APPENDIX G

Civil Engineering Services Report

Prepared by:

Burchills Engineering

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332-334 Water St, Fortitude Valley

Civil Engineering Report

Client: Pellicano Living Pty Ltd
Project No: BE220298
Document No: BE220298-RP-CER-00

December 2023

Document Control Record

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Signed:	
Date:	08/12/2023

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Date:	08/12/2023

Version No.	Description	Date	Prepared	Approved
00	Original Issue	08/12/2023	CH	RKB

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1. Introduction

Burchills Engineering Solutions have been engaged by Pellicano Living Pty Ltd to prepare a Civil Engineering Report to accompany the PDA Development Permit for a Material Change of Use, involving Multiple Dwelling, Short-Term Accommodation and Centre Activities (Food and Drink Outlet, Office and Shop) located at 332-334 Water Street, Fortitude Valley.

The subject site is situated within the Brisbane City Council (BCC) and the Bowen Hills Priority Development Area, and is therefore subject to assessment against the Bowen Hills Priority Development Area Development Scheme ("Development Scheme"). Under the Development Scheme, the site is located within the following designations:

- Urban Area – as designated in the PDA Structure Plan;
- Mixed Use Zone – as designated in the PDA Zoning Plan; and
- Precinct 2 – as designated in the PDA Precincts Boundaries.

This report determined that the site is suitable for the proposed development, in relation to matters concerning civil engineering design parameters and site constraints. The development can be undertaken in accordance with the current Brisbane City Council guidelines, SEQ Water Supply and Sewerage, Design and Construction Code and best management practices.

1.1 Scope of Report

This report describes the existing physical conditions of the site, and suitability for the proposed development with particular respect to:

- Project Identification;
- Proposed Development;
- Site Earthworks;
- Access and Traffic;
- Stormwater Drainage;
- Water Supply;
- Sewer Reticulation;
- Electricity and Telecommunications Supply.

This report represents an assessment of the facts and circumstances pertaining to these matters, as they are known to the writer at the time of preparation.

2. Project Identification

2.1 Real Property Description

The subject site is located at 332 - 334 Water Street, Fortitude Valley QLD 4006, more formally described as Lot 1 on RP10553, Lots 11 and 12 on RP10552, Lots 5, 6 and 94 on SP266307, Lot 13 on RP81335, Lot 955 on SP206840 and Easement A on SP143465. The proposed development involves 475 residential dwellings across two (2) towers ranging between 1, 2 and 3 bedroom dwellings. The towers have a building height of 31 storeys, which includes a communal rooftop terrace. Commercial and retail uses are also proposed, along with expansive public plaza spaces on the ground plane. The commercial Ground Floor Area (GFA) summates to 2,667m^2, with the majority of that being designated office space. A 46m^2 portion of the commercial space will be designated to food and drink services.

The site which is to be developed is shown on the Design Concept Plan prepared by Woods Bagot which is included in Appendix B of this report. A DBYD is included within Appendix A of this report. The location of the subject site is shown on Figure 2.1 below.

Figure 2.1 Site Locality Plan

2.2 Physical Description

The site currently has road frontage with Water Street on the southern boundary, Brunswick Street on the western boundary and neighbouring residential tower on the eastern boundary. The site is generally flat throughout due to the demolition of previous structures. The site is approximately 4.6m AHD with a slight grading from the north-western corner down to the south-eastern corner of Water Street. Currently, the subject site consists of hard stand podium and ground level slab, which ties into existing council verge/footpath.

The site is bounded by the following existing land uses:

North: Multi-storey commercial development (Emerging Community Zone);
South: Water Street;
East: Multi-storey residential unit complex (Emerging Community Zone); and
West: Brunswick Street.

2.3 Proposed Development

The subject site is proposed to be developed into a residential development consisting of two residential apartment towers as well as approximately 479 carparks. The proposed development layout is shown below in Figure 2.2, and on the Design Concept Plan prepared by Woods Bagot shown within Appendix B.

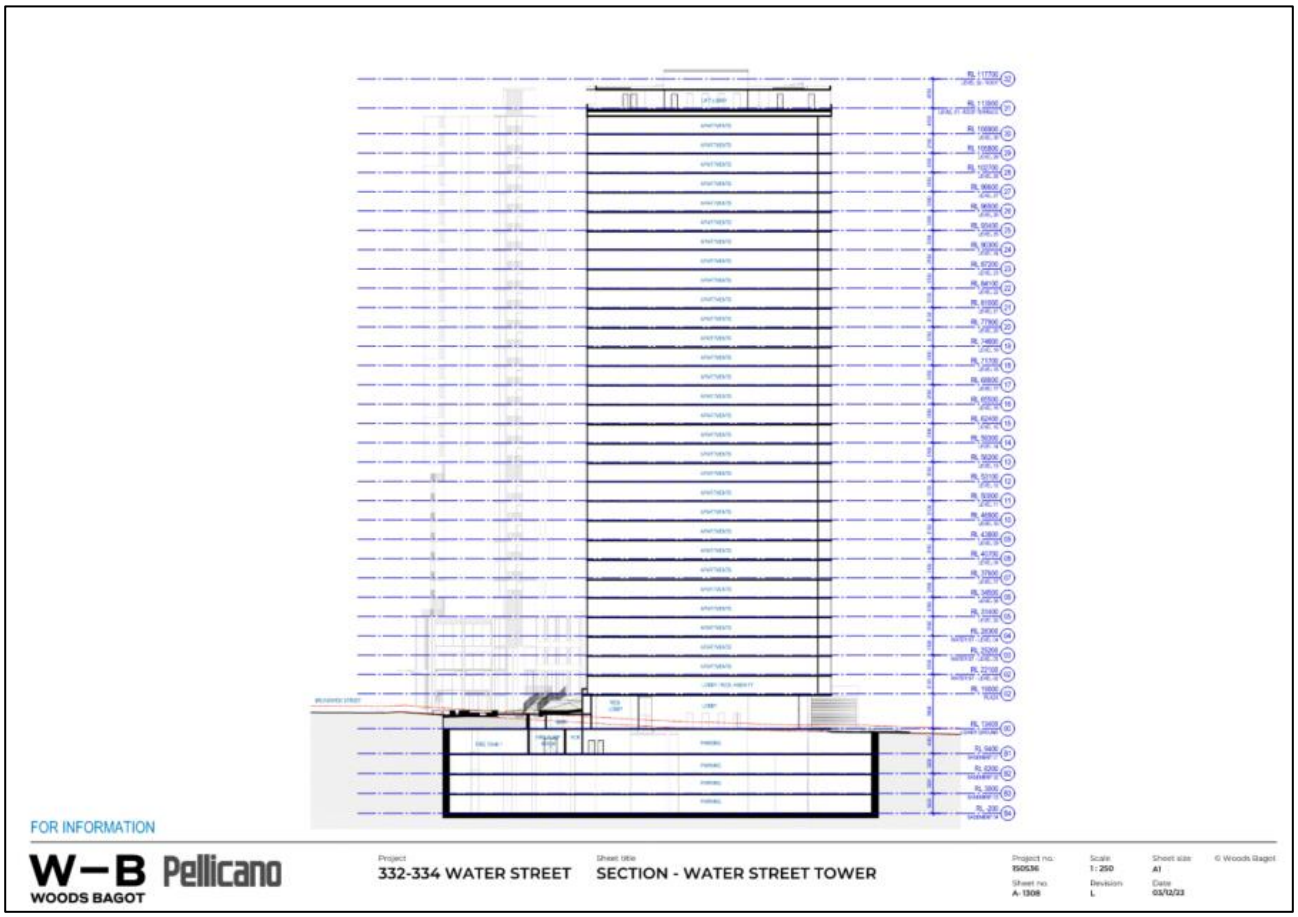


Figure 2.2 Design Concept Plan Water Street

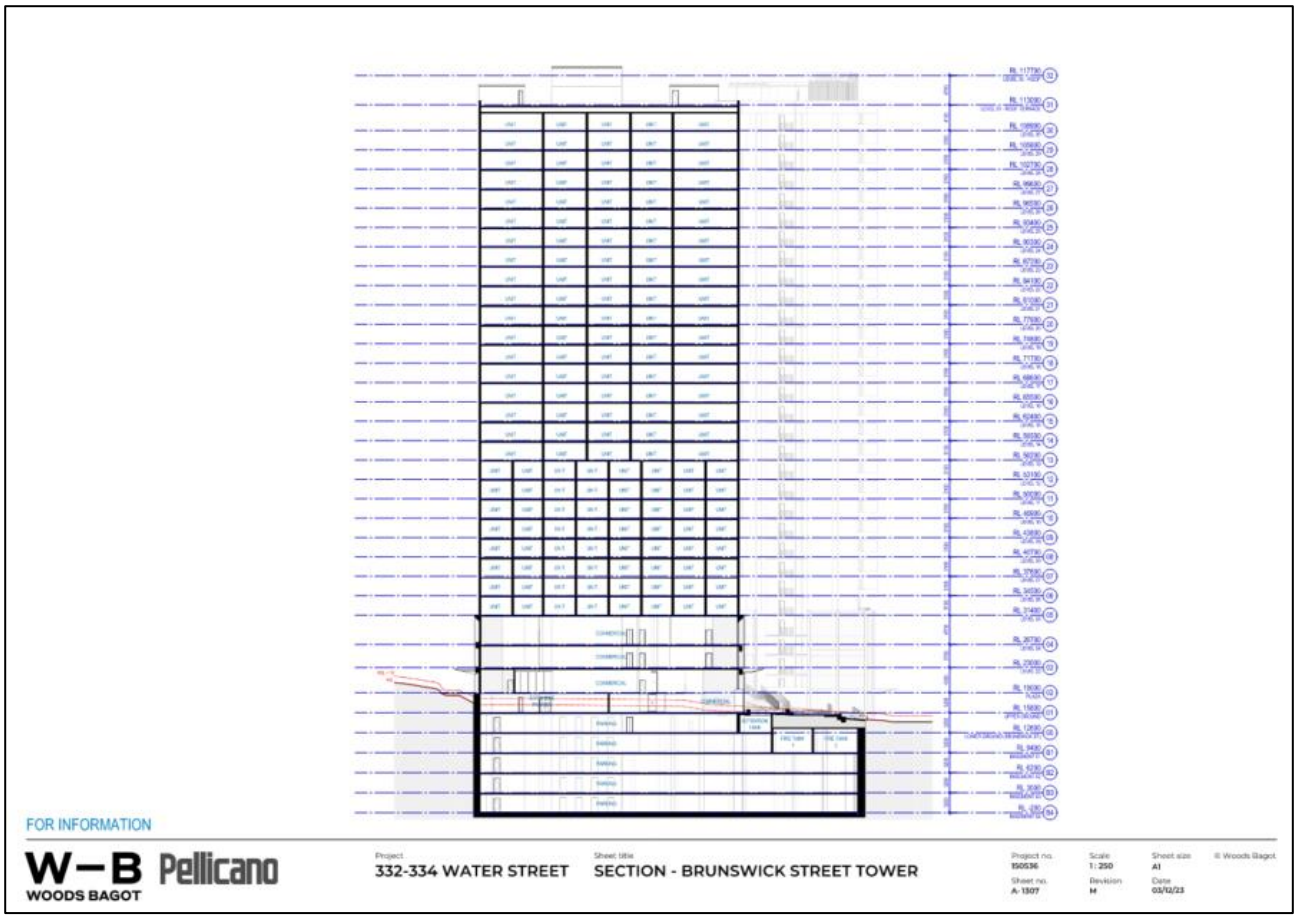


Figure 2.3 Design Concept Plan Brunswick Street

Based on the SEQ Water Supply and Sewerage Design & Construction Code, the Equivalent Tenements (ET) and Equivalent Population (EP) for the proposed development is shown in Table 2.1.

