

DUE DILLIGENCE / INFRASTRUCTURE REPORT

50 BUSBY STREET, SOUTH BATHURST

ELECTRICAL, HYDRAULIC AND CIVIL SERVICES

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1 EXECUTIVE SUMMARY

1.1 GENERAL

This report compiled by JHA Consulting Engineers identifies and summarises our assessment of the electrical, hydraulic, and civil services associated with the existing Residential Aged Care Facility (RACF) and assesses these services in line with the proposed site redevelopment works.

This report findings are limited to a desktop review only and are based on information sources provided by Allera as well as readily available utility/council information:



Figure 1: Concept Masterplan

1.2 INFORMATION SOURCES

The following information sources were provided to JHA and utilised for the services desktop assessment:

- Request for Quotation (RFQ) – Dated 17th January 2024
- Before You Dig Australia (BYDA) information (formerly DBYD)
- Existing floor plans of RACF (obtained from Realestate.com.au)
- Council Pressure and Flow Enquiry – Dated 3rd July 2023
- Detail Survey (Drawing No. 8073_001 Rev.02)
- Drone footage – Received 2nd February
- Energy Australia Electricity Bills - Received 12th February
- Bathurst Regional Council – Guidelines for Engineering Works

1.3 PROJECT INFORMATION

1.3.1 SCOPE OF WORKS

The following scope of work is intended as part of this project to be carried out:

- Demolition of existing 62 bed aged care facility; and
- Construction of approximately 97 dwellings including:
 - 34 townhouses; and
 - 63 apartments proposed within one building.

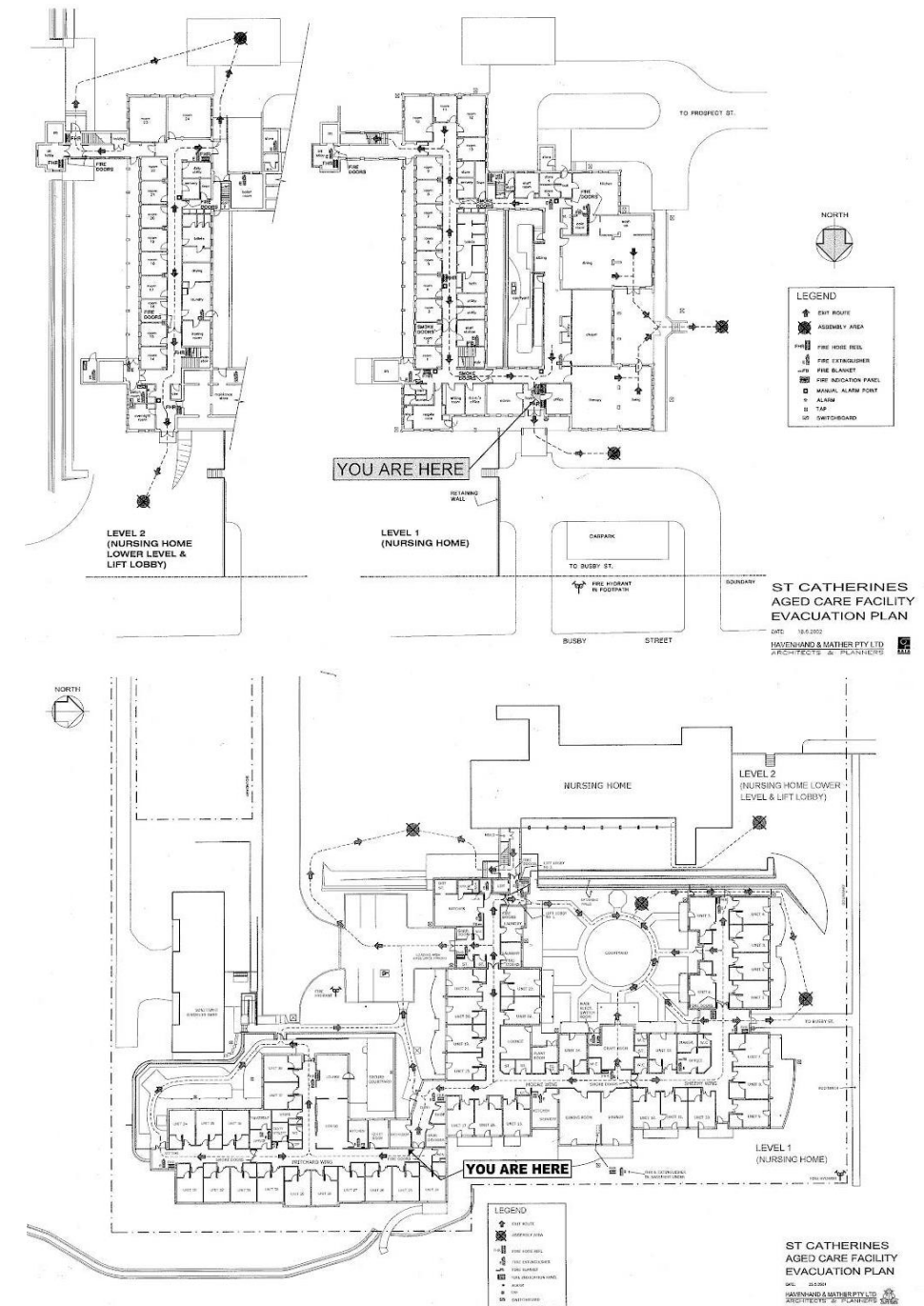


Figure 2 and 3: Existing Aged Care Floorplans

2 ELECTRICAL SERVICES

2.1 STANDARDS & REGULATIONS

Electrical Services advice will comply with the following relevant Codes and Standards (note, some of these Standards may be overridden by specific State Government guidelines):

Reference	Description
NCC	National Construction Code/ Building Code of Australia (2022)
AS/NZS 3000.2018	SAA Wiring Rules and all applicable standards within, including standards mentioned in Appendix A – Normal and Informative. Inclusive of all current amendments
AS/M25 1044	EMI and RFI Requirements;
AS 3000	Wiring Rules;
AS 3008	Electrical installations – Selection of cables;
AS 3439.1	Low Voltage Switchgear and control gear assemblies;
AS/NZS 3080	Integrated Communication Cabling Systems for Commercial Premises;
AS/NZS 3084	Telecommunications Pathways & Spaces, Commercial Buildings;
AS/ ACIF S008	Requirements for authorised cabling products;
AS/ ACIF S009	Installation requirements for customer cabling (wiring rules)
AS/NZS 1158	Lighting for Roads and Public Spaces
Authorities	
<ul style="list-style-type: none">▪ Work Cover Authority requirements;▪ Local Council regulations having jurisdiction on this project;▪ Requirements of the NSW Fire Brigade.▪ Requirement of the Australian Communications and Media Authority▪ National Construction Code NCC2022▪ Essential Energy Standards	

2.2 ELECTRICAL SERVICES SCOPE

In developing the site infrastructure analysis, the report will cover the following key points:

- Identify existing electrical supply infrastructure.
- Calculate Max demand.
- Provide kiosk substation requirements.
- Identify High voltage, low voltage supply and preferred route of cables into substation from boundaries.
- Identify telecommunication lead in requirements.

2.2.1 EXISTING ELECTRICAL SUPPLY INFRASTRUCTURE

The site is currently supplied via a pole (asset number 4988 023) located along Busby Street, as depicted in *Figure 4*. The electricity network is within Essential Energy's jurisdiction.

The rating of the incoming supply is unknown.

