Australian Government

BUILDING OUR FUTURE

BUNBURY OUTER RING ROAD | PLANNING AND DEVELOPMENT

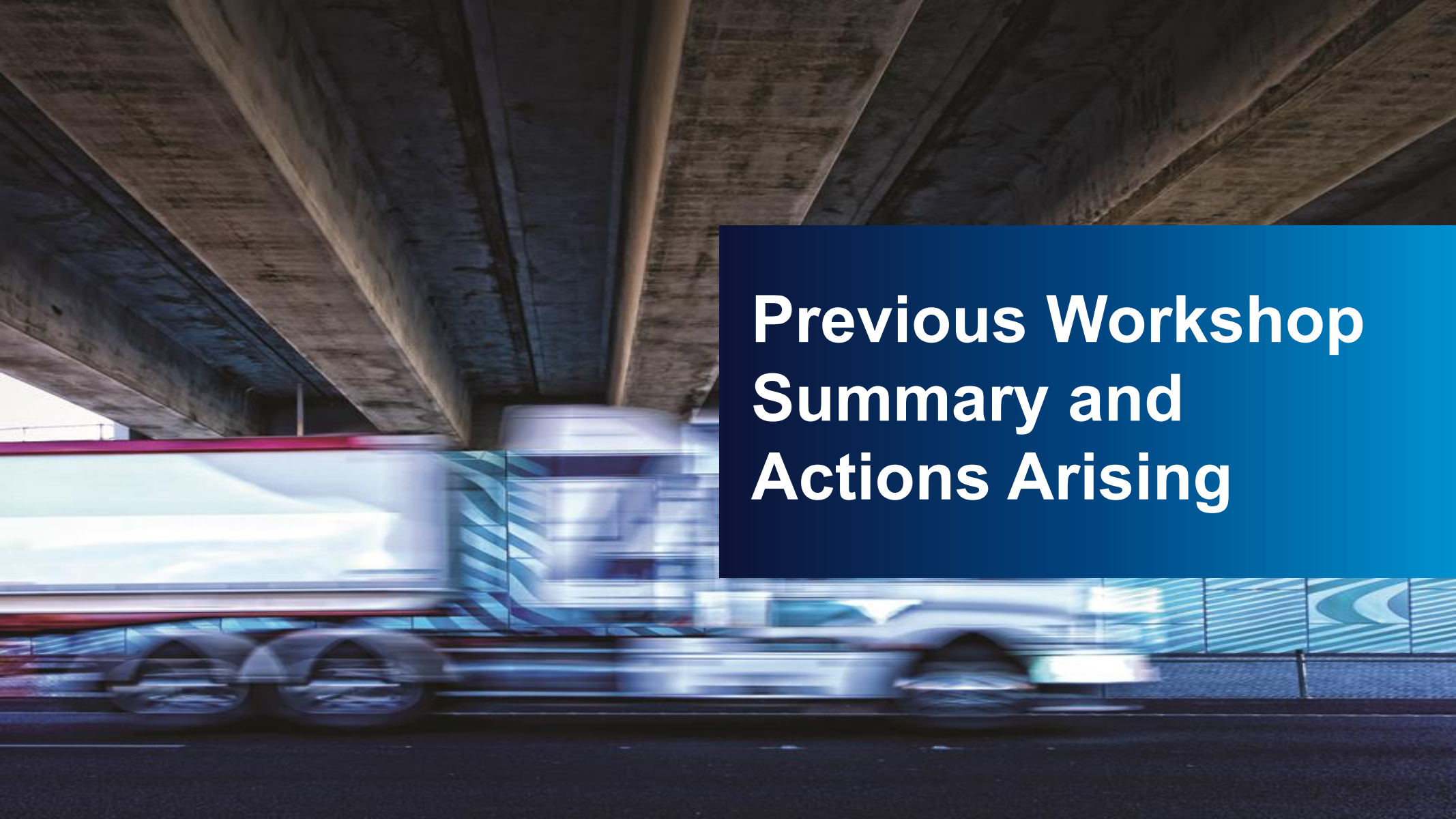
Bunbury Outer Ring Road

Northern & Central Community Reference Group

5 November 2018

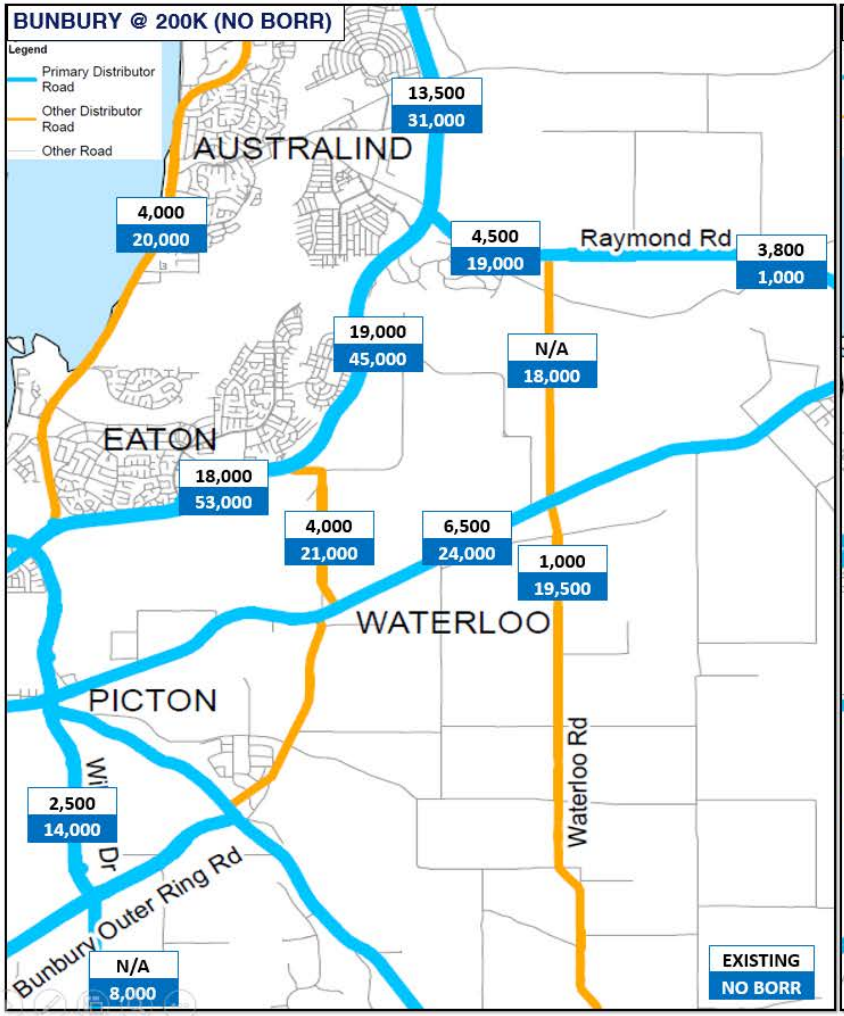
Agenda

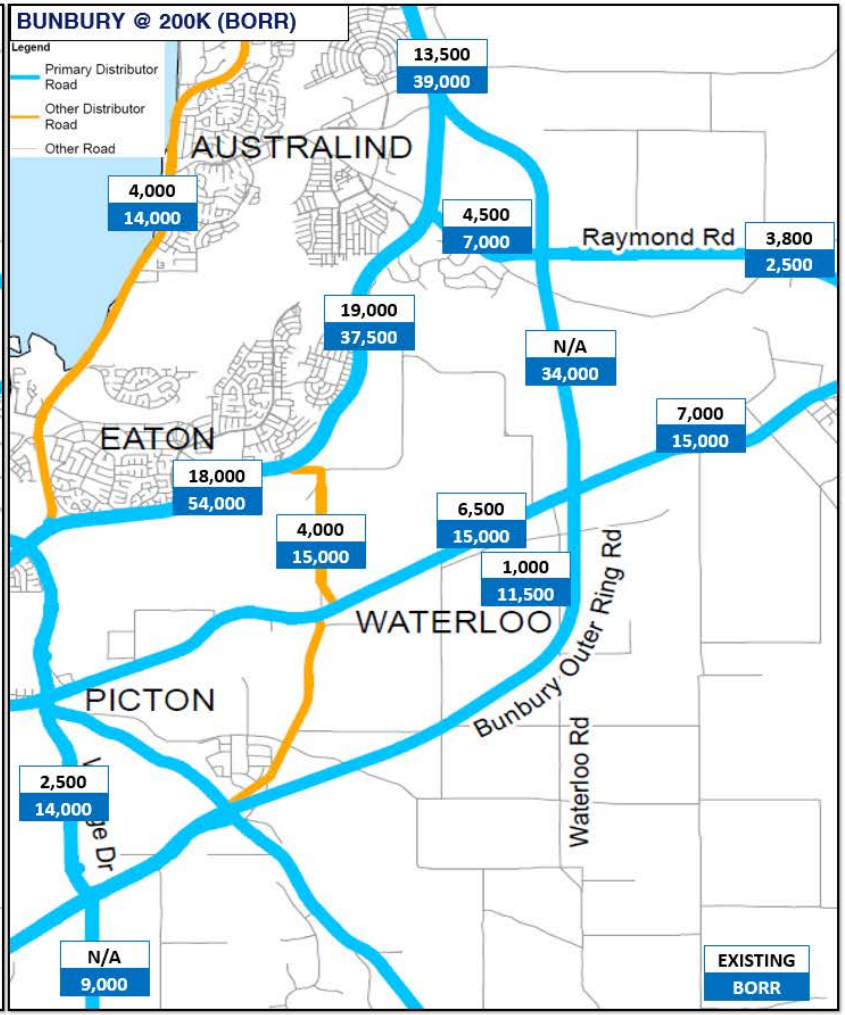
4:45	**Arrival – light refreshments available from 4:45pm**	
5:00	Welcome – meeting purpose and process	Linton Pike
5:10	Previous Workshop Summary and actions arising	Linton Pike
5:30	Urban Landscape Design Strategy	Marion Dalton
6:00	Preferred BORR North / Central interchange options	
6:30	Environmental assessment process	Fionnuala Hannon
6:50	Noise management process	Fionnuala Hannon
7:15	Consultation and engagement update	Tammy Mitchell
7:30	CRG member comment	CRG members
8.00	Next steps and close	Linton Pike



Previous Workshop Summary and Actions Arising

Approximate Daily traffic Volumes - Bunbury regional population 200,000





Urban & Landscape Design

Marion Dalton

What is Urban & Landscape Design (ULD)?

Urban & Landscape Design is about **creating places** for people by **connecting communities**, **built form** and the **natural environment.**

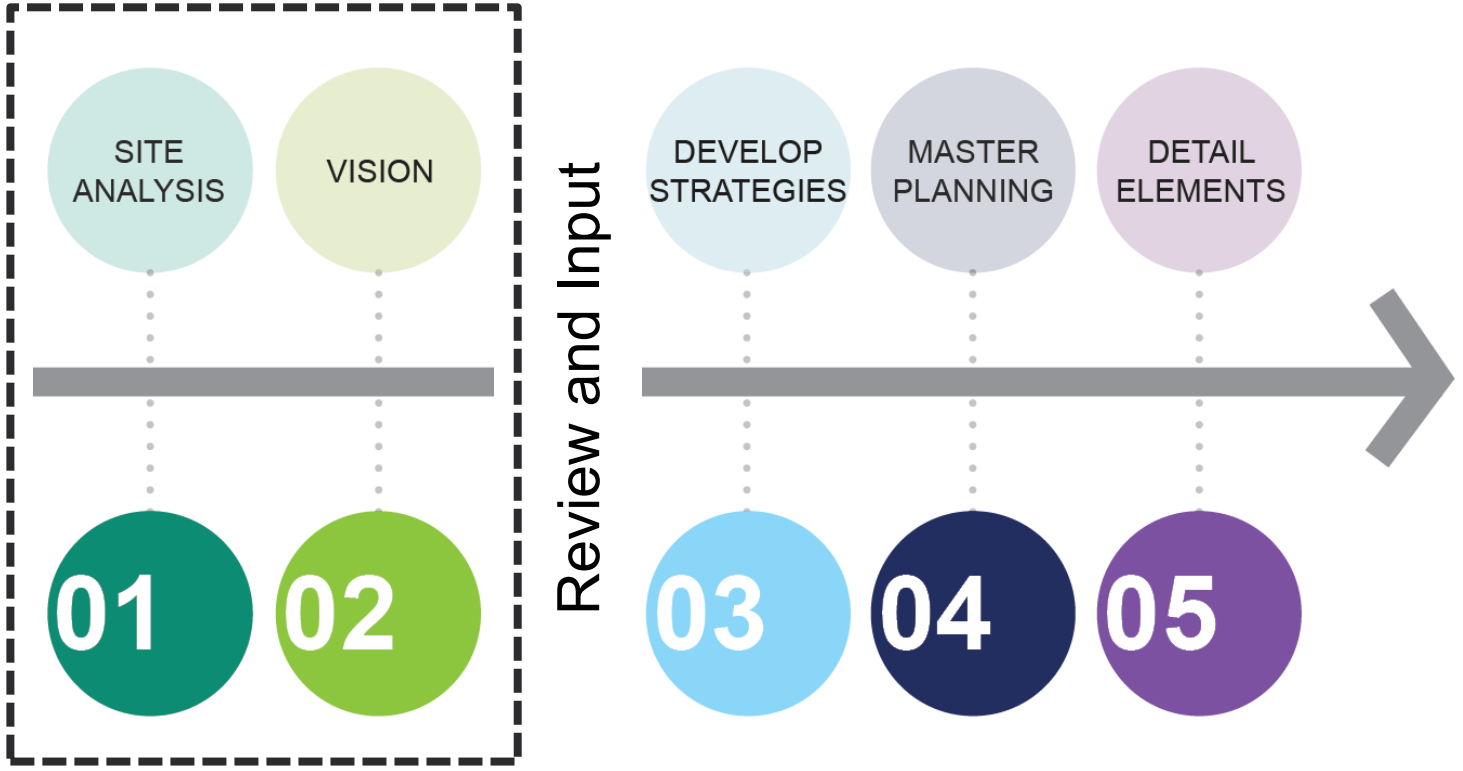
Aspects of this include:

- communities and connections
- character and sense of place
- vegetation and habitats
- public art and aesthetics

