

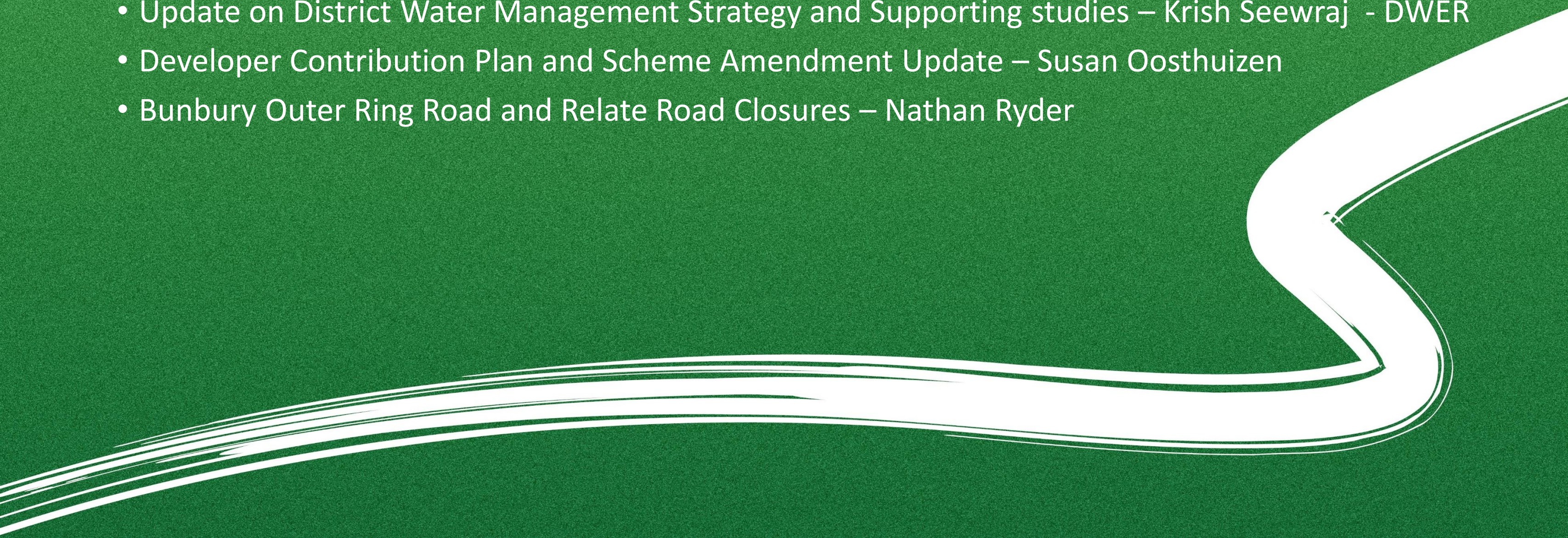


# ***WANJU & Waterloo Advisory Group***

***3 November 2021***

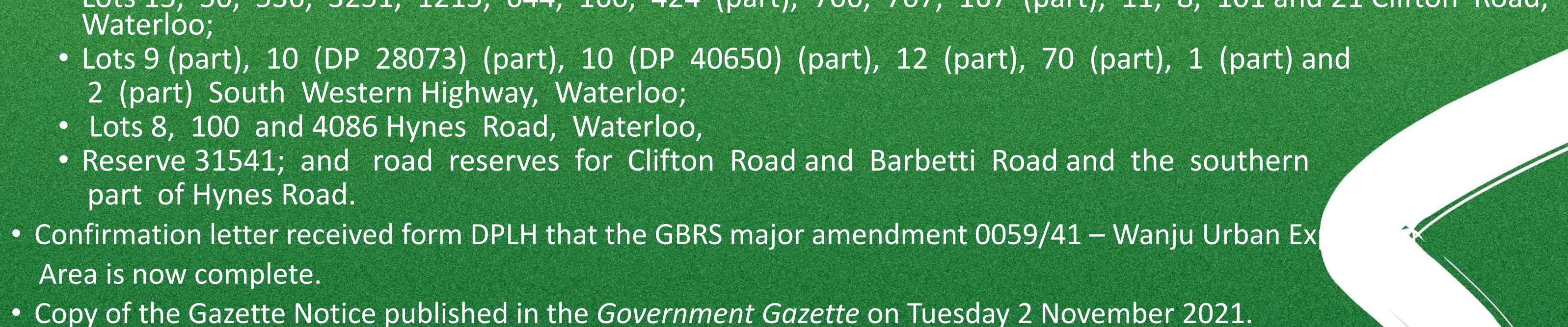


# *Agenda*

- Welcome
  - GBRS Amendments – Susan Oosthuizen
  - Update on District Water Management Strategy and Supporting studies – Krish Seewraj - DWER
  - Developer Contribution Plan and Scheme Amendment Update – Susan Oosthuizen
  - Bunbury Outer Ring Road and Relate Road Closures – Nathan Ryder
- 

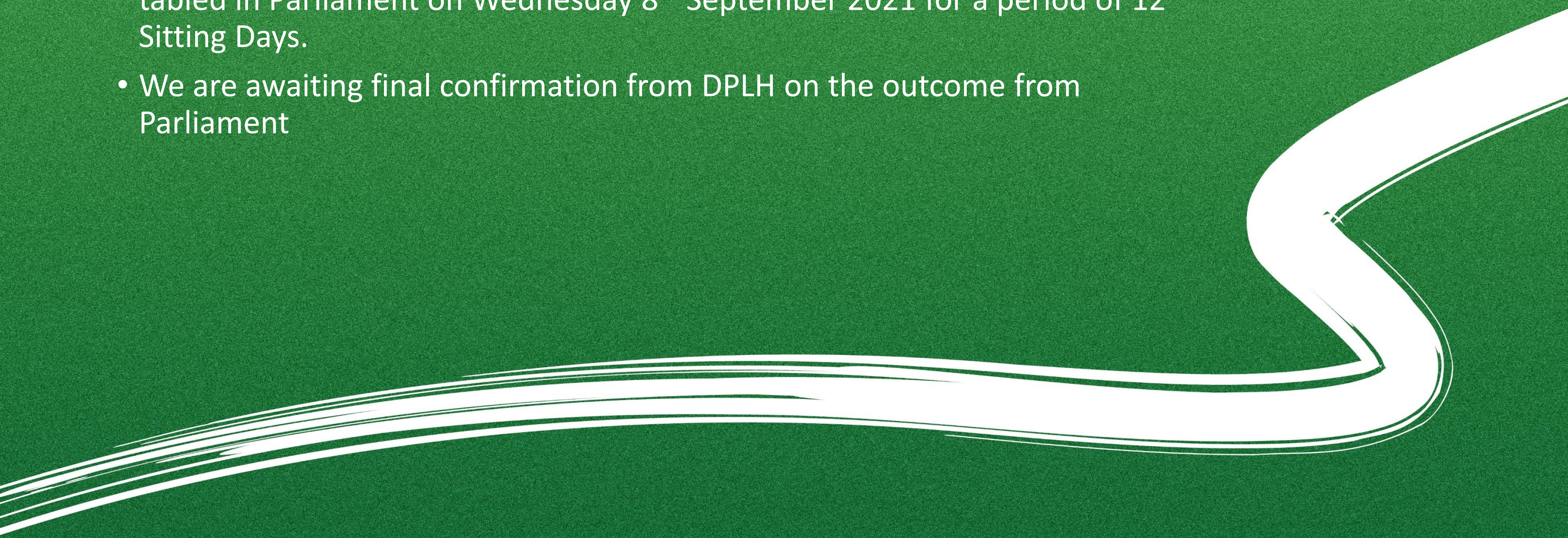


# *WANJU Greater Bunbury Regional Scheme Amendments*

- An amendment to the GBRS changes the zoning or reservation of land to allow for a different land use.
  - The purpose of the Wanju Urban Expansion Area amendment is to rezone various lots from Rural to Urban Deferred Zone, to facilitate the Wanju District Structure Plan.
  - Urban deferred: land suitable for future urban development but where there are various planning servicing and environmental requirements which need to be addressed before urban development can take place.
  - The amendment of the GBRS was to rezone the following lots:
    - Lots 15, 50, 536, 3251, 1215, 644, 166, 424 (part), 706, 707, 167 (part), 11, 8, 101 and 21 Clifton Road, Waterloo;
    - Lots 9 (part), 10 (DP 28073) (part), 10 (DP 40650) (part), 12 (part), 70 (part), 1 (part) and 2 (part) South Western Highway, Waterloo;
    - Lots 8, 100 and 4086 Hynes Road, Waterloo,
    - Reserve 31541; and road reserves for Clifton Road and Barbetti Road and the southern part of Hynes Road.
  - Confirmation letter received from DPLH that the GBRS major amendment 0059/41 – Wanju Urban Expansion Area is now complete.
  - Copy of the Gazette Notice published in the *Government Gazette* on Tuesday 2 November 2021.
- 



# ***WATERLOO Greater Bunbury Regional Scheme Amendments***

- Waterloo is now following the same process as Wanju.
  - GBRS Major Amendment 0060/41 – Waterloo Industrial Expansion Area was tabled in Parliament on Wednesday 8<sup>th</sup> September 2021 for a period of 12 Sitting Days.
  - We are awaiting final confirmation from DPLH on the outcome from Parliament
- 



# *WANJU & WATERLOO District Water Management Strategy*

- Krish - Planning Advice Program Manager from DWER will provide an update on the District Water Management Strategy and Supporting studies





# District Water Management Strategy and Supporting studies

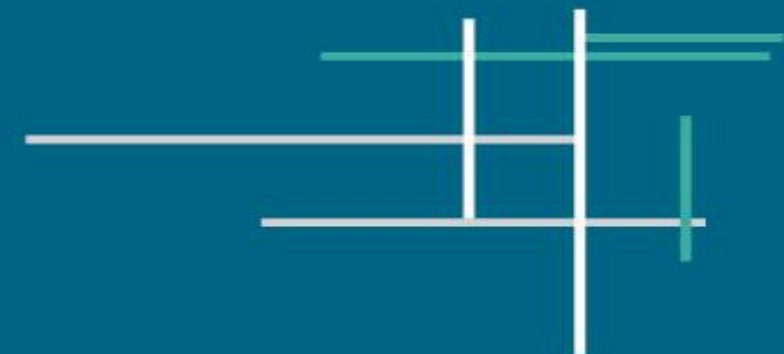
DISTRICT WATER MANAGEMENT STRATEGY  
TO SUPPORT THE WANJU AND WATERLOO DISTRICT STRUCTURE PLANS

