Pre-Lodgement Application Form

Portal Application number: PAN-436861

Applicant contact details

Title	Mr
First given name	Bill
Other given name/s	
Family name	Longley
Contact number	[redacted]
Email	[redacted]
Address	[redacted]
Application on behalf of a company, business or body corporate	No

Owner/s of the development site

Owner/s of the development site	I am the only owner of the development site

Site access details

Are there any security or site conditions which may impact the person undertaking the inspection? For example, locked gates, animals etc.	No

Developer details

ABN	
ACN	
Name	
Trading name	
Address	
Email Address	

Development details

Application type	Development Application
Site address #	1
Street address	1-19 JUDE STREET HOWLONG 2643
Local government area	FEDERATION
Lot / Section Number / Plan	1/82/DP758528 ☑ 2/82/DP758528 ☑ 4/82/DP758528 ☑ 3/82/DP758528 ☑
Primary address?	Yes
	Land Application LEP Corowa Local Environmental Plan 2012 Land Zoning R1: General Residential Height of Building NA Floor Space Ratio (n:1)

Planning controls affecting property	NA Minimum Lot Size 550 m² Heritage NA Land Reservation Acquisition NA Foreshore Building Line NA

Proposed development

Selected common application types	Subdivision
Description of development	This proposal seeks approval for subdivision of the subject land into forty-one (41) general residential allotments. Consent is requested for the creation of two new internal subdivision roads and for the extension of Hammer Street and Belmore Street along the eastern and northern respective boundaries of the proposed site. The proposal requests to remove exotic and native vegetation from the proposed site and from the road reserves at the site's frontage. The design intention of this proposed development i
Dwelling count details	
Number of dwellings / units proposed	
Number of storeys proposed	
Number of pre-existing dwellings on site	
Number of dwellings to be demolished	
Number of proposed occupants	0
Existing gross floor area (m2)	0
Proposed gross floor area (m2)	0
Total site area (m2)	0
Total net lettable area (m2)	0
What is the estimated development cost, including GST?	$2,700,709.00
Estimated development cost	$2,455,190.00
Do you have one or more BASIX certificates?	
Climate Zone	
What climate zone/s is the development in?	Climate zone 8 - alpine
Has the climate zone impacted the design of the development?	No
Subdivision	
Number of existing lots	4
Type of subdivision proposed	Torrens Title
Number of proposed lots	41
Proposed operating details	
Number of staff/employees on the site	

Number of parking spaces

Number of loading bays	
Is a new road proposed?	Yes
Description of the proposed roadworks	Jude Street will be widened and upgraded with formal kerb and channel and footpath along the site's frontage. The extension of Hammer Street and Belmore Street will have formal kerb and channel and footpath along the site's frontage. The newly created internal subdivision roads will have formal kerb and channel and footpath fronting proposed lots.

	Proposed Lots 1, 2, 32, 34, 36, 38 & 40 will be accessed from Jude Street, proposed Lots 3-15 will be accessed from newly constructed 'Street One', proposed Lots
Concept development	
Is the development to be staged?	No, this application is not for concept or staged development.
Crown development	
Is this a proposed Crown development?	No

Related planning information

Is the application for integrated development?	No
Is your proposal categorised as designated development?	No
Is your proposal likely to significantly impact on threatened species, populations, ecological communities or their habitats, or is it located on land identified as critical habitat?	No
Is this application for biodiversity compliant development?	No
Does the application propose a variation to a development standard in an environmental planning instrument (eg LEP or SEPP)?	No
Is the application accompanied by a Planning Agreement ?	No
Section 68 of the Local Government Act	
Is approval under s68 of the Local Government Act 1993 required?	No
10.7 Certificate	
Have you already obtained a 10.7 certificate?	
Tree works	
Is tree removal and/or pruning work proposed?	Yes
Please provide a description of the proposed tree removal and/or pruning work	Removal of 20 trees. 1 Large, 5 medium and 14 small
Number of trees to be impacted by the proposed work	20
Land area to be impacted by the proposed work	
Units	
Approximate area of canopy REQUESTED to be removed	3,752.77
Units	Square metres
Local heritage	
Does the development site include an item of environmental heritage or sit within a heritage conservation area.	No
Are works proposed to any heritage listed buildings?	No
Is heritage tree removal proposed?	No
Affiliations and Pecuniary interests	
Is the applicant or owner a staff member or councillor of the council assessing the application?	No

Does the applicant or owner have a relationship with any staff or councillor of the council assessing the application?	Yes
Description provided	Bill Longley is the son of Councillor David Longley
Political Donations	
Are you aware of any person who has financial interest in the application who has made a political donation or gift in the last two years?	No
Please provide details of each donation/gift which has been made within the last 2 years	

Sustainable Buildings

Is the development exempt from the *State Environmental Policy (Sustainable Buildings) 2022* Chapter 3, relating to non-residential buildings?	Yes
Provide reason for exemption. Is the development any of the following:	Development that is wholly residential

Payer details

Provide the details of the person / entity that will make the fee payment for the assessment.

The *Environmental Planning and Assessment Regulation 2021* and Council's adopted fees and charges establish how to calculate the fee payable for your development application. For development that involves building or other works, the fee for your application is based on the estimated cost of the development.

If your application is for integrated development or requires concurrence from a state agency, additional fees will be required. Other charges may be payable based on the Council's adopted fees and charges. If your development needs to be advertised, the Council may charge additional advertising fees. Once this application form is completed, it and the supporting documents will be submitted to the Council for lodgement, at which time the fees will be calculated. The Council will contact you to obtain payment. Note: When submitting documents via the NSW Planning Portal, credit card information should not be displayed on documents attached to your development application. The relevant consent authority will contact you to seek payment.

The application may be cancelled if the fees are not paid:

First name	Bill
Other given name(s)	
Family name	Longley
Contact number	[redacted]
Email address	[redacted]
Billing address	[redacted]

Application documents

The following documents support the application.