ULD Principles & Objectives

1. RESPOND TO **CONTEXT AND CHARACTER**
2. INTEGRATE **LANDSCAPE QUALITY**
3. RESPOND TO **BUILT FORM AND SCALE**
4. INCORPORATE **FUNCTIONALITY AND BUILD QUALITY**
5. DELIVER **SUSTAINABLE OUTCOMES**
6. ENHANCE **AMENITY**
7. INCORPORATE **LEGIBILITY**
8. SUPPORT **SAFE BEHAVIOURS AND USE**
9. RESPOND TO THE **LOCAL COMMUNITY NEEDS**
10. DELIVER **ATTRACTIVE AND INVITING AESTHETICS**

Process


SITE ANALYSIS
VISION
Review and Input
DEVELOP STRATEGIES
MASTER PLANNING
DETAIL ELEMENTS
01
02
03
04
05

Site Analysis

Regional Journey

- BORR is part of a longer journey in the south-west
- Change in environment and points of interest creates a sense of place
- The design should be responsive and sensitive to the existing character

Site Analysis

Landscape Character

Rural Land/
Darling Escarpment

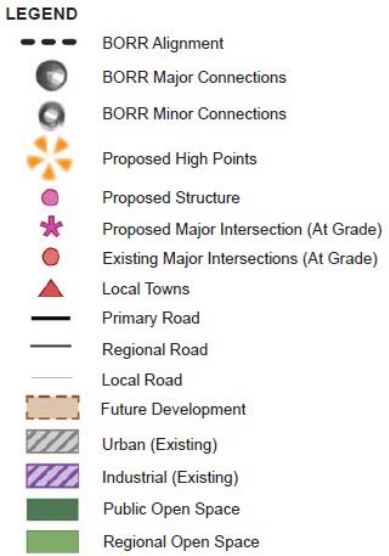
Collie River

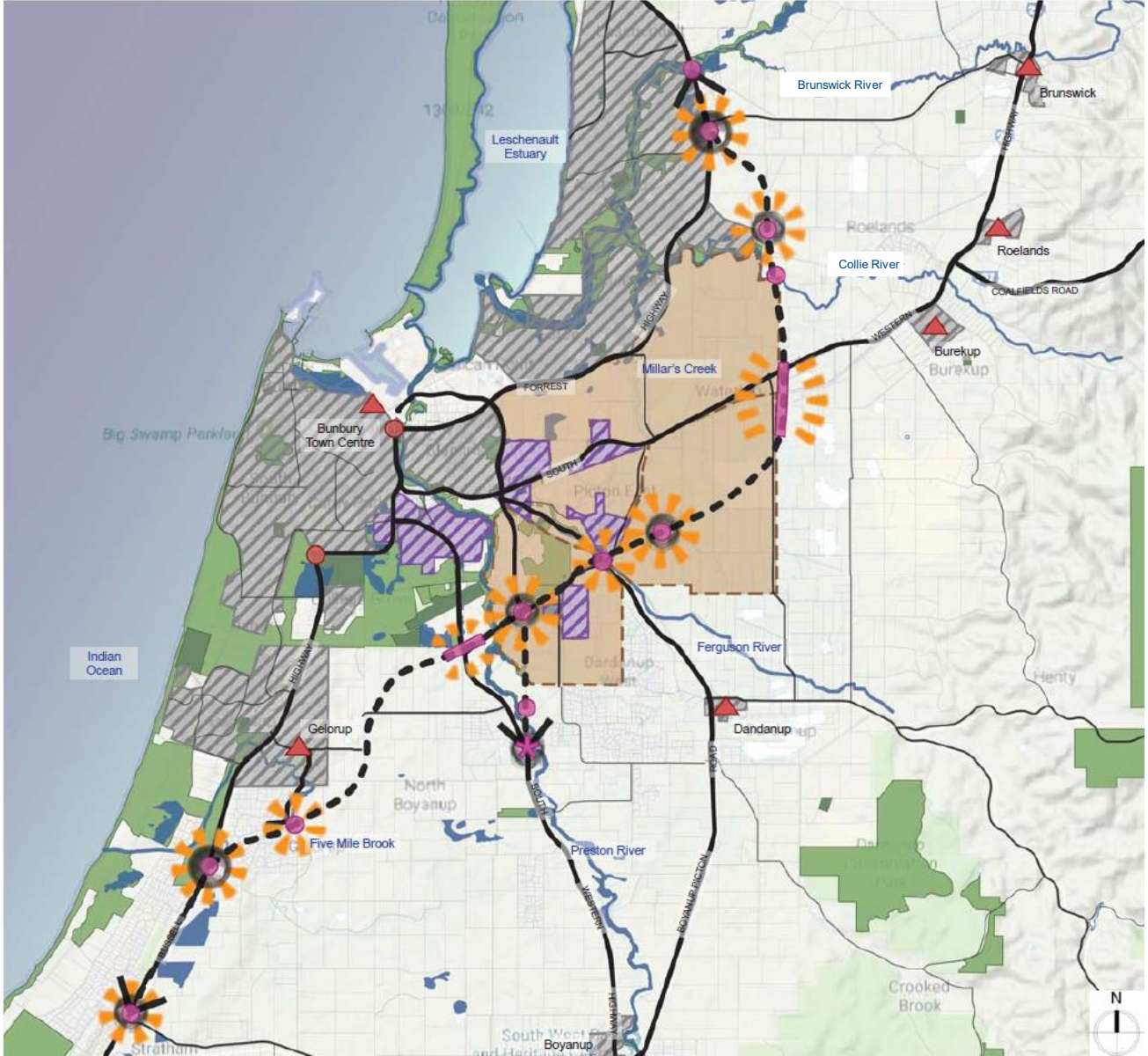
Remnant Vegetation

Site Analysis

Built Form

- Scale
- Character
- Context

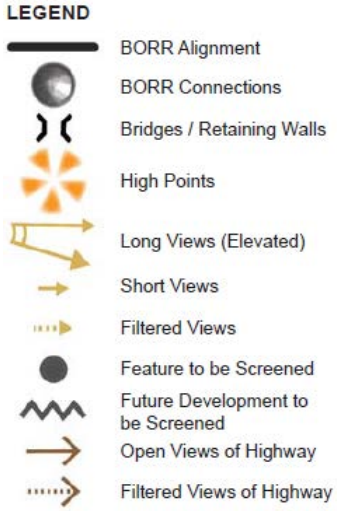


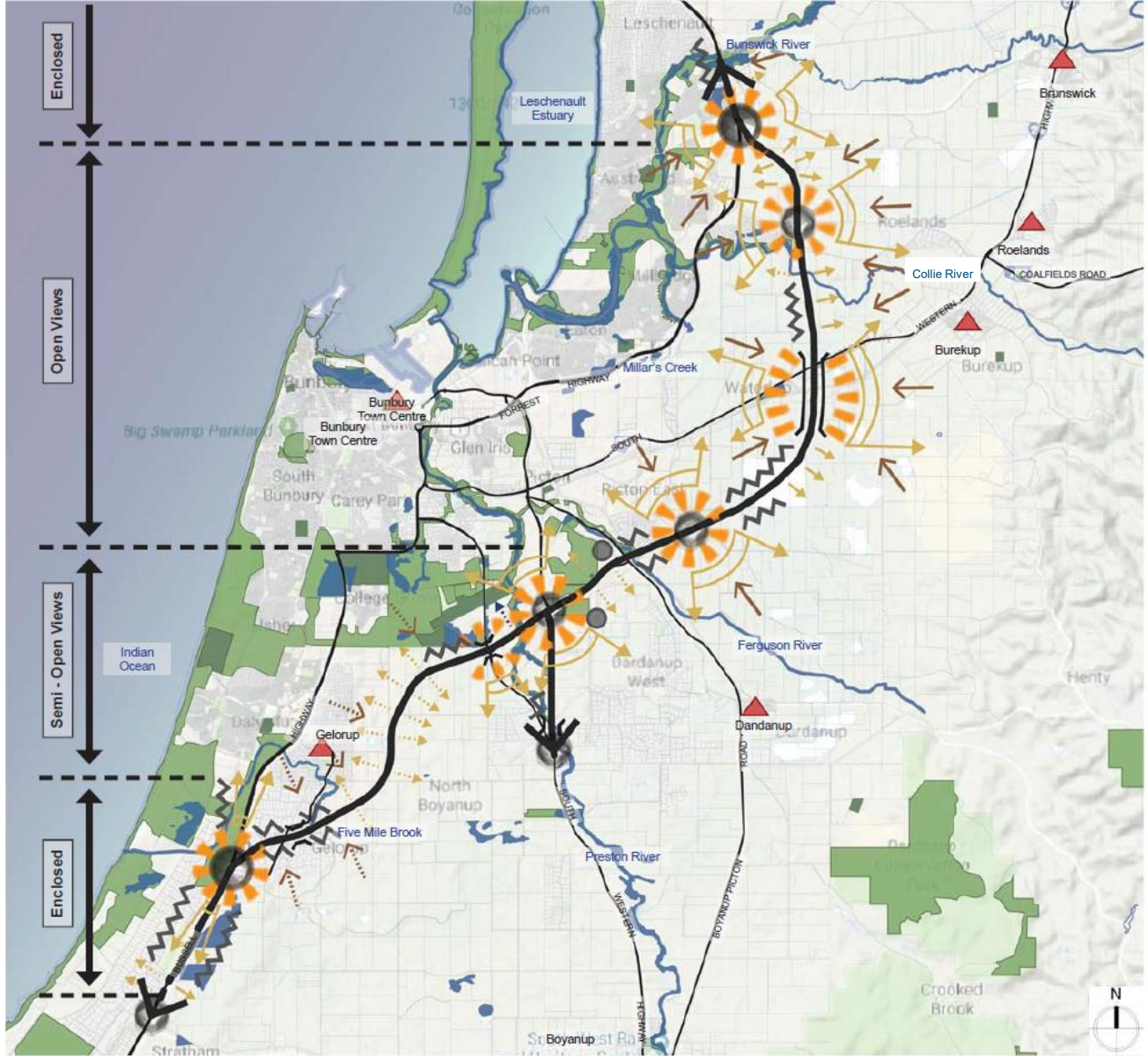


Site Analysis

Visual Amenity

- Views of BORR
- Views from BORR
- Features
- Impacts & Mitigation

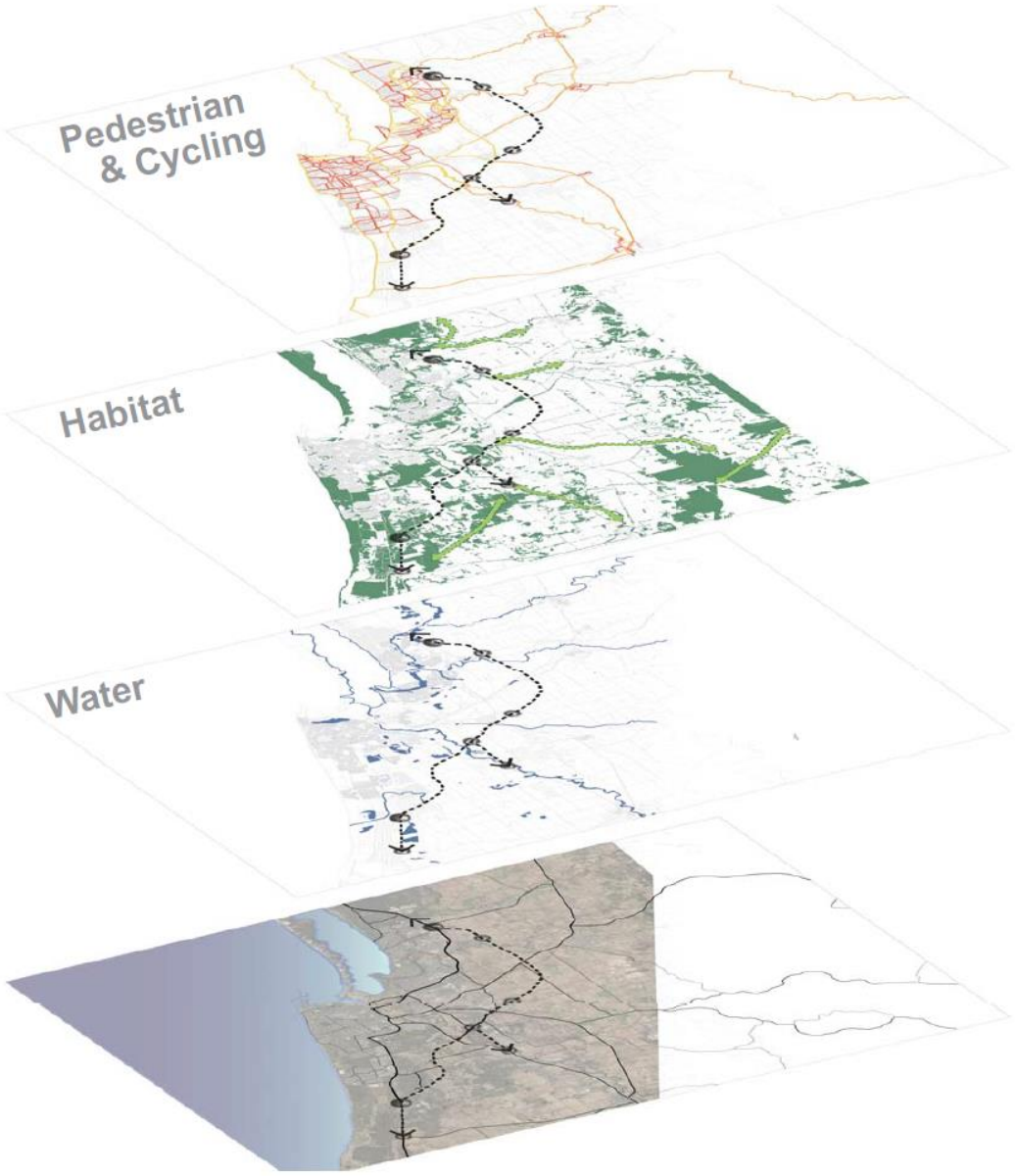




Vision

Integrating Networks

- Enhance green (flora), blue (water) and pedestrian & cycling network to maximise benefits between the networks;
- Develop a green corridor of native trees (where feasible)
- Maximise linkages into the wider region
- Locate the PSP in a position that maximises shade provision from the trees;
- Maximise the retention of existing trees.