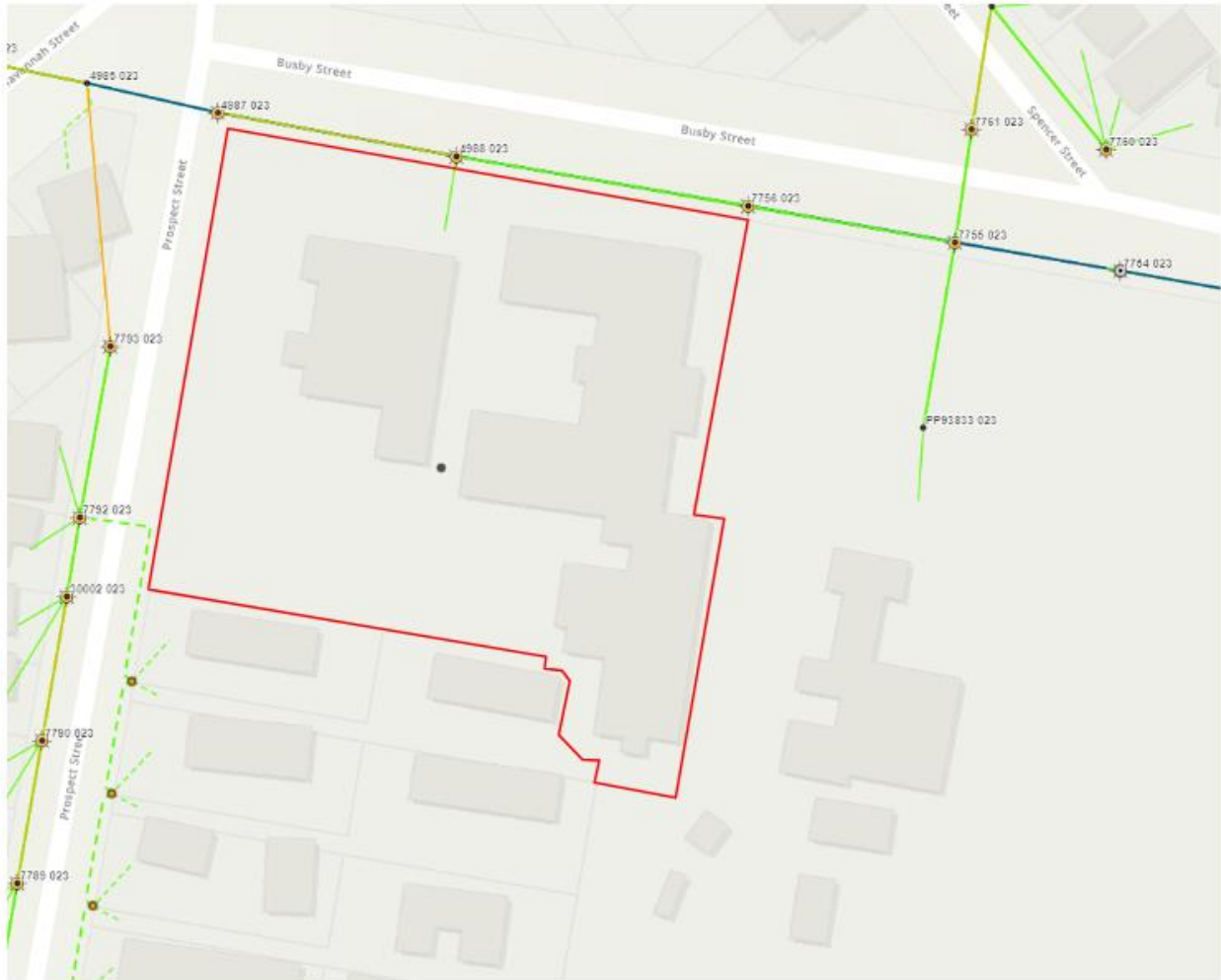


Figure 4: Essential Energy GIS Network Diagram



Figure 5: Existing Pole # 4988 023 along Busby Street



Figure 6: Existing Pole Mounted Substation (95-105)

Audits of Essential Energy's GIS (geographic information system) suggests that existing substation #95-105 mounted on pole #7756 023 is located along Busby Street. The pole mounted substation is rated at 300 kVA and it is feeding several developments in the area including the existing development on 50 Busby Street. The substation is around 140 meters from the development site. This information is to be confirmed by Essential Energy. See *Figure 4* for the extract from Essential Energy's GIS.

Figure 5 depicts the existing pole.

The pole mounted substation is shown in *Figure 6*.

2.2.2 MAXIMUM DEMAND CALCULATION

Based on the proposed development of 97 dwellings including 34 townhouses (class 1) and 63 apartments (class 2), a preliminary maximum demand was calculated based on the allowance of 6kVA per living unit excluding the load for EV charging.

The number of EV chargers that will be installed in the development is undecided at this stage, so the calculation is based on the NCC’s requirement to have 100% provisions for EV charging for the class 2 development and the assumption that a load management system will be installed if any EV charging is installed on site. We note that the AS3000 calculation method for the EV charging load results in higher load calculation than the NCC’s method of load calculation. Both methods were presented to the client who accepted the lower load based on the NCC calculation. It must be noted that using the lower NCC’s EV load in the maximum demand calculation will limit the EV charging speed and the available load for EV charging on the development.

The NCC’s provisions for EV chargers is 100% of the carpark spaces for a class 2 development but none for a class 1 development. Thus, in the below maximum demand calculations, we have allowed for the load for 63xEV chargers. The load per charger was assumed to be 12kWh and only charging between from 11:00pm and 7:00am (i.e. 8 hours daily during off-peak times) as nominated in clause J9D4 (2)(b) of NCC2022.

The maximum demand can be summarised in the table below.

	Amps/Ph	kVA
Maximum Demand for 97 dwellings- excluding the load for EV charging provisions	275	
EV Charging as per NCC 2022 (63 EV chargers)	132	
Total Maximum Demand with EV Chargers as per NCC 2022	407	293

Table 1: Maximum demand calculation summary based on the NCC2022 method for the EV charging load.

As shown Table 1, the maximum demands exceed the capacity of a street feed (~200A) which will most likely trigger the requirement for Level 3 augmentation. Due to this, it is anticipated that a new HV padmount substation with a minimum capacity of 500kVA will be required. The final substation size is to be confirmed by Essential Energy and is subject to detailed design and calculations during the design stage as well as input from the client on the allowance for EV charging on the project.

In case the authority dictates the installation of a new padmount substation, the following easements will be required as per Figure 7 below:

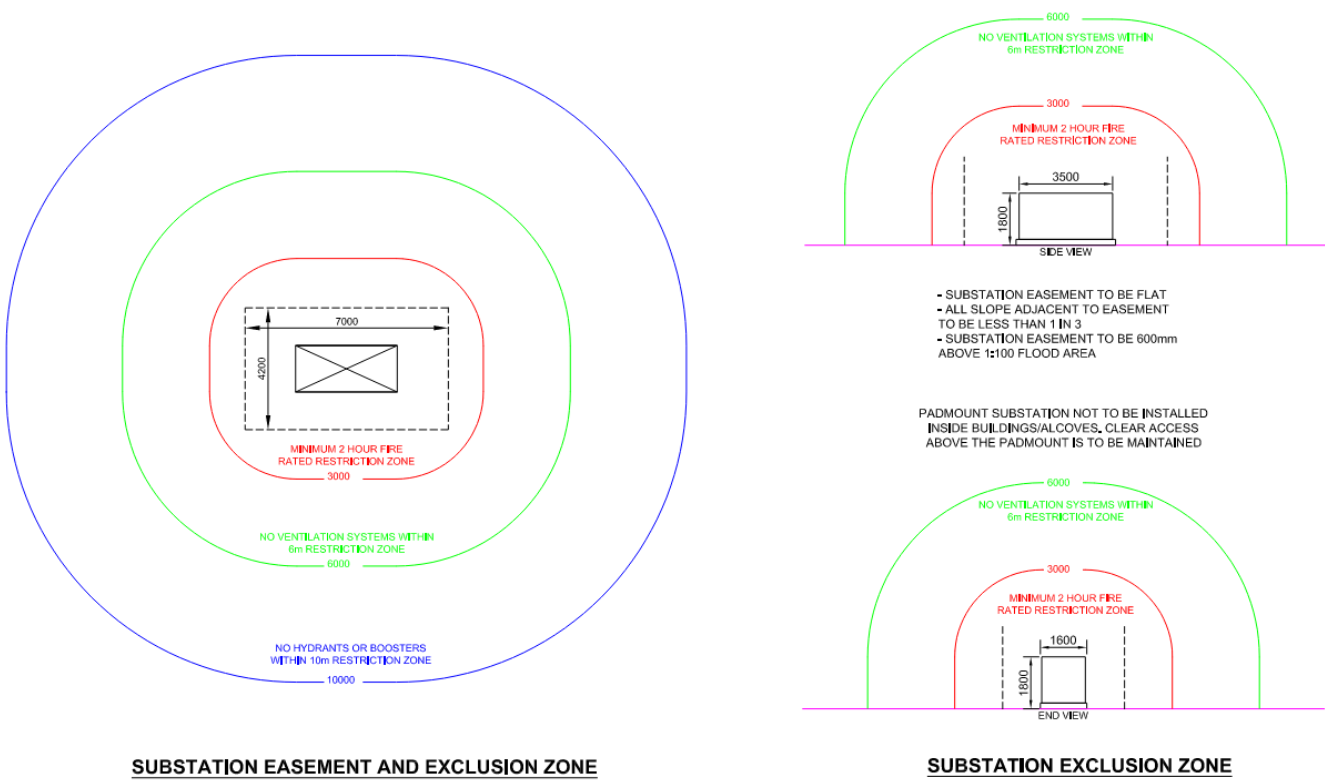


Figure 7: Essential Energy Padmount Substation details

Based on the Essential Energy’s GIS, there is an HV cable running through the existing poles on Busby Street (as shown in Figure 8), which provides an opportunity to connect to the proposed substation directly to the HV network on the street and reduce required trenching. This is however subject to confirmation from essential energy.