Document type	Document file name
Aboriginal Due Diligence Assessment	AHIMS Search Result
Cost estimate report	F1373 - 1-19 Jude Street, Howlong - DE - X1
Preliminary Engineering Drawings	F1373 CDP X2
Statement of environmental effects	F1373 - DA Report - RevA (c)
Stormwater Management Plan	F1373 - Infrastructure Servicing Strategy RevA (c)
Survey plan	23210 RE+EC MGA2020 AHD 191223
Title Documentation / Certificate of Title	4_82_758528

Applicant declarations

I declare that all the information in my application and accompanying	

documents is , to the best of my knowledge, true and correct.	Yes
I understand that the development application and the accompanying information will be provided to the appropriate consent authority for the purposes of the assessment and determination of this development application.	Yes
I understand that if incomplete, the consent authority may request more information, which will result in delays to the application.	Yes
I understand that the consent authority may use the information and materials provided for notification and advertising purposes, and materials provided may be made available to the public for inspection at its Offices and on its website and/or the NSW Planning Portal	Yes
I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Government Information (Public Access) 2009 (NSW) (GIPA Act) under which it may be required to release information which you provide to it.	Yes
I agree to appropriately delegated assessment officers attending the site for the purpose of inspection.	Yes
I have read and agree to the collection and use of my personal information as outlined in the Privacy Notice	Yes
I confirm that the change(s) entered is/are made with appropriate authority from the applicant(s).	

RESIDENTIAL DEVELOPMENT

1-21 JUDE ST, HOWLONG

CONCEPT DESIGN PLANS | 41 LOTS

LOCALITY PLAN

DRAWING LIST:

F1373CDP01	LOCALITY PLAN & GENERAL NOTES
F1373CDP02	TYPICAL DETAILS
F1373CDP03	EXISTING CONDITIONS & SITE CONTEXT PLAN
F1373CDP04	OVERALL DEVELOPMENT PLAN
F1373CDP05-06	DETAIL PLAN (2 SHEETS)
F1373CDP07	BULK EARTHWORKS PLAN
F1373CDP08	LANDSCAPING PLAN
F1373CDP09-11	ROAD LONG SECTIONS (3 SHEETS)
F1373CDP12-13	DRAINAGE LONG SECTIONS (2 SHEETS)
F1373CDP14-15	SEWER LONG SECTIONS (2 SHEETS)

TABLE OF OFFSETS FOR SERVICES

STREET	GAS	NDW	DW	TELCO	UG ELEC	SEWER	BOK
JUDE STREET	3.90 S	- -	2.40 S	0.80 S			VARIES
ROAD 2	2.60 E	- -	3.10 E	2.60 W	3.10 W	1.50 W	5.70E / 5.70W
ROAD 3	2.60 W	- -	3.10 W	3.60 W	4.10 W		10.40 - 15.45W
ROAD 4	2.60 S	- -	3.10 S	2.60 N	3.10 N	1.50 N	5.70N / 5.70S

NOTE: LOCATION OF EXISTING SERVICES SPECIFIED ARE APPROXIMATE ONLY, CONTRACTOR TO LOCATE SERVICES PRIOR TO CONSTRUCTION

DIAL BEFORE YOU DIG www.1100.com.au

REV	DESCRIPTION	DATE	APPROVED
X4	AMENDMENT TO SEWER ALIGNMENT	4/09/2024	M.FISCHER
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AUTHORITY: FEDERATION COUNCIL

CLIENT: **LONGFORD LAND HOLDINGS**

FISCHER DEVELOPMENT SOLUTIONS
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ABN 30 136 220 716

DRAFTED:	C.L.	NER REG: 4531546
DESIGNED:	C.L.	NER REG: 4531546
CHECKED:	M.F.	NER REG: 3718456

N

RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
COVER SHEET, LOCALITY PLAN & GENERAL NOTES

SCALE 1:1,000 @ A3
10 0 10 20 30 40 50

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP01 / 15 REV: X4

LEGEND : EXISITNG CONDITIONS

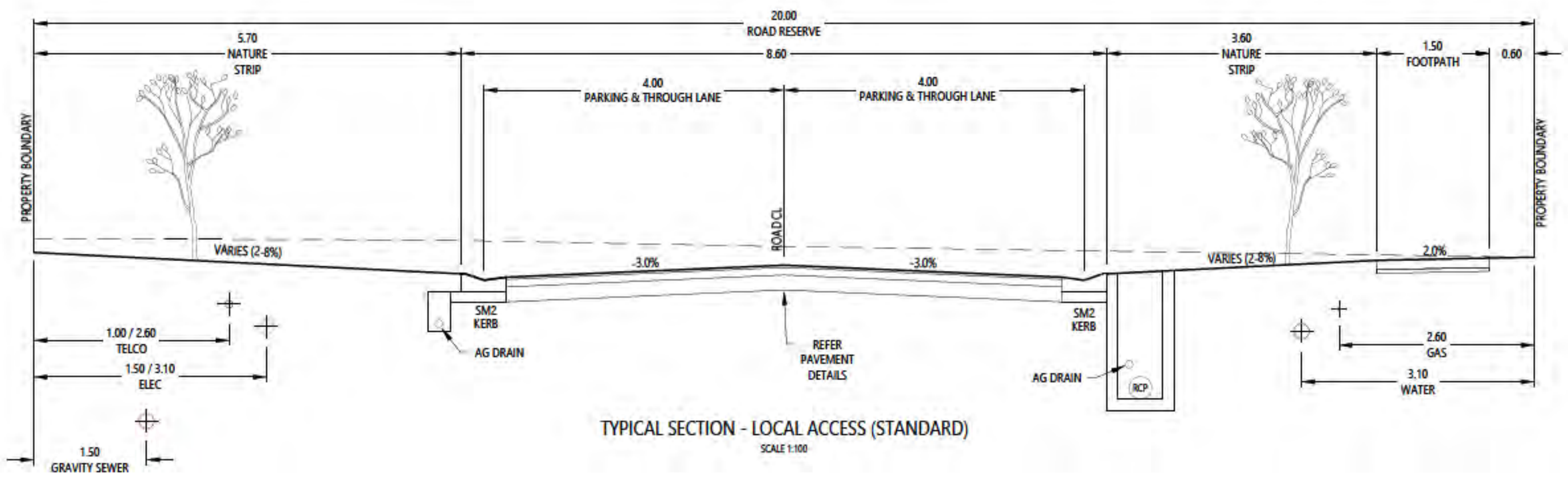
- TITLE BOUNDARY
- PROPOSED FUTURE TITLE BOUNDARY
- PREVIOUS STAGE TITLE BOUNDARY
- PROPOSED OR EXISTING EASEMENT
- EXISTING BUILDING OUTLINE
- EXISTING BITUMEN CENTRELINE
- EXISTING KERB & CHANNEL
- EXISTING EDGE OF BITUMEN
- EXISTING EDGE OF FORMATION
- EXISTING CONCRETE / ASPHALT PATH
- EXISTING DRIVEWAY
- EXISTING TOP OF BANK
- EXISTING TOE OF BANK
- EXISTING OPEN DRAIN INVERT
- EXISTING FENCE LINE
- EXISTING DRAIN / PIT
- EXISTING ELECTRICITY MAIN & PIT
- EXISTING OH ELECTRICITY MAIN & POLE
- EXISTING TELECO CABLE/PITS/PILLAR
- EXISTING GAS MAIN
- EXISTING WATER MAIN & APPURTNEANCES
- EXISTING SEWER & STRUCTURE
- EXISTING TREE TO BE RETAINED & TPZ
- EXISTING TREE TO BE REMOVED
- EXISTING STREET SIGN
- SURVEY STATIONS