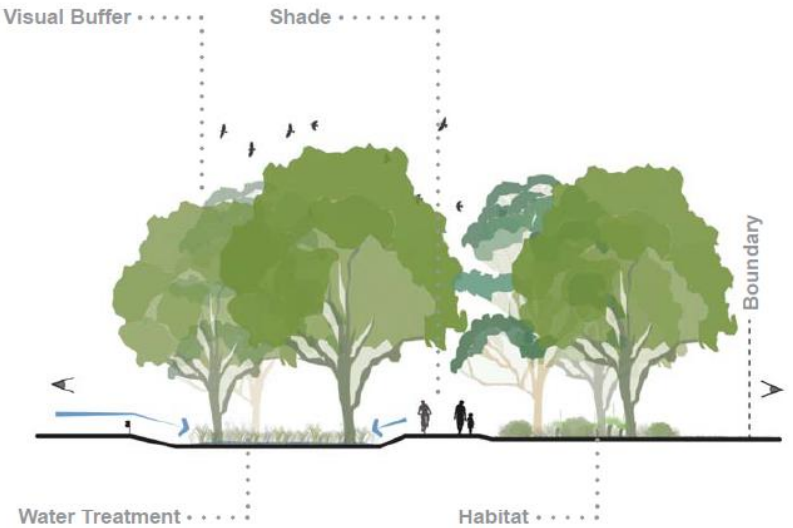
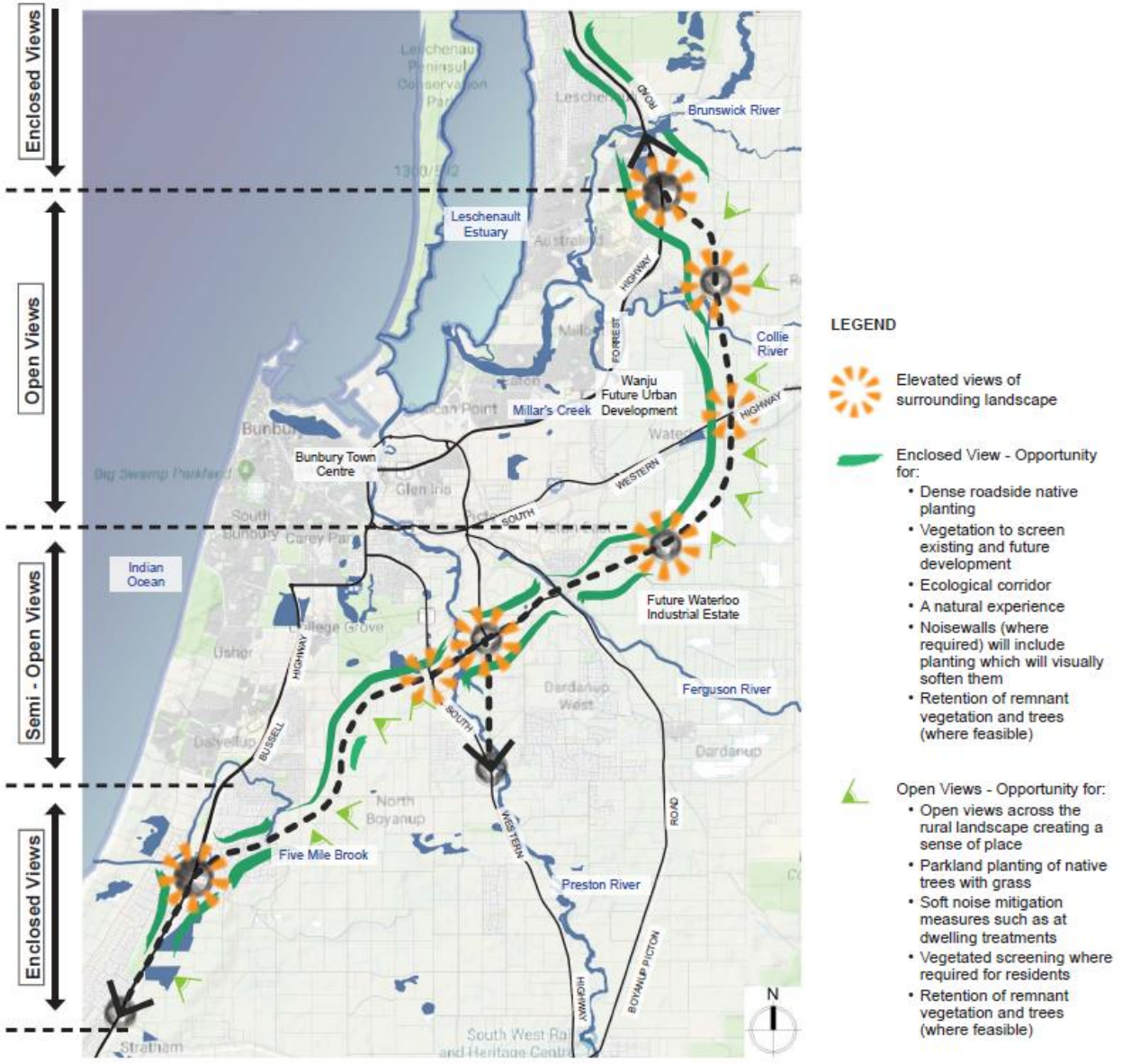


Figure 2-4. Integrated corridor vision section

Vision

Experiencing Journey

- Incorporate and build upon the existing character of the area;
- Create a natural soft, green experience;
- Enhance views of surrounding natural features such as the Darling Scarp
- Create a varied travel experience by utilising open and enclosed views; and
- Incorporate screening of urban and industrial development for visual amenity and reduce visual impacts



Vision

Experiencing Journey

Vision

Reflecting Place

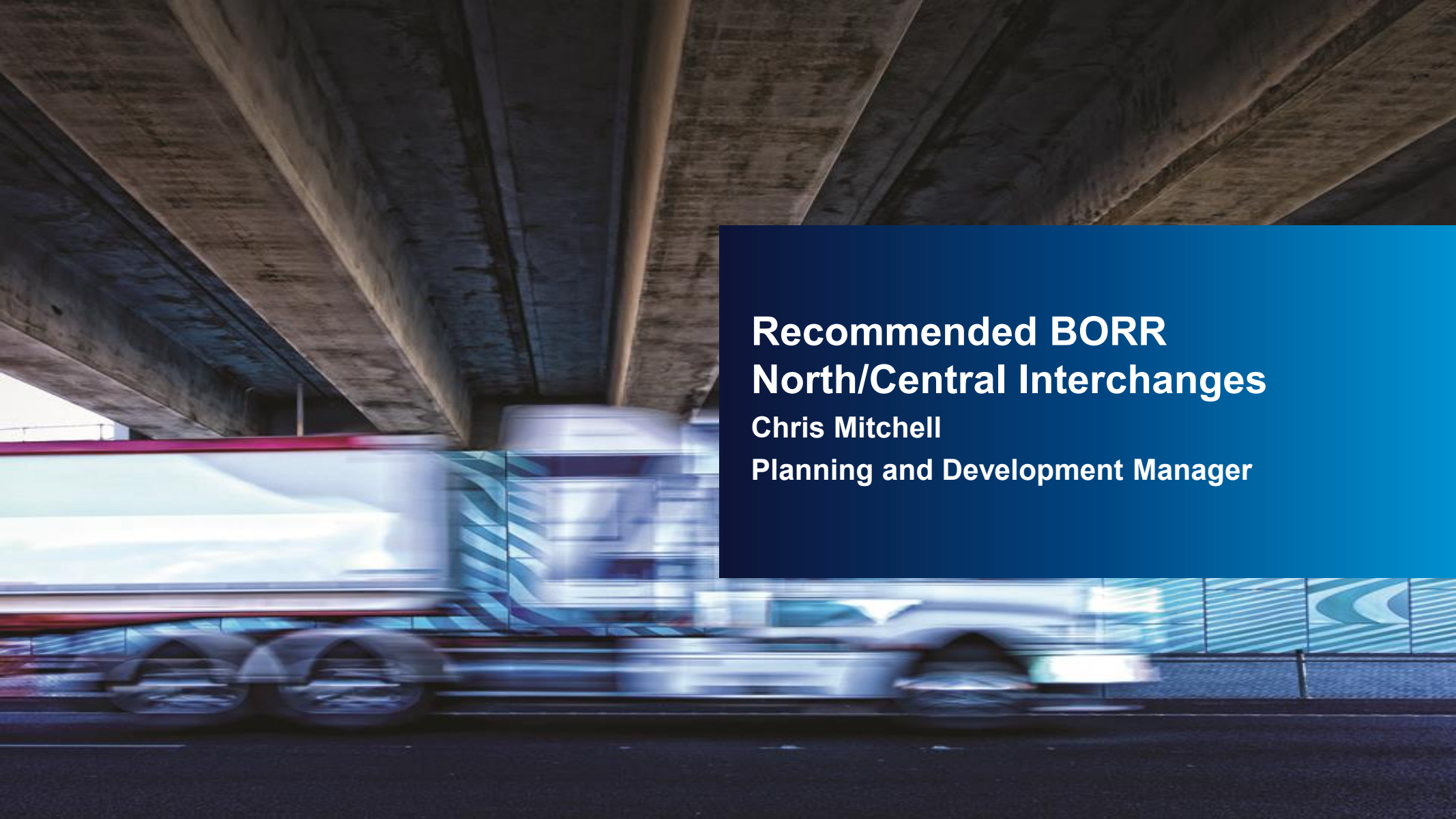
- Opportunities at connection/intersection points
- Three node types
  - Primary Nodes at major interchanges in priority locations form a gateway to Bunbury;
  - Secondary Nodes where BORR intersects with local roads; and
  - River Nodes where BORR crosses over the rivers
- Community values will be the key driver for the place characteristics

Vision

Reflecting Place

Next Steps

- Undertake seed collection
- Investigate early works screening planting
- Incorporate feedback from Community and Stakeholder engagement – CRGs, Drop-in sessions, PEG etc
- Urban and Landscape Design Strategies

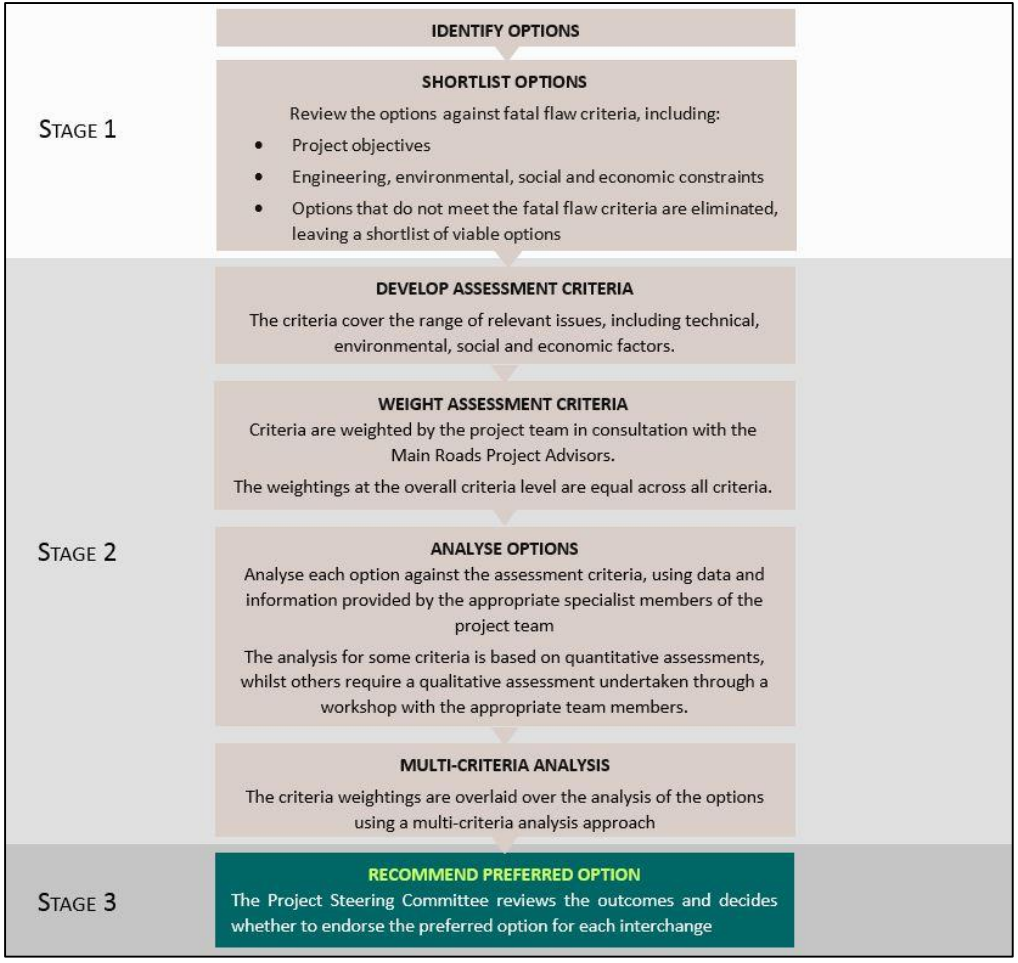


Recommended BORR North/Central Interchanges

Chris Mitchell

Planning and Development Manager

Options Assessment Process



Stage 1 Shortlist Criteria

- Suitability and all movements provided
- Engineering – unsafe / not feasible or appropriate
- Economic – cost prohibitive (e.g. systems interchange)

Stage 2 – Multi Criteria Assessment

- Assessment developed to integrate social, economic and environmental considerations
- Criteria based on project objectives, IA objectives and IPT objectives
- Twenty eight sub-criteria developed based on likely points of differences
- Sub-criteria weighted by Main Roads and BORR IPT team
- Additive weighting method used to rank each option

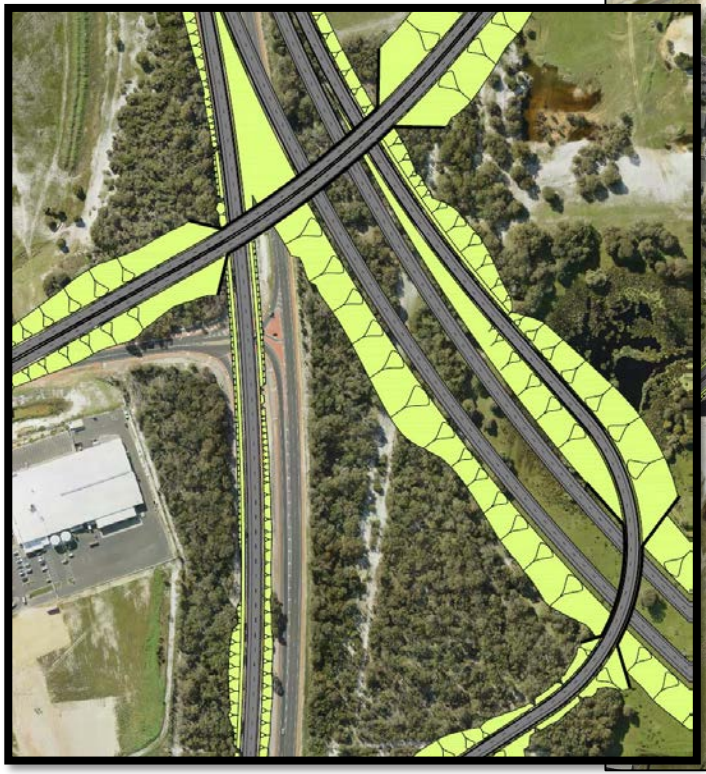
Northern Interchange (Paris Road – Clifton Road)

