVRC-22-071 Multiple Heavy and Light Trucks	Evaluation of RFQ - closed 18/11/22		
LVRC-22-073 Multiple Mowers	Evaluation of RFQ - closed 11/1/23		
LVRC-22-074 Multiple Trailers	Planning for RFQ process		
LVRC-22-072 Multiple Light Commercial & Passenger Vehicles	Awarded Lockyer Valley Toyota		
LVRC-22-072A Single Cab Utilities	Awarded Moorooka Motor Group		
LVRC-22-069 Bridge Maintenance	Evaluation of RFQ - closed 7/2/23		
LVRC-22-082 John Street Laidley Design	RFQ closes 17/2/23		
Waste			
LVRC-22-076 Leachate Management Services	Sourcing tender closed on 16/2/22		
LVRC-22-044 Waste Facilities Supervision	Evaluation of tender - closed 13/12/22		
LVRC-22-045 MRF Kerbside Recyclable Processing	Evaluation of tender - closed 13/12/22		
LVRC-22-091 FOGO Treatment System	Planning for tender process		
Community Facilities			
LVRC-2-086 Gatton Shire Hall External Façade Upgrade	Tender closes on 28/2/22		
LVRC-22-092 Fairways Park North Carpark Repairs	Awarded JCNL		
Planning and Development			
LVRC-22-027 Forest Hill Silos Art	Planning for tender process		
LVRC-23-005 Bushfire Management Plan	Planning for RFQ process		
LVRC-23-006 Nature Based Recreation and Tourism Study	Planning for RFQ process		
LVRC-23-007 - Phase 2 - Laidley Flood Protection Scheme	Planning for RFQ process		
Procurement and Stores			
LVRC-22-078 – Bitumen Products & Services	Planning for tender process		
LVRC-22-052- Traffic Control Ad-hoc Services	Planning for tender process		

Group	Progress		
Procurement and Stores	**January 2023**	**February 2023**	**March 2023**
LVRC-23-008 – Wet/Dry Plant & Equipment Hire Panel	Planning for tender process		
Executive Office			
LVRC-22-022 – Corporate Uniforms	Planning for tender process		
LVRC-23-002 – 2022-23 Flood Intelligence Infrastructure	Planning for tender process		
LVRC-23-004 – Flood Camera Network Maintenance	Planning for tender process		

Planning	23
Sourcing	4
Evaluation	9
Contract	78
No Award	5



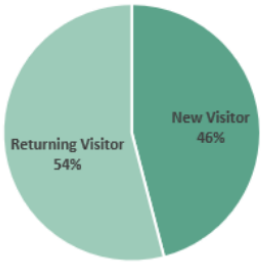
DISASTER MANAGEMENT

Corporate Plan Action – Disaster Management framework development and implementation

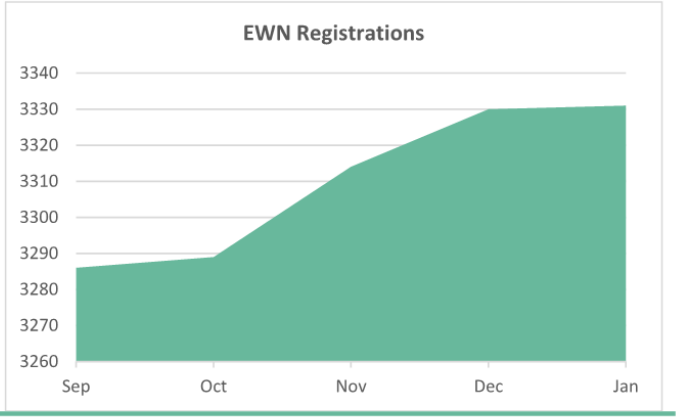
Corporate Strategic Planning

The Disaster Management team have drafted a Disaster Management Policy which is currently being reviewed by the ELT. A Disaster Management Framework is being developed to support the Policy. The Framework aligns with the Queensland Disaster Management Arrangements.

Community Education External Engagement & Partnerships	Council officers attended Recovery Basics training delivered by Red Cross and facilitated by Laidley Community Centre. This was a multiagency training and engagement activity.
Training & Exercises	The 2023 Disaster Management training program and calendar has been developed and training is underway. Incident management system training was delivered for staff undertaking various functions in disaster operations.
Internal Engagement & Collaborations	In collaboration with the Organisational Development team, a process has been developed for the delivery of Queensland Disaster Management Arrangements to all staff.
Disaster Management Plans	The Local Disaster Management Plan is currently under review with the aim of tabling at the March 2023 meeting of the Local Disaster Management Group.
Flood Intelligence System	The annual maintenance of Council's rain and river height gauges and flood monitoring cameras has been completed. The network is monitored for issues. Four sites identified with issues have been repaired. All cameras operating as intended.
Funded Programs – Progress Reports	The Get Ready Program is 80% completed with the Evacuation Centre trailer ready for deployment. The installation of additional Disaster Management Incident Management System modules is yet to be commenced due to provider restraints.
Incidents/Operations	A number of thunderstorms have passed through the region last month – no activation was necessary.

State Emergency Service (SES) Monthly Report	The successful candidate has been appointed to the role of Local Controller for the Lockyer Valley SES supported by Council. The Lockyer Valley SES currently has 38 members. • Forest Hill – 10 • Gatton – 14 • Laidley – 12 SES has supported Queensland Police Service (QPS) at land searches on three occasions and Queensland Ambulance Service (QAS) with patient retrievals on three occasions during January. One resident in Gatton sourced sandbags after hours from SES. SES provided bags and plastic on this occasion and resident filled own bags. SES advised resident to purchase their own sandbags and sand.
Queensland Disaster Management Arrangements Review	Council has lodged a submission into the Inspector General Emergency Management review into Queensland's Disaster Management Arrangements regarding: • the roles and responsibilities of parties to the arrangements. • the role and effectiveness of disaster management committees reflected, and not reflected, in the Act including the Queensland Disaster Management Committee, State Disaster Management Group, District Disaster Management Committees, Local Disaster Management Committees and recovery focused committees. • matters to inform the appropriate allocation of State level disaster management functions across agencies in the context of outcomes from the Independent Review of QFES (noting the transition of the State Emergency Service and volunteer marine rescue functions to the QPS). • matters to inform update of the Act and State Disaster Management Plan to support implementation of the structural elements of the Government Response; Clarification of roles and responsibilities of committees and parties to the arrangements; and the effectiveness of disaster management of the local group, including local disaster management plans.
Disaster Dashboard	The Disaster Dashboard was accessed by 460 new users and 561 existing users in January 2023. See graph below. 
Opt-In Notification Service	Subscriptions for the Lockyer Valley Early Warning Network increased between November and December 2022. Registration remained

stable in January with a total of 3331 registered users. Lockyer Valley residents are encouraged to register for this free service at EWN or through the Disaster Dashboard.



COMMUNITY DEVELOPMENT & ENGAGEMENT

Strategic Priority 1 – *Engage with the community to ensure the community's views, values and aspirations inform Council decision-making.*

11 projects received engagement support in January:

- Meeting between Council and Traditional Custodian Elders
- Flood-affected Park Furniture Program
- Disaster Management Seasonal Preparedness
- eNotices Strategy
- Lockyer Waters Community Facilities
- Lorikeet Road/Gerhke Road Roadworks
- Lorikeet Road Floodway Upgrade Project
- Fairways Park Carparking
- Queensland Rail Level Crossing works, Laidley
- Hope Street Tennis Courts
- Laidley Transfer Station Fire

A meeting was held in January between the Mayor, Councillors, Executive Managers and Elders and representatives of the Traditional Custodians of the region, the Yuggera and Ugarapul people. The meeting focused on shared understandings of terminology and recognition processes, opportunities for meaningful engagement on future projects and building a base for a strong working relationship.

IAP2-approved training on Methods of Engagement has been arranged for relevant officers in March. This training builds upon the recent Essentials of Engagement training completed by officers and provides a strong framework and skill base for various business units to apply across appropriate projects. Oversight and support will continue from the Engagement and Communications Team.

Strategic Priority 2 – *Support community groups to increase their capacity, resilience and sustainability.*

- Council continues to provide financial support to community groups and hall committees through the *Community Safer Places* and *Council Catch Up* series program areas for community-led projects that increase the resilience and social connectedness of local areas. Direct engagement and communication commenced with Community Centres and Hall Committees regarding internal and external funding opportunities and identifying community and community group capacity building opportunities.
- 27 schools throughout the region were included in a mailout of Ambassador Support Grant flyers for staff to present to students who will represent at either a state level or higher across sporting, academic, or cultural endeavours.
- Minor Community Grants were provided to:
    - South-West Queensland Thunder Football Club
    - Gatton Swimming Club Inc.
- Ma Ma Creek Community Centre was awarded $24,000 at the January Council Meeting via the *Community Safer Places* project. This funding will be used to build a shed at the centre.
- Council will host a free Grant Writing Workshop for local community groups in March, which will be facilitated by a successful and experienced local grant writer.

My Community Directory: January 2023

Top 5 searched categories	Top 5 most viewed service
1. Health Services	1. Toowoomba Chinese New Year Group Inc
2. Community Clubs & Interest Groups	2. Laidley & Districts Netball Association
3. Sport	3. Lifeline Shop – Crowley Vale
4. Education	4. Laidley Oral Health Services
5. Religion & Philosophy	5. Gatton Redbacks Soccer Club

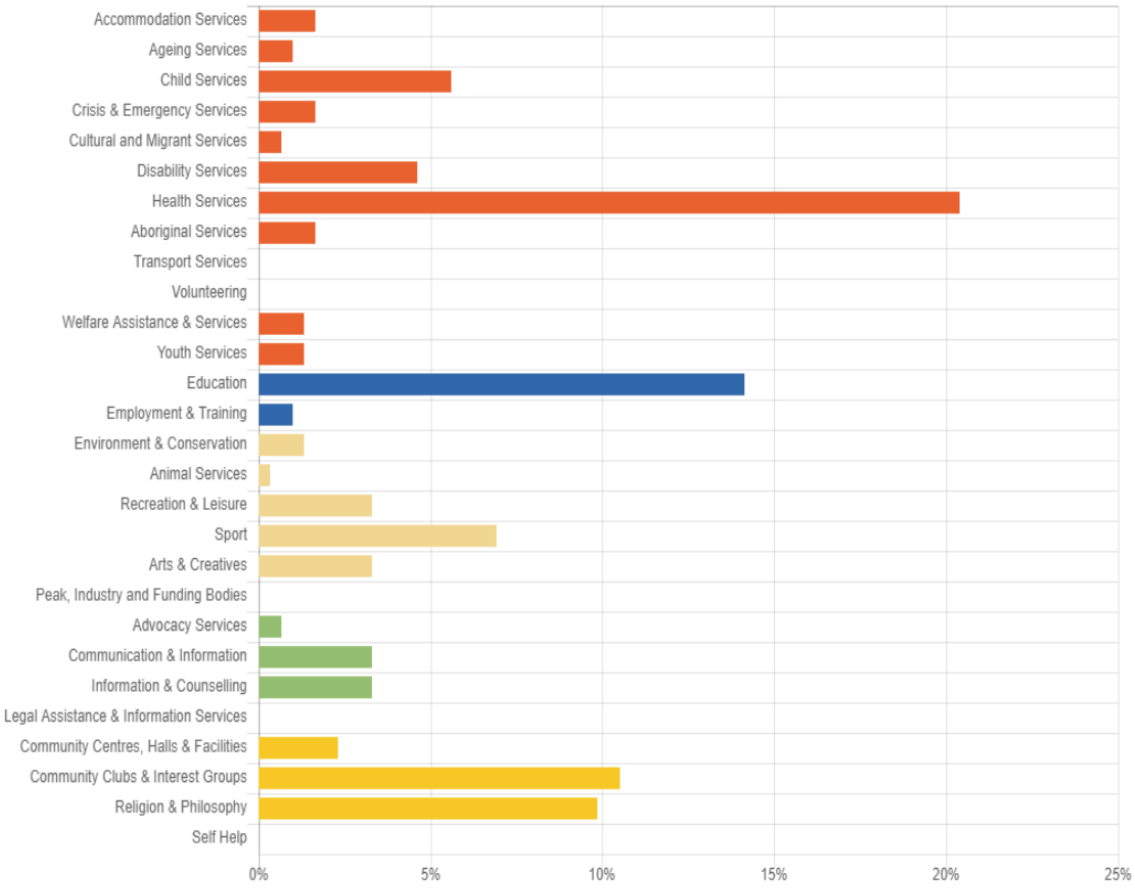
Services by Sector

The below chart shows the number of services listed on My Community Directory by sector.

Services by Category

The below graph shows the number of services listed on My Community Directory by category.

Health Services is the most dominant category, with 62 services listed (20.39%), followed by Education with 43 (14.14%), Community Clubs & Interest Groups with 32 (10.53%) and Religion & Philosophy with 30 (9.87%).



Strategic Priority 3 – *Develop and deliver programs, in consultation and collaboration with stakeholders, to promote community wellbeing and resilience, including recovery from adverse events*.

Community recovery and resilience engagement continues through:

- Disaster preparedness and recovery information added to the Libraries' Welcome Packs initiative.
- Key stakeholder involvement with the two-year Building Inclusive Disaster Resilient Communities (BDIRC) project, led by funding partners Queenslanders with Disability Network (QDN), University of Sydney, and Community Services Industry Alliance (CSIA).
- Provided access for targeted Council staff to workshop on tailoring climate change-themed communications to the public.
- Ongoing involvement in the South-East Queensland Climate Resilience Alliance, alongside Council's Growth and Policy business unit.
- Meeting with Darling Downs and West Moreton Primary Health Network regarding disaster resilience/ business continuity planning training, and other disaster recovery collaboration opportunities in the region.

