

PSP 1075 LANCEFIELD ROAD

METROPOLITAN PLANNING AUTHORITY

HIGH LEVEL UTILITY SERVICES ASSESSMENT

Document No. | B

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JACOBS®

Lancefield Road Services Assessment

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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 Lancefield Road PSP (PSP 1075). 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, Jemena, 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

The assessment of each of the services identifies the existing infrastructure within and adjacent the precinct, responsibility, constraints of existing services, anticipated future requirements, considerations and expectations of the authorities for future draft urban master planning phase.

Staging

Staging information has been identified as a key a consideration by Western Water along with Jemena indicating a detailed masterplan indicating the staging of the development within the PSP area and proposed timing would 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 masterplan, 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 Lancefield Road 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 servicing advice.

1. Introduction

PSP Objective

The Growth Areas Authority (GAA) is concurrently undertaking a number of Precinct Structure Plans (PSPs) for precincts within the current growth corridors of Melbourne. These PSPs aim to guide and facilitate development in the growth areas and ensure 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 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, and employment the connections to transport.

The development of greenfield sites, along with urban consolidation, is an important part of the 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 the 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 – Gas supply mains
- Jemena - Electricity distribution network
- Nextgen / Visionstream – Telecommunications inter capital cable
- Telstra – Telecommunications
- NBN Co – Telecommunications

This report aims to identify the high level opportunities and constraints to development with respect to utility services infrastructure. The capacities 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 Lancefield Road precinct (PSP 1075), and identifies 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 Growth Area Authority (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 council to complete the planning for Melbourne's Growth Areas.

The GAA is managing the preparation of the Lancefield Road 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 features in the Lancefield Road 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
- Major roads Vineyard Road, Sunbury Road and Lancefield Road), as well as future road creek crossings
- A future Major Town Centre
- A mixed business/residential precinct, and industrial precinct
- An existing extractive industry

Information Sources

The information sourced within this report, has been collated from the following 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 Lancefield Road precinct is located within the City of Hume and will ultimately form part of a significant expansion of the Sunbury Township. The precinct is 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 1109 hectares with approximately 700 hectares of land identified for future urban development. The PSP area will accommodate approximately 6,000 dwellings based upon an average density of 15 lots per hectare.

The PSP has 3 neighbouring precincts, PSP1072 Sunbury North and PSP1074 Sunbury South which is also at the pre-planning stage.

The Lancefield Precinct is located north east of the Sunbury Township. To the north of Gellies Road it is bounded to the north by the Sunbury North PSP area, to the east by Emu Creek and to the west by the existing urban area of Sunbury and Jacksons Creek.

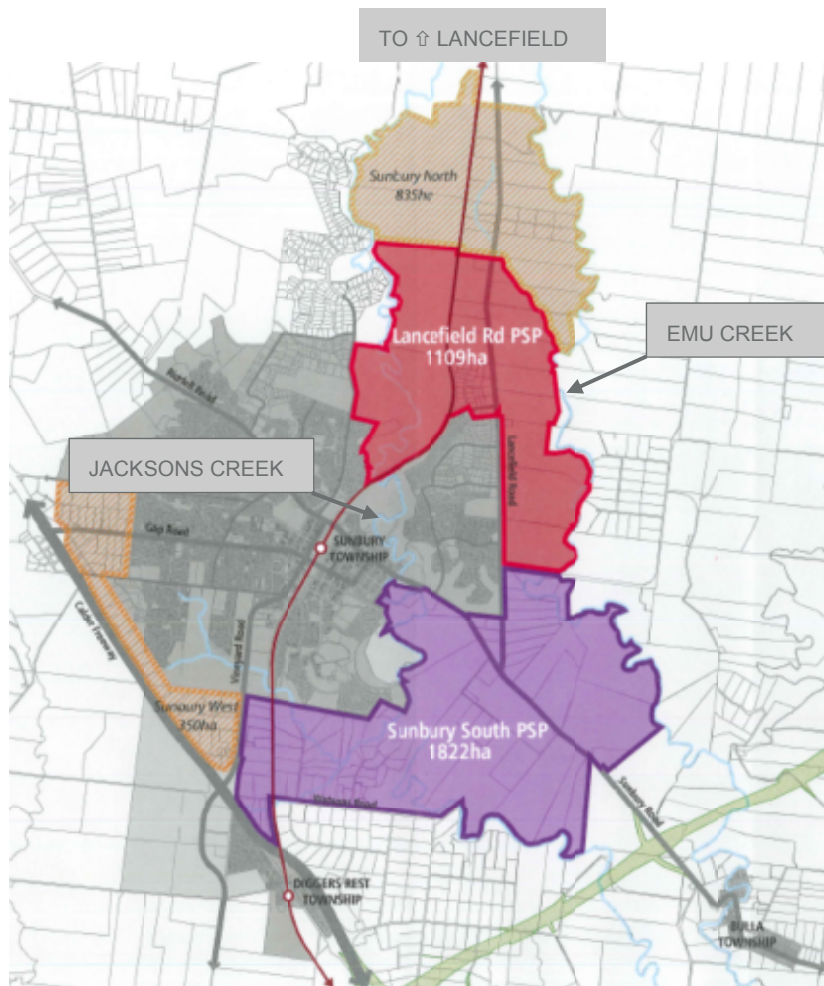


Figure 2.1 : Lancefield Road PSP Areas Map

3. Water and Sewer Supply

3.1 Current servicing arrangements

Water

Water supply services for the precinct are provided by Western Water.