BORR Northern Interchange

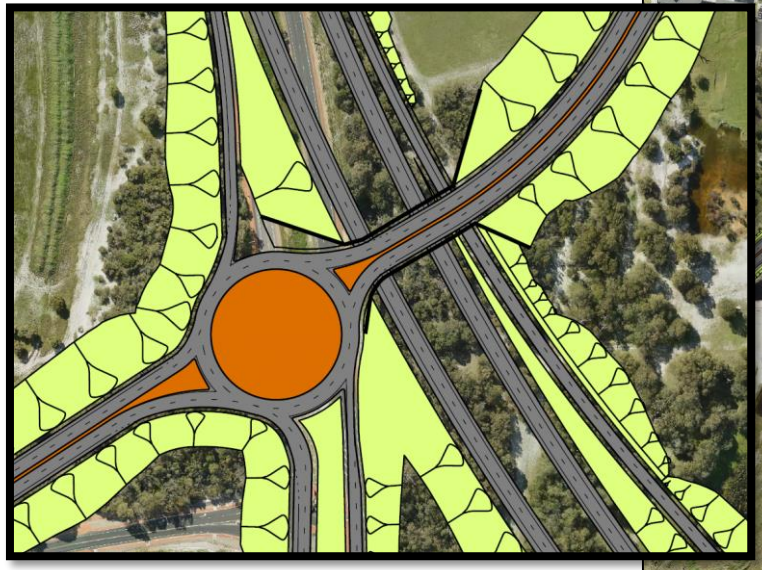
- Key Objectives
  - Free flow access to Bunbury
  - Paris Road to be connected to Clifton Road
  - Not preclude the future Perth to Bunbury Fast Rail

- Interchange treated as split interchange between Paris Road/Clifton Road and Raymond Road

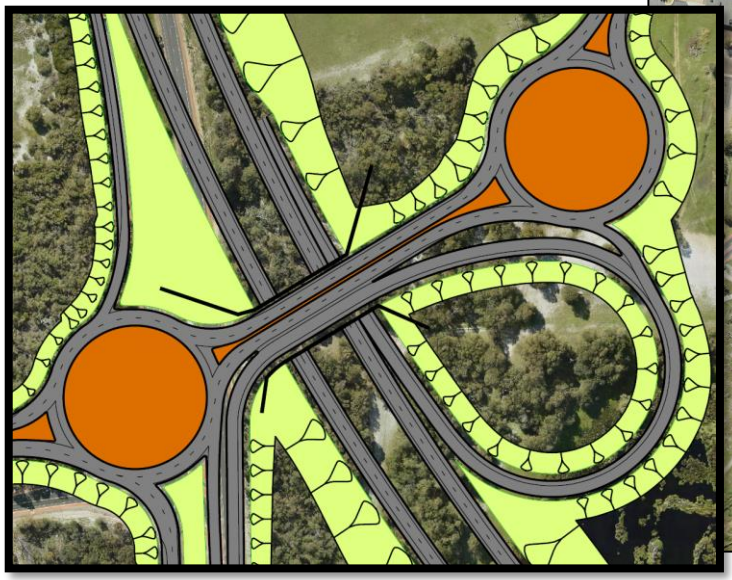
Paris – Clifton Option 1



Paris – Clifton Option 2



Paris – Clifton Option 3 Preferred

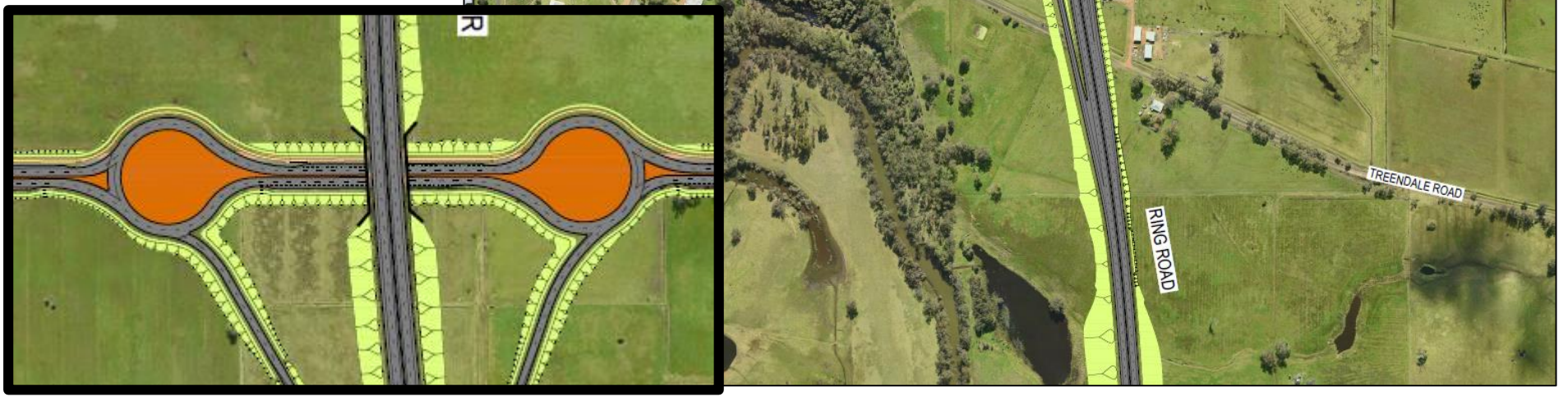


Northern Interchange – Recommended Option

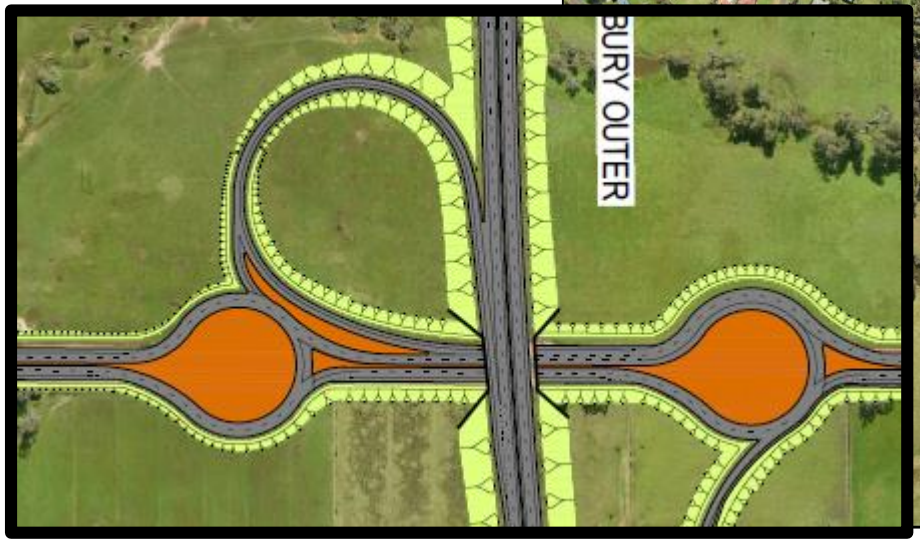
- Recommended interchange option is Option 3 (loop with Paris-Clifton connected)
- Achieves free flow bypass
- Maintains connectivity between Paris Rd and Clifton Rd and also from Paris Rd to Forrest Highway
- Minimises impact to remnant vegetation and has the least fragmentation to potential western ringtail possum habitat, Banksia Woodland TEC and potential black cockatoo habitat
- Achieves the best network performance out of the three options

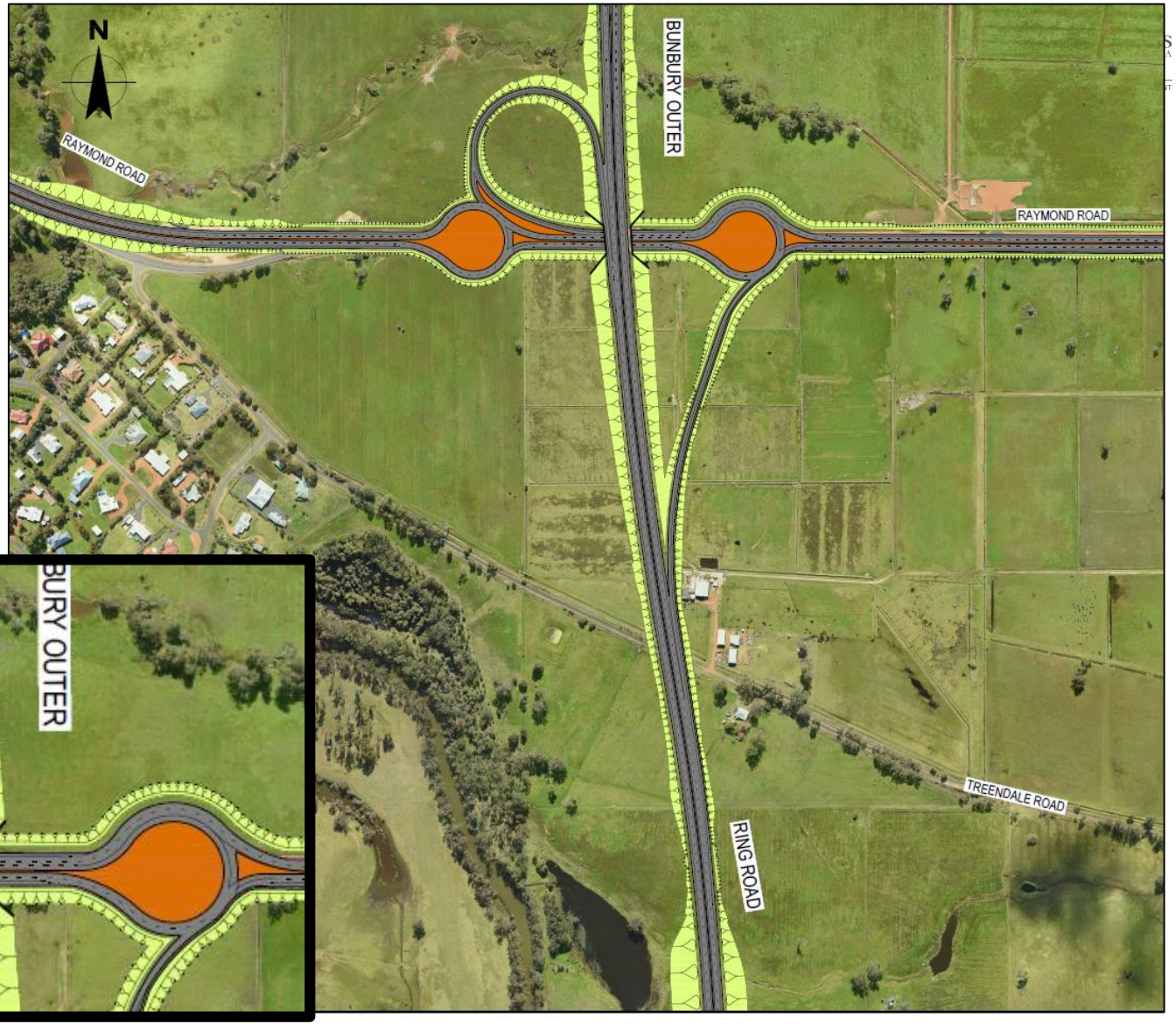
Raymond Road Interchange

Raymond Interchange Option 1 Dumbbell Preferred



Raymond Option 2 Modified Dumbbell



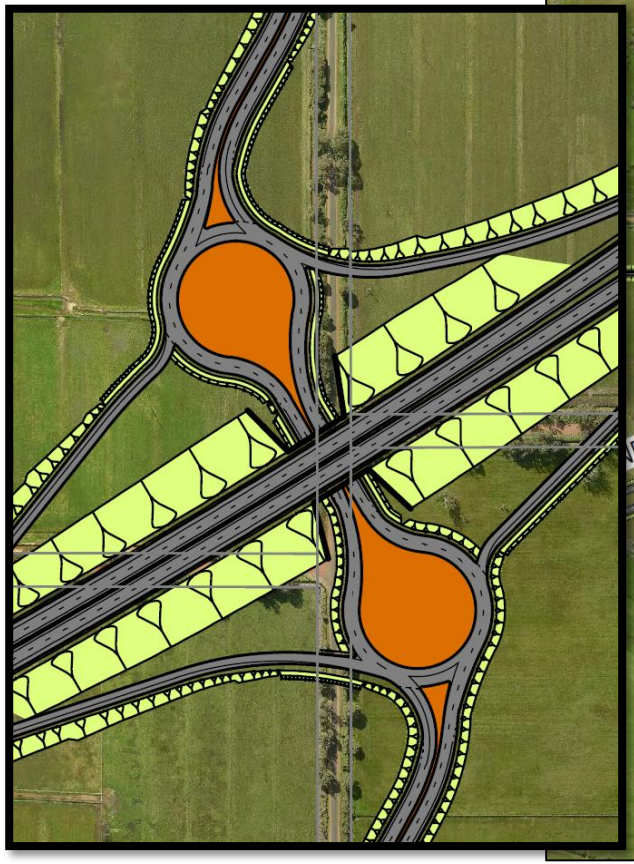


Raymond Rd Interchange – Recommended Option

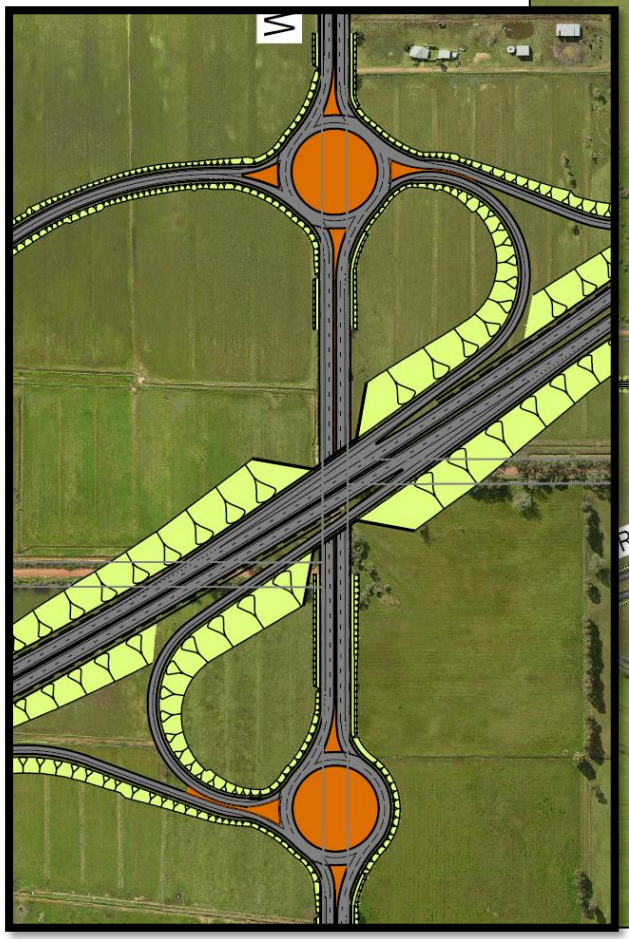
- Recommended option is the Dumbbell Interchange (Option 1)
- Minimal points of difference between two options
- Dumbbell option suits the anticipated dominant traffic movements
- Similar social impacts
- Marginally lower overall project costs (construction, WOLCC & land acquisition)

