Appendix 1

Engineering Servicing Report

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NORTH ELLENBROOK WEST
LOCAL STRUCTURE PLAN AREA 1
ENGINEERING SERVICING REPORT

CONOBLE PARK PTY LTD
C/- PARCEL PROPERTY

CLIENT: CNOBLE PARK PTY LTD C/- PARCEL PROPERTY

PROJECT: NORTH ELLENBROOK WEST LOCAL STRUCTURE PLAN AREA 1

TITLE: ENGINEERING INFRASTRUCTURE SERVICING REPORT

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1 INTRODUCTION

TABEC Pty Ltd has prepared the following engineering servicing report for Parcel Property to provide engineering servicing and infrastructure advice to support the proposed urban development of North Ellenbrook (West) Local Structure Plan Area 1, this being Lots 112, 114 and 1808 Chudalup Road (the Site).

This report considers the civil engineering aspects of residential and commercial related land uses and summarises the availability of existing infrastructure assets in proximity to the Site and the potential engineering infrastructure requirements to support the proposed urban development within the study area. The earthworks, roads, drainage, wastewater, water, gas, power and communication servicing requirements are considered based on existing site investigations, technical reporting and advice from relevant servicing authorities.

The information provided within this report is current at the time of preparing the report and therefore subject to change as further detail is resolved during future planning and engineering design phases.

2 STUDY AREA AND EXISTING SITE FEATURES

2.1 Site Locality and Planning Context

The Local Structure Plan (LSP) area is approximately 111 hectares and is located the City of Swan, approximately 7km north of the Ellenbrook activity centre and 28km to the North-East of Perth central business district. An existing aerial image of the LSP area is presented in the following Figure 1.



Figure 1 – North Ellenbrook West Local Structure Plan Area 1 Locality – Aerial Image (MNG Access 2025)

The Site is bound by the following existing landholdings:

- Tonkin Highway (Main Roads WA Reserve) to the east;
- Lot 2946 and Lot 108 to south;
- Halden Road to the west;
- Chudalup Road to the north.

The Site is accessible from the north via existing Raphael Road and Chudalup Road reserves, with access to the western portion of the site from existing Halden Road reserve. The aforementioned roads exhibit rural sealed road pavements, with informal access to Lot 112 currently accommodated via Lot 114. Lot 112 is to ultimately accommodate the proposed Tonkin Highway North Ellenbrook Interchange (THNEI) which shall provide main access to the LSP area and the broader District Structure Plan area.

The proposed concept subdivision plan for the LSP Area 1 Site, produced by Rowe Group, is presented in the following Figure 2. The concept identifies the various proposed lands use areas, associated roads, public and regional open space configuration within the context of the funded Tonkin Highway North Ellenbrook Interchange.

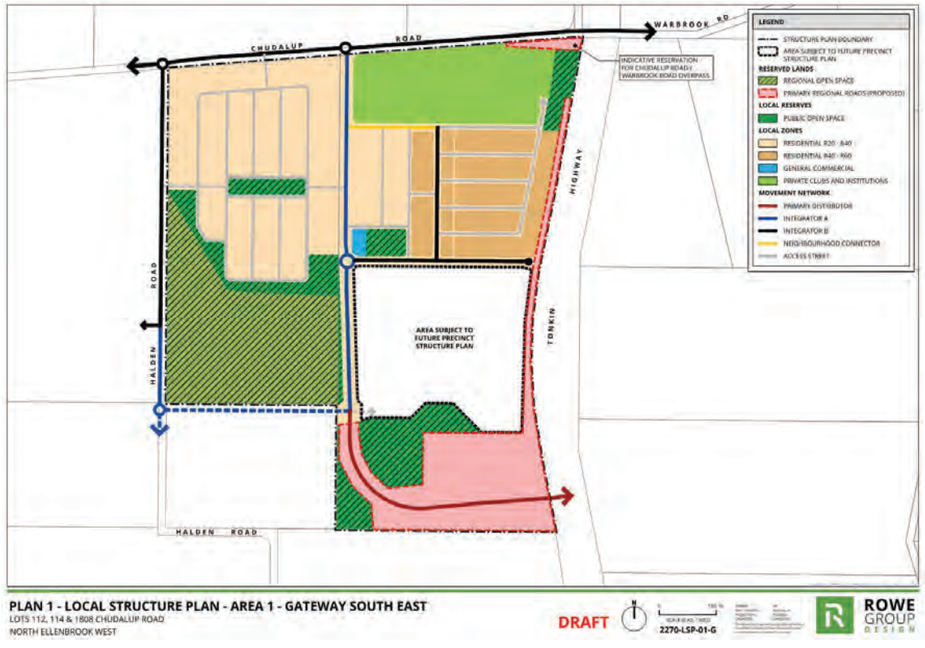


Figure 2 - Concept North Ellenbrook (West) LSP Area 1 Structure Plan (Rowe Group, March 2026)

The proposed development outcome is to incorporate ~27.5 hectares of residential land with a ~10-hectare school site and ~18-hectare district and commercial centre.

The Site is contained within the approved North Ellenbrook (West) District Structure Plan within the City of Swan, as indicated in the following Figure 3.

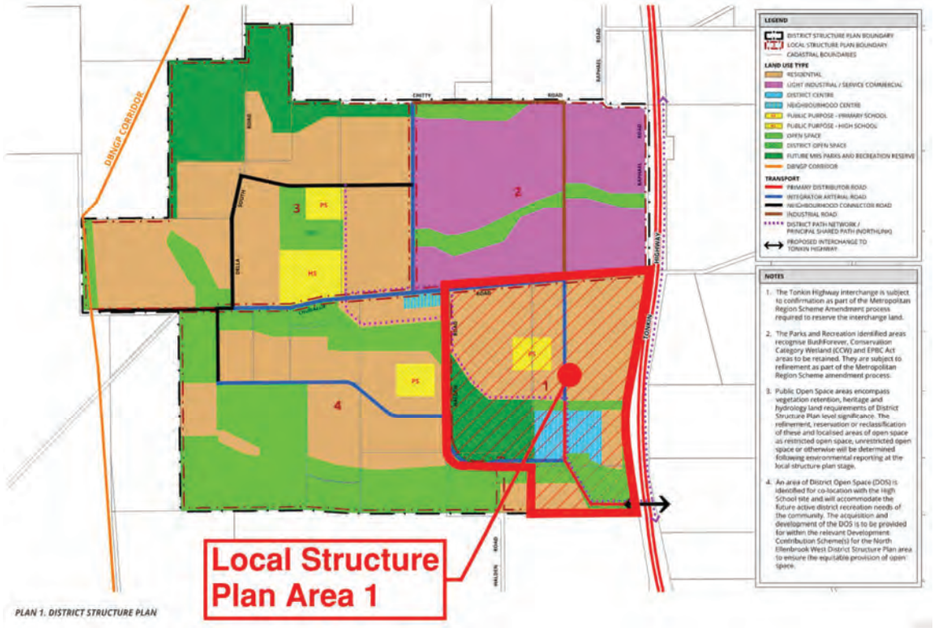


Figure 3 - LSP Area 1 Extent of Approved North Ellenbrook (West) District Structure Plan (Rowe Group, 2022)

The LSP area is currently zoned 'Rural' under the provisions of the *Metropolitan Region Scheme* (MRS) and 'General Rural' under the City of Swan Local Planning Scheme No. 17. The North Ellenbrook West DSP area is currently subject to an Amendment to the MRS to rezone the area, including LSP Area 1, from 'Rural' to 'Urban' and 'Parks and Recreation Reservation'. It is understood that consideration of the proposed amendment progressing, with an 'Urban' zoning determination anticipated in June 2026.

2.2 Anticipated Development and Infrastructure Delivery Timeframes

The anticipated development timeframes for the LSP area are presented in the following table and have informed the coordination and staging of infrastructure delivery with relevant servicing authorities to support the proposed LSP. Relevant key infrastructure timeframes are also included and discussed further in relevant sections of this report.

Based on advice from the relevant service authorities, it is understood that the initial Stage 1 of development (nominally 150 lots) can be serviced with water and power from the existing infrastructure networks within Chudalup Road directly abutting the site. Temporary tankering of full-occupancy flows may be required for a short period until the commissioning of the interim wastewater infrastructure has occurred (anticipated during 2029), to be formalised through suitable agreements with the Water Corporation.

The balance of development within the LSP area would be progressed concurrently with the delivery of a new HV feeder being designed and delivered by Western Power, to be in-service by late 2028. Water Corporation water distribution infrastructure is anticipated to be completed by 2030 to support further development of adjacent residential development and support the ultimate district centre demands.

Table 1 - Anticipated Development and Infrastructure Delivery Timeframes

Development Milestone	Timeframe
MRS 'Urban' & TPS 'Residential Development' Zone Confirmation	June 2026
Local Structure Plan Approval	February 2027
Subdivision Approval	February 2027
Tonkin Highway North Ellenbrook Interchange (THNEI) Construction Completion	December 2027
Stage 1 Construction Completion	December 2027
Stage 1 Clearances and Titles (Serviced from Existing Water & Power Network)	March 2028
Completion of Western Power HV Feeder	Late 2028
Stage 1 Full-Occupancy Sewer Flows (Commence Tankering)	March 2029
Completion of Water Corporation Interim Sewer Infrastructure	FY29/30
Balance LSP Area 1 Development Completion (Excluding District Centre)	December 2029
Balance LSP Area 1 Full-Occupancy Sewer Flows	December 2030
Completion of Water Corporation Water Distribution Infrastructure (Required for District Centre)	FY29/30
Completion of Western Power North Ellenbrook Zone Substation	2030-2032

3 EXISTING SITE CONDITIONS AND FEATURES

3.1 Existing Site Features

The Site is generally comprised of grassy paddocks with standings of mature trees and currently serves for agricultural land use purposes. The south-western portion of the Site exhibits a greater density of vegetation generally incorporating shrubs and trees, with a portion to be retained as part of proposed regional open space. Trees within proposed public open space areas and road verges / medians are intended to be retained where possible whilst achieving the necessary landform outcomes for the Site.

There is an existing dwelling situated towards the northern portion of Lot 114 and existing agricultural fencing and gates throughout the site, which are to be removed prior to undertaking civil works across the site.

There are several localised dams within Lot 112 and 114 which hold water for agricultural purposes. The north-eastern portion of the site is generally lower-lying and subject to extended periods of inundation during winter months.

The Site contains geomorphic wetlands with an assigned management category of 'Multiple Use' by the Department of Biodiversity, Conservation and Attractions (refer Figure 3). This category indicates that the area has few remaining important attributes and functions, which is consistent with the observed agricultural land use. It is anticipated that localised low-lying areas of the Site would remain for tree retention, with hydrological management of multiple-use wetland and protection of environmental assets in accordance with the North Ellenbrook West Local Water Management Report prepared by Avant Hydro.

Pre-development flows are to be maintained to the conservation wetland to the east of Tonkin Highway, outside of the LSP area, utilising existing culverts under Tonkin Highway. This is reflected in

the approved North Ellenbrook West District Water Management Strategy, with culvert locations and pre-development catchments presented in Figure 8.

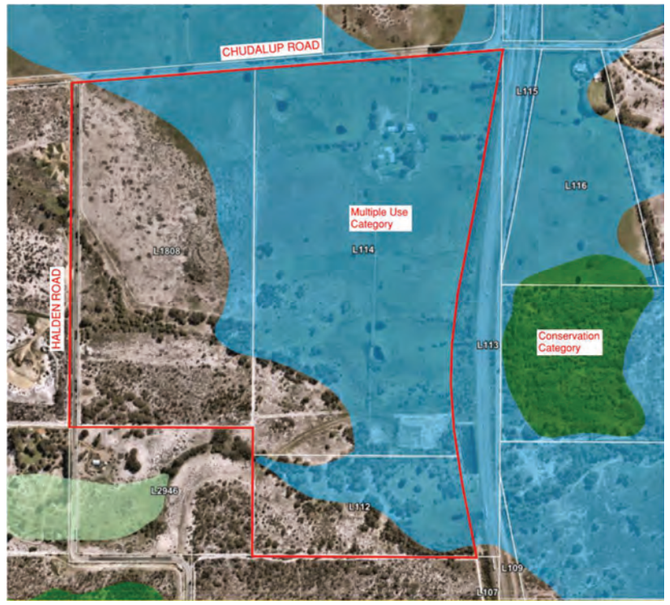


Figure 4 - Swan Coastal Plan Geomorphic Wetlands (MNG Access, 2025)

3.2 Landform and Topography

The land generally grades from south-west to north-east, with elevations ranging from approximately 59mAHD at high points along the south-western Halden Road boundary (Lot 1808) down to ~RL42.5mAHD in the north-eastern corner of Lot 114. The north-west corner of Lot 1808 exhibits an elevation of ~53mAHD which grades down to ~RL47mAHD at the eastern boundary to Lot 114, with a comparatively flatter grade across Lot 114 to the Tonkin Highway boundary.

Existing surface contours and notable elevations are indicated in the following Figure 5.

Geotechnical site investigations undertaken by Structerre in September 2025 and observed surface water across the majority of Lot 114, where existing surface levels at consistent with anticipated groundwater levels.