PREPARED FOR DEPARTMENT OF PLANNING, LANDS AND HERITAGE

OCTOBER 2021  
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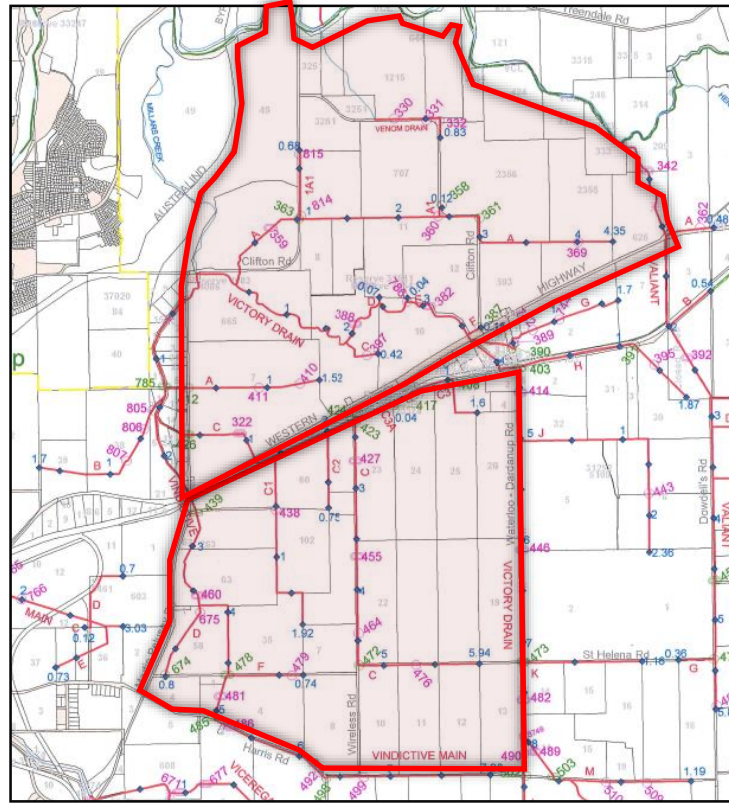
Krish Seewraj  
SW Region  
Department of Water and Environmental Regulation  
Planning Advice Program Manager











The arterial drainage system needs consideration of:

- Alignment, levels and widths.
- Funding, construction and on-going management.
- How it may impact development staging.
- Maintaining services to agricultural land/customers.
- Agreements with Water Corporation and Harvey Water.

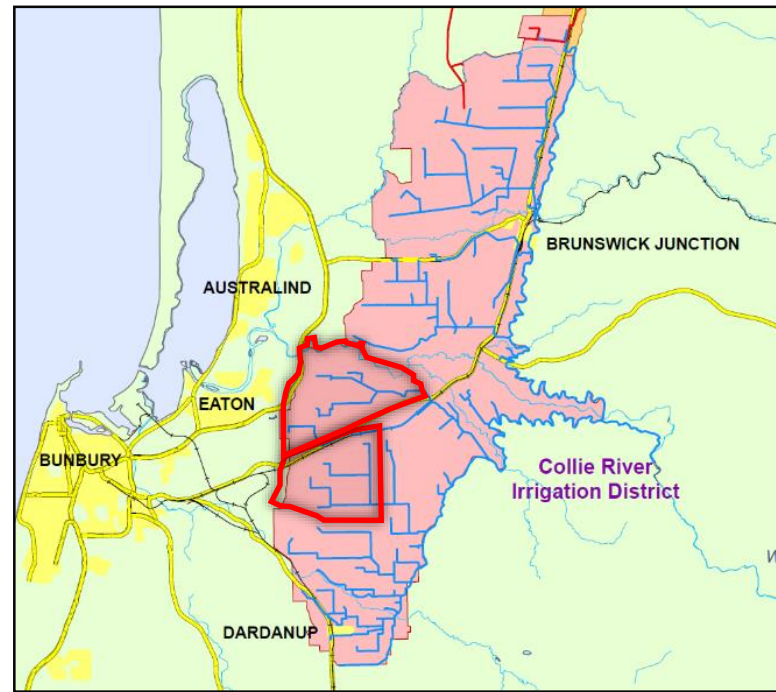
Variable design and management criteria may be set.

Additional land is required to offset impacts on downstream systems.

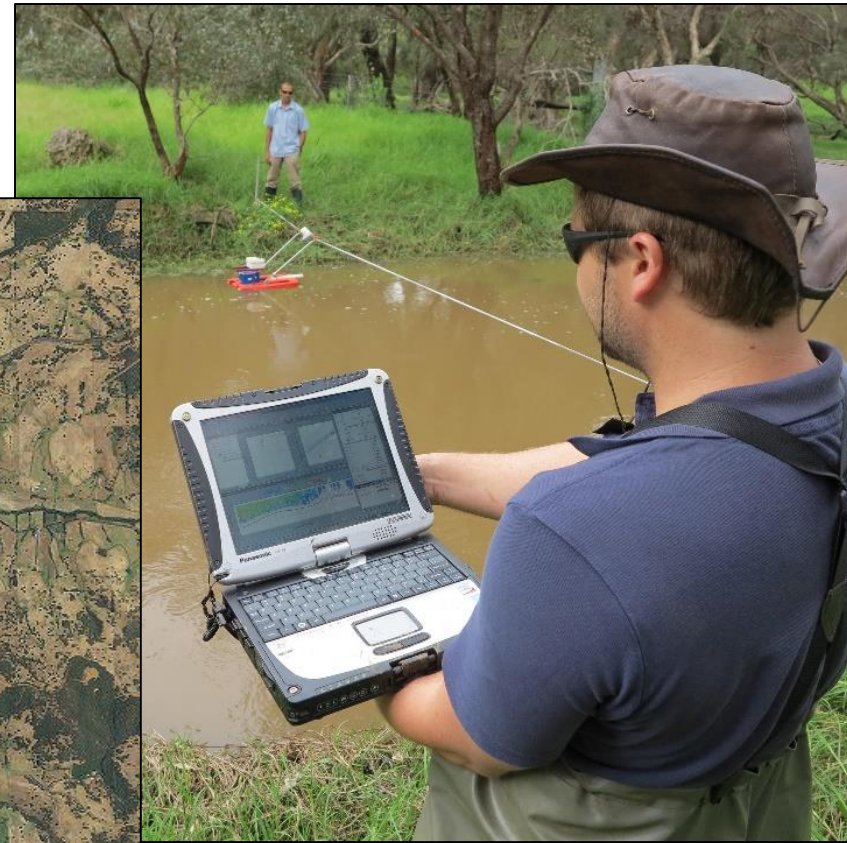
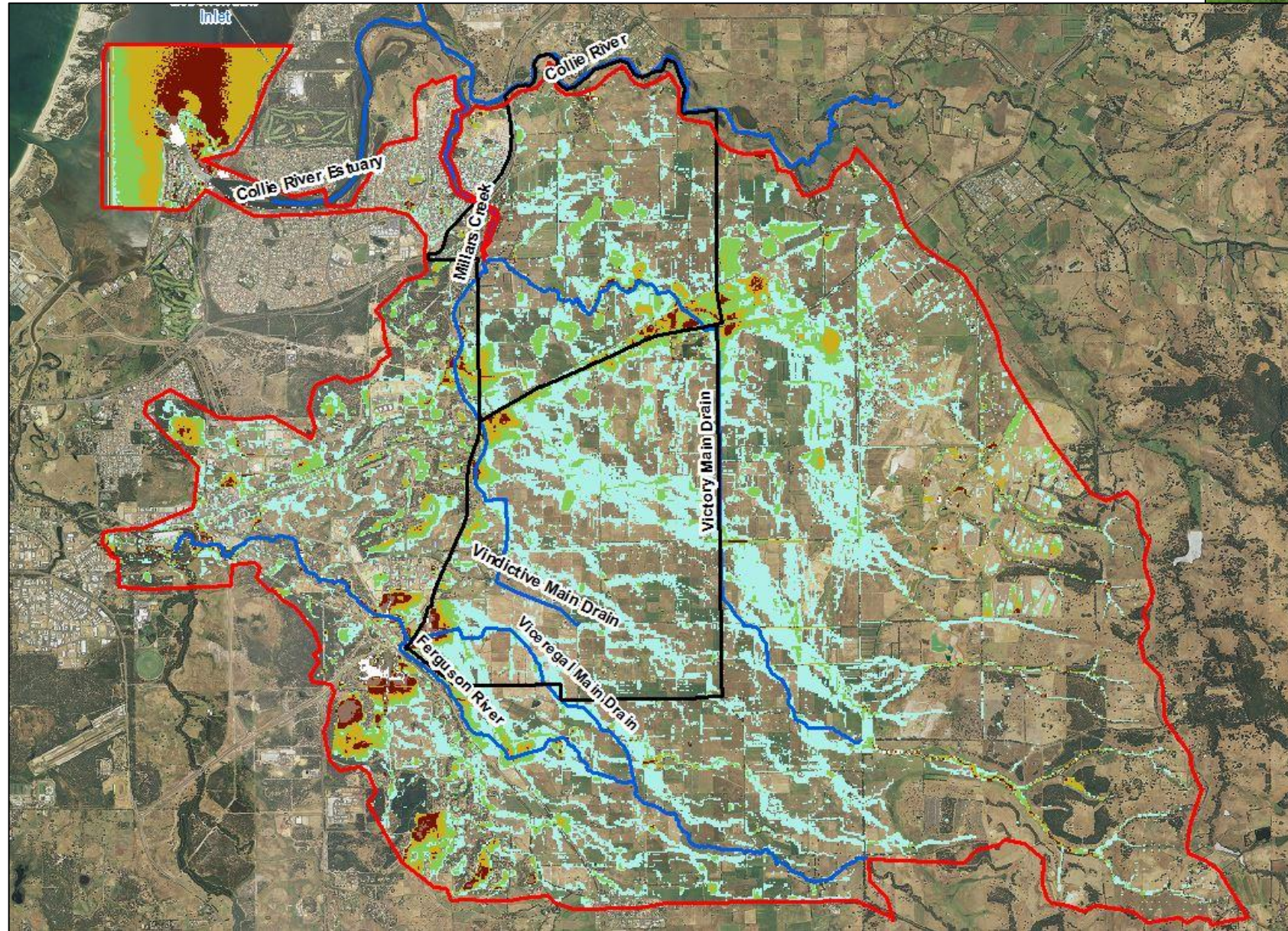
Multiple discussions and agreements with drainage managers.

