



**WAPC**

Western  
Australian  
Planning  
Commission

LEADING A  
CONTEMPORARY  
PLANNING SYSTEM



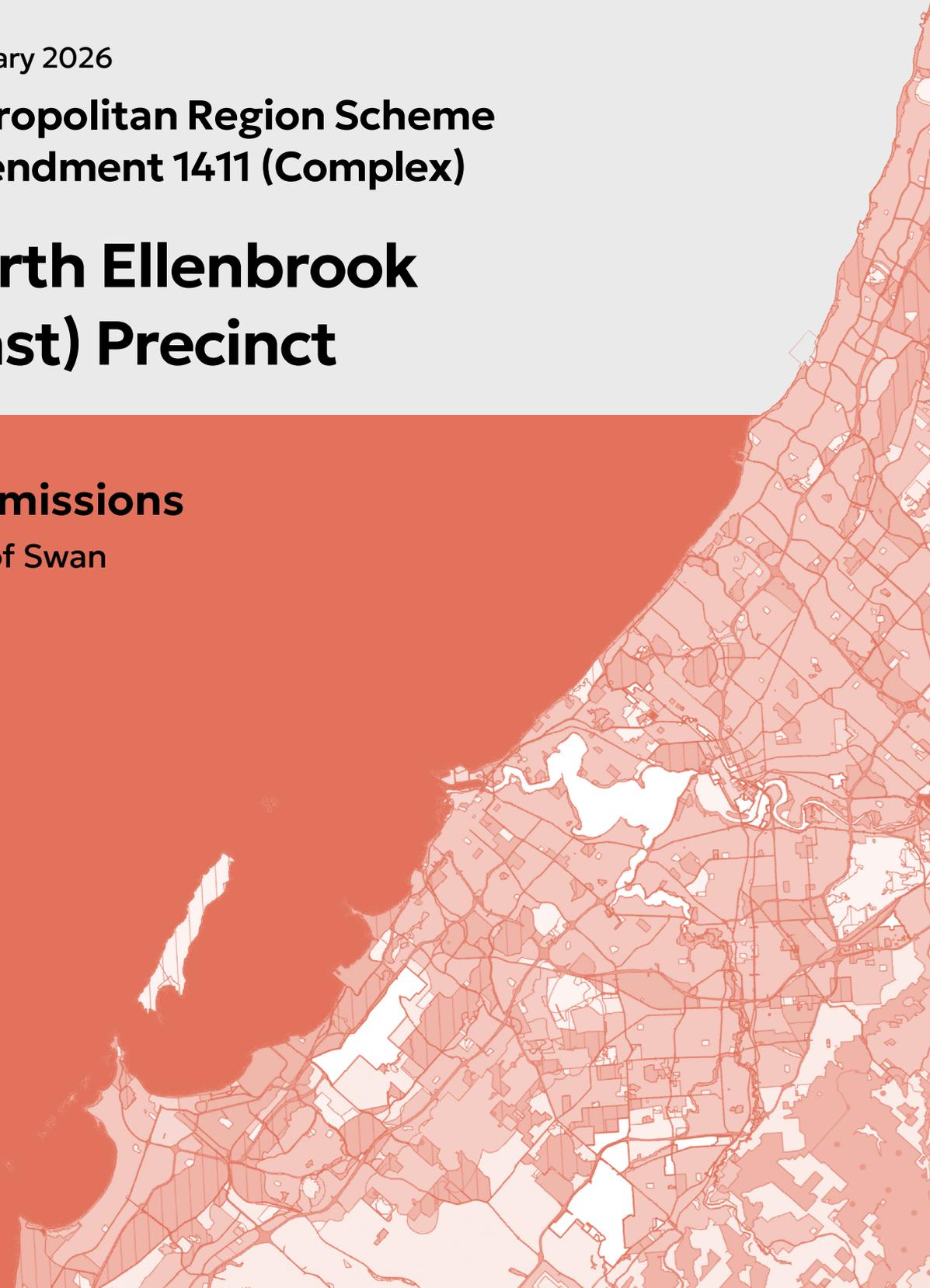
February 2026

## Metropolitan Region Scheme Amendment 1411 (Complex)

# North Ellenbrook (East) Precinct

## Submissions

City of Swan



**Acknowledgement of Country**

The Western Australian Planning Commission acknowledges Aboriginal people as the traditional custodians of Western Australia. We pay our respects to the Ancestors and Elders, both past and present, and the ongoing connection between people, land, waters, and community. We acknowledge those who continue to share knowledge, their traditions and culture to support our journey for reconciliation. In particular, we recognise land and cultural heritage as places that hold great significance for Aboriginal people.

**Disclaimer**

This document has been published by the Western Australian Planning Commission. Any representation, statement, opinion, or advice expressed or implied in this publication is made in good faith and on the basis that the government, its employees, and agents are not liable for any damage or loss whatsoever which may occur as a result of action taken or not taken, as the case may be, in respect of any representation, statement, opinion or advice referred to herein. Professional advice should be obtained before applying the information contained in this document to particular circumstances.

**© State of Western Australia**

Published by the  
Western Australian Planning Commission

Gordon Stephenson House  
140 William Street  
Perth WA 6000

Locked Bag 2506  
Perth WA 6001

Internet: [www.dplh.wa.gov.au](http://www.dplh.wa.gov.au)  
Email: [info@dplh.wa.gov.au](mailto:info@dplh.wa.gov.au)

Phone: (08) 6551 8002  
National Relay Service: 13 36 77

Amendment 1411 (Complex)  
Submissions

File: RLS/1083

Published February 2026

This document is available in alternative formats on application to the  
Department of Planning, Lands and Heritage Communications Branch.

# Schedule 1

listing of submissions

# Metropolitan Region Scheme Amendment 1411 (Complex) North Ellenbrook (East) Precinct

Submission Number	Submitter
1	Department of Water and Environmental Regulation
2	Department of Health
3	Water Corporation
4	Department of Primary Industries and Regional Development
5	Main Roads Western Australia
6	Department of Energy, Mines, Industry Regulation and Safety
7	Public Transport Authority
8	Department of Education
9	Davco Holdings Pty Ltd
10	Department of Fire and Emergency Services
11	City of Swan
12	Dorothy Mulder & Ingrid Mulder
13	Edward Benfield (on behalf of the Bullsbrook Resident and Ratepayers Association)
14	Hatch (on behalf of the owners of Lots 29 & 30 Maralla Road, Bullsbrook)
15	Jan Zeck
16	Department of Transport
17	Tanika Groves
18	Peter & Cara Holschier
19	Connor Pike
20	Name removed at the request of the submitter
21	Name removed at the request of the submitter
22	Name removed at the request of the submitter
23	Name removed at the request of the submitter
24	Name removed at the request of the submitter
25	Name removed at the request of the submitter
26	Kirsty Lea
27	Name removed at the request of the submitter
28	Name removed at the request of the submitter
29	Ellen Brockman Integrated Catchment Group
30	Name removed at the request of the submitter
31	Hatch (on behalf of Satterley North Ellenbrook Pty Ltd)
32	Parcel Property
33	Lateral Planning (on behalf of the owner of 166 Halden Road, Bullsbrook)
34	Michelle Davies
35	CLE Town Planning + Design
36	Name removed at the request of the submitter
37	North Swan Land Conservation District Committee
38	Wendy Claxon
39	Urban Bushland Council Inc
40	Name removed at the request of the submitter
41	Hatch (on behalf of EEDB Property Pty Ltd)
42	Hatch (on behalf of GM Property Group)
Late Submissions	Submitter
43	Department of Biodiversity, Conservation and Attractions

# Schedule 2

submissions

## Submission 001

**From:** [Jim Mackintosh](#)  
**To:** [Region Planning Schemes](#)  
**Cc:** [Anthony Muscara](#)  
**Subject:** RE: Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) - RLS/1083  
**Date:** Tuesday, 22 April 2025 3:22:12 PM  
**Attachments:** [image001.png](#)  
[RE Proposed Metropolitan Region Scheme amendment North Ellenbrook \(East\) City of Swan - Request for Preliminary Comments.msg](#)

---

OFFICIAL

OFFICIAL

OFFICIAL

Dear DPLH,

Thank you for the above referral. The Department of Water and Environmental Regulation (DWER) has previously supported the proposal (copy attached). Therefore the DWER has no objections.

Regards

**Jim Mackintosh**

---

**Department of Water and Environmental Regulation**

**Program Manager**

**Swan Avon Region**

**Planning Advice Section**

T 08 6250 8043 |

E [jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)

Visit our website [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)

---

**From:** [Jim Mackintosh](#)  
**To:** [Lainy Collisson](#); [Christine Collins](#)  
**Cc:** [Anthony Muscara](#); [Brett Pye](#); [Region Planning Schemes](#)  
**Subject:** RE: Proposed Metropolitan Region Scheme amendment – North Ellenbrook (East) – City of Swan - Request for Preliminary Comments  
**Attachments:** [image001.jpg](#)  
[RE North Ellenbrook \(east\) DSP - DWMS .msg](#)

---

Dear DPLH,

Thank you for the above referral. The Department of Water and Environmental Regulation (DWER) has considered the proposal and would dlike to provide the following advice:

The DWER has previously endorsed the *District Water Management Strategy – North Ellenbrook East* (RPS, July 2022) and therefore supports the proposed MRS Amendment. A copy of the DWER's endorsement of the DWMS is attached.

Regards

**Jim Mackintosh**

---

**Department of Water and Environmental Regulation**

**Program Manager**

**Swan Avon Region**

**Planning Advice Section**

T 08 6250 8043 |

E [jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)

Visit our website [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)

---

**From:** [Jim Mackintosh](#)  
**To:** [smcsweeney](#)  
**Cc:** [johan.gildenhuis@dplh.wa.gov.au](#); [Daniel Martinovich](#); [Vanson, Scott](#); [Joycelyn Siew](#); [Glenn Simmons](#); [Jacqui Clinton](#)  
**Subject:** RE: North Ellenbrook (east) DSP - DWMS  
**Attachments:** [image001.png](#)

---

Dear Shane,

Thank you for the submission of the latest District Water Management Strategy (DWMS), for the above proposal, to the Department of Water and Environmental Regulation. The Department is satisfied that the revised DWMS addresses our previous comments. The DWMS can now be considered endorsed by the Department and the Department supports the proposal progressing to the next stage of the approval process (MRS Amendment stage and Environmental Protection Authority assessment).

Regards

**Jim Mackintosh**

---

## Department of Water and Environmental Regulation

**Program Manager**

**Swan Avon Region**

**Planning Advice Section**

T 08 6250 8043 |

E [jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)

Visit our website [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)

---

**From:** Shane McSweeney

**Sent:** Thursday, 14 July 2022 3:13 PM

**To:** Jim MacKintosh ; Glenn Simmons

**Cc:** [johan.gildenhuis@dplh.wa.gov.au](#); Daniel Martinovich ; Vanson, Scott ; Joycelyn Siew

**Subject:** RE: North Ellenbrook (east) DSP - DWMS

Hi Jim,

DWER reference (Rev1 DWMS – PA 041929, Rev0 DWMS – 034479)

RPS Reference: EWP18103.001

Thanks for discussing this project with me last week.

As discussed, we have finalised a Revision 2 of the DWMS which aims to respond to both DWER and DBCA comments raised in relation to the Rev 1 of the DWMS.

I have uploaded the document to the Water Online portal.

I have also attached a word version of the comments table which outline DWER's comments, and the responses and changes made in response to those comments in the DWMS. The table provides direction on where changes have been made to this version of the DWMS for ease of review.

As discussed, the main issue that remains outstanding is the official submission of the groundwater licence trade applications. While the licence trade applications have yet to be finalised in a paperwork sense, the DWMS outlines each of the agreed trades in Table 14 which demonstrates that the licence trades will exceed the minimum irrigation demand required outlined by DWER in a meeting with DPLH on 2 March 2022.

[@Glenn.Simmons@DWER.wa.gov.au](mailto:@Glenn.Simmons@DWER.wa.gov.au) – see below for licence trade application coming your way shortly.

### **Groundwater Licence trades:**

GM Property has entered in commercial arrangement for the sale of Lot 10 within the DSP area. GM Property are currently finalising the required paperwork to submit a licence trade application to DWER

for the trade of GWL 46317 with a licensed allocation of 73,650 kL/yr. I missed a signature on that one and so I'm waiting for the current licence holder to return from holiday to sign the form. Should be coming the week beginning the 25<sup>th</sup> of July.

Lendlease is also finalising agreements with a number of parties for the trade of eight existing licences who are interested in trading some/all of their GWL allocation, summarised in the table below.

**Table : Proposed groundwater licence trades in the North Ellenbrook East area to support the DSP**

<b>GW area</b>	<b>GW subarea</b>	<b>Aquifer</b>	<b>GWL allocation (kL/yr) to be traded</b>
Swan	North Swan	Perth - Superficial Swan	17,450
			73,650
			10,000
<b>Subtotal</b>			<b>101,100</b>
<b>Leederville aquifer</b>			
Swan	Swan Confined	Perth - Leederville	2,500
			12,000
			6,500
			5,000
			6,300
			10,000
<b>Subtotal</b>			<b>42,300</b>
<b>Total</b>			<b>143,400</b>

These groundwater licence trades will be submitted in the coming three weeks (anticipated by first week of August 2022).

Once these licence trade applications are submitted then I'm confident DWER has all the information required to provide endorsement or support for the DWMS.

Let me know if you need anything further from me. I'm heading on leave tonight but will check my emails intermittently to make sure I can put out any fires when they spark.

Regards,

Shane

**Shane McSweeney**  
**General Manager and Technical Director Urban Water Management**



P 08 6182 1790

E [smcsweeney@pentiumwater.com.au](mailto:smcsweeney@pentiumwater.com.au)

W [pentiumwater.com.au](http://pentiumwater.com.au)

Level 1, 640 Murray St, West Perth WA 6005, Australia

This E-mail is confidential. If you are not the addressee you may not copy, forward, disclose or use any part of it. If you have received this message in error please delete it and all copies from your system and notify the sender immediately by return E-mail. Internet communications cannot be guaranteed to be timely, secure, error or virus-free. The sender does not accept liability for any errors or omissions.

**From:** Jim MacKintosh <[jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)>

**Sent:** Monday, 4 July 2022 8:12 AM

**To:** Shane McSweeney <[smcsweeney@pentiumwater.com.au](mailto:smcsweeney@pentiumwater.com.au)>

**Subject:** RE: North Ellenbrook (east) DSP - DWMS

Thanks Shane. I'll give you a call about 11:30 Tuesday the 5<sup>th</sup> if that is OK?

Regards

## Jim Mackintosh

---

### Department of Water and Environmental Regulation

Program Manager

Swan Avon Region

Planning Advice Section

T 08 6250 8043 |

E [jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)

Visit our website [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)

---

**From:** Shane McSweeney <[smcsweeney@pentiumwater.com.au](mailto:smcsweeney@pentiumwater.com.au)>

**Sent:** Friday, 1 July 2022 12:38 PM

**To:** Jim Mackintosh <[jim.mackintosh@dwer.wa.gov.au](mailto:jim.mackintosh@dwer.wa.gov.au)>

**Subject:** FW: North Ellenbrook (east) DSP - DWMS

Hi Jim,

We have been progressing the revision of the DWMS for North Ellenbrook East over the past few months since we discussed the project with DPLH on 2 March 2022.

DWER's most recent advice (attached) outlined four major concerns. You can see from the emails below with the City (following our meeting with them) I have continued to use those four concerns.

Just a brief progress update on each of those items to aid our discussions on this:

1. Water source for POS and school irrigation:
  - a. We have revised the demand analysis based on water supply planning advice and we have also set ourselves a minimum allocation volume that we must reach to gain DWER support for DWMS (based on your comment in that meeting with DPLH of 2 March 2022). That volume is based on have secured sufficient groundwater entitlements for school sites and DOS site.
  - b. Licence trades have been identified and one licence trade for 73,650 kL/yr just needs a final signature on the Form 4T. LendLease have identified and agreed trade values with other licence holders to bring us to the minimum requirement, but the Lendlease PM is going through the final approval process to get those funds released. (one of the biggest challenges has been getting the internal machine of an ASX listed company to lower their risk threshold to allow them to trade for licences without any development outcome certainty).
2. Proposed subsoil harvesting scheme:
  - a. The preferred irrigation water source is groundwater and trading is occurring to reach the minimum volume requirement by groundwater to support the DWMS approval.
  - b. Lendlease has commissioned the Prefeasibility Study as was requested and that study has now been completed. However, given the above stated groundwater supply, the pre-feasibility study approval no longer is required to support the DWMS. The City's position on the subsoil harvesting option is also outlined in the below email. It is likely that the DWMS will not include the subsoil harvesting pre-feasibility study but that study will be provided to DWER and the City outside of the DWMS process.
3. Northern Creek line:
  - a. The concept development plan has been revised to incorporate the drainage line (waterway)
  - b. The stormwater modelling has been revised and DWMS updated to include this

design outcome

4. Water Sensitive Urban Design

- a. The DWMS now includes wording to that effect and all WSUD features proposed including any aspirational treatment areas and methods.

In summary, the DWMS is now sitting on my desk for final review. It should be submitted to DWER next week. The irrigation licence trades are yet to be submitted to DWER (I'm anticipating those licence trade submission will occur within the month of July 2022) and that parallel process within the groundwater allocation branch can occur.

DPLH is seeking support from DWER for the DWMS to support the DSP. I believe Johan is looking to get the DSP approved subject to final DWMS approval similar to the process that occurred at East Wanneroo.

I'll looking to have a phone discussion with you regarding this.

Regards,

Shane

**Shane McSweeney**  
**General Manager and Technical Director Urban Water Management**



P 08 6182 1790

E [smcsweeney@pentiumwater.com.au](mailto:smcsweeney@pentiumwater.com.au)

W [pentiumwater.com.au](http://pentiumwater.com.au)

Level 1, 640 Murray St, West Perth WA 6005, Australia

This E-mail is confidential. If you are not the addressee you may not copy, forward, disclose or use any part of it. If you have received this message in error please delete it and all copies from your system and notify the sender immediately by return E-mail. Internet communications cannot be guaranteed to be timely, secure, error or virus-free. The sender does not accept liability for any errors or omissions.

**From:** Shane McSweeney

**Sent:** Friday, 25 March 2022 2:45 PM

**To:** Daniel Martinovich <[daniel@cleplan.com.au](mailto:daniel@cleplan.com.au)>; Ian Humphrey <[Ian.Humphrey@swan.wa.gov.au](mailto:Ian.Humphrey@swan.wa.gov.au)>

**Cc:** Liam Smart <[Liam.Smart@swan.wa.gov.au](mailto:Liam.Smart@swan.wa.gov.au)>

**Subject:** RE: North Ellenbrook (east) DSP - POS irrigation requirements

Hi all,

Thanks for your time this morning to discuss the North Ellenbrook East DSP and specifically the DWMS and the issue of POS irrigation requirements.

Below I have outlined the four outstanding comments from DWER on the DWMS and our proposed response or changes to the DWMS (in black text). In **blue text** I have outlined some of my takeaway points from our discussions today.

Are you happy to accept these as broad minutes or do you wish to clarify anything?

Thanks,

Shane

1. **Water Source for irrigation** – it is DWER's expectation that water licences be traded or transferred at the DSP stage when no certainty on a development outcome is available to the proponent.

Actions currently being taken by the proponent:

- In consultation with the Water Supply Planning branch of DWER, RPS has revised the required irrigation water volume per year. The reduction is based on DWER's broader review of the irrigation requirements. The irrigation volume is calculated based on 60% of the development requiring irrigation at 6,750 kL/ha/yr. In this instance the DSP area would need approximately 200,000 kL/yr for irrigation.
- We acknowledge that the DSP North Ellenbrook West was successful in securing some

irrigation water supply to irrigate approximately 35% of the required POS across that DSP and the DWMS including that information was approved by DWER. We therefore understand that irrigating 35% of POS is a benchmark for DWER. Irrigating 35% of POS would require 118,000 kL/yr as a minimum.

- GM Property Group have now secured an option on land and have begun the licence transfer process. This licence has a volume of 73,650 kL/yr.
- Trades and transfers have been explored over the past two years. However, no trade or transfer materialised for a variety of reasons.
- Lendlease engaged BD Water to explore further licence trading opportunities in the relevant subareas. This work is on-going.

We accept that the 60% benchmark for irrigated POS is something that the City is comfortable and aligns with previous DWER studies and City' audits of their POS assets.

In our most recent meeting with DWER it was agreed they would accept or approve the DWMS if sufficient groundwater allocation was secured to irrigate the District Open Space and the Department of Education sites (whether they are co-located or not). We understand and would expect that both the City and DWER will expect that full water supply for irrigation requirement would need to be met for each Local Structure Plan.

Based on our discussions this morning I understand the City are consistent with DWER in their expectation that 60% of a DSP area would be irrigated at an average of 6,750 kL/ha/yr but this does not include the Department of Education sites that won't have a shared use agreement with the City.

Specifically, the City will look to have the following irrigation water supply allocation for various green spaces as follows:

- District Open Space would require 10,000 kL/yr for 80 to 90% of that nominated area.
- A co-located school oval/POS would require 10,000 kL/yr for 90% of that area.
- Active POS areas with kick about space or turf spaces would require 10,000 kL/yr. However, given some of these areas have not been defined yet the City accepts the general rule of 60% of the DSP's open space (not including DoW site) would need to be irrigated at an average irrigation rate of 6,750 kL/ha/yr

## 2. **Proposed subsoil harvesting scheme**

DWER have requested that a pre-feasibility study for subsoil harvesting scheme or any alternate water supply scheme be advanced to support the DWMS.

Actions currently being taken by the proponent:

- Prepare a *Non-potable water supply – option evaluation and concept design report*. This report would discuss the viability of a subsoil drainage harvesting system, as per Stage 1 of the *Guideline for the approval of non-drinking water systems in WA* (2013). This report will include information such as: site characteristics and constraints; land planning considerations; end uses and demand; discussion of the non-drinking water sources; options for siting, water treatment and storage; infrastructure and land requirements; health and environmental risks; and institutional arrangements. RPS would use our experience from subsoil harvesting feasibility reports for other developments including Brabham and the Nambelup Industrial Area (DWER).

While this report won't lock in institutional arrangement of funding or governance it should provide DWER with sufficient scientific certainty in the subsoil harvesting approach for approval of the DWMS.

The City is comfortable with the possibility of an innovative alternate non-potable water supply option in the form of subsoil harvesting as this is consistent with the Council decision for the Brabham project. But additional analysis, engineering feasibility studies, and agreement the

institutional arrangements of funding and governance would need to be reached before the City would accept the implementation of that proposal. This level of detail would only be feasible to provide at LSP stage.

### 3. Northern Creek re-alignment

DWER has requested the reinstatement (in the plans) or a rural agricultural drain as it is mapped as a natural waterway.

Actions:

- The concept development plan will be revised to incorporate the drainage line (waterway)
- The stormwater modelling will be revised and DWMS updated to include this design outcome
- Further assessment at the LSP stage will be undertaken to realign the waterway

Nothing further for the City to consider at this stage.

### 4. Water Sensitive Urban Design

DWER requires that the DWMS proposes best practice WSUD.

Actions:

- The DWMS will include all WSUD features proposed including any aspirational treatment areas and methods.

As was discussed, we will need to include ambitions on WSUD features to facilitate at source infiltration of stormwater in the DWMS to satisfy DWER. As was agreed, we will get into the details on these in an LWMS that supports an LSP where the City can have greater control on what is designed.

-----Original Appointment-----

**From:** Daniel Martinovich <[daniel@cleplan.com.au](mailto:daniel@cleplan.com.au)>

**Sent:** Thursday, 10 March 2022 2:23 PM

**To:** Daniel Martinovich; Daniel Martinovich; Ian Humphrey; Shane McSweeney

**Cc:** Liam Smart

**Subject:** North Ellenbrook (east) DSP - POS irrigation requirements

**When:** Friday, 25 March 2022 10:00 AM-11:00 AM (UTC+08:00) Perth.

**Where:** MS Teams

Meeting will be online.

Ian – please forward to Liam.

---

## Microsoft Teams meeting

**Join on your computer or mobile app**

[Click here to join the meeting](#)

[Learn More](#) | [Meeting options](#)

---

Disclaimer: This e-mail is confidential to the addressee and is the view of the writer, not necessarily that of the Department of Water and Environmental Regulation, which accepts no responsibility for the contents. If you are not the addressee, please notify the Department by return e-mail and delete the message from your system; you must not disclose or use the information contained in this email in any way. No warranty is made that this material is free from computer viruses.



Your Ref: RLS/1083 MRS Amendment 1411  
Our Ref: F-AA-90444-85 E-AA-25/121079  
Contact: Vic Andrich 9222 2000

Ms Marija Bubanic  
Senior Planning Support Officer, Land Use Planning  
Department of Planning, Lands and Heritage  
140 William Street  
PERTH WA 6000

Attention: Anthony Muscara

Via email: [regionplanningschemes@dplh.wa.gov.au](mailto:regionplanningschemes@dplh.wa.gov.au)

Dear Ms Bubanic

**PROPOSED METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX)  
– REZONE ‘RURAL’ ZONE TO ‘URBAN DEFERRED’ AND ‘REGIONAL OPEN  
SPACE’ – NORTH ELLENBROOK (EAST)**

Thank you for your letter of 11 April 2025, requesting comments from the Department of Health (DoH) on the above proposal. The DoH provides the following comment:

**1. *Land use and Amenity Considerations***

The submission is in support of proposals to rezone 504Ha from Rural to ‘Urban Deferred and Regional Open Space’ to facilitate future subdivision and residential/POS redevelopment.

The site is a large area of low lying, remnant bush, ephemeral ponds and creeks, partly cleared and use as agricultural (grazing) land with associated numerous small farmhouses and outbuildings. There is a "turf farm" Lot 10 on Maralla Road in the south of the site, large linear earthworks (Lot12/13) on Sawpit Road and a small shooting range Lot 110 to the west of Sawpit Road.

The site is surrounded by The Vines residential subdivision to the south, Tonkin Highway reserve to the west, other remnant bushland and cleared grazing land to the north and south east, a large market garden/plant nursery immediately adjacent to the east and an intensive poultry farm 700m to the east.

The site has not been classified as a C-RR, CRU, RRU as recorded on DWER’s Contaminated Sites database (CS Act 2003). However, although this site does not appear on DWERs public access database, it may be subject to other important classifications not recorded on that database. The proponent should obtain a Basic Summary of Records relating to the land and its surroundings to complete their assessment of the site’s suitability for a rezoning to a more sensitive land use. Schedule 1 — Forms ([www.wa.gov.au](http://www.wa.gov.au))

The site has been used for intensive agricultural (Turf Production) and shooting range land uses which are potentially contaminating land uses as set out in DWER's 'Assessment and management of contaminated sites' (DWER Nov 2021) Appendix B.

DoH advises that the storage and use of agricultural chemicals, fuels and wastes are associated with these contaminated sites, and other hazardous materials including asbestos should be safely removed from buildings prior to demolition and clearance to avoid the creation of new contaminated sites.

It is appropriate and efficient that these matters are comprehensively addressed as early as possible in the land planning process to avoid delays and additional costs later. DoH recommends that the following conditions and advice be included in DPLH advice.

#### CONDITION

- a) Prior to commencement of development works, investigation for soil, groundwater and landfill gas/vapour contamination (as required) is to be carried out to determine if remediation is required.
- b) If required, remediation, including validation of remediation, of any contamination identified shall be completed prior to completion of construction works and occupation to the satisfaction of City of Swan on advice from the Department of Health, to ensure that the site is suitable for the proposed use and poses no unacceptable risk to human health.

Investigations and remediation are to be carried out in compliance with the *Contaminated Sites Act 2003* and current contaminated sites guidelines and best practice. (Department of Health)

#### Advice

In relation to Condition [X] and in accordance with regulation 31(1)(c) of the *Contaminated Sites Regulations 2006*, a Mandatory Auditor's Report, prepared by an accredited Contaminated Sites Auditor, will need to be submitted to the Department of Health as evidence of compliance with Condition [X]. A current list of accredited Auditors is available from [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au).

Planning Conditions requiring a soil and groundwater contamination risk assessment, and if required a Remediation and Validation Report should be conducted in accordance with NEP(ASC)M guidelines and supervised by an independent accredited Contaminated Sites Auditor in accordance with *Contaminated Sites Regulations 2006* reg 31(1).

You should be aware that under section 13(5) of the *Contaminated Sites Act 2003*, if DoH is required to agree a classification for the site, this will be based on evidence provided by the proponent that the site is suitable for the proposed land use and the risk to public health is low.

EPA (2005) guideline ‘*Separation Distances between Industrial and Sensitive Land Uses*’ recommends that a default separation/buffer distances of 300-500m be established around market gardening land uses (and up to 1000m for other land uses), where they may be significant noise, dust and odour impacts and risks arising. Alternatively, DoH policy allows for the creation and use of a 40m wide vegetative buffer around sensitive land uses where spray drift is an issue and provides detailed guidance of the designed and establishment of vegetative buffers for this purpose.

Amenity related to public health needs to be considered during early planning stages to ensure developments do not impact negatively on the health and wellbeing of future populations living in or around the area and to mitigate possible risk to human health or safety. Public health factors to be considered are provided on the following DoH webpage ‘[Residential estates precincts and urban developments](#)’.

## **2. Water Supply and Wastewater Disposal (SPP2.9)**

The amendment is to require that all development is subject to connection to drinking water and sewage services are provided by a licensed service provider.

Future developments/subdivisions are required to connect to scheme water, reticulated sewerage and be in accordance with the *Government Sewerage Policy 2019*.

## **3. Medical Entomology**

The proposal is located in an area that may be prone to mosquitoes as wetlands are in the vicinity. Despite considerable efforts to manage mosquitoes and mosquito-borne disease by the City of Swan in collaboration with DOH, there continues to be cases of Ross River virus and Barmah Forest virus disease, including around Ellenbrook.

To protect the health and lifestyle of communities, all land use planning decisions should include consideration of mosquitoes and their management. While it is well documented that mosquito-borne diseases occur in the Perth metropolitan area, the risk of exposure to mosquitoes and their diseases for future residents in this area of Ellenbrook is not clearly defined. The Department recommends that:

- The proponent works with the City of Swan environmental health team to determine the extent of risk from mosquitoes and mosquito-borne disease for the location
- If that risk is considered to be medium or high by the City, a mosquito management plan should be established for the development area and adequately funded
- The City of Swan ensures they have sufficient resources to continue mosquito management for any future development associated with the amendment following the handover of responsibility from the developer.

Stormwater management infrastructure such as culverts, road drainage systems, etc. should be in accordance with the Department of Water publication *Stormwater Management Manual for Western Australia*, to the satisfaction of the local government - [Stormwater management manual of Western Australia \(www.wa.gov.au\)](http://www.wa.gov.au)

Further details on mosquito management may be downloaded from:  
[Mosquito management \(health.wa.gov.au\)](https://health.wa.gov.au)

Should you have any queries or require further information please contact Vic Andrich  
on 9222 2000 or [eh.eSubmissions@health.wa.gov.au](mailto:eh.eSubmissions@health.wa.gov.au)

Yours sincerely



Jane Cook  
**A/EXECUTIVE DIRECTOR  
ENVIRONMENTAL HEALTH DIRECTORATE**

14 May 2025



Your Ref: RLS/1083  
Our Ref: 153095210 (MRS398711)  
Enquiries: Brett Coombes  
Direct Tel: 9420 3165  
Email: land.planning@watercorporation.com.au

20 May 2025

Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

Attention: Anthony Muscara

### **Proposed MRS Amendment - North Ellenbrook (East)**

Thank you for your correspondence of 11 April 2025 inviting comments on the above proposal. Water Corporation has no objections to the proposed rezoning of this land from "Rural" to "Urban Deferred" and "Regional Open Space" reservation, as this is consistent with the North Ellenbrook (East) District Structure Plan.

The subject land forms part of the broader North Ellenbrook urban expansion area. The Corporation has undertaken conceptual water and wastewater planning for the area, which is subject to ongoing review. Servicing of the planned development of North Ellenbrook is subject to delivery of significant off-site water (distribution mains from Ellenbrook tank) and sewerage infrastructure (wastewater pump stations, sewer pressure mains, and a large gravity sewer along Drumpellier Drive). The staging and funding of these major headworks is dependent on capital funding being secured and approvals being obtained.

Funding of the required headworks infrastructure is currently not able to be considered through the Corporation's base Asset Investment Program for budgetary reasons. Funding could be secured through the State Government's Housing Enabling Infrastructure Fund (HEIF). The HEIF, announced by the State Government as part of the 2024-25 mid-year budget review, sets aside \$100 million per annum over the next four years to strategically invest in future Water Corporation and Western Power enabling infrastructure projects that will increase and bring forward residential development in priority locations across Perth and regional Western Australia.

The distribution of funds from the HEIF is managed through a prioritization process overseen by the State's Housing Supply Unit (Department of Treasury) and Priority Corridors Working Group and approved through a process involving the Infrastructure and Residential Lands Oversight Group (IRLOG), Ministerial Oversight Committee (MOC) and the Expenditure Review Committee (ERC).

The Corporation supports the requirement outlined in the Amendment report that water and wastewater servicing requirements and funding are to be satisfied prior to the lifting of Urban Deferment.

If you have any queries or require further clarification on any of the above issues, please contact the Enquiries Officer.

Brett Coombes  
Senior Planner, Land Use Planning  
Development Services

Development  
Services

629 Newcastle Street  
Leederville WA 6007

PO Box 100  
Leederville WA 6902

T (08) 9420 2099  
F (08) 9420 3193



Your Ref: RLS/1083  
Our Ref: MRS398711  
Enquiries: Matt Calabro

25 September 2025

Secretary  
Department Of Planning Lands and Heritage  
140 William St  
PERTH WA 6000

Attention of: Anthony Muscara

**Re: Updated Comments Requested - Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East)**

Thank you for your letter dated 13<sup>th</sup> September 2025. We offer the following comments regarding this proposal.

The subject landforms part of the broader North Ellenbrook urban expansion area. The Corporation has undertaken conceptual water and wastewater planning for the area, which is subject to ongoing review. Servicing of the planned development of North Ellenbrook is subject to delivery of significant off-site water (distribution mains from Ellenbrook tank) and sewerage infrastructure (wastewater pump stations, sewer pressure mains, and a large gravity sewer along Drumpellier Drive).

We're currently progressing a route investigation for the main sewer and two pressure mains to service the broader area. This work has just commenced and is expected to be completed by the end of the year.

At this stage, funding for the construction of the required headworks infrastructure is not included in the Corporation's current Asset Investment Program (AIP) due to budget constraints. As such, any future delivery of these works will be dependent on future decisions of government and the availability of funding through appropriate channels. No funding has been committed at this point in time.

Funding of the required headworks infrastructure is currently not able to be considered through the Corporation's base Asset Investment Program for budgetary reasons. The distribution of funds from the HEIF is managed through a prioritization process overseen by the State's Housing Supply Unit (Department of Treasury) and Priority Corridors Working Group and approved through a process involving the Infrastructure and Residential Lands Oversight Group (IRLOG), Ministerial Oversight Committee (MOC) and the Expenditure Review Committee (ERC). However, this funding has not yet been committed to the Water Corporation and is still awaiting decision from the State Government.

Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact me at [matt.calabro@watercorporation.com.au](mailto:matt.calabro@watercorporation.com.au)

Regards,

Matt Calabro  
Senior Planner – Land Use Planning  
Development Services

---

**From:** Matt Calabro <Matt.Calabro@watercorporation.com.au>  
**Sent:** Friday, 30 January 2026 3:37 PM  
**To:** Anthony Muscara <Anthony.Muscara@dplh.wa.gov.au>  
**Cc:** Russell Nelson <Russell.Nelson@watercorporation.com.au>; Mark Busher <mark.busher@watercorporation.com.au>  
**Subject:** RE: MRS Amendment 1411 (Complex) - North Ellenbrook (East)

Hi Anthony,

Thanks for your patience in getting this back.  
The Engineering Report provided with the submission you sent through to me was not offered to Water Corporation prior for comment or assessment.

We have now reviewed the proposed development in conjunction with new planning data following a number of upgrades that have taken place to the network in the last month.

We can accept a maximum of 280 Lots into the Roxborough Catchment temporarily, until the ultimate network for North Ellenbrook (East) is constructed and implemented.

Wastewater servicing is contingent on the second stage of the Roxborough Rd PM upgrade being complete which is planned to be funded and delivered in the FY2027 minor works program. Given we are currently pumping at 17+hours per day in winter and we can't receive any flows from this development until this new pressure main is delivered. Retic should be designed and the diversion constructed so flow can be diverted to the long-term pump station (Bullsbrook PS I) when it is constructed. A site will need to be allocated for this WWPS within the proposed development.

Water Servicing requires Ellenbrook DN700 The Broadway and The Vines Tank PRV 1 & 2 which are both set to be completed by the end of 2026.

Water Servicing connections can be provided to the development by extending the DN250 at Dalmilling Dr & Dunnett Dr junction to Maralla Rd and the DN200 at the Saltriver St and Lyndhurst St Junction up to Maralla Rd.

With these pieces in place, we can support a maximum of 280 lots, anything further will require the rest of the North Ellenbrook (East) infrastructure in place.

I will be in contact with the consultants at Cossil and Webley directly to discuss these planning arrangements.

Regards,

**Matt Calabro**  
Senior Planner – Land Use Planning  
Development Services





Department of  
**Primary Industries and  
Regional Development**

Your reference: RLS/1083  
Our reference: LUP 2143  
Enquiries: Louise Murray

Western Australian Planning Commission  
140 William Street  
Perth WA 6000

Email: [regionplanningschemes@dplh.wa.gov.au](mailto:regionplanningschemes@dplh.wa.gov.au) (Attn: Maria Bubanic)

Date: 27 May 2025

Dear Sir/Madam

**Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) – RLS/1083**

Thank you for inviting the Department of Primary Industries and Regional Development (DPIRD) to comment on the above Metropolitan Region Scheme (MRS) Amendment, which seeks to transfer approximately 504.23 ha of 'Rural' zoned land in Bullsbrook to the 'Urban Deferred' and 'Regional Open Space' zone/reserve.

DPIRD does not object to the proposed amendment, which is consistent with strategic planning for the area, but notes with concern (1) the omission of State Planning Policy 2.5 Rural Planning (SPP 2.5) from the Amendment Report, and (2) the ongoing lack of any buffer to intensive agricultural operations in the approved North Ellenbrook (East) District Structure Plan (DSP), despite previous DPIRD advice.

Omission of SPP 2.5 from the Amendment Report

The Amendment Report does not refer to SPP 2.5, however it is relevant to the proposal, as:

- the proposed rezoning area is currently zoned Rural, and
- adjacent Rural land uses include intensive agricultural operations, which is a land use that SPP 2.5 supports. Specifically, DPIRD is aware of a poultry farm at 355-357 Warbrook Road, a tree production nursery at 208 & 228 Sawpit Road, and a floriculture operation at 405 Warbrook Road.

By omitting SPP 2.5 from consideration in the Amendment Report, the risk increases that the Western Australian Planning Commission (WAPC) will fail to take into account the impact of a proposal on agricultural production in its decision-making. It also increases the likelihood of future land use conflict.

Previous DPIRD comment on Draft North Ellenbrook (East) DSP

DPIRD previously advised the WAPC of nearby intensive agricultural operations in comments provided on the Draft North Ellenbrook (East) District Structure Plan (DSP) in 2021. (**Attachment 1** – Previous DPIRD Response)

DPIRD's comments included a recommendation that a buffer be 'clearly identified on Lot 15 (Stage 1B)' of the DSP to ensure the future separation of residential development from the operating tree farm/nursery and poultry farm.

Notwithstanding DPIRD's advice, a buffer was not included in the DSP when it was approved by the WAPC in August 2023. (**Attachment 2** – WAPC Approved North Ellenbrook (East) DSP).

The Amendment Report states that 'consideration of poultry farm and plant nursery buffers are matters to be addressed prior to the lifting of Urban Deferment', but it does not state how they will be addressed. DPIRD suggests that the correct way to address the issue, is to require a buffer to be shown on the DSP, as provided for in Clause 5.12.5 of SPP 2.5.

Including a discussion of SPP 2.5 in the Amendment Report would help to clarify the WAPC's position in regard to these matters.

For more information, please contact Louise Murray on 9368 3833 or [louise.murray@dpiird.wa.gov.au](mailto:louise.murray@dpiird.wa.gov.au)

Yours sincerely



Mr Timothy Overheu  
**Acting Director Agriculture Resource Management and Assessment  
Fisheries and Sustainability**

**Attachment 1:** Previous DPIRD Advice

**Attachment 2:** WAPC Approved North Ellenbrook (East) District Structure Plan (August 2022)

**Attachment 1: Previous DPIRD Advice**

Your reference: North Ellenbrook  
DSP (East)  
Our reference: LUP 1064  
Enquiries: Heather Percy

Submissions - North Ellenbrook DSP (East)  
Western Australian Planning Commission  
PERTH WA 6001  
[neeastdsp@dplh.wa.gov.au](mailto:neeastdsp@dplh.wa.gov.au)

Date: 8 June 2021

Dear Sir/Madam

**Draft North Ellenbrook (East) District Structure Plan**

Thank you for inviting the Department of Primary Industries and Regional Development (DPIRD) to comment on the Draft North Ellenbrook (East) District Structure Plan (DSP).

DPIRD has reviewed the draft DSP and is concerned that the location and proposed staging of residential development on Lot 15 (Stage 1B<sup>1</sup>) will adversely limit neighbouring agricultural businesses and lead to land use conflict.

To avoid land use conflict while land use is transitioning from rural to urban, DPIRD recommends a buffer is clearly identified on Lot 15 (Stage 1B). This buffer would separate future residential development on Lot 15 from the tree farm/nursery by 100 metres and from the existing poultry farm by 500 metres.

If future technical studies and investigations, as mentioned in the draft DSP, provide evidence that noise, odour and other impacts generated by the poultry farm and tree farm/nursery on future residents can be contained within a smaller buffer, then the DSP, or the future Local Structure Plan for Area 1B, can be amended.

Attachment 1 provides additional information about soils, land capability and land degradation hazards for the area.

---

<sup>1</sup> Note: Lot 15 was changed from Stage 1B to Stage 1A between the draft and final versions of the DSP.

For more information please contact Heather Percy on 9780 6262 or [heather.percy@dpird.wa.gov.au](mailto:heather.percy@dpird.wa.gov.au)

Yours sincerely



Dr Melanie Strawbridge  
**Director Agriculture Resource Management Assessment  
Sustainability and Biosecurity**

Attachment 1: Soil and Land Capability Information for North Ellenbrook (East)

**Attachment 1: Soil and Land Capability Information for North Ellenbrook (East)**

DPIRD has identified two soil-landscape systems in North Ellenbrook (East):

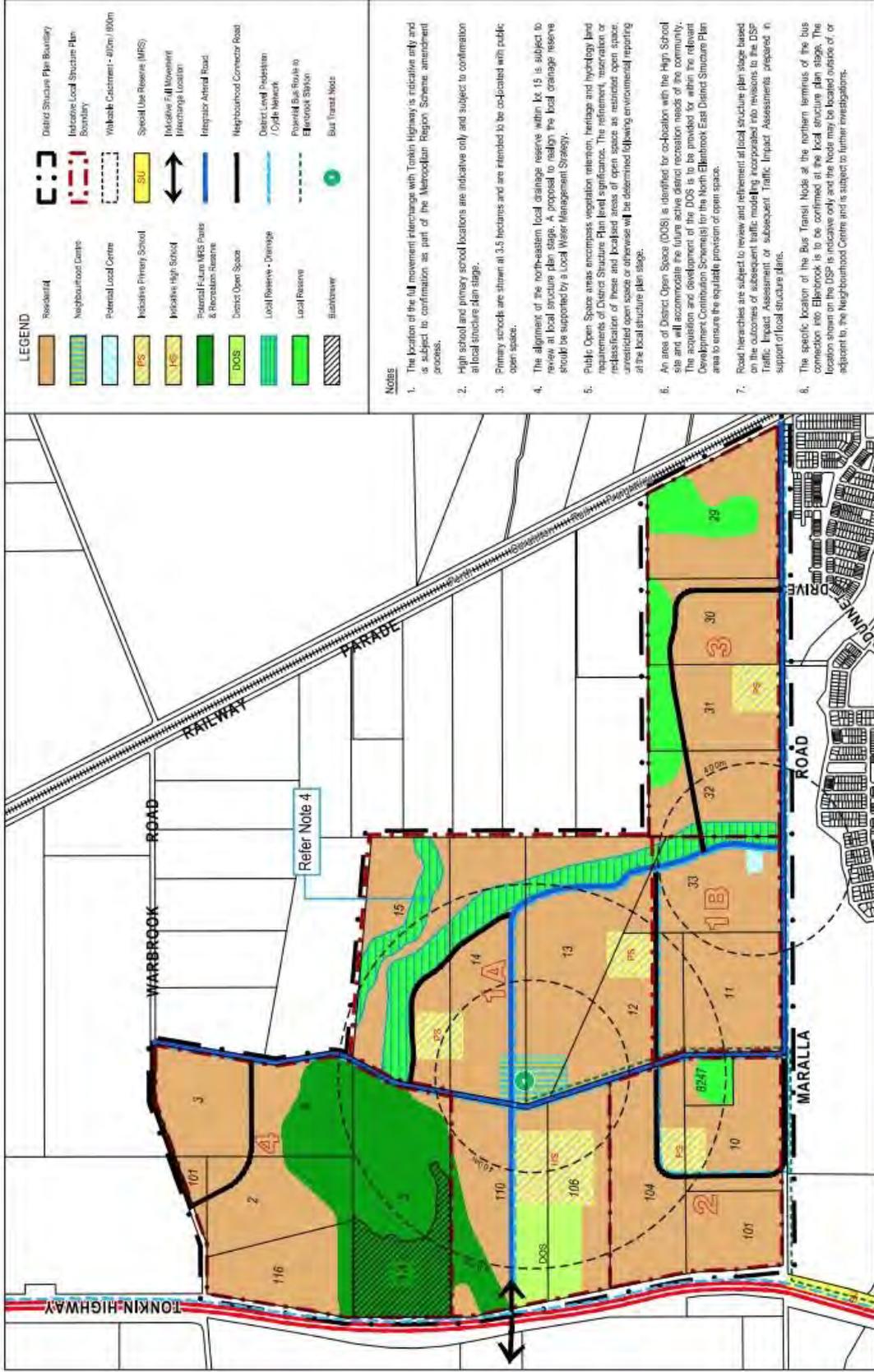
- Yanga System (213Ya) which consists of poorly drained plain with pale sands and deep sandy duplex, wet, semi-wet and saline wet soils.
- Bassendean System (212Bs) which includes sand dunes and sandplains with pale deep sand, semi-wet and wet soil.

Most of the Yanga System has more than 70% assessed as low and very low capability for vineyards, annual and perennial horticulture.

Land degradation hazards include waterlogging and inundation and phosphorus export hazard.

The DSP area does not contain high quality agricultural land.

Attachment 2: WAPC Approved North Ellenbrook (East) District Structure Plan (August 2022)



plan no: 3138-119C-01  
date: 1 August 2022  
scale: 1:20,000 @ A4

**DISTRICT STRUCTURE PLAN MAP**  
North Ellenbrook (east)

**CLE Town Planning + Design**



Enquiries: Arfanara Najnin on (08) 9323 6119

Our Ref: 23/3663 (D25#510874)

Your Ref: RLS/1083

26<sup>th</sup> May 2025

The Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

Email: [regionplanningschemes@dplh.wa.gov.au](mailto:regionplanningschemes@dplh.wa.gov.au)

Attention: Anthony Muscara

## **PROPOSED METROPOLITAN REGION SCHEME AMENDMENT – 1411 (COMPLEX) NORTH ELLENBROOK (EAST) - RLS/1083**

Thank you for your correspondence dated 23 April 2025 inviting Main Roads to comment on the above MRS amendment proposed to rezone from 'Rural' to 'Urban Deferred and Regional Open Space'.

Main Roads has reviewed the supporting information and support the proposed MRS amendment subject to:

- Modifications being made to the proposed 'Regional Open Space' area on Lot 110 to reflect the land required for the new interchange connection with Tonkin Highway. The land required for the new interchange should be included in the area to be zoned as 'Urban Deferred'. The new interchange is required to support the proposed development of North Ellenbrook District Structure Plans (east and west).

In relation to the requested modification we also note that the Environmental Protection Authority considered the 'Regional Open Space' included in this MRS amendment (and other future open space or reserves proposed within the District Structure Plan) when providing advice on MRS Amendment 1411. Therefore, Main Roads also recommends including an equivalent area of Regional Open Space with comparable environmental values in the proposed MRS amendment. Main Roads is available to provide any relevant information that will assist DPLH identify a suitable alternative area/s.

As discussed at our meeting on 22 May 2025 it would be highly appreciated if DPLH could confirm that this modification to the 'Regional Open Space' area can be included in the proposed MRS amendment as outlined above.

Should the Commission disagree with Main Roads comments, recommendation and/or requests and/or resolve not to include Main Roads feedback or advice into its relevant planning decision (s) Main Roads request an opportunity to meet again and discuss the proposal further prior to final determination being made.



Main Roads requests a copy of the WAPC's final recommendation to be sent to [planninginfo@mainroads.wa.gov.au](mailto:planninginfo@mainroads.wa.gov.au) quoting the file reference above.

If you require any further information, please contact Planning Information Manager Arfanara Najnin on (08) 9323 6119 or via email at [arfanara.najnin@mainroads.wa.gov.au](mailto:arfanara.najnin@mainroads.wa.gov.au).

Yours sincerely

A handwritten signature in black ink, appearing to read "Lindsay Broadhurst".

Lindsay Broadhurst

**Director Road Planning**

Anthony Muscara  
Principal Planner  
Department of Planning, Lands and Heritage  
Sent by Email — Anthony.muscara@dplh.wa.gov.au  
140 William Street, Perth WA 6000

Dear Anthony Muscara

**MRS AMENDMENT 1411 (COMPLEX) - NORTH ELLENBROOK (EAST) - RLS/1083**

Thank you for your letter dated 11/04/2025 inviting comment on the proposed Metropolitan Region Scheme (MRS) Amendment for 1411 (Complex) - North Ellenbrook (East) - RLS/1083.

The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) has assessed this proposal with respect to mineral and petroleum resources, geothermal energy, and basic raw materials and makes the following comments.

- Over the SW corner of the proposal there is a
  - 7.77% encroachment on pending E70/5144 held by Australian Silica Quartz Pty Ltd. and a
  - 0.04% encroachment on petroleum exploration permit EP 494 held by Macallum Group Ltd.
  - The tenement holders were not contacted as the encroachment is minor and the current change to the land use will not significantly impact exploration.
- In the SW corner of the area is a proposed extractive industry licence for sand, MINEDEX site Code S0236055, Project Code J05263, proposed open pit Sawpit Rd Lot 10/Robinson. Note, no significant activity is evident from a review of historic aerial photography.
- It is noted that the amendment acknowledges the presence of Basic Raw Materials, and that consideration will be made for sequential land use allowing for extraction of sand resources.

DEMIRS lodges no objections to the above MRS amendment.

Yours sincerely



---

**Steven Batty** | Senior Geologist  
Resource Security Directorate  
28 May 2025

**From:** [MacLeod, Rashidah](#)  
**To:** [DPI Referrals](#)  
**Cc:** [Anthony Muscara](#)  
**Subject:** RE: Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) - RLS/1083  
**Date:** Thursday, 5 June 2025 1:26:28 PM  
**Attachments:** [image001.png](#)  
[image003.png](#)  
**Importance:** High

---

OFFICIAL

OFFICIAL

Hi Anthony,

**PROPOSED METROPOLITAN REGION SCHEME AMENDMENT 1411 ( COMPLEX) - NORTH ELLENBROOK (EAST) – RLS/1083**

Thank you for your email dated 11<sup>th</sup> April 2025, the Public Transport Authority (PTA) is intending to seek an extension of the existing transit corridor further north which will have impact on lots 101, 104 and 106. This will need to be accommodated within a future amendment to change the zoning to urban. In the meantime, Local Structure Planning for this area will need to consider and provide for a transit corridor, station and associated interchange facilities so that this is not precluded in the future. This may accommodate for rail or buses and will be subject to future planning and a business case.

Kind regards,

**Rashidah MacLeod**

**Senior Transport and Land Use Planner | Infrastructure Planning and Land Services**

Public Transport Authority of Western Australia

Public Transport Centre, West Parade, Perth, 6000

PO Box 8125, Perth Business Centre, WA, 6849

Tel: (08) 9326 5658 Fax: (08) 9326 2000

Email: [Rashidah.MacLeod@pta.wa.gov.au](mailto:Rashidah.MacLeod@pta.wa.gov.au) | Web: [www.pta.wa.gov.au](http://www.pta.wa.gov.au)



*The Public Transport Authority of Western Australia cannot accept any liability for any loss or damage sustained as a result of software viruses. You must carry out such virus checking as is necessary before opening any attachment to this message. The information in this email and any files transmitted with it may be of a privileged and/or confidential nature and is intended solely for the addressee(s). If you are not an intended addressee please notify the sender immediately, and note that any disclosure, copying or distribution by you is prohibited and may be unlawful. The views expressed in this email are not necessarily the views of the Public Transport Authority.*



Department of  
Education

Your ref: RLS/1083  
Our ref: D25/0500081  
Enquiries: Ikmal Ahmad

The Secretary  
Western Australian Planning Commission

Email: [regionplanningschemes@dplh.wa.gov.au](mailto:regionplanningschemes@dplh.wa.gov.au)

Attention: Anthony Muscara, Principal Planner

Dear Sir / Madam

**Proposed Metropolitan Region Scheme Amendment 1411 (Complex) –North Ellenbrook (East) – RLS/1083**

Thank you for your email dated 19 May 2023 providing the Department of Education (the Department) with the opportunity to comment on the proposed Metropolitan Region Scheme (MRS) Amendment which seeks to reclassify the subject site from Rural zone to Urban Deferred and Parks and Recreation to align with the endorsed North Ellenbrook East District Structure Plan (DSP).

The proposed MRS Amendment generally aligns with the broader intent of the DSP and that the recognition of the WAPC's Operational Policy 2.4 – Planning for School Sites (OP 2.4) under the 'Strategic Context' section in the MRS Amendment Report is commendable. Notwithstanding this, the Department would like to bring the following matters to your attention:

- As correctly noted in the Report, there will be, amongst other matters, a public high school site within the MRS Amendment area. The Department acknowledges that it is deemed premature to include the subject school site on the proposed MRS Map at this stage. The ultimate location, size and configuration of the high school site and the four public primary school sites will be defined through subsequent local structure planning. In addition, it is expected that an omnibus amendment will be required to reserve the subject high school site as indicated in the MRS Amendment Report.
- The Report states that the size of school sites to be 4 hectare (ha) and 8 ha for primary and secondary schools respectively. To align with OP 2.4, the Department's default position is that it will request for additional land of up to 2,500m<sup>2</sup> on every new public primary school site identified on new structure plans. In addition, it is worth noting that additional land may be further required for the establishment of other supplementary services such as education support facilities or childhood health services. The Department has identified the need for an Education Support facility to be established for the public high school and first built public primary school within the DSP which would result in an additional land for both educational establishments. The Department assumes that the high school site is proposed to be shared use with an adjoining oval, otherwise it is required to be 10 ha consistent with OP 2.4.

Accordingly, the Department recommends that the following sentence under the 'Operational Policy 2.4 – Planning for School Sites' section of the Report to be deleted:

*“OP 2.4 requires one primary school (4 hectares) to be provided for every 1,500 dwellings and one secondary school (8 hectares) for every four-five primary schools.”*

Instead, it could be replaced by the following sentence:

*“The number, size and location of public school sites shall comply with the provisions of the OP 2.4 requirements.”*

- Under the same section, there is an error on the title of the relevant approved DSP. It should be North Ellenbrook (East) DSP instead of North Bullsbrook (East) DSP

In this regard, the Department has no in principle objections to the proposed MRS Amendment and welcomes further discussions with the proponents to ensure the above elements are considered prior to the preparation of future local structure plans.

Should you have any questions in relation to the above, please do not hesitate to contact Mr Ikmal Ahmad, Principal Consultant – Land Planning on 9264 4435 or email [Ikmal.ahmad@education.wa.edu.au](mailto:Ikmal.ahmad@education.wa.edu.au)

Yours sincerely



Matt Turnbull  
**Manager Land and Planning**

5 June 2025

# *Davco Holdings Pty Ltd*

B.R.N. 4907

*Builders • Developers • Management Consultants*

9<sup>th</sup> June 2025

Western Australian Planning Commission  
140 William Street,  
PERTH WA 6000

ATT: Anthony Muscara RLS 1083

Dear Sir,

RE: LOT 5 HN 189 SAWPIT ROAD, BULLSBROOK WA 6084

I have been appointed by Felice Antonio Yozzi, the executor appointed under the will of Antonio Yozzi, to advise the Department that he has no problem in supporting the Amendment to the Metropolitan Region Scheme from Rural zone to Urban deferred.

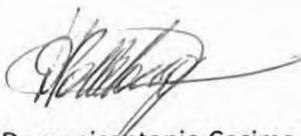
The land has been in the Yozzi family since 1983 and they are very disappointed to see that most of the land is reserved for Public Open Space and they strongly object.

I would like to request the Department to reconsider and spread out the Public Open Space evenly within the 504.23ha and not penalise one owner.

Your consideration to this request would be greatly appreciated. Please see all relevant documents regarding my appointment and the probate.

All correspondence in relation to the above property be directed to Davco Holdings Pty Ltd.

Your sincerely



Domenicantonio Cosimo (Tony) Vallelonga JP

9<sup>TH</sup> June 2025

TO WHOM IT MAY CONCERN.

RE: LOT 5 HN 189 SAWPIT ROAD, BULLSBROOK WA 6084

This is to conform that Domenicantonio Cosimo (Tony) Vallelonga, Director of Davco Holding Pty Ltd is authorised to carry out investigations, access relevant information and have discussions with any Government Agencies and Local Authorities regarding Compensation/Acquisition matters in relation to the above property.

Your sincerely



Felice Antonio Yozzi  
Executor appointed under the will of  
The Late Antonio Yozzi

**From:** DFES Land Use Planning <advice@dfes.wa.gov.au>  
**Sent:** Friday, 13 June 2025 8:24 AM  
**To:** Region Planning Schemes  
**Cc:** Anthony Muscara  
**Subject:** RLS/1083 - 1411 (Complex) - North Ellenbrook (East) - DFES Response

**Categories:** SUB

Our Ref: D29370  
Your Ref: RLS/1083

Dear Sir/Madam,

I refer to your email dated 11 April 2025 regarding the referral of the proposed Metropolitan Region Scheme (MRS) Amendment 1411 (Complex) – North Ellenbrook (East). The referral is accompanied by a BMP (Version A) prepared by Emerge Associates dated February 2020.

DFES previously provided advice on the same BMP at the preliminary advice referral stage on 19 June 2023 (DFES Ref D29370). While DFES identified that compliance with the bushfire protection criteria was not fully demonstrated, DFES was of the opinion that compliance can be achieved for future planning stages.

DFES notes that the abovementioned BMP was prepared to address the 2015 *State Planning Policy 3.7 Planning in Bushfire Prone Areas* planning framework. As the new *State Planning Policy 3.7 Bushfire* (SPP 3.7) and associated *Planning for Bushfire Guidelines* (Guidelines) were published on 24 September 2024 and

its advice with consideration of the new SPP 3.7 policy framework. Further review comments are provided below to assist decision-making:

- Element 1: Location. As the North Ellenbrook (East) District Structure Plan was assessed against SPP 3.7 (2015) and approved in August 2022, in accordance with Section 1.3.1 of the Guidelines, an assessment of the current MRS amendment proposal under the new methodology for Element 1: Location may not be required.
- Element 3: Vehicular Guidelines. DFES maintains the view that the legacy no-through roads can be addressed at the local structure plan and subdivision stages by measures such as perimeter roads. The requirement for a road interchange with Tokin Highway for future urban deferral lifting is also expected to improve compliance with the Guidelines.

On the basis of the above, DFES does not object to the MRS amendment moving forward. In accordance with Section 2.1 of the *Explanatory Note State Planning Policy 3.7 Bushfire and the Planning for Bushfire Guidelines* ([https://www.planning.wa.gov.au/docs/default-source/policy/spp-3-7-explanatory-note.pdf?sfvrsn=d4ec204e\\_8](https://www.planning.wa.gov.au/docs/default-source/policy/spp-3-7-explanatory-note.pdf?sfvrsn=d4ec204e_8)) it is at the decision-maker's discretion to request additional information, such as an updated BMP, if it is deemed necessary for decision making.

Land Use Planning staff are available to discuss planning proposals and provide general bushfire advice at any stage of the planning process. Please do not hesitate to contact me on the number below, should you require clarification of any of the matters raised.

Kind Regards

**Sean He**

**Senior Land Use Planning Officer | Land Use Planning**

Department of Fire and Emergency Services

Cockburn Emergency Services Complex | 20 Stockton Bend, Cockburn Central WA 6164

**T:** 08 9395 9702 / **E:** [advice@dfes.wa.gov.au](mailto:advice@dfes.wa.gov.au) / **W:** [dfes.wa.gov.au](http://dfes.wa.gov.au)



FOR A SAFER STATE

13 June 2025  
Anthony Muscara  
Region Planning Schemes  
Department of Planning, Lands and Heritage  
140 William Street  
PERTH WA 6000

Dear Anthony,

**RE: CITY OF SWAN SUBMISSION – METROPOLITAN REGION SCHEME AMENDMENT 1411 – NORTH ELLENBROOK (EAST)**

Thank you for inviting the City of Swan to provide a submission on Amendment 1411 to the Metropolitan Region Scheme (**MRS**) for various land in Bullsbrook subject to the North Ellenbrook (East) District Structure Plan (the **Amendment**).

Council considered the Amendment at the 11 June 2025 Ordinary Meeting of Council and resolved as follows:

*That Council resolve to:*

1. *Support the proposed amendment as per the officer recommendation, with the following addition of point 4:*
1. *Advise the WAPC that:*
1. *MRS Amendment 1411 as advertised is supported subject to deleting the fourth dot point under the proposed Requirements to Lift the Urban Deferment and adding the following additional three Requirements to Lift the Urban Deferment:*
  - a. *Confirmation of the existing plant nursery buffers (unless ceased) and the need for suitable transitional arrangements.*
  - b. *The northern portion of the site is partly located within the recommended separation distance between sensitive land uses and existing poultry farms on Lots 20 & 21 Warbrook Road and Lot 22 Railway Road, Bullsbrook. Prior to the transfer of the affected land to the Urban zone in the MRS, the WAPC will require the demonstration that these poultry farm have permanently ceased operating, or it being determined that a reduced separation distance would be appropriate pursuant to the recommendations of State Planning Policy 2.5: Rural Planning and upon the advice of the Department of Water and Environmental Regulation and the Department of Primary Industries and Regional Development.*

- c. *Confirmation of road upgrading requirements to support the proposed scale of development, specifically those roads identified as integrators.*
2. *Council recommends that the entire wetland core and buffer of the Resource Enhancement wetland located partly in the southeast of the Amendment area, and also extending onto 471 (Lot 52) and 481 (Lot 53) Railway Parade, to the north be included in the MRS as a Regional Reserve: Parks and Recreation to allow holistic protection of the wetland.*
3. *The City does not and will not have the capacity or financial means to be in a position to undertake or accept any responsibility for a Developer Contribution Plan (DCP) for the construction/provision of any Regional Infrastructure such as the proposed Northlink Interchange.*
4. *Inform the WAPC that the City supports the EPA position on both the formalisation of the proposed expanded local reserve areas and the identification of potential additional POS areas (including on lot 8247/ 35 Sawpit Road) to be included as additional criteria for the lifting of the urban deferment.*

Should you have any further enquiries in relation to this matter, please contact **Stuart Thiele** of the City's Strategic Planning Business Unit.

Yours sincerely,



Ian Humphrey  
**MANAGER STRATEGIC PLANNING**

Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
Perth WA 6001

RE: Metropolitan Regional Scheme Amendment 1411 (Complex)  
North Ellenbrook (East)

We strongly oppose the MRS Amendment 1411 North Ellenbrook (EAST)

We have been associated with this area since 1981. We have repeatedly engaged with CALM, DPAW, DBCA and DWER pertaining to the Natural Environment (Flora and Fauna) and hydrology of the area. We continue to be involved in studies including the East Gnangara Mound Spring Monitoring for DWER. In addition, we now take part in a further study by DWER with the other mound springs to monitor water levels.

There is a Birdlife registered Black Cockatoo Roost Night Roost (SWABUL005) on Lot 8247 (with recommended 500m Buffer). The same trees are also used as a Day roost. The regular use of the roost by both Endangered Carnaby's Cockatoo (*Calyptorhynchus latirostris*) and (vulnerable) Forest redtails (*Calyptorhynchus banksia naso*) is supported by photographic and /or video documentation since 2017. This information is consistent with information provided in our submission in 2021. (Not supporting the DSP). We continue to monitor the use of lot 8247 by both Carnaby's and Forest redtails for foraging and roosting (Day and night roosting).

Birdlife

- The cockatoo roost includes non -native trees on lot 8247, lot 104, lot 10, lot 11 and lot 12 Sawpit Rd and they use the roost on a regular basis.
- According to Dr. Christine Groom (PhD on Carnaby's Cockatoos) night roosting trees should be at least 20 years old. (Groom et al., 2020)
- Main trees include - Lemon scented gums (*Corymbia Citriodora*), Flooded Gums (*E. grandis*) and *Pinus Pinaster*.
- Day roosts are also important during the hottest part of the day- Large dense shady trees including Pines, Eucalyptus and Ficus.

- These trees form part of the SWABUL005 roost and must all be retained.

## According to [Methods for mapping of Carnaby's cockatoo habitat](#)

By Brett Glossop, Karen Clarke, David Mitchell and Geoff Barrett  
Swan Region, Department of Environment and Conservation

"A night roost can include tall trees (>8m) within 1km of the central roosting area of larger roost sites (>150 birds recorded at any given time) and within 500m of smaller roost sites (<150 birds recorded). Therefore, the night roost points were buffered to 1000 m at sites where at least 150 birds had been recorded, and buffered to 500m at roost sites where fewer than 150 birds had been recorded. This produced a GIS data layer of areas or polygons that will accommodate the use by Carnaby's cockatoo of multiple trees in close proximity to the roost site, rather than any single tree."

- Due to the cumulative impact of habitat loss in surrounding areas, all native vegetation must be protected regardless of condition.

The DSP site (North Ellenbrook (East)) is an Ecologically sensitive area with complicated hydrology. The water is close to or on the surface even in mid-summer on much of the site. It is within the Ellen Brook Catchment area and the Sawpit Gully traverses the site which forms the drainage for the area via smaller waterways flowing into the Ellenbrook. The Ellen Brook is a natural ephemeral waterway, a major tributary of the Swan River.

On the provided maps for this amendment, several smaller drains are not shown, including,

- a. Maralla creek which is on lot 30 Maralla rd. is not shown but it is a connecting waterway to Sawpit Gully under Maralla Rd.
- b. There are two bodies of water on lot 104, at least one is spring fed with a drain connecting to Sawpit Gully (shown on a historic Cadastral and topographical map). A drain emanating from that location and feeding into Sawpit gully through the property, through a culvert on Sawpit Rd and through lot 12 and 13 into Sawpit Gully.
- c. On the same map there is a spring on Lot 5 near Maralla Rd.

All waterways and inland waters must be protected to maintain connection.

Map information- Lands and surveys Western Australia, SWAN. Shire of Swan. ID BG35/5.2

Mostly to the East of Sawpit Rd the plains of the catchment are prone to inundation in the winter through either rising of the water table or waterlogging on surfaces with low permeability. Even in Summer water remains close to the surface.

- This area will require a lot (unspecified amount) of fill, even then is there a guarantee that problems with the water table will not have future effect on urban development and the environmental areas?
- The amounts of imported fill required and its potential impact on the Environmental assets in and around the DSP including the Western Swamp tortoise reserves and buffers, Maralla Road reserve The Sawpit Gully and Euph tributaries and Ellenbrook and catchment, mature/significant tree retention and hydrology.

In relation to the protection of WDEs, groundwater modelling undertaken as part of the DWMS indicates that the proposed subsoil drains will not impact the hydrology of the Twin Swamps Nature Reserve. Subsoil flows will be treated in bioretention areas or living streams prior to discharging from the

Where will these be located?

Hydrology to the west of the spring and altering the undulating sand dunes -

- The map 3.3 Geology and landform P Cossill and Weibly engineering report shows areas of peaty clay. One area on lot 10 is directly west of the spring on lot 8247.
- It is stated - "Sections of Peaty Clay indicated within the western portion of the site may require removal or remediation prior to development."

Removing peaty clay to the west of the mound spring with water flow from west to east will surely negatively impact the spring. Have these studies been carried out?

Acid Sulphate soils (ASS)- While much of the site shows moderate to low-risk ASS, there are areas particularly to the west of Sawpit rd. showing High to Moderate risk. The recommendation of CW report p6 is that these areas might require treatment and further testing.

Have these tests been carried out? What are the results and what is the planned approach? There are two areas with profiles consistent with water flow direction (west to east), will the remediation of these soils affect the spring?

Lot 10 is used as the turf farm. Movement of soil (sand) on or from lot 10 could negatively impact hydrology. A comprehensive analysis of chemicals used on the site should be undertaken to determine the half-life of the chemicals and contamination.

- The Ellen Brook catchment is already known for high phosphorus levels in its surface and groundwater, making it particularly vulnerable to additional nutrient inputs from Turf farms and development. It is already one of the highest contributing catchments with elevated nutrients, nitrogen and phosphorus, to the Swan-Canning estuarine system.

In the SPC Agenda, August 30, 2022, p240 DBCA Wetlands –

“The DSP and subsequent planning stages should ensure the protection of the mound spring, including appropriate hydrological studies to ensure impacts from the change in land use and associated impacts on water quality and quantity are mitigated.”

And on page 94 SPC Agenda

*The Barnard Springs Trough and Wetland*

“The DBCA confirmed the presence of the CCW and requires that the draft DSP and subsequent planning stages ensure that impacts from the change in land use and associated impacts on water quality and quantity are mitigated. The subject wetland was reclassified to CCW post-advertising of the draft DSP and modifications are required to address the matter in the form of a local reserve coinciding with the CCW. Textual modifications are also required to the Part 1 report to require that future local structure planning is to be supported by hydrological studies to inform design and preservation of environmental values such as the Barnard Springs Trough and Wetland.”

And P247/248 SPC AGENDA (Aug 30, 2022)-

“Modify the draft DSP in relation to Lot 8247 to reflect the CCW which has been reclassified since lodgement –refer Attachment 8. The draft DSP to outline that future local structure planning is to be supported by hydrological studies in this location to inform structure plan design and preservation of environmental values. Modify the draft DSP in relation to Lot 8247, that do not accurately reflect the CCW. The draft DSP to outline that future local structure planning is to be supported by

hydrological studies in this location to inform structure plan design and preservation of environmental values.”

We understand that there is advice from the EPA regarding a Reserve on parts of Lot 8247 and Lot 5 Sawpit Rd.

When will the hydrological studies begin and how will the impacts of surrounding Urban development be mitigated?

The WAPC comment on p228 SPC Agenda meeting August 30, 2022, states “The Fauna Bridge provided by MRWA further south connects two areas two areas that were once a continuous natural area which Tonkin Hwy bisected.”

- The fauna that traverse west to east do not remain in the Maralla Road reserve but forage and use the subject site on a regular basis.
- There is no ecological linkage between the proposed reserves.
- Isolated islands of vegetation are not large enough to sustain the terrestrial fauna and will have a catastrophic impact on flora in retained areas of vegetation.
- It is imperative to address how fauna displacement will be mitigated. Urban development, while necessary, has often been detrimental to local ecosystems. Comprehensive strategies, including habitat restoration and wildlife corridors, must be integrated alongside hydrological studies to ensure the ecological integrity of the area.

We are not convinced that connection and balance and therefore integrity of this Amendment have been met.

We continue to Enhance the Conservation and Environmental attributes of lot 8247 and we do not support being a part of the Development.

Yours faithfully,

**Respondent No:** 19**Login:** Anonymous**Email:** n/a**Responded At:** Jun 15, 2025 17:53:15 pm**Last Seen:** Jun 15, 2025 17:53:15 pm**IP Address:** n/a

Q1. What is your first name?