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. 1075 Lancefield Road 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 - Refer Appendix B - Servicing Layout Plans drawing '*PSP No. 1075 Lancefield Road Servicing Layout*'

Recycled Water

There is no recycled water currently available to the site.

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. However the capacity is expected to be adequate to service Diggers Rest and the Sunbury South Precinct up to Sunbury Road only.
- 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 within the Sunbury South PSP a DN525 mm Trunk main (CC_S0257) is 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 Appendix B - Servicing Layout Plans.

Note: Western Water has indicated 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 to commence until 2017/18.
- Western Water has indicated no recycled water would be available for developments north of Sunbury Road

Western Water 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"¹.

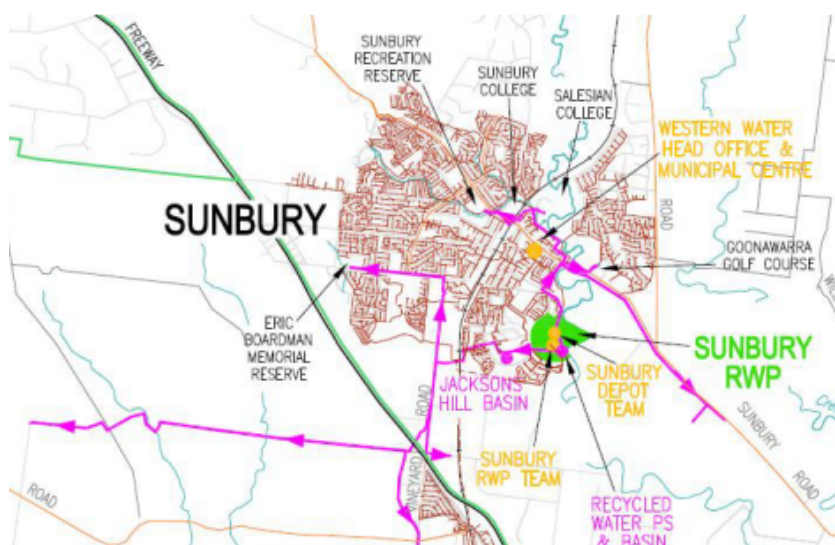


Figure 3.1 : Western Water - REIP recycled water scheme

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 Western Water preliminary advice.

As part of the REIP a recycled water scheme map for Sunbury is provided – Refer Figure 3.1 : Western Water - REIP recycled water scheme. This figure indicates the scheme will be supplied to the south west of Sunbury Road, which is also supported by Western Water preliminary advice.

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

3.3 Development opportunities

Water

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

Works currently planned for beyond 2019-2023 capital works projects:

- DN600 mm water main from the intersection of Sunbury Road along Lancefield Road (CC_W0286)
- DN750 mm water main from the intersection of Balbethan Drive north along Lancefield Road (CC_W0287)
- DN750 mm water main and traversing east via Balbethan Drive through the site and connecting into Elizabeth Drive (CC_W0289)