Waterloo Interchange (future industrial precinct)

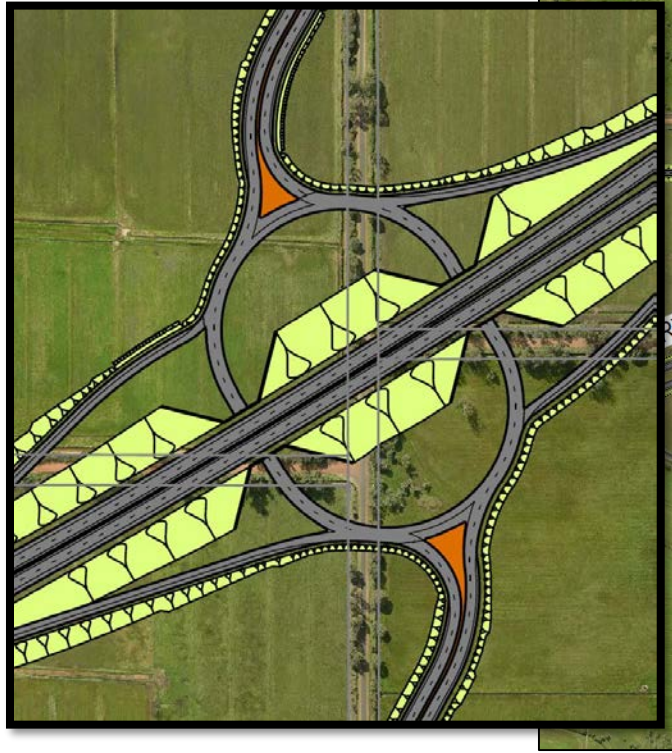
Waterloo Option 1

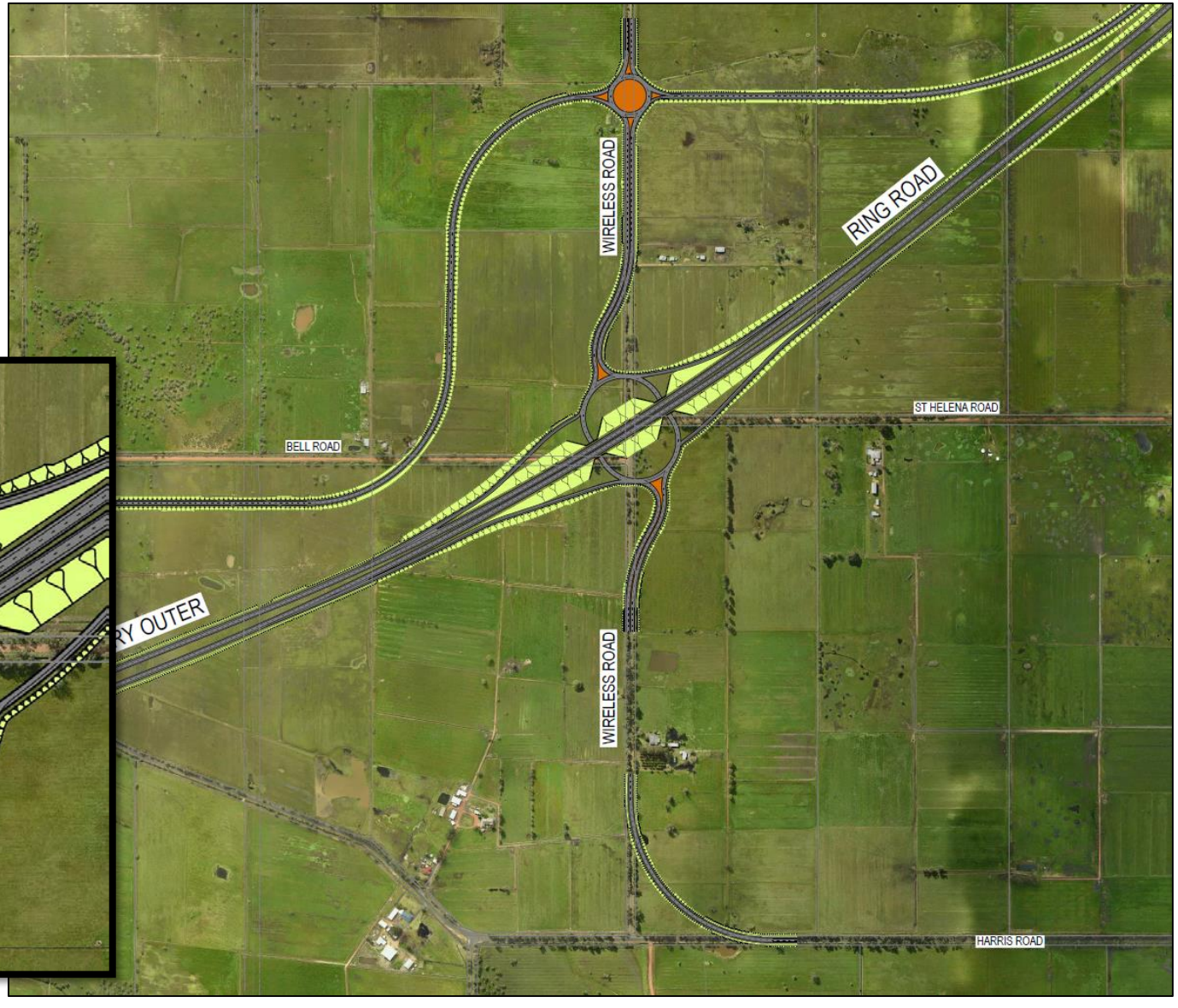


Waterloo Option 2



Waterloo Option 3 Preferred



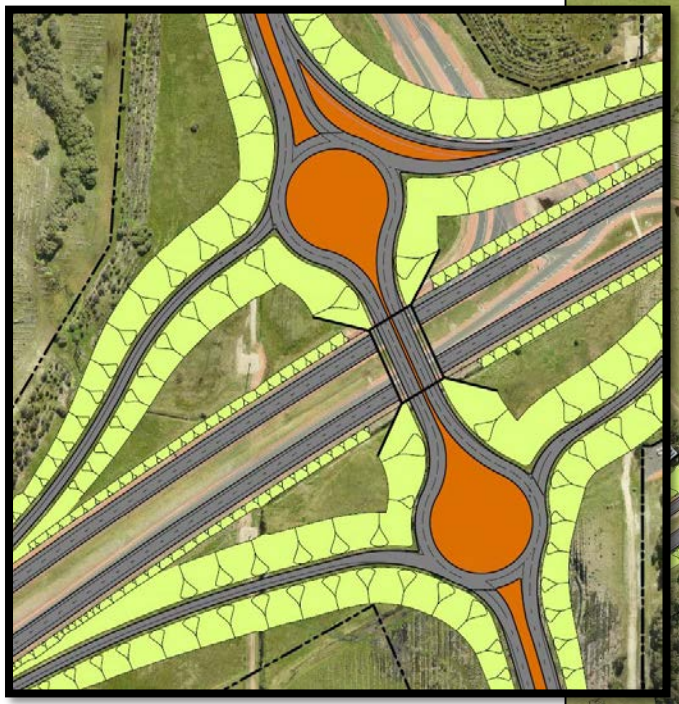


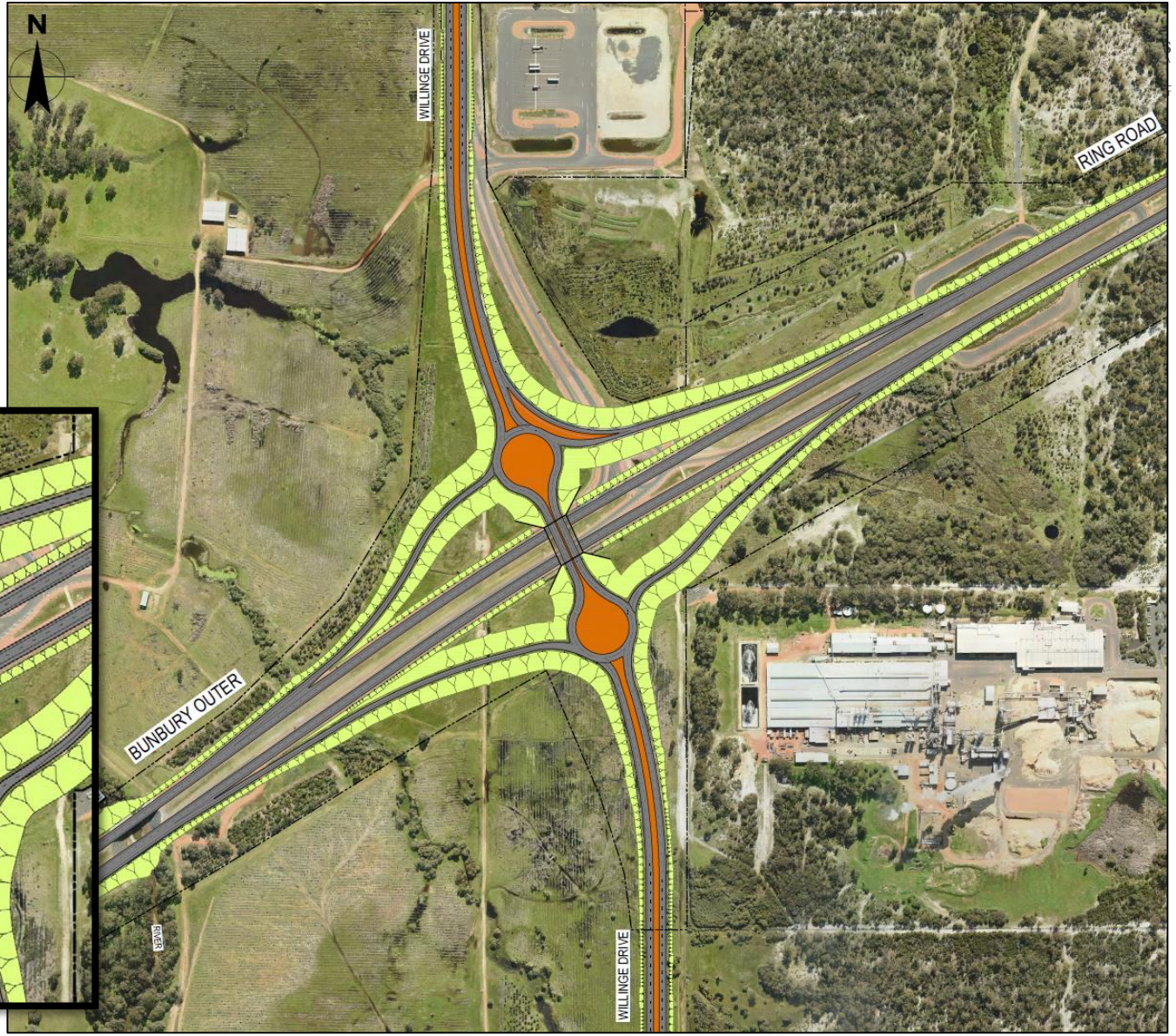
Waterloo Interchange – Recommended Option

- Recommended interchange is the Grade Separated Roundabout (Option 3)
- Minor points of differences between the three options
- Suits the dominant traffic movements
- Safe interchange form as angle of conflicts are controlled
- Larger radii than dumbbell interchange allows for better for operational suitability for freight vehicles