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

Secretary Western Australian Planning Commission Locked Bag 2506 Perth WA 6001

RE: Metropolitan Regional Scheme Amendment 1411

(Complex) North Ellenbrook (East) We strongly oppose the MRS Amendment 1411 North Ellenbrook (EAST) We have been associated with this area since 1981. We have repeatedly engaged with CALM, DPAW, DBCA and DWER pertaining to the Natural Environment (Flora and Fauna) and hydrology of the area. We continue to be involved in studies including the East Gnangara Mound Spring Monitoring for DWER. In addition, we now take part in a further study by DWER with the other mound springs to monitor water levels. There is a Birdlife registered Black Cockatoo Roost Night Roost (SWABUL005) on Lot 8247 (with recommended 500m Buffer). The same trees are also used as a Day roost. The regular use of the roost by both Endangered Carnaby's Cockatoo (*Calyptorhynchus latirostris*) and (vulnerable) Forest redtails (*Calyptorhynchus banksia naso*) is supported by photographic and /or video documentation since 2017. This information is consistent with information provided in our submission in 2021. (Not supporting the DSP). We continue to monitor the use of lot 8247 by both Carnaby's and Forest redtails for foraging and roosting (Day and night roosting). Birdlife • The cockatoo roost includes non -native trees on lot 8247, lot 104, lot 10, lot 11 and lot 12 Sawpit Rd and they use the roost on a regular basis. • According to Dr. Christine Groom (PhD on Carnaby's Cockatoos) night roosting trees should be at least 20 years old. (Groom et al., 2020) • Main trees include - Lemon scented gums (*Corymbia Citriodora*), Flooded Gums (*E. grandis*) and *Pinus Pinaster*. • Day roosts are also important during the hottest part of the day- Large dense shady trees including Pines, Eucalyptus and Ficus. • These trees form part of the SWABUL005 roost and must all be retained. According to Methods for mapping of Carnaby's cockatoo habitat By Brett Glossop, Karen Clarke, David Mitchell and Geoff Barrett Swan Region, Department of Environment and Conservation "A night roost can include tall trees (>8m) within 1km of the central roosting area of larger roost sites (>150 birds recorded at any given time) and within 500m of smaller roost sites (<150 birds recorded). Therefore, the night roost points were buffered to 1000 m at sites where at least 150 birds had been recorded,

and buffered to 500m at roost sites where fewer than 150 birds had been recorded. This produced a GIS data layer of areas or polygons that will accommodate the use by Carnaby's cockatoo of multiple trees in close proximity to the roost site, rather than any single tree." • Due to the cumulative impact of habitat loss in surrounding areas, all native vegetation must be protected regardless of condition. . The DSP site (North Ellenbrook (East) is an Ecologically sensitive area with complicated hydrology. The water is close to or on the surface even in mid-summer on much of the site. It is within in the Ellen Brook Catchment area and the Sawpit Gully traverses the site which forms the drainage for the area via smaller waterways flowing into the Ellenbrook. The Ellen Brook is a natural ephemeral waterway, a major tributary of the Swan River. On the provided maps for this amendment, several smaller drains are not shown, including, a. Maralla creek which is on lot 30 Maralla rd. is not shown but it is a connecting waterway to Sawpit Gully under Maralla Rd. b. There are two bodies of water on lot 104, at least one is spring fed with a drain connecting to Sawpit Gully (shown on a historic Cadastral and topographical map). A drain emanating from that location and feeding into Sawpit gully through the property, through a culvert on Sawpit Rd and through lot 12 and 13 into Sawpit Gully. c. On the same map there is a spring on Lot 5 near Maralla Rd. All waterways and inland waters must be protected to maintain connection. Map information- Lands and surveys Western Australia, SWAN. Shire of Swan. ID BG35/5.2 Mostly to the East of Sawpit Rd the plains of the catchment are prone to inundation in the winter through either rising of the water table or waterlogging on surfaces with low permeability. Even in Summer water remains close to the surface. • This area will require a lot (unspecified amount) of fill, even then is there a guarantee that problems with the water table will not have future effect on urban development and the environmental areas? • The amounts of imported fill required and its potential impact on the Environmental assets in and around the DSP including the Western Swamp tortoise reserves and buffers, Maralla Road reserve The Sawpit Gully and Euph tributaries and Ellenbrook and catchment, mature/significant tree retention and hydrology. In relation to the protection of WDEs, groundwater modelling undertaken as part of the DWMS indicates that the proposed subsoil drains will not impact the hydrology of the Twin Swamps Nature Reserve. Subsoil flows will be treated in bioretention areas or living streams prior to discharging from the Where will these be located? Hydrology to the west of the spring and altering the undulating sand dunes - • The map 3.3 Geology and landform P Cossill and Webly engineering report shows areas of peaty clay. One area on lot 10 is directly west of the spring on lot 8247. • It is stated - "Sections of Peaty Clay indicated within the western portion of the site may require removal or remediation prior to development." Removing peaty clay to the west of the mound spring with water flow from west to east will surely negatively impact the spring. Have these studies been carried out? Acid Sulphate soils (ASS)- While much of the site shows moderate to low-risk ASS, there are areas particularly to the west of Sawpit rd. showing High to Moderate risk. The recommendation of CW report p6 is that these areas might require treatment and further testing. Have these tests been carried out? What are the results and what is the planned approach? There are two areas with profiles consistent with water flow direction (west to east), will the remediation of these soils affect the spring? Lot 10 is used as the turf farm. Movement of soil (sand) on or from lot 10 could negatively impact hydrology. A comprehensive analysis of chemicals used on the site should be undertaken to determine the half-life of the chemicals and contamination. • The Ellen Brook catchment is already known for high phosphorus levels in its surface and groundwater, making it particularly vulnerable to additional nutrient inputs from Turf farms and development. It is already one of the highest contributing catchments with elevated nutrients, nitrogen and phosphorus, to the Swan-Canning estuarine system. In the SPC Agenda, August 30, 2022, p240 DBCA Wetlands – "The DSP and subsequent planning stages should ensure the protection of the mound spring, including appropriate hydrological studies to ensure impacts from the change in land use and associated impacts on water quality and quantity are mitigated." And on page 94 SPC Agenda The Barnard Springs Trough and Wetland "The DBCA confirmed the presence of the CCW and requires that the draft DSP and subsequent planning stages ensure that impacts from the change in land use and associated impacts on water quality and quantity are mitigated. The subject wetland was reclassified to CCW post-advertising of the draft DSP and modifications are required to address the matter in the form of a local reserve coinciding with the CCW. Textual modifications are also required to the Part 1 report to require that future local structure planning is to be supported by hydrological studies to inform design and preservation of environmental values such as the Barnard Springs Trough and Wetland." And P247/248 SPC AGENDA (Aug 30, 2022)- "Modify the draft DSP in relation to Lot 8247 to reflect the CCW which has been reclassified since lodgement –refer Attachment 8. The draft DSP to outline that future local structure planning is to be supported by hydrological studies in this location to inform structure plan design and preservation of environmental values. Modify the draft DSP in relation to Lot 8247, that do not accurately reflect the CCW. The draft DSP to outline that future local structure planning is to be supported by hydrological studies in this location to inform structure plan design and preservation of environmental values." We understand that there is advice from the EPA regarding a Reserve on parts of Lot 8247 and Lot 5 Sawpit Rd. When will the hydrological studies begin and how will the impacts of surrounding Urban development be mitigated? The WAPC comment

on p228 SPC Agenda meeting August 30, 2022, states “The Fauna Bridge provided by MRWA further south connects two areas two areas that were once a continuous natural area which Tonkin Hwy bisected.” • The fauna that traverse west to east do not remain in the Maralla Road reserve but forage and use the subject site on a regular basis. • There is no ecological linkage between the proposed reserves. • Isolated islands of vegetation are not large enough to sustain the terrestrial fauna and will have a catastrophic impact on flora in retained areas of vegetation. • It is imperative to address how fauna displacement will be mitigated. Urban development, while necessary, has often been detrimental to local ecosystems. Comprehensive strategies, including habitat restoration and wildlife corridors, must be integrated alongside hydrological studies to ensure the ecological integrity of the area. We are not convinced that connection and balance and therefore integrity of this Amendment have been met. We continue to Enhance the Conservation and Environmental attributes of lot 8247 and we do not support being a part of the Development. Yours faithfully, Dorothy Elizabeth Mulder and Ingrid Elizabeth Mulder

---

Q11. **Upload supporting documents** not answered

---

Q12. **Upload supporting documents** not answered

---

Q13. **Upload supporting documents** not answered

---



Respondent No: 20

Login: Anonymous

Email: n/a

Responded At: Jun 16, 2025 00:05:20 am

Last Seen: Jun 16, 2025 00:05:20 am

IP Address: n/a

Q1. What is your first name?	Edward
Q2. What is your surname?	Benfield
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	brra.president@gmail.com
Q5. What is your address?	69 Clarkson Road, Bullsbrook, WA 6084
Q6. What is your contact number?	0402790167
Q7. Are you responding on behalf of an organisation?	Yes
Q8. What is the name of the organisation?	Bullsbrook Residents & Ratepayers Association
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Oppose
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.	<p>Please be advised that Bullsbrook Residents &amp; Ratepayers Association (BRRA) opposes the MRS Amendment 1411 North Ellenbrook (EAST), as currently worded, on the following grounds: i) Insufficient environmental protections within the Amendment wording ii) Lack of recognition within the Amendment wording of the lessons learned from similar large-scale developments regarding environmental degradation within the environmentally sensitive Swan Valley and the Ellen Brook catchment iii) The rapid expansion of urban development within the Swan Valley – Ellenbrook – Bullsbrook corridor without an adequate plan to put in place sufficient infrastructure to support the large population increase from re-zoning to Urban Deferred areas such as North Ellenbrook (East) iv) Contradiction with the City of Swan Local Biodiversity Strategy (LBS).</p>
Q11. Upload supporting documents	<a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/2fe516fbf2c2667cfa758a3a28f68321419c7ec3/original/1749996305/b3d52bd1549ce14fbe09b49af713ca76_Metropolitan%20Regional%20Scheme%20Amendment%201411%20%28Complex%29_J%20North%20Ellenbrook%20%28East%29%20BRRA%20Submission%20%28signed%29.pdf?1749996305">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/2fe516fbf2c2667cfa758a3a28f68321419c7ec3/original/1749996305/b3d52bd1549ce14fbe09b49af713ca76_Metropolitan%20Regional%20Scheme%20Amendment%201411%20%28Complex%29_J%20North%20Ellenbrook%20%28East%29%20BRRA%20Submission%20%28signed%29.pdf?1749996305</a>
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered

15<sup>th</sup> June 2025

Edward Benfield  
President, Bullsbrook R&RA  
[Brra.president@gmail.com](mailto:Brra.president@gmail.com)

Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
Perth WA 6001

RE: Metropolitan Regional Scheme Amendment 1411 (Complex), North Ellenbrook (East)  
**Bullsbrook Residents & Ratepayers Association (BRRRA) OBJECTION submission**

Dear Secretary,

Please be advised that Bullsbrook Residents & Ratepayers Association (BRRRA) opposes the MRS Amendment 1411 North Ellenbrook (EAST), as currently worded, on the following grounds:

- i) Insufficient environmental protections within the Amendment wording
- ii) Lack of recognition within the Amendment wording of the lessons learned from similar large-scale developments regarding environmental degradation within the environmentally sensitive Swan Valley and the Ellen Brook catchment
- iii) The rapid expansion of urban development within the Swan Valley – Ellenbrook – Bullsbrook corridor without an adequate plan to put in place sufficient infrastructure to support the large population increase from re-zoning to Urban Deferred areas such as North Ellenbrook (East)
- iv) Contradiction with the City of Swan Local Biodiversity Strategy (LBS)

**Insufficient environmental protections within the Amendment wording**

There are three key aspects of environmental risk associated with this: hydrology, flora and fauna which are all inter-related and inter-dependent. Any development with North Ellenbrook (East) needs to be done sensitively, with rigorous environmental protections, to preserve the current hydrology which support the existing, particularly native woodland. Native woodland needs to be properly preserved, not merely subject to destruction and like-for-like replanting, which destroys fragile ecosystems. If the hydrology and flora are compromised, the fauna will be also, black cockatoo and western swamp tortoise being the “poster fauna” but the whole ecosystem within North Ellenbrook (East) is at risk.

BRRRA recommendation is that the any Amendment place binding environmental commitments on developers to protect key natural areas including strategic ecological corridors, remnant vegetation, current levels of biodiversity, natural drainage lines and wetlands. These commitments should be supported by robust hydrological assessments, spatial mapping of threatened & priority ecological habitats and regular reporting of environmental management focused key performance indicators.

**Lack of recognition of lessons learned from similar large-scale developments regarding environmental degradation within the Swan Valley and the Ellen Brook catchment**

There have been numerous submissions to Council regarding the significant detrimental environmental impacts, and need for remediations, of recent urban developments to the South, in particular Brabham, Henley Brook and Dayton. Without sufficient, well-defined, environmental protections, there is a risk that the same story will be repeated in North Ellenbrook (East) at significant cost to the City of Swan taxpayers.

BRRR recommendation is that any Amendment specifically lay out clear actions to mitigate the risk of repeating adverse environmental impacts acknowledged to have occurred in recent urban developments in Brabham, Henley Brook and Dayton.

**Lack of evidence of an adequate plan for sufficient infrastructure investment to support the large population increase from re-zoning North Ellenbrook (East) to Urban Deferred**

Another lesson from the recent urban developments in Ellenbrook and the Swan Valley is the social issues arising from the lag between urban development and the provision of adequate infrastructure to support the growth in population as a result of that development. The rapid expansion of large, piecemeal, developments in the Swan Valley – Ellenbrook – Bullsbrook corridor risks exacerbating traffic congestion and overloading local amenities and ruining the very thing that developers are using to attract buyers: the beauty and the “close to nature” lifestyle of the area North of Ellenbrook. To mitigate the risk of significant environmental degradation within the Swan Valley – Ellenbrook – Bullsbrook corridor, the current rapid expansion needs to be replaced with a more measured, considered, expansion to enable the environment and landscape values of the Swan Valley and the Ellen Brook catchment to be preserved and for there to be a, holistic, effective plan for sustainable communities, preserving the unique characteristics of the area, instead of creating yet more, uniform, non-descript, bland, suburbs to the East of Perth.

BRRR recommendation is that any Amendment specifically state the various infrastructure improvements required to support the anticipated population increase, associated with this Amendment, and a clear timetable to deliver them.

**Contradiction with the City of Swan Local Biodiversity Strategy (LBS)**

The stated aim of the City of Swan’s Local Biodiversity Strategy (LBS) is to retain and enhance remnant vegetation; with an emphasis on conserving areas with significant ecological value, including remnant native vegetation and natural drainage lines. Based on the experience of developments to the south of Ellenbrook, there is a high risk that rezoning the North Ellenbrook area for urban development will lead to the clearing and destruction of valuable ecosystems, undermining the objectives of the LBS.

BRRR recommendation is that any Amendment specifically states the protections to be included in associated development applications to ensure adherence to the City of Swan Local Biodiversity Strategy.

In conclusion, Bullsbrook Residents & Ratepayers Association requests that Western Australian Planning Commission carefully consider this objection and provide more substantive environmental protections as part of any re-zoning of Metropolitan Regional Scheme Amendment 1411 (Complex), North Ellenbrook (East).

Yours sincerely,

DocuSigned by:  
  
B8963E35DC14434...

Edward Benfield

On behalf of Bullsbrook Residents & Ratepayers Association (BRRA)

**HATCH**

OUR REF: LWP KIN

16 June, 2025

The Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001  
Via email : [RegionPlanningSchemes@dph.wa.gov.au](mailto:RegionPlanningSchemes@dph.wa.gov.au)

RE: SUBMISSION MRS AMENDMENT NO.1411 – Nth ELLENBROOK (EAST) LOTS 29 & 30 MARALLA ROAD

Hatch acts on behalf of the owners of Lots 29 & 30 Maralla Road in making this submission to Amendment No.1411 for North Ellenbrook (East). The landowners are supportive of Metropolitan Region Scheme (MRS) Amendment 1411. Based upon the information provided in the attached submission and technical appendices requests a modification to lift the Urban Deferment and rezone Lots 29 and 30 to 'Urban' under the MRS.

The proposed modification would expedite the delivery of approximately 450 affordable residential lots in the rapidly growing north-eastern metropolitan corridor. Following the completion of Ellenbrook and Averly there is a critical shortage of affordable land in the corridor in the short to medium term. At its peak, the north-eastern corridor was providing approximately 2,000 lots per annum. There is now a limited availability of land for first home buyers which Lots 29 and 30 can provide in the short term if an 'Urban' zoning under the MRS is supported. Site-specific investigations affirm the suitability of the subject lots for development, leveraging existing infrastructure in the adjacent Ellenbrook project while requiring only minor extensions and upgrades. Traffic impacts are anticipated to be manageable within the existing road network, incorporating minor upgrades and targeted traffic management which primarily serve to address issues with the existing traffic volumes.

Should you have any queries regarding the above, please do not hesitate to contact the undersigned or Oliver Ford.

Yours sincerely,

  
**Tim Trefry**  
Partner, Urban Solutions

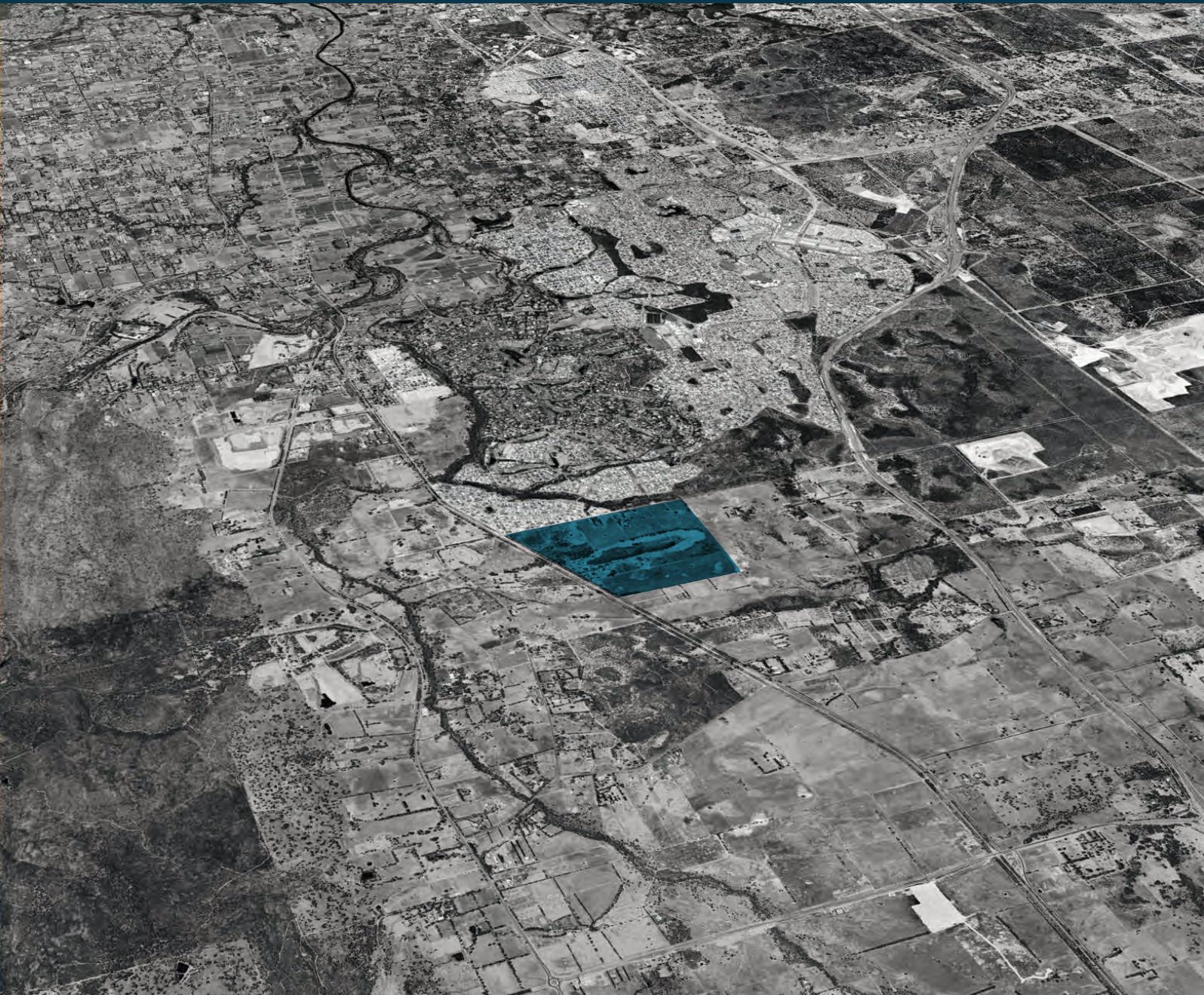
Tel: 08 9213 7333  
Mob: 0412 221 440  
[tim.trefry@hatch.com](mailto:tim.trefry@hatch.com)  
Level 2, 442 Murray Street  
Perth WA 600

**HATCH**

Modification Request to  
**Metropolitan Scheme Amendment 1411 (Complex)**  
**North Ellenbrook (East)**

**Lot 29 & 30 (No.152) Maralla Rd, Bullsbrook**

June 2025



## Document Control

<b>Title</b>	Lot 29 & 30 (No. 152) Maralla Road, Bullsbrook	
<b>Prepared for</b>	Western Australian Planning Commission	
<b>Prepared by:</b>	Hatch Urban Solutions	
<b>Consultant Team</b>	Planning and Urban Design	Hatch – Urban Solutions
	Environment	Pentium Water
	Traffic	Transcore
	Engineering	Cossill & Webley

### Disclaimer & Copyright

This document was prepared for the exclusive use of by Western Australian Planning Commission This information is considered 'preliminary' and should not be used for detailed design discussions. Hatch Associates acts in all professional matters as a faithful advisor to its clients and exercises all reasonable skill and care in the provision of its professional services.

The information presented herein has been compiled from a number of sources using a variety of methods. Hatch Associates does not attempt to verify the accuracy, validity or comprehensiveness of any information supplied to Hatch Associates by third parties.

Hatch Associates makes no warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, validity or comprehensiveness of this document, or the misapplication or misinterpretation by third parties of its contents.

Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favouring by Hatch Associates.

This document cannot be copied or reproduced in whole or part for any purpose without the prior written consent of Hatch Associates.

# Contents

<b>Executive Summary</b> .....	<b>4</b>	<b>7</b>	<b>Environmental Considerations</b> .....	<b>17</b>
<b>1 Proposed Modification</b> .....	<b>6</b>	<b>8</b>	<b>Transport and Access Considerations</b> .....	<b>19</b>
<b>2 Advertised MRS Amendment 1411</b> .....	<b>8</b>	<b>9</b>	<b>Engineering Servicing Considerations</b> .....	<b>21</b>
<b>3 Concept Plan</b> .....	<b>10</b>	<b>10</b>	<b>Conclusion</b> .....	<b>24</b>
<b>4 Site Description</b> .....	<b>11</b>	<b>Appendices</b>		
4.1 Location.....	11	<b>Appendix 1:</b>	Certificate of Titles	
4.2 Area and Ownership .....	11	<b>Appendix 2:</b>	Concept Plan	
4.3 Existing Land Use .....	12	<b>Appendix 3:</b>	Environmental Values Memo	
<b>5 Modification Justification</b> .....	<b>12</b>	<b>Appendix 4:</b>	DBCA Letter of Endorsement	
5.1 Housing Supply Context.....	12	<b>Appendix 5:</b>	Transport Technical Note	
5.2 Justification.....	14	<b>Appendix 6:</b>	Engineering Servicing Report	
<b>6 Strategic Planning Context</b> .....	<b>15</b>			
6.1 Perth and Peel@3.5million / North-East Sub-Regional Planning Framework .....	15			
6.2 North Ellenbrook (East) District Structure Plan.....	15			
6.3 State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region .....	15			
6.4 Draft State Planning Policy 2.9 – Planning for Water .....	15			
6.5 State Planning Policy 3.7 – Bushfire .....	16			
6.6 State Planning Policy 5.4 – Road and Rail Noise .....	16			
6.7 Operational Policy 2.4 – Planning for School Sites .....	16			

# Executive Summary

This report, prepared by Hatch Urban Solutions on behalf of the landowners of Lots 29 and 30 Maralla Road, Bullsbrook (subject lots) supports Metropolitan Region Scheme (MRS) Amendment 1411. Based upon the information provided in this submission and technical appendices requests a modification to lift the Urban Deferment and rezone Lots 29 and 30 to 'Urban' under the MRS.

The proposed modification would expedite the delivery of approximately 450 affordable residential lots in the rapidly growing north-eastern metropolitan corridor. Following the completion of Ellenbrook and Averly there is a critical shortage of affordable land in the corridor in the short to medium term. At its peak, the north-eastern corridor was providing approximately 2,000 lots per annum. There is now a limited availability of land for first home buyers which Lots 29 and 30 can provide in the short term if an 'Urban' zoning under the MRS is supported. Unlike the balance of the North Ellenbrook landholdings, only Lots 29 and 30 are not constrained by the broader servicing and road access issues and are capable of being developed independently from the remaining District Planning area. Site-specific investigations affirm the suitability of the subject lots for development, leveraging existing infrastructure in the adjacent Ellenbrook project while requiring only minor extensions and upgrades. Traffic impacts are anticipated to be manageable within the existing road network,

incorporating minor upgrades and targeted traffic management which primary serve to address issues with the existing traffic volumes.

Servicing requirements for the development have been thoroughly assessed, confirming that the existing infrastructure is fully equipped to support the proposed residential lots.

Minor expansions to water, electricity, and telecommunications systems will ensure reliable service delivery without necessitating extensive upgrades. Sewerage systems have also been evaluated, with minor adjustments planned to accommodate increased capacity. These enhancements will facilitate the development process, ensuring seamless and cost-effective integration with existing services.

In addressing environmental considerations raised by the Environmental Protection Authority (EPA), the Concept Plan integrates protective measures capable of being implemented through sequential planning stages, ensuring the preservation of environmental values.



Figure 1: Concept Plan

## 1.0 Proposed Modification

Hatch Urban Solutions, on behalf of the landowners of Lots 29 and 30 Maralla Road, Bullsbrook (subject lots), supports Metropolitan Region Scheme (MRS) Amendment 1411 (Amendment) however, requests modification to lift the Urban Deferment for the subject lots and to be zoned 'Urban' under the MRS.

Should the modification be supported, a concurrent amendment to rezone the lots to 'Residential Development' under the City of Swan's (City) Local Planning Scheme No.17 (LPS17) will be sought. Furthermore, a local structure plan and subdivision application for Lots 29 and 30 can be prepared and progressed alongside the finalisation of the Amendment subject to support from the Western Australian Planning Commission (WAPC).

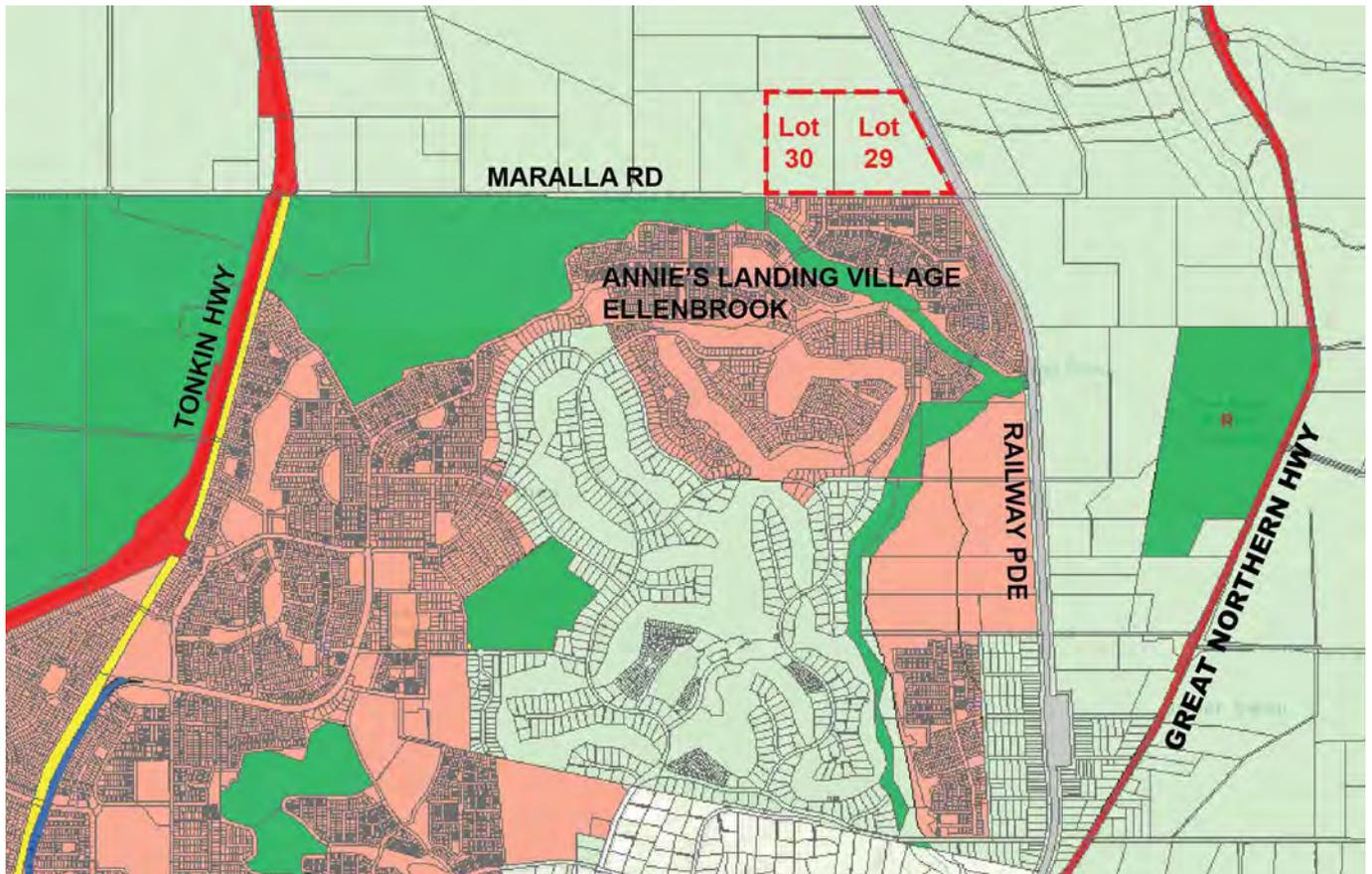
The Amendment provides an opportune planning pathway for the short-term release of land for the development of affordable housing in the fast-growing north-eastern metropolitan corridor. The proposed modification will facilitate the early delivery of approximately 450 affordable residential lots as shown on the Concept Plan (figure 1).

The residential lots could be delivered in 2026/27 while the more complex servicing and infrastructure issues associated with the broader North Ellenbrook land holding are resolved. The support for the early release of the subject lots will remove the timely pressure associated with the cross-agency negotiation of servicing and infrastructure provision.

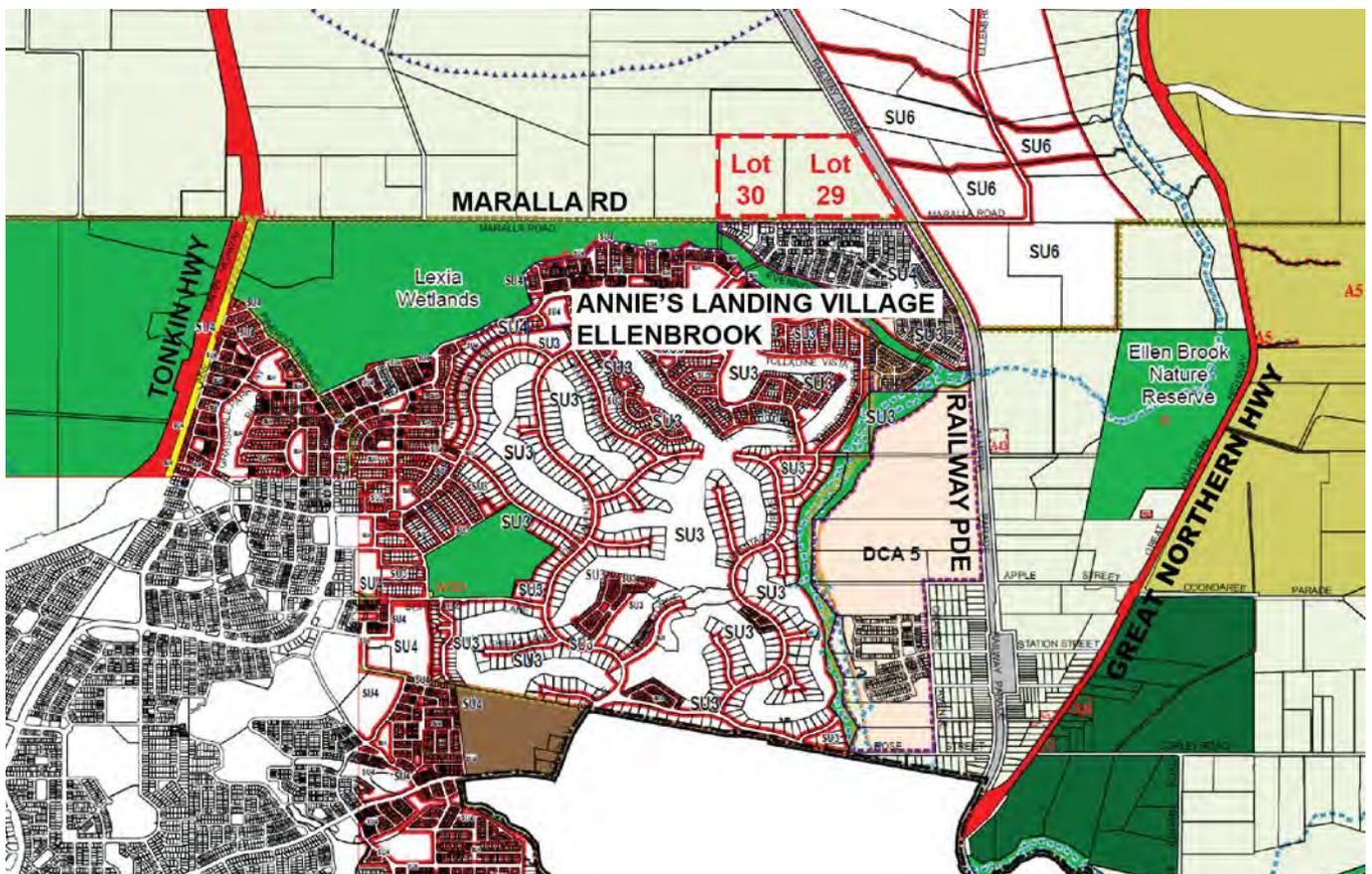
This report presents the rationale for the proposed modification and confirms that the subject lots are suitable for development whereby planning approvals can proceed by leveraging existing infrastructure and services, with only minor extensions required and no major upgrades necessary. Moreover, the projected traffic volumes from the development can be accommodated within the existing road network through minor upgrades and targeted traffic management measures, which have been identified as necessary to address current traffic conditions.

The Concept Plan informed by site-specific investigations, addresses environmental considerations raised by the Environmental Protection Authority (EPA) and liaison following onsite meetings with the Department of Biodiversity, Conservation and Attractions (DBCA) providing an outcome that protects environmental values and is capable of being managed through sequential planning stages.

**Figure 2:** MRS Scheme Map – Existing



**Figure 3:** City of Swan Scheme Map – Existing



## 2.0 Advertised MRS Amendment 1411

Lots 29 and 30 are in the south-east corner of the broader Scheme Amendment 1411 (Amendment) area abutting Maralla Road and Railway Parade (figure 4).

At the time of writing, the Amendment is being advertised for public comment from 11 April 2025 to 16 June 2025. Following the consideration of submissions, the WAPC may make modifications to the Amendment.

The purpose of the Amendment is to transfer approximately 504.23 ha in Bullsbrook from the Rural zone to the Urban Deferred zone and Regional Open space reservation in the MRS (figure 4). Lots 29 and 30 are inclusive of this area covering 46 ha and is zoned Rural under the MRS featuring no Bush Forever sites.

The proposed Amendment will facilitate the future residential development, school sites, district open and areas for POS and environmental value. The development of the Amendment area will be dependent on the provision of new infrastructure and services.

Realising an opportunity to utilise the existing infrastructure and servicing capacity of the adjacent Annie's Landing Village residential development to the south in Ellenbrook, the proposed modification to rezone Lots 29 and 30 to 'Urban' under the MRS could provide the early delivery of affordable housing while the more complex servicing and infrastructure issues are resolved for the broader Amendment area.

Lots 30 consists of a rural residence, mostly historically cleared vegetation and a wetland conservation area in the north. Lot 29 is vacant, has cleared vegetation and a larger wetland conservation area that occupies the north and central areas. The broader Amendment area has a similar composition being used for a range of rural and rural-residential land uses and is mostly cleared of vegetation. Bush Forever Site 13 is located within the Amendment area, west

of Lots 29 and 30, and is to be retained (and broader vegetation) with a Regional Open space reservation.

All mapped Conservation Category Wetlands (CCW) are identified for retention within future local reserves. Potential areas as suitable foraging, roosting and breeding habitat for Carnaby's Black Cockatoo and the Forest Red-tailed black cockatoos are to be protected including the state-listed, threatened ecological communities (TEC) floristic community types (FCT) 15 forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain local reservations.

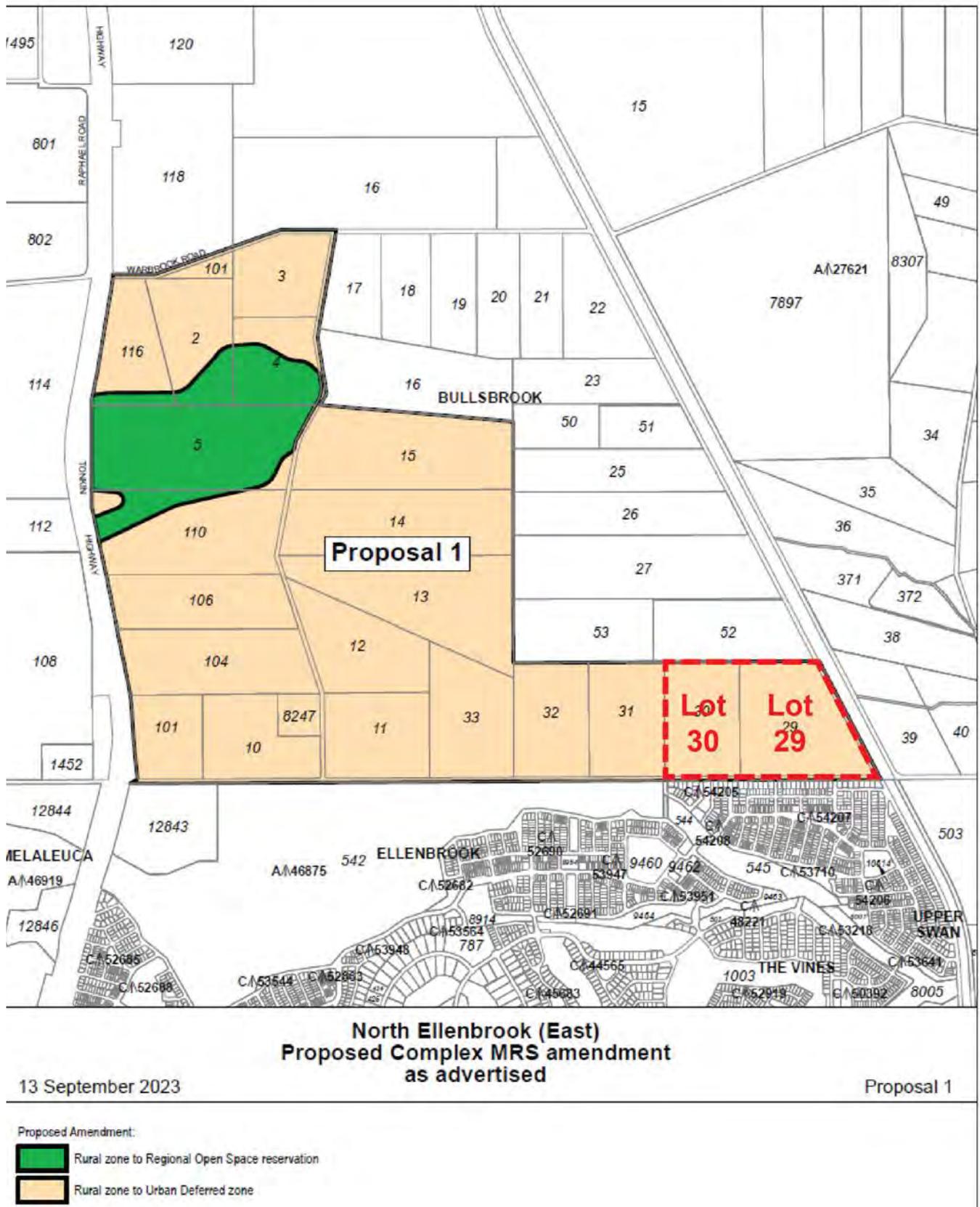
Land use and development within the Amendment area is generally controlled by the City's LPS17. The subject land is currently zoned 'General Rural' under LPS17.

The WAPC's Amendment Report lists several requirements to lift the urban deferment. Where applicable to Lots 29 and 30, these requirements include:

- A mesoscopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads Western Australia (MRWA) in collaboration with the Department of Planning, Lands and Heritage and the City of Swan. The Traffic Impact Assessment (TIA) that accompanies the North Ellenbrook (East) District Structure Plan (DSP) is to be updated to reflect the outcomes of the State Government transport assessment. The updated TIA will inform subsequent stages of planning, specifically TIA's that accompany local structure plans.
- Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site.

The above points as they relate the proposed modification have been addressed under section 8 and 9 of this report.

**Figure 4:** Scheme Amendment 1411 – Advertised Proposal



### 3.0 Concept Plan

To support the proposed modification, a concept plan has been developed that considers the site's environmental value, its relationship with existing Annie's Landing Village residential area in Ellenbrook, and future adjacent future development as informed by the North Ellenbrook (east) District Structure Plan (DSP).

The Concept Plan, as per Appendix 2, demonstrates the following:

- Extension of the proposed public open space boundary to provide an east-west linkage between the two Resource Enhancement Wetlands (REW) inclusive of buffers, which retains 43 (of the 44) mapped Black Cockatoo trees in a contiguous area of open space.
- The establishment of a 40m – 50m *Grevillea curviloba* buffer, consisting of total area of 3.35 ha in the centre of Lot 29. A 20m road reserve forms the inface for this and the above-mentioned open space reserves.
- The east-west open / conservation linkage preserves the key environmental values of Lot 29 & 30 in a form that can be ceded to the State as part of the planning approval process.
- The timely delivery of development given the capacity for serving connections from the southern existing Annie's Landing Village residential development in Ellenbrook.

Figure 5: Concept Plan



## 4.0 Site Description

### 4.1 Location

The subject area encompasses a 46-ha site across two land holdings (figure 6), Lot 29 and 30 Maralla Road, Bullsbrook, located in the south-east corner of the Amendment area within the City of Swan.

Situated approximately 26km north-east of the Perth CBD and 5km north of the Ellenbrook secondary centre, the Amendment area abuts Ellenbrook to the South, Tonkin Highway to the West, Railway Parade to the east and rural land to the north.

The subject lots adjoins Maralla Road and Railway Parade, to the south the Annie’s Landing Village residential development is adjacent in the suburb of Ellenbrook.

### 4.2 Area and Ownership

The subject area comprises of two (2) adjoining single lot titles, Lots 29 and 30 Maralla Road, Bullsbrook being 26.9ha and 19.43ha in area respectively. The registered proprietor for Lot 29 is Ellenbrook Developments Ltd and for Lot 30 is Crossbrook Pty Ltd and Northern Corridor Holdings Pty Ltd.

**Table 1:** Certificate of Title Details

Lot	Plan/ Diagram	Certificate of Title	Street Address
29	8094	2059/401	N/A
30	8094	246/52A	No. 152 Maralla Road, Bullsbrook

**Figure 6:** Location Plan



### 4.3 Existing Land Use

The subject area is currently zoned 'Rural' under the MRS and 'General Rural' under the City of Swan's LPS17.

Lot 29 is vacant with cleared vegetation and Conservation Category Wetlands (CCW) identified for retention on the Concept Plan. Lot 30 contains a single residence, cleared land, and CCW to the north also to be retained.

## 5.0 Modification Justification

### 5.1 Housing Supply Context

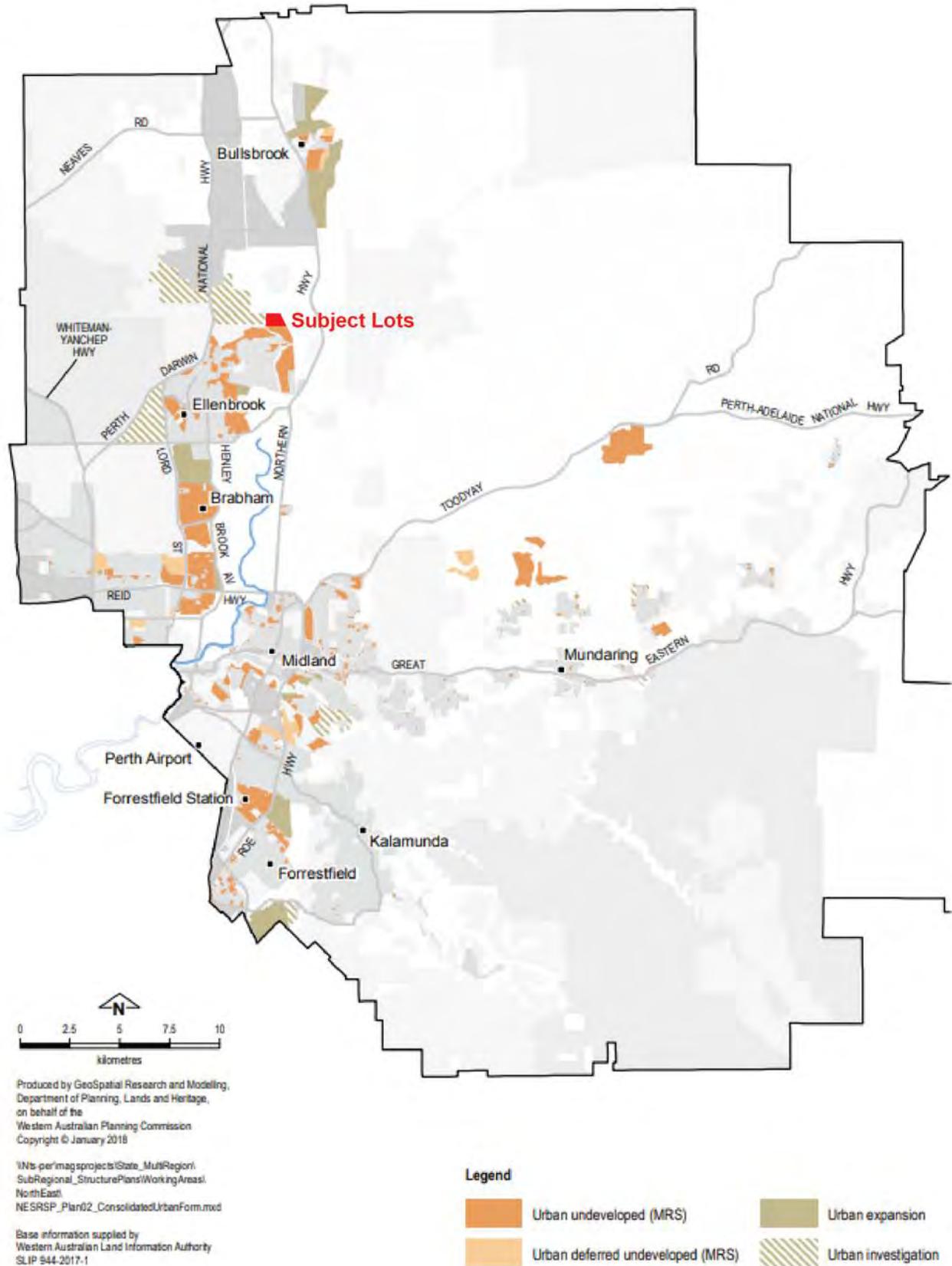
In a context of record housing unaffordability and cost of living pressures, the delivery of affordable housing is recognised as a key priority of the State Government and increasingly of the Commonwealth.

To address the prolonged undersupply of housing across much of the country, the Commonwealth Government at the beginning of 2022, introduced the National Housing Accord, collaborating with all levels of government and industry to deliver 1.2 million new well-located homes over five years (July 2024 to June 2029). To meet this achievement each state has been allocated a housing target for this period, for Western Australia (WA) a total of 129,086 homes (25,817 annual average) are to be built. In response, the State Government have expanded their housing supply initiatives involving the accelerated land release for residential development through the Housing Diversity Pipeline (HDI).

Despite government efforts, Industry analysis has noted past housing delivery has fallen short of the notional target and without urgent action it is predicted WA will have a 33,500 shortfall by 2029 – *Priorities for the 2025 WA State Election August 2024*, Urban Development Institute of Australia (UDIA). To address this, an increased focus to release lot supply for new homes in areas already earmarked for development is required.

The Perth and Peel@3.5million / North-East Sub-Regional Planning Framework denotes Lots 29 and 30, and the broader Amendment area for 'Urban Investigation' (figure 7). It outlines various key considerations which are reflected in the North Ellenbrook (East) District Structure Plan (DSP), the Amendment, and this report for modification.

**Figure 7:** Perth and Peel@3.5million / North-East Sub-Regional Planning Framework



## 5.2 Justification

The proposed modification provides an opportunity for the short-term delivery of approximately 450 affordable residential lots. By utilising the existing capacity of services from the adjacent Ellenbrook Annie's Landing Village residential development to the south as described in sections 8 and 9 of this report, development can commence in 2 to 3 years while services for the balance of North Ellenbrook is addressed for medium to long term development.

In assessing the appropriateness of the modification, four (4) criteria for land suitability informed by the HDP Round 2 Overview were considered for the privately owned subject lots. Table 1 below outlines the criteria and the proposals justification in relation to Lots 29 and 30.

**Table 2:** Land Suitability Criteria

Criteria	Justification
<p><b>1 Planning Readiness</b></p> <p>The subject land is either appropriately zoned or already subject to a planning process that will enable residential development.</p>	<p>The MRS Scheme Amendment 1411 provides an active planning pathway for the WAPC to consider the proposed modification to rezone the subject lots to 'Urban.'</p> <p>The targeted modification is complimentary to the overall Amendment, facilitating short-term delivery while infrastructure and servicing are addressed in the broader Amendment area.</p>
<p><b>2 Development Feasibility</b></p> <p>The land is not significantly constrained that prevents the short-term delivery of development.</p>	<p>Sections 8 and 9 outline how existing infrastructure and services can meet the projected demands of the development through minor upgrades and extensions.</p>
<p><b>3 Timely Delivery</b></p> <p>Proposals must demonstrate the ability to expedite development and bring housing supply to market quickly.</p>	<p>The immediate servicing potential for the subject lots will enable the early development to be realised within a 2-to-3-year timeframe.</p> <p>The location of the subject site presents a logical spatial progression to urban development, leveraging its proximity to the existing residential development to the south in Ellenbrook while being complementary to the long-term overall vision for the Amendment area.</p>
<p><b>4 Housing Diversity</b></p> <p>Developments are expected to contribute to diverse housing outcomes.</p>	<p>The north-east metropolitan corridor is rapidly growing, providing affordable residential lots to market.</p> <p>Should the modification be supported, a structure plan and subdivision will be progressed and will investigate diverse and affordable housing typologies.</p>

## 6.0 Strategic Planning Context

### 6.1 Perth and Peel@3.5million / North-East Sub-Regional Planning Framework

The *Perth and Peel@3.5million* document outlines a future vision for Perth and Peel, advocating for a more considered, connected, consolidated urban form.

The *North-East Sub-Regional Planning Framework* identifies the subject lots as 'Urban Investigation'. A small portion of the Amendment area to the north is identified as 'Industrial expansion' however, the North Ellenbrook (East) District Structure Plan has refined conceptual planning for the area and does not envisage an industrial use.

The Framework identifies the following key considerations for the North Ellenbrook Investigation Area (noting it includes matters that only relate to the abutting North Ellenbrook – West area):

- Protection of Bush Forever areas and conservation category wetlands
- Protection of high value Carnaby's Black Cockatoo habitat and vegetation with 10–30% remaining in Perth and Peel regions
- Protection of threatened ecological communities and flora populations
- Offsite impacts on Western Swamp Tortoise habitat (EPP)
- Best practice drainage and nutrient management
- Impacts, risks and management of Gnangara groundwater resources (existing Priority 3 Source Protection Area).
- Pearce Airbase operations (Department of Defence)
- Transition/interface with regional open space areas
- Bushfire risk
- Access to the regional road network
- Basic raw materials – sequential land use allowing for extraction of sand resources

### 6.2 North Ellenbrook (East) District Structure Plan

In August 2022, the WAPC approved the North Ellenbrook (East) District Structure Plan (DSP). This plan provides a framework for future urban development. Sequential development within DSP areas will be managed by individual local structure plans. The DSP outlines future State and Local reserves, an internal hierarchy of higher order roads, a neighbourhood centre, and land designated for residential development. It also arranges access to the regional road network via a planned interchange with Tonkin Highway.

### 6.3 State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region

State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region (SPP 2.8) provides a framework for addressing bushland protection and management in land use planning and decision-making. The policy permits development when it is consistent with policy measures and other planning and environmental considerations.

The Concept Plan (Appendix 2) provides for various open space reserves that logically integrate into the existing residential and on-site environmental contexts. The open space reserves provide protection to remnant vegetation including foraging, roosting and breeding habitat for Carnaby's and forest re-tailed black cockatoos and provides a buffer to the identified wetlands.

### 6.4 Draft State Planning Policy 2.9 – Planning for Water

Draft State Planning Policy 2.9 – Planning for Water (draft SPP 2.9) aims to ensure that planning and development consider water resource management and implement appropriate water management measures during different stages of the planning process. The Department of Water and Environmental Regulation (DWER) has approved a District Water Management Strategy (DWMS) for the site.

## **6.5 State Planning Policy 3.7 – Bushfire**

State Planning Policy 3.7 – Bushfire (SPP 3.7) aims to implement effective, risk-based land use planning and development strategies. It prioritises the avoidance of bushfire risk where possible and, when unavoidable, focuses on managing and mitigating the risk to people, property, and infrastructure to an acceptable level. The protection of human life and the management of bushfire impacts are considered paramount.

A Bushfire Management Plan (BMP) has been prepared for the Amendment and the Department of Fire and Emergency Services and advised that modifications to the BMP can be undertaken in subsequent planning stages to assess risk in accordance with SPP 3.7.

## **6.6 State Planning Policy 5.4 – Road and Rail Noise**

State Planning Policy 5.4 – Road and Rail Noise (SPP 5.4) aims to reduce road and rail noise's impact on sensitive areas near major transport routes. The policy also ensures transport corridors remain functional by preventing incompatible developments.

The subject lots of the proposed modification about the Perth to Geraldton freight line where there is potential for noise attenuation to be required. The nature of these measures will be determined at the detailed structure planning stage.

## **6.7 Operational Policy 2.4 – Planning for School Sites**

Operational Policy 2.4 outlines criteria, configuration, and design standards for school sites. It specifies one primary school per 1,500 dwellings (4 hectares) and one secondary school per four to five primary schools (8 hectares). The policy also clarifies developer contributions for public primary schools.

The North Bullsbrook (East) DSP has considered the need for education facilities and provides for four primary schools and one high school site within the Amendment area. The indicative locations for these schools are not within the subject lots for this modification.

In the interim period, feedback from the Department of Education confirmed at present there is capacity in the existing Anne Hamersley Primary School within the adjacent Ellenbrook residential area.

## 7.0 Environmental Considerations

In response to comments on the Amendment provided by the EPA in December 2023 on the Western Swamp Tortoise (WST) and Black Cockatoo habitat, input was sought from Pentium Water to inform the Concept Plan (Appendix 2).

The Memo prepared by Pentium Water (Appendix 3), incorporates findings from various site-specific investigations to outline a planning response and environmental management requirements in relation to the environmental considerations raised by the EPA.

The Memo confirms that the environmental values identified by the EPA's Chair's letter are capable of being managed through sequential planning stages, specifically:

- There are no known WST populations within Lots 29 or 30 inclusive of the Resource Enhancement Wetlands (REW). The REW within Lot 29 is seasonally waterlogged and does not contain suitable WST habitat.
- The wetland management response is to include:
  1. Establishing a 50m buffer to REW adjacent to Lot 30 and a 30m buffer surrounding the REW (these buffers are reflected in the Concept Plan (Appendix 2));
  2. Subjecting the wetland and buffer area to a Wetland/ Foreshore Management Plan; and
  3. Liaise with DBCA/ City Swan regarding key interface elements to development.
- Both REW and associated wetland are to be ceded (free of cost) to either the City of Swan or DBCA as a local nature reserve. This is intended to be addressed through a subdivision condition.

- The potential Black Cockatoo foraging / nesting habitat located along the northern portion of the subject lots has been addressed in the Concept Plan by:
  1. Extending the future public open space area boundary;
  2. Retaining 43 (of the 44) mapped black cockatoo trees in a contiguous area of open space; and
  3. The proposed public open space area will to be ceded to the City of Swan through a condition of subdivision.
- The two *Grevillea curviloba* subsp. *curviloba* population areas totalling 0.93 ha within Lot 29 were subject to two independent botanical assessments and two site visits with DBCA officers. In liaison with the DBCA the following management actions were agreed to ensure the protection and long-term viability of the two *Grevillea curio* subsp. *Curviloba* population areas.

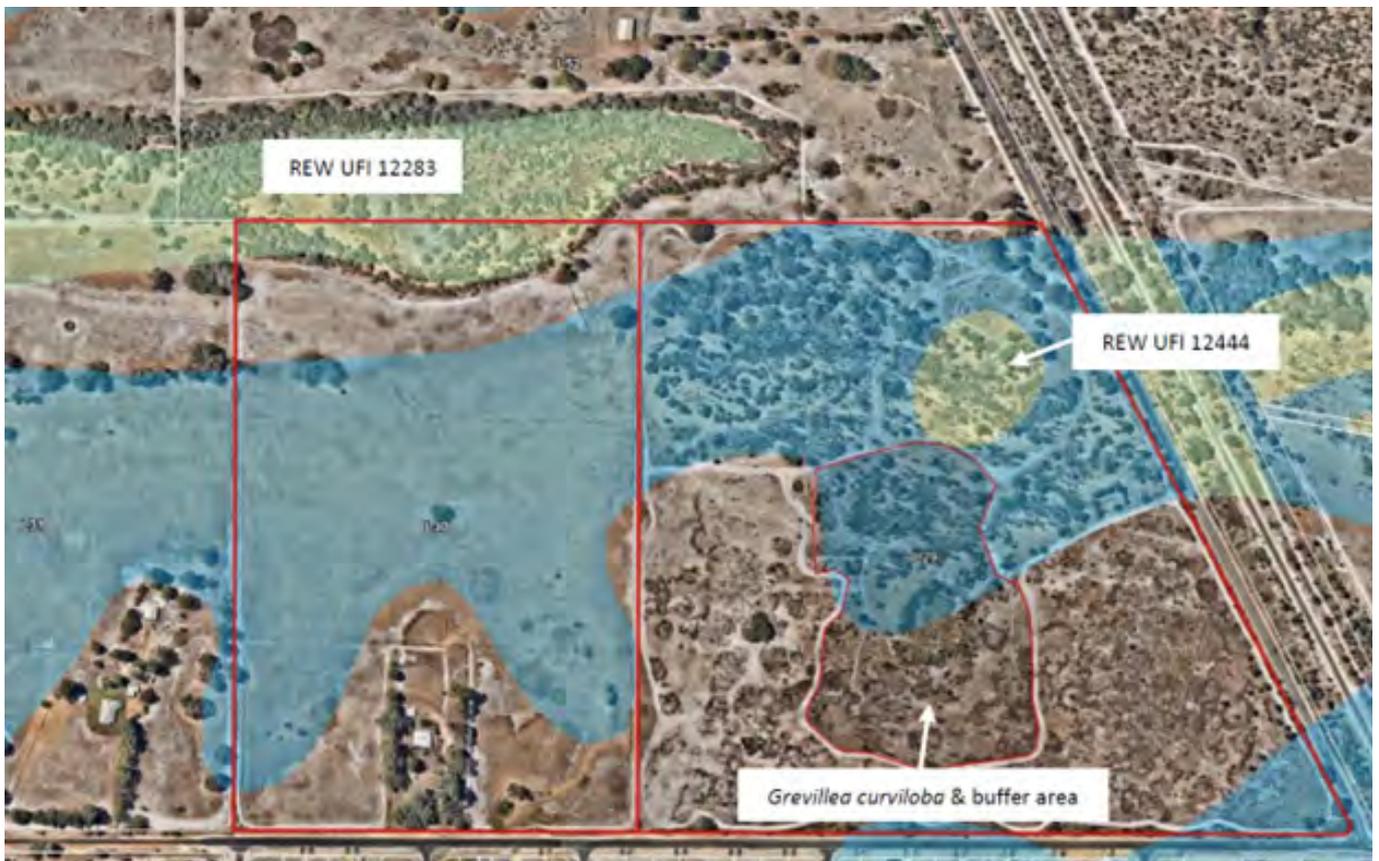
The below management framework was endorsed by DBCA's District Manager, as appended, refer to Appendix 4.

1. The establishment of a 40m – 50m *Grevillea curviloba* subsp. *curviloba* buffer from the future residential development area (figure 8).
2. The agreed *Grevillea curviloba* subsp. *curviloba* population buffer area total 3.35 ha.
3. A 20m road reserve will form an interface between the local reserve area and the future residential development, as conveyed on the Concept Pan (figure 3).
4. A hard wall at the edge of the buffer surrounding the *Grevillea curviloba* subsp. *curviloba* populations, with an access point will be installed.

5. The 3.34 ha *Grevillea curviloba* subsp. *curviloba* population and buffer area will be ceded to the City of Swan (free of cost) as a local reserve area. This management outcome will be established as a condition of subdivision.
6. The *Grevillea curviloba* subsp. *curviloba* and buffer area will be subject to the following management requirement as a subdivision condition:
  - The preparation and implementation of a Conservation Management Plan to the satisfaction of DBCA on advice from the City of Swan.
7. The management plan will be approved by the City of Swan on advice from DBCA.

The proposed environmental management outcomes are captured in the proposed Concept Plan (Appendix 2) demonstrating the two REWs and buffer areas, the extended public open space (and Black Cockatoo tree retention) and the *Grevillea curviloba* subsp. *Curviloba* population 3.35 ha local reserve area.

**Figure 8:** Subject Lots – Key Environmental Attributes



## 8.0 Transport and Access Considerations

Transcore has prepared a Technical Note (Appendix 4) to assess the capacity of the existing road network of Ellenbrook and Railway Parade to accommodate the traffic that will be generated from the early delivery of development. The analysis focuses mainly on Dunnett Drive, Banrock Drive, The Broadway route to the district centre at Bordeaux Lane and the Railway Parade route to Upper Swan.

The report outlines the subject lots are part of the North Ellenbrook (East) DSP area where future traffic generation of the DSP area was assessed in the North Ellenbrook (East) DSP Traffic Impact Assessment (TIA) (July 2022). Using the trip rate in the TIA report, it was determined the proposed development of 450 lots would have a total traffic generation of approximately 3,650vpd.

It was concluded that the existing road network can sufficiently accommodate the traffic flows anticipated by the early development of the subject lots through the implementation of minor upgrades and traffic management. This is detailed below for each of the assessed roads.

- **Dunnet Drive** – has sufficient capacity to accommodate future traffic flows in the development scenario. However, an upgrade to the existing footpath to a shared path should be considered.
- **Banrock Drive** – the existing road standard is sufficient to provide capacity to accommodate the future traffic flows on the north-east and central sections. The shortcoming of the existing road is the lack of a 6m central median to accommodate a car turning right and enable right turns to be undertaken in two stages in heavy traffic flow conditions. The solution to this existing problem is to prohibit all right turn movements along the high-volume section of Banrock Drive. The displaced right turn movements would sufficiently be handled by right turn or U-turns at the two roundabouts at either end the high-volume section, eliminate the need for a 6m median and accommodate the anticipated traffic volumes under the development scenario.
- **The Broadway** – The existing road is capable of carrying future traffic flows, except at The Broadway / Moseley Drive intersection. This intersection already requires upgrading to cater for existing traffic flows, the upgrading of this final section of The Broadway to dual carriageway standard is therefore expected.
- **Railway Parade** – The future traffic flows is considered to present an insignificant increase to and that the existing road standard can accommodate the development.

Figure 9: Banrock Drive Intersections Proposed to be Restricted



## 9.0 Engineering Servicing Considerations

Cossill and Webley Consulting Engineers Australia (CW) have prepared an Engineering Servicing Report for the subject lots, as appended to this report (refer to Appendix 5). The report outlines the subject site presents favourable conditions for urban development with manageable engineering constraints that can be effectively addressed through standard development practices. Services to the site are readily available through extension of existing infrastructure from the established residential development to the south.

The report confirms the following for the proposed modification:

- The earthworks strategy has been designed to integrate the development into the existing landform, minimising fill requirements while ensuring drainage, roadworks, and sewer reticulation needs are met.
- Road access is to be provided via Maralla Road and Railway Parade, with two four-way interactions. The internal road network will be designed to complement the site's topography and drainage strategy.
- Stormwater drainage will utilise existing topographical and waterway features to be managed through different catchments, directing runoff to conservation lots, public open spaces, and purpose-built drainage assets. This approach aims to prevent flooding within the site while protecting existing development and surrounding road networks.
- Water supply will be extended from the existing DN100 water mains in the southern neighbouring development. Upgrades to the existing mains will likely be required.
- Sewage from the site will be discharged via the connection to the existing DN150 sewerage mains along Maralla Road. The site is separated into two sewage catchments, with the topography allowing for gravity-fed systems without the need for pump stations onsite.
- Electrical power will be supplied by extending the underground HV reticulation from the existing development south of Maralla Road may need to be relocated underground.
- Reticulated gas is not currently proposed for the development.
- Telecommunications will likely be provided through an extension of the existing NBN network from the southern residential development.

**Figure 10:** Preliminary Site Catchment Plan



**Figure 11:** Water Supply Mains



Figure 12: Sewerage Service Extension



Figure 13: Electrical Connection & Grid Capacity Plan



## 10.0 Conclusion

The proposed development presents a significant opportunity to expedite the delivery of affordable housing, addressing key targets for growth and urban expansion.

By leveraging established infrastructure directly adjacent to Lots 29 and 30 such as water, sewage, electricity, and telecommunications networks, the project benefits from streamlined integration with essential services. This approach minimises delays and facilitates efficient progress, ensuring that housing can be delivered promptly to meet community and development goals while maintaining environmental considerations.

The Lot 29 and 30 present a suitable early development outcome with all the required services able to be extended from the adjacent development. The appended engineering services report as prepared by Cossill & Webley engineers demonstrates the site can be successfully developed in 2026/27 with appropriate infrastructure provisions while integrating with the surrounding environment and existing developments.

The finalisation of the MRS Amendment 1411 North Ellenbrook (East) provides a planning pathway for the early release and development of Lots 29 and 30 and creation of affordable residential lots. In response to comments provided by the EPA on the Western Swamp Tortoise (WST) and Black Cockatoo habitat, a design concept plan based upon from Pentium Water, provides the WAPC and EPA an outcome that protects the environmental values within Lot 29 and 30 and is capable of being managed and protected through the sequential planning stages.

Appendix 1

# Certificate of Titles

REGISTER NUMBER <b>29/P8094</b>	
DUPLICATE EDITION <b>2</b>	DATE DUPLICATE ISSUED <b>31/12/2014</b>

**RECORD OF CERTIFICATE OF TITLE**  
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **2059** FOLIO **401**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

  
REGISTRAR OF TITLES 

**LAND DESCRIPTION:**

LOT 29 ON PLAN 8094

**REGISTERED PROPRIETOR:**  
(FIRST SCHEDULE)

ELLENBROOK DEVELOPMENTS LTD OF SUITE 3, 44 KINGS PARK ROAD, WEST PERTH  
(A G046198 ) REGISTERED 4/12/1995

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**  
(SECOND SCHEDULE)

1. M870493 MORTGAGE TO NORMAN MAXWELL KANAIR OF 27 SAUNDERS STREET, NORTH BEACH REGISTERED 24/12/2014.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.  
\* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.  
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2059-401 (29/P8094)  
PREVIOUS TITLE: 246-51A  
PROPERTY STREET ADDRESS: LOT 29 MARALLA RD, BULLSBROOK.  
LOCAL GOVERNMENT AUTHORITY: CITY OF SWAN

WESTERN



AUSTRALIA

REGISTER NUMBER <b>30/P8094</b>	
DUPLICATE EDITION <b>N/A</b>	DATE DUPLICATE ISSUED <b>N/A</b>

**RECORD OF CERTIFICATE OF TITLE**  
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME **246** FOLIO **52A**

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

**LAND DESCRIPTION:**

LOT 30 ON PLAN 8094

**REGISTERED PROPRIETOR:**  
(FIRST SCHEDULE)

NORTHERN CORRIDOR HOLDINGS PTY LTD OF 27 SAUNDERS STREET, NORTH BEACH  
IN 3/4 SHARE  
CROSSBROOK PTY LTD OF SUITE 5, 2 HARDY STREET, SOUTH PERTH  
IN 1/4 SHARE  
AS TENANTS IN COMMON

(T M089024 ) REGISTERED 30/10/2012

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**  
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.  
\* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.  
Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 246-52A (30/P8094)  
PREVIOUS TITLE: 1305-724  
PROPERTY STREET ADDRESS: 152 MARALLA RD, BULLSBROOK.  
LOCAL GOVERNMENT AUTHORITY: CITY OF SWAN

NOTE 1: DUPLICATE CERTIFICATE OF TITLE NOT ISSUED AS REQUESTED BY DEALING M89025



Appendix 2

# Concept Plan



- Legend**
- Potential black cockatoo foraging habitat
  - Potential black cockatoo breeding habitat
  - Flooded gum (Eucalyptus rudis)
  - Marri (Corymbia calophylla)
  - Standing dead tree

**DESIGN CONCEPT AND ENVIRONMENTAL CONSTRAINTS**  
**Lots 29 & 30 Maralla Road, North Ellenbrook**  
 City of Swan

**DRAFT** REF NO. **LWP KIN** DRAW NO. **RD1 009** REV. **F**

**HATCH**

SCALE 1:5000

0 50 100 150 200 250 metres

**CADASTRAL INFORMATION**  
 Y:\M\DD: VARIES  
 DWG REF: VARIES  
 PROJECTION: PC84

**AERIAL PHOTOGRAPHY**  
 SOURCE: NEARMAPS  
 Y:\M\DD: JUN 2024

**DISCLAIMER**  
 This plan is a preliminary design concept and is subject to a full design assessment and approval by the City of Swan and the Western Australian Planning Commission. The location of the design elements including roads, public open space and access points are subject to detailed site investigations by qualified consultants and technical assessment by service agencies.

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY



Appendix 3

# Environmental Values Memo



## Memo

Date: 30 July 2024  
To: Danny Murphy  
From: John Halleen

### RE: Environmental Values within Lots 29 and 30 Maralla Road.

#### Background

In December 2023 the Environmental Protection Authority (EPA) Chair provided the following specific recommendations for Metropolitan Scheme Amendment (MRS) No. 1411 – North Ellenbrook (East):

Lots 29 and 30 Maralla Road (or part thereof) are reserved by the Western Australian Planning Commission (WAPC) for ‘Parks and Recreation’ under the MRS.

This recommendation was based on considerations of the following environmental attributes within Lots 29 and 30 Maralla Road:

- Potential future refuge habitat for the threatened Western Swamp Tortoise (WST) species. This potential future WST refuge habitat is associated with Resource Enhancement Wetland (REW) UFI 12283 which is located partially within Lots 29-32 Maralla Road and the northern Lots 52 and 53.
- The approximate 1.07 ha mapped REW (UFI 12444) located entirely within the northern portion of Lot 29.
- *Grevillea curviloba* subsp. *curviloba* (conservation & threatened significant flora) population within a 0.93 ha area located centrally within the northern portion of Lot 29.
- Potential threatened black cockatoo species (specifically Carnaby’s cockatoo and Forest red-tailed cockatoo) foraging/nesting habitat. This foraging habitat consists of scattered Flooded gum (*Eucalyptus rudis*) and Marri (*Corymbia calophylla*) trees located along the northern boundaries of Lots 29 and 30.

#### Site Summary

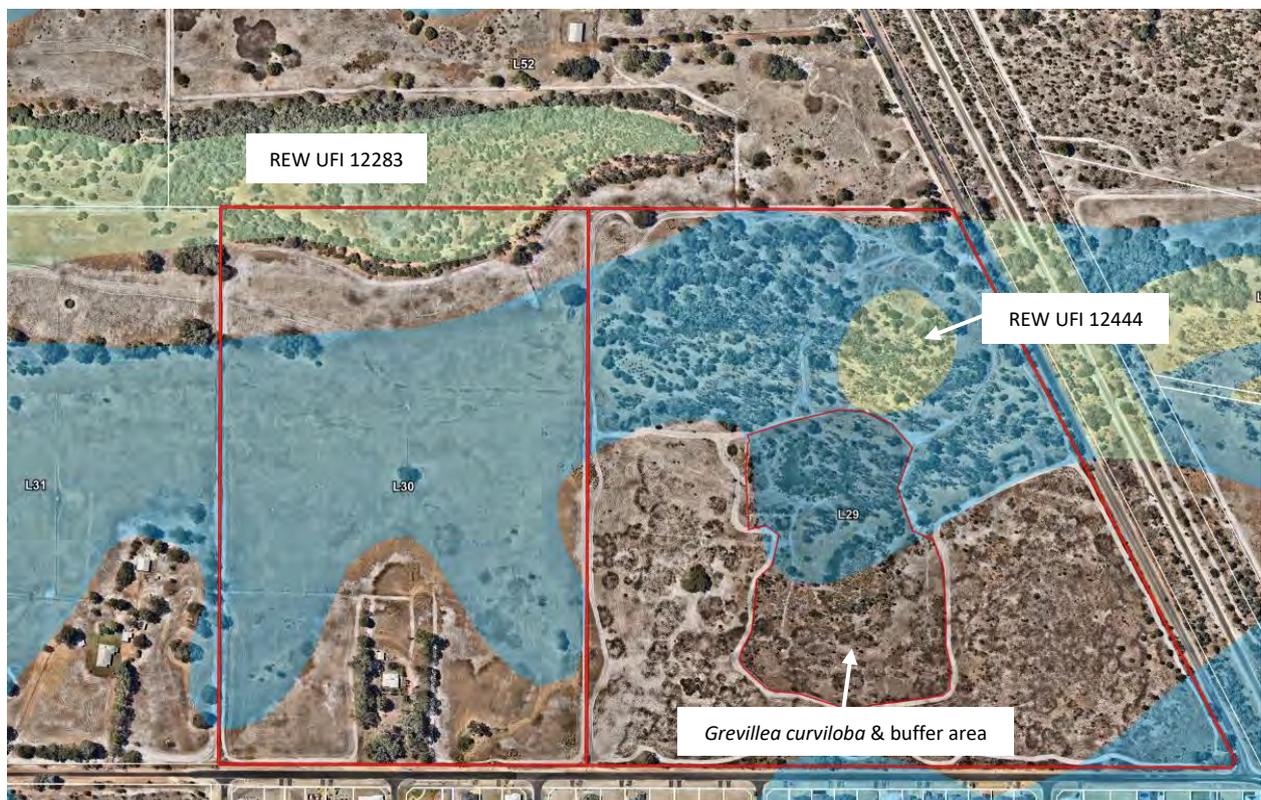
A summary of the site’s planning and lot title status Table 2.

**Table 1: Site summary**

Element	Lot 29 and 30 Maralla Road		
Address	Lot	Suburb	
Lot 29 & 30 Maralla Road		Bullsbrook	
Lot details	Deposited Plan	C/T	Area
Lot 29	P008094	2059/401	26.90 ha
Lot 30	P008094	246/52A	19.43 ha
Local Government Area	City of Swan		
Zoning	Metropolitan Region Scheme (MRS)		Local Planning Scheme (LPS) No. 17
Lot 29 & 30	Rural		General Rural
MRS Amendment	Subject to MRS Amendment No. 1411 – North Ellenbrook (East)		
District Structure Plan (DSP)	North Ellenbrook (East) DSP		

Element	Lot 29 and 30 Maralla Road	
<b>Environmental Attributes</b>		
Lot 29	<i>Grevillea curviloba</i> subsp. <i>curviloba</i> population (threatened flora species).	<ul style="list-style-type: none"> <li>The population was assessed onsite with Department of Biodiversity, Conservation and Attractions (DBCA) officers.</li> <li>The population is in a defined 0.93 ha area.</li> <li>The <i>Grevillea curviloba</i> subsp. <i>curviloba</i> population are within a DBCA agreed 3.35 ha buffer area.</li> </ul>
	REW UFI 12283	<ul style="list-style-type: none"> <li>The REW does not extend into Lot 29.</li> <li>A small portion (~ 500 m<sup>2</sup>) of the proposed 50 m wetland buffer extends into the north-western corner of Lot 29.</li> </ul>
	REW UFI 12444	<ul style="list-style-type: none"> <li>The wetland area totals 1.07 ha mapped.</li> <li>The wetland condition was mapped in was mapped as 'Degraded' to 'Completely Degraded' condition.</li> <li>The REW will be retained with a 30 m buffer.</li> </ul>
	Threatened black cockatoo foraging / nesting habitat	<ul style="list-style-type: none"> <li>The threatened black cockatoo foraging area is approximately 2.9 ha.</li> <li>A total of 40 potential breeding habitat trees were recorded on the site. The total included: <ul style="list-style-type: none"> <li>36 Marri trees</li> <li>1 Flooded Gums trees</li> <li>3 standing dead trees</li> </ul> </li> </ul>
Lot 30	REW UFI 12283	<ul style="list-style-type: none"> <li>Approximate 1.2 ha portion of REW UFI 12283 extends into Lot 30.</li> </ul>
	Threatened black cockatoo foraging / nesting habitat	<ul style="list-style-type: none"> <li>A total of 4 potential breeding habitat trees were recorded on the site. The total included: <ul style="list-style-type: none"> <li>2 Marri trees</li> <li>2 Flooded Gums trees</li> </ul> </li> </ul>

Lots 29 and 30 North Ellenbrook are shown in Figure A.



**Figure A: Lots 29 & 30 Maralla Road and key environmental attributes**

## Objective

The objective of this memo is to:

- Provide a synthesis of information regarding the environmental attributes identified in the EPA Chair's letter specific to the Lots 29 and 30 Maralla Road landholdings.
- Outline the planning response to the existing environmental attributes and future environmental management requirements as part of the future planning and development process.
- Outline the environmental management requirements as part of the future planning and development process.

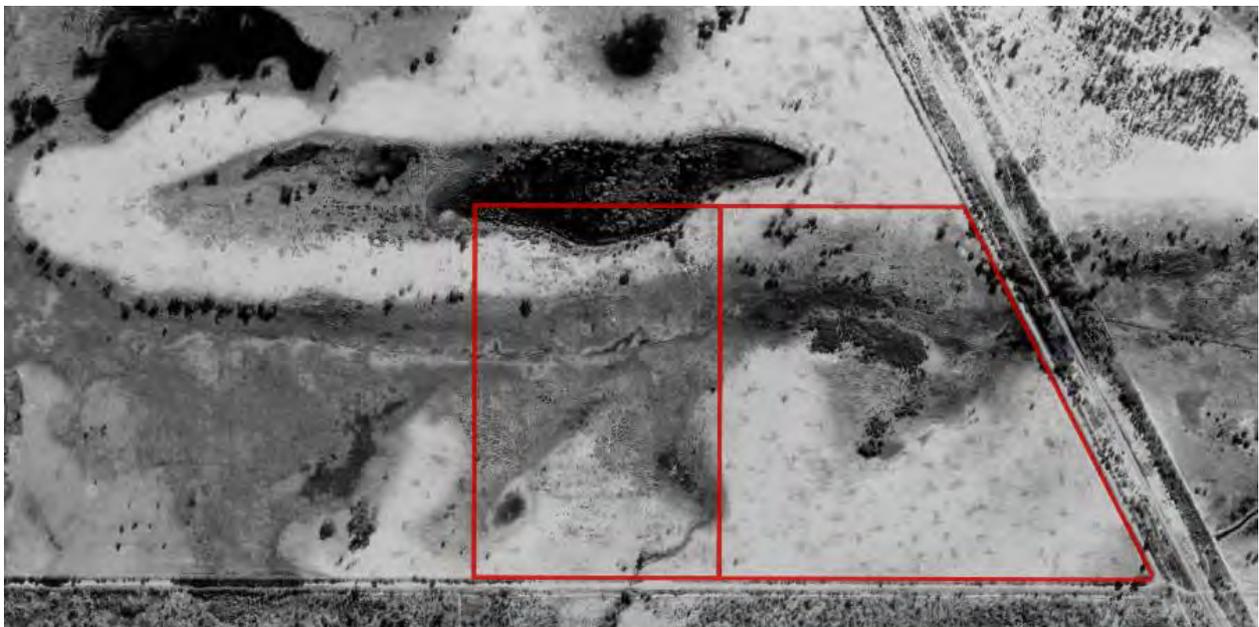
This memo incorporates the findings from site specific investigations and reporting including:

- Lot 29 and 30 Maralla Road, North Ellenbrook - Black Cockatoo Habitat Assessment (PGV Environmental 2019)
- Lot 29 and 30 Maralla Road, North Ellenbrook - Vegetation and Flora Survey (PGV Environmental 2019)
- Aquatic fauna survey and assessment - inclusive of the Western Swamp Tortoise (Indo-Pacific Environmental 2023)
- A western swamp tortoise eco-hydrological impact assessment (Emerge Associates and Pentium Water 2023) and peer review (HydroGeoEnviro 2023).

## Context

In the early 1970s, the majority of Lots 29 and 30 was cleared of native vegetation for the purpose of establishing livestock paddocks.

The 1974 photo illustrates the historical clearing within Lots 29 and 30. This historical photo also shows the extent of clearing and infilling within and surrounding the northern REW UFI 12283 (within Lots 52 and 53). The cleared landholdings were primarily used for livestock paddocks.



**Plate A: 1974 aerial photo of Lots 29 and 30 Maralla Road**

The 1979 historical aerial shows the clearing of native vegetation particularly within Lot 30 and the within the western extent of REW UFI 12283 (north of Lot 30) continued and there was the establishment of a livestock dam within Lot 29. There was no fencing of the REW UFI 12444 within Lot 29 from rural land use activities.