LEGEND : PROPOSED WORKS

- PROPOSED KERB & CHANNEL
- PROPOSED EDGE OF BITUMEN
- PROPOSED BITUMEN SAWCUT
- PROPOSED CONCRETE WORKS
- PROPOSED GABION RETAINING WALL
- PROPOSED EARTHWORKS TOP OF BANK
- PROPOSED EARTHWORKS INVERT
- EXTENT OF EARTHWORKS BATTER
- PROPOSED CARPARK LINE MARKING
- PROPOSED BUILDING ROOFLINE (BY OTHERS)
- PROPOSED BUIDING WALL (BY OTHERS)
- PROPOSED DRAIN / PIT / I.S.
- PROPOSED DOWNPIPE / ROOF DRAINAGE
- PROPOSED SUBSOIL DRAINAGE
- PROPOSED FUTURE DRAINAGE
- H1 H2 H3 — PROPOSED HOUSE DRAIN (H1 = TO PIPE, H2 = TO PIT, H3 = TO KERB)
- PROPOSED SEWER MAIN & STRUCTURES
- PROPOSED FUT. LOW PRESSURE SEWER
- PROPOSED SEWER PROPERTY CONNECTION
- PROPOSED WATERMAIN & FITTINGS
- PROPOSED FUTURE WATERMAIN
- PROPOSED ELECTRICITY MAIN
- PROPOSED FUTURE ELECTRICITY MAIN
- PROPOSED GAS MAIN
- PROPOSED FUTURE GAS MAIN
- PROPOSED TELCO MAIN
- PROPOSED FUTURE TELCO MAIN
- PROPOSED WATER SERVICE & CONDUIT (SHARED TRENCH, INDIVIDUAL CONDUIT)
- PROPOSED ELECTRIC SERVICE & CONDUIT (SHARED TRENCH, INDIVIDUAL CONDUIT)
- PROPOSED TELCO SERVICE & CONDUIT (SHARED TRENCH, INDIVIDUAL CONDUIT)
- STORMWATER OVERLAND FLOWPATH
- FINISHED SURFACE CONTOURS (1.0m / 0.2m)
- EXISTING SURFACE CONTOURS (1.0m / 0.2m)
- FS 101.95 — FINISHED SURFACE LEVEL
- NS 101.95 — EXISTING SURFACE LEVEL
- FALL — SURFACE GRADING
- 10.00 — DIMENSION (IN METRES U.N.O)

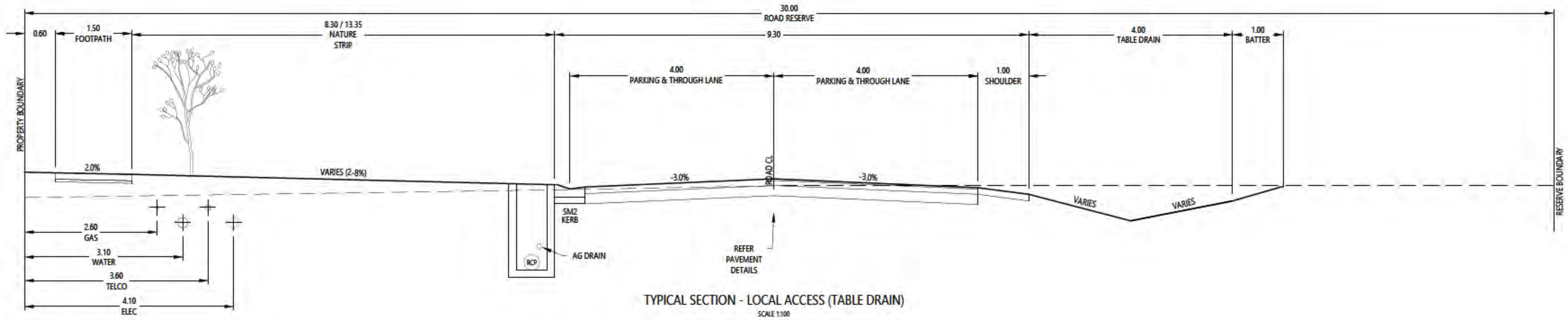
LEGEND : SHADING

- PROPOSED SEALED PAVEMENT (PRIMARY)
- PROPOSED KERB & CHANNEL
- PROPOSED URBAN FOOTPATH
- PROPOSED INDUSTRIAL DRIVEWAY
- PROPOSED ASPHALT SHARED PATH
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED FCR PAVEMENT
- PROPOSED NATURESTRIP \ LANDSCAPING
- PROPOSED LOT EARTHWORKS \ BATTER
- PROPOSED ROCK BEACHING



