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To: Western Sydney Parklands Trust

Project: 97-151 Wallgrove Road, Cecil Park

Our Ref: SY075110.000

Date: March 2024

Table of Contents

EXECUTIVE SUMMARY	3
1.0 THE SITE	4
2.0 SERVICE AUTHORITIES:	4
3.0 POTABLE WATER AND WASTE WATER	4
3.1.1 POTABLE WATER	4
3.1.2 WASTE WATER	5
4.0 TELECO SERVICES	6
5.0 GAS	6
APPENDIX A POTABLE WATER & WASTE WATER DEMAND	7
APPENDIX B SCHEMATIC OF UTILITY INFRASTRUCTURE	9
APPENDIX C SYDNEY WATER FEASIBILITY RESPONSE	10
APPENDIX D MASTERPLAN	11
APPENDIX E STANTEC WASTE WATER TREATMENT REPORT	12

Revision:

Issue	Date	Comment
A	12/2020	Issue for comment
B	02/2021	Updated for Masterplan and Sydney Water comments
C	11/2023	Report from Stantec regarding Waste Water disposal
D	03/2024	Update Sydney Water issues

EXECUTIVE SUMMARY

This report presents a review of the existing and proposed service infrastructure required to support development of the site known as 97-151 Wallgrove Road Cecil Park.

Servicing Capability

- Potable Water
 - ▲ The site is serviced from the Cecil Park reservoir system which has recently been amplified. Capacity now exists to service the subject development.
 - ▲ A 500mm trunk water main is constructed adjacent to the frontage of the site. Direct connection to this main is not allowed.
 - ▲ The trunk water main distributes potable water from the Cecil Park reservoir adjacent to the intersection of Wallgrove Rd and Elizabeth Drive to a large supply catchment.
 - ▲ Approximately 180m north of the subject site, reticulation connection has been undertaken to service developments off Kosovich Place. Connection to this main is possible to provide a 150mm diameter rider main to the frontage of the site post 2022.
- Waste Water
 - ▲ No Waste Water assets currently service this site.
 - ▲ The nearest waste water reticulation system is 1.4km to the east of the site within the Abbotsbury residential district. It will NOT be possible to connect to this system due to topographic constraints and intervening infrastructure.
 - ▲ Depending on development timeframe a private system for treatment or discharge of waste water will need to service the proposed development.
 - ▲ Sydney Water are currently developing the Orchard Hills sub-regional masterplan study to provide a guide to the development of the waste water systems to be developed to service the sub-regional catchment. This site is within that catchment. Sydney Water advise that the sub-regional study should be completed by end 2024/beginning 2025.
- Gas
 - ▲ A 1,050kPa high pressure gas main is constructed adjacent to the frontage of the subject site.
 - ▲ A 14,980kPa Transmission gas main is also constructed within the Wallgrove Road corridor.
 - ▲ The 1,050kPa gas main would be available to service the development.
- Telco
 - ▲ Telstra/NBN Co assets exist along the frontage of the subject site consisting of buried conduits and overhead fibre optic system.

1.0 THE SITE

The site is known as 97-151 Wallgrove Road comprising an area of 10.015ha within the Western Sydney Parklands Area (WSP).

Due to the sites location within the WSP area none of the service authorities have considered the site in any planning reports/studies for utility servicing. The site adjoins land zoned as RV4 (Primary Production Small lots).

Fairfield Council in its Draft Local Strategic Planning Statement identified the RV4 areas as an Urban Investigation Area to manage opportunities and impacts associated with the area being in close proximity to the Western Sydney Airport and Aerotropolis precincts.

Councils statement notes that in the short term Council will engage with DPIE to investigate opportunities within the Rural Lands Investigation area to capitalise on assets such as proximity to the Western Sydney Employment Lands, transport corridors and Western Sydney Freight Line.

However, the major and critical utility service authorities (Sydney Water and Endeavour Energy) have focussed on the servicing requirements for the Aerotropolis precincts (and other high priority areas within Sydney) as being critically time dependent and little studies have been undertaken of the RV4 lands that are adjacent to the subject site.

2.0 SERVICE AUTHORITIES:

The service authorities who provide infrastructure services to this area are:

- | | | |
|-----|-------------------|---|
| (a) | Sydney Water: | Potable and Waste Water Infrastructure. |
| (b) | Endeavour Energy: | Electrical Infrastructure |
| (c) | Telstra or NBN Co | Telecommunications |
| (d) | Jemena: | Gas Infrastructure |

3.0 POTABLE WATER AND WASTE WATER

Demand calculations noted in this report for Potable Water and Waste Water have been undertaken and are referenced in Appendix A to this report. The demand calculations are based on flexible employment yields based on development of the site as a logistics hub.

3.1.1 POTABLE WATER

- a) A 500mm trunk water main is adjacent to the frontage of the site.
- b) The site is serviced from the Cecil Park reservoir system.
- c) Average Day Demand is estimated at 13.7kl/day (refer to Appendix A).
- d) Direct connection to the trunk water main will not be possible. If connection is allowed then a drilling for a 150mm reticulation connection would be expected with a minor extension of a reticulation main across the frontage of the site.
- e) However, a reticulation connection has already been undertaken approx. 180m north of the site to service development along Kosovich Place. Connection could occur to this main with construction of a 150mm reticulation main from Kosovich Place to the subject site.
- f) Pressure & flow from the water main system would be adequate to serve development of the site.
- g) A feasibility response from Sydney Water is attached in Appendix C. This feasibility is dated February 2021 under Case 188806. Subsequent to the advice outlined by Sydney Water in Sec 4.1 of the feasibility amplification works outlined in that response have now been undertaken and supply has been strengthened for all reticulation systems in the Cecil Park Remainder Water Supply Zone.

3.1.2 WASTE WATER

- a) There are no Waste Water services in this area.
- b) Sydney Water are currently undertaking the Orchard Hills sub-regional masterplan study which is scheduled for completion at the end 2024/beginning 2025. The subject site sits within the study area.