**Plate B: 1979 aerial photo of Lots 29 and 30 Maralla Road 1979**

In the mid-1990's Lot 30 is almost totally cleared of native vegetation. The northern portion of Lot 29 contains patches of remnant vegetation. The western portion of REW UFI 12283 (north of Lot 30) has been significantly cleared of native vegetation.



**Plate C: 1995 aerial photo of Lots 29 and 30 Maralla Road 1979**

### Surrounding Land Use

The following land uses surround Lot 29 and 30:

- Lot 29 abuts Railway Parade and the operational Perth-Geraldton rail freight line 'is situated approximately 50 m east of Lot 29.
- Maralla Road reserve south of Lots 29 and 30.
- The established Ellenbrook residential estate occurs south of Maralla Road.
- Rural lots occur to the west of Lot 30 and north of Lots 29 and 30. The majority of these rural lots have been historically cleared of native vegetation apart from a portion of REW UFI 12283 immediately north of Lot 30.

- Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011 area abuts Lots 29 and 30 eastern and northern boundaries.
- Bush Forever site 300 is the closest nature reserve. The Bush Forever site is located within the Ellenbrook residential development (Saw Pit Gully) located south of Maralla Road approximately 50 m from the boundary of Lot 30 at the closest point.

Figure B shows the surrounding land uses.



**Figure B: Lots 29 & 30 Maralla Road and surrounding land uses**

### Environmental Attribute Summary

A summary of the environmental values within Lots 29 and 30 Maralla Road is summarised below:

- Most of Lot 30 has been extensively cleared of native vegetation to support rural land uses.
- Regrowth and patches of remnant vegetation remains in areas predominantly within the northern portion of Lot 29.
- A total of 80 plant species were recorded during the vegetation and flora survey. This total consisted of 44 native species and 36 (46%) introduced species (PGV Environmental 2019).
- Two stands (totalling 0.93 ha in area) of the Threatened *Grevillea curviloba* subsp. *curviloba* (Narrow curved-leaf Grevillea) were recorded within Lot 29.
- No other conservation significant species were recorded.
- Two weed species, Cape Tulip (*Moraea flaccida*) and Arum Lily (*Solanum linnaeanum*) were recorded within the northern boundaries of Lots 29 and 30.

- Nine vegetation communities were described and mapped across Lots 29 and 30.
- The condition of the remnant vegetation was mostly 'Degraded' or 'Completely Degraded'. The only area in 'Good' condition was the *Grevillea curviloba* subsp. *curviloba* area.
- The remnant native vegetation is part of the Yanga Vegetation Complex which has 55.4% of its original extent remaining and 17.75% with 1.89% protection which is less the 10% retention target in the Perth and Peel Regions.
- The vegetation communities were assessed in such a degraded condition that no Floristic Community Type (FCT) could be accurately assign. No TECs or PECs are considered to occur.
- REW (UFI 12444) consists of stands of *Acacia saligna*/*Melaleuca raphiophylla* in 'Degraded' condition.
- REW (UFI 12283) located along the northern portion of Lot 30 consists of *Melaleuca raphiophylla*/*M. teretifolia* over weeds vegetation in 'Degraded' condition.

## Environmental Attributes

### Western Swamp Tortoise (WST)

Lots 29 and 30 Maralla Road are situated adjacent to the Environmental Protection (Western Swamp Tortoise Habitat) Policy (EPP) area. It is understood the EPA has initiated a review of the 2011 WST EPP.

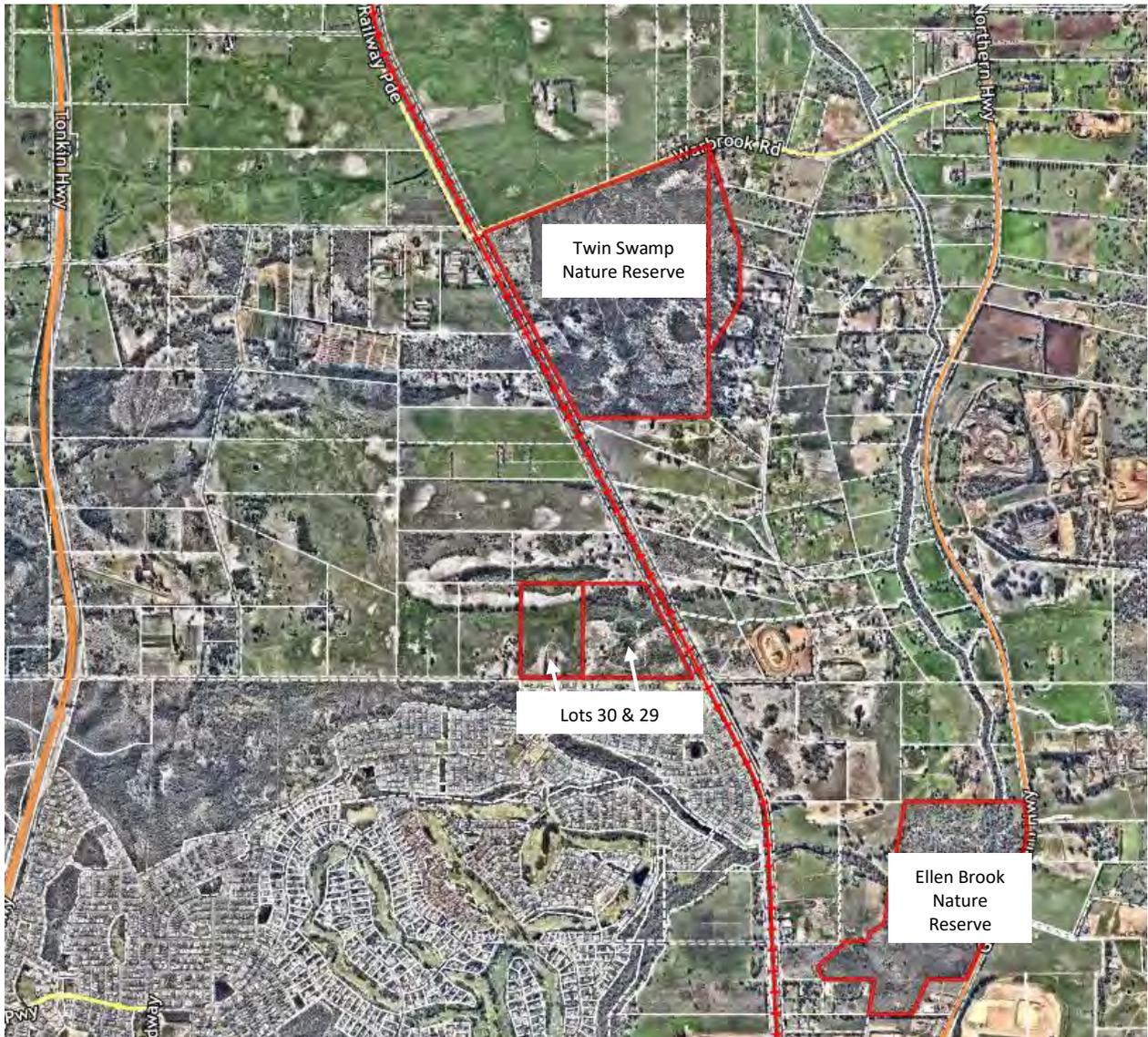
The two known WST populations occur within the following reserves:

- Twin Swamps Nature Reserve (TSNR) located approximately 1 km north-east of Lots 29 and 30 Maralla Road.
- Ellen Brook Nature Reserve (EBNR) approximately 1.4 km south-east of Lots 29 and 30 Maralla Road.

In the region, there are no known or reported WST population(s) outside of these two reserve areas.

The majority of the land surrounding the TSNR and the EBNR has been historically cleared to support agricultural and clay extraction land uses and regional transport links i.e. Perth-Geraldton rail freight line and Great Northern Highway.

Figure C shows the proximity of the two known WST populations (TSNR and the EBNR) in vicinity of Lots 29 and 30 Maralla Road.



**Figure C: Lots 29-32 Maralla Road and the Twin Swamps Nature Reserve & Ellen Brook Nature Reserve Areas**

In consultation with DBCA's WST expert, (Gerald Kuchling), site specific aquatic surveys (which included WST) was undertaken including within northern portion of Lot 29 and 30 and within REW UFI 12283 immediately north of Lot 30.

The key conclusions from the aquatic / WST survey relevant to Lots 29 and 30 were (Indo-Pacific Environmental 2023):

- No conservation significant aquatic fauna i.e., WST is considered to occur or be reliant upon habitat within the amendment area or the two REWs (UFI 12283 and UFI 12444).
- No WST species were recorded within the amendment area, the two REWs (UFI 12283 and UFI 12444) or Lots 29 and 30.
- If WST were to enter the amendment area (for example, from TSNR) it would unlikely survive due to:
  - The majority of habitat within the amendment area is unsuitable.
  - The presence of competitive species or those with which they would not co-occur,
  - Predators (cats/foxes) and the lack of predator management.
- In addition, physical infrastructure including roads and railway line provides a significant physical separation barrier between the amendment area from the known WST populations.

- DBCA advised in July 2023 they considered it reasonable to conclude that WST do not occur within Lot 29 or 30 (or more broadly the North Ellenbrook (East) amendment area).
- DBCA noted it may be possible for individual WST to potentially move into the amendment area. Noting a WST would need to traverse over 1 km (through cleared rural landholdings and possibly the Ellenbrook residential estate) and cross the Perth-Geraldton freight rail line, Railway Parade and Maralla Road to access Lots 29 and 30 Maralla Road.

### WST future refuge

The EPA Chair's letter identified Lots 29 and 30 Maralla Road (or parts thereof) as potential future drought refuge for the WST species. It is assumed, the focus of the WST future drought refuge proposal is focused on REW UFI 12283 (Sumpland - seasonally inundated basin) which is located partially within Lot 30 Maralla Road. The aquatic fauna survey of REW 12444 located within Lot 29 (Palusplain - seasonally waterlogged flat) concluded it does not contain suitable WST habitat (Indo-Pacific Environmental 2023).

The WST future drought refuge proposal specific for REW UFI 12283 is considered speculative for the following reasons:

1. The biology of WST is directly linked to wetland hydrological characteristics, requiring a hydroperiod (wet period) of around seven months to meet feeding, breeding, and temperature requirements. Specifically:
  - a. WST inhabit shallow, ephemeral wetlands with clay or sand over clay soils and suitable nearby aestivation refuges (Burbidge et al. 2010).
  - b. The inundation hydroperiods of WST wetlands are essentially determined by seasonal rainfall from May to November (TSSC 2012; BoM 2023).
  - c. Wetland water levels must typically remain within the range of 20-40 cm to allow individuals to feed, mate and grow (Burbidge 1981).
2. REW UFI 12283 is a seasonally inundated sumpland. The assessment of REW UFI 12283 as a suitable habitat for WST concluded:
  - a. The REW has an irregular hydroperiod (or wet period), with inundation not occurring some years during the WST active (feeding and growth) period (June/July to November/December).
  - b. During the noted years that inundation did not occur, or if inundation did not occur for long enough, it is likely that any WST present would not have survived, and WST would not persist at within this wetland.
3. A review of the historical aerial photographs confirm:
  - a. The sporadic wetland filling period. With evidence of the wetland being dry in June (2013, 2015, 2018) with minimal or no surface water October/November (2023, 2020, 2019).
  - b. The wetland has short pooling periods i.e., typically less than 5 months, suggesting a higher recharge into the Superficial Aquifer and likely sand dominated geology (but not homogenous) across the wetland area.
4. REW UFI 12283 demonstrates these WST habitat limitations particularly compared with EBNR. Specifically, it has limited vegetation cover (which is essential to provide the shade and leaf litter generation used for summer period aestivation), fluctuating water levels and has a large open area and is more susceptible to a drying climate.
5. The conclusions from the WST survey and review of the wetland data implies REW UFI 12283 would not meet the WST's specific eco-hydrological habitat requirements.

The above conclusions were drawn from the Indo-Pacific Environmental 2023 WST survey and assessment within Lot 30 and REW (UFI 12283). The REW (UFI 12444) within Lot 29 was identified as being 'unsuitable' for WST species. The aquatic fauna survey (Indo-Pacific Environmental 2023) is presented in the Environmental Assessment Report (Emerge Associates 2023) for the North Ellenbrook (East) MRS amendment (Appendix G).

## REW (UFI 12283 and UFI 12444) Management

The location of REWs UFI 12283 and UFI 12444 within Lots 29-32 Maralla Road has been identified and mapped within the Environmental Assessment Report supporting the North Ellenbrook (East) MRS Amendment.

The wetland assessments drew the following conclusions:

1. **REW (UFI 12444):** The REW is located entirely northern portion of Lot 29 and covers an approximate 1.07 ha area. The vegetation within REW was mapped as 'Degraded' condition.
2. **REW (UFI 12283):** REW (UFI 12283) intersects a 3 ha area along the northern boundary of Lots 30. The wetland extends beyond the amendment area to the north. The vegetation within REW (UFI 12283) was mapped as being in 'Degraded' condition.

The following specific management outcomes for REWs UFI 12283 and UFI 12444 will be adopted:

- **REW (UFI 12444)** located at the northern portion of Lot 29:
  - A 30 m buffer will be established around the mapped wetland.
  - Additional open space area on the east, north and western side of the wetland buffer.
  - The wetland and associated buffer will be ceded to the City of Swan (free of cost) as a local reserve area. This management outcome will be established as a condition of subdivision.
  - REW (UFI12444) will be subject to the following management requirement as a subdivision condition:
    - The preparation and implementation of an approved Wetland Management Plan. The wetland management plan will address the following elements to the satisfaction of the City of Swan:
      - Purpose and scope
      - Wetland boundary and buffers
      - Baseline environmental assessment of the wetland and the 30 m buffer (confirming the vegetation type and vegetation condition.
      - Wetland management and implementation plan including:
        - Drainage management & integration with the adjacent public open space area.
        - Wetland buffer & revegetation works.
        - Weed control.
        - Fencing and access management.
        - Maintenance & monitoring.
        - Completion criteria.
        - Contingency actions.
        - Adaptive management actions.
      - Timeframes & reporting.
      - The finalisation of the Wetland Management Plan is dependent upon the following supporting plans:
        - Landscape and engineering plans inclusive of the drainage designs within or adjacent to the wetland.
        - Revegetation Plan.
    - The preparation and implementation of an approved Urban Water Management Plan.

- Detailed landscape Plan for the adjacent open space area.
- **REW (UFI 12283)** located at the northern boundary of Lot 30:
  - A 50 m buffer and then a road reserve will be created adjacent to the wetland boundary.
  - Additional open space area located on the south-eastern boundary adjacent to the wetland buffer.
  - The portion of REW UFI 12283 and associated buffer within Lot 30 will be ceded to DBCA (if the department assumes long term land management responsibility for REW 12283) or alternatively the City of Swan (free of cost) as a local reserve area. This management outcome will be established as a condition of subdivision.
  - REW (UFI 12283) will be subject to the following management requirement as a subdivision condition:
    - The preparation and implementation of an approved Wetland / Foreshore Management Plan (for the portion of wetland and 50 m buffer within Lot 30 (and including the ~ 500 m<sup>2</sup> area in Lot 29).
    - Wetland / Foreshore Management Plan will address the following elements to the satisfaction of DBCA and/or the City of Swan:
      - Purpose and scope confirming:
        - If REW (UFI 12283) is to be incorporated into DBCA's potential future drought refuge for the WST species.
        - Confirm any additional specific boundary management requirements including fencing and signage.
      - Wetland boundary and buffers
      - Baseline environmental assessment of the wetland and the 50 m buffer confirming
        - The presence of WST
        - vegetation type and vegetation condition.
      - Wetland management and implementation plan including:
        - Wetland buffer & revegetation works.
        - Weed control.
        - Fencing management.
        - Maintenance & monitoring.
        - Completion criteria.
        - Contingency actions.
        - Adaptive management actions.
        - Timeframes & reporting.
    - The finalisation of the Wetland / Foreshore Management Plan is dependent upon the following supporting plans:
      - Landscape and engineering plans inclusive of the drainage designs within or adjacent to the wetland.
      - Revegetation Plan.

### **Carnaby's cockatoo and Forest red-tailed cockatoo foraging/nesting habitat**

The EPA Chair's letter raised a concern that the proposed local reserves areas located across the northern portion of Lots 29 and 30 do not provide a continuous linkage which encompasses the potential foraging and nesting habitat for the threatened black cockatoo species. The black cockatoo potential foraging and nesting habitat consists primarily of scattered Marri and

Flooded Gum trees located in cleared livestock paddocks across the northern boundaries of Lots 29 and 30. Noting in Lot 30 the mapped black cockatoo trees are located within the proposed 50 m wetland buffer area.

Figure D illustrates the black cockatoo potential foraging and nesting habitat within Lots 29 and 30 Maralla Road.



**Figure D: Lots 29 and 30 Maralla Road & potential black cockatoo nesting and foraging trees**

Within Lots 29 and 30 there were 44 black cockatoos potential foraging and nesting trees. The total area containing foraging habitat is approximately 2.9 ha and consists primarily of two scattered stands of Marri trees at the northern end of Lot 29 (PGV Environmental 2019).

The Lot 29 and 30 landowners, to provide certainty on the retention of the potential foraging and nesting trees for the threatened black cockatoos species have agreed to establish a contiguous open space area along the northern boundary of Lot 29 and Lot 30 for the purpose of retaining the identified black cockatoos foraging and nesting trees.

The total proposed public open space area along the northern boundary is 6.74 ha.

The proposed public open space area will be ceded to the City of Swan. This management outcome will be established as a condition of subdivision.

The public open space area will be subject to following management requirements to the satisfaction of the City of Swan:

- Detailed landscape plan for the public open space area. This plan includes:
  - Additional tree planting which would compliment the existing black cockatoo nesting/foraging habitat.
  - Access pathways.
  - Monitoring and maintenance.

The establishment of the 6.74 ha public open space area (which ~ 2 ha larger area than the proposed local reserve within Lot 29 outlined in the North Ellenbrook (East) DSP. This secures the following outcomes:

- The retention of 43 black cockatoos potential foraging and nesting trees in an area of contiguous public open space.

- The only other potential foraging and nesting tree is located at the south-east boundary of Lot 29 and Maralla Road (Figure C). The retention of this single tree will be determined as part of a future detailed subdivision design.
- The retention of approximately 2.7 ha (or 94%) of the defined 2.9 ha potential black cockatoo foraging habitat area in an area of public open space.

### Population of *Grevillea curviloba* subsp. *curviloba*

Two stands of the threatened species *Grevillea curviloba* subsp. *curviloba* were recorded within Lot 29. The two *Grevillea curviloba* subsp. *curviloba* population areas were subject to two independent botanical assessments and two site visits with DBCA officers. The two *Grevillea curviloba* subsp. *curviloba* population areas total 0.93 ha (PGV Environmental 2019).

In liaison with DBCA the following management actions were agreed to ensure the protection and long term viability of the two *Grevillea curviloba* subsp. *curviloba* population areas:

- The establishment of a 40 m - 50 m *Grevillea curviloba* subsp. *curviloba* buffer from the future residential development area.
- The agreed *Grevillea curviloba* subsp. *curviloba* population buffer area totals 3.35 ha.
- A 20 m road reserve will form an interface between the local reserve area and the future residential development.
- A hard wall at the edge of the buffer surrounding the *Grevillea curviloba* subsp. *curviloba* populations, with an access point will be installed.
- The 3.34 ha *Grevillea curviloba* subsp. *curviloba* population and buffer area will be ceded to the City of Swan (free of cost) as a local reserve area. This management outcome will be established as a condition of subdivision.
- The *Grevillea curviloba* subsp. *curviloba* and buffer area will be subject to the following management requirement as a subdivision condition:
  - The preparation and implementation of a Conservation Management Plan to the satisfaction of DBCA on advice from the City of Swan.
  - This management plan will address the following elements:
    - Detail the hard wall and fence structure.
    - Access for maintenance.
    - Bushfire.
    - Weed management.
    - Rehabilitation.
    - Monitoring and maintenance.
- The management plan will be approved by the City of Swan on advice from DBCA.

The above management framework for the *Grevillea curviloba* subsp. *curviloba* population was endorsed by DCBA's regional manager in September 2020.

### Conclusion

The environmental values within Lots 29 and 30 Maralla Road identified in the EPA Chair's letter are capable of being managed through the sequential planning stages, specifically:

1. There are no known WST populations within Lots 29 or 30 (or the North Ellenbrook (East) Amendment area) inclusive of REW (UFI 12283). The aquatic fauna survey within Lot 29, specifically REW (UFI 12444) which is a seasonally waterlogged flat wetland concluded it does not contain suitable WST habitat (Indo-Pacific Environmental 2023).
2. The wetland management response includes:
  - a. Establishing 50 m buffer to REW (UFI 12283) adjacent to Lot 30 and a 30 m buffer surrounding REW (UFI 12444).

- b. Subjecting the wetland and buffer area to a Wetland (REW - UFI 12444) / Foreshore Management Plan (REW - UFI 12283).
- c. Liaise with DBCA/City of Swan on the following key interface elements to REW UFI 12283:
  - i. Fence type and location.
  - ii. Restricting public/third party access.
  - iii. Rehabilitation requirements.
3. Both REWs (and the associated wetland buffers) will be ceded (free of cost) to either the City of Swan or DBCA as a local nature reserve. This will be a requirement of a future subdivision condition. This subdivision condition will also capture the requirement to prepare and implement a wetland management plan.
4. The potential black cockatoo foraging / nesting habitat located along the northern portion of Lots 29 30 Maralla Road has been addressed through:
  - i. Extending the future public open space area boundary.
  - ii. Retaining 43 (of the 44) mapped black cockatoo trees in a contiguous area of open space.
  - iii. The proposed public open space area will be ceded to the City of Swan. This management outcome will be established as a condition of subdivision and will be subject to the approval by the City of Swan of a detailed landscape plan.
5. The two *Grevillea curviloba* subsp. *curviloba* population areas totalling 0.93 ha within Lot 29, has been subject to:
  - i. DBCA site assessment.
  - ii. DBCA agreed management framework including incorporating the *Grevillea curviloba* subsp. *curviloba* population within a 3.35 ha local reserve area.
  - iii. The *Grevillea curviloba* subsp. *curviloba* and buffer area will be subject to a future Conservation Management Plan (to the satisfaction of DBCA on advice from the City of Swan) as a condition of subdivision.

The proposed environmental management outcomes are captured in the enclosed design concept for Lots 29 and 30. The design concept illustrates the two REWs (UFI 12283 & UFI 12444) and buffer areas, the extended public open space (and black cockatoo tree retention) and the *Grevillea curviloba* subsp. *curviloba* population 3.35 ha local reserve area.

If the Department has any further questions in relation to the management framework for the key environmental values within Lots 29 and 30, please contact the undersigned.

John Halleen

Principal Environmental Planner

[jhalleen@pentiumwater.com.au](mailto:jhalleen@pentiumwater.com.au)

Enc: Design Concept and Environmental Constraints (Hatch 2024)

the  $\mathbb{R}^n$ -valued function  $\mathbf{f}$  is a solution of the system (1) if and only if  $\mathbf{f}$  is a solution of the system (2). The system (2) is called the *variational system* of (1) at the point  $(t, \mathbf{x})$ . The matrix  $\mathbf{A}(t, \mathbf{x})$  is called the *variational matrix* of (1) at the point  $(t, \mathbf{x})$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (3)$$

where  $o(\epsilon)$  is a vector-valued function satisfying  $\|o(\epsilon)\| = o(\|\epsilon\|)$  as  $\epsilon \rightarrow 0$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (4)$$

where  $o(\epsilon)$  is a vector-valued function satisfying  $\|o(\epsilon)\| = o(\|\epsilon\|)$  as  $\epsilon \rightarrow 0$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (5)$$

where  $o(\epsilon)$  is a vector-valued function satisfying  $\|o(\epsilon)\| = o(\|\epsilon\|)$  as  $\epsilon \rightarrow 0$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (6)$$

where  $o(\epsilon)$  is a vector-valued function satisfying  $\|o(\epsilon)\| = o(\|\epsilon\|)$  as  $\epsilon \rightarrow 0$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (7)$$

where  $o(\epsilon)$  is a vector-valued function satisfying  $\|o(\epsilon)\| = o(\|\epsilon\|)$  as  $\epsilon \rightarrow 0$ .

Let  $\mathbf{f}$  be a solution of (1) and let  $\mathbf{y}$  be a solution of the variational system (2) at the point  $(t, \mathbf{x})$ . Then

$$\mathbf{f}(t + \epsilon) = \mathbf{f}(t) + \epsilon \mathbf{y} + o(\epsilon) \quad (8)$$

Appendix 4

# DBCA Letter of Endorsement



Department of **Biodiversity,  
Conservation and Attractions**



Your ref: EEL19080.002  
Our ref: PRS 44659  
Enquiries: Mark Cugley  
Phone: 9303 7700  
Email: [mark.cugley@dbca.wa.gov.au](mailto:mark.cugley@dbca.wa.gov.au)

Mr John Halleen  
Technical Director  
RPS Australia West Pty Ltd  
Level 2, 27-31 Troode Street  
West Perth WA 6005

Dear John,

**LOTS 29 AND 30 MARALLA ROAD, NORTH ELLENBROOK (BULLSBROOK) – GREVILLEA  
CURVILOBA SUBSP. CURVILOBA MANAGEMENT**

I refer to your correspondence of 6 August 2020 following a site meeting on 27 July 2020 with DBCA district officers to discuss the future management of a population of *Grevillea curviloba subsp. curviloba* at Lot 29 Maralla Road, Bullsbrook. The Parks and Wildlife Service of the Department of Biodiversity, Conservation and Attractions (DBCA) would like to thank you for the opportunity for district staff to meet again with yourself and representatives of the landowner LWP, to further refine the interim and long-term management of the new population.

DBCA considers that the new reserve boundaries as displayed in Figure A of your correspondence provides an improved separation distance between the Grevillea population and future potential residential development. It is noted that the new boundary offers a buffer of approximately 40-50m from the Grevillea population and now excludes the potential for turfed public open space to be co-located in the buffer.

DBCA is generally supportive of the management measures outlined in your letter as these reflect the agreed approach discussed at the site meeting of 27 July 2020. The department notes however that a separation distance for the temporary fence to be installed around the Grevillea population was omitted from your letter. The department's preference would be for the temporary fenced buffer to follow the alignment of the permanent reserve boundary as close as reasonably possible, as this will reduce the risk of damaged to the soil structure of the buffer area and allow the potential early rehabilitation of the buffer area to assist in the management of the Grevillea population.

As detailed in the department's previous correspondence of 24 February 2020, the department notes that several key considerations are still required to be resolved prior to the creation of a Grevillea conservation reserve. A key consideration is the determination by the Western Australian Planning Commission (WAPC) that the subject lot is suitable to be rezoned for urban development. The identification and conservation of key environmental assets in the area is one of several factors the WAPC will consider when determining the suitability of land to be rezoned. DBCA's support for the interim and potential long-term management of the Grevillea population should not be considered to pre-empt any future decision made by WAPC in relation to the subject land.

Swan Coastal District  
5 Dundobar Road, Wanneroo WA 6065  
PO Box 459 Wanneroo WA 6946

Phone: (08) 9303 7700 Fax (08) 9303 7777 Email: [michael.roberts@dbca.wa.gov.au](mailto:michael.roberts@dbca.wa.gov.au)  
[www.dbca.wa.gov.au](http://www.dbca.wa.gov.au)

DBCA will continue to provide a key role in providing advice to decision making authorities such as WAPC and the Environmental Protection Authority throughout the planning process for the subject property. Thank you for providing the department with an opportunity to provide input into the interim and long-term management of this important new Grevillea population.

Please contact me on 9303 7700 or [mark.cugley@dbca.wa.gov.au](mailto:mark.cugley@dbca.wa.gov.au) if you have any queries regarding this advice.

Yours sincerely,



Mark Cugley  
DISTRICT MANAGER

9 September 2020



Appendix 5

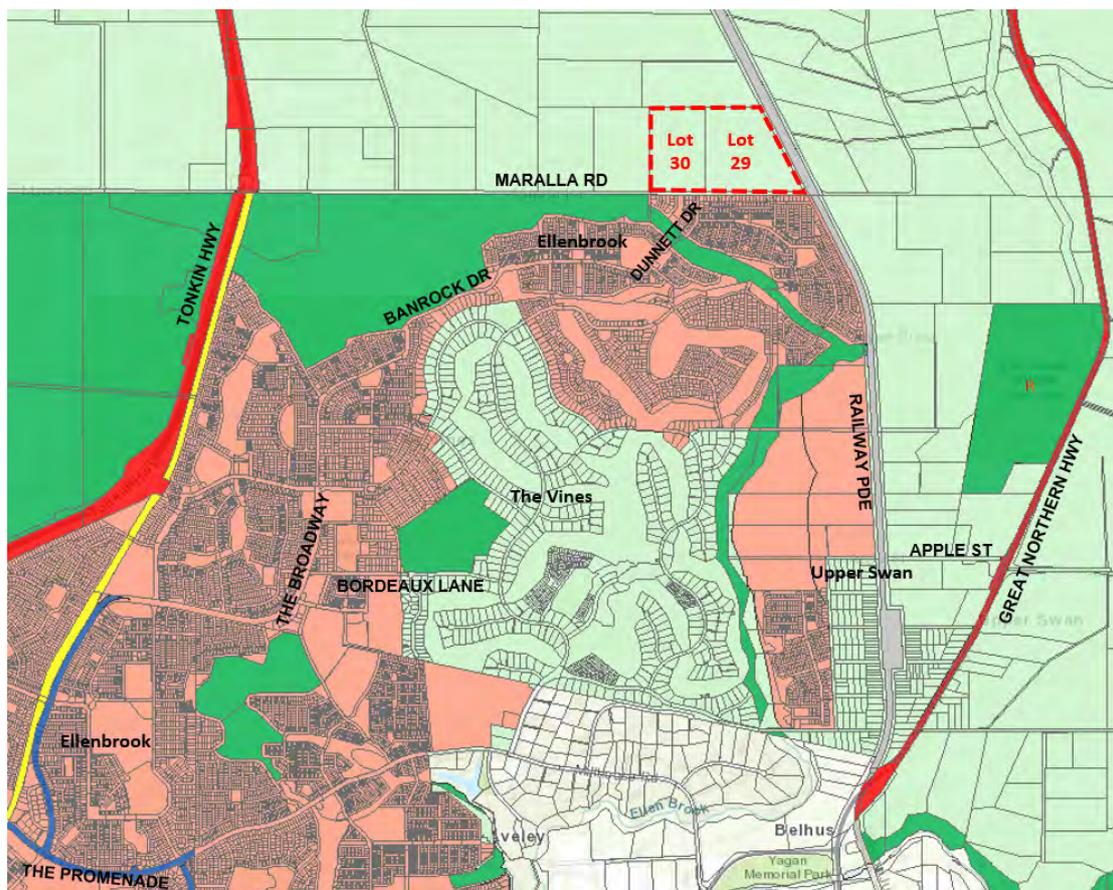
# Transport Technical Note

**Technical Note:** No 1**Date:** 27/05/2025**Project No:** t25.008**Project:** Lots 29 & 30 Maralla Road, North Ellenbrook**Subject:** Existing Road Network Capacity

## 1 Introduction

This Technical Note relates to a proposal for subdivision of Lots 29 and 30 Maralla Road for the early delivery of approximately 450 residential lots. The subject site is part of the North Ellenbrook (East) District Structure Plan. A preliminary concept plan for the subject site is included at **Appendix A** in this Technical Note.

The subject site is located on the northern side of Maralla Rd and immediately west of Railway Pde in the suburb of Bullsbrook, in the City of Swan, as shown in **Figure 1**.



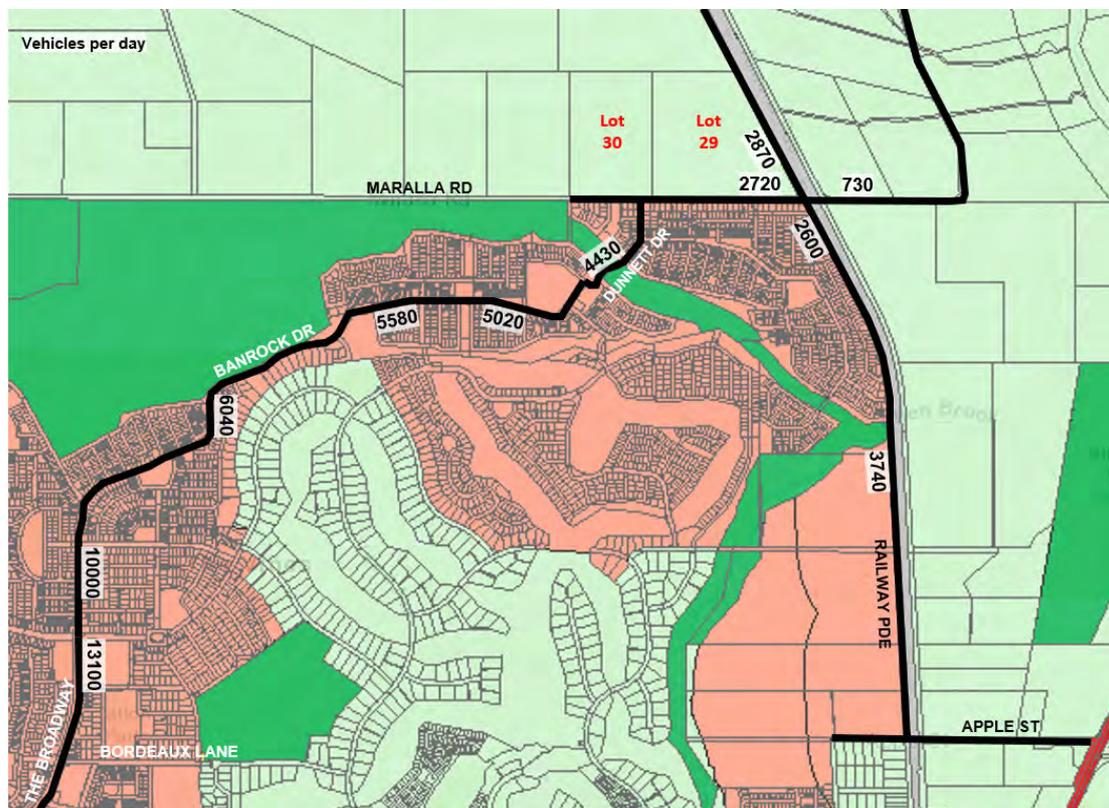
**Figure 1: Location of the subject site**

The purpose of this Technical Note is to assess the capacity of the existing road network of Ellenbrook and Railway Parade to accommodate the additional traffic flows that will be generated by residential development of the subject site.

This analysis focuses mainly on the Dunnett Drive – Banrock Drive – The Broadway route down to the district centre at Bordeaux Lane (The Broadway is built to dual carriageway standard south of Bordeaux Lane) and the Railway Parade route down into Upper Swan.

## 2 Existing Traffic Volumes

Traffic counts have been undertaken in February 2025 to establish the existing traffic volumes on the road network for this assessment. These existing weekday traffic volumes are shown in **Figure 2**.



**Figure 2: Existing weekday traffic volumes**

Further details of each of the traffic counts are presented in **Appendix B**. One of the counts undertaken was a 12-hour traffic count (7am to 7pm) at the Railway Pde / Maralla Rd / Ellenbrook Rd intersections. Therefore, the weekday traffic volumes shown on Railway Parade, Maralla Road and Ellenbrook Road around those intersections have been factored up from those 12-hour counts based on the Railway Parade count south of Sorrel Way, where that 12-hour period equated to 75.4% of daily traffic flow.

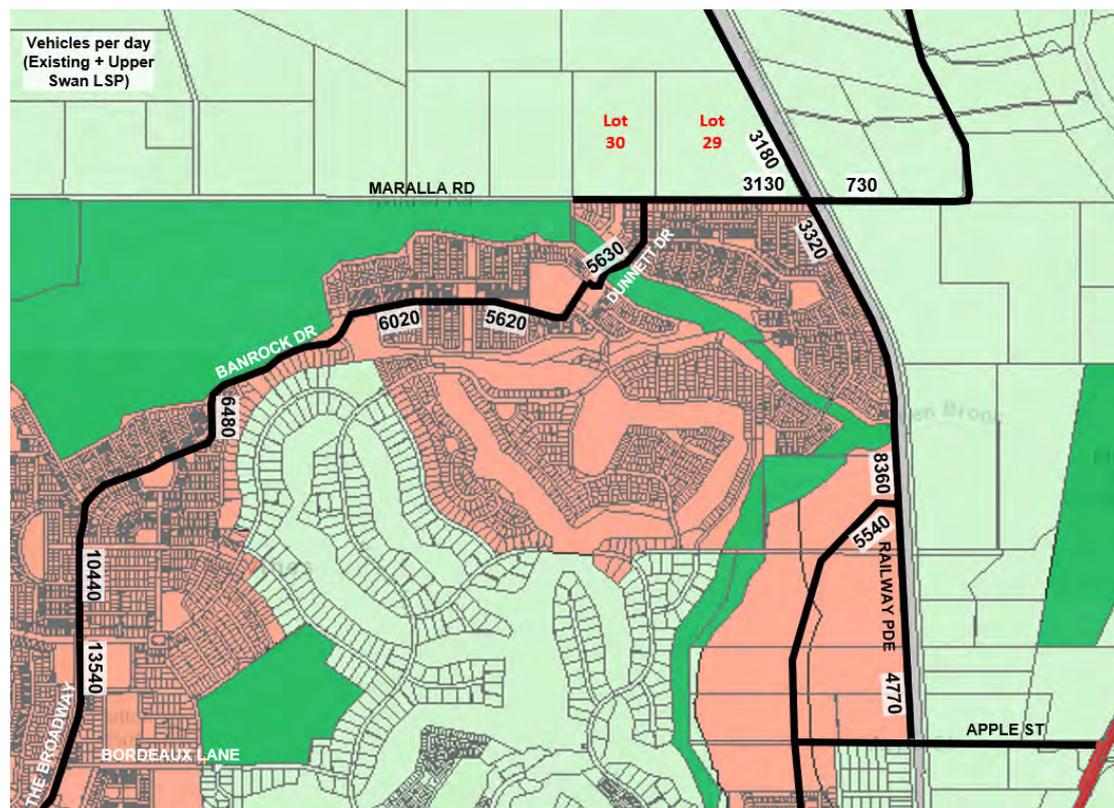
### 3 Upper Swan LSP Traffic

The Upper Swan Local Structure Plan area is the urban zoned land on the western side of Railway Parade and Orange Avenue in Upper Swan (see **Figure 1**). The *Upper Swan Local Structure Plan Transport Impact Assessment* (2018) and subsequent TIA Addendum (2024) modelled the traffic generation associated with the development of that precinct.

When fully developed that Upper Swan LSP area will generate net external traffic flows of approximately 12,600vpd with approximately 4600vpd on Railway Parade at the new bridge over the Ellen Brook at the northern end of that LSP area.

The modelled external traffic distribution from the Upper Swan LSP area is approximately 49% south (Great Northern Hwy and West Swan Road), 9% north (Great Northern Hwy, Railway Pde and Maralla Rd) and 42% west (Ellenbrook and The Vines).

The future total traffic volumes with full development of the Upper Swan LSP area (i.e. existing + Upper Swan LSP) are shown on the key roads for this Technical Note in **Figure 3**.



**Figure 3: Existing + Upper Swan LSP weekday traffic volumes**

## 4 Lots 29 & 30 Subdivision Traffic Generation

Lots 29 & 30 Maralla Road are part of the North Ellenbrook (East) DSP area. The future traffic generation of that DSP area was assessed in the *North Ellenbrook (East) DSP Traffic Impact Assessment* (July 2022).

That TIA report used a residential trip rate of 9 trips/dwelling/day for standard dwellings and 6.5 for group housing dwellings. Those trip rates were sourced from the *NSW Guide to Traffic Generating Developments* (2002). However, from November 2024 that guide has been superseded by a new *NSW Guide to Transport Impact Assessment* (2024) which provides an updated trip rate of 8.12vpd per dwelling for low density residential dwellings.

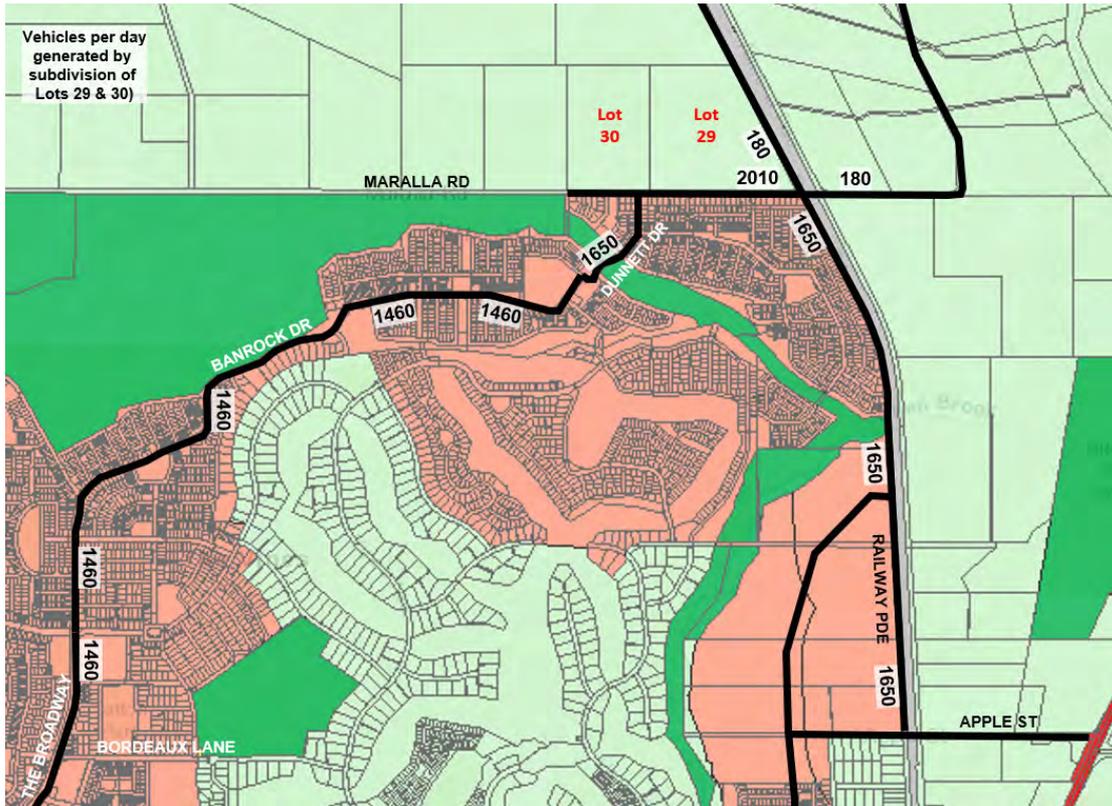
Accordingly, the proposed yield of approximately 450 residential lots would have a total traffic generation of approximately 3,650vpd.

Information in the older *NSW Guide to Traffic Generating Developments* indicates that approximately 25% of residential traffic typically travels to/from local facilities within that locality including schools and shops, but in this instance the closest primary and secondary schools and shopping facilities would all be in Ellenbrook.

Taking into consideration the external traffic distribution modelled for the Upper Swan LSP area and the location of the subject site within the road network, the anticipated external trip distribution from subdivision of Lots 29 & 30 is as follows:

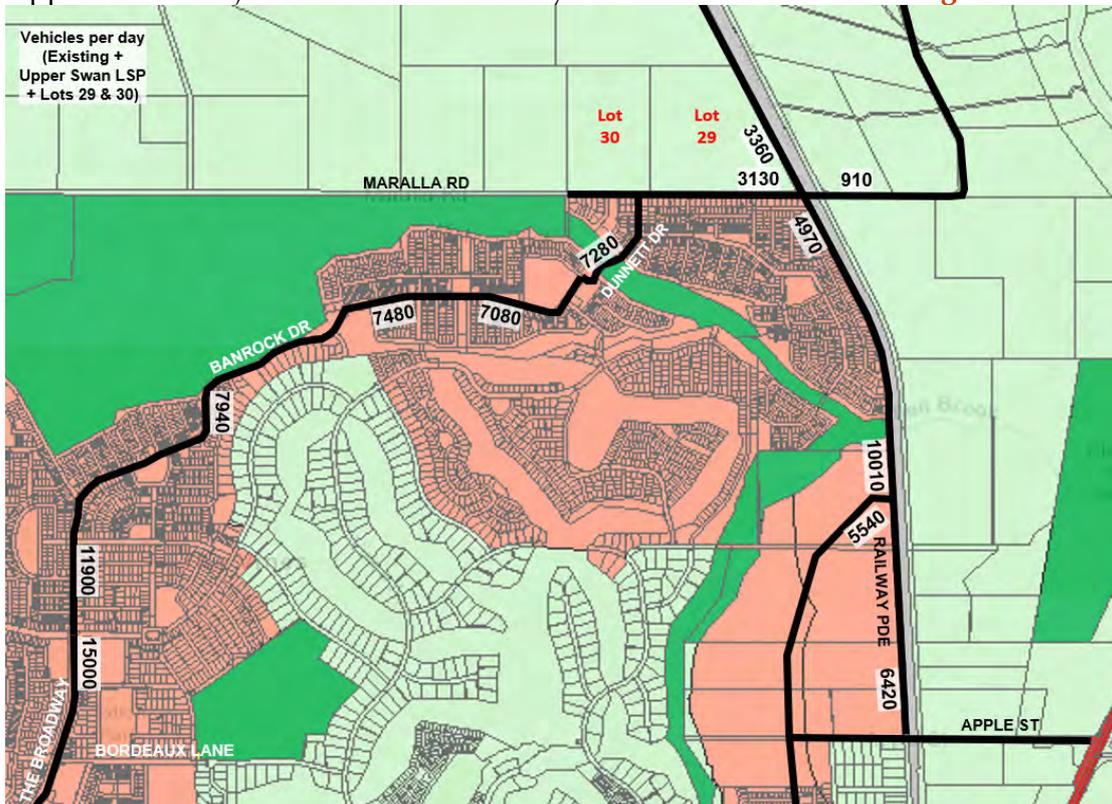
- 5% northeast via Ellenbrook Rd to Great Northern Hwy
- 5% north via Railway Parade
- 45% south via Railway Parade
- 45% southwest via Dunnett Dr, including:
  - 5% to primary school
  - 5% to secondary school
  - 15% to shops and other local facilities

The resulting external traffic flows generated by the proposed subdivision of Lots 29 & 30 are illustrated in **Figure 4**.



**Figure 4: Traffic flows generated by subdivision of Lots 29 & 30**

Adding that traffic from Lots 29 & 30 to the future total traffic flows (existing + Upper Swan LSP) results in the total daily traffic volumes shown in **Figure 5**.



**Figure 5: Total weekday traffic volumes with subdivision of Lots 29 & 30**

## 5 Road Network Capacity

### 5.1 Dunnett Drive

Dunnett Drive (Maralla Road to Banrock Drive) is constructed as a two-lane neighbourhood connector with sealed width of approximately 7.4m and parking indented in the verges in a 22m road reserve. The road reserve is slightly narrower at approximately 21.2m through the POS south of Everingham Drive but there is no parking in the verges on that narrower section.

The 7.4m sealed road width of this section of Dunnett Drive corresponds to a Neighbourhood Connector B in the WAPC *Liveable Neighbourhoods* policy, which has a standard cross-section of 7m sealed width between kerbs with parking indented in the verges in a 19.4m road reserve. (The 7.4m sealed width was previously considered necessary for bus routes but Public Transport Authority (PTA) guidelines only require 3.5m traffic lanes for bus routes, so 7m sealed width is sufficient.)

The WAPC *Liveable Neighbourhoods* policy (Element 2 – Movement Network, Requirement R40) states:

*“Cycle lanes should be provided on streets with projected traffic volumes of more than 3000 vehicles per day and near schools, stations, centres or where long distance commuter cycling and recreational cycling is likely.*

*“Additional shared paths may be also be necessary for cyclist safety along streets with higher traffic volumes. Arterial roads should normally incorporate a cycle lane for on-street cyclists.”*

Accordingly, on-road cycle lanes must be considered desirable but are not mandatory in *Liveable Neighbourhoods*.

Dunnett Drive has paths in the verges as follows:

- Maralla Rd to Dalmilling Dr: 1.8m footpath on the western side only;
- Dalmilling Dr to Everingham Dr: 1.8m footpath on the western side and 2.3m shared path on the eastern side;
- Everingham Dr to Janselling Ave: 2.5m shared paths on both sides; and
- Janselling Ave to Banrock Dr: 1.8m footpath on the southeast side and 2.3m shared path on the northwest side.

The shared paths on Dunnett Drive from Dalmilling Drive to Banrock Drive may be considered as adequate provision for bicycles on this section of Dunnett Drive.

The northern section of Dunnett Drive (from Maralla Rd to Dalmilling Drive) would currently be carrying significantly less traffic than the southern section. Based on the existing traffic volumes shown in **Figure 2**, it is estimated the northern section of Dunnett Drive would currently be carrying up to 2200vpd (i.e. about 50% of the southern section traffic volume) and would increase to approximately 4300vpd when Lot 29 & 30 and Upper Swan LSP traffic flows are added in.

Therefore, the existing footpath on the northern section of Dunnett Drive should be upgraded to a shared path (widen from 1.8m footpath to 2.3m shared path on the western verge or minimum 2m wide shared path on the eastern verge adjacent to kerb).

The future traffic volumes on Dunnett Drive of 7280vpd shown in **Figure 5** (and approximately 4300vpd north of Dalmilling Drive) are more in line with the traffic volume range for a Neighbourhood Connector A in the *Liveable Neighbourhoods* policy.

*Liveable Neighbourhoods* (Element 2, Requirement R8) states:

“Development along integrator B and neighbourhood connector streets with ultimate vehicle volumes over 5000 vehicles per day should be designed either so vehicles entering the street can do so travelling forward, or are provided with alternative forms of vehicle access.”

Residential development along both sides of Dunnett Drive south of Dalmilling Drive do not have driveway access onto Dunnett Drive and are provided with access via rear laneways instead, which complies with that *Liveable Neighbourhoods* requirement.

A central median at least 2m wide is normally included in the standard cross-section for a Neighbourhood Connector A. However, footnote 7 under Figure 17 (Neighbourhood Connector A cross-section) says, “*In some circumstances the median may be omitted.*” It does not provide any guidance on what those special circumstances would be, but it should be considered that the difficulty, disruption and cost to retrofit such a median on this already constructed road would be an appropriate example of that type of exceptional circumstance.

In practical terms, the existing 7.4m road width plus 2.3m shared path on Dunnett Drive does provide sufficient capacity to accommodate those future traffic flows in the proposed development scenario.

## 5.2 Banrock Drive

Banrock Drive is constructed as variant forms of Neighbourhood Connector A.

The northeast section (from Dunnett Drive to about 300m west of Norcia Way) has a 3m median, two 4.2m traffic lanes and indented parking in the verges within road reserve varying from approximately 21.5m to 22m (or more in some sections). This section has shared paths of 2.0m to 2.5m width on both sides. Residential lots do not have direct driveway access onto this section of Banrock Drive.

The central section from 300m west of Norcia Way to the Helms Loop / Dorrien Way intersection is constructed with 7m sealed width in a 22m road reserve. This section has shared paths of 3.0m on the north side and 2.0m on the south side. Residential lots abutting this section do have driveway access onto Banrock Drive

but they are large lots along this section with provisions made for vehicles to turn around on site to enter the road in forward gear.

The southwest section from the Helms Loop / Dorrien Way intersection to Elmridge Parkway / Ackworth Grange intersection has a 3m median, two 4.2m traffic lanes and indented parking in the verges within road reserve of approximately 21.5m. This section typically has a 2.3m shared path on the northwest side and 1.8m footpath on the other side. Residential lots do not have direct driveway access onto most of this section of Banrock Drive but the southernmost section does have about 14 lots with direct driveway access onto Banrock Drive.

The standard Neighbourhood Connector A cross-section in the *Liveable Neighbourhoods* policy has a 2m median, two 3.5m traffic lanes, two 1.5m cycle lanes and 2.1m parking lanes in a 24.4m road reserve, or reduced to 23m road reserve with indented parking in the verges. A shared path is required on one side and a footpath on the other side.

Accordingly, Banrock Drive does not specifically cater for on-road cycling by providing on-road cycling lanes, but the shared paths on Banrock Drive may be considered as adequate provision for bicycles (as discussed above in relation to Dunnett Drive).

It is noted that bus stops along Banrock Drive do not have bus embayments. This is in accordance with the WAPC *Liveable Neighbourhoods* policy. For example, the footnotes under Figure 17 (Neighbourhood Connector A cross-section) states, “Bus stops are normally in travel lane against kerb extensions in parking lane.”

As indicated in **Figure 5**, future traffic volumes along Banrock Drive in the proposed development scenario would range from 7,080vpd at the northeast end, progressively increasing to 11,900vpd at the southwest end. Those higher traffic volumes at the southwest end (particularly the existing 10,000vpd and future 11,900vpd south of Vilama Link / Adlington Way intersection) are well into the 7,000vpd to 15,000vpd range of an Integrator B in *Liveable Neighbourhoods*.

An Integrator B is the next category of road above Neighbourhood Connector A in *Liveable Neighbourhoods*. These two categories of roads are relatively similar in a lot of ways. Both typically have two 3.5m traffic lanes, two 1.5m cycle lanes and a central median. The main difference between them is the width of the central median. The Neighbourhood Connector A typically has a 2m median which provides a refuge for pedestrians crossing the road. The Integrator B typically has a 6m median which can accommodate a car turning right out from a side street intersection, so that right turn can be undertaken in two stages in heavy traffic flow conditions.

The only problem with the existing 3m median on the high-volume section of Banrock Drive from Vilama Link / Adlington Way roundabout south to Elmridge Parkway / Ackworth Grange roundabout is that it does not adequately cater for

right turn movements with the existing traffic flows of 10,000vpd on this section of Banrock Drive.

The solution to this existing problem is to ban all right turn movements along this section Banrock Drive. This would require closure of the median openings and restrict turn movements to left in / left out (LILO) at Lomas Circle, Badminton Cross, Solway Brace and Coldstream Pass (Bentall Way is already LILO). The displaced right turn movements would be handled by right turns or U-turns at the two roundabouts at either end of this section of Banrock Drive.



**Figure 6: Banrock Drive intersections to be restricted to LILO**

After that, with no right turns on this section of Banrock Drive, there would be no requirement for a 6m median on this section of Banrock Drive, so it would be able to accommodate the future 11,900vpd in the proposed development scenario.

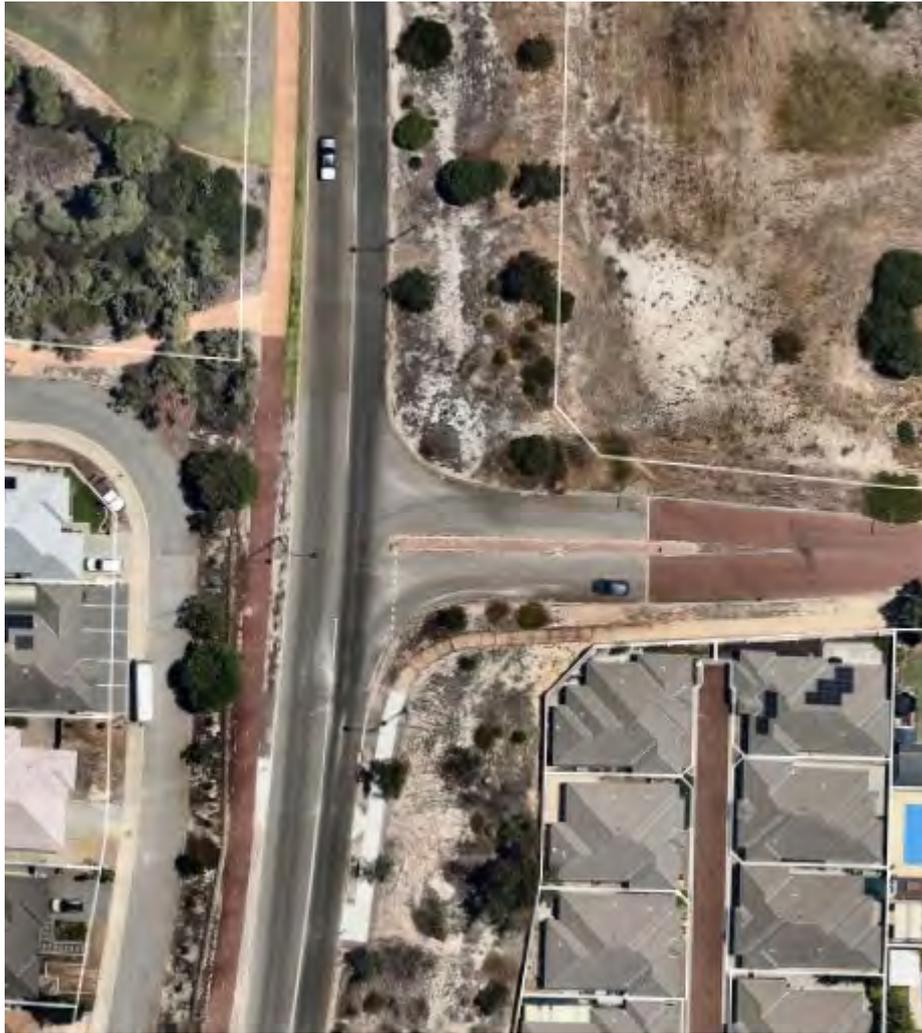
## 5.3 The Broadway

The Broadway (Elmridge Parkway / Ackworth Grange roundabout to Voyager Link / Bordeaux Lane roundabout) is currently constructed as a two-lane road with 8.5m sealed width in a 40m road reserve. This will ultimately become the northbound two-lane carriageway when this section is upgraded to dual carriageway standard in future, as has already been constructed on approach to and south of the Bordeaux Lane roundabout.

The Broadway already has a 3m shared path on the western side. No residential lots have direct driveway access onto The Broadway.

As indicated in **Figure 5**, future traffic volumes on this section of The Broadway would be up to 15,000vpd in the proposed development scenario, compared to 13,100vpd today.

The existing two-lane road is capable of carrying these existing and future traffic flows, except at The Broadway / Moseley Drive intersection, which is currently constructed as a Give Way sign-controlled T-intersection, as shown in **Figure 7**. It currently has a widened northbound lane to allow northbound through traffic to pass vehicles waiting to turn right into Moseley Drive but no left turn lane off the southbound through lane.



**Figure 7: The Broadway / Moseley Drive intersection**

This intersection already requires upgrading to cater for existing traffic flows, so ideally the upgrading of this final section of The Broadway to dual carriageway standard should happen relatively soon.

## **5.4 Railway Parade**

Railway Parade (Apple Street to Maralla Road) is constructed as a two-lane road with 3.5m traffic lanes and a 2.5m shared path on the western side. This road has been designed to accommodate the future traffic volumes modelled in the Upper Swan LSP TIA report and TIA Addendum, which anticipated 5,900vpd north of Apple Street and 9,600vpd north of the internal spine road (Clementine Blvd) through that LSP area.

The future total daily traffic volumes in **Figure 5** are slightly higher at 6,420vpd and 10,100vpd respectively, but as that is less than 10% higher than previously modelled, that is not considered a significant traffic increase and Railway Parade can accommodate those future traffic flows.

## 6 Conclusions

This Technical Note relates to a proposal for subdivision of Lots 29 and 30 Maralla Road for the early delivery of approximately 450 residential lots. The subject site is part of the North Ellenbrook (East) District Structure Plan.

Analysis has been undertaken of the capacity of the existing road network of Ellenbrook and Railway Parade to accommodate the additional traffic flows that will be generated by residential development of the subject site.

This analysis has focused mainly on the Dunnett Drive – Banrock Drive – The Broadway route down to the district centre at Bordeaux Lane (The Broadway is built to dual carriageway standard south of Bordeaux Lane) and the Railway Parade route down into Upper Swan.

Current development in progress in the Upper Swan Local Structure Plan area (further south along Railway Parade) will also generate additional traffic flows on those roads over the same timeframe as the subject site, and has been taken into consideration in this analysis.

Dunnett Drive, Banrock Drive, The Broadway and Railway Parade have all been constructed without the on-road cycle lanes that are typically included in the standard road cross-sections of these types of roads in the WAPC *Liveable Neighbourhoods* policy. Cycle lanes would generally be considered desirable but are not mandatory in the *Liveable Neighbourhoods* policy. Instead, cyclists are accommodated by shared paths within the verge on each of these roads. This is simply an existing feature of the existing road network planning in this area.

Dunnett Drive is constructed as a two-lane neighbourhood connector with sealed width of approximately 7.4m. The future traffic volumes forecast on Dunnett Drive in the proposed development scenario are up to 7,280vpd on the southern section and approximately 4,300vpd north of Dalmilling Drive. In practical terms, the existing 7.4m road width does provide sufficient capacity to accommodate those future traffic flows in the proposed development scenario.

It is noted that the northern section of Dunnett Drive (north of Dalmilling Drive) only has a 1.8m footpath on the western verge and therefore should be upgraded by either widening that existing footpath as a 2.3m shared path or by adding a new shared path on the eastern verge as well.

Banrock Drive varies in standard along its length. Most of this road is constructed as one 4.2m lane each way with a 3m central median but the central section is an undivided two-lane road with 7m sealed width. Future traffic volumes in the proposed development scenario range from 7,080vpd at the northeast end to 11,900vpd at the southwest end. The existing road standard is considered to provide sufficient capacity to accommodate the future traffic flows on the northeast and central sections.

However, the existing 10,000vpd and future 11,900vpd on Banrock Drive south of Vilama Link / Adlington Way intersection are well into the 7,000vpd to 15,000vpd range of an Integrator B in *Liveable Neighbourhoods*. The main shortcoming of the existing road standard on this section is the lack of a 6m central median to accommodate a car turning right out from a side street intersection, to enable that right turn to be undertaken in two stages in heavy traffic flow conditions.

The existing 3m median on the high-volume section of Banrock Drive from Vilama Link / Adlington Way roundabout south to Elmridge Parkway / Ackworth Grange roundabout does not adequately cater for right turn movements with the existing traffic flows of 10,000vpd on this section of Banrock Drive. The solution to this existing problem would be to ban all right turn movements along this section of Banrock Drive by closure of the median openings and restrict turn movements to left in / left out at four side-road intersections. The displaced right turn movements would be handled by right turns or U-turns at the two roundabouts at either end of this section of Banrock Drive. That would eliminate the requirement for a 6m median on this section of Banrock Drive, so it would be able to accommodate the future 11,900vpd in the proposed development scenario.

The Broadway, north of Bordeaux Lane, is constructed as a two-lane road with sealed width of approximately 8.5m, as the first carriageway of the ultimate dual carriageway standard of this road. Future traffic volumes on this section of The Broadway would be up to 15,000vpd in the proposed development scenario, compared to 13,100vpd today. The existing two-lane road is capable of carrying these existing and future traffic flows, except at The Broadway / Moseley Drive intersection. This intersection already requires upgrading to cater for existing traffic flows, so ideally the upgrading of this final section of The Broadway to dual carriageway standard should happen relatively soon.

Railway Parade (Apple Street to Maralla Road) is constructed as a two-lane road with 3.5m traffic lanes and a 2.5m shared path on the western side. This road has been designed to accommodate the future traffic volumes modelled for the Upper Swan Local Structure Plan, which anticipated 5,900vpd north of Apple Street and 9,600vpd north of the internal spine road (Clementine Blvd) through that LSP area.

The future total daily traffic volumes in the proposed development scenario are slightly higher at 6,420vpd and 10,100vpd respectively, but as that is less than 10% higher than previously modelled, that is not considered a significant traffic increase and Railway Parade can accommodate those future traffic flows.

It is therefore concluded that the existing road network is able to accommodate the traffic flows generated by early development of the subject site by implementing changes on Dunnett Drive (upgrade to shared path), Banrock Drive (closure of median openings on the southern section) and timely upgrade of the northern section of The Broadway to dual carriageway standard.



# APPENDIX A

---

## CONCEPT PLAN

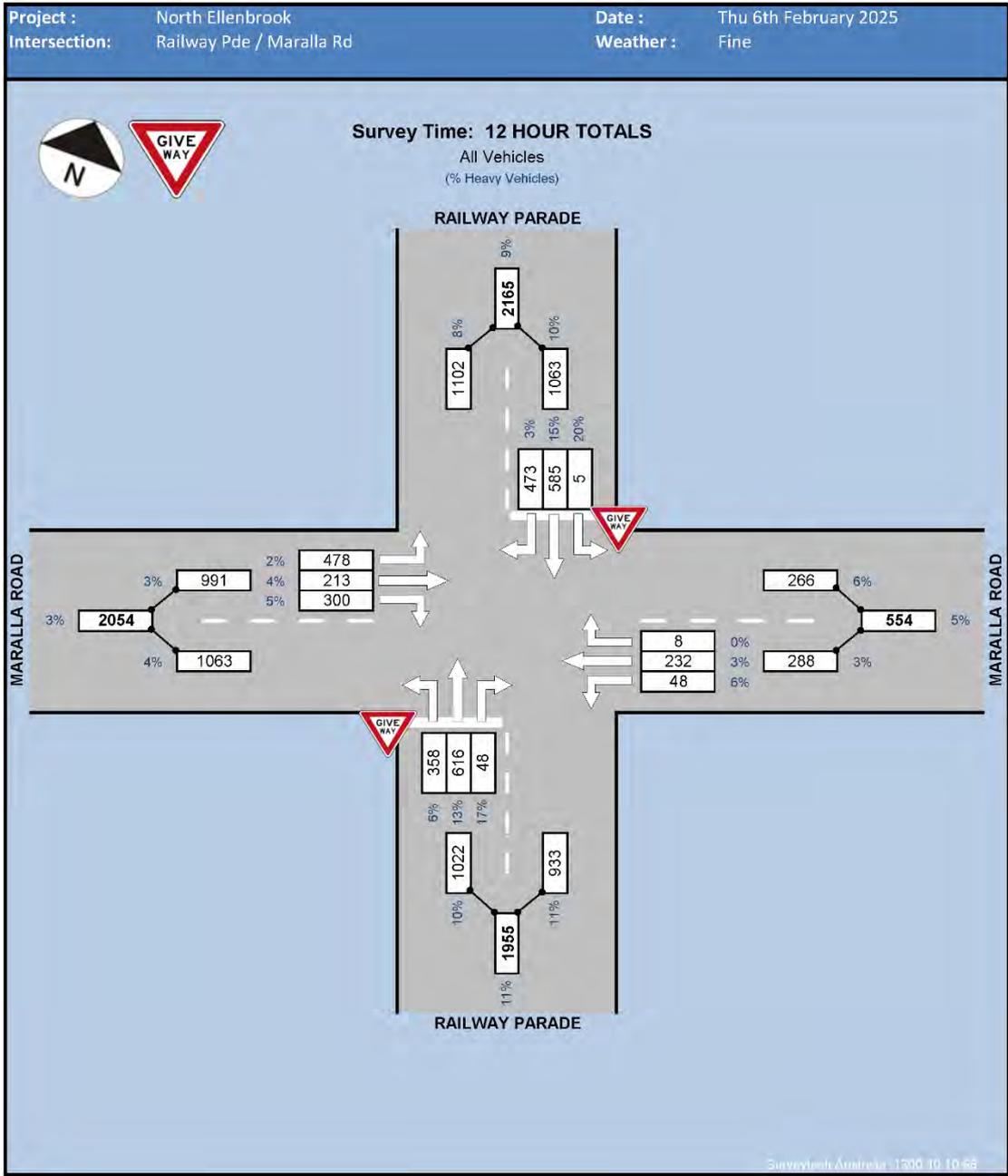




# APPENDIX B

---

## TRAFFIC COUNT INFORMATION



Road: Railway Pde south of Sorrel Way  
 Direction: Combined  
 Vehicles: All Vehicles  
 Date: 05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	22	25	7	29	37	10	17	16	21
1:00	8	10	12	15	20	7	8	9	11
2:00	11	7	14	19	19	11	9	10	13
3:00	22	22	19	9	14	14	22	20	17
4:00	66	69	70	28	18	58	64	65	53
5:00	177	208	180	63	28	200	203	194	151
6:00	246	246	261	100	80	279	276	262	213
7:00	342	340	307	132	98	327	340	331	269
8:00	267	267	272	160	129	253	281	268	233
9:00	180	196	194	190	207	167	190	185	189
10:00	179	193	158	227	201	163	170	173	184
11:00	141	176	199	219	211	170	177	173	185
12:00	183	189	198	213	186	148	157	175	182
13:00	180	194	208	191	201	150	169	180	185
14:00	233	254	282	211	195	234	251	251	237
15:00	257	341	304	188	193	278	314	299	268
16:00	302	325	349	195	198	362	327	333	294
17:00	227	287	276	186	146	306	293	278	246
18:00	167	168	173	156	141	166	202	175	168
19:00	112	110	123	120	114	104	138	117	117
20:00	65	102	93	77	75	65	95	84	82
21:00	72	92	104	78	71	57	70	79	78
22:00	38	42	59	77	39	32	42	43	47
23:00	15	24	46	44	25	10	18	23	26
Total	3512	3887	3908	2927	2646	3571	3833	3742	3469

Road: Dunnett Dr south of Everingham Drive  
 Direction: Combined  
 Vehicles: All Vehicles  
 Date: 05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	30	29	26	33	40	16	20	24	28
1:00	6	21	15	14	29	7	16	13	15
2:00	7	13	15	11	19	10	11	11	12
3:00	24	28	27	11	13	18	17	23	20
4:00	48	49	44	21	17	45	51	47	39
5:00	126	126	156	51	25	137	131	135	107
6:00	173	202	179	78	45	204	194	190	154
7:00	294	282	291	132	73	264	281	282	231
8:00	469	470	422	207	134	429	412	440	363
9:00	219	227	252	252	226	200	204	220	226
10:00	172	206	214	288	255	181	165	188	212
11:00	184	175	216	275	290	195	182	190	217
12:00	189	176	233	289	320	170	176	189	222
13:00	240	216	232	275	252	212	190	218	231
14:00	441	394	370	265	274	346	373	385	352
15:00	343	419	392	254	280	391	397	388	354
16:00	350	365	326	268	244	367	377	357	328
17:00	308	324	378	249	203	347	348	341	308
18:00	258	266	253	217	168	229	280	257	239
19:00	156	185	196	173	192	174	186	179	180
20:00	140	170	138	139	101	132	169	150	141
21:00	110	102	110	128	86	85	96	101	102
22:00	62	62	90	99	56	52	52	64	68
23:00	27	29	57	57	26	26	19	32	34
Total	4376	4536	4632	3786	3368	4237	4347	4426	4183

Road: Banrock Dr west of Anderton St  
 Direction: Combined  
 Vehicles: All Vehicles  
 Date: 05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	28	28	25	42	35	14	24	24	28
1:00	10	23	10	11	33	5	11	12	15
2:00	6	13	11	12	19	7	9	9	11
3:00	20	27	26	10	12	20	17	22	19
4:00	53	58	50	20	14	51	58	54	43
5:00	121	116	142	52	26	124	119	124	100
6:00	178	207	176	75	51	200	191	190	154
7:00	311	330	330	139	83	302	323	319	260
8:00	682	642	616	228	139	578	592	622	497
9:00	242	247	279	267	226	211	211	238	240
10:00	180	217	240	310	261	212	184	207	229
11:00	195	191	246	275	324	205	189	205	232
12:00	213	212	254	316	348	193	196	214	247
13:00	287	256	266	293	279	232	231	254	263
14:00	552	500	440	273	298	464	463	484	427
15:00	402	462	473	271	294	479	447	453	404
16:00	371	372	337	283	262	383	411	375	346
17:00	336	368	384	291	208	352	345	357	326
18:00	296	291	280	223	167	245	303	283	258
19:00	172	202	221	191	198	188	190	195	195
20:00	161	177	158	173	98	144	187	165	157
21:00	100	115	115	137	92	94	95	104	107
22:00	75	69	107	95	57	50	58	72	73
23:00	30	32	58	61	25	28	32	36	38
Total	5021	5155	5244	4048	3549	4781	4886	5017	4669

Road: Banrock Dr west of Norcia Way  
 Direction: Combined  
 Vehicles: All Vehicles  
 Date: 05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	42	52	35	50	48	24	27	36	40
1:00	16	24	15	17	35	8	13	15	18
2:00	10	18	14	16	26	7	12	12	15
3:00	22	32	29	21	22	29	26	28	26
4:00	62	66	58	22	23	65	61	62	51
5:00	140	126	156	61	37	139	144	141	115
6:00	211	213	212	82	57	244	212	218	176
7:00	335	372	339	150	87	316	351	343	279
8:00	682	639	643	256	157	541	549	611	495
9:00	270	274	299	295	237	255	260	272	270
10:00	217	248	271	352	303	253	209	240	265
11:00	250	218	263	328	367	273	225	246	275
12:00	243	254	303	382	375	227	224	250	287
13:00	298	278	314	350	333	267	268	285	301
14:00	566	466	448	318	343	481	471	486	442
15:00	411	489	495	302	333	498	469	472	428
16:00	396	401	390	313	321	427	456	414	386
17:00	398	428	406	309	232	406	408	409	370
18:00	342	361	354	237	201	295	354	341	306
19:00	223	252	251	213	217	220	225	234	229
20:00	200	216	202	202	127	174	222	203	192
21:00	121	146	153	175	115	113	126	132	136
22:00	88	80	110	120	72	64	71	83	86
23:00	37	46	71	71	40	29	44	45	48
Total	5580	5699	5831	4642	4108	5355	5427	5578	5235

Road:	Banrock Dr south of Helms Loop / Dorrien Way
Direction:	Combined
Vehicles:	All Vehicles
Date:	05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	38	49	36	47	47	21	31	35	38
1:00	16	23	18	20	35	13	14	17	20
2:00	12	26	21	15	32	9	15	17	19
3:00	25	32	28	20	22	30	29	29	27
4:00	75	68	67	27	21	65	65	68	55
5:00	172	149	180	65	47	165	166	166	135
6:00	230	243	229	93	70	269	252	245	198
7:00	353	403	362	172	100	347	377	368	302
8:00	623	569	576	296	177	523	532	565	471
9:00	286	299	323	332	258	304	315	305	302
10:00	243	273	298	400	324	265	249	266	293
11:00	291	265	308	388	405	311	259	287	318
12:00	273	277	332	413	435	263	266	282	323
13:00	312	299	358	399	346	300	280	310	328
14:00	538	459	434	358	388	472	461	473	444
15:00	441	540	536	348	339	537	518	514	466
16:00	447	449	434	366	373	475	508	463	436
17:00	456	494	459	332	284	447	455	462	418
18:00	379	424	389	258	218	343	384	384	342
19:00	266	299	280	240	246	235	250	268	259
20:00	223	254	217	213	144	195	255	229	214
21:00	137	160	170	187	128	124	144	147	150
22:00	97	104	120	134	76	78	84	97	99
23:00	38	55	74	79	42	35	49	50	53
Total	5971	6213	6249	5202	4557	5826	5958	6043	5711

Road:	Banrock Dr south of Vilama Link / Adlington Way
Direction:	Combined
Vehicles:	All Vehicles
Date:	05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	59	87	54	71	95	37	64	60	67
1:00	32	35	32	38	56	26	24	30	35
2:00	23	42	27	25	48	21	25	28	30
3:00	59	45	37	36	41	49	49	48	45
4:00	154	137	145	57	44	120	132	138	113
5:00	302	265	275	104	77	263	268	275	222
6:00	393	417	385	166	133	425	425	409	335
7:00	589	609	578	309	198	592	616	597	499
8:00	913	801	878	501	305	823	805	844	718
9:00	492	517	539	564	420	474	503	505	501
10:00	416	439	501	669	514	446	394	439	483
11:00	453	439	522	667	667	482	431	465	523
12:00	445	469	517	694	685	454	439	465	529
13:00	488	478	577	668	604	490	476	502	540
14:00	835	695	732	593	654	722	742	745	710
15:00	751	837	846	623	627	835	857	825	768
16:00	796	810	783	610	625	802	827	804	750
17:00	768	838	817	562	492	742	813	796	719
18:00	640	673	669	431	404	572	661	643	579
19:00	452	519	477	400	388	421	513	476	453
20:00	372	423	399	368	262	329	438	392	370
21:00	243	261	295	291	213	209	260	254	253
22:00	155	176	210	204	140	132	149	164	167
23:00	85	82	145	135	69	71	98	96	98
Total	9915	10094	10440	8786	7761	9537	10009	9999	9506

Road: The Broadway south of Elmridge Pkwy / Ackworth Grange  
 Direction: Combined  
 Vehicles: All Vehicles  
 Date: 05/02/2024 - 11/02/2025

Time	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Monday - Friday	Monday - Sunday
0:00	72	98	66	91	120	53	62	70	80
1:00	36	38	36	54	68	27	30	33	41
2:00	28	51	34	33	58	25	36	35	38
3:00	65	56	53	39	38	59	61	59	53
4:00	176	174	174	57	44	146	165	167	134
5:00	368	362	376	142	98	358	371	367	296
6:00	524	555	529	230	174	582	586	555	454
7:00	824	842	782	430	272	798	835	816	683
8:00	1224	1138	1214	682	412	1117	1113	1161	986
9:00	644	654	655	795	585	616	622	638	653
10:00	549	572	653	897	686	587	514	575	637
11:00	600	543	683	890	879	606	530	592	676
12:00	559	586	647	933	880	604	570	593	683
13:00	643	618	720	870	742	610	605	639	687
14:00	1118	966	1006	753	846	973	927	998	941
15:00	965	1091	1113	791	823	1077	1114	1072	996
16:00	1081	1116	1109	814	823	1069	1144	1104	1022
17:00	1031	1088	1053	733	611	1019	1055	1049	941
18:00	833	897	895	585	504	766	909	860	770
19:00	580	662	609	500	510	568	617	607	578
20:00	503	548	505	470	330	404	522	496	469
21:00	325	322	370	356	291	246	308	314	317
22:00	182	201	252	260	183	156	181	194	202
23:00	88	96	175	169	85	87	116	112	117
Total	13018	13274	13709	11574	10062	12553	12993	13109	12455



Appendix 6

# Engineering Serving Report



Engineering Servicing Report  
North Ellenbrook,  
Maralla Road, Bullsbrook  
October 2024

Rev 0

# Contents

1. EXECUTIVE SUMMARY .....	1
2. INTRODUCTION .....	2
3. SITE DESCRIPTION .....	3
3.1 Geology .....	3
3.2 Landform .....	4
3.3 Acid Sulphate Soils .....	5
4. EARTHWORKS .....	6
5. ROADS AND FOOTPATHS .....	7
5.1 Maralla Road .....	7
5.2 Railway Parade .....	8
6. STORMWATER DRAINAGE .....	9
7. WATER RETICULATION .....	10
8. WASTEWATER RETICULATION AND DISPOSAL .....	12
9. POWER .....	13
10. GAS SUPPLY .....	13
11. TELECOMMUNICATIONS .....	13
12. CONCLUSION .....	14

## Appendices

- A. Bulk Earthworks Strategy
- B. Maralla Road Levels & Existing Development Roadworks and Drainage (Maralla Road)
- C. Preliminary Catchment Plan
- D. Preliminary Sewer Strategy & Existing Sewer from Neighbouring Development
- E. Existing Water from Neighbouring Development
- F. Existing Power from Neighbouring Development

# 1. EXECUTIVE SUMMARY

This report has been prepared by Cossill and Webley Consulting Engineers Australia (CW) and summarises the results of a preliminary desktop assessment of the engineering aspects of the proposed residential development at the eastern end of Maralla Road, Bullsbrook (referred to herein as the site) within the municipality of Swan.

