



TAKE THE LEAD

Servicing & Infrastructure Report



Catherine Field Planning Proposal Charlesworth Close, Springfield Road, Camden Valley Way and Catherine Field Road

Prepared for: Springfield Rd Pty Ltd

Date: March 2022

Our Reference: 416-21

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Annexures:

- A. Sydney Water Feasibility Letter, 27 October 2021
- B. Craig & Rhodes Wastewater Servicing Strategy
- C. Endeavour Energy Technical Review, 1 November 2021
- D. NBN Advice Email

Issue	Date	Author	Approved
A	25/03/2022	Yee Lian	Adrian Miller

1 Introduction

Craig & Rhodes Pty Ltd has been engaged by Springfield Rd Pty Ltd (Springfield)) to prepare a Servicing and Infrastructure Report to support the Catherine Field Planning Proposal. The Catherine Field Planning Proposal is a Proponent-led proposal that seeks to rezone approximately 104 hectares of land within the Catherine Field Precinct to enable urban development for new housing, open space and recreation, riparian protection, major roads and stormwater management. The site is located wholly within the Camden Local Government Area and is approximately 42 kilometres south-west of the Sydney CBD.

The draft Indicative Structure Plan delivers approximately 2080 dwellings and a population of around 5,800 people. There will be a range of housing types at varying densities throughout the site. The site is identified for low and medium density residential development with single dwellings on lots ranging in size up from 250 square metres and averaging around 350 square metres and attached and semi-attached housing, typical of recently developed urban growth areas in other parts of Sydney.

The Proposal will provide a range of social infrastructure, including open space, recreation and community facilities for the future community, and deliver road and utilities infrastructure to service the broader South West Growth Area.

This report provides information regarding the current and proposed capacity of services including water and wastewater, electricity, gas and telecommunications for the extent of land covered under the Planning Proposal, which has an estimated development yield of 2,080 lots.

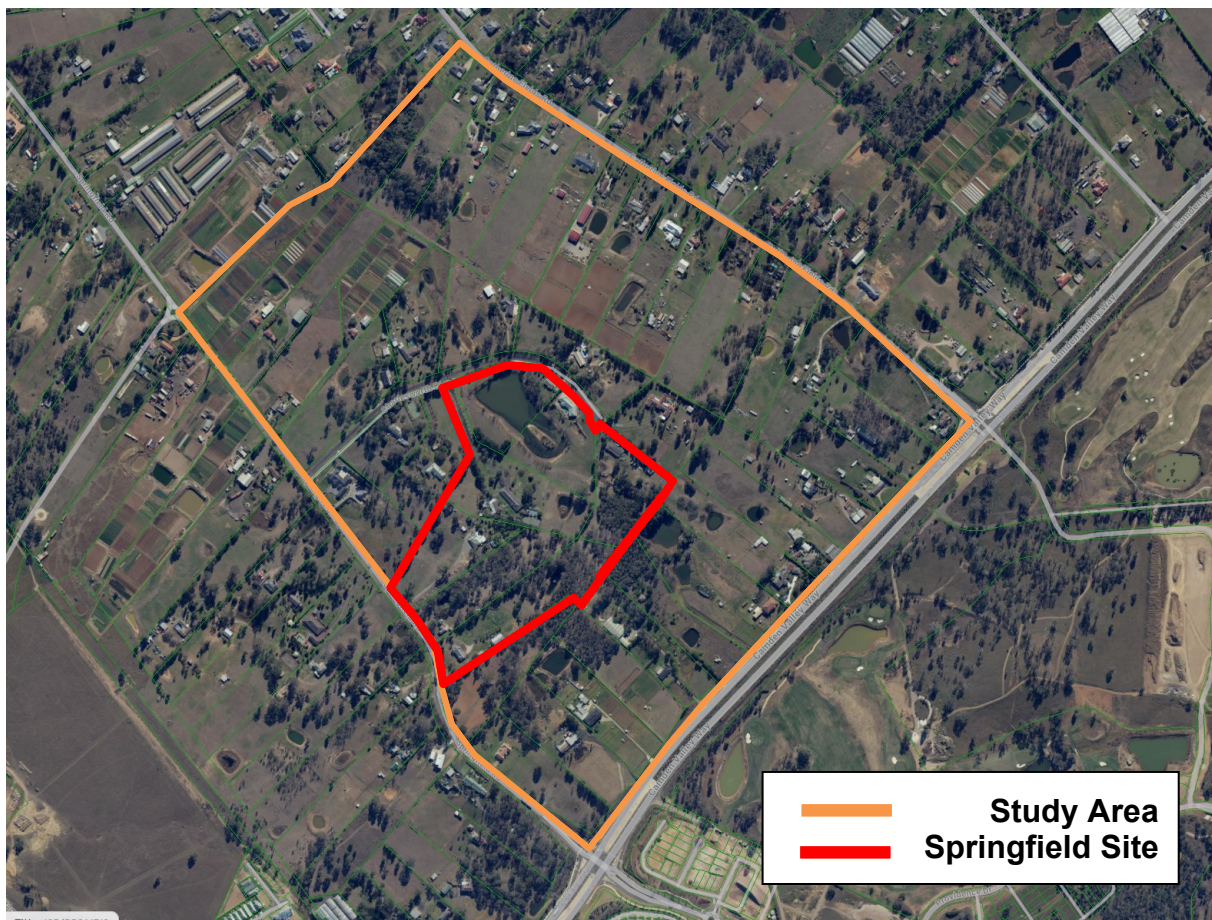


Figure 1: Aerial Map of Charlesworth Close, Catherine Fields

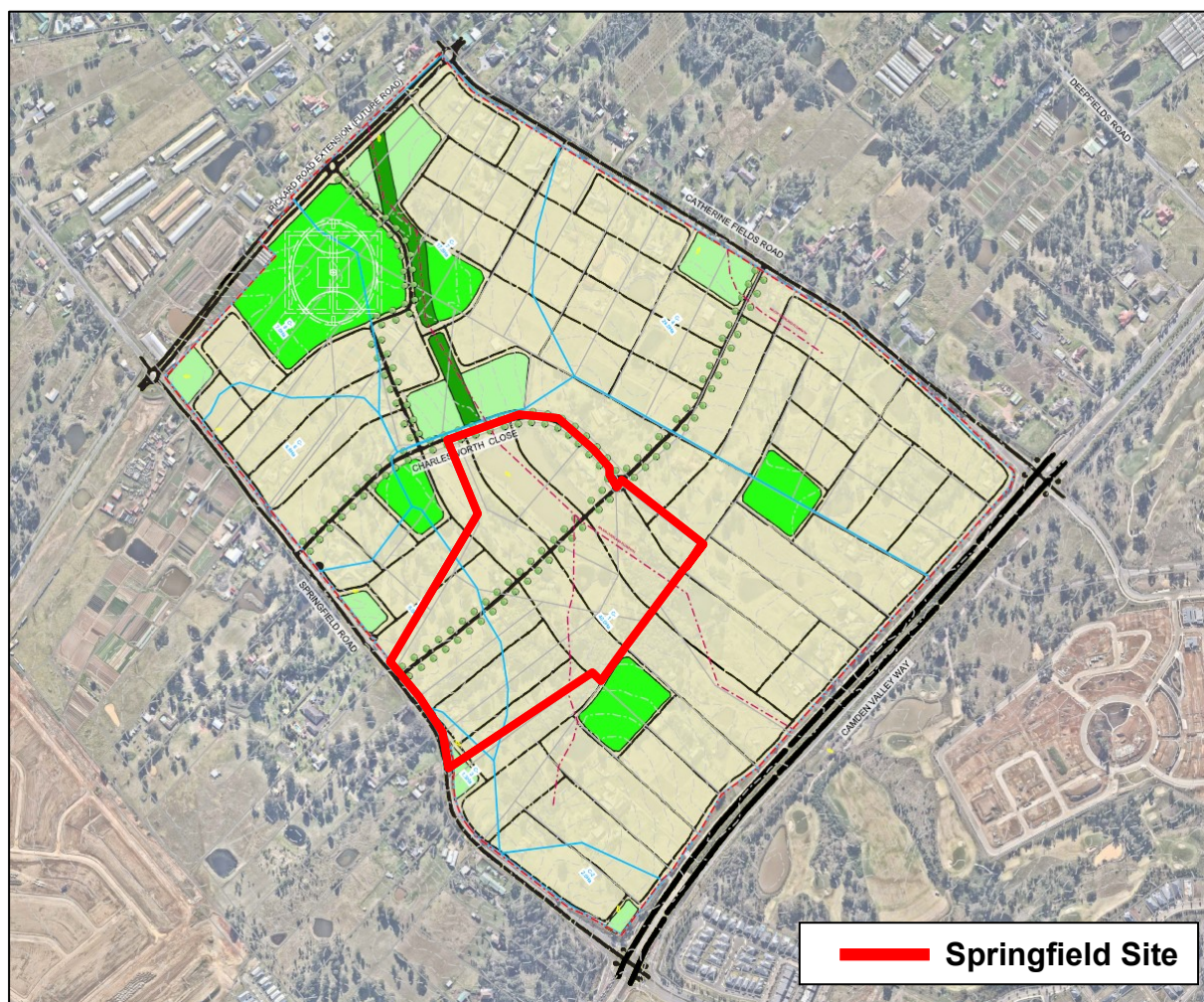


Figure 2: Springfield Road Precinct - Concept Plan by Urbanco.