Oversized drainage corridors.

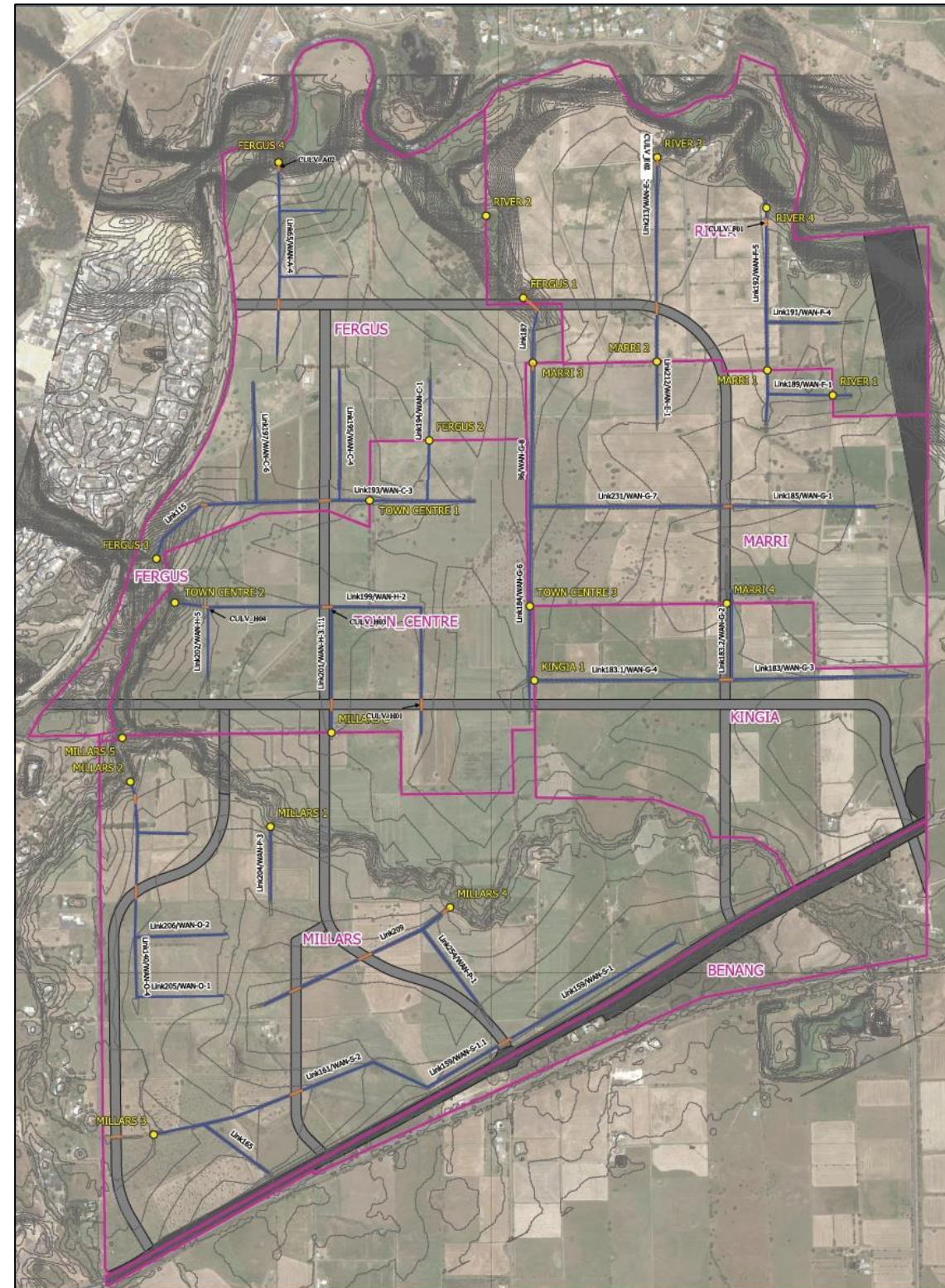
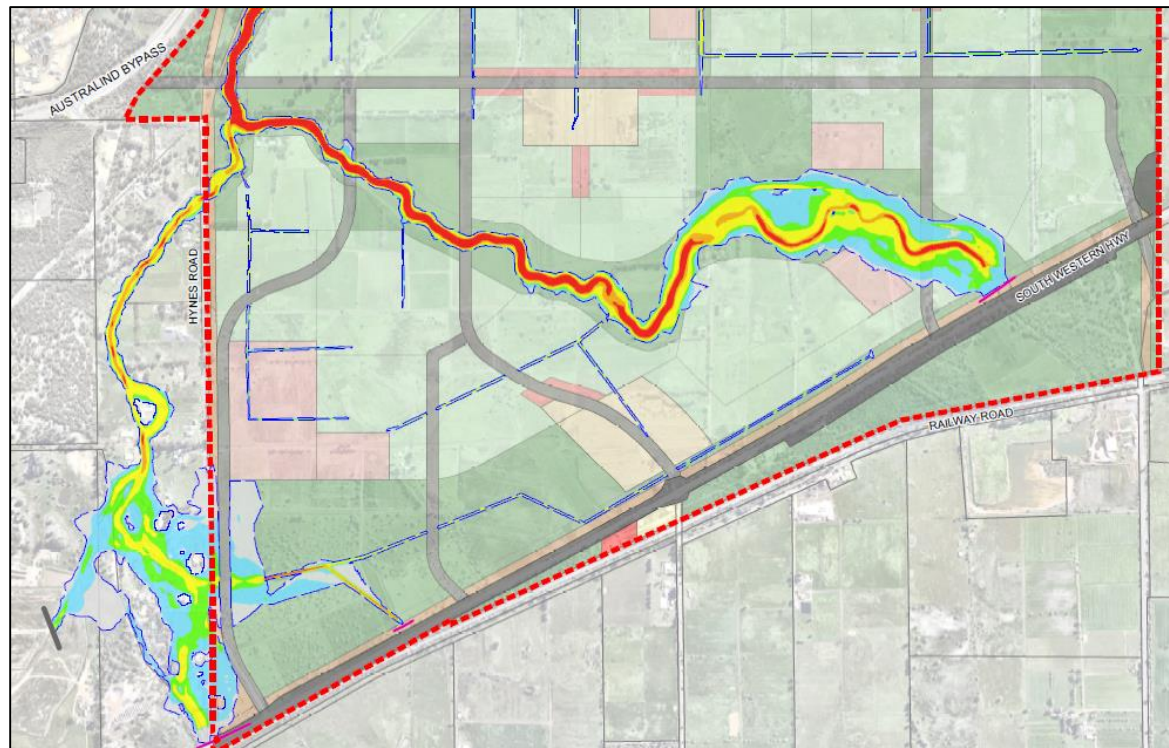
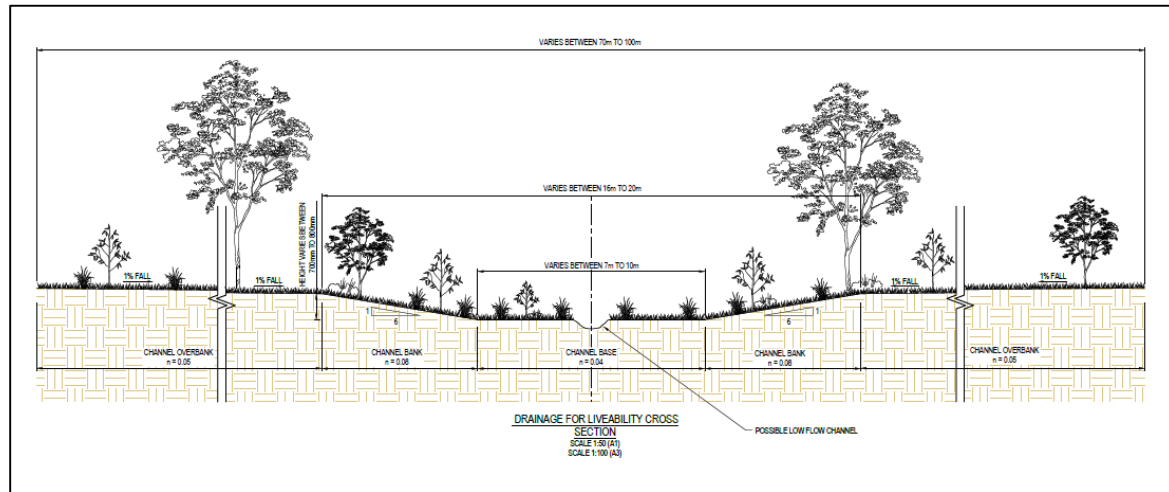
No central control over the arterial system design, construction and management.