There are existing stormwater culverts generally situated at topographical low points along the eastern boundary of the Site which facilitate conveyance of pre-development flows to the eastern side of Tonkin Highway.

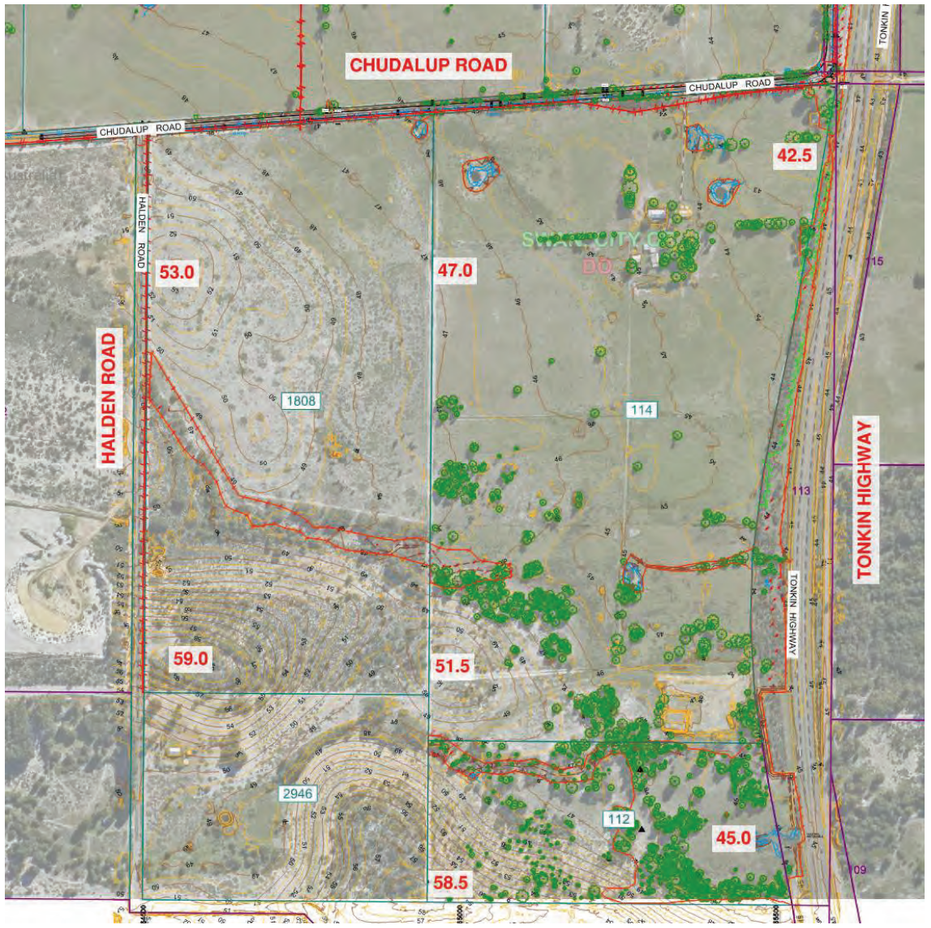


Figure 5 - LIDAR Site Feature Survey (MNG, 2025)

3.3 Ground Conditions

The Perth 1:50,000 Environmental Geology resource prepared by the Geological Survey of Australia indicates that the Site would exhibit sandy soils across the site, with sub-surface soil properties reflective of thin Bassendean Sand over Guildford Formation. With reference to Figure 6, the Department of Primary Industries and Regional Development (DPIRD) attribute the Yanga Soil System to the majority of Lot 114 and north/eastern portions of Lot 1808, typified by pale sands. These areas of the Site may exhibit perched surface water during wetter months of the year, particularly where there is shallow clearance to groundwater.

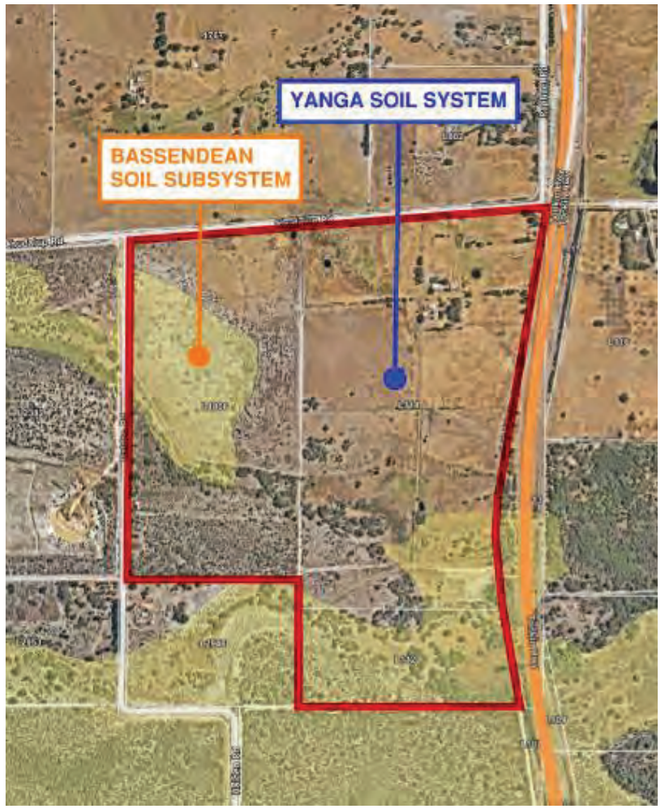


Figure 6 - DPIRD Subsoil Systems (DPIRD, 2025)

Structerre Consulting completed preliminary geotechnical investigation for the North Ellenbrook (West) area in September 2025. The North Ellenbrook (West) Geotechnical Investigation Report indicates that the subsurface ground conditions are consistent with the Environmental Geology resource mapping.

3.4 Groundwater

During geotechnical investigations, perched groundwater was encountered on or near the existing surface across majority of Lot 114. Groundwater was also encountered during test pit investigations and found to vary from the surface to 2m below the existing surface across the Site.

Desktop review of the Perth Groundwater mapping reveals the historical maximum groundwater levels range from RL 47m AHD to RL 42m AHD from west to east, as presented in Figure 7 below.



Figure 7 - Perth Groundwater Map (Department of Water and Environmental Regulation 2025)

The following Figure 8 from the North Ellenbrook (West) District Water Management Strategy (DWMS) illustrates the average annual maximum groundwater level (AAMGL) contours in the area suggesting LSP Area 1 exhibits groundwater levels from RL47mAHD to RL43mAHD, generally consistent with Perth Groundwater mapping information. Figure 8 also depicts the location of existing drainage catchments and the approximate locations of existing culverts designed to convey flows under Tonkin Highway.

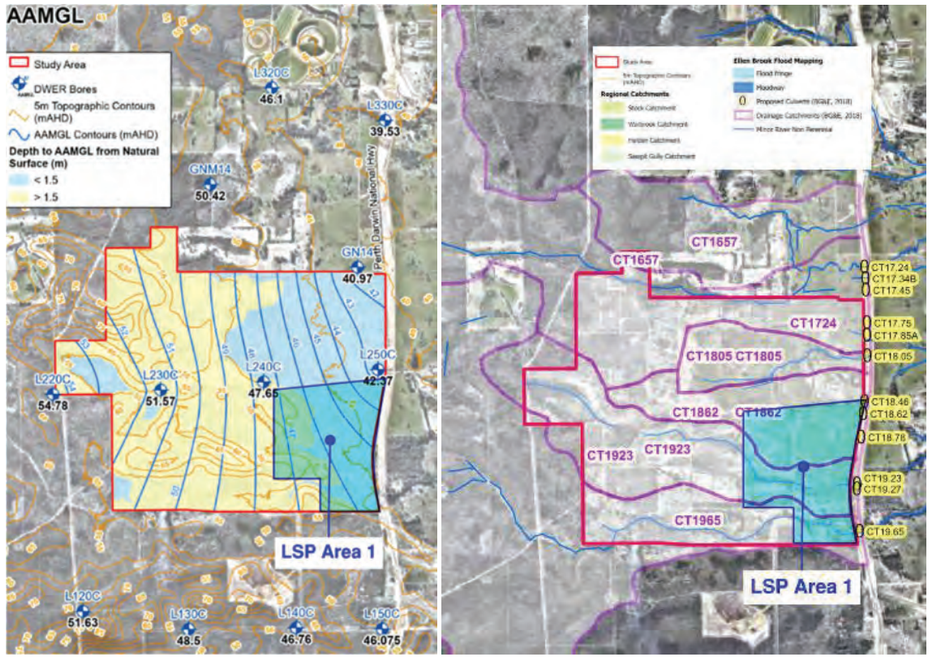


Figure 8 - North Ellenbrook (West) DWMS Groundwater Contours & Tonkin Hwy Culverts Extract (JDA, 2021)

The presence of groundwater near the surface will require placement of fill to achieve adequate separation between habitable development finished levels and groundwater level.

Service excavations are likely to intercept groundwater, hence suitable forms of dewatering and associated management are anticipated to be required when undertaking civil works, in accordance with an approved dewatering management plan.

3.5 Acid Sulfate Soils

A review of The Swan Coastal Plain Acid Sulfate Soils (ASS) Risk Map designates most of the Site as having moderate to low risk of Acid Sulphate Soils of ASS occurring within 3m of the natural soil surface (refer Figure 9). There is an area of high to moderate risk in the south-eastern portion of the site, however this is contained within the indicative road reserve for the Tonkin Highway North Ellenbrook Interchange to be constructed by Main Roads WA. This high to moderate risk area is not likely to the intercepted as part of the proposed subdivision works for the Site.

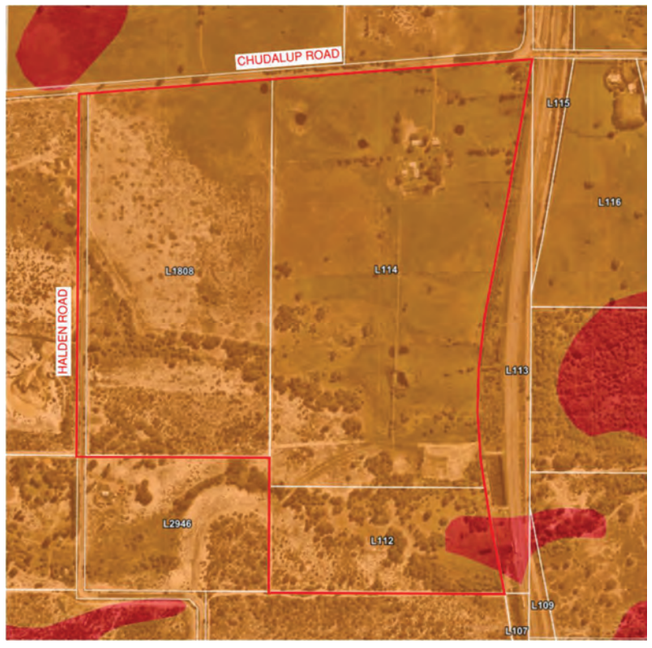


Figure 9 - Acid Sulphate Soil Risk Map – LSP Area 1 (MNG Access, 2025)

The presence of ASS will be further investigated in due course and associated reporting prepared with subsequent project progression.

Treatment of ASS impacted material and dewatering would be undertaken in accordance with an approved acid sulphate soil management plan should more than 100m^3 of material or water be removed from below the groundwater table in accordance with Department of Environmental Regulation (DER) guidelines.

3.6 Site Contamination Assessment

A search of the Department of Water and Environmental Regulation Contaminated Sites Database indicates that there are no contaminated sites within the proposed structure plan area.

NORTH ELLENBROOK WEST – LSP AREA 1

4 SITEWORKS AND EARTHWORKS

Geotechnical investigation of the Site was undertaken by Structerre Consulting in September 2025, with the associated geotechnical report providing advice on the suitability of the site for development and required earthworks to support the proposed land use outcomes.

The Site is to be cleared of all redundant structures, dwellings and internal fencing, with the exception of existing overhead power and services in existing road reserves. Vegetation and/or trees which have not been identified for retention are likely to be cleared due to the anticipated filling of the Site to satisfy geotechnical and hydrological requirements and achieve the necessary landform for the development. Vegetation and trees within regional open space are to be protected and maintained. Where landform permits, vegetation within proposed public open space and drainage reserves has potential to remain.

The Site is to have topsoil stripped in accordance with the site preparation recommendations of the geotechnical site investigation report. This is to include removal of organic material, roots and other deleterious material. Topsoil is to be suitably screened and/or blended with structural sand material for re-use as deep fill or placed as fill in non-structural areas below 0.6m from design finished surface. Topsoil screening, blending ratios and areas suitable for placement of blended material are to be assessed further by and experienced geotechnical engineer during construction.

Earthworks are expected to comprise of proof compaction, cut to fill excavations, grading of the existing ground surface and the placement and compaction of suitable fill material. The in-situ sand material investigated within the Site is deemed to have suitable geotechnical engineering properties for use as structural fill; to be utilised in cut to fill operations.

By undertaking the earthworks recommended in the geotechnical report, the Site can be reclassified as Class “A” in accordance with AS 2870-2011.