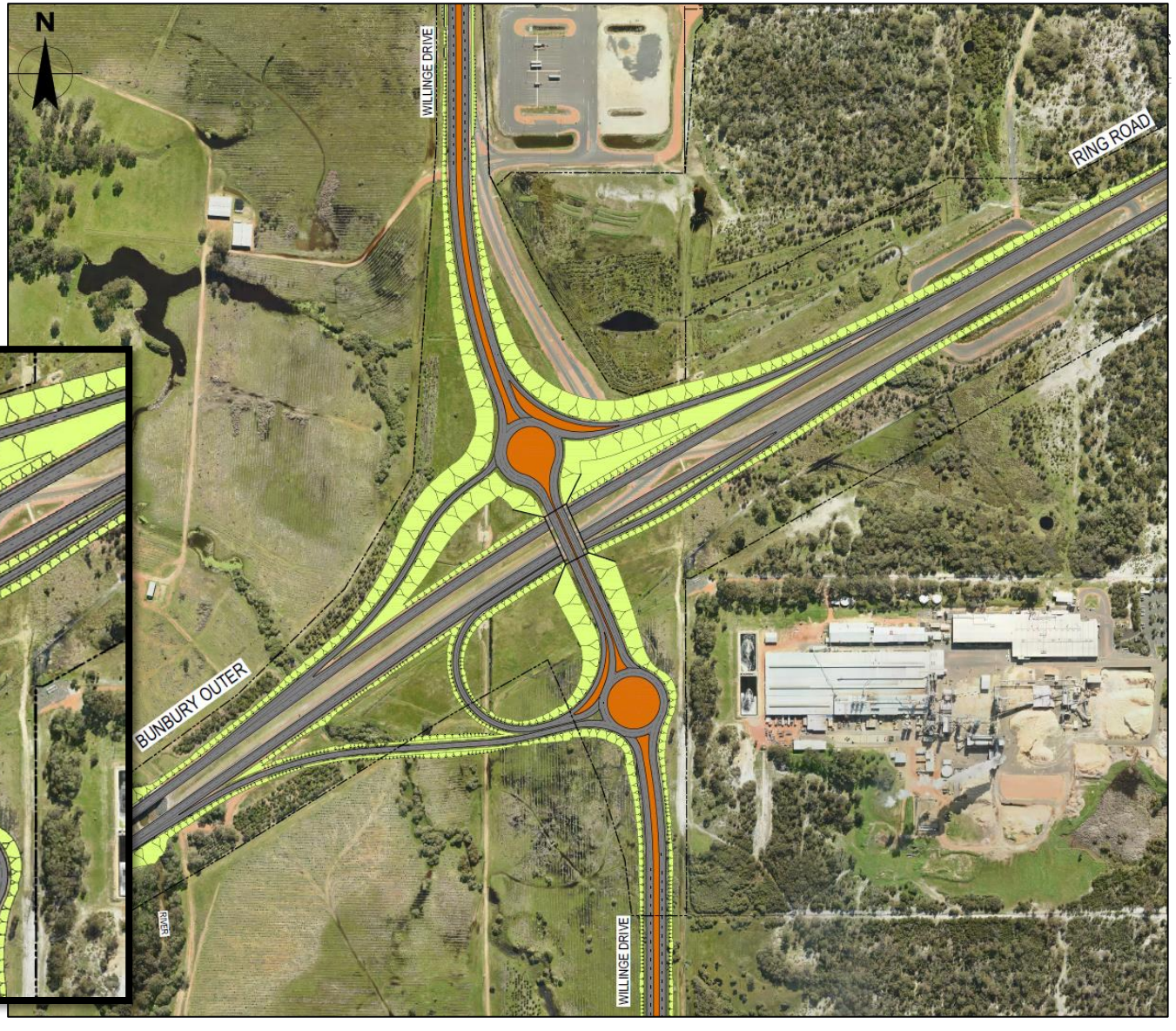
Willinge Drive (Port Access Road) Interchange

Willinge Option 1





Willinge Option 2



Willinge Option 3 Preferred

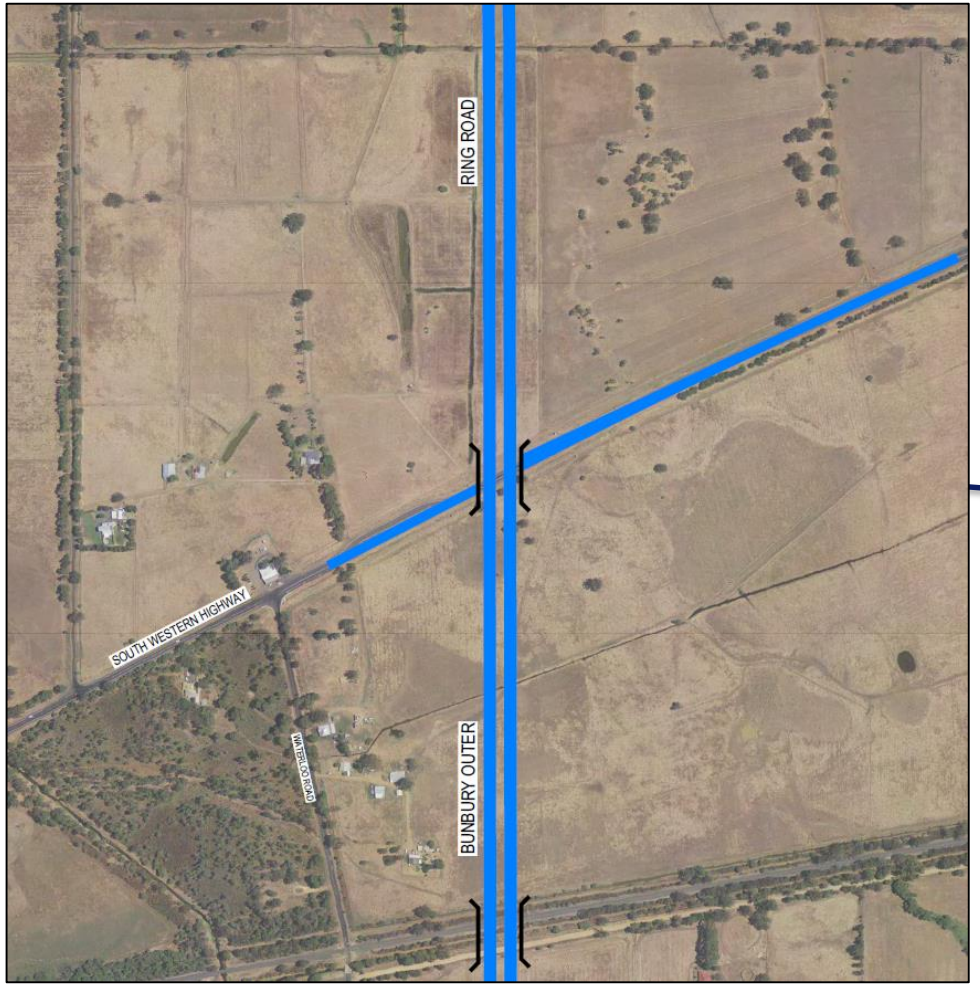
Willinge Interchange – Recommended Option

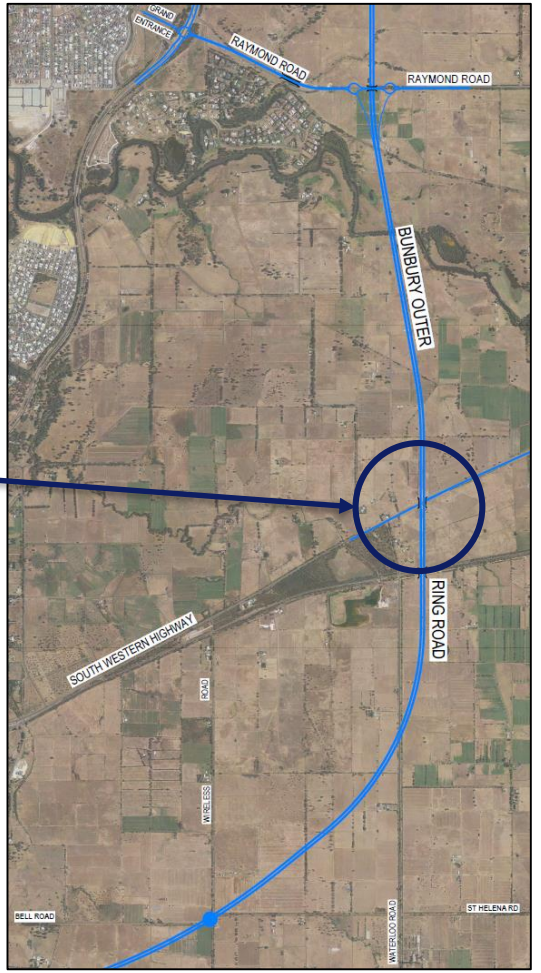
- Recommended interchange option is the Grade Separated Roundabout Option (Option 3)
- Safe interchange form as angle of conflicts are controlled
- Larger radii than dumbbell interchange allows for better for operational suitability for freight vehicles
- Traffic performance comparable with other interchange options

Network Operations & Connectivity

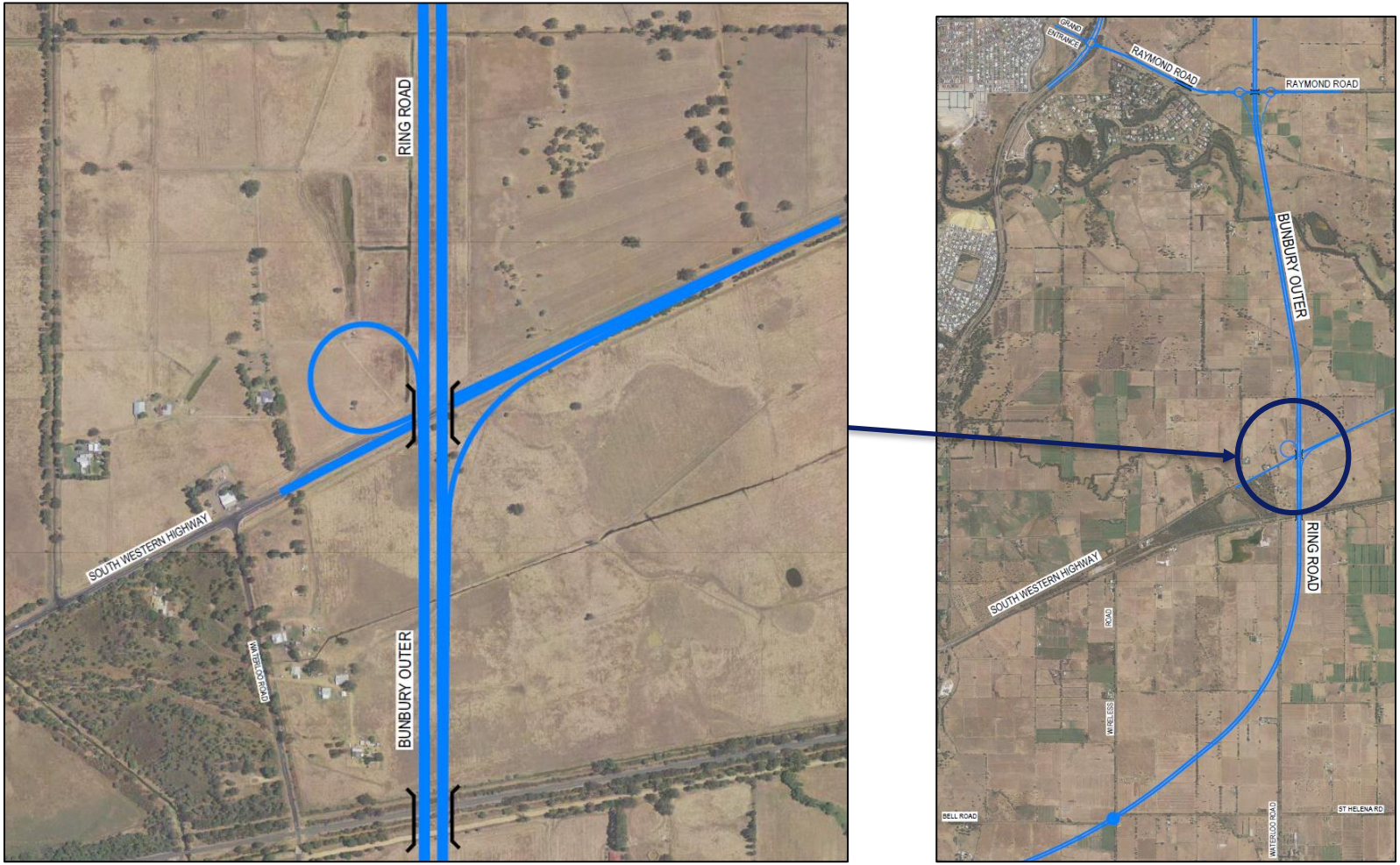
CONNECTIVITY – South Western Hwy (North)

Option 1 – no connection





Option 2 – with connection Preferred



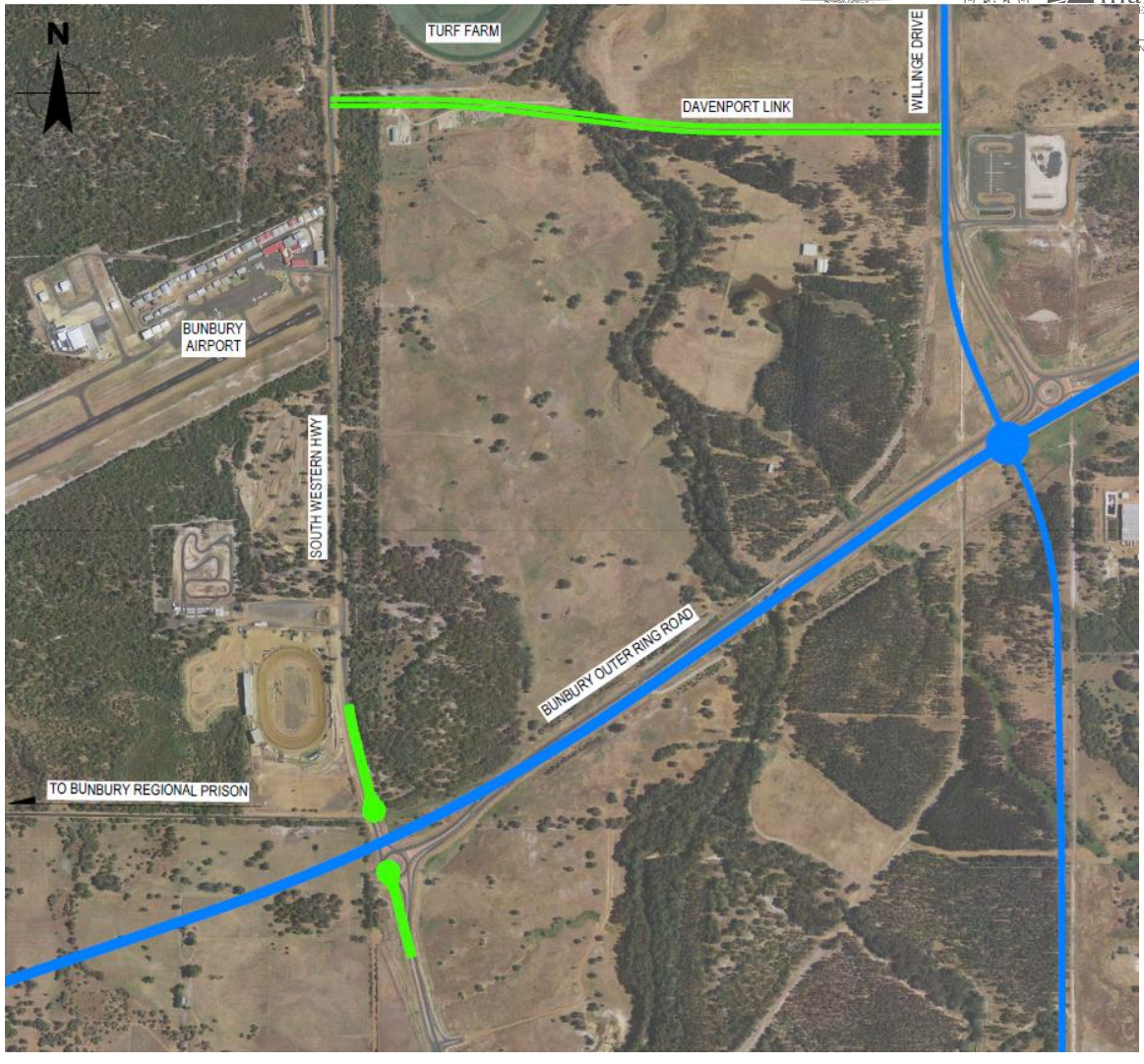
South West Highway (North)– Recommended Option

