



SERVICING REPORT

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Client:	Dynamic Planning
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GLOSSARY OF TERMS

AHD	Australian Height Datum
kVA	kilovolt-ampere
m	Meters
m ³	Cubic meters
mVA	megavolt-ampere
ODP	Outline Development Plan
P-12	Pipe class – pressure rating
POS	Public Open Space
Site	Southern River Sub-precinct 3D
WAPC	Western Australia Planning Commission

1. Introduction

1.1. General

This Servicing Report has been prepared by Shawmac Pty Ltd on behalf of Dynamic Planning for the revised Outline Development Plan for the Southern River Sub-Precinct 3D. The current revised ODP proposes the development of approximately 310 residential lots (including 3 grouped housing sites).

The site is bounded by Matison Street, Holmes Street and Passmore Street as shown on **Figure 1** and comprises Lots 8, 9 and 1792 Holmes Street and Part Lots 5 and 6 Matison Street, Southern River. The local government authority is the City of Gosnells.

An aerial photo of the site is shown in **Figure 2**.



Figure 1: Location



Figure 2: Aerial Photo of Site

1.2. Land Description

The site currently contains several residential buildings. The remainder of the site has been previously cleared with the exception of a number of small pockets of remnant vegetation. The south-western portion of the site contains remnant vegetation associated with the Canning River. The topography is described as flat to undulating with an approximate height ranging from 21m AHD to 24m AHD.

1.3. Purpose / Scope

The purpose of the report is to consider infrastructure requirements for the site and where possible provide preliminary advice for the concept subdivision and to identify the need to upgrade existing infrastructure where required. The servicing requirements for the following utility providers will be considered:

- Water Corporation – Water and Sewer;
- Western Power – Power Supply;
- ATCO Gas – Gas; and
- Telstra & NBN – Communications;

Stormwater drainage has not been included in the servicing assessment as. A Local Water Management Strategy outlining the stormwater management strategy has been prepared by Bioscience.

2. Proposed Land Use

The proposed ODP is shown in **Figure 3**.