Strategic Priority 4 – *Strengthen and utilise partnerships with NGOs and government agencies to improve support services and programs for vulnerable members of the community.*

- Bi-monthly attendance at the Lockyer Community Centre's Multicultural BBQ to assess and assist with disaster preparedness and resilience for residents from cultures and backgrounds with significantly different understandings of disaster preparedness, warnings and responses.
- Partnering with the Children's Health Queensland Hospital and Health Service on the local delivery of the Birdie's Tree disaster preparedness resources for children training in February 2023.

Interagencies

Staff are involved in the following networks aimed to identify human and social service gaps and trends, and improve service delivery through strategic networking and partnerships:

- Lockyer Youth Agency Network.
- Lockyer Valley Service Provider Interagency meeting.
- Lockyer Valley Disaster Recovery and Resilience Interagency.
    - The January meeting was attended by 29 representatives from 19 support agencies and government departments.
- Local Level Alliance and Ipswich West Moreton Community Central.
- Toowoomba and Ipswich Districts Human and Social Recovery Committee.

COMMUNICATIONS

The Communications Team manages a range of media and communication products ranging from media releases and social media posts, to design of posters, signs and fact sheets, to videography and media events, as well as website management.

Our primary function is to provide meaningful and timely information to the community on Council decisions, programs and services through a range of mediums.

DISASTER COMMUNICATIONS

The Communications Team leads the Public Information function during severe weather events and disasters and provides time-sensitive information via social posts and the Disaster Dashboard as well as managing enquiries and interviews from external media. Between disaster activations, the team publishes a range of preparedness messages.

0 preparedness messages published

0 awareness and warning messages published

ONLINE ENGAGEMENT

28 CORPORATE FACEBOOK POSTS

HIGHEST PERFORMING POST

Work for Council – job advertisements
Reactions: 14,000
Shares: 40

28 INSTAGRAM GRID POSTS

HIGHEST PERFORMING POST
Minister Scanlon visit
Reach: 492
Reactions: 35

30 TWITTER POSTS

HIGHEST PERFORMING POST
Minister Scanlon visit
Impressions: 4
Shares: 2

15 IN-HOUSE DESIGN PROJECTS

31 DESIGNS CREATED

$3,460.00 COUNCIL SAVED ON DESIGN PROJECTS

0 INTERNAL VIDEOS

2 EXTERNAL VIDEOS

MEDIA ENQUIRIES

7 RADIO | **6** NEWSPAPER | **2** TV | **3** OTHER

EXTERNAL COMMUNICATIONS

11 MEDIA RELEASES

1 PAID ADVERTS

COMMUNITY CONNECT NEWSLETTER

An opt-in e-newsletter aimed at community groups including sporting and interest groups and schools which provides timely information on capacity-building workshops, a wide range of grants and community events.

586 Subscribers with an open rate of **47.78%** (industry average < 25%).

TOP 3 ARTICLES

1. Australia Day Event
2. EasyGrants Newsletter
3. Inland Rail Sponsorships

COUNCIL'S CORPORATE WEBSITE

12,798 TOTAL WEBSITE USERS

74.7% NEW WEBSITE USERS

MOST VISITED WEB PAGES

- Current Vacancies
- Flood Monitoring Cameras
- Contact us

ADVOCACY

Advocacy

Inland Rail

The current independent review of Inland Rail by the Australian Government (chaired by Dr Kerry Schott AO) was due to be completed by early 2023. The Department of Infrastructure Transport and Regional Development has been contacted for advice on timeframes for the Report. Council's submission to that Review highlighted the concerns of Council and the community over the impacts of the current alignment through our communities. Safety concerns were raised along with amenity impacts such as noise, vibration as well as severance and connectivity issues.

Council has continued its advocacy for a change in the Inland rail alignment around both Gatton and Forest Hill and has met several times this year with senior officers from the Australian Rail Track Corporation (ARTC) to raise concerns and discuss what we consider to be significant improvements to the alignment. Council's firm view is that an alignment must be found that reduces the number of residents affected by Inland Rail construction and operation and that minimises the extent of the impacts on residents. Council considers that the impacts of the project simply cannot be mitigated on the current alignment.

Following meetings with the Interim CEO of Inland Rail it was agreed that the alignment would be revisited to consider alternatives that would significantly reduce the impacts on our community. This work will continue with the evaluation of potential alternatives in early 2023.

On 31 January 2023, the Coordinator-General met with the Mayor, CEO and the CEO of Inland Rail (along with Senior Officers from respective organisations) to discuss the alignment and the process going forward to consider an alternative alignment. It was a good meeting and Council looks forward to working with the proponents and the Coordinator- General seeking to identify an alignment that can minimise impacts as far as possible.

ARTC and the Office of the Co-Ordinator General (OCG) continue their work and review of the Draft Environmental Impact Statements for both Helidon to Calvert (H2C) and Gowrie to Helidon (G2H) sections of Inland Rail. OCG has required ARTC to provide additional information on both the G2H and the H2C project. It is not anticipated that this work will be ready for further community consultation until late in 2023.It will again be important that Council makes thorough submissions under the Coordinator-General's process as there will not be the usual assessment processes through Council.

One of the many issues Council has raised with the Coordinator-General is the risk of fire generated by the proposed railway both during construction and operation. Given the sensitive and remote environment that the Inland Rail corridor will traverse this is a serious concern in terms of triggering bushfire in remote parts of our region with limited access for emergency vehicles. A vivid local example of this occurred near Laidley on 25 January 2023 when it was reported that an Aurizon freight locomotive caught fire. (See photo below).

Pic Ch9 News

Any EIS approval will need to condition Inland Rail to address these concerns.

Council has also been trying to identify any benefits associated with Inland Rail. The Australian Government's Interface Improvement Program funded Council's identification of potential benefits. The Final Gateway 4 Report has been submitted to the Government for consideration and it is anticipated that discussions with Departmental officers will take place shortly to determine the relative merit of the proposal and to understand the next steps in this process.

14.2 Group Manager People Customer Corporate Services Monthly Report - January 2023

Author: Dan McPherson, Group Manager People, Customer and Corporate Services
Responsible Officer: Dan McPherson, Group Manager People, Customer and Corporate Services

Purpose:
This report provides Council with a summary of key operational activities undertaken by the People, Customer and Corporate Services performance group during January 2023.

This document is for Council's information only.

Executive Summary
This report provides Council with a summary of key operational activities undertaken by the People, Customer and Corporate Services Group during January 2023.

Proposal
That this report be received and noted.

Attachments

1⇩ Monthly Group Report - People Customer and Corporate Services - January 2023 20230208 9 Pages

People, Customer and Corporate Services

MONTHLY GROUP REPORT

JANUARY 2023

Lockyer Valley REGIONAL COUNCIL

PEOPLE, CUSTOMER AND CORPORATE SERVICES

It has already been an eventful start to the new year with the Minister for Environment, Meaghan Scanlon MP, visiting the Gatton FOGO facility on the 17 January. The facility has now collected 549 tonnes of FOGO. (That's the weight of 110 elephants!) Photo of the visit below.

Organisational Development:

- 44 leaders across the organisation have now successfully completed the Leadership Development program.
- Planning is underway, and nominations have been called for Focus Groups to assist on closing the gaps identified by the staff pulse surveys. We are looking forward to this collaboration with staff and what it will bring. Training on facilitating Focus Groups is also planned, this will be an opportunity of growth for the staff involved. The Focus groups are to commence in March.

Health & Safety:

- The Local Government Workcare Mutual Risk Obligations Audit is due in April, passing this audit is of great importance and preparations are underway to achieve continuation of the Council's self-insurance status.

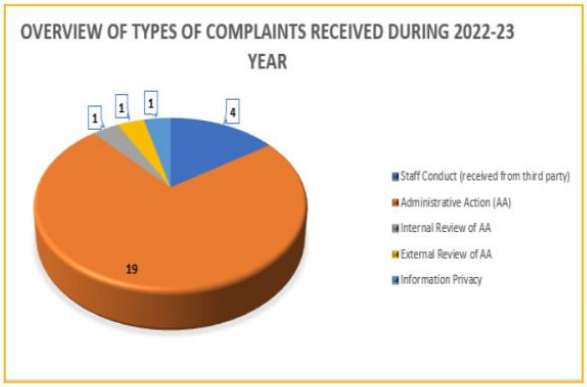
Recovery Plan:

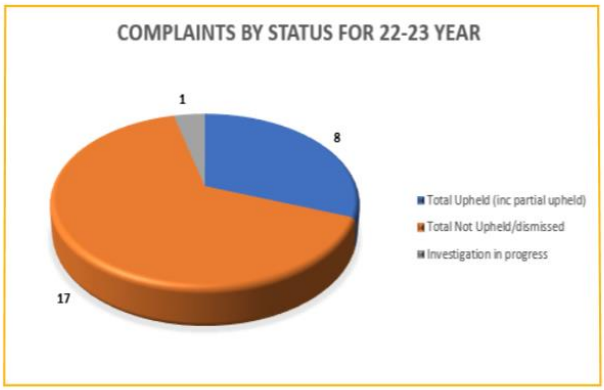
Queensland Recovery Authority (QRA)- The QRA 6-month Recovery Report is underway, the report is based on the period 1 August 2022 to 1 February 2023. The report will detail progress made by Council in the following areas:

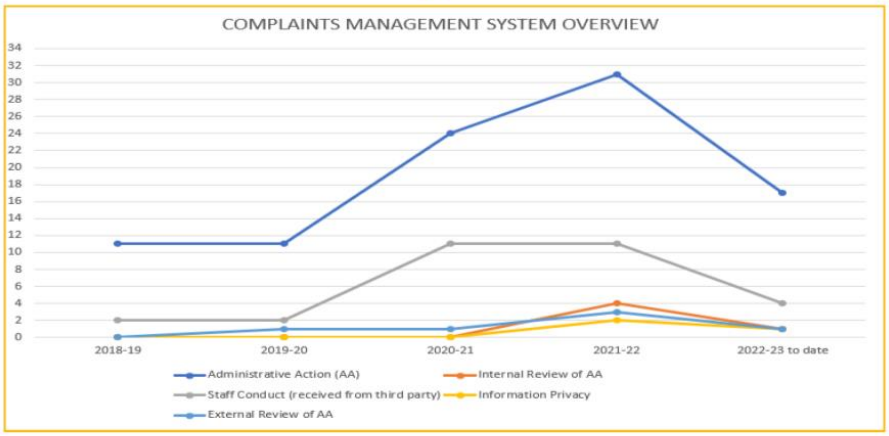
- A status update on each of the five areas of recovery activities i.e. human social, roads, buildings etc.
- Outline any successes or challenges faced by Council and the Community.
- Detail and provide photos of any completed activities.

GOVERNANCE AND PROPERTY

Below is an overview of complaints received through Council's complaints management system for the 2022/2023 financial year to date. During January, Council received two new complaints, and one request for an internal review of Council's original decision. Council also received advice that an external review conducted by the Queensland Ombudsman upheld Council's original decision in relation to the matters the complainant had raised.

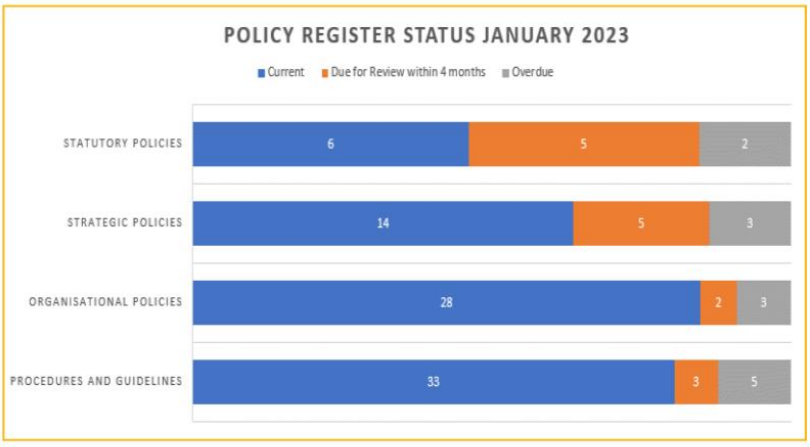






POLICY REGISTER UPDATE

Of the five statutory policies which are due for review within four months, these policies will be received and adopted with Council's 2023/2024 Budget.



INFORMATION MANAGEMENT

Disposal of Physical Records

Work continues in the assessment and disposal of records within the Council. 2,060 boxes of documents were reviewed and disposed of in 2022. The auditing of physical records, and the evaluation of archived documents to determine their value for digitisation or listing for disposal in accordance with relevant legislation will continue in 2023. It is a big job and a busy year ahead for our Information Managment Team.