TYPICAL SECTION - LOCAL ACCESS (STANDARD)

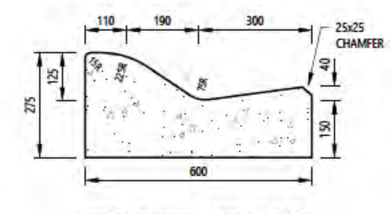
SCALE 1:100



TYPICAL SECTION - LOCAL ACCESS (TABLE DRAIN)

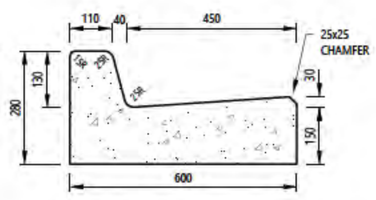
SCALE 1:100

PAVEMENT TYPE	ACCESS STREET PAVEMENT		CONCRETE FOOTPATH - STANDARD FINISH (REFER FED SD 301)		CONCRETE DRIVEWAY - RESIDENTIAL (REFER FED SD 408)		CRUSHED ROCK SHOULDER PAVEMENT	
PAVEMENT LAYER	THICKNESS (mm)	MATERIAL	THICKNESS (mm)	MATERIAL	THICKNESS (mm)	MATERIAL	THICKNESS (mm)	MATERIAL
WEARING COURSE / SURFACE FINISH	-	2 COAT BITUMEN SEAL	-	BROOMED FINISH & TOOLED JOINTS. FINISHED SURFACE TO COMPLY WITH AS 4586	-	BROOMED FINISH & TOOLED JOINTS. FINISHED SURFACE TO COMPLY WITH AS 4586		
BASE LAYER	180	20mm NOM. SIZE DGB20 FCR	100	25MPa CONCRETE WITH SL72 MESH 30mm COVER	175	25MPa CONCRETE WITH SL72 MESH 30mm COVER	150	20mm NOM. SIZE DGB20 FCR
SUBBASE LAYER	100	20mm NOM. SIZE DGS20 FCR	50	20mm NOM. SIZE DGB20 FCR	50	20mm NOM. SIZE DGB20 FCR	-	-
SUBGRADE LAYER	-	SUBGRADE PREPARATION IN ACCORDANCE WITH GENERAL NOTES. SUBGRADE IMPROVEMENT AS DIRECTED BY SUPERINTENDENT	-	SUBGRADE PREPARATION IN ACCORDANCE WITH GENERAL NOTES. SUBGRADE IMPROVEMENT AS DIRECTED BY SUPERINTENDENT	-	SUBGRADE PREPARATION IN ACCORDANCE WITH GENERAL NOTES. SUBGRADE IMPROVEMENT AS DIRECTED BY SUPERINTENDENT	-	SUBGRADE PREPARATION IN ACCORDANCE WITH GENERAL NOTES. SUBGRADE IMPROVEMENT AS DIRECTED BY SUPERINTENDENT



KERB PROFILE - 600mm SM2

(SCALE 1:50)



KERB PROFILE - 600mm B2

(SCALE 1:50)

NOTE: GEOTECHNICAL INVESTIGATION **HAS NOT** BEEN UNDERTAKEN, PAVEMENT DESIGN MUST BE UNDERTAKEN PRIOR TO CONSTRUCTION

NOTE: THIS IS AN UNCONTROLLED DOCUMENT AND WILL NOT BE UPDATED. IT IS THE RESPONSIBILITY OF THE USER TO CONFIRM THAT THIS IS A CURRENT COPY AND SUITABLE FOR THE PROPOSED USE - THIS SHEET MUST BE READ IN CONJUNCTION WITH ALL SHEETS OF THIS SET AND ANY ACCOMPANYING DOCUMENTS

PLOT DATE: 06/09/2024

REV	DESCRIPTION	DATE	APPROVED
X4	AMENDMENT TO SEWER ALIGNMENT	4/09/2024	M.FISCHER
X3	PLAN AMENDMENTS FOLLOWING COUNCIL RFI & ARBORIST REPORT	22/08/2024	M.FISCHER
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AUTHORITY: FEDERATION COUNCIL

CLIENT: LONGFORD LAND HOLDINGS

FISCHER DEVELOPMENT SOLUTIONS

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ABN 30 136 220 716

		NER REG:
DRAFTED:	C.L.	4531546
DESIGNED:	C.L.	4531546
CHECKED:	M.F.	3718456

N

RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG

CONCEPT DESIGN PLANS | 41 LOTS

PLAN TYPE

SCALE 1:1,000 @ A3

10 0 10 20 30 40 50

CONCEPT PLAN

NOT FOR CONSTRUCTION

AUTHORITY REF: TBC

PROJECT & DWG No: F1373CDP02 / 15

REV: X4

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X4	AMENDMENT TO SEWER ALIGNMENT	4/09/2024	M.FISCHER
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RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
EXISTING CONDITIONS & SITE CONTEXT PLAN

SCALE 1:1,500 @ A3
15 0 15 30 45 60 75

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP03 / 15
REV: X4

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PLOT DATE: 06/09/2024

REFER TO PLANS FOR ENDORSEMENT AND ARBORIST REPORT FOR VEGETATION TO BE REMOVED/RETAINED

ROAD 2

ROAD 4

ROAD 3 / HAMMER ST

JUDE ST

PEARCE ST

HAMMER ST

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RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
OVERALL DEVELOPMENT PLAN

