



**Infrastructure Services  
Directorate**

# **APPENDICES**

**Items 12.3.1 – 12.3.6**

# **ORDINARY COUNCIL MEETING**

To Be Held

**Wednesday, 27<sup>th</sup> of July 2022**

**Commencing at 5.00pm**

At

**Shire of Dardanup  
ADMINISTRATION CENTRE EATON  
1 Council Drive – EATON**

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~ Large Print  
~ Electronic Format [disk or emailed]  
Upon request.



**Regional Road Group 5-Year Program  
2023/2024 to 2027/2028**

LGA	Road Name	LGA Number	Road Number	SLK Start	SLK Finish	Work Description	Work Type**	Preservation***					Improvement / Expansion***				
								2023/24	2024/25	2025/26	2026/27	2027/28	2023/24	2024/25	2025/26	2026/27	2027/28
Shire of Dardanup	Pile Road	801	0022	0.05	16.78	Widen, reconstruct and seal.	I						40,000	60,000	440,000		
Shire of Dardanup	Ferguson Road	801	0001	0.00	0.27	Reconstruct pavement and seal.	P	300,000									
Shire of Dardanup	Eaton Drive	801	0202	0.40	1.70	Road and intersection modifications.	I						250,000				
Shire of Dardanup	Ferguson Road	801	0001	0.27	2.29	Reconstruct pavement and seal.	P			500,000	500,000						
Shire of Dardanup	Moore Road	801	0024	0.60	1.80	Reconstruct pavement and seal.	P				500,000						
Shire of Dardanup	Martin Pelusey Road	801	0023	2.79	3.39	Widen, reconstruct and strengthen.	I									200,000	
Shire of Dardanup	Henty Road	801	0018	8.00	11.00	Widen Road	I									400,000	
Shire of Dardanup	Dowdels Line	801	0009	3.85	4.94	Widen, reconstruct and seal.	I										240,000
Shire of Dardanup	Eaton Drive	801	0202	0.00	0.27	Surface profiling and pavement repairs											33,333
<b>Financial Year Total RRG Pool Contribution</b>								<b>300,000</b>	<b>0</b>	<b>500,000</b>	<b>1,000,000</b>	<b>0</b>	<b>290,000</b>	<b>60,000</b>	<b>440,000</b>	<b>600,000</b>	<b>273,333</b>
<b>Financial Year Total LGA Contribution</b>								<b>150,000</b>	<b>0</b>	<b>250,000</b>	<b>500,000</b>	<b>0</b>	<b>145,000</b>	<b>30,000</b>	<b>220,000</b>	<b>300,000</b>	<b>136,667</b>
<b>Grand Total</b>								<b>450,000</b>	<b>0</b>	<b>750,000</b>	<b>1,500,000</b>	<b>0</b>	<b>435,000</b>	<b>90,000</b>	<b>660,000</b>	<b>900,000</b>	<b>410,000</b>

<b>Total Annual LGA Funding Request</b>	<b>2023/24</b>	<b>2024/25</b>	<b>2025/26</b>	<b>2026/27</b>	<b>2027/28</b>
	<b>885,000</b>	<b>90,000</b>	<b>1,410,000</b>	<b>2,400,000</b>	<b>410,000</b>

<b>Preservation as % of Total Program</b>	<b>50.85%</b>	<b>0.00%</b>	<b>53.19%</b>	<b>62.50%</b>	<b>0.00%</b>
<b>Improvement/Expansion as % of Total Program</b>	<b>49.15%</b>	<b>100.00%</b>	<b>46.81%</b>	<b>37.50%</b>	<b>100.00%</b>

\*\*P Preservation  
 \*\*I Improvement  
 \*\*\* Enter \$ amounts as RRG Pool Contribution  
  Calculated Cells

Updated: 14/07/2021

**RISK ASSESSMENT TOOL**

**OVERALL RISK EVENT:** Regional Road Group Submissions for 2023-2024

**RISK THEME PROFILE:**

1 - Asset Sustainability Practices

**RISK ASSESSMENT CONTEXT:** Operational

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
<b>HEALTH</b>	Not undertaking treatments at these locations may result in further accidents.	Catastrophic (5)	Possible (3)	High (12 - 19)	Construct proposed treatments in compliance with State Blackspot Program.	Major (4)	Unlikely (2)	Moderate (5 - 11)
<b>FINANCIAL IMPACT</b>	Risk that assets are not upgraded or created to meet demand.	Moderate (3)	Possible (3)	Moderate (5 - 11)	Not required.	Not required.	Not required.	Not required.
<b>SERVICE INTERRUPTION</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
<b>LEGAL AND COMPLIANCE</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
<b>REPUTATIONAL</b>	Council may receive negative publicity for not maintaining its roads.	Minor (2)	Likely (4)	Moderate (5 - 11)	Not required.	Not required.	Not required.	Not required.
<b>ENVIRONMENT</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

# [Appendix ORD: 12.3.2A]

**Nathan Ryder**

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**From:** Lynette Pitts <lyn\_tony@westnet.com.au>  
**Sent:** Monday, 17 January 2022 2:52 PM  
**To:** Records  
**Subject:** Fwd: Fencing and Gates on Yabberup Rd, Wellington Forest

**⚠ CAUTION:** This email originated from outside the Shire of Dardanup.  
Do NOT click links or open attachments unless you recognize the sender and know the content is safe. Do NOT enter any username or passwords and report any suspicious content.

Good afternoon

In regards to the email that we received from Stephen Delane on 12 January 2022 we would like to ask if it is possible to have a permit to keep the gate at the beginning of Yabberup Road near Mungallup/Pile Road in place, so that we can close it when we are moving cattle onto Yabberup Road to get them into our yards for maintaining their health, ie: when the vet comes, when we need to drench and tag cattle or any other work in regards to the cattle, and when we need to yard them for the carrier to come and take them to Boyanup for sale.

This would be very helpful as I (Tony) work nearly all of the time here on my own, and if I can please have a permit to shut this gate at those times it would be very helpful to me.

That particular gate has been in place for at least 60 years that I know of when my uncles Jack and Bill Smith had this property and the owners before them, had it in place.

We were left this property in 2018 when both of my uncles passed away.

We have lived happily here for over 32 years, and have had to have the gate closed at times when we have to move stock, and anyone going through Yabberup Road at those times have been very courteous to shut the gate behind them with no trouble. We ask if you could have empathy for our situation and grant us this permit.

This would help us out enormously, especially as I am 65 years old and at most times I need to work with the cattle on my own.

We will make sure that everything else is attended to in the email from Steve.

We look forward to your reply with hope that this is in our favour.

Kind regards

Tony and Lyn Pitts

Sent from my iPhone

Begin forwarded message:

**From:** Lynette Pitts <lyn\_tony@westnet.com.au>  
**Date:** 17 January 2022 at 1:32:38 pm AWST  
**To:** lyn\_tony@westnet.com.au  
**Subject:** Fwd: Fencing and Gates on Yabberup Rd, Wellington Forest

Sent from my iPhone

Begin forwarded message:

**From:** Stephen Delane <Stephen.Delane@dardanup.wa.gov.au>  
**Date:** 12 January 2022 at 8:55:13 am AWST

# [Appendix ORD: 12.3.2A]

To: lyn\_tony@westnet.com.au

Subject: Fencing and Gates on Yabberup Rd, Wellington Forest

Hi Tony & Lyn

Further to my previous email, please find attached photos of the gates and wire that requires removal or actioning.

Kind regards

**Stephen Delane**

Ranger



**A:** 1 Council Drive | PO Box 7016 | Eaton WA 6232

**T:** 08 9724 0307 | **E:** Stephen.Delane@dardanup.wa.gov.au

**W:** www.dardanup.wa.gov.au



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**From:** Stephen Delane

**Sent:** Wednesday, 12 January 2022 8:49 AM

**To:** 'lyn\_tony@westnet.com.au' <lyn\_tony@westnet.com.au>

**Subject:** Fencing and Gates on Yabberup Rd, Wellington Forest

Good morning Tony and Lyn

Further to our discussions regarding fencing along Yabberup Rd for your property.

As the shire has received a formal complaint regarding the objection to gates and fencing being installed on/across Yabberup Rd, a requirement is for you to now remove all unauthorised constructed fences and gates within the thoroughfare (road being fenceline to fenceline). Any solid structures that have been in place for more than 1 year (or have not been altered) are able to remain, however the gate portion of the structure must be removed. All temporary wire fencing (Cocky's Gate) are also to be removed.

This requirement is under the following legislation;

**Local Laws - Activities in Thoroughfares and Public Places and Trading 2007 - 2.2(1)(c)**

- A person shall not, without a permit - cause any obstruction to a vehicle or a person using a thoroughfare as a thoroughfare

**Local Government (Miscellaneous Provisions) Act 1960 Section 448 - Cattle Grazing on streets etc without local governments consent may be impounded**

- Cattle driven along or on to a street, or way, or place mentioned in Section 447, for the purposes of grazing, without the consent of the local government, are to be regarded as trespassing on the street, way, or other place, and may be impounded by the local government.

**Road Traffic Code 2000**

- **reg 275 Unattended stock on road**
  - (1) A person in charge of stock shall not –
    - a) Allow it to stray onto a road; or

## [Appendix ORD: 12.3.2A]

- b) Having taken stock onto a road, allow it to remain there unattended, or inadequately attended.

- **reg 276 Restrictions of driving stock**

A person shall not drive stock along or across a road unless the person –

- (a) takes all reasonable precautions to warn approaching traffic of the presence of stock; and
- (b) arranges the driving of the stock at such times, and in such numbers, and establishes such control of the stock on the road, as is likely to prevent it causing unreasonable delay to the passage of other traffic.

The below link is Main Roads requirements for stock movement on State Roads, however this is also best practice for all local roads.

[https://www.mainroads.wa.gov.au/technical-commercial/technical-library/road-traffic-engineering/roadside-items/stock-crossings/#mctoc\\_1ebii8qem57g](https://www.mainroads.wa.gov.au/technical-commercial/technical-library/road-traffic-engineering/roadside-items/stock-crossings/#mctoc_1ebii8qem57g)

Unfortunately there is no permit available granting you to have fences or gates installed within the thoroughfare and no authority would be given to close Yabberup Rd at any stage.

The removal of these gates and wire must be completed by 28<sup>th</sup> February 2022. Whilst I have empathy for your situation, and this practice may have been occurring for many year in this location by previous owners, I am legally bound to enforce the legislation as required.

If you require any further information, please do not hesitate to contact me.