Placement of free-drainage sand fill is to occur where required to increase the thickness of unreactive cover above silty sands and groundwater in low-lying areas to both improve surface drainage and achieve sufficient clearance to groundwater. Geotechnical investigations recommend that a minimum of 1.5m of free-drainage sand fill is required above groundwater level (AAMGL).

Minimum building floor levels are anticipated to be a minimum 0.3m above the estimated 1% AEP flood levels, in accordance with the Local Water Management Strategy (LWMS) prepared by Avant Hydro for the Site.

An earthworks concept plan has been prepared for the Site (Refer Appendix A) that considers’ Avant Hydro’s LWMS, with the finished levels being informed by the following key factors:

- Existing ground conditions (soil types, any areas of uncontrolled fill or loose sands, etc);
- Conservation areas and tree retention;
- Interfacing requirements with Tonkin Highway and adjacent properties;
- Interfacing requirements with the regional open space and vegetation for retention;
- Minimum 1.5m separation between habitable floor levels to groundwater (AAMGL) levels;
- Accommodating sub-soil / stormwater drainage treatment requirements in low-lying areas;
- Considering clearance and level requirements for gravity related infrastructure such as sewer reticulation and stormwater drainage;
- Requirements to ensure adequate cover over existing soils to achieve Class “A” classification;
- Minimising imported fill requirements.

It is recommended that earthworks are undertaken during dryer months of the year when groundwater levels are likely to be lower, noting that dewatering or temporary drainage management may be required to manage perched water during earthworks activities.

5 ROADWORKS

5.1 Existing Road Network

The Site currently fronts two existing rural roads, these being Chudalup Road to the north and Halden Road to the west. Both these existing roads are constructed to a rural road standard and will require road reserve widening and upgrades to an urban road standard to support the ultimate development outcomes.

Chudalup Road and Halden Road have existing road reserve widths of 20m with ~6.4m wide sealed pavement and unsealed shoulders. Chudalup Road intersects with Raphael Road to the north-east of the Site, with Raphael Road providing connectivity to Tonkin Highway via the existing Stock Road interchange.



Figure 10 - Existing Chudalup Road / Halden Road Intersection (Google, 2026)

There are no existing paths within the site or adjacent existing road reserves.

5.2 Proposed Roads

A Transport Impact Assessment (TIA) for the site has been produced by PJA Australia which details the proposed road network connections, intersection controls and access arrangements for the proposed development. The TIA demonstrates the proposed road hierarchy, cross-sections and road intersection treatments.

Primary access to the proposed subdivision is to be provided via the Tonkin Highway North Ellenbrook Interchange (THNEI), to be accommodated within Lot 112 of the LSP area. The interchange is to incorporate grade separation of Tonkin Highway and principal shared path (PSP) and an at-grade path between east and west North Ellenbrook. Funding for the interchange has been committed by the Federal and State Governments with further investment committed by adjacent private developers who will utilise the interchange within the North Ellenbrook East and West District Structure Plan areas.

Main Roads WA are in the process of developing designs for the interchange, with construction scheduled to commence in July 2026 and achieve practical completion in late 2027. The concept general arrangement for the interchange is presented in Figure 11.

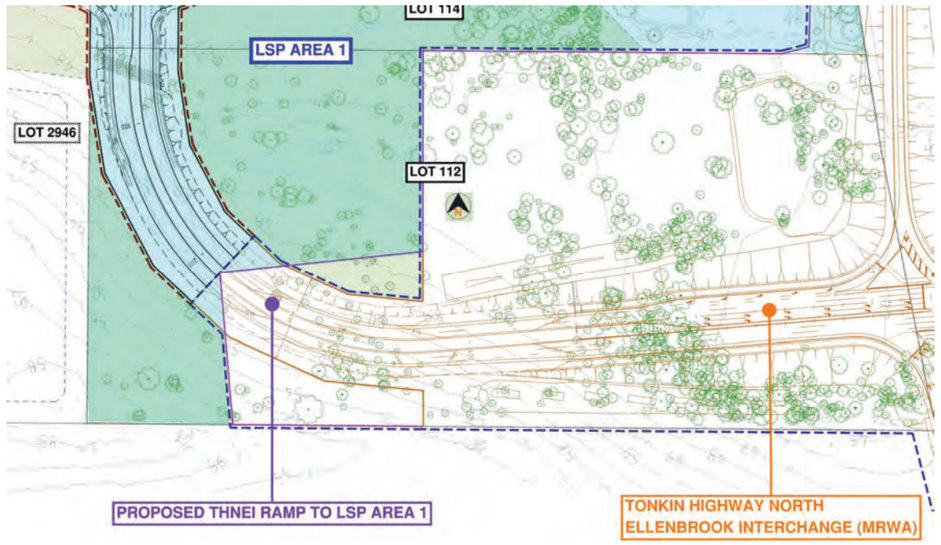


Figure 11 – Tonkin Highway North Ellenbrook Interchange Ramp Arrangement Concept (TABEC, 2026)

The LSP makes provisions for a road reservation for the future Chudalup Road / Stock Road overpass. The need and nexus for the provision of this infrastructure will be investigated in future detailed traffic studies.

The proposed development will require the following general road network:

- Provision of Tonkin Highway Interchange Connection and Signalised Intersection;
- Upgrade of Halden Road;
- Upgrade of Chudalup Road;
- Internal integrator and primary distributor road network;
- Internal local road network.

The road network will be guided by the Department of Planning's Liveable Neighbourhoods recommendations and comply with the City of Swan's design and construction standards. Roadworks will generally consist of kerbed and sealed asphalt roads, with footpaths on at least one side of the road. Traffic calming mechanisms may be required to be incorporated into the design of the internal road to suitably control traffic speeds through the proposed development. Internal intersection treatments and traffic calming measures are to be determined as part of future detailed design.

Kerb openings and flush kerbing is to be implemented in suitable locations to promote local infiltration of stormwater via median swales and planted verge areas. It is anticipated that drainage culvert bridges would be required to provide controlled conveyance of stormwater under major roads.

As traffic volumes on Tonkin Highway are likely to exceed 20,000 vehicles per day, in accordance with State Planning Policy 5.4 Road and Rail Noise, it is likely that noise mitigation measures will be required for this interface. Required noise mitigation measures are to be implemented in accordance with the Transportation Noise Assessment report prepared by Herring Storer Acoustics.

It is anticipated that the upgrade of existing roads and construction of new integrator and primary distributor roads and associated signalised intersections would be subject to inclusion under a Developer Contribution Plan as they benefit the broader North Ellenbrook West DSP area.

6 STORMWATER DRAINAGE

6.1 Existing Drainage Network

There is no existing pit and pipe drainage infrastructure for the road network within the LSP area. As is typical in rural road reserves, rainfall sheet flows off the existing roads and either infiltrates at source or is conveyed to low points in the existing catchment via road-side swales.

On the boundary of the LSP, there are culverts under Tonkin Highway which were previously designed to provide serviceability for 1% AEP events without overtopping the highway.

6.2 Stormwater Management

A Local Water Management Report (LWMR) has been prepared for the LSP Area by Avant Hydro. The stormwater drainage system for the local road network will need to be designed and constructed in accordance with City of Swan requirements to adequately convey surface stormwater runoff to suitable storage locations for local treatment and infiltration within the Site, prior to controlled discharge to main drains.

Stormwater management for the site is proposed to be undertaken in accordance with water sensitive urban design (WSUD) principles. It is anticipated that the stormwater management system will comprise of pit and pipe drainage, median swales and stormwater treatment basins to convey and treat stormwater during design storm events. Minor storm events are to be managed through a combination of upstream infiltration opportunities (swales, tree pits, permeable pavers) prior to discharge into downstream bio-retention areas for treatment.

Road reserves are to be designed to accommodate overland stormwater flows for the 1% AEP event and convey stormwater to designated flood storage areas. Where flood storage areas are situated at localised low points upstream of the Tonkin Highway culvert discharge, suitably sized conveyance swales and/or culverts within road reserves and public open space are to convey flows during major storm events. Discharge from the site is to be via existing culverts installed under the Tonkin Highway, with post-development peak discharge comparable to pre-development rates.

Disposal of lot stormwater onsite via infiltration will be pursued at detailed design stage. Lots found to be unable to support at-source infiltration will be connected directly into the City of Swan stormwater pipe network, noting this will increase the size of the catchment basins.

Finished floor levels are to achieve a minimum 0.5m clearance to 1% AEP top water levels in adjacent watercourses or flood storage areas, and a minimum 0.3m clearance to 1% AEP overland flood levels.

Groundwater depth groundwater varies for the site and appears to be perched in areas. Subsoil drainage will be required for management and control of perched water tables post-development, in areas where the existing natural surface is within 1.5m of the AAMGL.

A Drainage Catchment Concept Plan has been prepared for the Site that considers Avant Hydro's LWMR and the proposed locations of drainage basins within the Site, included in Appendix A.

7 WASTEWATER

Water Corporation (WC) is responsible for operating wastewater services in the LSP area and have provided network planning advice relating to the required wastewater infrastructure required to service the North Ellenbrook West and East DSP areas. There is presently no wastewater infrastructure in immediate proximity to the proposed development area.

Water Corporation have presented network planning concepts for the short-term (interim) and long-term (ultimate) sewer reticulation scheme planning during technical advisory group (TAG) meetings held during July 2025, which can be referred to in Appendix B.

Water Corporation planning indicates that wastewater from the Site would ultimately gravitate north via a network of trunk gravity sewer mains to the future Bullsbrook Transfer Pump Station situated on Stock Road. Wastewater would then discharge from the transfer pump station to the Alkimos Wastewater Treatment Plant. WC have advised that the downstream infrastructure to support the long-term planning is not expected to be required until 2055 (refer WC correspondence dated 7 November 2025 included in Appendix C).

It has been acknowledged by Water Corporation that a short-term (interim) servicing strategy is required to meet the more immediate needs of the North Ellenbrook development. Water Corporation are currently progressing their short-term (interim) wastewater servicing strategy for the North Ellenbrook area, which incorporates interim pump stations and sewer discharge mains to convey sewer from the North Ellenbrook (West and East) DSP areas to discharge into the proposed DN900 Ellenbrook Collection Main located in proximity to the Barrambie Way Pump Station. The following Figure 12 indicates the proposed interim and ultimate wastewater servicing strategy, overlayed on the Water Corporation's Bullsbrook SD044 Conceptual Planning Long Term Scheme.

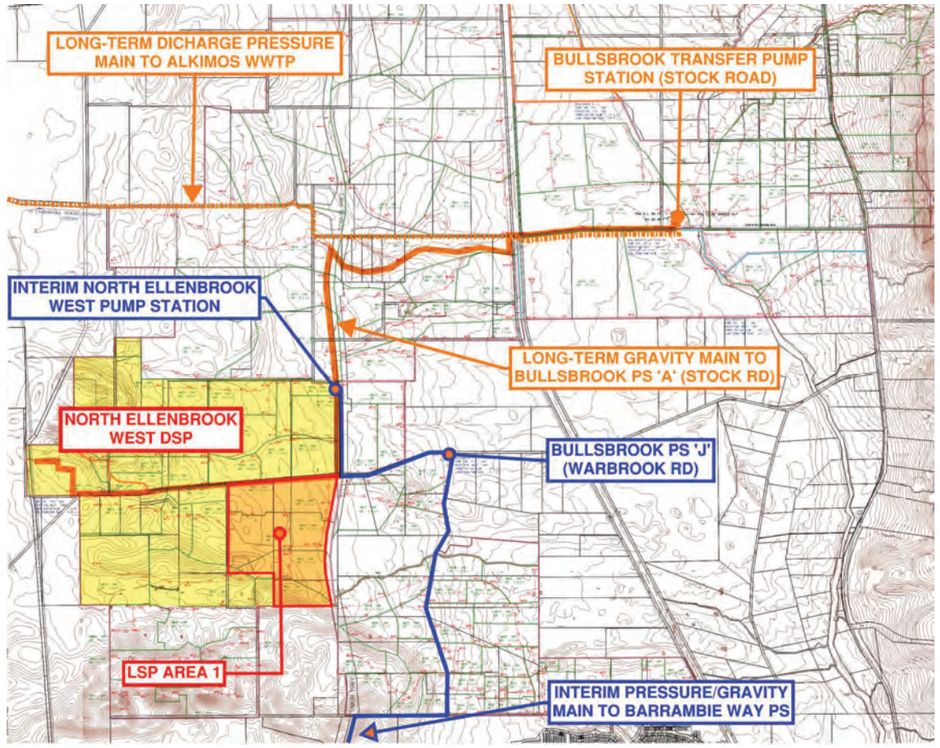


Figure 12 – Short-term (Interim) and Long-Term Sewer Servicing Strategy Concept (TABEC, 2026)

Water Corporation are currently progressing route investigations for the interim wastewater infrastructure servicing solution, as represented in Figure 13, and have committed to providing the outcomes of preliminary investigation by mid-2026 following coordination with DBCA and Main Roads WA. Preliminary route investigations undertaken by the Water Corporation were presented during a TAG meeting held 21 November 2025 and can be referred to in Appendix D.