Table 2.1 Development Summary

Use	Unit	Total Units/ GFA	EP's/Ha	Total EP
Mixed use zone — Inner city zone precinct – Water	295.5	2,736 m^2	295.50EP/ Ha	80.85
Attached Dwelling (Apartment)	1	475 units	1.75EP/Unit	831.25
			TOTAL	912.10
Mixed use zone — Inner city zone precinct – Sewer	310.5	2,736 m^2	310.50EP/Ha	84.95
Attached Dwelling (Apartment)	1	475 units	1.75EP/Unit	831.25
			TOTAL	916.20

3. Site Earthworks

It is anticipated that earthworks associated with the proposed development will include cutting and filling associated with trenching of services, basement excavation, and alterations to existing levels to allow for a level building pad and a basement carpark.

3.1 Sediment and Erosion Control

The best management practices will be implemented according to the IECA Best Practice Erosion and Sediment Control (2008) guidelines.

The following is a procedure of water quality controls to be implemented for the construction stage of the development.

3.1.1 Phase 1 – Basement Dewatering

- A dewatering management plan is to be prepared by a suitably qualified consultant.

3.1.2 Phase 2 – Infrastructure, Building & Roadworks

- The site stormwater pipes and pits shall be installed with drop inlets provided to all pits.
- Provide sediment fences, sandbags or fine mesh cover to all gully pits.
- Monitoring of new stormwater pipes and infrastructure (including the storm water quality improvement devices) to ensure they are free of sediment and debris.
- Maintain shake down and wash down area at entry/exit.
- All disturbed areas are to be surfaced or landscaped/grassed (maintained to minimum 70% ground cover) as soon as practicable after completion of localised works.

3.1.3 Phase 3 – Finishing Works & Defects Liability Period

All erosion and sediment control measures, including sediment fences and inlet traps shall be maintained until completion of surface finishes including landscaping and turfing:

- Maintain sediment fences.
- Attend to landscaped areas to maintain ground cover.

It is to be noted that this report does not address structural or geotechnical aspects of the development. These services are being completed by others and should be read prior to earthworks activities being commenced on site.

4. Access and Traffic

Access into the development is proposed via an entry ramp from Water Street. This ramp will be divided into two lanes; one entry and one exit. The internal basement network will have a width that varies between 5.8m and 6.8m. There will be a combined total of 408 car spaces in the combined basement that both buildings share. SLR have completed a Traffic Impact Statement (Project No.: 620.V31023.00000) dated 11 October 2023. It is imperative that this report be reviewed for further traffic advice.

5. Stormwater Drainage

The stormwater drainage and flooding assessment associated with the proposed development has been prepared in accordance with the Brisbane City Council City Plan 2014 (BCC, 2022) and has referenced relevant guidelines relating to stormwater management to form the conceptual basis of the design strategy. The following outcomes have been made as a result of this report.

Stormwater Quantity

- The Lawful Points of Discharge (LPD) for the site have been defined as the sites southern boundary.
- Runoff produced over catchments A1 and A2 will be conveyed by the internal stormwater network and road infrastructure to the proposed stormwater management devices. From these devices, stormwater will be discharged to Water Street in a controlled manner via kerb adapters.
- Proposed on-site detention required to meet kerb and channel flow limits are as follows:
    - Tank A1: 185m^3
- To satisfy the flood overlay code, the minimum crest level to the basement carparking entrance must be above the 2% AEP overland flow flood level, 12.95 m AHD.
- The building hydraulic consultant should consider a suitable location for the detention tank to surcharge in the event of a blockage or rainfall event in excess of the 1% AEP.

Stormwater Quality

- To achieve Brisbane City Council's Water Quality Objectives, it is proposed to use ATLAN's proprietary treatment devices.
- The required devices are as follows:
    - Catchment A1
        - Six (6) 600x600 ATLAN Stormsacks; and,
        - Three (3) ATLAN Filter Cartridges within one (1) ATLAN Vault Precast Concrete Tank

6. Water Supply

There is an existing DN150 water main which traverses Water Street. It is proposed that the development will gain its potable water supply from this main. The development will also gain its fire slow supply from the same main therefore, dual services will likely be required. It is anticipated that the existing infrastructure has the capacity to service the proposed development. We note that further consultation with Urban Utilities to determine adequacy of main, pipe size and flows will be undertaken at a later date. Hydraulic engineers will conduct their own investigation into the internal mains, which will be coordinated appropriately during subsequent application phases.

A DBYD has been prepared and is included within Appendix A of this report. Details of the proposed water connection are shown on the Water Schematic, Drawing No. BE220298-C500-A, prepared by Burchills Engineering Solutions and included within Appendix C.

6.1 Water Demand Calculation

To determine suitable pipe sizing for the proposed development, water demands are calculated according to the intended new development. The water criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 03-2013 Water Supply Code of Australia, Part 1: Planning and Design.

The water flow parameters shown in Table 6.1, 6.2 and 6.3 required to meet Council's Standards of Service and have been based on Single Supply (Drinking Water Only) Network parameters shown in SEQ Design Criteria Table 6.1.

Table 6.1 Potable Water Supply Demand and Peaking Factor

Property Type	Average Day Demand L/EP/day	Non-Revenue L/EP/day	Peaking Factors		
			MDMM	PD	PH
Attached Dwelling	230	30	1.5	2	3.5
Mixed Use Commercial	**230**	**30**	**1.5**	**2**	**2.8**

Notes:

MDMM Mean Day Maximum Month Demand
PD Peak Day Demand
AD Average Day Demand
PH Peak Hour Demand

Table 6.2 Potable Water Pressure Parameters

Item	Pressure Parameter
Minimum Service Pressure	22 metres (at the property boundary)
Maximum Service Pressure	Target 55 metres (at the property boundary)

Table 6.3 Fire Fighting Parameters

Item	Pressure Parameter
Minimum Residential Mains Pressure (Emergency Fire operating conditions)	12 metres at the main at the property boundary 6 metres elsewhere
Fire Flow High Density Residential	60 L/s for a duration of 4 hrs by up to 5 hydrants
Fire Flow Commercial	30 L/s for a duration of 4 hrs by up to 3 hydrants
Background Demand	2/3 x Peak Hour demand plus 1 x non-residential peak hour demands

The calculated water supply demand for the proposed development is shown in Table 6.4.

Table 6.4 Water Supply Demand Calculations

Use	EP	AD Flow	Non-Revenue	AD (L/s)	PH (L/s)
Attached Dwelling	912.20	230	30	2.74	8.82
Mixed Use Commercial	80.85	230	30	0.23	0.61
			Total	2.73	8.64

Calculations of maximum peak demand and demand multiplier for the residential aspect of the development are based on an allowance of 230 L/EP/day and a peak hour factor of 3.5 for Attached Dwellings and a peak hour factor of 2.8 for Mixed Use Commercial, with the Non-Revenue flows of 30 L/EP/day, as follows:

Maximum Residential Peak Demand = PHF x Demand Rate x EP's + NR

= 3.5 x 230 x 912.20 + (30 x 912.20)

= 716,687.00 L/day

= 8.82 L/s

Demand Multiplier = Maximum Demand / EP's

= 0.0096 L/sec/EP

Maximum Commercial Peak Demand	= PHF x Demand Rate x EP's + NR
	= 2.8 x 230 x 80.85 + (30 x 80.85)
	= 54,492.90 L/day
	= 0.63 L/s
Demand Multiplier	= Maximum Demand / EP's
	= 0.0078 L/sec/EP

7. Sewer Reticulation

There is an existing 150mm gravity sewer house connection on Water Street that runs along the southern boundary of the site. It is anticipated that wastewater generated from the development will be conveyed to this main via the existing 150mm connection.

Details of the proposed sewer connection are shown on the Services Connection Layout Plan, Drawing No. BE220298-C600-A, prepared by Burchills Engineering Solutions and is included in Appendix C. Detailed design and sizing of the development's external sewerage reticulation and connection will be undertaken at the detailed design phase of the development.

It should be noted that the intention of the design is for council access to be maintained to all council owned sewer infrastructure traversing beneath the proposed development. A build over sewer application process will be undertaken ensuring that the purpose of the sewer main is protected.

7.1 Sewer Demand Calculation

The sewer criteria and design parameters are based on the following references:

- SEQ Water Supply and Sewerage Design & Construction Code (SEQ WS&S D&C Code); and
- Water Services Association of Australia – WSA 02-2014 Sewerage Code of Australia, Part 1: Planning and Design.

The sewer flow generation, pipe design parameters, minimum sewer pipe grades and maximum capacity are shown below in Table 7.1, 9.2 and 9.3. The following parameters are based on Urban Utilities NuSewer smart sewer option:

Table 7.1 Sewer Flow Generation Parameters

Flow	Parameter
Average Dry Weather Flow (ADWF)	180 L/EP/d
Peak Dry Weather Flow (PDWF)	PDWF = d x SF + GWI; Where: SF = Sanitary Flow of 150 L/EP/d GWI = Groundwater Infiltration of 30 L/EP/d
Peak Wet Weather Flow (PWWF)	PWWF = PDWF + Rainfall Dependent Inflow (RDF) RDF = 360 L/EP/d

Table 7.2 Pipe Design Parameters

Flow	Parameter
Mannings 'n'	0.0128
Minimum velocity @ PDWF	0.75 m/s
Depth of Flow @ PWWF – Existing system	Up to 1.0 m below MH cover level and no spillage through overflow structures
Depth of Flow @ PWWF – Proposed sewers	Max flow depth shall not exceed ¾ pipe full (75% d/D).

Table 7.3 Minimum Pipe Capacity – New Sewers Flowing ¾ Full

Pipe Size (mm)	Min Pipe Grade (1 in x)	Capacity (L/s)
150	180	10.4
225	300	23.6
300	400	44.1
525	750	143.0
1200	2400	796.1

The total development yield has been taken into account, not just the increase in equivalent persons on the subject site. The calculated sewer demand generation for the proposed development is shown in Table 7.4.

Table 7.4 Sewer Demand Calculation

Use	EP	ADWF Rate	ADWF (kL/d)	PDWF (kL/d)	PWWF (kL/d)	PWWF (L/s)
Mixed Use Zone & Attached Dwelling	916.20	180	164.92	500.24	830.07	9.60

The calculations indicate that the total post development demand at PWWF will be approximately 9.60 L/s. Initial assessment indicates that the existing sewer main which traverses Water Street is a DN225 gravity main. It is anticipated that a sewer network capacity be undertaken through Urban Utilities to develop further understanding into the condition of the existing infrastructure.

8. Electrical and Telecommunications

A Dial Before You Dig search has been completed and is included in Appendix A of this report. It is envisaged that adequate power supply can be provided to the site from the existing infrastructure. However, a specialist electrical consultant will need to be engaged to provide advice in relation to internal electrical reticulation requirements, to prepare detailed designs and to liaise with the relevant authorities.

9. Conclusion

The findings of this Civil Engineering Report support the site use proposed in this development application to Brisbane City Council.

It is anticipated that earthworks associated with the proposed development will include cutting and filling associated with trenching of services, basement excavation, and alterations to existing levels to allow for a level building pad and a basement carpark.

The Lawful Points of Discharge (LPD) for the site have been defined as the southern boundary of the site. Stormwater runoff will be detained and mitigated to allowable kerb and channel flow limits through the use of an on-site detention device.

Water Quality Design Objectives prescribed by the State Planning Policy will be achieved through the use of Atlans proprietary quality devices.

There is an existing DN150 water main which traverses Water Street. It is proposed that the development will gain its potable water supply from this main. The development will also gain its fire slow supply from the same main therefore, dual services will likely be required. It is anticipated that the existing infrastructure has the capacity to service the proposed development. We note that further consultation with Urban Utilities to determine adequacy of main, pipe size and flows will be undertaken at a later date.