Kind regards

**Stephen Delane**

Ranger



**A:** 1 Council Drive | PO Box 7016 | Eaton WA 6232

**T:** 08 9724 0307 | **E:** [Stephen.Delane@dardanup.wa.gov.au](mailto:Stephen.Delane@dardanup.wa.gov.au)

**W:** [www.dardanup.wa.gov.au](http://www.dardanup.wa.gov.au)



“This message contains privileged and confidential information intended only for the use of the addressee or entity named above. Use of this information

beyond this intended use is unauthorised”



[Appendix ORD: 12.3.2A]







[Appendix ORD: 12.3.2A]



[Appendix ORD: 12.3.2A]



[Appendix ORD: 12.3.2A]



[Appendix ORD: 12.3.2A]



**RISK ASSESSMENT TOOL**

**OVERALL RISK EVENT:** Yabberup Road – Gate Licence Request

**RISK THEME PROFILE:**

2 - Business and Community Disruption

**RISK ASSESSMENT CONTEXT:** Operational

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
<b>HEALTH</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.
<b>FINANCIAL IMPACT</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.
<b>SERVICE INTERRUPTION</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
<b>LEGAL AND COMPLIANCE</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required	Not required.	Not required.	Not required.
<b>REPUTATIONAL</b>	Not seeking feedback on a proposal that affects land access on a public road.	Insignificant (1)	Almost Certain (5)	Moderate (5 - 11)	Consult with affected landowners and land managers.	Insignificant (1)	Unlikely (2)	Low (1 - 4)
<b>ENVIRONMENT</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

# [Appendix ORD: 12.3.3]

RISK ASSESSMENT TOOL								
<b>OVERALL RISK EVENT:</b>		Industry Road Safety Alliance Membership Review						
<b>RISK THEME PROFILE:</b>		14 - Safety and Security Practices						
<b>RISK ASSESSMENT CONTEXT:</b>		Strategic						
CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
HEALTH	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
SERVICE INTERRUPTION	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
LEGAL AND COMPLIANCE	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
REPUTATIONAL	Negative perception of discontinuance of membership.	Insignificant (1)	Rare (1)	Low (1 - 4)	Not required.	Not required.	Not required.	Not required.
ENVIRONMENT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

# [Appendix ORD: 12.3.4]

## RISK ASSESSMENT TOOL

**OVERALL RISK EVENT:** RFT F0256464 – Mowing and Turf Services

**RISK THEME PROFILE:**

- 1 - Asset Sustainability Practices
- 2 - Business and Community Disruption

- 7 - Environment Management
- 15 - Supplier and Contract Management

**RISK ASSESSMENT CONTEXT:** Operational

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
HEALTH	Management of Herbicide spraying	Minor (2)	Unlikely (2)	Low (1 - 4)	Not required.			
FINANCIAL IMPACT	Budget control and activity based spending	Minor (2)	Possible (3)	Moderate (5 - 11)	Budget structure reflected in Contract and subsequent PO's.			
SERVICE INTERRUPTION	Open Spaces will deteriorate if not serviced	Moderate (3)	Almost Certain (5)	High (12 - 19)	Execute contract and proceed with service arrangements.	Minor (2)	Unlikely (2)	Low (1 - 4)
LEGAL AND COMPLIANCE	Contract administration and variation management	Minor (2)	Unlikely (2)	Low (1 - 4)	Not required.			
REPUTATIONAL	Open Spaces will deteriorate if not serviced	Moderate (3)	Almost Certain (5)	High (12 - 19)	Execute contract and proceed with service arrangements.			
ENVIRONMENT	Poor weed and fertiliser control	Moderate (3)	Possible (3)	Moderate (5 - 11)	Direct management and supervision to minimise impacts beyond application surfaces.	Minor (2)	Unlikely (2)	Low (1 - 4)





# Bunbury Outer Ring Road Wanju Waterloo Advisory Group

1 June 2022







OP	Constructor NOPs	Designer NOPs
 	  	

[Appendix ORD: 12.3.5A]

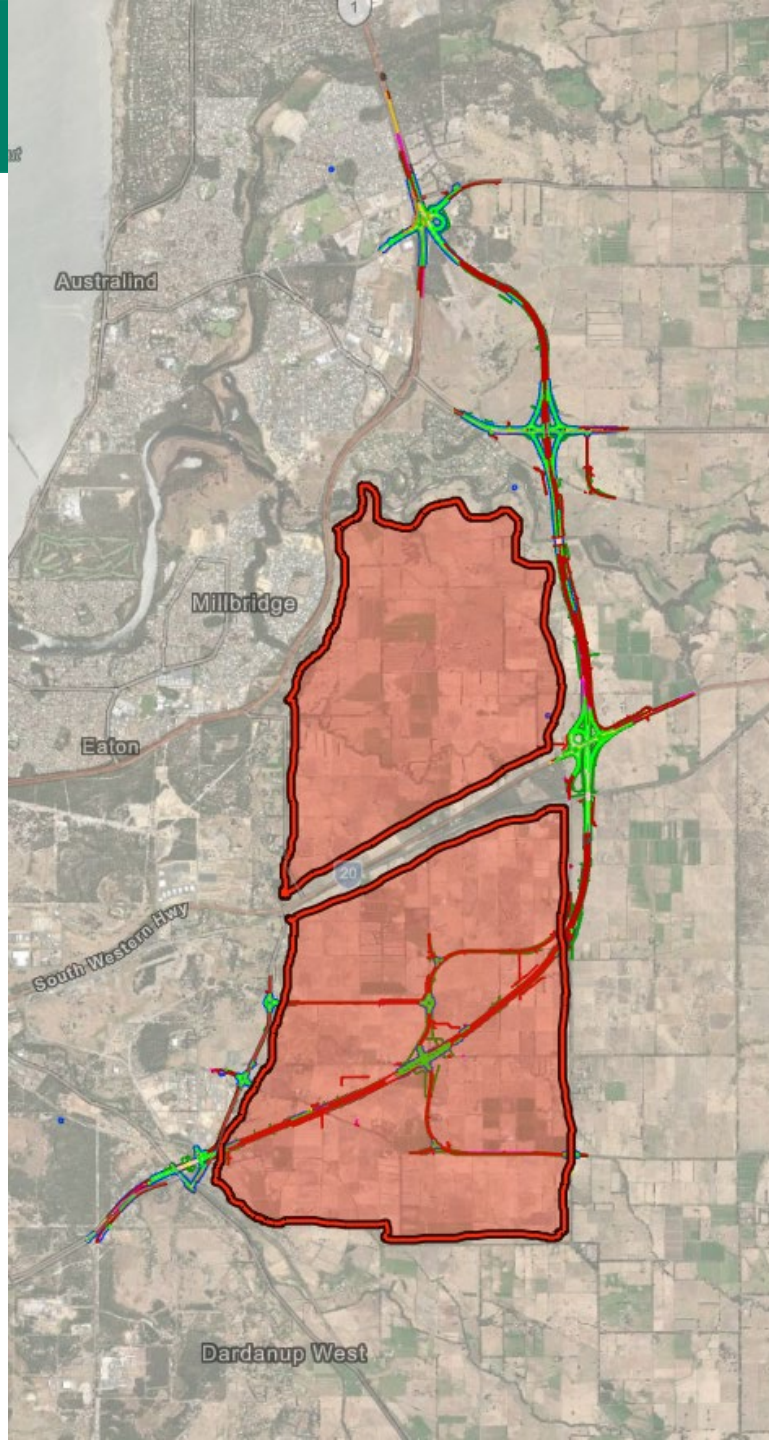
- Northern project area (Stage 2)**
  - 1 Paris Road / Clifton Road interchange
  - 2 Raymond Road interchange
  - 3 South Western Highway (north) interchange
  - 4 Discovery Road intersection
  - 5 BORR overpass of Golding Crescent, Ferguson River, Freight Rail and Boyanup-Picton Road
- Central project area (Stage 1)**
  - 6 Bunbury Outer Ring Road (Stage 1)
- Southern project area (Stage 3) (pending approvals)**
  - 7 South Western Highway (south) existing roundabout
  - 8 Lillydale Road roundabout
  - 9 Yalinda Drive overpass
  - 10 Bussell Highway Y-interchange



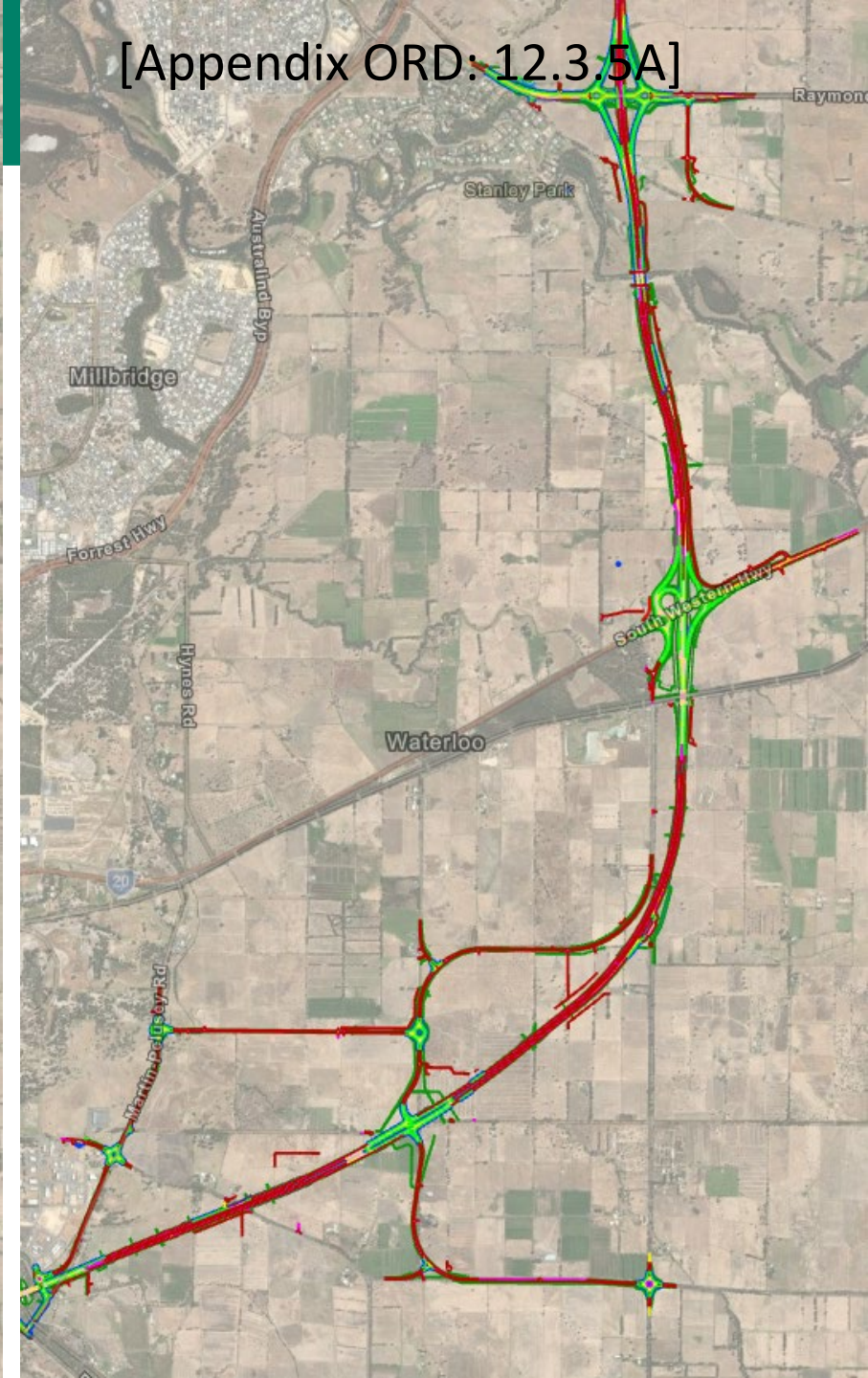
**LEGEND**

-  Bunbury Outer Ring Road new alignment
-  Connecting road upgrades/construction
-  Bunbury Outer Ring Road existing alignment
-  Existing road closure
-  Bridge
-  New cul-de-sac