Figure 2 shows that Springfield Rd Pty Ltd holds 13 hectares of land that can deliver around 400 residential lots.

2 Study Area

The study area is known as Charlesworth Close, Catherine Fields with an area of 103.9 ha. The area is currently zoned RU4 Primary Production Small Lots, and has a minimum lot size control of 2ha under the Camden LEP 2010. The site is entered via Charlesworth Close, and Springfield Road to the southwest, with neighbouring adjoining lots in all other directions.

Table 1: Planning Proposal Study Area Allotments

Lot 2 DP 518472	Lot 301 DP 709378	Lot 10 DP 618175	Lot 4 DP 203127	Lot 1 DP 861247
Lot 131 DP 27602	Lot 302 DP 709378	Lot 11 DP 618175	Lot 122 DP 27602	Lot 4001 DP 1121133
Lot 1302 DP 736633	Lot 101 DP 547859	Lot 206 DP 259147	Lot 3 DP 203127	Lot 4003 DP 1121133
Lot 129 DP 27602	Lot 208 DP 259147	Lot 8 DP 203127	Lot 2 DP 203127	Lot 4002 DP 1121133
Lot 128 DP 27602	Lot 4 DP 215520	Lot 125 DP 27602	Lot 121 DP 27602	Lot 100 DP 1149669
Lot 127 DP 27602	Lot 3 DP 215520	Lot 204 DP 259147	Lot 1 DP 203127	Lot 100 DP 1173578
Lot 126 DP 27602	Lot 207 DP 259147	Lot 124 DP 27602	Lot 120 DP 27602	Lot 20 DP 1171869
Lot 2 DP 861247	Lot 2 DP 215520	Lot 205 DP 259147	Lot 119 DP 27602	Lot 101 DP 1173578
Lot 3 DP 518472	Lot 302 DP 716446	Lot 5 DP 203127	Lot 2 DP 27602	Lot 30 DP 1175280
Lot 4 DP 518472	Lot 1 DP 215520	Lot 123 DP 27602	Lot 1301 DP 736633	Lot 31 DP 1175280
Red Text – Springfield Road Lots				

Table 2: Springfield Development Site Allotments

Lot Number	Address	Area (ha)
Lot 2 DP 215520	46-48 Springfield Road, Catherine Field	2.71ha
Lot 3 DP 215520	52 Springfield Road, Catherine Field	2.07ha
Lot 4 DP 215520	58 Springfield Road, Catherine Field	2.09ha
Lot 302 DP 716446	32 Charlesworth Close, Catherine Field	2.76ha
Lot 10 DP 618175	44 Charlesworth Close, Catherine Field	2ha
Lot 204 DP 259147	66 Charlesworth Close, Catherine Field	2ha
Total Area (Approx.)		13ha

3 Methodology

This report has been prepared by:

- Review of Feasibility Letter from Sydney Water regarding possible potable water and wastewater supply;
- Craig & Rhodes wastewater servicing scenarios for the Site;
- Sydney Water's Growth Servicing Plan;
- Review of Technical Review Letter from Endeavour Energy to obtain possible electrical supply scenarios for the Site, and Endeavour Energy's Growth Servicing Plan;
- Review of advice from NBN Co. to obtain possible telecommunication scenarios for the Site and
- Review of advice from Jemena Gas to obtain possible natural gas supply scenarios for the Site.

4 Potable Water

4.1 Background

A feasibility letter was prepared by Sydney Water (Attachment A) dated 27 October 2021 regarding potable water services for the potential development yield of 1,700 residential lots. Further considerations have been made in relation to Sydney Water's Growth Servicing Plan (2020-2025).

4.2 Current

Potable Water Supply is provided through the Leppington Elevated Water Supply Zone (WSZ). Sydney Water has advised that there is limited capacity to service growth associated with the proposed residential development.

4.3 Proposed

Sydney Water plan to carry out hydraulic modelling and options assessment to identify the next stages of trunk infrastructure required to service growth within the Leppington Elevated WSZ. This development site will be included in this modelling.

Trunk water main extensions and amplifications may be required to be delivered by the developer. Exact specifications will be articulated by Sydney Water in its Notice of Requirements when the developer makes an application for a Section 73 Certificate as part of the DA process.

4.4 Next Steps

The next steps in progressing the delivery of potable water consists of the following:

- Sydney Water to carry out hydraulic modelling and options assessment to identify the next stages and extent of trunk infrastructure required to service the proposed development; and
- Sydney Water to issue of Notice of Requirements (NOR) following an application for a Section 73 certificate specifying the infrastructure sizing and funding matters to service the development.

5 Wastewater

5.1 Background

The subject site is located within the South Creek catchment. The ultimate servicing strategy for development in this area is for sewer to drain north through a series of carriers and pumping stations to the Upper South Creek Advanced Water Recycling Plant that will service the Aerotropolis and South West Growth Centre precincts.

In the interim, a number of current and planned pumping stations are transferring wastewater from the initial precincts of the South West Growth Centre south to the West Camden Treatment Plant. Sydney Water plans to deliver a new pumping station, SP1209, that will cater for an additional 4,000 dwellings for the Lowes Creek Maryland Precinct. This will be pumped back through to the West Camden Treatment Plant (**Figure 3**).



5.2 Current

Sydney Water's advice (Attachment A) has stated that there is no capacity in the existing wastewater network to service the proposed development prior to 2026-28. Sydney Water has further stated that the South Creek catchment is currently serviced via transfer to the West Camden wastewater network, and has also stated that there is very limited capacity in the West Camden network, despite the planned SPS 1209 (to service the Pondicherry and Lowes Creek Merryland precincts) catering for an additional 4,000 dwellings.

Despite this, Sydney Water is currently delivering works that will double the West Camden treatment plant capacity to 176,000 people, sufficient to cater for future growth to 2046. Works are scheduled to be completed by 2023.

The site would ultimately be serviced by two gravity carriers, being South Creek and Riley's Creek. These are not scheduled for delivery until 2026-2028.

5.3 Proposed

As Sydney Water will not be delivering trunk sewer capacity to service the site until 2026-2028, Craig & Rhodes has prepared an alternative servicing strategy that will provide services for initial development of the precinct. For the purposes of this exercise, we have assumed that Springfield Rd Pty Ltd would be the first landowner to develop. Any other landowner would similarly need to engage with Sydney Water to determine how their site could be serviced on an interim basis, until the permanent sewer service had been delivered.

We anticipate that the rezoning, DA and development process will take at least four years, and therefore initial wastewater services will not be required until early 2026. This implies that the initial interim wastewater services will be required between zero to two years until Sydney Water delivers the Riley Creek and South Creek carriers.

Figures 5 and 6 below show that the site can be serviced via the delivery of a temporary pumping station and rising main of approximately 670 metres that would connect to a carrier discharging to SPS 1156. This would be funded by the developer and delivered to Sydney Water's specifications. Craig & Rhodes has previously delivered similar pumping stations for developments in this area.

Our proposed servicing strategy would be sized to accommodate approximately 400 lots, being Springfield's landholdings. This could be increased and the location adjusted pending other landowner's development intentions, and Sydney Water's network modelling.