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

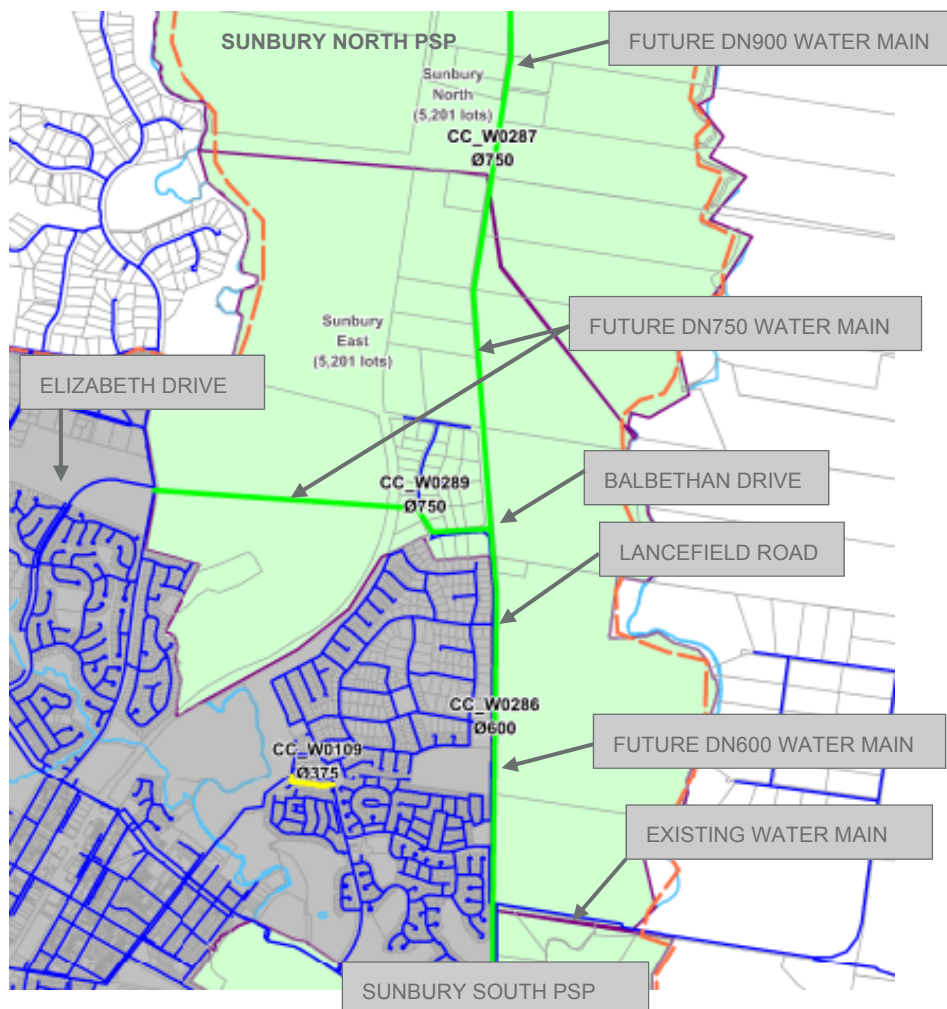


Figure 3.2 : Western Water - Future Trunk Water Mains

Sewer

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

Works currently planned beyond 2018-2023 capital works projects:

- DN200 mm rising main (CC_S0241) including pump station (CC_S0240)
- DN450 mm Trunk main (CC_S0244)
- DN525 mm Trunk main (CC_S0245)