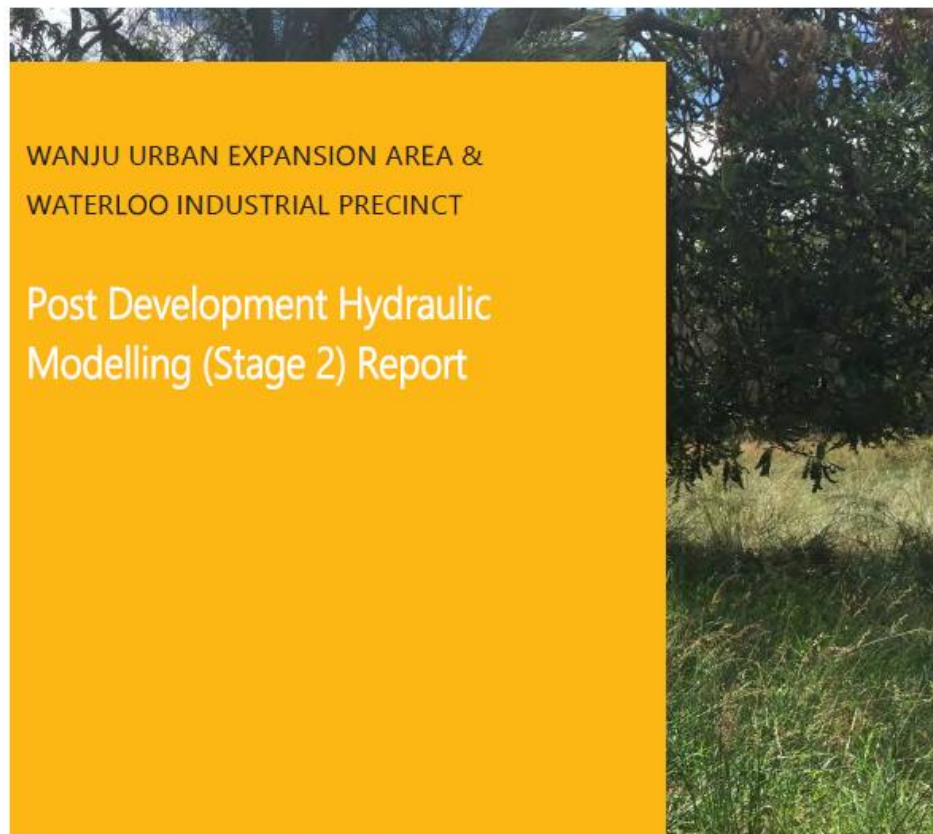












WANJU URBAN EXPANSION AREA &  
WATERLOO INDUSTRIAL PRECINCT

## Post Development Hydraulic Modelling (Stage 2) Report

PREPARED FOR DEPARTMENT OF PLANNING, LANDS AND HERITAGE

18-000276-02 | Issue D  
November 2020

Calibre Professional  
Services Pty Ltd  
ABN 55 070 683 037

Oversby Consulting



# Wanju Drainage Report

## COSTINGS AND TEMPORARY DRAINAGE MANAGEMENT

PREPARED FOR DEPARTMENT OF WATER AND  
ENVIRONMENTAL REGULATION

B20002 | 24 June 2021

Oversby Consulting Pty Ltd  
ABN 41 887 270 403













Cross section 2 - multiple use corridor



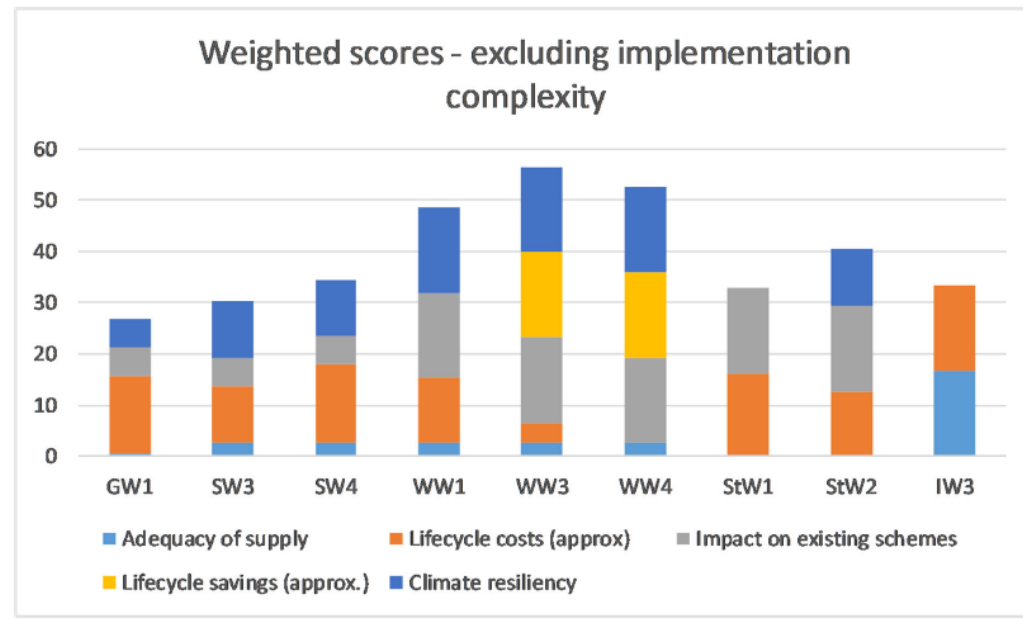
Table 3. Landscape Zone Guidelines

Landscape Zone	Type of zone	Structural Requirements						Primary service of landscape							Considerations						
		Ground cover <1m	Low shrub <1.5m	High Shrub >1.5m	Tree <10m	Tree >10m	Shade Structures	Aesthetics	Fire	Thermal heat	Water Quality	Drainage	Environmental	Art / natural features	Views	Security /safety	Commutable spaces	Nuisance insects	Interpretive signage	Maintenance (cost/durable)	Drought tolerant
Street-scape	Residential	Y	Y		Y			Y		Y				Y	Y	Y	Y	Y	Y	Y	Y
	Commercial	Y	Y		Y		Y	Y		Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y
	Town centre	Y	Y		Y		Y	Y		Y			Y	Y	Y	Y	Y	Y	Y	Y	Y
	Industrial	Y	Y		Y					Y	Y					Y	Y		Y	Y	Y
POS	Recreation space	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Nature space	Y	Y	Y	Y	Y		Y		Y	Y	Y						Y	Y	Y	Y
	Sports space	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Commutable space	Y	Y		Y	Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Drainage	Rain gardens	Y	Y		Y			Y		Y	Y	Y	Y				Y		Y	Y	Y
	Swales -urban	Y	Y		Y			Y		Y	Y	Y	Y				Y		Y	Y	Y
	Channels -urban	Y	Y		Y			Y		Y	Y	Y					Y		Y	Y	Y
	Swales -industrial	Y	Y		Y					Y	Y				Y		Y		Y	Y	Y
	Channels - industrial	Y	Y		Y			Y		Y	Y	Y			Y		Y		Y	Y	Y
	Basins / wetlands	Y	Y	Y	Y			Y		Y	Y	Y	Y				Y		Y	Y	Y
Foreshore / Living streams	Conservation	Y	Y	Y	Y	Y		Y		Y	Y	Y						Y			
	Recreation	Y	Y			Y	Y	Y	Y	Y		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Floodway	Y	Y		Y	Y				Y							Y		Y		
Buffers	Sound	Y	Y	Y	Y	Y		Y		Y		Y							Y	Y	Y
	Screening			Y	Y			Y				Y							Y	Y	Y
	Conservation	Y	Y	Y	Y	Y		Y		Y		Y							Y	Y	Y
	Bushfire setbacks	Y	Y					Y	Y										Y	Y	Y
Supporting documents	Wanju – Waterloo District Structure Plan (DoP 2016) Integrated Water Management Strategy – Wanju and Waterloo (Calibre 2016) Public Parkland Planning & Design Guide (WA) (2014, Department of Sport and Recreation) Drainage Liveability Program (2016), Water Corporation. BUWM Framework (WAPC 2008) Vegetated Guidelines for Stormwater Biofilters in the south-west of WA (Monash 2014) Construction and Establishment Guidelines: swales, bio retention systems and wetlands (Water By Design, 2010) Perth and Peel Green Growth Plan (WAPC 2016) Decision Process for stormwater management (DWER 2017)											Stormwater Management Manual for Western Australia (DoW 2004-2009). Operational policy 4.3: Identifying and establishing waterways foreshore areas (DoW 2012) SPP3.7 Planning in Bushfire Prone Areas (DoP 2016) Guidelines for Planning in Bushfire Prone Areas (DoP 2016) Green Infrastructure: A vital step to Brilliant Australian Cities (AECOM 2017) Benefits of urban green spaces in the Australian Context (University of Melbourne 2016) Best practice guidelines for holistic open space turf management in Sydney (Sydney Water 2011) Western Australian environmental guidelines for the establishment and maintenance of turf grass areas (SRT 2014)									





### MCDA – Equal weighted scores



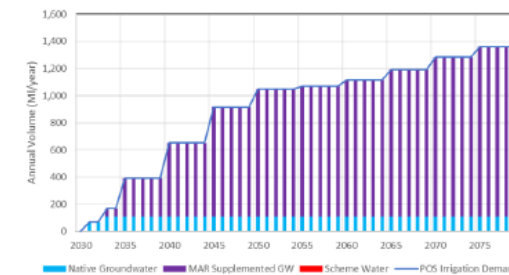
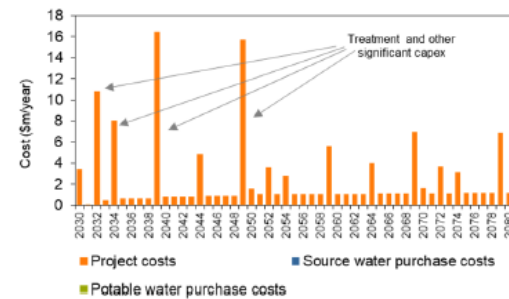
### Option 3: StW2 – Storm water

#### Relevant Features

- Storm water option is driven by demand for non-potable water
- Option doesn't avoid other costs of storm water management - scaled for larger peak flows

#### Assumptions

- The same groundwater allocation (110Ml/year)
- Deploy plant to meet POS demand
- Managed Aquifer Recharge (MAR) used as a delivery aid – timing driven by POS demand
- Some local infrastructure must be committed at time of precinct development
- No change to:
  - timing of Base Case wastewater infrastructure
  - Other stormwater management infrastructure