Craig & Rhodes has presented this option to Sydney Water for consideration. We understand that there is approximately 4,000 lots capacity in the West Camden network, given that SPS 1209 is being sized for 4,000 lots. We also understand that 4,000 lots will not be delivered in the time required for interim servicing of the site (2026-2028), and therefore there should be network capacity to accommodate the initial 400 lots of the site.

As also mentioned above, the West Camden Treatment plant will double in servicing capacity to accommodate 176,000 people, sufficient to cater for future growth to 2046. Works are scheduled to be completed by 2023. There is therefore capacity in the plant to service the initial development in the precinct.

Sydney Water has undertaken to utilise the information we have provided and incorporate it into the network modelling to determine how the site can be serviced in the interim.

The rest of the precinct can be serviced once the Riley Creek and South Creek carriers are delivered by Sydney Water in 2026-2028. Given the anticipated lot production of 200 per year, the proposed servicing strategy enables an orderly number of lots to be delivered to market until the ultimate servicing strategy has been delivered. This is shown in **Figure 4** below.

An alternative strategy, but less cost effective, is the construction of two separate wet wells that would collect sewerage for pump out by a tanker, and disposal at the West Camden treatment plant. Sydney Water allows the construction of these “IOPs”, which are funded by the developer, and operated by Sydney Water on a temporary basis until the ultimate servicing strategy is delivered. The capacity for each IOP is typically 200 lots.

	2022	2023	2024	2025	2026	2027	2028
Planning proposal lodged (April 2022)							
Precinct rezoned and DA lodged (April 2024)							
Subdivision works complete (April 2025)							
First homes built and delivered @ 200/year from April 2026							
Interim sewer servicing (from 2026-2028)							
Trunk sewer servicing (from 2028)							

Figure 4: Development timeline, interim and ultimate sewer servicing

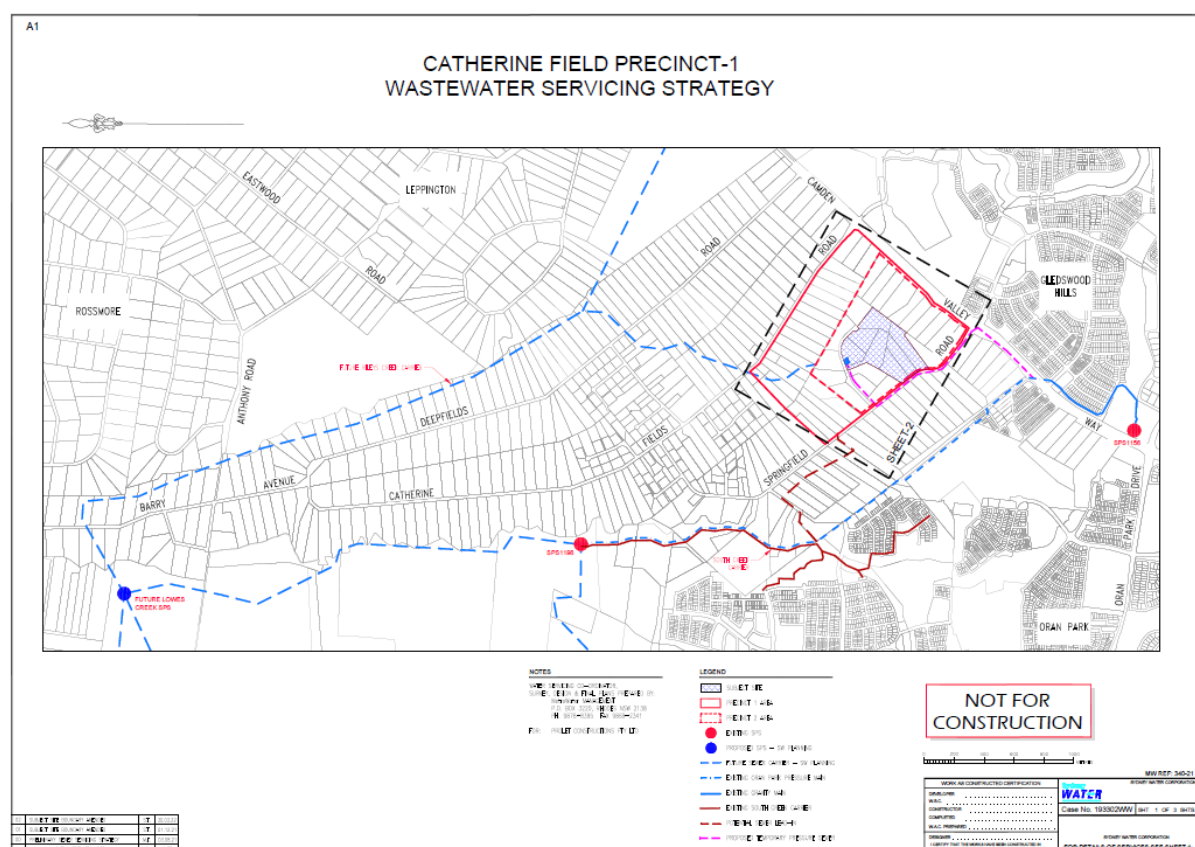


Figure 5: C&R Proposed Wastewater Servicing Strategy

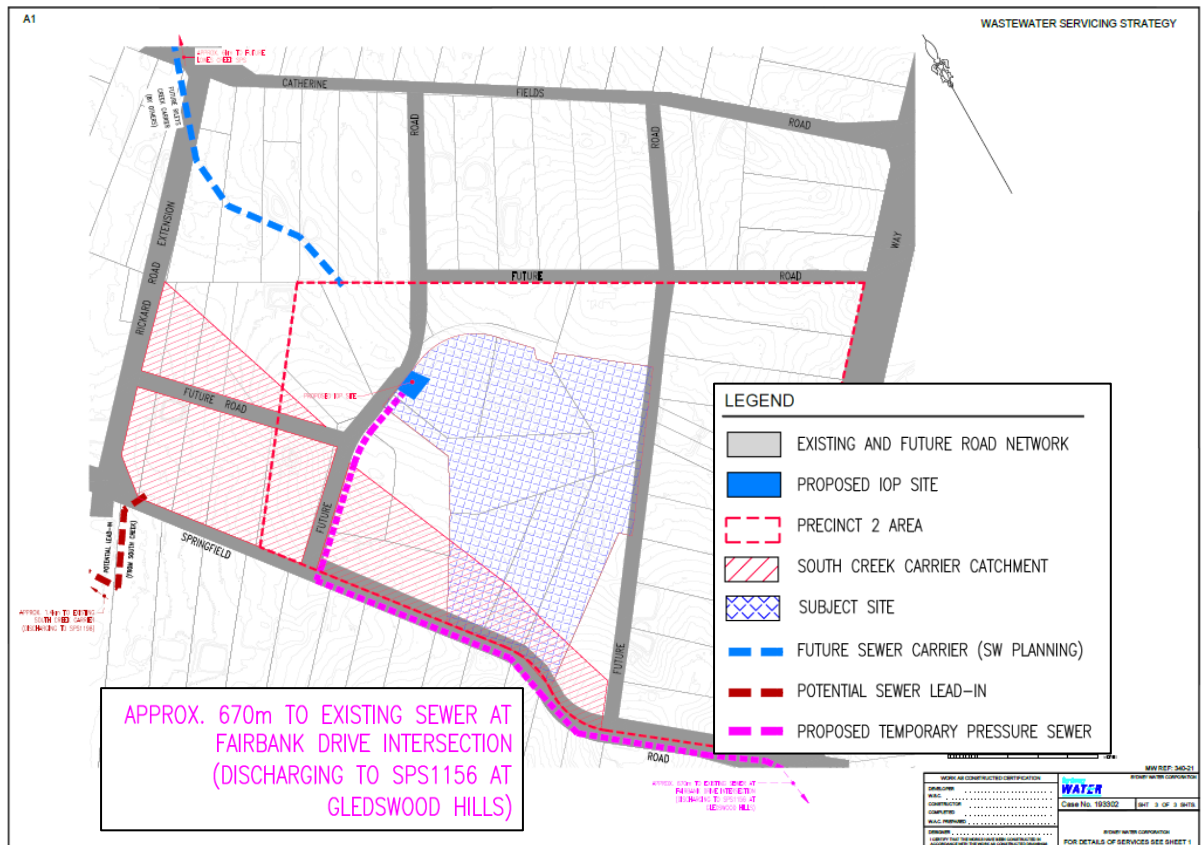


Figure 6: C&R Proposed Interim Wastewater Servicing

5.4 Next Steps

The next steps in progressing the delivery of wastewater infrastructure consists of the following:

- Sydney Water to carry out hydraulic modelling and options assessment to identify the next stages and extent of trunk infrastructure required to service the proposed development;
- Sydney Water to complete capacity improvement works at the West Camden Treatment Plant;
- Sydney Water to issue of Notice of Requirements (NOR) with their requirements for sewer main layout, sizing and funding matters confirmed; and
- Detailed design to be progressed based on the NOR and submitted to Sydney Water for approval.