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

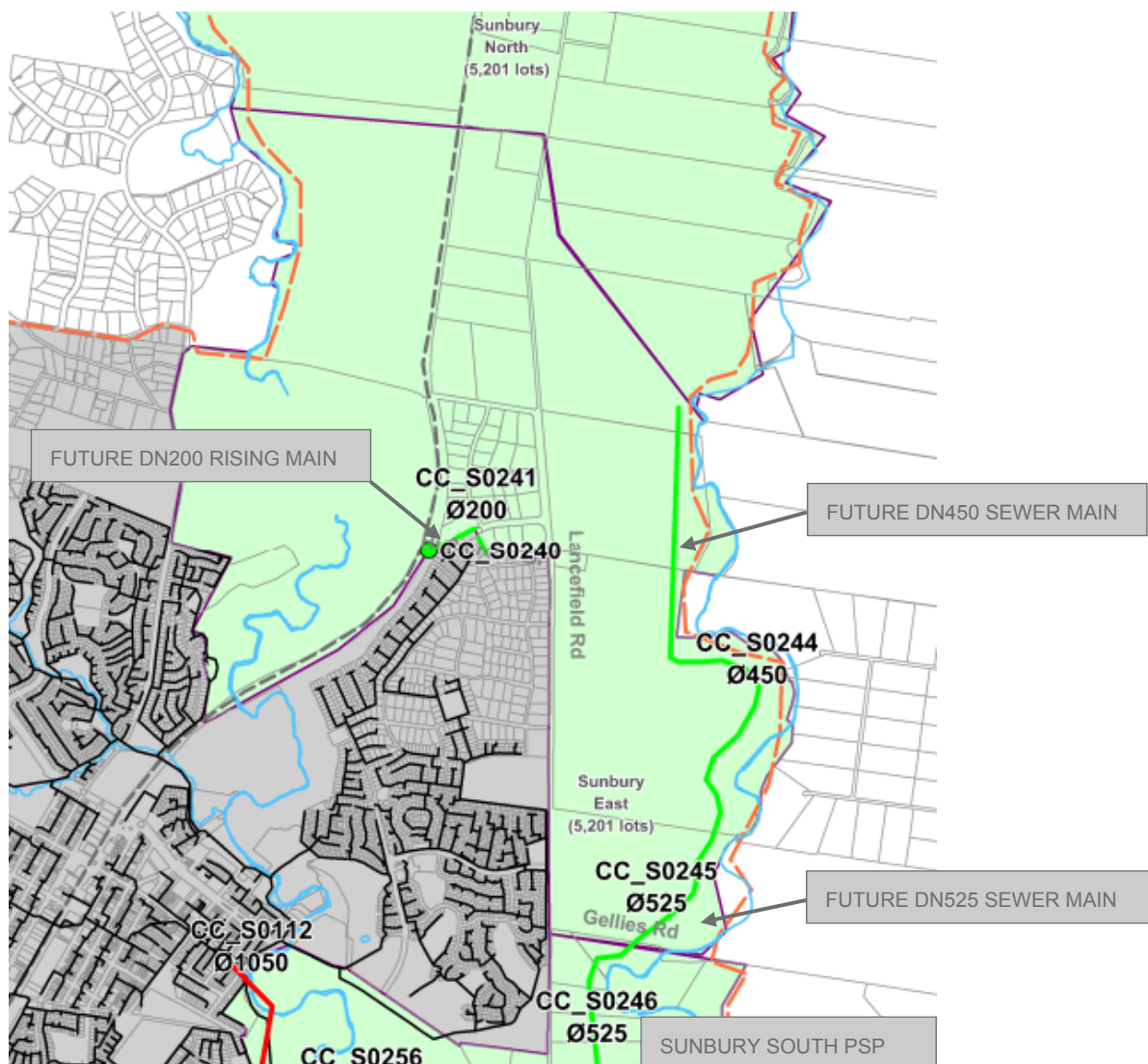


Figure 3.3 : Western Water Future Trunk Sewer Mains

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 are proactively expanding the beneficial use of recycled water across its service area, as identified in their plans and programs. However Western Water has indicated no recycled water would be available for developments north of Sunbury Road including areas along Melbourne-Lancefield.

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’².

3.4 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 Contributions³ 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 3.4 : Western Water Sunbury NCC Area Map.

The guide refers to Western Water website (www.westernwater.com.au) for details of fees and charges applicable.

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

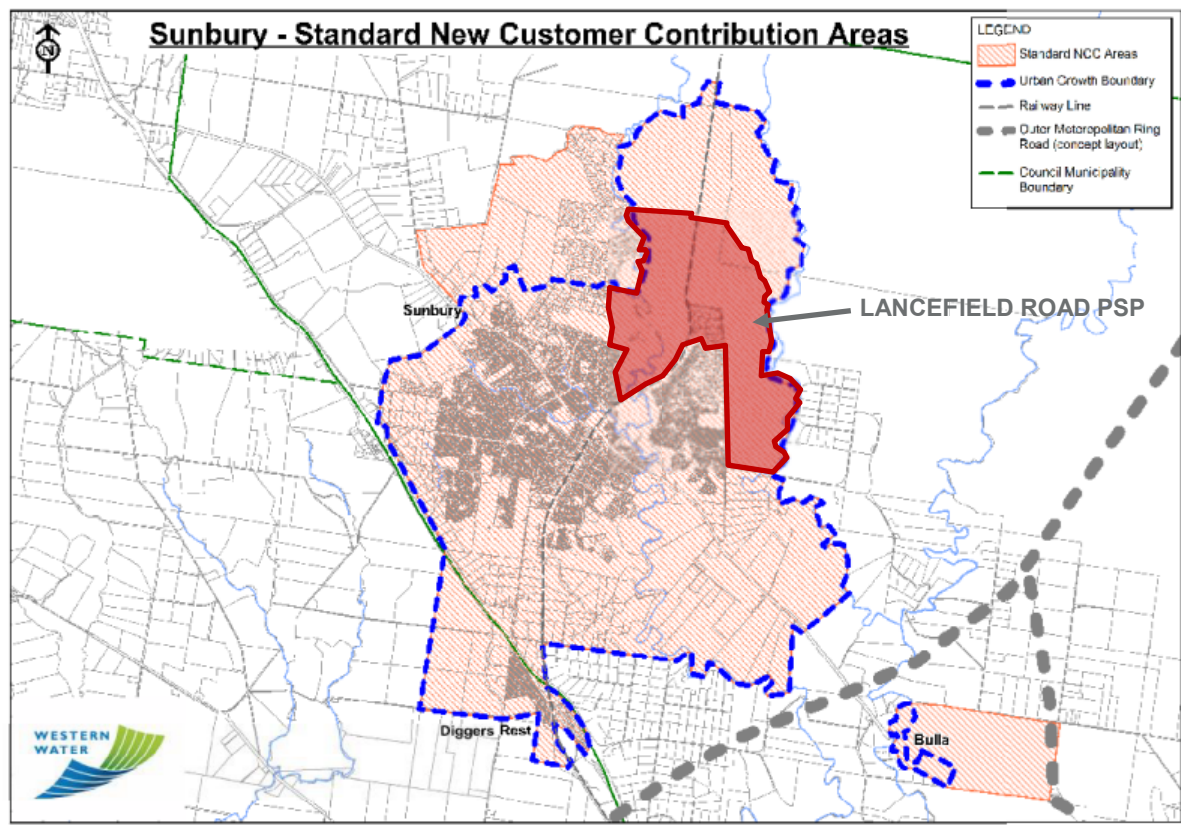


Figure 3.4 : Western Water Sunbury NCC Area Map

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

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

4. Electricity

4.1 Current servicing arrangements

Jemena

Electricity supply services for the precinct are provided by Jemena.