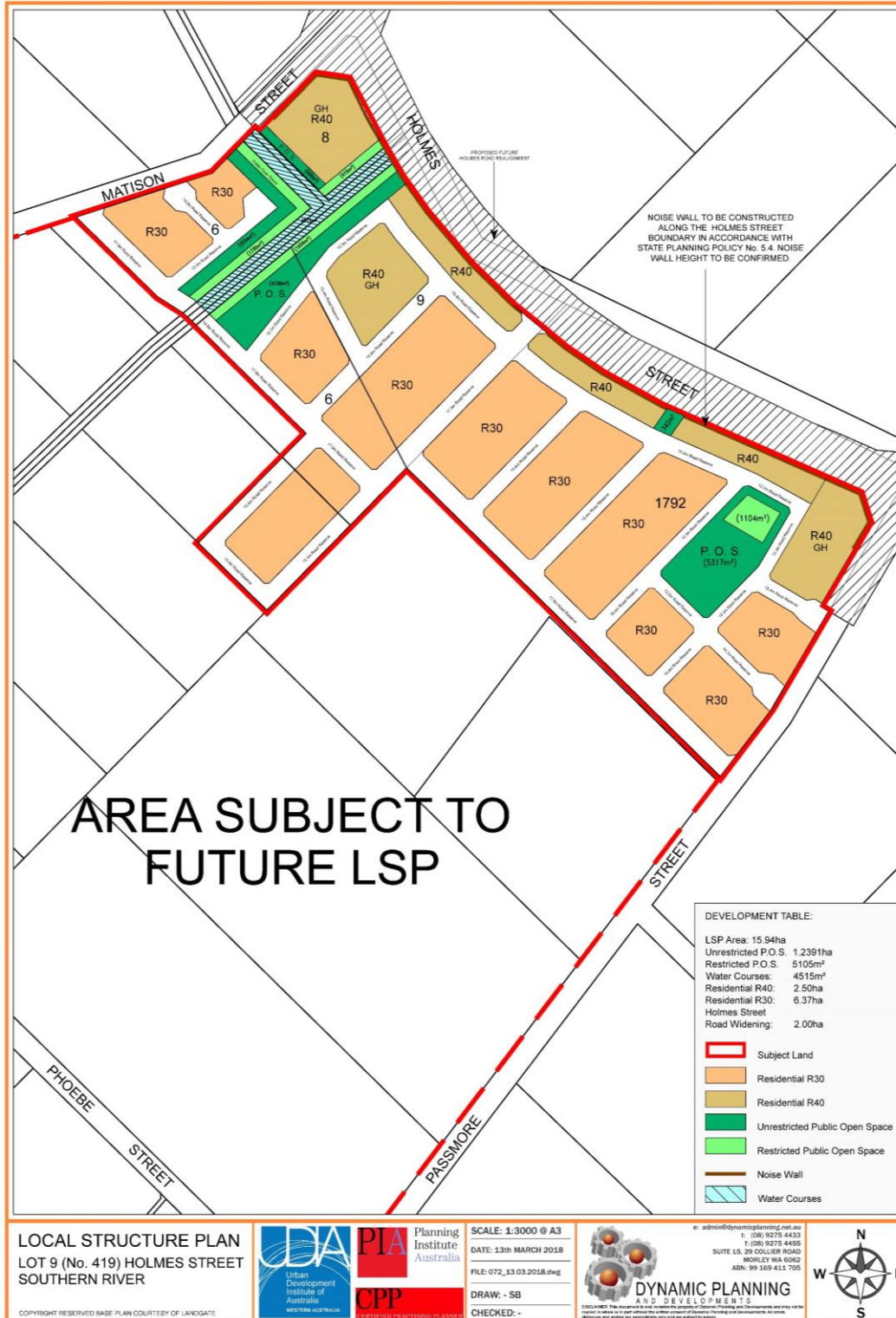


Figure 3: Proposed Southern River Precinct 3D Outline Development Plan



Proposed land use is primarily residential and public open space as summarised in **Table 1**. The dwelling yield for the R30 and the single dwelling R40 lots have been estimated from a Subdivision Concept Plan. The dwelling yield for the grouped housing sites has been based on the average R40 lot size of 220sqm in accordance with the WAPC Residential Design Codes.

Table 1: Proposed Land Use and Yields

Land Use	Area (ha)	Number of Dwellings
Residential (R30)	6.45	198
Residential (R40)	2.50	112
Public Open Space / Drainage	1.75	-

3. Existing Infrastructure

3.1. Water Reticulation

The site is not currently serviced by a water mains supply. The existing 1400S Serpentine – Canning Link Main runs along Passmore Street. There is also an existing reticulation main along Matison Street serving the properties to the west. This main currently terminates approximately 300 metres from the north-west corner of the site. The existing water reticulation network surrounding the site is shown in **Figure 4**.



Figure 4: Existing Water Reticulation

3.2. Wastewater

There is no existing wastewater reticulation in the vicinity of the site. The closest infrastructure is the pressure main along South Western Highway approximately 650 metres north of the site.

3.3. Gas Reticulation

There are existing high pressure gas mains along Matison Street and Holmes Street to the north of Matison Street as shown in **Figure 5**. There is no gas infrastructure along Holmes Street south of Matison Street or Passmore Street.