6 Electricity

6.1 Background

Endeavour Energy has proposed the delivery of new 11 kV feeders, and the new Catherine Park Zone Substation (ZS) located in the Catherine Field (Part) Precinct to create additional capacity. The delivery of the Catherine Field ZS is not expected until 2024 according to Endeavour Energy's 2018 Growth Servicing Plan.

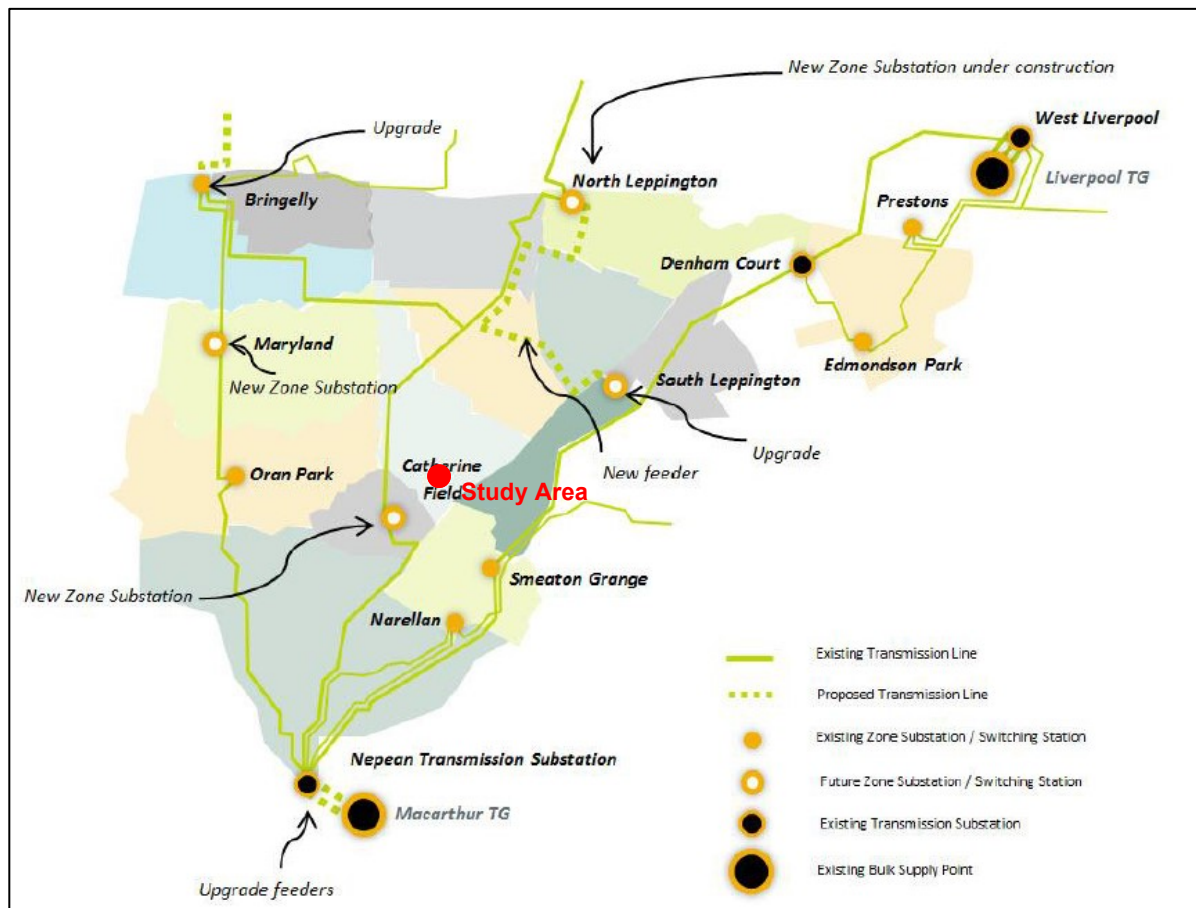


Figure 7: Existing and Proposed electricity infrastructure (Growth Servicing Plan 2018)

6.2 Current

Electricity supply within the Catherine Field precinct is provided by Endeavour Energy. Existing infrastructure such as 11 kV feeders, the Macarthur Bulk Supply Point and Nepean Transmission Substation are in operation supplying the South West Growth Area. These facilities are located outside the study area. (Figure 7)

6.3 Proposed

After a technical review conducted by Endeavour Energy (Attachment C), it has been determined that the following infrastructure is required to service the proposed development.

- Establishing a temporary mobile zone substation at the Catherine Park ZS site (as shown in Figure 8) until the future substation is complete and operational.

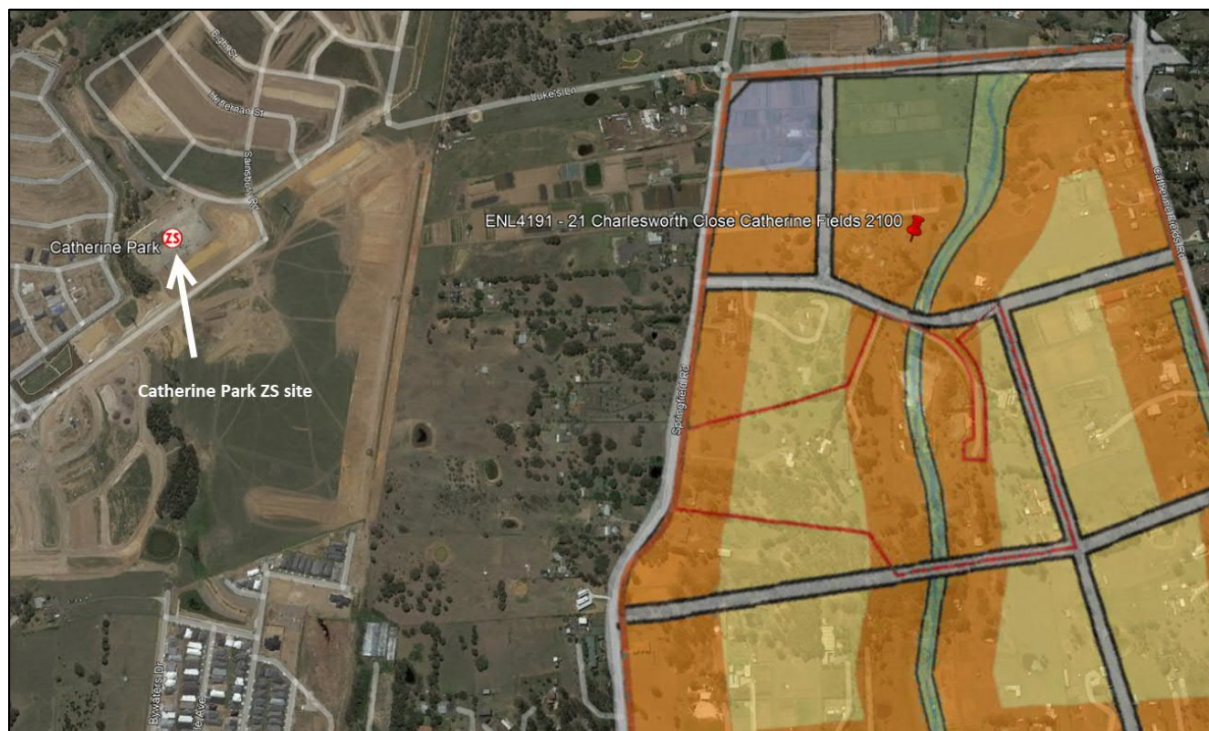


Figure 8: Proposed temporary mobile substation located at Catherine Field ZS site (Source: Endeavour Energy)

6.4 Next Steps

The next steps in progressing the delivery of electricity infrastructure consists of the following:

- Engage Endeavour Energy's Network Planning team to discuss and determine timing and stages of development.