Overhead power lines are present along the alignments of existing road reserves within the precinct (refer figures below), with Jemena DBYD data indicating some minor underground reticulation.

Existing High Voltage (HV) assets are available within the precinct, including HV feeders on minor roads and a zone substation located in Sunbury – Refer Appendix B - Servicing Layout Plans drawing 'PSP No. 1075 *Lancefield Road Servicing Layout*'



Figure 4.1 : Gellies Road - Overhead power



Figure 4.2 : Raes Road - Overhead Power

4.2 Constraints

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

Should the assessment indicate a considerable increase in loads, Jemena indicated an additional zone substation may be required.

4.3 Development opportunities

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

5. Gas

5.1 Current servicing arrangements

SP Ausnet (Gas)

Gas supply services for the Sunbury area are provided by SP Ausnet (Gas), with existing supply adjacent the precinct is as shown in Figure 5.1 : SP Ausnet Gas Supply Map.

SP Ausnet engineering team have indicated they have no assets within the Lancefield Road PSP.

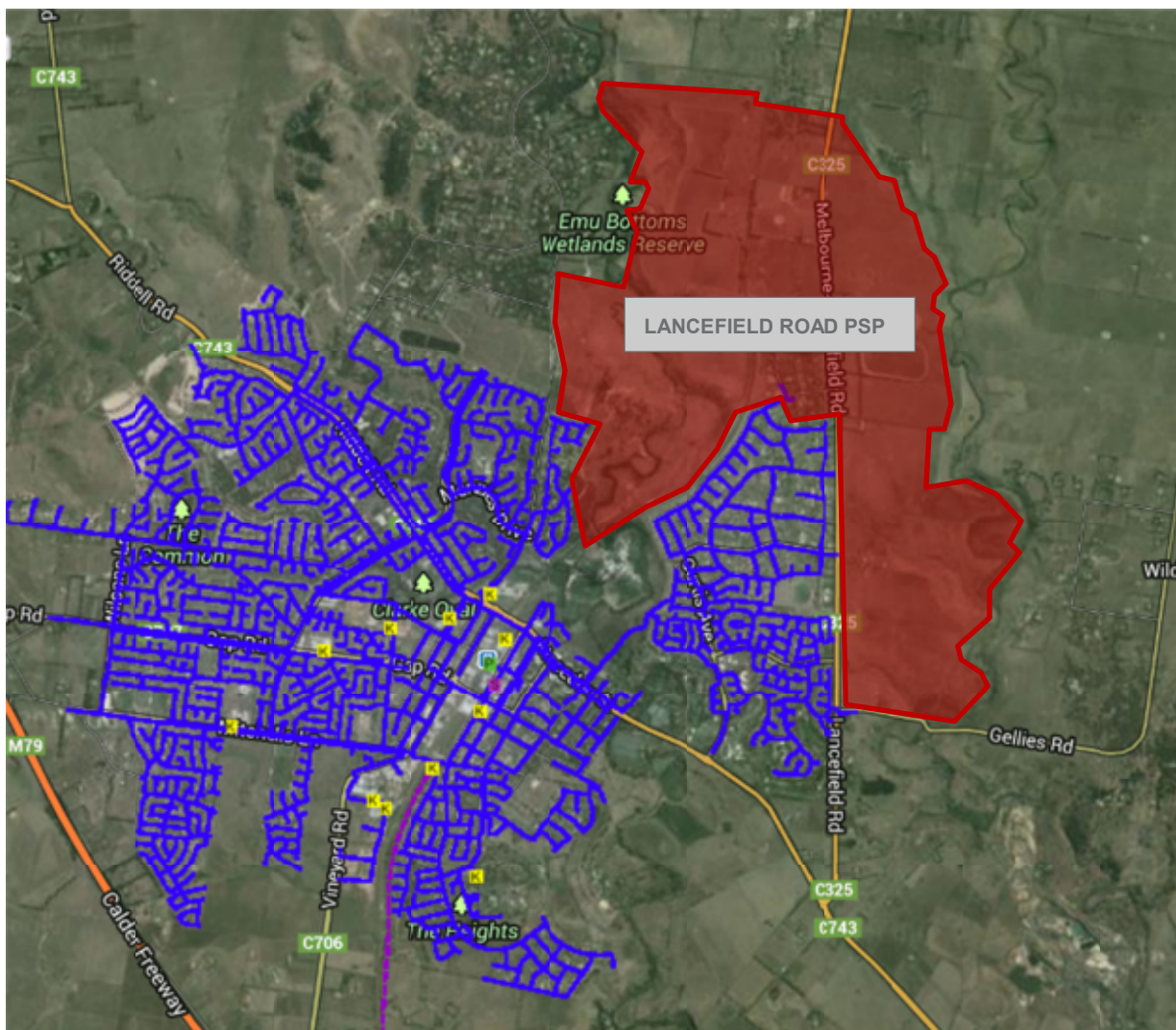


Figure 5.1 : SP Ausnet Gas Supply Map

5.2 Constraints

Minor capacity constraints exist within the eastern area of the network and 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

5.3 Development opportunities

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.