There is an existing DN225 gravity sewer house connection on Water Street that traverses the southern boundary of the site. It is anticipated that wastewater generated from the development will be conveyed to this main via the existing DN225 connection. It is anticipated that a sewer network capacity be undertaken through Urban Utilities to develop further understanding into the condition of the existing infrastructure.

All required essential services can be suitably provided to the development, including:

- Stormwater Drainage;
- Reticulated Water Services;
- Reticulated Sewerage Services;
- Electricity and Telecommunications Supply.

Appendix A – DBYD

Job No 32460881

Phone: 1100
www.1100.com.au

Caller Details

Contact:	Chris Hunter	**Caller Id:**	3069616	**Phone:**	0432 588 853
Company:	Burchills Engineering Solutions				
Address:	2/26 Marine Parade Southport QLD 4215	**Email:**	chris.hunter@burchills.com.au		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: 68 Brunswick Street

Working on Behalf of: Private

Enquiry Date:	**Start Date:**	**End Date:**
03/08/2022	05/08/2022	31/08/2022

Address:

68 Brunswick Street
Fortitude Valley QLD 4006

Job Purpose:	**Onsite Activities:**
Design	Planning & Design
Location of Workplace:	**Location in Road:**
Both	Road, Nature Strip, Footpath

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:

Not supplied

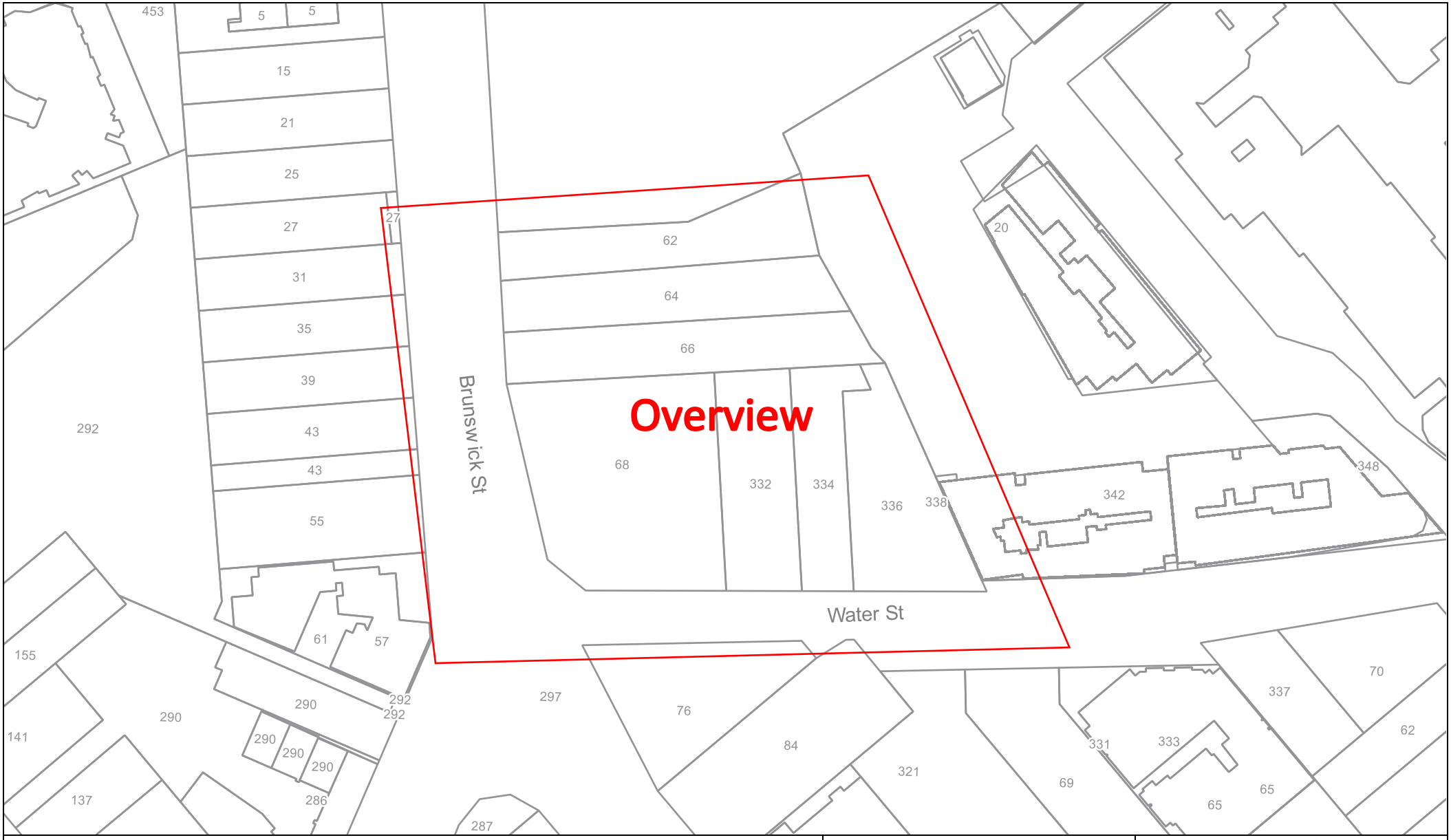
Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
214416702	AARNet Pty Ltd Qld	1300 275 662	NOTIFIED
214416711	APT Holdings - Origin (AGN North)	1800 085 628	NOTIFIED
214416701	Brisbane City Council	(07) 3403 8888	NOTIFIED
214416705	Energex QLD	13 12 53	NOTIFIED
214416707	NBN Co Qld	1800 687 626	NOTIFIED
214416704	Nextgen NCC - QLD	1800 262 663	NOTIFIED
214416703	Optus and or Uecomm Qld	1800 505 777	NOTIFIED
214416709	Queensland Urban Utilities	13 23 64	NOTIFIED
214416708	Telstra QLD South East	1800 653 935	NOTIFIED
214416710	TPG Telecom (QLD)	1800 786 306	NOTIFIED
214416706	Vocus Communications 2	1800 262 663	NOTIFIED



Sequence Number: 214416704

Date: 04/08/2022

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Digsite

Area

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Cable

3rd Party Duct

Marker Post

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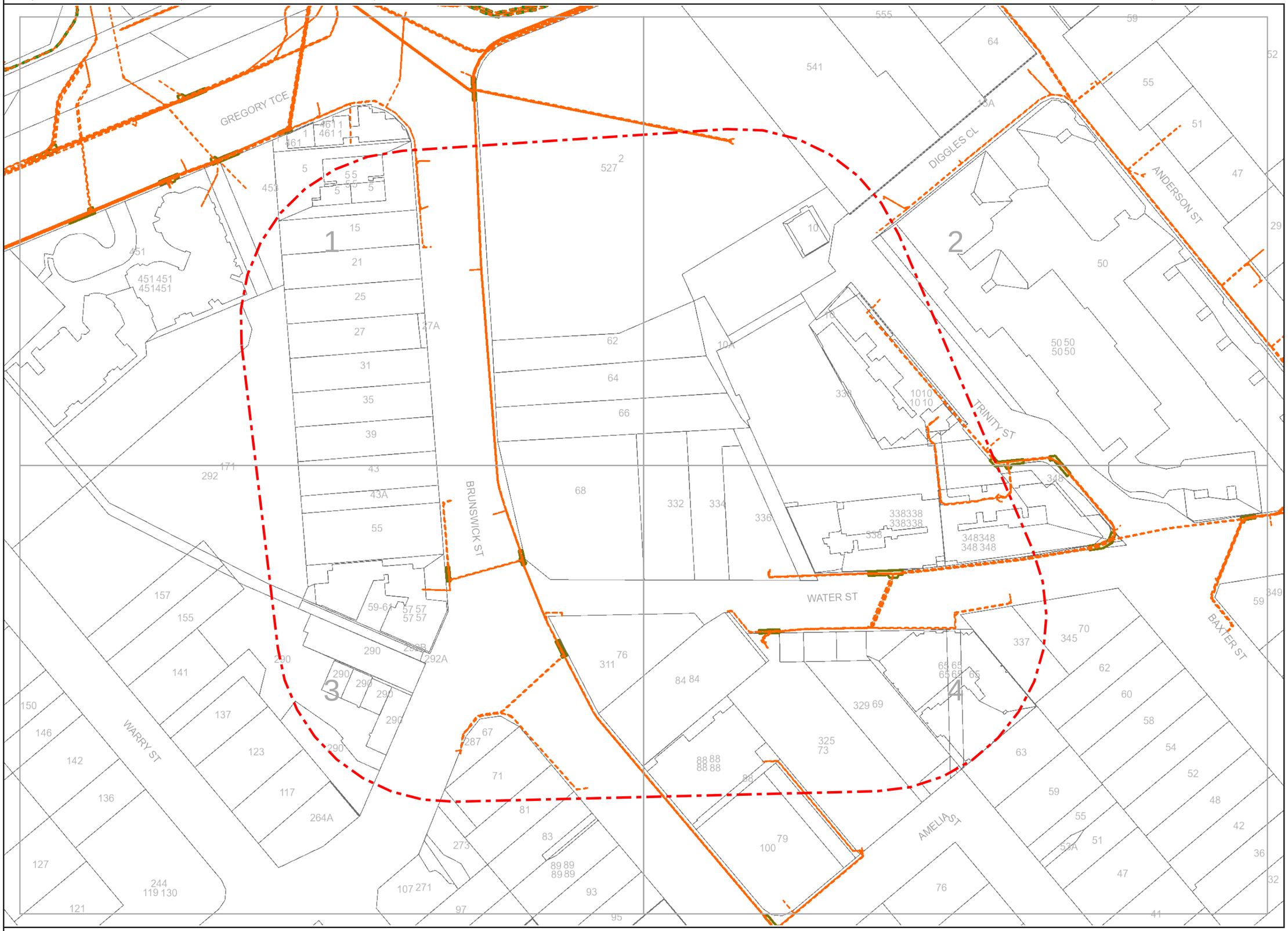

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DBYD

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Scale: 1:1025
OVERVIEW

For a full list of Map Symbols, please refer to the supplied DBYD Symbology Legend page