INFORMATION MANAGEMENT SNAPSHOT

	January 2023
Mail/Email items processed	1,333
Requests for files/boxes	34

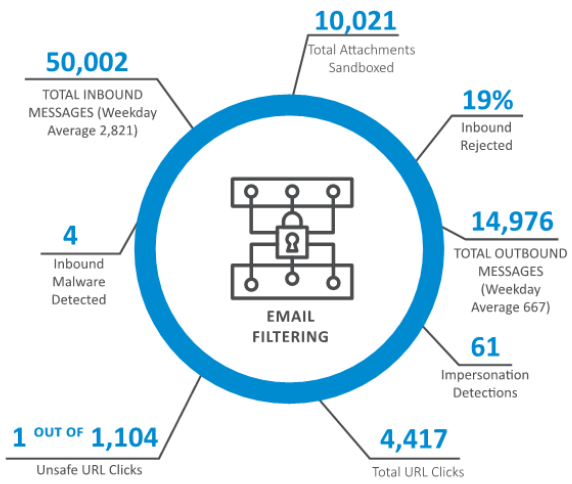
RIGHT TO INFORMATION APPLICATIONS

	2023	2022	2021	2020	2019	2018
Number of applications received	2	9	14	10	2	8

INFORMATION COMMUNICATION TECHNOLOGY

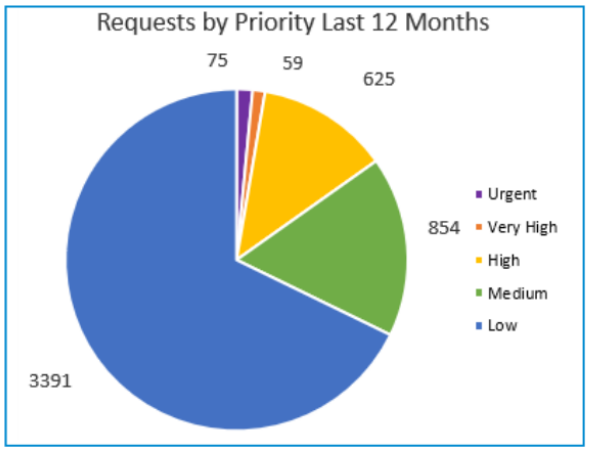
- In addition to the current visits to the Depot and Cultural Centre one day per week, we are now trialling one staff member to be at the depot two days per week; and couple of hours per week at the Laidley office. The intention here is to further improve our services to all staff.
- TechOne 2022B update is in place now. The TechOne review will be conducted by a third-party solution provider, dates to be confirmed.
- ICT Steering committee is set to recommence for this year on the 17th February.
- Staff have been sent communication regarding the Cybersecurity training. The LGAQ and Local Buy in conjunction with Peak Services, is running fully funded virtual Cyber Security Fundamentals training sessions for LVRC staff with network access February to March 2023.

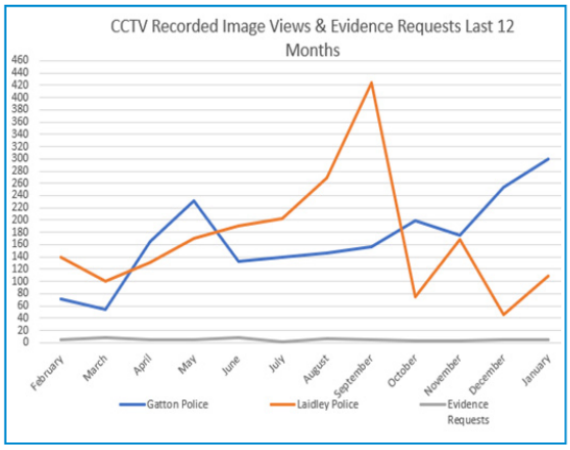
EMAIL AND WEB PROTECTION

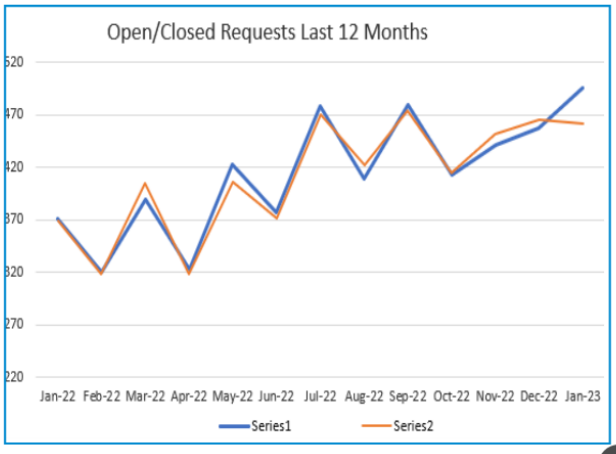


NETWORK PERFORMANCE SNAPSHOT

UNPLANNED NETWORK DOWNTIME 13 MINUTES







PEOPLE AND CUSTOMER EXPERIENCE

ORGANISATIONAL DEVELOPMENT AND PAYROLL

Full Time Equivalent 285 POSITIONS

Headcount 311 EMPLOYEES

Average Time to Hire 27 DAYS

Early Turnover Rate 14%

Voluntary Turnover Rate 1%

Absenteeism Rate 4%

Training Participation Rate 51%

Training Events 22

RECRUITMENT CAMPAIGNS 10 ACTIVE CAMPAIGNS

- *Business Support Officer x 2 (Community and Regional Prosperity Group)*
- *Customer Experience Officer x 2*
- *Business Support Officer (Infrastructure)*
- *Operator/Labourer x 2*
- *Assistant Educator*
- *Organisational Development Advisor*
- *Technical Planning Officer*

UNSUCCESSFUL RECRUITMENT CAMPAIGNS 1 CAMPAIGNS

- *Project Support Officer (Libraries)*

CORPORATE TRAINING

- *Disaster Management Training - Queensland Disaster Management Arrangements*
- *First Aid Training - Provide Basic Emergency Life Support*
- *First Aid Training - Provide Cardiopulmonary Resuscitation*
- *First Aid Training - Provide Emergency First Aid Response in an Education and Care Setting*
- *First Aid Training - Provide First Aid*
- *Governance Compliance Training - Authorised Persons*
- *Governance Compliance Training - Gifts and Conflicts of Interest*
- *Governance Compliance Training - Public Interest Disclosures*
- *Governance Compliance Training - Public Interest Disclosures for Managers and Supervisors*
- *Internal Compliance Training - Corporate Induction*
- *Internal Compliance Training - Employee Code of Conduct*
- *Internal Compliance Training - Workplace Bullying and Harassment*
- *Nationally Recognised Certification - Operate Elevating Work Platform*
- *Nationally Recognised Certification - Operate Elevating Work Platform*
- *Nationally Recognised Certification - Working safely at Heights*
- *Safety Compliance Training - Drug and Alcohol Awareness*
- *Safety Compliance Training - Fire Warden (Emergency Control Team)*
- *Safety Compliance Training - Workplace Health and Safety Induction*
- *Safety Compliance Training - Working Safely with Hazardous Chemicals*
- *Toolbox Talk - Working in the Sun*
- *Traffic Management - Control Traffic with Stop-Slow Bat*
- *Traffic Management - Working in Proximity to Traffic Awareness Part 1*
- *Traffic Management - Working in Proximity to Traffic Awareness Part 2*

PEOPLE AND CUSTOMER EXPERIENCE

CUSTOMER CONTACT

1,778
Increase of 327 calls from last month.

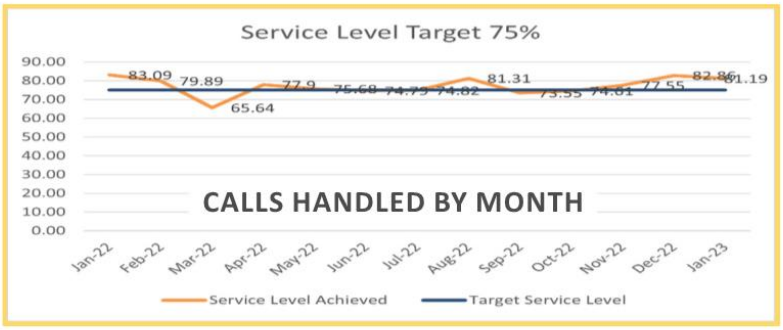
CALLS RECEIVED

4:22 MINUTES
Decrease of 4 seconds from last month.

AVERAGE HANDLING TIME

81.19%
SERVICE LEVEL TARGET 75%

SERVICE LEVEL REACHED



TOTAL WEB CHATS
56
Decrease of 24 chats from last month.

TOTAL RECEIPTS
189
Increase of 48 receipts from last month.

TOTAL eREQUESTS
507
Decrease of 174 eRequests from last month.

WEBCHAT HANDLING TIME
9:49
MINUTES
Decrease of 3:35 minutes from last month.

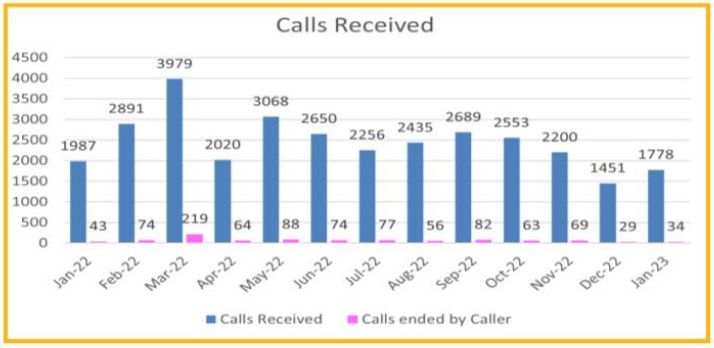
TOTAL CRM RECEIVED
1076
Decrease of 6 requests from last month.

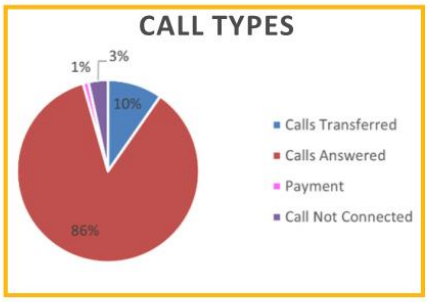
QGAP PERFORMANCE

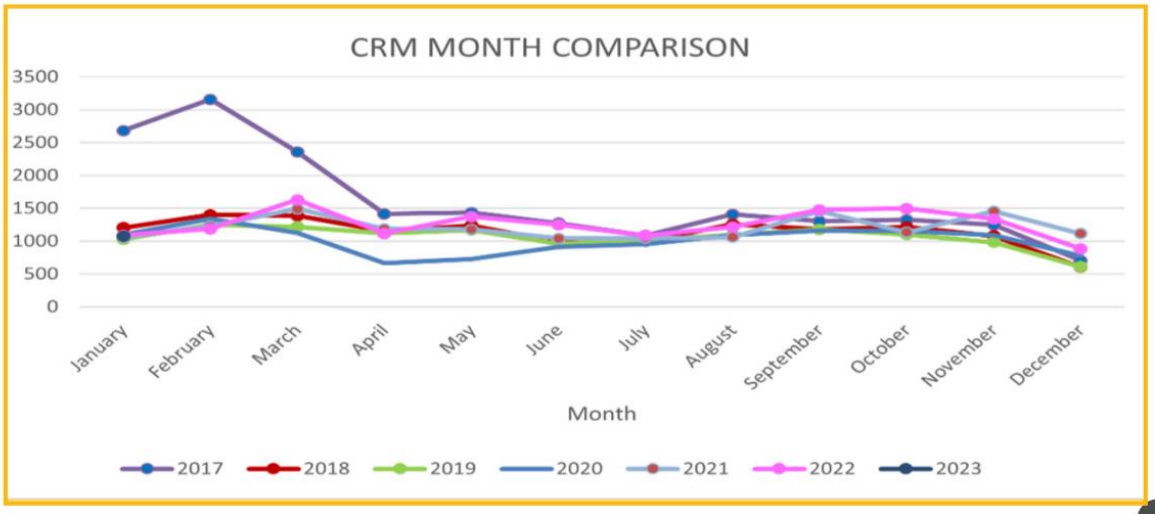
73.63 HRS
Total time taken for all transactions

