

# **PSP 1074 SUNBURY SOUTH**

METROPOLITAN PLANNING AUTHORITY

## **HIGH LEVEL UTILITY SERVICING ASSESSMENT**

Document No. | B

27 Nov 2014



**JACOBS®**



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## **Document history and status**

Revision	Date	Description	By	Review	Approved
A	31 Oct 2013	Draft High level utility servicing report	JES	TR	DN
B	27 Nov 2014	Final High level utility servicing report	JES	DN	DN



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## Important note about your report

The sole purpose of this report and the associated services performed by Jacobs is to prepare a High Level Servicing and Infrastructure Assessment (including sewerage, potable water, recycled water, electricity, gas and telecommunications) in accordance with the scope of services set out in the contract between Jacobs and the Client. That scope of services, as described in this report, was developed with the Client.

In preparing this report, Jacobs has relied upon, and presumed accurate, any information (or confirmation of the absence thereof) provided by the Client and/or from other sources. Except as otherwise stated in the report, Jacobs has not attempted to verify the accuracy or completeness of any such information. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change.

Jacobs derived the data in this report from information sourced from the Client (if any) and/or available in the public domain at the time or times outlined in this report. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report. Jacobs has prepared this report in accordance with the usual care and thoroughness of the consulting profession, for the sole purpose described above and by reference to applicable standards, guidelines, procedures and practices at the date of issue of this report. For the reasons outlined above, however, no other warranty or guarantee, whether expressed or implied, is made as to the data, observations and findings expressed in this report, to the extent permitted by law.

This report should be read in full and no excerpts are to be taken as representative of the findings. No responsibility is accepted by Jacobs for use of any part of this report in any other context.

This report is limited to a high level servicing assessment of the utility services infrastructure and is based on verbal and written advice received from the Dial Before You Dig service and service providers prior to 31 October 2013. Access to information by service providers was limited during the assessment due to the preliminary status of the precinct.

This report has been prepared on behalf of, and for the exclusive use of, Jacobs's Client, and is subject to, and issued in accordance with, the provisions of the contract between Jacobs and the Client. Jacobs accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.



## Executive summary

### Project overview

The Growth Areas Authority (GAA) is developing a number of Precinct Structure Plans (PSPs) for precincts within the current growth corridors of Melbourne. The purpose of a PSP is to guide and facilitate development in the growth areas and to make sure that adequate and prompt infrastructure planning is available to support future development within these precincts.

### Project scope

This report identifies the high level opportunities and constraints to development with respect to water, sewerage, recycled water, electricity, gas and telecommunications services to inform the preparation of the Sunbury South PSP (PSP 1074). This PSP is located within the Sunbury-Diggers Rest Growth Corridor. The capacity of existing services and the likely future infrastructure requirements have been assessed in consultation with the relevant authorities and provided in this report.

The report has been developed in consultation with key utility service providers and agencies including Western Water, SP AusNet (Gas and Electricity), Jemena, APA Group, Nextgen, Telstra and NBN Co, and describes the preliminary high level authority advice provided by these providers in respect of the servicing requirements for the precinct. Western Water's advice also provided schematic details on the drainage interfaces with the adjoining PSP's.

Preliminary staging and high level (indicative) cost information has also been provided where available.

### Assessment

This assessment has identified the existing infrastructure within and adjacent to the PSP area, responsibility, constraints of existing services, anticipated future requirements, considerations and expectations of the utility service providers and agencies for the future draft urban master planning phase.

### Staging

Staging information has been identified as a key consideration by Western Water along with Jemena indicating a detailed master plan indicating staging of development within the PSP area and proposed timing will be required to provide detailed servicing advice. Other relevant service providers were unable to advise of their requirements however it would be reasonable to assume that each agency would expect the provision of a detailed master plan, staging and proposed timing of the precincts development to be provided.

### Costing

As a consequence of essential services legislation, in most cases, service authorities are required to bear the cost of trunk infrastructure provisions and typical development costs at an allotment level.

Costing information has been presented for Western Water (New Customer Contributions) (Appendix A), however the costing contributions required were not available from the other service providers.

### Conclusion and Recommendations

From the assessment and discussions with servicing authorities the PSP development area appears to be suitable for further development, however Western Water has indicated no recycled water would be available for developments north of Sunbury Road. No other major constraints were identified.

Key recommendations for the Sunbury South precinct are the development of detailed masterplan for the precinct including staging options for submission to authorities to initiate formal discussions and the provision of detailed preliminary utility servicing advice.



# 1. Introduction

## PSP Objective

The Growth Areas Authority (GAA) is concurrently preparing a number of Precinct Structure Plans (PSPs) for precincts within the current growth corridors of Melbourne. The purpose of a PSP is to guide and facilitate development in the growth areas and to make sure that adequate and prompt planning is available to support future development within these precincts.

PSPs are master plans for whole communities which usually cater for between 10,000 to 30,000 people. Precinct structure planning is considered to be fundamental to making Victoria's growth areas great places to live, both today and for future generations. PSPs lay out roads, shopping centres, schools, parks, housing, employment and the connections to transport.

The development of greenfield sites, along with urban consolidation, is an important part of the Victorian State Government's strategy to address strong population growth and the housing and employment demands that flow from this.

One of the key aspects of the PSP process is the planning and provision of adequate utility servicing infrastructure for these developing precincts. New developments place additional load on existing services infrastructure which often necessitates augmentation of existing infrastructure to varying degrees.

The utility services authorities are responsible for planning, designing, constructing and maintaining trunk supply and distribution of utilities within the precinct. Authorities identified within the Sunbury South precinct are:

- Western Water – Sewer, water and recycled water
- SP AusNet – Electricity transmission
- Jemena – Electricity distribution network
- SP AusNet – Gas supply mains
- APA Group – Gas transmission main
- Nextgen / Visionstream – Telecommunications inter capital cable
- Telstra – Telecommunications
- NBN Co – Telecommunications

This report identifies the high level opportunities and constraints to development with respect to utility services infrastructure. The capacity of existing services and the likely future infrastructure requirements have been assessed in consultation with the relevant authorities and provided within this report. Preliminary staging and high level (indicative) cost information has also been provided where available.

## Project Scope

JACOBS was commissioned by GAA to undertake a high level utilities servicing assessment report for the Sunbury South precinct (PSP 1074), and identify current services and utilities infrastructure capacity issues within the precinct, with identified key opportunities and constraints for the provision of servicing and utility infrastructure to fully service the precinct into the future.

JACOBS consulted with the relevant service authorities identified, by undertaking a site inspection and undertaking Dial Before You Dig inquiries, reviewing supplied infrastructure data to assess the capacity of existing services and identify future services, with the details discussed throughout the report.



## **Key Stakeholders**

The GAA is the statutory authority responsible for overseeing the preparation of all PSPs in Melbourne's growth areas and advising the Minister for Planning on their approval. The GAA works in partnership with Growth Area Councils to complete the planning for Melbourne's Growth Areas.

The GAA is managing the preparation of the Sunbury South PSP. As it is located within the City of Hume, the Hume City Council is also a key stakeholder in the preparation and implementation of the PSP.

Hume City Council has recently adopted the Hume Integrated Growth Area Plan for Sunbury, which sets out Council's long term, high level vision for the future development of Sunbury township. Council has a Draft Integrated Water Management Plan nearing completion as a joint project with Western Water, funded by the Living Victoria fund (Office of Living Victoria).

Important existing features in the Sunbury South PSP (existing and proposed under the Growth Corridor Plan) include:

- The Jacksons Creek and Emu Creek corridors and their tributaries, notably Harpers Creek. The creeks are identified to have good water quality that should be maintained
- Redstone Hill (Sunbury South)
- Major roads (Vineyard Road, Sunbury Road and Lancefield Road), as well as future road creek crossings
- Two potential future railway stations, south of the existing Sunbury Rail Station respectively
- A future Major Town Centre
- A mixed business/residential precinct, and industrial precinct
- An existing extractive industry
- The Sunbury Sewerage Treatment Plant, which is located immediately outside Sunbury South PSP area, and will likely have an impact on development within the precinct.

## **Information Sources**

The information within this report has been collated from the following sources:

- A Dial-Before-You-Dig enquiry to determine the extent of readily available services information and to assess the size and location of existing services.
- Publicly available aerial and street level photography and cadastral and contour information.
- Correspondence, meetings and phone conversations with personnel from the various utility service authorities who provided information about future servicing strategies and master planning.
- Websites of service authorities, industry associations and government departments to obtain further information about the capacities of existing assets, plans for future assets, policies, standards and legislation governing development.
- Excludes servicing strategies by land owners.



## 2. Site Overview

The Sunbury South precinct is located within the City of Hume and will ultimately form part of a significant expansion of the Sunbury Township. The precinct is comprised of several large-scale development areas in the Sunbury-Diggers Rest Growth Corridor and will contribute to a projected ultimate population of up to 100,000 residents within the Greater Sunbury Township.

The PSP comprises of 1822 hectares with approximately 850 hectares of land identified for future urban development. The PSP area will accommodate approximately 9,000 dwellings based upon an average density of 15 lots per hectare.

The PSP has 3 neighbouring precincts, PSP1072 Sunbury North, PSP 1095 Sunbury West and PSP1075 Lancefield Road (Sunbury East) which is also at the pre-planning stage.

The Sunbury South precinct has the Diggers Rest and Bulla Townships to the south, with Sunbury Township sitting to the north west of the precinct. The Lancefield Road Precinct sits to the north off Gellies Road. Sunbury South precinct is generally bounded by:

- West - Vineyard Road and Calder Freeway
- South – Watsons Road and Jackson Creek
- East – Emu Creek
- North – Sunbury Road, Lancefield Road and Gellies Road