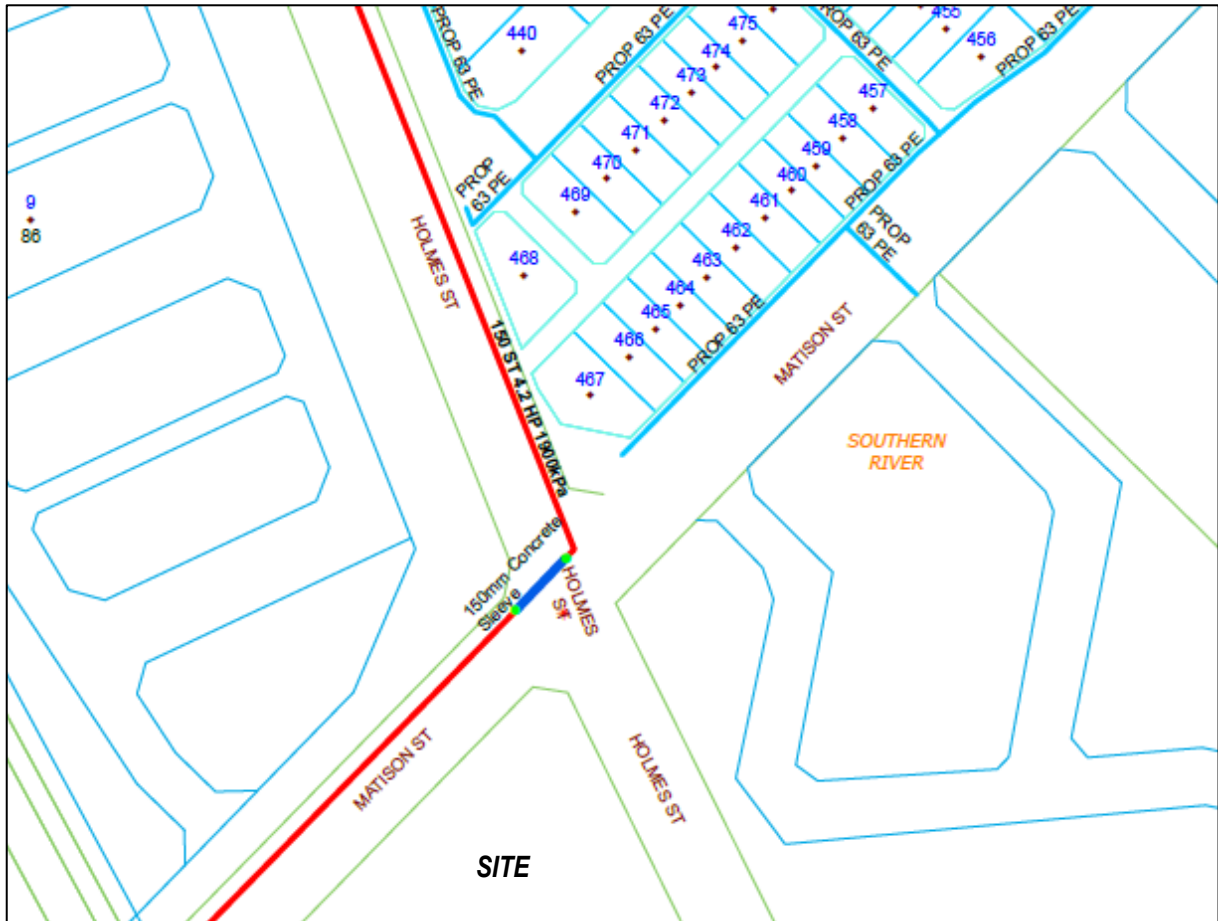


Figure 5: Existing Gas Reticulation

3.4. Telecommunications

There are existing Telstra conduits and copper cables along Matison Street, Holmes Street and Passmore Street.

3.5. Power

Western Power has high voltage overhead distribution lines along Holmes Street, Passmore Street and a section of Matison Street west of Holmes Street. The high voltage overhead power along Matison Street reduces to low voltage power approximately 150m west of Holmes Street and then terminates at the western extent of the site. The existing overhead power distribution is shown in **Figure 6** and **Figure 7**.