The interim pump stations and associated discharge mains would be funded by the Water Corporation and likely delivered by Developers through entering into formal Developer Constructed Works

Agreements. Water Corporation have advised that the required interim sewer capital works projects are planned to be operational by FY2029/30 to service the initial development.

Announcement of Housing Enabling Infrastructure Fund investments for the 2026-2027 budget confirmed funding for the Water Corporation wastewater infrastructure required to support the residential development of North Ellenbrook. The funding was secured in response to the Water Corporation's request, as minuted during the North Ellenbrook TAG meeting held 9 February 2026 (refer Appendix E).

Water Corporation had commissioned preliminary site investigations and route studies ahead of funding announcements, with the outcomes of these studies informing the scoping requirements for the North Ellenbrook West wastewater pump station and associated headworks infrastructure. Scoping studies are anticipated to progress throughout 2026, in alignment with program for design delivery of the infrastructure by FY2029/2030.

Temporary tankering arrangements with Water Corporation may be required to service the initial stages of development prior to commissioning of the interim wastewater headworks infrastructure.

LSP Area 1 can be serviced internally with sewer reticulation constructed to Water Corporation standards, which gravitates to an interim pump station within the North Ellenbrook West DSP area. The location of the interim North Ellenbrook West pump station is subject to further detailed Water Corporation planning advice, anticipated to be located in proximity to Chitty Road as per Figure 13.

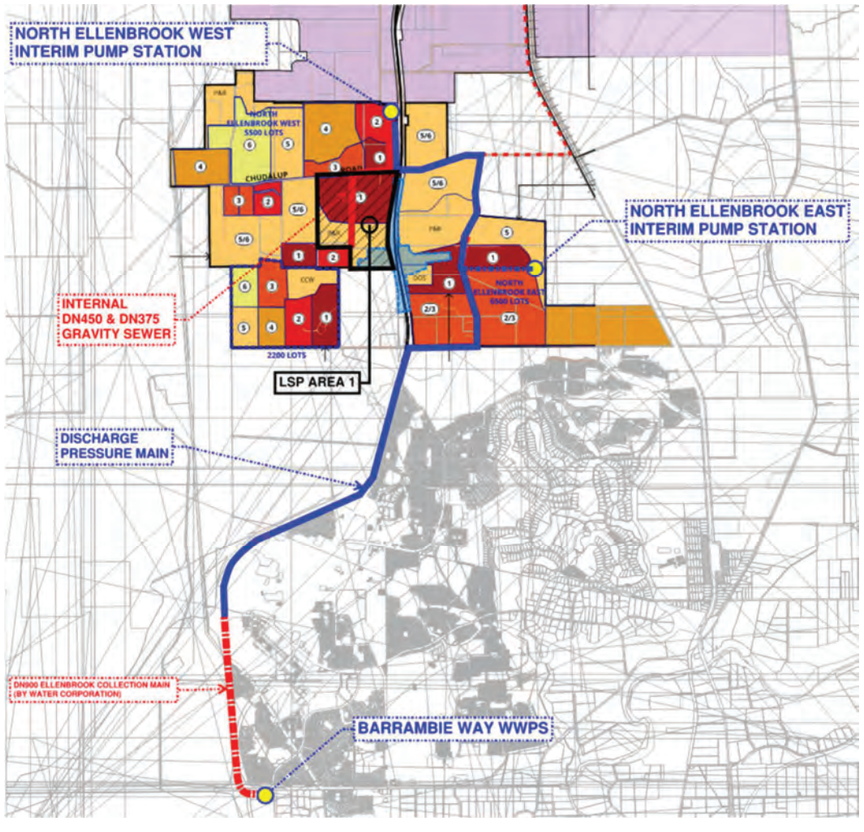


Figure 13 - Short-term (Interim) Sewer Infrastructure Concept (TABEC, 2026)

8 WATER SUPPLY

Water Corporation (WC) are responsible for the operation of existing water services in the North Ellenbrook area and have provided network planning advice relating to the required network extensions to service the development.

Whilst there are existing reticulation mains in the area, no major water distribution assets exist in the immediate vicinity of the proposed development area.

There is an existing DN250 water reticulation main within Chudalup Road reserve to the north of the Site which presently provides services to the Centre for National Resilience. Water Corporation has advised that the existing DN250 main has sufficient capacity to service the initial stages of urban residential development in the proposed LSP area.

Chudalup Road reserve will require widening and upgrading to an urban standard and it is likely that the existing water main will be relocated as part of these upgrade works. The location of the existing DN250 water main asset is presented in the following Figure 14.



Figure 14 – Existing Water Supply Network (Water Corporation, ESInet 2026)

Water Corporation has advised that the existing network could support full development of the LSP area, with the exception of the district centre, without any upgrades. Pressures provided to the fully complete development would be sufficient for residential and community areas, although upgrades to the external water distribution network would be required to support the district centre.

To support progressive development of the district centre and residential development in the area, installation of DN1000 and DN700 water main is required to connect the existing Ellenbrook Tank water supply to the LSP Area, with the water mains to be installed to the eastern extent of the North Ellenbrook West DSP area abutting Tonkin Highway. These two water mains are shown in the Water Corporation's conceptual long-term water planning as indicated in Figure 15, which was presented during North Ellenbrook technical advisory group meetings held to date (refer Appendix B).

Water Corporation have programmed these external water distribution works to be completed by 2030, although delivery may be brought forwards depending on rate of development in the North Ellenbrook area. It is anticipated that construction of the infrastructure would commence when ~40% of the LSP Area 1 has been developed to ensure timely commissioning to support ongoing development.

Announcement of Housing Enabling Infrastructure Fund investments for the 2026-2027 budget confirmed funding for the Water Corporation water infrastructure required to support the residential development of North Ellenbrook. It is understood that upgrade of water distribution mains is to be funded and delivered by the Water Corporation in line with the anticipated growth of development in the North Ellenbrook West and East DSP areas, with scoping studies to progress given recent announcement of investment in this infrastructure through the 2026-2027 HEIF funding.

Ultimately, Water Corporation intend on progressing delivery of the water distribution infrastructure to connect the Bullsbrook and Ellenbrook Tanks to support development of this consolidate growth corridor, subject to confirmation of required funding.

All internal water reticulation mains are to be designed and constructed in accordance with Water Corporation specifications, with installation costs borne by the developer. Standard infrastructure contributions will also apply.

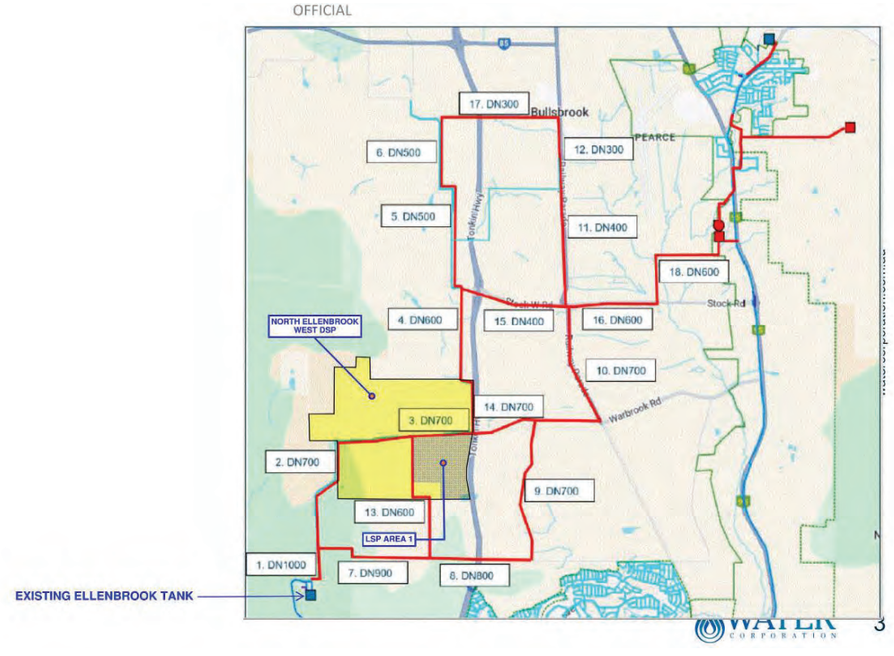


Figure 15 - Water Corporation Conceptual Long-Term Water Planning (Water Corporation, 2025)

9 POWER TRANSMISSION AND SUPPLY

Western Power is responsible for the network planning, management, operation and maintenance of the electricity network and provision of power generation and distribution infrastructure to support development in the North Ellenbrook and Bullsbrook area.

There is an existing 22kV overhead high-voltage (HV) cable within the Chudalup Road and Halden Road reserves which connects to the Muchea Zone Substation (ZSS) transmission network. It is anticipated

that existing overhead infrastructure in Chudalup Road and Halden Road will need to be relocated underground as a requirement of the proposed subdivision works.

Western Power design information package (DIP) advice has confirmed that there is sufficient capacity in the existing overhead network to provide service to the initial 150 residential dwelling within LSP Area 1, via connection to the existing overhead infrastructure. Whilst the Western Power network mapping tool indicates that Muchea ZSS has a spare capacity (refer Figure 16), it is understood that capacity is being allocated to separate feeders to the Bullsbrook growth area and that the existing overhead network connected to the Muchea ZSS is not sufficient to support the ultimate anticipated loads for the proposed LSP.

Western Power are currently progressing engineering design for additional HV feeder infrastructure from the Henley Brook Zone Substation which would be required to support the progressive development of the LSP area. Western Power have advised that ~1,000 residential lots in the North Ellenbrook area could be serviced by the new HV feeder assets, therefore meeting the power demands for LSP Area 1. The Henley Brook ZSS is currently undergoing capacity upgrades to support the additional load, which Western Power have programmed to complete in 2026. Final engineering design for the HV feeder infrastructure is to be completed by the end of 2026, with completion of construction and commissioning (in-service) of the asset programmed for late 2028. Western Power are engaging with developers to coordinate engineering design and progressing HV feeder route investigations.

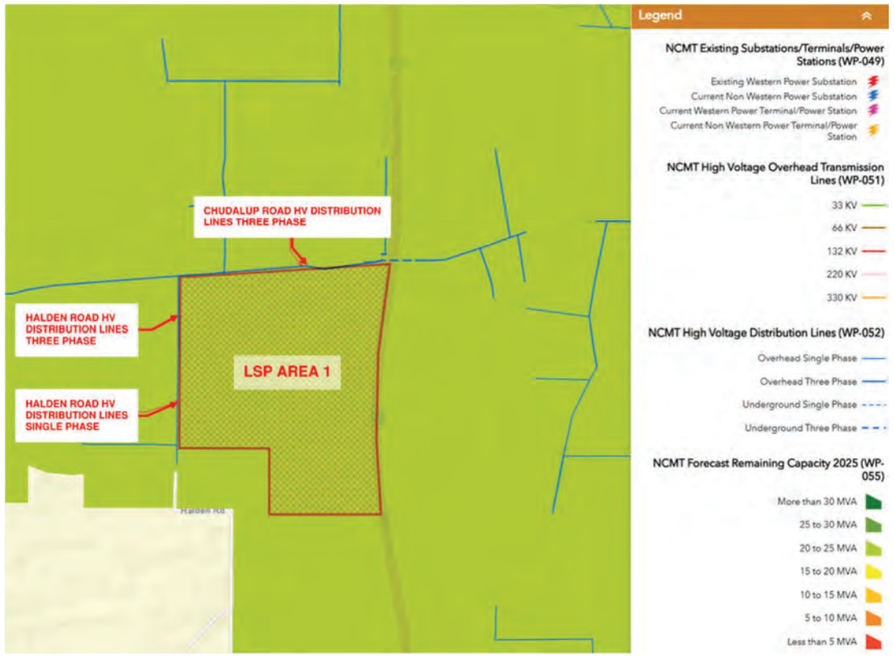


Figure 16 – Western Power Network Capacity Mapping Tool (Western Power, 2025)

Western Power have advised that a new zone substation is to be constructed to service the longer-term power demands of the broader North Ellenbrook West and East DCP areas. It is understood that the North Ellenbrook ZSS is likely to be situated to the north of Chitty Road within the future North Ellenbrook Industrial area, subject to confirmation of site location from Wester Power. Announcement of Housing Enabling Infrastructure Fund investments for the 2026-2027 budget confirmed funding for the acquisition of land for the North Ellenbrook ZSS and to progress scoping planning for the ZSS and

associated transmission infrastructure. The ZSS is anticipated to be in-service by 2030-2032, subject to confirmation of Western Power design and delivery programme.

Internal low-voltage network and street lighting will be required as part of the development, to be constructed in accordance with Western Power requirements. All lots will otherwise be provided with power connections during the subdivision works.

10 TELECOMMUNICATIONS

The NBN rollout map indicates that the subject site area is currently serviceable by fixed wireless service. The closest fixed line services are situated within existing urban development areas south of Maralla Road, as shown in Figure 17.

There may be opportunity to utilise 'Technology Choice Program' to upgrade from the fixed wireless service to a fibre network through further consultation with NBN, or an alternate telecommunications provider.