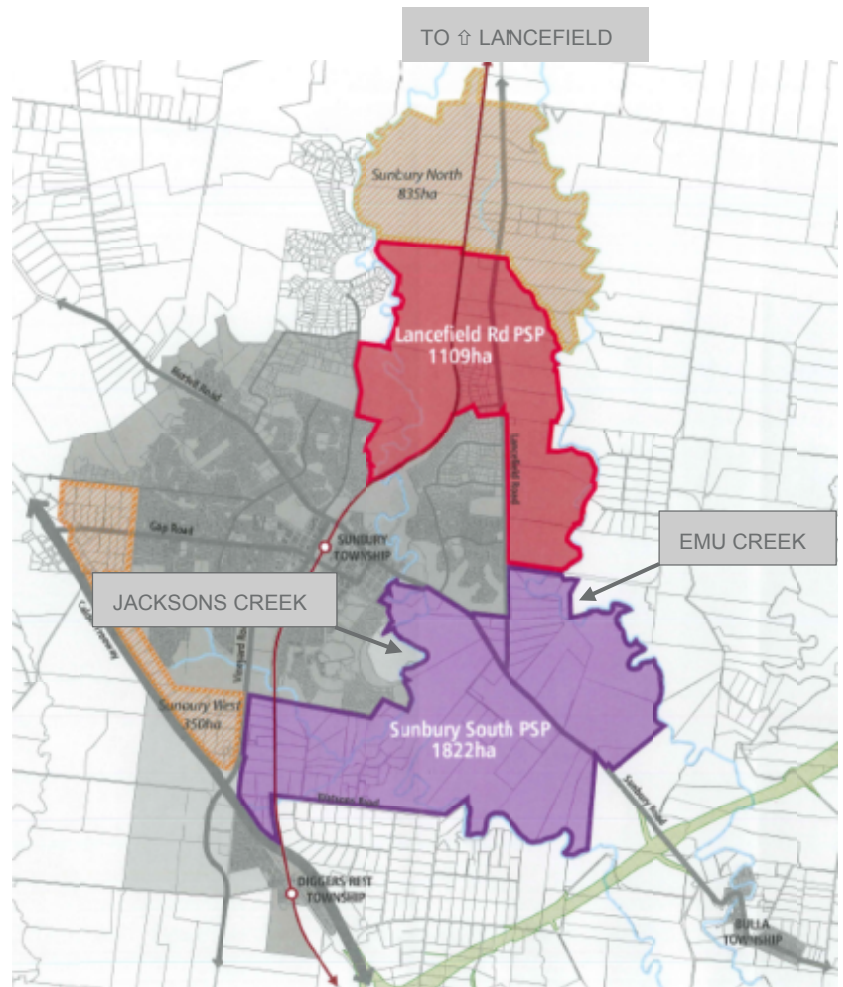


Figure 2.1 : Sunbury PSP Areas Map



### 3. Water and Sewer Supply

#### 3.1 Current servicing arrangements

Western Water has provided preliminary high level advice for servicing the Sunbury South precinct. Information provided identifies servicing within the Sunbury South precinct and links to neighbouring PSP's Lancefield Road, Sunbury North and Sunbury West.

##### Water

Water supply services for the precinct are provided by Western Water

Current Western Water data indicates existing reticulation is present along the alignments of existing road reserves within the precinct – Refer Appendix B - Servicing Layout Plans drawing 'PSP No. 474 Sunbury South Servicing Layout'.

##### Sewer

Sewer services for the precinct will be provided by Western Water.

Current Western Water data indicates there are no reticulated mains servicing existing residents within the precinct. A DN375 mm rising main traverses the precinct from the north of the precinct and runs parallel to the existing railway line corridor through to Diggers Rest. Refer Appendix B - Servicing Layout Plans drawing 'PSP No. 1074 Sunbury South Servicing Layout'.

##### Recycled Water

Recycled Water services for the precinct will be provided by Western Water.

There is no recycled water currently available to the precinct, however Western Water have an existing recycled water plant (RWP) adjacent to the precinct within the Western Water Sunbury Depot.



Figure 3.1 : Western Water's Existing Sunbury RWP



## 3.2 Constraints

### Western Water preliminary advice

Preliminary advice received from Western Water indicated a number of constraints and are outlined as follows:

- Western Water are currently investigating the possibility of establishing a class A recycled water network for Sunbury South, and is identified in the capital program to commence construction by 2018. The capacity is expected to be adequate to service Diggers Rest and the Sunbury South Precinct up to Sunbury Road.
- Staging of development will be fundamental as sewer and recycled water infrastructure supply will be from the west then north towards the Lancefield Rd PSP – Refer to Western Water Development Servicing Plan – Sunbury Sewer and Appendix B - Servicing Layout Plans.
- Development of land within the Sunbury South PSP needs to take into account the Sunbury RWP and the required buffer zone around the plant. Development cannot encroach into this zone. Refer to Western Water Development Servicing Plan – Sunbury Sewer Appendix B - Servicing Layout Plans
- Where developments proceed out of sequence, temporary assets will be required to be constructed by the developer until permanent infrastructure is constructed.
- Western Water capital projects works currently planned for 2013-2018 indicates a DN525 mm Trunk main (CC\_S0257) proposed from the existing Western Water Sunbury Depot to the east and adjacent the precinct traversing east through the precinct across Jacksons Creek towards Sunbury Road. – Refer Figure 3.3 : Western Water Future Trunk Sewer Mains.

Note: Western Water has advised that unless this land is ready to be developed, this may impact on the timing of other developments. There is some capacity within the existing sewer to Goonawarra, however this will only have sufficient capacity for the initial stages of any developments through the Lancefield PSP.

- Western Water is not expecting any development works within the PSP area to commence until 2017/18.
- Western Water will require land for both a Class A recycled water tank on Redstone Hill as well as a number of sewer pump stations within the PSPs.
- Western Water has indicated no recycled water would be available for developments north of Sunbury Road
- Western Water has advised the requirement for a buffer zone to be provided around the Sunbury RWP within the Sunbury South PSP. Development within this zone will need to be restricted. Western Water will clarify the requirements of the buffer zone as part of the future draft urban master planning process.

## 3.3 Development opportunities

### Water

Western Water has advised that the following future trunk infrastructure is required within the PSP area.

Works currently planned for 2019-2023

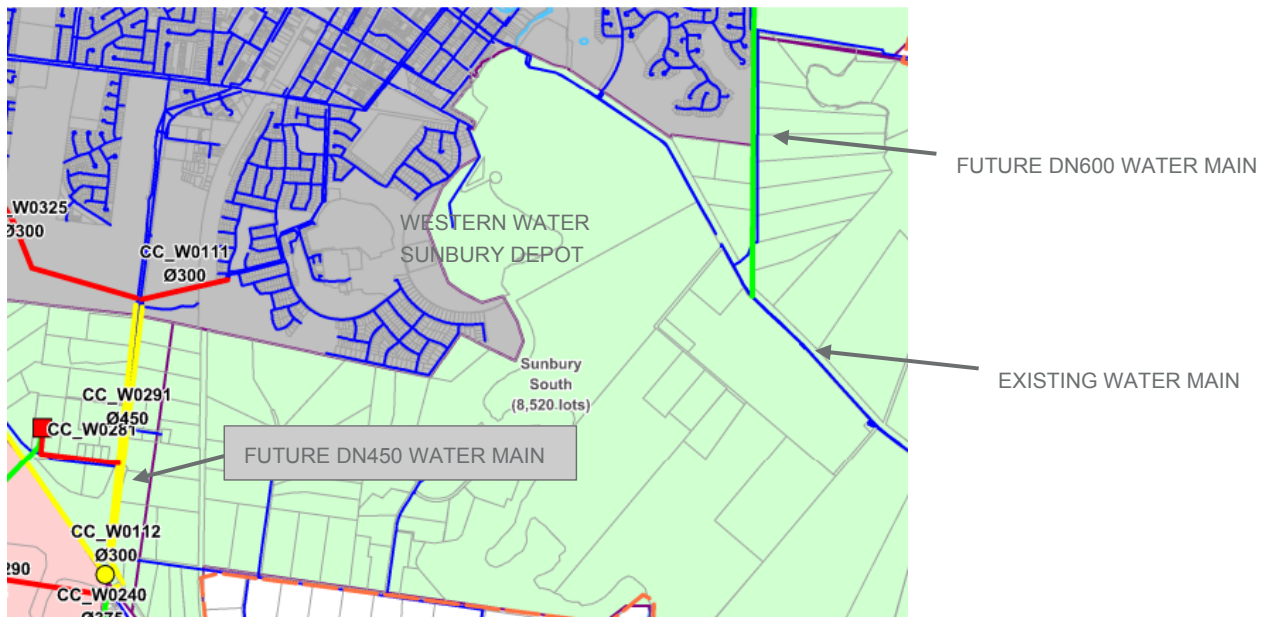
- DN450 mm water main along Vineyard Road (CC\_W0291)

Capital works projects currently planned for beyond 2019-2023

- DN600 mm water main from the intersection of Sunbury Road and along Lancefield Road (CC\_W0286)

Refer to Appendix B - Servicing Layout Plans and Figure 3.2 : Western Water - Future Trunk Water Mains





**Figure 3.2 : Western Water - Future Trunk Water Mains**

## Sewer

Western Water has indicated the following future trunk infrastructure services within the precinct.

Works currently planned for 2018-2023

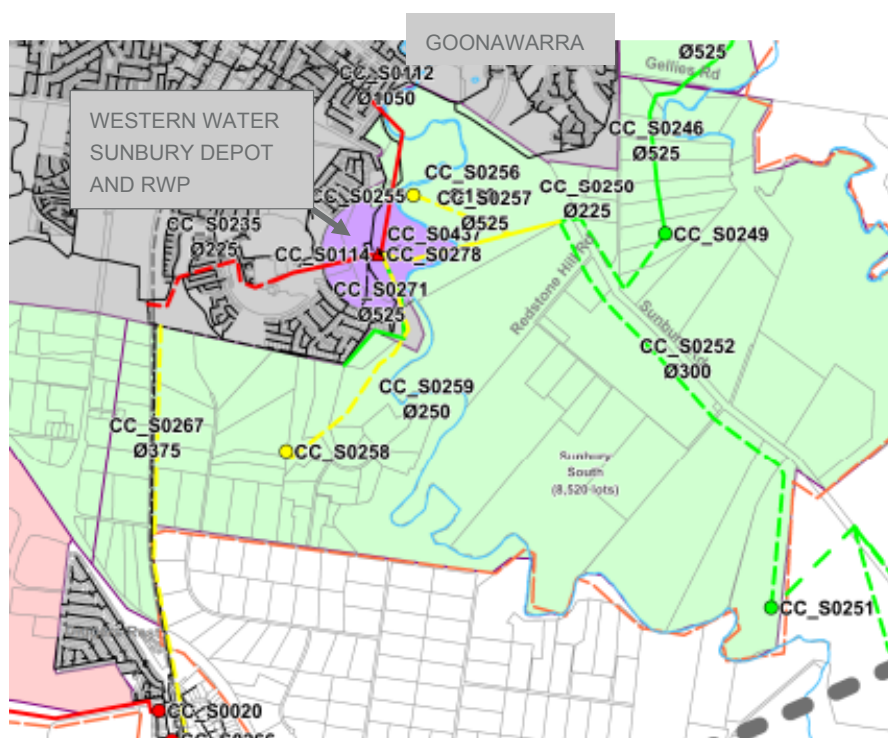
- DN150 mm rising main (CC\_S0256) including pump station (CC\_S0255)
- DN250 mm rising main (CC\_S0259) including pump station (CC\_S0258)
- DN375 mm rising main (CC\_S0267) including pump station
- DN525 mm Trunk main (CC\_S0257)

Works currently planned beyond 2018-2023 capital works projects

- DN225 mm rising main (CC\_S0250) including pump station (CC\_S0249)
- DN300 mm rising main (CC\_S0252) including pump station (CC\_S0251)
- DN525 mm Trunk main (CC\_S0246)
- DN525 mm Trunk main (CC\_S0271)

Refer to Appendix B - Servicing Layout Plans and Figure 3.3 : Western Water Future Trunk Sewer Mains





**Figure 3.3 : Western Water Future Trunk Sewer Mains**

### **Recycled Water**

Western Water are recognised leaders in water recycling with several RWPs supplying recycled water schemes including Sunbury, Melton, Bacchus Marsh, Gisborne, Riddells Creek, Romsey and Woodend. Western Water is proactively expanding the beneficial use of recycled water across its service area, as identified in their plans and programs.