- Recommended configuration is partial connectivity for northbound to eastbound and for westbound to southbound (Option 2)
- Provides for efficient regional and freight movements from South West Highway east of BORR to get to and from BORR/the Port
- 3km shorter route from the intersection of Coalfields Hwy and South West Hwy, avoids need for heavy vehicles to negotiate staggered T intersection at Raymond Road
- Reduce reliance on South West Highway through the Wanju and Waterloo precincts

CONNECTIVITY – South Western Hwy (South)

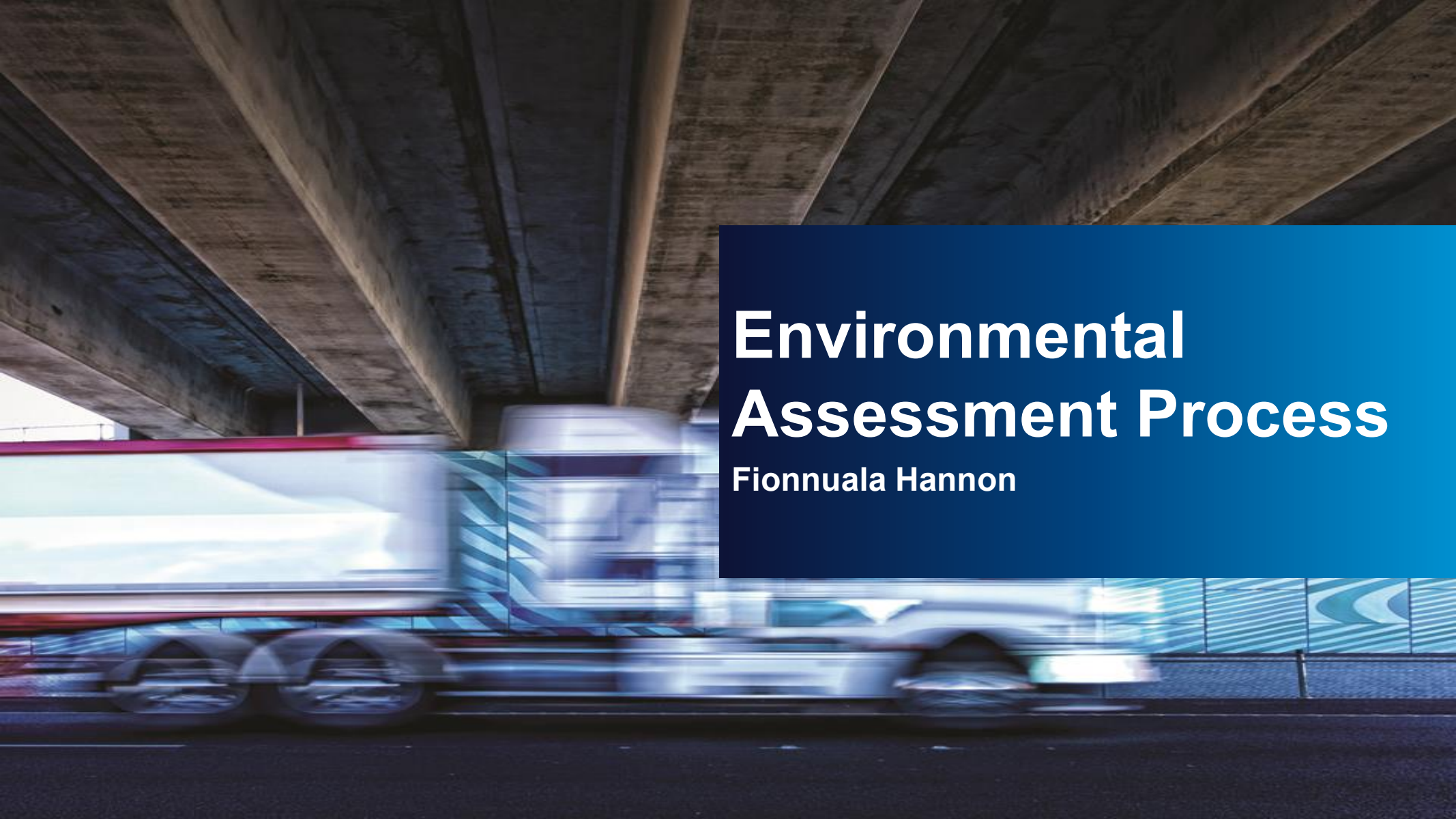
Option 1 Preferred

Option 2


N
TURF FARM
DAVENPORT LINK
WILLINGE DRIVE
BUNBURY AIRPORT
SOUTH WESTERN HWY
BUNBURY OUTER RING ROAD
TO BUNBURY REGIONAL PRISON

South West Highway (South)– Recommended Option

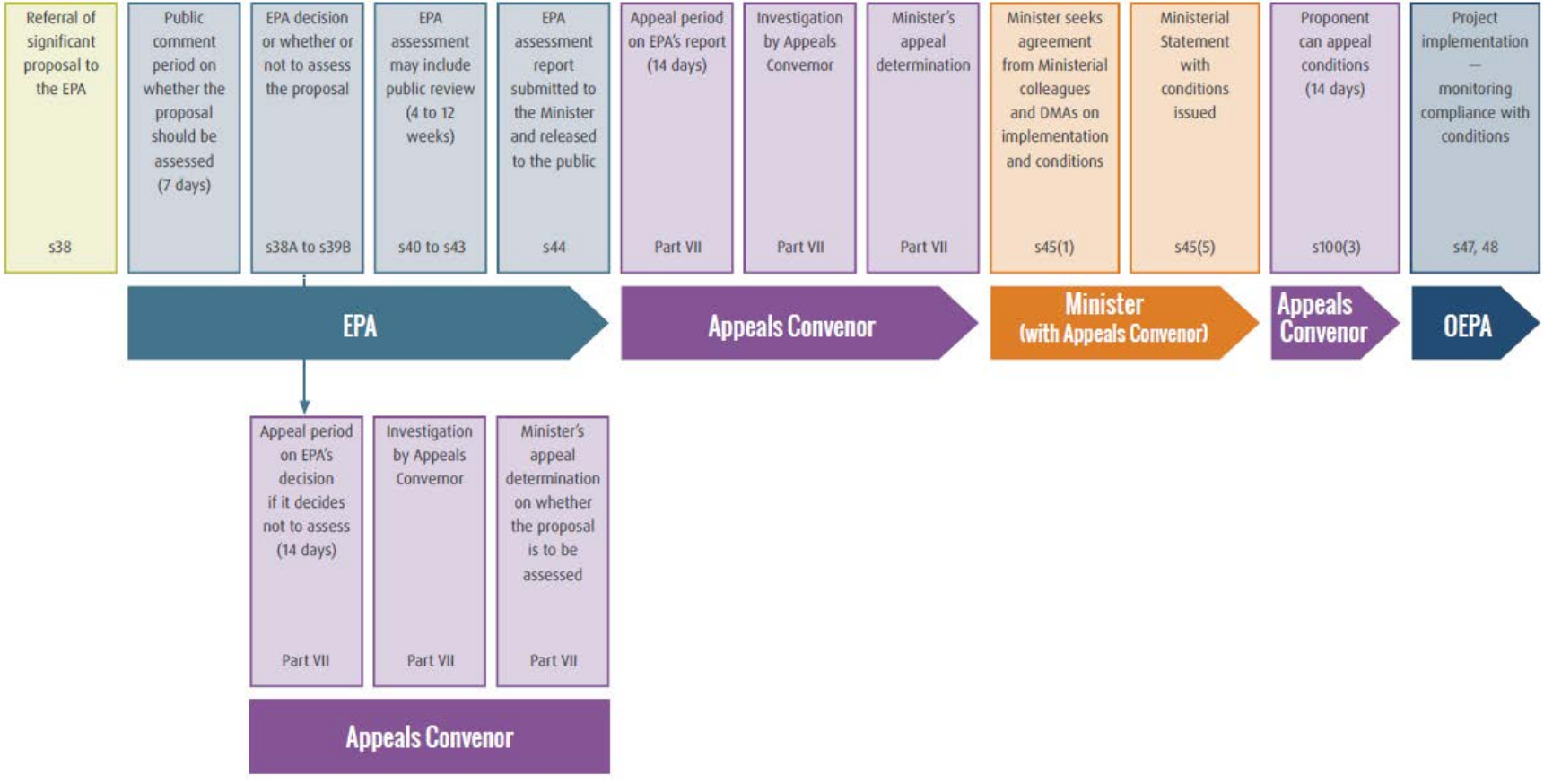
- Recommended configuration is grade separation of BORR and South West Highway (Option 1)
- Provides flexibility in the future to accommodate development, industrial and airport
- Avoids environmental and heritage impacts associated with an additional Preston River crossing
- Avoids impacts to vegetation within the Ocean to Preston Regional Park



Environmental Assessment Process

Fionnuala Hannon

Environmental Impact Assessment Process



Northern & Central section

Proposed Approvals pathway

Part IV EP Act (WA)

s38 referral to the EPA– February 2019

Level of assessment advised – Either:

Not Assessed; Assessment on Referral Information or Public Environmental Review

Decision is not appealable

(Includes a 1 week public comment period)

If formally assessed (ARI or PER)

Assessment Phase

EPA Report and Recommendations (including draft Ministerial Conditions advertised) –

Ministerial Statement.

Final Approval

EPBC Act (Commonwealth)

EPBC Act referral to the Cwth DoEE– for assessment of Matters of National Environmental Significance

(e.g. cockatoos, possums TEC's)

Decision if Controlled or Not Controlled Action

Assessment Phase if required including offsets

Anticipated decision notice and approval

Part V EP Act (WA) Native Vegetation Regulations

Clearing application if EPA decision is Not to Assess

Application lodged

Application advertised for public comment (14 days)

Assessment phase (bilateral may apply)

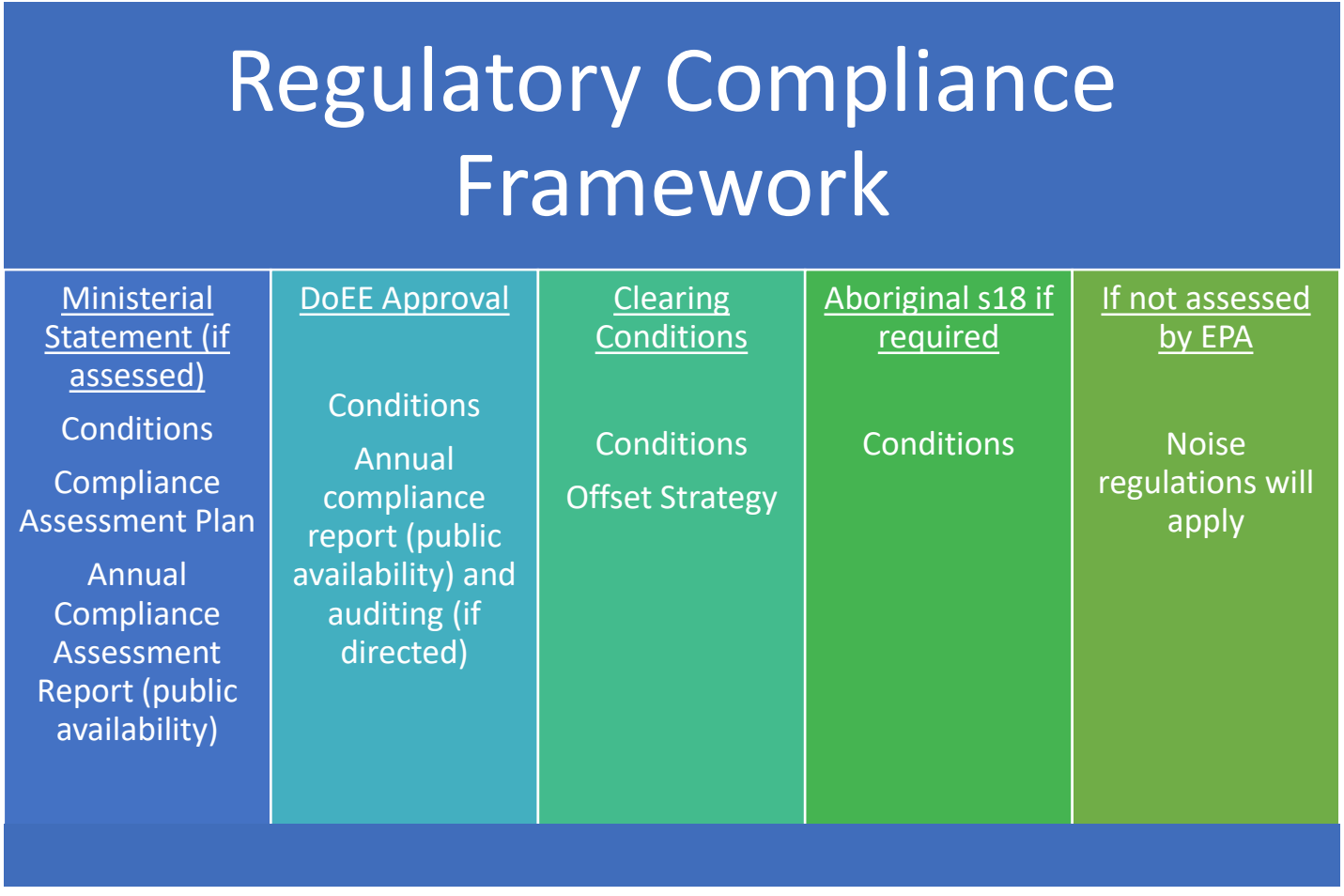
Offsets determined if required (bilateral may apply)

Application decision advertised for public appeal (21 days)