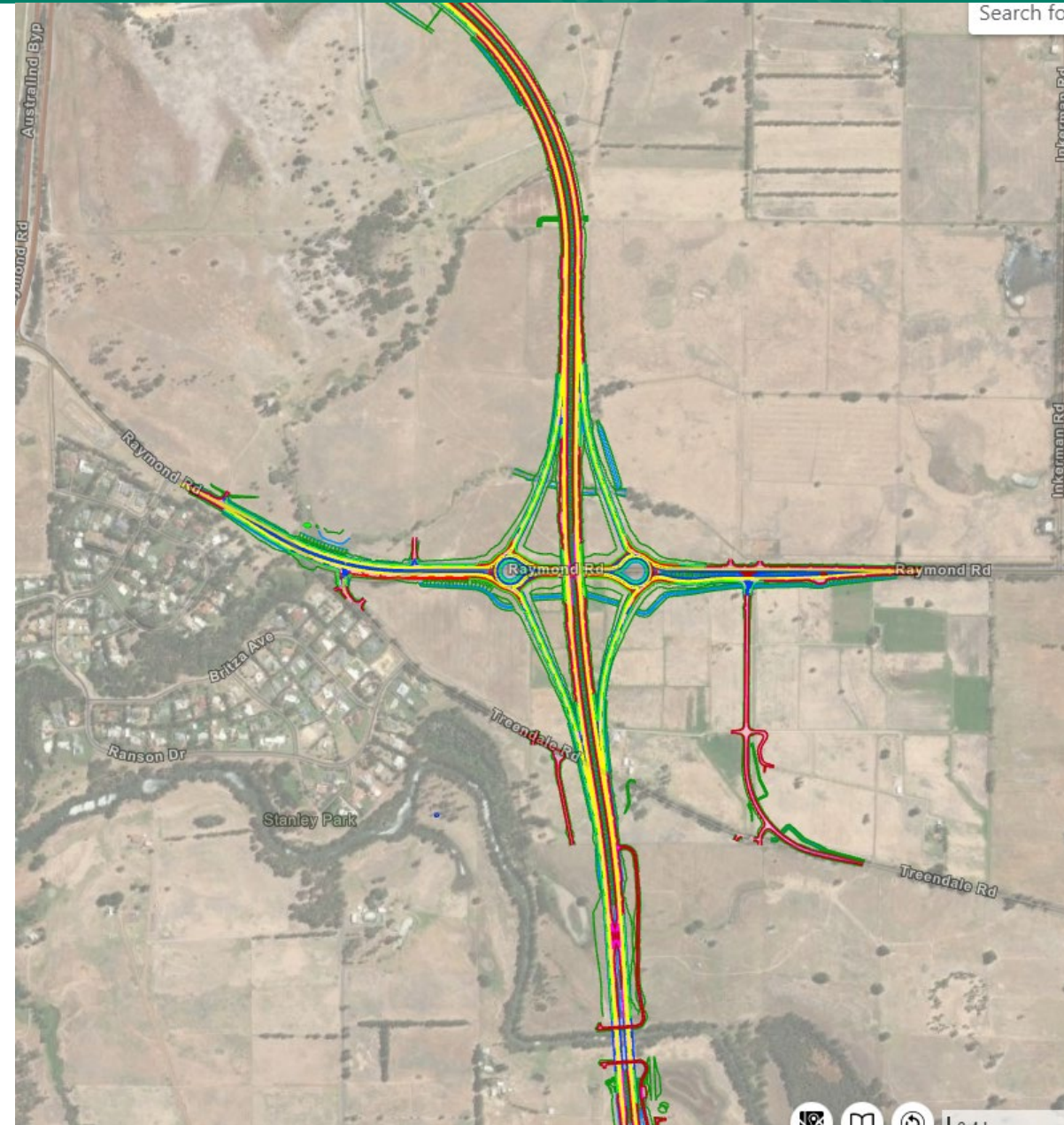
# Wanju and Waterloo Proximity to BORR



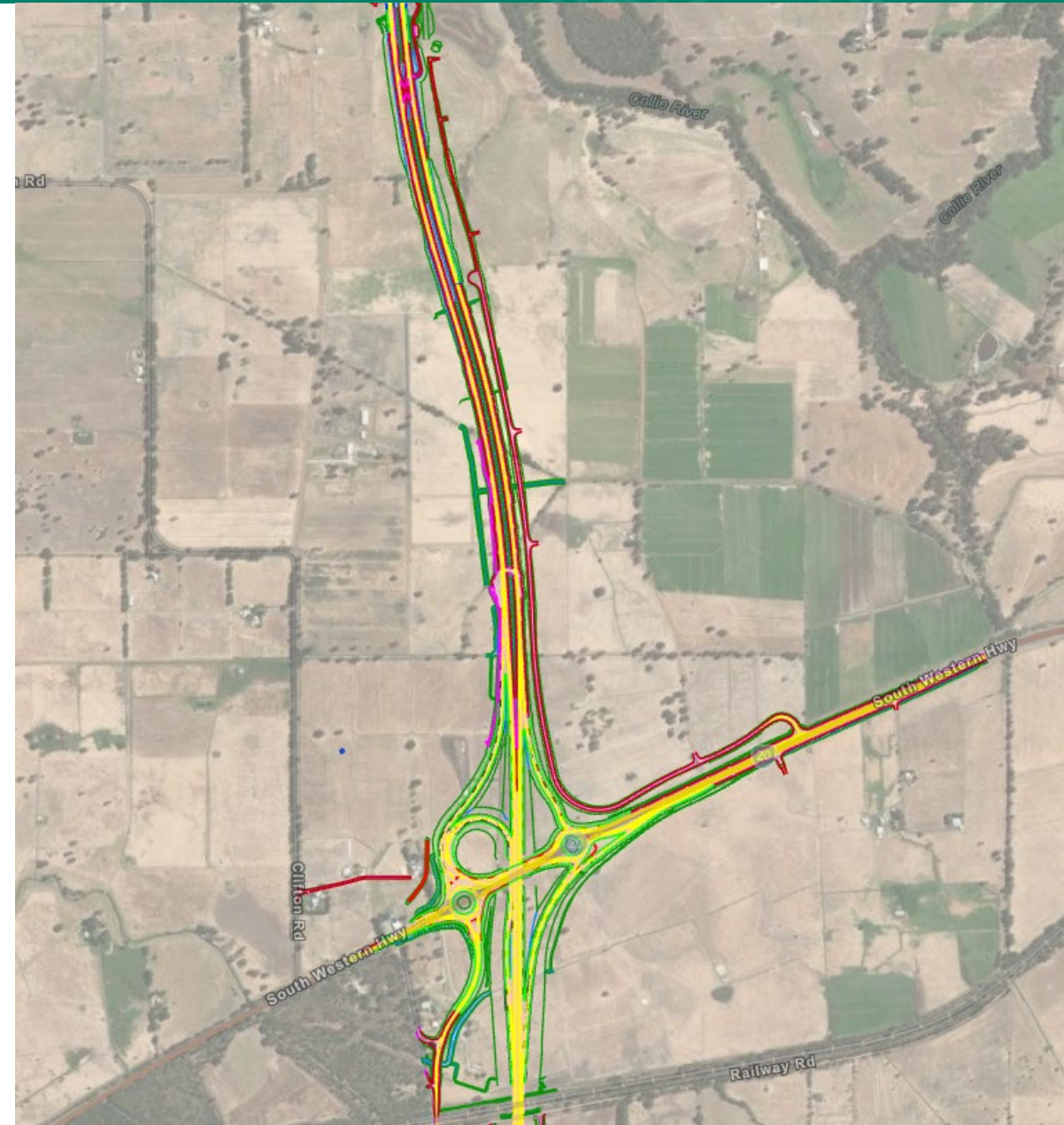
[Appendix ORD: 12.3.5A]