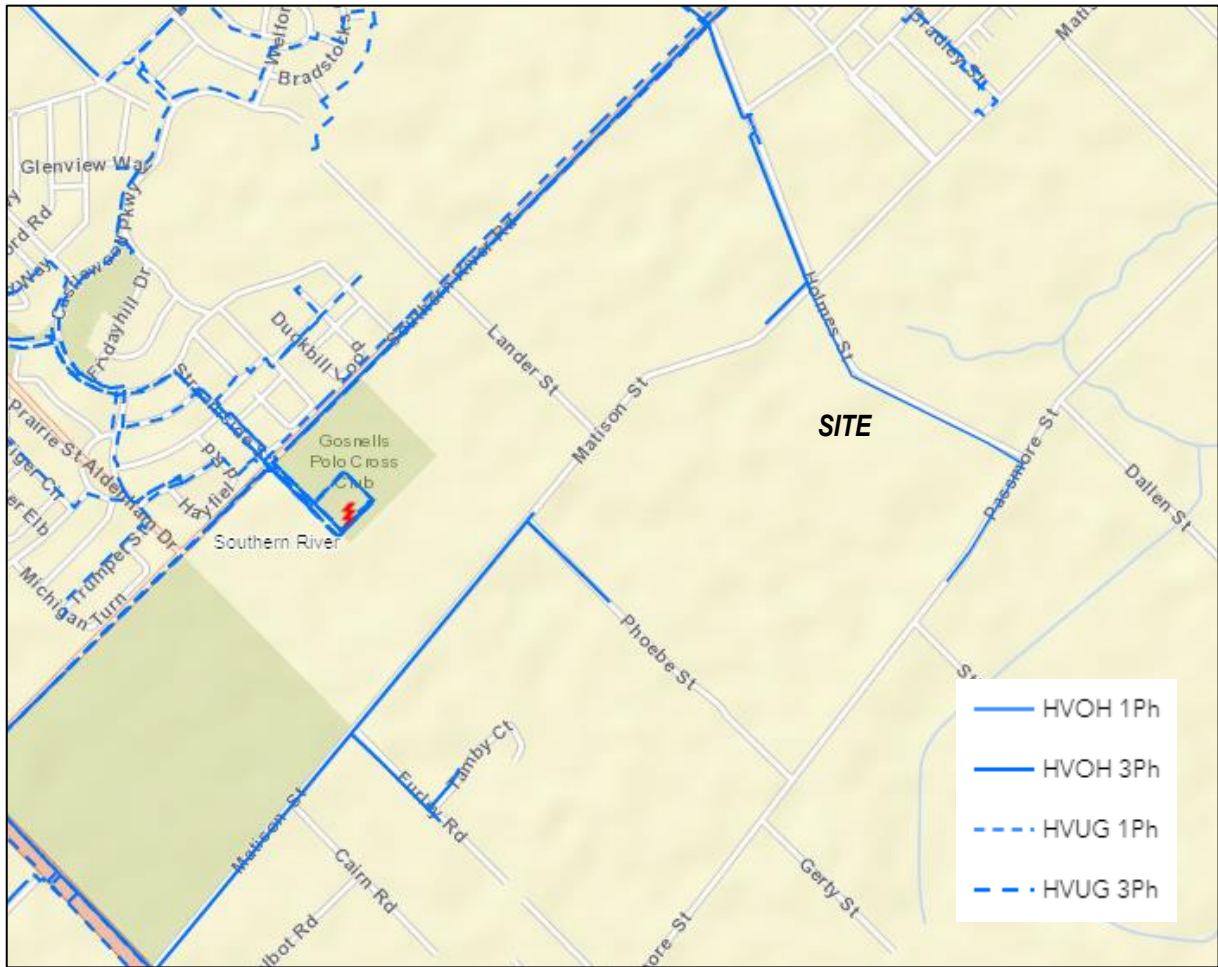


Figure 6: Existing High Voltage Overhead Power Lines

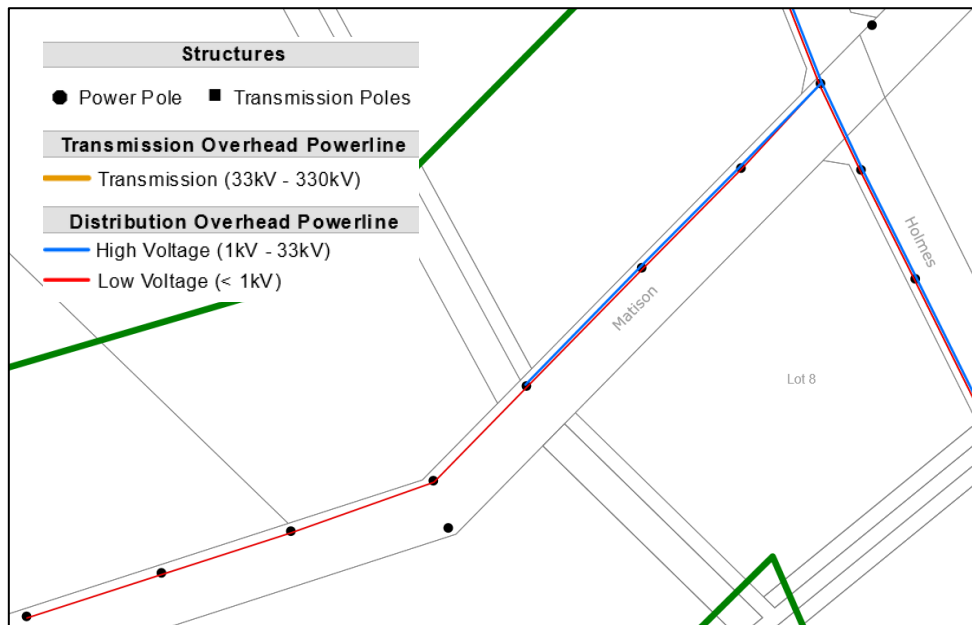


Figure 7: Existing High and Low Voltage Overhead Power Lines – Matison Street

4. Infrastructure (Proposed Services)

4.1. Water Reticulation

The site is located within the Gosnells – Riverton Gravity Water Scheme.