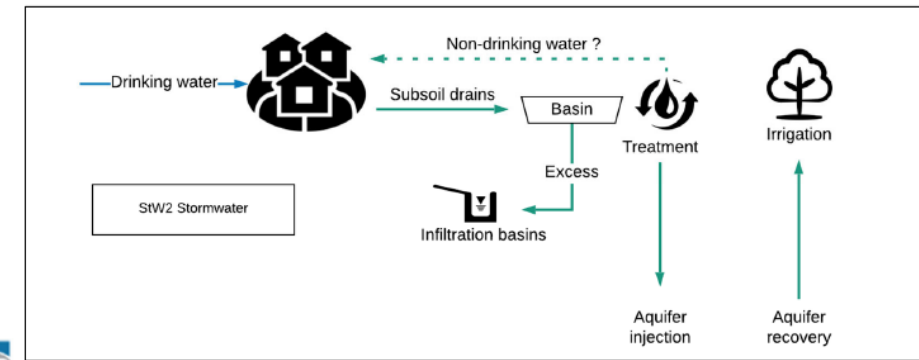


### StW2 – Stormwater harvesting - MAR

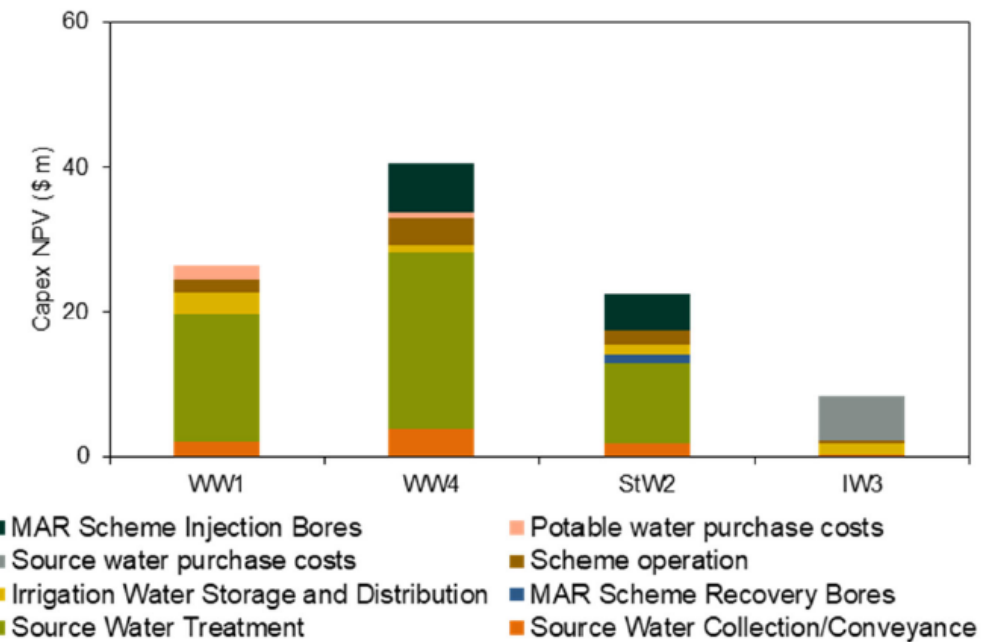
Harvest from the Wanju stormwater drainage network during winter and inject into the Yarragadee aquifer for abstraction during summer months

#### Approach:

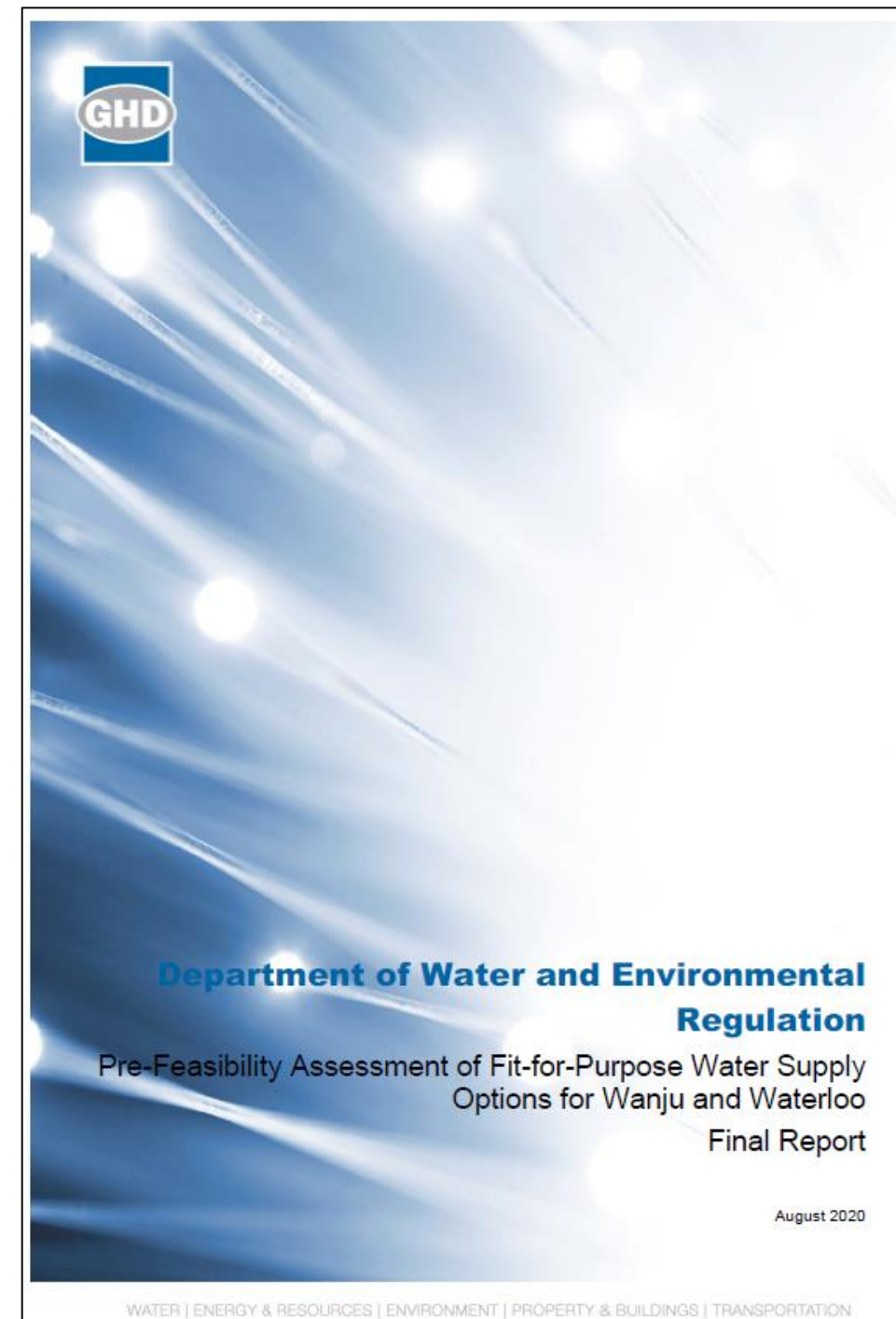
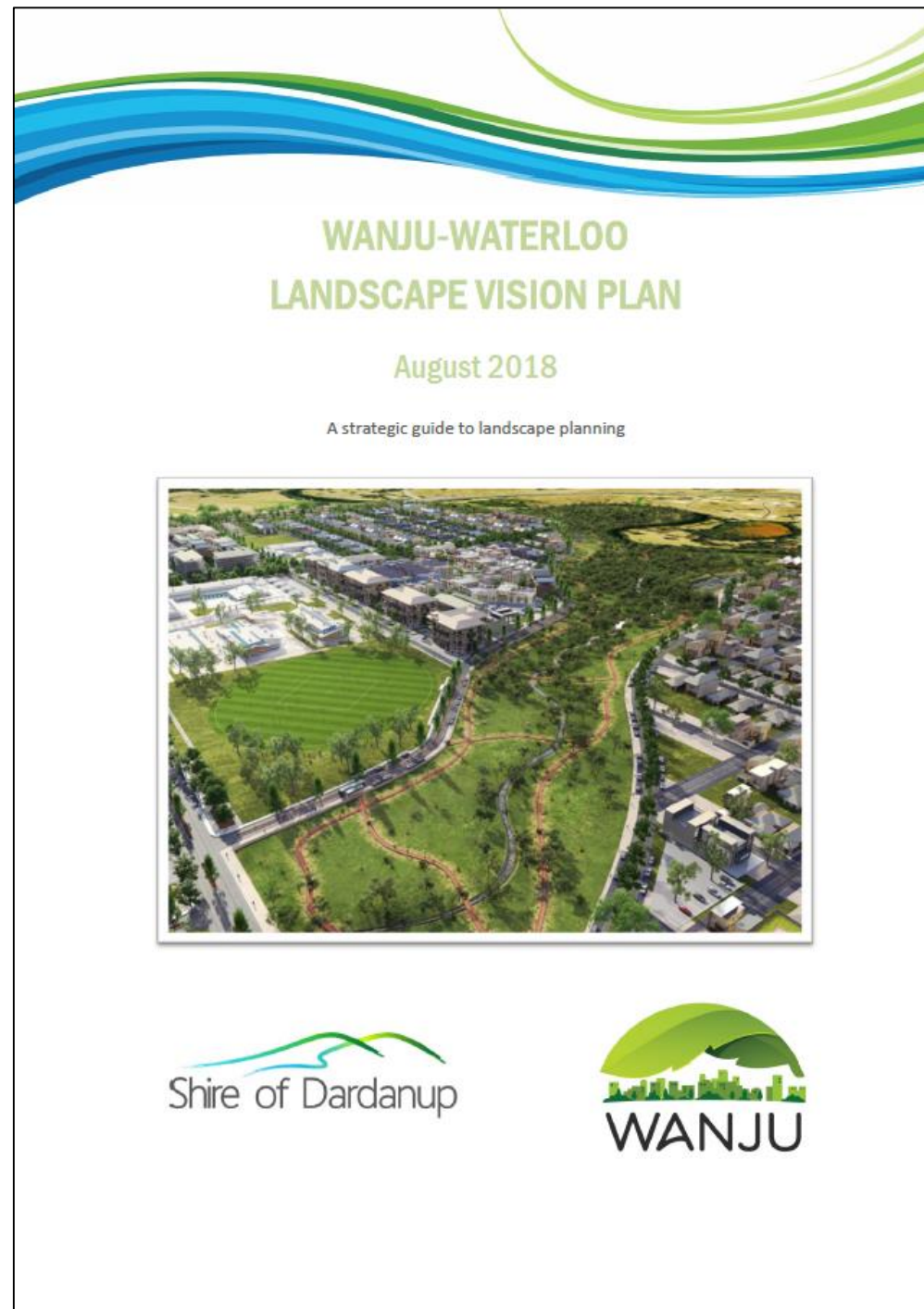
- Source availability – 2.7 GL, surplus 1.3 GL
- Infrastructure
  - Local conveyance to reservoir
- Aquifer injection / recovery
- Distribution pipeline and pumps
- Unit water cost
  - \$3.60 / KL



### Options – shares of capex and resource costs











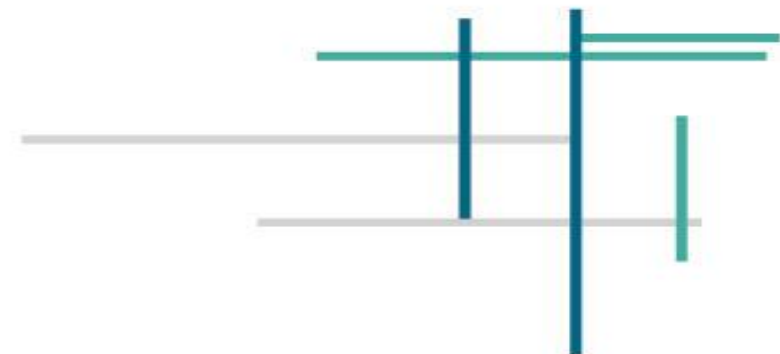
# Questions...