SCALE 1:1,500 @ A3
15 0 15 30 45 60 75

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP04 / 15 REV: X4

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PLOT DATE: 06/09/2024

LEGEND

- KERB & CHANNEL (PROPOSED \ EXISTING)
- EDGE OF SEAL (PROPOSED \ EXISTING)
- TOP OF BANK (PROPOSED \ EXISTING)
- BOTTOM OF BANK
- OPEN DRAIN INVERT (PROPOSED \ EXISTING)
- SITE TITLE BOUNDARY
- PROPOSED LOT BOUNDARY
- PROPOSED FUTURE LOT BOUNDARY
- PROPOSED OR EXISTING EASEMENT
- PROPOSED DRAIN / PIT
- FUTURE DRAIN / PIT
- EXISTING DRAIN / PIT
- PROPOSED TRUNK GRAVITY SEWER (>4m)
- PROPOSED GRAVITY SEWER MAIN (<4m)
- PROPOSED SEWER RISING MAIN
- FUTURE GRAVITY SEWER MAIN
- EXISTING GRAVITY SEWER MAIN
- PROPOSED WATERMAIN
- EXISTING WATERMAIN
- PROPOSED ELECTRICITY MAIN
- EXISTING ELECTRICITY MAIN
- PROPOSED GAS MAIN
- EXISTING GAS MAIN
- PROPOSED TELCO MAIN
- EXISTING TELCO MAIN
- FINISHED SURFACE CONTOURS (1.0m / 0.1m)
- EXISTING SURFACE CONTOURS (1.0m / 0.2m)

OPEN DRAIN INVERT TO BE REGRADED TO SUIT DRAINAGE OUTFALL OF RL145.80 WHERE REQUIRED

EXISTING ROAD CROSSING UNDER JUDE & PEARCE ST TO BE RE-CONSTRUCTED WITH 2 x 525Ø CL4 RCP

OPEN DRAIN TO BE INDEPENDANTLY GRADED.

REFER TO PLANS FOR ENDORSEMENT AND ARBORIST REPORT FOR VEGETATION TO BE REMOVED/RETAINED

PROPOSED 250Ø WATER MAIN TO SERVICE THE DEVELOPMENT. CONNECTION ON KENNEDY STREET

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RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
DETAIL PLAN (SHEET 1 OF 2)

SCALE 1:1,000 @ A3
10 0 10 20 30 40 50

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP05 / 15 REV: X4

LEGEND

- KERB & CHANNEL (PROPOSED \ EXISTING)
- EDGE OF SEAL (PROPOSED \ EXISTING)
- TOP OF BANK (PROPOSED \ EXISTING)
- BOTTOM OF BANK
- OPEN DRAIN INVERT (PROPOSED \ EXISTING)
- SITE TITLE BOUNDARY
- PROPOSED LOT BOUNDARY
- PROPOSED FUTURE LOT BOUNDARY
- PROPOSED OR EXISTING EASEMENT
- D — PROPOSED DRAIN / PIT
- D — FUTURE DRAIN / PIT
- EXD — EXISTING DRAIN / PIT
- S — PROPOSED TRUNK GRAVITY SEWER (>4m)
- S — PROPOSED GRAVITY SEWER MAIN (<4m)
- SRM — PROPOSED SEWER RISING MAIN
- FS — FUTURE GRAVITY SEWER MAIN
- EXS — EXISTING GRAVITY SEWER MAIN
- W — PROPOSED WATERMAIN
- EXW — EXISTING WATERMAIN
- E — PROPOSED ELECTRICITY MAIN
- EXE — EXISTING ELECTRICITY MAIN
- G — PROPOSED GAS MAIN
- EXG — EXISTING GAS MAIN
- T — PROPOSED TELCO MAIN
- EXT — EXISTING TELCO MAIN
- FINISHED SURFACE CONTOURS (1.0m / 0.1m)
- EXISTING SURFACE CONTOURS (1.0m / 0.2m)

OPEN DRAIN TO BE INDEPENDANTLY GRADED.

OPEN DRAIN TO BE INDEPENDANTLY GRADED.

REFER TO PLANS FOR ENDORSEMENT AND ARBORIST REPORT FOR VEGETATION TO BE REMOVED/RETAINED

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X2	PLAN AMENDMENTS FOLLOWING CLIENT REVIEW	10/05/2024	M.FISCHER
X1	PLANS ISSUED FOR PRELIMINARY REVIEW	22/04/2024	M.FISCHER

AUTHORITY: FEDERATION COUNCIL

CLIENT: **LONGFORD LAND HOLDINGS**

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DESIGNED: C.L. NER REG: 4531546
CHECKED: M.F. NER REG: 3718456

N

RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
DETAIL PLAN (SHEET 2 OF 2)

SCALE 1:1,000 @ A3
10 0 10 20 30 40 50

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP06 / 15
REV: X4

CUT/FILL TABLE

No.	MIN LEVEL	MAX LEVEL	COLOUR
1	-1.50	-1.00	
2	-1.00	-0.60	
3	-0.60	-0.30	
4	-0.30	-0.02	
5	0.02	0.30	
6	0.30	0.60	
7	0.60	1.00	
8	1.00	1.50	

NOTES: LEVELS ARE A COMPARISON BETWEEN EXISTING SURFACE & DESIGN SURFACE. BOXING OF ROAD PAVEMENT IS **NOT** CONSIDERED IN THIS COMPARISON.
NS LEVELS ARE ORIGINAL AS-SURVEYED EXISTING SURFACE LEVELS & FS LEVELS ARE FINAL FINISHED SURFACE

REV	DESCRIPTION	DATE	APPROVED
X4	AMENDMENT TO SEWER ALIGNMENT	4/09/2024	M.FISCHER
X3	PLAN AMENDMENTS FOLLOWING COUNCIL RFI & ARBORIST REPORT	22/08/2024	M.FISCHER
X2	PLAN AMENDMENTS FOLLOWING CLIENT REVIEW	10/05/2024	M.FISCHER
X1	PLANS ISSUED FOR PRELIMINARY REVIEW	22/04/2024	M.FISCHER

AUTHORITY: FEDERATION COUNCIL

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CHECKED: M.F. NER REG: 3718456

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RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
BULK EARTHWORKS PLAN