472
Total number of transactions

9:36
Total average time for all transactions







7

PEOPLE AND CUSTOMER EXPERIENCE

WORK HEALTH AND SAFETY

OUR GOAL ZERO HARM

MEASURING OUR SAFETY PERFORMANCE

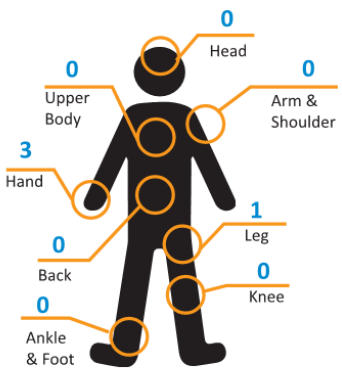
JANUARY 2023

INJURIES BY CLASSIFICATION TYPE

5 INJURIES OCCURRED

0	LOST TIME
2	MEDICAL ONLY
2	FIRST AID
0	REPORTABLE ONLY
1	NEAR MISS

AREAS OF THE BODY MOST AFFECTED



KEY FACTORS ASSOCIATED WITH ASSET INCIDENTS

4 ASSET INCIDENTS OCCURRED

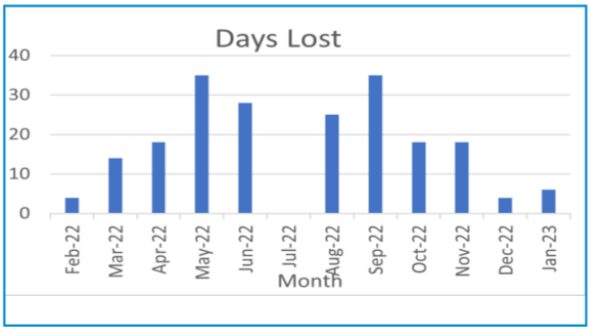
1	PROPERTY DAMAGE
2	PLANT VEHICLE/ INCIDENT
0	ANIMAL STRIKE
1	FIRE

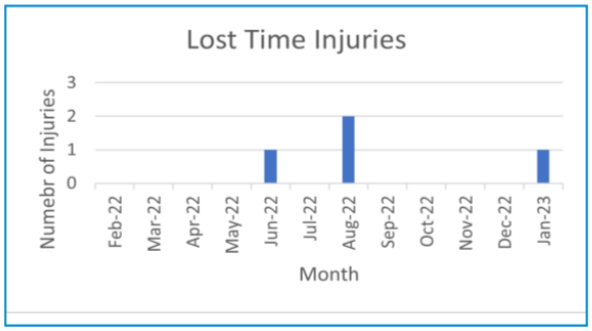
KEY FACTORS ASSOCIATED WITH ENVIRONMENTAL INCIDENTS

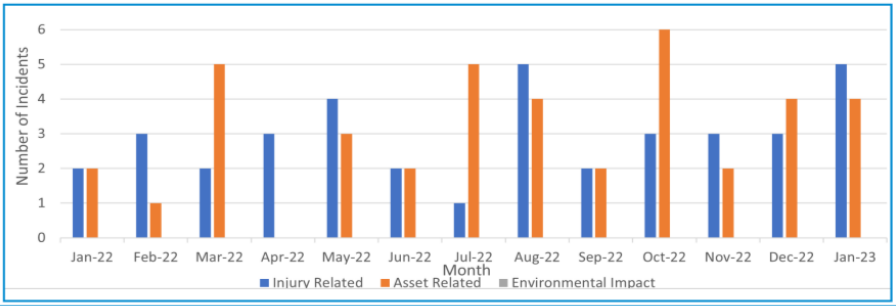
0 ENVIRONMENTAL INCIDENTS OCCURRED

0% SPILLS

0% CONTAMINATION







8

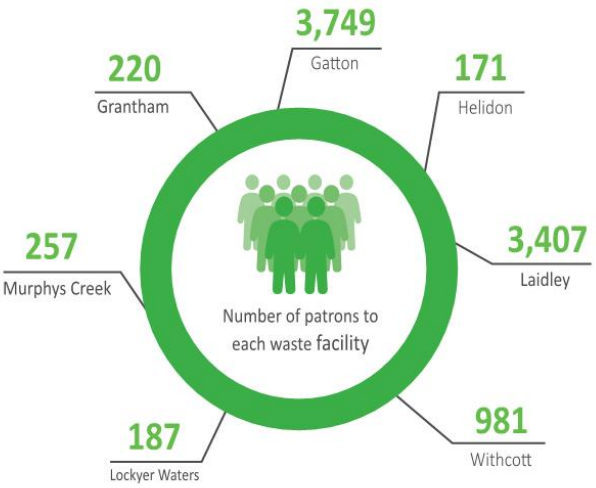
WASTE SERVICES

WASTE MANAGEMENT

- Meaghan Scanlon MP, Minister for the Environment, visited the FOGO treatment system on the 17th of January. The Minister was interested to see how Council is processing the collected FOGO material and how the trial went as the Queensland Department of Environment and Science funded the trial. She was impressed with how the trial went and outcomes produced.
- A funding application to further consider FOGO across more of the Lockyer Valley is currently being prepared for submission to the Queensland Government.
- Cell 5 construction at the Gatton Landfill will commence soon.

KERBSIDE WASTE & RECYCLING SERVICES DECEMBER 2022

Garbage Bins Collected 82.2% presentation rate	67,990	
Garbage Tonnes Received	990	TONNES
Recycle Bins Collected 70.9% presentation	29,887	
Recycle Tonnes Received	206.74	TONNES
Recycle Contamination	32.38	TONNES
FOGO Food/Garden Tonnes Received 1 Year trail of 1000 homes 46% presentation rate	2,401	TONNES



8,972
TOTAL PATRONS TO ALL WASTE FACILITIES IN DECEMBER 2022

9

14.3 Group Manager Community and Regional Prosperity Monthly Report - January 2023

Author: Amanda Pugh, Group Manager Community & Regional Prosperity
Responsible Officer: Amanda Pugh, Group Manager Community & Regional Prosperity

Purpose:

This report provides Council with a summary of key operational activities undertaken by the Community and Regional Prosperity Group during January 2023.

This document is for Council's information only.

Executive Summary

This report provides Council with a summary of key operational activities undertaken by the Community and Regional Prosperity Group during January 2023.

Proposal

That this report be received and noted.

Attachments

1⇩ Community and Regional Prosperity Monthly GM Report - January 2023 12 Pages

Community and Regional Prosperity

Lockyer Valley REGIONAL COUNCIL

MONTHLY GROUP REPORT

JANUARY 2023

1

PERFORMANCE REPORTING

KEY GROUP PROJECTS

LOCAL FLOODPLAIN MANAGEMENT PLAN (LFMP)

With the modelling and planning risk mapping in place the consultant has been progressing the LFMP and evacuation projects. The consultant has proposed a traffic light system to address the completion of providing flood warnings using the flood intelligence tool.

Catchment Planning has been progressing in North Laidley. Officers have been engaging with the new landowners to resolve a number of issues and set the next phase of work. We now have updated work from our consultants to review. An agreement has been formalised with respect to engineering support with the Developer which should allow progress with their project.

FLOOD MODELLING - ENGINEERING

The Lockyer Creek overall flood modelling project is complete. The Engineering map sets output from this project were used to create the overlay mapping in the draft planning scheme. Due to time constraints the flood hazard overlay maps and FIP were moved forward with available maps/information. The creation of the new Defined Flood Level (DFL) maps for both the FIP (interim) and scheme are in progress. The DFL (scheme) map was based on the consultant applying the effect of freeboard in relation to the Probable Maximum Flood (PMF). Any amendments will be addressed during the State interest review process.

As an outcome of the Laidley flood mitigation workshop on 24 November 2022, the consultant is being engaged to undertake Phase 2 of the review. It is intended to present the working group with an update on the review, additional tasks requested at the workshop and a framework to make informed decisions. As discussed at the November 2022 workshop, the consultant indicated that there were limitations to naturalised options on their own with declining benefits for increased excavation. In response to this the next phase will summarise and report on work to date, matching options to objectives, look at supporting resilience projects, as well as exploring additional options for consideration.

Officers have been supporting Councils new contactor of the Resilience Homes Fund buyback program to assist management of the scheme. Discussions were held with QRA in terms of obtaining effective outcomes with this program particularly in Laidley. Opportunities for funding the Laidley scheme were explored with the QRA. Strategies for effective use of the available funds under the RHF program were agreed with QRA. We intend to use the Phase 2 work at Laidley to provide key data for this exercise.

The finalised regional engineering mapping and rainfall models were provided to the Flood Intelligence vendor (WaterRIDE) to allow that project to progress. They are currently near completion, for inclusion on the updated system. The vendor has been engaged to consider and include learnings from the February/March 2022 events to improve operation of the Flood Intelligence Portal, particularly in complex localities such as Grantham.

Discussions were held 2022 with Urban Utilities in relation to a request for access to detailed flood information. It is intended that we work collaboratively to assist each other's planning programs. At this stage it looks like the more effective solutions are to have a joint agreement of data, planning and intelligence sharing. This agreement is still under development.

Officers submitted an EO to QRA last year for grants to undertake updated calibration of 2021 Creek models to the 2022 events as well as using the coming 2022 LIDAR set. Other projects included detailed modelling in urban & semi urban (not currently mapped) including risk identification in these areas. Due to cost restraints they were areas outside the current LFMP project. This work was to assist with infrastructure planning. Council has just received advice that it has been successful with funding to update the overall Lockyer Creek model item only. This project will incorporate the coming state government 2022 post flood digital elevation model (DEM/LIDAR) and calibrate the 2022 flood. We understand that the state will be providing the DEM in the near future. We plan to obtain the 2022 event calibrated model from ARTC (they are using our modelling) to undertake this work effectively. We were unsuccessful with other items, including taking the results into our flood intelligence portal.

FLOOD INFORMATION PORTAL

A final review of the FIP template report is underway to ensure accuracy and efficiency. Media supporting the release of the FIP is complete with the information tool and factsheet nearing completion. The creation of the new Defined Flood Level (DFL) maps for both the FIP as well as indicative flood layer are in progress. There are some issues with mapping and the DFL. It is anticipated that the portal will be due for launch in the coming weeks.

KEY GROUP PROJECTS CONTINUED

TOOWOOMBA AND LOCKYER VALLEY ESCARPMENT MOUNTAIN BIKE TRACK PROJECT

Investigations for alternative sites for the Withcott Hub continue. Discussions were held with Lockyer Valley Foods about a potential site. As requested by Lockyer Valley Foods an email has been sent to their CEO for consideration of access to the site to connect and complete the trails from Toowoomba to the Lockyer Valley.

LAKE APEX AND LAKE FREEMAN REIMAGINING PROJECT

No further progress to report at this stage.

FOREST HILL SILO PROJECT

Place Design Group are continuing work on the Concept/Master Plan. Council has sought advice from Inland Rail on the availability of drawings, showing the proposed noise wall as the dimensions and positioning will affect placement of the viewing platform. Council's Legal team are currently reviewing the GrainCorp agreement.

EQUINE COLLABORATIVE PRECINCT

In December, the Deputy Mayor led a site visit at Lockyer Valley Turf Club with senior representatives from Racing Queensland and UQ Gatton Campus, followed by a tour of the UQ Veterinary Science Facility, to gain a better understanding of the opportunities for education and training within the industry.

Photos from the tour have been sent to all attendees.There has been no further progress at this stage.

ARTS AND CULTURAL PLAN

Following an extensive community consultation process, the Arts and Cultural Plan has been drafted. The plan has been scheduled for inclusion on the Agenda for the February Councillor Workshop.

COMMUNITIES

TOURISM

Southern Queensland Country Tourism

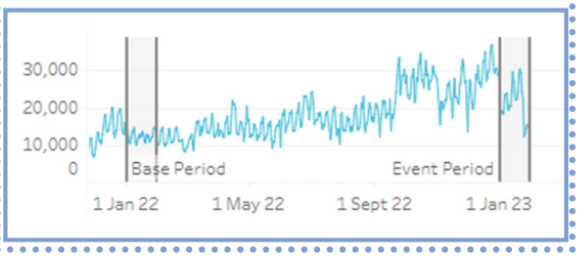
STATISTICS FOR JANUARY 2023

VISITOR ESTIMATES

80% of Visitors were Queenslanders

18% of Visitors were Interstate
11% from NSW

8% Increase JANUARY VISITATION
in comparison to January 2022

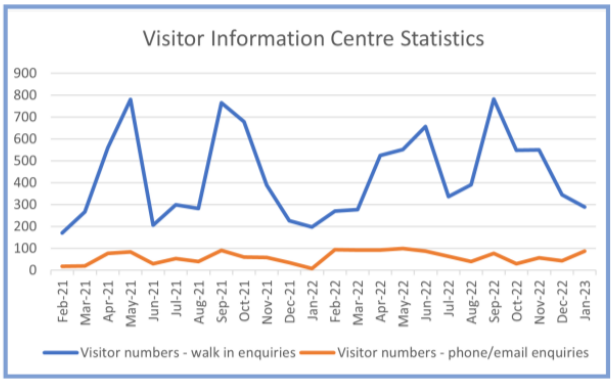


QUEENSLAND TRANSPORT MUSEUM

403 TICKET SALES

53 FREE ENTRY

$2,650 TOTAL TICKET REVENUE



EVENTS

Ongoing support is being provided to a range of community event organisers. Support includes advice and equipment.

1 COMMUNITY GROUPS/ EVENTS GIVEN ASSISTANCE

- Laidley Pioneer Village – $1000 Council community grant and additional in-kind support including equipment.
- Gatton Historical Village – $1000 Council community grant and additional in-kind support including corflute signs.
- Advertising of community led events on VMS Board including:
  - 21/01 Bucking Thunder Bull Ride (sell-out event).
  - All local Australia Day Events.
- Advertising of community led events on January-March What's On Poster including:
  - 19/01 Multicultural Community BBQ.
  - 21/01 Bucking Thunder Bull Ride.
  - 26/01 Withcott & District Progress Association Australia Day Pig Races.
  - 04/02 Bushfood Under the Stars.
  - 05/02 Lockyer Valley Billy Cart Association Family Fun Day.
  - 11/02 Laidley Equestrian Group Twilight Hack Show.
  - 26/03 Colours of the Lockyer.
  - Advertising of Mulgowie Farmers Markets on the Warrego Highway event sign at UQ Gatton.

4 UPCOMING COMMUNITY EVENTS

Ongoing assistance was provided to:

1. 4 February – Native Oz Bushfoods, Bushfood Under the Stars
2. 5 February – Lockyer Valley Billy Cart Association Family Fun Day
3. 11 February- Laidley Equestrian Group Twilight Hack Show
4. 26 March – Colours of the Lockyer

EVENTS CONTINUED

1 COUNCIL LED EVENTS

The Lockyer Valley Regional Council Australia Day Event was held on the morning 26 January 2023 in the Gatton Shire Hall. Offering a refreshed format this year, additional elements were added to showcase this year's Australia Day Ambassador, Professor Peter Timms and his work saving koalas from extinction.

Over 300 attendees celebrated the achievements of 21 nominated community members in the Australia Day Community Awards, cheered on 14 new citizens and enjoyed free festivities showcasing local suppliers including:

- Catering by Native Oz Bushfoods.
- Bush Poet, Marco Gliori.
- Music by local bush band, String Beans.
- Face painting and make a clay koala and echidna.
- Koala displays including, Wildlife Rescue Rehabilitation and Education, Griffith University and Council Environmental Officers.
- Auslan Interpreter and Quiet Zone.