7 Telecommunications

7.1 Background

NBN Co. is the default Statutory Infrastructure Provider (SIP) providing most Australian premises with superfast broadband and voice telephone services.

7.2 Current

According to the NBN Co. network map and advice (Attachment D) telecommunication services are available for the entirety of the study area, which is serviced by NBN's fixed line infrastructure.

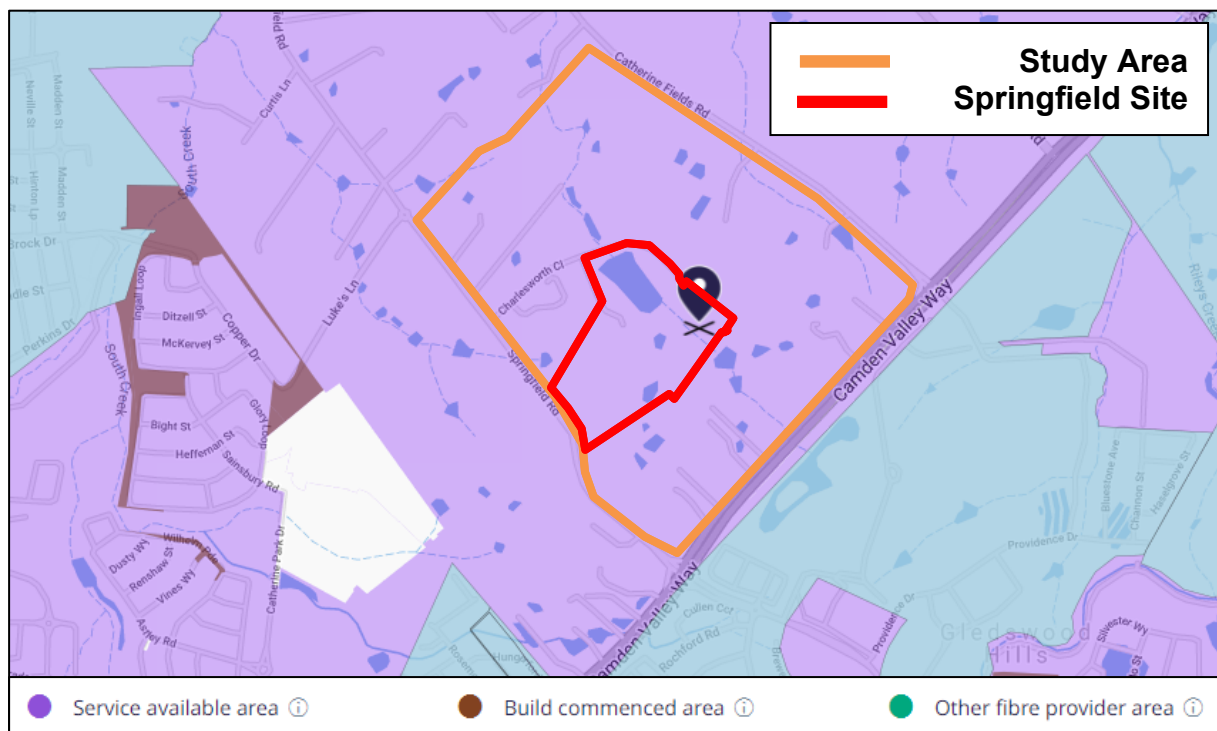


Figure 9: NBN rollout Map (NBN 2021)

7.3 Proposed

The proposed development can be serviced by NBN Co. (**Figure 9**), with delivery to be compliant and in accordance with NBN Co. design and build guidelines.

Further investigation and detailed design will be required to determine the depth and extent of infrastructure. An NBN designer will need to be engaged at the detailed design stage to facilitate the reticulation of fibre telecommunication services throughout the proposed development, and connection to the existing infrastructure, allowing for a single point of connection for each proposed lot.

7.4 Next Steps

The next steps in progressing the delivery of telecommunications infrastructure consists of the following:

- Engage NBN Co. to discuss and determine timing and stages of development.
- Prepare detailed design plans in accordance with NBN Co. design and build guidelines.

8 Natural Gas

8.1 Background

Jemena Gas has been engaged to seek confirmation of any existing natural gas supply and assets potentially traversing throughout study area.

8.2 Current

There is currently no known suitable residential natural gas network traversing through the study area.

8.3 Proposed

From our correspondence with Jemena Gas, it has been confirmed that suitable natural gas infrastructure is available on the eastern side of Camden Valley Way, at the corner of The Hermitage Way that would need to be extended across Camden Valley Way through Springfield Rd and Charlesworth Close to service this precinct.

It is anticipated that the Developer will deliver trenching and restorations during the construction phase for Jemena, and a financial contribution may be required to assist with project viability. Once the development is approved and construction certificates gained, Jemena would be able to make a formal offer to supply the development.

8.4 Next Steps

The next steps in progressing the delivery of natural infrastructure consists of the following:

- Council to issue Construction Certificate to Developer
- Developer to submit Construction Certificate, plans and supporting documentation to Jemena for consideration and determination of gas supply offer.

9 Conclusion

Based on investigations performed for existing services and infrastructure and proposed works, the development site can be serviced with all services to match the staging of the development.

Initial servicing would be focused around the land owned by Springfield with the delivery of the temporary pumping station, with further staging to match the service delivery schedule of all utilities and as development proceeds across the site.

Appendix A - Sydney Water Feasibility Letter, 27 October 2021



Case Number: 193302

October 27, 2021

PROLET CONSTRUCTIONS P/L
c/- METROWATER MANAGEMENT

Feasibility Letter

Developer: PROLET CONSTRUCTIONS P/L
Your reference: 340-21
Development: Lot 1 DP215520 SPRINGFIELD RD, Catherine Field
Development Description: Proposed residential development to create approximately 1,700 lots.
Your application date: July 30, 2021

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what our 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 (WSC).

We'll then send you either a:

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

These documents will be the definitive statement of our requirements.

There may be changes in our 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
- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

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 [Plumbing, building & developing](#) page on our website.

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

You must engage your current or another authorised WSC 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 WSC (at any point in this process) you must write and tell us.

You'll find a list of WSC's at [Listed providers](#) on our website.

The WSC will be your point of contact with us. 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 our costs).

3. Developer Works Deed

After the WSC has submitted your new application, they'll receive the our 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 we've signed the documents, one copy will be returned to the WSC.

The Deed sets out for this project:

- your responsibilities

- our responsibilities
- 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 and sewer 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.

We've assessed your application and found that:

- **The proposed 1,700 lot subdivision is currently serviced via the Leppington Elevated Water Supply Zone (WSZ).**
- **The Leppington Elevated WSZ has limited capacity to service growth. Sydney Water plan to carry out hydraulic modelling and options assessment in the next 6 months, to identify the next stages of trunk infrastructure required to service growth in this supply zone.**