Based on the desktop investigation, the approximately 46-hectare site across two landholdings (Lots 29 & 30) presents favourable conditions for urban development, with manageable engineering constraints that can be effectively addressed through standard development practices.

The geological conditions of the site predominantly consist of Bassendean Sand overlying pebbly silt. Ground conditions are not expected to present significant constraints to development. Preliminary geotechnical assessment suggests that standard construction methodologies will be suitable. A detailed geotechnical investigation is recommended to confirm conditions prior to detailed design.

The earthworks strategy has been developed to maximise the usage of the site's natural topography, which generally slopes from northwest to east. The preliminary bulk earthworks design indicates a requirement for approximately 385,000m<sup>3</sup> of fill material to achieve suitable levels for residential development while maintaining functional drainage paths. This volume of fill, while substantial, is considered manageable within the context of the development.

Services to the site are readily available through extension of existing infrastructure from the established residential development to the south. Water and sewerage services will connect to existing Water Corporation infrastructure along Maralla Road, with connection points identified at Dunnett Drive and Lyndhurst Street intersections. It is noted that upgrades to the existing water reticulation and downstream sewerage system capacity may be required to accommodate additional flows from the proposed development.

Road access to the site is currently available via Maralla Road and Railway Parade, with two four-way intersection upgrades anticipated at Dunnett Drive and Lyndhurst Street.

Power and telecommunications services can be extended from existing infrastructure in the southern development, with underground power reticulation to replace the current overhead powerlines along Maralla Road.

The stormwater management strategy has been developed with eight distinct catchments proposed, utilising existing site topographical features and drainage infrastructure to manage runoff effectively.

Based on the desktop investigation, the site presents as a suitable urban development opportunity with all required services able to be extended from the adjacent development. While some infrastructure upgrades may be required, these are considered standard requirements for a development of this scale. This report demonstrates that the site can be successfully developed with appropriate infrastructure provisions while integrating with the surrounding environment and existing developments.

## 2. INTRODUCTION

The following report has been prepared by Cossill & Webley Consulting Engineers (CW) and summarises the results of a preliminary desktop assessment of the civil engineering and future servicing considerations of the proposed residential development (referred to herein as the Site).

This report covers the approximately 46-hectare site located in the suburb of Bullsbrook, West Australia within the municipality of Swan, consisting of two landholdings (Lot 29 on the right & 30 on the left) along the eastern end of Maralla Road. The report has been prepared based on civil engineering infrastructure requirements to service the Site and covers site works, roadworks, sewerage, water reticulation, power supply, stormwater drainage and utility services.

The land is a rural site with signs of agricultural use from one existing dwelling in Lot 30, and an abundance of marri trees is present in the northern half of Lot 29.

The Site borders undeveloped greenfields to its west, a wetland to its north, the existing Railway Parade and a live rail line to its east, and Maralla Road to the south. A recent residential development is immediately adjacent to the site in the south, separated by Maralla Road. Access to the Site is provided by Railway Parade and Maralla Road.

An aerial view of the Site is highlighted in the blue boundary below in Figure 1.



*Figure 1 - Site Aerial Image (Nearmap, June 2024)*

### 3. SITE DESCRIPTION

The following section summarises the existing conditions on-site based on a desktop assessment.

#### 3.1 Geology

As shown in Figure 2 below, the Site is generally sandy, overlaying pebbly silt which is partially exposed in the north-eastern portion of the Site. A pocket of clay is also present in the north-western corner where the wetland is situated.

The geological condition of the Site indicates a high water table throughout the Site, with the clayey and silty northern and north-eastern landholding particularly prone to flooding, resulting in low bearing capacity and dispersive soil that is not suitable for excavation and construction works.

The remaining portion of the Site is generally comprised of well sorted and drained Bassendean Sand sitting atop the silty layer that is typically suitable for urbanisation works. However, the condition of the sandy soil can be modified by the silty layer beneath, causing potential complications that may affect the expected ground conditions. Drainage disposal can also be a concern due to the site's relatively high water table.

It is not expected that any major difficulties will be experienced during the construction of the site's development. However, it is recommended that a geotechnical investigation of the site should be conducted to gain further insight into the site and confirm its geological conditions for any future design and construction works undertaken.

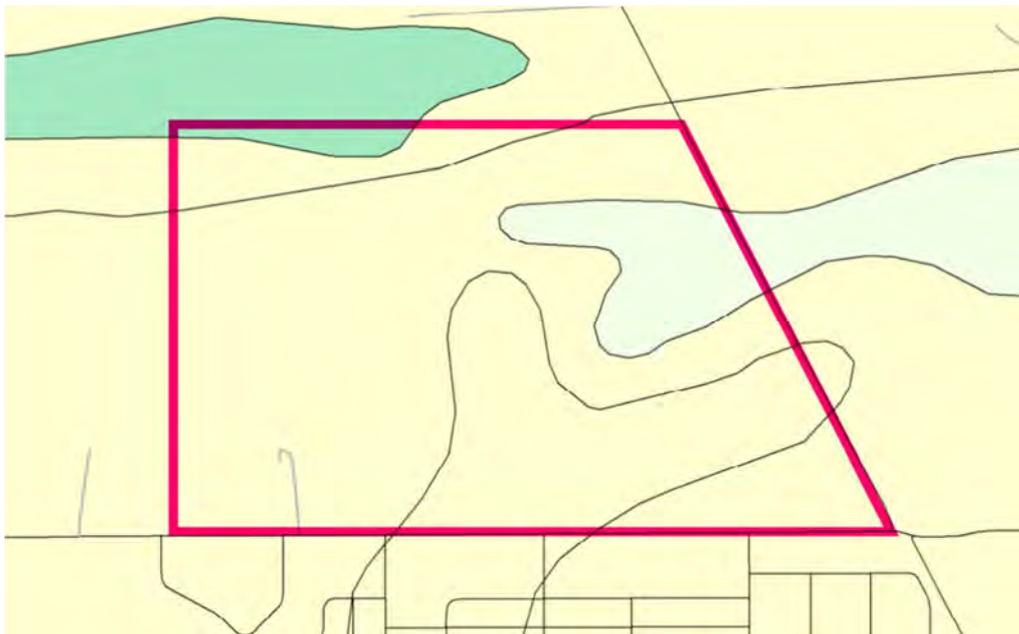


Figure 2 – Geological Mapping of the Site (GeoVIEW WA)

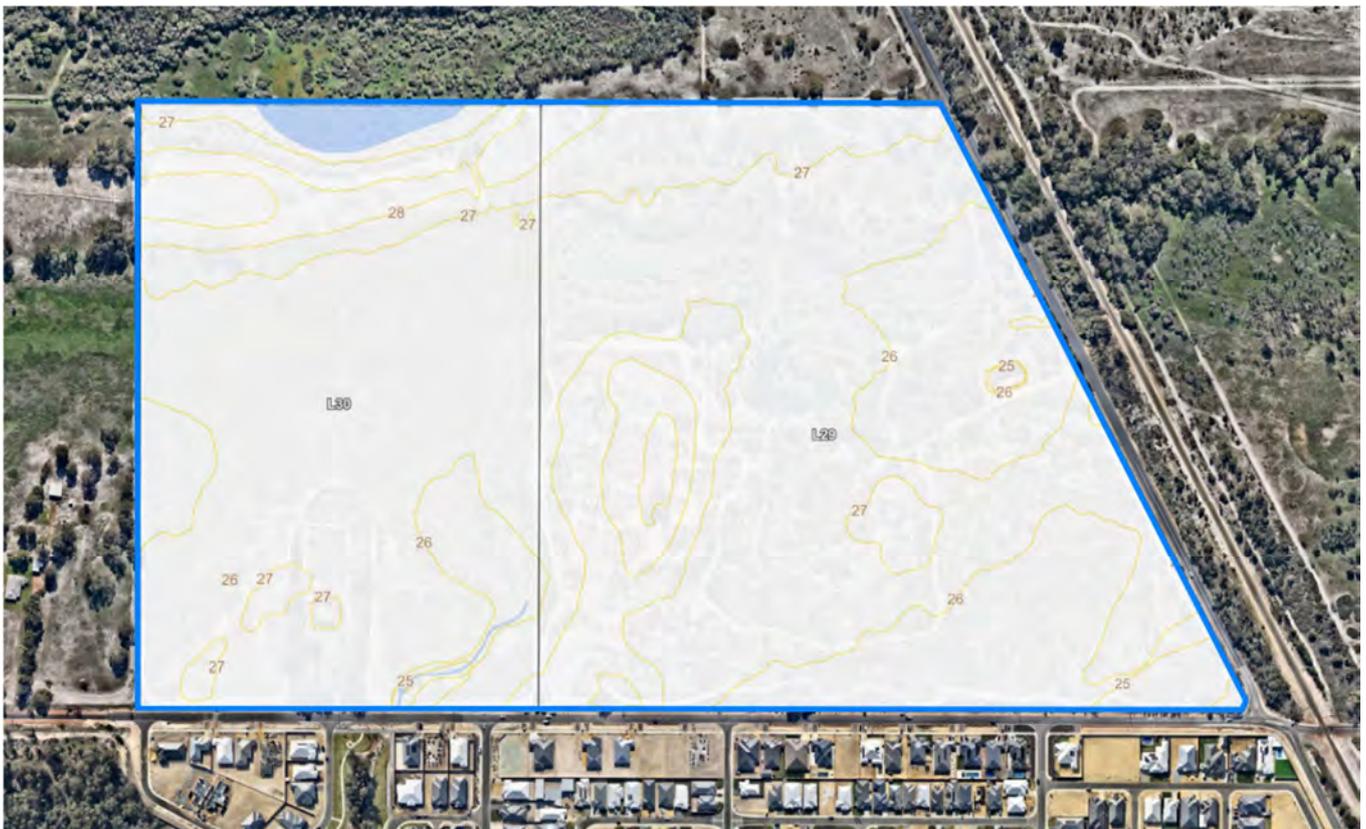
Geological Unit	Description	Notes
 Cps	Peaty Clay (Swamp Deposits) - dark grey and black with variable sand content.	High water table and prone to flooding; organic and clayey soils of low bearing capacity.
 Mgs1	Pebbly Silt (Guildford Formation) - strong brown, silt with common fine to occasionally coarse grained, sub-rounded laterite, quartz, heavily weathered granite pebbles, some fine to medium-grained quartz sand, of alluvial origin.	Near-surface water table and prone to flooding; differential settlement of foundation may occur unless built on columns or concrete rafts above 1m of compacted sand; dispersive in places.
 Qpb	Sand over Pebbly Silt (Thin Bassendean Sand over Guildford Formation) – Very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted, of aeolian origin. Overlaying Mgs1 gravelly silt.	Generally high water table; unit of varying thickness; the sand's physical properties are modified by the underlying silts.

### 3.2 Landform

Over 60 % of the subject land has an undulating Terrain and generally slopes from the north-west to the east, with the highest point located at the site's north-western corner and site centre, both 29 AHD. Noticeably Maralla Road has its high point located centrally along the southern bound of the site, grading towards the west and east. This should be considered for the drainage strategy of the site and its associated earthwork design.

The balance of the site (the north-eastern portion) is gently inclined to the East (Railway Parade) and the south-eastern corner (intersection of Railway Parade and Maralla Road). Site gradients range from very steep (greater than 1-in-3) to gentle slopes of 1-in-200.

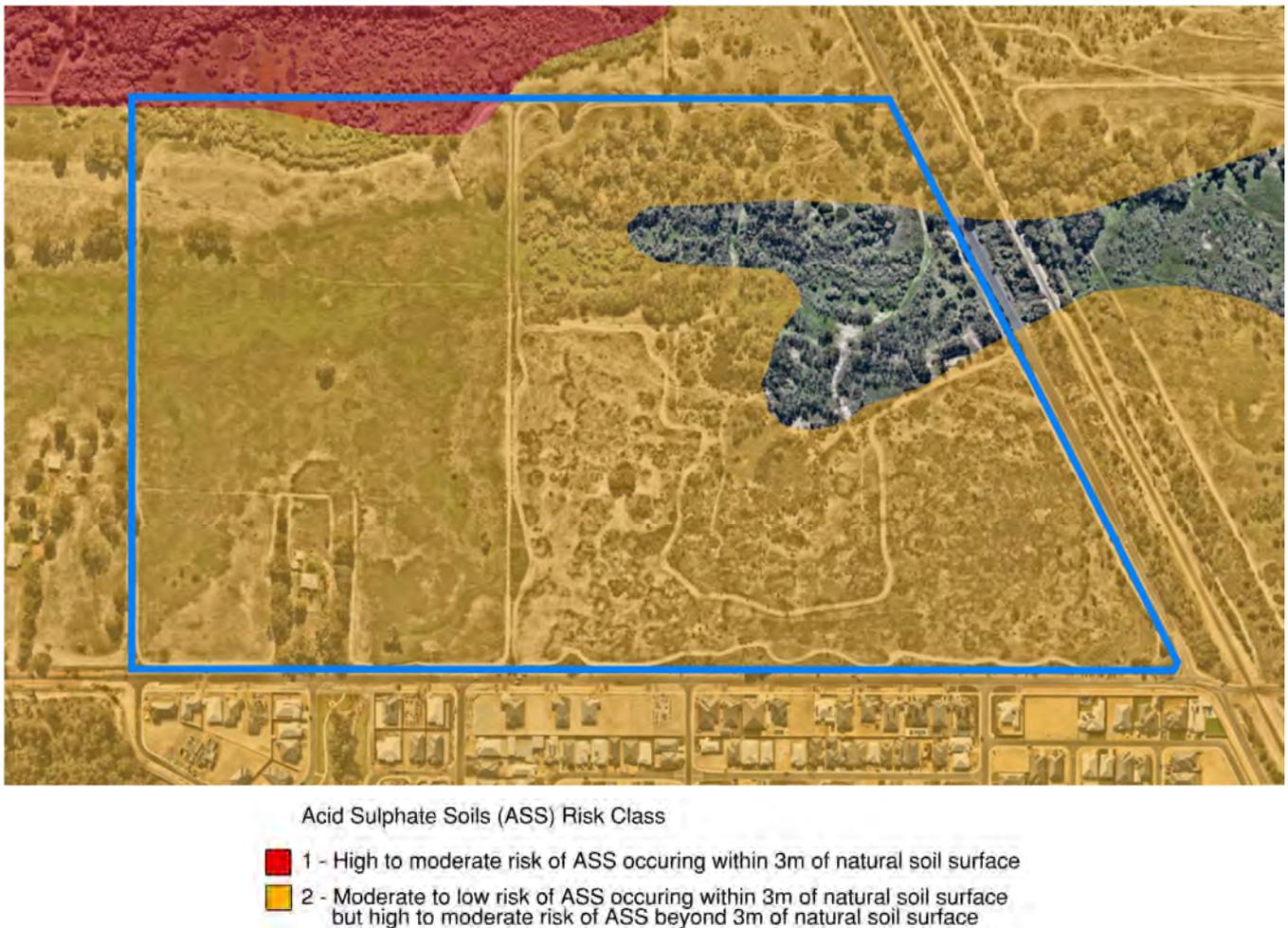
Greater than 70% of the subject land has gradients less than 1-in-10. Land with gradients requiring major earthworks and retaining walls (usually greater than 1-in-8 to 1-in-10) are not present on site, hence majority of the earthworks will involve reshaping to form level pads where appropriate and for infrastructure servicing of the site.



*Figure 3 - Site Contour*

### 3.3 Acid Sulphate Soils

The Department of Water and Environmental Regulation regarding the potential for acid sulphate soils (ASS) shows a moderate to low risk of ASS present for the majority of the proposed site. While moderate to high risk of ASS is indicated in sections of the north-western site border, we don't consider this issue will be a constraint to development as it is situated within the existing wetland where residential developments are not expected.



*Figure 4 - ASS Mapping*

## 4. EARTHWORKS

A preliminary earthworks design is shown in Figure 5 below and attached in Appendix A. A site-responsive earthworks approach is proposed to integrate development into the existing landform. The general intent is to minimise the fill to the site, whilst ensuring drainage, roadworks and sewer reticulation requirements are met.

As a general principle, it is proposed to construct just sufficient earthworks for the purpose of constructing roads and allotments with suitable gradients, and sufficient earthworks across the development such that the site can be developed for its intended use.

The two conservation areas (Wetland and Grevillea) and the Public Open Space located at the site's north and north-east will largely be undisturbed to preserve the existing flora and fauna, as well as to retain their significance to the drainage strategy of the local landscape.

Due to the undulating and uneven nature of the site, it is anticipated that fill will be required for the majority of the proposed residential allotments and road reserves. Fill depth ranging from 0.5m to 1.5m across the residential portion of the site will create level pads suitable for the landholding's proposed usage, and to minimally reshape landform to synergise with the drainage strategy.

A high-level estimate of roughly 385,000 m<sup>3</sup> of fill is expected for the overall site earthwork strategy. Where feasible, some cut-to-fill will be undertaken on-site, minimising imported fill requirements. However, it is noted that the expected cut on site is relatively negligible compared to the fill that is required.



Figure 5 – Preliminary Site Earthwork Design

## 5. ROADS AND FOOTPATHS

The site is bounded by Maralla Road to its south and Railway Parade to its east, both of which could provide initial and ultimate site accesses.

Tonkin Highway and Great Northern Highway are situated 2.5km and 1.8km from the site location respectively, however, the existing road network does not directly connect the site to either of the two highways. Maralla Road connects to Great Northern Highway via Railway Parade over Ellen Brook.

Road access to site from the Perth Metropolitan Area can only be achieved via either residential access road networks north of the Ellenbrook township or exiting the Great Northern Highway just north of the Upper Swan township along Railway Parade.

Road access to site from regions further north can be achieved through the Stock Road exit from both Tonkin Highway and Great Northern Highway and along Railway Parade.

### 5.1 Maralla Road

Maralla Road is a single carriageway rural road with 7.5m sealed length, forming the southern boundary of the site. A longitudinal section of the existing Maralla Road levels and location of existing crossovers are attached in Appendix B.

Maralla Road provides access to the site along the entire southern site bound, with existing access points to both Lot 29 and Lot 30. A swale drain has been constructed as part of the southern neighbouring development's drainage solution, along with existing sewerage and water reticulation assets. An existing overhead powerline is present along the northern side of Maralla Road extending beyond the site along Maralla Road/Ellenbrook Road. The overhead powerline will be undergrounded as part of the proposed development. Both are shown in Figure 6 below.



*Figure 6 – Maralla Road facing West (Google Street View)*

The connections between the proposed internal roads and the existing Maralla Road will be 4-way intersections with Dunnett Drive and Lyndhurst Street, with T intersections at other minor road connections.

Future upgrades in the region, with connection to Tonkin Highway may affect future traffic volumes. A traffic impact assessment will determine whether it is possible to keep Maralla Road as a rural road, or it will need to be upgraded as part of the site's development.

Lots fronting Maralla Road to be low-density dwellings, similar to the neighbouring southern development. Crossovers are required onto Maralla Road, as per the existing residential crossovers to the south.



*Figure 7 – Maralla Road Intersection Upgrade*

## 5.2 Railway Parade

Railway Parade is a single-carriageway rural road with 7.5m sealed length, forming the eastern boundary of the site running north-south parallel to the existing rail line immediately to its east. Railway Parade intersects Maralla Road at the south-eastern corner of the site in an offset T-junction.

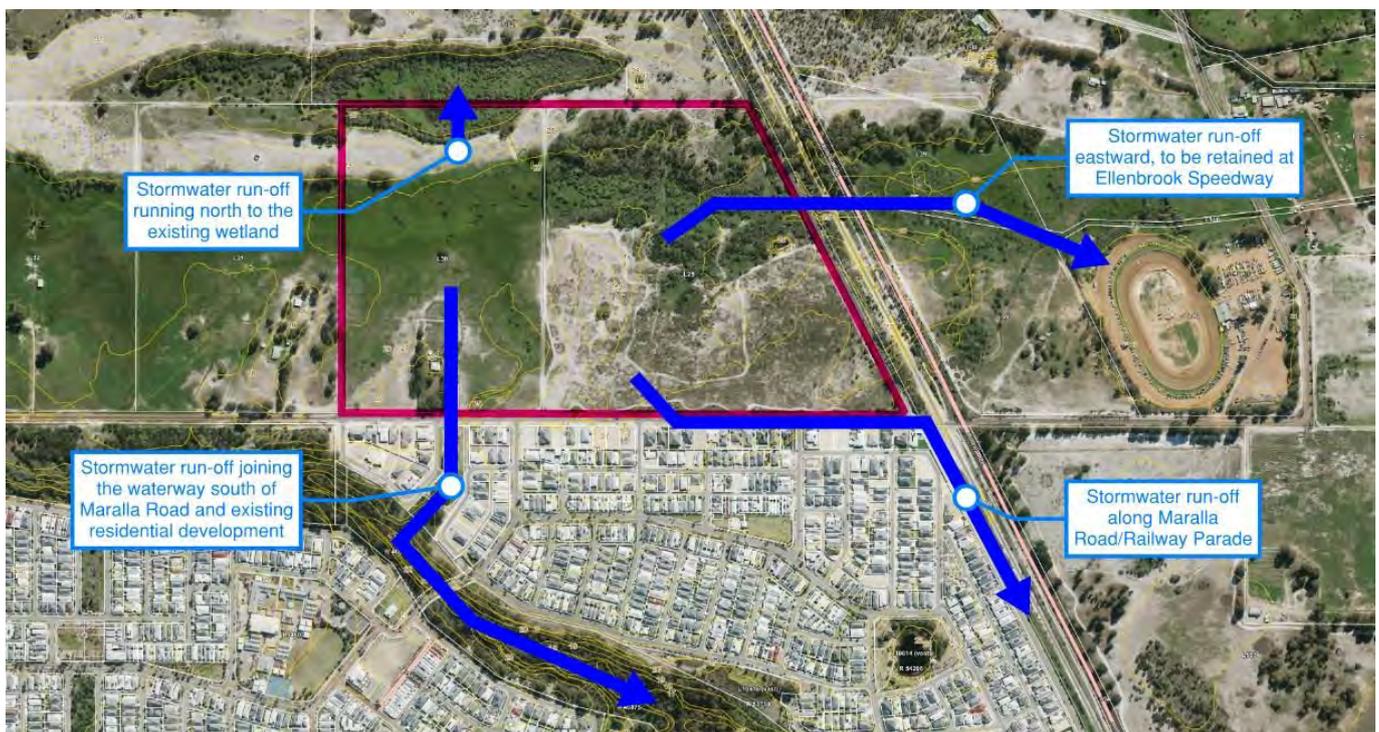


*Figure 8 –Railway Parade facing South (Google Street View)*

## 6. STORMWATER DRAINAGE

The site is located between a complex array of waterways and wetlands, as such the drainage strategy of the site should fully utilise these existing features to prevent flooding within the site, whilst ensuring the existing southern residential development and the surrounding road networks are protected from the site's stormwater runoff.

As shown below in Figure 9, currently the site is protected from flooding by four main stormwater runoff channels: Lot 30 drains northward towards the existing wetland and southward to the waterway south of Maralla Road and the existing residential development via a purpose built water treatment and flow channel; Lot 29 generally drains eastwards to the undeveloped greenfield where flow could be retained at the Ellenbrook Speedway in extreme weather events, and towards the south-eastern direction along Maralla Road and Railway Parade.



*Figure 9 – Current Site Stormwater Runoff Path*

Based on the preliminary earthwork design (Figure 5), a preliminary catchment plan of the site is prepared and shown below in Figure 10. The site is separated into 8 different stormwater catchments that direct the stormwater runoff in different paths.

Catchment A is treated and drained into the Wetland Conservation Lot to the north for detention in accordance with a drainage management plan.

Catchment B is the largest catchment within the site, with the stormwater runoff directed and retained in a centrally located stormwater basin and drained to the waterway system south of Maralla Road and the neighbouring residential development via the Public Open Space. A culvert and swale drains are likely required to connect the POS to the existing drainage assets south of Maralla Road.

Catch C, D & E are treated and drained into the Grevillea Conservation Lot and northern Public Open in accordance with a drainage management plan.

Catchment F is drained partially into the Grevillea Conservation Lot and northern Public Open Space, and partially drained along Railway Parade in the southern direction.

Catchment G is drained similarly to Catchment B.

Catchment H is drained eastwards along Maralla Road. Similar to the adopted drainage solution to the residential

development south of Maralla Road (Appendix B, 6023-24-610), a swale drain is proposed along Maralla Road to direct the stormwater runoff from Catchment H in the eastern direction along Maralla Road and Railway Parade. The allotments fronting Maralla Road are to be low-density country lots, similar to the neighbouring developments, to minimise the construction complexity of the swale in relation to residential crossovers, and the overall aesthetic of the development.

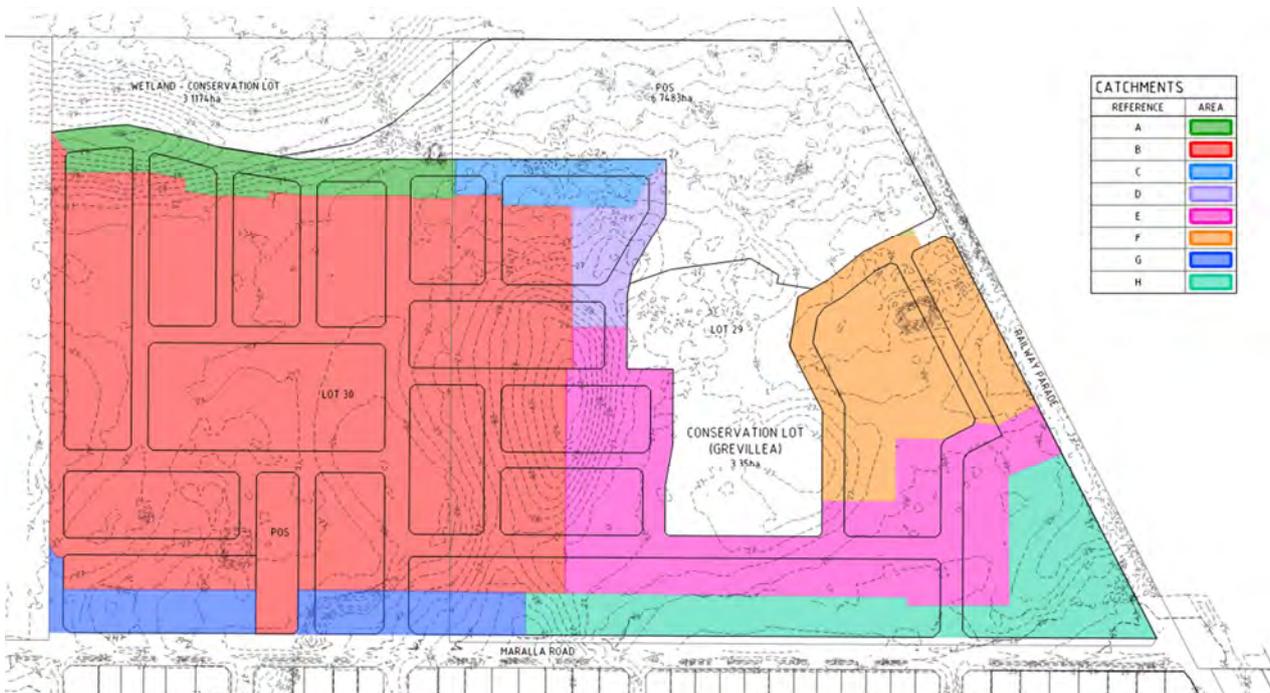


Figure 10 – Preliminary Site Catchment Plan

## 7. WATER RETICULATION

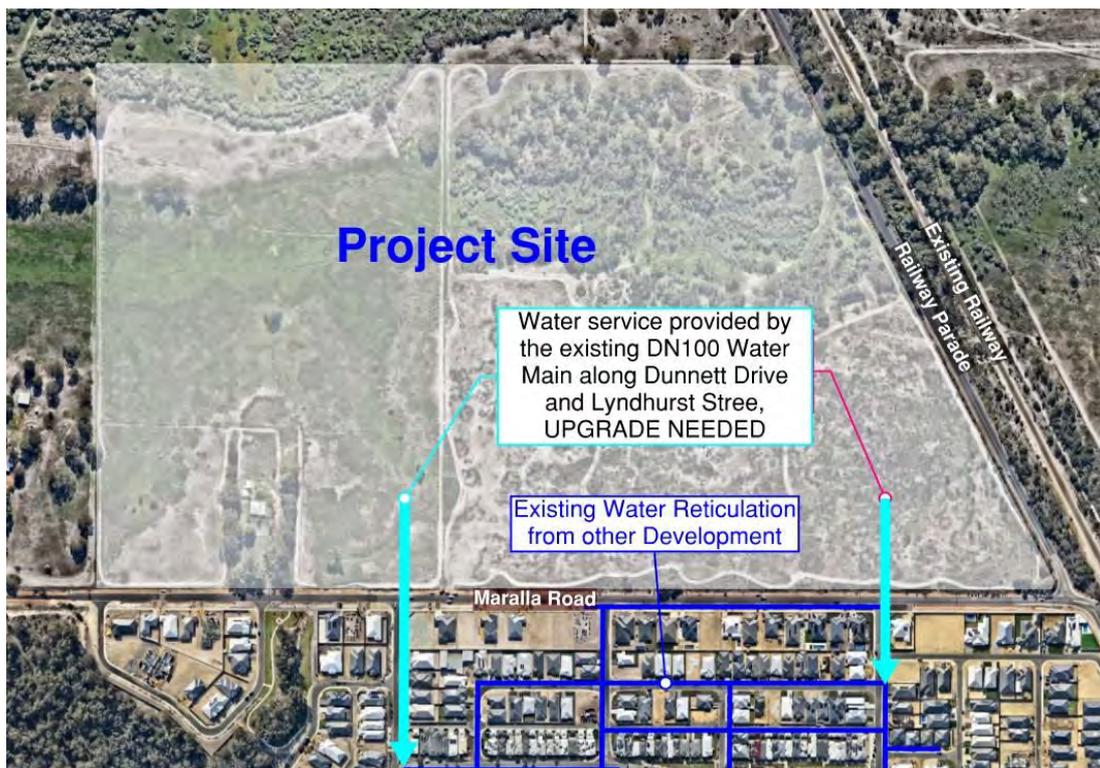


Figure 11 – Water Supply Connection

Cossill & Webley has conducted a desktop study advise on the likely water servicing requirements for this site.

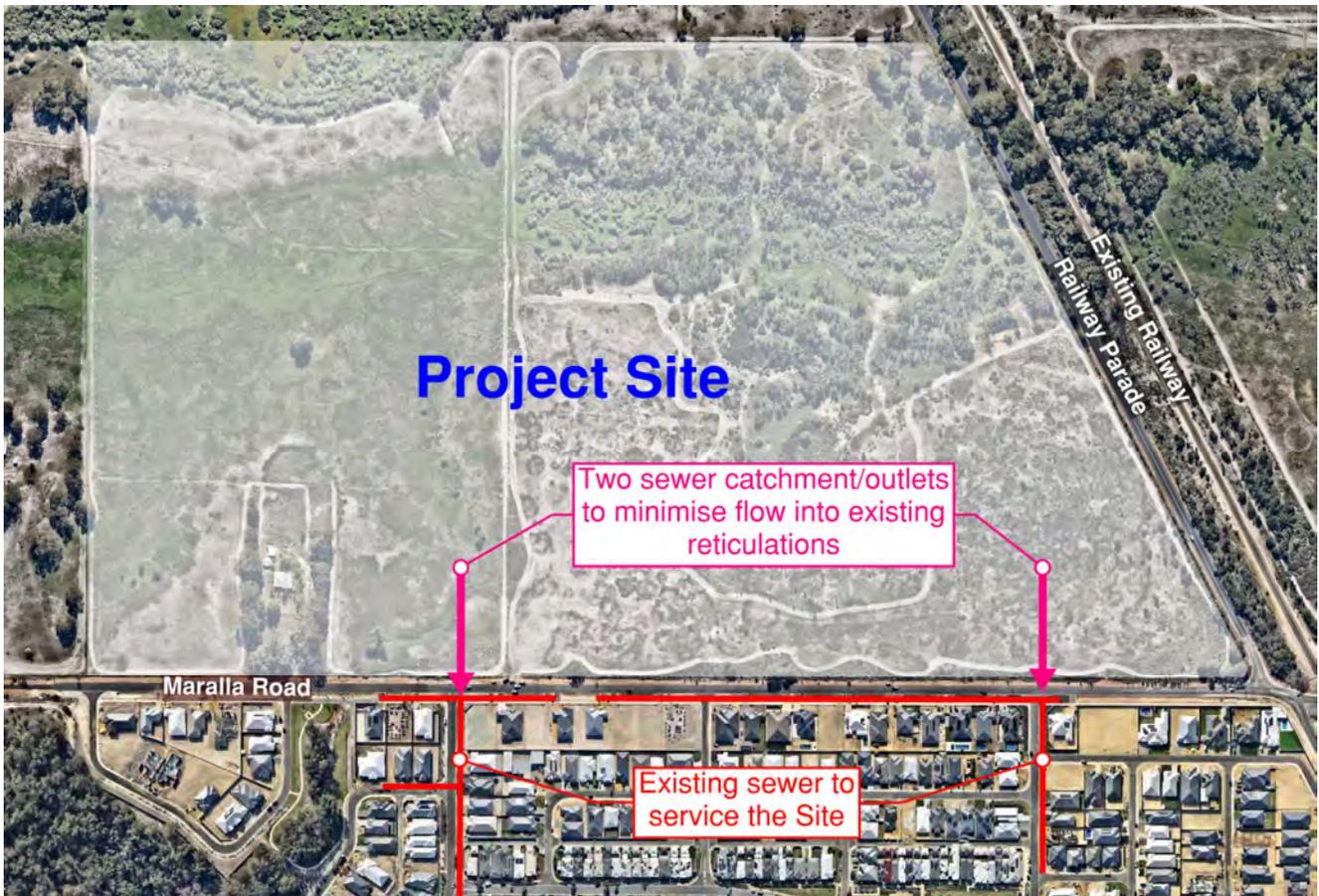
All water services to the site will be extended from the south, utilising the existing water reticulation in the southern neighbouring development. Specifically, connection at the two proposed intersection upgrades between Maralla Road and Dunnett Drive and Lyndhurst Street, where existing DN100 water mains currently services the existing development. The existing water reticulation design of the southern development is shown in Appendix E.

As shown in Figure 11, we note that the DN100 water mains may require more extensive upgrades depending on the timing of development and capacity of Water Corporation capacity in the surrounding areas at that time to ensure it has sufficient capacity to service the entire project site. Boring may be required when crossing existing pavements, namely Maralla Road, Bilya Lane and Dalmilling Drive for the western water main upgrade, and Outlook Way for the eastern water main upgrade. Pending the design specifications, existing footpaths may also need to be removed and later reinstated for open trenching. The Water Corporation may also require more extensive upgrades based on their strategic planning to upgrade and reinforce their infrastructure to meet the demands of the wider area. See below in Figure 12 the current 250mm and 200mm water mains with Ellenbrook.



*Figure 12 – Water Supply Mains*

## 8. WASTEWATER RETICULATION AND DISPOSAL



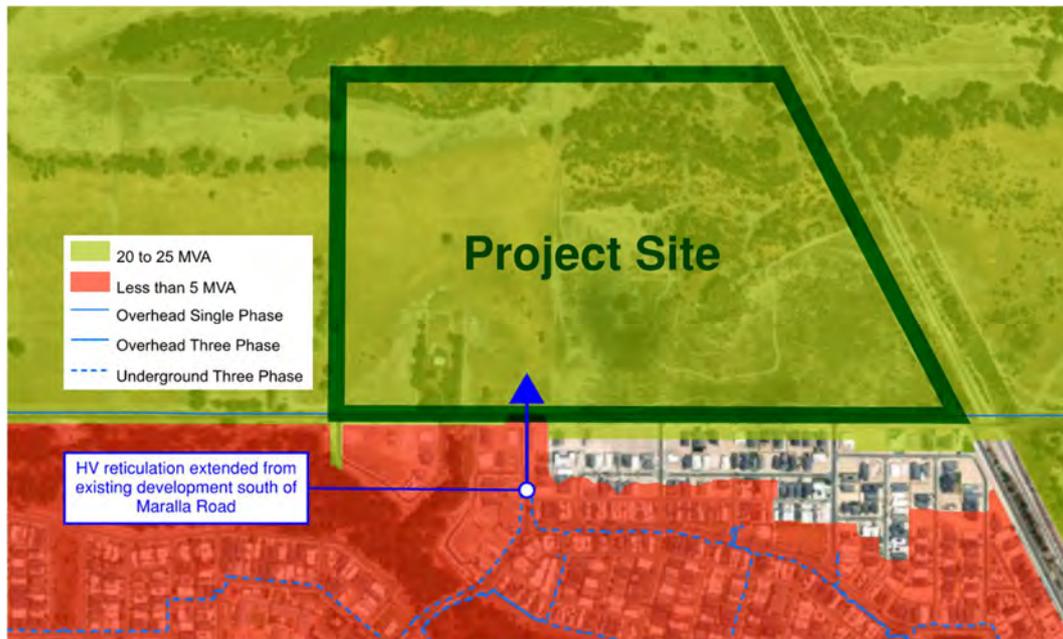
*Figure 13 – Sewerage Service Extension*

A preliminary site sewerage design drafted by CW and existing sewer reticulation plan of the southern neighbouring development is attached in Appendix D.

Cossill & Webley proposes the utilisation of the existing DN150 sewerage mains along Maralla Road previously constructed for the neighbouring residential development south of the site at the intersection of Dunnett Drive and Lyndhurst Street where the intersection upgrade work is expected, as shown in Figure 13.

The site is separated into two sewerage catchments to minimise flow into the existing reticulations. As shown in the preliminary earthwork plan, both catchments generally grade towards the proposed sewerage connection points, and into the Ellenbrook gravity system, which outfalls to Ellenbrook Pump Station No 4, on Roxburghe Drive. This pump station is close to capacity and will require investigation by the Water Corporation to confirm the additional flows into the catchment.

## 9. POWER



*Figure 14 – Electrical Connection & Grid Capacity Plan*

Western Power is the responsible electrical authority for the site. The existing power reticulation of the southern development is attached in Appendix F.

The overhead lines along Maralla Road will be able to support the first stages of development, and likely need to be removed from the site and relocated to an underground HV.

The site electrical supply is anticipated to be provided by the existing Western Power Henley Brook Power Substation approximately 8km south-west of the project site. Underground power will be provided HV reticulation extended from the existing development south of Maralla Road along Dunnett Drive. The specifics of these works will be designed at the time of development.

## 10. GAS SUPPLY

ATCO Gas is the responsible authority for the site.

Presently reticulated gas is not proposed within the development.

## 11. TELECOMMUNICATIONS

Fixed wireless NBN service is presently available to the site, and we anticipate fixed line NBN service to be extended from the existing NBN network in the residential development south of Maralla Road.

Under the current NBN scheme, the developer is required to enter into an agreement to provide infrastructure which is handed over free of charge to NBN Co upon completion. The installation of the communication service to the development would be funded through NBN, with developers responsible for funding the internal pit and pipe and a contribution to the backhaul costs (through existing network or via satellite receiver).

Capacity of the existing NBN Co and any potential backhaul costs will be finalised through the submission of a formal application with NBN.

An alternative to NBN would be through private communication supplies such as Telstra. These are expected to be available adjacent to the site area and will provide alternatives to the NBN network.

## 12. CONCLUSION

Based on the current information available, it is considered feasible and achievable to provide all the required servicing infrastructure to the proposed North Ellenbrook development, as follows:

- Earthworks strategy has been designed to integrate the development into the existing landform, minimising fill requirements while ensuring drainage, roadworks, and sewer reticulation needs are met. An estimated 385,000 m<sup>3</sup> of fill is expected for the overall site earthwork strategy.
- Road access will be provided via Maralla Road and Railway Parade, with two 4-way intersection upgrade and potential road upgrades required depending on future traffic volumes. Internal road network will be designed to complement the site's topography and drainage strategy.
- Stormwater drainage will utilise existing topographical and waterway features and be managed through eight different catchments, directing runoff to conservation lots, public open spaces, and purpose-built drainage assets. This approach aims to prevent flooding within the site while protecting existing developments and surrounding road networks.
- Water supply will be extended from the existing DN100 water mains in the southern neighbouring development. Upgrades to the existing mains will likely be required, pending the total capacity required to service the site, the development timing and Water Corporation's capacity in the surrounding areas.
- Sewerage from site will be discharged via the connection to the existing DN150 sewerage mains along Maralla Road. The site is separated into two sewerage catchments, with the topography allowing for gravity-fed systems without the need for pump stations onsite.
- Electrical power will be supplied by extending the underground HV reticulation from the existing development south of Maralla Road, with the Henley Brook Power Substation serving as the primary source. Existing overhead lines along Maralla Road may need to be relocated underground.
- Reticulated gas is not currently proposed for the development
- Telecommunications will likely be provided through an extension of the existing NBN network from the southern residential development.

This engineering servicing strategy demonstrates that the North Ellenbrook development can be successfully implemented with appropriate infrastructure provisions and careful integration with the surrounding environment and existing developments.

**APPENDIX A**  
**Bulk Earthworks Strategy**  
**6369-00-SK30 Rev A**  
**6369-00-SK31 Rev A**

**APPENDIX B**  
**Maralla Road Levels - Longitudinal Section**  
**Existing Development Roadworks and Drainage (Maralla Road)**  
**6023-00-SK17 Rev C**  
**6023-00-SK19 Rev B**  
**6023-24-610 Rev 5**

**APPENDIX C**  
**Preliminary Catchment Plan**  
**6369-00-SK33 Rev A**

**APPENDIX D**  
**Preliminary Sewer Strategy & Existing Sewer from Neighbouring Development**  
**6369-00-SK32 Rev A**  
**6023-23-400 Rev 0**  
**6023-24-400 Rev 2**

**APPENDIX E**  
**Existing Water from Neighbouring Development**  
**6023-23-500 Rev 1**  
**6023-13-700 Rev 4**

**APPENDIX F**  
**Existing Power from Neighbouring Development**  
**UPD6023-13 Rev 8**  
**UPD6023-24B Rev 3**

HATCH



Engineering Servicing Report  
North Ellenbrook,  
Maralla Road, Bullsbrook  
October 2024

Rev 0

# Contents

1. EXECUTIVE SUMMARY .....	1
2. INTRODUCTION .....	2
3. SITE DESCRIPTION .....	3
3.1 Geology .....	3
3.2 Landform .....	4
3.3 Acid Sulphate Soils .....	5
4. EARTHWORKS .....	6
5. ROADS AND FOOTPATHS .....	7
5.1 Maralla Road .....	7
5.2 Railway Parade .....	8
6. STORMWATER DRAINAGE .....	9
7. WATER RETICULATION .....	10
8. WASTEWATER RETICULATION AND DISPOSAL .....	12
9. POWER .....	13
10. GAS SUPPLY .....	13
11. TELECOMMUNICATIONS .....	13
12. CONCLUSION .....	14

## Appendices

- A. Bulk Earthworks Strategy
- B. Maralla Road Levels & Existing Development Roadworks and Drainage (Maralla Road)
- C. Preliminary Catchment Plan
- D. Preliminary Sewer Strategy & Existing Sewer from Neighbouring Development
- E. Existing Water from Neighbouring Development
- F. Existing Power from Neighbouring Development

# 1. EXECUTIVE SUMMARY

This report has been prepared by Cossill and Webley Consulting Engineers Australia (CW) and summarises the results of a preliminary desktop assessment of the engineering aspects of the proposed residential development at the eastern end of Maralla Road, Bullsbrook (referred to herein as the site) within the municipality of Swan.

Based on the desktop investigation, the approximately 46-hectare site across two landholdings (Lots 29 & 30) presents favourable conditions for urban development, with manageable engineering constraints that can be effectively addressed through standard development practices.

The geological conditions of the site predominantly consist of Bassendean Sand overlying pebbly silt. Ground conditions are not expected to present significant constraints to development. Preliminary geotechnical assessment suggests that standard construction methodologies will be suitable. A detailed geotechnical investigation is recommended to confirm conditions prior to detailed design.

The earthworks strategy has been developed to maximise the usage of the site's natural topography, which generally slopes from northwest to east. The preliminary bulk earthworks design indicates a requirement for approximately 385,000m<sup>3</sup> of fill material to achieve suitable levels for residential development while maintaining functional drainage paths. This volume of fill, while substantial, is considered manageable within the context of the development.

Services to the site are readily available through extension of existing infrastructure from the established residential development to the south. Water and sewerage services will connect to existing Water Corporation infrastructure along Maralla Road, with connection points identified at Dunnett Drive and Lyndhurst Street intersections. It is noted that upgrades to the existing water reticulation and downstream sewerage system capacity may be required to accommodate additional flows from the proposed development.

Road access to the site is currently available via Maralla Road and Railway Parade, with two four-way intersection upgrades anticipated at Dunnett Drive and Lyndhurst Street.

Power and telecommunications services can be extended from existing infrastructure in the southern development, with underground power reticulation to replace the current overhead powerlines along Maralla Road.

The stormwater management strategy has been developed with eight distinct catchments proposed, utilising existing site topographical features and drainage infrastructure to manage runoff effectively.

Based on the desktop investigation, the site presents as a suitable urban development opportunity with all required services able to be extended from the adjacent development. While some infrastructure upgrades may be required, these are considered standard requirements for a development of this scale. This report demonstrates that the site can be successfully developed with appropriate infrastructure provisions while integrating with the surrounding environment and existing developments.

## 2. INTRODUCTION

The following report has been prepared by Cossill & Webley Consulting Engineers (CW) and summarises the results of a preliminary desktop assessment of the civil engineering and future servicing considerations of the proposed residential development (referred to herein as the Site).

This report covers the approximately 46-hectare site located in the suburb of Bullsbrook, West Australia within the municipality of Swan, consisting of two landholdings (Lot 29 on the right & 30 on the left) along the eastern end of Maralla Road. The report has been prepared based on civil engineering infrastructure requirements to service the Site and covers site works, roadworks, sewerage, water reticulation, power supply, stormwater drainage and utility services.

The land is a rural site with signs of agricultural use from one existing dwelling in Lot 30, and an abundance of marri trees is present in the northern half of Lot 29.

The Site borders undeveloped greenfields to its west, a wetland to its north, the existing Railway Parade and a live rail line to its east, and Maralla Road to the south. A recent residential development is immediately adjacent to the site in the south, separated by Maralla Road. Access to the Site is provided by Railway Parade and Maralla Road.

An aerial view of the Site is highlighted in the blue boundary below in Figure 1.



*Figure 1 - Site Aerial Image (Nearmap, June 2024)*

### 3. SITE DESCRIPTION

The following section summarises the existing conditions on-site based on a desktop assessment.

#### 3.1 Geology

As shown in Figure 2 below, the Site is generally sandy, overlaying pebbly silt which is partially exposed in the north-eastern portion of the Site. A pocket of clay is also present in the north-western corner where the wetland is situated.

The geological condition of the Site indicates a high water table throughout the Site, with the clayey and silty northern and north-eastern landholding particularly prone to flooding, resulting in low bearing capacity and dispersive soil that is not suitable for excavation and construction works.

The remaining portion of the Site is generally comprised of well sorted and drained Bassendean Sand sitting atop the silty layer that is typically suitable for urbanisation works. However, the condition of the sandy soil can be modified by the silty layer beneath, causing potential complications that may affect the expected ground conditions. Drainage disposal can also be a concern due to the site's relatively high water table.

It is not expected that any major difficulties will be experienced during the construction of the site's development. However, it is recommended that a geotechnical investigation of the site should be conducted to gain further insight into the site and confirm its geological conditions for any future design and construction works undertaken.

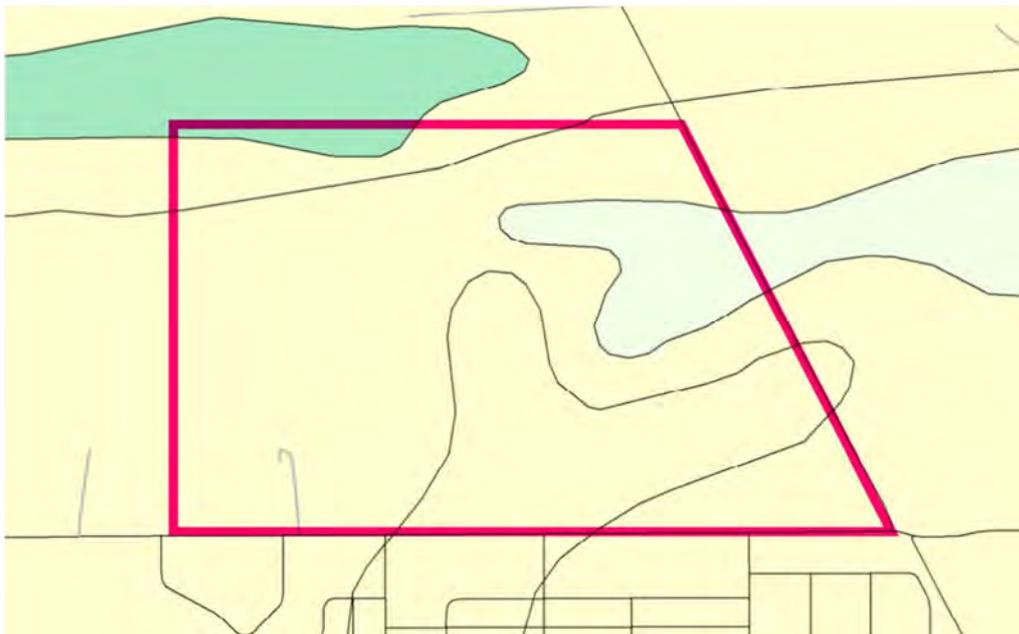


Figure 2 – Geological Mapping of the Site (GeoVIEW WA)

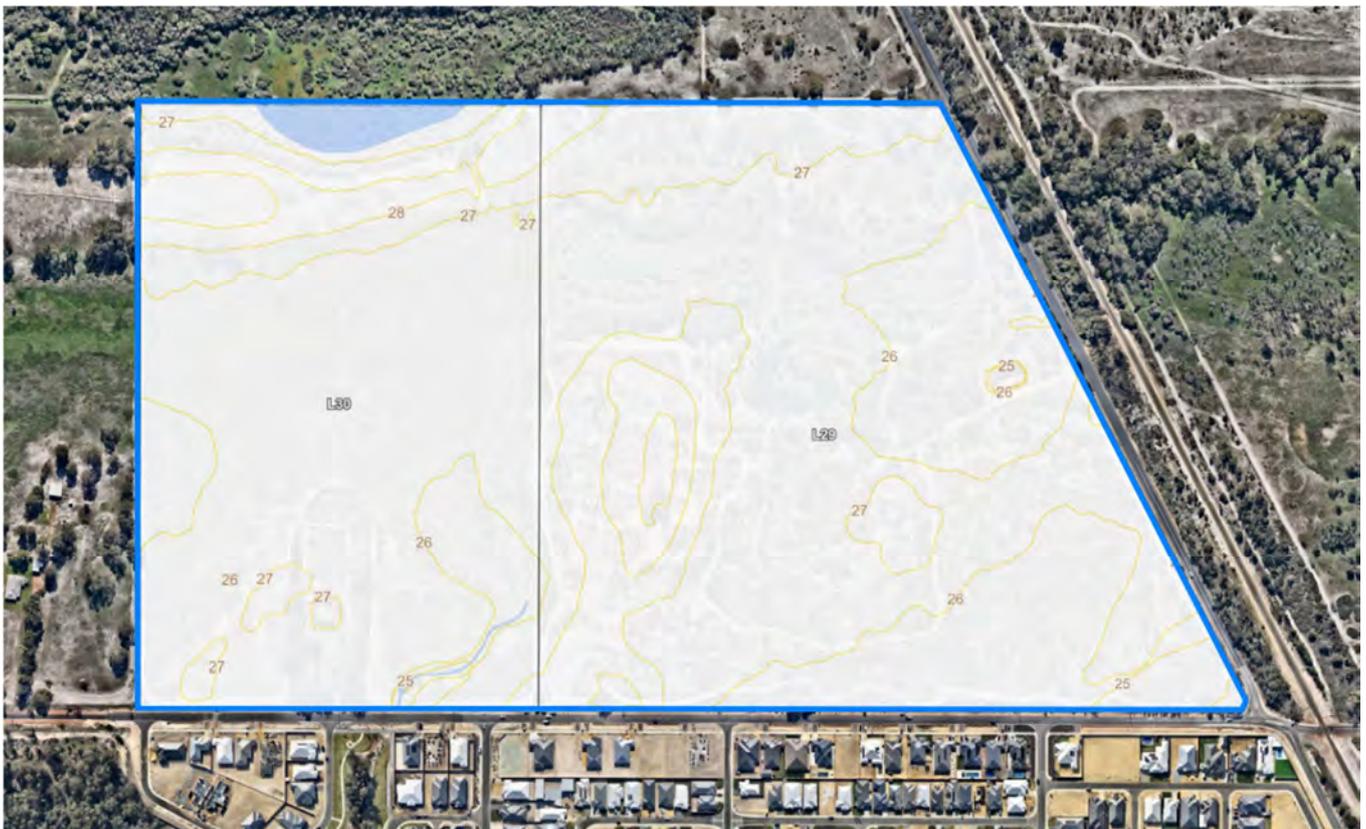
Geological Unit	Description	Notes
 Cps	Peaty Clay (Swamp Deposits) - dark grey and black with variable sand content.	High water table and prone to flooding; organic and clayey soils of low bearing capacity.
 Mgs1	Pebbly Silt (Guildford Formation) - strong brown, silt with common fine to occasionally coarse grained, sub-rounded laterite, quartz, heavily weathered granite pebbles, some fine to medium-grained quartz sand, of alluvial origin.	Near-surface water table and prone to flooding; differential settlement of foundation may occur unless built on columns or concrete rafts above 1m of compacted sand; dispersive in places.
 Qpb	Sand over Pebbly Silt (Thin Bassendean Sand over Guildford Formation) – Very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted, of aeolian origin. Overlaying Mgs1 gravelly silt.	Generally high water table; unit of varying thickness; the sand's physical properties are modified by the underlying silts.

### 3.2 Landform

Over 60 % of the subject land has an undulating Terrain and generally slopes from the north-west to the east, with the highest point located at the site's north-western corner and site centre, both 29 AHD. Noticeably Maralla Road has its high point located centrally along the southern bound of the site, grading towards the west and east. This should be considered for the drainage strategy of the site and its associated earthwork design.

The balance of the site (the north-eastern portion) is gently inclined to the East (Railway Parade) and the south-eastern corner (intersection of Railway Parade and Maralla Road). Site gradients range from very steep (greater than 1-in-3) to gentle slopes of 1-in-200.

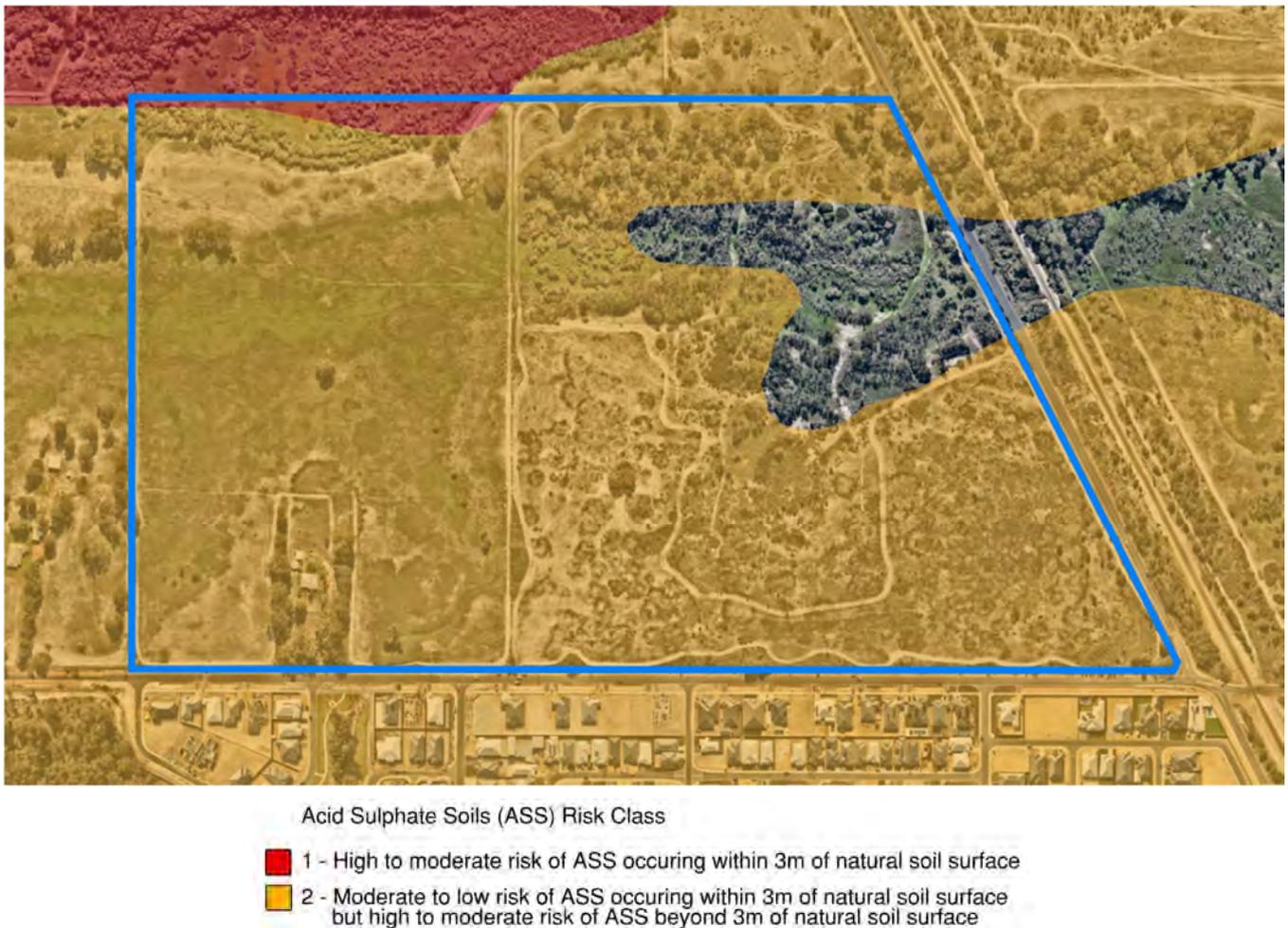
Greater than 70% of the subject land has gradients less than 1-in-10. Land with gradients requiring major earthworks and retaining walls (usually greater than 1-in-8 to 1-in-10) are not present on site, hence majority of the earthworks will involve reshaping to form level pads where appropriate and for infrastructure servicing of the site.



*Figure 3 - Site Contour*

### 3.3 Acid Sulphate Soils

The Department of Water and Environmental Regulation regarding the potential for acid sulphate soils (ASS) shows a moderate to low risk of ASS present for the majority of the proposed site. While moderate to high risk of ASS is indicated in sections of the north-western site border, we don't consider this issue will be a constraint to development as it is situated within the existing wetland where residential developments are not expected.



*Figure 4 - ASS Mapping*

## 4. EARTHWORKS

A preliminary earthworks design is shown in Figure 5 below and attached in Appendix A. A site-responsive earthworks approach is proposed to integrate development into the existing landform. The general intent is to minimise the fill to the site, whilst ensuring drainage, roadworks and sewer reticulation requirements are met.

As a general principle, it is proposed to construct just sufficient earthworks for the purpose of constructing roads and allotments with suitable gradients, and sufficient earthworks across the development such that the site can be developed for its intended use.

The two conservation areas (Wetland and Grevillea) and the Public Open Space located at the site's north and north-east will largely be undisturbed to preserve the existing flora and fauna, as well as to retain their significance to the drainage strategy of the local landscape.

Due to the undulating and uneven nature of the site, it is anticipated that fill will be required for the majority of the proposed residential allotments and road reserves. Fill depth ranging from 0.5m to 1.5m across the residential portion of the site will create level pads suitable for the landholding's proposed usage, and to minimally reshape landform to synergise with the drainage strategy.

A high-level estimate of roughly 385,000 m<sup>3</sup> of fill is expected for the overall site earthwork strategy. Where feasible, some cut-to-fill will be undertaken on-site, minimising imported fill requirements. However, it is noted that the expected cut on site is relatively negligible compared to the fill that is required.

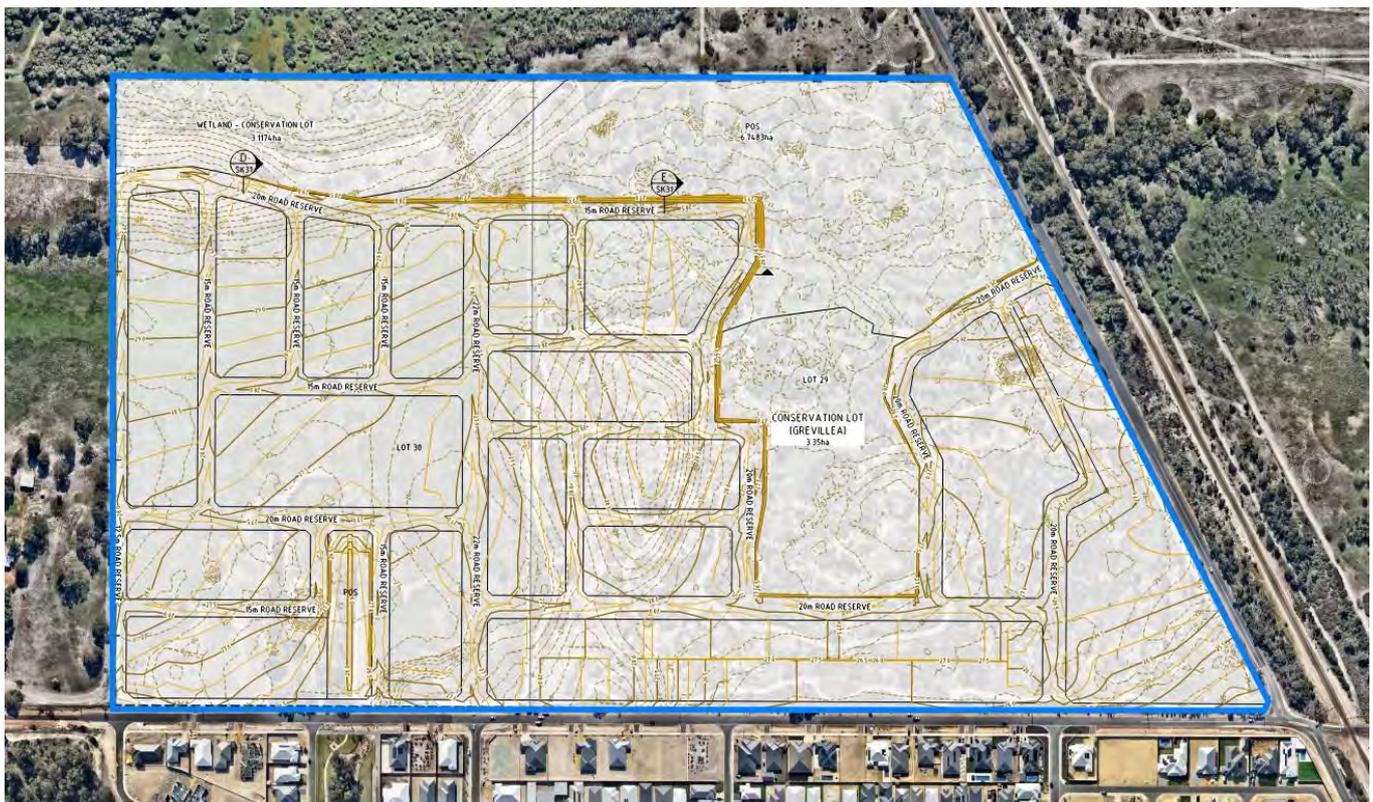


Figure 5 – Preliminary Site Earthwork Design

## 5. ROADS AND FOOTPATHS

The site is bounded by Maralla Road to its south and Railway Parade to its east, both of which could provide initial and ultimate site accesses.

Tonkin Highway and Great Northern Highway are situated 2.5km and 1.8km from the site location respectively, however, the existing road network does not directly connect the site to either of the two highways. Maralla Road connects to Great Northern Highway via Railway Parade over Ellen Brook.

Road access to site from the Perth Metropolitan Area can only be achieved via either residential access road networks north of the Ellenbrook township or exiting the Great Northern Highway just north of the Upper Swan township along Railway Parade.

Road access to site from regions further north can be achieved through the Stock Road exit from both Tonkin Highway and Great Northern Highway and along Railway Parade.

### 5.1 Maralla Road

Maralla Road is a single carriageway rural road with 7.5m sealed length, forming the southern boundary of the site. A longitudinal section of the existing Maralla Road levels and location of existing crossovers are attached in Appendix B.

Maralla Road provides access to the site along the entire southern site bound, with existing access points to both Lot 29 and Lot 30. A swale drain has been constructed as part of the southern neighbouring development's drainage solution, along with existing sewerage and water reticulation assets. An existing overhead powerline is present along the northern side of Maralla Road extending beyond the site along Maralla Road/Ellenbrook Road. The overhead powerline will be undergrounded as part of the proposed development. Both are shown in Figure 6 below.



*Figure 6 – Maralla Road facing West (Google Street View)*

The connections between the proposed internal roads and the existing Maralla Road will be 4-way intersections with Dunnett Drive and Lyndhurst Street, with T intersections at other minor road connections.

Future upgrades in the region, with connection to Tonkin Highway may affect future traffic volumes. A traffic impact assessment will determine whether it is possible to keep Maralla Road as a rural road, or it will need to be upgraded as part of the site's development.

Lots fronting Maralla Road to be low-density dwellings, similar to the neighbouring southern development. Crossovers are required onto Maralla Road, as per the existing residential crossovers to the south.



*Figure 7 – Maralla Road Intersection Upgrade*

## 5.2 Railway Parade

Railway Parade is a single-carriageway rural road with 7.5m sealed length, forming the eastern boundary of the site running north-south parallel to the existing rail line immediately to its east. Railway Parade intersects Maralla Road at the south-eastern corner of the site in an offset T-junction.

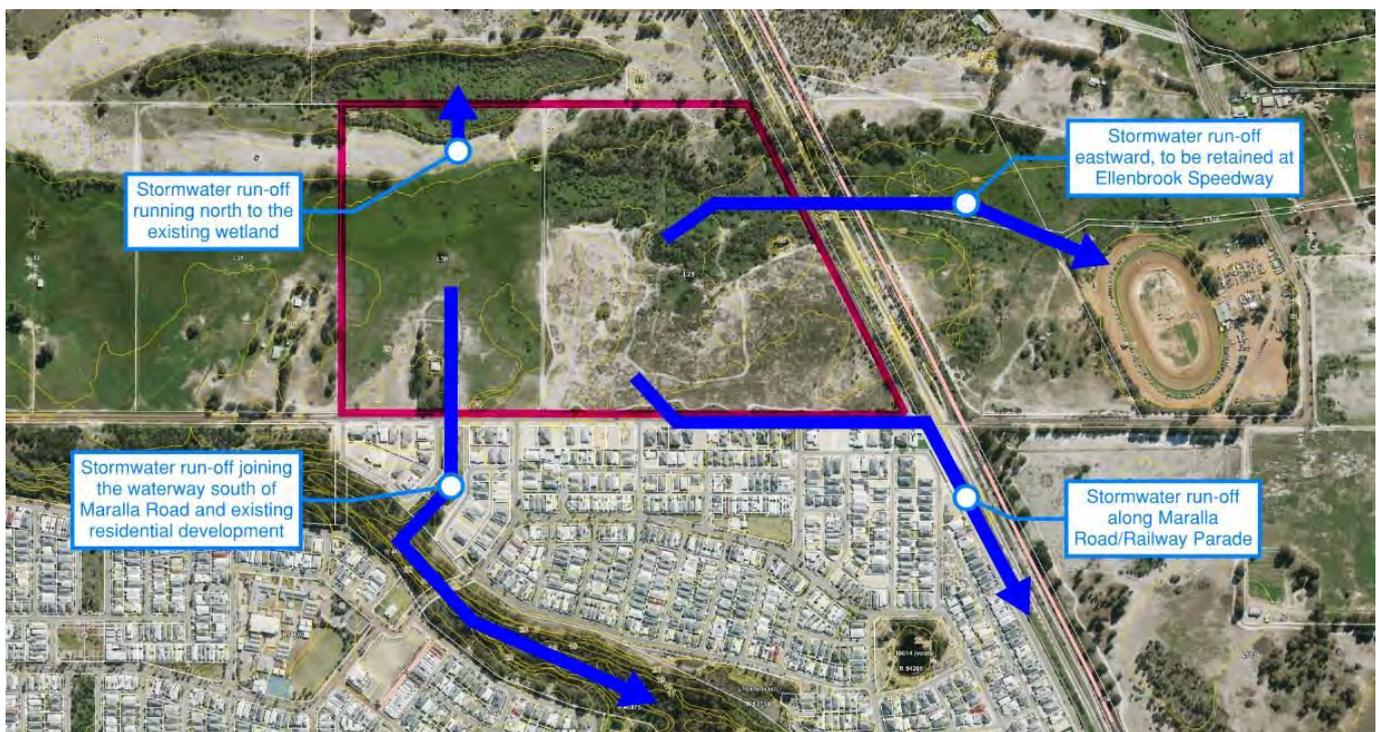


*Figure 8 –Railway Parade facing South (Google Street View)*

## 6. STORMWATER DRAINAGE

The site is located between a complex array of waterways and wetlands, as such the drainage strategy of the site should fully utilise these existing features to prevent flooding within the site, whilst ensuring the existing southern residential development and the surrounding road networks are protected from the site's stormwater runoff.

As shown below in Figure 9, currently the site is protected from flooding by four main stormwater runoff channels: Lot 30 drains northward towards the existing wetland and southward to the waterway south of Maralla Road and the existing residential development via a purpose built water treatment and flow channel; Lot 29 generally drains eastwards to the undeveloped greenfield where flow could be retained at the Ellenbrook Speedway in extreme weather events, and towards the south-eastern direction along Maralla Road and Railway Parade.



*Figure 9 – Current Site Stormwater Runoff Path*

Based on the preliminary earthwork design (Figure 5), a preliminary catchment plan of the site is prepared and shown below in Figure 10. The site is separated into 8 different stormwater catchments that direct the stormwater runoff in different paths.

Catchment A is treated and drained into the Wetland Conservation Lot to the north for detention in accordance with a drainage management plan.

Catchment B is the largest catchment within the site, with the stormwater runoff directed and retained in a centrally located stormwater basin and drained to the waterway system south of Maralla Road and the neighbouring residential development via the Public Open Space. A culvert and swale drains are likely required to connect the POS to the existing drainage assets south of Maralla Road.

Catch C, D & E are treated and drained into the Grevillea Conservation Lot and northern Public Open in accordance with a drainage management plan.

Catchment F is drained partially into the Grevillea Conservation Lot and northern Public Open Space, and partially drained along Railway Parade in the southern direction.

Catchment G is drained similarly to Catchment B.

Catchment H is drained eastwards along Maralla Road. Similar to the adopted drainage solution to the residential

development south of Maralla Road (Appendix B, 6023-24-610), a swale drain is proposed along Maralla Road to direct the stormwater runoff from Catchment H in the eastern direction along Maralla Road and Railway Parade. The allotments fronting Maralla Road are to be low-density country lots, similar to the neighbouring developments, to minimise the construction complexity of the swale in relation to residential crossovers, and the overall aesthetic of the development.

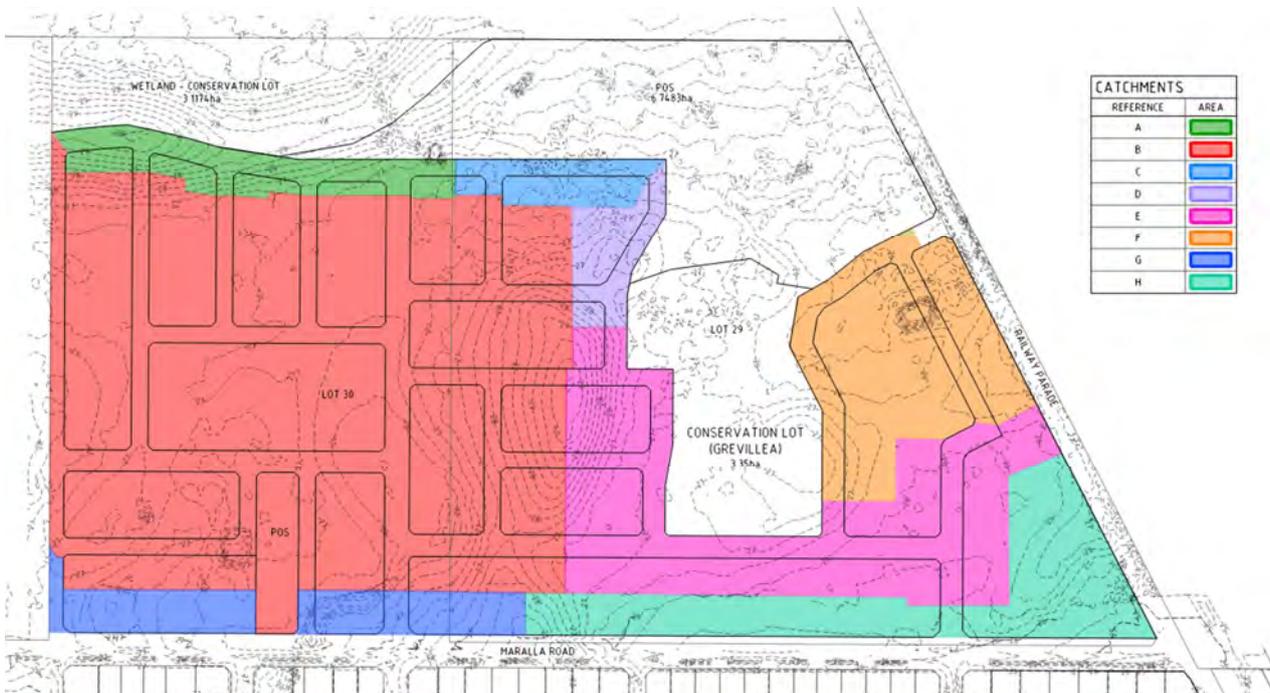


Figure 10 – Preliminary Site Catchment Plan

## 7. WATER RETICULATION

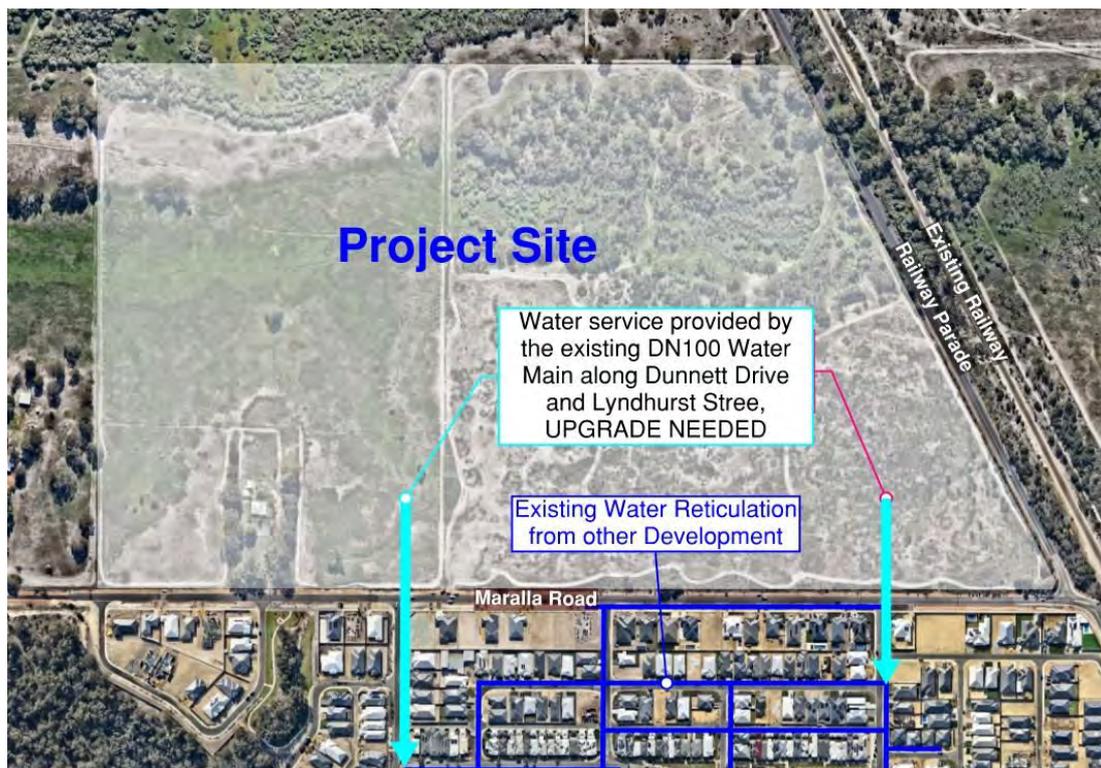


Figure 11 – Water Supply Connection

Cossill & Webley has conducted a desktop study advise on the likely water servicing requirements for this site.