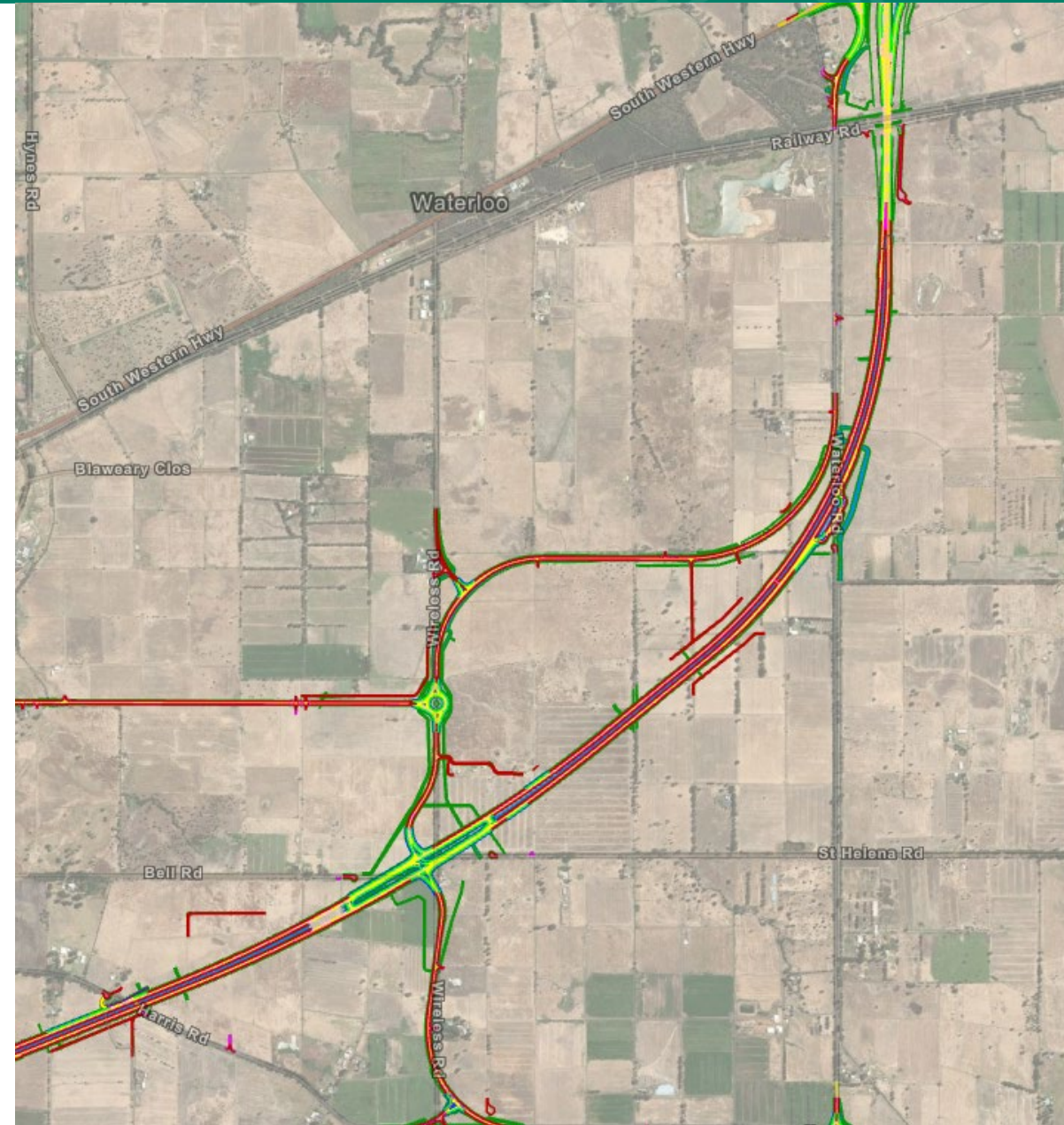
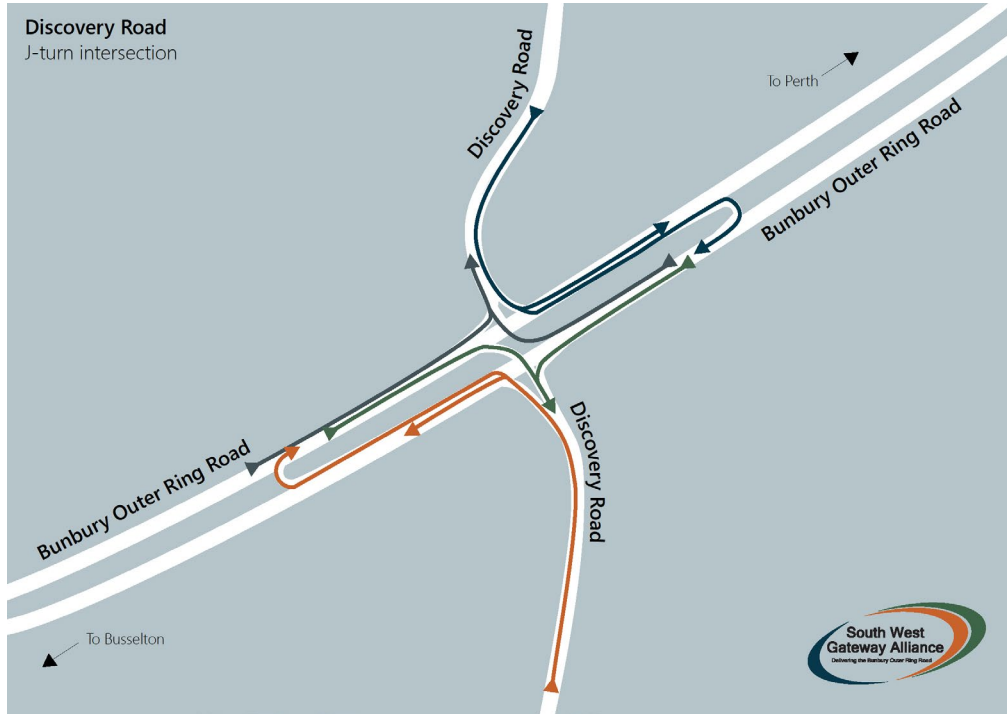
# Raymond Road