Western Water are currently investigating the possibility of establishing a class A network for Sunbury South, and is identified in their capital works program to commence construction by 2018.

### **Western Water Plans**

#### ***Regional Environmental Improvement Plan (REIP)***

Western Water developed their REIP - 2010, which is directly linked to its Integrated Management Strategy. The REIP describes the overarching environmental planning and management framework for Western Water's Class B and Class C recycled water schemes, demonstrates Western Water's commitment to responsible management and the safe and sustainable supply and use of recycled water in the Western Water region, and to comply with EPA's "Guidelines for Environmental Management Use of Reclaimed Water"<sup>1</sup>.

<sup>1</sup> [Regional Environmental Improvement Plan, Western Water's Recycled Water Schemes Report - July 2010](#)





Figure 3.4 : Western Water - REIP recycled water scheme

The REIP framework further outlines Western Water commitment to a number of specific projects and programs for achieving the proposed recycled water targets including the Sunbury RWP Class A Feasibility Study, with Western Water indicating they are currently investigating the possibility of establishing a Class A network for Sunbury South – Refer to Western Water preliminary advice.

As part of the REIP, a recycled water scheme map for Sunbury is provided – refer to Figure 3.4 : Western Water - REIP recycled water scheme.

#### Water Plan 2013 - 2018

Western Water has developed a Water Plan 2013 – 2018, which sets out Western Water prices, service standards and capital works over five years, however the plan was not available at the time of assessment, with Western Water indicating ‘a full copy of the plan will be available for download shortly’<sup>2</sup>.

### 3.4 Adjacent Precincts

#### Water

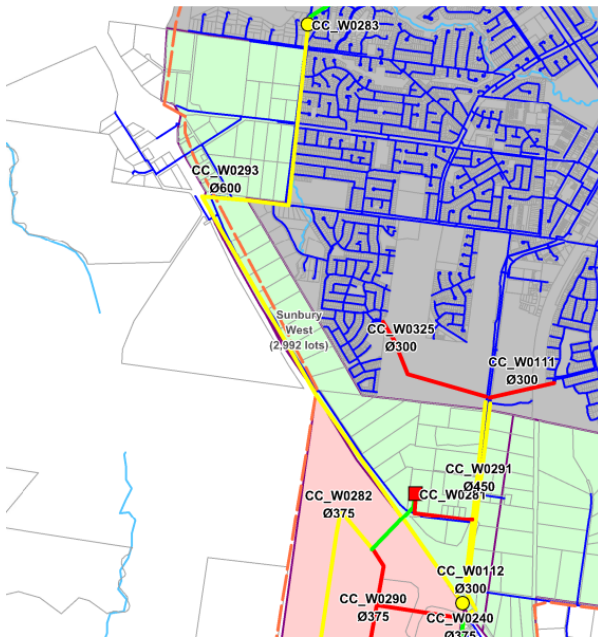
Western Water have indicated the following future water requirements for the Sunbury West PSP

- Water Tank and associated supply main, with works currently planned post 2013-2018
- DN600 mm water main, with works currently planned post 2019-2023

Refer to Figure 3.2 : Western Water - Future Trunk Water Mains and Appendix B - Servicing Layout Plans

<sup>2</sup> <http://www.westernwater.com.au/aboutus/Pages/Water-Plan-2013-2018.aspx>





**Figure 3.5 : Sunbury West PSP - Future Water supply**

#### **Sewer**

Western Water has not indicated trunk sewer supply for the Sunbury West PSP as part of their preliminary advice.

#### **Recycled Water**

Western Water have not indicated recycled water supply for the Sunbury West PSP as part of their preliminary advice.

### **3.5 Current Western Water Developer Fees and Charges**

Western Water has Standardised New Customer Contribution (NCC's) levied under the *Water Act 1989* for developments within their service area. The current Guide to New Customer Contributions<sup>3</sup> outlines the NCC framework and process for the land development industry and indicates the precinct sits within the Sunbury NCC area as shown in Figure 3.6 : Western Water Sunbury NCC Area Map

The guide refers to Western Water website ([www.westernwater.com.au](http://www.westernwater.com.au)) for details of the applicable fees and charges.

Refer Appendix A - Western Water Fees and Charges for a summary of current Western Water fees and charges.

<sup>3</sup> [Western Water Guide to New Customer Contributions - July 2013](#)



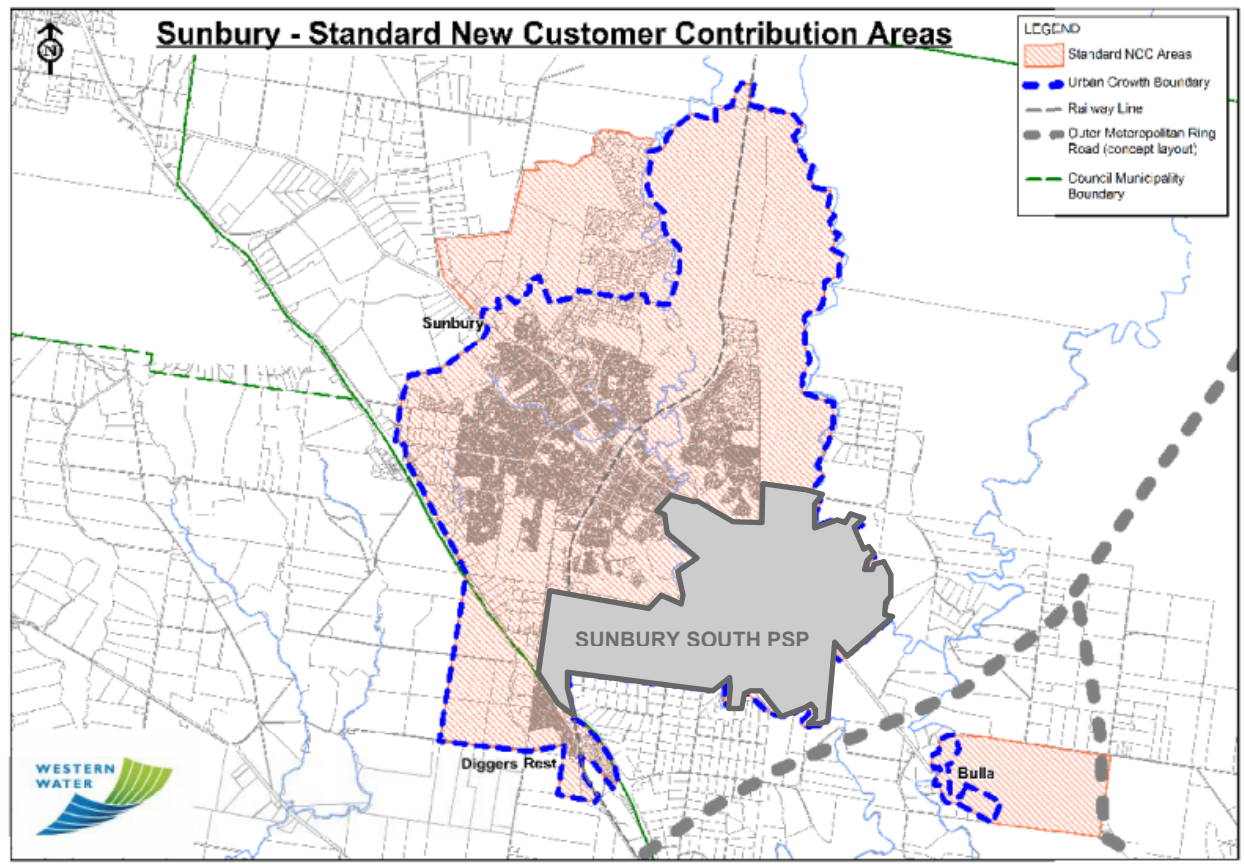


Figure 3.6 : Westen Water Sunbury NCC Area Map



## 4. Electricity

### 4.1 Current servicing arrangements

#### Jemena

Electricity supply services for the precinct are provided by Jemena.

66kV overhead power lines are present within the alignments of existing road reserves within the precinct (refer to the figures below), with Jemena Dial Before You Dig data indicating some minor underground reticulation.



Figure 4.1 : Redstone Hill Road - Overhead power



Figure 4.2 : Watson Road - Overhead Power



Figure 4.3 : Gellies Road - Overhead power



Figure 4.4 : Obeid Drive – Overhead Power

Jemena have indicated there are existing High Voltage (HV) assets are available within the precinct, including HV feeders on minor roads and a zone substation located in Sunbury. SP Ausnet is the responsible authority for transmission lines within the precinct.



## 4.2 Constraints

### Jemena

Jemena have indicated they are unable to determine augmentation requirements for the precinct or provide potential cost impacts to the developer.

To enable Jemena to provide preliminary servicing advice relating to supply requirements for this precinct, Jemena require detailed master plans, staging and proposed timing of the development to be prepared.

Should the assessment indicate a considerable increase in load, Jemena has advised that an additional zone substation may be required.

### SP AusNet

Formal advice has been requested from SP Ausnet on details of the transmission lines and easement within the precinct, however a formal response has yet to be provided. Details of easements are approximate and have been scaled from electronic easement data provided by GAA.

An existing HV transmission line is located within a 50m wide (approximately) easement which traverses the Carmody Family property, from Harker Street (House No. 109) across to Sunbury Road then continuing within and along the western grassed verge of Sunbury Road.

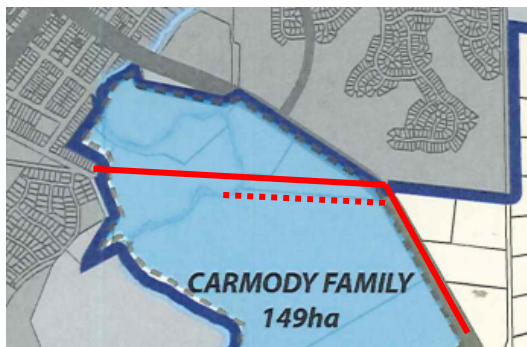


Figure 4.5 : Harker Street - Transmission Line (traversing Carmody property)





Figure 4.6 : Sunbury Road Transmission Line

Another existing dual (2 x 500kV) HV transmission line is located within a 100m wide (approximately) easement which runs parallel to the eastern boundary of the Woulfe, Quinn and Brown properties, and appears to sit partially within the Woulfe, Quinn and Brown property. The dual transmission line then continues north east along the southern boundary line of the Hi Quality property.