All water services to the site will be extended from the south, utilising the existing water reticulation in the southern neighbouring development. Specifically, connection at the two proposed intersection upgrades between Maralla Road and Dunnett Drive and Lyndhurst Street, where existing DN100 water mains currently services the existing development. The existing water reticulation design of the southern development is shown in Appendix E.

As shown in Figure 11, we note that the DN100 water mains may require more extensive upgrades depending on the timing of development and capacity of Water Corporation capacity in the surrounding areas at that time to ensure it has sufficient capacity to service the entire project site. Boring may be required when crossing existing pavements, namely Maralla Road, Bilya Lane and Dalmilling Drive for the western water main upgrade, and Outlook Way for the eastern water main upgrade. Pending the design specifications, existing footpaths may also need to be removed and later reinstated for open trenching. The Water Corporation may also require more extensive upgrades based on their strategic planning to upgrade and reinforce their infrastructure to meet the demands of the wider area. See below in Figure 12 the current 250mm and 200mm water mains with Ellenbrook.



*Figure 12 – Water Supply Mains*

## 8. WASTEWATER RETICULATION AND DISPOSAL



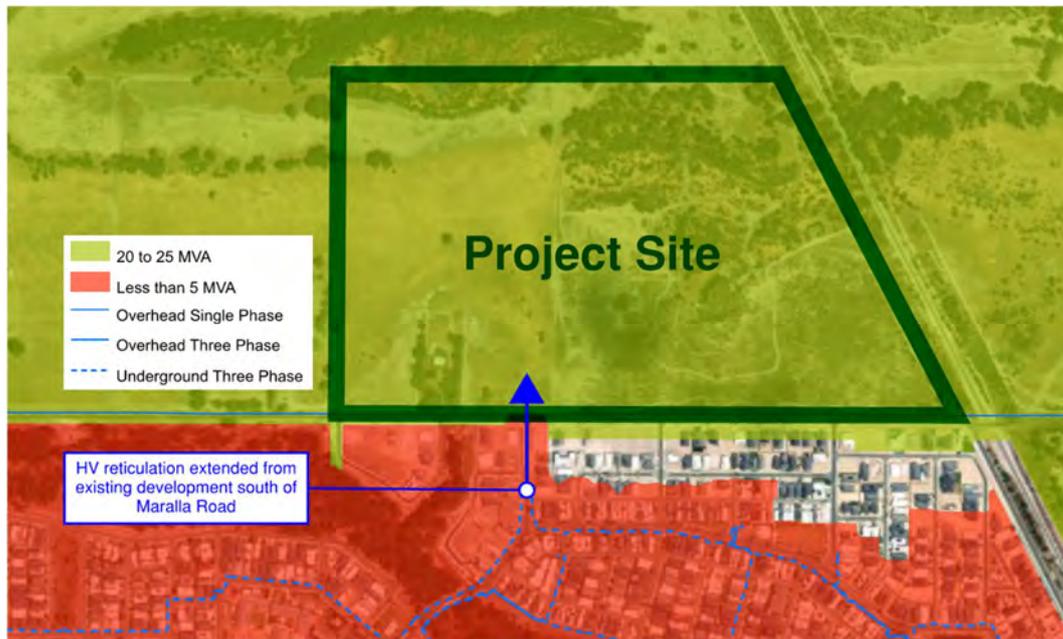
*Figure 13 – Sewerage Service Extension*

A preliminary site sewerage design drafted by CW and existing sewer reticulation plan of the southern neighbouring development is attached in Appendix D.

Cossill & Webley proposes the utilisation of the existing DN150 sewerage mains along Maralla Road previously constructed for the neighbouring residential development south of the site at the intersection of Dunnett Drive and Lyndhurst Street where the intersection upgrade work is expected, as shown in Figure 13.

The site is separated into two sewerage catchments to minimise flow into the existing reticulations. As shown in the preliminary earthwork plan, both catchments generally grade towards the proposed sewerage connection points, and into the Ellenbrook gravity system, which outfalls to Ellenbrook Pump Station No 4, on Roxburghe Drive. This pump station is close to capacity and will require investigation by the Water Corporation to confirm the additional flows into the catchment.

## 9. POWER



*Figure 14 – Electrical Connection & Grid Capacity Plan*

Western Power is the responsible electrical authority for the site. The existing power reticulation of the southern development is attached in Appendix F.

The overhead lines along Maralla Road will be able to support the first stages of development, and likely need to be removed from the site and relocated to an underground HV.

The site electrical supply is anticipated to be provided by the existing Western Power Henley Brook Power Substation approximately 8km south-west of the project site. Underground power will be provided HV reticulation extended from the existing development south of Maralla Road along Dunnett Drive. The specifics of these works will be designed at the time of development.

## 10. GAS SUPPLY

ATCO Gas is the responsible authority for the site.

Presently reticulated gas is not proposed within the development.

## 11. TELECOMMUNICATIONS

Fixed wireless NBN service is presently available to the site, and we anticipate fixed line NBN service to be extended from the existing NBN network in the residential development south of Maralla Road.

Under the current NBN scheme, the developer is required to enter into an agreement to provide infrastructure which is handed over free of charge to NBN Co upon completion. The installation of the communication service to the development would be funded through NBN, with developers responsible for funding the internal pit and pipe and a contribution to the backhaul costs (through existing network or via satellite receiver).

Capacity of the existing NBN Co and any potential backhaul costs will be finalised through the submission of a formal application with NBN.

An alternative to NBN would be through private communication supplies such as Telstra. These are expected to be available adjacent to the site area and will provide alternatives to the NBN network.

## 12. CONCLUSION

Based on the current information available, it is considered feasible and achievable to provide all the required servicing infrastructure to the proposed North Ellenbrook development, as follows:

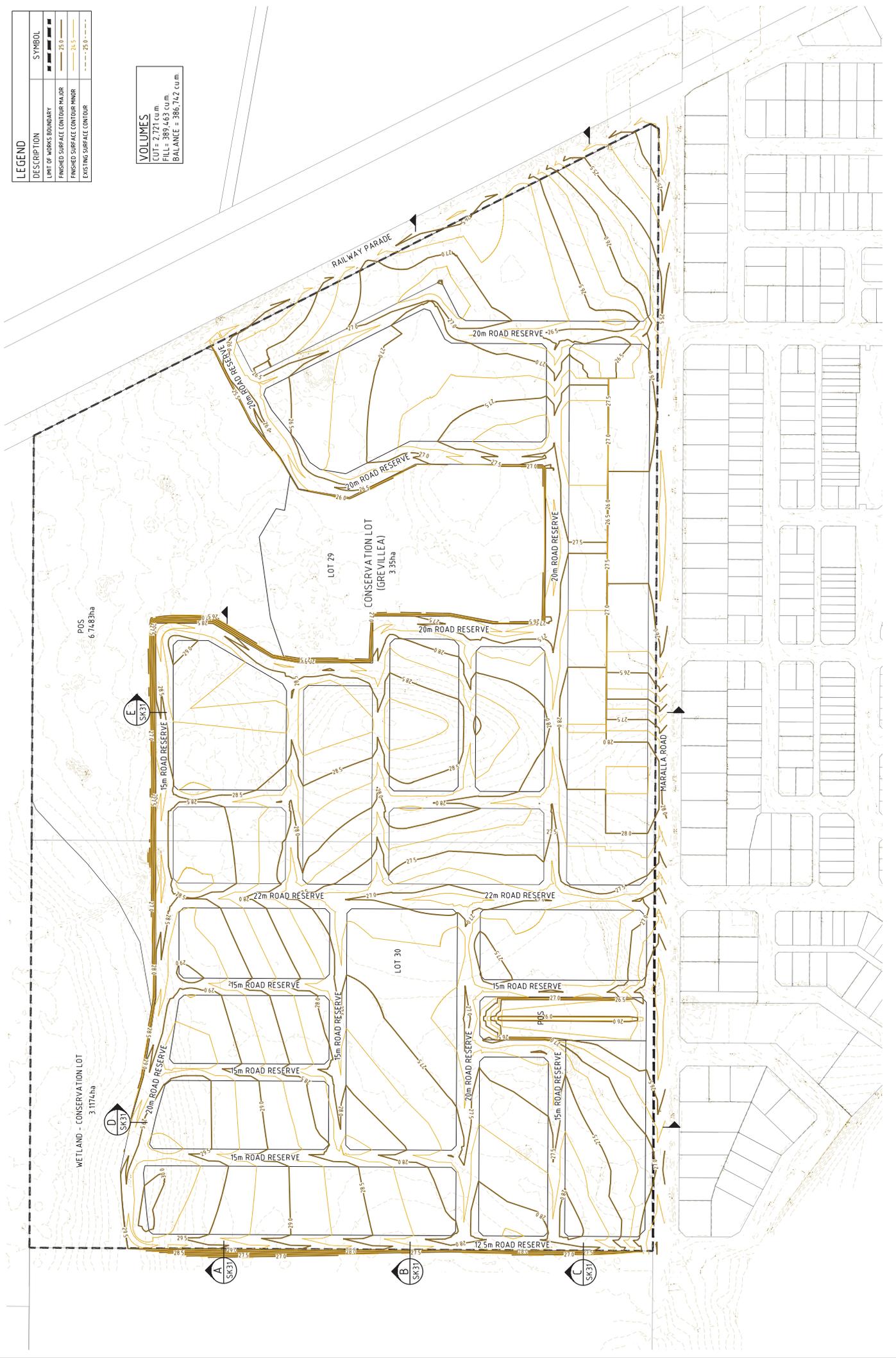
- Earthworks strategy has been designed to integrate the development into the existing landform, minimising fill requirements while ensuring drainage, roadworks, and sewer reticulation needs are met. An estimated 385,000 m<sup>3</sup> of fill is expected for the overall site earthwork strategy.
- Road access will be provided via Maralla Road and Railway Parade, with two 4-way intersection upgrade and potential road upgrades required depending on future traffic volumes. Internal road network will be designed to complement the site's topography and drainage strategy.
- Stormwater drainage will utilise existing topographical and waterway features and be managed through eight different catchments, directing runoff to conservation lots, public open spaces, and purpose-built drainage assets. This approach aims to prevent flooding within the site while protecting existing developments and surrounding road networks.
- Water supply will be extended from the existing DN100 water mains in the southern neighbouring development. Upgrades to the existing mains will likely be required, pending the total capacity required to service the site, the development timing and Water Corporation's capacity in the surrounding areas.
- Sewerage from site will be discharged via the connection to the existing DN150 sewerage mains along Maralla Road. The site is separated into two sewerage catchments, with the topography allowing for gravity-fed systems without the need for pump stations onsite.
- Electrical power will be supplied by extending the underground HV reticulation from the existing development south of Maralla Road, with the Henley Brook Power Substation serving as the primary source. Existing overhead lines along Maralla Road may need to be relocated underground.
- Reticulated gas is not currently proposed for the development
- Telecommunications will likely be provided through an extension of the existing NBN network from the southern residential development.

This engineering servicing strategy demonstrates that the North Ellenbrook development can be successfully implemented with appropriate infrastructure provisions and careful integration with the surrounding environment and existing developments.

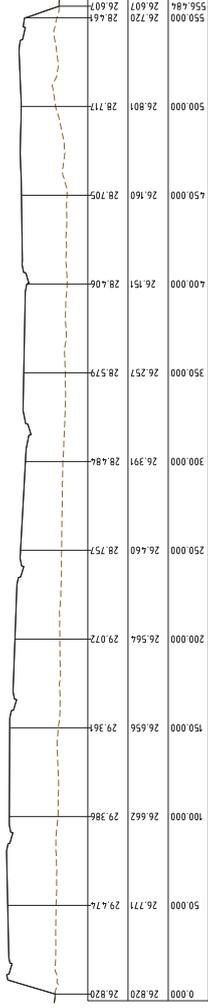
**APPENDIX A**  
**Bulk Earthworks Strategy**  
**6369-00-SK30 Rev A**  
**6369-00-SK31 Rev A**

DESCRIPTION	SYMBOL
LIMIT OF WORKS BOUNDARY	---
FINISHED SURFACE CONTOUR MAJOR	— 0.5 —
FINISHED SURFACE CONTOUR MINOR	— 0.1 —
EXISTING SURFACE CONTOUR	--- 0.5 ---

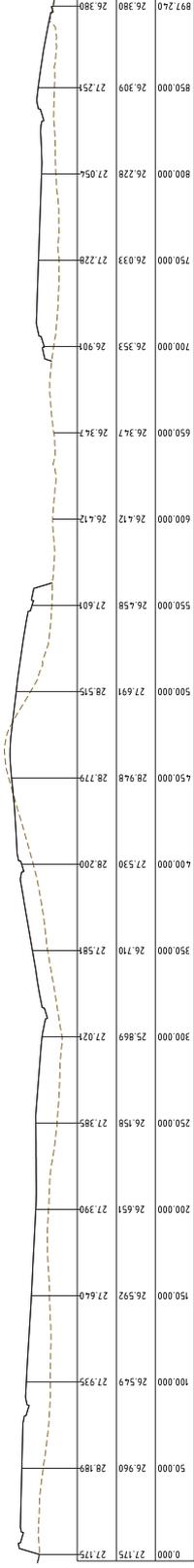
**VOLUMES**  
 CUT = 2,721 cu.m  
 FILL = 389,463 cu.m  
 BALANCE = 386,742 cu.m



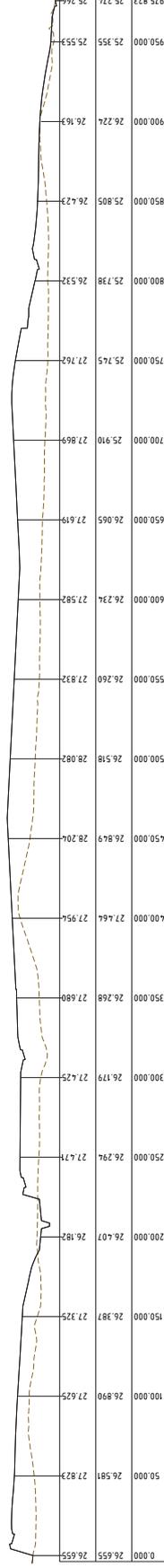
REV	DATE	BY	APP	ISSUED FOR APPROVAL					CLIENT <b>Cossill &amp; Webley</b> CONSULTING ENGINEERS Street Address 27 Lonsdale Street Melbourne VIC 3000 Mailing Address PO Box 9904 South Melbourne VIC 3200 T (03) 9422 3600 F (03) 9422 3861 E admin@cossill.com.au	PROJECT NORTH ELLENBROOK - LOT 29 & 30 MARALLA ROAD	TITLE 000 - GENERAL PRELIMINARY EARTHWORKS	DRAWING NO. 6369-00-SK30	SHEET NO. A	ORIGINAL SIZE A1
	DATE	BY	APP							APPROVED RC	SCALE 1:500			



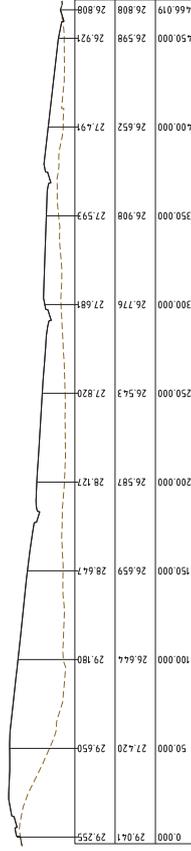
SITE SECTION A



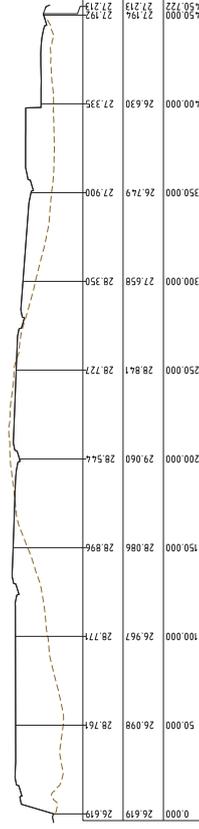
SITE SECTION B



SITE SECTION C



SITE SECTION D



SITE SECTION E

DATUM RL25  
 DESIGN LEVEL  
 EXISTING SURFACE  
 CHAINAGE

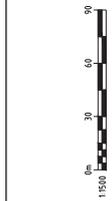
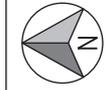
DATUM RL25  
 DESIGN LEVEL  
 EXISTING SURFACE  
 CHAINAGE

DATUM RL25  
 DESIGN LEVEL  
 EXISTING SURFACE  
 CHAINAGE

DATUM RL26  
 DESIGN LEVEL  
 EXISTING SURFACE  
 CHAINAGE

REV	DATE	BY	CHKD	APP
A	03/30/24	RC		

ISSUED FOR APPROVAL	



CONTRACTOR'S RESPONSIBILITY: The contractor shall ensure that the design is followed as shown on the drawings. The contractor shall be responsible for any errors or omissions in the design. The contractor shall be responsible for any changes to the design. The contractor shall be responsible for any delays or cost overruns. The contractor shall be responsible for any safety issues. The contractor shall be responsible for any environmental issues. The contractor shall be responsible for any other issues.

**CW Cossill & Webley**  
 CONSULTING ENGINEERS  
 Street Address: 17/18-19/21 St Johns Road, South Perth WA 6150  
 Mailing Address: PO Box 10000, South Perth WA 6150  
 T: (08) 9422 3600 F: (08) 9422 3611 E: admin@cosweb.com.au

CLIENT	APPROVED	DESIGNED	RC	SCALE	1:1000

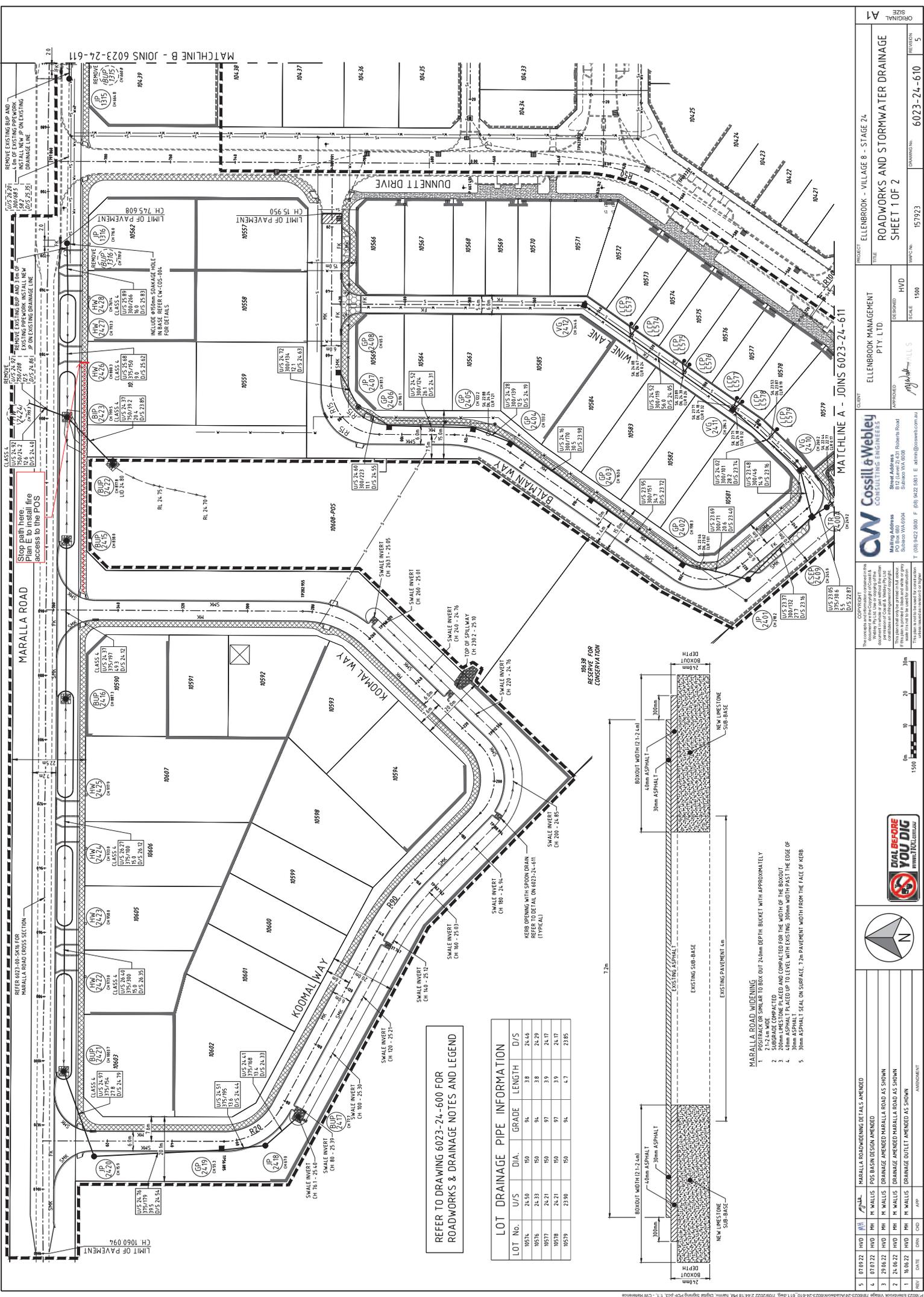
PROJECT	TITLE	DATE
NORTH ELLENBROOK - LOT 29 & 30 MARALLA ROAD	000 - GENERAL SITE SECTIONS	27/19/21

AMENDMENT	DATE	BY	CHKD	APP

REVISION	DATE	DESCRIPTION
A	03/30/24	6369-00-SK31

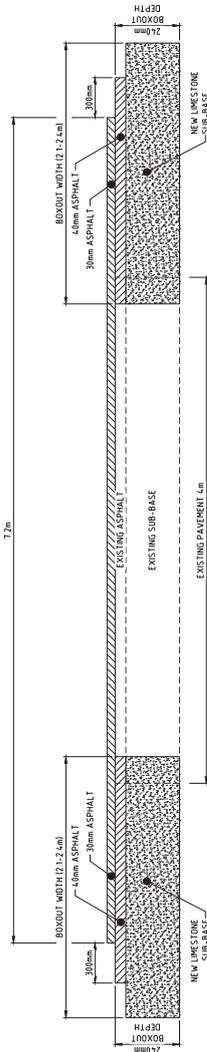
ORIGINAL SIZE: A1

**APPENDIX B**  
**Maralla Road Levels - Longitudinal Section**  
**Existing Development Roadworks and Drainage (Maralla Road)**  
**6023-00-SK17 Rev C**  
**6023-00-SK19 Rev B**  
**6023-24-610 Rev 5**



REFER TO DRAWING 6023-24-600 FOR ROADWORKS & DRAINAGE NOTES AND LEGEND

LOT No.	U/S	DIA.	GRADE	LENGTH	D/S
0574	24.50	150	9%	3.8	24.45
0576	24.33	150	9%	3.8	24.29
0577	24.21	150	9%	3.9	24.17
0578	24.21	150	9%	3.9	24.17
0579	23.90	150	9%	4.7	23.85



- MARALLA ROAD WIDENING**
1. 2.1-2.2m wide SPOON DRAIN TO BOX-OUT 700mm DEPTH BUCKET WITH APPROXIMATELY 200mm DEPTH
  2. SUBGRADE COMPACTED AND GRADDED FOR THE WIDTH OF THE BOX-OUT
  3. 40mm ASPHALT PLACED UP TO LEVEL WITH EXISTING 300mm WIDTH PAST THE EDGE OF KERB
  4. 30mm ASPHALT SEAL ON SURFACE 7m PAVEMENT WIDTH FROM THE FACE OF KERB
  5. 30mm ASPHALT SEAL ON SURFACE 7m PAVEMENT WIDTH FROM THE FACE OF KERB

PROJECT	ELLENBROOK - VILLAGE 8 - STAGE 24
TITLE	ROADWORKS AND STORMWATER DRAINAGE
SHEET 1 OF 2	
DRAWING NO.	6023-24-610
DATE	15/09/23
SCALE	1:500
DESIGNED BY	HVD
CHECKED BY	HVD
APPROVED BY	[Signature]
CLIENT	ELLENBROOK MANAGEMENT PTY LTD
CONSULTANT	CW Cossill & Webley CONSULTING ENGINEERS
PROJECT ADDRESS	1081 RAUPT 3000 E. (08) 8622 3861 E. Jarrim@coswill.com.au
STREET ADDRESS	1081 RAUPT 3000 E. Jarrim@coswill.com.au
MAILING ADDRESS	1081 RAUPT 3000 E. Jarrim@coswill.com.au
POSTAL ADDRESS	1081 RAUPT 3000 E. Jarrim@coswill.com.au
POSTAL CODE	1500
STATE	NSW
CITY	ELLENBROOK
COUNTRY	AUSTRALIA





APPENDIX C  
Preliminary Catchment Plan  
6369-00-SK33 Rev A



LOCALITY PLAN

REFERENCE	AREA
A	
B	
C	
D	
E	
F	
G	
H	



PROJECT: NORTH ELLENBROOK - LOT 29 & 30 MARALLA ROAD		CLIENT:	-									
TITLE: 000 - GENERAL PRELIMINARY CATCHMENT PLAN		DESIGNED:	RC									
DRAWING NO: 6359-00-SK33		APPROVED:	-									
SCALE: 1:2000 1:10000												
<p><b>CW</b> Cossill &amp; Webley CONSULTING ENGINEERS</p> <p>Street Address: 10 Jones Road, Sydney NSW 1585 Mailing Address: PO Box 9904, Sydney NSW 1585 T: (02) 9422 3600 E: (02) 9422 3811 E: <a href="mailto:enr@cosweb.com.au">enr@cosweb.com.au</a></p>												
<p><small>CONTRACTOR'S NOTE: The contractor shall provide the following information to the Council at least 14 days prior to the start of construction:</small></p> <ul style="list-style-type: none"> <li>1. A copy of the approved site plan.</li> <li>2. A copy of the approved catchment plan.</li> <li>3. A copy of the approved drainage plan.</li> <li>4. A copy of the approved erosion control plan.</li> <li>5. A copy of the approved sediment control plan.</li> <li>6. A copy of the approved water quality management plan.</li> <li>7. A copy of the approved stormwater management plan.</li> <li>8. A copy of the approved landscape plan.</li> <li>9. A copy of the approved site plan.</li> <li>10. A copy of the approved catchment plan.</li> <li>11. A copy of the approved drainage plan.</li> <li>12. A copy of the approved erosion control plan.</li> <li>13. A copy of the approved sediment control plan.</li> <li>14. A copy of the approved water quality management plan.</li> <li>15. A copy of the approved stormwater management plan.</li> <li>16. A copy of the approved landscape plan.</li> </ul>												
ISSUED FOR APPROVAL		<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>			REV	DATE	BY	APP				
REV	DATE	BY	APP									

A1 ORIGINAL SIZE

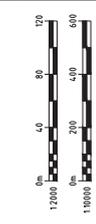
PROJECT: NORTH ELLENBROOK - LOT 29 & 30 MARALLA ROAD  
TITLE: 000 - GENERAL PRELIMINARY CATCHMENT PLAN  
DRAWING NO: 6359-00-SK33

CLIENT: -  
DESIGNED: RC  
APPROVED: -  
SCALE: 1:2000 1:10000

**CW** Cossill & Webley  
CONSULTING ENGINEERS  
Street Address: 10 Jones Road, Sydney NSW 1585  
Mailing Address: PO Box 9904, Sydney NSW 1585  
T: (02) 9422 3600 E: (02) 9422 3811 E: [enr@cosweb.com.au](mailto:enr@cosweb.com.au)

CONTRACTOR'S NOTE: The contractor shall provide the following information to the Council at least 14 days prior to the start of construction:

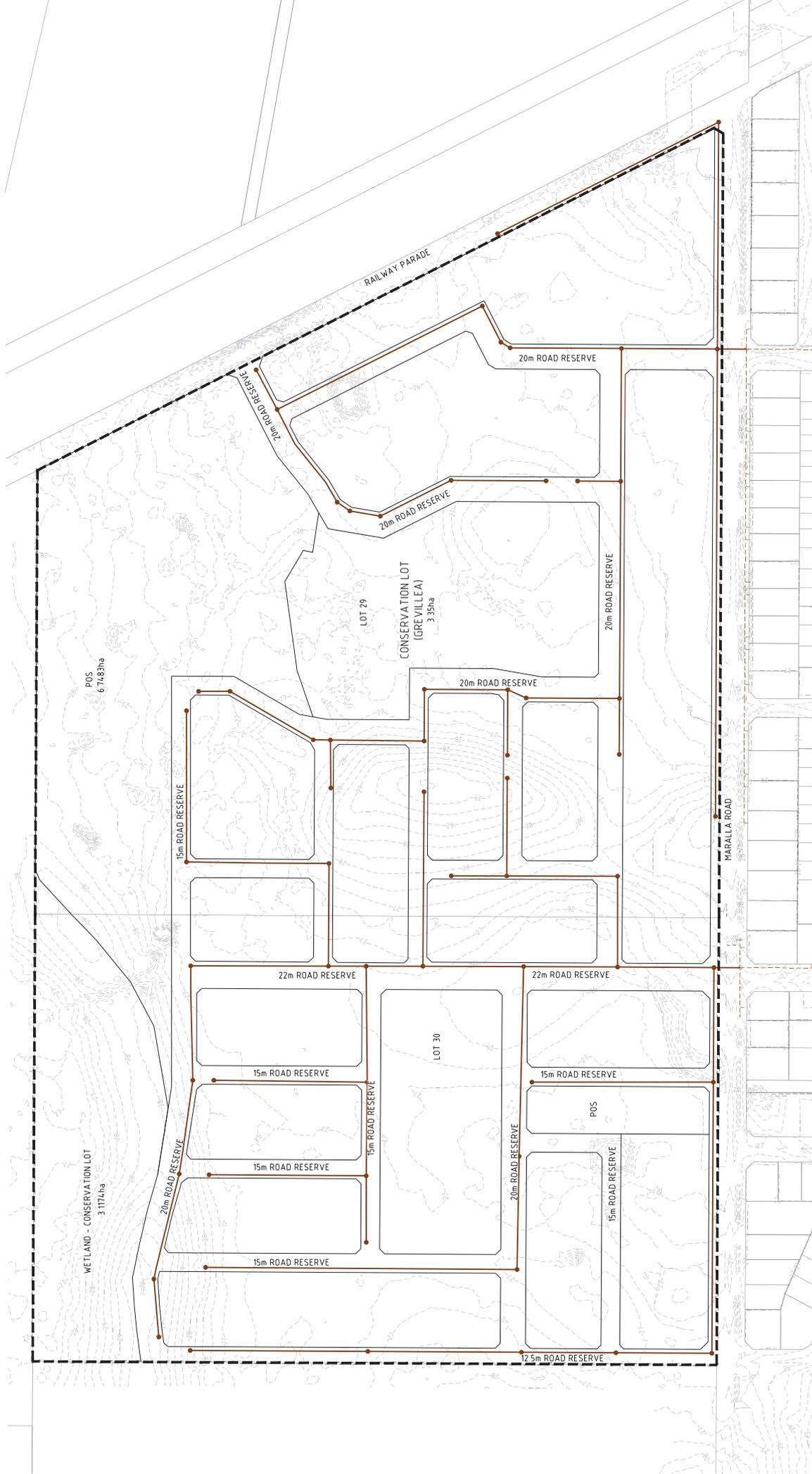
- 1. A copy of the approved site plan.
- 2. A copy of the approved catchment plan.
- 3. A copy of the approved drainage plan.
- 4. A copy of the approved erosion control plan.
- 5. A copy of the approved sediment control plan.
- 6. A copy of the approved water quality management plan.
- 7. A copy of the approved stormwater management plan.
- 8. A copy of the approved landscape plan.
- 9. A copy of the approved site plan.
- 10. A copy of the approved catchment plan.
- 11. A copy of the approved drainage plan.
- 12. A copy of the approved erosion control plan.
- 13. A copy of the approved sediment control plan.
- 14. A copy of the approved water quality management plan.
- 15. A copy of the approved stormwater management plan.
- 16. A copy of the approved landscape plan.



ISSUED FOR APPROVAL		<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>APP</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>			REV	DATE	BY	APP				
REV	DATE	BY	APP									

APPENDIX D  
Preliminary Sewer Strategy & Existing Sewer from Neighbouring Development  
6369-00-SK32 Rev A  
6023-23-400 Rev 0  
6023-24-400 Rev 2

LEGEND	
DESCRIPTION	SYMBOL
RETICULATION AREA BOUNDARY	
PROPOSED GRAVITY SEWER AND ACCESS CHAMBER OR MAINTENANCE SHED	
EXISTING GRAVITY SEWER	



REV	DATE	BY	APP	INITIAL ISSUE	AMENDMENT
	03/10/24	RC			
<p><b>REUSE YOU DIG</b> www.youdig.com.au</p>					
<p><b>Crossill &amp; Webley</b> CONSULTING ENGINEERS          Street Address: 1/1100 Stirling Highway, Perth WA 6000          Mailing Address: Box 994, Stirling WA 6000          T: (08) 9422 3600 E: (08) 9422 3611 E: <a href="mailto:enr@crossill.com.au">enr@crossill.com.au</a></p>					
<p><small>THE CONSULTANT'S LIABILITY UNDER THIS CONTRACT IS LIMITED TO THE AMOUNT OF THE FEE PAID TO THE CONSULTANT. THE CONSULTANT'S LIABILITY UNDER THIS CONTRACT IS LIMITED TO THE AMOUNT OF THE FEE PAID TO THE CONSULTANT. THE CONSULTANT'S LIABILITY UNDER THIS CONTRACT IS LIMITED TO THE AMOUNT OF THE FEE PAID TO THE CONSULTANT.</small></p>					
PROJECT		NORTH ELLENBROOK - LOT 29 & 30 MARALLA ROAD			
TITLE		000 - GENERAL PRELIMINARY SEWER			
SCALE		1:500			
DRAWING NO.		6359-00-SK32			
REVISION		A			

**STANDARD SEWER NOTES**

1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE NOTES AND STANDARD DRAWINGS LISTED IN WATER CORPORATION DESIGN STANDARD DS 39 VERSION 1, REVISION 2, JUNE 2019.
2. ALL PIPE SIZES IN MILLIMETRES. ALL DISTANCES AND LEVELS IN METRES.
3. DISTANCES GIVEN ARE AT THE INTERSECTION OF SEWERS.
4. THE CONTRACTOR SHALL ENSURE THAT ALL LOTS ARE SERVED WITH CONNECTIONS.
5. EARTHWORKS TO BE COMPLETED PRIOR TO CONSTRUCTION OF SEWER CONNECTIONS.
6. ACCESS CHAMBER DEPTHS ARE SHOWN FOR WATER CORROSION INFORMATION ONLY.
7. DRAIN PIPES SHALL BE 50mm.
8. DRAIN TO DRAINS SEWER PIPES SHALL BE UPVC CLASS S40 WHERE THE DEPTH OF COVER TO TOP OF PIPES IS LESS THAN 1.0m.
9. PROPERTY CONNECTION TYPES TO BE AS PER THE WATER CORPORATION DESIGN STANDARD DS39 OR AS SPECIFICALLY NOTED ON THE DRAWINGS.
10. ALL PROPERTY CONNECTIONS DEEPER THAN 1.0m ARE TO BE BROUGHT UP TO GRADE AT THE PROPERTY CURB AND TO BE CONFORM WITH WATER CORPORATION DESIGN STANDARD DS 39, TABLE 4.2 AND 4.3.1.1.
11. MINIMUM COVER OF SEWERS TO BE 0.5m IN ROAD RESERVES AND 0.75m ELSEWHERE.
12. CONCRETE ENCASEMENT SHALL BE PROVIDED WHERE NOTED ON THE DRAWINGS.
13. ACCESS CHAMBERS SHALL BE PRECAST CONCRETE OR STANDARD BREAK CONSTRUCTION.
14. CONTRACTOR TO CONFIRM EXISTING INVERT LEVELS PRIOR TO ANY CONSTRUCTION. ALL CONNECTIONS TO EXISTING SEWERS TO BE MADE BY THE WATER CORPORATION AT THE CONNECTION JUNCTIONS.

**STAGE SEWER NOTES**

1. LOCAL AUTHORITY - CITY OF SWAN
2. PROJECT SURVEYOR - VEPS
3. CONTOURS WITHIN THE RETICULATION AREA DERIVED FROM EARTHWORKS PLAN.
4. CENTRE LINES OF ACCESS CHAMBERS, SEWER PIPES AND 10.0m LINES ARE TO BE ON ALIGNMENTS OF 3.0m IN ROAD RESERVES AND 0.5m INSIDE LOTS UNLESS OTHERWISE SHOWN.

DESCRIPTION	SYMBOL
RETICULATION AREA BOUNDARY	---
EXISTING GRAVITY SEWER	---
EXISTING GRAVITY SEWER	---
ACCESS CHAMBER NUMBER	AC-XXXX
ACCESS CHAMBER DEPTH	0.75m
ACCESS CHAMBER TYPE	10
DROP ACCESS CHAMBER	10
UPSTREAM INVERT LEVEL	105.20/30
PIPE DIAMETER / GRADE	150/000
DOWNSTREAM INVERT LEVEL	105.20/30
CONNECTION TYPE	REFER TYPICAL
INSPECTION OPENING	10
LOTTES SPECIFIED IN PREVIOUS STAGE BUT RELEASED IN THIS STAGE	10
SERVICE LOAD IN THIS STAGE FOR RELEASE IN FUTURE	*
STAGE	10
FISHED SURFACE DESIGN CONTOUR	10
DESIGN LOT PAD LEVEL	10
PROPOSED LIMESTONE RETAINING WALL	10
EXISTING LIMESTONE RETAINING WALL	10
PROPOSED KERB LINES	10
EXISTING KERB LINES	10
FUTURE KERB LINES	10
EASEMENT	10
POST DEVELOPMENT GROUND WATER LEVEL	10
PROPERTY CONNECTION TYPE	10
PROPOSED 10.0m LINES (WHERE NOTED)	10

**NSWSA RETICULATION SUBMISSION**

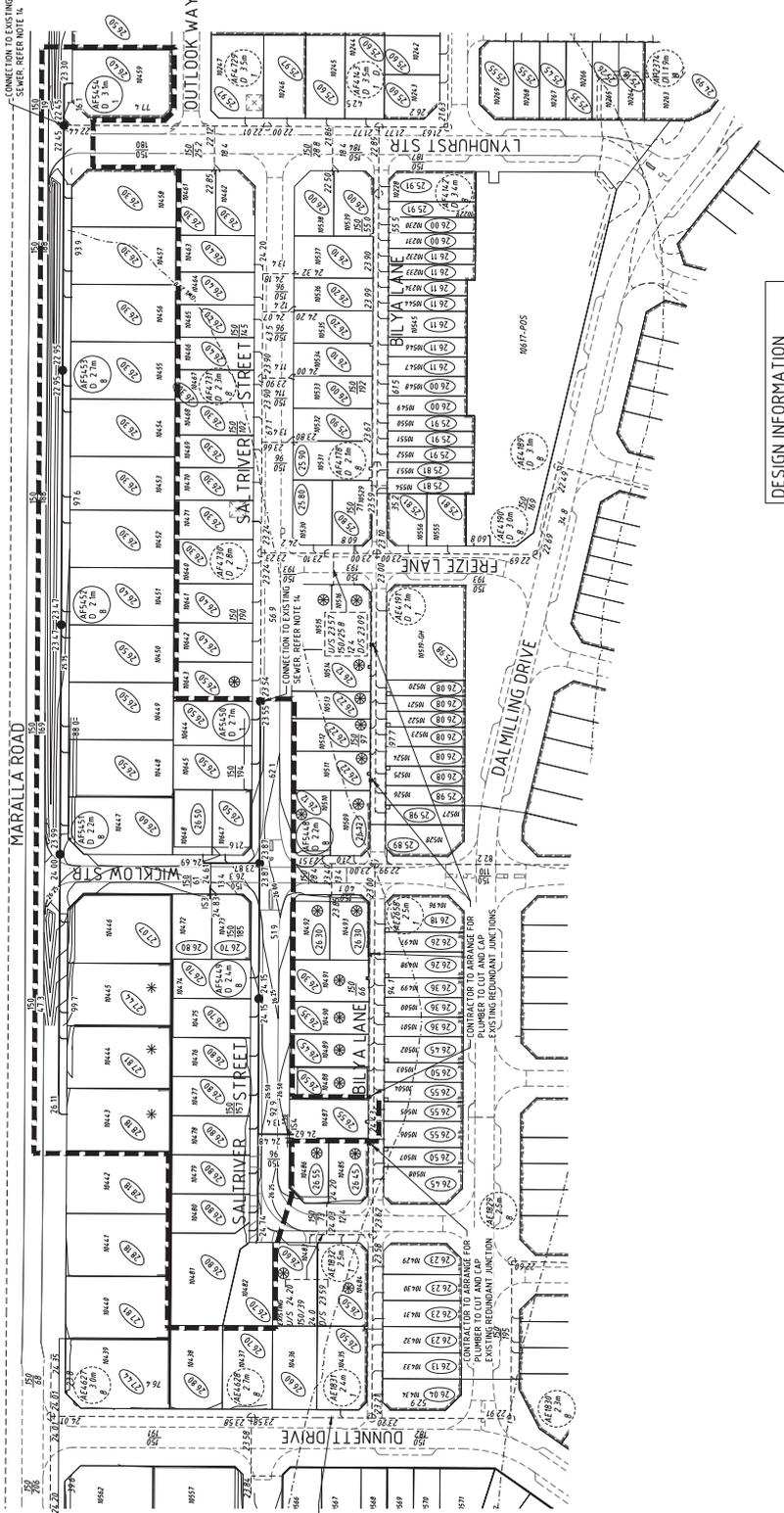
This plan is accepted as being in accordance with the endorsed Concept Plan 1079-200-00-00A.  
 Compliance with relevant design standards and manuals remains the responsibility of the Design Engineer.  
 No works are to commence on site until start-up meeting requirements have been made with the relevant Asset Inspector. Refer to the Developers' Manual for further details.

**NU65-203-001-01A**

FILE: 12272944 RETICULATION AREA - ELLENBROOK

PROJECT	ELLENBROOK - VILLAGE 8 - STAGE 23
TITLE	SEWER RETICULATION PLAN
DATE	15/09/23
DRAWING NO.	6023-23-4-00
SCALE	1:1000
DESIGNED	HVD
APPROVED	
CLIENT	ELLENBROOK MANAGEMENT PTY LTD

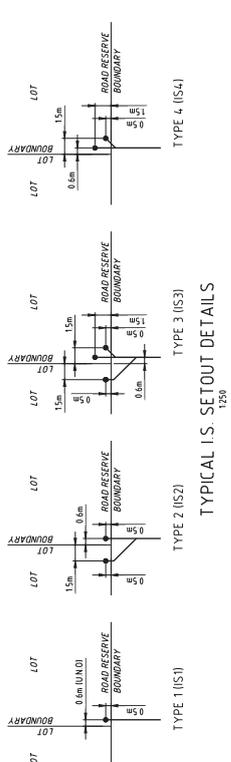
ISSUED FOR WATER CORPORATION APPROVAL AND CONSTRUCTION	19/10/21	HVD
ADDITIONAL SERVICE TO LOT 1045/5 IS SERVICE TO LOT 1047 INCLUDED IN WORKS	18/09/21	HVD
ISSUED FOR PRICING/APPROVAL	18/09/21	HVD
DATE	18/09/21	APP
NO.	1	APP



**DESIGN INFORMATION**

DEPTH OF MANHOLES SHOWN FOR WATER CORPORATION INFORMATION ONLY	0.75m
WATER PIPE	150mm
ACCESS CHAMBERS	2
MAINTENANCE SHAPES	5
LOTS SERVED	33
LOCAL AUTHORITY	CITY OF SWAN

**NOTICE TO CONTRACTOR**  
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE THE NATURE AND LOCATION OF ALL SERVICES WHICH MAY BE ENCOUNTERED AND TO CONSULT WITH THE RELEVANT SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF EXCAVATIONS. FAILURE TO DO SO OR TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTOR'S LIABILITY FOR REPAIR OF ALL SERVICES DAMAGED BY HIM DURING CONSTRUCTION WORKS. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY FOR THE PROTECTION OF ALL EXISTING SERVICES.



TYPICAL I.S. SETOUT DETAILS

**COSSILL & WEBLEY CONSULTING ENGINEERS**  
 10/101 RIVERVIEW DRIVE, ELLENBROOK, WA 6102  
 T: (08) 9422 3600 F: (08) 9422 3811 E: admin@cosw.com.au

**YOU DIG**  
 EXTERNAL USE ONLY

1:1000 scale bar and north arrow.

ISSUED FOR WATER CORPORATION APPROVAL AND CONSTRUCTION	19/10/21	HVD
ADDITIONAL SERVICE TO LOT 1045/5 IS SERVICE TO LOT 1047 INCLUDED IN WORKS	18/09/21	HVD
ISSUED FOR PRICING/APPROVAL	18/09/21	HVD
DATE	18/09/21	APP
NO.	1	APP

**STANDARD SEWER NOTES**

- THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE NOTES AND STANDARD DRAWINGS LISTED IN WATER CORPORATION DESIGN STANDARD DS 39 VERSION 2, JUNE 2019.
- ALL PIPE SIZES IN MILLIMETRES. ALL DISTANCES AND LEVELS IN METRES.
- DISTANCES GIVEN ARE AT THE INTERSECTION OF SEWERS.
- THE CONTRACTOR SHALL ENSURE THAT ALL LOTS ARE SERVED WITH CONNECTIONS.
- EARTHWORKS TO BE COMPLETED PRIOR TO CONSTRUCTION OF SEWER CONNECTIONS.
- ACCESS CHAMBER REPTS ARE SHOWN FOR WATER CORPORATION INFORMATION ONLY.
- DN150 PIPES SHALL BE S100.
- DN150 TO DN750 SEWER PIPES SHALL BE UPVC CLASS S40 WHERE THE DEPTH OF COVER TO TOP OF PIPES IS LESS THAN 7.0m.
- PROPERTY CONNECTION TYPES TO BE AS PER THE WATER CORPORATION DESIGN STANDARD DS50 OR AS SPECIFICALLY NOTED ON THE DRAWINGS.
- ALL PROPERTY CONNECTIONS DEEPER THAN 1.0m ARE TO BE BROUGHT UP TO WITHIN 1.0m OF THE SURFACE AND MARKED AS SHOWN ON WATER CORPORATION Dwg A401-S1-1, A401-S2-1 AND A401-S1-1.
- MINIMUM COVER OF SEWERS TO BE 0.3m IN ROAD RESERVES AND 0.75m ELSEWHERE.
- CONCRETE ENCASEMENT SHALL BE PROVIDED WHERE NOTED ON THE DRAWINGS.
- ACCESS CHAMBERS SHALL BE PRECAST CONCRETE OR STANDARD BRICK CONSTRUCTION.
- CONTRACTOR TO CORRECT EXISTING INVERT LEVELS PRIOR TO ANY CONSTRUCTION. ALL CONNECTIONS TO LIVE SEWERS TO BE MADE BY THE WATER CORPORATION AT THE CONTRACTOR'S EXPENSE.

**STAGE SEWER NOTES**

- LOCAL AUTHORITY - CITY OF SWAN
- PROJECT SURVEYOR - VEIS
- CONTOURS WITHIN THE RETICULATION AREA DERIVED FROM EARTHWORKS PLAN.
- CENTRELINES OF ACCESS CHAMBERS, SEWER PIPES AND 10 LINES ARE TO BE ON ALIGNMENTS OF 3.0m IN ROAD RESERVES AND 5.0m IN LOTS UNLESS OTHERWISE SHOWN.

DESCRIPTION	SYMBOL
RETICULATION AREA BOUNDARY	---
EXISTING GRAVITY SEWER	---
EXISTING GRAVITY SEWER	---
ACCESS CHAMBER NUMBER	AC#
ACCESS CHAMBER DEPTH	D
ACCESS CHAMBER TYPE	T
DROP ACCESS CHAMBER	DC
UPSTREAM INVERT LEVEL	U.S. 20.30
PIPE LENGTH	150/100
DOWNSTREAM INVERT LEVEL	D.S. 20.10
CONNECTION TYPE REFER TYPICAL	15.02.03.00.04
INSPECTION OPENING	10
TO BE EXPOSED IN PREVIOUS STAGE BUT RELEASED IN THIS STAGE	⊗
SERVICE LAD IN THIS STAGE FOR RELEASE IN FUTURE STAGE	*
FINISHED SURFACE DESIGN CONTOUR	25.10
DESIGN LOT PAD LEVEL	25.10
PROPOSED LIMESTONE RETAINING WALL	---
EXISTING LIMESTONE RETAINING WALL	---
PROPOSED KERB LINES	---
EXISTING KERB LINES	---
FUTURE KERB LINES	---
EASEMENT	---
POST DEVELOPMENT GROUND WATER LEVEL	---

**NSWA RETICULATION SUBMISSION**

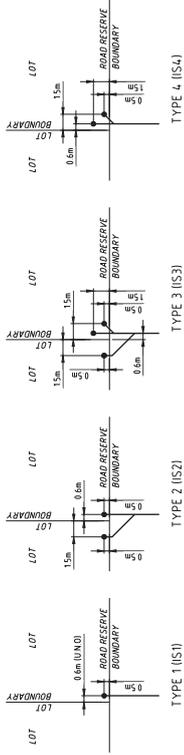
This plan is accepted as being in accordance with the endorsed Concept Plan 1079-200-010-01A.  
 Compliance with relevant design standards and manuals remains the responsibility of the Design Engineer. No works are to commence on site until start-up meeting requirements have been made with the relevant Asset Inspector. Refer to the Developer's Manual for further details.

**NW55-203-001-01C**

FILE: 129558940 RETICULATION AREA - ELLENBROOK

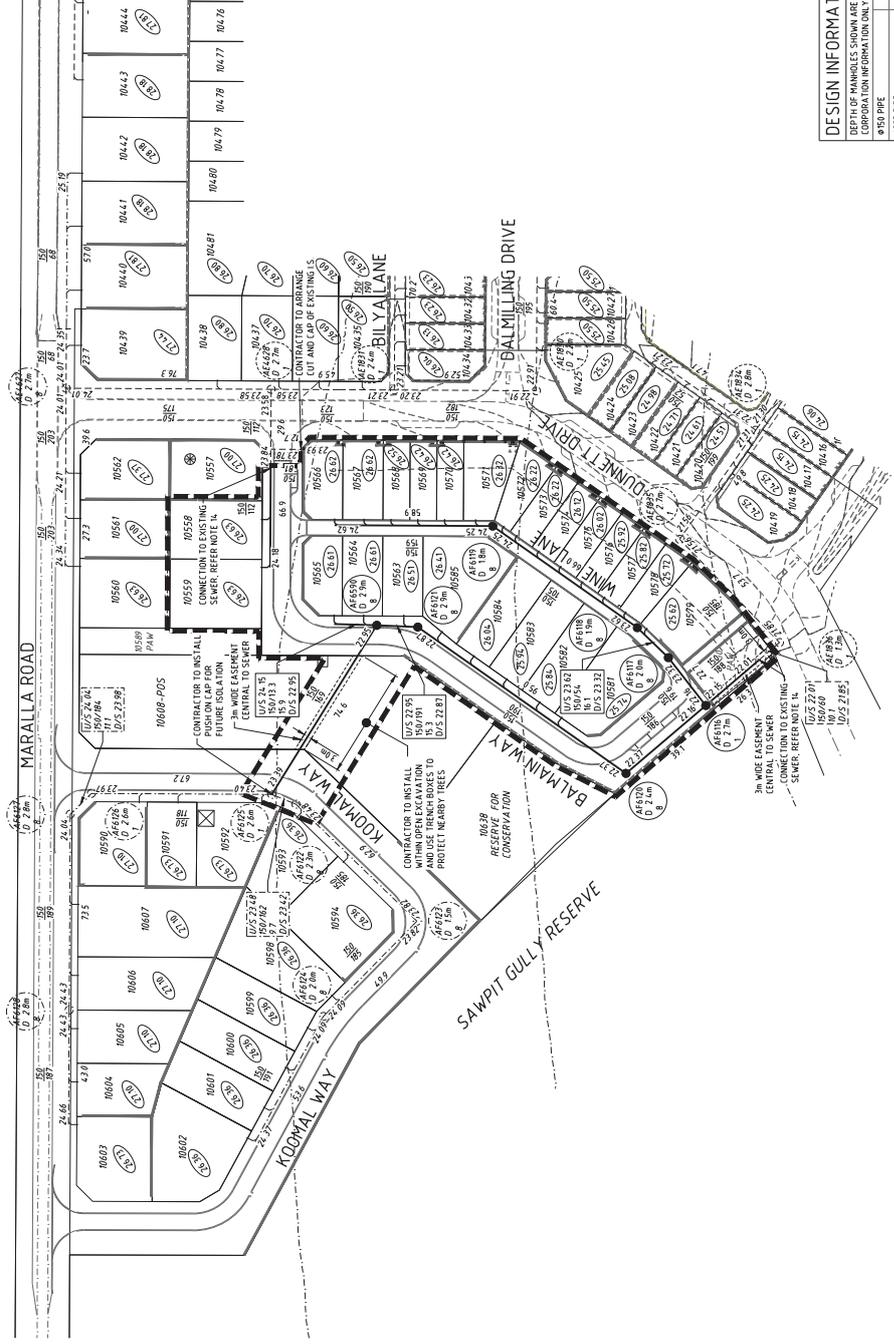
PROJECT	ELLENBROOK - VILLAGE 8 - STAGE 24
TITLE	SEWER RETICULATION PLAN
DRAWING NO.	6023-24-4.00
DATE	15/09/23
SCALE	1:1000
DESIGNED	HVD
CHECKED	M. WALLIS
APPROVED	ELLENBROOK MANAGEMENT PTY LTD
CLIENT	ELLENBROOK MANAGEMENT PTY LTD
ORIGINAL SIZE	A1

DESIGN INFORMATION	
DEPTH OF MANHOLES SHOWN ARE FOR WATER CORPORATION INFORMATION ONLY.	4.674m
Ø150 PIPE	0.0m
Ø225 PIPE	1
MAINTENANCE SHAFTS	6
LOTS SERVED	24
LOTS RELEASED	25
LOCAL AUTHORITY	CITY OF SWAN



**TYPICAL IS SETOUT DETAILS**

1259



APPENDIX E  
Existing Water from Neighbouring Development  
6023-23-500 Rev 1  
6023-13-700 Rev 4

### CONTRACTOR'S RESPONSIBILITY

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CO-ORDINATE THE INSTALLATION OF ALL SERVICES WITHIN THE SUBDIVISION. THE CONSULTANT SHOULD ENSURE THAT THERE IS NO CONFLICT BETWEEN THE POSITIONING OF FULLY PRELAD WATER SERVICES WITHIN THE LOT AND AND WITHIN THE ROAD RESERVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSENTS TO FULLY PRELAD SERVICES ARE REQUIRED.

### SERVICES

- ALL WATER MAINS SHALL BE INSTALLED ON 2" ALUMINUM EXCEPT AS OTHERWISE AGREED
- FULLY PRELAD WATER SERVICES TO BE INSTALLED IN ACCORDANCE WITH W.C. WATER RETICULATION DESIGN STANDARD NO. 43 REVISION 3 (SEPTEMBER 2018) AND READ IN CONJUNCTION WITH W.C. STANDARD ARRANGEMENT (DRG NO. 810 02-8-15 AND 8102-8-24)
- WATER SERVICE LOCATIONS SHALL BE IN ACCORDANCE WITH THE GUIDELINES FOR POSITIONING CONTAINED IN DRG NO. 8102-8-14C
- WHERE POSSIBLE LOTS ARE ARRANGED IN PARS WITH A DUAL SERVICE PIPE ENTERING THE RIGHT HAND SIDE OF THE PAIR OF LOTS AND SPLITTING LEFT AND RIGHT TO SUPPLY EACH PAIR OF PLOTS
- WHERE SHORT AND LONG SINGLE SERVICES ARE INDICATED THE SERVICE PIPE AND METER SHOULD, IF POSSIBLE BE LOCATED AT THE LEFT HAND SIDE BOUNDARY OF LOTS
- FOR A STRAIGHT ROAD RESERVE, SERVICE PIPES SHALL BE ALIGNED AT RIGHT ANGLES TO FRONT BOUNDARIES, RATHER THAN TO THE SUPPLY WATER MAINS
- WHERE THERE IS A BEND IN THE ROAD RESERVE AT THE SIDE BOUNDARY, THE SERVICE PIPE SHALL BE POSITIONED PARALLEL TO THE LINE BISECTING THE ANGLE
- FL AND FR FULLY PRELAD LEFT & RIGHT INDICATES THE SIDE OF THE LOT WHEN VIEWED FROM THE ROAD FRONTAGE WHICH IS SELECTED FOR ITS METER LOCATION
- FULLY PRELAD WATER SERVICES ARE VALUED IN \$140.00 PER METER AND TO BE INSTALLED IN ACCORDANCE WITH STANDARD WATER CORPORATION (DRG NO. 8102-2-3)

LEGEND	DESCRIPTION	SYMBOL
RETICULATION AREA BOUNDARY		---
PROPOSED MAINS		---
PROPOSED VALVE (No. = 2)		⊕
PROPOSED HYDRANT (No. = 1)		⊕
PROPOSED PRELAD LONG SERVICE		---
CHANGE IN PIPE SIZE		---
TEMPORARY BLANK END AND FLUSHING POINT (No. = 3)		---
CONNECTION BY WATER CORPORATION (No. = 2)		---
EXISTING MAIN, HYDRANT AND VALVE		---
FUTURE MAIN, HYDRANT AND VALVE		---
EXISTING RETAINING WALL		---
FUTURE RETAINING WALL		---
DEFERRED SERVICE		---
SERVICE LAD IN PREVIOUS STAGE TO BE RELEGED IN THIS STAGE		---
THIS STAGE FOR RELEASE IN FUTURE STAGE		---

SERVICES	QTY (No.)
PRELAD SHORT DUAL	12
PRELAD LONG DUAL	7
PRELAD SHORT SINGLE	8
PRELAD LONG SINGLE	5
TOTAL NUMBER OF LOTS SERVED	43
NUMBER OF DEFERRED SERVICES	0
EXTENSION	QTY (m)
100 P-16	712.3
150 P-16	0.0
200 P-16	0.0

**MSWA RETICULATION SUBMISSION**

This plan is accepted as being in accordance with the endorsed Concept Plan 1079-100-001-01A

Compliance with relevant design standards and manuals remains the responsibility of the design engineer.

No works are to commence on site until start-up meeting requirements have been met. Refer to the relevant Assail Inspector Refer to the Developers Manual for further details.

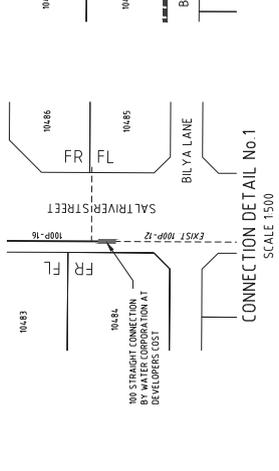
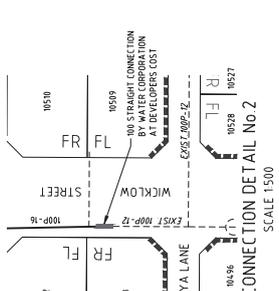
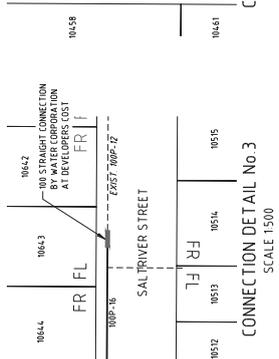
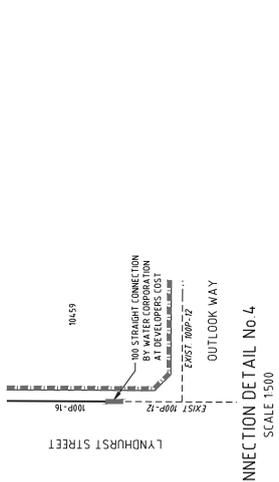
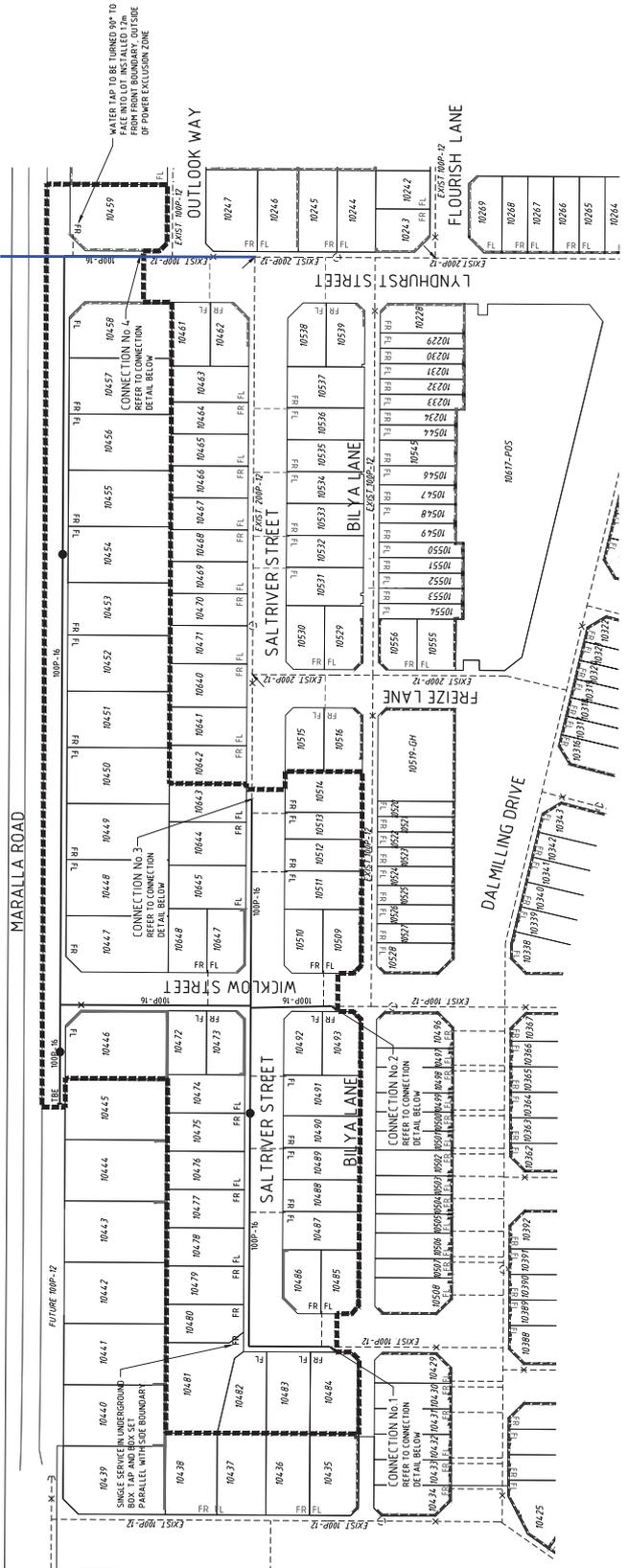
**NU65-103-001-01A**

FILE	12272944
PROJECT	ELLENBROOK - VILLAGE 8 - STAGE 23
TITLE	WATER RETICULATION PLAN
DATE	15/09/23
DRAWING NO.	6023-23-500
SCALE	1:500
DESIGNED	HVD
CHECKED	HVD
APPROVED	[Signature]
CLIENT	ELLENBROOK MANAGEMENT PTY LTD

**Crossill & Webley CONSULTING ENGINEERS**

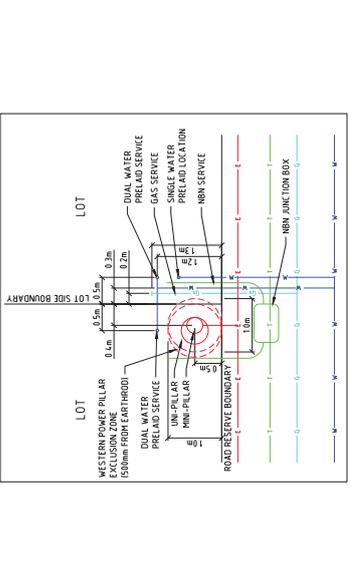
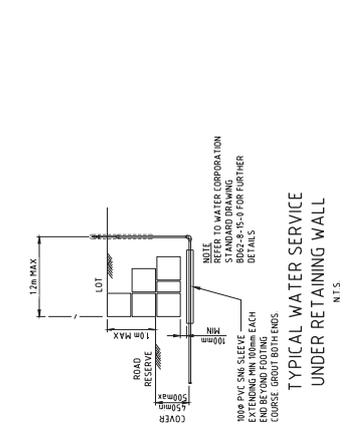
108/1442-2600 E. (08) 9422 3861 E. [enquiries@crossill.com.au](mailto:enquiries@crossill.com.au)

108/1442-2600 E. (08) 9422 3861 E. [enquiries@crossill.com.au](mailto:enquiries@crossill.com.au)



**NOTICE TO CONTRACTOR**

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE THE NATURE AND LOCATION OF ALL SERVICES WHICH MAY BE ENCOUNTERED AND TO CONSULT WITH THE RELEVANT SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF EXCAVATIONS. FAILURE TO DO SO OR TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTOR'S LIABILITY FOR REPAIR OF ALL SERVICES DAMAGED BY HIM DURING CONSTRUCTION WORKS FOR THE PROTECTION OF ALL ALL PRECAUTIONS NECESSARY FOR THE PROTECTION OF ALL EXISTING SERVICES.



### CONTRACTOR'S RESPONSIBILITY

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CO-ORDINATE THE INSTALLATION OF ALL SERVICES WITHIN THE SUBDIVISION. THE CONSULTANT SHOULD ENSURE THAT ALL SERVICES ARE INSTALLED IN ACCORDANCE WITH ALL C.A.C. WATER RETICULATION DESIGN STANDARDS AS PER VERSION 3 REVISION 10, JULY 2013 AND READ IN CONJUNCTION WITH W.C. STANDARD ARRANGEMENT DRG No. 10-02-R-15 AND B002-R-24.

### SERVICES

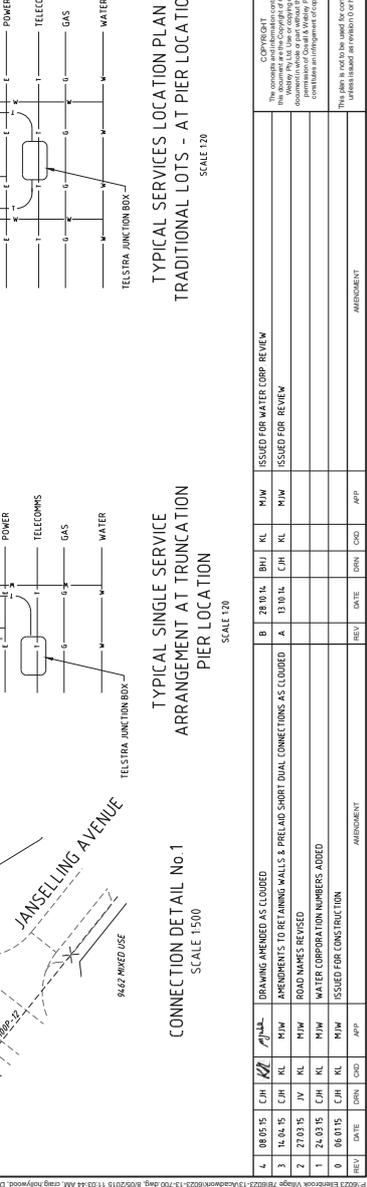
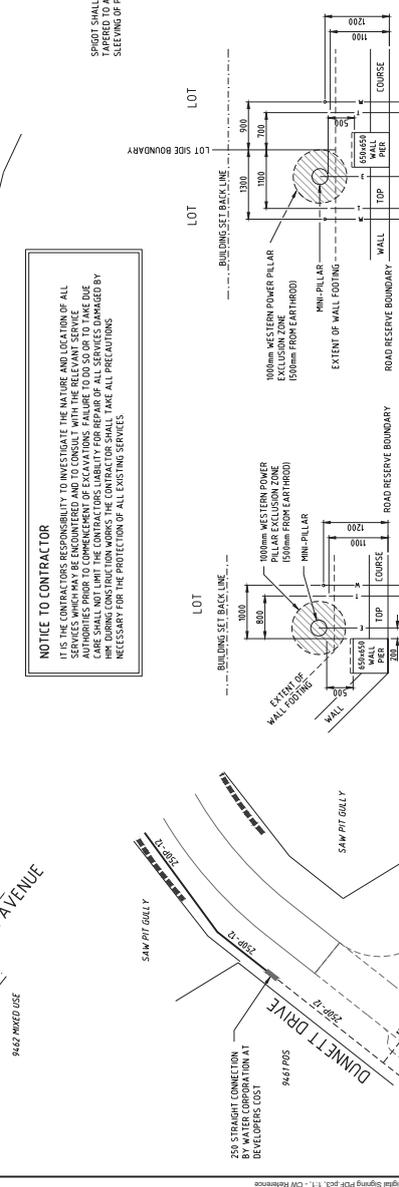
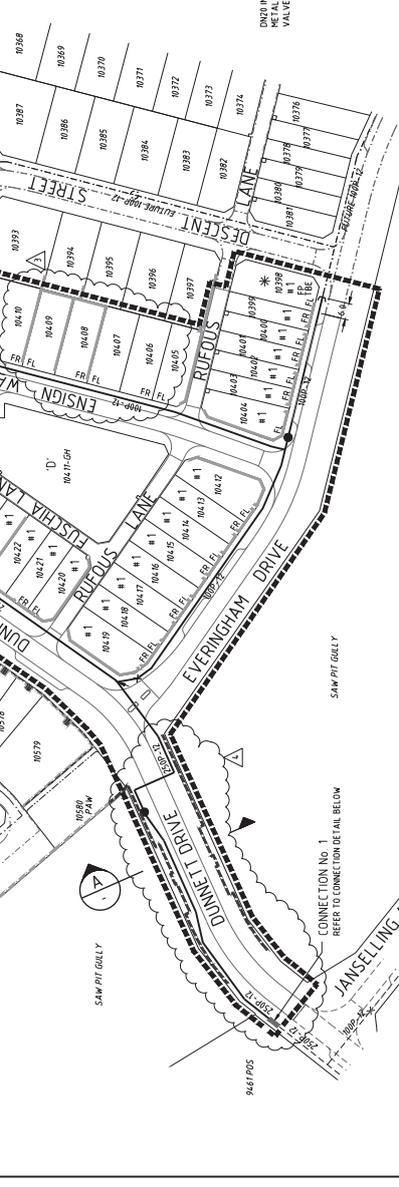
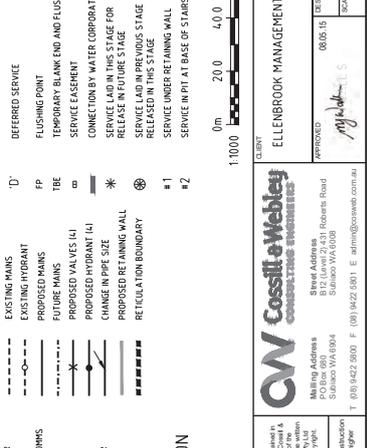
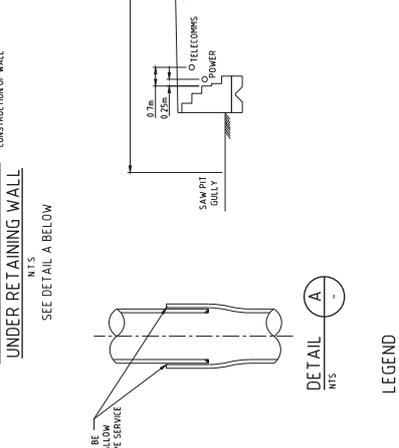
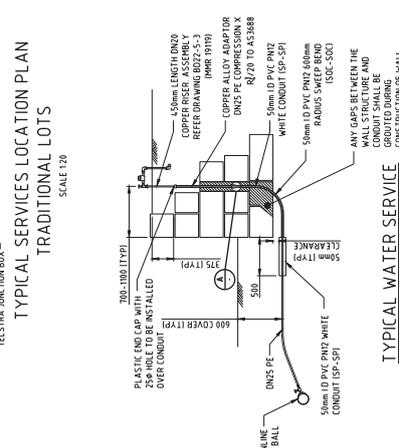
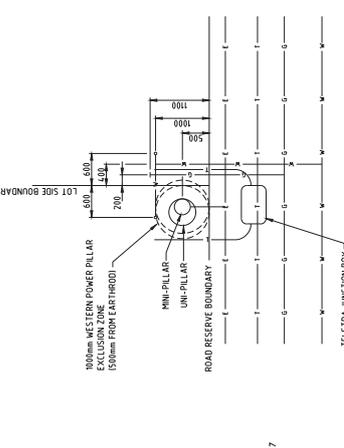
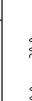
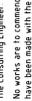
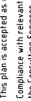
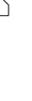
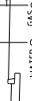
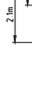
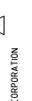
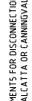
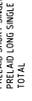
1. ALL WATER MAINS SHALL BE INSTALLED ON 2.7m ALIGNMENT EXCEPT AS OTHERWISE AGREED
2. FULLY PRELAD WATER SERVICES TO BE INSTALLED IN ACCORDANCE WITH ALL C.A.C. WATER RETICULATION DESIGN STANDARDS AS PER VERSION 3 REVISION 10, JULY 2013 AND READ IN CONJUNCTION WITH W.C. STANDARD ARRANGEMENT DRG No. 10-02-R-15 AND B002-R-24.
3. WATER SERVICE LOCATIONS SHALL BE IN ACCORDANCE WITH THE GUIDELINES FOR POSITIONING CONTAINED IN DRG No. B002-R-14.
4. WHERE POSSIBLE LOTS ARE ARRANGED IN PAIRS WITH A DUAL SERVICE PIPE ENTERING THE RIGHT HAND SIDE OF THE PAIR OF LOTS AND SPLITTING LEFT AND RIGHT TO SUPPLY EACH PAIR OF PLOTS.
5. WHERE SHORT AND LONG SINGLE SERVICES ARE INDICATED THE SERVICE PIPE AND METER SHOULD, IF POSSIBLE, BE LOCATED AT THE LEFT HAND SIDE BOUNDARY OF LOTS.
6. SERVICE PIPES SHOULD BE LOCATED AT RIGHT ANGLES TO THE FRONT BOUNDARY OF LOT, NOT THE MAIN.
7. FL AND FR FULLY PRELAD LEFT & RIGHT INDICATES THE SIDE OF THE LOT WHEN VIEWED FROM THE ROAD FRONTAGE WHICH IS SELECTED FOR ITS METER LOCATION
8. - - - - - INDICATES LOCATION OF SINGLE AND DUAL LONG SERVICES
9. NUMBER OF SERVICES  
 PRELAD SHORT DUAL 3  
 PRELAD LONG DUAL 0  
 PRELAD SHORT SINGLE 9  
 PRELAD LONG SINGLE 42  
 TOTAL 54
10. APPLICATION AND PAYMENTS FOR DISCONNECTION OF SERVICES TO BE MADE AT TECHNICAL SERVICES WALKDOWN OR CANNOPULL OFFICES.

### EXTENSION

CONTRACTOR TO LAY

### CONNECTIONS

CONNECTIONS (II) BY WATER CORPORATION



REV	DATE	DRN	APP	AMENDMENT
1	08/05/15	CM	M/W	ISSUED FOR WATER CORP REVIEW
2	16/04/15	CM	M/W	ISSUED FOR REVIEW
3	27/03/15	JV	M/W	ROAD NAMES REVISION
4	24/03/15	CM	M/W	WATER CORPORATION NUMBERS ADDED
5	08/05/15	CM	M/W	ISSUED FOR CONSTRUCTION

NOTICE TO CONTRACTOR  
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO INVESTIGATE THE NATURE AND LOCATION OF ALL SERVICES WHICH MAY BE ENCOUNTERED AND TO CONSULT WITH THE RELEVANT SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF EXCAVATIONS. FAILURE TO DO SO OR TO TAKE DUE CARE TO PROTECT EXISTING SERVICES MAY BE CONSIDERED AS NEGLIGENCE. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY FOR THE PROTECTION OF ALL EXISTING SERVICES.