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”⁴

Nextgen Group (Visionstream)

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

Nextgen have indicated 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 from other communication network retailers and government agencies as required in providing service to the broader network.

6.2 Constraints

NBN rollout map indicates that the NBN rollout has not started in the area – Refer Figure 6.1 : NBN rollout map.

National Broadband Network (NBN) - Government Expectations

In a letter released by the Federal Government’s Minister for Communications 24th September 2013 to the Chairman of NBN Co. with regard to government expectations, the government indicated it is committed to completing the construction of the National Broadband Network and looking at a more cost effective approach. The government has also indicated they will be issuing a number of directions to NBN as part of the review process in the coming months.⁵

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 commence their 2014-17 Corporate Plan.

⁴ Australian Government’s Department of Broadband Communications and the Digital Economy
[Fibre in New Developments Policy Update Statement 22 June 2011](#)

⁵ Australian Government’s 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](#)

6.3 Development opportunities

National Broadband Network (NBN)

It is anticipated that communication services for the area will be supplied through the National Broadband Network Company (NBN Co) however timing of delivery is unknown.

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.

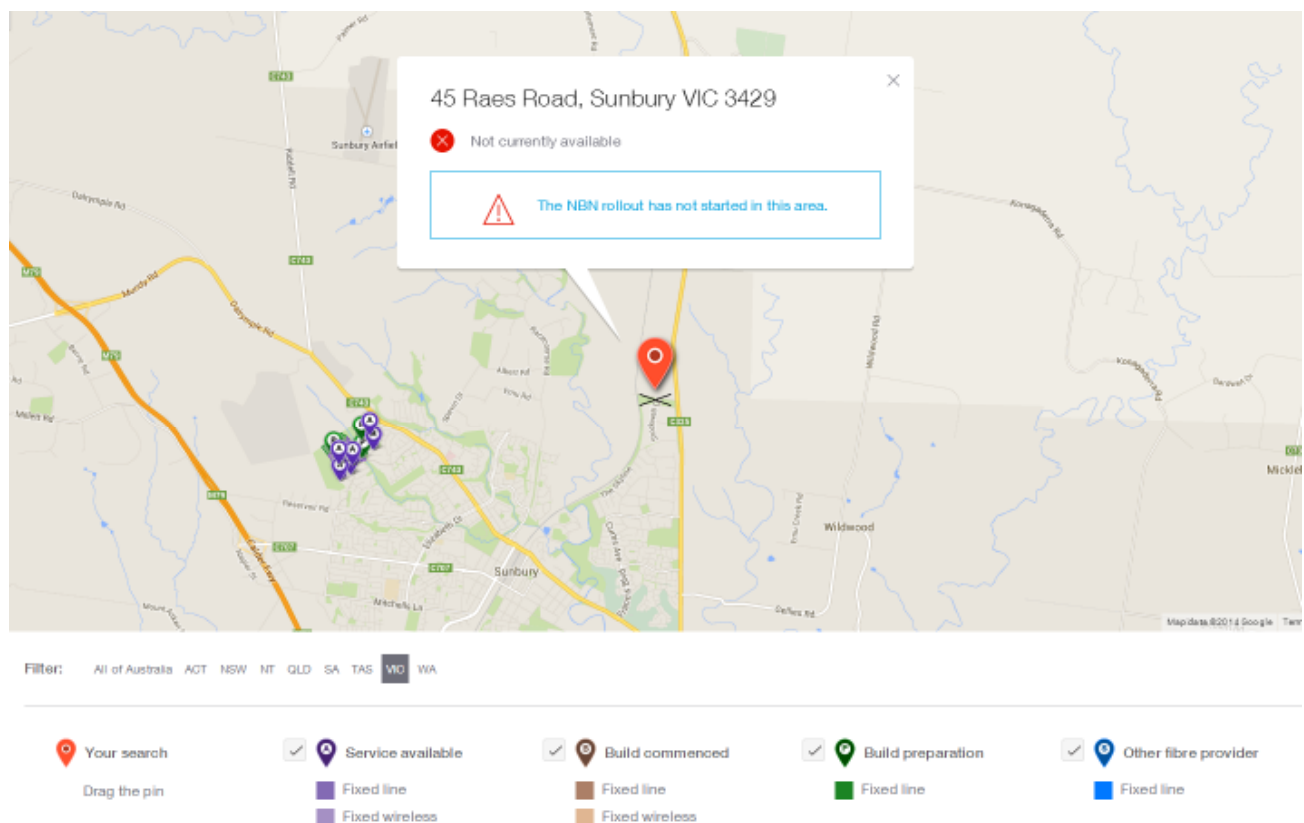


Figure 6.1 : NBN rollout map

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, construction commenced, with other area construction expected to commence within one year – refer 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.