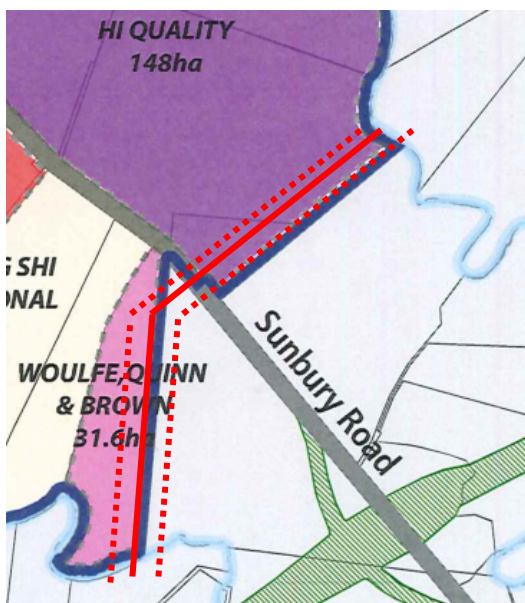


Figure 4.7 : Existing Dual Transmission Line

### 4.3 Development opportunities

Whilst Jemena have advised that they are unable to determine augmentation requirements for the precinct at this time, they have requested a detailed master plan, staging and proposed timing of the development to further assess the requirements for the future development of the precinct be prepared.

SP AusNet's 'A guide to living with transmission easements', document outlines the rights and responsibilities in relation to the use of easements. The guide requests plans for proposed development on an easement to be submitted SP AusNet's Property Group.<sup>4</sup>

<sup>4</sup> A GUIDE TO LIVING WITH TRANSMISSION EASEMENTS [www.sp-ausnet.com.au](http://www.sp-ausnet.com.au)



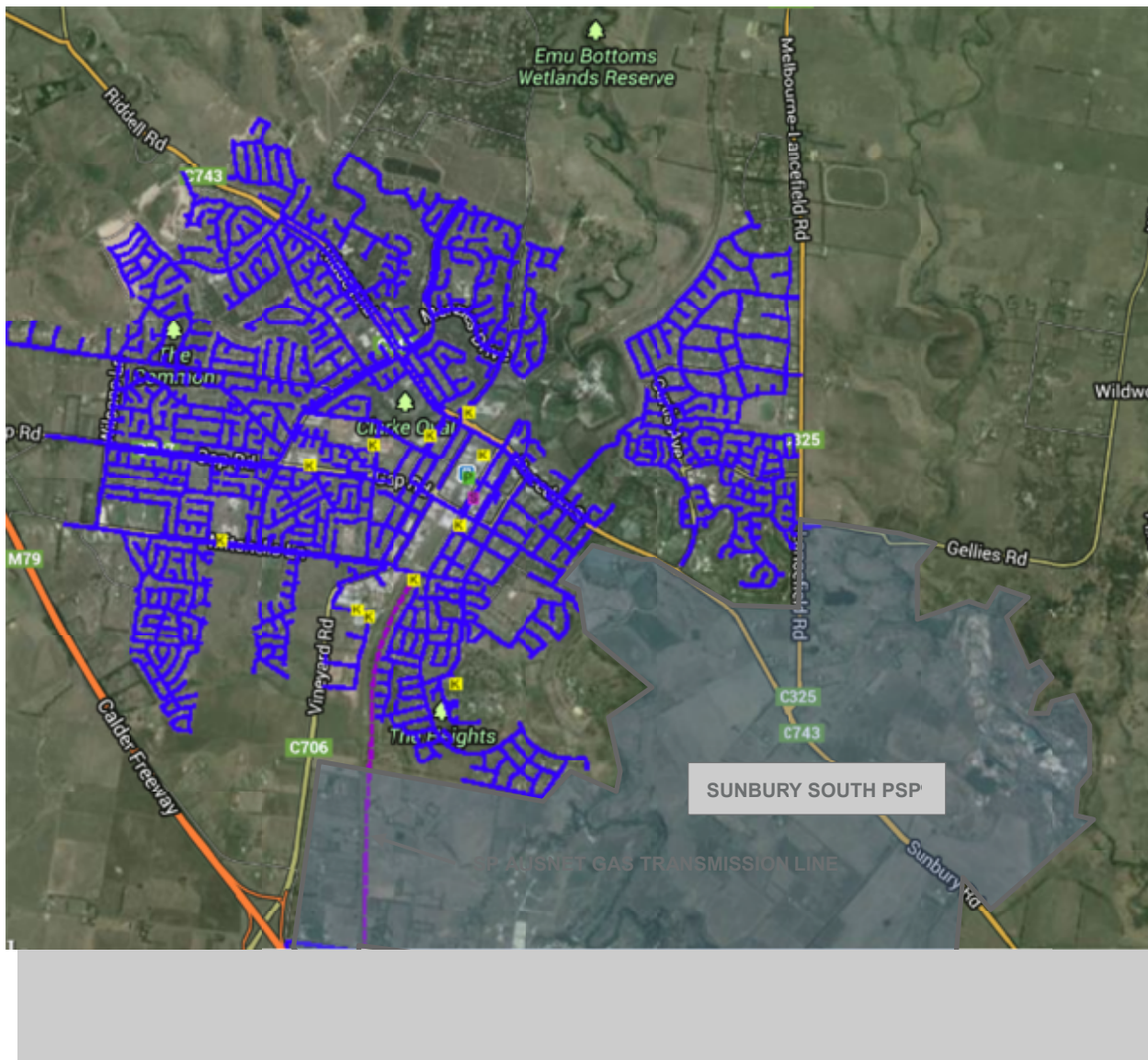
## 5. Gas

### 5.1 Current servicing arrangements

#### SP Ausnet (Gas)

Gas supply services for the Sunbury South precinct are provided by SP Ausnet (Gas).

Figure 5.1 : SP Ausnet Gas Supply Map



SP Ausnet's engineering team have provided a high level view of the Sunbury South precinct and advised the following:

- SP Ausnet has no assets within the Sunbury South PSP.
- Supply provided adjacent to the precinct is as shown in the above SP Ausnet Gas Supply Map



## 5.2 Constraints

### SP Ausnet

SP Ausnet has advised of the following constraints:

- Minor capacity constraints exist within the eastern area of the network. This will require further augmentation to adequately support the anticipated development.
- Further augmentation may incorporate the need for an additional Field Regulator of the SP Ausnet Transmission Pipeline with additional large diameter trunk mains.
- Potential cost impacts on the developer were not disclosed by the authority

### APA Group

An APA Gas Transmission Pipeline exists within the site, along the eastern alignment of the railway corridor.

APA has indicated the transmission pipeline is the 150 mm Deer Park to Sunbury Transmission Pressure Pipeline (T62) which sits within a 20 m wide easement. Refer Figure 5.2 : Gas Transmission Line (T62). This pipeline terminates at APA Sunbury City Gate (pressure reducing facility) in the vicinity of Shields Street and Evans Street, should a new city gate be required as part of future assessments, APA indicated a 30 m x 30 m or 50 m x 50 m footprint will be required to accommodate the infrastructure.



Figure 5.2 : Gas Transmission Line (T62)

APA has advised that Energy Safe Victoria (ESV) will need to be consulted as part of the change of land use process. ESV is the safety regulator for licensed pipelines under the *Pipelines Act 2005*. This is a requirement of the *Pipelines Act 2005* and the *Pipelines Regulations 2007*<sup>5</sup>. This process is understood to take a considerable amount of time to ensure compliance.

Pipeline licensees are obliged to comply with AS2885 which includes processes for the management of public safety. In accordance with Australian Standard AS2885 for Pipelines – Gas and Liquid Petroleum (AS2885.1),

<sup>5</sup> [Pipelines Regulation 2007 Part 3 Pipeline Licence Process](#)



explicitly addressed in Clause 4.7.4 - Change of location class AS2885.1-2012<sup>6</sup> a Safety Management Study is required due to a change in land use planning along the route of the pipeline. APA will undertake a safety management study and identify additional control measures to be implemented demonstrating risk from loss of containment involving rupture to as low as reasonably practicable. The assessment will include a cost benefit analysis of implementing any of the alternatives developed as part of the assessment.

Potential cost impacts on the developer were not be disclosed, however the installation of mains within the precinct would typically be undertaken by APA subject to commercial analysis.

APA also indicated a preliminary 'Measurement Length' of 164m both sides of the T62 pipeline in accordance with the requirements of CL4.3.2 Measurement Length - AS2885.1-2012 is required. APA prefers buildings and community type facilities, including sporting facilities and sensitive uses like schools to be located beyond the measurement length.

Normal residential development within the 164m zone is allowed as are other uses such as open space and bike trails.



Figure 5.3 : Gas Transmission Main - Watson Road Level Crossing

Construction works (e.g. roads and other asset crossing) within the transmission pipeline easement will require APA approval. Vegetation within the easement area needs to be low and shallow rooted to comply with the APAs requirements.

APA identified the risk of undermining the pipeline during heavy stormwater events, and will require designers to restrict flows in the vicinity of and from passing over the transmission pipeline during a 1:100 year storm event.

### 5.3 Development opportunities

Whilst APA have indicated a 164m measurement length be applied within the vicinity of the gas transmission line, APA have indicated the area can be developed for normal residential use, including cycling and walking tracks.

<sup>6</sup> AS2885.1-2012 Pipelines—Gas and liquid petroleum Part 1: Design and construction



## 6. Telecommunications

### 6.1 Current servicing arrangements

#### Telstra

Telstra have existing communication services within and adjacent the precinct.

The Australian Government Department of Broadband Communications and the Digital Economy have indicated that “Telstra would not have infrastructure responsibilities but would be retail provider of last resort” and that “All new developments will be assumed to be in NBN Co’s long-term fibre footprint. However, NBN Co will promptly notify the government, developers and Telstra (as Universal Service Obligation provider outside the footprint) of new developments that are outside of the long-term fibre footprint”<sup>7</sup>

#### Nextgen Group (Visionstream)

Nextgen Group has advised the Sydney to Melbourne (inter capital) trunk cable assets traverse sections of the site.

They have advised that the existing cable typically varies from its original state and whilst the cable does not have a large number of fibres (approximately 24), they are typically 1.2m deep. There are various connections with other communication network retailers and government agencies as required in providing service to the broader network.

### 6.2 Constraints

#### National Broadband Network (NBN) - Government Expectations

In a letter released by the Federal Governments Minister for Communications on 24<sup>th</sup> September 2013 to the Chairman of National Broadband Network Company (NBN Co.) with regard to government expectations, the government indicated it is committed to completing the construction of the NBN and is looking at a more cost effective approach. The government has also indicated they will be issuing a number of directions to NBN Co as part of the review process in the coming months.<sup>8</sup>

NBN Co have been instructed to continue with existing brown field construction where build instructions have been issued to delivery partners, however any further build or remediation instructions should not ordinarily be issued pending further analysis.

NBN Co has been instructed by the Government to proceed with implementation of their 2014-17 Corporate Plan.

### 6.3 Development opportunities

#### National Broadband Network (NBN)

It is anticipated that communication services for the area will be supplied through the NBN Co.