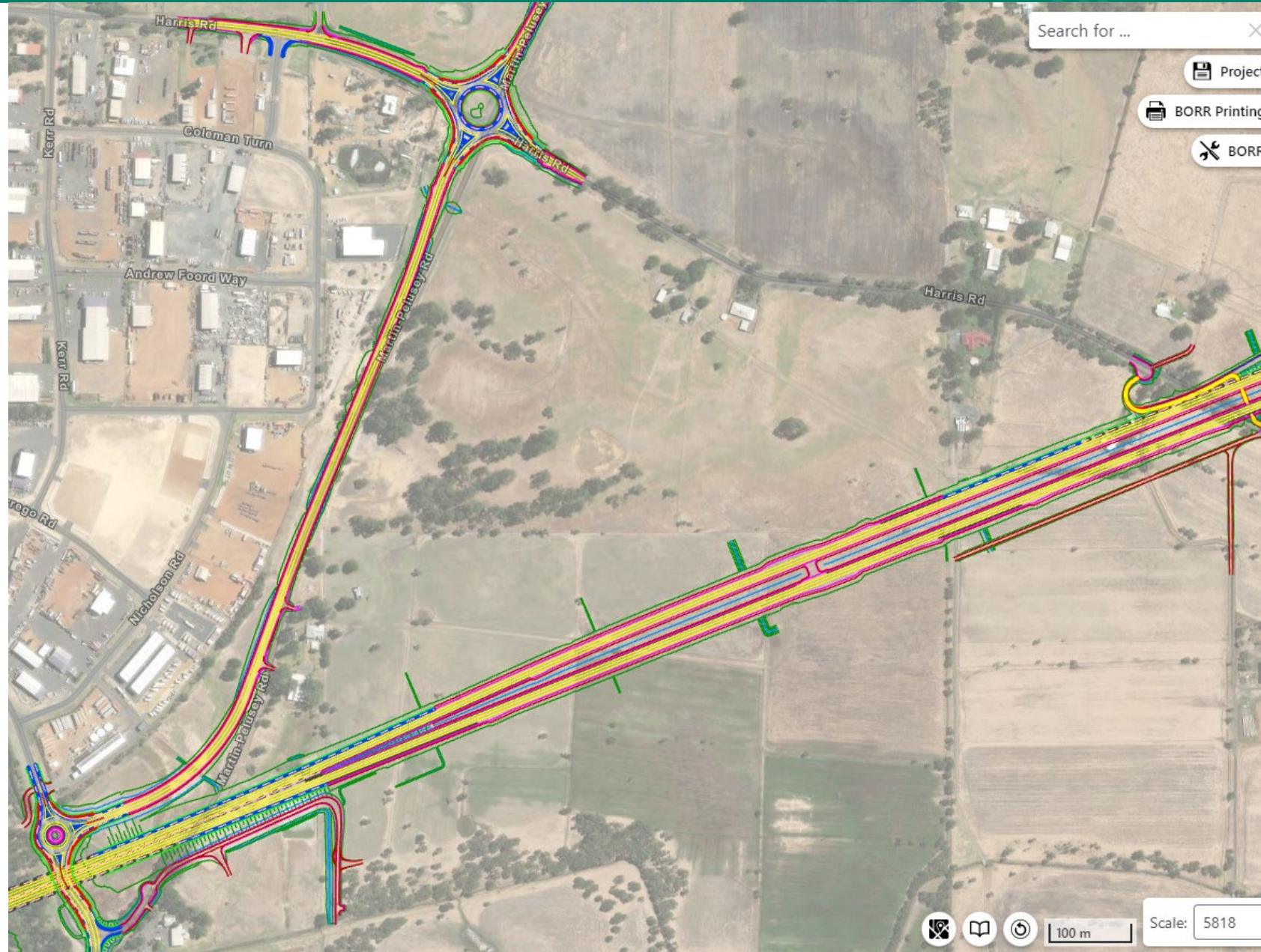
# South West Highway



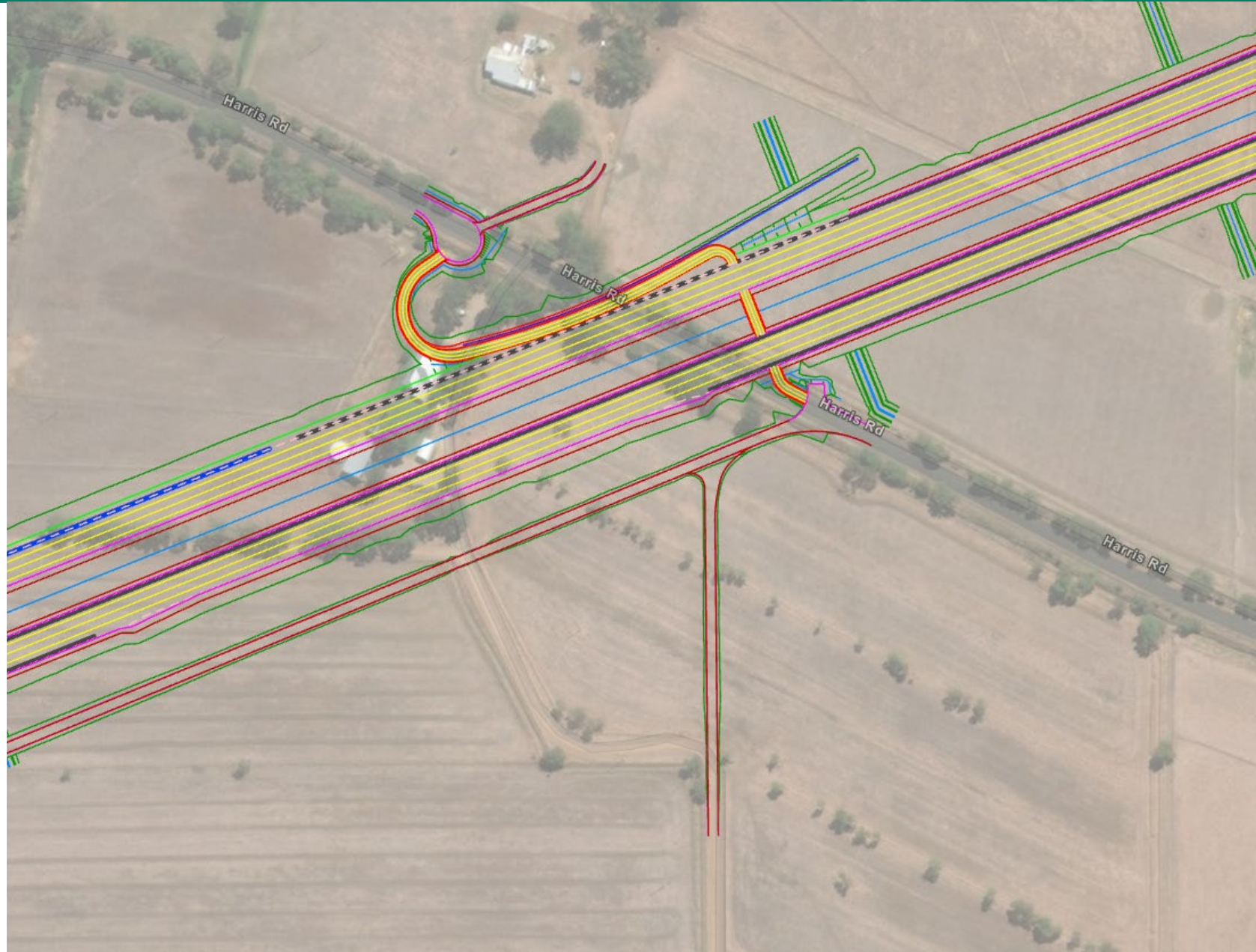
# Discovery Road



# Martin-Pelusey | Golding | Harris



## Cycle Route to Fergusson







Australian Government

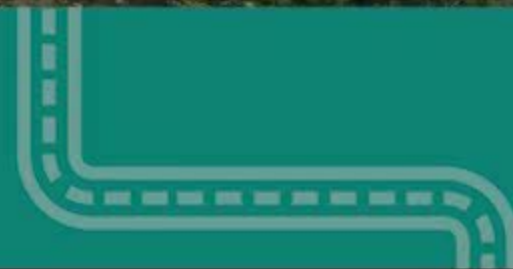


**BUILDING OUR FUTURE**



## **BUNBURY OUTER RING ROAD**

Clifton Road



- CAT 1 clearing completed at the Paris Rd and Clifton Rd intersection
- Commenced topsoil strip and foundation preparation where BORR meets Forrest Hwy
- Commenced excavation, foundation preparation and piling pad construction for the Paris Rd and Clifton Rd bridge (BR 1837)
- Ongoing embankment construction (direct tip)
- Installation and backfill of the relocated gas pipeline (550m of DN200 Steel HP gas)



- Ongoing embankment construction (direct tip) on Raymond Rd intersection - ramps
- Completed rock foundation treatment on Ramp 205
- Completed cut to fill South of Collie River
- Completed foundation preparation
- Continued installation of culverts
- Completed preload embankment construction for Collie River Bridges (BR 1839 and 1840)



- Commenced piling pad construction on South Western Hwy (north) bridge (BR 1841)
- Continued import, place and compact between South Western Hwy and the rail line
- Completed foundation preparation and commenced import on South Western Hwy westbound
- Continued installation of reinforced concrete pipes north of South Western Hwy
- Preparation for large reinforced concrete box culvert installation and delivery of deep fill onsite
- Completed South West Hwy barrier installation to enable abutment box out adjacent to the highway and compaction of bridging layer



- Completed topsoil strip and foundation preparation south of the rail line to Waterloo Rd
- Completed spine track between Railway Rd and Waterloo Rd
- Commenced excavation for the Watercorp drain adjacent to Waterloo Rd
- Completed subgrade and commenced subbase works on the main alignment Sth of Waterloo Rd
- Completed clearing and topsoil stripping works between Wireless Rd and Harris Rd
- Commenced foundation preparation between Harris Rd and Wireless Rd interchange
- Completed spine track construction between Martin-Pelusey Rd and Harris Rd
- Installation, backfill and pressure testing of the relocated gas pipeline (350m of DN150 Steel HP gas)



### Creating jobs

**YAKA DANDJOO**

10/26 Jobs advertised by 8 companies  
BORRjobs.com.au

20 graduates have successfully gained employment  
13 employed on BORR

57% graduates are female

23% SWGA employees are female

48 graduates remain connected to the program (83% retention rate)

58 total graduates



### Aboriginal participation

1 Aboriginal business awarded ABDI

1/7 Contracts quarantined for Aboriginal businesses

212.8 Aboriginal monitoring hours

4569.49 Aboriginal employment hours

10 Aboriginal cultural events held

52 Aboriginal people employed on the project

5/107 Dedicated business briefings; attendees in total

110/70 Businesses registered; in the South West

22 Aboriginal businesses have transacted with SWGA

10 Aboriginal businesses are working on packages in excess of \$50,000

4 Aboriginal employees

37 Participated in the Cultural Immersion Program

3 Trainees working on the project

\$13.3m 43% Committed of \$30m target



Delivering the Bunbury Outer Ring Road in partnership with Main Roads



### Industry sustainability

9/407 Business briefings; attendees in total

67/729 1:1 business discussions

15/27 Tender briefing/support

193 South West businesses have transacted with SWGA

643 Businesses registered; 432 South West region

\$137.5m 31% Local business spend committed of \$450m target

### Environment and sustainability

34.49/45 Current working score / minimum target score

14 Heritage Monitoring events completed

7/62 Sustainability commitments completed

300 Must statements completed

Review, inspection and management of construction at Collie River

### Community

1/1 Community presentations

1 Local shire presentations

11/2101 Newsletter subscribers

52/2085 Facebook group members

1/63 Advisory group meetings

9/220 Landowner meetings

111/1206 Land access arrangements

16/1179 Visits to the Community Hub

# [Appendix ORD: 12.3.5B]

## RISK ASSESSMENT TOOL

**OVERALL RISK EVENT:** Bunbury Outer Ring Road – Notices of Proposed Road Closures

**RISK THEME PROFILE:**

3 - Failure to Fulfil Compliance Requirements (Statutory, Regulatory)

**RISK ASSESSMENT CONTEXT:** Project

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
HEALTH	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
FINANCIAL IMPACT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
SERVICE INTERRUPTION	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.
LEGAL AND COMPLIANCE	Public notices not issued in accordance with Section 3.50 of the Local Government Act 1995	Moderate (3)	Possible (3)	Moderate (5 - 11)	Issue public notices as per the Act	Moderate (3)	Rare (1)	Low (1 - 4)
REPUTATIONAL	Residents and businesses not given the opportunity to make submissions in relation to road closures.	Moderate (3)	Possible (3)	Moderate (5 - 11)	Issue public notices as per the Act and consider submissions if received	Moderate (3)	Rare (1)	Low (1 - 4)
ENVIRONMENT	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

# [Appendix ORD: 12.3.5C]

## Nathan Ryder

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**From:** Peta Nolan  
**Sent:** Tuesday, 7 June 2022 11:41 AM  
**To:** Nathan Ryder  
**Subject:** FW: Discovery Road Towards100 Demonstration Project  
**Attachments:** Implementation Plan v2 - BORR Towards100 Demonstration Projects.pdf

For your attention

### Peta Nolan

Personal Assistant - Infrastructure



**A:** 1 Council Drive | PO Box 7016 | Eaton WA 6232  
**T:** 08 9724 0304 | **E:** Peta.Nolan@dardanup.wa.gov.au  
**W:** www.dardanup.wa.gov.au



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**From:** Maddie Darch <Maddie.Darch@dardanup.wa.gov.au>  
**Sent:** Friday, 8 April 2022 4:18 PM  
**To:** Theo Naudé <Theo.Naude@dardanup.wa.gov.au>  
**Subject:** FW: Discovery Road Towards100 Demonstration Project

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**From:** Peter Damen <[peterd@level5design.com.au](mailto:peterd@level5design.com.au)>  
**Sent:** Friday, 8 April 2022 4:12 PM  
**To:** André Schönfeldt <[Andre.Schonfeldt@dardanup.wa.gov.au](mailto:Andre.Schonfeldt@dardanup.wa.gov.au)>  
**Cc:** Maddie Darch <[Maddie.Darch@dardanup.wa.gov.au](mailto:Maddie.Darch@dardanup.wa.gov.au)>  
**Subject:** Discovery Road Towards100 Demonstration Project

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Hi Maddie, please forward on if you can.

Thanks  
Peter

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**From:** Peter Damen  
**Sent:** Friday, 8 April 2022 3:57 PM  
**To:** [theo.naude@dardanup.wa.gov.au](mailto:theo.naude@dardanup.wa.gov.au)  
**Cc:** [michael.bennett@dardanup.wa.gov.au](mailto:michael.bennett@dardanup.wa.gov.au); [André.Schönfeldt@dardanup.wa.gov.au](mailto:Andre.Schonfeldt@dardanup.wa.gov.au); Andonis Missikos <[andonis@cassari.com.au](mailto:andonis@cassari.com.au)>; [andonis@swahub.org](mailto:andonis@swahub.org)  
**Subject:** Discovery Road Towards100 Demonstration Project

Hi Theo,

Thank you to Michael, Andre and yourself for hosting Andonis and I last Friday for our meeting with you at your offices.



## [Appendix ORD: 12.3.5C]

It was great to hear that you are open to what we are proposing and keen to understand more of what we hope to deliver.

The SWA, SWGA and Main Roads are all working hard to make a real and significant difference with the Discovery Road *Towards100* Demonstration Project. Communities rightfully expect us to deliver more sustainable outcomes in our projects and I am pleased to see that Main Roads has made the commitment to lead the way with projects like the Bunbury Outer Ring Road. I know Mark Hazebroek, the Main Roads Project Director for BORR, previously spoke with Andre about this matter last year, and received a positive reply, which was very helpful.

It has been a very busy week and hence it has taken me a few days to send you a follow up response. I did promise to send you a copy of our implementation plan for the BORR demonstration projects including Discovery Road – this is now attached. The document gives quite a bit of detail on the location, materials and other aspects of the project, which hopefully provide the detail you were chasing. The implementation plan was produced back in early February and some details have changed but the major elements remain the same. That includes our desire to use crushed recycled concrete (CRC) in the subbase and basecourse of the Discovery Road *Towards100* demo project.

While the Shire has previously written to us to confirm you are happy to use CRC, particularly in subbase, we are now hoping to use some of it in basecourse in the demo. We are also hoping to use a range of other proven recycled products including food and garden organics in landscaping, recycled plastic pipes behind kerbs, green concrete in kerbing, and a number of other green and low carbon sustainable products throughout the demonstration. In all cases these products will be certified as environmentally safe and will meet the fit for purpose technical requirements for the project. That includes several products being certified through the SWA Product Stewardship Scheme.

I would be keen to get your input as we move forward with the first BORR demonstration project on Discovery Road. If you could respond back to us in writing to confirm your support for the demonstration project that would be excellent.

I know we also discussed the need for a Council briefing on the matter – if there is anything specific that we can help in terms of documentation or information to inform the Council we would be very happy to help with it. We are also happy to attend a briefing session if you thought it would be worthwhile.

Best regards  
Peter

Btw I have followed up with my network to get some information on the light asphalt pavements that are being used to countereffect the heat sink issue in residential neighbourhoods that Michael was interested in. If something comes through to me I will forward it through to you.

**Peter Damen**  
**Program Director, Innovation Hub, Sustainability Waste Alliance**  
**Alliance Director, Green Deal Alliance**



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## Implementation Plan v3 (May 2022) For BORR 'Towards100' Demonstration Projects

### 1. Objectives

As agreed at the 27 October 2021 Workshop held at SWGA, a "Towards 100" Demonstration Project on Bunbury Outer Ring Road (BORR) will be undertaken to deliver on the goals of the Recycle First Plan. A "Towards 100" approach leads to a shift in thinking. Instead of justifying increasing the amount of recycled content in any given project, an objective of 100% waste derived materials is targeted and any departure from this objective must be justified.