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE  
 ARRANGEMENT AT TRUNCATION  
 PIER LOCATION  
 SCALE 1:500

CONNECTION DETAIL No 1  
 SCALE 1:500

TYPICAL SERVICES LOCATION PLAN  
 TRADITIONAL LOTS - AT PIER LOCATION  
 SCALE 1:200

TYPICAL WATER SERVICE  
 UNDER RETAINING WALL  
 SCALE 1:50

TYPICAL SINGLE SERVICE

APPENDIX F  
Existing Power from Neighbouring Development  
UPD6023-13 Rev 8  
UPD6023-24B Rev 3





Jan Zeck  
72 Fergusson Close,  
West Swan WA 6055

**MRS Amendment 1411-North Ellenbrook (East)**

**MRS Amendment 1411-North Ellenbrook (East): Objection**

I oppose this proposal to rezone this land from 'Rural' to 'Urban Deferred' for the following reasons;

- This area is subject to very high groundwater
- Too little is understood about managing stormwater and groundwater in high groundwater areas
- The DWMS needs to be reviewed in light of the drainage management outcomes and practices in southern areas of the SUGC
- Insufficient elevation differences to obtain fall and /or grade separations for hydraulic infrastructure for the majority of the site
- Extensive quantities of fill are required to make urban development possible
- Environmental risks are extensive and highly significant
- Loss of Black Cockatoo habitat
- Risk of serious and severe adverse impact to Western Swamp Tortoise reserves
- Risk of similar situation to the Spearwood sewage spill
- Loss of Urban Tree Canopy
- Insufficient ecological linkages between wetlands and Bush Forever sites
- Incorporation of drainage in waterways and wetlands does not allow for problems to be dealt with before they enter waterways, wetlands and environmentally sensitive areas.
- The mitigating actions proposed in the additional information provided by the WAPC, are insufficient - while commendable, go nowhere near enough to provide habitat for the black cockatoos or increasing tree canopy
- Mitigating actions endorsed by the EPA in its advice are highly likely to be lost because of development
- Cumulative impacts have not been considered
- This is not sustainable development

THIS AREA IS SUBJECT TO VERY HIGH GROUNDWATER

North Ellenbrook (East) DSP DWMS notes,

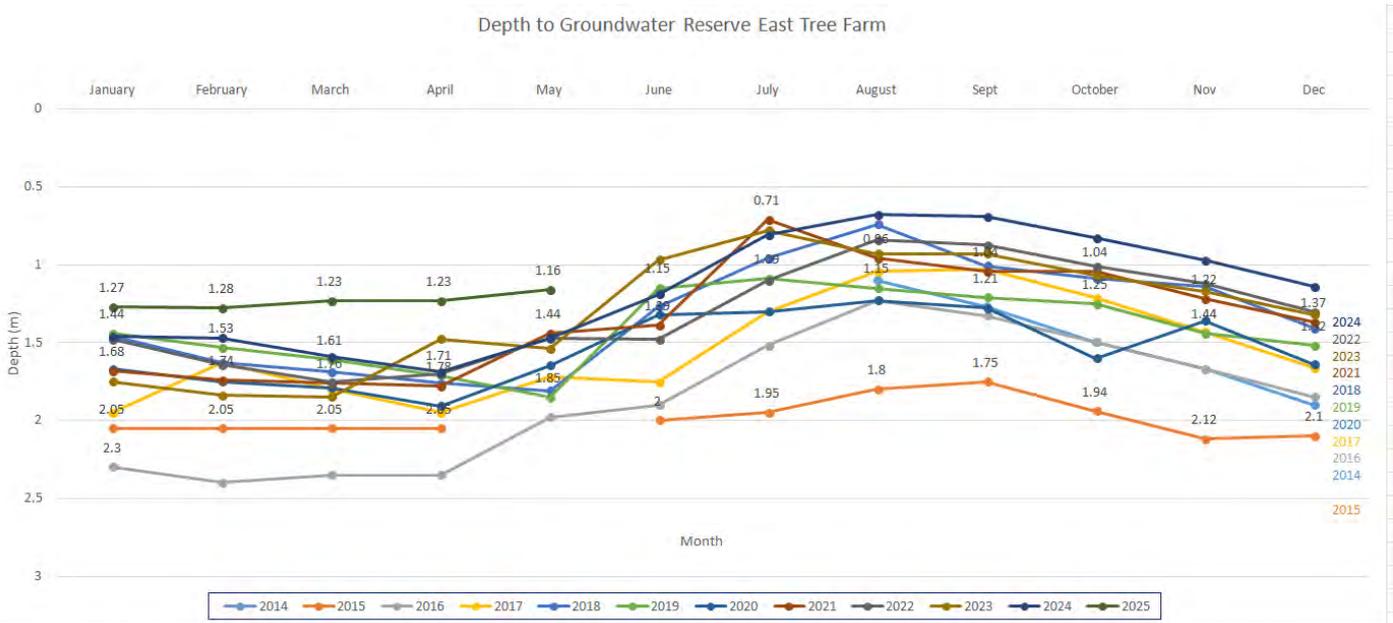
Historic average annual maximum groundwater levels (AAMGLs) range from approximately 24 to 44m AHD and groundwater flows in an easterly and south-easterly direction. The majority of the site is inundated or has very low clearance to groundwater with approximately:

- 25% of the DSP area with groundwater which is at or above natural surface level (NSL)
- 50% of the DSP area with groundwater which is between 0 and 1 m below NSL
- 25% of the DSP area with groundwater which is at a depth of greater than 1 m below NSL

As groundwater rises due to urban development it will impact on an already extremely wet area. Groundwater levels have risen by one meter in land adjacent to Dayton in the last ten years due to urban development.

It is highly probable that groundwater levels in North Ellenbrook-East will rise a similar amount, particularly as drainage from North Ellenbrook-West, both stormwater and groundwater, flow into this area.

A rise in groundwater level of this nature will highly likely result in 75% of the site experiencing groundwater at or above natural ground level.



# Readings taken monthly, on last day of each month. The higher the point is towards the top of the graph, the shorter the distance from ground surface to groundwater.  
 # Note upward trend over time.  
 # Note groundwater depth for January and February, 2025, is the highest for that time of year for any year measured. Represents a one metre increase on the level recorded January, 2015.  
 numbers recorded in red drv at this depth. water level is lower.

Figure 1: Results from groundwater monitoring bore, 51 Harrow St, West Swan

### UNDERSTANDING HIGH GROUNDWATER ENVIRONMENTS

(Please note: all following quotations in italics are extracts from, ‘When urban stormwater meets high groundwater – Parts 1 & 2’)<sup>1</sup>

*‘Numerous state government land developments in Western Australia already act as exciting demonstration sites for sustainable development, urban water management, energy management and resilience (Development WA, 2021a, 2021b). However, none of these have been located specifically on a high groundwater site.’*

*‘For example, the optimal management of urban water cycles and urban development in the presence of high groundwater has received relatively little attention...’*

*‘The Expert Panel’s study found that the status quo for predicting and mitigating the impacts of high groundwater on urban development in the Swan Coastal Plain of Western Australia is not always adequate.’*

Unlike the deep, free draining sands closer to the coast, the geomorphology of this site is complex with sand over clay soils along with palusplain wetlands and related waterways associated with floodplain environments. This complex geology translates into highly complex hydrology. The palusplain features and channels, along with nutrient stripping functions, store and release vast volumes of stormwater and groundwater over extended periods.

To date, models for Better Urban Water Management and best practice management strategies have been based on studies with deep sand profiles. There have been very few, if any, studies based on high groundwater sites such as those found in the southern Swan Urban Growth Corridor (SUGC) and the North Ellenbrook areas.

### Managing risks

*‘At present, such detailed drainage and water management assessment is not available across the entirety of Perth’s urban development frontier. Therefore, sites zoned for development may face significant – potentially unacceptable – water-related risks. Bringing forward water management assessments earlier in the planning process and allowing*

<sup>1</sup> When urban stormwater meets high groundwater – Parts 1 & 2, Thompson S., Shanafield M., Manero A., Claydon G. (2021) Water e-Journal Vol 6 No1

*water related risks to exclude some sites from urban development could help avoid significant social, economic and environmental costs flowing from these risks.'*

*'Mitigating the changing surface flood risks is costly. Moreover, fill use on floodplains entails a potentially complex trade-off between mitigating groundwater and surface water flood risks.'*

Areas with high groundwater in the SUCG already completed, or substantially completed, need to be assessed prior to committing to further development in high groundwater areas in North Ellenbrook.

Last year, which was a lower than average rainfall year, saw serious flooding<sup>2</sup> in this lower region with some areas continuously inundated for 5 months. It wasn't until late December that flood waters receded. For five months 236 and 248 Park St, Henley Brook were flooded. Both these properties have operating septic tanks and leach drains and have been continuously inhabited during this period. My understanding is that 248 Park St is owned by DPLH and that it is leased by the inhabitants who complained to the leasing agent but to my knowledge nothing was done to alleviate the problem. This family had two small children and the parent was reluctant to allow them outside because of the state of the property and risk to the children's health and safety.

There has also been, as noted above, a steady increase in groundwater levels in land adjacent to new urban development.<sup>3</sup> Adjacent agricultural properties located in the adjacent Swan Valley Act area and designated as Priority Agricultural Soils are being impacted by rising groundwater. The tree farm at 51 Harrow St, West Swan has already suffered losses due to trees no longer being salable and loss of stock. As the groundwater does not subside sufficiently during the dryer months, it is becoming increasingly difficult to maintain and successfully replace stock.

It would appear that these and other adverse impacts such as unintended tree deaths, algal blooms<sup>4</sup>, elevated mosquito populations, noxious odours and suspected unmitigated breach of acid sulphate soils<sup>5</sup> are due to a number of factors related to development such as,

- flooding,
- dewatering,
- continuous inundation of swales and tree pits,
- incomplete, poorly designed and/or poorly executed drainage infrastructure
- poor monitoring and oversight
- no mitigation plans
- no controls during construction phase
- poor understanding of water management in areas with high groundwater
- little, if any, consideration of impacts on areas surrounding development
- piecemeal approach to water management to the detriment of regional water management

Following a review of these southern areas it may be found that modification to the water management model and its implementation can sufficiently reduce risks to an acceptable level or it may be prudent to delay approval until further modeling has achieved this outcome. To continue without adequate assessment and understanding is foolhardy. The environmental risks in this area are too great to 'wing it'.

---

<sup>2</sup> See attachment 'Letter to Finn Macleod 041024 Am 071224'

<sup>3</sup> See attachment 'Rising Groundwater 300525 CR'

<sup>4</sup> See attachment 'Why Local Biodiversity is important'

<sup>5</sup> Although actions which resulted in suspected breaches of ASS occurred in the latter part of 2024, evidence is still apparent in drains, creeks and an assumed retention basin. Recent water testing revealed a ph level of 5.4 in the drain that passes under the road at 236 Park St, Henley Brook.

## THE DWMS NEEDS TO BE REVIEWED IN LIGHT OF THE DRAINAGE MANAGEMENT OUTCOMES AND PRACTICES IN SOUTHERN AREAS OF THE SUGC

*'A lack of data, information and knowledge, along with process, regulatory and capacity barriers currently prevent the urban water management sector from achieving best-practices in groundwater management.'*

The DWMS for North Ellenbrook-East was prepared in 2019. This is prior to the report noted in italics which outlines numerous issues associated with urban development in high groundwater areas. To my knowledge there have not been any modifications to the DWMS.

There is so much development occurring across the LGA it is difficult keeping track of it all but there is one thing for certain, there is insufficient responsibility being taken by the City of Swan to monitor how management strategies like Water Sensitive Urban Design and best practice water management are performing in the complex geology and hydrology of land on the river plains. These strategies may have worked in theory and in deeper sands where drainage is free flowing but they are not producing the expected outcomes here.

There are a number of reasons, I believe, why these management strategies are not working to optimal levels such as;

- insufficient understanding of local geology and hydrology
- insufficient knowledge and application of knowledge, where it exists, of local climatic conditions
- poor design of management strategies such as sub soil drainage and bio-retention basins
- insufficient construction stage provisions of temporary management infrastructure
- insufficient construction stage controls and monitoring
- insufficient provision of end of drainage system infrastructure at commencement of development
- insufficient consideration of impact of development on surrounding areas
- insufficient sharing of knowledge across disciplines and incorporation of local knowledge
- too much reliance on consultants who have little knowledge of local conditions
- insufficient mitigation strategies, determination of trigger points, collection and publication of data for construction and post development stages
- insufficient independence of drainage management infrastructure from local wetlands and waterways which prevents mitigation management of the adverse impacts of chronic and/or acute events entering waterways and environmentally sensitive areas
- insufficient ongoing monitoring of water quality and quantity including groundwater levels
- removal of thousands of trees which results in significant rise in ground water levels
- insufficient collection of data and assessment of performance of water management strategies during construction and post development
- willingness of local government, government agencies, government regulators and professionals/consultants to keep rolling out management strategies with no ongoing assessment of performance

All of these contribute to the situation we are currently facing in the City of Swan, and no doubt all along the river flats below the escarpment, where we have massive tree loss through clearing and impacts of altered hydrology and climate change. The impacts and outcomes are widespread and highly significant as they contribute in no small way to the condition of our environment, health, commerce and standard of living.

There is a very real risk that without these issues being addressed we will lose many of our local and regional environmental assets, including endangered flora and fauna, waterways, wetlands and bushlands.

The loss of these will have a highly significant influence on the quality of the landscape and the lifestyle we live. They are the elements that mitigate against rising temperatures and adverse climate events, decreasing air and water quality and which moderate our health and wellbeing.

Once development has been completed and handover occurs, the local government, in this case the City of Swan, is responsible for 'making good' adverse conditions. I don't believe the City and its residents and ratepayers should be carrying the sole burden of repair and/or compensation for outcomes forced on them, to a great degree, by state decisions, policies and strategies. I do believe that the City needs to acknowledge that there are serious and significant problems with current strategies and they urgently require review and amelioration before we commit more of our valuable environmental assets to this unsustainable rollout of urban development.

The City and Councillors have over the last year received numerous emails, data, questions, statements, deputations, phone calls and offers of local tours to make them familiar with the adverse impacts of the particular style of urban development being practised in the City of Swan and its significant adverse impacts on surrounding areas.

#### INSUFFICIENT ELEVATION DIFFERENCES TO OBTAIN FALL AND /OR GRADE SEPARATIONS FOR HYDRAULIC INFRASTRUCTURE FOR THE MAJORITY OF THE SITE

There is minimal fall across the site and, in association with high groundwater, drainage required for urban development is severely compromised.

Minimal vertical separation between upstream and end of pipe treatment will require the site to be filled.

#### EXTENSIVE QUANTITIES OF FILL ARE REQUIRED TO MAKE URBAN DEVELOPMENT POSSIBLE

*'Filled sites are often designed to drain internally to subsoils, but they also create a new land surface within which groundwater can mound. Due to the high permeability of sand fill, water table mounding is often established rapidly after development. The implications of this additional hydraulic head for groundwater flow and quality around developed lots are poorly understood.'*

*'Elevating the land surface with fill also changes the shape, nature and connectivity of surface flow pathways. Fill is routinely used where high groundwater environments occur on floodplains. In these locations, fill may reduce floodplain storage or isolate the stream channel from the floodplain. The implications of such changes in connectivity and storage on extreme flood processes may be significant.'*

Due to high groundwater and minimal falls across the site, extensive fill will be required to raise floor levels above flood levels, provide structural security to urban infrastructure and achieve required falls for drainage and sewerage.

The disassociation of waterways and wetlands due to filling for development can be problematic creating significant alteration to local hydrological regimes.

Sand mining is associated with loss of Banksia Woodlands which is a further adverse impact on black cockatoo habitat and contributes to the increasing loss of this threatened ecological community and biodiversity.

Sand mining resources are diminishing around Perth which will result in rising costs for the resources along with greater transport distances.

It is estimated that up to 15,000,000m<sup>3</sup> of fill may be required to prepare the site for urban development.

Issues associated with extensive fill

- cost
- transport
- carbon footprint
- loss of banksias
- loss of vegetation
- loss of amenity
- loss of waterways and connectedness with wetlands

## ENVIRONMENTAL RISKS ARE EXTENSIVE AND HIGHLY SIGNIFICANT

This site drains into extensive areas of highly sensitive environmental sites within and immediately adjacent to its borders.

*'Undeveloped sites with high groundwater are riskier than sites with deep water tables.'*

*'Sites located near environmentally significant areas are higher risk.'*

- Twin Swamps and the Ellenbrook Nature Reserve are the only two registered habitats for the critically endangered Western Swamp Tortoise. They are highly sensitive to changes in hydrology including water quality and quantity. These reserves are immediately downstream of creeklines that transit the site. This makes these reserves and the WST highly vulnerable to any adverse impacts eventuating within the site.
- Bush Forever 13 is contained wholly within the site and although it is proposed to be retained in a larger Regional Open Space reservation it will be impacted by rising groundwater. The DWMS indicates that at least two BRA are to be located within the intended reserve and adjacent areas are planned to be drained into the Northern Creek and Sawpit Gully that transits the proposed reserve.
- Tumulus Spring on Lot 8247 is critically endangered and will be adversely impacted by changes to hydrology that will occur due to clearing, earthworks, filling and drainage.
- Maralla Road Reserve (Bush Forever site 300) contains significant Banksia Woodlands protected by the EPBC Act. Banksias are highly reactive to changes in hydrology. Dewatering in adjacent areas north of Maralla Road will highly likely adversely impact these as will rising groundwater following urbanization. Alterations in groundwater levels cannot be contained on site, as experienced in southern SUCG areas, and impacts. In addition to these impacts will be higher volumes of discharge directed through four culverts under Maralla Road from BRAs and FSAs including Sawpit Gully located in the urban area to the north.

The DWMS also intends using the Maralla Road Reserve as a drainage channel by directing discharge from Catchment 19 into the Reserve then directing it back through a culvert into Catchment 6.

**A Bush Forever reserve, or any adjacent land, should not be used as an adjunct to facilitate drainage that should be managed and contained wholly within the development site.**

Adverse impacts being experienced in areas adjacent to urban development areas in the southern SUGC as mentioned above are,

- Tree deaths due to dewatering
- Tree deaths due to localised inundation
- Tree deaths due to raised groundwater levels
- Suspected unmitigated breach of Acid Sulphate soils
- Inundation of septic tanks and leach drains

Considering that the proposed DWMS for this area is basically the same as that for the lower SUGC and the issues that have arisen there due to

- insufficient understanding of local geology and hydrology
- insufficient knowledge and application of knowledge, where it exists, of local climatic conditions
- poor design of management strategies such as sub soil drainage and bio-retention basins
- insufficient construction stage provisions of temporary management infrastructure
- insufficient construction stage controls and monitoring
- insufficient provision of end of drainage system infrastructure at commencement of development
- insufficient consideration of impact of development on surrounding areas
- insufficient sharing of knowledge across disciplines and incorporation of local knowledge
- too much reliance on consultants who have little knowledge of local conditions

- insufficient mitigation strategies, determination of trigger points, collection and publication of data for construction and post development stages
- insufficient independence of drainage management infrastructure from local wetlands and waterways which prevents mitigation management of the adverse impacts of chronic and/or acute events entering waterways and environmentally sensitive areas
- insufficient ongoing monitoring of water quality and quantity including groundwater levels
- removal of thousands of trees which results in significant rise in ground water levels
- insufficient collection of data and assessment of performance of water management strategies during construction and post development

and the outcomes which have resulted, along with the high probability that more adverse outcomes are likely but have not yet come to light, it would appear that these highly sensitive environmental areas are in imminent danger of severe adverse impacts.

**Poorly understood and managed rising groundwater levels due to urbanization as experienced in the southern areas would highly likely result in death of proposed remnant bushland and adversely impact native fauna reliant on this habitat in every one of these highly significant environmental places.**

**Can this risk even be considered?**

### Loss of Urban Tree Canopy

Between 40,000 to 60,000 trees are estimated to exist on this site. As many as 75% will be cleared for urban development and, as the DWMS is basically the same as that used for the southern SUCG, many of the proposed retained trees and vegetation will be lost through dewatering, rising groundwater and/or inundation. Attempts to retain trees in 'tree pits' and swales have not been highly successful in areas with high groundwater.

The retention of 'potential' trees and habitat in areas with high groundwater which have been largely filled has not eventuated in southern sections of the SUCG. These developed precincts have been recorded as 0-5% tree canopy<sup>6</sup> although it is closer to 1%.

### Loss of Black Cockatoo habitat

The three WA black cockatoo species are protected by the EPBC Act for a good reason, they are endangered species. The Carnaby's black cockatoo are critically endangered.

The loss of habitat across the Swan Coastal Plain is already extensive and increasing at a previously unseen rate.

Since 2010 there has been widespread land clearing in the City of Swan with somewhere in the vicinity of 95,000 trees already cleared in the 1260ha SUGC south of Gnaragara Road. By the time this section of the corridor has been completed that number will rise closer to 160,000 trees. Around 65% of the trees on site are highly likely to be black cockatoo habitat.

Land clearing in North Ellenbrook-East will remove around 75% of the trees currently exist on the site. The trees that are earmarked to be retained for black cockatoo habitat along with those proposed to be planted in the potential restoration area within the proposed Regional Open Space reservation are highly likely to be adversely impacted by rising groundwater associated with urban development.

Banksia Woodlands are highly susceptible to changes in groundwater. Sudden lowering during dewatering and continuous higher groundwater will severely impact survival.

---

<sup>6</sup> WAPC Urban Tree Canopy Dashboard  
MRS Amendment 1411-North Ellenbrook (East)  
Jan Zeck  
72 Fergusson Close, West Swan, 6055

Without intervention to stop wholesale land clearing and start replacing habitat already lost, already diminished populations of endangered black cockatoos will not exist beyond the next few decades. Urgent action is required to turn this situation around and requires legislated protection of habitat.

#### RISK OF SERIOUS AND SEVERE ADVERSE IMPACT TO WESTERN SWAMP TORTOISE RESERVES

##### 4.4.4.3 Offsite impacts to existing Western Swamp Tortoise habitat through altered hydrology

Specific portions of the site experience some hydrological (surface or groundwater) connectivity with Twin Swamps Nature Reserve (850 m east of the site) and Ellen Brook Nature Reserve (1.4 km southeast of the site), which support the only two known wild populations of the WST species.

Potential offsite impacts to WST habitat are related to hydrological considerations and as such, have been considered in the context of the Inland Waters factor, discussed in **Section 4.5.5.4**. In summary, potential offsite impacts to WST habitat as a result of implementing the proposed DSP can be suitably mitigated such that no significant impact to WST will occur.<sup>7</sup>

It is acknowledged that surface water is unlikely to impact Twin Swamps as creeklines travel to the south of the reserve but there is a real risk that adverse impacts may occur due to groundwater because the reserve is down gradient to the site. A rise in groundwater is highly probable as this site is already extremely wet and in light of experience in the southern SUGC. If this scenario does eventuate, there is a real risk that the wetlands within the Twin Swamps reserve would be wetter for longer which would have a serious and severe impact on the Western Swamp Tortoise.

Dewatering may have the potential to impact Twin Swamps as it is down gradient of the site. It may be a minimal risk due to the separation distance involved but this may increase depending on when dewatering occurs, duration of operation, groundwater levels at the time and how much rainfall has been received or will be received post dewatering.

A potential phenomena which requires investigation is the capture of groundwater via subsoil drainage and its redirection within the surface water management system to another area. This may have a long term adverse impact if it robs groundwater from water sensitive environments.

#### RISK OF SIMILAR SITUATION TO THE SPEARWOOD SEWAGE SPILL

The recent sewerage spill in Spearwood is a problem because of the risks it raises for newly developed areas in the City of Swan. In new urban development areas Water Corporation is usually well behind the development in providing urban infrastructure.

For the last 20 years, raw sewage has been transferred to trucks and transported to a treatment plant from Aveley.

Sewage is being pumped out of sewerage pipes from a manhole in the middle of Brooklands, Henley Brook, because no connection has yet been made to the main sewer line.

My concern is that the majority of parks, or Public Open Space, in new areas are used for storm and ground water drainage. Many of them drain into wetlands and creeklines with drainage infrastructure actually located in creeklines.

If a situation like Spearwood eventuates in North Ellenbrook East, raw sewage would go straight into the Western Swamp Tortoise reserves with minimal or no provisions to prevent this from happening. This would be catastrophic for the Western Swamp Tortoise.

---

<sup>7</sup> North Ellenbrook-East EAR

## INSUFFICIENT ECOLOGICAL LINKAGES BETWEEN WETLANDS AND BUSH FOREVER SITES

Numerous Commonwealth, State and City of Swan legislative and non legislative planning instruments require ecological linkages to be included in the planning of new urban areas. These are routinely ignored leading to fragmentation and loss of biodiversity.

There is no connection between Bush Forever 13 and bushland to the west. There is no connection between the wetland UFI 12283 and the endangered *Grevillea curviloba* subsp. *curviloba* to other bushland areas. There is no connection between the critically endangered Tumulus Spring UFI 9185 and any other remnant bushland on the site nor any connection to the Maralla Road Reserve (Bush Forever 300 site).

These deficiencies need to be rectified.

## INCORPORATION OF DRAINAGE IN WATERWAYS AND WETLANDS DOES NOT ALLOW FOR PROBLEMS TO BE DEALT WITH BEFORE THEY ENTER WATERWAYS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS.

The incorporation of drainage infrastructure is of serious concern. The attitude that a degraded creek is of no value and can be used to host drainage measures is short sighted and facilitates piecemeal planning. When seen in the regional context they are connectors between areas and interconnected with areas that more often than not are of significant environmental importance. The rehabilitation of creeks would be of greater value to the environment as ecological corridors.

When seen in a regional context it is much easier to understand the importance of creeks and waterways because they transport surface waters into wetlands, remnant bushland and other waterways that may be many kilometers away. The quality and quantity of discharge into these creeks results in it being dispersed over large distances and often into environmentally significant features.

Locating BRAs and FSAs in creek lines and waterways does not allow any spatial dimension to treat contaminants that may originate on the site before entering the waterways. This is of particular importance during the construction phase as the practice in the southern SUGC appears to be simply to direct any and all discharge straight into the creeks and drain prior to drainage infrastructure being operational. I have not seen nor do I have knowledge of any temporary BRAs within the southern SUGC and only the occasional temporary FSA.

Unless there is proper control of material being transported off site there is the potential to adversely impact areas offsite.

## THE MITIGATING ACTIONS PROPOSED IN THE ADDITIONAL INFORMATION PROVIDED BY THE WAPC, ARE INSUFFICIENT - WHILE COMMENDABLE, GO NOWHERE NEAR ENOUGH TO PROVIDE HABITAT FOR THE BLACK COCKATOOS OR INCREASING TREE CANOPY

The additional considerations provided by the WAPC to mitigate against loss of habitat and environmental concessions, when seen in the light of development that has occurred in the southern SUGC, is no concession at all. The only binding agreement is the inclusion of the 61.07ha in a 'Parks and Recreation' reserve. All others are reliant on the whim of the developer. With conditional language like 'could be' and 'may include' there is no real commitment to include these 'concessions'.

As has happened so many times, initial proposals get changed and lost as development progresses, trees die during the process of development, amendments are made and features are sacrificed. Of the '600 trees retained' claim by Mirvac in Brooklands, Henley Brook, how many actually survived development and of those, how many will still be alive in 2 years or 10 years time?

The initial LSP for Brooklands indicated a small park along Park St, POS 15, in which the last small stand of Banksias was located. Only 0.66ha but the only patch which remained in the Brooklands precinct. Somewhere between LSP 1 and the LSP as amended in 2024, POS 15 and the retained Banksias has been lost without a word of explanation.

Seven Eucalyptus todtiana and two Corymbia calophylla intended to be retained within POS 1 in Brabham Stage 3 have already died due to drainage from Brabham Stage 1 being released directly onto the Brabham Stage 3 site instead of being managed appropriately<sup>8</sup>. These mature trees died due to localised inundation.

Mature trees along Everglades Avenue and Youle-Dean Road which were contained in a roadside 'swale' because the surrounding ground level had to be raised by 1.5 to 2m to facilitate development. More than half have already died and more are dying. These were over 40 years old and not regarded important enough to ensure their survival.

As described in many sections of this submission, high groundwater makes retention of existing trees and remnant bushland extremely difficult because of the need to fill the land to create a new ground level above high water mark and the inevitable rise in groundwater level due to urban development which results in retained vegetation being drowned.

The concessions provided by the WAPC do not go far enough to ensure its offerings become a reality.

It is a measure of the credibility, integrity, and professionalism of the EPA and WAPC that both bodies have provided and endorsed this proposal and advice without any knowledge or assessment of the reality on the ground. The indifference of both bodies for the care of the environment is shameful. It is even more shameful that people with firsthand knowledge of and expertise in issues associated with water management in areas with high groundwater sit on bodies such as the WAPC in silence.

#### CUMULATIVE IMPACTS HAVE NOT BEEN CONSIDERED

##### Cumulative Impacts associated with high groundwater and drainage

*'Finally, regional water assessments are needed to improve our understanding of cumulative impacts of development on sensitive environments and flood risk in urbanised areas of the floodplain. As Perth encroaches on high groundwater regions, the findings of these assessments should be incorporated into land zoning and planning processes to limit some of the risks currently assumed by land owners and LGAs.'*

*'Risks can also be hydraulic, and could be associated with cumulative impacts of development, or with cumulative risks. For example, areas of high groundwater that are also located on floodplains would face the risk of both surface water and groundwater flooding, and consequently would require a high standard of investigation and design.'*

*'Therefore, although some guidance is available, there is no planning mechanism routinely followed to formally assess and mitigate the cumulative impacts of fill use (DoW, 2008).'*

*'Examples can be found in the Perth area where wetlands or remnant bushland are encircled by developments with raised land surfaces (Figure 4). It is difficult to accept that this can occur without a cumulative adverse impact on groundwater processes in the encircled area. However, only anecdotal information describes wetlands' responses to the cumulative impacts of urbanisation in many locations. Local urban water management plans and associated detailed modeling are typically required only at the level of subdivision planning (WAPC, 2008).'*

*'Eutrophication in the lake is primarily driven by groundwater inflows, and became problematic approximately 15-20 years following urbanisation of the surrounding area.'*

Groundwater and stormwater from North Ellenbrook (West) which covers 737ha flows into North Ellenbrook (East). This is a substantial area with its own complexities. Water management strategies are required to manage stormwater and groundwater within the precinct along with the stormwater and ground water emanating from North Ellenbrook–West.

---

<sup>8</sup> See attachment 'Letter to Finn Macleod 041024 Am 071224'

MRS Amendment 1411-North Ellenbrook (East)

Jan Zeck

72 Fergusson Close, West Swan, 6055

## Other cumulative impacts

Extensive areas of black cockatoo habitat have been lost across the Swan Coastal Plain due to clearing for urban development. The loss of trees on the North Ellenbrook-East and West sites, estimated to be close to 70,000, due to clearing and the development process will significantly contribute to substantial loss of black cockatoo habitat, biodiversity and urban tree canopy. In all, there could be up to 250,000 trees lost in the SUGC alone. As these are not the only areas being cleared for housing that figure could rise higher.

Banksia Woodlands are routinely lost due to fragmentation where minimal areas are retained. To meet TEC thresholds they must be of sufficient quality and size. This often leads to small patches and those that do not qualify because of standard of condition being cleared instead of rehabilitated.

The cumulative impact of loss of habitat due to all these factors, death by a thousand cuts, on the black cockatoos is unforgivable. The rate of loss is eye-watering. Developers, government agencies, regulatory bodies and local government have to do better than this. The pretense at complying with regulations to support black cockatoos and the environment has to stop and real actions must be undertaken right now.

## THIS IS NOT SUSTAINABLE DEVELOPMENT

### The use of extensive fill

*'Sourcing fill has environmental impacts. Fill comes from sand quarries, which typically require clearing of vegetation. Quarrying operations and haulage to development sites impose both carbon costs and the other disturbances such as noise, traffic, and wear and tear on roads. We are not aware of dedicated studies that quantify these impacts, but they would all scale directly with the quantity of fill required at a development site.'*

*'At the development site itself, a broad range of under-studied environmental impacts follow from extensive fill use. In the developed landscape, the variation of the land surface does not follow any geomorphic logic, but is discontinuous and incongruous across the boundaries of separate developments. These so-called "Frankenstein" landscapes (e.g. Figure 1) substantially reduce visual and physical amenity, and at times impose privacy and erosion concerns – e.g. where large grade separations occur between neighbouring developments. The use of fill also contributes to the loss of tree cover (Brunner & Cozens, 2013), as trees growing in the natural land surface cannot be retained if the surrounding land surface must be substantially raised.'*

### Economic Impacts and Affordable Housing

*'LGAs are exposed to significant risk where groundwater management fails.'*

*'Resolving such problems is often expensive (see examples in Figure 3), and generally falls on homeowners or LGAs. Because LGAs are responsible for approving local urban stormwater management plans, they often require that development plans use a certain depth of fill.'*

*'From an economic standpoint, the excessive use of fill creates an unnecessary and disproportionate impact on house prices. On average, the cost of fill in Perth is approximately A\$30/m<sup>3</sup>, and rising. Importing clean fill can consequently represent up to 30% of on-lot development costs, which are typically passed on to home buyers.'*

*'In Perth, construction norms are predicated on a relatively deep groundwater level, overlain by sandy soil, allowing the use of thin slab foundations supporting double brick exteriors and tile roofs, with a flat grassy backyard. This ubiquitous design is not resilient to shallow groundwater flooding. The consequences of high groundwater within urban lots are therefore expensive for both homeowners and LGAs responsible for damaged assets.'*

*'This kind of "remedial" use of alternative technologies can be costly, especially in areas with high nutrient content in the groundwater. However, these measures may be considerably more cost-effective if designed upfront and integrated into the overall development strategy for subdivisions.'*

Based on estimated fill required for the site and the cost as noted above, the supply of fill could be around half a billion dollars. This undermines the potential to supply affordable housing to the market.

#### Whole picture planning

*'Local water management strategies are currently initiated at this local structure planning stage. This is problematic for several reasons. Firstly, the scale is often too small to address regional water issues such as floodplain function or cumulative impacts of the use of fill. Thus, it promotes a piecemeal approach to water management, when water management in many sites includes extensive regional components. Secondly, there has often been significant investment in potential development sites before the necessary and appropriate urban water management plans are considered. If "deal breaker" issues are identified relating to water at this stage, developers are placed in a difficult situation due to sunk costs and hard-to-manage environmental risks. If these risks are not adequately managed, problems tend to arise post-development, exposing LGAs to liability.'*

#### Impacts on Environment

Potential to lose the majority of remnant and other vegetation on site due to water management and construction methods along with the risk of severe adverse impacts affecting surrounding areas, the majority of which are of high environmental significance.

#### Loss of Identity

*'The use of fill has enabled the ongoing use of construction and design techniques that are increasingly poorly aligned with local site characteristics.'*

To realise a sense of place, firstly the place any alteration has to enhance it and at the very least have no net loss of amenity. Filling the site with 2 to 3 metres of fill does the complete opposite.

#### Remedial Costs

Numerous references are made in the document 'When urban stormwater meets high groundwater – Parts 1 & 2, Thompson S. , Shanafield M., Manero A., Claydon G. (2021) Water e-Journal Vol 6 No1' to adverse outcomes to both buildings and urban infrastructure that can eventuate due to high groundwater.

The cost of repair generally falls on the local government authority and ratepayers. There is no equity in this scenario.

Sustainable development requires the incorporation of the following

- solar Orientation & opportunities for passive solar design
- orientation to cooling breezes
- space between buildings for breezes
- shade and cooling influence of vegetation
- insufficient space on lots for vegetation/trees
- no restrictions on astro turf, use of dark heat absorbing colours of finishes
- cost of materials
- everyone needs to travel
- minimal public transport opportunities – need to be EW as well as NS and radial centered on CBD
- public transport needs to be included early so patterns of use established
- access to parks, shops and employment

- ecological linkages to parks
- species planted
- cost of urban infrastructure increases with expansion of city footprint
- maintenance cost is even higher

Style of urban development of new suburbs like Brabham result in extremely low (reported as 0-5% tree canopy but highly likely to be closer to 1%) tree canopies. Hard surfaces contribute to heat sink effect.

Temperatures recorded in Brabham will be similar to North Ellenbrook-East.

Year	Number of days of 40° or more	Highest temperature
21/22	17	44.5
22/23	2	40.1
23/24	16	45.1
24/25	17	45.1

Last summer when it was 45.1°, the temperature in Brabham recorded on the road was 63° and on astro turf 81°.

With minimal shade and suburbs dominated by hard surfaces, air conditioning is essential over summer. This is highly likely to be 24/7 contributing to

- heat sink effect
- cost of living
- high electricity use
- likelihood of power outages due to high number of homes switching on at the same time

## CONCLUSION

### More studies are required

*‘Finally, there is a need to critically reappraise the timing of drainage and water management evaluation within the Western Australian planning process. This is evidenced by the environmental challenges emerging at some high groundwater sites in the Swan Coastal Plain and the difficulties associated with flood control following extensive use of fill in floodplain environments’*

*At the broadest level, detailed regional drainage and flood modeling studies should be extended across the development frontiers on the Swan Coastal Plain to better identify areas where the use of fill increases flood risk (e.g. due to disconnection of floodplains from channels).*

Basically, I believe the rezoning of this land from ‘Rural’ to ‘Urban Deferred’ is premature. To do so without a review of the performance of the DWMS in the southern section of the Swan Urban Growth Corridor is extremely foolhardy. It risks the loss of thousands of mature trees, over half of which are black cockatoo habitat, along with the survival of critically endangered and threatened native flora and fauna.

## FLOODING IN THE NORTH EAST CORRIDOR

Hi Finn, I expect you are aware by now of the flooding that has been occurring in the Dayton, Brabham and Henley Brook area over the last 2 months and that this seriously undermines the integrity of the drainage strategies for these areas. I understand that groundwater levels have been rising over the last several years, however this year the compounding effect from further development has become evident. (Harry Gratte, 2024)

This has been a drier than average year and yet flooding has occurred where it has not occurred previously, even in much wetter years. I have been keeping a photographic record on the area in Henley Brook and attach a couple of photos for your information. The first was taken on August 28 a few days after I noticed rising water levels. The second was taken on September 29, just over one month later. In the intervening period we have had only 63ml of rain and yet the level of water has not reduced, if anything it has increased. We have also had a period of almost three weeks dry weather prior to the last rain event on 27<sup>th</sup> and 28<sup>th</sup> of September.



Park St, Henley Brook 28/08/2024



Park St, Henley Brook 29/09/2024

## FLOODING IN THE NORTH EAST CORRIDOR

The factor that has changed in Henley Brook this year is the encroachment of urban development from the west and the earthworks (fill) to the east.

As this flooding has persisted for at least a month there are probably serious health issues arising as both the properties which appear to be the most impacted (248 and 236 Park St), do not have deep sewer and rely on septic tanks and leach drains.

Flooding in Dayton has also been an ongoing saga with discharge having to be piped away and adjoining farmland being inundated.



Citrus Ave, Dayton 05/09/24

Seven trees in Lot 822 intended for POS 1 have died over the last year. These are *Eucalyptus tottiana*, a dryland species that does best on well drained soils. (Harry Gratte, 2024) Although the trees were struggling with the extreme heat over summer, it is highly likely that the discharge from the Brabham Stage 1 development during last winter also contributed to their deaths. Continuous inundation kills tree roots and considering how much discharge is accumulating in their vicinity from the drain under Youle-Dean Rd it is more than likely that this played a major part in their demise. Rainfall to the end of September 2024 is similar to rainfall for all of 2023 and the image below indicates how much discharge is directed to this area.



Youle-Dean Rd, Brabham 25/08/24

## FLOODING IN THE NORTH EAST CORRIDOR

Drains constructed along Youle-Dean Rd east of Everglades Ave, which have incorporated existing trees, have been inundated for an extended period. There are a number of species located in the drain so survival may be patchy depending on how well each species tolerates continuous water logged soil.



Trees in drain along Youle-Dean Rd east of Everglades Ave, Brabham 25/08/24

Mature trees that were incorporated into the drain along Everglades Ave and Youle-Dean Rd (west) have been under water for a considerable length of time and about half have already died, another quarter are on the way out and the remainder will probably die as well. The proposal to incorporate retained trees in 'tree pits' where this type of continuous inundation can occur must be seriously challenged if trees are to survive.



Trees in drain corner of Everglades Ave and Youle-Dean Rd, Brabham 16/07/24



*Eucalyptus camaldulensis* – River Red Gum (Eastern Australia) tolerates extended flooding but not permanent flooding of soil. (Harry Gratte, 2024)

Since this photo was taken in July a number of other trees have died within this drain.

Trees that have died or dying along Youle-Dean Rd (west), Brabham 16/07/24

## FLOODING IN THE NORTH EAST CORRIDOR



Drainage basins along Woollcott Ave, Brabham following rain event 27<sup>th</sup> and 28<sup>th</sup> September 29/09/24

It would appear that there have been difficulties achieving effective operation of the series of basins along Woollcott Ave. Water has persisted in a couple of these throughout autumn and resulted in algal growth, mosquitoes breeding and a foul odour emanating prior to water being pumped into the lower system.

The brown tone of the water, in the image above, probably indicates it's ground water. If this is the case it would highly likely be the result of a super saturated soil profile, ie the ground is at capacity to hold any more water.

The effectiveness of the capacity for nutrient and pollutant stripping within the basins across all localities must also be questioned as many are already being invaded by weed species. Arum Lily has become prevalent this year and if immediate work to control it is not undertaken, it will out compete all the species intended to strip pollutants as well as native species intended to be conserved within wetland ecosystems.

In some cases planted vegetation has not survived the summer and has not been replaced. Winter planting has been inundated before plants have established. The recent planting along Woollcott Ave has seen many basin and fringing plants die because they have not been watered during recent hot days.

In all, successful growth of nutrient and pollutant stripping vegetation in basins has not been achieved which would indicate that discharge into the lower channel wetlands is highly likely to be nutrient rich and contain pollutants detrimental to the health of the Swan River.

The flooding experienced this year could be due to a number of reasons, some of which are impossible to mitigate against although many are a function of staging and timing. Staging work to begin in the west rather than eastern areas has created problems with excessive groundwater levels moving from the west (established urban areas) to the east, (the direction of flow) and timing earthworks to coincide with winter rainfall has added to the dilemma. Where historic channel wetlands have been interrupted due to earthworks and new drainage work is occurring or has yet to be installed, discharge has nowhere to go and as soil profiles are already full, it persists above ground level.

## FLOODING IN THE NORTH EAST CORRIDOR

Dewatering in winter adds enormous additional water into the drainage system that has not been effectively established and dewatering in summer robs areas to the east of ground water critical to the maintenance of existing vegetation especially during extreme summer temperatures experienced of late.

These factors were known before any of this development occurred and it is hard to fathom why they were not considered in initial staging of development and drainage strategies.

Thirty years ago the EPA warned of piecemeal planning in the new NE Corridor that would result in unacceptable outcomes for the environment and development that would be unsustainable in the long term (50+ years). It cautioned that the style of planning utilized by state agencies would only deliver sustainable outcomes if all necessary studies were undertaken, successful management strategies established and planning integrated the management and protection of the environment. The EPA further warned that once committed, it would be impossible to undo these decisions, even when the land proved unacceptable for urban development on environmental grounds.

It would appear that the hydrology of the areas closer to the river where underlying clay soils alter performance is not fully understood and this is highly likely to have compounded the issues currently being encountered. The Swan Urban Growth Corridor Drainage and Water Management Plan was designed and based on the western areas (Whiteman Edge) where ground water was able to percolate down through deep sands with no or minimal clay layers within subsoils. It would appear that this model does not work for the areas closer to the river that do have a clay under sand profile.

Water discharged from stormwater and groundwater systems was supposed to accumulate in the compensation basin/s system in the lot on the corner of Murray Road and Woollcott Ave, but this has minimal water retained in it. Whereas the drain that traverses this lot, which is a much earlier construction following the creek line, does have considerable water within it. St Leonards Creek has been moving swiftly with considerable volumes being drained through the lower sections east of West Swan Road into the river. In fact, all the creek lines and drains in the St Leonards system have had excessive water moving through them this year.

In contrast, there has been no more than average water movement through Wandoo Creek this year. The creek line that passes through our property ran for about 3 weeks and the water level was low within the creek. On a few occasions over the last 37 years the creek has run bank to bank but this is a rare event in recent times. The exception was the period when Brabham Stage One was under construction and summer dewatering directed discharge into Wandoo Creek northern line. This resulted in the creek flowing for around three months over two summers after which we also experienced tree deaths on our property which were highly likely the consequence of groundwater being directed into the creek system rather than moving through the soil profile towards the east.

The situation is similar in the southern section of Wandoo creek that comes from around Harrow Street and crosses West Swan Road just south of George Street, there has been minimal flow this year.

The point I am making is that discharge from the urban areas was supposed to be retained within drainage basins on the way to the lower sections of the creeks. This was to mimic the ecological processes previously performed by the palusplains of this area, ie, to filter water before it enters the river. If discharge is not being held within these basins as designed and is making its way through channels directly to the river, as it appears to be doing, what is preventing pollutants and nutrients entering the river?

One of the objectives of the local water management strategies is to maintain ground water at predevelopment levels to conservation and adjacent areas like the Swan Valley Act area. From observations, record keeping and flooding this year, this does not appear to be happening. It is also extremely difficult to monitor groundwater and impacts in adjoining areas when there are minimal, if any, monitoring bores, despite these being requested in numerous submissions.

Interrogation of Pentium Water's Local Water Management Strategy for Brabham Stage 3 reveals a serious flaw that is highly likely to have significant and consequential impact on Matters of National Environmental

Significance. The consultant notes that Bush Forever 200 is '*located directly adjacent to the development area, with vegetation including Melaleuca raphiophylla and Eucalyptus rudis closed forest, Melaleuca preissiana low woodland, Hypocalymma angustifolium and Pericalymma ellipticum open low heath.*' Most of these plants are wetland species and only occur in much smaller patches within Bush Forever 200, **the remainder is predominantly Banksia Woodlands.**

There is no mention of the Banksias that are both within the development (4.35ha plot in Park 5 to be conserved by the developer) and directly adjacent in BF200. Both these areas are down gradient (groundwater) of the much wetter areas in the north of Brabham Stage 3 mentioned previously. The consultant's attitude is that a higher watertable will help with a drying climate but they have not factored in the Banksias and how they will cope with consistently higher groundwater levels. Considering how effectively the Local Water Management Strategies have worked this dryer than average winter and the omission of Banksias on the doorstep of Brabham Stage 3, I am extremely concerned about the risk to the survival of these endangered Banksias and loss of extensive foraging habitat to endangered black cockatoos. The Banksia Woodlands within BF200 also have the added impact of excessive discharge being directed towards and held within drainage basins constructed and to be constructed within Dayton along Harrow Street. These are directly across the road from the protected Banksia Woodlands within BF200 which have not been acknowledge or factored into drainage management strategies.

The same degree of concern is held for areas within the adjoining Swan Valley Act area. If there is so much flooding in all three localities in this, a drier than average year, how much reliance can be placed on the LWMS for Brabham Stage 3 when it is eventually developed? There is considerable risk that the volume of discharge being directed into Wandoo Creek (north) will result in flooding within rural properties. If discharge is not held and treated as designed, as is the case this year, not only will the quality be severely compromised but also groundwater that is crucial to the survival of vegetation over extreme summer temperatures will not be available.

The same condition applies to Wandoo Creek south and rural land within that area.

Similar concerns apply to conservation wetland Horse Swamp. This year there have been decent volumes directed to the wetland resulting in beneficial conditions for its operation. This extra discharge has come from urban areas within the developed area of Brabham, not Stage 3. Considering how much ground and storm water is being discharged from the current urban area and knowing how wet Lot 822 is, there is considerable concern that excessive volumes will be directed into the wetland. If this happens there is a high probability that surrounding areas will become inundated and may result in the death of surrounding vegetation, dependent upon the species of vegetation involved.

The concern is not confined to the operational period of the LWMS but also to the construction stage when drainage infrastructure has not been commenced, is partially complete or not completed but earthworks are underway, as is the case in Henley Brook. There does not appear to be any planning undertaken to manage this phase of the development and it is at this time that development is highly likely to have severe impacts to surrounding areas.

- Considering that local water management strategies have been designed for the urban development in Dayton, Brabham and Henley Brook can you inform me why, this winter, we have had incidence of flooding in all three localities?
- Considering that Dayton North and South have further development yet to commence, what mitigating actions have been undertaken or are intended to be taken to prevent flooding as seen this year impacting on Bush Forever 200 site, especially changes to ground water regimes that are likely to impact Banksia Woodlands of the Swan Coastal Plain TEC, and priority agricultural land in the Swan Valley Act area?
- Considering the adverse impacts to surrounding areas from inundation this year, what additional monitoring installations, such as bores, are being planned within adjoining land to monitor hydrological changes from current and future urban development?

## FLOODING IN THE NORTH EAST CORRIDOR

- What mitigating action has been developed, or is intended to be developed, to prevent flooding as experienced this year from occurring in future years?
- What action is planned or proposed to address the under performance of the drainage management strategy along Woollcott Avenue?
- What action is planned or proposed to prevent the premature discharge of storm and groundwater into lower creek systems and subsequently in to the Swan River?
- What action is planned or proposed to prevent and/or control weed incursion, now and in the future, into wetlands and drainage basins designed to strip nutrients which are integral to effective local water management strategies?
- What action is planned or proposed to prevent or mitigate against continued inundation and ultimate death of retained trees, or those intended to be retained, within drainage systems or where drainage is discharged as an interim measure?
- What mitigating action has been developed, or is intended to be developed, to prevent the type of flooding as described above from occurring during the **construction stage** of Brabham Stage 3?
- Considering the apparent lack of understanding of hydrology within this area closer to the river where clay underlies sand, can you also guarantee that the development of Brabham Stage 3 will result in no changes to groundwater levels and quality in surrounding areas?
- Considering how ineffectively local water management strategies have performed this year, what additional measures have been included to ensure there are no changes to the groundwater regime within Bush Forever 200 which is likely to impact Banksia Woodlands of the Swan Coastal Plain TEC?

The questions above are in reference to years with similar rainfall to this year.

- What happens in the event of an AEP 20%, 5% and 1% event, or in a period of well above average rainfall when the present drainage system is not coping?

I would be appreciative of your early response to my queries.

Kind regards,

Jan Zeck

Some quick background notes on rising groundwater, based on our observations and measurements at our Swan Valley tree farm. This is background information for the future should the rising groundwater issue continue to grow, potentially impacting the Threatened Ecological Communities in Bush Forever Site 200 (Old Caversham Airbase.)

Notes on rising groundwater we are measuring along the western edge of the Swan Valley, where it adjoins new urban in Dayton. This is part of the NE Urban Corridor rollout from Caversham, Dayton, Brabham, Henley Brook, existing Ellenbrook and future urban north of Ellenbrook to Bullsbrook.

Sand over clay soils are an issue when hard surfaces (roofs, roads, paths) replace the trees that had acted as pumps and helped control groundwater. Even on degraded farmland, these mature trees served an important function. They were cleared broadscale, and have been replaced by hard surfaces. These hard surfaces now deliver rainfall into the soil profile, where it moves through the sand until it hits the groundwater over the impervious, underlying clay layer, then moves down gradient towards the Swan River. Water movement through soil is a wonderful example of truth – water movement does not lie;

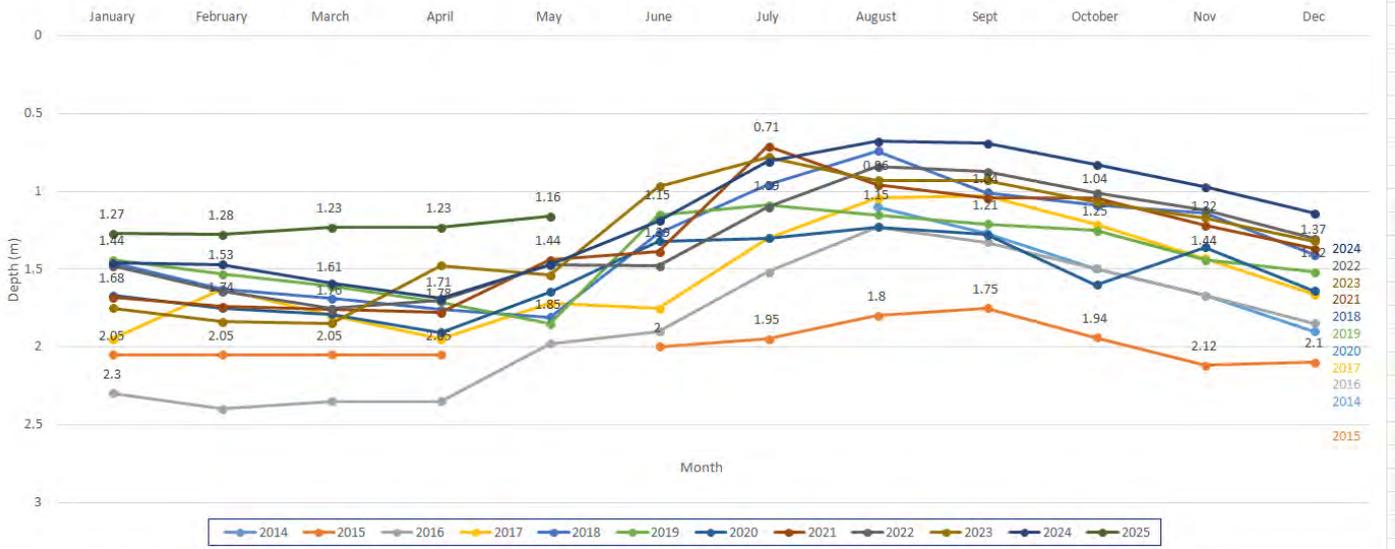
- Critical therefore that drainage plans in these new urban areas address the effect of these soil types, so that adjoining rural and bush land is not impacted;
- A key problem, as explained to us by a hydrologist/engineer working for one of the developers, is that the exit drainage to cope with the extra water created by urbanisation, is not installed until the end of the development. We say this flies in the face of good drainage planning, which begins at the (river) end and works back. According to the hydrologist, this anomaly happens because they must wait for all the developer contribution funds to be in the kitty before the exit drainage can be afforded. We call this 'cart before horse' planning. It fails to address the goal that neighbouring and nearby land must not be adversely affected by an action on the developed footprint;
- Bush Forever Site 200 (Old Caversham Air Base) is now bordered on three sides by urban or future urban – Brabham, Dayton, future Brabham Stage 3, likely urban to the west if MRS 1421 is approved to rezone Parks and Recreation (formerly part of Whiteman Park) to Urban. Bush Forever Site 200 contains Threatened Ecological Communities including Banksia woodlands of the Swan Coastal Plain, an important food resource for endangered Black Cockatoos. If planners get the drainage wrong – as is being seen in earlier developments on sand over clay – then these nationally significant Banksias will not survive. Banksias do not tolerate 'wet feet.' The response from one planner, when this concern was raised, was 'that's all right, we'll learn something from that.' A woeful attitude. That will be too late. Once that TEC is gone, it's gone.
- We only have one chance to get the planning right, and so far the drainage system along the western edge of the Swan Valley appears to be failing badly. We are having to go through FOI to get the drainage plan for the urban area to the west of us, and which we believe it impacting our land that is zoned Swan Valley Priority Agriculture;
- The obvious question is 'what is happening with groundwater in these suburbs themselves?' Last winter, into Spring and summer, locals witnessed surface water remaining in sumps and public open spaces adjoining new urban areas in Brabham, as just one example. Will this impact the integrity of structures built on land where groundwater is close to the soil surface? Many of the families in these new urban areas do not have English as a first language, are unfamiliar with the soils and biology of the area, and are therefore perhaps less able to advocate for their rights than those of us with local knowledge and a science background. They are desperate for a home and are a vulnerable target market for developers.
- Attached graph shows groundwater levels with time for one monitoring bore on our Swan Valley tree farm, over past 10 years. Note that the depth to groundwater for January, February, March 2025 is higher than for any previous year or measurement, despite this being the driest time of year and the past summer being particularly hot and dry.

Cheryl Rogers and Harry Gratte

0414 827 984

0417 016 336

Depth to Groundwater Reserve East Tree Farm



# Readings taken monthly, on last day of each month. The higher the point is towards the top of the graph, the shorter the distance from ground surface to groundwater.  
 # Note upward trend over time.  
 # Note groundwater depth for January and February, 2025, is the highest for that time of year for any year measured. Represents a one metre increase on the level recorded January, 2015.  
 numbers recorded in red drv at this depth. water level is lower.

Figure 1: Results from groundwater monitoring bore, 51 Harrow St, West Swan

Why Local Biodiversity is important

**The issues described below are the costs of not having a comprehensive and effective Local Biodiversity Action Plan.**

Is it a risk you want to take and will the people you represent thank you for allowing these things to happen.

An Action Plan that delivers defined plans, actions, timelines and costing is **critical** to ensuring that these disastrous outcomes never eventuate.

**The draft Local Biodiversity Action Plan as presented will not do this.**

Local biodiversity is of immense importance to our health and well being. It underpins every biosystem that operates within this region, including us. When our local biodiversity is healthy it looks after itself, removing the burden from humans to manage manifold issues that come from an unhealthy one.

Maintaining biodiversity **in situ** is of paramount importance. It is more cost effective, more efficient, more easily managed and faster to re-establish healthy ecosystems than other repair methods. Failure to do so results in substantial public and private funds, and community and government effort being spent on environmental repair projects.



Iron sulphides, from earthworks in the Brooklands precinct, directed into drains which now discharge directly into St Leonards Creek Henley Brook. (15/12/24)

Iron sulphides can acidify water when they are exposed to air and water. This is because when disturbed, the iron sulfides in the soil oxidize, reacting with oxygen and water to produce sulfuric acid, which lowers the pH of the soil

and surrounding water. This acidification can harm aquatic life and compromise water quality.

Consequences of inattentive local biodiversity stewardship result in excessive contaminants entering creek systems causing putrid waterways that breed multitudes of mosquitoes, river algal blooms which kill fish and river organisms, emaciated native fauna that die on roadsides or have to be killed, dead and dying trees incapable of providing habitat or shade and rising groundwater which kills more vegetation and in turn more wildlife.

If you think these are exaggerations, think back to last year. There were algal blooms in bioretention basins along Woollcott Ave in Brabham. Not sure if Ward Councilors were monitoring this situation. I was, and residents in close proximity complained of both the offensive smell and proliferation of mosquitoes.



Woollcott Ave bioretention basin covered with thick algal bloom due to excessive nutrients in drainage water. Failure of nutrient stripping vegetation survival over summer results in contaminants being discharged into local creek systems then into the Swan River. (11/11/24)



Park users complained of the unpleasant odours emanating from algal bloom which developed in the amphitheatre at Arpent Link Park, Brabham. (11/11/24)

## Why Local Biodiversity is important

Properties along Park Street Henley Brook were inundated and tenants complained that children had to be kept inside because of the dangers of drowning and effluent from septic tanks and leach drains seeping into floodwater.

Algal bloom on flood waters in Park St Henley Brook directed into drains and sumps with little to no nutrient stripping ability which finally discharge into local creeks and onto the Swan River. (1/12/24)



After surviving lower than average rainfall over the last few years and rising temperatures these trees couldn't manage excessive lowering of the watertable caused by dewatering associated with urban development.

Henley Brook just north of the primary school on Park Street where 18



mature trees died over summer due to dewatering. (11/4/25)

Humans are not immune from the impacts. With loss of bushland, weeds proliferate and bushfire risk increases. Uncontrolled rising groundwater risks buildings cracking and toxic moulds invading residences. Both cause insurance and maintenance costs to rise along with health risks.

Weeds proliferate in Pannage Wetlands reserve because, **“The City doesn't have the budget to manage it.”** (May 2024)



Urban heat sink effect rises exponentially and with no tree canopy, airconditioners run 24/7. Morbidity and mortality rates rise.



Management costs rise due to clean ups along with excessive mosquito and weed control. Rates and cost of living rise.

In the height of summer last year a Brabham resident took the temperature on the road: 63.1°, on astro turf: 81.7°, actual temperature 45.1°.

Weeds proliferate along Youle-Dean Rd and trees dead and dying in swale (1/11/24)

**These are the costs of not having a comprehensive and effective Local Biodiversity Action Plan.**

Is it a risk you want to take and will the people you represent thank you for allowing this to happen.

An Action Plan that delivers defined plans, actions, timelines and costing is **critical** to ensuring that these disastrous outcomes never eventuate.

**The draft Local Biodiversity Action Plan as presented will not do this.**

---

**From:** Golestani, Shanthi <Shanthi.Golestani@transport.wa.gov.au>  
**Sent:** Tuesday, 17 June 2025 1:27 PM  
**To:** Region Planning Schemes  
**Cc:** Anthony Muscara  
**Subject:** 20250617 DoT response RE: Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) - RLS/1083

**Importance:** High

**Categories:** OBJ, Ack, SUB

OFFICIAL

Your ref: RLS/1083

Our ref: DT/24/00348

Enquiries: Shanthi Golestani (9216 8774)

Ms Sam Fagan  
Secretary, Western Australian Planning Commission  
Department of Planning, Lands and Heritage  
140 William Street  
PERTH WA 6000

Attention: Anthony Muscara

Dear Sam

**RE: PROPOSED Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) - RLS/1083**

Thank you for your email dated 11 April 2025 inviting the Department of Transport (DoT) to provide comment on the above proposed amendment. The Urban Mobility (UM) and Freight, Ports, Aviation, and Reform (FPAR) divisions of DoT have reviewed the submitted documents and consider the proposal to be premature whilst the transport related issues still under further planning and investigation. The following comments are provided:

1. The Amendment report refers to further investigations in relation to :
  - A mesoscopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads Western Australia (MRWA) in collaboration with the Department of Planning, Lands and Heritage and the City of Swan. The Traffic Impact Assessment (TIA) that accompanies the North Ellenbrook (East) District Structure Plan (DSP) is to be updated to reflect the outcomes of the State Government transport assessment. The updated TIA will inform subsequent stages of planning, specifically TIA's that accompany local structure plans.
  - Confirmation on the location and land requirements for a road interchange with Tonkin Highway.
  - The Amendment report also refers to SPP 5.4 and 4.1, as well as further detail investigations at the structure planning stage
    - a. There is no technical information provided on the above issues.
    - b. DoT queries the status of these issues and the associated technical investigations. It appears premature to progress the Amendment without confirmation that the outcomes are acceptable to DPLH, MRWA, PTA and other relevant State and Local Govt agencies.

2. DoT's strategic cycle network plan is the Long Term Cycle Network (LTCN) which was endorsed by the City of Swan Council on 1 July 2020. This strategic cycling network has been developed in collaboration with respective Local Governments and aims to ensure State and Local Governments continue to work together towards the delivery of a continuous cycling network providing additional transport options, recreational opportunities and support for tourism and commercial activity.
  - a. There are no LTCN routes within the Amendment area, however it is situated in proximity to a the primary route along Tonkin Hwy.
  - b. There is an opportunity to identify an active transport network (and LTCN) for the DSP area as part of the next stage of planning. This will ensure a consistent network as DSP precincts are developed in the future, at different stages.
  - c. The process of determining the LTCN should include collaboration between the DSP applicant, DoT's Active Transport branch and the City to ensure that the LTCN within this DSP area aligns with the City's aspirations and provides integration with the wider LTCN.
  - d. The process to amend the LTCN is found here: [Long-term cycle network | Department of Transport](#)
  
3. The internal street and path network should accommodate people of all ages and abilities walking, wheeling and riding. This is particularly important along the roads adjacent to schools.
  - a. [Planning and Designing for Active Transport in Western Australia: All Ages and Abilities Contextual Guidance](#) provides recommendations on appropriate bicycle facilities based on road function.
  
4. Supporting Transport Impact Assessment (TIA) should include Safe Walk to School assessment to each of the schools within the DSP area, and any school within 800m distance from the DSP area for future planning stages.

DoT has not liaised with Main Roads WA (MRWA) with regards to this response, and has confirmed that the Public Transport Authority (PTA) will send their own response. It is recommended DPLH contact PTA and MRWA directly for comment.

DoT would welcome the opportunity to comment at further planning stages particularly regarding the active transport network within the DSP area.

If you wish to follow up, please do not hesitate to contact me.

Kind regards,

**Shanthi Golestani**  
**Senior Project Officer - Transport Planner | Urban Mobility | Department of Transport**  
 GPO Box C102, Perth WA 6839  
 Tel: (08) [92168774](tel:92168774)  
 Email: [Shanthi.Golestani@transport.wa.gov.au](mailto:Shanthi.Golestani@transport.wa.gov.au) | Web: [www.transport.wa.gov.au](http://www.transport.wa.gov.au)

*Part time - Tues/Thurs/Fri*



We acknowledge the Traditional Custodians of this land and pay respect to the Elders past and present.

**Respondent No:** 1**Login:** Anonymous**Email:** n/a**Responded At:** Apr 22, 2025 16:36:50 pm**Last Seen:** Apr 22, 2025 16:36:50 pm**IP Address:** n/a

Q1. What is your first name?	Tanika
Q2. What is your surname?	Groves
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	tanikagroves@gmail.com
Q5. What is your address?	39 Maralla Road Ellenbrook
Q6. What is your contact number?	045661019
Q7. Are you responding on behalf of an organisation?	No
Q8. What is the name of the organisation?	not answered
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Oppose
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.	
	Impact of the construction phase on our property. Damages we won't be compensated for on our house from the dust, vibrations cause cracking and damages to our beautiful new houses. Impact of noise on our quite family friendly street. Noise impacting sleep on our shiftworking household. The displacement on the local native animals that frequent our parks and vacant land across the road.
Q11. Upload supporting documents	not answered
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered

**Respondent No:** 2**Login:** Anonymous**Email:** n/a**Responded At:** May 11, 2025 18:32:49 pm**Last Seen:** May 11, 2025 18:32:49 pm**IP Address:** n/a

Q1. What is your first name?	Peter & Cara
Q2. What is your surname?	Holschier
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	holschier@live.com.au
Q5. What is your address?	529 Railway Parade, Bullsbrook WA 6084 (Lot 26)
Q6. What is your contact number?	0409080850
Q7. Are you responding on behalf of an organisation?	No
Q8. What is the name of the organisation?	not answered
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Support

**Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.**

We do support the amendment however us residents in the area to be kept Rural feel we should have been approached earlier. Following the receipt of your letter both owners at Lot 26 and 25 have met to discuss the amended report. There are a few suggestions we would like to make. We note under State Planning Policy 4.1 – Industrial Interface, separation distances have been recommended for the Poultry farms and Plant Nurseries, however nothing has been listed for the rural properties - Lots, 50, 51, 25, 26, 27, 53, 52. 1. Being two of these properties are working farms – Lot 25 and 26 and that Lot 50, 51, 52, 53 and 27 going forward could have Livestock there are a few suggestions / recommendations we would like to make. There will potentially be housing at the back of our properties, and to prevent any complaints from home owners in the future we would like to point out some things that can make it easier for the residents. The working farms • create Dust when ploughing, Harrowing paddocks, doing Firebreaks - if there is a strong Easterly this will increase the amount of dust. • We spray paddocks with poisons, for Firebreaks and Weed Control – which can cause drift of the poisons. • We Spread Fertiliser / Lime over our paddocks • During Hay season we work longer hours over certain days during the weekdays. • We have Cattle that calve and may bellow throughout the night when calling their Calves. To help reduce the impact of Dust, Poisons, Noise etc, we would suggest that a concrete barrier wall be placed between our Properties and the Proposed Metropolitan Region. Furthermore we are worried that if a wall is not placed between the 2 areas, the impacts that may be created for us are • Livestock potentially getting out into the Suburban area, if fencing is vandalised. • Livestock being chased by dogs • Livestock being mauled • Rubbish coming onto our Properties and the impact it can have on our Livestock • The cost of vet bills associated with any of the above • People entering our Properties illegally and being chased by cattle, this is more prevalent when Cattle have calves at foot. • People entering our Properties illegally and trampling our crops. Some of the Rural properties do have very good fencing with an electric wire, however we have no control over vandals. 2. In the amendments there is nothing notated about the impact to the Kangaroos in this area. The kangaroo population is excessive, in the hundreds plus. Kangaroos are seen in all the properties around this area. What is being done to relocate the Kangaroos elsewhere so it does not impact surrounding rural areas and obviously suburban areas. 3. Advice Under Section 48A(1)(a) Bush Forever site 13, is this Lot 13? This Lot has a lot of Melaleuca across the middle of the Lot as well as wet areas in Winter. Is this being protected for Wildlife and Fauna?

---

**Q11. Upload supporting documents**

not answered

---

**Q12. Upload supporting documents**

not answered

---

**Q13. Upload supporting documents**

not answered

---

**Respondent No:** 3**Login:** Anonymous**Email:** n/a**Responded At:** May 14, 2025 22:57:41 pm**Last Seen:** May 14, 2025 22:57:41 pm**IP Address:** n/a

Q1. What is your first name?	Connor
Q2. What is your surname?	PIke
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	connor.pike2213@outlook.com
Q5. What is your address?	29 Maralla Road, Ellenbrook
Q6. What is your contact number?	0498573080
Q7. Are you responding on behalf of an organisation?	No
Q8. What is the name of the organisation?	not answered
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Oppose
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.	
	<p>The existing wildlife will be heavily affected by this change, with nowhere for these native animals to go. Also, during the construction of our current residence, we were sold the property with the stipulation that it would not be developed. Current traffic on these roads is a concern as well. With these developments, they will increase traffic and traffic accidents/ dangers.</p>
Q11. Upload supporting documents	not answered
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered



Respondent No: 4

Login: Anonymous

Email: n/a

Responded At: May 28, 2025 15:00:13 pm

Last Seen: May 28, 2025 15:00:13 pm

IP Address: n/a

Q1. What is your first name? **Name and contact details removed at the request of the submitter**

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Support

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

See my supporting document below. I tried to type it in here but it didn't save it and it all disappeared. I trust that you will take the time to read my submission.

Q11. Upload supporting documents [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/12d48c29b43d79f8e33bf8a317e9e519afcd0c46/original/1748408016/ff0414bea23a0596261e13fec2c47b85\\_Proposed%20Metropolitan%20Region%20Scheme%20Amendment%201411%20%282%29.docx?1748408016](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/12d48c29b43d79f8e33bf8a317e9e519afcd0c46/original/1748408016/ff0414bea23a0596261e13fec2c47b85_Proposed%20Metropolitan%20Region%20Scheme%20Amendment%201411%20%282%29.docx?1748408016)

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered

**Proposed Metropolitan Region Scheme Amendment 1411 (Complex)  
North Ellenbrook (East)  
City of Swan**

This is a response to the letter dated 11 April 2025 inviting comment on the proposed amendment to transfer about 504.23 ha from rural zone to urban deferred zone and Regional Open Space.

I am the owner of \_\_\_\_\_ on Railway Parade. In addition, I own two lots \_\_\_\_\_ (315 acres and \_\_\_\_\_ (70 acres) on Warbrook Road.

My husband (deceased), my son and I have operated a beef cattle farm since 1975 across all three lots. All our farming properties are in the buffer zone for the Twin Swamps Reserve, in deference to the survival and status of the western swamp tortoise.

I bring to the WAPC's attention the following from the "*State Planning Policy 4.1 – Industrial Interface (SPP 4.1) ensures planning decisions consider the locational constraints of land uses, the significant investments represented, and the current and future benefits and costs to communities when assessing proposals where land use conflict may exist or result. This will achieve:*

- *appropriate siting and long-term operational certainty for industry*
- *appropriate siting of sensitive land uses for the protection of health and amenity for people and the environment*
- *sustainable land use planning and development outcomes consistent with broader State strategic planning objectives.*

*The objectives of this policy are to:*

- *ensure the impacts of industrial land uses are considered at all stages of the planning process;*
- *adequately separate industrial land uses and any resulting off-site impacts and/or safety risks from incompatible land uses to:*
  - *protect industrial areas to improve long-term operational certainty*
  - *avoid, mitigate or manage potential impacts on the health and amenity of people and the environment*
  - *promote co-location of like uses to minimise the impact area; and*
- *plan the land use transition between industrial land uses/infrastructure facilities and sensitive land uses by providing compatible zones, reserves and land uses. (State Planning Policy 4.1 – Industrial Interface)*

There appears to be negligible consideration given to the working farms which will be adjacent to the proposed housing and how the two could co-exist compatibly. People who are raised in suburban areas mostly have little or no knowledge of the complexities and risks associated with farming. I would urge the WAPC to consider the following:

- Buffers be established separating homes and farms. Ideally, the buffers would be in the form of a physical, cement barrier, similar to those seen along major highways; and/or have land set aside (reserved as buffers) between homes and the farms. The benefits of this would be to:
  - Reduce the risk to home-owners and their families from being directly exposed to farm operations such as from chemical sprays used for firebreaks and weed control; creation of dust when making hay or harrowing paddocks; and drift when spreading fertilisers.
  - Reduce home-owners and their families from being effected by farmers working outside usual work hours and on weekends such as for seasonal machinery work or calving periods, where noise could be a problem.
  - Discourage people in the housing estate from entering the farms. This will allow calving season to be undertaken in a stress free way from activities in the housing estate. Cows can also become very aggressive should trespassers go near their newborn calves.
  - Reduce the threat of trespassers and vandalism to fences, animals and property. The risk posed by essential electric fences also requires consideration.
  - Reduce wildfire risk for homes. Wildfires, at times of prevailing easterly winds, especially during summer and autumn months, have occurred a number times in the past. The strength of the easterly winds makes the grass fires difficult to control. Reduced rainfall and reduced ground water add to the risk. A physical barrier could provide fire protection for homes.
- Dumping of rubbish on road verges or properties is an on-going problem as residential communities develop nearby. It is expected that this will be much worse for our properties as the North Ellenbrook (East) community is established. This causes landowners stress and disrupts the amenity of the area. I would expect the developers would establish ways to mitigate the dumping of rubbish by home-owners.
- Ongoing problems as large populations of kangaroos are being driven into ever diminishing areas. Kangaroos cause a lot of damage to fences as they seek food and water. Cattle escaping through damaged fences then create road hazards. With the expected increase in road traffic, it is imperative that the kangaroo population is controlled or contained.
- Quality of drinking ground water after development of housing estate. Our cattle rely on good quality water for drinking. As farmers we need to be confident the quality of ground water will not be negatively affected by the development.



Respondent No: 5

Login: Anonymous

Email: n/a

Responded At: Jun 04, 2025 14:30:51 pm

Last Seen: Jun 04, 2025 14:30:51 pm

IP Address: n/a

- Q1. What is your first name? **Name and contact details removed at the request of the submitter**
- 
- Q2. What is your surname?
- 
- Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes
- 
- Q4. What is your email address?
- 
- Q5. What is your address?
- 
- Q6. What is your contact number?
- 
- Q7. Are you responding on behalf of an organisation? Yes
- 
- Q8. What is the name of the organisation? Perthland Pty Ltd ATF Warbrook Unit Trust
- 
- Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Support
- 
- Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.
- As the landowner of ( ) Warbrook Road, Bullsbrook, we confirm our support for the proposed MRS rezoning of the land in accordance with the endorsed District Structure Plan. We consider that the reasons for the current Urban Deferred zoning have either already been addressed or are capable of being addressed through Local Structure Planning process. Accordingly, we request that the deferral of the land's urbanisation be set aside, and that the land be rezoned to Urban under the MRS as part of the advertised rezoning. Urban rezoning will support the timely delivery of new housing, provide certainty for developers, and contribute positively to addressing the current housing supply crisis in Perth.
- 
- Q11. Upload supporting documents not answered
- 
- Q12. Upload supporting documents not answered
- 
- Q13. Upload supporting documents not answered
-



**Respondent No:** 6

**Login:** Anonymous

**Email:** n/a

**Responded At:** Jun 07, 2025 00:01:02 am

**Last Seen:** Jun 07, 2025 00:01:02 am

**IP Address:** n/a

Q1. What is your first name? *Name and contact details removed at the request of the submitter*

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

This area is already busy enough this area was sold as bush forever site and this will ruin the natural feel of the ellenbrook area. Absolutely disgusting money grab

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



Respondent No: 7

Login: Anonymous

Email: n/a

Responded At: Jun 07, 2025 07:42:28 am

Last Seen: Jun 07, 2025 07:42:28 am

IP Address: n/a

Q1. What is your first name? ***Name and contact details removed at the request of the submitter***

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

I oppose this development as if it were to go ahead it would likely cause residents who unknowingly move to the area to complain about the Speedway venue nearby that has operated for more than 40 years at the site. This club has a strong history and is vital to the WA and National Speedway industry!

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



Respondent No: 8

Login: Anonymous

Email: n/a

Responded At: Jun 07, 2025 11:41:50 am

Last Seen: Jun 07, 2025 11:41:50 am

IP Address: n/a

Q1. What is your first name? **Name and contact details removed at the request of the submitter**

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Support

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

Using underutilised land for housing is the best outcome compared to more natural areas. The area is inbetween to urban areas already.

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



Respondent No: 9

Login: Anonymous

Email: n/a

Responded At: Jun 10, 2025 15:56:44 pm

Last Seen: Jun 10, 2025 15:56:44 pm

IP Address: n/a

Q1. What is your first name? *Name and contact details removed at the request of the submitter*

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number? 0433341151

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

My horses are out on a paddock at 140 saw pit road. We have black cockatoos roosting on the property. The dams have western swamp turtles in them. Where are they going to go? Who's going to make sure that they have homes to go to. These animals have been living here for many years and now u want to rip away more of their homes? I dont agree with it.