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<sup>7</sup> Australian Governments Department of Broadband Communications and the Digital Economy  
[Fibre in New Developments Policy Update Statement 22 June 2011](#)

<sup>8</sup> Australian Governments Department of Communications National Broadband Network, Interim Statement of Expectations to NBN Co – 24 September 2013 [Interim Statement of expectations to NBN Co - 24 September 2013](#)

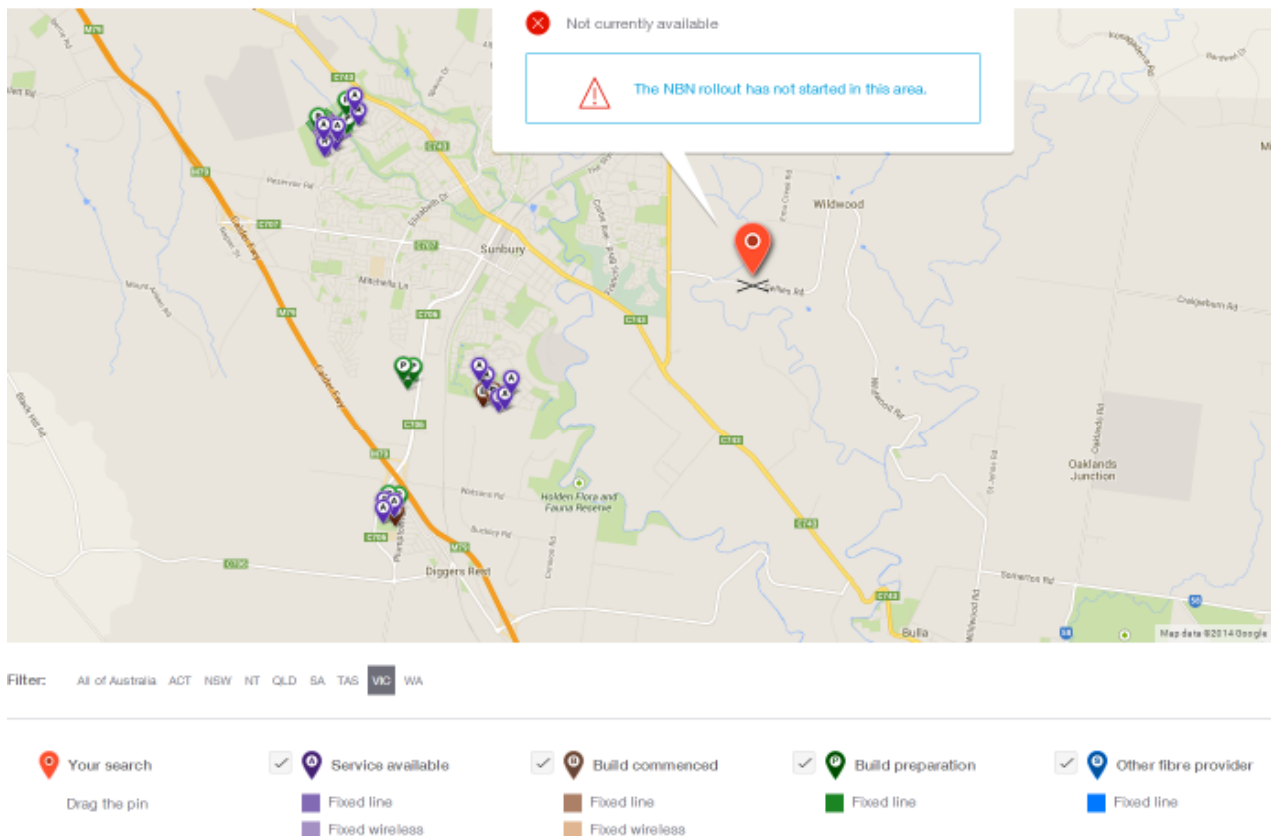


### NBN Current Process

Under the current process, the development site would be assessed for fibre under the Federal Government Fibre in New Development Policy should the development exceed 100 lots constructed over a minimum 3 year period.

NBN Co. has two programs of works for the rollout of fibre:

- Brownfield Areas which are existing serviced premises and
- Greenfield Areas which are any developments that fit within the criteria of the New Development Policy.



**Figure 6.1 : NBN rollout map**

Current information obtained from the NBN Co website indicates that the service is unavailable at this time, however within surrounding residential areas the service is either available or construction commenced, with other area construction expected to commence within one year – refer to Figure 6.1 : NBN rollout map.

For NBN Co planning and design team to review the proposed development in more detail the development would require registration along with the submission of the new Master Plan through the NBN Co website [www.nbnco.com.au](http://www.nbnco.com.au).

**Note:** NBN website currently indicates “This website is currently under review, pending the introduction of new Government policy. Some content may not be current, but will be updated as soon as possible.”<sup>9</sup>

<sup>9</sup> NBN Co notification pending introduction of new Government Policy [New Government Policy new-developments](#)



***Nextgen Group (Visionstream)***

Discussions with Nextgen Change Management Team indicate that should the fibre optic cable require to be relocation to accommodate any future development use, further discussions will be required with the team to assist with further servicing advice.



## 7. Governance

### Essential Services Commission Act 2001 and related Codes & Guidelines

The Essential Services Commission's (ESC) general regulatory powers are set out in the *Essential Services Commission Act 2001* and are applied to the Victorian electricity industry by the *Electricity Industry Act 2000*. This Act sets out the Commission's powers in respect to licensing and service regulation.

The objective under the *Essential Services Commission Act 2001* is to promote the long term interests of Victorian consumers with regard to the price, quality and reliability of essential services.

The ESC also has objectives under the *Electricity Industry Act 2000*:

*To promote a consistent regulatory approach between the electricity industry and the gas industry, to the extent that it is efficient and practicable to do so to promote the development of full retail competition.*

The ESC also has regulatory responsibilities prescribed by the *National Electricity (Victoria) Act 1997* and the National Electricity Code, which establishes the National Electricity Market in Victoria.

In addition to complying with the requirements of Victorian licences, codes and guidelines, electricity companies must also comply with the National Electricity Law and Rules.

### *Electricity Industry (Victoria) Act 2000*

The main purpose of this Act is to regulate the electricity supply industry.

### *Energy Safe Victoria (ESV)*

- Electricity Safety Act 1998 and subsequent amendments
- Electricity Safety (Electric Line Clearance) Regulations 2010

### *Gas Industry*

Energy Safe Victoria (ESV)

- Pipelines Act 2005 - Pipelines Regulations 2007
- Gas Safety Act 1997

### *Subdivision Act 1988*

This Act sets out the procedure for the subdivision and consolidation of land and regulates the management of and dealings with common property and the constitution and operation of bodies corporate. The Minister for Environment and Climate Change is responsible for administering this Act insofar as it relates to the management of the Officer of the Registrar-General and the Land Titles Officer. The Act is otherwise administered by the Minister for Consumer Affairs and the Minister for Planning.

### *Department of Transport, planning and Local Infrastructure (DTPLI)*

DTPLI are the governing body for local government and responsible for the administration of the Local Government and Planning and Environment Acts.

### *Local Government Act 1989<sup>10</sup>*

The act provides a framework for the establishment and operation of councils and is the main legislative instrument for Victoria's councils.

<sup>10</sup> [DPCD - Local Government Acts and Regulations - Local Government Act](#)



Changes to the Act in 2003 included the insertion of a Local Government Charter outlining the purpose of local government is to provide a system under which Councils perform the functions and exercise the powers conferred by or under this Act and any other Act for the peace, order and good government of their municipal districts.

#### ***Planning and Environment Act 1987<sup>11</sup>***

The Planning and Environment Act 1987, the Planning and Environment Regulations 2005 and the Planning and Environment (Fees) Regulations 2000 establish the legal framework for the planning system in Victoria. The purpose of the Act is to establish a framework for planning the use, development and protection of land in Victoria in the present and long-term interest of all Victorians.

#### **Environment Protection Authority Regulations**

The Environment Protection Authority (EPA) is the responsible authority for the administration of a number of Acts <sup>12</sup>

#### ***Environment Protection Act 1970***

The purpose of this Act is to create a legislative framework for the protection of the environment in Victoria having regard to the principles of environment protection.

#### ***Climate Change and Environment Protection Amendment Act 2012***

Amends the *Environment Protection Act 1970* to improve community amenity and reduce business costs. These amendments came into operation on 13 February 2013.

#### ***Pollution of Waters by Oils and Noxious Substances Act 1986***

The purpose is to protect the sea and other waters from pollution by oil and noxious substances.

#### ***National Environment Protection Council (Victoria) Act 1995***

The *National Environment Protection Council (Victoria) Act 1995* is complementary legislation to the other states and the Commonwealth. The Act establishes the National Environment Protection Council (NEPC), which comprises a Minister from the Commonwealth and each state and territory.

The objective of NEPC is to ensure people are equally protected from air, water and soil pollution and from noise, no matter where they live in Australia. By eliminating differences between participating states in the adoption or implementation of major environment protection measures, distortion of decisions made by the business community and potential fragmentation of markets will be prevented.

#### **Water Industry Act 1994**

##### ***(Water - Sewer - Recycled Water)***

The Water Industry Act 1994 establishes the framework under which the three Melbourne water retailers are licensed and regulated by the Commission, together with the statutory functions, powers and obligations of the licensees.

#### ***Water Act 1989***

The Water Act 1989 provides the framework for the allocation and management of the State's water resources, including a bulk water entitlement regime and sets out the functions, rights and obligations and governance arrangements of regional urban water authorities and rural water authorities.

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<sup>11</sup> [DPCD - Planning Legislation](#)

<sup>12</sup> [Acts administered by EPA](#)



**Telecommunications**

- Telecommunications Act 2001
- Telecommunications (Low-impact Facilities) Determination 1997
- Telecommunications (Consumer Protection and Service Standards) Act 1999
- Australian Communications & Media Authority Act 2005
- Emergency Services Telecommunications Authority Act 2004



## 8. Guidelines and Standards

The following is a summary outlining some of the guidelines and standards that apply to the precinct. The summary is not an exhaustive list and is provided as a guide only.

### **Water and Sewer Supply**

- Western Water guidelines and standards
  - Class A Recycled Water Developer Guidelines
  - Western Water Design Standards
  - Pump Station Design Standards
  - Western Water dual water supply system schemes design and construction standards
- WSA 03-2002 Water Supply Code of Australia Melbourne Retail Water Agencies Edition (MRWA)
- WSA 02-2002 Sewerage Code of Australia Melbourne Retail Water Agencies Edition (MRWA)
- Water Services Association of Australia (WSAA) Dual Water Supply Systems First Edition Version 1.2 (Only applicable to subdivisions with potable and recycled water).

### **Power**

- AS 3000 - Electrical installations (Australian/New Zealand Wiring Rules)
- AS 3175 – Approval and test specification – Residual current-operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – General rules
- Electricity Distribution Code for Victoria, Energy Safe Australia

### **Gas**

- AS2885-2008 Pipelines—Gas and liquid petroleum General Requirements
- AS1432-2004 Copper tubes for plumbing, gas fitting and drainage applications

### **Telecommunication**

- AS/NZS 3084:2003 Telecommunications installations – Telecommunications pathways and spaces for commercial buildings
- ACA TS 102-1998 Telecommunications Technical Standard (Customer Equipment and Customer Cabling)

### **Typical Services Location**

The GAA has provided typical arrangements for utility services location within Access Street and for Trunk Services within the road reserves.