Water Corporation has advised that the long term plans for water distribution in the area includes new distribution mains along Holmes Street (future Garden Street extension) as shown in **Figure 8**. Planning from around 2004 indicated the ultimate requirement for a 500S main along Garden Street south of Southern River Road. This planning may be subject to further revision and modification. Servicing of the Sub-precinct 3D is dependent on prior subdivision and development of adjacent land to the north.

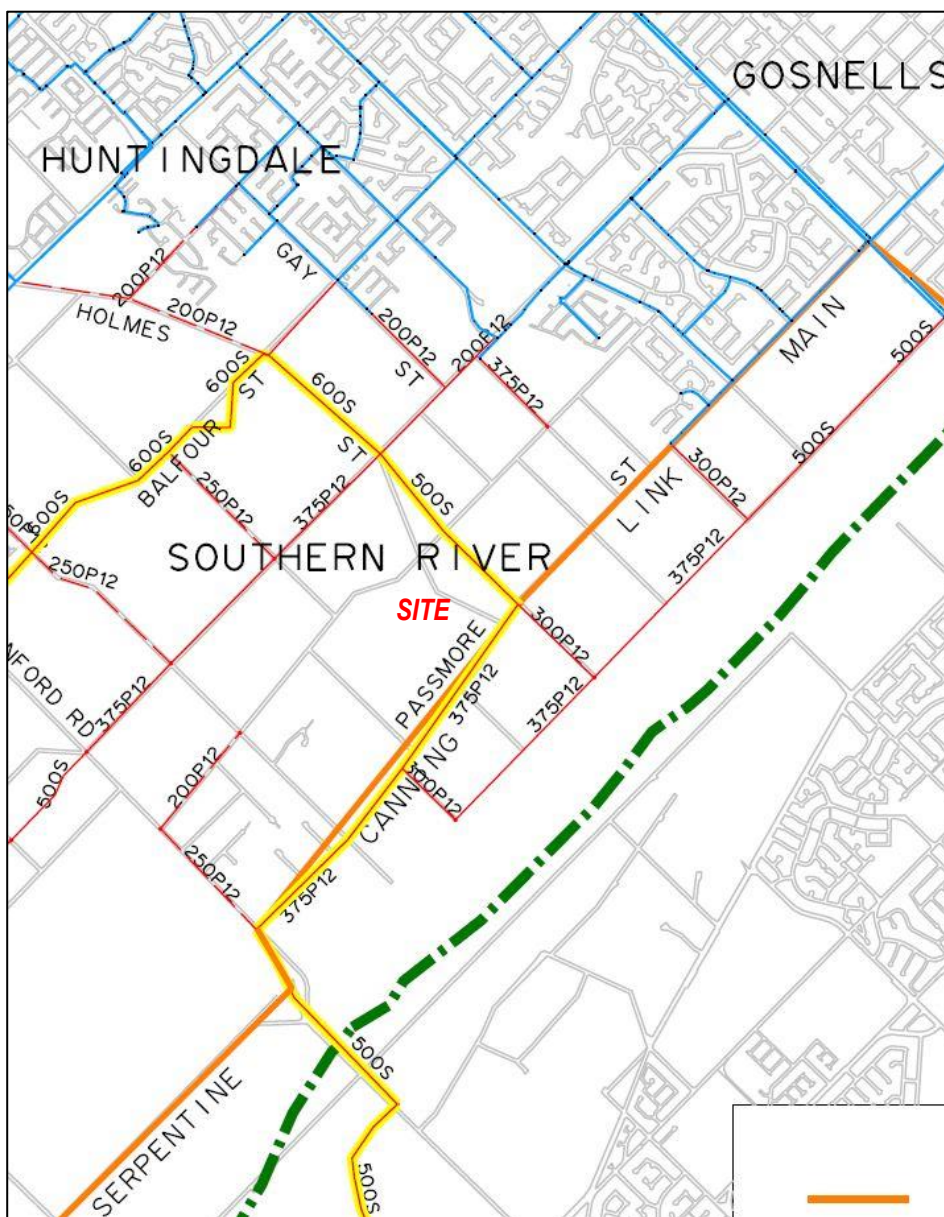


Figure 8: Long Term Water Corporation Water Distribution Planning

Initial servicing to the site and other nearby subdivisions to the north sites would need to occur via developer-funded extensions off the existing 400S distribution main on Southern River Road to the north-east of the site as shown in **Figure 9**. Standard water reticulation mains will extend from the distribution main.