AS5488 Category "D" Plan

N
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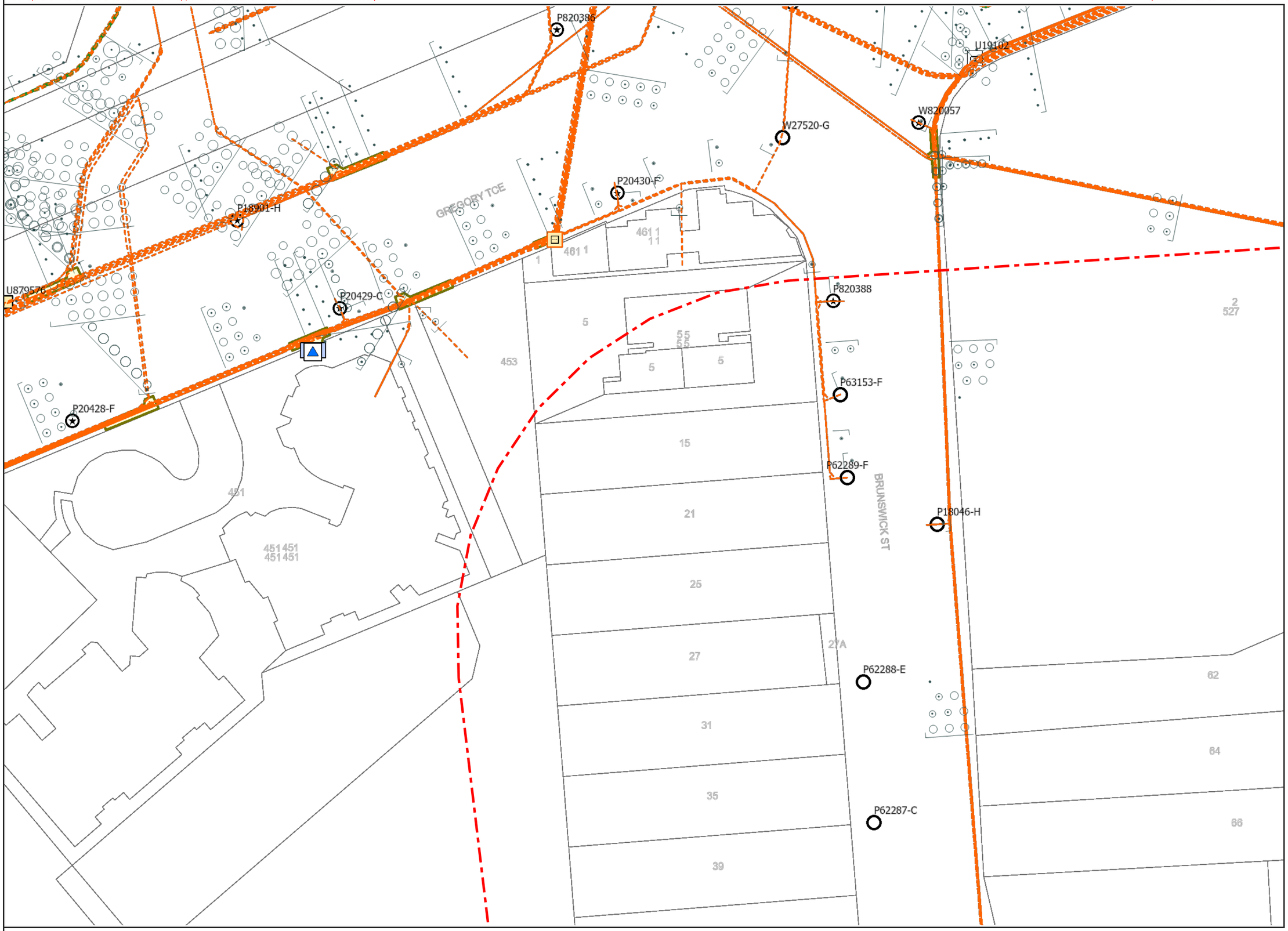

DBYD

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Date: 04/08/2022

Scale: 1:500
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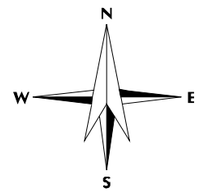
AS5488 Category "D" Plan



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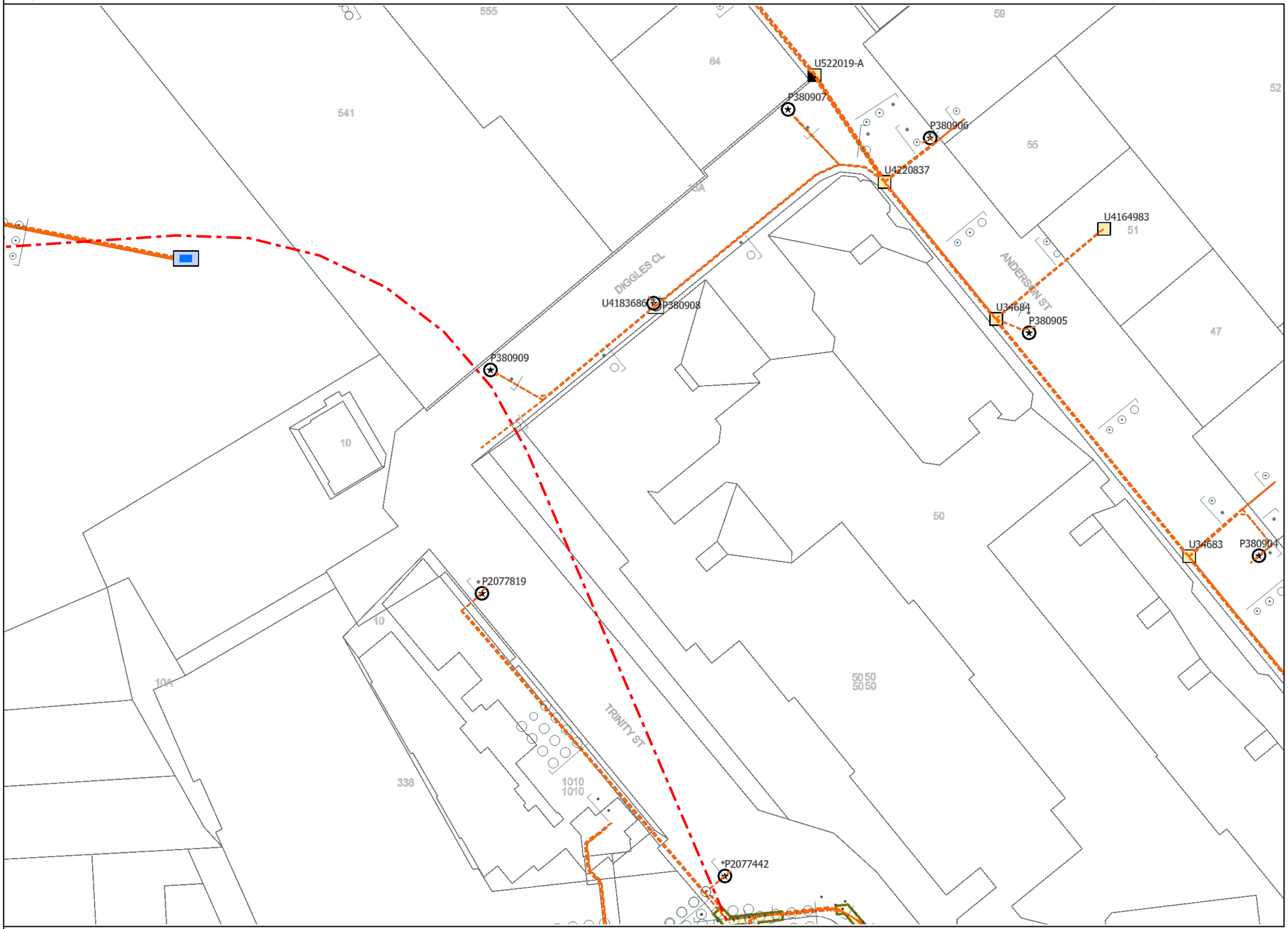

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energex

DBYD

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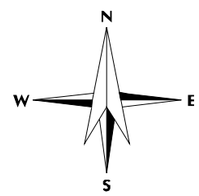

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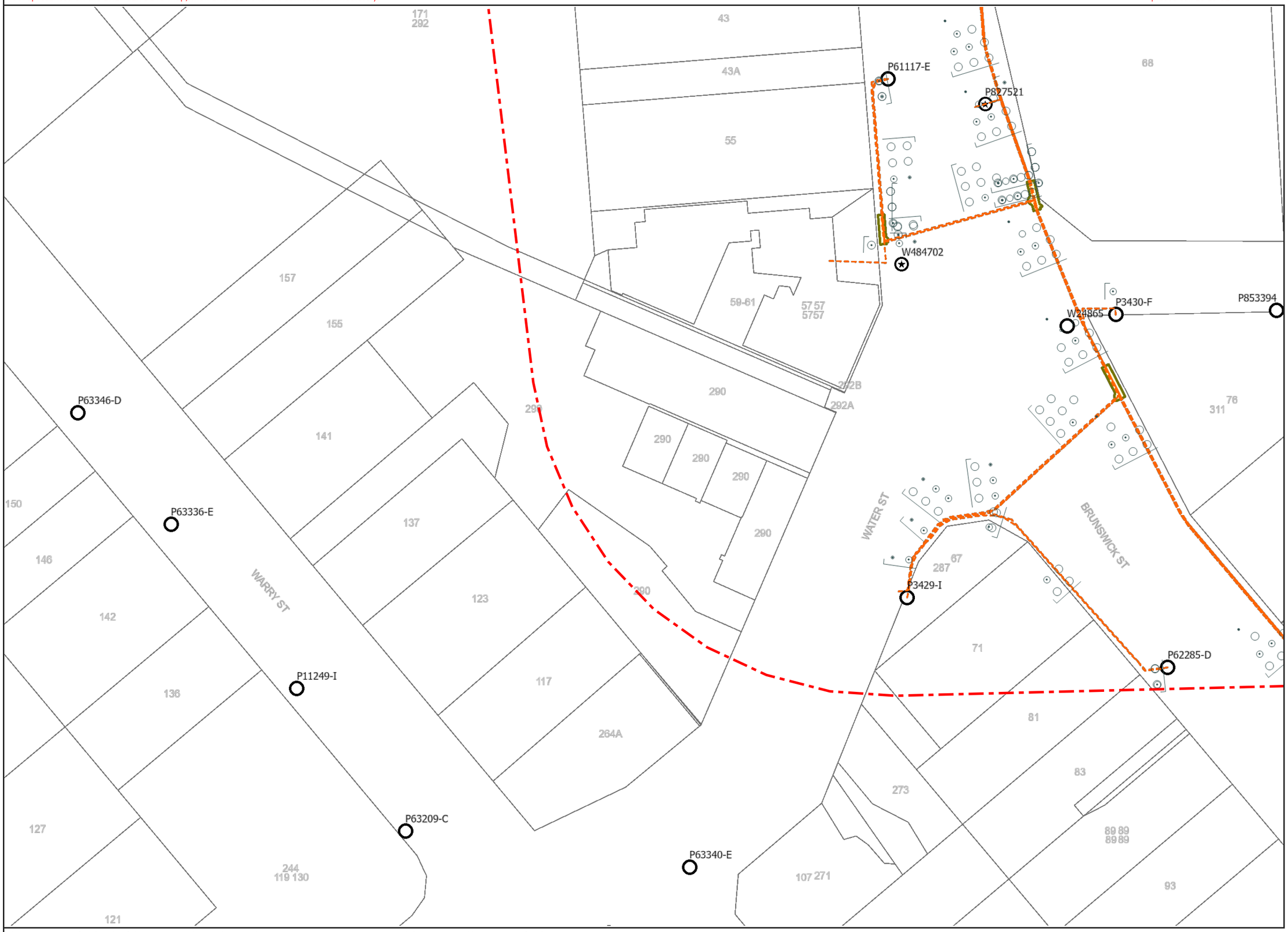