The results of the study will guide further Options planning to outline how waste water is to be treated. Currently, Sydney Water is constructing the Upper South Creek Advanced Water Treatment Plant expected to be operational by 2026. This is a major treatment plant capable of handling up to 110M litres of waste water per day.

Extension by a combination of Sewer Pump Stations, rising mains and gravity mains would be required to service sites within the area that the subject site sits. This may take a considerable amount of time to achieve.

- c) Consideration may need to be given to an interim servicing strategy for development of the site.
- d) Servicing an isolated development such as this site is not feasible by traditional reticulation systems and Sydney Water has no immediate plans to service this area.
- e) The waste water demand is estimated at 11kl/day which is a small amount to be discharged and handled (refer to calculation in Appendix A).
- f) The options that exist are:
 - (i) A Sec 68 application would need to be lodged with Fairfield Council. Sec 68 of the Local Government Act would allow Council to provide consent to operate an onsite sewerage system, install a septic tank or undertake operation of a facility such as a waste water storage tank and pump out to a tanker for offsite disposal.
 - (ii) In this particular instance, due to the volume of waste water discharge the option would be either on site treatment or offsite disposal by tankering.
 - (iii) Council may be reluctant to grant approval to offsite disposal by tankering as these processes are normally associated with short timeframes (i.e., less than 2 years) whilst more appropriate infrastructure is delivered to service the site.
 - (iv) On site treatment is a viable option as there are a number of supply solutions available as “off the shelf” products. The issue with these solutions is how to handle the “by product” of the treatment. That by product is treated water to a certain standard and sludge. The sludge is disposed of by removal of the sludge to a disposal facility. The treated water, which in this case could be 30-35kl/day needs to be disposed of. This water cannot be discharged to downslope drainage systems. Depending on the level of treatment it could be utilised for irrigation purposes however this requires an area of “green space” to discharge the treated water. (Refer to comments in (ix) below)
 - (v) The level of treatment for on site disposal would require either aerated treatments, disinfection, nutrient reduction and possibly membrane filters.
 - (vi) A system involving “traditional” waste water treatment (i.e., discharge by either gravity reticulation or a pressure sewer system to a receiving facility) will not occur for this site for many years.
 - (vii) The only option for waste water treatment is via onsite treatment as described above.
 - (viii) Stantec Australia have also undertaken an assessment of options for treatment of waste water from the proposed development (refer to Appendix E).

Stantec have reviewed 3 options:

- Onsite pump station with discharge rising main.
- Onsite treatment including dispersal area.
- Onsite collection and waste disposal by tanker collection.

Stantec make no recommendation regarding the preferred option however refer subparagraph (ix) below .

- (ix) The Stantec report attached in Appendix E outlines the requirement for onsite treatment, particularly the type of aerated waste water treatment infrastructure required and disposal by subsurface irrigation. The Stantec report outlines an area for the location of the effluent disposal using subsurface irrigation – this location would comply with Council “buffer” distance requirements for watercourses, boundaries and habitable structures.
- (x) In summary the installation of an onsite treatment facility would support the proposed development. Future extension of Sydney Waters’ waste water systems may lead to the decommissioning of the onsite treatment facility and connection of internal waste water hydraulic services to Sydney Water reticulation system.

4.0 TELCO SERVICES

- a) Existing overhead telco services existing within the Wallgrove Rd corridor adjacent to the site.
- b) For a development of a logistics facility of estimated G.F.A of 35,000m² the existing network is sufficient to service data traffic from that development.
- c) The area is within the NBN service footprint area.

5.0 GAS

- a) A 1,050kPa high pressure gas main is adjacent to the frontage of the site.
- b) This gas main is available to service development of the site.
- c) Jemena has responded to an enquiry regarding development adjacent to Jemena’s Eastern Gas Pipeline (EGP) noting that any work associated with development of the site MAY impact on their asset and further safe work procedures will need to be developed for work near their asset.

APPENDIX A

POTABLE WATER &

WASTE WATER DEMAND

Note: Demand Calculations based on Masterplan prepared by Watson Young drawing No. MP01 rev 02 dated December 2020 (refer to Appendix D)

Sydney Water in its recent submissions to IPART associated with the establishment of Developer Servicing Plan (DSP) charges for potable water and waste water outlined potable water and waste water use for non-commercial developments (Refer to “Infrastructure Contributions Plan – how we apply IPART’s pricing method” – Sec 5.3.1).

The usage figures are:

- Potable Water (PW): 65litres/day/employees
- Waste Water (WW): 80.5% of PW use

So, for this report a demand estimate for the following is adopted:

- Potable Water
 - Average Day Demand: 13.7kl/day
 - Max Day Demand: 30.5kl/day
- Waste Water
 - Average Dry Weather Flow 11kl/day

POTABLE WATER

Building	Area	Staff Office	Staff Warehouse	Total Staff	Average Day Demand (kl/day)	Max Day Demand
WHA – Bldg 01	12,370m ²	25	47	72	4.7	10.5
WHA – Bldg 02	10,100m ²	25	38	63	4.1	9
WHB – Bldg 01	12,900m ²	25	50	75	4.9	11
Total					13.7kl/day	30.5kl/day
Note: 1. An allowance of 1 person/250m² of warehouse and 1 person/20m² of office space has been made. 2. Average Day Demand assumed at 80kl/day/person.						