The developer may enter into an agreement with NBN Co or an alternative telecommunication infrastructure provider to extend the fibre network to the area. The developer is typically responsible for providing pit and pipe infrastructure throughout the subdivision for the fibre to be later installed by the telecommunications provider.

Communications infrastructure is not a typical condition of subdivision and therefore not essential to development.

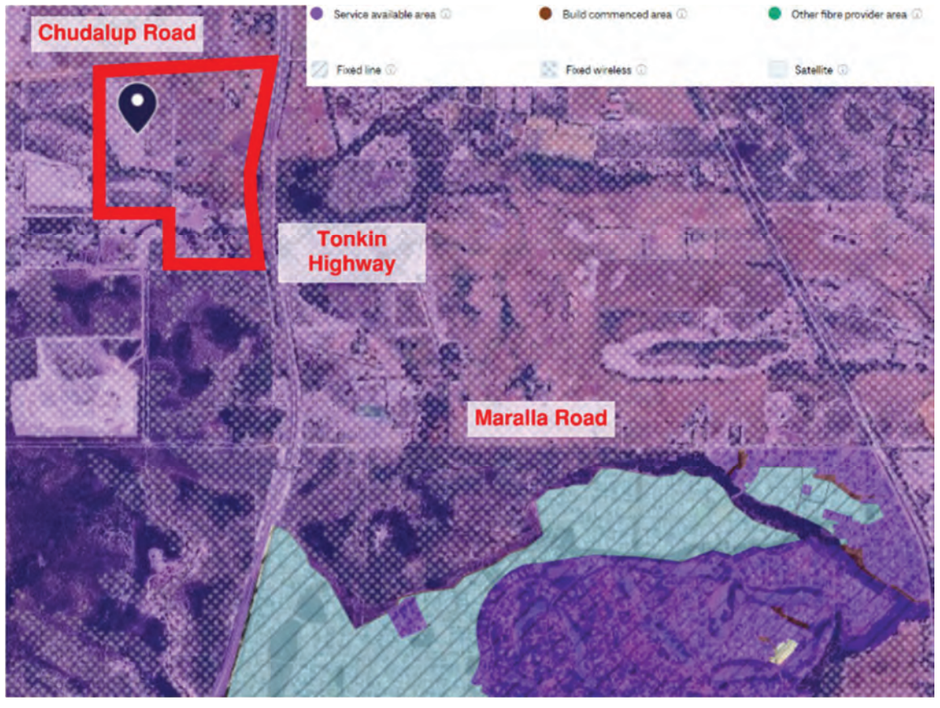


Figure 17 NBN Rollout Mapping (NBN, 2025)

11 GAS SUPPLY

There is no existing gas supply in the proposed development area or within adjacent road reserves. The nearest point of connection is existing high-pressure infrastructure in proximity to Maralla Road, situated several kilometres to the south. Arrangements can be made between the developer and ATCO Gas to extend the gas network to the service the development. This can be investigated as the development progresses, noting that gas reticulation is not a typical condition of subdivision and therefore not essential to facilitate development.

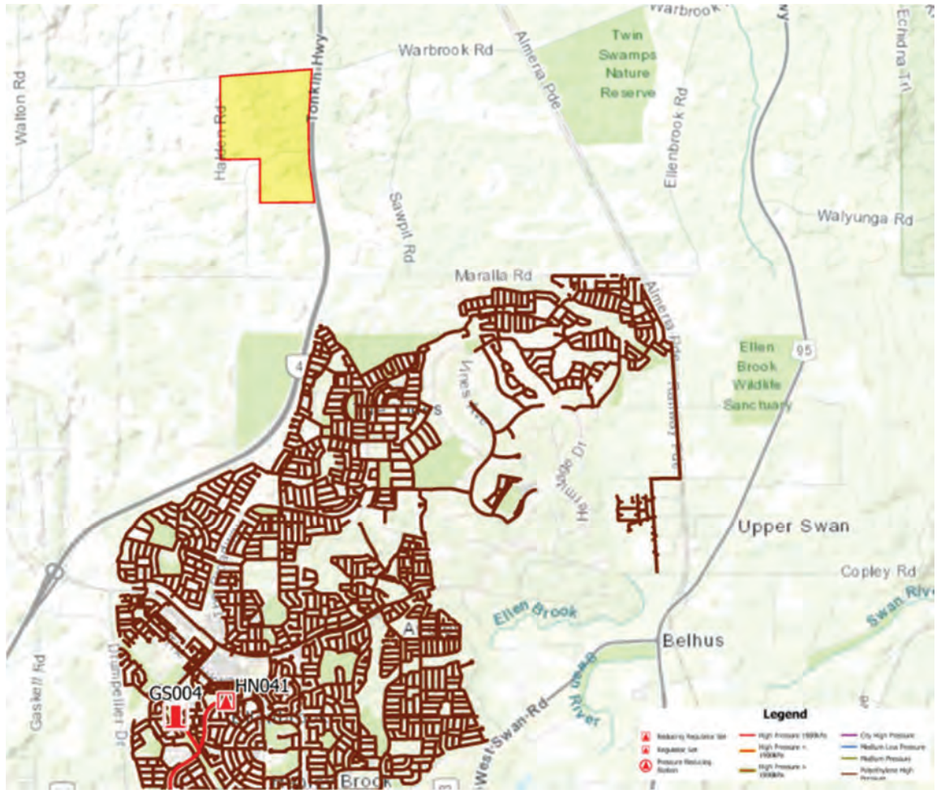


Figure 18 - Existing ATCO Gas Network - Perth Metro North Extract (ATCO Gas, 2023)

12 CONCLUSION

The Site is situated within the approved North Ellenbrook West DSP and is strategically placed to accommodate urban development. The Site is directly accessible from existing road networks and the funded Tonkin Highway North Ellenbrook Interchange, with servicing strategies actively being implemented to enable the development of this landholding. The scope and timeframes for coordinated delivery of service extensions will be progressed in cooperation with relevant Service Authorities as refinement of the subdivision layout and detailed planning of the proposed development site progresses.

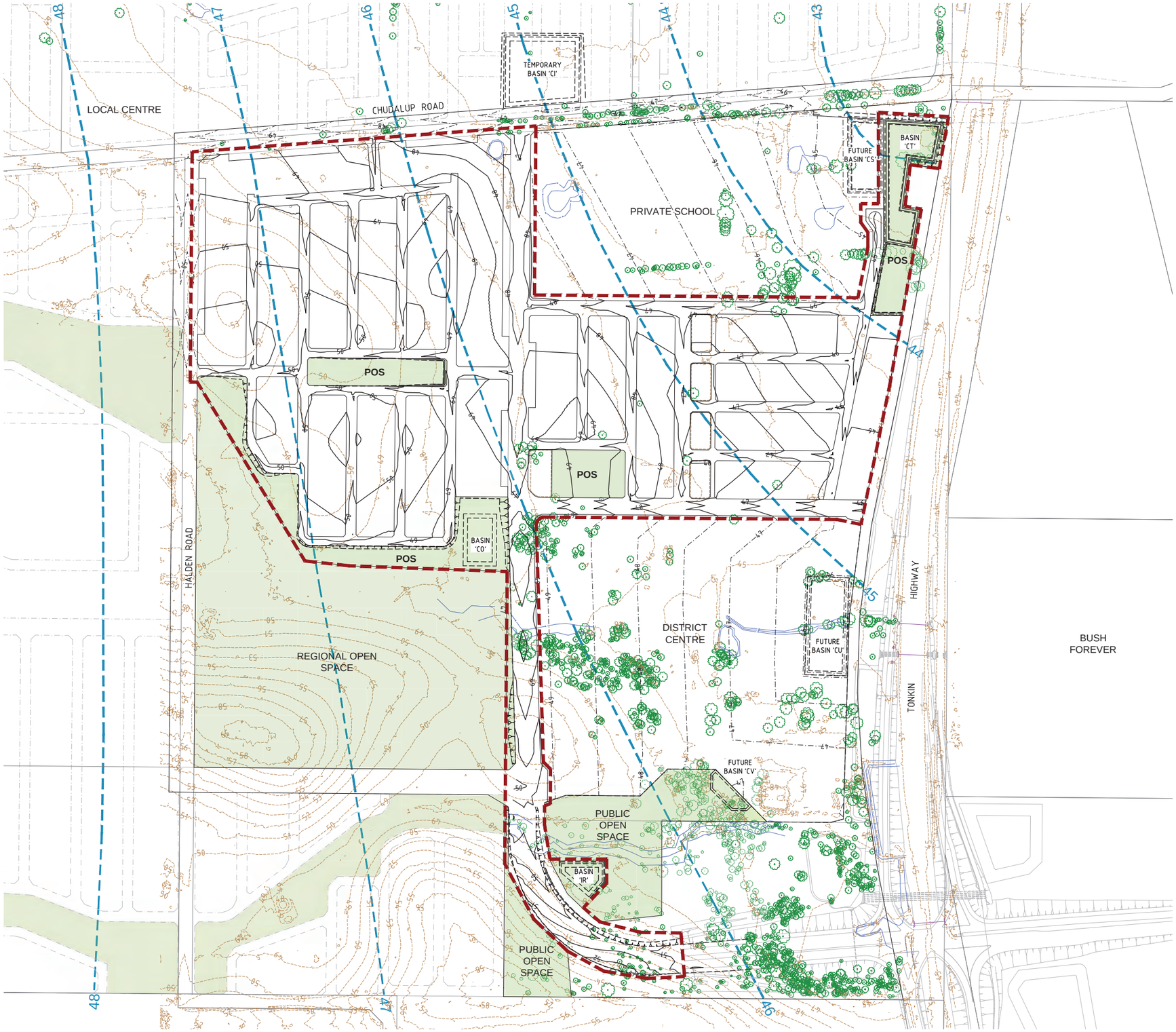
Based on the preliminary engineering servicing review, no engineering or servicing constraints to the development of the Site have been identified.

13 REFERENCES

We note that the following resources and technical reports relating to the site were available for our reference at the time of preparation of report, namely:

- Rowe Group, Local Structure Plan – Area 1 – Gateway (South East): Concept. March 202.
- Structerre Consulting, Geotechnical Investigation North Ellenbrook (West) – Halden Road, Bullsbrook WA. October 2025
- PJA, North Ellenbrook (West) Precinct 1 Local Structure Plan (LSP 1) Transport Impact Assessment. March 2026.
- Avant Hydro, North Ellenbrook West LSP Area 1 Local Water Management Report. March 2026.
- Transport Noise Assessment, Herring Storer Acoustics, March 2026.
- MNG, North Ellenbrook Contour Plan Conoble Park Pty Ltd, December 2023.
- Water Corporation, ESInet mapping. March 2026.
- Water Corporation, Wastewater Scheme Planning Series Bullsbrook – SD044 Conceptual Planning Long Term Scheme. May 2025.
- Water Corporation, Technical Advisory Group Presentations. 8 July 2025 & 9 February 2026.
- Western Power, Network Capacity Mapping Tool. March 2026.
- Google Maps Street View. January 2026.

APPENDIX A Concept Civil Engineering Drawings



LEGEND

- LSP 1 EARTHWORKS BOUNDARY
- 43 EXISTING SURFACE CONTOUR (0.5m)
- 43 AAMGL CONTOUR (1.0m)
- 45 PROPOSED SURFACE CONTOUR (0.5m)
- 45 FUTURE SURFACE CONTOUR (1.0m)
- EXISTING CULVERT
- EXISTING TREES