Excess catering was donated to the Gatton Food Pantry and surplus craft materials have been donated to the Gatton Childcare Centre.

2 PROJECTS IN PLANNING

- 2023 Anzac Day
- 2023 Laidley Spring Festival

LIBRARIES AND GALLERIES

59,942
ITEMS IN OUR COLLECTION
Physical- 38,205
Digital- 21, 737

472
ACQUISITIONS
Physical & eResources
In comparison to 284 in January 2022

89%
ITEMS ISSUED VIA SELF-SERVICE
KPI 85%

eRESOURCES

PLATFORM		JANUARY 2023	JANUARY 2021
	eAudiobooks & eBooks (Borrowbox)	2,133	1,707
	eAudiobooks, eBooks & eMagazines (Overdrive)	SUBSCRIPTION CEASED 30/11/22	380
	eMovies (Beamafilm)	62	90

10,764
PHYSICAL LOANS
In comparison to 10,480 in January 2022. Including audiobooks, books, DVDs, magazines, literacy kits, CDs, seeds, and toys.

2,498
ELECTRONIC LOANS
In comparison to 2,396 in January 2022.

13,262
TOTAL LOANS
Increase of 39.47% in comparison to last month

17,181
ACTIVE LIBRARY MEMBERS
In comparison to 15,968 in January 2022

135
NEW LIBRARY MEMBERS

0
VIRTUAL EVENTS
Reach: N/A

36
IN PERSON EVENTS
Total Attendees: 537

OPEN **13,905** VISITORS

10,435	3,470
Gatton Library	Laidley Library
Increase of 3,121 people	Increase of 606 people

LIBRARIES - EVENTS

Our January events at Gatton and Laidley Libraries included:

- Weekly - JP in the community sessions, craft group (Gatton)
- Bimonthly - Digital literacy sessions, writing group
- Monthly - Lockyer Valley Cancer Support Group (Gatton), movie matinees, book chat (Laidley), book club (Gatton), online book club
- Special events - The Human Book, School holiday activities, including scavenger hunt, summer reading club, Jurassic Joe show, movies, Lego fun, growing gummy bear experiment and craft days, LINC pool party at Lockyer Valley Sports and Aquatic Centre .

* All events are run by our library staff - the Cancer Support group is library supported, the LINC event was an outreach activity we attended

LIBRARIES UPDATE

- Staff have finalised our events for March to May 2023 and have developed the draft quarterly What's On Brochure.
- We have installed Acknowledgement of Country stickers at the entrances to both libraries as well as the Lockyer Valley Cultural Centre. This sticker features local artist John (*Jubbin) Parson's artwork Jubbin Dreaming.
- Nespresso pods can now be recycled at Gatton and Laidley Libraries through Nespresso's Bulk Recycling Program, providing recycling points at both libraries.
- Julianne, as part of a First 5 Forever outreach program, participated in the LINC pool party and the Lockyer Valley Sports and Aquatic Centre. This was a great opportunity to connect or reconnect with families and join new members.

ART GALLERY UPDATE

- The current exhibition in the Lockyer Valley Art Gallery is The Essence and Colours of the Lockyer Valley by Mark Sullivan and Elizabeth Browne. This exhibition has been well attended in January with over 1,825 visitors for January.
- The 2023 exhibition calendar has been finalised, and the brochure promoting the exhibits has been designed, printed and distributed.
- During the Australia Day welcome function the gallery was able to host special guests afterhours. This was a great opportunity to showcase the current exhibition.

REGIONAL ARTS AND DEVELOPMENT FUNDING (RADF)

- Round 1 for the 2022/23 RADF Funding opened in January. This round closes on 21 February.
- A Professional Development Round opened in January. This round is ongoing until the budget has been allocated. This is our second PD round offered and the application form was updated for this round based on learnings from the first offering.

CHILDCARE

UPDATE

During the Christmas closedown period, our main outdoor play area had new turf laid. We were very excited to start the new year in our refreshed play area! The new turf is a massive improvement not only visually, but also benefits the children's development. It assists with sensory learning and an increased awareness of our environment. The children discussed how we care for our environment through watering our grass and plants, and keeping the grass area clean from litter and food scraps.

80.12%
TOTAL OCCUPANCY RATE
In comparison to 71.64% in January 2022

ACTIVITIES

CULTURAL AWARENESS

We celebrated "Chinese New Year" on 23 January. Introducing the children to new cultures and traditions assists them in understanding the world around them.

We also celebrated Australia Day! The children experienced a sense of National pride as we engaged in Australian Traditions. We sang "We are Australian" and listened to "Waltzing Matilda". We also looked for Australia on the globe and what part of Australia we live in, additional to meaningful art representing our Australian culture.

Exposing the children to diverse cultures and traditions helps them feel a sense of belonging and connection to the world around them.

WELCOMING OUR 2023 FAMILIES

This month we have focussed on meeting the needs of our children and parents. Through building connections and relationships, we aim to make the transition back into care as seamless as possible, helping both parents and children feel comfortable and supported for a new year.

A big welcome to our new Kindergarten Teacher, Ms Amali! We are looking forward to seeing what the new year will bring.

PLANNING POLICY AND COMMUNITY WELLBEING

GROWTH AND POLICY

Draft Planning Scheme

The draft Lockyer Valley Planning Scheme is currently undergoing State Interest Check. Pending the advice from the State Government, it is anticipated that community consultation of the draft planning scheme will commence by the end of financial year.

Consulation will provide a range of opporunities for all sectors of the community to understand what a planning scheme is and does, how the planning scheme affects their interests and how to make a properly made submission. The planning scheme will be available in an entirely online platform enabling review and submission through the one portal.

Economic Development

Economic Development has encouraged the Lockyer Valley Chamber of Commerce, Industry and Tourism to apply for $20,000 in funding through the Tourism Industry Resilience Grant to run resilience capacity building workshops in the region.

Officers shared with the committee some knowledge and tips for writing applications and provided a letter of support to accompany their application.

Economic Development often provides statistical information to other areas of Council to support business modelling and grant applications. Most recently Event Impact Modelling for the 2023 Laidley Spring Festival and demographic data for Disaster Ready funding have been provided.

Project delivery status

Growth and Policy has numerous projects and studies underway that support the delivery of Council's strategies and Growth Management Plan.

Industrial land study - *near completion*
Constraints Analysis - *near completion*
Planning Scheme portal – *near completion*
Flood Information Portal – *near completion*
Bushfire Management plans (ILM project) – *procuring*
Matters of Local Environmental Significance - *being scoped*
Nature Based Toursim and Receration Study – *to be scoped*
Cultural Heritage study - *to be scoped*
Retail and commercial land use audit - *completed*

Lockyer Valley Planning Scheme

Lockyer Valley REGIONAL COUNCIL

Integrated Land Management Plan

Funded project

Draft management plans for each of the 16 locations are nearing completion. Bushfire Management plans form a significant piece of the overall management plans and are currently being prepared.

The next phase of the ILM project will be a broad Nature Based Tourism and Recreation Study that will identify opportunities to be realised and supported across the region.

Environmental Planning

Council has been working with Griffith University over the last year looking at community Koala education opportunties. This collaboration was strengthened at the Australia Day Awards and Citzenship ceremony where members of the University social research team, local wildlife carers and Council staff met with community members, provided free koala friendly trees and shared information and resources about koala conservation.

DEVELOPMENT ASSESSMENT

ACTIVITY	CURRENT MONTH	2023 YTD	2022 SAME YTD PERIOD
DEVELOPMENT APPLICATIONS			
RECEIVED	8	8	11
DECIDED	15	15	14
EXEMPTION CERTIFICATES			
RECEIVED	0	0	2
DECIDED	0	0	1
BUILDING, PLUMBING, PLANNING INFORMATION AND FORM 19'S			
RECEIVED	29	29	46
COMPLETED	26	26	66
PRELODGEMENT MEETINGS HELD	5	5	3

LAND DEVELOPMENT PIPELINE

- 5 PRE-LODGEMENTS — 1 x second dwelling, 2 x proposed structures, 1 x Eco Tourism Facility, 1 x Sawlog harvesting
- 1 RECONFIGURING A LOT — 1x New Proposed Lots Total of 1 YTD
- 1 OPERATIONAL WORKS — 11x Proposed Lots
- 0 ACCEPTED ON MAINTENANCE — Nil x On Maintenance
- 26 NEW LOTS SEALED — 26x Future Residential Lots
- 1 NEW HOUSES — 10x Plumbing Approvals for New Dwellings

JANUARY 2023 STATISTICS

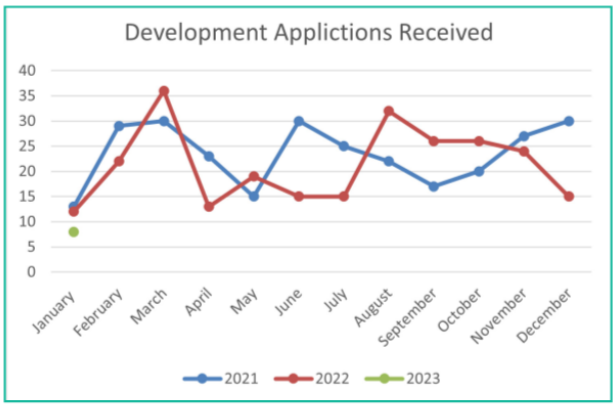
- **16** DECISION NOTICES ISSUED — *100% in statutory timeframes*
- **15** DECISIONS MADE — *80% in statutory timeframes*
- **0** NEGOTIATED DECISIONS THIS MONTH
- **24** BUSINESS DAYS AVERAGE TIME FOR APPLICATIONS IN DECISION STAGE THIS MONTH
- **73%** DECISIONS MADE WITHOUT ADDITIONAL INFORMATION REQUESTS

DEVELOPMENT ACTIVITY IN COMPARISON TO THE SAME 2021 YTD PERIOD

- **27%** decrease in Development Applications lodged
- **14%** increase in Development Applications decided
- **67%** increase in Prelodgement Meetings
- **37%** decrease in Building, Plumbing, Planning information & Form 19's received
- **61%** decrease in Building, Plumbing, Planning information & Form 19's completed

DEVELOPMENT COMPLIANCE

- **21** COMPLAINTS RECEIVED THIS MONTH
- **20** COMPLAINTS RESOLVED THIS MONTH
- **0** SHOW CAUSES ISSUED THIS MONTH
- **0** PENALTY INFRINGEMENT NOTICE ISSUED
- **100%** RESOLVED WITHOUT LEGAL ACTION
- **ZERO** ENFORCEMENT NOTICES ISSUED THIS MONTH



INFRASTRUCTURE CHARGES PAID
YTD = $13,385.79

INFRASTRUCTURE CHARGES OUTSTANDING
YTD = $478,735.31

BUILDING AND PLUMBING

BUILDING APPROVALS 42
By Private Certifiers and LVRC.
In comparison to 60 in 2022

BUILDING APPROVALS BY LVRC 5
In comparison to 11 in 2022

PLUMBING APPROVALS 25
In comparison to 33 in 2022

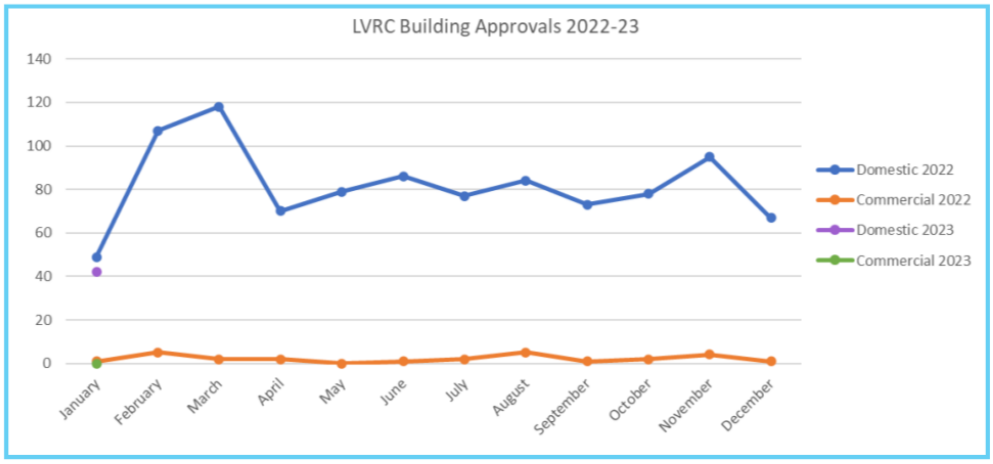
AVERAGE DAYS TO APPROVE 26 Days
Building Applications

$9.3M
COMMERCIAL AND DOMESTIC VALUE OF WORKS
in the Lockyer Valley Region

AVERAGE DAYS TO APPROVE 6 Days
Plumbing Applications

BUILDING INSPECTIONS 26

PLUMBING INSPECTIONS 127



CONTINUOUS IMPROVEMENTS

Process Improvement delivers efficiency and consistency

MULTIPLE ANIMALS ON ONE RENEWAL NOTICE
Testing is under way to ascertain if the renewal notices can include multiple animals on one notice.

WORK INSTRUCTIONS FOR BUILDING BUSINESS SUPPORT ROLE
Building and Private Certification lodgements, Final Inspection Certificates and creation of application folders have been documented and added to the Business Support work instructions. These improvements were implemented to capture information that has not previously been recorded in a work instruction with only one Business Support Officer having knowledge of the processes. This initiative reduces risk to Council.