The objectives of the BORR Demonstration projects are:

- to provide a pathway to deliver the WARRS 2030 and support the transition to a circular economy;
- to demonstrate the use of low-risk existing off-the shelf waste derived and bespoke products in the BORR to the maximum extent possible;
- To capture the knowledge and embed it back into Main Roads practices and processes.

### 2. Project Phases

There are three agreed phases to the demonstration projects. These are:

1. Planning phase – underway now
2. Execution Phase – scheduled to begin in mid-2022
3. Embedment phase – commencing late 2022

### 3. Description of BORR Demo Projects

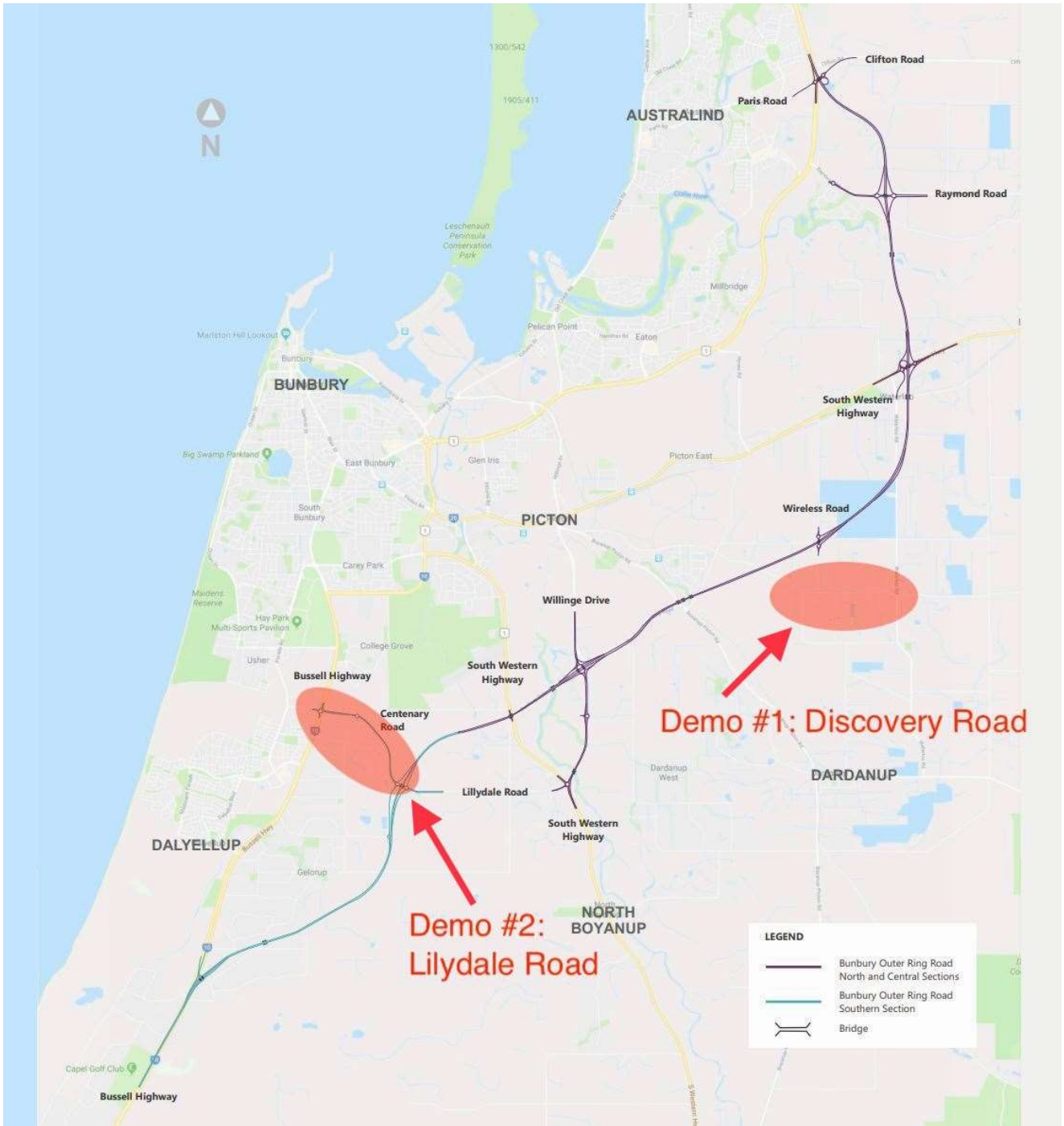
There are two *Towards100* demonstration projects scheduled to commence on BORR in 2022.

- Demo 1: Discovery Road
- Demo 2: Lilydale Road

These are illustrated on the following page.



## Implementation Plan v3 (May 2022) For BORR 'Towards100' Demonstration Projects

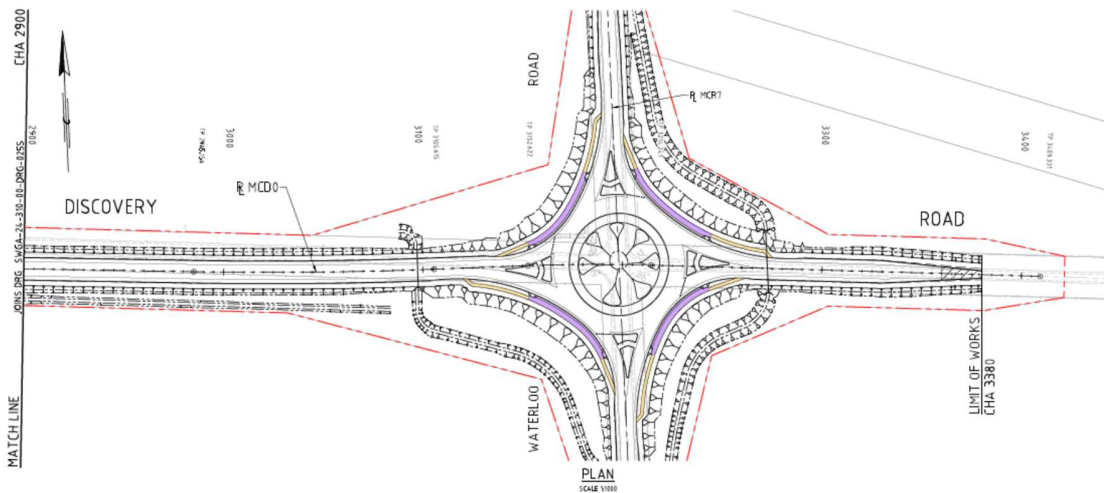




## Implementation Plan v3 (May 2022) For BORR 'Towards100' Demonstration Projects

### Demonstration Project #1:

The location of the first demonstration project will be Discovery Road (former Harris Road/ Wireless Road) in the Shire of Dardanup. It covers a relatively straightforward piece of two-lane road with sealed

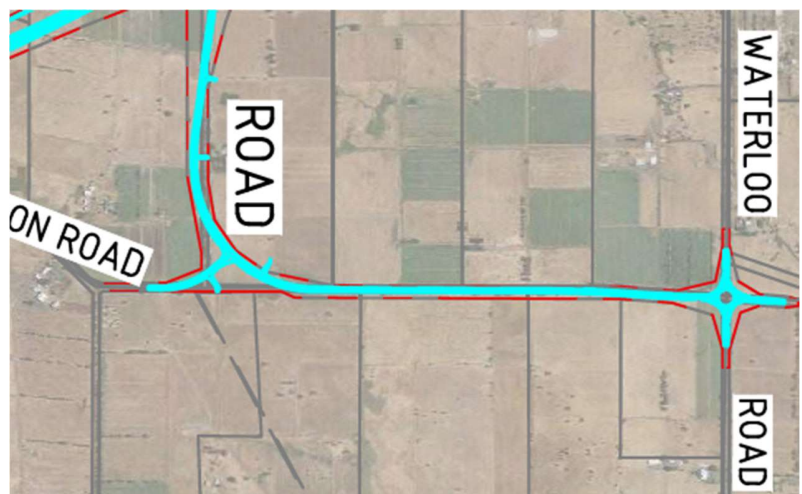


shoulder measuring 2.4 km long and a roundabout at Waterloo Road. There are portions of new build and widen/ overlay along the road. Discovery Road is a granular pavement with two coat seal and asphalt on the roundabout. The majority of it is unkerbed with piped drainage at the roundabout (offset behind the kerb due to the side entry arrangements).

Key quantities are:

- ~28,000m<sup>3</sup> imported fill;
- ~6,000m<sup>3</sup> subbase;
- ~27,000m<sup>2</sup> two coat seal; and
- ~6,300m<sup>2</sup> asphalt.

The primarily focus will be on the use of crushed recycled concrete (CRC) for pavements, geopolymer concrete for non-structural elements, manufactured / recycled sand and lithium by product blend for fill, crumb rubber in seals, recycled plastic pipe behind kerbs, and a blend





## Implementation Plan v3 (May 2022) For BORR 'Towards100' Demonstration Projects

of food organics and garden organics (FOGO) for landscaping. Other select recycled material opportunities such as recycled crushed glass may also be considered. The Draft **Materials Register** is shown in the Appendix.

The Discovery Road will be monitored over a 12- month period. The proposed timeline is:

- Design to be completed by: May 2022
- Construction to commence by: end Jun 2022

It is anticipated that by late 2022, the findings and learnings from Discovery Road can be passed on to Phase 2 of the demonstration, i.e., Lilydale Road and into wider OMTID/MRWA project activities.