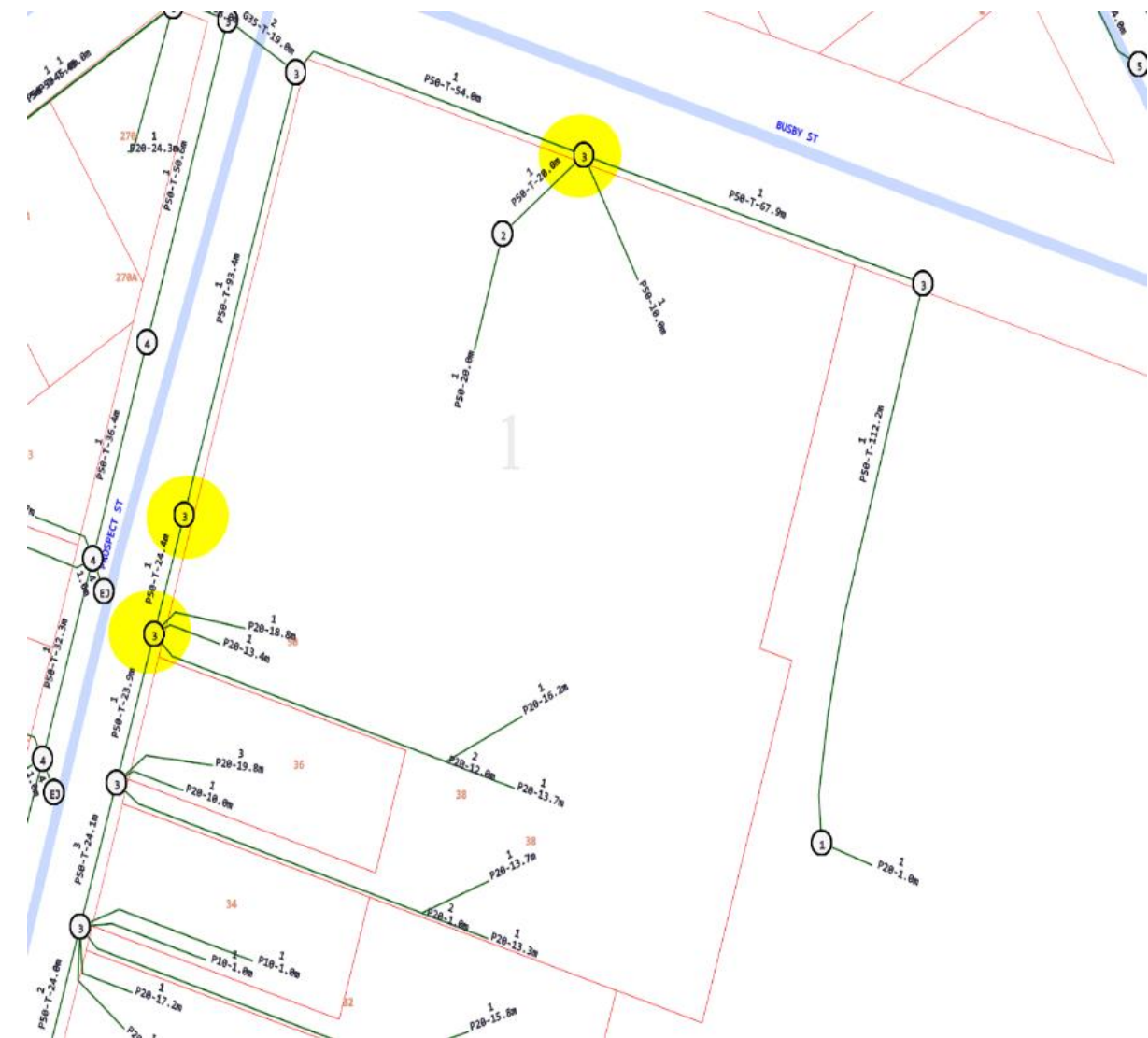
2.2.3 COMMUNICATIONS

Based on the DBYD drawings, the existing communication services in the vicinity of the site are as per the following:

1. NBN
2. Telstra

It appears NBN and Telstra provides incoming fibre to the site premises, which enters the premise from both Busby and Prospect Streets. Any of the existing pits can be used for incoming fibre connections to the premises based on the planning and location of the connection point of the communications infrastructure of the proposed development. Figure 9 shows the potentially usable NBN pits for fibre connection depending on the site planning at the time. Figure 10 shows the available Telstra pit and pipe network around the site.

It must be noted that Telstra does not provide services to individual clients anymore as NBN is the sole provider of communication services in Australia. NBNCo. Often use Telstra pit and pipes to run the fibre cables.



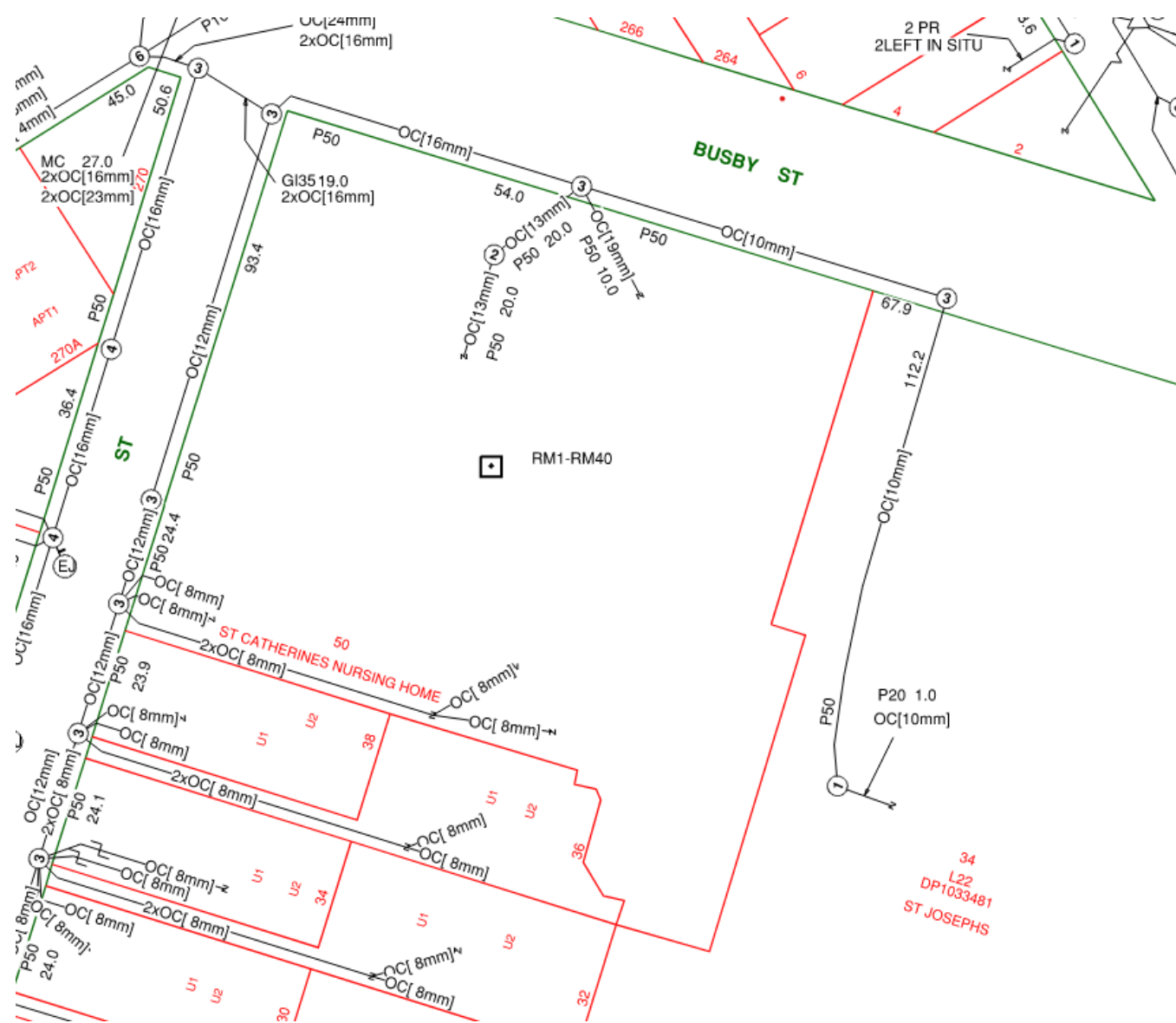


Figure 10: Telstra Cable Plan

For the class 2 apartments, incoming fibre will terminate to a fibre distributor in the communications room, while class 1 townhouses can have separate fibres to the premises subject to approval from NBN. Figure 11 and 12 below show examples of fibre distribution in class 1 and class 2 buildings respectively.

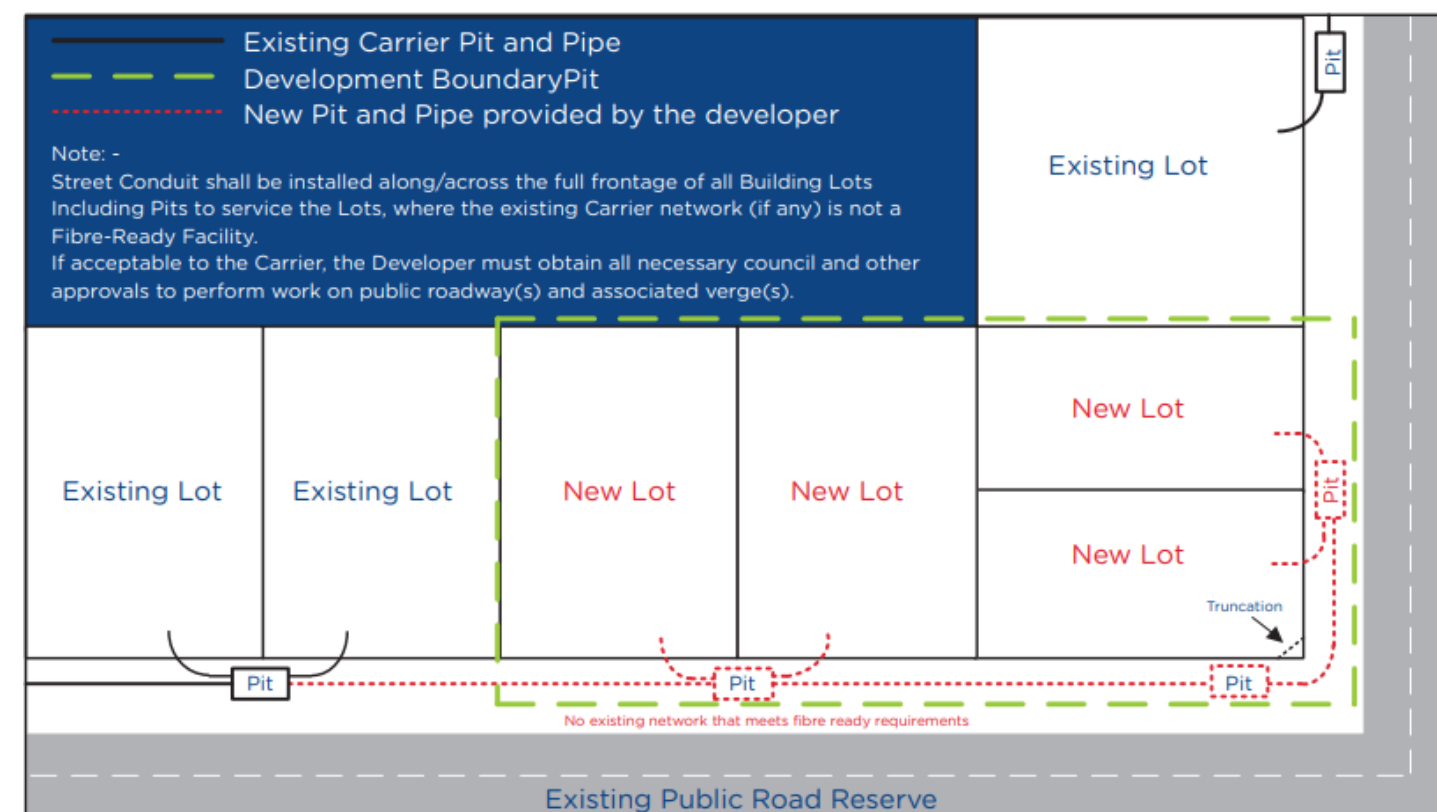


Figure 11: Fibre Distribution to Townhouses.