Refer Appendix B - Servicing Layout Plans drawing 'Services Locations – Cross Sections for Access Street Figure 003' and 'Services Locations – Cross Sections for Trunk Services Figure 004'.



## 9. Conclusion and Recommendations

Based on discussions with authorities responsible for servicing the precinct, the following summary of assessment findings and recommendations will assist in facilitating the planning and implementation of adequate infrastructure servicing for the precinct.

It is also noted that the recommendations will require further detailed assessments to be undertaken by the stakeholders and are presented here for the benefit of GAA, to assist with future draft urban master plan and associated actions.

Timely awareness of development staging within a precinct enables service authorities to be proactive in the planning and delivery of critical infrastructure within the precinct. It also allows accurate budget forecasting and suitable resource allocation to occur.

As PSP documentation is a reference point for developers, it is recommended that early engagement with service authorities by developers be emphasised within the PSP. Service authorities appreciate knowing in advance the zoning and forecast timing of developments within precincts and it is recommended that timelines for development be provided.

From the assessment and discussions with servicing authorities the development area appears to be suitable for further development, with no major constraints identified.

The following outlines key infrastructure findings and recommendations.

### **Potable Water**

- Western water is the responsible authority for water supply services.
- There are existing water supply mains within the precinct.
- Western Water have indicated future trunk water supply mains within the precinct and currently programmed to be delivered during and post 2019-2023 capital project works.
- Sequencing of development within the precinct is to be considered as part of the master planning process.

### **Sewer**

- Western Water is the responsible authority for sewer services.
- There are no existing reticulated services within the precinct.
- An existing DN375mm rising main traverses the precinct and runs parallel the existing railway line corridor through to Diggers Rest.
- Western Water is required to construct a sewer main across Jacksons Creek to the Sunbury Recycled Water Plant and is currently programmed to be delivered 2013-2018.
- Western Water have identified that four sewer pump stations will be required within the precinct to support future rising mains to be delivered during and post 2018-2023 capital project works.
- Western Water have indicated future trunk water supply mains within the precinct and currently programmed to be delivered during and post 2018-2023 capital project works.
- Sequencing of development within the precinct is to be considered as part of the master planning process.

### **Recycled Water**

- Western Water is the responsible authority for recycled water supply services.
- There are no existing recycled water services within the precinct.
- Western Water are currently investigating the possibilities for establishing a class A recycled water network for Sunbury South.



- The Class A Recycled water scheme is proposed for the Sunbury South precinct with expectations that service will support part of the development, that being the area to the west of Sunbury Road only, excluding the portion north of Sunbury Road through to Gillies Road.
- Western Water has indicated the requirement for a buffer zone around the Sunbury recycled water plant within the Sunbury South PSP. Development within this zone is restricted.
- The development needs to take into account the Sunbury RWP and the required buffer zone around the plant

#### **Electricity**

- Jemena
  - Jemena are the responsible authority for electricity supply.
  - The existing supply within the precinct is predominantly overhead power supply with minor underground assets.
  - Jemena have an existing zone substation in Sunbury.
  - Jemena have advised an additional zone substation may be required to support future development
- SP Ausnet
  - SP Ausnet is the responsible authority for electricity supply.
  - SP Ausnet have two transmission lines are located within the precinct, a single tower supply extending from Harker Street through to Sunbury Road and a dual tower supply along south eastern most boundaries of the precinct.
  - A formal application is to be submitted with SP Ausnet along with a detailed Master Plan through the SP Ausnet website.

#### **Gas**

- APA Group
  - APA has an existing 20m wide gas transmission easement exists within the Sunbury South PSP and are the responsible authority for gas transmission.
  - APA require a preliminary 'measurement length' of 164m wide both side of the transmission pipeline.
  - APA have advised a city gate may be required to be sited within the Sunbury South precinct.
- SP Ausnet (Gas)
  - SP Ausnet (Gas) has no assets within the precinct however is the responsible authority for gas distribution for adjacent developments.
  - SP Ausnet (Gas) have identified minor capacity constraints will require further augmentation.
  - SP Ausnet (Gas) have identified augmentation may require the need for an additional field regulator and larger diameter backbone mains.

#### **Telecommunications**

- Telstra have assets within and adjacent to the precinct
- Nextgen Group
  - Nextgen has indicated the Sydney to Melbourne (inter capital) trunk cable assets traverse sections of the site.
  - Further discussions would be required with Nextgen should the cable require to be relocated to accommodate any future development use.
- NBN



- NBN Co website indicates that the service is unavailable at this time.
- NBN services in surrounding residential areas is either available, construction commenced, with other areas indicating construction expected to commence within one year.
- NBN Co planning and design team require registration along with the submission of the new Master Plan through the NBN Co website.



## Appendix A. Western Water Fees and Charges

### Standardised New Customer Contributions (NCC's)<sup>13</sup>

- If a development (including a subdivision) requires either the construction of new assets or the upgrade of existing assets (either built by Western Water or built by the developer and gifted to Western Water) NCC's will be payable at a Greenfield rate for each property created.
- If a property is serviced and connected for one or two of available services (i.e. potable water, sewerage or Class A recycled water), the provision of or connection to, a further service will incur Greenfield NCC's in respect of that new service.
- A property which is already serviced and connected and is to be subdivided will pay an Infill NCC for each additional property created.
- Specialised, non-subdivisional or higher water usage developments will be considered on a case-by-case basis with NCC calculated on either a pro-rata approach and/or "fixture units".
- For multi-unit developments a "credit" will be provided for the existing lot and then standard NCCs applied per unit.

2013/14	Potable water and/or Class A Recycled Water	Sewerage	Total
Greenfield	\$2000 per lot	\$2000 per lot	\$4000 per lot
Infill	\$1000 per lot	\$1000 per lot	\$2000 per lot

### Administration fees

Administration fees are charged to recover costs incurred for preparation of works offer, design checking, construction audit, asset recording survey, preparation of as constructed plans and associated administration and calculated using the table below.

2013/14	Application fee (first lot is included in this fee)	Up to first 10 lots (excluding the first lot)	For each additional lot over 10
Works including survey	\$1412.25	\$416.96	\$208.48
Works with no survey	\$1312.25	\$146.96	\$58.48

### Other fees

If feasibility studies are required to be undertaken, the developer will be required to fund the study.

If any water and/or sewer works are constructed, a maintenance bond of 5% of the actual costs of the works will be required prior to Western Water issuing Consent for Statement of Compliance to the Council.

<sup>13</sup> [Western Water - Develop Property Fees and charges](#)



## Appendix B. Servicing Layout Plans

### Drawing Index – Proposed Servicing Layouts

Title	Drawing Number / Reference
PSP No. 474 Sunbury South Servicing Layout	SB20340-E-CC-DG-0001
Western Water Development Servicing Plan – Sunbury, Water	20/06/13 Capex_Plan
Western Water Development Servicing Plan – Sunbury, Sewer	20/06/13 Capex_Plan

### Drawing Index – Proposed Servicing Layouts

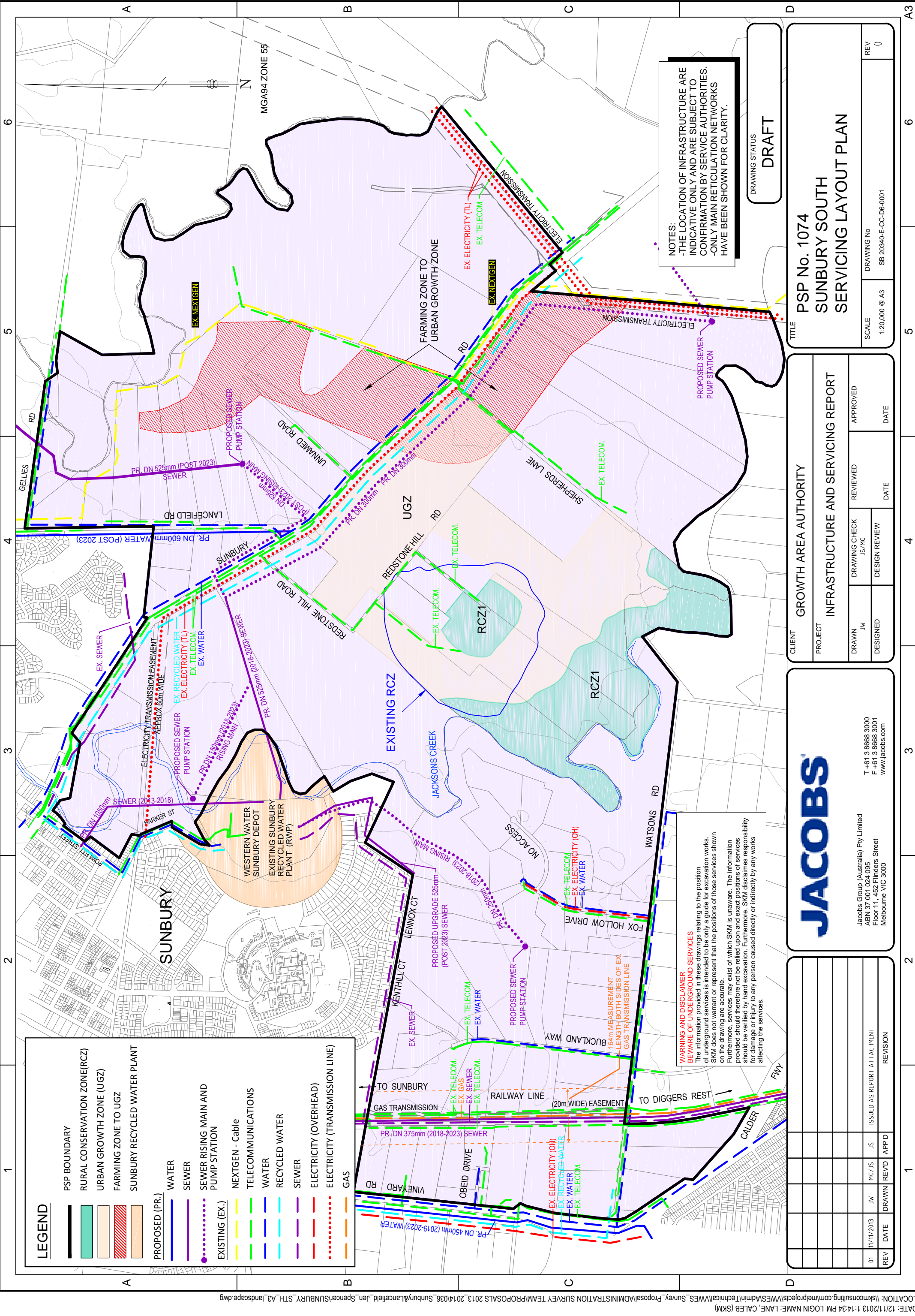
Title	Drawing Number / Reference
Services Locations – Cross Sections for Access Street	Figure 003
Services Locations – Cross Sections for Trunk Services	Figure 004

### Drawing Index – Existing Servicing Data

Title	Drawing Number / Reference
SP AusNet - Electricity transmission and distribution network	Document 2013-10-16-084323 (As provided by Jemena) Data incorporated into SB20340-E-CC-DG-0001*
Jemena - Electricity distribution network	No data received regarding overhead supply network 30801718_Assets Affected 30801719_Assets Affected
SP AusNet – Gas Transmission pipeline	No data received
APA Group – Gas Transmission pipeline	PSP_Pipeline_August_2013 T62-16 Route Plan & Longsections T62-17 Route Plan & Longsection T62-18 Route Plan Data incorporated into SB20340-E-CC-DG-0001*
Nextgen / Visionstream – Telecommunications inter capital cable	30801707 Nextgen Cable Data incorporated into SB20340-E-CC-DG-0001*
Telstra – Telecommunications	30801720 - Sunbury RD - FIBRE - 260913 - Map 1 of 1 – SK.DWF Data incorporated into SB20340-E-CC-DG-0001*

\* Asset data incorporated into SB20340-E-CC-DG-0001 relates to assets within the precinct only





LEGEND

PSP BOUNDARY

RURAL CONSERVATION ZONE(RCZ)

URBAN GROWTH ZONE (UGZ)

FARMING ZONE TO UGZ

SUNBURY RECYCLED WATER PLANT

PROPOSED (PR.)