**DISTRICT WATER MANAGEMENT STRATEGY**  
TO SUPPORT THE WANJU AND WATERLOO DISTRICT STRUCTURE PLANS

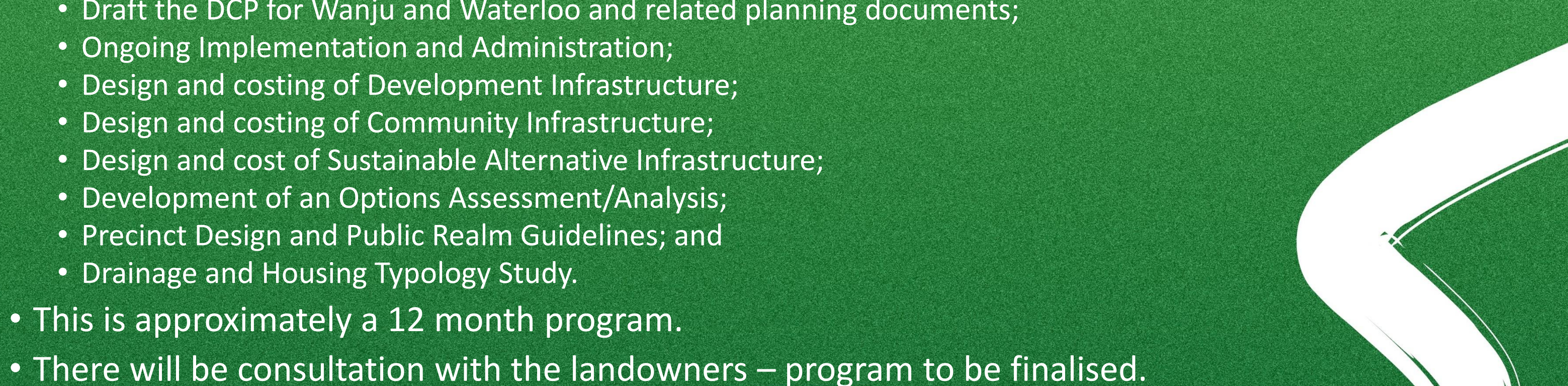
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OCTOBER 2021  
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# ***WANJU & WATERLOO Developer Contribution Plan***

- Council has supported a preferred tenderer for the Wanju & Waterloo DCP's - currently finalising contract negotiations.
  - A lead consultant with a consortium of sub-consultants is to draft the DCP's for Wanju and Waterloo and related planning documents.
  - The scope of works was broken down into eight (8) separable portions which included the following for consideration:
    - Draft the DCP for Wanju and Waterloo and related planning documents;
    - Ongoing Implementation and Administration;
    - Design and costing of Development Infrastructure;
    - Design and costing of Community Infrastructure;
    - Design and cost of Sustainable Alternative Infrastructure;
    - Development of an Options Assessment/Analysis;
    - Precinct Design and Public Realm Guidelines; and
    - Drainage and Housing Typology Study.
  - This is approximately a 12 month program.
  - There will be consultation with the landowners – program to be finalised.
- 



# *Bunbury Outer Ring Road*

- Nathan Rider - Manager Infrastructure, Planning & Design will provide an update on BORR and Related Road Closures





# ***Proposed Road Closures***





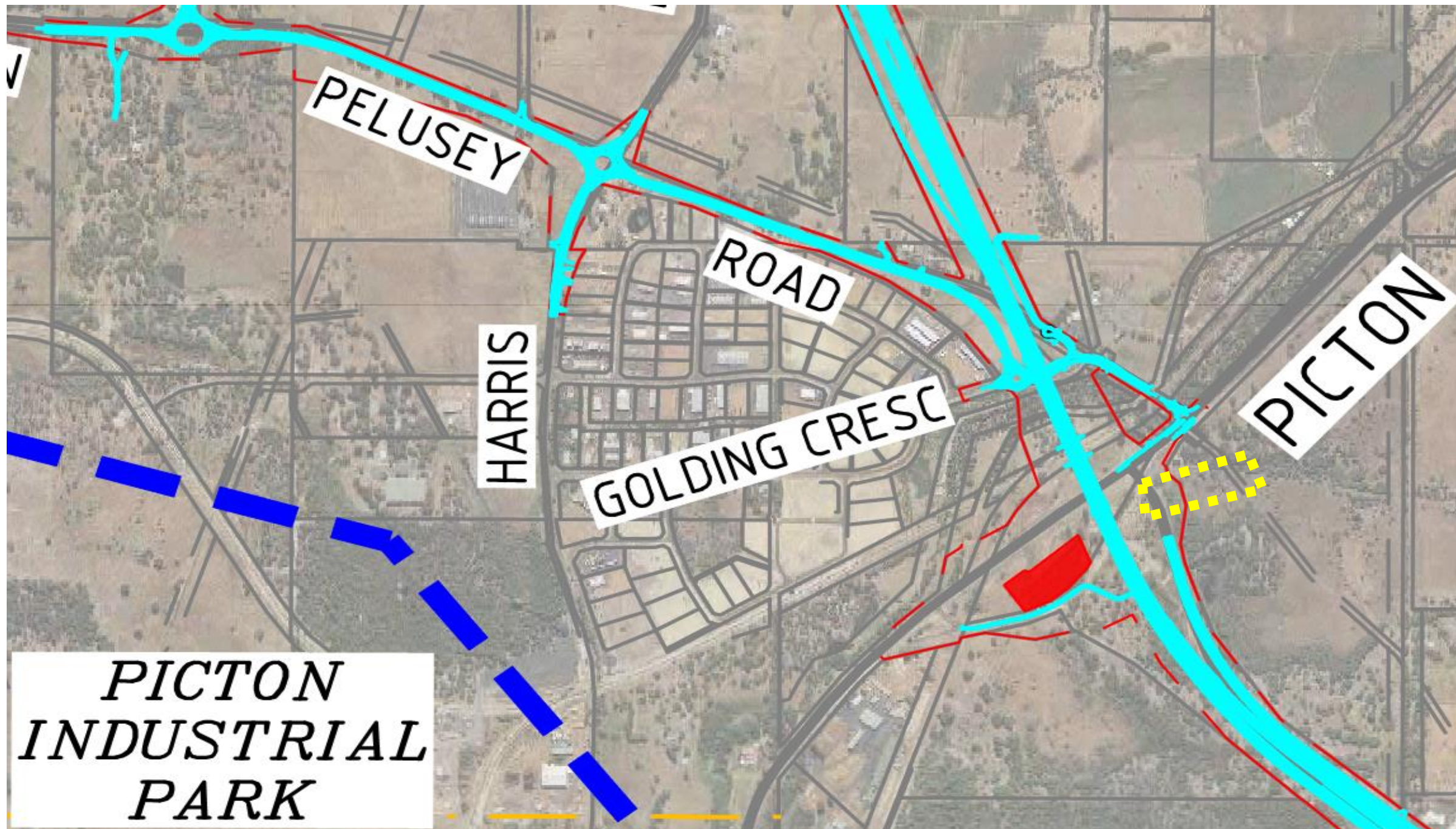
# Direct BORR Project Road Closures

The proposed road closures are summarised in the following table:

Stage	Road	Section	Closure Type	Proposed Start	Proposed Finish	Duration (Months)
1	Golding Crescent	Martin-Pelusey Road to Nicholson Road	Temporary	1/10/21	23/1/22	4
1	Wireless Road	Harris Road towards South Western Highway (3 km)	Temporary	29/11/21	26/4/23	17
1	St Helena Road	Wireless Road end	Permanent	29/11/21	-	-
1	Bell Road	Wireless Road end	Permanent	29/11/21	-	-
1	Harris Road	Damiani-Italiano Road to Dowdells Line	Temporary	5/1/22	26/4/23	16
2	Martin-Pelusey Road	Copplestone Road to Shire Depot	Temporary	26/4/23	22/12/23	8
2	Waterloo Road	South Western Highway to Wild Rose Road	Permanent	26/4/23	-	-
3	Harris Road	Both sides of BORR	Permanent	22/12/23	-	-
4	Martin-Pelusey Road	Boyanup-Picton Road to Copplestone Road	Temporary	22/12/23	28/6/24	7