SCALE 1:1,500 @ A3
15 0 15 30 45 60 75

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP07 / 15
REV: X4

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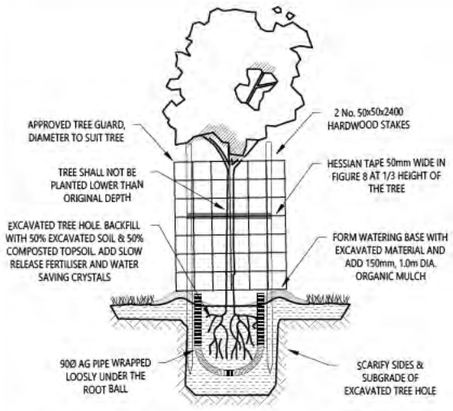
PLOT DATE: 06/09/2024



TREE PLANTING DETAIL

SCALE NTS

LEGEND: LANDSCAPING

- PROPOSED STREET TREE - *TO BE CONFIRMED BY COUNCIL*
- EXISTING TREE - TO BE RETAINED
- EXISTING TREE - TO BE REMOVED

NOTE:

1. ALL TREES WITHIN ROAD RESERVE TO HAVE MINIMUM 1000mm RADIUS MULCH RING SURROUND.
2. STREET TREES TO HAVE MINIMUM 3.0m CLEARANCE TO DRIVEWAYS.

REFER TO PLANS FOR ENDORSEMENT AND ARBORIST REPORT FOR VEGETATION TO BE REMOVED/RETAINED

TREE PLANTING SCHEDULE						
BOTANICAL NAME	**COMMON NAME**	**MATURE SIZE**	**PLANTING SIZE**	**DENSITY**	**QUANTITY**	**COMMENT**
CONFIRMED BY COUNCIL	CONFIRMED BY COUNCIL	CONFIRMED BY COUNCIL	1.3m HEIGHT AT PLANTING	AS SHOWN	41	

PLANTING PREPARATION & MAINTENANCE

Appropriate site preparation before planting will maximise the ability of nursery stock to rapidly establish once planted out. Removing competition from weeds, and providing friable soil in the localised area will reduce the stresses exerted on the young tree, aiding establishment. Timing of planting is critical in ensuring the success of the tree-planting program, and will ensure follow up management costs are kept to a minimum

WEED CONTROL

Weeds should be removed before planting takes place, and controlled following establishment. Weeds compete aggressively for water and nutrients, inhibiting growth of newly planted stock. The most practical method of weed control is via application of Glyphosate based herbicides at the prescribed rate for the selected weed species one month before planting is scheduled to take place. Glyphosate is the most accepted knock down chemical herbicide currently in use in Australia. Dead weeds can be left in place until planting to prevent localised erosion of the planting area. The non-selective nature of the herbicide should ensure most weeds are controlled.

Pre-emergent herbicides applied after initial weed control are useful for ongoing weed management, and reduce the need for follow up spraying, reducing maintenance costs. However the residual nature of these chemicals, particularly in relation to high public exposure is of concern and may not be an acceptable management procedure in which case an annual application of Glyphosate during the early years of establishment should be adequate to ensure effective establishment

SOIL AMELIORATION

Soil should be cultivated in a shallow broad hole, 2-3 times the diameter of the root ball and only marginally deeper than the root ball. The subsoil in general should not be pierced or broken but at the same time, the interface should not be "glazed". Amelioration of backfill should be avoided where possible, as soil structure will be altered, resulting in a number of challenges to successful establishment, although the material should be friable and definitely not puggy. These challenges include moisture being actively removed by finer grade surrounding soils during the dry months, causing drought stress, a particular concern for newly planted trees. Additionally, with differing soil porosities, the ameliorated hole can act as a sump during the wetter months, causing water-logging.

Backfill should be broken up, resulting in a well-aerated, non-compacted ring, conducive to root growth. A saucer of soil around the root ball is essential to hold available water, critical in a high stress situation such as street tree plantings, providing a location for watering during the establishment years. This method of watering allows the water to slowly percolate down through the root ball but it is essential that the saucer has the capacity to retain at least 45-50 litres of water. Perforated ag pipe coiled around the root ball and rising to the surface, in combination with the watering well, allows water to wet both the lower and upper parts of the root ball. A standard detail of planting measures are shown on this sheet (see 'Tree Planting Detail').

Most of the hardier native tree species will quickly establish a strong root system in the sub-soils if adequately de-compacted but the less vigorous species and those less tolerant of local conditions will benefit from the placement of a good depth of local topsoil placed around the root ball for a distance of 1-2 metres from the trunk of the tree, as long as there is adequate drainage away from the base of the potential sump this creates. The adjacent road agricultural drain or open table drain is usually sufficient for this purpose.

TIMING

Planting should ideally be undertaken during autumn for optimal plant establishment. Overly wet conditions can lead to the smearing of the sides of the planting hole during excavation, and thus is difficult for root growth to penetrate, as well as forming a basin that tends to become waterlogged. Spiralling of roots within the hole can result, as well as a number of root rots and anoxic soil conditions.

Due to planting stock availability or subdivision construction timelines, it may not be possible to plant during autumn. Planting can be quite successfully undertaken at other times of the year, however it must be recognized that higher management input will be required to ensure successful establishment, especially if late plantings are undertaken, leading to an increased program of irrigation during early stages of establishment. Many of these problems can be overcome by contract growing of plant material, to ensure that robust specimens are available of suitable size and state of development for the project.

MULCHING

Mulching is desirable for a number of reasons, not the least of which are moisture retention and weed control. Increased moisture has a flow on effect, including increasing the availability of nutrients to the tree. Furthermore, mulching helps to dissipate traffic loadings laterally, reducing the effects of compaction. Mineral aggregates, such as granitic sand are useful in high wear areas, particularly adjacent to footpaths, where it is not easily displaced by pedestrians or washed away. Where a higher maintenance regime can be implemented, such as adjacent to parks, a fibrous mulch offers better protection from compaction but is more prone to displacement or being washed away.