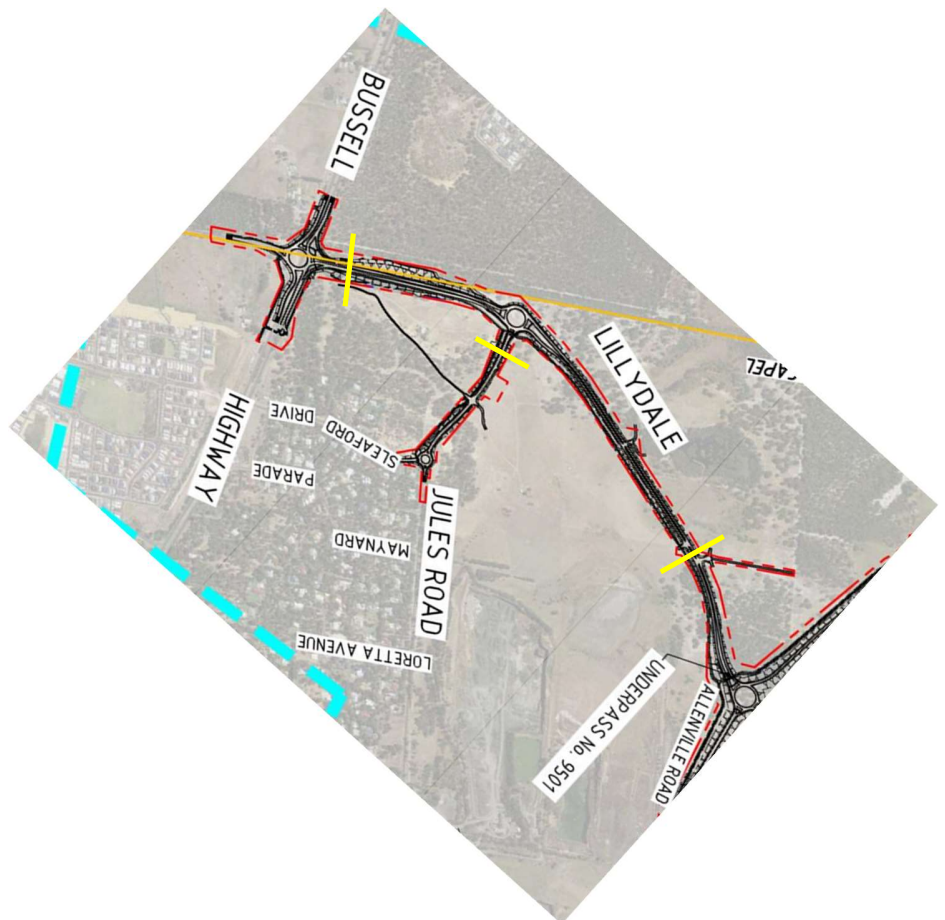
### **Demonstration Project #2:**

The location will be on Lilydale Road (BORR to Bussell) in the Shire of Capel. It covers a divided road with sealed shoulders measuring approximately 1.6km long with a roundabout at Jules Road. It is mainly granular pavement with two coat seal or asphalt surfacing. Other features of the road include approximately a large length of kerb, 900m of reinforced concrete pipes and a small noise wall.

Key quantities are:

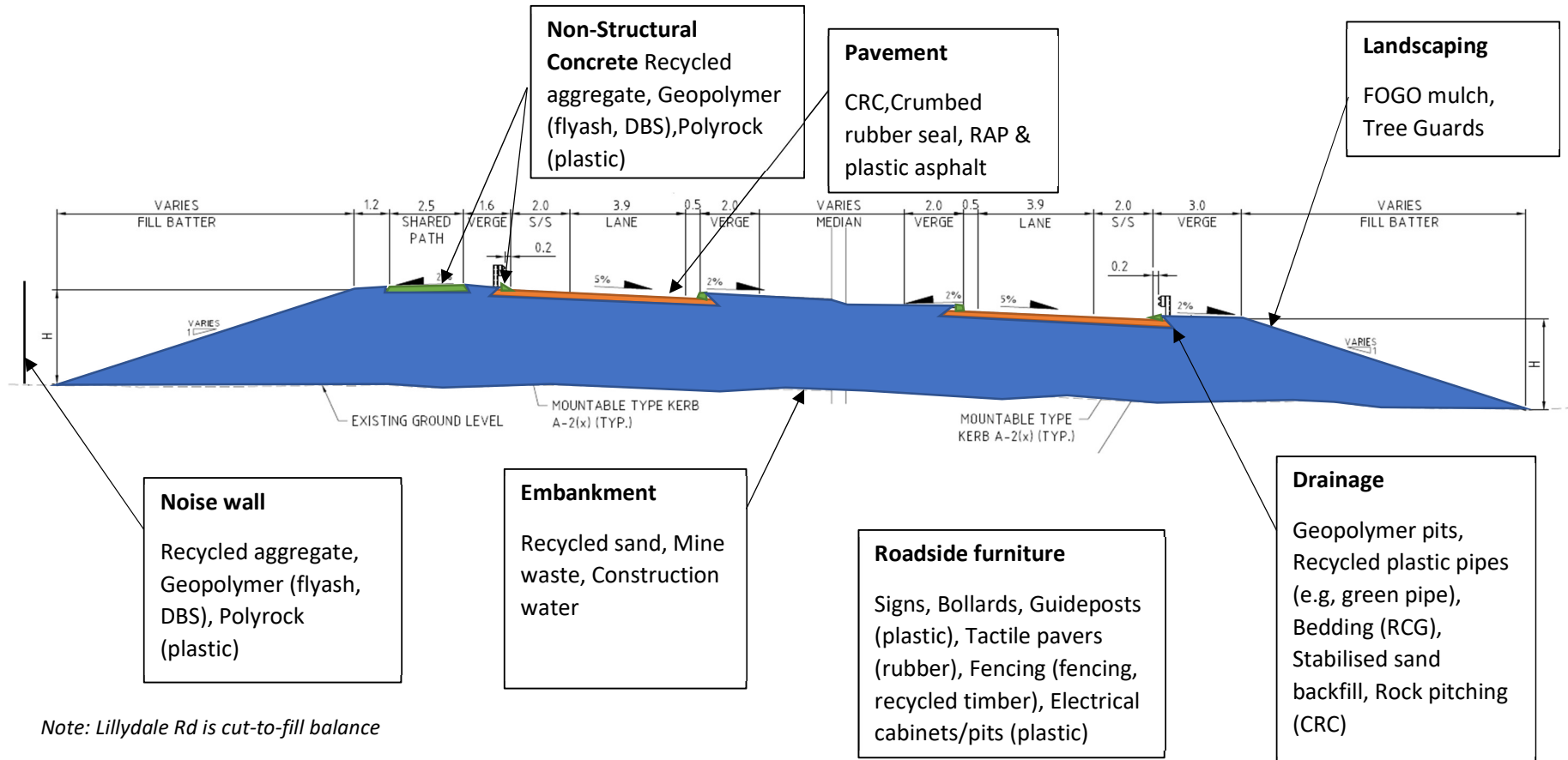
- ~18,000m<sup>2</sup> two coat seal;
- ~17,000m<sup>2</sup> asphalt;
- ~6,700m<sup>3</sup> subbase; and
- ~8,800m<sup>3</sup> basecourse.

The intent is for the Lilydale Road Demonstration to explore wider opportunities with glass, plastic, concrete, etc. to achieve 100% of recycled materials across the entire road section. Those minor elements that are to be excluded include electrical wiring and safety devices such as barriers.



## Implementation Plan v1 For BORR 'Towards100' Demonstration Projects

### 4. Potential Products:





## Implementation Plan v1 For BORR 'Towards100' Demonstration Projects

A successful SWGA-SWA workshop was held on 22 December 2021 to identify material opportunities for the Discovery Road Demonstration. A summary of the outcomes are shown in the Draft Materials Register provided in the Appendix. This register will be further developed throughout the planning phase of the demonstration projects and activities will be progressed to:

- identify and confirm a list of off the shelf waste derived products suitable to be used;
- facilitate cost estimates and availability in the South West to be sourced;
- develop a bill of quantities for waste derived materials;
- investigate the technical gaps and compliance to specification (e.g., RtR, MRWA Specifications); and
- obtain relevant approvals.

Design, procurement and construction of the demonstration roads will be the responsibility of the SWGA.

### 5. Brief Demonstration Timeline:

Phase:	Design to be completed by:	Commence construction by:	Complete demo reports by:
1: Discovery Road	May 2022	Jul 2022	Dec 2022
2: Lilydale Road	Sep 2022	Nov 2022	Jan 2023

## Implementation Plan v1 For BORR 'Towards100' Demonstration Projects

### 6. Key Tasks (for first 12 months of Demonstration Projects)

Timeline for BORR Towards100 Demonstration Projects - Initial 12 month period																	
Items	Key Tasks	Commence by:	Complete by:	2022												2023	
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
1	Formalise details of project plan and timeline	Jan-22	Feb-22	█													
2	Socialise and obtain approval for demo components	Feb-22	May-22		█	█	█	█									
3	Discovery Road demonstration project design	Feb-22	May-22		█	█	█	█									
4	Develop Towards100 bill of quantities for demonstrations	Feb-22	May-22		█	█	█	█									
5	Undertake procurement for demonstration	Feb-22	Jun-22		█	█	█	█	█								
6	Interact and engage with key suppliers and project team to manage risks & opportunities (ongoing task)	Jan-22	Dec-22	█	█	█	█	█	█	█	█	█	█	█	█	█	█
7	Lilydale Road demonstration project design	Jul-22	Sep-22								█	█	█				
<b>Execution Phase</b>																	
8	Construction of Discovery Road	Jul-22	Early-23								█	█	█	█	█	█	█
9	Multiple site visits & provide progress report updates	Dec-22	Jan-23													█	█
10	Identify key learnings (ongoing task)	Dec-22	Jan-23													█	█
11	Construction of Lilydale Road	Nov-22	Mid-23													█	█
<b>Embedment Phase</b>																	
12	Workshop to transfer knowledge from Discovery to Lilydale	Aug-22	Sep-22									█	█				
13	Material testing by MRWA/SWGA	Dec-22	Jan-23													█	█
14	Independent review test results and capture findings	Dec-22	Jan-23													█	█
15	Identify key learnings and document outcomes	Dec-22	Jan-23													█	█
16	Workshop to transfer knowledge & disseminate report	Jan-23	Jan-23														█



## Implementation Plan v1 For BORR 'Towards100' Demonstration Projects

### Appendix: BORR Demonstration Project Materials Register – Discovery Road

No	Material	Priority	BAU Material	Recycled Material (1)	Alternative Material (2)	Indicative Quantities
1	Embankment/ fill	1	Runnymede sand (virgin)	<del>Dardanup/Cleanaway</del> Recycled Sand	MRL and Alcoa Lithium by products	47,000 m <sup>3</sup>
2	Subbase	1	Limestone	CRC		15,000 tonnes
3	Basecourse	1	Crushed ferricrete			
4	Seal	1	14/7 Dbl/Dbl seal C170 10/5 two coat emulsion	Crumbed rubber		27,000 m <sup>2</sup>
5	Drainage pipes	1	Concrete /Precast concrete	Polyproplene pipes, Plastic pipes	Green Pipes, RPM Pipes, iPlex Blackmax	300 linear meters pipes
6	Asphalt	2	DGA14 A15E DGA10 A15E	RAP (>20%)	Crumbed rubber asphalt	4,000 m <sup>2</sup>
7	Kerbing Concrete infill (island)	2	Standard N32 concrete	Geopolymer	Geopolymer	TBC
8	Landscaping	2	Soil conditioner / mulch	FOGO		TBC
9	Culvert	3	RCP	Polyproplene pipes, Plastic pipes	Green Pipes, RPM Pipes, iPlex Blackmax	RCP450 - 45m RCP600 – 58m RCP750 – 30m RCBC 1200x600 – 120m

## Implementation Plan v1 For BORR 'Towards100' Demonstration Projects

No	Material	Priority	BAU Material	Recycled Material (1)	Alternative Material (2)	Indicative Quantities
10	Drainage – Pits and Headwalls (375/600/750)	3	Concrete/ Precast concrete	Geopolymer, plastic	Green Pipes, RPM Pipes, iPlex Blackmax	Pits – 19no Headwalls – 12no
11	Shared/cycle paths	3	Concrete on imported sand	Geopolymer	Geopolymer	TBC
12	Linemarking	3	Standard	Recycled glass beads		TBC
13	Rock pitching	3	Limestone spalls	CRC blocks	Glass blocks	TBC
14	Construction water	3	Harvey Water	AqWest wastewater		TBC
15	Stabilised sand (culverts)	3	Stab sand	Geopolymer additives	<del>Glass additives</del>	10,000 m <sup>3</sup>
16	Signs	3	Steel post / Alu panels	Recycled plastic		24 min / 2 maj
17	Tactile pavers	3	Standard tiles	Recycled rubber		16no locations

**Notes:**

The volumes provided in the schedule is only indicative (+/- 30%).