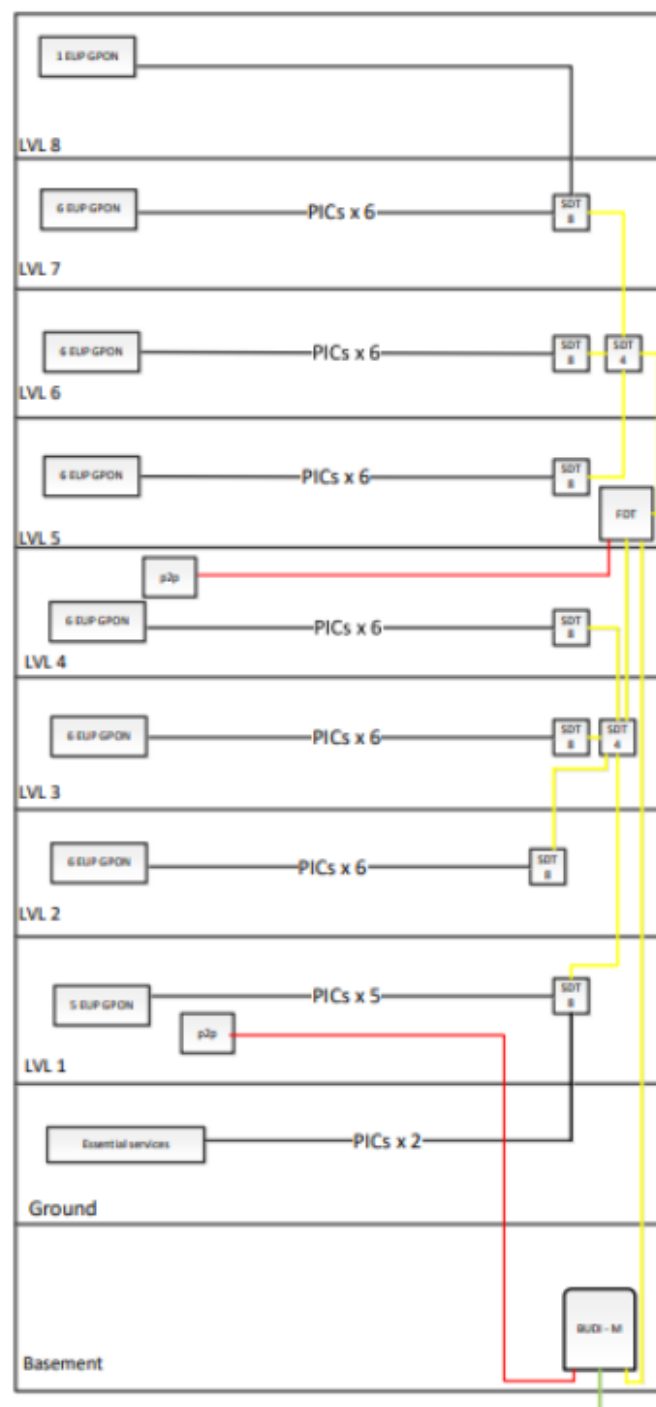


Figure 12: Fibre Distribution in an Apartment Building

3 HYDRAULIC SERVICES

3.1 STANDARDS AND REGULATIONS

The hydraulic design services for the proposed works shall be carried out in accordance with the requirements indicated within the latest editions of all current and appropriate Australian Standard documents, Codes of Practice and Building Regulations approved documents. Wherever a Standard or Code of Practice is referred to, it will imply the latest issue and/or revision applicable at the time of preparing this report. The design will comply with the latest publication of all relevant codes, standards, and regulations, including but not limited to:

Reference	Description
NCC	National Construction Code/ Building Code of Australia (2022)
AS 3500.1- 2021	Plumbing and Drainage – Water Services
AS 3500.2- 2021	Plumbing and Drainage – Sanitary Plumbing and Drainage
AS 3500.3- 2021	Plumbing and Drainage - Stormwater Drainage
AS 3500.4- 2021	Plumbing and Drainage - Heated Water Services
AS 2419.1- 2021	Fire Hydrant Installations
AS 2941- 2013	Fixed fire protection installations – Pump set installations
AS 5601- 2013	Gas Installations

Authorities

Ensure that the design and documentation, installation works, tools used, and the materials supplied and the work installed comply with codes, rules and regulations of the statutory and Local Government Authorities, including but not limited to:

- Fire and Resue NSW
- Gas Authority Rules and Regulations
- Bathurst Regional Council (BRC)
- NSW Office of Department Fair Trading

3.2 HYDRAULIC SERVICES SCOPE

In developing the site analysis, the report will identify the following key points:

- Incoming water supply and water pressure.
- Sewer connection.

It is understood that the client aspires for the site to be fully electrified, meaning there is no proposed natural gas to the site. As such, this report does not go further to investigate the natural gas infrastructure.

3.2.1 WATER SERVICE

Investigations utilising the Bathurst Regional Council infrastructure map indicates that the site has frontage to multiple water mains:

- 1x water main on Busby Street; and
- 1x water mains on Prospect Street.

It is noted that the sizes of the council service identified below had not originally been indicated on the plans provided, however, had been confirmed over the phone by council. Both the fire hydrant and potable water requirements for all sites are served off these mains.

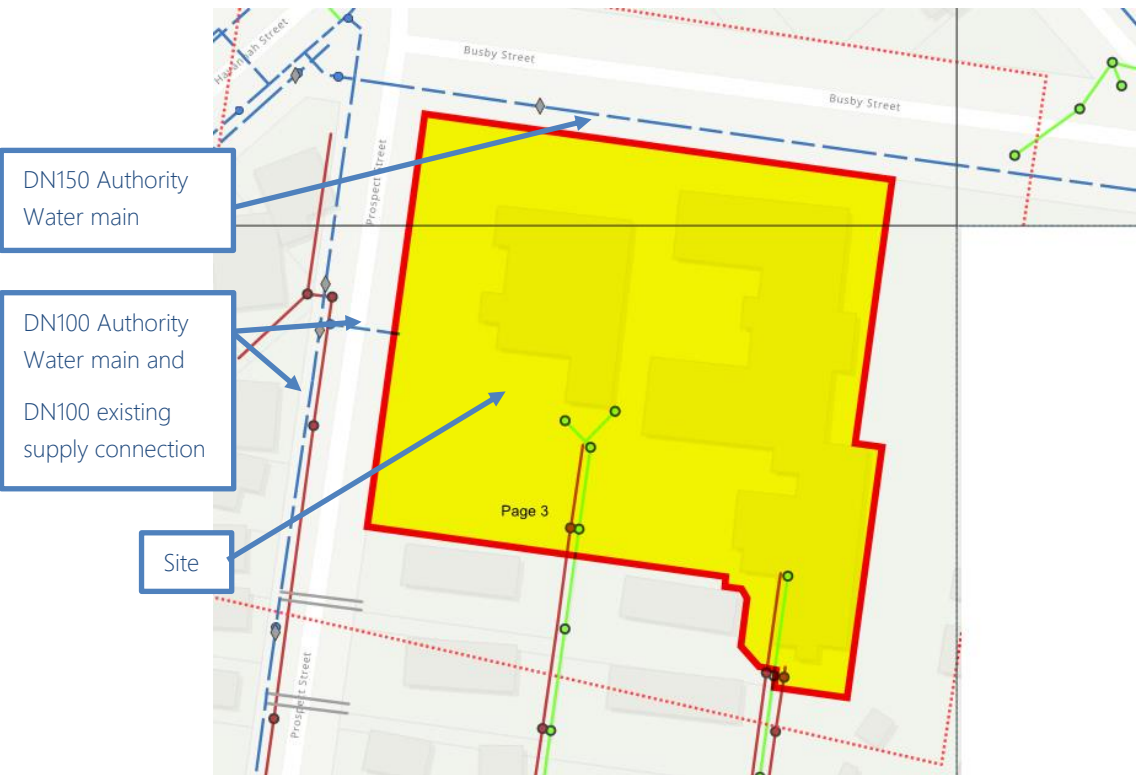


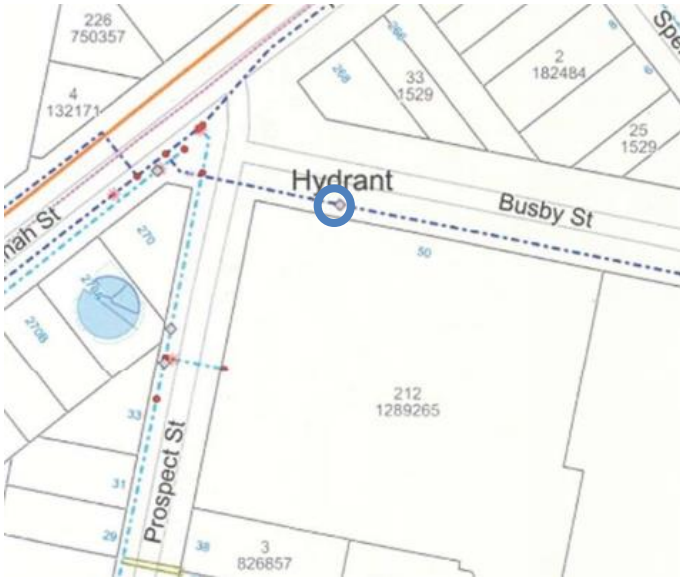
Figure 13: Bathurst Regional Council Infrastructure map (Water, Sewer, Drainage) – Water Supply

The BRC Infrastructure map indicates that the site has an existing water main connection to the Prospect Street water main. This is supported by a street view observation of the water meter as indicated in the infrastructure map (see snapshot below):



Figure 14: Street view of site master water meter along Prospect Street

As part of the information sources made available to JHA, a water pressure enquiry was undertaken on the council street fire hydrant located on Busby Street, in which the results were received on 3rd July 2023. The location of the hydrant is as per the snapshot and the results tabled in the images below:



Hydrant Flow Rate (controlled)		Hydrant Pressure (corresponding to the controlled flow)
litres/second	litres/minute	kPa
11.0	660	Maximum Flow
10.0	600	50
5.0	300	275
Zero discharge		350

Figure 15: Location of Water Pressure Enquiry along Busby Street and its result.