PLAN SEALING PROCESS AND TEMPLATE REVIEW
Development Assessment has reviewed the plan sealing process and templates to streamline the process. A new internal referral template has been created with the Subdivision Compliance Request and Approval Notice templates being updated. This will ensure that the survey plans are assessed in against the conditions of the development permit and the requirements of the Planning Regulation 2017.

REGULATORY TAX INVOICES
A request was logged with TechnologyOne to change numeric amounts on tax invoices to currency amount which eliminates the need for Business Support Officers to edit invoices prior to sending to applicants. This improvement reduces Business Support Officer time in checking out and editing documents for over 2000 building, plumbing and planning lodgements and 500 record searches per annum.

QUEENSLAND HEALTH MOBILE FOOD BUSINESS REGISTER
Following a Queensland Health Audit a new register has been implemented on the Queensland Health website for managing mobile food business and vehicle data. Several officers have been given access to the on-line register to update the register and add any new businesses when they apply for a permit to operate. The workflow in TechnologyOne has been updated to prompt the officer to upload the data to reduce the risk of the register not being up to date.

COMMUNITY AND WELLBEING

LVRC PROPERTY MANAGEMENT

- Slashing of weeds and overgrown vegetation at Shorelands Drive reserve around koala fodder planting area
- Installation of gates and advisory signs at 7 Mile Lagoon to enable secure access to the property.
- Assessment of Otto Road property for weeds and flood debris. Control of water hyacinth on dam located on Council property.
- Methane emissions testing and soil carbon analysis at 7 Mile Lagoon by UQ.
- Facilitated safe access to 7 Mile Lagoon property by bird watching members of public and scientific research groups.

PEST MANAGEMENT

- Treatments performed on Council reserves for Parthenium in Junction View/Black Duck Creek, Left Hand Branch and Summerholm.
- Treatments for Water Hyacinth and Amazonian Frogbit on Council land in the Glenore Grove and Gatton areas.
- Council representation at the LGAQ Resolution European Rabbit National Action Plan Update.
- Following Council's adoption of the Biosecurity Surveillance Program all related draft documentation finalised to move forward with the program.
- Attended the Queensland Parks and Wildlife Service quarterly working group for updates to the LVRC Surveillance Program and proposed Giant Rats Tail Grass treatment programs in Gatton National Park Woodlands.
- Correspondence with the Department of Transport and Main Roads for proposed treatment quote to an infestation of Yellow Bells on the Eastern Drive/Gatton Helidon Road overpass.
- Council weed facts sheets are currently under development. Factsheets are to be included on Council's website.

RESILIENT RIVERS

- Completed installation of single stage sediment traps in Lockyer Creek catchment area
- Water quality testing at creeks around Lockyer Valley
- Project planning for revegetation sites as part of Phase 3,4 and 5 Lockyer Creek stabilisation projects
- Maintenance of revegetation sites by contractor on Lockyer Creek as part of Phase 1 and 2 projects
- Council workshop delivered regarding the Healthy Land and Water membership agreement.
- Engaged WMA to undertake flood modelling assessment of proposed revegetation works on Lockyer Creek
- • Resilient Rivers western and southern group meeting in Ipswich to workshop project learnings, update of catchment management

PEST MANAGEMENT - DECEMBER

- **21** PEST WEED ENQUIRIES
- **2** PROPERTY FOLLOW-UPS
- **$377.50** HERBICIDE SUBSIDY CREDITS PROCESSED
- **2** RABBIT INFESTATION REPORTED
- **2** FOX REQUESTS FOR ASSISTANCE
- **6** WILD DOG ASSISTANCE REQUESTED
- **NIL** CAGE/TRAP SUPPLIED (Fox)
- **9** COMMUNITY SPRAY EQUIPMENT HIRES
- **1** WILD PIG ASSISTANCE REQUESTED
- **97.76 ha** TOTAL AREA OF PRIVATE PROPERTY MANAGEMENT PLANS
- **7** PRIVATE PROPERTY MANAGEMENT PLANS

LAND FOR WILDLIFE (LFW)

- **187** REGISTERED MEMBERS
- **16,116.52 ha** TOTAL LAND FOR WILDLIFE
- **27** PROPERTIES WORKING TOWARDS LAND FOR WILDLIFE
- **0** NEW LAND FOR WILDLIFE PROPERTIES
- **78** PROPERTIES AWAITING ASSESSMENT

ENVIRONMENTAL COLLABORATION

- Little Liverpool Range Initiative quarterly meeting
- Land for Wildlife end of Free Plants program 1520 plants, $3500 for 79 members
- Landholder complaint, site visit to herbicide drift
- Monitor the release of the Cats Claw Creeper Jewel Beetles on site at Dwyers Scrub Conservation Park
- Land for Wildlife 2 property revisits
- Collect and deliver plants to Gatton Hall for Australia Day celebrations
- Receive 2 Land for Wildlife requests to join

ENVIRONMENTAL HEALTH

THE FOLLOWING HAVE BEEN ISSUED YEAR TO DATE

169 FOOD LICENCES ISSUED YTD

169 CURRENT FOOD LICENCES

3 PERSONAL APPEARANCE SERVICES LICENCES

14 LOCAL LAWS PERMITS

- **3** CARAVAN
- **4** EVENTS
- **4** TEMPORARY HOME
- **1** CAMPING
- **1** MARKET
- **1** ROADSIDE STALL

LOCAL LAWS

1462 NUMBER OF CUSTOMER REQUESTS RECEIVED YTD

116 NUMBER OF DOGS IMPOUNDED YTD
In comparison to 169 in 2021-2022

35 KENNEL LICENCES ISSUED YTD
In comparison to 38 in 2021-2022

46 TOTAL NUMBER OF INFRINGEMENT NOTICES ISSUED YTD
In comparison to 41 in 2021-2022

458| 31% NUMBER OF CUSTOMER REQUESTS RESOLVED YTD
In comparison to 1849 / 91.35% in 2021-22

90 NUMBER OF DOGS RELEASED/REHOMED YTD
In comparison to 153 in 2021-2022

63 EXCESS ANIMAL PERMIT RENEWALS YTD
In comparison to 66 in 2021-2022 (Expire 30 September 2022)

NUMBER OF DOGS REGISTERED **7,331** YTD
In comparison to 8,347 in 2021-2022

ILLEGAL DUMPING / LITTERING UPDATE

Illegal Dumping Statistics have been collated based on review of all Illegal Dumping CRMs received and actioned year to date.

19 TOTAL NUMBER OF INFRINGEMENTS YTD ISSUED = $11,346

144 ILLEGAL DUMPING INCIDENTS YTD
In comparison to 181 in 2021-2022

APPROXIMATELY **660** WHEELIE BINS OF ILLEGALLY DUMPED WASTE YTD
In comparison to 1009 in 2021-2022

WASTE TYPES ILLEGALLY DUMPED YTD (APPROXIMATE %)

- 17% Wrecked Vehicles
- 18% Demolition Materials
- 17% Tyres
- 26% Household Waste
- 11% Mattresses/Furniture
- 5% Green Waste
- 2% White Goods
- 1% Asbestos

12

14.4 Group Manager Infrastructure Monthly Report - January 2023

Author: John Keen, Group Manager Infrastructure
Responsible Officer: John Keen, Group Manager Infrastructure

Purpose:

This report provides Council with a summary of key operational activities undertaken by the Infrastructure Group during January 2023.

This document is for Council's information only.

Executive Summary

This report provides Council with a summary of key operational activities undertaken by the Infrastructure Group during January 2023.

Proposal

That this report be received and noted.

Attachments

1⇩ Group Manager Infrastructure Monthly Report - January 2023 12 Pages





Infrastructure

MONTHLY GROUP REPORT

JANUARY 2023

Lockyer Valley REGIONAL COUNCIL

2022 WEATHER EVENTS

UPDATE

The emergent works phase of recovery for the May 2022 event is now completed and Council is focusing heavily on the Reconstruction of Essential Public Assets (REPA) program. Program updates are as below:

- The submission was lodged with the Queensland Reconstruction Authority for the value of $4.3 million. An inital outcome was received in mid January, with only approximatly $3,000 deemed ineligible.
- The design work is continuing for restoration works for the landslips at Liftins Bridge, East Egypt Road, Berlin Road and Mountain View Road including risk assessment, cost estimates and specifications for the construction tender.
- The Fred Thomas pedestrian bridge at Withcott is currently being procured.
- Works on Woolshed Creek floodway have commenced.
- Grading crews have been working in zones 1 and 8. Preparations are underway to commence work in zones 10 and 4.
- All sealed and unsealed zone grouped submissions have been lodged with the exception of unsealed zone 7. This final zone submission is expected to be ready to lodge within the first week of February. Submission building for unsealed roads in other maintenance zones is nearing completion.
- 4 of 12 sealed road submission approvals have been received to date.
- 11 of 16 unsealed road submissions have been approved to date.
- There are currently 15 submission with the QRA for assessment. Additionally, 5 submissions are being developed.

The images below are before and after photos of recent REPA works undertaken on the unsealed road network.

Curtain Road, Crowley Vale

Fielding Road, College View

Derrymore Road, Derrymore

Jew Road, Crowley Vale

INFRASTRUCTURE & ENGINEERING SERVICES BRANCH HIGHLIGHTS

DESIGN & CONSTRUCTION WORKS

LORIKEET ROAD, REGENCY DOWNS FLOODWAY RENEWAL

- The Lorikeet Road floodway in Regency Downs is nearing it's end of life and needs a complete replacement. This project is joint funded by the South East Queensland Community Stimulus Package (SEQCSP) and Council.
- Work includes demolishing and removing existing structures, minor earthworks, construction of culvert base slab, new aprons and floodway, installation of new reinforced concrete box culverts, rock protection and affected guideposts and road furniture.
- The key objective for Lorikeet Road Floodway is to replace the end of life concrete crossing/under road culvert with a new concrete floodway surface, new under road drainage structure and the replacement of road signs and marking; thus improving resilience and creating a safer floodway that is compliant with contemporary standards.
- Construction has begun and is scheduled to take approximately 6 weeks, weather permitting.

2022-23 BITUMEN RESEAL PROGRAM

- Lockyer Valley Regional Council are seeking to reseal approximately 170,000m2 of existing road pavement as asset renewal works for its sealed roads. This program is joint funded by both Council and the State Government through the Roads to Recovery Program (RTR).
- The objective of the RTR Program is to contribute to the Infrastructure Investment Program through supporting maintenance of the nation's local road infrastructure asset, which facilitates greater access for Australians and improved safety, economic and social outcomes.
- 100% of preparation works complete. Sealing is underway with a scheduled completion in February 2023.
- The list of roads include:
  - Bremer Street, Laidley
  - Church Street, Laidley
  - Colquhouns Road, Lower Tenthill
  - Connors Road, Grantham
  - Frome Street, Laidley
  - Gehrke Hill Road, Summerholm
  - Hope Street, Laidley
  - Laidley Creek West Road, Laidley Creek West
  - Laurette Drive, Glenore Grove
  - Lefthand Branch Road, Lefthand Branch
  - Ma Ma Lilydale Road, Ma Ma Creek
  - Manteuffel Road, Ropeley
  - McGarvas Road, Grantham
  - Mountain View Drive, Plainland
  - Old Ropeley Road, Lower Tenthill
  - Pioneer Street, Laidley
  - Railway Street, Laidley
  - Sippel Road, Laidley Creek West
  - Steinhardts Road, Lower Tenthill
  - Summer Street, Laidley

NORTH & EAST STREETS INTERSECTION UPGRADE

- The upgrade of North and East Street roundabout in Gatton has been funded under both the Black Spot and South East Queensland Community Stimulus Package. Scope of works include the installation of a concrete roundabout, upgrading of existing stormwater infrastructure, installation of new concrete kerb and channel, formalise pedestrian crossings and footpaths, relocation of public utilities, new pavement, asphalt surfacing and line marking.
- The project will be a staged delivery to accommodate the school terms. Stage 1, comprising of the stormwater installation is completed. Stage 2 commenced January 2023, which will included kerb, pavement, asphalt and line marking, with expected completion in April 2023.