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered

**Respondent No:** 10**Login:** Anonymous**Email:** n/a**Responded At:** Jun 10, 2025 16:11:10 pm**Last Seen:** Jun 10, 2025 16:11:10 pm**IP Address:** n/a

Q1. What is your first name?	Kirsty
Q2. What is your surname?	Lea
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	misskitarni@gmail.com
Q5. What is your address?	15 benilli place Alexander Heights
Q6. What is your contact number?	0480124608
Q7. Are you responding on behalf of an organisation?	No
Q8. What is the name of the organisation?	not answered
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Oppose
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.	
	<p>I oppose this rezoning due to the fact that this will impact wildlife and stock. Black cockatoos roost in the trees, the swamp turtles are in the dams, a family of emus reside in the area. I also have horses agisted on sawpit. It's getting harder and harder to find places to keep horses more than 100 horses will need to find homes or be put to sleep. The area on sawpit road is a beautiful place that's like a paradise in the city. Please reconsider rezoning.</p>
Q11. Upload supporting documents	not answered
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered



Respondent No: 11

Login: Anonymous

Email: n/a

Responded At: Jun 10, 2025 19:41:20 pm

Last Seen: Jun 10, 2025 19:41:20 pm

IP Address: n/a

Q1. What is your first name? ***Name and contact details removed at the request of the submitter***

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

I am writing to formally oppose the proposed rezoning of the land in question. This area is not only ecologically significant, but also supports a delicate balance of native wildlife and rural livelihoods that would be severely impacted by any zoning changes. The land currently provides essential habitat for a variety of native species, including the endangered black cockatoo, emus, and swamp turtles. These animals rely on this environment for feeding, breeding, and shelter—any disturbance or destruction of their habitat could contribute to further population decline and irreversible ecological damage. In addition to its environmental value, the land is actively used for livestock grazing, which supports local agricultural activity and contributes to the rural character of the region. Rezoning would threaten the viability of these farming operations, displacing livestock and potentially leading to the loss of generational farming practices. Rezoning this land risks sacrificing biodiversity, displacing vulnerable species, and undermining sustainable land use practices. I urge decision-makers to consider the long-term environmental and social costs and to preserve this land in its current zoning to protect both native wildlife and agricultural heritage.

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



Respondent No: 12

Login: Anonymous

Email: n/a

Responded At: Jun 11, 2025 09:17:06 am

Last Seen: Jun 11, 2025 09:17:06 am

IP Address: n/a

Q1. What is your first name? **Name and contact details removed at the request of the submitter**

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

I ChatGPT Log in You said: I want to oppose the Metropolitan Region Scheme North Ellenbrook (East) as there are endangered species in the area including black cockatoos and swap turtles and also home of emus, kangaroos, numerous birds and livestock. Help me write a comment to add to a submission ChatGPT said: Sure! Here's a clear, respectful, and persuasive draft for your submission opposing the Metropolitan Region Scheme (MRS) amendment for North Ellenbrook (East): Submission Comment – Opposition to Metropolitan Region Scheme Amendment: North Ellenbrook (East) I strongly oppose the proposed amendment to the Metropolitan Region Scheme for North Ellenbrook (East). This area represents a vital ecological habitat that supports numerous native and endangered species, including black cockatoos and the southwestern snake-necked turtle (often referred to as a "swamp turtle"). It is also a home to emus, kangaroos, and a wide variety of native birdlife. The environmental impact of urban development in this area would be devastating. Black cockatoos are listed as endangered, and their habitat is already under significant pressure. Clearing land in North Ellenbrook would result in the destruction of critical foraging and nesting grounds for these birds, as well as the fragile ecosystems that support swamp turtles and other native fauna. In addition to environmental concerns, the area supports agricultural and pastoral activity, with existing livestock operations that contribute to the local economy. Urban expansion into this region will not only disrupt wildlife but also displace existing land uses that are more sustainable in the long term. I urge the Western Australian Planning Commission to prioritize the preservation of this important natural habitat. Development should not come at the cost of biodiversity, environmental heritage, and the well-being of our native species. I request that this proposal be reconsidered and that alternative sites be explored that do not threaten such ecologically valuable land.

Q11. Upload supporting documents not answered

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



**Respondent No:** 13  
**Login:** Rosanna.hindmarsh  
**Email:** rosanna.hindmarsh@chitter  
 inglandcare.org.au

**Responded At:** Jun 12, 2025 18:17:39 pm  
**Last Seen:** Jun 12, 2025 07:04:09 am  
**IP Address:** 10.174.0.60

- Q1. **What is your first name?** Rosanna
- 
- Q2. **What is your surname?** Hindmarsh
- 
- Q3. **Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?** No
- 
- Q4. **What is your email address?** rosanna.hindmarsh@chitteringlandcare.org.au
- 
- Q5. **What is your address?** PO Box 62 MUCHEA WA 6501
- 
- Q6. **What is your contact number?** 0439911792
- 
- Q7. **Are you responding on behalf of an organisation?** Yes
- 
- Q8. **What is the name of the organisation?** Ellen Brockman Integrated Catchment Group
- 
- Q9. **Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?** Oppose
- 
- Q10. **Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.**  
 Submission uploaded.
- 
- Q11. **Upload supporting documents** [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/8b5710e122b8cb0d0c299ab91179edd62cbf7a80/original/1749716167/c80dd312fd2cadd18cc31cb8b833069\\_Submission%20for%20MRS%20Amend%201411%20North%20EB%20East%20120625.pdf?1749716167](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/8b5710e122b8cb0d0c299ab91179edd62cbf7a80/original/1749716167/c80dd312fd2cadd18cc31cb8b833069_Submission%20for%20MRS%20Amend%201411%20North%20EB%20East%20120625.pdf?1749716167)
- 
- Q12. **Upload supporting documents** [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b1c4d8bcf4a098a7cef169506951fead59d1284a/original/1749716244/b97e44fb6b938318176d2bb3cd62ae33\\_Recommende d%20corridors%20for%20submission%20120625.pdf?1749716244](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b1c4d8bcf4a098a7cef169506951fead59d1284a/original/1749716244/b97e44fb6b938318176d2bb3cd62ae33_Recommende d%20corridors%20for%20submission%20120625.pdf?1749716244)
- 
- Q13. **Upload supporting documents** not answered
-



## *Ellen Brockman Integrated Catchment Group Inc.*

12<sup>th</sup> June 2025

Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

Dear Madam

### **RE: METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX) NORTH ELLENBROOK (EAST)**

The Ellen Brockman Integrated Catchment Group was set up in 1996 and consists of community members, community catchment groups, local government, and State Government agencies representatives whose objective is to protect the Ellen Brook and its catchment from environmental degradation and to improve water quality that flows into the Upper Swan River. The Ellen Brook is the biggest contributor of nutrients to the Swan River of all the coastal sub catchments resulting in algal blooms in the summer months.

We have looked at the Amendment 1411 and strongly recommend that more areas be dedicated to reserves and public open space. These can be incorporated into the scheme and would enhance the development for better living outcomes (see attached document).

The addition of further reserves developed for recreation and natural areas created and preserved for biodiversity will

1. Provide open areas for recreation within an urban hub,
2. Increase the tree canopy for shade and cooling to provide pleasant surrounding for people and prevent creating a heat sink,
3. The creation of vegetated corridors for the safer movement of fauna and avifauna particularly along the degraded waterways that flow to the Ellen Brook,
4. Provide food and protection for native fauna including the Carnaby's Black Cockatoos,
5. The vegetated corridors will protect the surface water flows through the area during winter months and reduce the transport of nutrients into the Ellen Brook.
6. The hardstand areas created from the housing development will be substantial and run off into the waterways inevitable. Vegetated riparian corridors will reduce nutrient, non-nutrient contaminants, and sediment input in to the Ellen Brook.
7. Hardstand runoff will also contribute to the groundwater with a very real outcome of a rising water table as has happened in other housing developments. More vegetated areas and retention of large trees can reduce the problems for infrastructure such as roads.
8. Consideration for revegetation and protection of existing vegetation needs to be given to part of the drainage system along the Warbrook Road to the north that flows



*Chittering Landcare Centre*  
175 Old Gingin Road, PO Box 62, MUCHEA WA 6501.  
Tel: 0493 977 426, [admin@chitteringlandcare.org.au](mailto:admin@chitteringlandcare.org.au)  
[www.chitteringlandcare.org.au](http://www.chitteringlandcare.org.au)



directly into the southern boundary of Twin Swamps Reserve, an area dedicated to providing habitat for the critically endangered Western Swamp Tortoise.

9. Areas within the development containing large trees for roosting, feeding and possibly breeding of Carnaby's Cockatoos and other birds need to be protected.

The Ellen Brockman Group has completed many projects over the past 30 years to protect the Ellen Brook and its catchment. This would be a great opportunity to plan for good environmental outcomes within a development area that is situated in a sensitive area of the Swan Coastal Plain.

Thank you for accepting our submission for MRS Amendment 1411 for Ellenbrook North (East). Please contact us on [admin@chitteringlandcare.org.au](mailto:admin@chitteringlandcare.org.au) for further information or contact.

Yours sincerely



Rosanna Hindmarsh  
Executive Officer



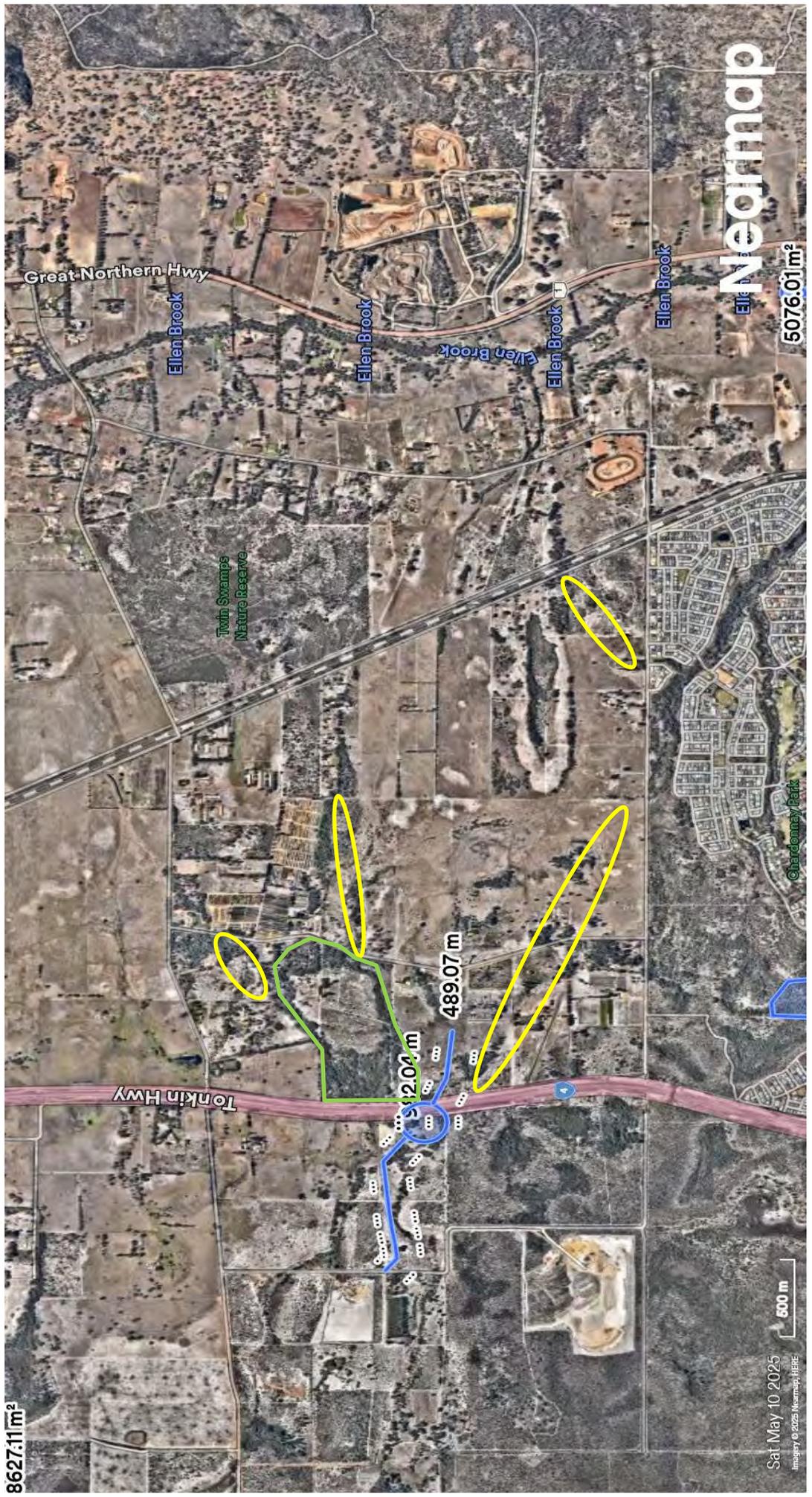
*Chittering Landcare Centre*  
175 Old Gingin Road, PO Box 62, MUCHEA WA 6501.  
Tel: 0493 977 426, [admin@chitteringlandcare.org.au](mailto:admin@chitteringlandcare.org.au)  
[www.chitteringlandcare.org.au](http://www.chitteringlandcare.org.au)



**Metropolitan Region Scheme Amendment 1411**  
**North Ellenbrook (East)**

Submission to the City of Swan. 12th June 2025

Proposed vegetated corridors to facilitate movement of terrestrial fauna and avifauna across the development that can, in future outside this DPS, can connect to the Ellen Brook corridor. These corridors should be revegetated along the water ways (now degraded) that can connect to Sawpit Gully and Maralla Nature Reserve to the south. They would protect waterways and improve water quality.





**Respondent No:** 14

**Login:** Anonymous

**Email:** n/a

**Responded At:** Jun 12, 2025 20:53:26 pm

**Last Seen:** Jun 12, 2025 20:53:26 pm

**IP Address:** n/a

Q1. What is your first name? *Name and contact details removed at the request of the submitter*

---

Q2. What is your surname?

---

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

---

Q4. What is your email address?

---

Q5. What is your address?

---

Q6. What is your contact number?

---

Q7. Are you responding on behalf of an organisation? No

---

Q8. What is the name of the organisation? not answered

---

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

---

**Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.**

Further north along Tonkin Highway from the recently highlighted black cockatoo feeding fiasco lies what was once hailed as the crown jewel of the Tonkin corridor: the fauna bridge—an ambitious and costly piece of infrastructure, built to safeguard native wildlife and preserve fragile ecosystems. It was a symbol of foresight, of coexistence, and of WA's commitment to balancing development with ecological integrity. Yet with the proposed North Ellenbrook housing developments in this planning document, North Ellenbrook East (complex) 1411, that symbol is at risk of being hollowed out. What once guided animals to safety will now lead them straight into destruction—an engineered death trail through the heart of their vanishing habitat. This bridge, once just concrete and steel, now represents something far grimmer: a death march into the relentless sprawl of suburbia. It stands as the gateway through which nature is funnelled into oblivion, one housing lot at a time. North Ellenbrook both east 1411 and west development plans are spread across multiple documents and the fragmented presentation makes it challenging for the general public—and even engaged stakeholders—to understand the full scale of habitat loss, ecological fragmentation and displacement. As someone with familiarity of the area—particularly the Maralla Road Reserve, which is managed by the DBCA—I hold serious concerns about how native fauna, including endangered black cockatoos, are being accounted for in the planning process. The environmental assessments appear fragmented, inconsistent, or in some cases entirely absent. The Tonkin Highway fauna bridge was constructed to enable wildlife to safely move between the Lexia Wetlands in Melaleuca and the Maralla Road Reserve and Sawpit Road habitats—both of which contain important mound springs and watercourses. Yet if residential development proceeds on both sides of the highway, the remaining habitat will be so severely reduced and fragmented that displaced fauna will have nowhere viable to go. Maralla Road Reserve, while ecologically important, does not possess the size, water resources, or structural protection to support large numbers of animals relocated through this corridor. To assume otherwise is to ignore the ecological reality. This raises an unavoidable question: what was the purpose of investing millions of taxpayer dollars into a fauna bridge if the surrounding bushland is to be cleared for housing? If the bridge is to fulfil its intended ecological role, then decisive action must be taken to protect and connect the surrounding natural areas. Specifically: Significant portions of existing Banksia woodland, particularly on the western side of Tonkin Highway, must be preserved; All mound springs, watercourses, and remnant vegetation east of the highway must be protected; And, critically, there must be the creation of a continuous ecological corridor linking the fauna bridge to Maralla Road Reserve, Sawpit Gully, Barnard Springs, and the Bush Forever site to the north. Without these connections, the fauna bridge will not be a corridor of life, but a path to nowhere. This is not simply a question of environmental concern, but one of public accountability. Western Australians deserve transparency in how infrastructure decisions are aligned with long-term land use and conservation goals. If we are to genuinely support coexistence between urban expansion and native ecosystems, we cannot allow short-term planning to undermine long-term ecological investments. The Tonkin fauna bridge was meant to be a legacy of leadership. Let us ensure it does not become a monument to what could have been.

---

**Q11. Upload supporting documents**

[https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/1be047e2d7e785ff14200851475d7093cfc7d1ce/original/1749725541/061230b9e2e72c8896545ca46a71424f\\_inbound561049577704757336.jpg?1749725541](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/1be047e2d7e785ff14200851475d7093cfc7d1ce/original/1749725541/061230b9e2e72c8896545ca46a71424f_inbound561049577704757336.jpg?1749725541)

---

**Q12. Upload supporting documents**

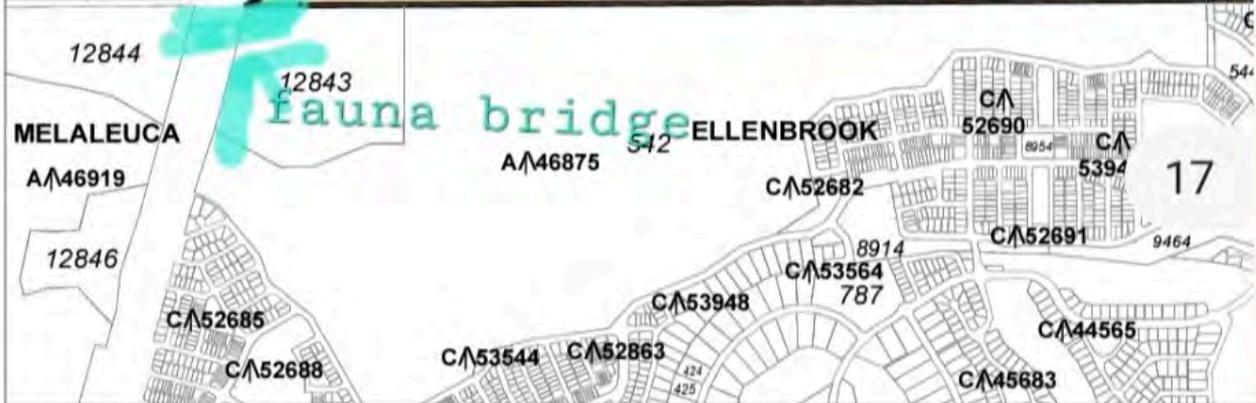
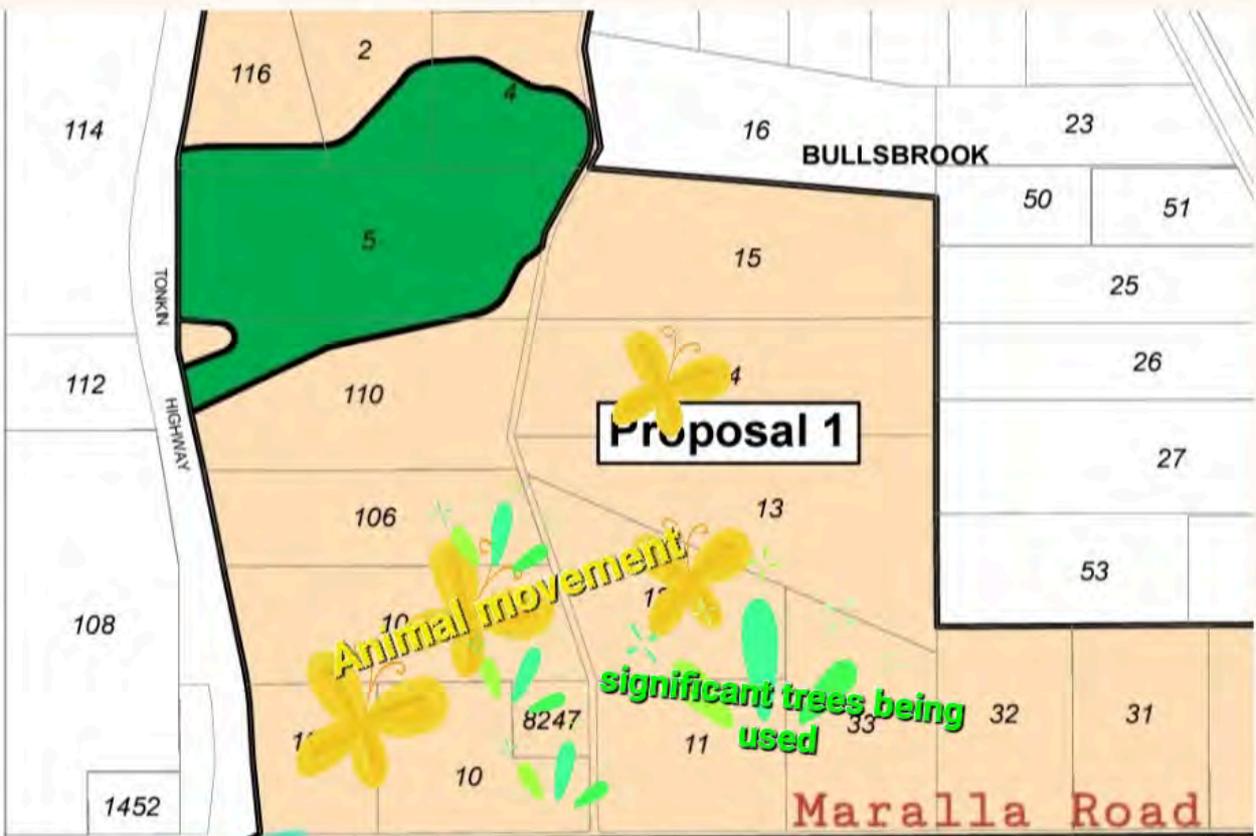
[https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/84187894e2fa51429fedca68c4a4d4ce1ba2970c/original/1749725553/08dda0577a901c2b566d81889c7c20c8\\_inbound247794739227817919.jpg?1749725553](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/84187894e2fa51429fedca68c4a4d4ce1ba2970c/original/1749725553/08dda0577a901c2b566d81889c7c20c8_inbound247794739227817919.jpg?1749725553)

---

**Q13. Upload supporting documents**

[https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/60166d28ace4bbde784eaaffef346b6bbad3b59/original/1749725597/a127aba79fba3317eff564e38a53f905\\_inbound3571584518080709952.jpg?1749725597](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/60166d28ace4bbde784eaaffef346b6bbad3b59/original/1749725597/a127aba79fba3317eff564e38a53f905_inbound3571584518080709952.jpg?1749725597)

---



**North Ellenbrook (East)  
 Proposed Complex MRS amendment  
 as advertised**

13 September 2023



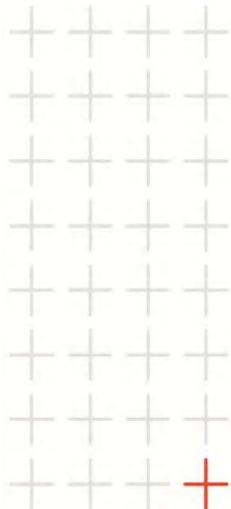
# Animal Welfare a Priority with Our First Fauna Bridge



Along with 37 new road bridges, nine new interchanges and more than 150 kilometres of road safety barriers, NorthLink WA features the state's first dedicated fauna bridge. Whilst we have many animal underpasses throughout the State this is a first for us.

**Respondent No:** 15**Login:** Anonymous**Email:** n/a**Responded At:** Jun 13, 2025 10:58:16 am**Last Seen:** Jun 13, 2025 10:58:16 am**IP Address:** n/a

Q1. What is your first name?	Ryan
Q2. What is your surname?	Darby
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	ryan.darby@hatch.com
Q5. What is your address?	Level 1 197 St Georges Terrace, Perth
Q6. What is your contact number?	0408614346
Q7. Are you responding on behalf of an organisation?	Yes
Q8. What is the name of the organisation?	Satterley North Ellenbrook Pty Ltd
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Support
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.  Refer to attached submission	
Q11. Upload supporting documents	<a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/813ed403d11266a38b68ea983163d8a78610667a/original/1749776291/4dcfdeb7ed380d325618c82c0697504a_250605%20H370844%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission%20%28Draft%29.pdf?1749776291">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/813ed403d11266a38b68ea983163d8a78610667a/original/1749776291/4dcfdeb7ed380d325618c82c0697504a_250605%20H370844%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission%20%28Draft%29.pdf?1749776291</a>
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered



**HATCH**

OUR REF: H370844

13 June 2025

Department of Planning, Lands and Heritage  
Locked Bag 2506  
Perth WA 6001

Attention: Region Schemes Team

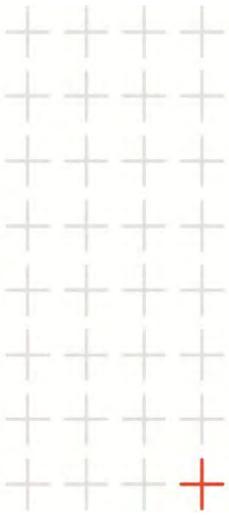
Dear Sir/Madam,

**SUBMISSION: METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX) - NORTH ELLENBROOK (EAST)**

1. We act for the beneficial landowners of Lots 104 and 106 Sawpit Road, Bullsbrook in providing the following submission to the Department of Planning, Lands and Heritage (DPLH) on their behalf on the Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) (the 'Amendment').
2. The subject lots are located on the western boundary of the Amendment area and have frontage to Sawpit Road.
3. It is noted that there are four requirements to be addressed prior to the Amendment area being rezoned to 'Urban', being:
  - Amesosopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads Western Australia (MRWA), DoT and City of Swan and the Traffic Impact Assessment (TIA) that accompanies the North Ellenbrook (East) District Structure Plan (DSP) is to be updated to reflect the outcomes of the State Government transport assessment.
  - Confirmation on the location and land requirements for a road interchange with Tonkin Highway.
  - Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site.
  - Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements.
4. It is understood that each of the requirements have been addressed or can be addressed in the near term. It is therefore suggested that the Amendment area be rezoned 'Urban' under the MRS and 'Residential Development' under the City of Swan Local Planning Scheme No 17 in accordance with s.126(3) of the *Planning and Development Act 2005*.

5. The following table provides justification that the requirements have been addressed:

Requirement	Response
MRWA mesoscopic transport model and updated District Structure Plan Traffic Impact Assessment (TIA)	It is understood that MRWA have finalised the mesoscopic transport model. The MRS Amendment proponents are updating the TIA submitted as part of the original DSP to address mesoscopic transport model outcomes.
Confirmation on the location and land requirements for a road interchange with Tonkin Highway	MRWA have provided a plan showing the interchange location and land requirements.
Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site	<p>This is a key matter requiring progression by Water Corporation (servicing and funding) who are actively engaging with agencies and developers. TAG meetings with all agencies are being re-instigated in concert with the DPLH.</p> <p>It is noted that the entire Bullsbrook South Precinct had its 'Urban Deferment' lifted to the 'Urban' zone at the WAPC meeting of 30 April 2025. The Bullsbrook South Precinct will connect to the same water and sewer network at the MRS Amendment 1411 area, noting that the first 500 to 560 lots will be serviced by an interim WWPS. The minutes of the 30 April 2025 meeting stated:</p> <p><i>'Members queried the potential risks of zoning the entire area as urban. Members were informed that there are no potential risks, and that the decision ultimately involves balancing whether to lift the urban deferment for the entire land area or just a portion of it, with both perspectives being valid. Members were also advised that structure planning and subdivision processes ensures that future planning stages will not proceed without appropriate infrastructure provision in place.'</i></p> <p>As there is no potential risks in zoning the area 'Urban' as the structure planning and subdivision processes ensure that future planning stages will not proceed without appropriate infrastructure provision in place, this requirement is considered addressed.</p>



Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements	The MRS Amendment environmental consultants are preparing a strategy to best address this requirement given poultry farms no longer operational. Potential impacts of any buffer will likely see affected area remain partially as Urban Deferred.
--	--

Thank you for considering our submission. Should you require any further information or clarification of the above please contact the undersigned on 0408 614 346.

Yours faithfully,  
HATCH

RYAN DARBY  
REGIONAL DIRECTOR

**Respondent No:** 16**Login:** Anonymous**Email:** n/a**Responded At:** Jun 13, 2025 13:38:05 pm**Last Seen:** Jun 13, 2025 13:38:05 pm**IP Address:** n/a

Q1. What is your first name?	Jackson
Q2. What is your surname?	Tomich
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	jtomich@parcelproperty.com.au
Q5. What is your address?	Level 1, 301 Vincent Street Leederville
Q6. What is your contact number?	0423475014
Q7. Are you responding on behalf of an organisation?	Yes
Q8. What is the name of the organisation?	Parcel Property
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Support
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.  Please refer to attached submission. Thank you.	
Q11. Upload supporting documents	<a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/e1596554005140b97957c092facee3ffcf81feb/original/1749785710/a90dbf9a34c97cbec69dc587e49a8336_20250612%20Parcel%20SubmissionMRS%20Amendment%201411.pdf?1749785710">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/e1596554005140b97957c092facee3ffcf81feb/original/1749785710/a90dbf9a34c97cbec69dc587e49a8336_20250612%20Parcel%20SubmissionMRS%20Amendment%201411.pdf?1749785710</a>
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered

13<sup>th</sup> June 2025

Region Schemes Team  
Department of Planning, Lands and Heritage  
140 William Street  
PERTH WA 6000

To whom this may concern,

**RE: Proposed Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East)**

Parcel Property is pleased to provide the following submission in response to the advertised Metropolitan Region Scheme (**MRS**) Amendment 1411 (**the Amendment**), relating to the North Ellenbrook (East) District Structure Plan (**DSP East**) Area (**the Subject Area**). Parcel Property thanks the Department of Planning, Lands and Heritage (**DPLH**) for the opportunity to review the proposed Amendment and contribute to the ongoing planning and development of the North-East Corridor. Parcel Property looks forward to continued collaboration with the Department and relevant stakeholders to support the coordinated delivery of this important growth area.

Parcel Property is the proprietor of various lots within the North Ellenbrook West District Structure Plan (**DSP West**) area. DSP West is the counterpart to DSP East and is located immediately adjacent to the Subject Area, across Tonkin Highway. As the primary landholder and proponent within DSP West, Parcel Property is actively committed to the planning and delivery of the broader North-East Corridor. We fully support and advocate for the timely delivery of housing within the State identified growth corridor, recognising its critical role in meeting Perth's future housing needs.

Parcel Property acknowledges and supports the importance of unlocking development-ready land within the North-East Corridor. While we support the proposed Amendment, we strongly advocate that the land be rezoned **straight to Urban Zone**, as opposed to Urban Deferred. The rationale for this position is outlined in detail throughout this submission and summarised overleaf.

**Submission Summary**

Parcel Property supports the proposed amendment and provides the following key comments for consideration:

1. The amendment should proceed straight to Urban Zone, as opposed to Urban Deferred.
2. The matters identified for resolution prior to lifting of Urban Deferred (**LUD**) are already well advanced, with significant progress made by the relevant State Agencies, including Water Corporation and Main Roads Western Australia.
3. The recent decision by the Western Australian Planning Commission (**WAPC**) to support full Urban zoning in Bullsbrook South MRS Amendment demonstrates a precedent for advancing Urban zoning in the North-East Corridor, where State-led infrastructure planning has been sufficiently progressed.

### **Amendment to Urban and Addressing LUD Criteria**

Upon review of the advertised documentation, Parcel Property are of the view that, by the time the amendment is finalised, the matters identified for resolution prior to LUD will be sufficiently addressed to support the development of the area. These matters are outlined below.

#### Tonkin Highway Intersection and Mesoscopic Modelling.

The proposed intersection at Tonkin Highway is currently being progressed by Main Roads and its appointed Technical Advisory Group (**TAG**). Based on advice received through the TAG, it is anticipated that the intersection location and associated land take requirements will be finalised prior to the completion of this Amendment. Furthermore, it is widely understood that the progression of the intersection has been undertaken in coordination with the mesoscopic transport model for the broader catchment.

In light of the above, Parcel Property supports the amendment progressing straight to Urban Zone, on the basis that Items 1 and 2 will be resolved prior to finalisation of the Amendment.  
Funding of Water and Wastewater Headworks.

Parcel Property understands that the Water Corporation are providing significant resources towards planning infrastructure to service the North-East Corridor, including North Ellenbrook West, North Ellenbrook East, Bullsbrook South, and ultimately Bullsbrook North. It is also understood that the Water Corporation has identified a preferred servicing route from Ellenbrook to Bullsbrook and have detailed design work underway.

This progress has been achieved through extensive engagement between DPLH and developers in order to assist the Water Corporation with its corridor planning.

Given the State Government's commitment to funding enabling infrastructure, such as through the Housing Enabling Infrastructure Fund, Parcel Property is of the view that Item 3 will be adequately resolved prior to the finalisation of the Amendment.

### Consideration of Poultry Farm and Nurseries.

Parcel Property is of the opinion that buffer zones, such as those relating to poultry farms and nurseries, is a matter that can be addressed through the Local Structure Planning process. Given the high-level nature of an MRS amendment, it is not necessary for land use buffers to be fully resolved at this stage.

Instead, this matter can be addressed through concept planning as part of the MRS process, which is already a requirement for LUD, and through the progression of adequate reporting and mapping within the applicable Local Structure Plan. Technical reporting can and should be provided at the subdivision stage to demonstrate, in accordance with the Structure Plan requirements, that land within the mapped buffer zone is capable of supporting development.

Parcel Property supports the amendment progressing straight to Urban Zone, on the basis that Item 4, relating to poultry farms and nurseries, can be resolved through the ongoing Local Structure Planning process and should not hold up housing supply in this priority corridor.

### **MRS Amendment - Bullsbrook South Precinct — Determination (RLS/1120)**

It is requested that the assessment and ultimate determination of this proposed Amendment be undertaken in the context of the recent Bullsbrook South Precinct MRS Amendment (RLS/1120), approved by the WAPC on 30 April 2025. This amendment supported a full Urban rezoning, despite infrastructure planning in the North East Corridor being progressed but not yet finalised. The level of advancement at the time provided the WAPC with sufficient confidence to proceed.

Parcel Property considers that the current Amendment presents a similar scenario to that of Bullsbrook South, with infrastructure planning more advanced than suggested in the advertised documentation. The WAPC's decision on Bullsbrook South sets a contemporary planning precedent for supporting full Urban rezoning in the context of sufficiently progressed infrastructure planning, enabling the Commission to approve with confidence.

### **Consideration of Early Infrastructure**

Notwithstanding the above, Parcel Property would like to acknowledge DPLH's commitment to advancing discussions around early infrastructure.

DPLH, through the advertised amendment report, makes consistent reference to the need for a coordinated Tonkin Highway intersection location. Parcel Property supports DPLH's continued commitment to the current Technical Advisory Group process and the intersection location and early infrastructure being progressed through that process.

Parcel Property acknowledges the reference to utilising the disused transit corridor reserve through Ellenbrook for a sewer pressure main, as well as a future WWPS transfer at Maralla Road. Future decisions regarding this wastewater infrastructure are key to unlocking both North Ellenbrook East and West. Given Parcel Property's landholdings and the associated impact, we respectfully request to be included in ongoing discussion relating to its planning and delivery.

### **Conclusion and Recommendation**

In summary, Parcel Property is conscious that the items required to be addressed prior to LUD are currently being progressed by various State agencies. As such, Parcel Property believe that, by the time the Amendment is finalised, the North Ellenbrook East area will be able to progress straight to Urban.

Parcel Property would like to again thank DPLH for the opportunity to review and provide feedback on this proposal. Should you require any further information, please don't hesitate to contact the undersigned.

Kind Regards,

*Fenualla O'Brien*

Fenualla O'Brien  
Senior Development Manager



Respondent No: 17

Login: Anonymous

Email: n/a

Responded At: Jun 13, 2025 17:42:32 pm

Last Seen: Jun 13, 2025 17:42:32 pm

IP Address: n/a

Q1. What is your first name?	Sean
Q2. What is your surname?	Fairfoul
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	sean@lateralplanning.com.au
Q5. What is your address?	44 King Street, Perth WA 6000
Q6. What is your contact number?	0413441199
Q7. Are you responding on behalf of an organisation?	Yes
Q8. What is the name of the organisation?	Lateral Planning
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Support
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.	<p>The landowner of the nearby 166 Halden Road, Bullsbrook, supports the proposed MRS rezoning of the land in accordance with the endorsed District Structure Plan. It is considered that as result of the extensive planning for the overall area, including the provision of detailed technical reporting the reasons for the Urban Deferred zoning have either already been addressed or are capable of being addressed through Local Structure Planning process. We are of the view that an Urban zoning will support and encourage the timely delivery of new housing and provide certainty for landowners and developers. Accordingly, we request that the deferral of the land's urbanisation be set aside, and that the land be rezoned to Urban under the MRS as part of the advertised rezoning. (refer attached)</p>
Q11. Upload supporting documents	<a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b489f66dd365b516f69f25156f29fb2a0360d8f3/original/1749800549/049edcee6138e945503b9d2445f0c62d_0231%2020250609%20MRS%20Amendment%20Submission.pdf?1749800549">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b489f66dd365b516f69f25156f29fb2a0360d8f3/original/1749800549/049edcee6138e945503b9d2445f0c62d_0231%2020250609%20MRS%20Amendment%20Submission.pdf?1749800549</a>
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered

9 June 2025

The Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

Attention: Anthony Muscara – Principal Planner – Land Use Planning

Dear Mr Muscara,

**MRS Amendment 1411 (Complex) – North Ellenbrook (east)**

Lateral Planning acts on behalf of the landowner of 166 Halden Road, Bullsbrook, and welcomes the opportunity to provide this submission in support of the proposed amendment to the Metropolitan Region Scheme (MRS) affecting the eastern portion of the North Ellenbrook District Structure Plan (DSP) area. While 166 Halden Road is not located within the area included in the proposed amendment, the site is within the DSP.

We are broadly supportive of the amendment, which aligns with the State Government's strategic intent to deliver new urban growth areas in Perth's north-eastern corridor. We respectfully submit that the **Urban Deferred** designation proposed for the subject land should instead be advanced directly to **Urban** zoning.

The North Ellenbrook DSP area, including the subject land, has already been subject to comprehensive detailed planning and technical investigations. These include extensive environmental, traffic, infrastructure servicing, and land use planning studies, which together provide a robust and informed basis for the district structure planning and future development.

We consider that the reasons for the current Urban Deferred zoning have either already been addressed or are capable of being addressed through the Local Structure Planning process.

We acknowledge that subdivision and development of the land will not proceed until the planned freeway interchange is constructed and operational. However, advancing the land to an **Urban** zoning at this stage will provide greater certainty to landowners and agencies involved in infrastructure coordination and investment planning.

In conclusion, while we support the intent of the MRS amendment, we submit that the land is capable of immediate progression to the **Urban** zone, in recognition of the thorough investigations already undertaken and the strategic imperative to bring well-located land to market efficiently in alignment with infrastructure delivery.

We would welcome the opportunity to engage further with the Department and the WAPC to support this outcome.

Should you require any further information or clarification in relation to this matter, please contact Sean Fairfoul on 0413 44 11 99.

Yours faithfully,



**Sean Fairfoul**  
Lateral Planning

**Respondent No:** 18**Login:** Anonymous**Email:** n/a**Responded At:** Jun 15, 2025 13:26:11 pm**Last Seen:** Jun 15, 2025 13:26:11 pm**IP Address:** n/a

Q1. What is your first name?	Michelle
Q2. What is your surname?	Davies
Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?	No
Q4. What is your email address?	wagtailfarm@bigpond.com
Q5. What is your address?	39 Davern Street Muchea WA 6501
Q6. What is your contact number?	0417978601
Q7. Are you responding on behalf of an organisation?	No
Q8. What is the name of the organisation?	not answered
Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?	Oppose
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.  Please refer submission document attached.	
Q11. Upload supporting documents	<a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/82cadbea695c879f700c39d804b809e8a4caf18a/original/1749957959/07cf2571a20adcaec84a532c994df2ff_WAPC%20Submission%20MRS%20Amendment%201411%20Michelle%20Davies.pdf?1749957959">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/82cadbea695c879f700c39d804b809e8a4caf18a/original/1749957959/07cf2571a20adcaec84a532c994df2ff_WAPC%20Submission%20MRS%20Amendment%201411%20Michelle%20Davies.p df?1749957959</a>
Q12. Upload supporting documents	not answered
Q13. Upload supporting documents	not answered

**SUBMISSION FORM**  
**Metropolitan Region Scheme Amendment 1411 (Complex)**  
**North Ellenbrook (East)**

---

**Report:** [MRS 1411 Complex Amendment Report](#)

**Submission To:** Secretary  
Western Australian Planning Commission  
Locked Bag 2506 PERTH WA 6001  
[Submitted via Online Form](#)

**Submission From:** Ms Michelle Davies  
39 Davern Street  
Mучea WA 6501  
0417 978 601  
[wagtailfarm@bigpond.com](mailto:wagtailfarm@bigpond.com)

**Privacy:** Submissions may be published as part of the consultation process.  
Do you wish to have your name removed from your submission? No

---

**Submission**

I strongly oppose the proposed scheme amendment as it does not adequately prioritize environmental protection and community well-being.

The lack of allocation for environmental reserves and public open spaces undermines the essential balance between urbanization and ecological sustainability.

While addressing the housing crisis is important, we cannot overlook the equally pressing climate, environmental, and mental health crises. Continually approving developments that do not adequately address these crucial aspects will only exacerbate the situation, leading to long-term harm to both ecosystems and community well-being.

A development approach that places environmental preservation at the forefront is essential for long-term sustainability. Integrating open recreational spaces, expanding tree canopy coverage, and protecting ecological corridors will not only support biodiversity but also create a healthier, more livable urban setting. Access to green spaces is well-documented to enhance mental health, providing residents with areas for relaxation, socialization, and stress relief.

Vegetated corridors are vital for ecological connectivity, enabling native fauna, including endangered Black Cockatoos, to move safely through urban areas and find food and shelter. These green networks also play a crucial role in waterway protection, reducing nutrient and sediment pollution, maintaining surface water flow, and safeguarding the Ellen Brook ecosystem and its surrounds, which contribute to the health of the Swan River.

The environmental consequences of hardstand runoff from housing developments must also be considered. Without effective mitigation, rising groundwater levels could threaten infrastructure

**SUBMISSION FORM**  
**Metropolitan Region Scheme Amendment 1411 (Complex)**  
**North Ellenbrook (East)**

---

stability and the viability of surrounding ecology. The retention of vegetated riparian buffers will help filter contaminants, reduce surface runoff, and protect fragile ecosystems such as Twin Swamps Reserve, which serves as a critical habitat for the endangered Western Swamp Tortoise.

In light of these considerations, I strongly recommend:

1. The allocation of more land for environmental reserves and public open spaces, particularly those noted in the EPA report related to this amendment.
2. The protection of all ecologically sensitive and environmentally valuable areas to enhance biodiversity.
3. The expansion of tree cover to improve urban cooling, ecosystem health, and mental well-being.
4. The preservation of large trees, which are vital for the survival of native bird species.
5. The establishment of vegetated corridors to support wildlife movement and protect waterway integrity.
6. The implementation of stringent runoff management strategies to prevent environmental degradation.

By embedding these recommendations into planning and development efforts, urban growth can be harmonized with ecological sustainability and mental health priorities, ensuring a thriving, resilient environment and community for current and future generations. It will also support the protection of our most precious resource – water.

I urge that the amendment be revised and resubmitted before any re-zoning is approved.

Thankyou for considering my submission.

Yours sincerely,  
Michelle Davies

Our Reference: 3883Ltr40  
Enquiries: Daniel Martinovich/Alex Jarvis

19 November 2025

Anthony Muscara  
Principal Planning Officer  
Department of Planning, Lands and Heritage  
140 William Street  
Perth WA 6000

Via email: [regionplanningschemes@dplh.wa.gov.au](mailto:regionplanningschemes@dplh.wa.gov.au)

Dear Anthony

**RE: SUBMISSION ON METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX) – NORTH ELLENBROOK (EAST)**

CLE Town Planning + Design ('CLE') welcomes the opportunity to make a submission as the applicant on the proposed complex Metropolitan Region Scheme ('MRS') Amendment 1411, which is being progressed on behalf of Abadeen Group Pty Ltd and Bravestar Group Pty Ltd.

We support the principle of the land being developed for urban purposes, as proposed by the Amendment, and note the proposed zoning and reservations (as applicable) are consistent with the overarching North Ellenbrook (East) District Structure Plan ('DSP').

However, we request a change to the zoning approach initiated by the Western Australian Planning Commission ('WAPC'). Specifically, we request that the WAPC, on the advice of the Department of Planning, Lands and Heritage ('DPLH'), rezone the 'Urban Deferred' portion of the Amendment area directly to the 'Urban' zone. This request excludes the land affected by the planned Tonkin Highway interchange, which is discussed further below.

In response to the four lifting of urban deferment requirements listed in the WAPC's initiation report, we are of the view that rezoning the land directly to 'Urban' is warranted for the following reasons:

- |                    |   |
|--------------------|---|
| <b>Requirement</b> | A mesoscopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads WA in collaboration with DPLH and the City of Swan ('City'). The Traffic Impact Assessment ('TIA') that accompanies the DSP is to be updated to reflect the outcomes of the State Government transport assessment. The updated TIA will inform subsequent stages of planning, specifically TIA's that accompany local structure plans. |
| <u>Response</u>    | The mesoscopic transport model has been completed by Main Roads WA but has not been provided to the project team to enable the TIA to be updated. Nevertheless, the outcomes of any updates to the TIA are unlikely to render any changes to the DSP's arterial road network, which are already planned as 'Integrator A' roads.  |
| <b>Requirement</b> | Confirmation on the location and land requirements for a road interchange with Tonkin Highway.  |
| <u>Response</u>    | Main Roads WA has confirmed the location and land requirements for the Tonkin Highway interchange.  |

**Requirement** Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site.

Response The Water Corporation has allocated funding and resources to progress infrastructure planning for this corridor. Multiple funding mechanisms are available, with the final capital source/s able to be confirmed separate to the MRS Amendment process and prior to the creation of titles.

**Requirement** Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements.

Response Assessment of the plant nursery and poultry farms in proximity to the Amendment area has confirmed they do not pose a constraint to future development. Any buffers that may be required can be addressed in a future local structure plan.

We also request that the WAPC concurrently amend the City's Local Planning Scheme No. 17 ('LPS 17') by rezoning the land 'Residential Development Zone' pursuant to Section 126(3) of the *Planning and Development Act 2005* ('the Act').

Rezoning the land directly to 'Urban' with a concurrent LPS 17 Amendment represents the most efficient planning approach to unlock additional land for housing, noting this land has been identified for future Urban Expansion since the release of the Sub-regional Planning Framework in 2018.

The commitment to this land being urbanised in the short term is evidenced by Main Roads WA's progression of the Tonkin Highway interchange project, which will provide the key point of access to the DSP upon completion. Main Roads WA has confirmed the location of the interchange and obtained the relevant environmental approvals, with the project now progressing to the procurement phase. Construction of the interchange is anticipated to commence in 2026 and be completed in late 2027. Significant commitments have been made to the delivery of this interchange to unlock additional land for housing, with approximately \$75 million of State and Federal funding allocated to the project. It is therefore critical that the land is rezoned to facilitate timely local structure planning and subdivision approvals to align with the delivery of this interchange.

Accordingly, the zoning of the land should support these substantial levels of public investment and the State and Federal Government's commitment to the supply of housing in North Ellenbrook.

## **Background**

CLE's initiation request dated 10 May 2023 sought to rezone the land referred to as North Ellenbrook (east) to 'Urban Deferred' and 'Parks and Recreation' in accordance with the approved DSP. Accordingly, the WAPC initiated an amendment to the MRS to zone the land 'Urban Deferred', subject to the following requirements for the lifting of urban deferment being addressed:

1. *A mesoscopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads Western Australia in collaboration with the DPLH and the City. The TIA that accompanies the DSP is to be updated to reflect the outcomes of the State Government transport assessment. The updated TIA will inform subsequent stages of planning, specifically TIA's that accompany local structure plans.*
2. *Confirmation on the location and land requirements for a road interchange with Tonkin Highway.*
3. *Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site.*
4. *Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements.*

Whilst the Amendment was initiated as set out above, the WAPC has the option of rezoning the proposed 'Urban Deferred' portion of the Amendment directly to 'Urban'. In addition, the WAPC also has the option to concurrently rezone the land under the City's LPS 17 to 'Residential Development Zone' pursuant to Section 126(3) of the *Planning and Development Act 2005*.

Since initiation of the Amendment, the project team has continued discussions with agencies regarding more detailed site planning for the DSP area, as well as servicing and infrastructure requirements. This has included targeted meetings and discussions with DPLH, Main Roads WA and Water Corporation, in addition to attending regular North Ellenbrook Technical Advisory Group ('TAG') meetings hosted by DPLH and Tonkin Highway North Ellenbrook Interchange ('THNEI') TAG meetings hosted by Main Roads WA.

As a result of this ongoing engagement and further advancement of service and infrastructure planning for the corridor by agencies, the future 'Urban' land is not required to be held in the 'Urban Deferred' zone. The proposed requirements for lifting of urban deferment have either been addressed, or are capable of being addressed at the local structure planning stage.

Further discussion on the requirements for the lifting of urban deferment, as well as our request to concurrently amend the City's LPS 17, is set out in further detail below.

#### **Requirement 1 – TIA updates to address Main Roads' mesoscopic transport model**

The project team has discussed the matter of addressing this requirement with Main Roads WA, both at an in-person meeting in June and via several emails to Main Roads WA officers, in which the mesoscopic modelling data and outcomes of the subsequent transport assessment have been requested. Main Roads WA has confirmed that the mesoscopic transport model has been completed but that it will not be provided to proponents.

Nevertheless, the outcomes of this model are highly unlikely to require any changes to the DSP road hierarchy, given the primary links of Sawpit Road, Maralla Road and the connector road to the Tonkin Highway interchange are all proposed as 'Integrator A' roads (four lanes with minimum reserve widths ranging between 37.8m – 52.6m). It is therefore improbable that the modelling outcomes will result in changes to the internal DSP road network, as the arterial roads are already designated at the highest standard contemplated (Integrator A at up to 52.6m wide). Any changes that may be required to the balance of roads can be dealt with as part of TIA's at the local structure plan stage.

This is expressly contemplated in Section 5.3.2 of the DSP Part 2 – Explanatory Report, where it is stated that *"...subsequent local structure planning processes should be adaptive to consider and respond to refinements in the traffic modelling as development progresses over time. Further traffic investigations are therefore required at the local structure plan stage to refine the movement network to achieve an optimum result that reflects contemporary travel behaviour (work from home), aligns with the objective of encouraging sustainable travel methods (walking, cycling, public transport) and supports good urban design outcomes."*

In addition, the proposed Amendment is not seeking to reserve any land as either Primary or Other Regional Road. Subsequently, even if an updated TIA recommended modifications to the road hierarchy this can and should be addressed at the local structure planning stage as per the above, and reflected in a future amendment to the MRS once the road reservations are defined.

Given the above, any updates to the TIA will not alter the outcomes of the proposed Amendment and therefore do not present a need to retain the land in the 'Urban Deferred' zone.

## **Requirement 2 – Tonkin Highway interchange and land requirements**

The Tonkin Highway interchange and supporting land requirements have been confirmed by Main Roads WA. This interchange will provide the key access and egress into the DSP area upon completion.

In response to the confirmed Tonkin Highway interchange location and footprint, it is recommended that the land required to accommodate the interchange be retained in the 'Rural' zone. As agreed with Main Roads WA, this land will be subject to its own amendment at a later date to reserve the land as 'Primary Regional Road'. An updated Amendment map has been prepared and is included as **Attachment 1** to illustrate the extent of the Tonkin Highway interchange footprint, and subsequently the land within the Amendment area to be retained within the 'Rural' zone.

It is recommended that DPLH confirm the extent of the Tonkin Highway interchange land requirement with Main Roads WA, as set out in **Attachment 1**, to inform the final extent of land to be rezoned and reserved under MRS Amendment 1411.

For these reasons, this lifting of urban deferment requirement has been satisfied.

## **Requirement 3 – Water and wastewater services**

The Water Corporation is currently progressing infrastructure planning for North Ellenbrook and Bullsbrook. Significant progress has been made over recent months by the Water Corporation with regards to wastewater planning, in conjunction with other utility providers and government agencies. It is our understanding that Water Corporation's water planning is already well advanced and is expected to be completed by December 2025.

As part of this infrastructure planning, consideration is being made by Water Corporation with regards to the funding of these assets. With the announcement of the Housing Enabling Infrastructure Fund ('HEIF') by the State Government to unlock housing and land supply, North Ellenbrook is a priority growth corridor that the Water Corporation is considering in their allocation of the HEIF. In addition, the Water Corporation's Capital Investment Program ('CIP') provides a potential funding mechanism for headworks projects. North Ellenbrook is not currently on the CIP, however this represents an alternative mechanism in the unlikely event that funding through the HEIF is not secured.

The Water Corporation has allocated funding and internal resources to progress infrastructure planning for North Ellenbrook, which will include consideration of funding mechanisms for the delivery of infrastructure.

Although an agreement for the funding of water and wastewater headworks has not yet been finalised by the Water Corporation, substantial progress has been made and a range of suitable mechanisms are available to ultimately support the delivery of the required infrastructure. Importantly, the choice of funding mechanism will not affect the proposed zoning under the MRS Amendment or the spatial layout of the DSP.

Accordingly, it is not considered necessary to retain the land in the 'Urban Deferred' zone pending final agreement with Water Corporation on the headworks funding. The proceeding planning stages (local structure planning and subdivision) will take time to advance once the land is rezoned, meaning that funding of service infrastructure can continue to progress in parallel. As has been demonstrated, sufficient planning has been undertaken and appropriate mechanisms exist to ensure future delivery of this infrastructure at the time it is required (subdivision construction and creation of titles).

This approach is consistent with the WAPC's recent decision to lift the urban deferment over the land subject to the MRS Amendment 1323/41: Bullsbrook South Precinct.

#### **Requirement 4 – Consideration of poultry farm and plant nursery buffers**

The Amendment area is in proximity to the following rural uses:

1. Ellenby Tree Farm located on Lots 16 (208) and 17 (228) Sawpit Road and Lot 18 (405) Warbrook Road, Bullsbrook; and
2. Oakland Poultry Farm located on Lot 22 (675) Railway Parade, Bullsbrook.

A Technical Note has been prepared to assess the potential impact of these uses on the Amendment area, with reference to the applicable policy framework. This includes the Environmental Protection Authority's ('EPA') '*Guidance Statement No. 3: Separation Distances Between Industrial and Sensitive Land Uses*' and the Department of Health '*Guidelines for Separation of Agricultural and Residential Land Uses*' (DoH Guidelines).

In addition to the above, AAA Egg Company previously operated a poultry farm on Lot 20 (357) and Lot 21 (355) Warbrook Road, Bullsbrook. They have relocated their poultry operations to a facility in Muchea, and whilst the poultry sheds remain on-site, they are no longer operational. Notwithstanding this, the Technical Note has evaluated the potential impacts of the existing poultry sheds on the Amendment area to ensure a conservative assessment of potential risks.

The Technical Note is included as **Attachment 2**, with the key findings summarised as follows:

- The nearest poultry shed to the Amendment area is 355m from the northern boundary, and is not operational. This exceeds the minimum generic separation distance of 300m set out in the EPA's Guidance Statement No. 3.
- The existing poultry sheds along the southern boundary of Lot 21, which are not operational, are surrounded by strands of trees that provide a level of buffering to surrounding land uses.
- Lot 23 Railway Parade, which separates most of the poultry sheds from the Amendment area, forms part of Bush Forever Site No. 400. This site contains approximately 214m of Banksia and Eucalypt remnant vegetation ranging in height from 6m-10m between the poultry sheds and Amendment area, providing an effective buffer between the sites.
- The plant nursery is within the generic separation distance of 100m of the Amendment area as recommended by EPA's Guidance Statement No. 3. The DoH Guidelines allow for a reduced separation distance of 40m to agricultural uses where a vegetation buffer is in place.
- The plant nursery has a 78m wide and 780m long vegetative buffer along its southern boundary, appropriately mitigating any perceived risks to the north-eastern portion of the Amendment area, being Lot 15 Sawpit Road.
- The plant nursery is effectively separated from the northern portion of the Amendment area by Sawpit Road, being Lot 2 Sawpit Road and Lot 481 Warbrook Road.
- The plant nursery uses organic techniques to control pests, further minimising any perceived impacts from spray drift.
- A risk assessment in accordance with the Department of Water and Environmental Regulations '*Risk Assessment Guidelines*' as documented within **Attachment 2** concluded a 'low' level of risk of both the poultry farm and plant nursery impacting future residential development within the Amendment area.

The Technical Note demonstrates that the existing plant nursery and poultry farms do not present an impediment to future development, and that mitigation measures are unlikely to be required.

Should any minor mitigation be required, this can be appropriately addressed through provisions included in the implementation section of a future local structure plan, following more detailed on-site technical assessments. Alternatively, potential impacts can be managed through the structure plan design by locating non-sensitive land uses in areas where amenity constraints may exist. Part 1 of the DSP identifies this as a matter to be addressed at the local structure planning stage, providing an appropriate mechanism to ensure it is considered in subsequent stages of the planning process.

It is therefore not considered necessary for any part of the Amendment area to be held in the 'Urban Deferred' zone.

This approach is consistent with MRS Amendment 1424/27, whereby Lots 877 and 878 Stakehill Road, Karnup were rezoned from 'Urban Deferred' to 'Urban', notwithstanding the existence of two operational poultry farms and a market garden in proximity to the subject land.

### **Concurrent Amendment to Local Planning Scheme No. 17**

Pursuant to section 126(3) of the Act, we request that the WAPC concurrently amend the City's LPS 17 by rezoning the proposed 'Urban' zoned land to 'Residential Development Zone'.

A concurrent amendment is requested as it represents the most efficient process to progress a planning framework over the land to facilitate land for housing, in accordance with the intended urban outcome. North Ellenbrook is a key growth corridor that will support the State and Federal government's objectives of delivering land to meet housing supply needs. Supporting a streamlined planning process is a key to facilitating more land for housing in the most efficient manner possible. It will also enable the planning framework to align with the delivery and completion of the Tonkin Highway interchange and supports the circa \$75 million of State and Federal government investment in the project, as discussed above.

A concurrent amendment to LPS 17 will avoid the need for a separate local scheme amendment process, which is anticipated to take approximately 18 months to complete and would delay submission of a local structure plan.

Importantly, there are no scheme text provisions needed to coordinate the future, more detailed planning for the land that may otherwise necessitate the need for a separate amendment to the City's LPS 17. The land is already subject to an approved DSP that sets out matters to be addressed at the local structure planning stage. The 'Residential Development Zone' requires a local structure plan to be prepared and approved prior to subdivision and development, which ensures all necessary details and technical reports are prepared to support preparation of a comprehensive structure plan to guide future subdivision.

Prescribing structure plan requirements within the scheme text is not necessary, given the detailed guidance provided by the DSP and the WAPC's Planning Manual for Structure Plans.

### Environmental Considerations – EPA Advice

In its advice on the Amendment dated 16 December 2024, the EPA noted the ability for future planning processes to appropriately mitigate environmental impacts, and as such elected to 'not assess' the Amendment. The EPA's advice in determining to not assess the Amendment was premised on an amendment being progressed to the DSP to address:

- *Expansion of the existing areas proposed for local reservation under the DSP, some of which will capture additional consolidated areas of black cockatoo foraging habitat;*
- *Identification of potential additional 'public open space' areas that could be implemented through future local structure planning stages; and*

- *Modifications to the DSP text to introduce provisions for the retention of further black cockatoo foraging habitat, additional to those areas already identified on the DSP map, with compliance to be demonstrated at the local structure planning stage and supported by management strategies for the reserve areas that contain black cockatoo foraging habitat.*

Through introduction of these amendments to the DSP, the EPA's advice noted that this demonstrates suitable application of their mitigation hierarchy and meaningfully minimises the environmental impacts of the proposal.

An amendment to the DSP has subsequently been submitted with DPLH specifically to address the EPA's advice. As set out in the draft amended DSP, the requirements of the EPA will be implemented through future local structure plans, achieving the objective that scheme text provisions would otherwise deliver.

## **Summary**

For the reasons outlined in this submission, rezoning the urban portion of the North Ellenbrook East MRS Amendment 1411 directly to the 'Urban' zone is warranted, as there are no fundamental constraints preventing the progression of local structure planning over the land.

Main Roads WA has finalised the location and land requirements for the Tonkin Highway interchange, obtained the relevant environmental approvals and completed the mesoscopic transport modelling. They are progressing the design, procurement and delivery of the interchange and are targeting a construction completion date of late 2027. Given the significant commitment of funding from both the State and Federal Government it is important that the rezoning process aligns with the delivery of this infrastructure, to support a coordinated planning and infrastructure framework and the timely delivery of land for housing.

Whilst Water Corporation has not yet finalised an agreement for the funding of water and wastewater there are suitable options in place and the supporting infrastructure planning is advancing. Rezoning of the land directly to 'Urban' will ensure that the Water Corporation continues to prioritise these investigations and finalisation of a servicing strategy, and avoids delaying the progression of local structure planning of land that is otherwise unconstrained. These matters can be progressed in parallel with the subsequent planning processes (local structure planning and subdivision).

The Technical Note (**Attachment 2**) demonstrates appropriate consideration of nearby rural activities, being a plant nursery and poultry farm, which do not present a constraint to development. Any mitigation measures, if required, can be managed through the design and implementation of a future local structure plan following further on-site technical assessment.

An approved DSP is also in place, with an amendment being progressed to address the EPA's advice on the MRS Amendment.

Accordingly, the four lifting of urban deferment requirements have either been addressed, or can be appropriately addressed at subsequent stages of the planning process, consistent with the WAPC's Lifting of Urban Deferment Guidelines.

A concurrent amendment to the City LPS 17 is also requested and warranted, given the detailed framework for the preparation and assessment of local structure plans established by the DSP, which will include the EPA's advice following finalisation of Amendment No. 1 to the DSP. This will avoid the need for unnecessary processes and support a streamlined planning framework and the housing supply continuum.

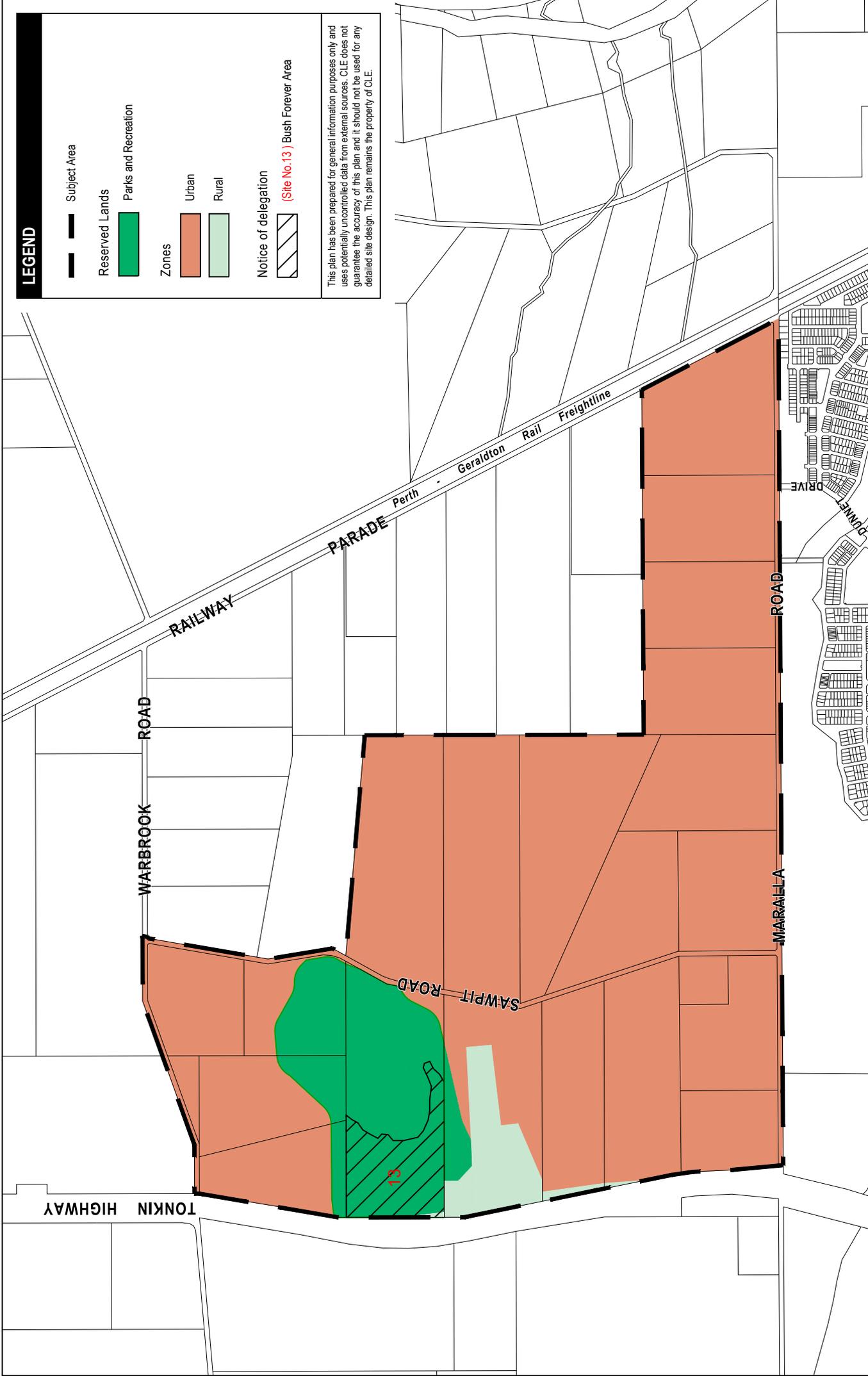
Thank you for the opportunity to make this submission. Should you have any queries, please don't hesitate to contact Alex Jarvis or myself on 9382 1233, or via email at [alexj@cleplan.com.au](mailto:alexj@cleplan.com.au) / [daniel@cleplan.com.au](mailto:daniel@cleplan.com.au).

Yours sincerely



**DANIEL MARTINOVICH**  
**PARTNER – PLANNING**  
**CLE TOWN PLANNING + DESIGN**

Encl: Attachment 1 – Proposed MRS Amendment Rezoning Plan  
Attachment 2 – Technical Note: Plant Nursery and Poultry Farm Considerations (Emerge)



**LEGEND**

Subject Area

Reserved Lands

Parks and Recreation

Zones

Urban

Rural

Notice of delegation

(Site No.13) Bush Forever Area

This plan has been prepared for general information purposes only and uses potentially uncontrolled data from external sources. CLE does not guarantee the accuracy of this plan and it should not be used for any detailed site design. This plan remains the property of CLE.



## TECHNICAL MEMORANDUM

### Poultry farm and tree nursery buffer considerations – North Ellenbrook (East) Metropolitan Region Scheme amendment

<b>PROJECT NUMBER</b>	EP25-024(05)	<b>DOC. NUMBER</b>	EP25-024(05)—004a PPS
<b>PROJECT</b>	Abadeen North Ellenbrook Development Support	<b>CLIENT</b>	Abadeen Pty Ltd
<b>AUTHOR</b>	PPS	<b>REVIEWER</b>	JDH
<b>VERSION</b>	A	<b>DATE</b>	November 2025

## 1 INTRODUCTION

Emerge Environmental Services Pty Ltd (T/A Emmerge Associates) have been engaged to provide environmental consultancy services to Abadeen Pty Ltd (the proponent) to support urban development in North Ellenbrook, an area currently subject to the North Ellenbrook (East) District Structure Plan (DSP), which was approved in August 2022 by the Western Australian Planning Commission (WAPC). The DSP provides a framework for the coordinated development of approximately 499 hectares (ha) of land in Bullsbrook for urban purposes (herein referred to as the ‘site’). Following approval of the DSP, an amendment to the Metropolitan Region Scheme (MRS) to transfer the corresponding site from the ‘Rural’ zone to predominantly ‘Urban deferred’ zone and ‘Regional Open Space’ is currently being progressed by the WAPC. The WAPC advertised the proposed amendment (MRS 1411) from 11 April to 16 June 2025.

The amendment, as advertised, includes four requirements to be addressed prior to the lifting of urban deferment and for the land to be transferred to the ‘Urban’ zone. The fourth requirement sets out the following:

*‘Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements’.*

This Technical Memorandum responds to the above requirement and provides an assessment of the poultry farm and plant nursery operations in proximity to the site, and the requirement for separation buffers between the land uses and future urban development within the site. It addresses the above proposed condition of urban deferment, providing:

- A description of the relevant poultry farms and plant nursery adjacent to the site including their current and future operational status.
- A description of the existing and potential future environmental and planning constraints with consideration of the relevant policies and guidance context in respect to the poultry farm and tree nursery land uses.
- Separation assessment of the poultry farm and tree nursery in consideration of the relevant guidance and other environmental factors. This includes an assessment of the actual current and future risks posed by the two land uses (if fully operational) to future urban development within the site.
- Recommendations of appropriate separation distances and possible planning mechanisms including justification that the urban deferment of the site can be lifted and the site be zoned to the ‘Urban’ zone without any impediment to future urban development.

**Poultry farm and tree nursery buffer considerations – North Ellenbrook (East)**  
**Metropolitan Region Scheme amendment**  
**Abadeen North Ellenbrook Development Support**



## 2 SURROUNDING LANDUSES

### 2.1 Poultry farms

Lots 20 and 21 Warbrook Road and Lot 22 Railway Road, as shown in **Plate 1**, have historically been associated with poultry egg production operations, with the landholdings under current ownership of AAA Egg Company Pty Ltd. The poultry operations have relocated to the AAA Egg Company operation in Muchea, with all poultry operations across Lots 20 and 21 now fully ceased. A total of nine non-operational farm sheds (poultry facilities) remain within the landholdings, as shown in **Plate 2**. The landholdings were initially listed for sale in April 2023, once operations ceased, with the sale recently re-listed. It is expected that once sold (expected to be prior to the gazettal of the MRS amendment and implementation of the DSP), poultry operations would remain permanently ceased across both Lots, with the remaining farm sheds to be decommissioned. The closest remaining farm shed to the site boundary is situated approximately 355 metres (m) within Lot 21 to the north of the site (refer to **Plate 2**). An approximate distance of 609 m lies between the nearest remaining shed and the site within Lot 20 (**Plate 2**).

The Oakland Poultry Family Farm specialising in selling chicks and fertile eggs is understood to currently remain in operation on Lot 22 Railway Road, with six existing farm sheds (considered a small scale poultry operation if at full capacity), as shown in **Plate 2**. Notwithstanding, it is Emerge Associates understanding that Lot 22 is under the ownership of the same proprietor as Lots 20 and 21 (AAA Egg Company), with the landholding also currently listed for sale. It is therefore expected that once sold, all poultry operations will cease permanently across the landholding. The closest farm shed to the site is currently situated approximately 657 m within Lot 22 to the north-east of the site (**Plate 2**).



Plate 1: DSP area (the site) and surrounding land uses (poultry farm and tree nursery)

**Poultry farm and tree nursery buffer considerations – North Ellenbrook (East)**  
**Metropolitan Region Scheme amendment**  
**Abadeen North Ellenbrook Development Support**



Plate 2: Poultry farm sheds and separation distances to the site

## 2.2 Tree nursery

A wholesale tree nursery is currently operated by Ellenby Tree Farm Pty Ltd on Lots 16, 17 and 18 Sawpit Road, adjacent to the north-eastern boundary of the site (refer to **Plate 1**). Based on the company's website, the tree farm on Sawpit Road is only accessible to the public by prior appointment and is not the company's primary display nursery (which is located in Gngalara and is open to the public six days a week). The company claims on its webpage that it avoids the use of harmful chemicals and only uses organic techniques to control pests therefore minimising any potential for harsh chemical spray drift on surrounding sensitive receptors (present and future). The tree nursery operation extends over 38 ha and is therefore considered a 'large' scale operation by industry standards, with no available State policy or guidance on the scale of nursery or tree farm operations.

## 3 POLICY AND GUIDANCE CONTEXT FOR POULTRY FARMS AND TREE NURSERIES

### 3.1 Poultry farm policy and guidance

Whilst the poultry farm operations across Lots 20 and 21 have already ceased and operations on Lot 22 are expected to cease once sold, the proponent is conscious of the possibility that the landholdings are sold to other poultry operators potentially resulting in poultry operations to re-establish. Based on this scenario and the assumption that all poultry operations may become fully operational, it is likely that a land use buffer from the existing poultry sheds and associated source of emissions (odour, dust and noise) would be required to be accommodated prior to any future residential development within the site to mitigate the potential for emissions impacting future sensitive receptors i.e. local residents. In this respect, the following policies and guidelines are considered:

- Environmental Protection Authority (EPA) Guidance Statement No. 3 (EPA 2005), which outlines that the ‘poultry industry’ has the potential to produce odour, dust and noise emissions, and recommends a separation distance of between 300-1000 m (depending on the size of the poultry operation) to sensitive land uses.
- The *Environmental Guidelines (Edition 2) for the Australian Egg Industry* (AEL 2018), which recommends a minimum separation distance of 500 m between the impact source and any land use zone that is not compatible with the development of poultry facilities, such as residential, where not specified by state or local government departments. It further provides guidance on the effectiveness of vegetation buffers between poultry farms and sensitive land uses.
- The *Environmental Code of Practice for Poultry Farms in Western Australia* (Poultry Farmers Association of WA 2004), which recommends minimum 500 m separation distance between new poultry sheds and any existing or future residential zone.

### 3.2 Tree nurseries

Tree farms may fall within the definition of ‘nurseries’, which the EPA (2005) outlines to have the potential to produce noise emissions that may affect nearby sensitive land uses and recommend a generic separation distance of 100 m between such land uses.

There is no further specific policy or guidance regarding tree nurseries and separation distances. State Planning Policy 2.5 – Rural Planning (WAPC 2016) references the Department of Health Guidelines for Separation of Agricultural and Residential Land uses (2012), which seeks to minimise health and nuisance impacts from chemical spray drift and dust from gardens and nurseries. The Guidelines recommend the minimum requirement of a 40 m separation distance between a nursery and sensitive land uses where a vegetative buffer exists.

As noted in **Section 2.2**, the tree nursery in question does not appear to utilise chemicals that may result in spray drift on sensitive land uses. In this respect, considerations for buffers should be given in relation to potential noise and dust impacts on future sensitive receptors within the site only.

### 3.3 Site-specific factors in consideration of policy and guidance

#### 3.3.1 Poultry farm – mitigation and management

Based on the assumption that the poultry farms to the north would re-establish full operation once sold, the closest potential source of odour from the poultry farm to the site boundary would be from the nearest farm shed within Lot 21 approximately 355 m to the north (see **Plate 2**). Given the location of the site subject to prevailing easterly and south-easterly winds and the distance of any poultry operations to the north of the site, odour, dust and noise are unlikely to impact upon the site.

As seen on **Plate 2**, the existing sheds are largely surrounded by strands of trees likely to provide shade and wind breaks. In addition, approximately 214 m of banksia and eucalypt type remnant vegetation within Lot 23 (directly to the south of the potential poultry farm operations and north of the site) likely ranging 6 m to 10 m in height occurs between any potential odour sources within the Lot 21 poultry farm and the site boundary (refer to **Plate 2**). The entirety of Lot 23 forms part of Bush Forever Site 400. It is therefore expected that this vegetation will remain uncleared and permanently screen and reduce any potential noise, dust and odour impact resultant of any potential poultry

operations from the proposed urban development within the site. It is noted that vegetation buffers of at least 8 m width are recommended for egg production farms in accordance with the *Environmental Guidelines (Edition 2) for the Australian Egg Industry* (AEL 2018). It is therefore expected that the 214 m of native vegetation between the site and the poultry farm (in addition to the balance of the total minimum 355 m separation distance) would suffice to negate any risks of potential odour, noise and dust from impacting on sensitive receptors within the site.

### 3.3.2 Tree nursery – mitigation and management

The tree nursery is expected to not generate any significant dust as internal vehicle movement is expected to be minimal, the nursery comprises extensive hard stand areas, and the nursery is expected to use irrigation systems to water plant stock, which acts like a dust suppression. Noise is anticipated minimal as a result of onsite vehicle use including small forklifts. No site-specific investigations have been completed to date to determine to what extent the nursery produces noise emissions, and whether any such noise emissions, albeit unlikely, exceed allowable limits outlined in the *Environmental Protection (Noise) Regulations 1987* such that they may impact upon future residential land uses within the site. However, available information suggests the tree farm is a relatively typical example of such an operation and is therefore considered likely to meet the requirements of the Regulations, with the nursery considered a low risk for noise.

It is noted that a large portion of the tree nursery (southern portion) is buffered with an approximately 78 m wide and 780 m long vegetated buffer adjacent to the site's boundary, which complies with the Department of Health recommendations of a minimum 40 m vegetated buffer, as outlined in the *Guidelines for Separation of Agricultural and Residential Land uses (2012)* and *State Planning Policy 2.5 – Rural Planning (WAPC 2016)*. Whilst the 40 m buffer is recommended to mitigate potential chemical spray drift, any noise and dust originating from the nursery (albeit anticipated negligible), would also be buffered and not impact on future sensitive land uses within the site. A small section of the western portion of the nursery is located directly adjacent to the sites boundary (absent of any vegetated buffer); however, the nursery would be separated from future residential lots through sufficient setbacks in form of either public open space, or public road reserve, expected to mitigate any potential noise and dust impacts from the nursery.