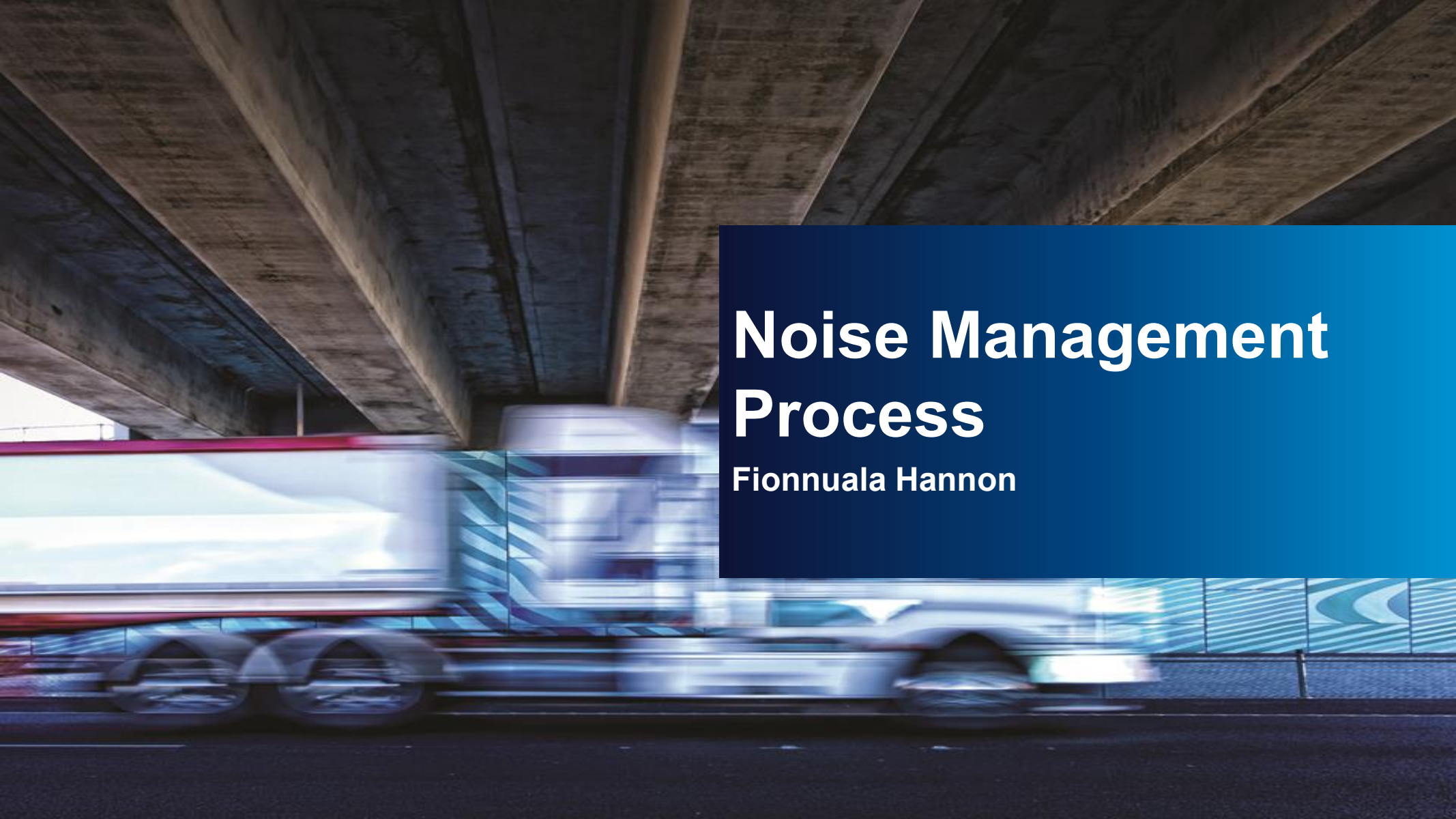
Clearing permit and conditions issued

Minimum 60 working day assessment period for licence application

Regulatory Compliance Framework



QUESTIONS AND ANSWERS

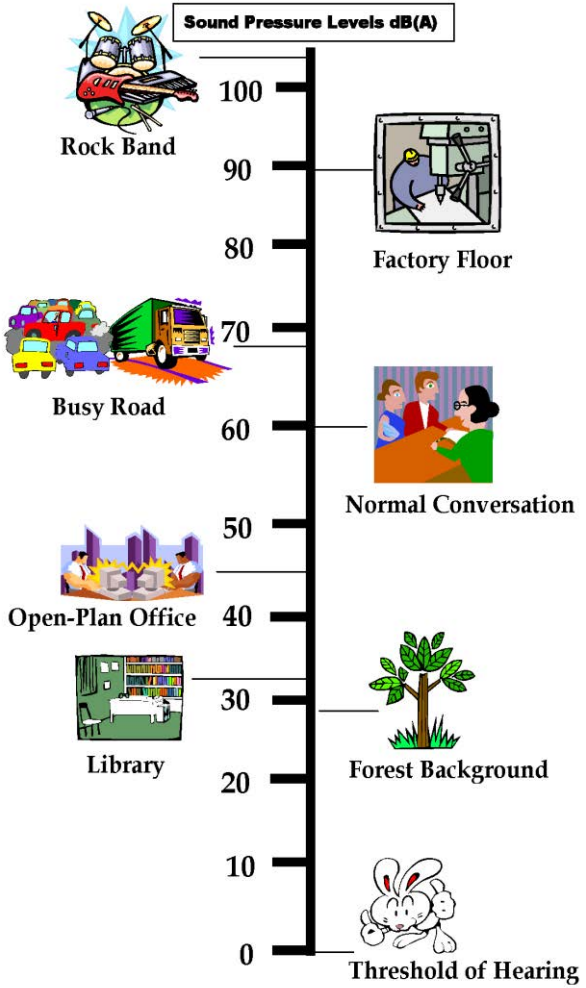


Noise Management Process

Fionnuala Hannon

Noise Management

- State Planning Policy 5.4 – road and Rail Transport Noise and Freight Considerations in Land Use Planning
- Forecast traffic volumes (2040)



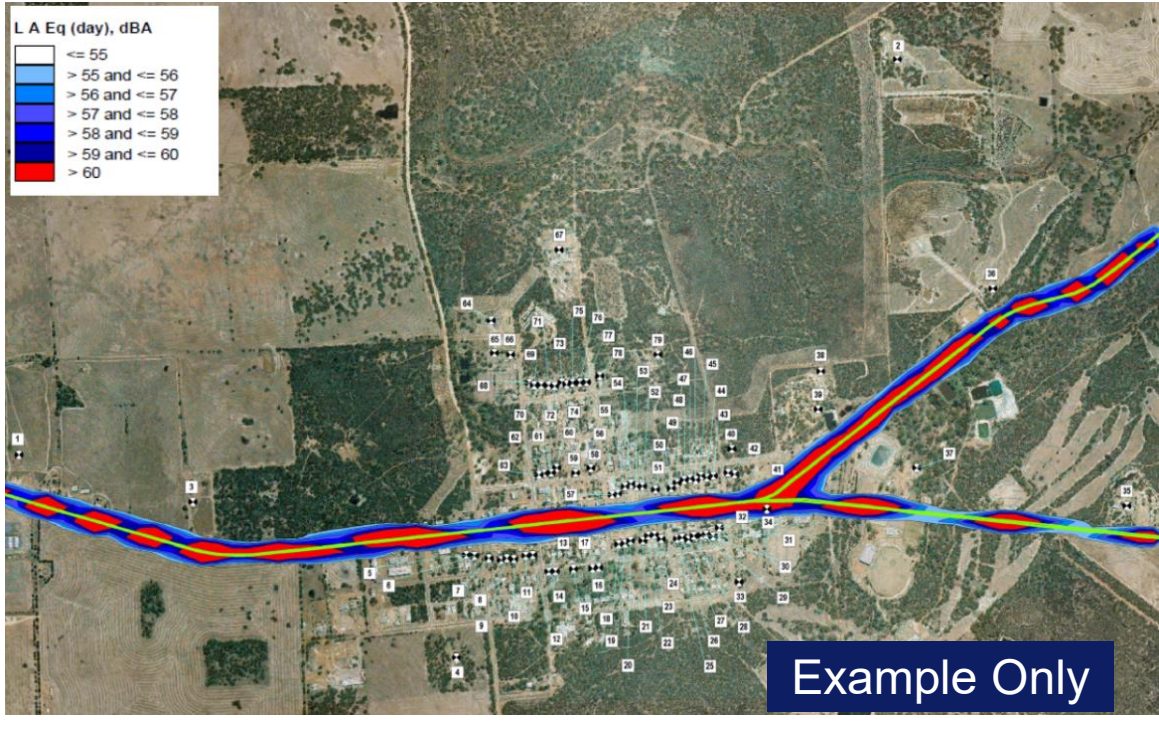
Extract from SPP 5.4 User Guide

Table A.1: Estimated outdoor noise level for road and rail screening assessments

Road	Characteristics	Vehicles per day	Distance from edge of carriageway (metres)							
			10	20	30	40	50	100	200	300
Primary road / distributor ($L_{Aeq,Day}$), dB [10]	(Urban) 80-100 km/hr and 7.5% heavy vehicles	20,000	70	67	64	63	62	58	52	50
		35,000	71	68	66	64	63	59	53	51
		50,000	73	70	67	65	65	61	55	52
		65,000	74	71	68	67	66	62	56	53
		80,000	75	72	69	68	67	63	57	54
		100,000	76	73	70	69	68	64	58	55
		120,000	77	74	71	70	69	65	59	56
	(Rural) 90-110 km/hr and 10% heavy vehicles	5,000	69	66	63	62	61	57	51	49
		10,000	72	69	66	65	64	60	54	52
		15,000	74	71	68	67	66	62	56	53
		20,000	75	72	69	68	67	63	57	55
Secondary road / district distributor ($L_{Aeq,Day}$), dB [10]	60-80 km/hr and 2.5% heavy vehicles	20,000	67	64	61	60	58	54	48	46
		25,000	68	65	62	61	59	55	49	47
		30,000	69	66	63	61	60	56	50	48
		40,000	70	67	64	62	61	57	51	49
		50,000	71	68	65	63	61	58	52	50
		60,000	72	69	66	64	62	59	53	51

What Goes Into a Noise Model

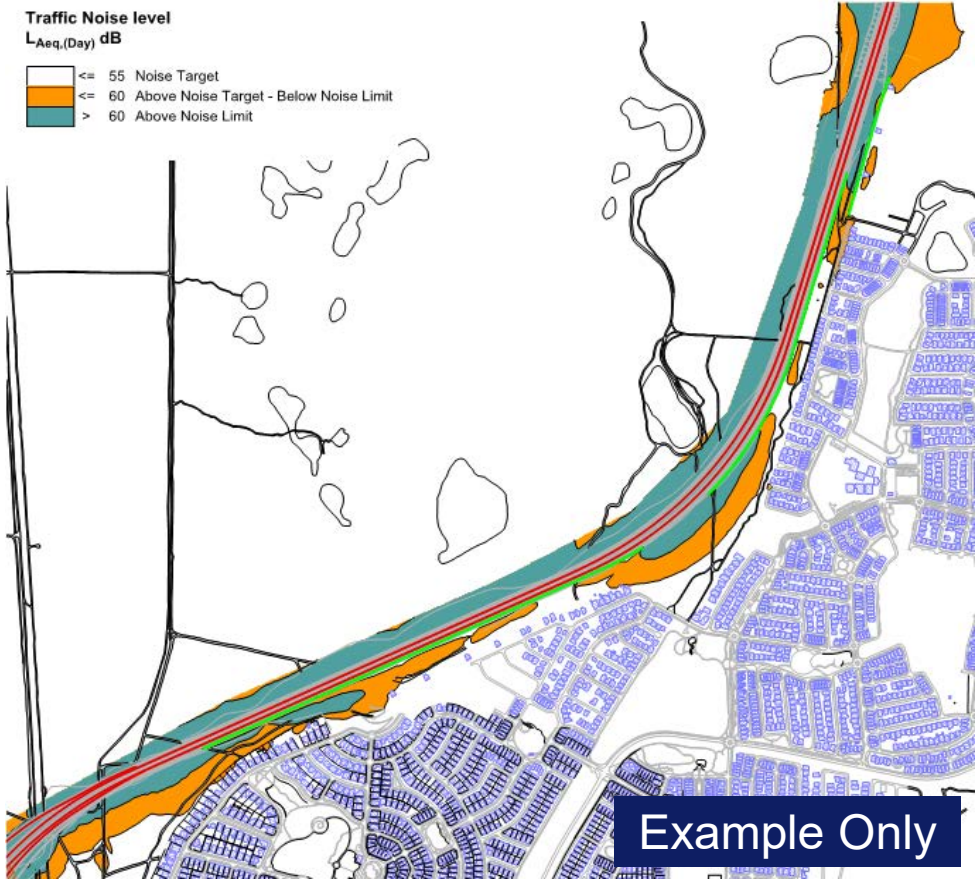
- House Ground Levels
- Property Fences (where solid)
- Designed Road Ground Levels
- Vehicle Heights
- Future Traffic Volumes
- Heavy Vehicle Numbers
- Road Surface Types
- Road Gradients



Possible noise outcomes

- Potential Noise Walls
- Architectural mitigation
- Quiet Pavement

Accepted corrections for various road surfaces are:	
– 14mm chip seal	+3.5dB
– 10mm chip seal	+2.5dB
– 5mm chip seal	+1.5dB
– Dense graded asphalt	0.0dB
– Novachip	-0.2dB
– Stone mastic asphalt	-1.5dB
– Open graded asphalt	-2.5dB



- The Noise loggers along the alignment provide information that is used to calibrate/refine the model. This details enables our modellers to determine daytime and night time noise contours.

Next Steps

- Noise Monitoring is complete
- Prepare Noise Modelling Report
- Complete peer review
- Present to CRG and communities of interest
- Agree form of treatment with CRG.

QUESTIONS AND ANSWERS

Consultation and Engagement Update

Tammy Mitchell – BORR Team
Community & Stakeholder Engagement Manager

Community Information Sessions

- Community Information Sessions were held at:
  - Eaton 24 October
  - Leschenault 25 October
  - Bunbury 30 October
  - Gelorup 31 October

- Outline the key themes raised by the community
- Summarise feedback provided at the sessions

(the above information will be updated post events, prior to CRG meeting)

QUESTIONS AND ANSWERS

CRG Member Round table

Next Steps