GRANTHAM SCRUB REHABILITATION

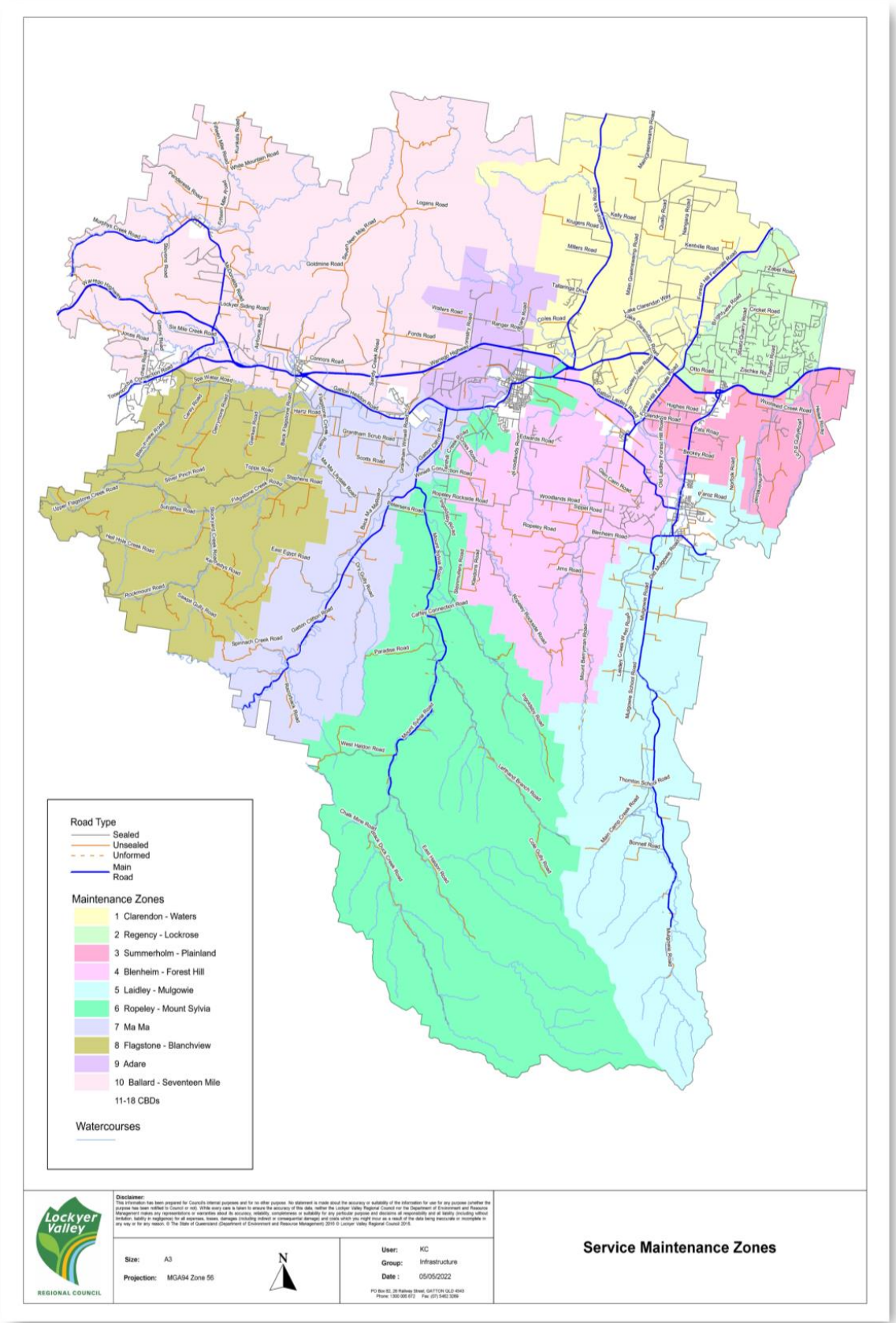
- The Grantham Scrub project is the combination of two separate funding streams to upgrade and rehabilitate Grantham Scrub Road from the intersection of Grantham Winwill Road for 1.3km.
- The intersection of Grantham Scrub and Grantham Winwill Roads has been funded by the Heavy Vehicle Safety and Protection Program (HVSPP). The scope of works includes stormwater drainage, realignment of property boundaries, service relocations, pavement widening and rehabilitation, bitumen surfacing, line marking and road furniture. This intersection upgrade will allow heavy vehicles to navigate this intersection safely whilst maintaining traffic flow.
- Grantham Scrub Road, from the intersection with Grantham Winwill to West of the intersection with Roses Road, will be funded by Transport Infrastructure Development Scheme (TIDS). The rehabilitation of Grantham Scrub will improve motorist safety, widen and strengthen the pavement and improve stormwater drainage. The work activities include culvert installation, service relocation, property realignment, road excavation, geotextile installation, road pavement, concrete kerb, bitumen sealing, line marking and road furniture.
- The section of Grantham Scrub Road between Kansas Road and Roses' Road has been completed and Lockyer Valley Regional Council crews are currently working on another section West of Roses' Road. The project is anticipated to be completed by June 2023.

LAKE CLARENDON WAY REHABILITATION

- The rehabilitation of Lake Clarendon Way in Lake Clarendon is joint funded by both the Local Roads and Community Infrastructure Program and Council.
- The aim of this project is to rehabilitate a 1.3km section to improve safety to motorists, increase the pavement life and help to improve drainage.
- Construction will begin in early February 2023 and is scheduled to take 4 weeks, weather permitting.

SPRINGBROOK PARK CARPARK UPGRADE

- Springbrook Park/Withcott Sporting Complex is located in Withcott, off Parkridge Drive. The sporting complex and park is utilised by a number of sporting clubs and community groups including Soccer, Martial Arts, Basketball, School Sports and the CWA. The venue is also able to be used as a community shelter in times of natural disaster. Successful funding from the Local Roads and Community Infrastructure Program will provide improved accessibility and parking for the venue.
- Some key objectives include, widening the pavement along the access road to achieve a consistent width for two-way traffic, improve access point, increase sealed carpark spaces, improve lighting and road signage and define drop off and pick up area.
- Bitumen sealing for 90% of the project was completed before Christmas to protect the works. Crews will be back onsite in February to complete the entrance tie in and concrete footpath works, with an expected completion date in March 2023.

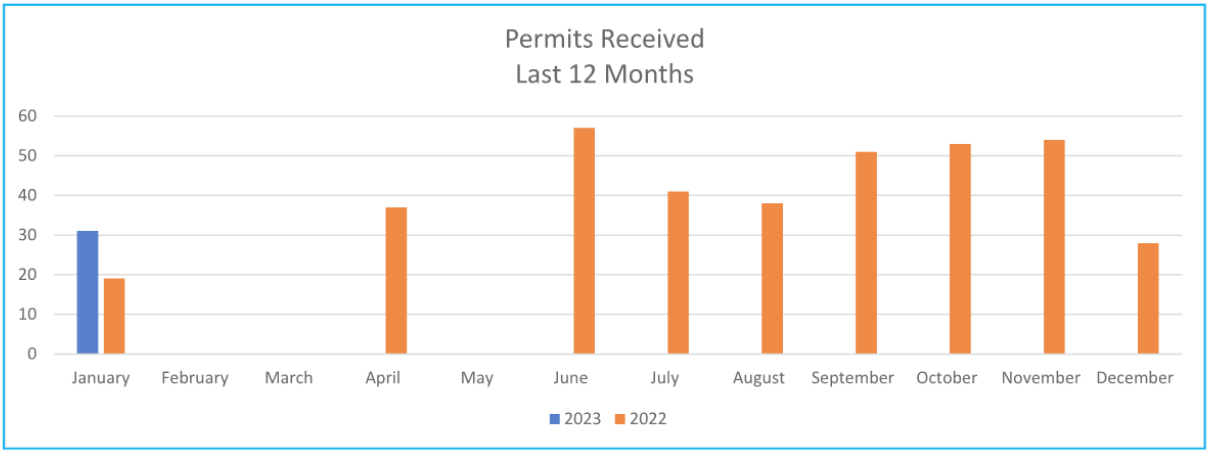

Road Type
Sealed
Unsealed
Unformed
Main Road
Maintenance Zones
1 Clarendon - Waters
2 Regency - Lockrose
3 Summerholm - Plainland
4 Blenheim - Forest Hill
5 Laidley - Mulgowie
6 Ropeley - Mount Sylvia
7 Ma Ma
8 Flagstone - Blanchview
9 Adare
10 Ballard - Seventeen Mile
11-18 CBDs
Watercourses
Lockyer Valley
REGIONAL COUNCIL
Disclaimer:
Size: A3
Projection: MGA94 Zone 56
N
User: KC
Group: Infrastructure
Date : 05/05/2022
Service Maintenance Zones

OPERATIONS & MAINTENANCE

WORKS ON ROADS PERMITS & APPLICATIONS

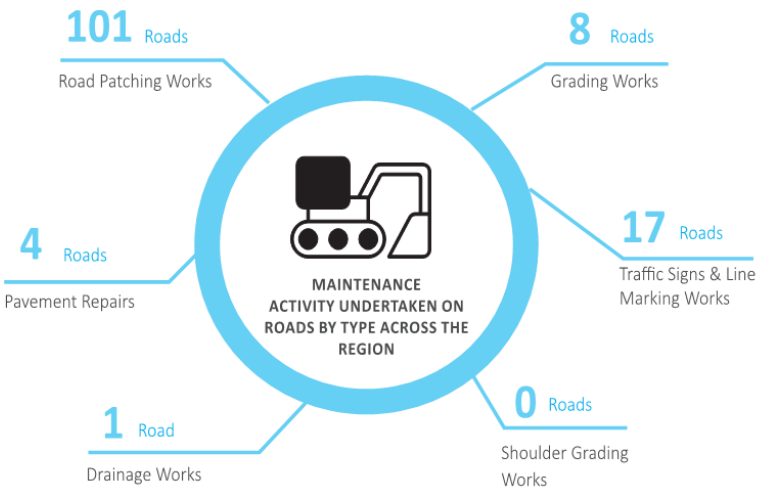
HEAVY VEHICLE APPLICATIONS	11
RURAL ADDRESSING APPLICATIONS	4
LAND ACCESS & ACTIVITY NOTICE	9
TRAFFIC CONTROL	2
OTHER ROAD ACTIVITY APPROVALS	0
DRIVEWAY APPLICATIONS	5

TOTAL APPLICATIONS RECEIVED IN JANUARY 2023 **31**



Please note no Group reports were produced for the months of February, March and May 2022.

MAINTENANCE WORKS



INFRASTRUCTURE PLANNING

ASSET MANAGEMENT

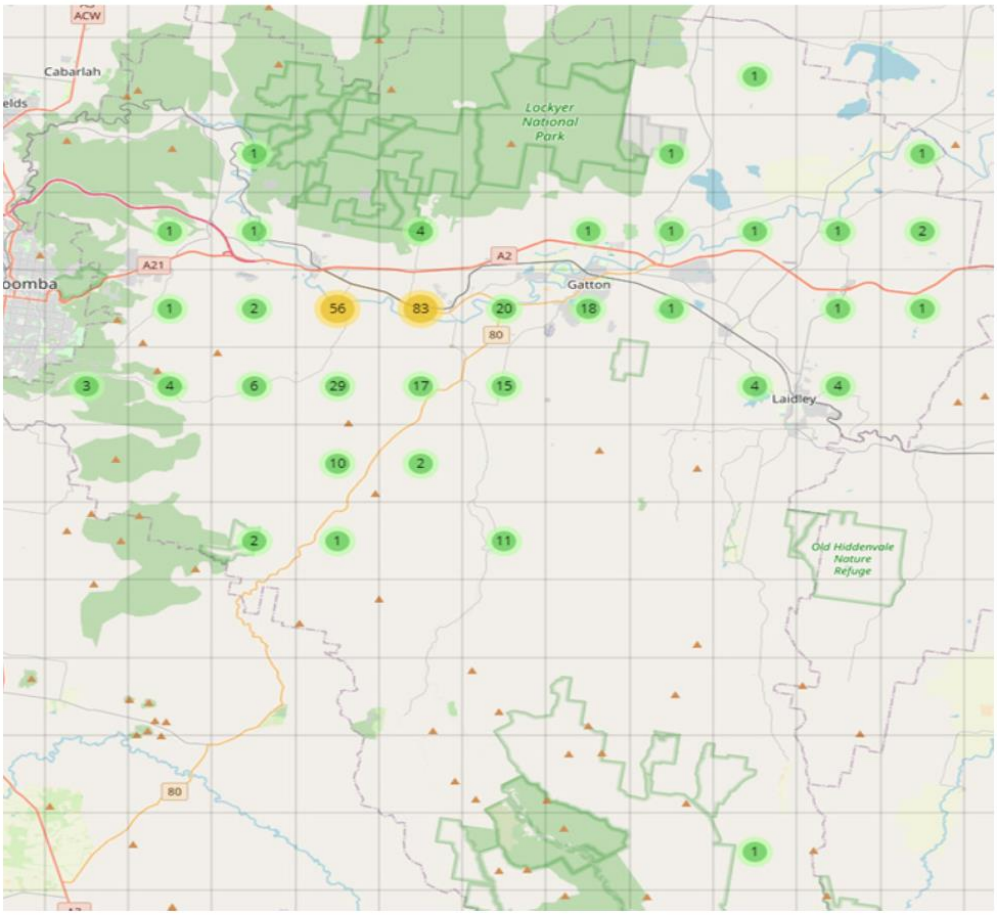
- Weekly monitoring surveys of the landslip sites at Berlin Road and East Egypt Road
- Routine RMPC inspections
- Creation of CBD and road furniture assets
- Condition inspection of 203 assets
- Continued processing of capital completions
- Building Condition Assessment project has commenced
- Continued contract negotiations with the contractor for the Gatton Stormwater CCTV project
- Tender assessments continuing for light vehicles and mowers