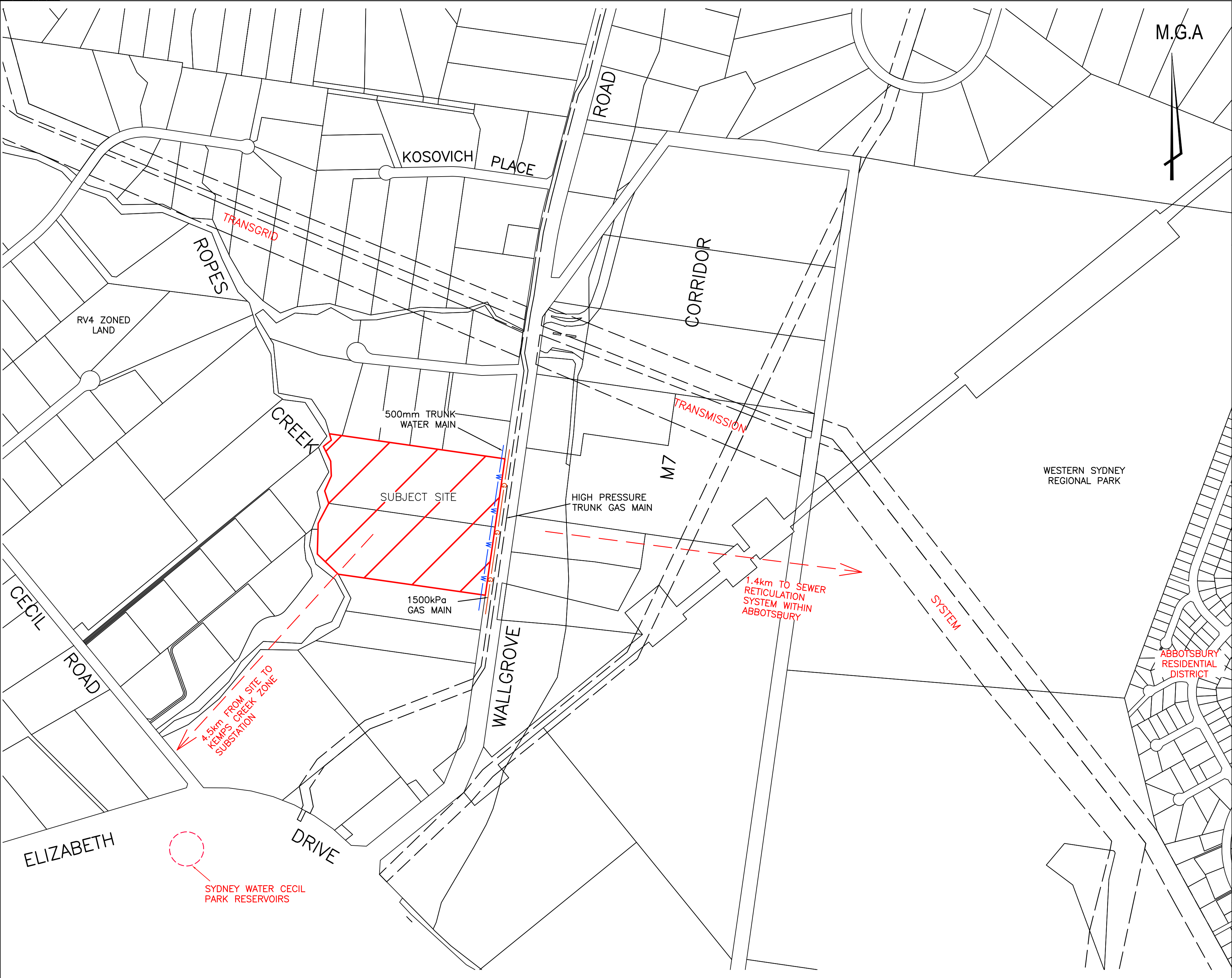
WASTE WATER

Average Dry Weather Flow is estimated at 80.5% of Average Day Demand of Potable Water
 Waste Water discharge (ADWF) = 11kl/day

APPENDIX B

SCHEMATIC OF UTILITY

INFRASTRUCTURE



CLIENT

WESTERN SYDNEY PARKLAND TRUST

PROJECT

PLAN OF SITE LOCATION AND LOCATION OF SERVICE ASSETS

NOTES

The title boundaries shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.

Services shown hereon have been located where possible by field survey. If not able to be so located, services have been plotted from the records of relevant authorities where available and have been noted accordingly on the plan. Where such records do not exist or are inadequate a notation has been made hereon.

Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

A	GKO	03/12/2020	CLIENT ISSUE
PPPa/CF	LPL	DD/MM/YY	COMMENT

DRAINAGE PIPE U/G

SW

SW

SW

DRAIN

D

D

D

ELECT. CABLE A/G

E

E

E

ELEC. CABLE H.V.

W

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GAS PIPE

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FENCE LINE

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SEWERAGE PIPE

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S

S

TELSTRA CABLE

T

T

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WATER PIPE

W

W

W



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HEIGHT DATUM	AHD	LOCAL AUTHORITY	FAIRFIELD
HEIGHT ORIGIN	N/A	SCALE	1:5000 (A2)
MERIDIAN	N/A	CONTOUR INTERVAL	N/A
CO-ORD SYSTEM	N/A	SURVEYOR	N/A
FIELD FILE	SY075110.000	DATE OF SURVEY	N/A
AUTOCAD FILE	SY075110	DRAWN	SF
ARCHIVE FILE	SY075110	CHECKED	GKO
PLAN NUMBER	SY075110.000	DATE	03/12/2020
		APPROVED	GKO
		DATE	03/12/2020
		REV	A

APPENDIX C

SYDNEY WATER

FEASIBILITY RESPONSE

Case Number: 188806

February 16, 2021

WESTERN SYDNEY PARKLANDS TRUST
c/- LANDPARTNERS PTY LTD

FEASIBILITY LETTER

Developer: WESTERN SYDNEY PARKLANDS TRUST
Your reference: SY075110.S73
Development: Lot 24, 25 DP 1152887, DP2594 97 - 151 Wallgrove Road, Cecil Park
Development Description: Warehouse facility
Your application date: December 15, 2020

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what Sydney Water's requirements could be if you applied to us for a Section 73 Certificate (Certificate) for your proposed development. **The information is accurate at today's date only.**

If you obtain development consent for that development from your consent authority (this is usually your local Council) they will require you to apply to us for a Section 73 Certificate. You will need to submit a new application (and pay another application fee) to us for that Certificate by using your current or another Water Servicing Coordinator (Coordinator).

Sydney Water will then send you either a:

- Notice of Requirements (Notice) and Developer Works Deed (Deed) or
- Certificate.

These documents will be the definitive statement of Sydney Water's requirements.

There may be changes in Sydney Water's requirements between the issue dates of this Letter and the Notice or Certificate. The changes may be:

- if you change your proposed development eg the development description or the plan/site layout, after today, the requirements in this Letter could change when you submit your new application; and
- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

What You Must Do To Get A Section 73 Certificate In The Future.