## RISK ASSESSMENT TOOL

**OVERALL RISK EVENT:** Bridge No 4930 – Request from Shire of Harvey for Contribution to Bridge Works

**RISK THEME PROFILE:**

- 1 - Asset Sustainability Practices
- 2 - Business and Community Disruption

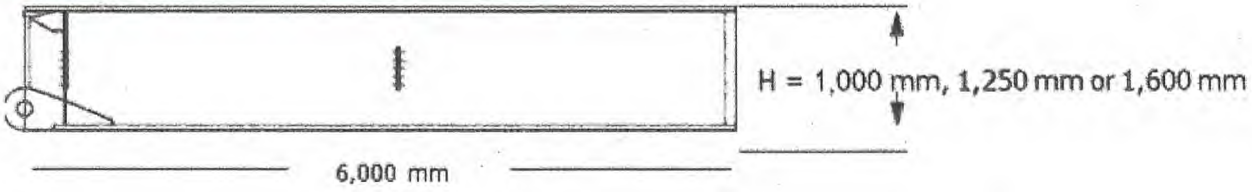
- 3 - Failure to Fulfil Compliance Requirements (Statutory, Regulatory)
- 14 - Safety and Security Practices

**RISK ASSESSMENT CONTEXT:** Operational

CONSEQUENCE CATEGORY	RISK EVENT	PRIOR TO TREATMENT OR CONTROL			RISK ACTION PLAN (Treatment or controls proposed)	AFTER TREATMENT OR CONTROL		
		CONSEQUENCE	LIKELIHOOD	INHERENT RISK RATING		CONSEQUENCE	LIKELIHOOD	RESIDUAL RISK RATING
<b>HEALTH</b>	Shire is implicated for lack of support to deal with the safety of the bridge.	Catastrophic (5)	Possible (3)	High (12 - 19)	Payment of part costs of remediation works and creation of agreement for ongoing requirements.	Catastrophic (5)	Unlikely (2)	Moderate (5 - 11)
<b>FINANCIAL IMPACT</b>	Shire is required to contribute to major refurbishment or replacement of the bridge with little to no warning.	Moderate (3)	Almost Certain (5)	High (12 - 19)	Enter into agreement regarding ongoing maintenance, cost sharing and incorporate into forward estimates and budgets.	Moderate (3)	Unlikely (2)	Moderate (5 - 11)
<b>SERVICE INTERRUPTION</b>	Inadequate maintenance/repairs result in failure of bridge and inability to access across the river for an extended and unplanned period.	Catastrophic (5)	Possible (3)	High (12 - 19)	Enter into agreement regarding ongoing maintenance, cost sharing and incorporate into forward estimates and budgets.	Catastrophic (5)	Unlikely (2)	Moderate (5 - 11)
<b>LEGAL AND COMPLIANCE</b>	Shire is implicated for lack of support to deal with the safety and accessibility of the bridge.	Moderate (3)	Likely (4)	High (12 - 19)	Enter into agreement, which acknowledges and enforces the Shire's actual liability with the bridge.	Moderate (3)	Unlikely (2)	Moderate (5 - 11)
<b>REPUTATIONAL</b>	Shire is implicated for lack of support to deal with the safety and accessibility of the bridge.	Moderate (3)	Possible (3)	Moderate (5 - 11)	Enter into agreement, which acknowledges and enforces the Shire's actual liability with the bridge.	Moderate (3)	Unlikely (2)	Moderate (5 - 11)
<b>ENVIRONMENT</b>	No risk event identified for this category.	Not Required - No Risk Identified	N/A	N/A	Not required.	Not required.	Not required.	Not required.

# UNIBRIDGE®: total modularity in Length and Width

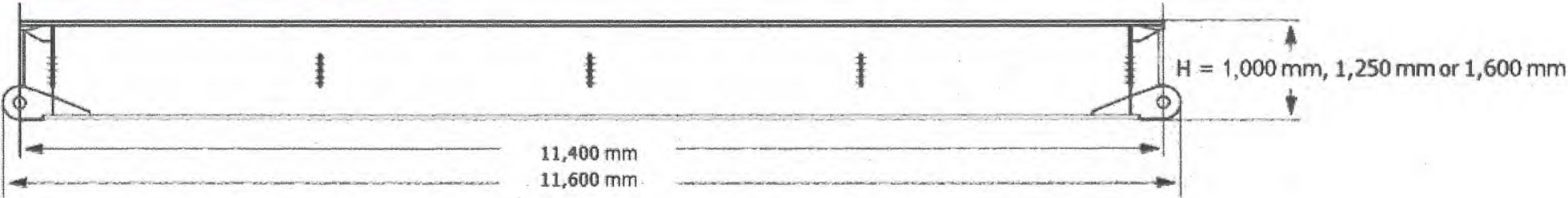
Single connection box girder



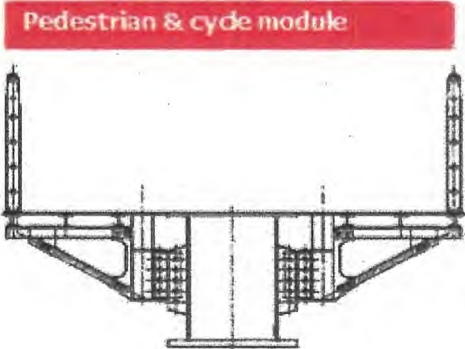
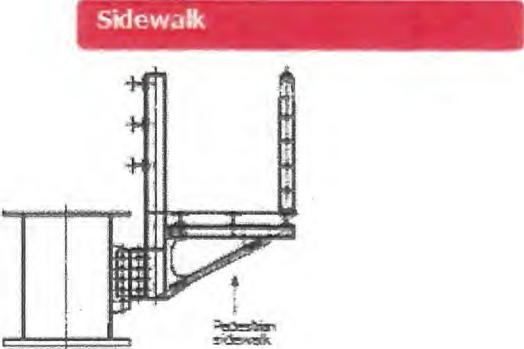
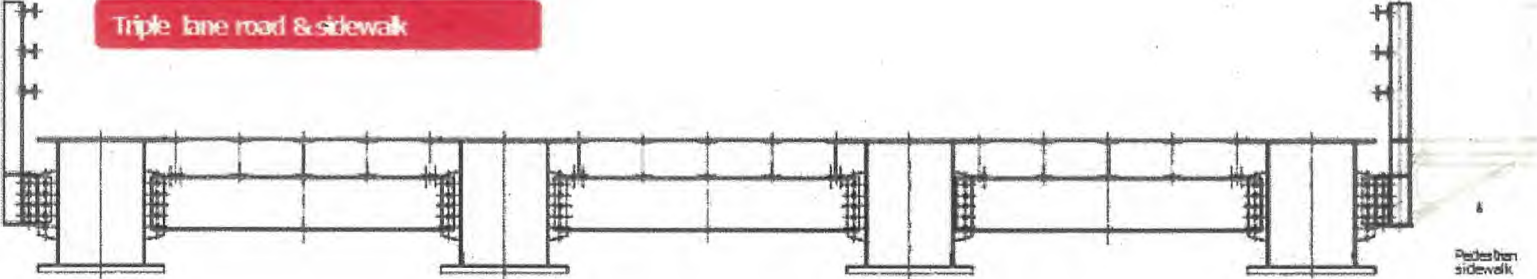
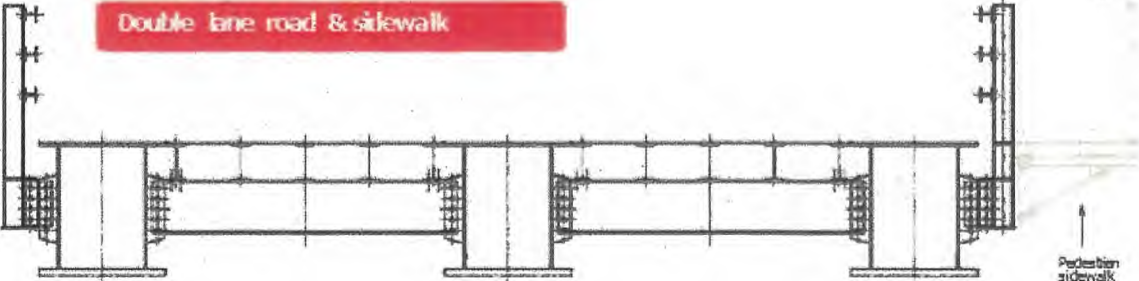
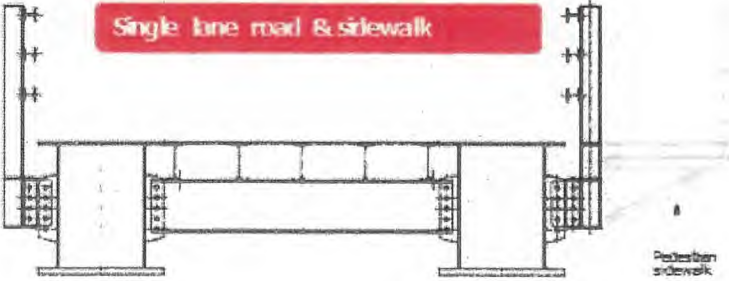
Single connection box girder



Double connection box girder



# UNIBRIDGE®: total modularity in Length and Width



# [Appendix ORD: 12.3.6B]

## Structure No: 3291B - PHOTO SHEET



mainroads  
WESTERN AUSTRALIA

Road Name: Southampton Rd  
Crossing: Blackwood River

LGA: Donnybrook - Balingup  
SLK: 14.62

Inspection Date: 25-Jun-2015  
Inspector: Peter Newhouse



Photo No. 1: RHS viewed from Abut 2 (Taken: 25-Jun-2015)



Photo No. 2: LHS viewed from Abut 1 (Taken: 25-Jun-2015)

## Structure No: 3291B - PHOTO SHEET



Road Name: Southampton Rd  
Crossing: Blackwood River

LGA: Donnybrook - Balingup  
SLK: 14.62

Inspection Date: 25-Jun-2015  
Inspector: Peter Newhouse



Photo No. 1: Abut 1 LHS (Taken: 25-Jun-2015)



Photo No. 2: Abut 1 LHS guardrail transition (Taken: 25-Jun-2015)