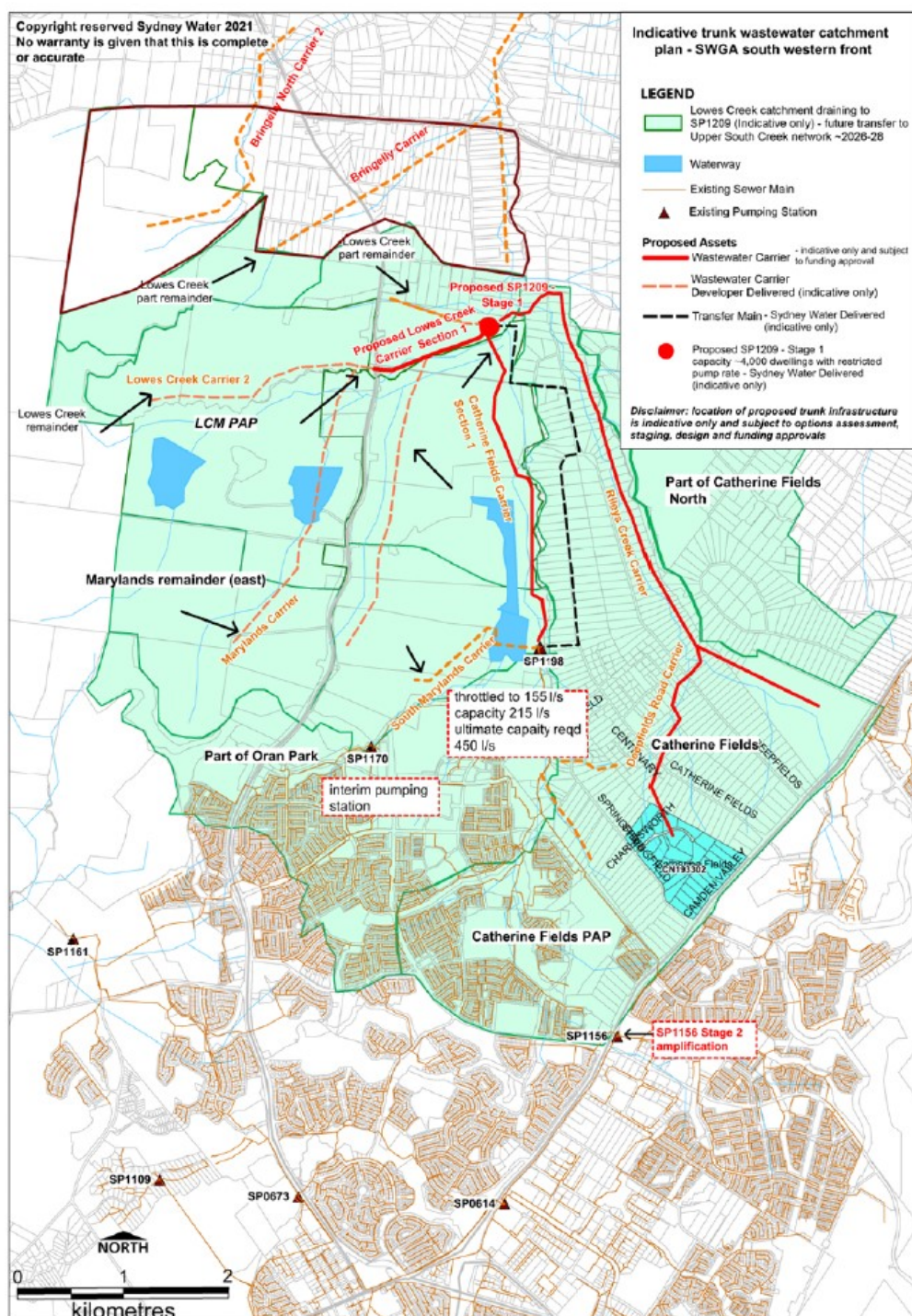
4.2 Sewer

Your development must have a sewer main that is the right size and can be used for connection. That sewer must also have a connection point within your development's boundaries.

We've assessed your application and found that:

- The proposed 1,700 lot development is located within the Lowes Creek catchment. **There is no capacity in the existing wastewater network to service this development prior to about 2026-28.**
- The Lowes Creek catchment is currently serviced via transfer to West Camden wastewater network, prior to delivery of the Upper South Creek (USC) Advanced Water Recycling Centre (AWRC). There is very limited capacity in the West Camden network and the Lowes Creek catchment is planned to be transferred to the USC AWRC network from about 2026-28, subject to funding approval.
- A new pumping station, SP1209, is planned to be delivered in the Lowes Creek catchment in 2023-24.
 - SP1209 stage 1 (4,000 dwellings) will have limited pumping capacity to pump peak dry weather flows to SP1198, due to the constraints within the West Camden network. Wet weather flows will be held back in the proposed Lowes Creek carrier.
 - SP1209 future stages will cater for servicing of the whole of the Lowes Creek catchment and transfer flows to the USC network from about 2026-28 onwards.

Refer to attached locality plan for indicative Lowes Creek catchment and indicative location of future carriers.



5. Ancillary Matters

5.1 Asset adjustments

After we issue this Notice (and more detailed designs are available), we may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you'll 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**. We'll need to see the completed designs for the work, and we'll 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 our **Permission to Enter** form(s) for this. You can get copies of these forms from your WSC or on our website. Your WSC 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 us may include:

- water main shutdown and disinfection
- connection of new water mains to our system(s)
- design and construction audit fees
- contract administration, Operations Area Charge & Customer Redress prior to project finalisation
- creation or alteration of easements etc
- 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 WSC 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 from us 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 the building plans must be approved when each lot is developed. This can be done at in our Tap in™ system [Sydney Water Tap in™](#).

This is not a requirement for the Certificate, but the approval is needed because the construction/building works may affect our assets (e.g. water, sewer, and stormwater mains).

If our stormwater channel, pipe, or culvert is located within ten (10) metres of your development site it must be referred to us for a detailed review.

Your Coordinator can tell you about the approval process including:

- Possible requirements
- Their costs
- Timeframes.

If your building plans need to be referred to us for detailed review you will be required to pay us for the costs associated with the detailed review.

We recommend that you apply for Building Plan Approval early as in some instances your WSC may need to refer your building plans to us for detailed review. You'll be required to pay us for the costs associated with the detailed review.

Note: You must obtain our written approval before you do any work on our systems. We'll 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*.

Backflow Prevention Water supply connections

A backflow prevention containment device appropriate to the property's hazard rating must be installed at the property boundary. The device is to be installed on all water supplies entering the property, regardless of the supply type or metering arrangements. It is needed to reduce the risk of contamination by backflow from these supplies.

A licensed plumber with backflow accreditation can advise you of the correct requirements for your property. To view a copy of our Backflow Prevention Policy and a list of backflow accredited plumbers [Plumbing, building & developing](#).

The water service for your development

We don't consider whether the existing water main(s) talked about above is adequate for firefighting purposes for your development. We cannot guarantee that this water supply will meet your Council's firefighting requirements. The Council and your hydraulic consultant can help.

You must make sure that each home/lot has its own 20mm meter.

When access to the water supply is required, the property owner or agent must apply to with us online. A meter must be installed before any water is used. It is illegal for anyone other than us to remove the locking mechanism on the water meter.

The online application can be found by visiting our website [Plumbing, building & developing](#). You'll need to have the:

- account (Property) Number which can be obtained from the WSC
- serial Number which can be found on the metal tag on your property service.

You can find more information by using the "Ask Sydney Water" section of our website.

Fire Fighting

Definition of firefighting 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 firefighting flow of the development and the ability of our systems to provide that flow in an emergency. Sydney Water's Operating Licence directs that our mains are only required to provide domestic supply at a minimum pressure of 15 m head.

Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to our water main. This work must meet our 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.

Disused Sewerage Service Sealing

Please don't forget that you must pay to disconnect all disused private sewerage services and seal them at the point of connection to our sewer main. This work must meet our 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 our soffit requirements for property connection and drainage.

Other fees and requirements

The requirements in this Notice relate to your Certificate application only. We 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; and
- council firefighting requirements. (It will help you to know what the firefighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here.)