DBYD

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AS5488 Category "D" Plan

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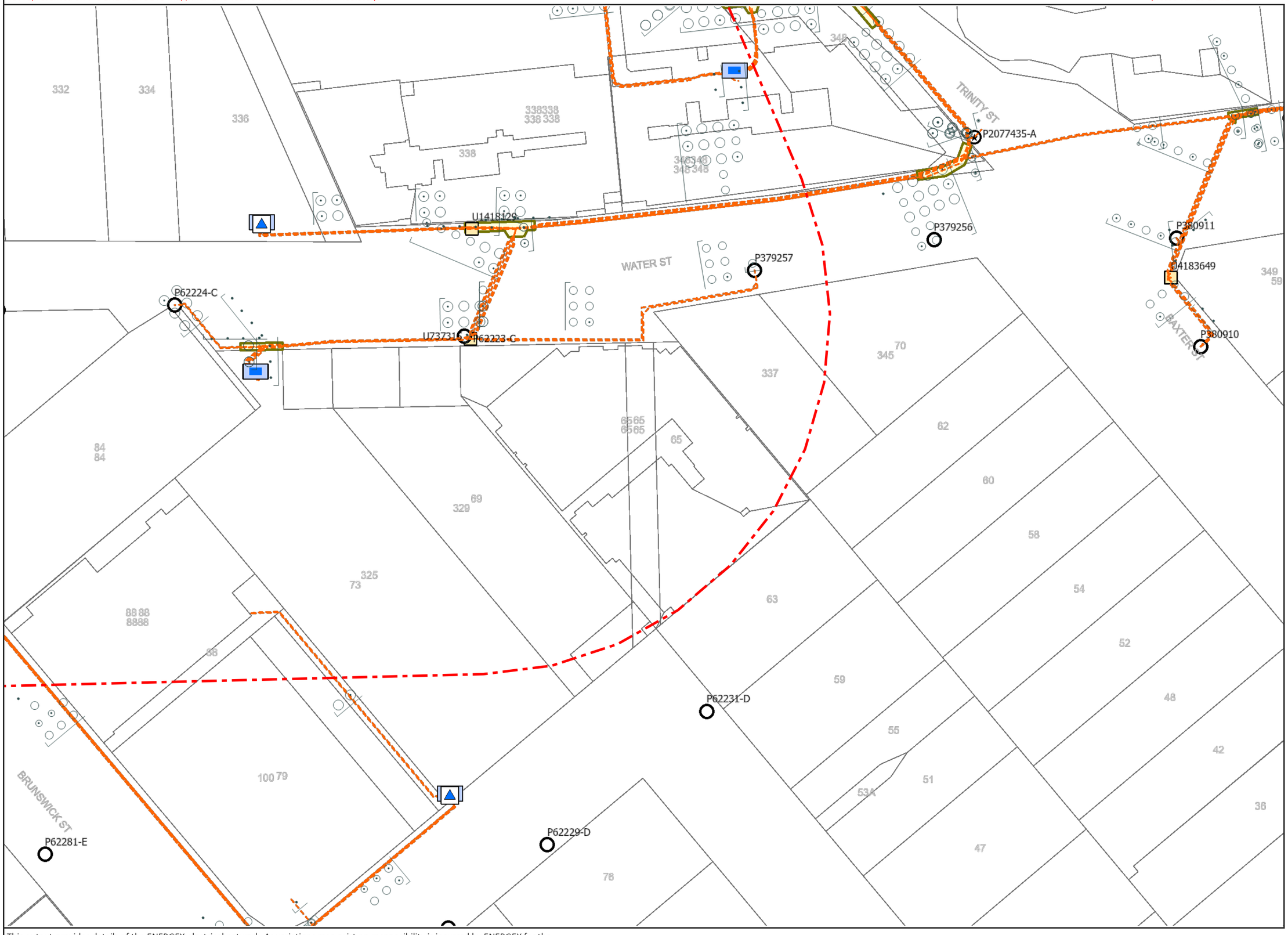
DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.

This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

All underground cables shall be treated as being energised. Where a cable is located that is not represented on the ENERGEX DBYD map, then ENERGEX shall be contacted immediately.

For Emergency Situations please call 13 19 62



This output provides details of the ENERGEX electrical network. As variations map exist no responsibility is incurred by ENERGEX for the accuracy or completeness of the information provided. Exact positions of cables and electrical connectivity should be confirmed on site.

energex

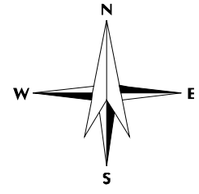
DBYD

Sequence: 214416705
Date: 04/08/2022

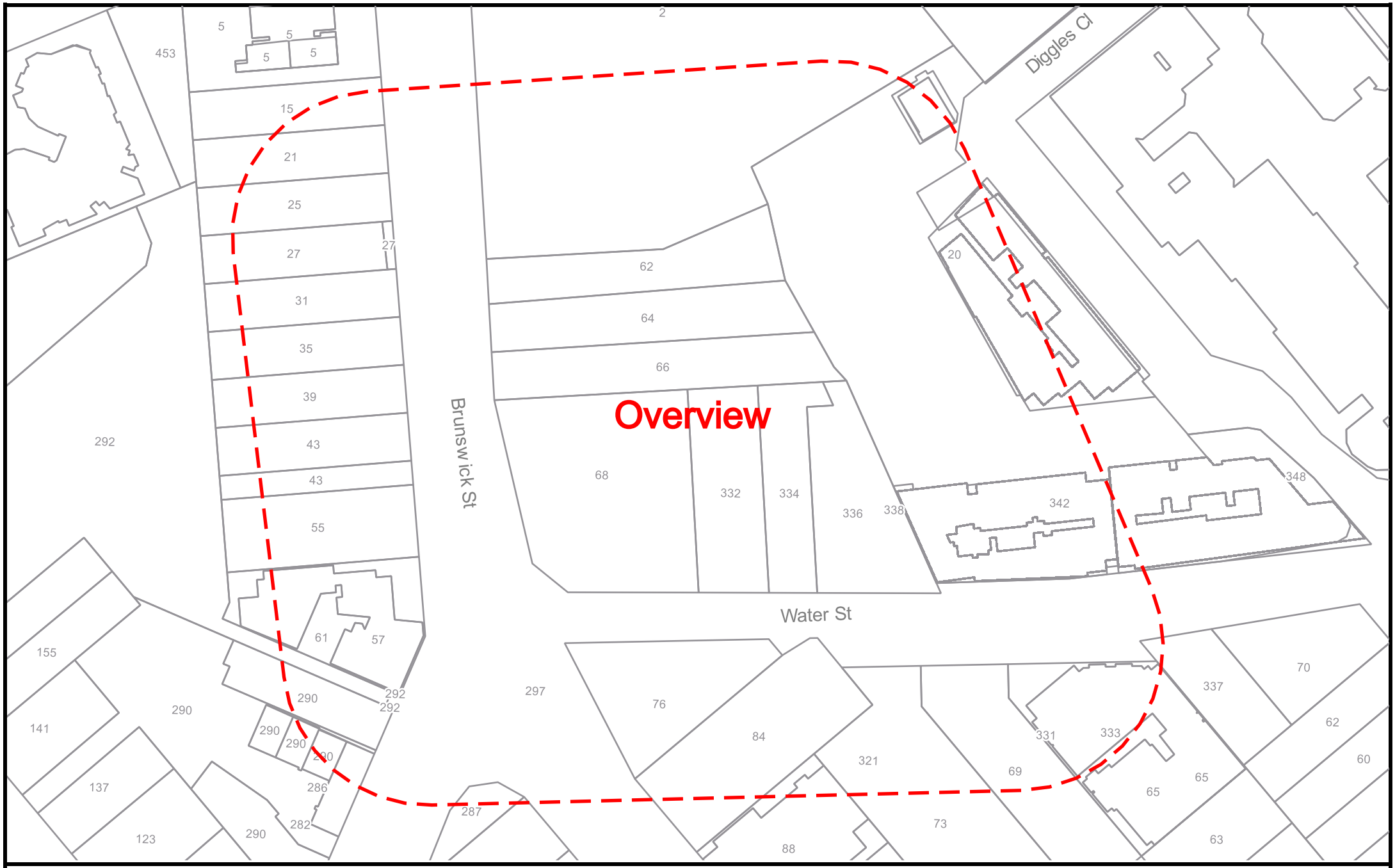
Scale: 1:500
Tile No: 4

For a full list of Map Symbols, please refer to the supplied DBYD Symbology Legend page

AS5488 Category "D" Plan



DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Energex nor PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.



VOCUS communications

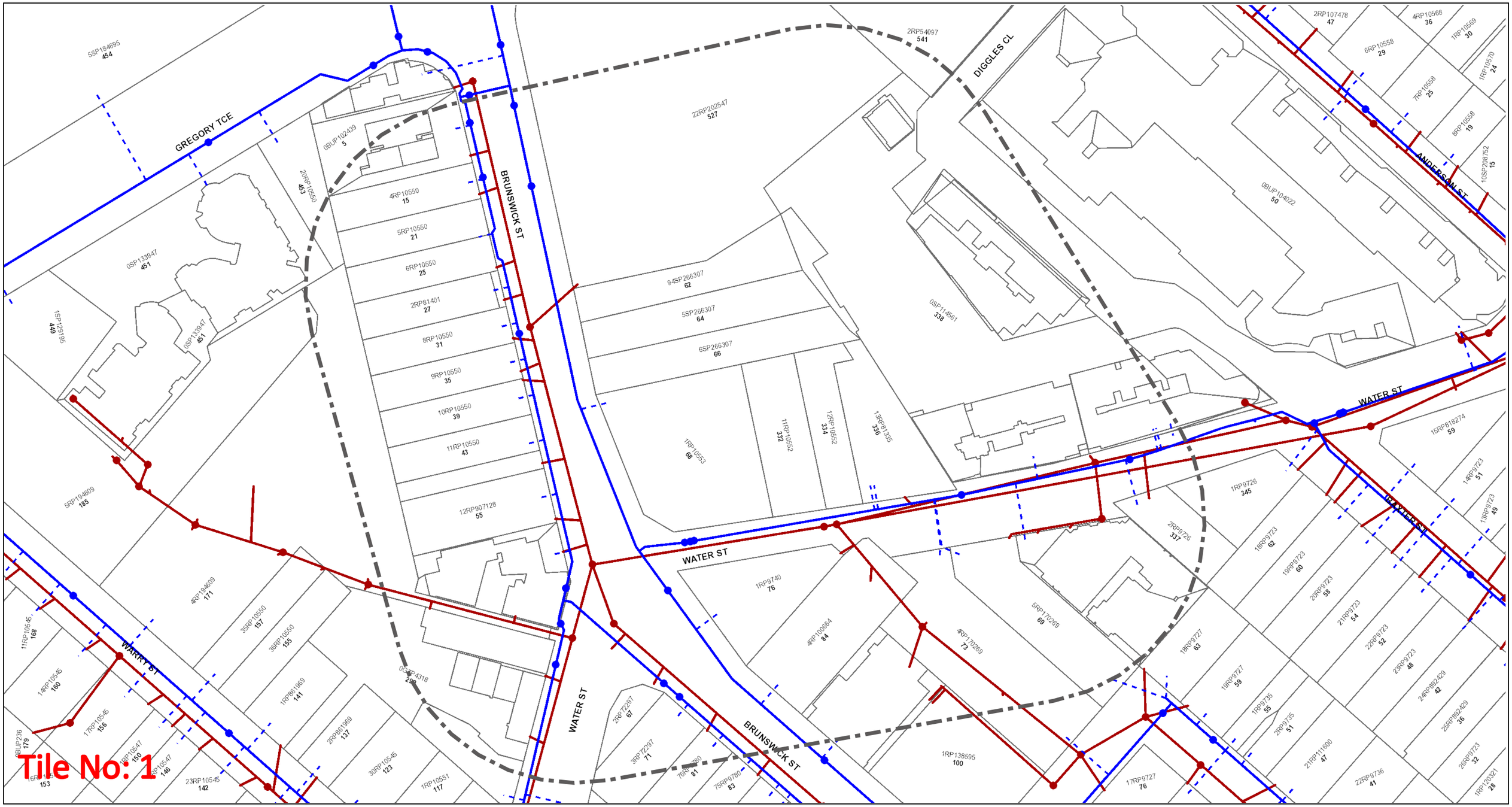
N W E S

SEQUENCE NUMBER: 214416706
JOB NUMBER: 32460881
ADDRESS: 68 Brunswick Street, Fortitude Valley, QLD 4006

LEGEND
Vocus Group Pit
Vocus Group Conduit

SCALE: 1:1000

Urban Utilities - Water, Recycled Water and Sewer Infrastructure



Tile No: 1

Dial Before You Dig - Urban Utilities Water, Recycled Water and Sewer Infrastructure

DBYD Reference No: 214416709

Date DBYD Ref Received: 04/08/2022

Date DBYD Job to Commence: 05/08/2022

Date DBYD Map Produced: 04/08/2022

This Map is valid for 30 days

Produced By: Urban Utilities

Sewer

- Infrastructure
- Major Infrastructure
- Network Pipelines
- Network Structures

Water

- Infrastructure
- Major Infrastructure
- Network Pipelines
- Network Structures
- Water Service (Indicative only)