WATER

SEWER

SEWER RISING MAIN AND PUMP STATION

NEXTGEN - Cable

TELECOMMUNICATIONS

WATER

RECYCLED WATER

SEWER

ELECTRICITY (OVERHEAD)

ELECTRICITY (TRANSMISSION LINE)

GAS

EXISTING (EX.)

WATER

SEWER

SEWER RISING MAIN AND PUMP STATION

NEXTGEN - Cable

TELECOMMUNICATIONS

WATER

RECYCLED WATER

SEWER

ELECTRICITY (OVERHEAD)

ELECTRICITY (TRANSMISSION LINE)

GAS

**WARNING AND DISCLAIMER**  
**BEWARE OF UNDERGROUND SERVICES**  
The information provided in these drawings relating to the position of underground services is intended to be only a guide for excavation works. SKM does not warrant or represent that the positions of those services shown on the drawing are accurate. Furthermore, services may exist of which SKM is unaware. The information provided should therefore not be relied upon and exact positions of services should be verified by hand excavation. Furthermore, SKM disclaims responsibility for damage or injury to any person caused directly or indirectly by any works affecting the services.

NOTES:  
-THE LOCATION OF INFRASTRUCTURE ARE INDICATIVE ONLY AND ARE SUBJECT TO CONFIRMATION BY SERVICE AUTHORITIES.  
-ONLY MAIN RETICULATION NETWORKS HAVE BEEN SHOWN FOR CLARITY.

DRAWING STATUS  
**DRAFT**

TITLE

PSP No. 1074

SUNBURY SOUTH

SERVICING LAYOUT PLAN

SCALE

1:20,000 @ A3

DRAWING No

SB 20340-E-CC-D6-0001

REV

0

CLIENT GROWTH AREA AUTHORITY					
INFRASTRUCTURE AND SERVICING REPORT					
DRAWN	DESIGNED	DRAWING CHECK		APPROVED	
		JS/MO	DATE	DATE	DATE

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# Development Servicing Plan - Sunbury, Water

## LEGEND

- Existing Water Main / Pump Station / Tank
- WP3 Water Main / Pump Station / Tank (2013-18)
- WP4 Water Main / Pump Station / Tank (2019-23)
- Future Water Main / Pump Station / Tank (Beyond WP4)
- MWC Water Main / Pump Station / Tank
- Capital Project Reference

## CC\_W0000

- Approved PSP Growth
- Non - Approved PSP Growth
- Outer Metropolitan Ring Road
- Ballarat Railway Line
- Urban Growth Boundary

## Project List

Capital Code	Description	Year Complete	Trigger
CC_W0108	750mm of 225mm water main	2017/18	Development in Canterbury Hills
CC_W0109	Existing main realignment	2022/23	Condition of main
CC_W0110	Upgrade/replacement of existing Loemans Rd chlorinator	2014/15	Condition of chlorinator
CC_W0111	600m of 300mm water main	2017/18	Growth in Diggers Rest
CC_W0112	Duplication of 300mm water main	2018/19	Development in Diggers Rest
CC_W0218	Installation of PH control buffering at Riddell Rd Pump Station	2019/20	Improvement works
CC_W0236	Additional storage at Riddell Rd	2023/24	Growth in Sunbury
CC_W0237	New PRV Station	2018/19	Growth in Sunbury low level zone
CC_W0240	Upgrade 400m of existing 225mm main to 375mm main	2028/29	Growth in Diggers Rest
CC_W0241	Upgrade 700m existing 225mm and 150mm mains with a 300mm main	2028/29	Growth in Diggers Rest
CC_W0281	Additional Storage to supply Sunbury (Stage 1 10ML tank at Bald Hill, Stage 2 to be determined)	2025/26	Growth in south Sunbury
CC_W0282	2200mm of 375mm water main	2021/22	Growth in Diggers Rest
CC_W0283	Upgrade Western Tank pump station	2019/20	Growth in Sunbury and/or Rosslynn system
CC_W0284	New Konagaderra Tank	2027/28	Growth in Sunbury North and Sunbury East PSPs
CC_W0285	2050m of 600mm water main	2027/28	Growth in Sunbury low level zone
CC_W0286	4350m of 600mm water main	2024/25	Growth in Sunbury North PSP
CC_W0287	4500m of 750mm water main	2025/26	Growth in Sunbury East PSP
CC_W0288	3000m of 900mm water main	2027/28	Construction of Konagaderra Tank
CC_W0289	2450m of 750mm water main	2026/27	Growth in Sunbury North and Sunbury East PSPs
CC_W0290	1400mm of 375mm water main	2016/17	Growth in Diggers Rest
CC_W0291	650m of 450mm water main	2019/20	Growth in Diggers Rest
CC_W0292	Vineyard Rd Pumping Station 850l/s@165m	2023/24	Growth in Sunbury
CC_W0293	7000m of 600mm water main	2024/25	Growth in Sunbury
CC_W0325	1000m of 300mm water main	2016/17	Growth Sunbury South PSP or west of Vineyard Rd

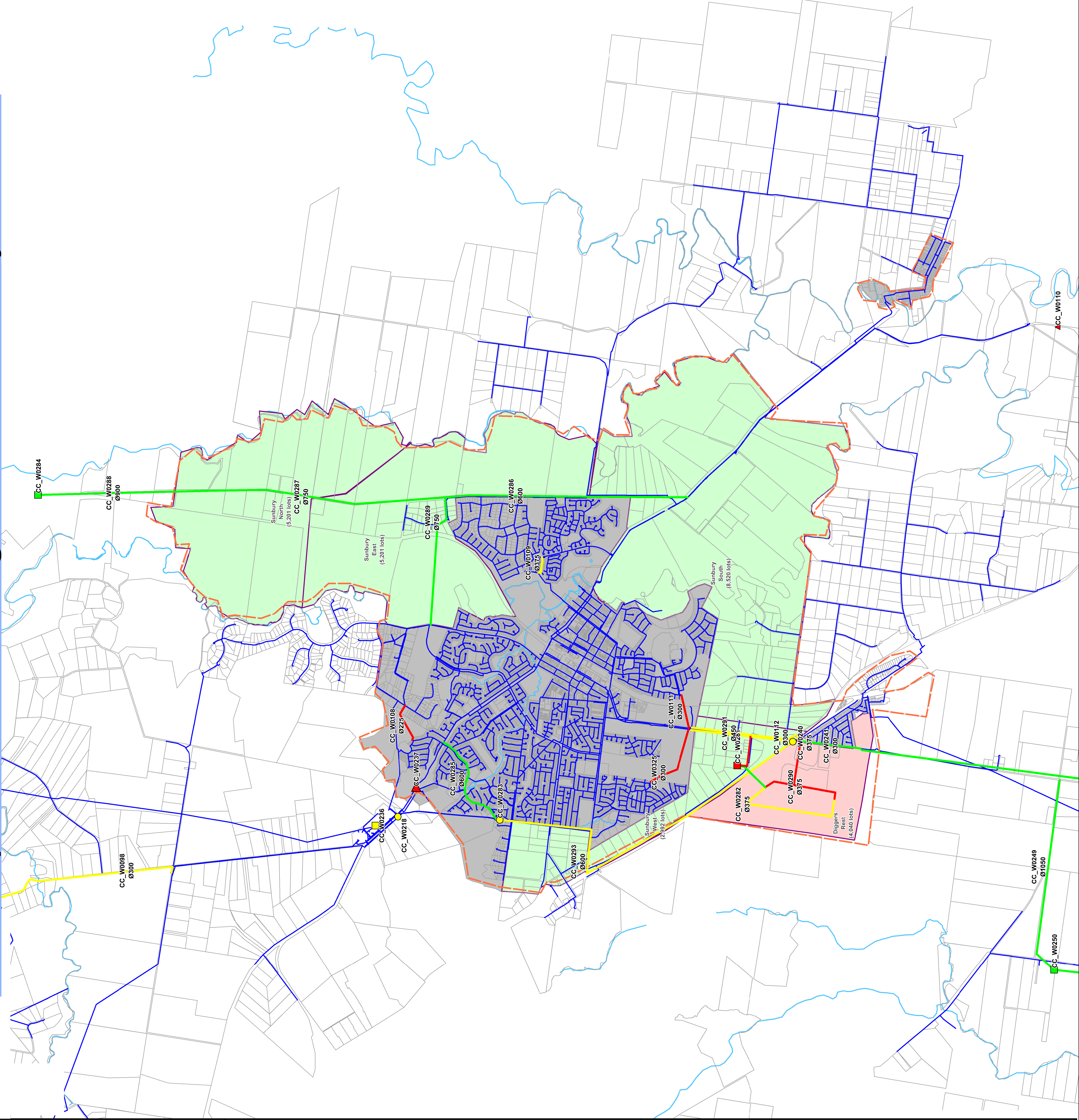
## Growth Forecasts

Year End	2013/14	2014/15	2015/16	2016/17	2017/18	2019-2023	2024-2028
Growth Forecast (Cumulative lots)	200	500	800	1,100	1,500	4,980	16,905

Note: This plan is provided for information purposes only and is subject to change without notice. Please contact Western Water for up to date information, prior to the commencement of land development activities.