Furthermore, an external double-headed fire hydrant is observed within the property boundary, located on the North-East corner of the site. This hydrant would have a separate connection into the water main on Busby Street.

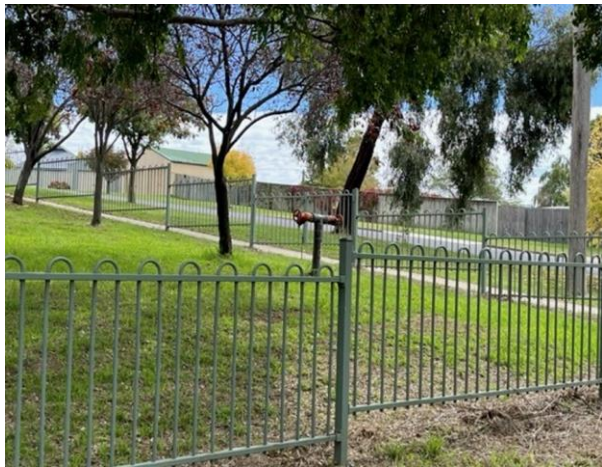


Figure 16: Existing external fire hydrant (NE Corner of site)

Potable Water Service

It should be noted that the make-up of the apartments and townhouses (i.e. 1-bed, 2-bed, 3-bed etc) is yet to be developed as the masterplan is at concept stage.

JHA have made assumptions on the apartment/townhouse make-up and have assumed that a single water supply for the entire development will be provided with the potable water usage calculations below:

- Average daily demand – 38.0 kL/day
- Average water flow – 0.5 L/s
- Peak flow demand – 2.3 L/s

In consideration of the average water flow and peak flow water demand, the expected pressure from the water main is between 275 kPa and 350 kPa.

Due to the expected pipe friction loss and elevation head loss, to maintain a 250 kPa (industry rule of thumb) pressure at the most disadvantaged fixture, water pumps may be required to serve various portions of the site.

In discussions over the phone with BRC, we have been advised that in-line pumping, directly from the water main is not permitted, and the introduction of a potable water break tank would need to be implemented so as to not disrupt the pressure within the council water mains.

Fire Hydrant Service

Should any of the proposed new buildings exceed 500 sqm in total floor area, under NCC 2022 Section E1D2, a fire hydrant system is required to serve that building.

As a maximum of 10-11 L/s is available at the Busby Street water main, the maximum number of hydrants able to operate off this main simultaneously is one (1).

If any of the buildings meet one of the below criteria, the number of fire hydrants required to operate simultaneously, is two (2), which requires a water supply of 20 L/s. See excerpt of AS2419.1 -2021, Table 2.2.5(B):

- Greater than 1,000 sqm and less than two storeys;
- Greater than 500 sqm and greater than two storeys.

NCC building classification	Fire compartment floor area, m ²	Number of fire hydrant outlets
NON-SPRINKLER-PROTECTED BUILDINGS		
2, 3, 5 and 9 (having a rise in storeys less than 2)	≤ 1 000	1
2, 3, 5 and 9 (having a rise in storeys less than 2)	> 1 000 ≤ 5 000	2
2, 3, 5 and 9 (having a rise in storeys of more than 2)	≤ 500	1
2, 3, 5 and 9 (having a rise in storeys of more than 2)	> 500 < 5 000	2

Figure 17: AS2419.1 – 2021, Table 2.2.5(B).

Further investigation and discussion between the landowner and Council will be required as the proposal progresses through the planning process.

Furthermore, as noted in the “Potable Water Service” section in this report, discussions over the phone with BRC have confirmed that in-line pumping, directly from the water main is not permitted. Introducing pumps to increase the water supply pressure to meet compliance to AS2419.1 would require a break tank.

3.2.2 SEWER SERVICE

Investigations utilising the Bathurst Regional Council infrastructure map indicates that the site has frontage to two sewer mains located on the southern boundary of the site.

It is noted that the sizes of the council service identified below had not originally been indicated on the plans provided, however, had been confirmed over the phone by council.

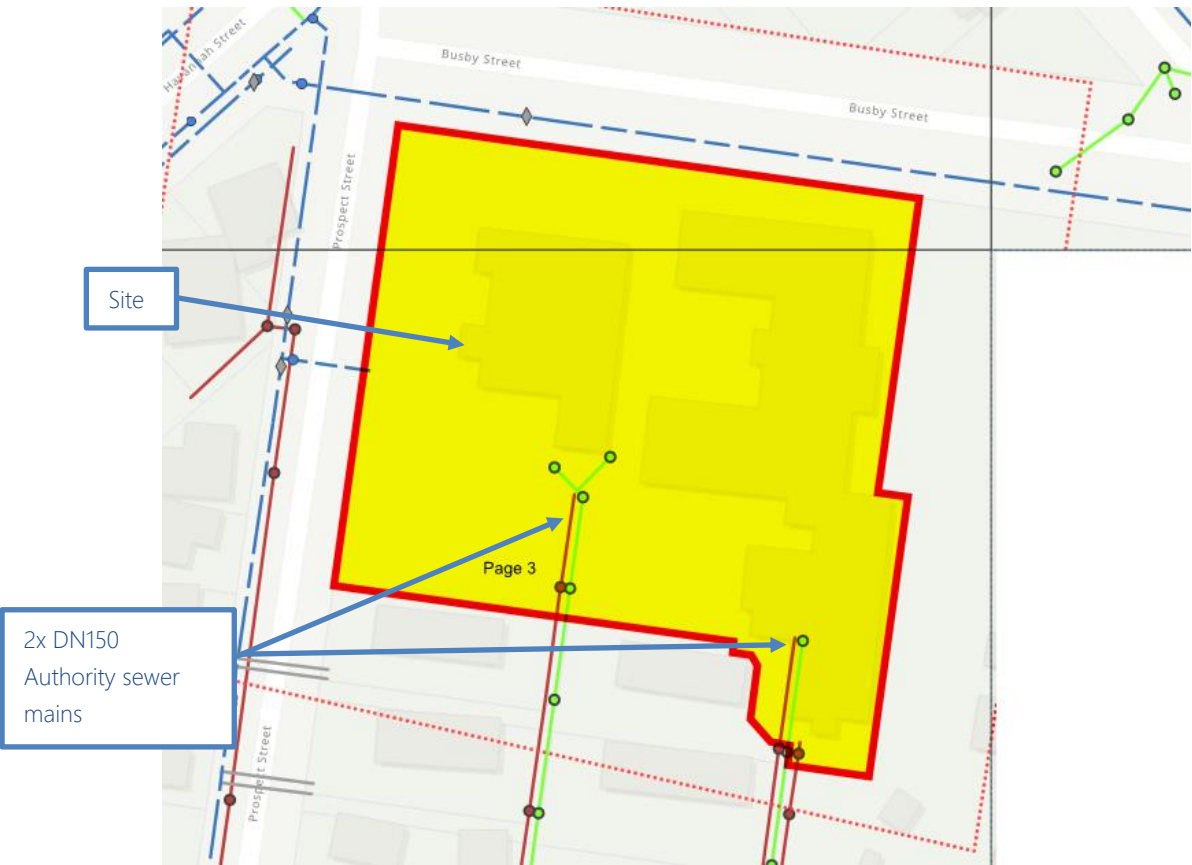


Figure 18: Bathurst Regional Council Infrastructure Map (Water, Sewer, Drainage) – Drainage Supply

The available information indicating the sewer system (survey information and BYDA infrastructure maps) does not provide information relating to the grade (pipe slope), as well as invert levels of these sewer systems.

As a result, the available capacity of the sewer system is not able to be determined.

To calculate the estimated load requirements for the proposed development, JHA have utilised the Water Supply Code of Australia (WSA 02), Sydney Water Edition, to calculate a preliminary Equivalent Population (EP). The calculation equates to 407 EP. See excerpt from Table A.1 from the code below:

residential occupancies

Classification	Unit	EP per Unit	Remarks
Residential			
Single occupancy lots	Lot	3.5	To be used for single occupancy <i>lots</i> down to 300 m ²
Single <i>lot</i> 1000m ²	Gross hectare	25	Approx 70% net which takes <i>roads</i> , parks etc into consideration
Single <i>lot</i> 500m ²	Gross hectare	50	
Single <i>lot</i> 300m ²	Gross hectare	80	
Multiple occupancy lots			
Single occupancy medium density dwelling units	Dwelling unit	3.0	To be used for multiple occupancy <i>lots</i> down to 300 m ²
Medium density (Group housing)	Gross hectare	120	Density of 40 dwelling units/gross ha
Medium density e.g. 3 storey walk-up flats	Gross hectare	210	Density of 70 dwelling units/gross ha

Figure 19: WSA 02 Residential Occupancies – Equivalent Population (EP)

The calculated average daily sewer discharge is approximately 33.5 kL/day.