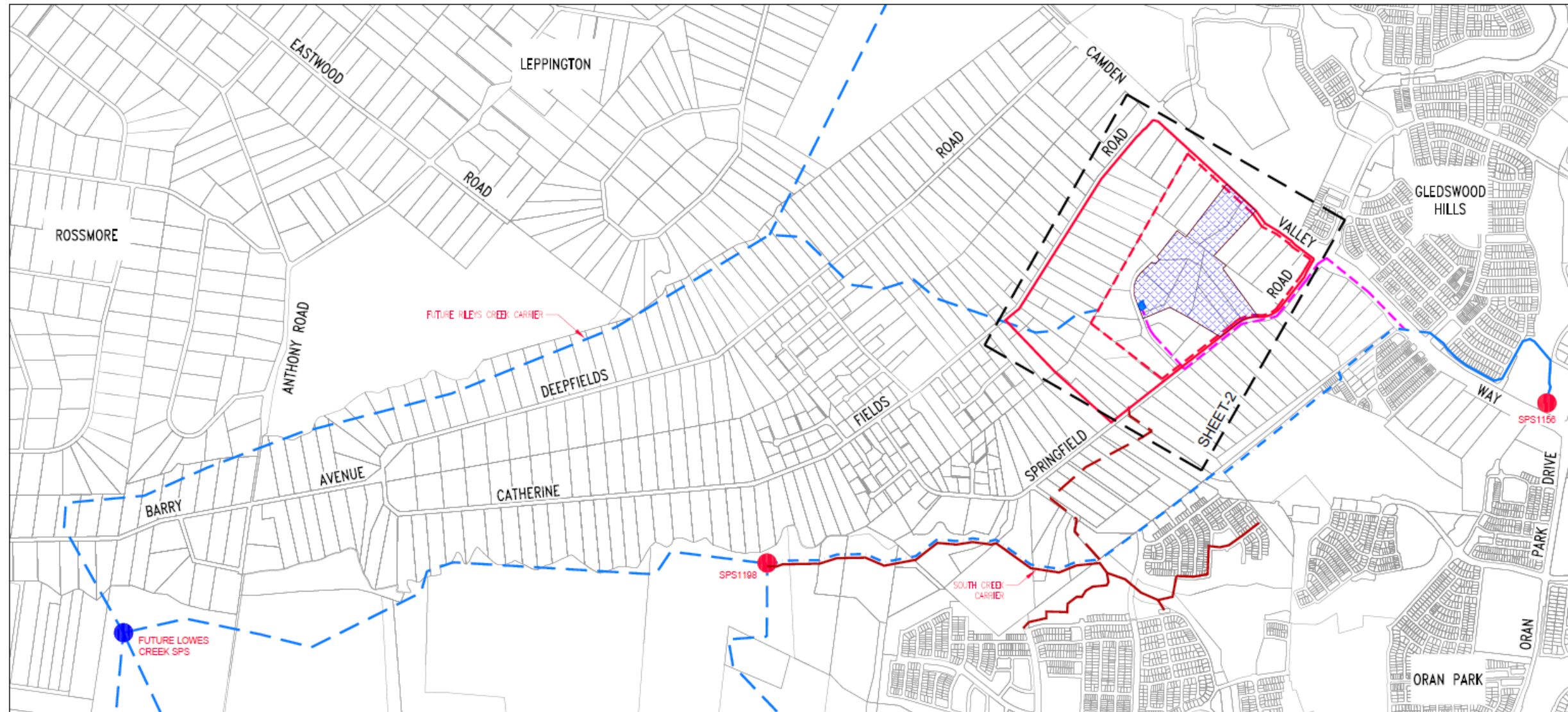
No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from us and to the extent that it is able, we limit its liability to the reissue of this Letter or the return of your application fee.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

END

Appendix B - Craig & Rhodes Wastewater Servicing Strategy

DELETE PROPERTIES CAMDEN VALLEY WAY (837 & 845) ON ALL FOLLOWING DIAGRAMS

CATHERINE FIELD PRECINCT-1 WASTEWATER SERVICING STRATEGY



NOTES

WATER SERVICING CO-ORDINATOR,
SURVEY, DESIGN & FINAL PLANS PREPARED BY:
MetroWater Management
P.O. BOX 3220, RHODES NSW 2138
PH: 9876-8395 FAX 9869-2341
FOR: PROLET CONSTRUCTIONS PTY LTD

LEGEND

- SUBJECT SITE
- PRECINCT 1 AREA
- PRECINCT 2 AREA
- EXISTING SPS
- PROPOSED SPS - SW PLANNING
- FUTURE SEWER CARRIER - SW PLANNING
- EXISTING ORAN PARK PRESSURE MAIN
- EXISTING GRAVITY MAIN
- EXISTING SOUTH CREEK CARRIER
- POTENTIAL SEWER LEAD-IN
- PROPOSED TEMPORARY PRESSURE SEWER

**NOT FOR
CONSTRUCTION**



MW REF: 340-21
SYDNEY WATER CORPORATION

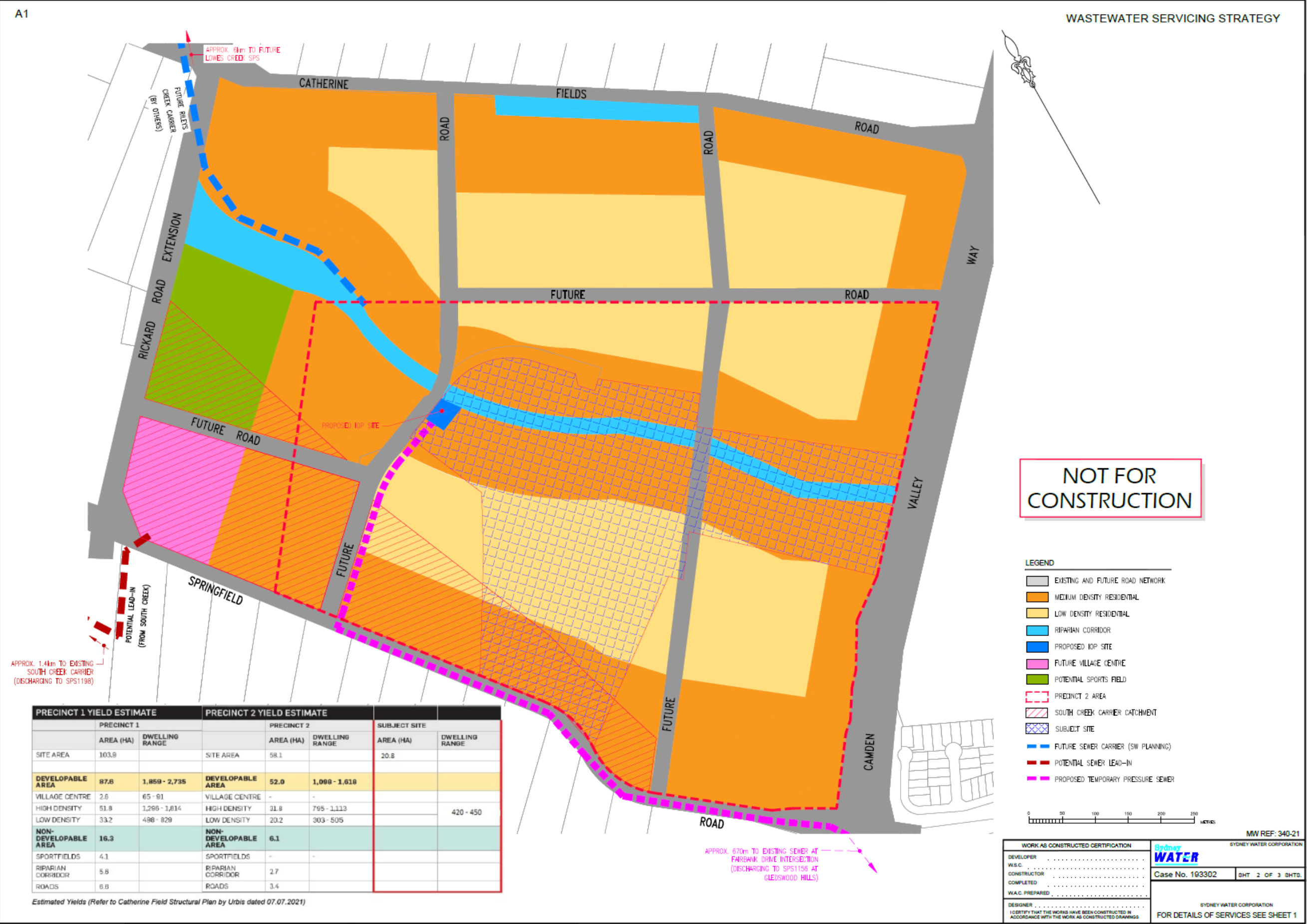
WORK AS CONSTRUCTED CERTIFICATION	
DEVELOPER
W.S.C.
CONSTRUCTOR
COMPLETED
W.A.C. PREPARED

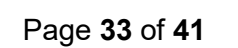
SYDNEY WATER CORPORATION	
Case No. 193302	SHT 1 OF 3 SHTS.