SCALE 1:3000 — 0 60 120 180

A1

No.	DATE	DRAWN	APPROVED	AMENDMENT
A.P1	25.02.26	KAM	MA	ISSUED FOR LSP APPROVAL

PRELIMINARY

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DRAWN	CHECKED	DATE
KM	MA	

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Level 2, 54-58 Havelock Street, West Perth WA 6005
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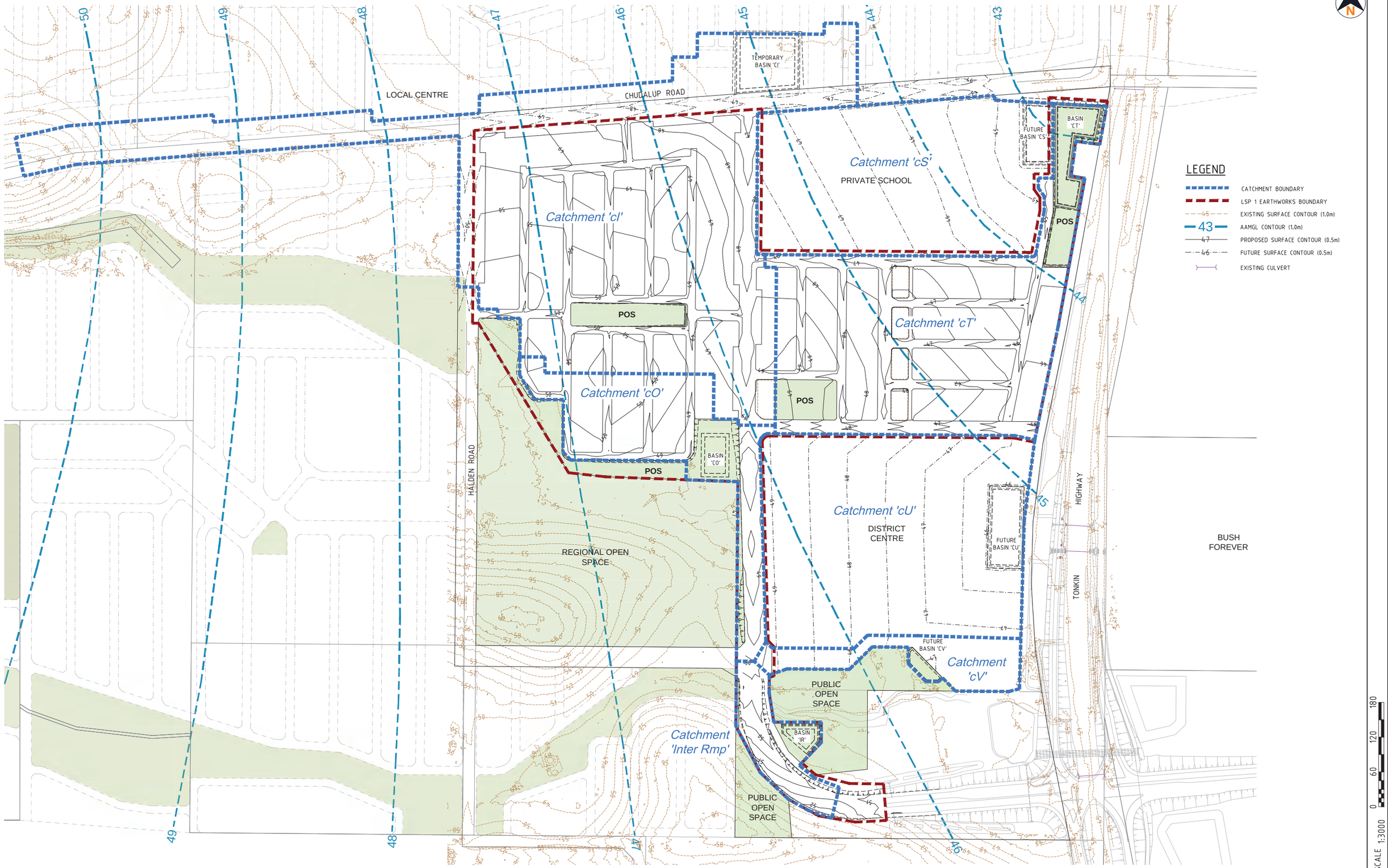
PROJECT: CHUDALUP ROAD - NORTH ELLENBROOK

TITLE: MASTERPLANNING
LSP 1 EARTHWORKS CONCEPT PLAN

DRAWING NUMBER: 2597-MP-110

ISSUE: A.P1

Plotted By: tsoore Plot Date: 25/02/26 - 07:17 Cad File: C:\1065\data\TB-10D\2597 - North Ellenbrook_395\CADD\CAD\2597-MP-2597-MP-110.dwg



No.	DATE	DRAWN	APPROVED	AMENDMENT
A.P1	25.02.26	KAM	MA	ISSUED FOR LSP APPROVAL

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DRAWN	CHECKED	DATE
KM	MA	

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PROJECT: CHUDALUP ROAD - NORTH ELLENBROOK

TITLE: MASTERPLANNING
LSP 1 DRAINAGE CATCHMENT PLAN

DRAWING NUMBER: 2597-MP-421

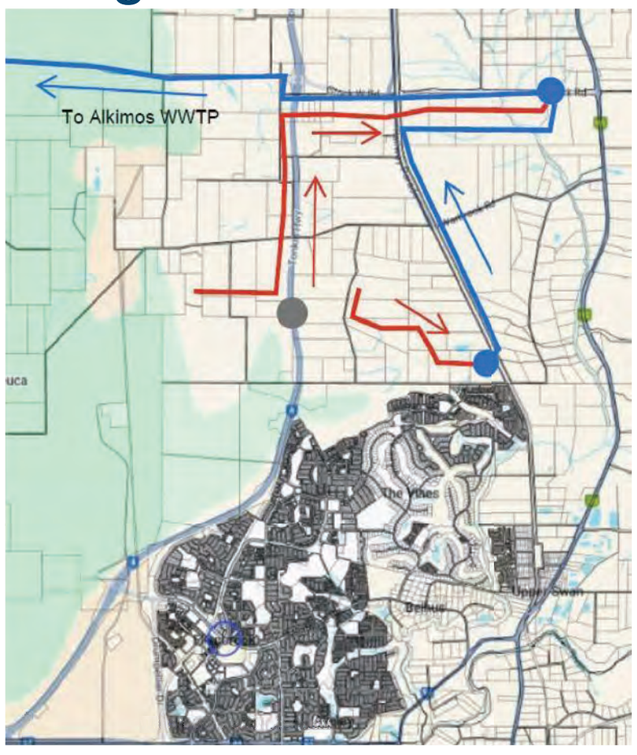
ISSUE: A.P1

Plotted By: kmoore Plot Date: 25/02/26 - 07:24 Cad File: C:\tabec\data\18-12D\2597 - North Ellenbrook_265\CADD\CAD\2597-MP\2597-MP-421.dwg

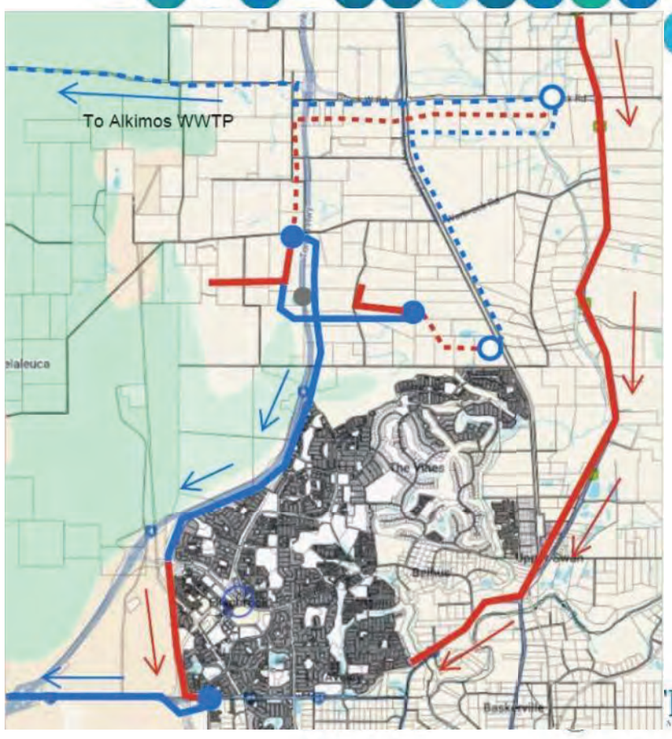
APPENDIX B Water Corporation Wastewater & Water Interim & Long-Term Network Planning (8 Jul 2025 TAG Meeting)

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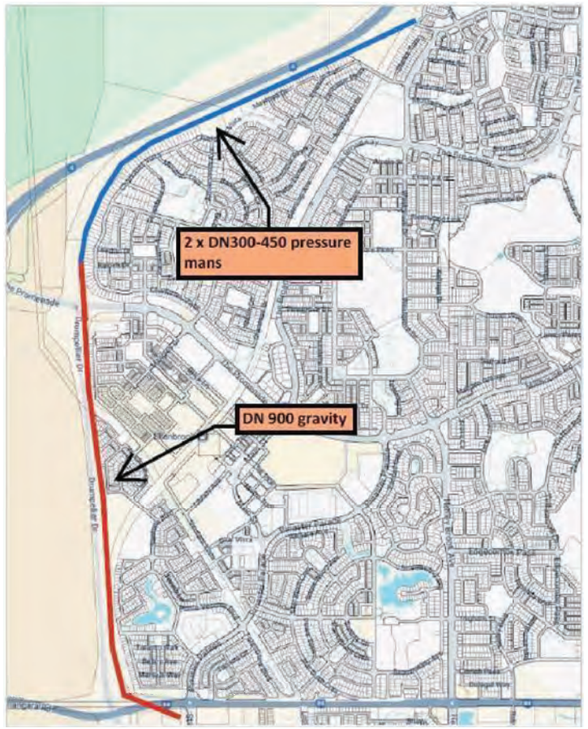
Long-term



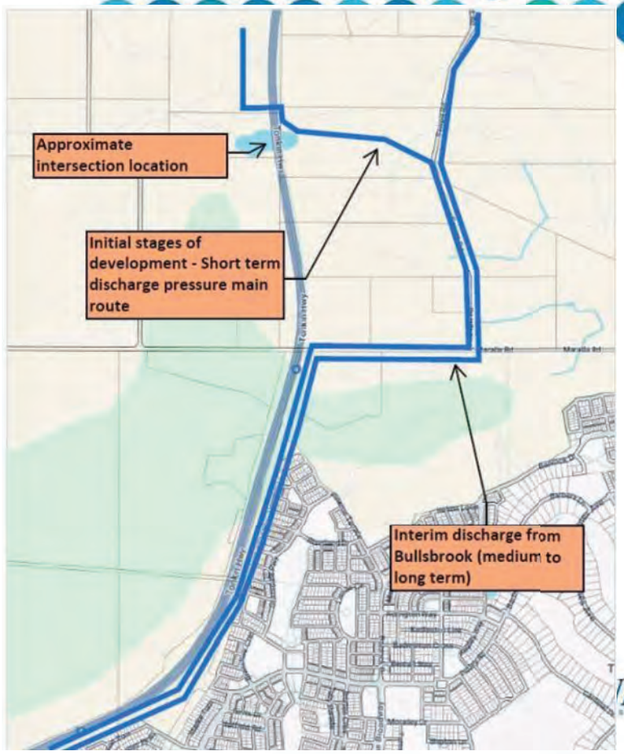
Short-term



Southern



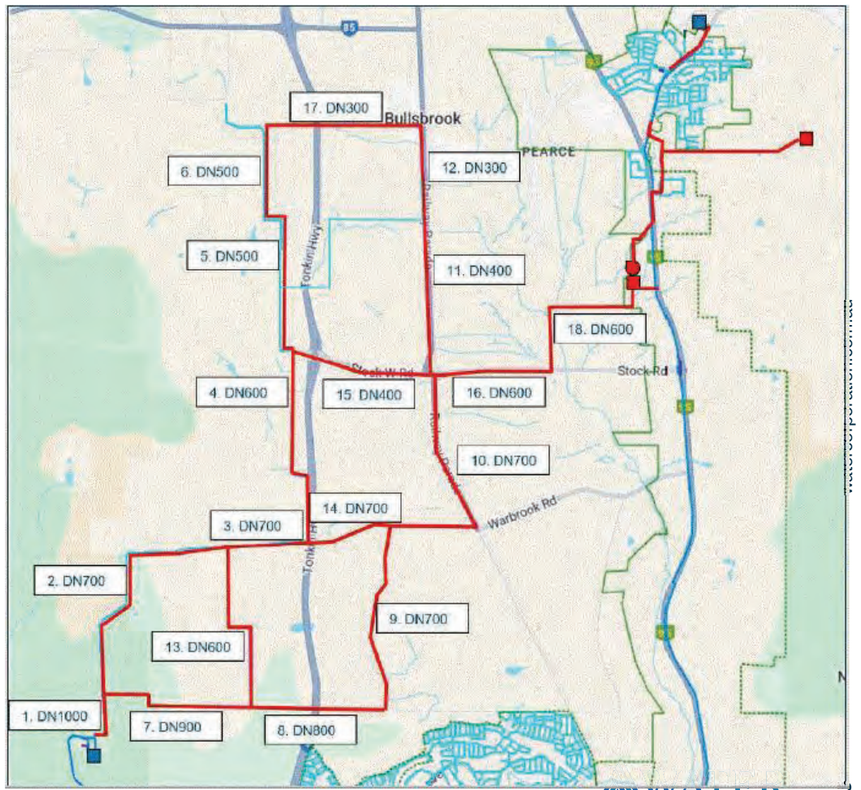
Northern



Water Planning

Recently reviewed water planning includes:

- Short term - upgrades to Upper Swan WPS pumping capacity to increase bulk transfer along GNH transfer main into Bullsbrook townsite retic. and to refill Bullsbrook gravity tank.
- Medium term – new low level (balance) tank in Bullsbrook south industrial area, a pump station and separated inlet-outlet mains to Bullsbrook gravity tank.
- Long term – staged construction of large distribution mains from Ellenbrook tank to follow spatial pattern of North Ellenbrook urban expansion and staged to meet rate of demand growth.
- Long term distribution mains from Ellenbrook tank will ultimately act as the bulk water transfer under gravity from Ellenbrook tank (TWL 93m) to Bullsbrook LL tank (TWL ~ 50m).



APPENDIX C Water Corporation Servicing Information (7 Nov 2025)

Development Services
629 Newcastle Street Leederville WA 6007
PO Box 100 Leederville WA 6902
T (08) 9420 2099
F (08) 9420 3193

Your Ref: 1409/41
Our Ref: MRS393712
Enquiries: Matt Calabro
Direct Tel: 9420 2099

7 November 2025

Chief Executive Officer
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 1409/41 (Major) - Portion of North Ellenbrook (West) - City of Swan (RLS/1112)

Thank you for your letter dated 16 October 2025. Water Corporation offers the following comments regarding this proposal.