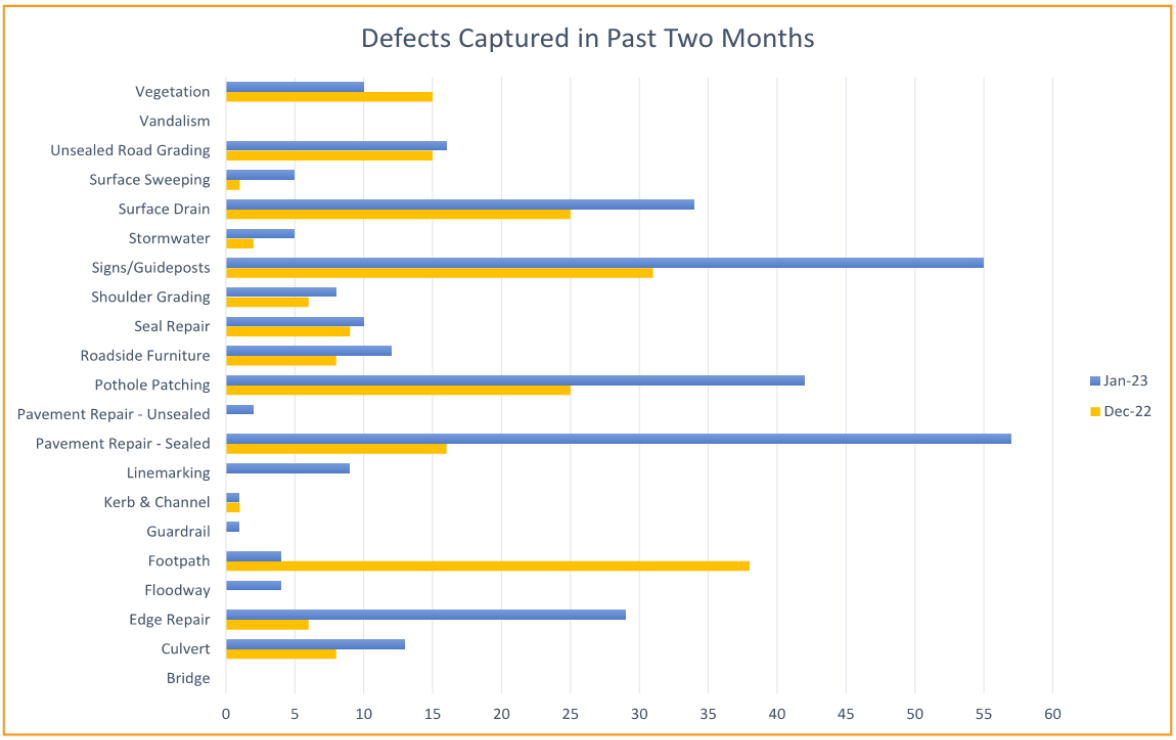
DEFECT OVERVIEW

TOTAL DEFECTS CAPTURED IN JANUARY 2023 317

133 DEFECTS COMPLETED IN JANUARY 2023

Defects Collected Across the Region In January 2023





COMMUNITY FACILITIES BRANCH HIGHLIGHTS

CAPITAL WORKS

MURPHYS CREEK GROUND PLAYGROUND

- The contruction of the new playground has been awarded. The contactor is scheduled to commence installation works mid March.

ALEX GEDDES HALL, LOCKYER WATERS

- The concept design for the new building is completed. On 18 January 2023, Council approved reallocation of $605,000 from the Black Summer Bushfire Recovery Grants Program to fund the replacement of Alex Geddes Hall. Currently waiting on confirmation from the funding body before commencing with the project.

UPCOMING CAPITAL PROJECTS:

- Electrical Infrastructure and IGA Carpark Lighting project
- Materials Recovery Facility Fire Systems project

PROJECTS OUT FOR TENDER/QUOTATION:

- Gatton Shire Hall External Cladding
- Lake Dyer Disabled Toilet
- Jean Biggs Disability Parking

PARKS AND CEMETERIES MAINTENANCE WORKS

Playground Maintenance

- Visual inspections undertaken at playgrounds and repairs completed as needed.

Furniture Maintenance / Landscaping

- Garden maintenance is ongoing.
- Bus stop maintenance commenced this month. Cleaning and vegetation maintenance complete on eight Gatton bus stops.
- Various requests for vegetation and safety issues were dealt with around the region.

Event Assistance

- Event sign changeovers completed as required.
- Assistance provided with the below events:
  - 2023 Tradies Race Day - 21 January 2023
  - Lockyer Valley Regional Council Australia Day Awards - 26 January 2023

Mowing/Slashing

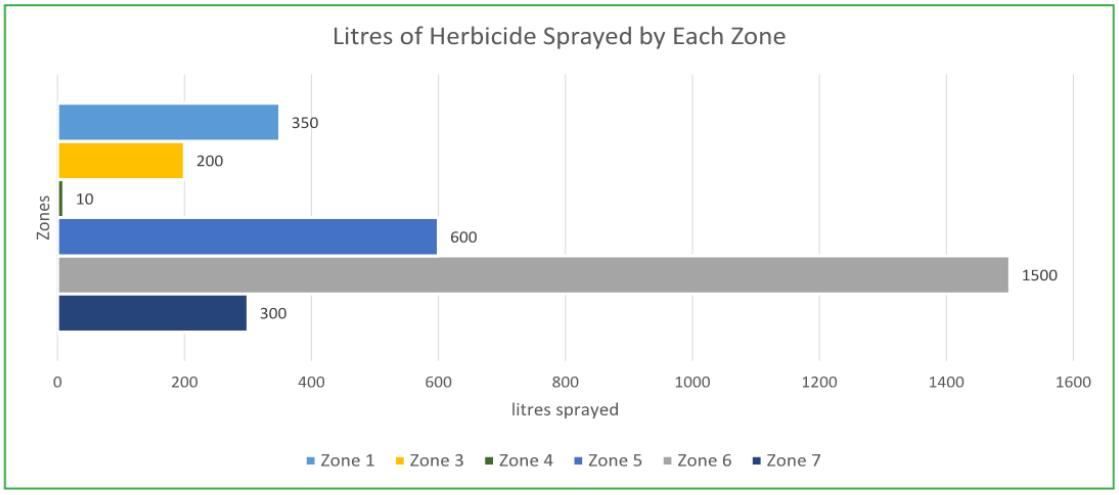
- Mowing across the region has been ongoing.
- Another round of slashing commenced this month with zones 1 and 6 of the region being completed. This equates to approximately 64ha of grass that has been mowed.
- Roadside spraying has been completed in all towns.

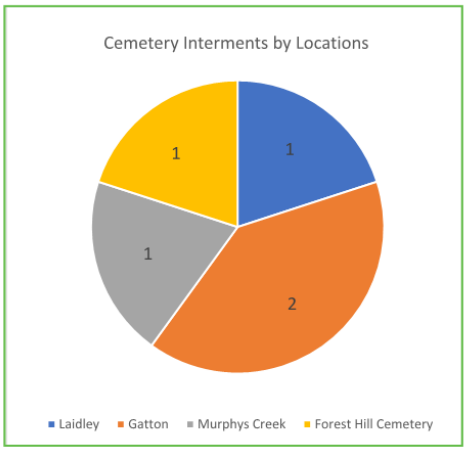
Disposal Services

- 903 street and park bins were services each week during January.

Declared Weeds

- There is ongoing monitoring and treatment of all declared weeds, with the focus on Giant Rat Tail Grass and Parthenium Weed with annual Rag Weed now present.





Cemetery Works

- Routine mowing across the five operational cemeteries.
- Additional mowing at Ingoldsbby and Ropeley Cemeteries was also completed.

FACILITIES MAINTENANCE WORKS

Electrical

- Testing of RCDs' (residual current devices) across all Council owned assets for completion end March
- Exit light testing
- Finalising electrical register
- Finalising air-conditioning at Gatton Shire Hall
- General maintenance and repairs as required.

Buildings

- Negotiations with various sporting groups for facilities upgrades through grant applications
  - Lockyer Valley Cricket – new duplicate nets at Cahill Park
  - Withcott – New shed for storage of equipment
  - Laidley Recreation Reserve – Electrical upgrade for electronic sign
- Park furniture upgrade to Laidley township and Laidley Lions Park
- New steps and handrails at Laidley Pioneer Village for Australia Day celebrations
- External cleans of the Lockyer Valley Cultural Centre, Murphys Creek Community Centre footpaths and ANZAC memorials
- New turf and garden installed at the Gatton Childcare Centre
- Routine maintenance and repairs as and when required

Plumbing

- Upgrade to hot water system at Alara Laidley
- Replacement of toilet suites and tap wear in various public amenities across the region
- General Repairs and maintenance.

LOCKYER VALLEY SPORTS & AQUATIC CENTRE

12,174	TOTAL CENTRE ATTENDANCE
2,389	GYM USERS
5,309	GENERAL POOL ENTRIES
1,986	LEARN TO SWIM LESSONS (NOT INCLUDING PARENTS)
281	SQUAD LESSONS (NOT INCLUDING PARENTS)
2,209	SCHOOLS - STUDENT GENERAL ADMINSSION (PRIMARY & SECONDARY)

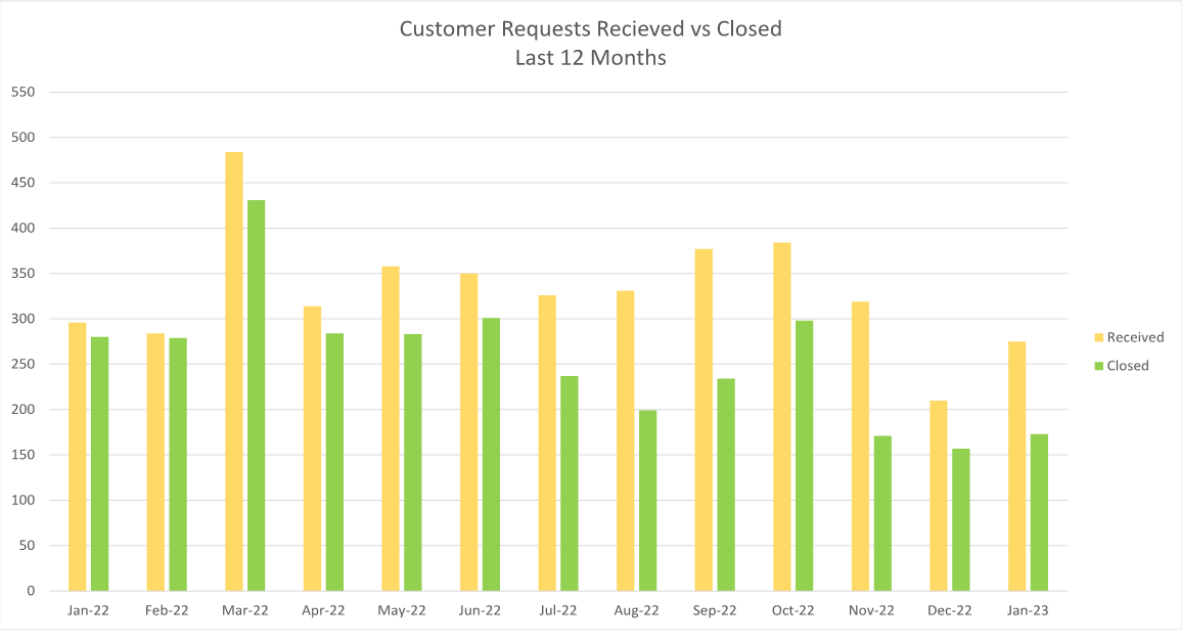
DAL RYAN MEMORIAL SWIMMING POOL

1,829	TOTAL CENTRE ATTENDANCE
1,479	GENERAL POOL ENTRIES
83	LEARN TO SWIM LESSONS
267	SCHOOLS - STUDENT GENERAL ADMINSSION (PRIMARY & SECONDARY)

11

CUSTOMER CONTACT

Data as at 7 February 2023



Data as at 7 February 2023

15.0 CONFIDENTIAL ITEMS

In accordance with the provisions of section 254J(3) of the *Local Government Regulation 2012,* a local government may resolve to close a meeting to the public to discuss confidential items, when its Councillors or members consider it necessary to close the meeting.

CLOSED SESSION

THAT the meeting be closed to the public, the time being 11:00am, to discuss the following item which is considered confidential in accordance with section 254J(3) of the *Local Government Regulation 2012,* for the reason indicated.

15.1 Request for Compensation - Lot 5 on RP189652 (Property ID 183650)
This item is confidential in accordance with Section 254J (3) (e) of the Local Government Regulation, 2012, as the matter involves legal advice obtained by the local government or legal proceedings involving the local government including, for example, legal proceedings that may be taken by or against the local government.

Moved By: Cr Hagan Seconded By: Cr Wilson
Resolution Number: 20-24/0758

CARRIED
6/0

OPEN SESSION

THAT Council move into open session, the time being 11:39am.

15.1 Request for Compensation - Lot 5 on RP189652 (Property ID 183650)

Author: Erin Neumann, Governance Officer
Responsible Officer: Dan McPherson, Group Manager People, Customer and Corporate Services

That the above item be considered in Closed Session to the exclusion of the press and public in accordance with Section 254J (3) (e) of the Local Government Regulation, 2012, as the matter involves legal advice obtained by the local government or legal proceedings involving the local government including, for example, legal proceedings that may be taken by or against the local government.

Purpose:

The purpose of this report is to seek Council's determination in relation to representations from the Member for Lockyer, on behalf of the owner of Lot 5 on RP 189652 (Property ID 183650), regarding their dissatisfaction with Council's settlement offer.

Officer's Recommendation:
THAT Council resolve to:

a. **Endorse correspondence sent to property owner on 5 December 2022 advising the settlement offer made on 28 September and confirmed on 25 October 2022, has now lapsed.**
b. **Respond to the Member for Lockyer's request for reconsideration of the settlement offer dated 1 February 2023, to advise that Council's settlement offer made on 28 September 2022 has now lapsed and no further correspondence will be entered into in relation to any matters for which administrative action complaints made by the property owner have been investigated and determined.**

RESOLUTION

THAT Council respond to the Member for Lockyer's request, dated 1 February 2023, in regard to the reconsideration of the settlement offer made to the owner of Lot 5 on RP 189652 on 28 September 2022, to advise that Council's settlement offer lapsed on 2 December 2022 and no further correspondence will be entered into in relation to any matters for which administrative action complaints made by the property owner have been investigated and determined.

Moved By: **Cr Hagan** **Seconded By:** **Cr Holstein**
Resolution Number: 20-24/0759

CARRIED
6/0

16.0 MEETING CLOSED

There being no further business, the meeting closed at 11:46am.