Figure 9: Required Distribution Mains Extension

The advice email from Water Corporation is attached as **Appendix A**.

4.2. Wastewater Reticulation

Water Corporation have advised the following wastewater servicing requirements:

- The portion of land to the north-west of the Forrestdale Main Drain can be gravity fed towards the north-west into other sewer extensions that will be extended through adjoining subdivisions.
- The south-east portion of the site would require the establishment of the future wastewater pump station (Balannup Pump Station E) which is to be located on other land to the east. This portion of the site would be gravity fed towards the proposed pump station. This may require some fill in the area south of the Forrestdale Main Drain in order to achieve sufficient grade in the direction of the proposed pump station. The indicative area requiring fill is shown in yellow.

An excerpt of the Water Corporations wastewater planning is shown in **Figure 10**.

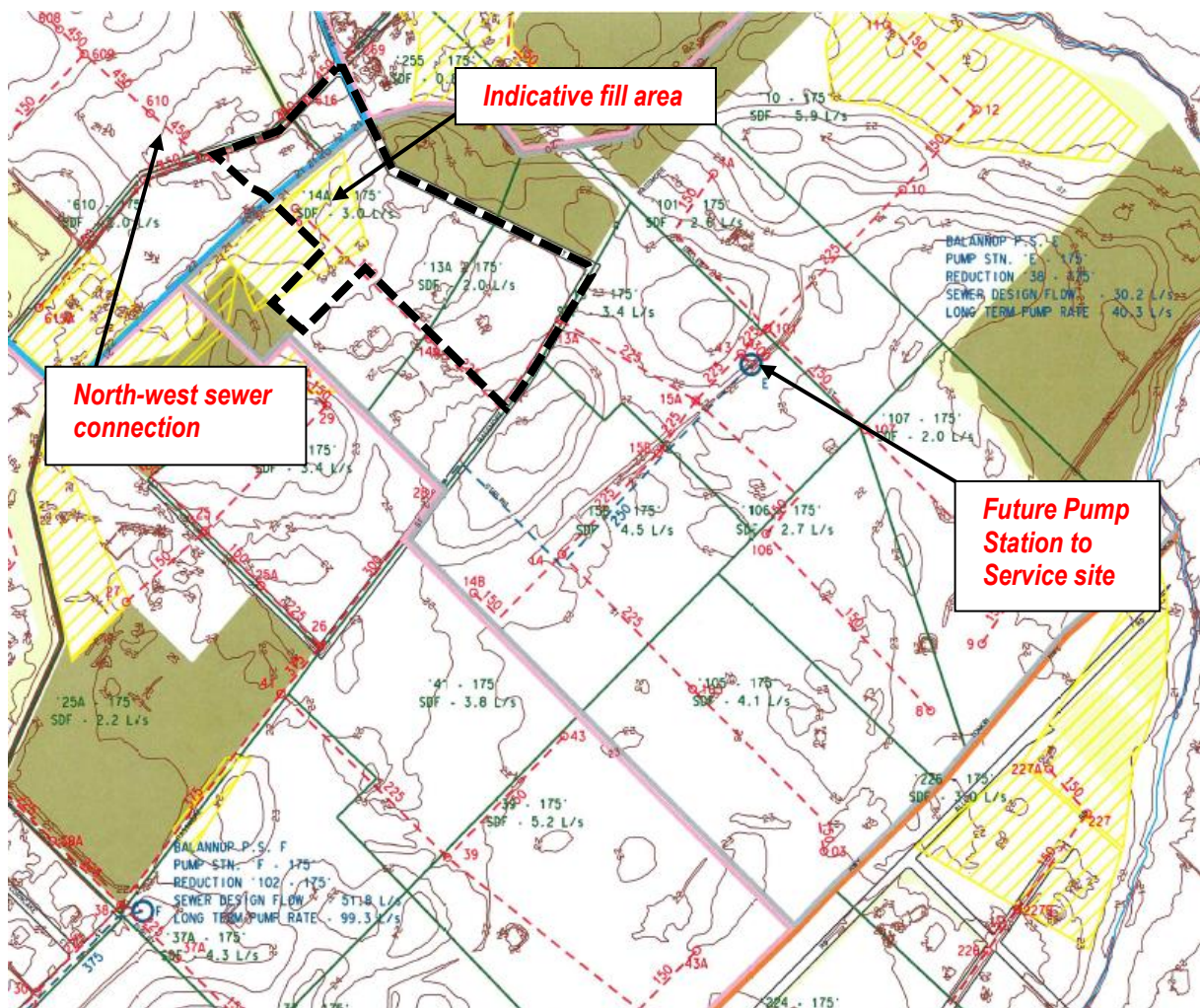


Figure 10: Water Corporation Wastewater Planning

The advice email from Water Corporation is attached as **Appendix B**.