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AUTHORITY: FEDERATION COUNCIL

CLIENT: **LONGFORD LAND HOLDINGS**

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DESIGNED: C.L. NER REG: 4531546
CHECKED: M.F. NER REG: 3718456

N

RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
CONCEPT DESIGN PLANS | 41 LOTS
LANDSCAPING PLAN

SCALE 1:1,500 @ A3
15 0 15 30 45 60 75

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373CDP08 / 15 REV: X4

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PLOT DATE: 06/09/2024

DEVELOPMENT PLAN

EXISTING CONDITIONS & TITLE SURVEY SUPPLIED BY OMLS. ANY DISCREPANCIES IDENTIFIED IN SURVEY SHOULD BE CONFIRMED WITH SURVEYOR

LOT 3, SEC 87 DP758528

LOT 4, SEC 87 DP758528

LOT 1, SEC 83 DP758528

LOT 2, SEC 81, DP758528

LOT 4, SEC 83 DP758528

LOT 3, SEC 81, DP758528

BELMORE STREET

STREET ONE

STREET TWO

HAMMER STREET

JUDE STREET

PEARCE STREET

2-4 JUDE STREET

6-8 JUDE STREET

10-12 JUDE STREET

14-16 JUDE STREET

20 JUDE STREET

X9	INCURSION DETAILS ADDED - MINOR AMEND	06.09.2024
X1	PREPARED FOR REVIEW AND COMMENT	17.01.2024
REV	DESCRIPTION	DATE

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RESIDENTIAL SUBDIVISION
1-19 JUDE STREET, HOWLONG
LOTS 1-4, SECTION 82, DP 758528

CONCEPT DEVELOPMENT PLAN

SCALE 1:1,250 @ A3
12.5 0 12.5 25 37.5 50 62.5

MUNICIPALITY
FEDERATION COUNCIL

PROJECT & DWG No: F1373CP01 / 04

REV: X9

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DEVELOPMENT PLAN

EXISTING CONDITIONS & TITLE SURVEY SUPPLIED BY OMLS. ANY DISCREPANCIES IDENTIFIED IN SURVEY SHOULD BE CONFIRMED WITH SURVEYOR

GENERAL NOTES

THIS PLAN IS PRESENTED FOR APPROVAL/ENDORSEMENT PURPOSES ONLY AND REPRESENTS PROPOSAL FOR ASSESSMENT AND REVIEW BY THE RESPONSIBLE AUTHORITY.

THIS PLAN IS BASED ON PRELIMINARY INFORMATION AND IS SUBJECT TO FINAL SURVEY AND COUNCIL APPROVAL.

- VEGETATION (TREE)
- VEGETATION FOR REMOVAL
- TREE PROTECTION ZONE (TPZ)
- STRUCTURAL ROOT ZONE (SRZ)
- (1) TREE NUMBER

LOT 3, SEC 87 DP758528

LOT 4, SEC 87 DP758528

LOT 1, SEC 83 DP758528

LOT 4, SEC 83 DP758528

LOT 2, SEC 81, DP758528

LOT 3, SEC 81, DP758528

BELMORE STREET

STREET ONE

STREET TWO

HAMMER STREET

JUDE STREET

PEARCE STREET

2-4 JUDE STREET

6-8 JUDE STREET

10-12 JUDE STREET

14-16 JUDE STREET

20 JUDE STREET

11 1053m²
10 900m²
9 900m²
8 900m²
7 900m²
6 900m²
5 900m²
4 900m²
3 900m²
1 904m²
2 871m²
12 850m²
13 792m²
14 823m²
15 860m²
17 844m²
19 844m²
21 844m²
22 839m²
23 768m²
24 768m²
16 844m²
18 844m²
20 844m²
25 809m²
26 805m²
41 1058m²
39 783m²
37 783m²
35 783m²
33 783m²
27 644m²
28 612m²
29 612m²
30 612m²
31 644m²
40 1054m²
38 783m²
36 783m²
34 783m²
32 783m²

TREE RECOMENDAED FOR REMOVAL DUE TO LIMB FAILURE (REFER ARBORIST REPORT)

DEAD TREE TO BE REMOVED

EUCALYPT IN POOR HEALTH DUE TO PERPPERCORN SUCKERS. TO BE REMOVED (REFER ARBORIST REPORT)

PERPPERCORN TO BE REMOVED (REFER ARBORIST REPORT)

DEAD EUCALYPT SURROUNDED BY PERPPERCORN SUCKERS TO BE REMOVED (REFER ARBORIST REPORT)

LOW IMPACT CONSTRUCTION REQUIRED TO RETAIN EUCALYPT TREES

LOW IMPACT CONSTRUCTION REQUIRED TO RETAIN EUCALYPT TREES

LOW IMPACT CONSTRUCTION REQUIRED TO RETAIN EUCALYPT TREES

REV	DESCRIPTION	DATE
X9	INCURSION DETAILS ADDED - MINOR AMEND	06.09.2024
X1	PREPARED FOR REVIEW AND COMMENT	17.01.2024

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RESIDENTIAL SUBDIVISION
1-19 JUDE STREET, HOWLONG
LOTS 1-4, SECTION 82, DP 758528