Based on this equivalent population, Table 4.4 of the WSA 02 code, notes that a single DN 150 sewer main can cater for an equivalent population of 500. In consideration of the multiple sewer connections, and although the proposed development constitutes an increase in sewer load from the existing 62 bed aged care facility, it can be assumed that the sewer system is adequate.

Table 4.4 MAXIMUM EP FOR RETICULATION SEWERS

Pipe Size	Grade		Maximum EP
DN 150	1 in 170	0.59%	500
	1 in 150	0.67%	550
	1 in 125	0.80%	625
	1 in 100	1.00%	725
	1 in 80	1.25%	850
	1 in 60	1.67%	1,050

Figure 20: WSA 02 Maximum EP for Reticulation Sewers

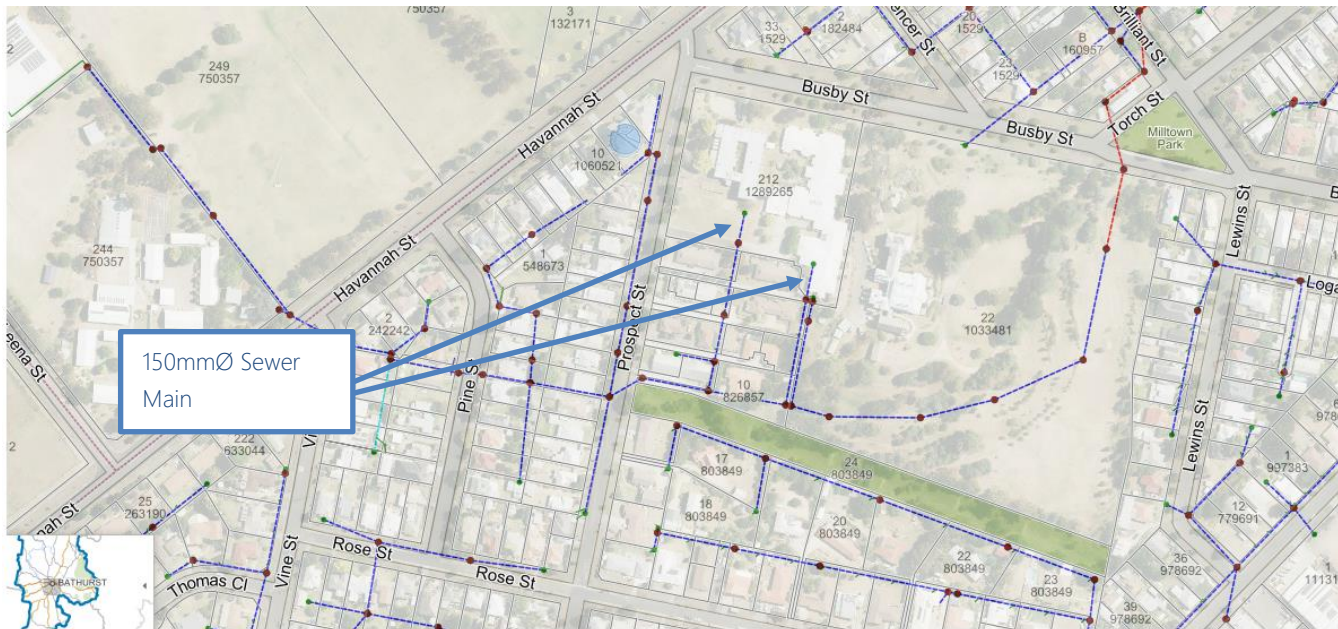


Figure 21: Sewer Main Infrastructure as sent by Council email dated July 5th 2023 (1 of 2)

Lastly, the drone fly through, as well as the survey information, does not appear to indicate a sewer pumping station (SPS) on site, indicating that a gravity sewer line is able to be achieved.

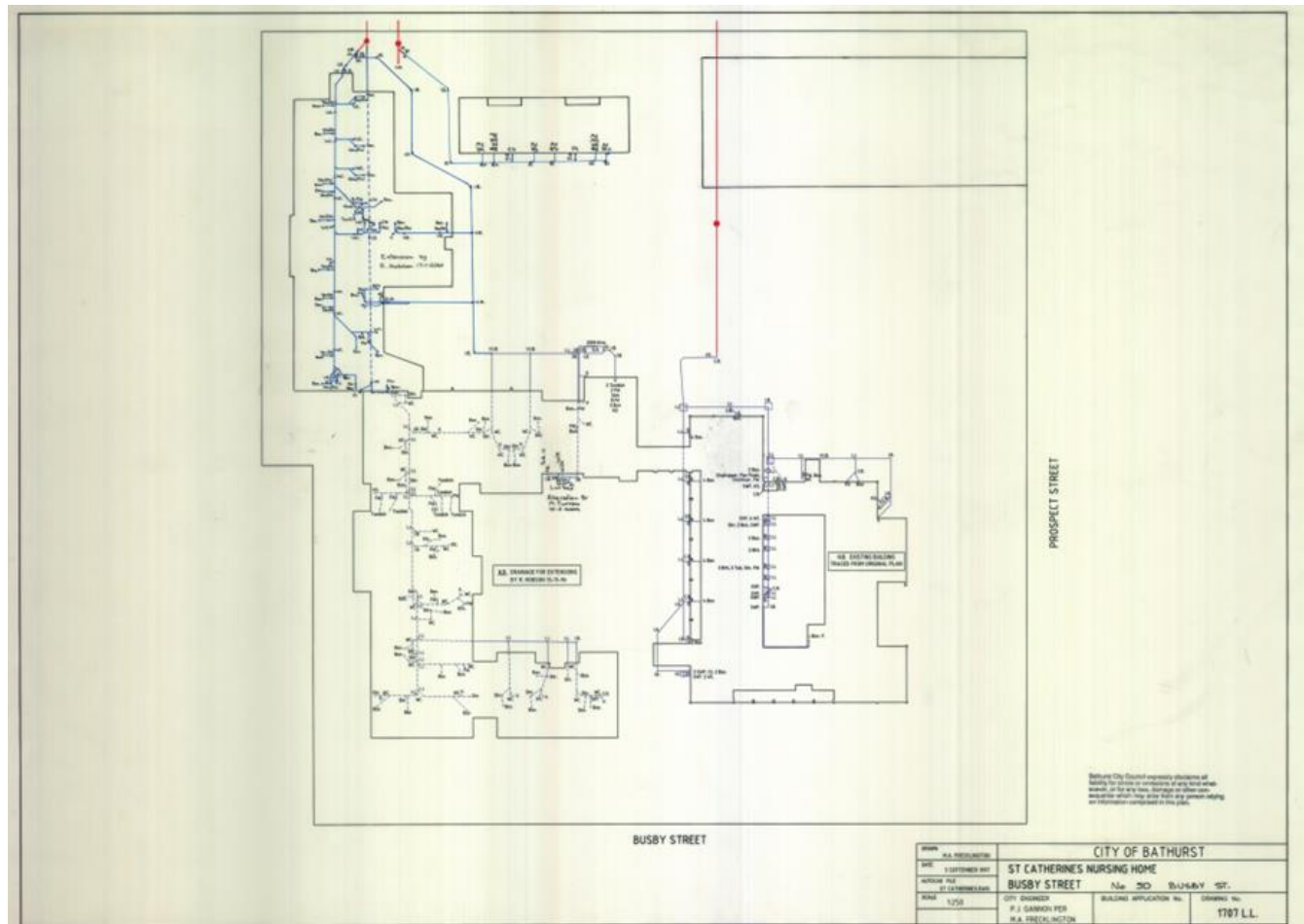


Figure 22: Sewer Main Infrastructure as sent by Council email dated July 5th 2023 (2 of 2)

This further indicates that from a sewer loading perspective, there is ample capacity within the council sewer system to accept the proposed sewer loads of the proposed development.

4 CIVIL SERVICES

4.1 STANDARDS AND REGULATIONS

The civil design services for the proposed works shall be carried out in accordance with the requirements indicated within the latest editions of all current and appropriate Australian Standard documents, Codes of Practice and Building Regulations approved documents. Wherever a Standard or Code of Practice is referred to, it will imply the latest issue and/or revision applicable at the time of preparing this report. The design will comply with the latest publication of all relevant codes, standards and regulations, including but not limited to:

Reference	Description
NCC	National Construction Code/ Building Code of Australia (2022)
ARR	Australian Rainfall and Runoff
AS 2439.1	Perforated plastics drainage and effluent pipe and fittings
AS 2566.1	Buried flexible pipelines
A S2890.1	Parking facilities – Off-street car parking
AS 3500.3	Plumbing and drainage – Stormwater drainage
AS 3996	Access covers and grates
BRC DCP	Bathurst Regional Council Development Control Plan 2014
BRC SMP	Bathurst Regional Council Stormwater Management Plan for the City of Bathurst (Nov 2004)
BRC GEW	Bathurst Regional Council Guidelines for Engineering Works (September 2023)

Authorities

Ensure that the design and documentation, installation works, tools used and the materials supplied and the work installed comply with codes, rules and regulations of the statutory and Local Government Authorities, including but not limited to:

- Bathurst Regional Council (BRC)
- Transport for New South Wales (TfNSW)

4.2 CIVIL SERVICES SCOPE

In developing the site analysis, the report will identify the following key points:

- Review local Government requirements including review of site flooding constraints, stormwater infrastructure, flood zoning (where possible) and overland flow.
- Provide initial estimates of onsite detention and retention requirements.
- Highlight existing and possible upgrades associated with the proposed project scope

4.2.1 EXISTING STORMWATER SYSTEM

The site falls predominately from the west to the east and is located high up within the catchment, The site consists of two large buildings, driveways, drop off areas and parking as well as associated landscaping areas, which results in an approximate built upon area between 50-60% of site. Refer to *Figure 23* for the contour plan.