4.3. Gas Reticulation

ATCO have advised that the existing distribution network has capacity to supply Sub-precinct 3D. The site will need to be serviced by an extension of the distribution pressure gas main along Holmes Street to the north of Matison Street which is dependent on the prior development of Precinct 3A along Holmes Street.

The advice email from ATCO gas is attached as **Appendix B**.

4.4. Power

According to Western Power's Network Capacity Mapping Tool, the 2031 forecast remaining capacity in the area is between 15 and 20 MVA as shown in **Figure 11**. According to the Design After Diversity Maximum Demand (DADMD) calculator, each lot would require 4.7kVA; therefore the proposed 310 dwellings will require approximately 1.46MVA. Based on this, there is considered to be sufficient capacity to service the site.

It should be noted that capacity is usually allocated on a first in first served basis. Final power connection and capacity requirements will need to be confirmed for the site when a Design Information Package request is forwarded to Western Power.

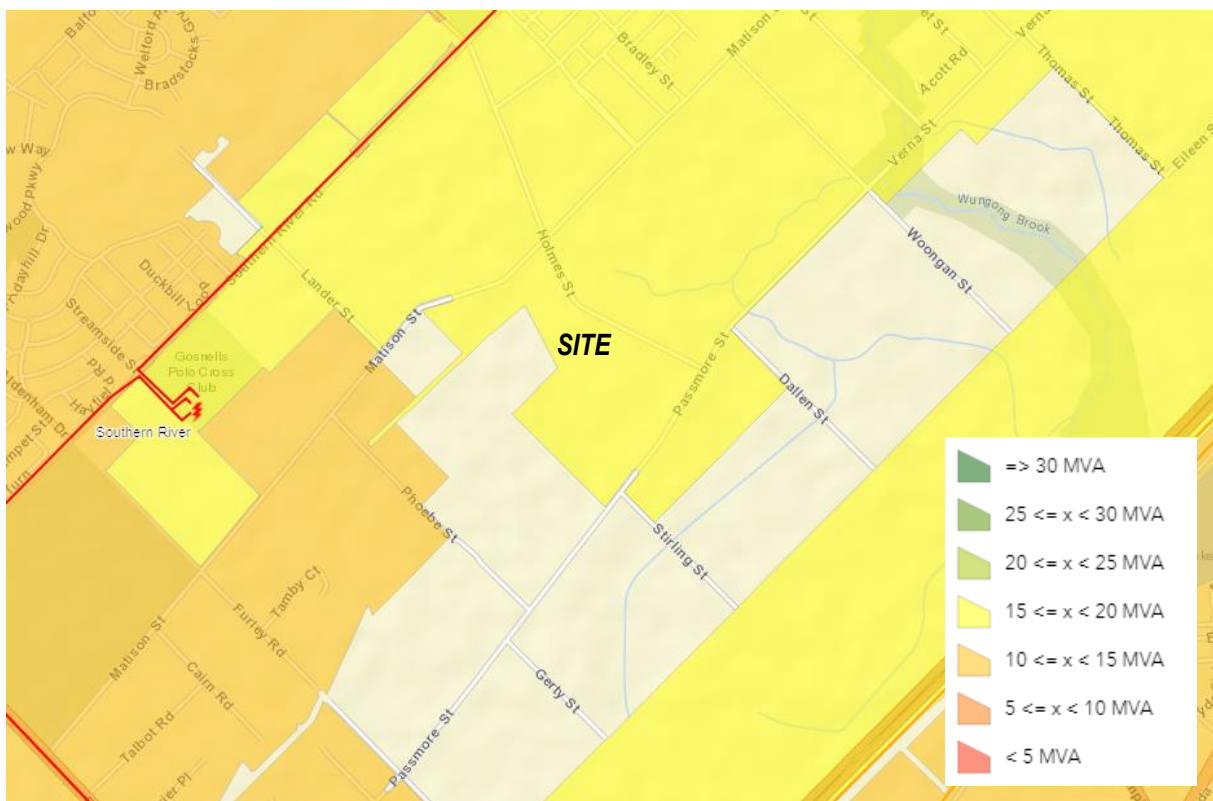


Figure 11: 2031 Forecast Remaining Power Capacity (Western Power Network Capacity Mapping Tool)



4.5. Telecommunications

Currently Telstra have no plans for expansion of their infrastructure to suit ongoing development and thus they do not have any planning information for this area.