To get a Section 73 Certificate you must do the following things. You can also find out about this process by visiting www.sydneywater.com.au > Plumbing, building & developing > Developing > Land development.

1. **Obtain Development Consent from the consent authority for your development proposal.**
2. **Engage a Water Servicing Coordinator (Coordinator).**

You must engage your current or another authorised Coordinator to manage the design and construction of works that you must provide, at your cost, to service your development. If you wish to engage another Coordinator (at any point in this process) you must write and tell Sydney Water.

For a list of authorised Coordinators, either visit www.sydneywater.com.au > Plumbing, building & developing > Developing > Providers > Lists or call **13 20 92**.

The Coordinator will be your point of contact with Sydney Water. They can answer most questions that you might have about the process and developer charges and can give you a quote or information about costs for services/works (including Sydney Water costs).

3. **Developer Works Deed**

After the Coordinator has submitted your new application, they will receive the Sydney Water Notice and Developer Works Deed. You and your accredited Developer Infrastructure Providers (Providers) will need to sign and lodge both copies of the Deed with your nominated Coordinator. After Sydney Water has signed the documents, one copy will be returned to the Coordinator.

The Deed sets out for this project:

- your responsibilities;
- Sydney Water's responsibilities; and
- the Provider's responsibilities.

You must do all the things that we ask you to do in that Deed. This is because your development does not have water services and you must construct and pay for the following works extensions under this Deed to provide these services.

Note: The Coordinator must be fully authorised by us for the whole time of the agreement.

4. Water and Sewer Works

4.1 Water

Your development must have a frontage to a water main that is the right size and can be used for connection.

Sydney Water has assessed your application and found that:

97 -151 Wallgrove Road (Fairfield Precinct)

Drinking Water Servicing

The proposed development is currently located within Cecil Park **Remainder** Water Supply Zone (WSZ) and is part of Prospect South Delivery System. Cecil Park WSZs are currently supplied with rural drinking water infrastructure and do not have capacity to service developments within the Aerotropolis Core precinct prior to delivery of major system amplifications.

Cecil Park Reservoirs are currently at capacity and cannot accommodate demands from new developments without the additional transfer flow rate from Liverpool Water Supply Zone (WSZ) and trunk infrastructure proposed within Cecil Park WSZs.

Sydney Water are currently delivering the following trunk drinking water infrastructure to increase supply to the area –

- Rising Main (DN900) and pump WP0432 and 60ML reservoir at Liverpool
- DN1200/DN1050 from Cecil Park reservoir up to Western Rd, with offtakes at Range Rd and Western Rd connecting existing mains in Elizabeth Drive

This work is in delivery and proposed to be operational in 2022. This timing is anticipated and may change due to unforeseen circumstances.

Once the above infrastructure is operational (2022), additional amplification works are required to service this development via the Cecil Park **Remainder** WSZ.

The above infrastructure is required to be operational for the development to require connection to the mains in Wallgrove Road.

Direct connection to the DN500 trunk main in Wallgrove Rd is not allowable. Domestic connections are required to be connected to reticulation mains. A new offtake of DN150 is required from the trunk main to extend as a reticulation main (rider main) to service 97 -151 Wallgrove Rd.

Further, detailed information regarding peak water consumption over different scenario for the development needs be assessed for hydraulic capacity of the network prior the connection and approval of domestic water service and meter size.

Precinct trunk drinking water mains and reticulation mains are required to be sized as per the WSAA code.

4.2 Sewer

Sydney Water has assessed your application and found that:

- There are no wastewater mains within the vicinity of the proposed development. There are no immediate plans for servicing the site.

5. Ancillary Matters

5.1 Asset adjustments

After Sydney Water issues this Notice (and more detailed designs are available), Sydney Water may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you will need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it **before we can issue the Certificate**. Sydney Water will need to see the completed designs for the work and we will require you to lodge a security. The security will be refunded once the work is completed.

5.2 Entry onto neighbouring property

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use Sydney Water's **Permission to Enter** form(s) for this. You can get copies of these forms from your Coordinator or the Sydney Water website. Your Coordinator can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

5.3 Costs

Construction of these **future** works will require you to pay project management, survey, design and construction costs **directly to your suppliers**. Additional costs payable to Sydney Water may include:

- water main shutdown and disinfection;
- connection of new water mains to Sydney Water system(s);
- design and construction audit fees;
- contract administration, Operations Area Charge & Customer Redress prior to project finalisation;
- creation or alteration of easements etc; and
- water usage charges where water has been supplied for building activity purposes prior to disinfection of a newly constructed water main.

Note: Payment for any Goods and Services (including Customer Redress) provided by Sydney Water will be required prior to the issue of the Section 73 Certificate or release of the Bank Guarantee or Cash Bond.

Your Coordinator can tell you about these costs.

OTHER THINGS YOU MAY NEED TO DO

Shown below are other things you need to do that are NOT a requirement for the Certificate. They may well be a requirement of Sydney Water in the future because of the impact of your development on our assets. You must read them before you go any further.

Approval of your building plans

Please note that your building plans must be approved. This can be done at Sydney Water Tap in™. Visit www.sydneywater.com.au > Plumbing, building & developing > Building > Sydney Water Tap in™ or call 13 20 92.

This is not a requirement of the Certificate but the approval is needed because construction/building works may impact on existing Sydney Water assets (e.g. water and sewer mains). In any case, these works **MUST NOT** commence until Sydney Water has granted approval.

Your Coordinator can tell you about the approval process including:

- Possible requirements;
- Costs; and
- Timeframes.

Note: You must obtain our written approval before you do any work on Sydney Water's systems. Sydney Water will take action to have work stopped on the site if you do not have that approval. We will apply Section 44 of the *Sydney Water Act 1994*.