*Golding Crs - Temporary Closure – 4 Months – Nov 2021 to Feb 2022*

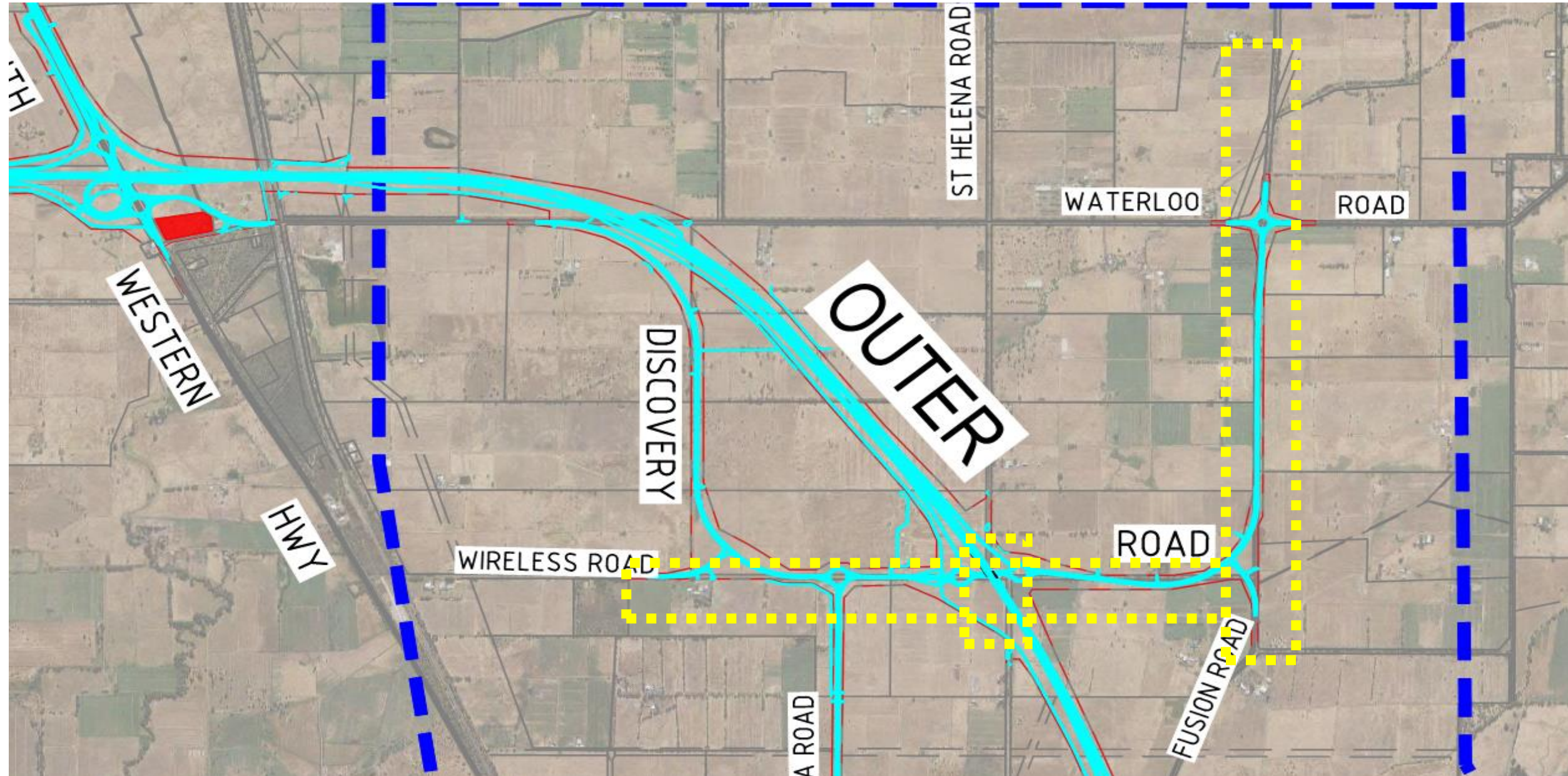




*Wireless Road - Temporary Closure – 17 Months – Dec 2021 to May 2023*

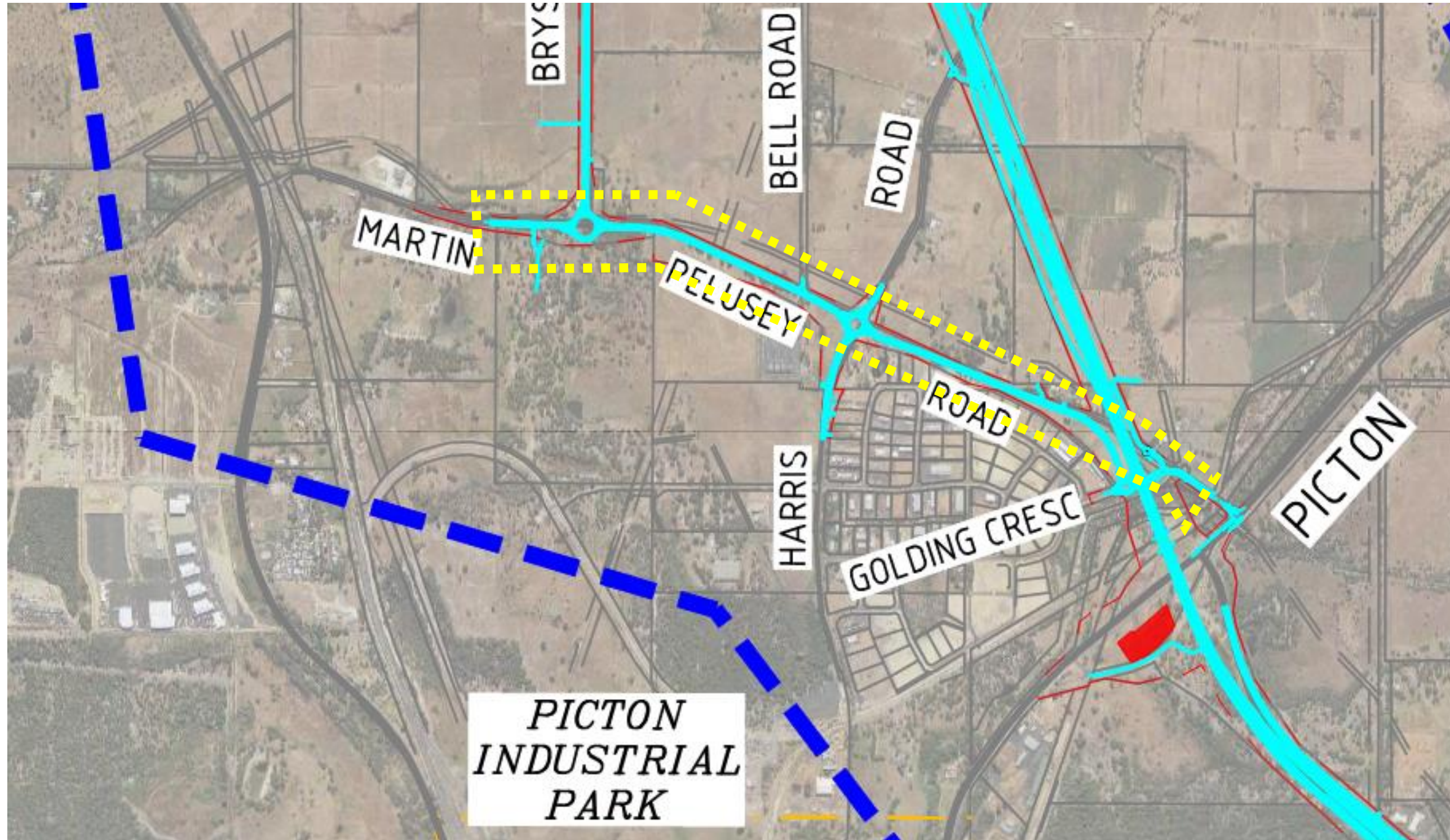
*Harris Road – Temporary Closure – 16 Months – Jan 2022 to May 2023*