DESIGNER:
I CERTIFY THAT THE WORKS HAVE BEEN CONSTRUCTED IN
ACCORDANCE WITH THE WORK AS CONSTRUCTED DRAWINGS

SYDNEY WATER CORPORATION
FOR DETAILS OF SERVICES SEE SHEET 1

01	SUBJECT SITE BOUNDARY AMENDED	S.T.	01.12.21
02	PRELIMINARY SEWER SERVICING STRATEGY	M.T.	03.08.21
No.	AMENDMENT DESCRIPTION	BY	DATE





**Appendix C - Endeavour Energy
Technical Review, 1 November 2021**

TAKE THE LEAD



Endeavour
Energy

Craig & Rhodes Pty Ltd
PO Box 3220
RHODES NSW 2138

ENL4191 – Technical Review | Catherine Field Precinct Area 1, CATHERINE FIELD

It is understood that this technical review request is to seek response from Endeavour Energy to support rezoning planning proposal for the proposed residential subdivision in Catherine Field (refer to Figure 1) which is likely to yield total 1859 to 2735 new lots.



Based on the information provided in the technical review request application, the total site load assessed by Endeavour Energy is between 10MVA -14.8MVA, using After Diversity Maximum Demand (ADMD) of 5.4kVA/lot for total 1859-2735 lots.

endeavourenergy.com.au

Potential HV Supply Requirements

Endeavour Energy advises that the supply voltage of the HV distribution feeder in the area will be at 11kV. Based on planning limit of 240A / 4.6MVA per 11kV feeder, this development will require minimum three (3) to four (4) 11kV distribution feeders from Endeavour Energy's Zone Substation (ZS). 11kV distribution feeders will require a minimum of three cross-feeder ties plus one cross-zone tie (per feeder) in line with sound network planning reliability and security principles.

At present, there is insufficient spare capacity on adjacent 11 kV feeders to supply this entire development. Subject to discussions with Endeavour Energy's Network Planning team, capacity for this development will be made available via a **mobile zone substation** to be established at the Catherine Park ZS site, which is located along Catherine Park Dr. Refer to Figure 2 for proposed Catherine Park ZS site location in relation to the proposed development site.

This development will be supplied via three (3) to four (4) 11kV distribution feeders from the Catherine Park ZS site into the development. The 11kV distribution cable shall be standard 11kV 240 Copper XLPE cables. The design for electrical reticulations shall be carried out by the Accredited Service Provider (ASP) Level 3 under contestable works process in accordance with Endeavour Energy's Model Standing Offer (MOS) for Subdivisions. It shall be noted that this response does not constitute the final method of supply and further network capacity and connection investigations will need to be conducted when the formal application for subdivision is submitted in the future.



Figure 2

To help facilitate timelines with the delivery of abovementioned mobile zone substation and that of the applicants, the applicant is encouraged to get in contact with Endeavour Energy's Network Planning team and to provide a high-level delivery of how many lots they expect to delivery per year. The contact details of Endeavour Energy's capacity planner is as follows:

Louis Fernandes | Capacity Planner

Email: Louis.Fernandes@endeavourenergy.com.au

T 02 9853 7602

Hope this assists for the meantime, formal application (s) must be submitted, and subsequent designs have been certified or approvals granted will Endeavour Energy reserve capacity on the network.

Should you have any questions regarding this response to your request for technical review, please contact the undersigned.

Yours faithfully,

J. Lei

Jonathan Lei

Contestable Works Project Manager

Ph: 02 9853 7905

Email: Jonathan.Lei@endeavourenergy.com.au

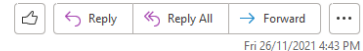
Appendix D - NBN Advice Email

RE: Your nbn™ New Development application confirmation: STG-W000207630



Kareena Prado <kareenaprado@nbnc.com.au>
To: Adrian Miller
Cc: Yee Lian

Follow up. Completed on Thursday, 2 December 2021.



Fri 26/11/2021 4:43 PM

Hello Adrian,

Thank you for speaking with me today.

nbn can deliver fibre to the premise for this development
nbn have obligations as the Statutory Infrastructure Provider (SIP).
The SIP regime commenced on 1/7/2020 via The Telecommunications Legislation Amendment (Competition and Consumer) Act 2020.
nbn is the default SIP for most Australian premises and the regime states our obligation to connect premises and supply wholesale broadband services to retail service providers on reasonable request.

Further information at <https://www.acma.gov.au/sip-obligations>

Please do not hesitate to contact me

Kind regards,
Kareena Prado
Senior Business Development Manager, NSW/ACT | New Developments, Business Enterprise & Government
| M +61 4 2853 7208 | E kareenaprado@nbnc.com.au

Visit our New Developments site: www.nbn.com.au/newdevelopments
Remember to submit all Pre-Construct and As-Built designs for review via the [new upload tools](#).
For all existing application updates please use the [tracker](#)

business nbn™



From: Adrian Miller <amiller@crhodes.com.au>
Sent: Wednesday, 24 November 2021 11:43 AM
To: Kareena Prado <kareenaprado@nbnc.com.au>
Cc: Yee Lian <ylian@crhodes.com.au>
Subject: [External] FW: Your nbn™ New Development application confirmation: STG-W000207630

EXTERNAL SENDER – Be cautious opening Links and Attachments

Hi Kareena,

Thanks for your presentation and fielding my questions.

As I mentioned earlier, we are acting for a client seeking a rezoning of theirs and surrounding land amounting to around 2,000 lots

We lodged the feasibility about 2 months ago and have not received anything in return

Would you be able to assist us in this matter? We require some high level advice for an infrastructure report that will accompany the development proposal.

Regards,

Adrian Miller
Senior Urban Development Advisor

CRAIG & RHODES

Mobile: 0466 423 609 | Office Phone: 02 9869 1855
Suite 7.01 Level 7, 3 Rider Blvd, Rhodes NSW 2138
PO Box 3220, Rhodes NSW 2138
ABN 77 050 209 991
www.craigandrhodes.com.au
[Facebook](#) [Instagram](#) [LinkedIn](#)
In the current COVID 19 situation it is still business as usual for Craig & Rhodes in accordance with Federal and State Government directions.
We have implemented our Work from Home policy and a majority of our team are now working safely from home.
In the event the situation changes we will advise. Thanks for your patience and we look forward to working with you.

From: Yee Lian <ylian@crhodes.com.au>
Sent: Wednesday, 24 November 2021 10:25 AM
To: Adrian Miller <amiller@crhodes.com.au>
Subject: FW: Your nbn™ New Development application confirmation: STG-W000207630

Hi Adrian,

Please find below the reference number and attached the documents sent to NBN for assessment.

Regards,

Yee Lian
Planner

CRAIG & RHODES

Office Phone: 02 9869 1855
Suite 7.01 Level 7, 3 Rider Blvd, Rhodes NSW 2138
PO Box 3220, Rhodes NSW 2138
ABN 77 050 209 991
www.craigandrhodes.com.au
[Facebook](#) [Instagram](#) [LinkedIn](#)
In the current COVID 19 situation it is still business as usual for Craig & Rhodes in accordance with Federal and State Government directions.
We have implemented our Work from Home policy and a majority of our team are now working safely from home.
In the event the situation changes we will advise. Thanks for your patience and we look forward to working with you.



Dear Yee Lian,

Thank you for your recent application.

Your development reference is: STG-W000207630

The development address submitted is : 32 , Charlesworth Close , Catherine Field , NSW,2557

Latitude: -34.0019833

Longitude: 150.7671843

The preferred name submitted for this development is: Springfield Rd Pty Ltd

What's next?

nbn will start a technical assessment of your application to confirm our charges and how to deliver the **nbn**™ broadband access network to your development.

We will contact you within 20 business days.

Your application details

Application details submitted

Building type: Residential use only

Development work type: Sub division or empty lots

Council reference number:

Estimated occupancy date: 30/06/2024

Build type: Pit and Pipe

Contact details submitted

Your details

Yee Lian

0298691855

ylan@crhodes.com.au

Contract Signatory

Joseph Jacob

0298691855

Contract Signatory

Joseph Jacob
0298691855

ylia@crhodes.com.au

Billing Information

ABN: 15646606671
Registered entity name: SPRINGFIELD RD PTY LTD
Preferred business name: SPRINGFIELD RD PTY LTD

Billing Contact

Joseph Jacob
0298691855

ylia@crhodes.com.au

PO Box 543

Accounts payable Contact

Joseph Jacob
0298691855

ylia@crhodes.com.au

Thank you and regards,
nbn™ New Developments team.

[View the frequently asked questions](#)
[Subscribe to our Construction Industry eNewsletter](#)

For specific enquiries about your application, contact us on 1800 687 626