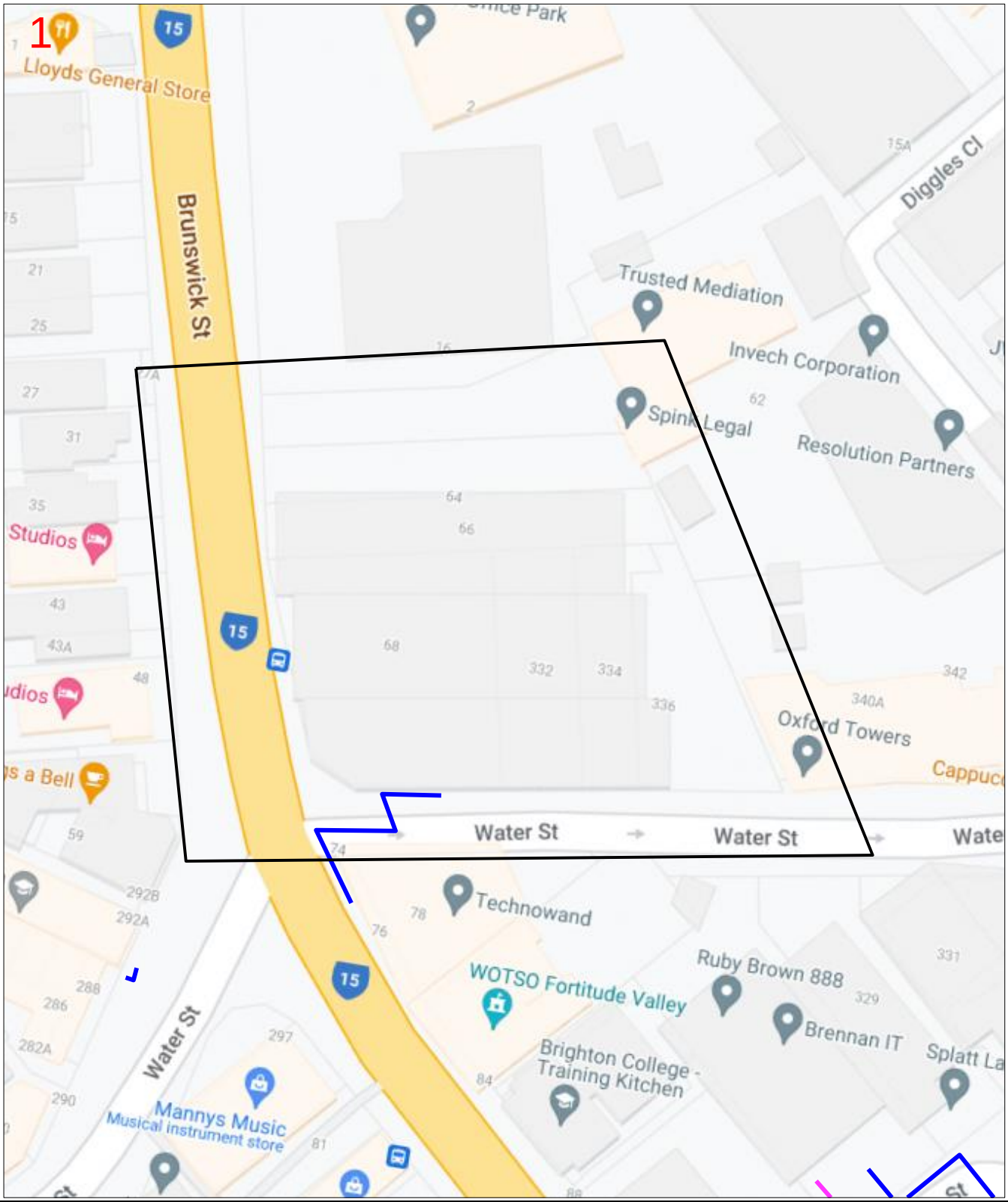
N

Map Scale 1:1000

For further information, please call Urban Utilities on 13 26 57 (8am-6pm weekdays). Faults and emergencies 13 23 64 (24/7).

www.urbanutilities.com.au

ABN 86 673 835 011



Enquiry Number: 214416710

Map Sheet: 1

Scale: 1: 750

0 0.008km

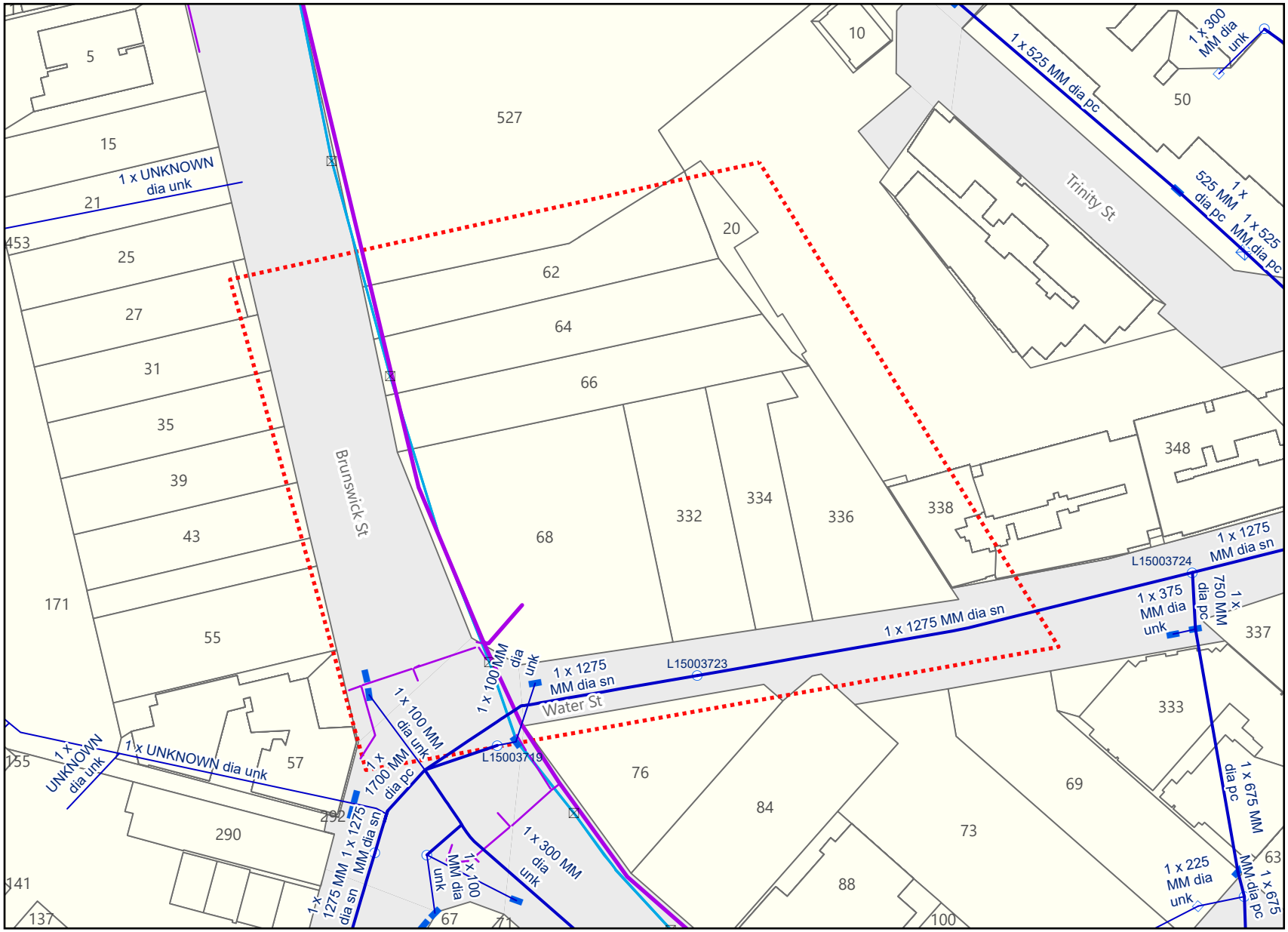
N

LEGEND

DBYD Work Area

AAPT/PowerTel Pit	TransACT Pit
AAPT/PowerTel Duct	TransACT Duct
DDA Pit	SOUL Pattinson Telecoms Pit
DDA Duct	SOUL Pattinson Telecoms Duct
Agile/Adam Pit	PIPE Networks Pit
Agile/Adam Duct	PIPE Networks Duct

Job # 32460881
Seq # 214416701
Provider: Brisbane City Council
Telephone: 07 3403 8888



Legend

BYDA Enquiry

Stormwater Network

- Stormwater Drain
- Stormwater Gully / Roofwater Connection
- Stormwater Maintenance Hole
- Stormwater Roofwater Pit
- Stormwater Gully Pit
- Stormwater Field Inlet

BCC Cable Network

- Fibre Optic Pit Location
- Traffic System Cable
- Traffic Signal Ducting
- Fibre Optic Cable Location

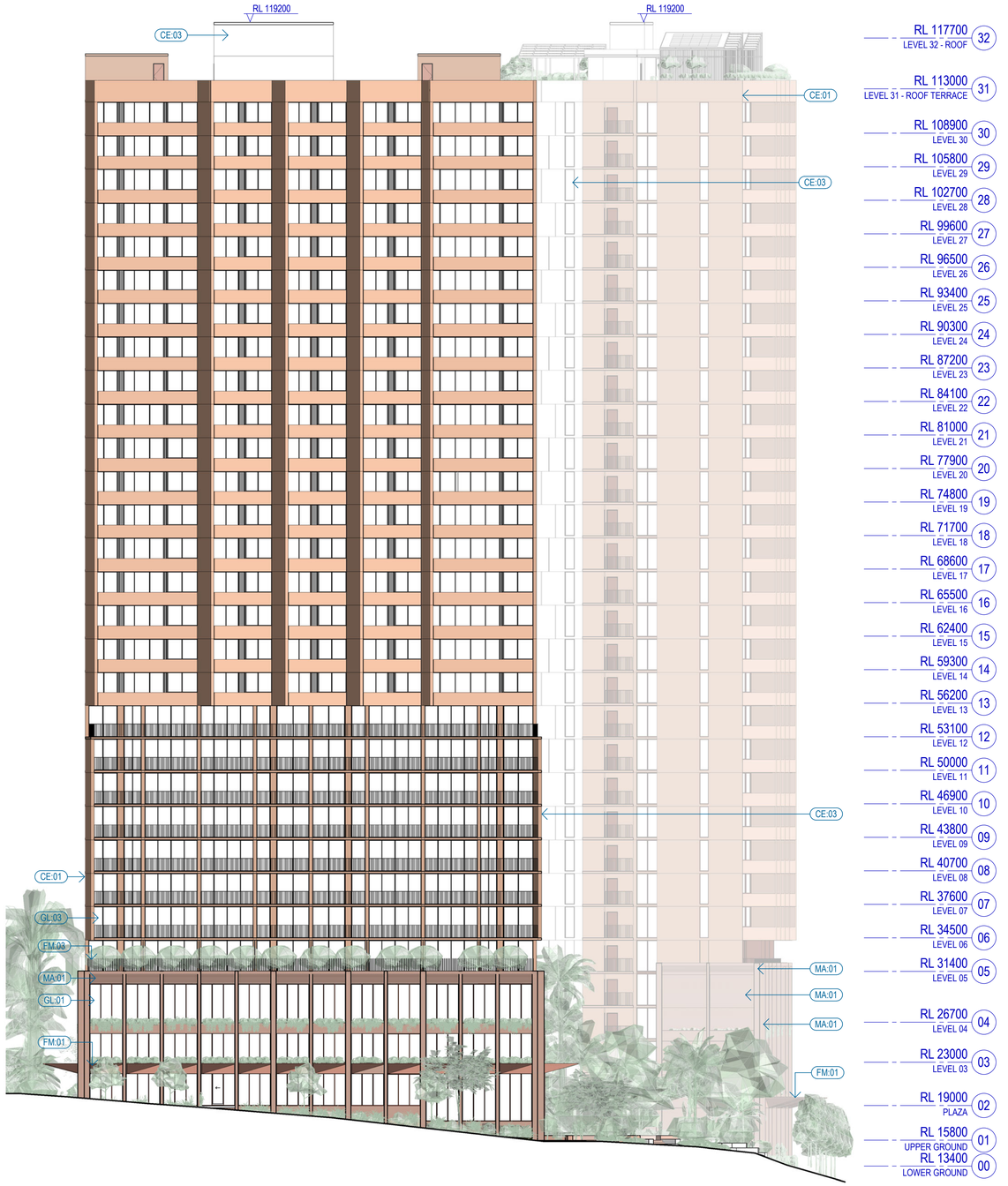
In an emergency contact Brisbane City Council on 07 3403 8888
04/08/22 (valid for 30 days)