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.”⁶

Nextgen Group (Visionstream)

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

⁶ NBN Co notification pending introduction of new Government Policy [New Government Policy new-developments](#)

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 establish 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 Planning and Community Development (DPCD)

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

Local Government Act 1989⁷

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

⁷ [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 1987⁸

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 ⁹

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.

⁸ [DPCD - Planning Legislation](#)

⁹ [Acts administered by EPA](#)

Telecommunications

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

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 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 services reticulating the precinct
- Western water have identified one sewer pump stations will be required within the precinct to support a future rising main 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 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 for the Sunbury area
- There are no existing services reticulating the precinct
- The Class A Recycled water scheme is proposed for the Sunbury South precinct with expectations that service will support part of the Sunbury South PSP west of Sunbury Road only excluding the Lancefield Road PSP
- Development of a high level master plan to initiate discussions with western water for inclusion and or revision in their planning would be beneficial.

Electricity

- Jemena
 - Jemena are the responsible authority for electricity supply
 - Jemena existing supply within the precinct is predominantly overhead power supply with minor underground assets
 - Jemena have indicated they have an existing zone substation in Sunbury and that an additional zone substation may be required to support future development

Gas

- 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 indicated minor capacity constraints will require further augmentation
 - SP Ausnet (Gas) have also indicated augmentation may require the need for an additional field regulator and larger diameter trunk mains.

Telecommunications

- Telstra has assets within and adjacent 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,
 - In surrounding residential areas the service is either available, construction commenced, with other area 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)¹⁰

- 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.

¹⁰ [Western Water - Develop Property Fees and charges](#)

Appendix B. Servicing Layout Plans

Drawing Index – Proposed Servicing Layouts

Title	Drawing Number / Reference
PSP No.1075 Lancefield Road 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

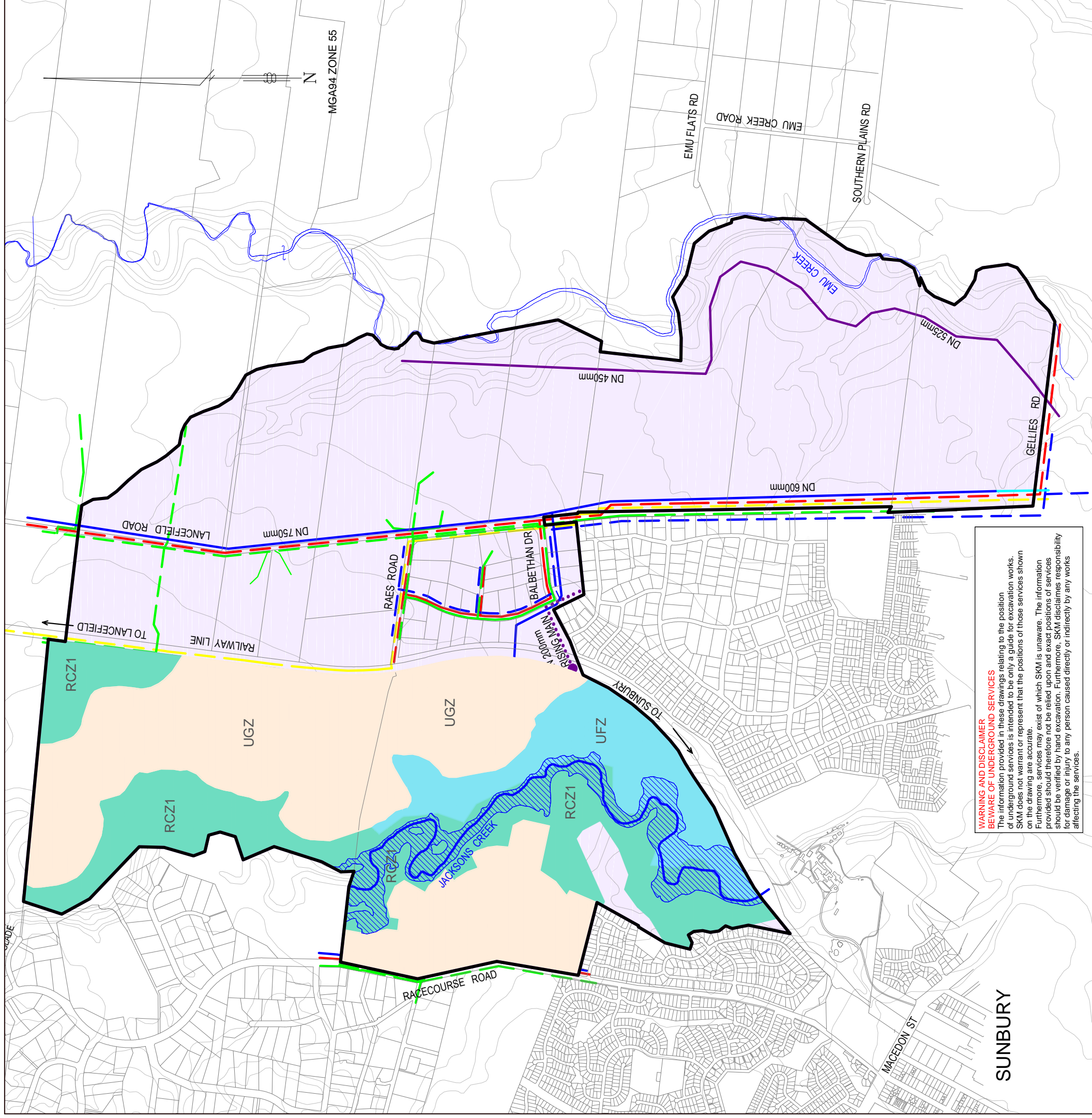
Drawing Index – Proposed Servicing Layouts