Disused Sewerage Service Sealing

Please do not forget that you must pay to disconnect all disused private sewerage services and seal them at the point of connection to a Sydney Water sewer main. This work must meet Sydney Water's standards in the Plumbing Code of Australia (the Code) and be done by a licensed drainer. The licensed drainer must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Soffit Requirements

Please be aware that floor levels must be able to meet Sydney Water's soffit requirements for property connection and drainage.

Requirements for Business Customers for Commercial and Industrial Property Developments

If this property is to be developed for Industrial or Commercial operations, it may need to meet the following requirements:

Trade Wastewater Requirements

If this development is going to generate trade wastewater, the property owner must submit an application requesting permission to discharge trade wastewater to Sydney Water's sewerage system. You must wait for approval of this permit before any business activities can commence.

The permit application should be emailed to Sydney Water's Business Customer Services at businesscustomers@sydneywater.com.au

It is illegal to discharge Trade Wastewater into the Sydney Water sewerage system without permission.

A **Boundary Trap** is required for all developments that discharge trade wastewater where arrestors and special units are installed for trade wastewater pre-treatment.

If the property development is for Industrial operations, the wastewater may discharge into a sewerage area that is subject to wastewater reuse. Find out from Business Customer Services if this is applicable to your development.

Backflow Prevention Requirements

Backflow is when there is unintentional flow of water in the wrong direction from a potentially polluted source into the drinking water supply.

All properties connected to Sydney Water's supply must install a testable **Backflow Prevention Containment Device** appropriate to the property's hazard rating. Property with a high or medium hazard rating must have the backflow prevention containment device tested annually. Properties identified as having a low hazard rating must install a non-testable device, as a minimum.

Separate hydrant and sprinkler fire services on non-residential properties, require the installation of a testable double check detector assembly. The device is to be located at the boundary of the property.

Before you install a backflow prevention device:

1. Get your hydraulic consultant or plumber to check the available water pressure versus the property's required pressure and flow requirements.
2. Conduct a site assessment to confirm the hazard rating of the property and its services.
Contact PIAS at NSW Fair Trading on **1300 889 099**.

For installation you will need to engage a licensed plumber with backflow accreditation who can be found on the Sydney Water website:

<http://www.sydneywater.com.au/Plumbing/BackflowPrevention/>

Water Efficiency Recommendations

Water is our most precious resource and every customer can play a role in its conservation. By working together with Sydney Water, business customers are able to reduce their water

consumption. This will help your business save money, improve productivity and protect the environment.

Some water efficiency measures that can be easily implemented in your business are:

- Install water efficiency fixtures to help increase your water efficiency, refer to WELS (Water Efficiency Labelling and Standards (WELS) Scheme, <http://www.waterrating.gov.au/>
- Consider installing rainwater tanks to capture rainwater runoff, and reusing it, where cost effective. Refer to <http://www.sydneywater.com.au/Water4Life/InYourBusiness/RWTCalculator.cfm>
- Install water-monitoring devices on your meter to identify water usage patterns and leaks.
- Develop a water efficiency plan for your business.

It is cheaper to install water efficiency appliances while you are developing than retrofitting them later.

Contingency Plan Recommendations

Under Sydney Water's [customer contract](#) Sydney Water aims to provide Business Customers with a continuous supply of clean water at a minimum pressure of 15meters head at the main tap. This is equivalent to 146.8kpa or 21.29psi to meet reasonable business usage needs.

Sometimes Sydney Water may need to interrupt, postpone or limit the supply of water services to your property for maintenance or other reasons. These interruptions can be planned or unplanned.

Water supply is critical to some businesses and Sydney Water will treat vulnerable customers, such as hospitals, as a high priority.

Have you thought about a **contingency plan** for your business? Your Business Customer Representative will help you to develop a plan that is tailored to your business and minimises productivity losses in the event of a water service disruption.

For further information please visit the Sydney Water website at:

<http://www.sydneywater.com.au/OurSystemsandOperations/TradeWaste/> or contact Business Customer Services on **1300 985 227** or businesscustomers@sydneywater.com.au

Fire Fighting

Definition of fire fighting systems is the responsibility of the developer and is not part of the Section 73 process. It is recommended that a consultant should advise the developer regarding the fire fighting flow of the development and the ability of Sydney Water's system to provide that flow in an emergency. Sydney Water's Operating Licence directs that Sydney Water's mains are only required to provide domestic supply at a minimum pressure of 15 m head.

A report supplying modelled pressures called the Statement of Available pressure can be purchased through Sydney Water Tap in™ and may be of some assistance when defining the fire fighting system. The Statement of Available pressure, may advise flow limits that relate to system capacity or diameter of the main and pressure limits according to pressure management initiatives. If mains are required for fire fighting purposes, the mains shall be arranged through the water main extension process and not the Section 73 process.

Large Water Service Connection

A water main will be available, once you have completed your water main construction, to provide your development with a domestic supply. The size of your development means that you will need a connection larger than the standard domestic 20 mm size.

To get approval for your connection, you will need to lodge an application with Sydney Water Tap in™. You, or your hydraulic consultant, may need to supply the following:

- A plan of the hydraulic layout;
- A list of all the fixtures/fittings within the property;
- A copy of the fireflow pressure inquiry issued by Sydney Water;
- A pump application form (if a pump is required);
- All pump details (if a pump is required).

You will have to pay an application fee.

Sydney Water does not consider whether a water main is adequate for fire fighting purposes for your development. We cannot guarantee that this water supply will meet your Council's fire fighting requirements. The Council and your hydraulic consultant can help.

Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to a Sydney Water water main. This work must meet Sydney Water's standards in the Plumbing Code of Australia (the Code) and be done by a licensed plumber. The licensed plumber must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Other fees and requirements

The requirements in this Notice relate to your Certificate application only. Sydney Water may be involved with other aspects of your development and there may be other fees or requirements.

These include:

- plumbing and drainage inspection costs;
the installation of backflow prevention devices;
- trade waste requirements;
- large water connections and
-
- council fire fighting requirements. (It will help you to know what the fire fighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here.)