0 10 20 40 m

Scale 1:1,000

Plans generated by SmarterWX™ Automate

Appendix B – Plan of Development



CODE	DETAILS
CD:01	PLANTER BOXES WITH BRICK CLADDING
CE:01	CONCRETE - TERRACOTTA HUE
CE:03	CONCRETE - WIHITE, WITH STAGGERED VERTICAL PROFILE
FM:01	ALUMINIUM AWNING WITH STEEL FRAME, POWDERCOAT FINISH
FM:02	ALUMINIUM BATTENS, POWDERCOAT FINISH
FM:03	METAL RAILING, POWDERCOAT FINISH
FM:04	PERGOLA STRUCTURE WITH STEEL FRAME, POWDERCOAT FINISH
GL:01	FULL HEIGHT GLAZING SYSTEM, POWDERCOAT FINISH TO MULLIONS
GL:02	FRAMELESS GLASS BALUSTRADE
GL:03	FULL HEIGHT GLAZING SYSTEM, OPERABLE WINDOWS
MA:01	STANDARD FACE BRICK LAID IN STRETCHER BOND, TERRACOTTA COLOUR
MA:02	STANDARD FACE BRICK LAID IN STRETCHER BOND, WHITE COLOUR

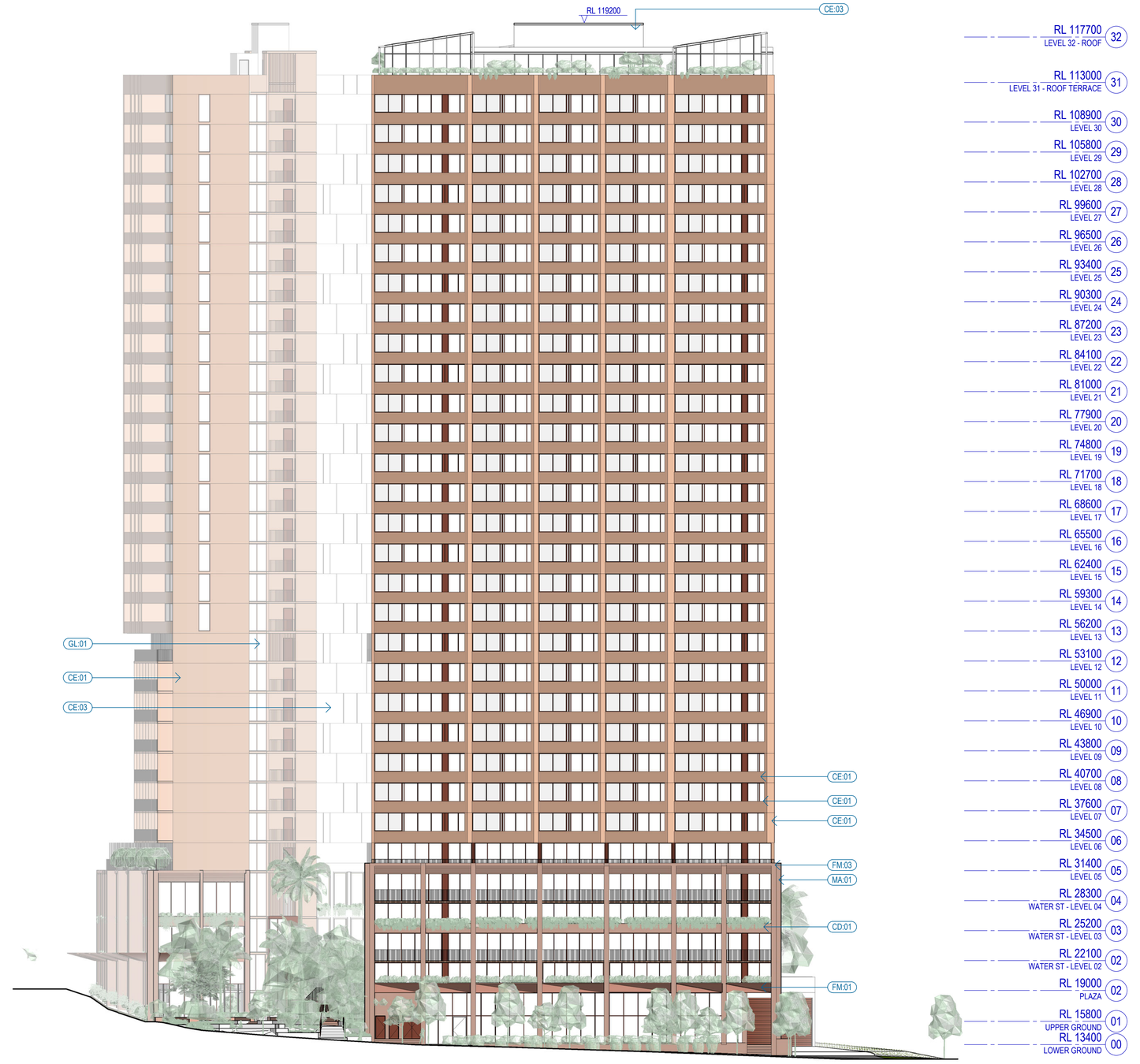
FOR INFORMATION

W—B WOODS BAGOT Pellicano

Project
332-334 WATER STREET

Sheet title
WEST ELEVATION (BRUNSWICK STREET)

Project no. **150536**
Scale **1 : 250**
Sheet size **A1**
Sheet no. **A- 1301**
Revision **L**
Date **03/12/23**



RL 117700 LEVEL 32 - ROOF 32
RL 113000 LEVEL 31 - ROOF TERRACE 31
RL 108900 LEVEL 30 30
RL 105800 LEVEL 29 29
RL 102700 LEVEL 28 28
RL 99600 LEVEL 27 27
RL 96500 LEVEL 26 26
RL 93400 LEVEL 25 25
RL 90300 LEVEL 24 24
RL 87200 LEVEL 23 23
RL 84100 LEVEL 22 22
RL 81000 LEVEL 21 21
RL 77900 LEVEL 20 20
RL 74800 LEVEL 19 19
RL 71700 LEVEL 18 18
RL 68600 LEVEL 17 17
RL 65500 LEVEL 16 16
RL 62400 LEVEL 15 15
RL 59300 LEVEL 14 14
RL 56200 LEVEL 13 13
RL 53100 LEVEL 12 12
RL 50000 LEVEL 11 11
RL 46900 LEVEL 10 10
RL 43800 LEVEL 09 09
RL 40700 LEVEL 08 08
RL 37600 LEVEL 07 07
RL 34500 LEVEL 06 06
RL 31400 LEVEL 05 05
RL 28300 WATER ST - LEVEL 04 04
RL 25200 WATER ST - LEVEL 03 03
RL 22100 WATER ST - LEVEL 02 02
RL 19000 PLAZA 02
RL 15800 UPPER GROUND 01
RL 13400 LOWER GROUND 00

CODE	DETAILS
CD:01	PLANTER BOXES WITH BRICK CLADDING
CE:01	CONCRETE - TERRACOTTA HUE
CE:03	CONCRETE - WIHITE, WITH STAGGERED VERTICAL PROFILE
FM:01	ALUMINIUM AWNING WITH STEEL FRAME, POWDERCOAT FINISH
FM:02	ALUMINIUM BATTENS, POWDERCOAT FINISH
FM:03	METAL RAILING, POWDERCOAT FINISH
FM:04	PERGOLA STRUCTURE WITH STEEL FRAME, POWDERCOAT FINISH
GL:01	FULL HEIGHT GLAZING SYSTEM, POWDERCOAT FINISH TO MULLIONS
GL:02	FRAMELESS GLASS BALUSTRADE
GL:03	FULL HEIGHT GLAZING SYSTEM, OPERABLE WINDOWS
MA:01	STANDARD FACE BRICK LAID IN STRETCHER BOND, TERRACOTTA COLOUR
MA:02	STANDARD FACE BRICK LAID IN STRETCHER BOND, WHITE COLOUR

FOR INFORMATION

W—B WOODS BAGOT Pellicano

Project
332-334 WATER STREET

Sheet title
SOUTH ELEVATION (WATER STREET)

Project no. **150536**
Scale **1 : 250**
Sheet size **A1**
Sheet no. **A- 1302**
Revision **L**
Date **03/12/23**

Appendix C – Conceptual Engineering Drawings

ROADWORK LAYOUT PLAN

SCALE 2 0 2 4 6 8 10 (metres)
1 : 200 (FULL SIZE)

332 - 334 WATER STREET
FORTITUDE VALLEY
FOR
PELLICANO LIVING PTY LTD

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUED	05-12-23

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
332 - 334 WATER STREET, FORTITUDE VALLEY

DRAWING TITLE :
ROADWORKS LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 05-12-2023
PROJECT LEADER : CHRIS HUNTER	DESIGNER : THUY VU
DRAFTSPERSON : THUY VU	CHECKED : CHRIS HUNTER
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
DATUM : AHD	A1 ORIGINAL SIZE BEFORE REDUCTION

PROJECT No.:	DRAWING No. :	VERSION:
BE220298	C300	A

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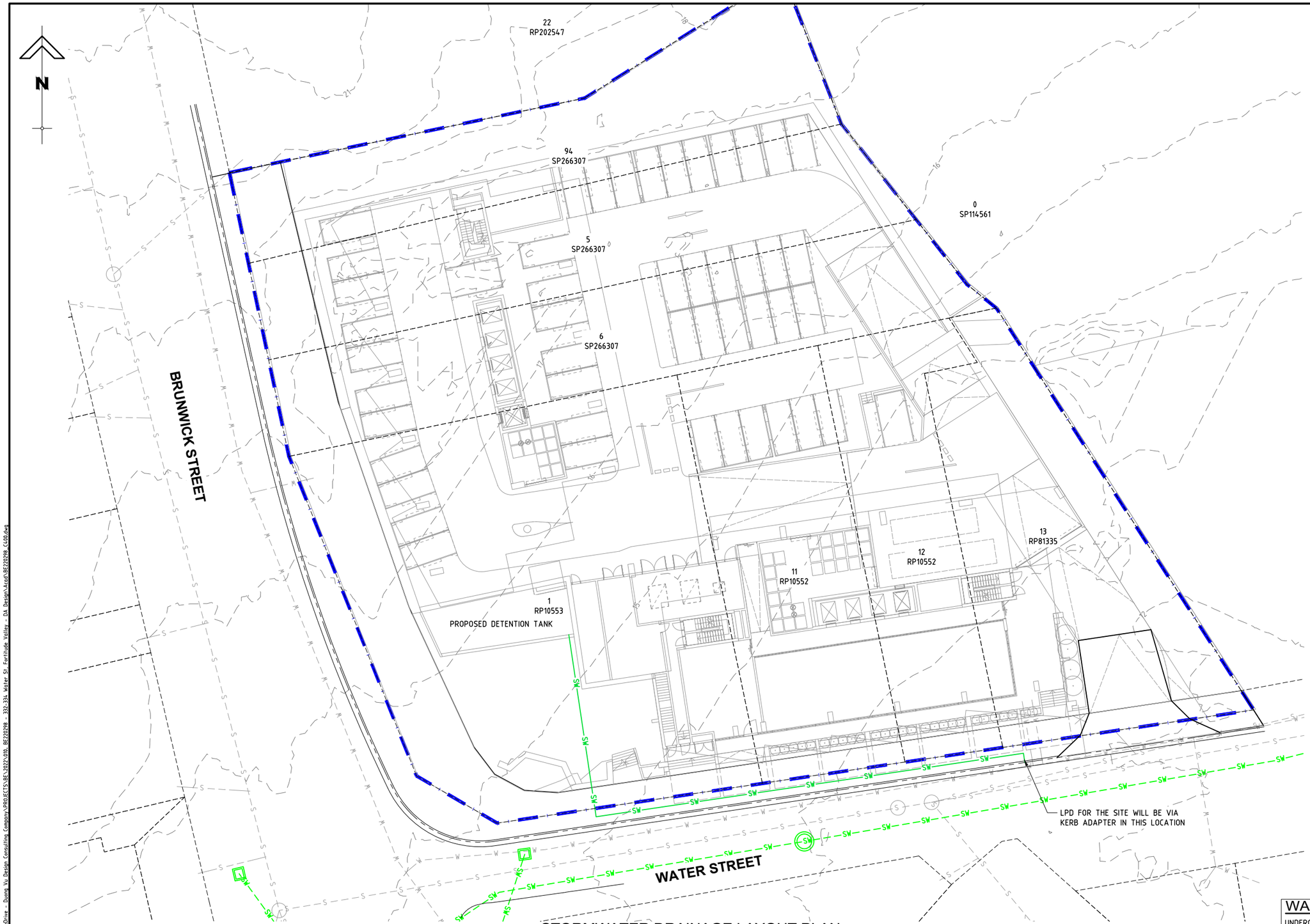
PLOTTED 05 Dec 2023