Figure 23: Site Contour Plan (Mecone Mosaic)

The detailed survey (ref: 8073_001 Rev 2, dated 28/03/2023) indicates a stormwater pit and pipe system serving the site, and although no pipe information is provided in the survey, BRC have verbally confirmed that the pipe system within Busby Street is a 375mm piped system. In addition, there appears to be two 3.0m wide drainage easement running through the southern properties which benefit the subject property. Referring to the BRC stormwater network maps, inter-allotment pipework is nominated within these easements which drain to a strip of council land to the south. Refer to *Figure 24* and *Figure 25* for location. Further investigation should be undertaken to confirm the size, depth, and state of repair of the inter-allotment pipework.

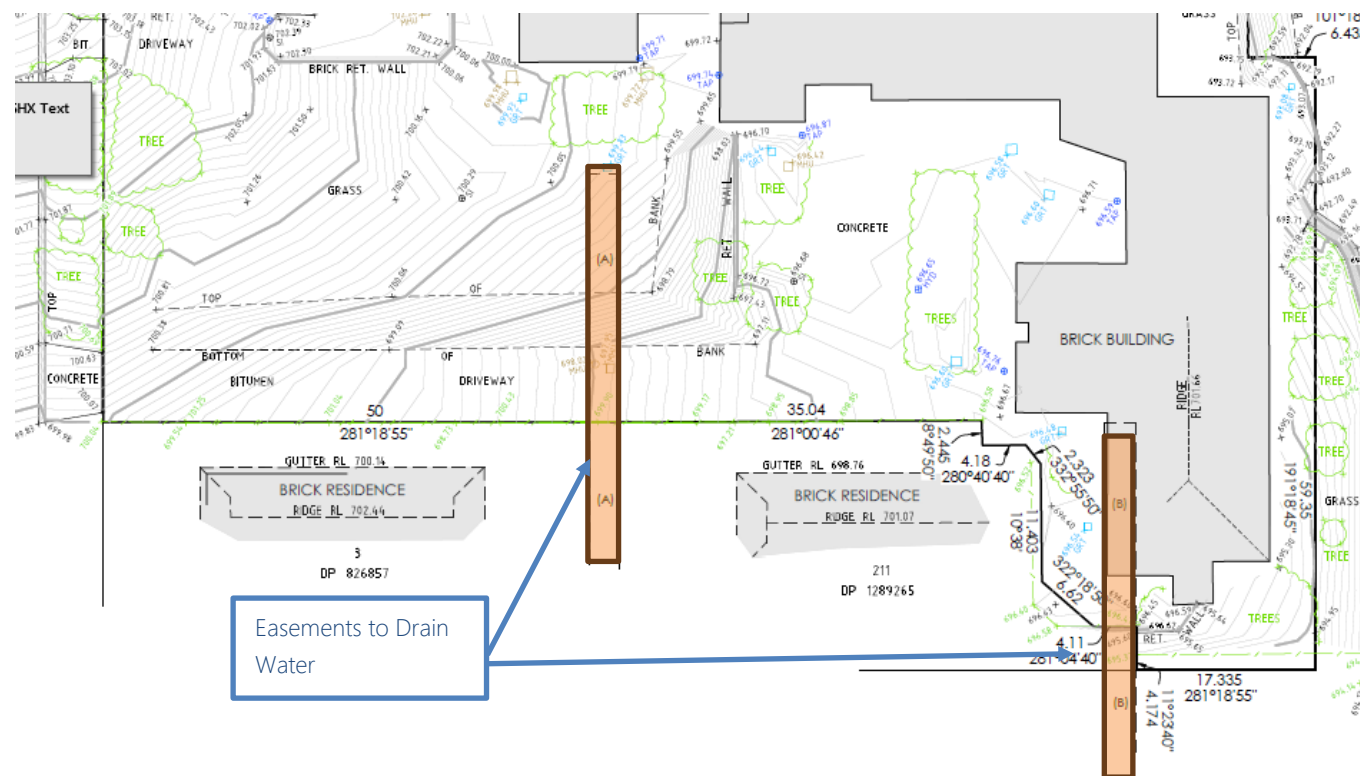


Figure 24: Easements to drain water, 3.0m Wide (Ref: 8073_001 Rev 2, dated 28/03/2023)

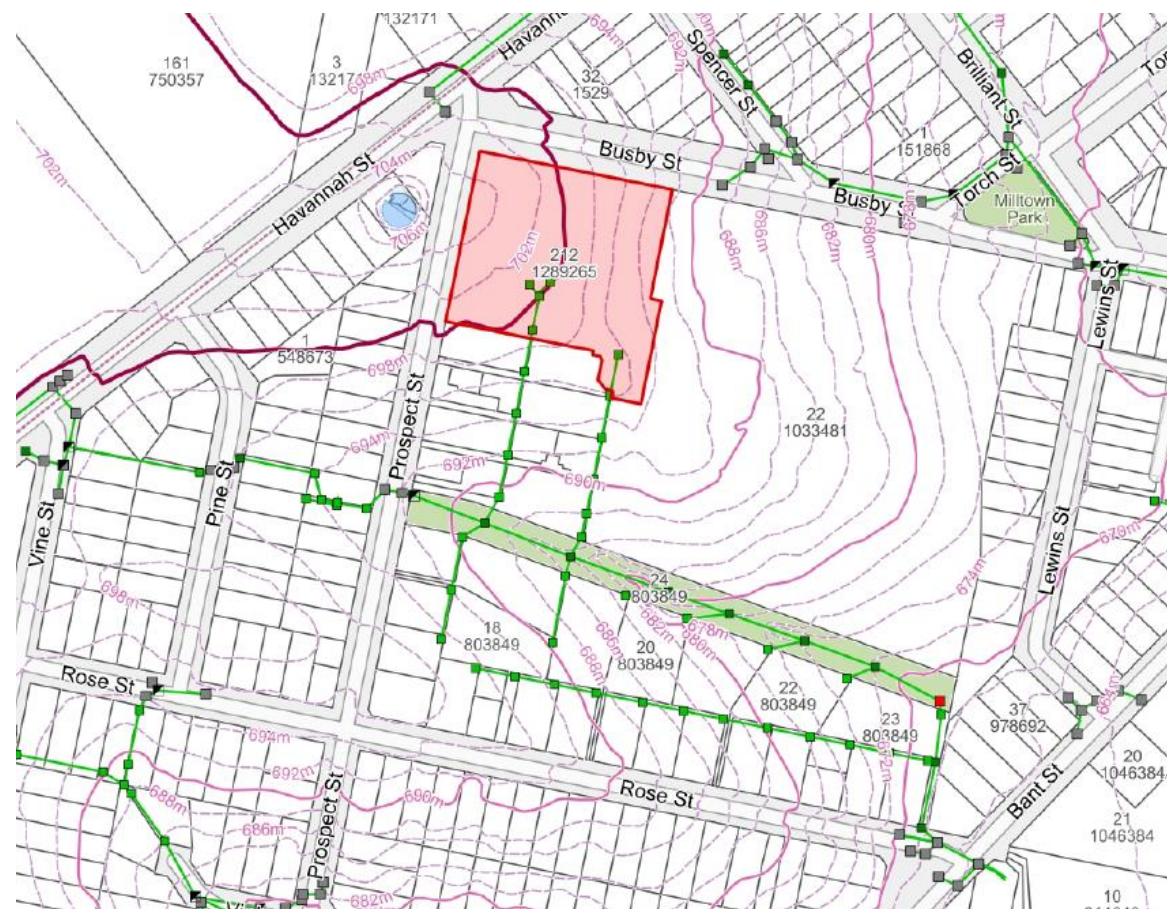


Figure 25: BRC Stormwater Network Maps

In addition to the inter-allotment drainage easements, the BRC stormwater network map also shows that there is a kerb inlet pit within Busby Street, close to the northeast corner of the site which BRC have verbally confirmed is served by a 375mm pipe within the road reserve. From a review of the survey and Google Maps Streetview it also appears that there is a kerb inlet pit along the frontage of the development site which is not indicated in the BRC mapping. Figure 26 shows the boundary pit stormwater pit at the lowest point of the site, adjacent to the kerb inlet pit.

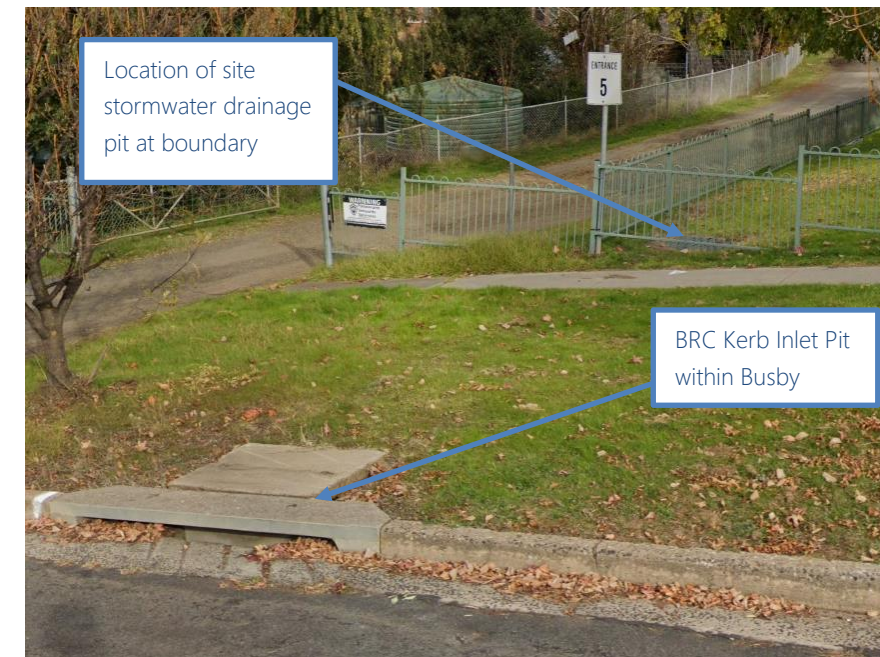


Figure 26: Busby Street Streetview (Google Maps)

4.2.2 PROPOSED STORMWATER SYSTEM

JHA have contacted BRC for confirmation of the stormwater controls for any redevelopment of the land. The response from BRC is shown in **Appendix A**.