*St Helena Road and Bell Road – Permanent Closure - from Dec 2021*



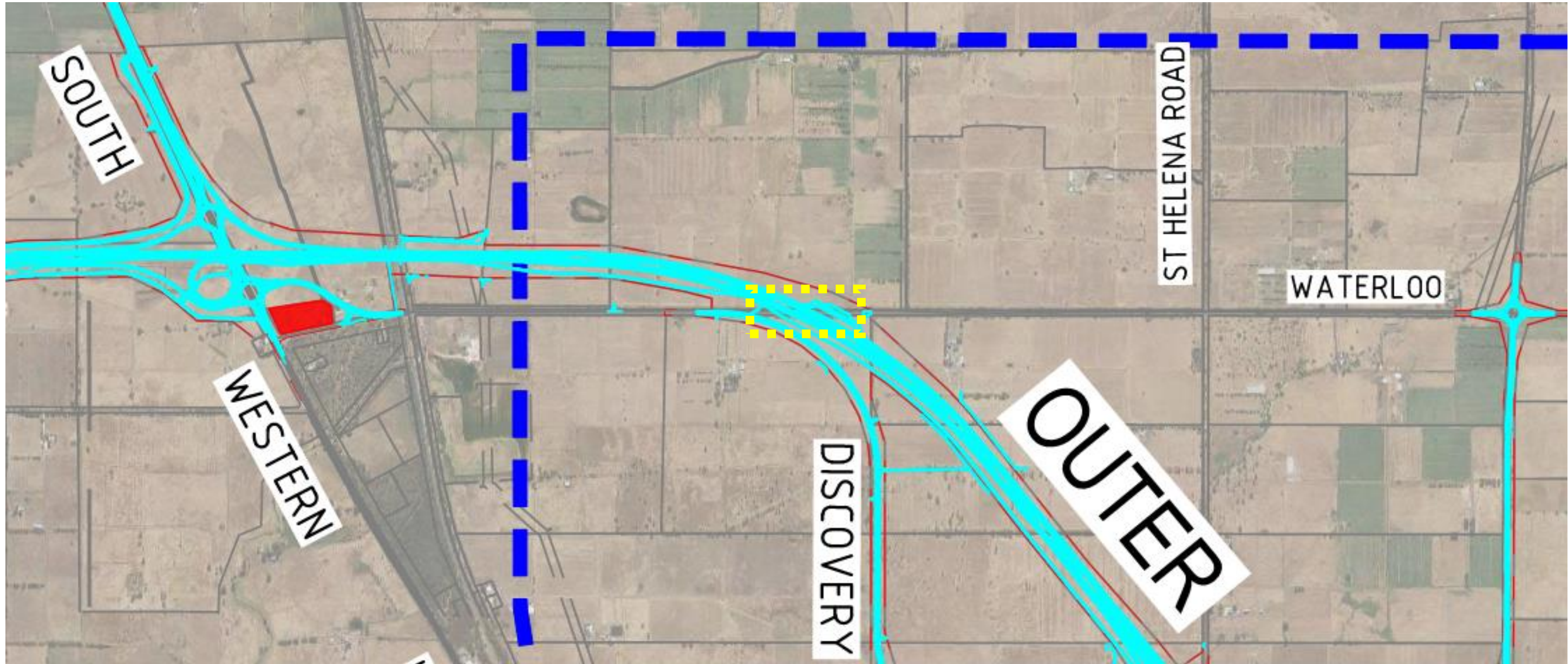


# *Martin Pelusey Road - Temporary Closure – 8 Months May 2023 to Jan 2024*



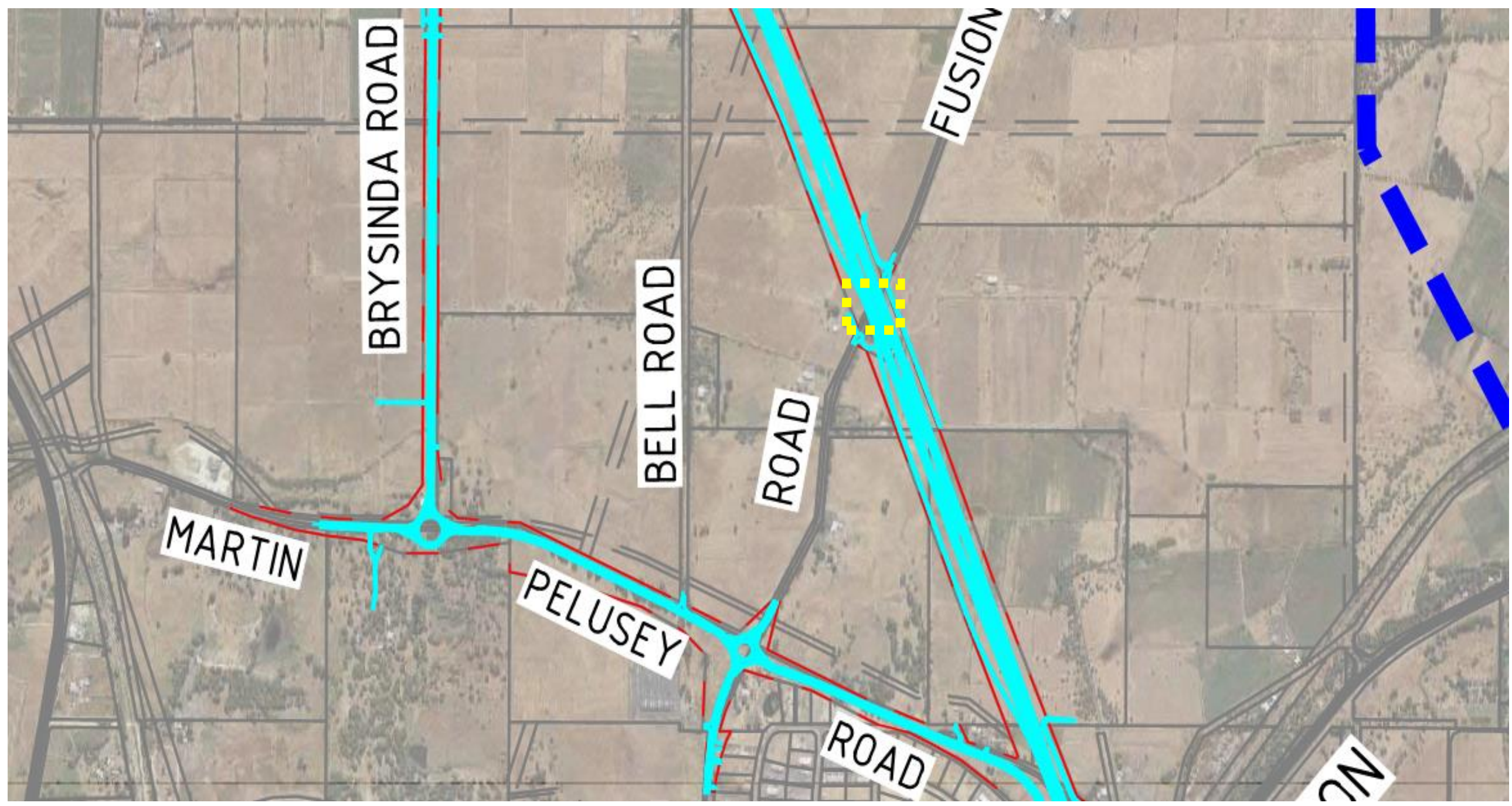


# Waterloo Road – Permanent Closure – from April 2023





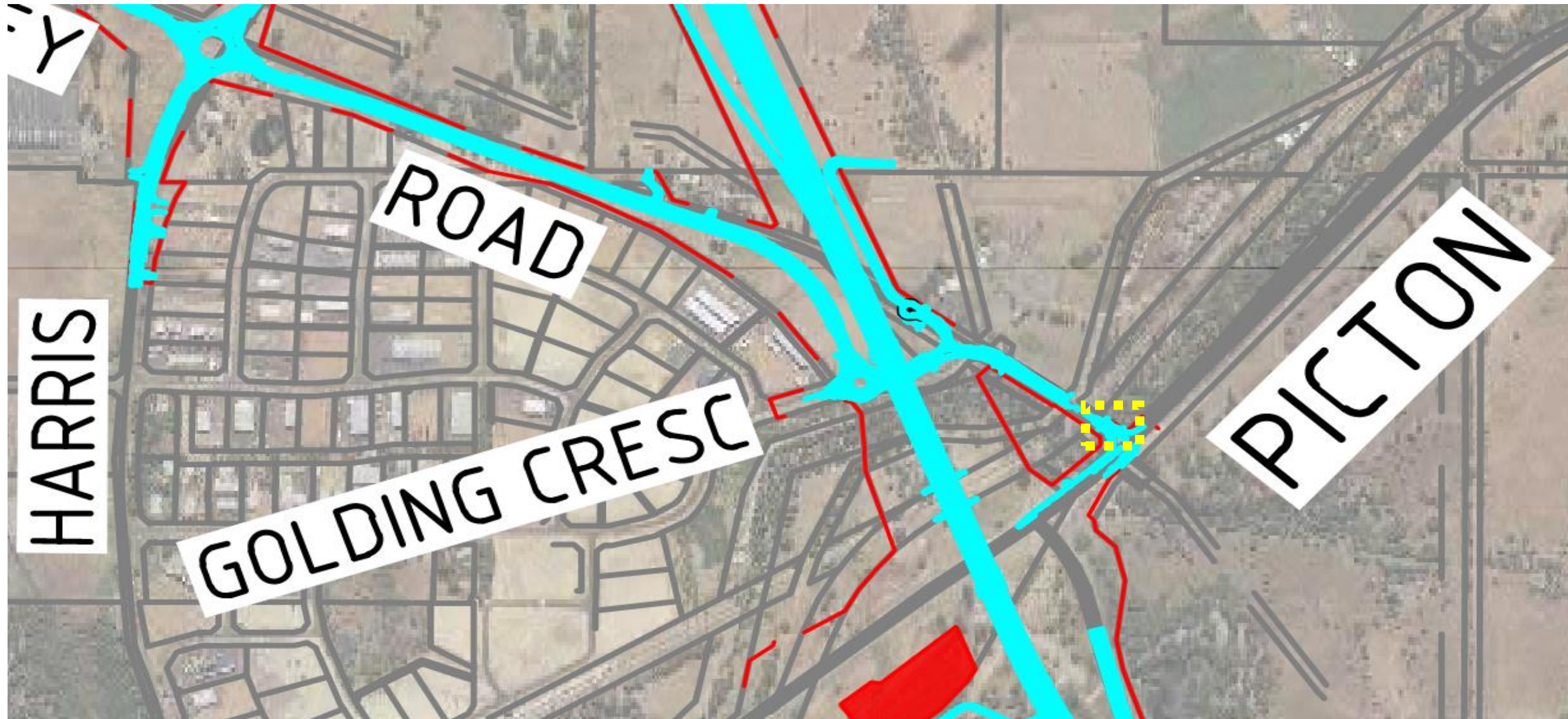
# Harris Road – Permanent Closure – from December 2023





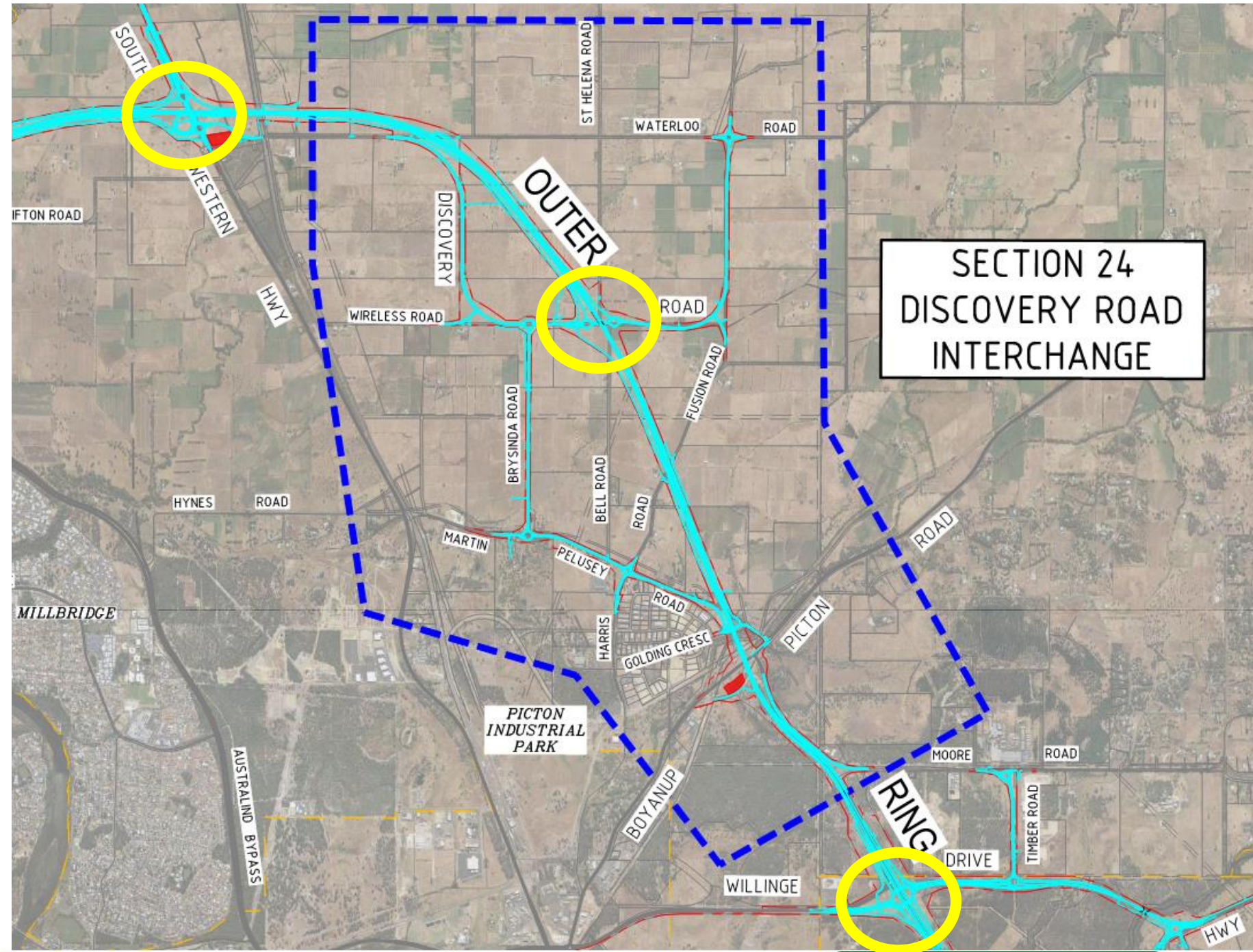
# *Martin Pelusey Road – Temporary Closure – 7 Months*

*Dec 2023 to Jun 2024*





# Proposed Closure of Wireless Road Connection to South Western Highway





# *Proposed Closure of Wireless Road Connection to South Western Highway*

*When? If it happens, nothing will happen until the BORR project is finished*



*Public Comment Period Closes end of November 2021*