STORMWATER DRAINAGE LAYOUT PLAN

SCALE 2 0 2 4 6 8 10 (metres)
1 : 200 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

332 - 334 WATER STREET
FORTITUDE VALLEY
FOR
PELLICANO LIVING PTY LTD

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUED	05-12-23

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
332 - 334 WATER STREET, FORTITUDE VALLEY

DRAWING TITLE :
STORMWATER DRAINAGE LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 05-12-2023
PROJECT LEADER : CHRIS HUNTER	DESIGNER : THUY VU
DRAFTSPERSON : THUY VU	CHECKED : CHRIS HUNTER
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
DATUM : AHD	A1 ORIGINAL SIZE BEFORE REDUCTION

PROJECT No.:	DRAWING No. :	VERSION:
BE220298	C400	A

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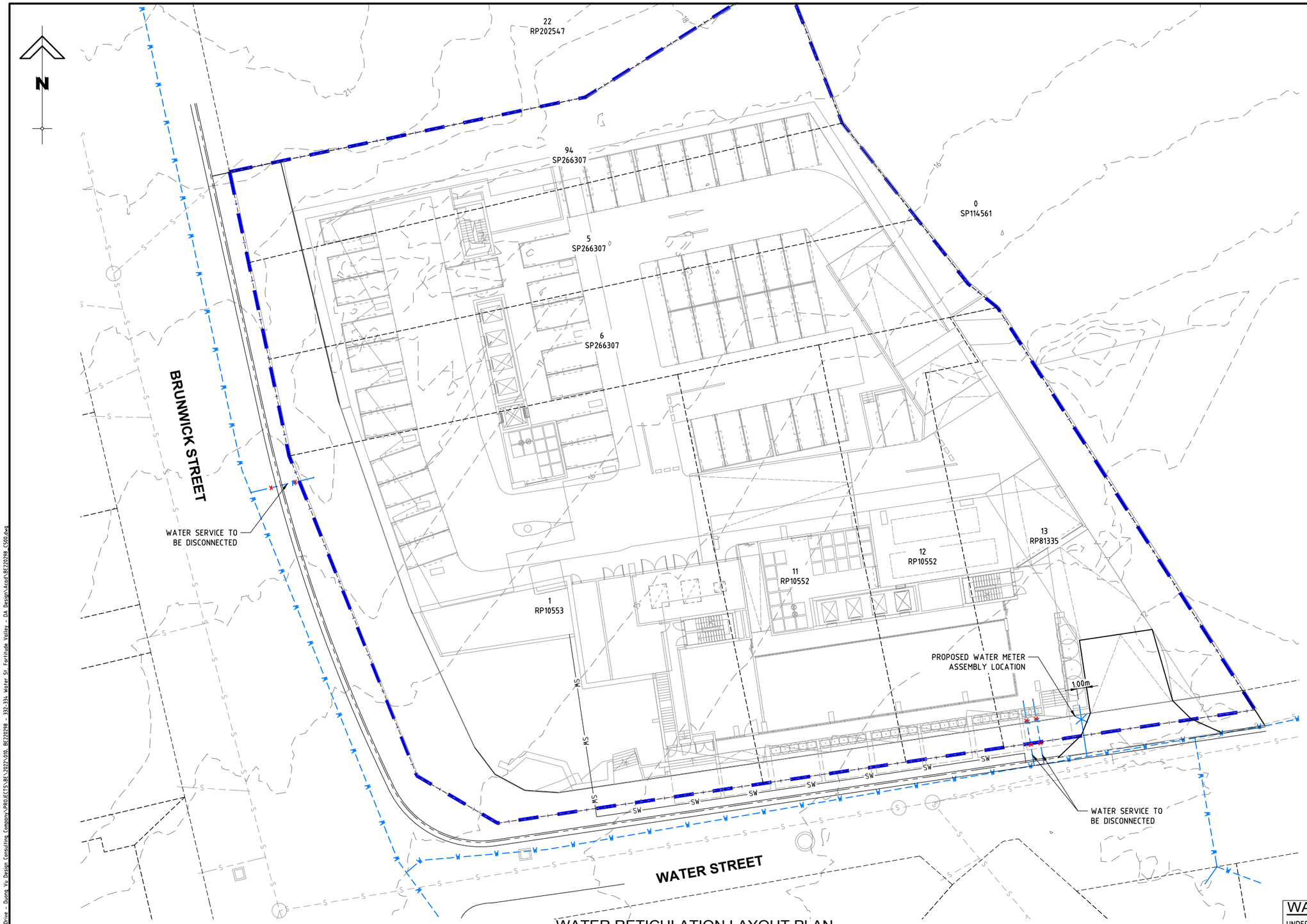

WATER RETICULATION LAYOUT PLAN

SCALE 1 : 200 (FULL SIZE) 2 0 2 4 6 8 10 (metres)

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

332 - 334 WATER STREET
FORTITUDE VALLEY
FOR
PELLICANO LIVING PTY LTD

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUED	05-12-23

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
332 - 334 WATER STREET, FORTITUDE VALLEY

DRAWING TITLE :
WATER RETICULATION LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 05-12-2023
PROJECT LEADER : CHRIS HUNTER	DESIGNER : THUY VU
DRAFTSPERSON : THUY VU	CHECKED : CHRIS HUNTER
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
DATUM : AHD	A1 ORIGINAL SIZE BEFORE REDUCTION
PROJECT No.: BE220298	DRAWING No. : C500
	VERSION: A

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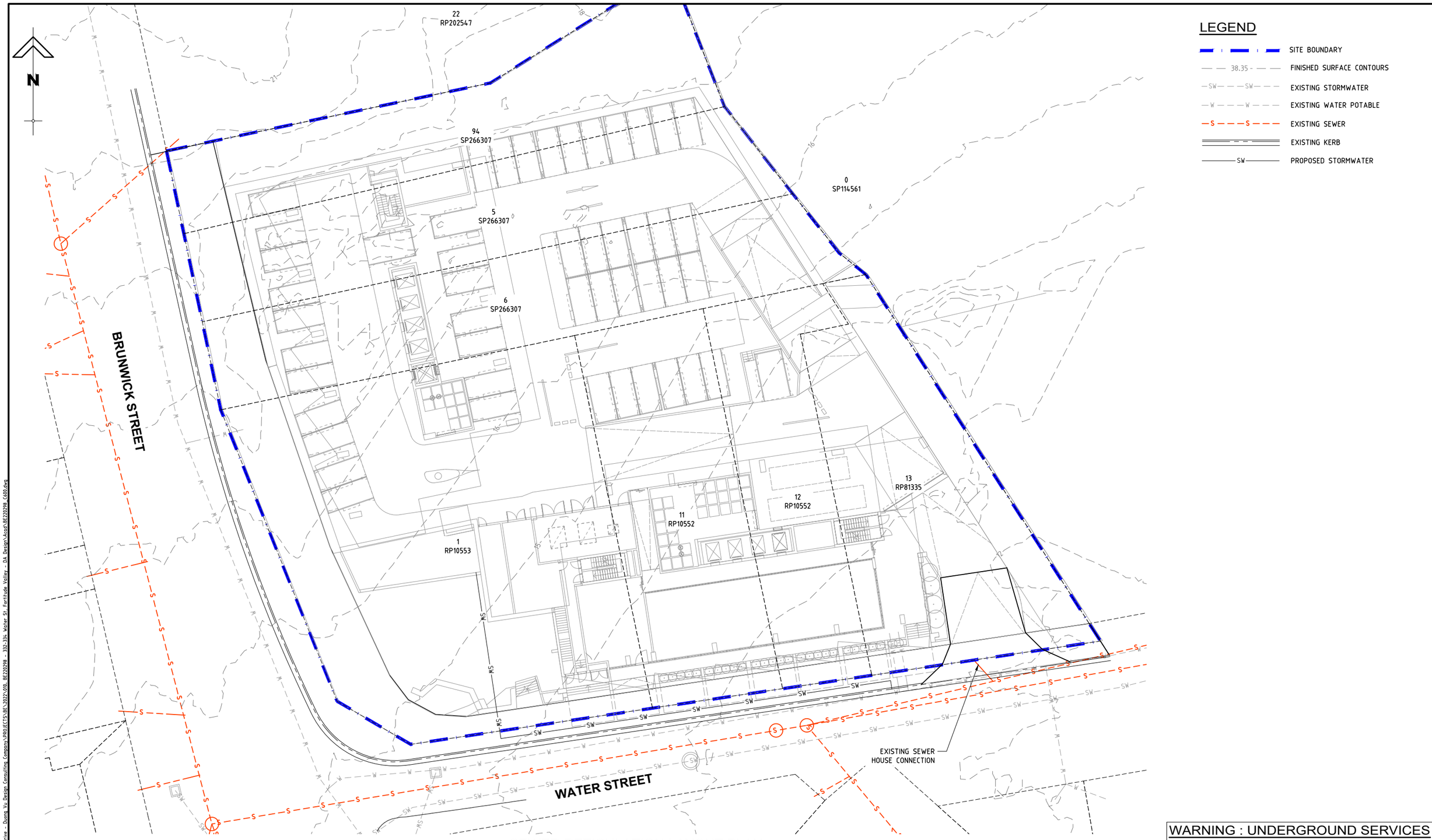
PLOTTED 05 Dec 2023



SEWER RETICULATION LAYOUT PLAN

SCALE 2 0 2 4 6 8 10 (metres)
1 : 200 (FULL SIZE)

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

332 - 334 WATER STREET
FORTITUDE VALLEY
FOR
PELLICANO LIVING PTY LTD

VER.	DESCRIPTION	DATE
A	ORIGINAL ISSUED	05-12-23

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
332 - 334 WATER STREET, FORTITUDE VALLEY

DRAWING TITLE :
SEWER RETICULATION LAYOUT PLAN

DEVEL. APPLIC. No. :	DATE : 05-12-2023
PROJECT LEADER : CHRIS HUNTER	DESIGNER : THUY VU
DRAFTSPERSON : THUY VU	CHECKED : CHRIS HUNTER
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
DATUM : AHD	A1 ORIGINAL SIZE BEFORE REDUCTION
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