Water Corporation notes this proposal is subject to investigation led by the Department of Treasury and Finance, Housing Support Unit established in 2025.

In accordance with Water Corporations Infrastructure funding Model and State Planning Policy 2.9, water infrastructure for this proposal remains unfunded due to the current land use planning status.

The implementation of the proposed water service headworks to service North Ellenbrook is likely to require infrastructure intersecting significant public infrastructure (roads, rail and gas) and environmental values, which may potentially require three years to complete scoping, design and approvals, contracting and construction.

A North Ellenbrook water services alignment assessment study was commenced by Water Corporation, funded by the Housing Enabling Infrastructure Fund (HEIF) during 2025. Recommended North Ellenbrook infrastructure alignments are planned to be finalised by December 2025 for progressing to design on the basis the development is prioritized for funding by Government.

<u>Water Services</u>

Long-term conceptual water infrastructure planning is in place to respond to the proposed development which includes:

- Precincts 1 and 1B will require a distribution main extending approximately five kilometres from the Ellenbrook tank. However, this component may be deferred until the commencement of development within Precinct 2, subject to staging and demand considerations.
- A staging strategy to service initial development (approximately 400 lots) is proposed via the existing reticulation mains constructed to support the Centre for National Resilience.
- Three capital water works projects are planned to be operational by FY 2029/30 to unconstrain initial development, and a forth capital project planned to be operational during 2031.

- The four water capital works projects required to service the development are estimated to require funding of $31 million.
- Initial funding of $24 million is required between FY 2026/27 and 2029/30 to support development beyond the initial stages, approximately 400 lots, the remaining $7 million is required between FY 2030/31 to 2032/33.

Sewer Servicing

Long-term conceptual sewer infrastructure planning is in place to respond to the proposed development which includes:

- Long-term planning sewer discharge to a future pumping station on Stock Road, Bullsbrook, transferring flows to Alkimos Wastewater Treatment Plant, however downstream infrastructure to support the long-term plan is not expected to be required to be in place until 2055.
- A staging strategy to connect North Ellenbrook to the existing Ellenbrook sewer scheme will require approximately 2km of gravity main, 4km of pressure main, and a series of interim pumping stations at an estimated cost of approximately $52 million, requiring approximately three to four years to deliver.
- Subject to confirmed funding commencing FY 2026/27, the sewer capital works projects are planned to be operational by FY 2029/30 to unconstrain initial development.
- Meeting developer timelines with temporary tankering options which may be limited to approximately 300 lots .

To accelerate delivery, Water Corporation can enter into Developer Constructed Works Agreements allowing developers to build infrastructure on its behalf, enabling parallel progress to reduce delays. Formal agreements cannot proceed until funding is confirmed.

The information provided above is subject to review and may change. If the proposal has not proceeded within the next six months, please contact the Water Corporation to confirm that this information is still valid.

Should you have any queries or require further clarification on any of the above issues, please do not hesitate to contact matt.calabro@watercorporation.com.

Regards,



Dehlia Goundrey
Head of Development Services

APPENDIX D Water Corporation Interim Sewer Servicing Route Investigations (21 Nov 2025 TAG Presentation)

WC Route Investigations
North Ellenbrook – Interim Sewer Servicing



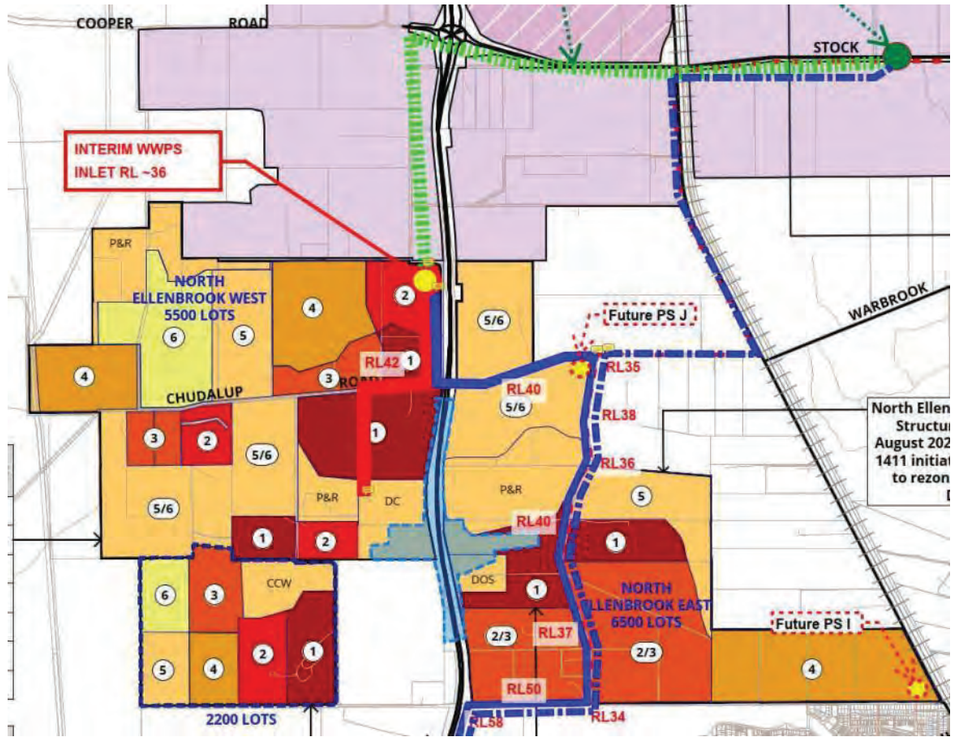
TAG Presentation

21 November 2025

WISE Project No. 1006-01-15
Water Corporation PO No. 4200792036

North End Tie-In

- Interim PS – North Ellenbrook West
  - North-east corner of western residential area
  - Likely Type 90 PS
  - Need to cross Tonkin Hwy at Warbrook Rd
- Other Interim PS options
  - Assuming injection to primary rising main

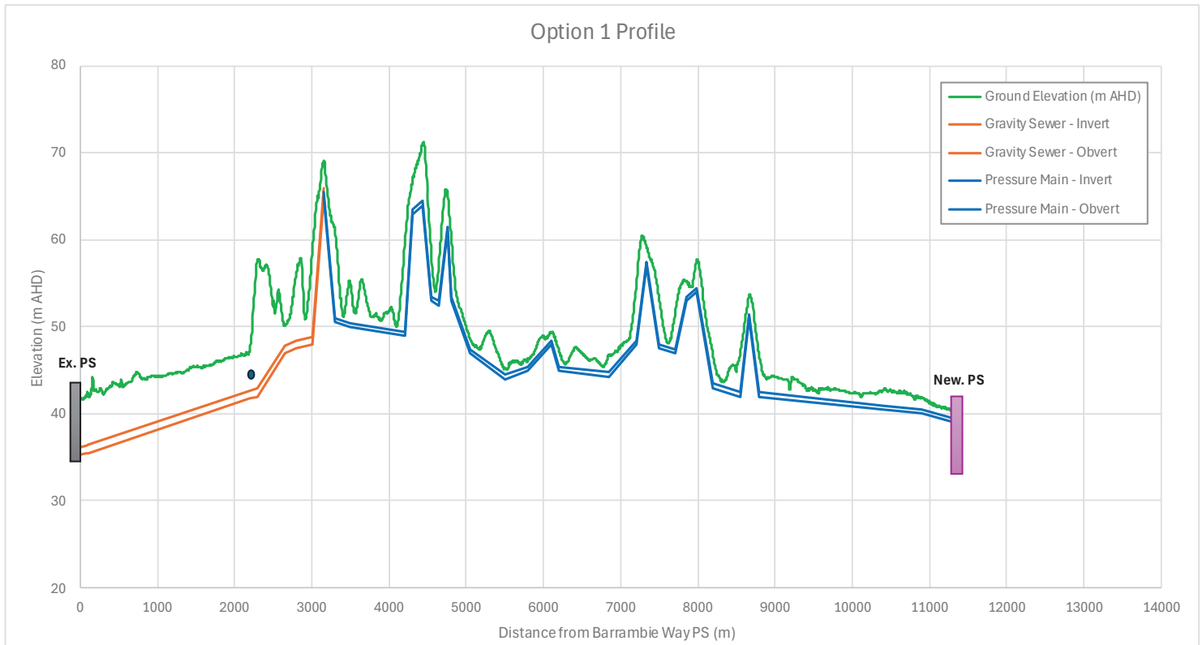


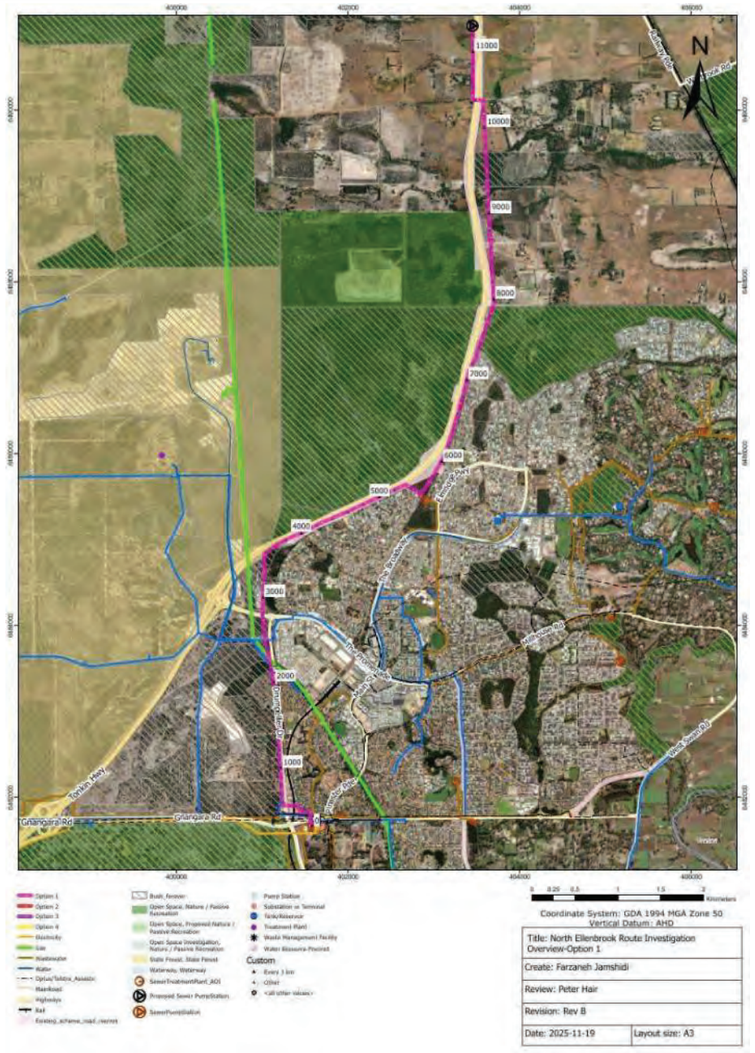
South End Tie-In

- Tie in to ex. Barrambie Way PS
  - Could utilize existing sewer across Gnagara Rd, pending capacity review
- Trenchless crossing of Rail and Drumpellier Rd embankment