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from Sydney Water and to the extent that it is able, Sydney Water limits its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

END

APPENDIX D

MASTERPLAN



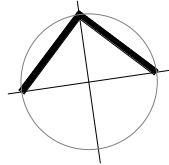
DEVELOPMENT ANALYSIS					
BUILDING NO.	SITE AREA (m²)	WAREHOUSE AREA (m²)	OFFICE AREA (m²)	TOTAL BUILDING (m²)	SITE COVERAGE (%)
BUILDING 01 - WH A	20,220	11,870	500	12,370	61.2
BUILDING 01 - WH B	23,665	12,400	500	12,900	54.5
BUILDING 02 - WH A	18,245	9,600	500	10,100	55.4
DEVELOPABLE LOT	62,130	33,870	1,500	35,370	
TOTAL LOT 24 & 25	98,696				
INTERNAL ROAD AREA		7,441m²			
CAR PARKING - BAYS					
BUILDING 01 - WH A		60			
BUILDING 01 - WH B		55			
BUILDING 02 - WH A		45			
DISCLAIMER: ALL TITLE BOUNDARIES ARE APPROXIMATE ONLY.					

NO.	DATE:	REVISION:	BY:	CHK:
P1	18.12.2020	PRELIMINARY ISSUE FOR REVIEW	JF	IM
P2	27.01.2021	PRELIMINARY ISSUE FOR REVIEW	MC	IM

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Wallgrove_MP
Lots 24 & 25, Wallgrove Road, Cecil Park, NSW

MASTERPLAN



Western Sydney
Parklands Trust



DATE: DECEMBER, 2020
DRAWN BY: IM
SCALE: As indicated
SCALE: 1:2000@A3

JOB NO:	20306
DRAWING NO:	MP01
REVISION:	P2



APPENDIX E

STANTEC WASTE WATER TREATMENT REPORT

Wallgrove Road Business Hub

Sewer Disposal Options

Prepared for: Western Sydney Parklands c/O HBB Property

Attention: Jordan Shields

Date: 16th July 2021

Prepared by: Antonio Lo Monte

Ref: 301350389

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Revision

Revision	Date	Comment	Prepared By	Approved By
001	19.05.2021	Preliminary Client Review	ALM	ALM
002	07.07.2021	Final Client Review issue	ALM	ALM
003	16.07.2021	Final issue	ALM	ALM

Contents

1.	Introduction	1
2.	Site Information	2
3.	Sewer Disposal Cost Estimates Options	3
4.	Option 1 Onsite Pump Station	4
5.	Option 2 – Onsite Treatment and Re-use Plant	7
6.	Option 3 – Onsite Pump out	10

1. Introduction

The purpose of this report is to provide Western Sydney Parklands Trust options for the sewer treatment to the property.

This report is based on the following sources of information:

- MP01_Masterplan
- Land partners Infrastructure assessment
- Sparks & Partners Civil Engineering Due Dilligence.
- Publicly available information
- Previous experience
- Discussions and inquiries With Fairfield City Council Environmental Officer
- Detailed Discussions with RARi – Water Servicing coordinator

At this time no formal discussions have been had with authorities for the project. The expectation is that once the risks and opportunities are defined and communicated to internal stakeholders, the strategy and approach to instigating discussions with external stakeholders will be developed.

Limitations of this report are as follows:

- No taking or testing of material samples was carried out
- All information provided by others, particularly verbal information has been taken at face value
- No testing for or advice is provided with respect to asbestos, microbiological or other contaminates
- No detailed survey and detailed authority information is available
- No formal discussions with Authorities (This will be available through a formal submission's, which have not occurred)

Calculations and assessment based on the Waste Water information

Note: Demand Calculations based on Masterplan prepared by Watson Young drawing No. MP01 rev 02 dated December 2020 (refer to Appendix D)

POTABLE WATER

Building	Area	Staff Office	Staff Warehouse	Total Staff	Average Day Demand (kl/day)	Max Day Demand
WHA – Bldg 01	12,370m ²	25	24	49	3.92	6.3
WHA – Bldg 02	10,100m ²	25	25	50	4.0	6.5
WHB – Bldg 01	12,900m ²	25	20	45	3.6	5.8
Total					11.5kl/day	18.6kl/day
Note: 1. An allowance of 1 person/500m ² of warehouse and 1 person/20m ² of office space has been made. 2. Average Day Demand assumed at 80kl/day/person.						

WASTE WATER

Average Dry Weather Flow is estimated at 90% of Average Day Demand of Potable Water
Waste Water discharge (ADWF) = 10.3kl/day

Image #1 – Calculations from Landpartners report



2. Site Information

The site is located at Lot 24 & 25 Wallgrove Road Cecil Park, NSW and has a site area of approximately 9,686m².

The site is currently undeveloped.

The image below indicates the sites location.