NBN is not currently available to the site. The availability of Fibre to the node (FTTN) technology in the area is indicatively planned from April to June 2018. An application to extend NBN services to the proposed lots within the site will need to be lodged with NBNCo via the new development application process on the NBNCo website.

No constraints were identified that would restrict the installation of telecommunications.



5. Conclusion

A review of the servicing requirements for the proposed Outline Development Plan for Southern River Sub-precinct 3D has concluded the following:

- Advice from Water Corporation is that their long term planning proposes distribution mains along Holmes Street. Prior to these being constructed, an extension of the existing 400S water distribution main along Southern River Road along Holmes Street (future Garden Street extension) would be required to service the site.
- The portion of the site north-west of the Forrestdale Main Drain can be gravity fed towards the north-west into adjoining subdivisions. The south-east portion of the site is dependent on the prior establishment of the future wastewater pump station (Balannup Pump Station E) which is to be located on other land to the east. Some fill will be required to the south of the Forrestdale Main Drain to achieve sufficient grade towards the future pump station. The capacity of the existing wastewater network will be confirmed by Water Corporation during the subdivision stage.
- ATCO have advised that the existing distribution network has capacity to supply Sub-precinct 3D. The site will need to be serviced by an extension of the distribution pressure gas main along Holmes Street to the north of Matison Street which is dependent on the prior development of Precinct 3A along Holmes Street.
- There is existing Telstra infrastructure servicing the current lots within the site. NBN is not currently available to the site but is planned for April to June 2018. There are no anticipated constraints that would restrict the extension and upgrade of these services to supply the proposed development.
- The power requirements of the proposed development has been estimated to be approximately 1.46 MVA. According to Western Power's Network Capacity Mapping Tool, the 2031 forecast remaining capacity in the area is between 15 and 20 MVA. Based on this, there is considered to be sufficient capacity to service the site.



Appendix A – Water Corporation Planning Advice



Paul Nguyen

From: Brett Coombes <Brett.Coombes@watercorporation.com.au>
Sent: Thursday, February 15, 2018 10:43 AM
To: Paul Nguyen
Subject: Re: Lot 9 (419) Holmes St, Southern River
Attachments: Balannup SD excerpt.pdf; PM-#13335183-v1-Gosnells_Riverton_Water_Planning_Matison_and_Holmes_Stre...jpg; PM-#13335709-v1-Gosnells_Riverton_Water_Planning_Detail_Matison_and_Holm...jpg; 201504240854.pdf

Paul,

Wastewater planning excerpt is attached. Servicing for the south-eastern portion of this land requires establishment of future WWPS E, which is on other land to the east. The north-western portion around the Forrestdale Main Drain can grade north-westwards into other sewers that are being/will be extended through adjoining subdivisions.

w.r.t water planning, our overall distribution planning and an excerpt of our indicative capital program for distribution mains are attached. A more detailed retic. level plan will need to be prepared around the local structure plans for this site (similar to the last attachment above for the land adjoining).

Give me a call if you need anything else.

Regards

Brett Coombes
Senior Planner, Land Planning
Assets Planning Group
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Appendix B – ATCO Gas Planning Advice

Paul Nguyen

From: Pemberton, Chris <Chris.Pemberton@atcogas.com.au>
Sent: Wednesday, February 21, 2018 4:08 PM
To: Paul Nguyen
Subject: RE: ES20180219 FW: Request for planning advice - Southern River Precinct 3D ODP - ES20180219

Thanks for that,

The existing gas distribution network has the capacity to supply your proposed subdivision. However, it is unknown when the proposed gas mains will reach your site.

There is a High Pressure gas pipeline adjacent the site, but this would not be used to bring gas to the development. The nearest distribution pressure gas mains are approximately 250m to the north in Holmes St (Precinct 3A?). With proposed mains bringing gas to the corner of Homes/Matison. These proposed mains will be installed if/when the Precinct 3A development proceeds along Holmes St.

If your client proceeds with development of 3D prior to gas being extended as part of 3A, a mains extension would be required. The availability of gas will depend on the surrounding development and where 3D Stage 1 is located.

Please let me know if you require any additional information or clarification.