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
Jemena - Electricity distribution network	No data received regarding overhead supply network 30801900_Assets Affected
SP AusNet – Gas Transmission pipeline	No data received
Nextgen / Visionstream – Telecommunications inter capital cable	30801894 Nextgen Cable Data incorporated into SB20340-E-CC-DG-0002*
Telstra – Telecommunications	30801901 - Melbourne Lancefield RD - FIBRE - 260913 - Map 1 of 1 – SK.DWF Data incorporated into SB20340-E-CC-DG-0002*

* Asset data incorporated into SB20340-E-CC-DG-0002 relates to assets within the precinct only



LEGEND

- PSP BOUNDARY
- URBAN FLOOD WAY ZONE (UFZ)
- RURAL CONSERVATION ZONE (RCZ)
- URBAN GROWTH ZONE (UGZ)

PROPOSED

- WATER (POST 2023)
- SEWER (POST 2023)
- SEWER RISING MAIN AND PUMP STATION

EXISTING

- NEXTGEN - Cable
- TELECOMMUNICATIONS
- WATER
- ELECTRICITY (OVERHEAD)

[illegible]

DRAWING STATUS



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CLIENT
GROWTH AREA AUTHORITY

INFRASTRUCTURE AND SERVICING REPORT

DRAWN JW	DRAWING CHECK JS/MQ	REVIEWED	APPROVED
DESIGNED JS	DESIGN REVIEW	DATE	DATE

TITLE
PSP No. 1075
LANCEFIELD ROAD
SERVICING LAYOUT PLAN

SCALE 1:20,000 @ A3	DRAWING No SB 20340-E-CC-D6-0002	REV 0
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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

REPORT DATE: 26/11/2014

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

VERSION 1

PSP 1074 SUNBURY SOUTH

Ref	DESCRIPTION	DETAIL	Qty	Unit	Rate	\$
	WATER					
	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
	SEWER					
	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
	Works beyond 2018-2023					
	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
	RECYCLED WATER					
	Western water currently investigating			Note		Excluded
	POWER					
	Undetermined augmentation requirements			Note		Excluded
	GAS					
	Undetermined augmentation requirements			Note		Excluded
	TELECOMMUNICATIONS					
	Undetermined augmentation requirements			Note		Excluded
	CABLE					
	No NBN rollout stated for area			Note		N/A
		Sub-Total				\$ 8,974,900
	Sub-Total					8,974,900
	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
	TOTAL ESTIMATED COST (ex GST)				+/- 50%	14,943,209

PROJECT NO SB20340

REPORT DATE: 26/11/2014

SUNBURY & LANCEFIELD - FEASIBILITY DESIGN

Indicative Cost Estimate

INFRASTRUCTURE COSTING STUDY

VERSION 1

PSP 1075 LANCEFIELD

Ref	DESCRIPTION	DETAIL	Qty	Unit	Rate	\$
	WATER					
	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
	SEWER					
	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
	RECYCLED WATER					
	Not available for developments			Note		N/A
	POWER					
	Undetermined augmentation requirements			Note		Excluded
	GAS					
	Undetermined augmentation requirements			Note		Excluded
	TELECOMMUNICATIONS					
	Undetermined augmentation requirements			Note		Excluded
	CABLE					
	Undetermined augmentation requirements			Note		Excluded
	Sub-Total					\$ 5,927,410
	Sub-Total					5,927,410
	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
	TOTAL ESTIMATED COST (ex GST)				+/- 50%	9,906,638