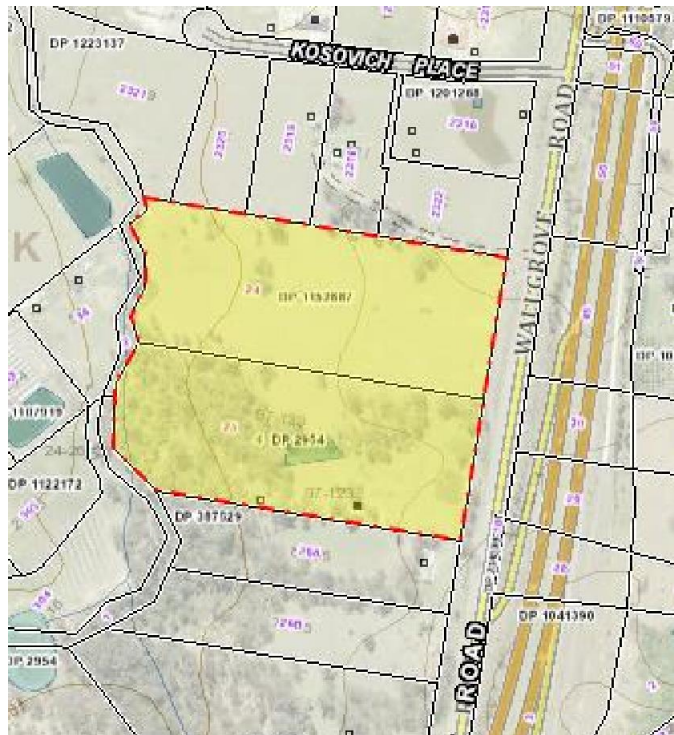


Image #2 – Site Location

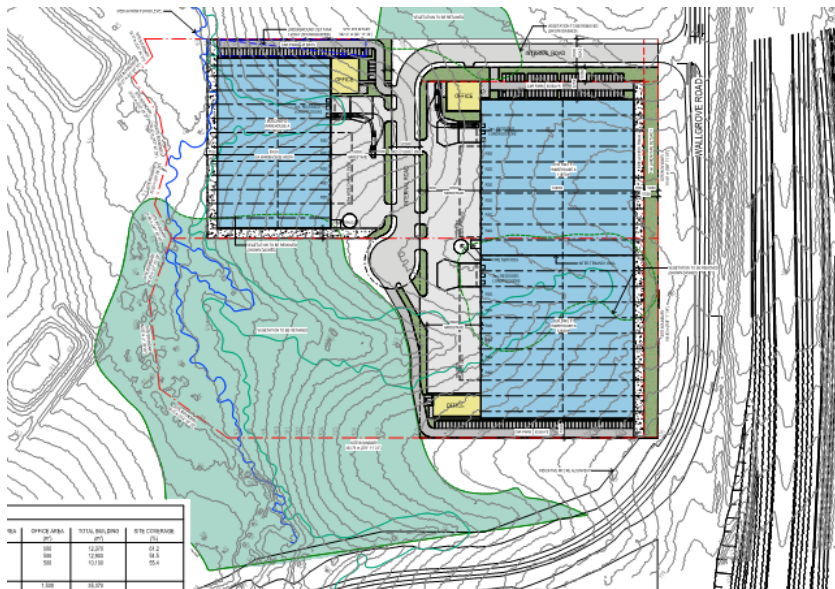


Image #3 Proposed Development



3. Sewer Disposal Cost Estimates Options

Approximate cost estimate:

Services Description	Estimate	
On site Pump station inc pump line	Set up	~ \$850,000
	Monthly	\$1,000
On Site Treatment inc dispersal area	Set up	\$800,000
	Monthly	\$2,000
On site collection & waste disposal (via contractor)	Set up	\$50,000
	Monthly	\$62,100



On further review of this option we have liaised with RARi a Sydney Water Accredited Coordinator or WSC and have produced the following summary of works needed to be completed.



Image #5 Proposed sewer pumped main route – option 1

In summary the extents of work for the above option to get a private sewer pump main through to the closest Sydney Water gravity sewer asset.

- Installation of private main north up Wallgrove road to ward Elizabeth Drive
- Major road crossing north across Elizabeth Drive
- Westerly crossing under M7 off Ramp, close to a major Sydney water 500mm trunk main & Cecil Hills Distribution water aqueduct – Depths unknown
- Westerly crossing under M7 main road.
- Permission to enter private land
- Crossing private lots
- Connection into sewer main in Isabel Street- extending sewer main to edge of lot, relining of existing sewer main and most probably needing to install a sewer vent shaft at edge of property.

The above works would need to be lodged under a Part 4 submission and would incur the following issues

- Long approval times in Sydney Water
- Extensive approval time with M7 operator and most likely onerous bonds and guarantees required.
- Permissions to cross private lots
- Easements to be created.
- Potential 12-24 month approval process.

•

4.1.3 Budget

The budget is determined by the installation costs and the anticipated running costs

Capital costs	Maintenance	Running cost
\$20,000 (holding tanks and pump tank) \$40,000 sewer pumps \$ 600,000 sewer pump line (0.8km) \$ 80,000- fees and approvals \$ 60,000 – sewer connection work costs \$ 50,000 easement purchase costs – potential.	Monthly - \$1,000 Annual \$12,000	Standard Sydney water disposal costs



5. Option 2 – Onsite Treatment and Re-use Plant

5.1.1 Overview

This option is to capture the waste water on site in and treat it in accordance with onsite treatment facility requirements standards, the water produced by this process is close to being grade A water, this water however can only be disposed via underground irrigation, typically installed in grassed and non- native planted areas with species that require watering to assist in the uptake of water.

5.1.2 High level Calculations

Based on the daily expected load of 10kl/ day of effluent discharge a Black water treatment plant similar to an Aquacell treatment plant would be utilised.

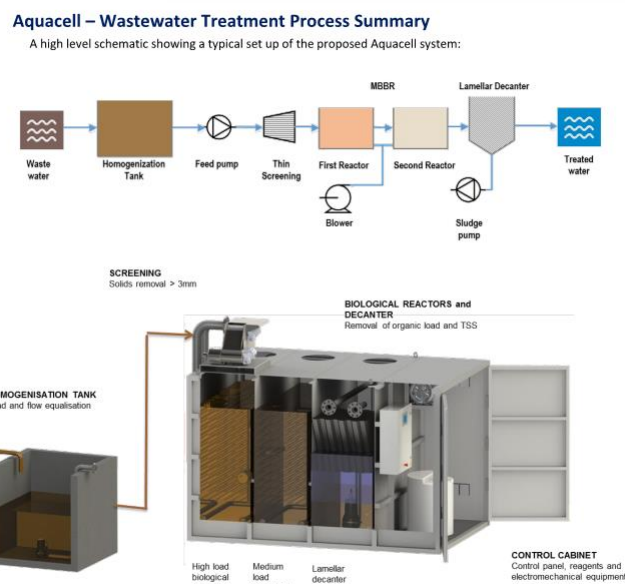


Image #6 Proposed treatment Plant schematic

The system would require the following requirements from a high level review.

- Site enclosure – 10m X 5 m X 3.5m internal height clearance.
- Inground collection tanks & pump tanks
- An irrigation area or approximately 4000-5000m² that has the following controls.
 - o Not used for food production
 - o 3m from boundaries
 - o 6 m from buildings
 - o 3m from water course /s
 - o 3m from driveways
 - Note – these requirements are on the Fairfield City Council website.