DATE: 20/06/2013  
WOR: CAPEX\_Plan





LEGEND

- / - - - / ●

Existing Sewer / Rising Main / Pump Station

— / - - - / ●

WP3 Sewer / Rising Main / Pump Station (2013-18)

— / - - - / ●

WP4 Sewer / Rising Main / Pump Station (2018-23)

— / - - - / ●

Future Sewer / Rising Main / Pump Station (Beyond WP4)

CC\_ S0000

Capital Project Reference

Approved PSP Growth

Non - Approved PSP Growth

Outer Metropolitan Ring Road

Ballarat Railway Line

Urban Growth Boundary

Sunbury RWP

Project List

Capital Code	Description	Year Complete	Trigger
CC_ S0016	Connection of the Bulla township to reticulated sewerage system	2023/24	Compliance
CC_ S0020	Replacement of the existing generator	2017/18	Condition of generator
CC_ S0114	New backup generator	2017/18	Condition of generator
CC_ S0203	Upgrade of 250mm rising main with a second 250mm new main	2014/15	Labour in Sunbury SPS
CC_ S0240	Construction of new 500/L pump station servicing Area 2 East	2028/29	Growth in Sunbury East PSP
CC_ S0241	400m of 200mm rising main	2028/29	Growth in Sunbury East and Sunbury North PSP
CC_ S0244	1340m of 450mm sewer	2028/29	Growth in Sunbury East and Sunbury North PSP
CC_ S0245	1340m of 525mm sewer	2028/29	Growth in Sunbury East and Sunbury North PSP
CC_ S0246	1620m of 525mm sewer	2027/28	Growth in Sunbury East and Sunbury North PSP
CC_ S0249	New 257 L/s SPS	2027/28	Growth in Sunbury North PSP
CC_ S0250	1580m of 225mm rising main	2027/28	Construction of 257/L pump station (CC_ S0249)
CC_ S0251	New 31 L/s SPS	2025/26	Growth in Sunbury South PSP
CC_ S0252	3740m of 300mm rising main	2025/26	Construction of 341/L pump station (CC_ S0251)
CC_ S0255	New 14 L/s SPS	2019/20	Growth in Sunbury South PSP
CC_ S0256	580m of 150mm rising main	2019/20	Construction of 14/L pump station (CC_ S0255)
CC_ S0257	1780m of 525mm outfall sewer	2022/23	Growth in Sunbury South PSP
CC_ S0258	New 82/L SPS	2022/23	Growth in Sunbury South PSP
CC_ S0259	2014m of 250mm rising main	2022/23	Construction of 82/L pump station (CC_ S0258)
CC_ S0264	New 60/L SPS	2020/21	Growth in Sunbury East PSP
CC_ S0265	1700m of 250mm rising main	2018/19	Growth in Sunbury East PSP
CC_ S0266	Upgrade Tarne St SPS to 125 L/s	2021/22	Growth in Sunbury East PSP
CC_ S0267	3400m of 375mm rising main running	2021/22	Tarne St SPS upgrade (CC_ S0266)
CC_ S0270	Upgrade 950m to 300mm of existing rising main	2017/18	Growth in Sunbury East and Sunbury North PSP
CC_ S0271	Upgrade 100m of existing sewer to 300mm	2017/18	Growth in Sunbury East and Sunbury North PSP
CC_ S0274	New 4 L/s SPS	2030/31	Growth in Sunbury East and Sunbury North PSP
CC_ S0275	510m of 100mm rising main	2030/31	Construction of 4/L pump station
CC_ S0276	New 4 L/s SPS	2030/31	Growth in Sunbury East and Sunbury North PSP
CC_ S0277	3.300m of 100mm rising main	2030/31	Construction of 4/L pump station
CC_ S0278	Upgrade to existing RMP Plant	2016/17	Growth in Sunbury
CC_ S0437	Master Asset Register and Rating Schedule	2027/28	N/A

Growth Forecasts

Year End	2013/14	2014/15	2015/16	2016/17	2017/18	2019-2023	2024-2028
Growth Forecast (Cumulative lots)	200	500	800	1,100	1,500	4,980	16,905

Note: This plan is provided for information purposes only and is subject to change without notice. Alignments and asset locations are indicative only. Please contact Western Water for up to date information, prior to the commencement of land development activities.

DATE: 20/06/2013  
WOR: CAPEX\_ Plan

Development Servicing Plan - Sunbury, Sewer



## **Appendix C. Trunk Services Estimate**

Scope of costs are limited to trunk infrastructure only, and based on available information provided from the authorities as part of the high level utility servicing assessment.



# **FEASIBILITY DESIGN**

Indicative Cost Estimate

VERSION 1

For

## **INFRASTRUCTURE COSTING STUDY SUNBURY & LANCEFIELD**

Prepared For



By

**JACOBS®**

REPORT DATE: 26/11/2014

PROJECT NO SB20340



**SUNBURY & LANCEFIELD - FEASIBILITY DESIGN**  
*Indicative Cost Estimate*  
**INFRASTRUCTURE COSTING STUDY**

**VERSION 1**

## **BASIS OF COST**

The costs are based on documents which are feasibility design options only, associated cost information is **strictly indicative only**. The cost details are based on current market rates, for Melbourne, (November 2014). They have been summarised and the resultant summary figure has then been used to calculate additional allowances such as survey & design, contingency, etc.

### **RATES**

- No allowance for escalation has been included in the rates.
- Contingency, Site Establishment, Supervision & Project Management, Survey & Design have been based on percentages and may be subject to change depending on the period of construction. Fees should be revisited/confirmed during future design stages.
- Rates based on pipe types as noted

### **SCOPING LIMITATIONS:**

- Scope of costs are limited to trunk infrastructure only, and based on available information from the authorities.

#### Water & Sewer

- Western Water are currently investigating the possibility of establishing a class A network for Sunbury South, however trunk infrastructure details are not developed at this time.
- Western Water has indicated no recycled water would be available for developments north of Sunbury Road including areas along Melbourne-Lancefield.

#### Electricity

- Jemena have indicated they are unable to determine augmentation requirements for the precinct.

#### Gas

- Whilst SP Ausnet have indicated they are unable to determine augmentation requirements for the precinct at this time, providing a detailed master plan, staging and proposed timing of the development to further assess the requirements for the future development of the precinct would be advantageous.

#### Telecommunications

- Authorities indicated they are unable to determine augmentation requirements for the precinct.

### **ASSUMPTIONS:**

- It is assumed excavated material is suitable for backfill of underground services
- No additional allowance for engineered fill.
- No allowance has been included to upgrade existing supply services outside the precinct definition.
- No allowance for fencing easements has been included
- No allowance for remediation of pavement where proposed services cross existing roadways.
- No staging of works allowed for in cost
- Site establishment costs are nominal allowances and may vary depending on procurement, staging arrangements.
- Costs associated with land acquisition are excluded.
- No allowance for adverse ground conditions eg. rock, soft spots etc.
- Design lengths and layouts are broad estimates based on the high level information provided.
- No allowance for price escalation has been included, rates may vary depending on the period of construction and should be revisited/confirmed during future design stages.
- VicRoads approval fees and 10 year maintenance are excluded.
- Figures exclude GST



PROJECT NO SB20340

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# SUNBURY & LANCEFIELD - FEASIBILITY DESIGN

Indicative Cost Estimate

## INFRASTRUCTURE COSTING STUDY

VERSION 1

### PSP 1074 SUNBURY SOUTH

Ref	DESCRIPTION	DETAIL	Qty	Unit	Rate	\$
	<b>WATER</b>					
	DN450mm water main	DICL supply and lay, incl. excavation & backfill	1,650	m	245	403,430
	DN600mm water main	DICL supply and lay, incl. excavation & backfill	1,700	m	476	809,200
	<b>SEWER</b>					
	DN150mm rising main	GRP supply and lay, incl. excavation & backfill	800	m	86	69,000
	DN250mm rising main	GRP supply and lay, incl. excavation & backfill	1,850	m	112	207,900
	DN375mm rising main	GRP supply and lay, incl. excavation & backfill	2,350	m	269	632,740
	DN525mm trunk main	GRP supply and lay, incl. excavation & backfill	1,400	m	409	572,250
	DN1050mm trunk main	GRP supply and lay, incl. excavation & backfill	1,000	m	1,099	1,099,000
	Pump stations		2	No.	100,000	200,000
	<b>Works beyond 2018-2023</b>					
	DN300mm trunk main		4,400	m	310	1,364,000
	DN525mm trunk main		4,200	m	520	2,184,000
	Trenching for above		27,060	m3	40	1,082,400
	Bedding material		514	m3	70	35,980
	Pump stations		2	No.	150,000	300,000
	Allowance to bore under Sunshine Rd	525dia pipe	1	Item	15,000	15,000
	<b>RECYCLED WATER</b>					
	Western water currently investigating			Note		Excluded
	<b>POWER</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>GAS</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>TELECOMMUNICATIONS</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>CABLE</b>					
	No NBN rollout stated for area			Note		N/A
	<b>Sub-Total</b>					<b>\$ 8,974,900</b>
	<b>Sub-Total</b>					<b>8,974,900</b>
	Service Relocation					-
	10 Year Maintenance Fee					N/A
	Traffic Management					N/A
	Survey & Design		5	%		448,745
	Supervision & Project Management		5	%		448,745
	Site Establishment		1	%		89,749
	Contingency		50	%		4,981,070
	<b>TOTAL ESTIMATED COST (ex GST)</b>				<b>+/- 50%</b>	<b>14,943,209</b>



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# SUNBURY & LANCEFIELD - FEASIBILITY DESIGN

Indicative Cost Estimate

## INFRASTRUCTURE COSTING STUDY

VERSION 1

### PSP 1075 LANCEFIELD

Ref	DESCRIPTION	DETAIL	Qty	Unit	Rate	\$
	<b>WATER</b>					
	DN600mm water main	DICL supply and lay, incl. excavation & backfill	5,100	m	476	2,427,600
	DN750mm water main	DICL supply and lay, incl. excavation & backfill	2,500	m	661	1,651,880
	<b>SEWER</b>					
	DN200mm rising main	GRP supply and lay, incl. excavation & backfill	560	m	112	62,930
	DN450mm trunk main	GRP supply and lay, incl. excavation & backfill	1,500	m	382	572,250
	DN525mm trunk main	GRP supply and lay, incl. excavation & backfill	2,600	m	409	1,062,750
	Pump stations		1	No.	150,000	150,000
	<b>RECYCLED WATER</b>					
	Not available for developments			Note		N/A
	<b>POWER</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>GAS</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>TELECOMMUNICATIONS</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>CABLE</b>					
	Undetermined augmentation requirements			Note		Excluded
	<b>Sub-Total</b>					<b>\$ 5,927,410</b>
	<b>Sub-Total</b>					<b>5,927,410</b>
	Service Relocation					-
	VicRoads Approvals Fee					N/A
	10 Year Maintenance Fee					N/A
	Traffic Management					25,000
	Survey & Design		5	%		296,371
	Supervision & Project Management		5	%		296,371
	Site Establishment		1	%		59,274
	Contingency		50	%		3,302,213
	<b>TOTAL ESTIMATED COST (ex GST)</b>				<b>+/- 50%</b>	<b>9,906,638</b>