On-Site detention (OSD)

BRC have advised that OSD is not a specific requirement within BRC guidelines. However, it may need to be considered should that capacity of the existing system be limited. As highlighted above, the site drains to the upstream end of the inter-allotment and BRC stormwater pipe systems. BRC have verbally confirmed that the pipe system within Busby Street is a 375mm piped system. Based on the site being located high on the catchment and the steep grade of the BRC pipe system, JHA do not believe there should be any pipe capacity issues at this point of connection, given the site currently houses a 62 bed aged care facility with extensive impervious areas.

However, if it is proposed to connect to the inter-allotment drainage systems, further survey investigation is required to confirm the diameter of the pipework to confirm capacity.

Stormwater Treatment/Conservation

Given the proposal is still at concept stage and not yet at detailed design, the design of the stormwater system is yet to commence. It is noted that stormwater treatment and rainwater harvesting is not specifically required in BRC's guidelines. However, JHA have reached out to the BRC planning division who highlighted that water sensitive urban design (WSUD) incorporating stormwater treatment is in the early stages of adoption for this type of development and may be required depending on finalising the design.

If the development triggers the requirements for stormwater treatment, then a system that meets the following minimum percentage stormwater pollutant reduction targets as shown in *Table 2*.

Pollutant	% Post development average annual load reduction
Total Suspended Solids (TSS)	60
Total Phosphorus (TP)	45
Total Nitrogen (TN)	40
Gross Pollutants (litter)	90

Table 2: BRC Required pollutant reduction targets.

Typically, this shall be achieved using engineered devices such as filter baskets, filter cartridges (possibly located within the OSD system) and gross pollutant traps. However, BRC would be looking for a closer integration of WSUD stormwater treatment systems into landscaping such as bioretention systems, raingardens and swales. The design of such systems shall allow consideration to safety around ponding of water and the implication on the end user.

Stormwater System Capacity

Reviewing the Concept Masterplan (Ref: CHC 2023), provided in the fee proposal briefing documents, it appears the proposal involves a residential apartment building and townhouses, located across the full extents of site.

As previously noted, the proposal is still at concept stage and has not yet progressed through detailed design, however given the 375mm piped system, current impervious areas and the roof surfaces of the multi-building 62 bed aged care facility, the stormwater system is expected to be able to cater for a proposed development of 97 new dwellings.

This stormwater management system should be considered holistically into the final architectural layout noting the constraints highlighted above.

4.2.3 EXISTING COUNCIL FLOOD STUDIES

The BRC DCP 2014 provides flood planning maps for the urban areas. As discussed in Section 4.2.1, the site is located high up within the catchment and is unlikely to be impacted by overland flow or mainstream flooding. The nearest flooding, highlighted by BRC is within Queens Charlottes Creek to the west. Figure 27 shows an extract of the Council Flood Planning Map, whilst Figure 28 shows the distance to the nearest flood extents from the subject site.

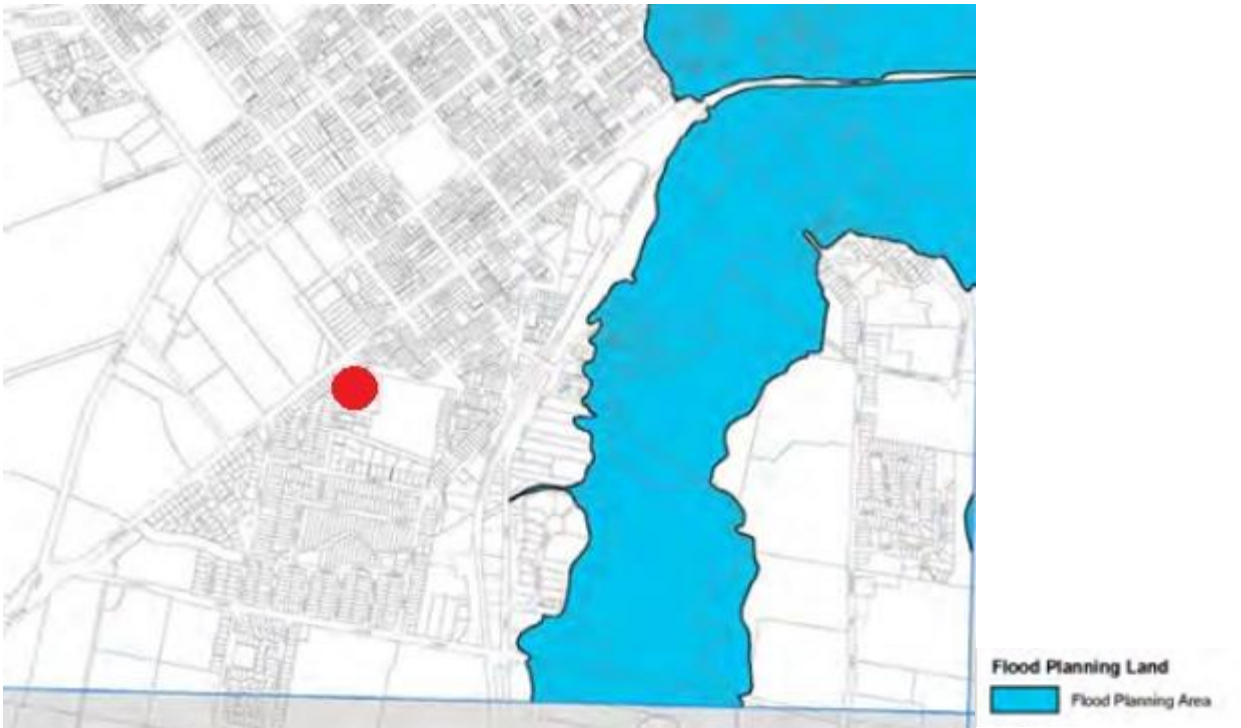


Figure 27: BRC Flood Planning Map (BRC DCP 2014 -Map No. 39)



Figure 28: Approximate Distance to Flood Extents (Mecone Mosaic)

Matthew Beament

From: Alexandra Ignacio
Sent: Thursday, 15 February 2024 4:29 PM
To: Matthew Beament
Subject: FW: Bathurst - Stormwater Information [SEC=OFFICIAL]
Attachments: GIS Sketch - Stormwater - 50 Busby.pdf

From: David McKellar <David.McKellar@bathurst.nsw.gov.au>
Sent: Thursday, February 15, 2024 4:12 PM
To: Alexandra Ignacio <Alexandra.Ignacio@jhaengineers.com.au>
Subject: RE: Bathurst - Stormwater Information [SEC=OFFICIAL]

Afternoon Alexandra

Please be advised that Council's engineering requirements regarding storm water disposal are in accordance with Bathurst Regional Council's Guidelines for Engineering Works (link provided below).

www.bathurst.nsw.gov.au/files/assets/public/v/1/planning/development/eng-guidelines-drawings/engineering-guidelines-21-09-23.pdf

Onsite detention is not a specific requirement within Council's Guidelines. However, may need to be considered should the capacity of the existing system be limited.

Water Quality and Rainwater Harvesting again are not specifically required by Council's Engineering Guidelines though should be discussed with Council's Planning Section.

Please find attached GIS mapping sketch indicating the existing storm water systems in the proximity of the development site. There is three (3) potential discharge points, one in Busby Street and two within the development site. Note independent survey is required to ascertain pipe sizing, real world location and level data.

Regards Dave

David McKellar
Subdivision Supervisor
Bathurst Regional Council
Wiradjuri Country
158 Russell Street Bathurst 2795
P: 02 6333 6109
W: www.bathurst.nsw.gov.au



From: Alexandra Ignacio <Alexandra.Ignacio@jhaengineers.com.au>
Sent: Thursday, February 1, 2024 3:54 PM
To: Council <council@bathurst.nsw.gov.au>
Cc: Matthew Beament <Matthew.Beament@jhaengineers.com.au>
Subject: Bathurst - Stormwater Information

CAUTION: This email originated from outside BRC. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi,

We are working on a due diligent report for stormwater infrastructure for the site located at 50 Busby St, South Bathurst NSW 2795.

Could you please provide us with information for stormwater design?

We would like to know if it is needed On-site Detention, Water Quality (WSUD), Rainwater Harvesting and/or any other possible requirement related to stormwater for the site mentioned. If so, do you have any design guidelines that may be able to assist? We haven't found any specific guidelines/ information for these questions stated on Bathurst Regional Development Control Plan 2014 and Bathurst Regional Council - Guidelines for Engineering Works online.

We have also reviewed the Flood Planning Maps on Bathurst Regional Development Control Plan (2014) and it appears that the site is located outside the flood extents. Please confirm whether there are any updated flood reports which have superseded this information.

Finally, do you have any stormwater network maps of the council infrastructure in the area?

We appreciate your help.

Regards,

Alexandra Ignacio

Civil Design Drafter



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