On Site reuse is a holistic way to deal with the sewerage created on site and based on the factors stacking up could be a good stratagem, this is an acceptable option as received by councils in previous developments

Capital and running costs summary have been out lined in section 3.



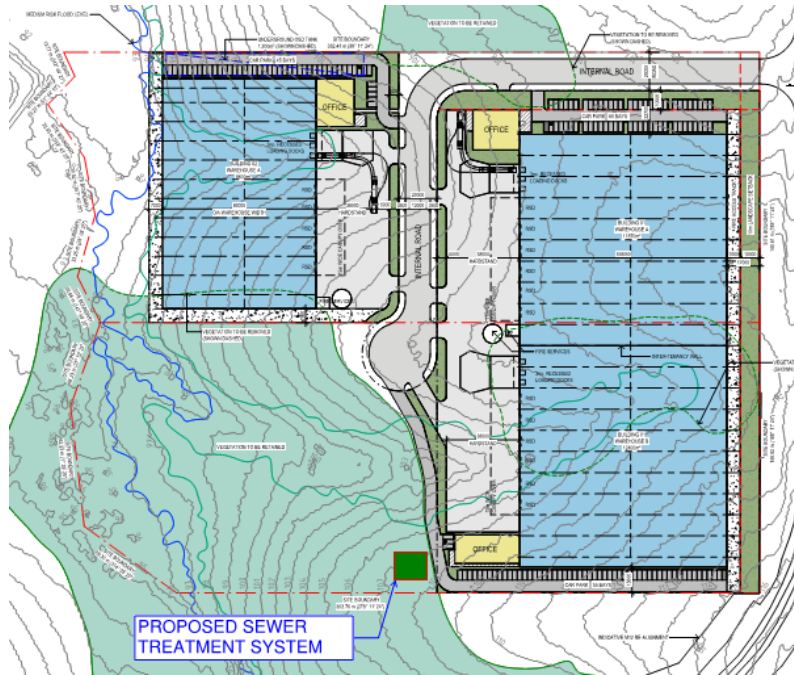


Image #7 Proposed Development – Sewer Option 2

SYSTEM	BUFFER DISTANCES
All land Application Systems	100 metres to permanent surface waters (river, stream, lake etc.) 250 metres to domestic groundwater well 40 metres to other waters (farm dams, intermittent waterways and drainage channels)
Surface Spray Irrigation	6 metres if area up-gradient and 3 metres if area down-gradient of driveways and property boundaries 15 metres to dwellings 3 metres to paths and walkways 6 metres to swimming pools
Surface Drip and Trickle irrigation	3 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, property boundaries, driveways and buildings
Sub-surface Irrigation	6 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, property boundaries, driveways and buildings
Absorption System	12 metres if area up-gradient and 6 metres if area down-gradient of property boundary 6 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, driveways and buildings.

Image #8 excerpt from Fairfield council Sewer Management Strategy



Image #9 Proposed Development – Sewer Option 2

The above area is what we will need to disperse the treated water from the black water treatment plant via underground drip irrigation. This will need to be a grassed area which will absorb and disperse the water through evaporation, transpiration and absorption.

The area is measured to be at 100m to the indicated creek, this will meet the requirements of Fairfield City council.

Formal applications will need to be lodged, which we would anticipate based on similar exercises 3-4 months for approvals.

5.1.3 Budget

The budget is determined by the installation costs and the anticipated running costs

Capital costs	Maintenance	Running cost
\$500,000 sewer treatment Plant \$250,000 irrigation reticulation \$50,000 Enclosure/shed	Monthly - \$2,000 Annual \$24,000	Power & Maintenance – (maintenance is covered under contract with supplier)

Power costs not calculated.



6. Option 3 – Onsite Pump out

6.1.1 Overview

This option is to capture the waste water on site in holding tank for disposal via a pump truck., this option while it is a low capital cost is not necessarily a sustainable solution and isn't generally acceptable when submitted to the council.

6.1.2 High level Calculations

Based on the daily expected load of 10kl/ day of effluent discharge it would be anticipated to required a weeks worth of storage capacity with a buffer.

The anticipated storage volume for this load would be in the order of 100kl tank – installed at the lowest point of the development area to which the internal drainage would reticulate to.

On-site storage will have minimal impact on space as this is all installed under ground, this would be viewed upon unfavourably from Fairfield Council as this isn't a sustainable option.

Capital and running costs have been out lined in section 3.

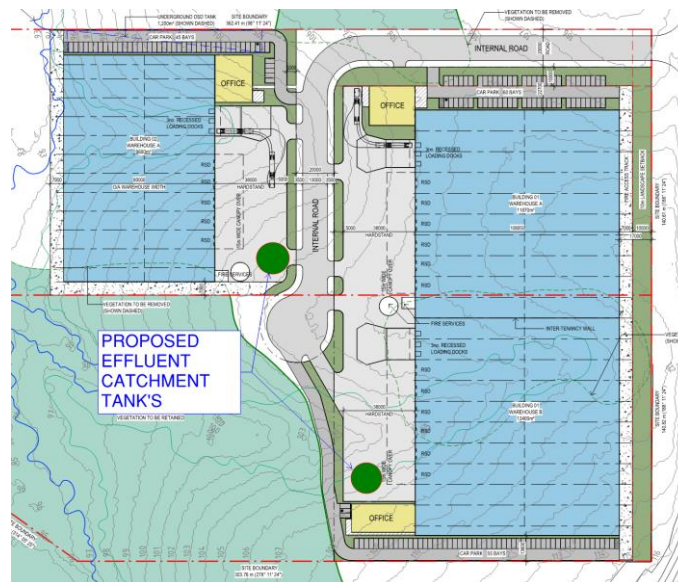


Image #10 Proposed Development – Sewer Option 1

6.1.3 Budget

The budget is determined by the installation costs and the anticipated running costs

Capital costs	Maintenance	Running cost
\$50,000 (holding tanks and pump out point only	Monthly - \$500 Annual \$6000	Per litre disposal costs (Collection by JJ Richards or similar operator) \$0.22c per litre – Based on 70,000litres per week - \$15,400 p/w - =\$800,800