### 3.4 Proposed buffers and anticipated risks

#### 3.4.1 Risk assessment

A risk assessment has been prepared to support this technical memorandum in consideration to any amenity risk to future residents from the potential future operation of the poultry farm and tree nursery.

The risk assessment is based on the risk matrix provided in **Table 1**. The risk matrix uses the risk categories outlined in the Department of Water and Environmental Regulation's Risk Assessments Guidelines (DWER 2020) utilising the Australian Standard (AS) 4360:2004: Risk Management and AS 31000:2009 Risk Management – Principles and Guidelines.

**Table 2** and **Table 3** provide the criteria to assess the 'consequences' and 'likelihood' of a risk event occurring.

The risk assessment is provided in **Table 4** summarising the risks associated with the poultry farm and tree nursery and includes the initial and residual risk ratings, the identified controls (if required) which link to environmental management measures and a rationale for the rating of each impact pathway.

The outcome of the risk assessment demonstrates an overall 'low' level of risk of the poultry farm and tree nursery (if fully operational) impacting future residents within the site.

**Poultry farm and tree nursery buffer considerations – North Ellenbrook (East)**  
**Metropolitan Region Scheme amendment**  
**Abadeen North Ellenbrook Development Support**



Table 1: Risk Assessment Matrix (AS 4360)

Probability/Likelihood	Consequence/Impact				
	Slight (A)	Minor (B)	Moderate (C)	Major (D)	Severe (E)
Almost certain (5)	Low	Moderate	High	Extreme	Extreme
Likely (4)	Low	Low	Moderate	High	Extreme
Possible (3)	Low	Low	Moderate	High	Extreme
Unlikely (2)	Very Low	Low	Low	Moderate	High
Rare (1)	Very Low	Very Low	Low	Moderate	Moderate

Table 2: Criteria to assess the consequence of a risk event occurring (based on DWER 2020)

Consequence	Criteria
Severe	<ul style="list-style-type: none"> <li>Onsite impacts: <b>catastrophic</b></li> <li>Offsite impacts local scale: <b>high level or above</b></li> <li>Offsite impacts wider scale: <b>mid-level or above</b></li> <li><b>Mid to long-term or permanent impact to an area of high conservation value or special significance</b></li> <li><b>Specific Consequence Criteria (for environment) are significantly exceeded</b></li> </ul>
Major	<ul style="list-style-type: none"> <li>Onsite impacts: <b>high level</b></li> <li>Offsite impacts local scale: <b>mid-level</b></li> <li>Offsite impacts wider scale: <b>low level</b></li> <li><b>Short-term impact to an area of high conservation value or special significance</b></li> <li><b>Specific Consequence Criteria (for environment) are exceeded</b></li> </ul>
Moderate	<ul style="list-style-type: none"> <li>Onsite impacts: <b>mid-level</b></li> <li>Offsite impacts local scale: <b>low level</b></li> <li>Offsite impacts wider scale: <b>minimal</b></li> <li><b>Specific Consequence Criteria (for environment) are at risk of not being met</b></li> </ul>
Minor	<ul style="list-style-type: none"> <li>Onsite impacts: <b>low level</b></li> <li>Offsite impacts local scale: <b>minimal</b></li> <li>Offsite impacts wider scale: <b>not detectable</b></li> <li><b>Specific Consequence Criteria (for environment) likely to be met</b></li> </ul>
Slight	<ul style="list-style-type: none"> <li>Onsite impact: <b>minimal</b></li> <li><b>Specific Consequence Criteria (for environment) met</b></li> </ul>

Table 3: Criteria to assess the likelihood of a risk even occurring (based on DWER 2020)

Likelihood	Criteria
Almost certain	The risk event is expected to occur in most circumstances.
Likely	The risk event will probably occur in most circumstances.
Possible	The risk even could occur at some time.
Unlikely	The risk event will probably not occur in most circumstances.
Rare	The risk event may only occur in exceptional circumstances.

**POULTRY FARM AND TREE NURSERY BUFFER CONSIDERATIONS – NORTH ELLENBROOK (EAST) METROPOLITAN REGION SCHEME AMENDMENT**  
**Abadeen North Ellenbrook Development Support**



Table 4: Risk assessment

Risk ID	Potential Impacts	Source	Initial Risk		Relevant Policy and Guidance and Mitigation		Residual Risk		Expected Outcome/Comment	
			Likelihood	Consequence	Rating	Consequence	Likelihood	Rating		
1	Odour, dust and noise from poultry farm operations impacting future residents within the site.	Odour (poultry egg layer sheds, manure and/or litter) Dust (from shed ventilation and vehicle movement or litter handling) Noise (shed fands, vehicles or bird handling).	Possible	Minor	Low	The EPA Guidance Statement No. 3 recommends for a separation distance of between 300 m and 1000 m (depending on the size of the poultry operation) to sensitive land uses. The closest source of odour, dust and noise that could potentially originate from the poultry farm to the site boundary would be from the nearest farm shed within Lot 21 approximately 355 m to the north. The separation distance includes approximately 214 m of banksia and eucalypt type woodland vegetation which would screen any potential odour, dust and noise impacts from potential poultry farm operations. The DSP provides for a mix of potential local reserves (public open space) and urban development along a section of the site boundary. Additional requirements for public open space areas and public road reserves will be considered at the future structure planning stage. Notwithstanding, it is anticipated that any public open space areas and future road reserves adjacent to the northern site boundary (relevant to the poultry farms) will provide additional separation that would exceed the existing 355 m buffer.	Unlikely	Minor	Low	It is expected that the 355 m largely vegetated separation buffer between the site's boundary and the nearest poultry farm shed in addition to any future road and public open space areas within the site is sufficient to negate any potential risks of odour impacts on future urban development within the site. Furthermore, given the location of the site subject to prevailing easterly and south-easterly winds, the distance of the potential poultry operations to the north of the site and the nature of poultry operation (egg production), odour, dust and noise are unlikely to impact upon the site. The anticipated 'Low' risk of adverse impacts from the poultry farm on future sensitive

POULTRY FARM AND TREE NURSERY BUFFER CONSIDERATIONS – NORTH ELLENBROOK (EAST) METROPOLITAN REGION SCHEME  
 AMENDMENT  
 Abadeen North Ellenbrook Development Support



Risk ID	Potential Impacts	Source	Initial Risk		Relevant Policy and Guidance and Mitigation	Residual Risk		Expected Outcome/Comment
			Likelihood	Consequence		Likelihood	Consequence	
2	Noise and dust from the tree nursery operations impacting future	Noise and dust (through vehicle (such as forklift, or truck operations)	Possible	Minor	The EPA Guidance Statement outlines that nurseries have the potential to produce noise emissions that may affect nearby sensitive land uses and recommend a generic separation distance of 100 m between such land uses and sensitive receptors. The nursery is not expected to create significant levels of noise and, with the emissions not expected to exceed allowable limits outlined in the <i>Environmental Protection (Noise) Regulations 1987</i> . The nursery is not expected to create significant dust emissions. A large portion of the tree nursery is buffered with an approximately 78 m wide and 780 m long vegetated buffer adjacent to the site's boundary, which complies with the Department of Health recommendations of a minimum 40 m vegetated buffer, as outlined in the Guidelines for Separation of Agricultural and Residential Land uses (2012) and State Planning Policy 2.5 – Rural Planning (WAPC 2016). Where small portions of the nursery are located directly adjacent to the site boundary,	Unlikely	Minor	land uses, negates the need for an increased buffer beyond the existing 355 m separation from any potential emission sources.  Whilst any noise and dust emissions originating from the nursery are anticipated to be negligible, the existing vegetation buffer and future road reserves between the nursery and future residential dwellings are expected to buffer any potential impacts on future sensitive land uses within the site. The anticipated 'Low' risk of adverse impacts from the nursery on future sensitive land uses, negates the need for an increased buffer.

**POULTRY FARM AND TREE NURSERY BUFFER CONSIDERATIONS – NORTH ELLENBROOK (EAST) METROPOLITAN REGION SCHEME AMENDMENT**  
**Abadeen North Ellenbrook Development Support**



Risk ID	Potential Impacts	Source	Initial Risk		Relevant Policy and Guidance and Mitigation	Residual Risk		Expected Outcome/Comment
			Likelihood	Consequence		Likelihood	Consequence	
					future public open space and road reserves within the site that would provide separation between the nursery and residential dwellings will be considered at the local structure planning design phase.			

#### *3.4.1.1 Poultry farm buffer*

Based on the information provided in the sections above, it is expected that the 355 m largely vegetated separation buffer between the site's boundary and the nearest poultry farm shed (if assumed fully operations in the future) is sufficient to negate any potential risks of odour, noise and dust impacts on future urban development within the site. It is therefore Emerge Associate's opinion that in relation to the poultry farms, there should be no requirement for any land subject to the MRS amendment to be held in the 'Urban deferred' zone. No additional separation buffers are expected to be required within the site noting that additional separation can be provided through future structure planning stages including through the additional provision of public open space areas and road reserves between sensitive land uses and any potential poultry operations to the north.

It is noted that existing potential sensitive receptors (rural dwellings) exist in proximity to the poultry farms to the north and to the south, with these closer to any potential odour sources than any created residential lots will be within the site.

#### *3.4.1.1 Tree nursery buffer*

Sensitive land uses can typically co-exist with nursery operations, with the most common management response being notifications on titles of residential lots. Further consultation with the nursery operators is also expected throughout the future planning process. A large portion of the tree nursery is buffered with an approximately 78 m wide and 780 m long vegetated buffer adjacent to the site's boundary, which complies with the Department of Health recommendations of a minimum 40 m vegetated buffer, as outlined in the Guidelines for Separation of Agricultural and Residential Land uses (2012) and State Planning Policy 2.5 – Rural Planning (WAPC 2016). Where there is no vegetated buffer, additional requirements for public open space areas and public road reserves between the nursery and sensitive land uses will be considered at the future structure planning stage. It is therefore Emerge Associate's opinion that in relation to the tree nursery, there should be no requirement for any land subject to the MRS amendment to be held in the 'Urban deferred' zone.

## **4 CONCLUSION**

In summary, based on the information provided in this technical memorandum, it is understood that all poultry operations within Lots 20 to 22 to the north of the site have ceased or will cease permanently once the landholdings are sold. In the instance poultry operations would re-establish full operation within Lots 20 and 21 to the north of the site (once sold), the poultry farm and tree nursery would not preclude the rezoning of the site to the 'Urban' zone. Based on the information provided in the sections above, it is expected that the existing 355 m largely vegetated separation buffer between the site's boundary and the nearest poultry farm shed is sufficient to negate any potential risks of odour, noise and dust impacts on future urban development within the site. With respect to the tree nursery, impacts from noise and dust are expected to be negligible and the in excess of 40 m vegetated buffer in addition to future road and public open space placement within the site will be sufficient to accommodate any setbacks between this land use and future residential lots.

## 5 REFERENCES

Environmental Protection Authority (EPA) 2005, *Guidance Statement No. 3. Separation Distances between Industrial and Sensitive Land Uses*, Perth.

Western Australian Planning Commission (WAPC) 2016, *State Planning Policy 2.5 Rural Planning*, Perth.



Respondent No: 21

Login: Anonymous

Email: n/a

Responded At: Jun 16, 2025 07:57:18 am

Last Seen: Jun 16, 2025 07:57:18 am

IP Address: n/a

- Q1. What is your first name? ***Name and contact details removed at the request of the submitter***
- Q2. What is your surname?
- Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes
- Q4. What is your email address?
- Q5. What is your address?
- Q6. What is your contact number?
- Q7. Are you responding on behalf of an organisation? No
- Q8. What is the name of the organisation? not answered
- Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose
- Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.
- I strongly oppose the proposed MRS Amendment 1411 North Ellenbrook East. I am concerned about the impacts on the remnant Banksia Woodlands, the sensitive hydrology of the area and the Ellen Brook catchment. The Banksia Woodlands of the Swan Coastal Plain are listed as an endangered ecological community under the EPBC Act. The clearing of native vegetation/ Banksia Woodlands leads to habitat fragmentation and loss for threatened species including our Black Cockatoos. Hardstand runoff and cleared vegetation leads to nutrient and sediment pollution of the Ellen Brook and Swamp Reserve, threatening critical habitat, including for our endangered Western Swamp Tortoise. I urge a revision of the proposed amendment to take the above mentioned concerns into consideration. Many thanks for accepting my submission.
- Kind Regards Nicole Angst
- Q11. Upload supporting documents not answered
- Q12. Upload supporting documents not answered
- Q13. Upload supporting documents not answered



Respondent No: 22

Login: Anonymous

Email: n/a

Responded At: Jun 16, 2025 08:46:26 am

Last Seen: Jun 16, 2025 08:46:26 am

IP Address: n/a

- Q1. What is your first name? Leanne
- 
- Q2. What is your surname? Fried
- 
- Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? No
- 
- Q4. What is your email address? northswanlandcare@gmail.com
- 
- Q5. What is your address? P.O. Box 154 Bullsbrook W.A. 6084
- 
- Q6. What is your contact number? 0439870371
- 
- Q7. Are you responding on behalf of an organisation? Yes
- 
- Q8. What is the name of the organisation? North Swan Land Conservation District Committee
- 
- Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose
- 
- Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.
- RE: Metropolitan Regional Scheme Amendment 1411 (Complex) North Ellenbrook (East) We oppose the MRS Amendment 1411 North Ellenbrook (EAST) as it stands. The North Swan Land Conservation Committee is concerned with ensuring that any development within the North Swan region is conducted sensitively, with consideration for the natural fauna, vegetation and hydrology of the area. This is not the case as this amendment stands. We believe the amendment in its current form will be detrimental to the sensitive hydrology of the area. The site is within the Ellen Brook catchment area. The Ellen Brook is a major tributary of the Swan River - It is the largest sub catchment for the Swan Canning catchment. Development in this area needs consideration of the complex hydrology including surface run off and nutrient flow into the Ellen Brook. It doesn't appear that the necessary hydrological considerations have been made in the amendment, for example any plan to protect surface run off in the winter months or reduction in nutrients and sediment flowing into the Ellen Brook or commitment to preventing a rising water table, which often results from such housing developments. Consideration is also needed of the impact of development on flora and fauna in the area. Strategic planting, retention of mature trees and planning for wildlife corridors are necessary components of any development in the area. These will not only ensure sustainability of local flora and fauna and connection with those of other areas but will also provide people living in the region access to nature, with its associated mental and physical health benefits. It is important also to protect the established Black Cockatoo habitats in the region and the habitat of the endangered Western Swamp Tortoise. The North Swan Land Conservation Committee recommends that the amendment be revised to show a greater consideration for the hydrology of the area with plans for surface water retention, and prevention of a rising water table and excess nutrient run off. Greater consideration also needs to be given to the natural fauna and flora of the area including planning for wildlife corridors, protection of sensitive ecologies and retention of mature trees. Thankyou for accepting our submission.
- 
- Q11. Upload supporting documents not answered
-

Q12. Upload supporting documents

not answered

---

Q13. Upload supporting documents

not answered

---

**Respondent No:** 23**Login:** Anonymous**Email:** n/a**Responded At:** Jun 16, 2025 11:18:26 am**Last Seen:** Jun 16, 2025 11:18:26 am**IP Address:** n/a

- Q1. **What is your first name?** Wendy
- 
- Q2. **What is your surname?** Claxon
- 
- Q3. **Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission?** No
- 
- Q4. **What is your email address?** claxon@bigpond.com
- 
- Q5. **What is your address?** 369 Strachan Road, Bullsbrook WA 6084
- 
- Q6. **What is your contact number?** 0419964345
- 
- Q7. **Are you responding on behalf of an organisation?** No
- 
- Q8. **What is the name of the organisation?** not answered
- 
- Q9. **Do you support/oppose the proposed amendment to the Metropolitan Region Scheme?** Oppose
- 
- Q10. **Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.**

I oppose the proposed scheme amendment as it does not adequately prioritize environmental protection and community well-being. The lack of allocation for environmental reserves and public open spaces undermines the essential balance between urbanization and ecological sustainability. While addressing the housing crisis is important, continually approving developments that do not adequately address environmental aspects and community well being will only lead to further social issues in the future. A development approach that places environmental preservation at the forefront is essential for long-term sustainability. Integrating open recreational spaces, expanding tree canopy coverage, and protecting ecological corridors will not only support biodiversity but also create a healthier, more livable urban setting. Access to green spaces is well-documented to enhance mental health. Vegetated corridors are vital for ecological connectivity, enabling native fauna, including endangered Black Cockatoos, to move safely through urban areas and find food and shelter. These green networks also play a crucial role in waterway protection, reducing nutrient and sediment pollution, maintaining surface water flow, and safeguarding the Ellen Brook ecosystem and its surrounds, which contribute to the health of the Swan River. The environmental consequences of hardstand runoff from housing developments must also be considered. Without mitigation, rising groundwater levels could threaten infrastructure stability and the viability of surrounding ecology. The retention of vegetated areas will help filter contaminants, reduce surface runoff, and protect fragile ecosystems such as Twin Swamps Reserve, which serves as a critical habitat for the endangered Western Swamp Tortoise. In light of these considerations, I strongly recommend: 1. The allocation of more land for environmental reserves and public open spaces, particularly those noted in the EPA report related to this amendment. 2. The protection of all ecologically sensitive and environmentally valuable areas to enhance biodiversity. 3. The expansion of tree cover to improve urban cooling, ecosystem health, and mental wellbeing. 4. The preservation of large trees, which are vital for the survival of native bird species. 5. The establishment of vegetated corridors to support wildlife movement and protect waterway integrity. 6. The implementation of stringent runoff management strategies to prevent environmental degradation. Thankyou for considering my submission.

**Q11. Upload supporting documents**

not answered

---

**Q12. Upload supporting documents**

not answered

---

**Q13. Upload supporting documents**

not answered

---



Respondent No: 24

Login: Anonymous

Email: n/a

Responded At: Jun 16, 2025 13:37:12 pm

Last Seen: Jun 16, 2025 13:37:12 pm

IP Address: n/a

- Q1. What is your first name? ***Name and contact details removed at the request of the submitter***
- Q2. What is your surname?
- Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes
- Q4. What is your email address?
- Q5. What is your address?
- Q6. What is your contact number?
- Q7. Are you responding on behalf of an organisation? Yes
- Q8. What is the name of the organisation? Urban Bushland council Inc
- Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose
- Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.
- Many issues have to be resolved before amendment occurs including rezoning ESAs to Parks and Recreation, determining the ecological linkages through this area to all ESAs.
- Q11. Upload supporting documents [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/f326d745f1192d88a2a2bdeabda32562c571e048/original/1750045026/f1d297233cb885414946e82e56cfe8b5\\_MRS%201411%20Ellenbrook%20UBCI-250616.pdf?1750045026](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/f326d745f1192d88a2a2bdeabda32562c571e048/original/1750045026/f1d297233cb885414946e82e56cfe8b5_MRS%201411%20Ellenbrook%20UBCI-250616.pdf?1750045026)
- Q12. Upload supporting documents not answered
- Q13. Upload supporting documents not answered



[Regionalplanningschemes@dph.wa.gov.au](mailto:Regionalplanningschemes@dph.wa.gov.au)

16th June 2025

**MRS 1411 (Complex) North Ellenbrook (East)**  
**504 ha in Bullsbrook from Rural to Urban Deferred and Regional Open Space**

Dear Officer,

Introduction to the Urban Bushland Council

The UBC is an association of over 90 volunteer bushcare community groups and 100 individual supporter members with a common interest in conservation, protection and management of publicly owned areas of urban bushland in WA. Our member groups collaborate with their respective land managers in Bushcare and management activities. The UBC is the peak community organisation for urban bushland conservation in WA and has been active for 30 years.

The Urban Bushland Council WA Inc comments for MRS 1411 proposed changes from Rural to Urban Deferred and Regional Open Space are as follows:

Our concerns are:

- a. **Appropriate Zoning:** That decisions on ecosystems, sustainability, liveability and hard infrastructure will be left to the structure plan stage, which is too late, instead of being addressed at this rezoning stage. The precedence for poor environmental outcomes is with the recent 100ha lot at Caversham Airbase (Braham Stage 3) that was rejected by City of Swan on very good grounds - but the developer then took the structure plan to WAPC and it was approved.
  - b. **Size:** This is a huge area, 504Ha north of Ellenbrook on the extreme outskirts of our sprawling city which will degrade ecological function, hydrology and landscape
  - c. **Bush Forever sites:** The 504ha sits between four Bush Forever (BF) sites with no definite plan of ecological linkages between these sites and these are just as important as Bush Forever.
  - d. **Vegetation extent.** We agree with City of Swan that all mature trees should be assessed for retention to support liveability, black cockatoo recovery plan and ecosystem services.
  - e. **Ecological linkages:** We request that the ecological linkages are planned at this MRS stage to give clear guidance of development parameters so that ecological systems are functioning
    - We request that the retained native vegetation ecological linkages and BF is classified as regional public open space for the purpose of conservation. This would mean rezoning regional open space to Parks and Recreation before this rezoning MRS 1411.
    - We request that these conservation areas must be monitored so that conservation values are not degraded from recreational use when development to urban occurs.
  - f. **Buffers:** There are no buffers to Bush Forever on the boundary or in the MRS amendment zone. Buffers to Environmentally Sensitive Areas (ESAs) (including as Bush Forever sites and wetlands) is an Environmental Protection Agency (EPA) requirement.
  - g. **Conservation Category Wetland (CCW):** We agree with the City of Swan that the entire CCW within MRS 1411 and outside this boundary should be rezoned to Parks and Recreation for conservation immediately.
-

- h. **Meeting targets of 30% Canopy Cover:**
- What is the current canopy cover of the 504ha identified to be amended?
  - City of Swan canopy cover has dropped from 35% to 12% in a very short time. How will this trend be reversed and enhanced to 30% if the same development style continues to be approved?
  - Tree retention is important to City of Swan and the Perth community, but City of Swan has no capacity to look after more than 10% POS. Where will the 30% tree canopy come from on public realm if there is no legislation for private land to have 30% canopy cover? Although it is a planning requirement to have a 2x2m deep soil plot to grow a large tree on every urban plot, the reality is that this is not happening. Declining tree canopy, resulting increasing temperatures and the prohibitive cost of cooling are going to make Perth dangerously hot and unliveable.
  - Development in this urban growth corridor has seen most of development sites cleared of all trees, sand fill added to raise the building pad to stop flooding dwellings. This has caused the loss of hundreds of thousands of trees, biodiversity loss, amenity loss and destruction of the habitat of black cockatoos and many creatures that support ecosystem services. The resulting flooding, often followed by dewatering, has seen death of trees which were supposed to be retained. (Youle Dean Rd to Whiteman Park Train Station)
- i. **Public Open Space:**
- This MRS does not address where local POS will be located so that each dwelling is within 400 m of nature? We request that this is determined before the structure plan stage as refusal to approve structure plans by City of Swan has resulted in the developer bypassing the Local Government Authority (LGA) and getting approval directly from the WAPC (eg Caversham Air base development of 100ha)
- j. **City of Swan Black Cockatoo Protection Action Plan**
- This plan highlights:
- The importance of City of Swan to these birds under threat from extinction within 20 years. If these clear felling, hot heat island sink developments continue, our black cockatoos face extinction sooner than 2045.
  - The importance of large trees is not just local for roosting, resting and cooling. We agree with the City of Swan that an assessment of every mature tree should be assessed for its importance to black cockatoos. This includes location, size, structural condition and health of all mature trees and a plan for the continued management plan of the trees to be retained.
  - The Department of Planning, Lands and Heritage's (DPLH) response to the City of Swan was that 61ha of regionally significant vegetation was to be retained. This appears to be only Bush Forever. Where are Bush Forever buffers and ecological linkages to the four regionally close Bush Forever sites that Black Cockatoos and other wildlife need?
  - The DPLH say further identification of environmental features could be identified at the structure plan stage. This is too late! Thousands of trees will be cleared as at the old Caversham airbase on 100ha because of exactly this issue. The City of Swan rejected the structure plan of Brabham Stage 3 and the developer took the unmodified structure plan directly to WAPC where it was approved.
  - Fig 1 pg 5 of 5 MRS 1411, proposed amendment to DSP marks possible additional POS. We urge that this and further vegetation on the east is retained for POS improving liveability.
  - We request that the tree retention plan supports the City of Swan black cockatoo protection action plan which uses the latest research by Murdoch University on vegetation requirements necessary for black cockatoos such as suitable linkages as flyovers.

## k. Hydrology

The approved water resource management plans by the Department of Water and Environmental Regulation (DWER) for the Urban growth corridor to Ellenbrook are failing, causing impacts much greater than the development sites.

The impact of flooding and dewatering on:

- private land will result in costly remediation and possible lawsuits.
- public land is too much for CoS to remediate.
- The Swan River from unfiltered run off is considered by the Department of Biodiversity, Conservation and Attractions (DBCA) Swan Canning Protection Strategy Draft as the biggest threat to our rivers. This will leave a legacy of intergenerational inequity.

### **Research of the collapse of our bushland, forests and mature trees Autumn 2024**

Studies by Murdoch University showed that the bushland and forest collapse autumn 2024 were most likely caused by fire, shallow soils or decrease in the freshwater lens of ground water. With research by the University of Western Australia's Water and Spatial Science Department reaching similar conclusions. Australia Living Atlas also ran a project to investigate tree deaths in Perth by citizen science records a year ago.

The data shows that the urban growth corridor is having a significant impact on groundwater. This impact now on the adjoining Bush Forever sites will escalate with further development and infrastructure such as raised roads.

Urban Bush care groups are seeing the impact firsthand: in the Marralla Rd BF 300 site at The Vines the largest mature Marri, a critical food source for the Black Cockatoos has died. With Fires and shallow soil ruled out as a cause of death, it is clear that a drop in ground water is now killing long established trees. We request that the water table change be investigated in the approved developments before further rezoning occurs. The impact of removing vegetation, hard-surfacing and over-extraction for urban development is overwhelming stormwater systems creating dangerous flooding and causing a loss of recharge to the aquifer and/or a drop in the water table. The findings released this week by the Auditor General, Caroline Spencer, highlight the failures of water management. This must not be allowed to continue.

In light of the Auditor General's findings on water management, it is appropriate to use the precautionary principle, and buffers to all ESA's be significantly increased from the current guidelines to protect critical ESAs

**The EPA advice** is that minimal impact is expected on hydrology. We feel that this assessment is contradicted by the ongoing tree deaths. We are concerned that changes in hydrology will adversely impact conservation category wetlands and the survival of the western swamp tortoise and has the capacity to kill the surrounding native vegetation including important habitat trees for the black cockatoos. We request that baseline water table data for this rezoning area is recorded before rezoning to deferred urban occurs.

Furthermore, we request that the EPA is asked to review its advice based on the changes to hydrology in the Brabham/Dayton area. This case study demonstrates that an ecosystem collapse is likely to be catastrophic, rather than gradual.

Infrastructure such as a raised Henley Brook Avenue through Bush Forever 200 banksia woodland has pressure to progress as further urban development continues. This road may be deemed necessary for the urban development of MRS 1411. This road proposal has never had an environmental assessment of its entirety since it was proposed decades ago. The City of Swan has agreed to undertake this assessment before further segments of the road are proposed to be constructed.

## I. Aboriginal Heritage and Culture :

We support comments by the South West Aboriginal Land and Sea Council (SWALSC) for protection and recognition of the Aboriginal heritage site.

We consider the importance of the *Local Government Act 1995* 3.1 General Function in this rezoning ie

*the need —*

(i) *to recognise the particular interests of Aboriginal people; and*

(ii) *to involve Aboriginal people in decision making processes*

As an international signatory to the IPBES 2022 December Kunming Montreal Biodiversity targets, point ii is a requirement of all levels of Australian Government.

**m. Road and rail pollution** from Tonkin highway and Geraldton rail line. This is a concern for both residents and wildlife. The lack of safe crossings for wildlife threatens biodiversity. We suggest that a mix of tall trees, mid story and ground cover lining the transport corridor would be a win for nature and liveability.

**o. Tonkin Highway Interchange** We agree with the City of Swan that until there is an agreement between Commonwealth Government and the developer for the cost of Tonkin Highway interchange and surrounding infrastructure that this MRS should not proceed. The City of Swan have said they cannot afford to undertake this infrastructure. We also request that provisions are made for wildlife crossing in this interchange or at suitable areas of Tonkin Highway.

**p. Bushfires:** Urban development increases fire risk, posing a threat to surrounding biodiversity from increased bushfires. Although there might be regulations on building standards for bushfires there are no policies or regulations to protect bushland biodiversity from the increase in fires as determined in the 2022 federal [review](#) by the Threatened Species Committee. The Committee found that changes in fire regimes are a Matter of National Environmental Significance from the loss of biodiversity. The research showed the increased fire risk around urban areas. We are concerned of the loss of biodiversity from increased fires in the adjoining bushland started by more humans and our governments continuation with harmful burning programs to save life and infrastructure but causing biodiversity loss.

**Conclusion: Urban Bushland Council's position on this rezoning is that it is premature. The serious questions raised above need to be resolved. They are significant as individual items, but the cumulative effect of all of them is very harmful. If this rezoning occurs there is an expectation that urban development would follow, and yet the environmental safeguards are not yet identified.**

Yours sincerely

---

Chairperson, Urban Bushland Council WA Inc

M:

E: [ubc@bushlandperth.org.au](mailto:ubc@bushlandperth.org.au); W: [www.bushlandperth.org.au](http://www.bushlandperth.org.au)

City West Lotteries House, 2 Delhi Street, West Perth WA 6005



**Respondent No:** 25

**Login:** Anonymous

**Email:** n/a

**Responded At:** Jun 16, 2025 16:54:02 pm

**Last Seen:** Jun 16, 2025 16:54:02 pm

**IP Address:** n/a

Q1. What is your first name? *Name and contact details removed at the request of the submitter*

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? No

Q8. What is the name of the organisation? not answered

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Oppose

**Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.**

I am writing to formally oppose Metropolitan Region Scheme Amendment 1411 (Complex) – North Ellenbrook (East) on the following grounds:

- 1. Environmental Impact – Habitat for Black Cockatoos and Carnaby’s Cockatoos** The proposed amendment threatens critical roosting and foraging habitat for the endangered Black Cockatoo and Carnaby’s Cockatoo populations. These birds are listed under the Environment Protection and Biodiversity Conservation Act 1999, and their survival is closely tied to the mature native trees found on private properties throughout this area. Many of these trees are essential night-time roosting sites, and development would lead to habitat fragmentation, tree removal, and a further decline in these already vulnerable species.
- 2. Threats to the Western Swamp Turtle, Western Long-necked Turtle, and Wetland Habitat** North Ellenbrook (East) is home to the critically endangered Western Swamp Turtle (*Pseudemydura umbrina*) as well as the more widespread but increasingly vulnerable Western Long-necked Turtle (*Chelodina colliei*). Both species rely on ephemeral wetlands, natural soaks, and small dams scattered across private properties in the area. These habitats—often dismissed as "man-made"—now serve as critical refuges for breeding, foraging, and seasonal movement. Urban development threatens these turtles through habitat loss, fragmentation, water pollution, and altered hydrological regimes. The loss of even small, isolated wetlands could have devastating consequences for local populations, particularly in the face of ongoing climate variability and reduced rainfall.
- 3. Loss of Rural Character and Community Amenity** Bullsbrook and the surrounding region are valued for their semi-rural, peaceful lifestyle—something deeply cherished by both residents and visitors. The proposal to subdivide the area into small residential lots would irrevocably alter this character, replacing open spaces, native bushland, and rural land uses with dense housing estates. To retain the area’s identity and rural atmosphere, consideration should be given to larger lot sizes (e.g., min 10-acre blocks) that reflect current land use patterns and community expectations.
- 4. Traffic and Infrastructure Concerns** The existing road network and associated infrastructure are not equipped to support the significant increase in traffic and service demands that this development would generate. Increased congestion would compromise safety, reduce accessibility for current residents, and exacerbate existing infrastructure challenges. Moreover, the lack of adequate public transport, schools, healthcare services, and community facilities would place unsustainable pressure on local government resources.
- 5. Climate and Environmental Sustainability** The clearing of native vegetation for urban development weakens the region’s climate resilience. Trees and bushland in the area contribute to carbon sequestration, reduce the urban heat island effect, and maintain biodiversity corridors essential for wildlife movement. Their removal would not only destroy roosting sites for Black Cockatoos and Carnaby’s Cockatoos but also reduce the area’s natural defences against bushfires, floods, and other climate-related challenges.
- 6. Cumulative Impacts and Precedent** Approval of this amendment may set a precedent for further piecemeal developments across Perth’s outer regions, resulting in fragmented ecosystems and diminished community identity. Without a comprehensive and environmentally informed strategic plan, the cumulative impacts of such development risk irreversible harm to local biodiversity, water systems, and quality of life.

Recommendation I urge the Western Australian Planning Commission to reject Metropolitan Region Scheme Amendment 1411 (Complex) – North Ellenbrook (East) on the basis that: It threatens endangered and vulnerable species, including the Black Cockatoo, Carnaby’s Cockatoo, Western Swamp Turtle, and Western Long-necked Turtle; It would result in the loss of critical wetland and woodland habitats that support biodiversity and ecological health; It undermines the rural character and amenity of Bullsbrook; It places unsustainable demands on infrastructure and services; It contributes to environmentally and climatically unsustainable development. Instead, I recommend exploring planning alternatives such as low-density rural zoning (e.g., min 10-acre blocks) that maintain the semi-rural character of the area, while protecting sensitive habitats and preserving environmental values for future generations.

---

**Q11. Upload supporting documents**

not answered

---

**Q12. Upload supporting documents**

not answered

---

**Q13. Upload supporting documents**

not answered

---

**Respondent No:** 26**Login:** Anonymous**Email:** n/a**Responded At:** Jun 16, 2025 17:45:28 pm**Last Seen:** Jun 16, 2025 17:45:28 pm**IP Address:** n/a

Q1. What is your first name?

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? Yes

Q8. What is the name of the organisation? EEDB Property Pty Ltd

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Support

Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

Support for MRS amendment. Wish for Lot 27 Railway Parade, Bullsbrook to be included in MRS Amendment. Refer to attached submission.

Q11. Upload supporting documents [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/c7a9b2bd8b7c4be634e4b2da261d628e0a2230d5/original/1750059923/3931a55ea9250be15dce7c91038c11f7\\_250616%20GMP%20BUL%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission.pdf?1750059923](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/c7a9b2bd8b7c4be634e4b2da261d628e0a2230d5/original/1750059923/3931a55ea9250be15dce7c91038c11f7_250616%20GMP%20BUL%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission.pdf?1750059923)

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



OUR REF: GMP BUL

16 June 2025

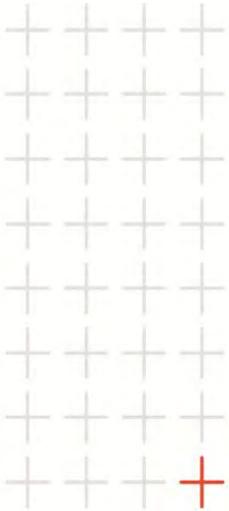
Department of Planning, Lands and Heritage  
Locked Bag 2506  
Perth WA 6001

Attention: Region Schemes Team

Dear Sir/Madam,

**SUBMISSION: METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX) - NORTH ELLENBROOK (EAST)**

1. We act for the landowners of Lot 27 (No. 501) Railway Parade, Bullsbrook (EEDB Property Pty Ltd) in providing the following submission to the Department of Planning, Lands and Heritage (DPLH) on their behalf on the Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) (the 'Amendment').
2. The subject lot abuts the eastern boundary of the Amendment area and has frontage to Railway Parade.
3. The landowners are supportive of the Amendment and believe there are opportunities to assist in the delivery of the proposed high school and to increase the residential lot yield, which will assist in contributions for the interchange and other district infrastructure.
4. It is understood that the current location of the high school, as annotated on the North Ellenbrook (East) District Structure Plan may be impacted by environmental constraints and the Tonkin Highway interchange access road.
5. There is an opportunity to relocate the proposed high school site to western portion of Lot 27. This site is considered a suitable alternative for the high school site for the following reasons:
  - The subject land is flat and devoid of vegetation;
  - It is central to the catchment of the DSP area. This proposed site is also considered to service the Clementine (Upper Swan) and Annie's Landing (Ellenbrook) projects. Refer to the attached a Catchment Plan (Attachment 1) demonstrating the proposed site is far more accessible (e.g. distance and road legibility) than both Ellenbrook Secondary College and Aveley Secondary College; and
  - The site is in proximity to a proposed primary school site but not directly adjoining.
6. The alternative high school location can easily be accommodated on Lot 27 and it has good accessibility to the proposed DSP road network and the surrounding road network via Railway Parade. Refer to the high school concept plan (Attachment 2).
7. The land between the proposed high school and Railay Parade could be developed low density residential to the east to allow for a transition of land uses from urban to rural.

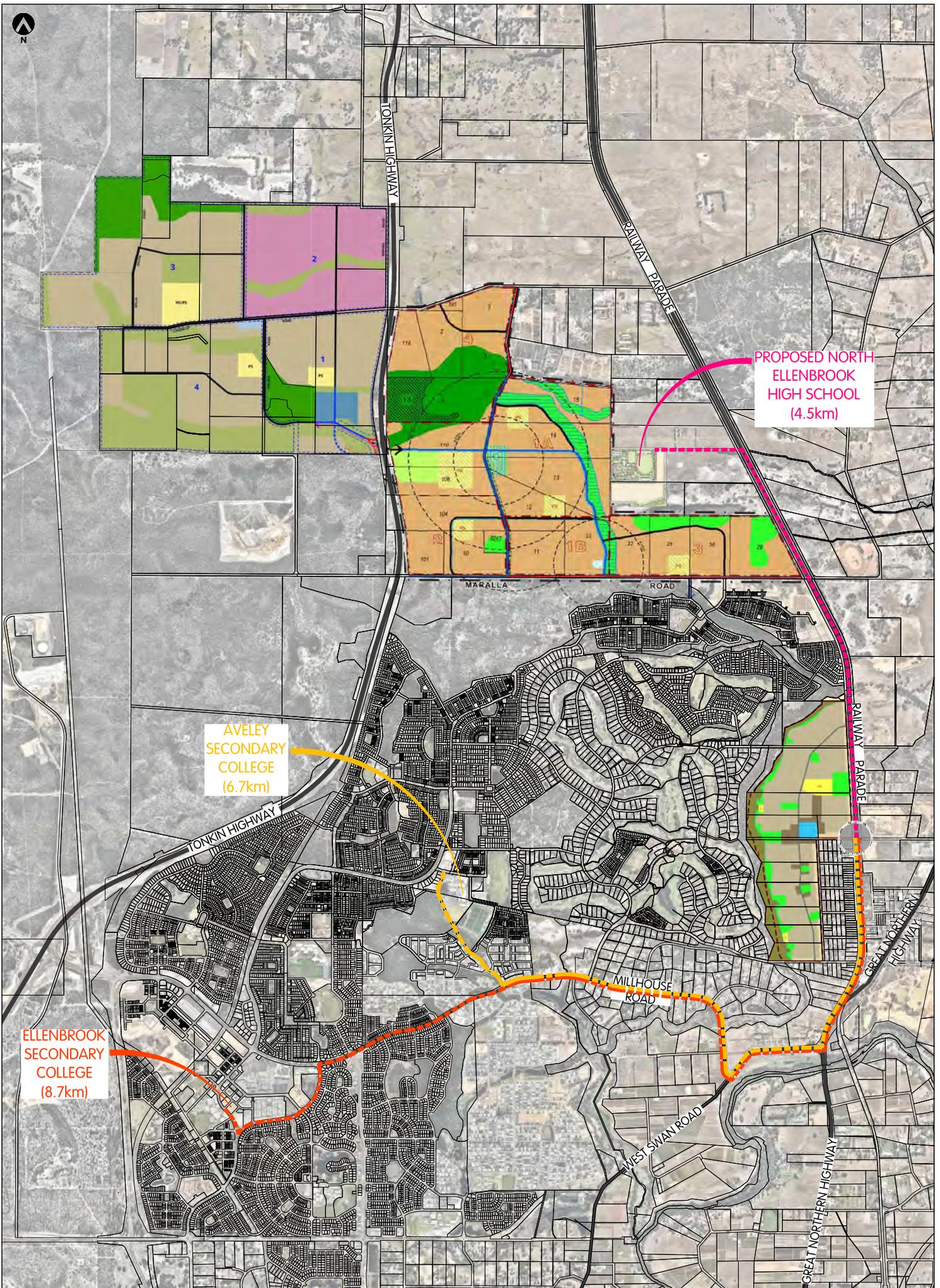
- 
8. It is acknowledged that Lot 27 is located within the Western Swamp Tortoise Environmental Protection Policy area. A key matter for the Western Swamp Tortoise Habitat is that the hydrology, both surface and ground water, for the Twin Swamps Nature Reserve and Ellen Brook Nature Reserve is protected to ensure the health and integrity of the habitat. It has been acknowledged by the EPA that Lot 27 is not within the surface water catchment of the habitat reserves. The landowners environmental and hydrology consultants, Emerge and Associates, have undertaken a review of the hydrology and have concluded that while the subject site is currently identified within the EPP area, the information available indicates that there is unlikely to be a direct hydrological connection between the site and either the Ellen Brook or the Twin Swamps Nature Reserves. This includes extending the water balance modelling undertaken in support of the North Ellenbrook (East) DSP to incorporate the site assuming full Urban concept.
  9. Emerge have also undertaken a review of the environmental values present over the subject sites. Specifically, the purpose of the survey was to assess the flora, vegetation and fauna values within the sites with a particular focus on identifying potential habitat for *Pseudemydura umbrina* (Western Swamp Tortoise). The survey concluded that there are no threatened or priority flora species were recorded within the site and that the remnant vegetation in the site is not considered to represent a Threatened Ecological Community or Priority Ecological Community.
  10. As a result of the investigations, the development of Lot 27 for a high school is unlikely to have a detrimental impact on the Western Swamp Tortoise habitat, subject to the implementation of a coordinated rezoning, structure planning, subdivision and development process.
  11. It is understood that EPA are currently undertaking a review of the EPP and the landowner will be engaging with them to facilitate the removal of Lot 27 from the EPP area having regard to the information provided above.
  12. As a result of the above it is requested that Lot 27 be identified as 'Urban Deferred' with a requirement to lift the deferment being the removal of the Western Swamp Tortoise EPP boundary from the subject lot.
  13. It is noted that the North Ellenbrook (East) District Structure Plan is currently being amended and it is recommended that the high school site be included on Lot 27, with the remainder of the lot being identified as residential.

Thank you for considering our submission. Should you require any further information or clarification of the above please contact the undersigned on 0408 614 346.

Yours faithfully,

REGIONAL DIRECTOR

Att High School Catchment Plan  
High School Concept Plan

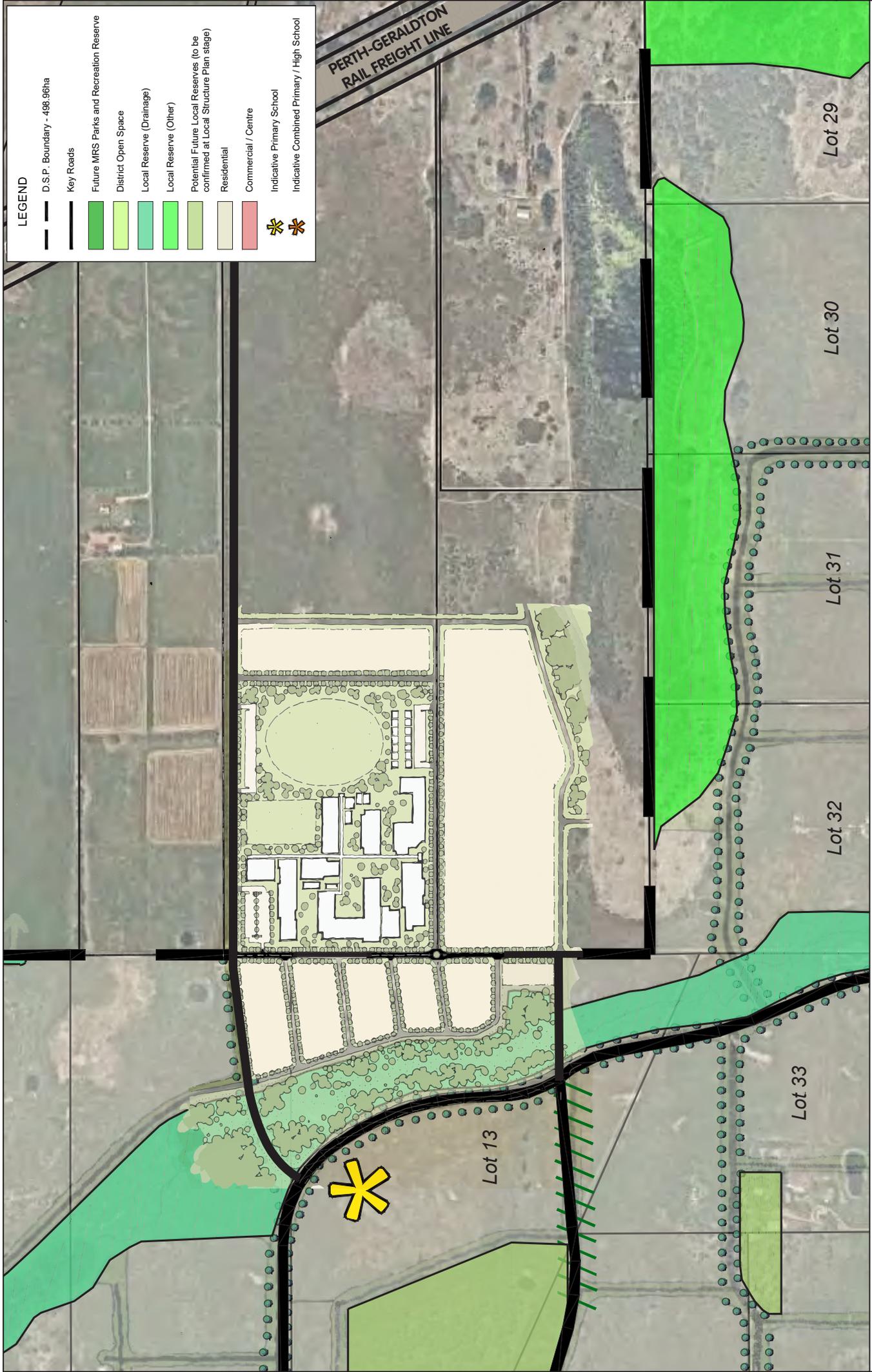


**PROPOSED NORTH  
ELLENBROOK  
HIGH SCHOOL  
(4.5km)**

**AVELEY  
SECONDARY  
COLLEGE  
(6.7km)**

**ELLENBROOK  
SECONDARY  
COLLEGE  
(8.7km)**

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL LEGAL AND CONFORMANCE ARE SUBJECT TO LOCAL DESIGN AND B/LBY.



**LEGEND**

- D.S.P. Boundary - 488.96ha
- Key Roads
- Future MRS Parks and Recreation Reserve
- District Open Space
- Local Reserve (Drainage)
- Local Reserve (Other)
- Potential Future Local Reserves (to be confirmed at Local Structure Plan stage)
- Residential
- Commercial / Centre
- Indicative Primary School
- Indicative Combined Primary / High School

**SCHOOL CONCEPT OPS\_CLOSE UP**

**Address (Bold upper-lower case)**  
 Locality (shire/city) (Regular Italic upper-lower case)

**REF NO. DRAW NO. REV.**  
**GMP BUL DES\_ILL 002 B**

**DRAFT**

<p>210-520 210518 Y19MDD</p>	<p>NR RD APRD</p>	<p>FOR COMMENT FOR COMMENT REV</p>	<p>B A REV</p>
--------------------------------------	---------------------------	--	------------------------

AERIAL PHOTOGRAPHY SOURCE: Y19MDD.

DISCLAIMER: ISSUED FOR DESIGN INTENT ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY

**Respondent No:** 27**Login:** Anonymous**Email:** n/a**Responded At:** Jun 16, 2025 17:47:49 pm**Last Seen:** Jun 16, 2025 17:47:49 pm**IP Address:** n/a

Q1. What is your first name?

Q2. What is your surname?

Q3. Submissions may be published as part of the consultation process. Do you wish to have your name removed from your submission? Yes

Q4. What is your email address?

Q5. What is your address?

Q6. What is your contact number?

Q7. Are you responding on behalf of an organisation? Yes

Q8. What is the name of the organisation? GM Property Group

Q9. Do you support/oppose the proposed amendment to the Metropolitan Region Scheme? Support

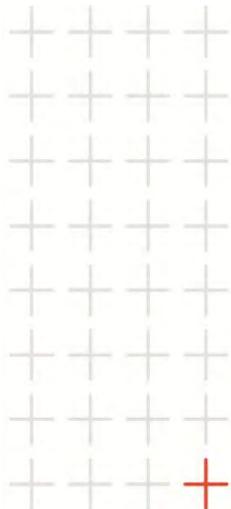
Q10. Please type your submission (reasons for support/opposition) in the box below. Any supporting documents may be uploaded below.

Support the MRS Amendment. Refer to attached submission.

Q11. Upload supporting documents [https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b862cbaac673937a12a81702134861d36411e6f1/original/1750060066/fa05b1cae09969a72da60d4ac56be109\\_250612%20GMP%20SAW%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission.pdf?1750060066](https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/b862cbaac673937a12a81702134861d36411e6f1/original/1750060066/fa05b1cae09969a72da60d4ac56be109_250612%20GMP%20SAW%20North%20Ellenbrook%20%28East%29%20MRS%20Amendment%20Submission.pdf?1750060066)

Q12. Upload supporting documents not answered

Q13. Upload supporting documents not answered



**HATCH**

OUR REF: GMP BUL

12 June 2025

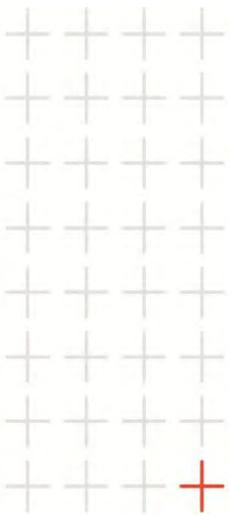
Department of Planning, Lands and Heritage  
Locked Bag 2506  
Perth WA 6001

Attention: Region Schemes Team

Dear Sir/Madam,

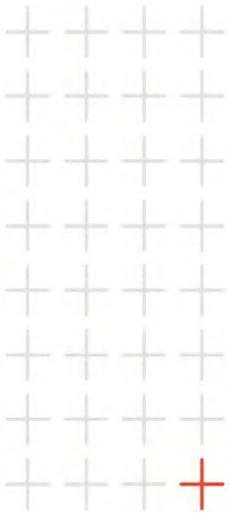
**SUBMISSION: METROPOLITAN REGION SCHEME AMENDMENT 1411 (COMPLEX) - NORTH ELLENBROOK (EAST)**

1. We act for the beneficial landowners of Lot 10 Sawpit Road, Bullsbrook in providing the following submission to the Department of Planning, Lands and Heritage (DPLH) on their behalf on the Metropolitan Region Scheme Amendment 1411 (Complex) - North Ellenbrook (East) (the 'Amendment').
2. The subject lot is located on the southern boundary of the Amendment area and has frontage to Maralla Road and Sawpit Road.
3. The beneficial landowners are supportive of the Amendment, however request the amendment area be rezoned straight to 'Urban' under the MRS and 'Residential Development' under the City of Swan Local Planning Scheme No 17 in accordance with s.126(3) of the *Planning and Development Act 2005*.
4. It is noted that there are four requirements to be addressed prior to the Amendment area being rezoned to 'Urban', being:
  - Amesosopic transport model and subsequent transport assessment being prepared and undertaken by Main Roads Western Australia (MRWA), DoT and City of Swan and the Traffic Impact Assessment (TIA) that accompanies the North Ellenbrook (East) District Structure Plan (DSP) is to be updated to reflect the outcomes of the State Government transport assessment.
  - Confirmation on the location and land requirements for a road interchange with Tonkin Highway.
  - Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site.
  - Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements.



5. It is understood that each of the requirements have been addressed or can be addressed in the near term. It is therefore suggested that the Amendment area, except for the land impacted by the existing poultry farm and plant nursery buffers, be rezoned 'Urban' under the MRS and 'Residential Development' under the City of Swan Local Planning Scheme No 17 in accordance with s.126(3) of the *Planning and Development Act 2005*.
6. The following table provides justification that the requirements have been addressed:

Requirement	Response
MRWA mesoscopic transport model and updated District Structure Plan Traffic Impact Assessment (TIA)	It is understood that MRWA have finalised the mesoscopic transport model. The MRS Amendment proponents are updating the TIA submitted as part of the original DSP to address mesoscopic transport model outcomes.
Confirmation on the location and land requirements for a road interchange with Tonkin Highway	MRWA have provided a plan showing the interchange location and land requirements.
Agreement with the Water Corporation regarding the funding of water and wastewater headworks to service the site	<p>This is a key matter requiring progression by Water Corporation (servicing and funding) who are actively engaging with agencies and developers. TAG meetings with all agencies are being re-instigated in concert with the DPLH.</p> <p>It is noted that the entire Bullsbrook South Precinct had its 'Urban Deferment' lifted to the 'Urban' zone at the WAPC meeting of 30 April 2025. The Bullsbrook South Precinct will connect to the same water and sewer network at the MRS Amendment 1411 area, noting that the first 500 to 560 lots will be serviced by an interim WWPS. The minutes of the 30 April 2025 meeting stated:</p> <p><i>'Members queried the potential risks of zoning the entire area as urban. Members were informed that there are no potential risks, and that the decision ultimately involves balancing whether to lift the urban deferment for the entire land area or just a portion of it, with both perspectives being valid. Members were also advised that structure planning and subdivision processes ensures that future planning stages will not proceed without appropriate infrastructure provision in place.'</i></p>



	<p>As there is no potential risks in zoning the area 'Urban' as the structure planning and subdivision processes ensure that future planning stages will not proceed without appropriate infrastructure provision in place, this requirement is considered addressed.</p>
<p>Consideration of the existing poultry farm and plant nursery buffers and/or suitable transitional arrangements</p>	<p>The MRS Amendment environmental consultants are preparing a strategy to best address this requirement given poultry farms no longer operational. Potential impacts of any buffer will likely see affected area remain partially as Urban Deferred.</p>

Thank you for considering our submission. Should you require any further information or clarification of the above please contact the undersigned on 0408 614 346.

Yours faithfully,  
HATCH

REGIONAL DIRECTOR



Department of Biodiversity,  
Conservation and Attractions



*We're working for  
Western Australia.*

Your ref: RLS/ 1083  
Our ref: PRS 50552  
Enquiries: Jacqui Clinton  
Phone: 9442 0312  
Email: jacqui.clinton@dbca.wa.gov.au

The Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

**Att: Anthony Muscara**

### **Request for Comment – Proposed Metropolitan Region Scheme amendment 1411 – North Ellenbrook (East) – City of Swan**

I refer to your correspondence of 11 April 2025 requesting comments on the proposed amendment to the Metropolitan Region Scheme (MRS) for the North Ellenbrook (East) area to be rezoned from 'Rural' to 'Urban Deferred' and the 'Regional Open Space' reservation. The Department of Biodiversity, Conservation and Attractions' (DBCA) Parks and Wildlife Service has reviewed the MRS amendment report and provides the following advice pursuant to responsibilities under the *Biodiversity Conservation Act 2016* (BC Act), *Conservation and Land Management Act 1984* and the *Swan and Canning Rivers Management Act 2006* (SCRM Act) and in the context of the State Planning Policy 2.10: Swan-Canning River System (SPP 2.10).

#### **Strategic Planning Processes**

It is noted that the associated North Ellenbrook (East) District Structure Plan (DSP) was approved by the Western Australian Planning Commission (WAPC) in August 2022. DBCA provided advice to the WAPC dated 18 June 2021, regarding the North Ellenbrook (East) DSP.

DBCA also provided advice, dated 4 December 2023, in response to a request from the Department of Water and Environmental Regulation (DWER), to assist the Environmental Protection Authority's assessment of the MRS Amendment. DBCA's advice followed DWER's provision of the updated 'Environmental Assessment Report – North Ellenbrook (East) – Metropolitan Region Scheme Amendment (Emerge 2023) (EAR), which included the 'Western Swamp Tortoise Eco-hydrological Impact Assessment' (Emerge Associates & Pentium Water 2023). It is noted that the updated EAR document does not include additional vegetation or wetland assessments, which were requested in DBCA's earlier DSP advice.

Documentation provided to date has not addressed many of the previous issues raised and DBCA therefore reiterates the advice provided to the WAPC and DWER, on consideration of the previous and updated technical information prepared to inform assessment of the current MRS Amendment.

The protection of significant biodiversity and environmental values, such as threatened flora and ecological communities, wetlands and regionally significant vegetation within regional and local open space should be facilitated through amendments to the Metropolitan Region Scheme, the

City of Swan's Local Planning Scheme (LPS) and the preparation of local structure plans. The deferral of assessments and surveys may result in important values not being afforded adequate protection and cause potential issues and delays at subsequent strategic and statutory planning stages.

It is noted that the EPA advice (Appendix A of the Amendment Report) recommended the "retention of additional vegetation and threatened fauna habitat through the designation of further local reserve areas". DBCA supports this approach to protect the significant environmental values and their supporting habitat, identified within the amendment area. As these additional areas form part of the local open space network, they should be shown appropriately in future local planning scheme amendments.

### **Threatened Ecological Communities**

The EAR identifies the likely occurrence of State and Commonwealth listed threatened ecological communities (TEC) within the DSP area. The EAR includes reference to the potential occurrence of the State listed TEC *Forests and woodlands of deep seasonal wetlands of the Swan Coastal Plain* (SCP15), protected under the BC Act. This occurrence has not yet been confirmed onsite. It also identified up to 9.3 hectares of the TEC 'Banksia woodlands of the Swan Coastal Plain', listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Banksia woodlands also provide suitable habitat for State and Commonwealth listed threatened fauna.

It is noted that 11 lots within the MRS Amendment area have not yet been surveyed and therefore, the presence of further State or Commonwealth TECs has not yet been assessed. Prior to future planning stages, including the lifting of Urban Deferment and local planning scheme amendments, the location and mapped extent of TEC occurrences across the amendment area should be confirmed. To confirm the TEC occurrences, detailed vegetation assessments should be provided to DBCA, which include the statistical analysis of floristic community types. Proponents should be advised to contact DBCA at [communities.data@dbca.wa.gov.au](mailto:communities.data@dbca.wa.gov.au) for further information on survey and analysis methods for TECs. Confirmed occurrences of TECs should be considered for retention and reserved for conservation wherever possible. Proponents for development proposals that are likely to modify areas of State-listed TEC may be required to submit an application for an authorisation to modify a TEC under Section 45 of the BC Act.

### **Threatened flora**

Detailed flora surveys, undertaken in accordance with Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016), are to be undertaken to inform the future planning stages. The 'Flora and Vegetation Assessment – Various Lots North Ellenbrook' (Emerge 2019) provided at Appendix B of the EAR has not included a targeted flora survey to identify threatened flora populations which may occur within the amendment area.

The EAR has highlighted the requirement for further detailed flora and vegetation assessments to identify any conservation significant flora for consideration and retention in future planning processes (Section 5.2.3.2, page 26). Several populations of listed threatened and priority flora are located within or in close proximity to the amendment area, including the grand spider orchid (*Caladenia huegelii*) (critically endangered) and the narrow curved-leaf grevillea (*Grevillea curviloba subsp. curviloba*) (critically endangered). While it is acknowledged that the requirement for further survey should not preclude progression of the current MRS amendment, DBCA recommends that a targeted flora survey be conducted to inform future planning processes, to ensure identified threatened flora populations are appropriately retained and protected in regional and local conservation open space.

*Grevillea curviloba subsp. curviloba*

The 'Lots 29 & 30 Maralla Road, North Ellenbrook - Flora and Vegetation Survey' (PGV Environmental, 2019) included in Appendix E of the EAR, identified two sub-populations of *G. curviloba subsp. curviloba* (as occurring within Lot 29 Maralla Road). This species is listed as threatened under the BC Act and EPBC Act due to the limited distribution of known occurrences and limited reservation of known occurrences in secure tenure. DBCA considers this population may represent one of the largest populations of the species recorded on the Swan Coastal Plain. The long-term protection of this threatened flora population is therefore considered to be important to the survival of the species.

While it is noted the DSP proposes retention of this population within a local reserve, it is important to ensure that the population and its surrounding supporting habitat is not impacted by incompatible land uses. The inappropriate location of active open space, such as playing fields and turfed areas, may indirectly impact the threatened flora population. DBCA should be consulted during future detailed planning stages to ensure the proposed conservation reserve is designed and managed to facilitate the long-term protection of the threatened flora population and to consider the required management options.

Due to the location of known populations of this species within and outside the amendment area, it is important that further targeted surveys for the species are undertaken, particularly over those lots that have not been previously surveyed. It should be noted that *G. curviloba subsp. curviloba* is known to occur in areas subject to historical disturbance such as rail and road reserves. It is therefore likely that new populations may occur in proposed urban areas, which have not been intensively surveyed due to the degraded nature of the existing vegetation.

**Western Swamp Tortoise**

DBCA understands the "Western Swamp Tortoise Eco-Hydrological Impact Assessment" (Emerge, 2023) (EHIA) was prepared by the proponent to provide additional environmental information in relation to the potential hydrological impacts to western swamp tortoises (WST) and their habitat. The EHIA was informed by additional groundwater monitoring and modelling outlined within the "Groundwater Modelling Report Update" (Pentium, 2023). It should be noted that while DBCA can provide advice in relation the WST and their general habitat requirements, advice in relation the adequacy and accuracy of the hydrological modelling is deferred to the Department of Water and Environmental Regulation's (DWER) Science and Planning hydrologists.

DBCA acknowledges the information provided in Section 4 (pp19 - 31) of the EHIA generally provides an accurate summary of the hydrological habitat characteristics of both the Ellen Brook and Twin Swamps Nature Reserves. DBCA understands that the WST habitat within the Ellen Brook Nature Reserve relies predominantly on winter rainfall and surface water flows with little interaction with groundwater. The habitat within Twin Swamps Nature Reserve however is highly dependent on the maintenance of ground and surface water quality and levels to ensure the wetlands in the reserve are able to provide viable long-term habitat for the WST.

It is recognised that maximum groundwater levels and annual rainfall are following a decreasing trend due to groundwater abstraction and climate change, which has detrimentally impacted the WST habitats within both reserves.

If DWER's hydrological review of the modelling undertaken confirms that there is adequate information available to provide confidence in the future groundwater simulations presented, it is possible to conclude that the hydrological impacts from future urban development of the North Ellenbrook (East) area may be able to be managed to minimise and mitigate hydrological impacts to the WST habitats.

Confidence in the groundwater modelling methods and report conclusions does not negate the requirement for identifying and designing adaptive storm water management systems within the North Ellenbrook (East) urban area. If long-term ground and surface water monitoring indicates hydrological impacts to the WST habitats and other significant ground water dependant ecosystems that are attributable to the change in land use, these contingencies should be implemented. The EAR and supporting documents do not address or recognise hydrological contingency measures.

### Aquatic Fauna survey

The MRS Amendment area occupies a portion of the historic range of the WST which was historically recorded in the eastern Swan Coastal Plain between Guildford and Bullsbrook. Individuals tracked as part of monitoring of the Twin Swamps Nature Reserve population have been recorded up to one kilometre from the reserve within the surrounding rural area, in various habitat types which include farm dams and remnant wetlands. In addition, historical records have noted the presence of WST within wetlands on the periphery of the area. Given these historical records and noting the historical range of the WST, there is the possibility that WST individuals may occupy the amendment area as a relic or vagrant population, as recognised in the EAR (page 33 and Figure 11).

It is noted that the 'Survey of Listed Aquatic Fauna Within the North Ellenbrook Development' (Indo-Pacific Environmental, 2023) (Appendix G of the EAR) reports on the results of a recent survey of aquatic fauna, including a targeted survey for western swamp tortoise individuals. DBCA was consulted regarding the survey methodology and considers that the technical aspects used in the surveys are generally adequate regarding the detection of conservation significant aquatic fauna. DBCA agrees that the habitat within the proposed urban development is not critical for the conservation significant aquatic species, *Pseudemys umbrina* (Western Swamp Tortoise), *Galaxiella nigrostriata* (Black-stripe Minnow) and *Westralunio carteri* (Carter's Freshwater Mussel).

While no WST were located during the surveys and it is reasonable to conclude that populations do not persist in the area (page 19), due to cryptical nature and the individual longevity of WSTs, the timespan of the survey was not considered adequate to conclude that it is "...highly unlikely that ... *P. umbrina*... currently reside within the Study Area" (p 23). It therefore remains possible that WST individuals may move into and/ or through the area in the future.

On this basis DBCA have previously recommended that future clearing and earthworks within proximity of the known WST habitats should be subject of pre-clearing surveys to identify and relocate any WST individuals. Should WST require relocation, the proponent should be made aware that there may be a requirement to apply for a section 40 Ministerial Authorisation (s40) requirement under in accordance with the BC Act.

### **Bush Forever Site 13**

The MRS Amendment request includes the proposed reservation of an area, which includes Bush Forever Site 13 (*Sawpit Road Bushland, Bullsbrook*) and a section of Sawpit Gully Creek, from Rural to Regional Open Space (ROS). The proposed ROS reserve should be ceded as part of the future development and created as a conservation reserve.

As the proposed regional reserve is relatively small, isolated from other areas of DBCA managed estate and will be surrounded by urban development, DBCA is not identified as an appropriate end land manager.

### **Wetlands**

Recent review of the environmental values of the wetlands, currently mapped in the Geomorphic Wetlands of the Swan Coastal Plain (GWSCP) dataset as Multiple Use and Resource

Enhancement wetlands (REW), indicates that many wetlands within the amendment area have values commensurate with Conservation category wetlands (CCW). A revision to the GWSCP dataset, which is currently underway by DBCA, is likely to assist in informing future strategic planning decisions regarding the retention and protection of high conservation wetlands values within the MRS amendment area and their buffers. DBCA's Wetlands Section should be contacted at [wetlands@dbca.wa.gov.au](mailto:wetlands@dbca.wa.gov.au) for further information regarding the updated wetland mapping within the North Ellenbrook area.

Areas currently proposed as urban include wetlands which the revised mapping indicates may be commensurate with REWs and CCWs. This includes the palusplain wetlands associated with the Sawpit Gully creekline. Prior to future planning processes, including the lifting of Urban Deferment, local scheme amendments and local structure planning, wetland assessments should be undertaken to ensure the appropriate reservation of wetlands and their buffers within public open space and local reserves. Despite this matter being raised in previous DBCA advice, the Amendment Report makes no reference to the requirement for wetland assessments to inform future planning stages. Deferring this requirement to local structure planning or subdivision stages can result in planning approval delays and ultimately potential direct wetland impacts. It is noted however that the ROS areas in addition to the potential local reserve and additional open space areas, shown as Figure 1 of the EPA advice, should accommodate a majority of the areas of high value wetland within the amendment area.

The guidance document *A methodology for the evaluation of wetlands on the Swan Coastal Plain, Western Australia* (DBCA 2017) and associated information sheet *Wetland identification and delineation: information for mapping and land use planning on the Swan Coastal Plain* (DBCA 2017) should be utilised by proponents and consultants reviewing wetland boundaries and management categories.

In accordance with the EPA's Guidance Statement 33 *Environmental Guidance for Planning and Development* (2008), all wetlands that are to be protected should be allocated a minimum 50 metre buffer to maintain wetland values and mitigate impacts from adjacent land uses. In addition, as part of proposed local structure plans, wetlands to be protected should be subject of relevant wetland management plans to ensure ongoing protection of wetland values and mitigation of impacts from changes in adjacent land uses.

#### Barnard Springs & Trough wetland

The results of a recent on-ground wetland assessment undertaken by DBCA at Lot 8427 Sawpit Road, Bullsbrook, determined that a section of UFI 9185 (now UFI 16148) be re-evaluated from REW to CCW. The mound spring associated with this wetland is also referred to as 'The Barnard Springs Trough & Wetland', contains a known Carnaby's black cockatoo roost site and is also recognised by the City of Swan as a heritage place. While this mound spring has been subject of historical excavation, it has high conservation value and could be significantly impacted by changes in the surrounding surface and groundwater catchments.

It is noted that this area and its buffer is shown as a local reserve in the DSP with additional surrounding areas of local open space included in Figure 1 of the EPA Advice.

#### **District Water Management Strategy**

Further to the provision of comments regarding the previous DSP, DBCA undertook a subsequent review of the District Water Management Strategy (DWMS) prepared to support the DSP. This review was undertaken in consultation with the Department of Water and Environmental Regulation (DWER), with both agencies submitting comments and raising issues to be addressed, to allow endorsement of the document. DBCA's advice related to concerns regarding potential hydrological impacts to the WST habitats, important wetlands and water dependent ecosystems and the waterways and tributaries of the Ellen Brook, including Saw Pit Gully. As a result of the comments

provided by both agencies a revised DWMS (dated July 2022) was endorsed on the 16 August 2022.

A number of issues raised by DBCA, including a requirement for additional monitoring and groundwater modelling (Class 3 model), confirmation of modelled groundwater reductions in high value wetlands and the location of drainage infrastructure, were proposed to be addressed at the Local Water Management Strategy stage. Given the highly significant water dependent ecosystems within and surrounding the amendment area, it is important that the proposed Ecohydrological Impact Assessments (EHIA) and updated groundwater modelling report inform the current MRS amendment. It is noted by the proponent the updated Groundwater Modelling Report has been prepared in accordance with the approved DWMS.

An additional outstanding issue not addressed in the revised 'District Water Management Strategy – North Ellenbrook East' (RPS 2022) relevant to the current DSP and MRS amendment, relates to the southern section of the Resource Enhancement wetland (UFI 16149) not being shown as an environmental constraint in Figure G of the DWMS. While it is recognised that further wetland assessment is required to evaluate this section of the wetland, current mapping shows this wetland as a Resource Enhancement Wetland. It is noted that Figure G currently shows all other "REW's" as "constraints" with the exception of UFI 16149.

DBCA expects referral of future Local Water Management Strategy's and other hydrological reports prepared to support future planning and environmental processes, to ensure a continuation of the collaborative approach to consultation given the complex environmental and hydrological issues associated with the North Ellenbrook East development.

### **Sawpit Gully, Ellen Brook and Swan and Canning River System**

DBCA has responsibilities under the SCRM Act which seeks to protect the ecological and community benefits and amenity of the Swan Canning Development Control Area and promote and facilitate the good management of the catchment area to meet this objective.

The catchment area as shown in Schedule 1 of the SCRM Act includes the land and waters contained within the DSP. The development therefore should be consistent with the good management of the catchment. Sawpit Gully flows from the DSP area, through a culvert under Maralla Road and into the Maralla Road Nature Reserve, managed by DBCA under the CALM Act.

SPP 2.10: Swan-Canning River System states that "land use changes should not result in further water quality degradation but should, if possible, improve the situation." The development of North Ellenbrook should therefore be undertaken in accordance with best management practice to ensure that water quality from future development will be appropriate prior to entering Sawpit Gully and the Ellen Brook and ultimately the Swan and Canning rivers.

The Swan Canning Water Quality Improvement Plan calls for a marked reduction in nutrients entering the Swan and Canning rivers. Of the 31 catchments on the Swan Coastal Plain the Ellen Brook catchment is the greatest contributor of both nitrogen and phosphorus to the Swan and Canning rivers. For the nutrient reduction targets to be met, land use within the catchment needs to be carefully managed. To be consistent with this plan, the development of North Ellenbrook should ensure there are no new inputs of contaminants to the site and there is no change in the quantity or quality of water entering Sawpit Gully and the Ellen Brook. The area has high ground water levels and is prone to regular inundation and flooding and any changes to the pre-development flow rates may result in the mobilisation of historical inputs and result in decreased water quality in the Ellen Brook and ultimately the Swan and Canning river systems.

Additional information should be provided to demonstrate that the development of North Ellenbrook will not result in significant adverse environmental impact on the Ellen Brook and ultimately the Swan and Canning Rivers, noting that additional investigations are being undertaken including the

preparation of an Ecohydrological Impact Assessment and an updated Groundwater Modelling Report to support the MRS Amendment.

Future planning processes need to be consistent with water sensitive urban design principles and should be in accordance with the Department of Water and Environmental Regulation's *Stormwater Management Manual for Western Australia* and *Decision Process for Stormwater Management in WA* and/or *Stormwater Manual for Western Australia (DoW, 2007)* (DWER's predecessor). Noting any stormwater management systems, should, for example, be located outside wetlands and their buffers to minimise hydrological impacts. Any overflow of runoff towards waterways and wetlands should be via overland flow paths across vegetated surfaces. Stormwater systems that utilise wetlands for flood storage should be designed to maintain pre-development surface water flow rates, runoff volumes and flood level and shallow groundwater recharge rates for receiving water bodies, unless otherwise established in an approved management strategy or plan and subject to the advice of the relevant agency.

The DSP shows Sawpit Gully as retained as a local reserve for drainage, which is proposed to include a 30 metre foreshore buffer. The retention and revegetation of a foreshore buffer of at least 30 metres, and the incorporation of best practice stormwater management strategies, as referred to above, would assist in managing impacts to the waterway. A Foreshore Management Plan for Sawpit Gully and any adjoining waterway should be prepared and implemented as part of future planning applications in consultation with DWER and DBCA.

It should be noted that ecological water requirements of receiving systems should be a primary consideration within any water management strategy and if changes in hydrology are proposed then it should be demonstrated that there will be no significant impacts to the ecology of a waterway or wetland system. Allocation of areas to accommodate alternate stormwater infrastructure may need to be considered outside wetlands and their buffers in some precincts.

### **Wastewater disposal strategies**

The DWMS for North Ellenbrook (West) notes that preliminary advice from Water Corporation indicates there is no wastewater system in place for the area but Water Corporation have agreed to start planning to service the area north of Marshall Road in 2020. Further information is required on the proposed management of wastewater and the timing of the construction of the necessary infrastructure to service the development.

### **Kangaroo Management**

Urban expansion in this area may result in the displacement of large numbers of kangaroos which currently utilise the rural habitat. Displaced kangaroos can create problems for nearby urban landowners, along major transit corridors and public open space areas, resulting in excessive grazing and safety issues particularly during summer months when food and water is scarce. Proponents are encouraged to implement early planning measures to ameliorate potential management issues and costs during later stages of development. The relocation of kangaroos post development is often challenging, expensive and can raise issues regarding animal welfare.

A Kangaroo Management Plan should be prepared and implemented at, or prior to, the local structure planning stage, in consultation with the City of Swan and DBCA, to address the management of kangaroos pre-development, during construction activities and following development. The plan should include as a minimum the following:

- A baseline survey to record of the number of kangaroos in the proposed development area;
- Adaptive kangaroo management options, including the preferred management approach and alternate options;

- A community engagement, education and communication strategy, inclusive of a communications role to respond to community concerns relating to kangaroo management;
- A framework for implementation of the plan through each stage of development, for the life of the development; and
- Contingencies to suit the subsequent stages of development.

DBCA is able to provide advice on a range of management strategies that mitigate the impacts of kangaroo displacement.

### **Tonkin Highway Interchange location**

DBCA previously provided preliminary advice to the Department of Planning, Lands and Heritage (DPLH) in January 2021 in relation to options presented regarding the location and design of the proposed Tonkin Highway interchange. It is noted that the reservation of land to accommodate the Tonkin Highway interchange will be subject of a separate MRS amendment process.

DBCA expects that an interchange, associated with the development of the North Ellenbrook area, is designed and constructed to minimise vegetation disturbance and maintain the natural flow regimes of waterways. Further detailed environmental, engineering and alignment definition studies will be required to guide the finalisation of the future interchange design and consultation with DBCA is ongoing.

### **Bushfire Management**

It is noted that the EPA advice includes the recognition of opportunities for rehabilitation, particularly around waterways and within local reserves and wetland buffers. Bush fire management planning at future planning stages should include accurate reflection of the post development vegetation classification, with consideration of future rehabilitation requirements. This will ensure that adequate setbacks and BAL classifications are applied within future bushfire management plans prepared to support the local scheme amendment and local structure planning stages.

### **Matters of National Environmental Significance**

The native vegetation proposed to be cleared to facilitate the future development of the North Ellenbrook (East) area may impact Matters of National Environmental Significance including populations of the threatened flora species *G. curviloba subsp. curviloba*, occurrences of the threatened ecological community 'Banksia woodlands of the Swan Coastal Plain' and the breeding, roosting and foraging habitat of threatened species listed under State and Commonwealth legislation including Carnaby's black cockatoo (*Zanda latirostris*) and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*). The MRS area is also in close proximity to known populations of the Western Swamp Tortoises (WST) (*Pseudemydura umbrina*) and may contain habitat for this species.

Consideration should therefore be given to the obligations for assessment of future proposals in accordance with the Commonwealth EPBC Act. Please be aware that proponents may have notification responsibilities under the EPBC Act and should contact the Commonwealth Department of Climate Change, Energy, the Environment and Water for further information on these responsibilities, prior to further planning stages.

OFFICIAL

Thank you for the opportunity to comment on the proposed MRS amendment. Please contact Jacqui Clinton at Parks and Wildlife's Swan Region office on 9442 0312 or by email at [jacqui.clinton@dbca.wa.gov.au](mailto:jacqui.clinton@dbca.wa.gov.au) if you have any queries regarding this advice.

Yours faithfully,



Shawn Debono  
A/ REGIONAL MANAGER

30 June 2025