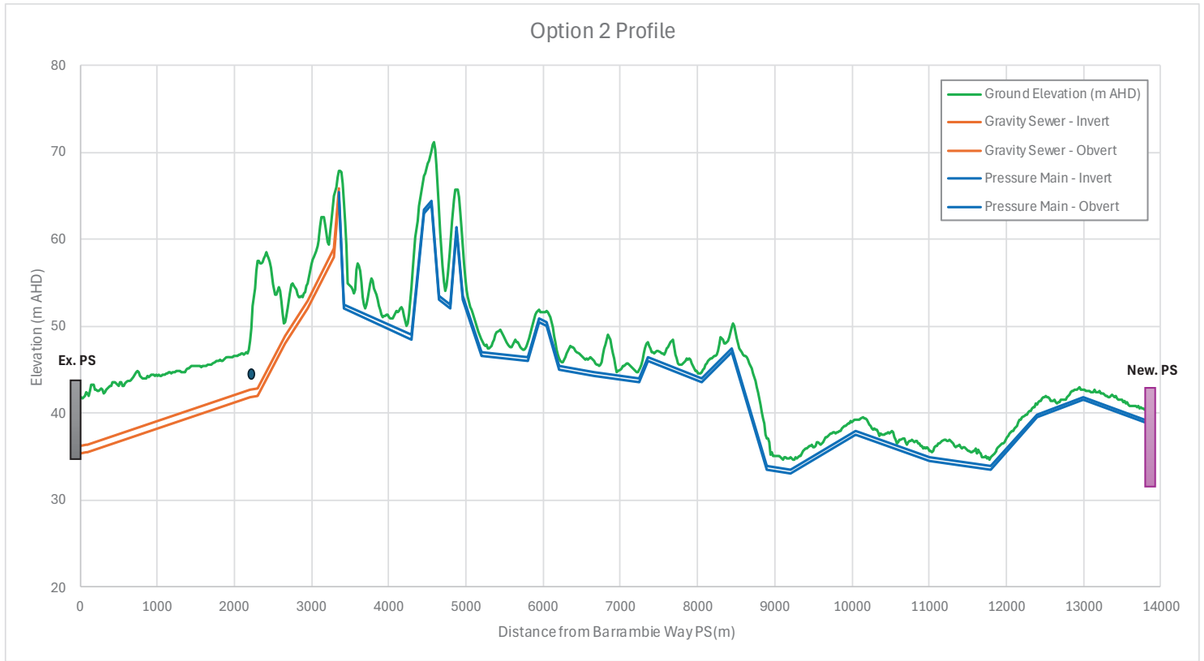
North Ellenbrook – Option 1

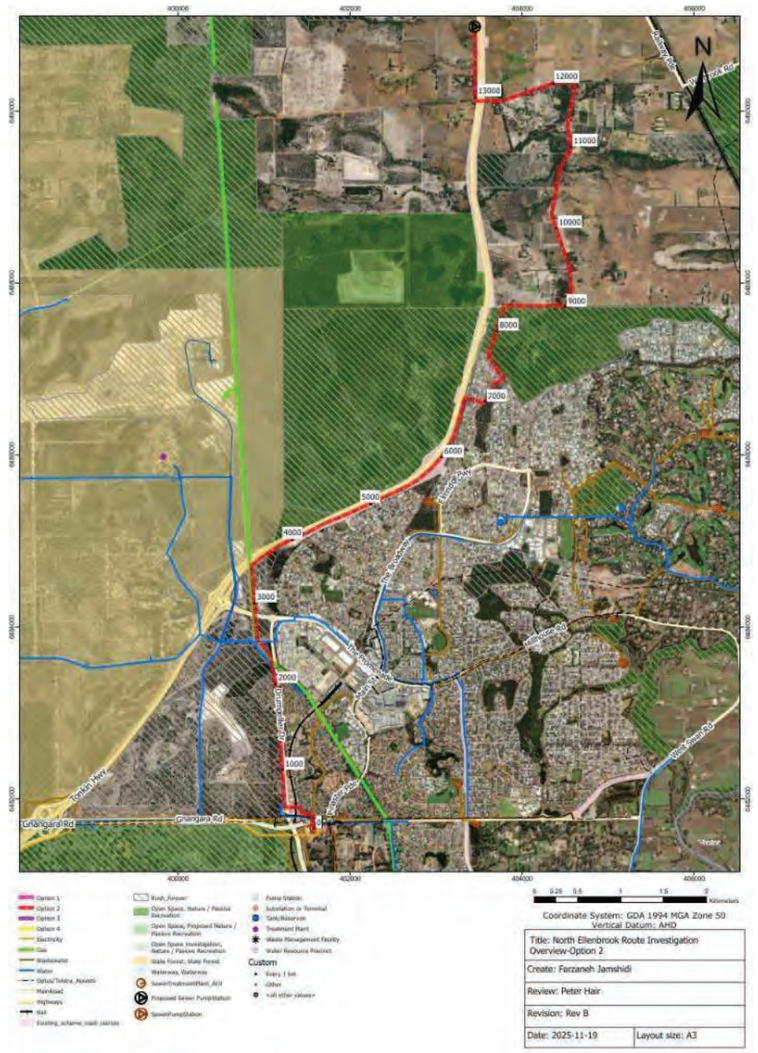




All concepts are preliminary in nature and subject to change

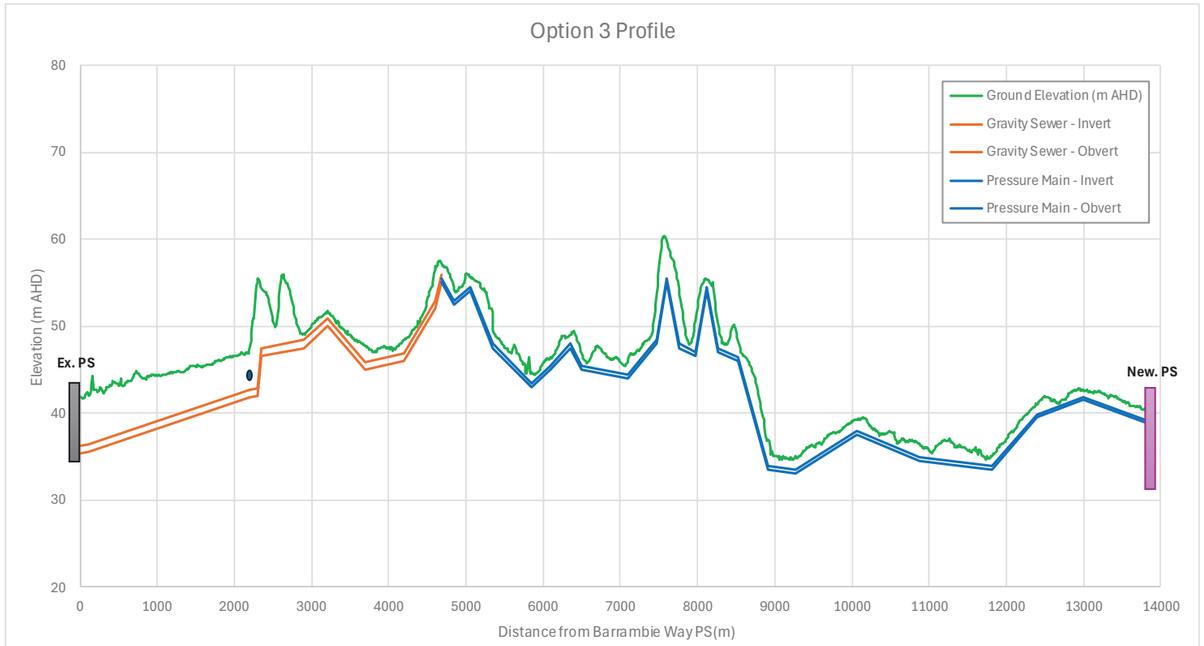
North Ellenbrook – Option 2

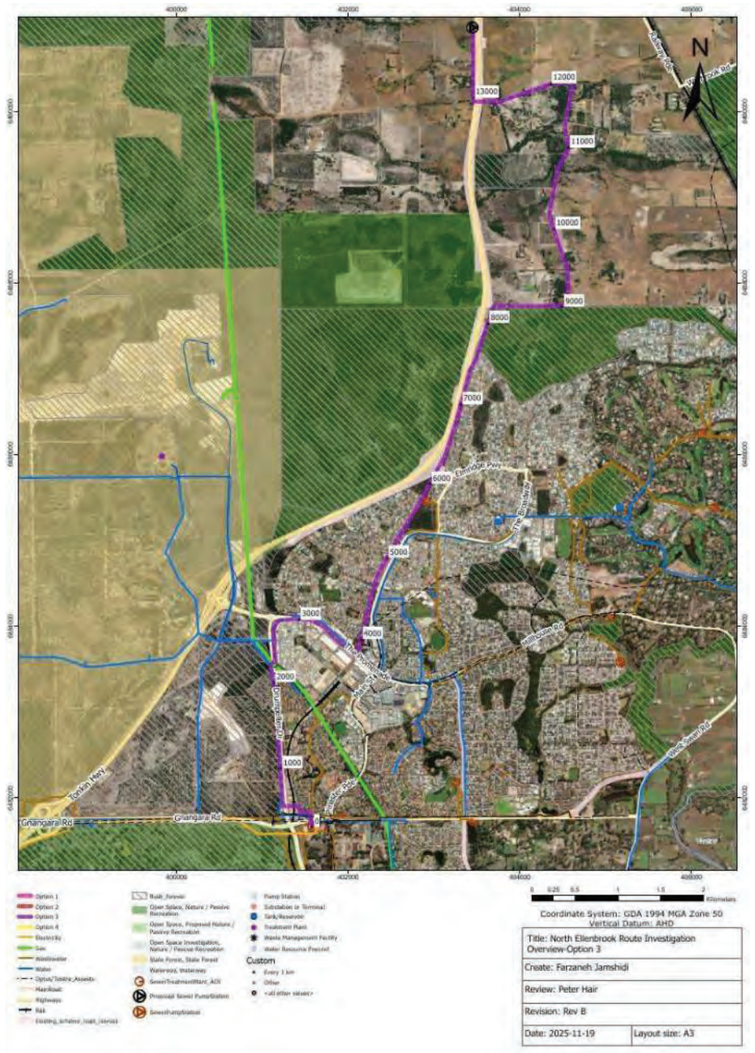




All concepts are preliminary in nature and subject to change

North Ellenbrook – Option 3





All concepts are preliminary in nature and subject to change

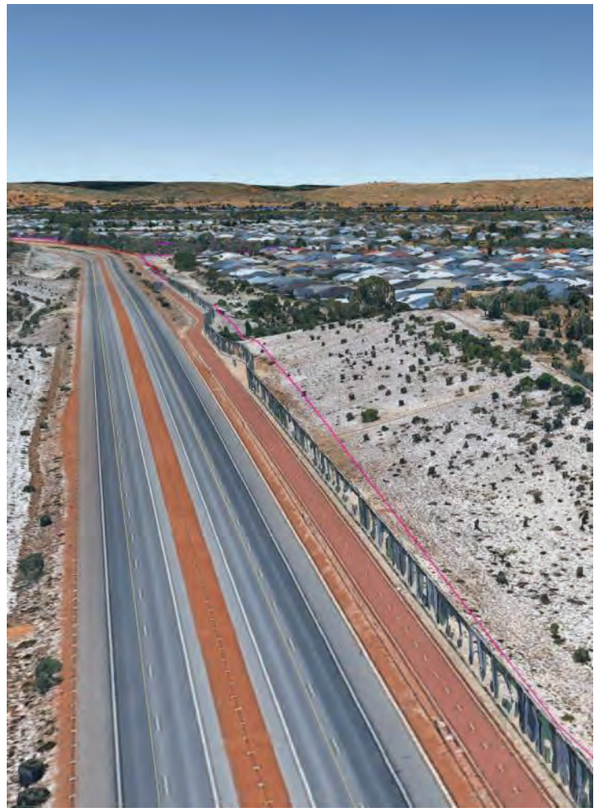
Key Constraint – DBP Gas Mains @ Drumpellier Dr

- AGIG: 2 x Ø 660 mm
- APA: 1 x Ø 356 mm
- Will likely require trenchless under-crossing, min 1 m clearance
- Dictates gravity sewer depth for ~2 km approach to Barrambie Way PS



Key Constraint – High Point / Gravity Transition

- All interim high points need to be lower than ultimate high point, to keep rising main full.
- May require trenchless installation though localized high terrain (e.g. near Ellenbrook Lookout, Maralla Rd)
  - Alternative: transition further upstream, add gravity siphon (adds complexity)



Tight Section – Transition from Tonkin Hwy

- Need to transition from Tonkin Hwy route towards Maralla Rd
  - Could thread through Pelora Vw laneway (local high point – Option 1)
  - Or dogleg through local streets and cut across bush land (flatter, Option 2)
- Also needs consideration of bush forever crossing and proximity to nature crossing bridge



Options Comparison

	Option 1	Option 2	Option 3
Total Length	11,300 m	13,800 m	13,800 m
- Gravity	3,150 m	3,350 m	4,680 m
- Pressure	8,150 m	10,450 m	9,120 m
Max. Static Pumping Head [1]	29 m	29 m	19 m
No. Interim High Points on Pressure Main	6+	7+	6+
No. Gravity Siphons	0	0	1

[1] From assumed PS inlet of 36 m AHD to gravity discharge point. Excludes piping/friction losses.

Thank you

Peter Hair
Principal Engineer
WISE Consulting
phair@wisewa.com.au

Graham Hayward
A/ Senior Principal, Strategic Programs,
Future Water Solutions
Water Corporation
Graham.Hayward@watercorporation.com.au

WISE
WATER INFRASTRUCTURE
SCIENCE & ENGINEERING

APPENDIX E Water Corporation Planning Update (9 Feb 2026 TAG Minutes)

Items	
1	**Purpose**
1.1	Infrastructure-focused quarterly Technical Advisory Group (TAG) session to update stakeholders on the urbanisation plans for North Ellenbrook.
2	**Agency updates**
2.1	**Main Roads WA update** • Tonkin Highway North Ellenbrook Interchange (THNEI) project deliverables are being finalised before handover to the delivery team. • Request for proposal (RFP) closes: 24 February 2026 • Contract award anticipated: April–May 2026 • Construction commencement: September 2026 (unchanged) • Cost estimate cannot be disclosed until contract award.

2.2	**Water Corporation update**
	• Progress made since last TAG:
	  • Meetings held with DBCA and PTA.
	  • Meeting with West Ellenbrook developers scheduled for the current week.
	• Multiple sewer route options assessed for operational performance.
	• Cost estimates prepared and broken into four separable components to allow flexibility.

Items
• Funding submission lodged with Government (includes wastewater and trunk water). Decisions regarding funding are a matter for Government, noting the 2026-27 budget process is in train. • Indicative 8 year delivery program. • **Water Corporation to meet with Main Roads and West Ellenbrook developers regarding routes** (action item 16). • Sewer route plans previously circulated; to be re issued to ensure all stakeholders have copies.