VEGETATION REMOVAL PLAN

SCALE 1:1,250 @ A3
12.5 0 12.5 25 37.5 50 62.5

MUNICIPALITY: FEDERATION COUNCIL
PROJECT & DWG No: F1373CP02 / 04
REV: X9

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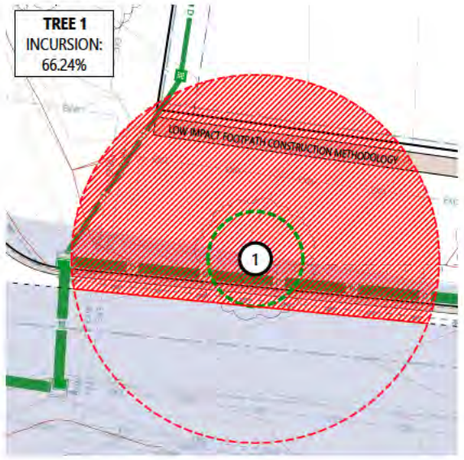
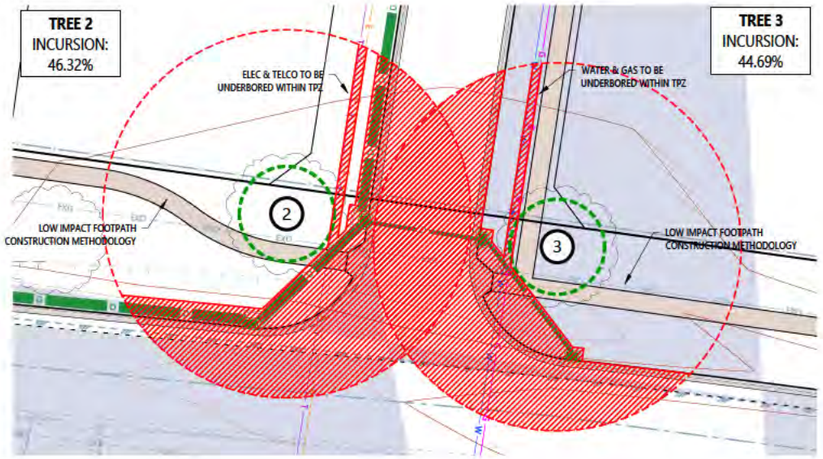
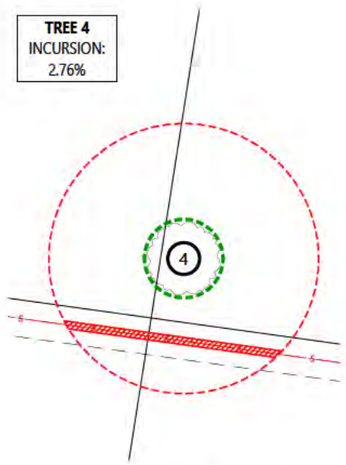
DEVELOPMENT PLAN



TREE 1 - INCURSION PLAN
SCALE 1:500



TREE 2 & 3 - INCURSION PLAN
SCALE 1:500

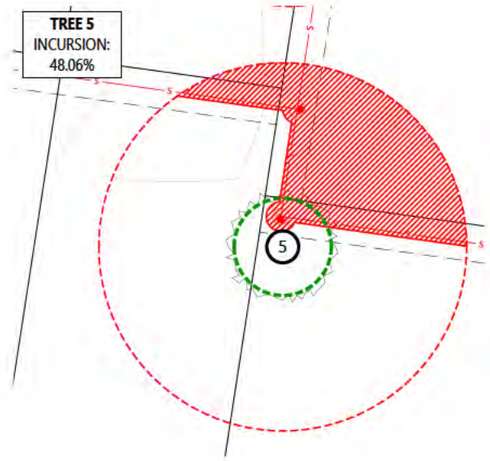


TREE 4 - INCURSION PLAN
SCALE 1:500

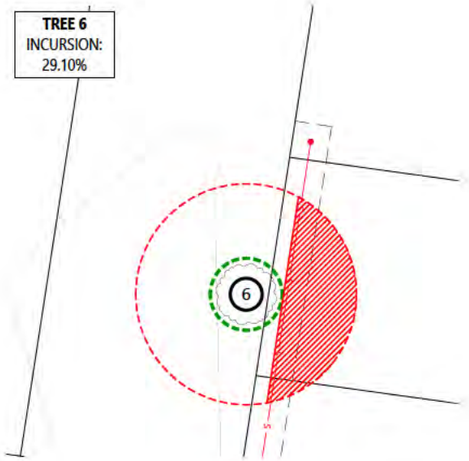
LEGEND

THIS PLAN IS PRESENTED FOR APPROVAL/ENDORSEMENT PURPOSES ONLY AND REPRESENTS PROPOSAL FOR ASSESSMENT AND REVIEW BY THE RESPONSIBLE AUTHORITY.

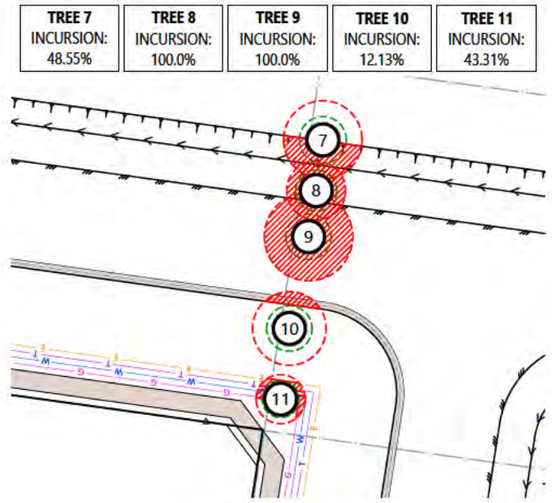
- ENCROACHMENT AREA
- TREE PROTECTION ZONE (TPZ)
- STRUCTURAL ROOT ZONE (SRZ)
- 1 TREE NUMBER



TREE 5 - INCURSION PLAN
SCALE 1:500



TREE 6 - INCURSION PLAN
SCALE 1:500



TREE 7-11 - INCURSION PLAN
SCALE 1:500

REV	DESCRIPTION	DATE
X9	INCURSION DETAILS ADDED - MINOR AMEND	06.09.2024
X1	PREPARED FOR REVIEW AND COMMENT	17.01.2024

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RESIDENTIAL SUBDIVISION
1-19 JUDE STREET, HOWLONG
LOTS 1-4, SECTION 82, DP 758528

TREE INCURSION PLANS (SHEET 1 OF 2)

SCALE 1:500 @ A3
5 0 5 10 15 20 25

MUNICIPALITY: FEDERATION COUNCIL
PROJECT & DWG No: F1373CP03 / 04
REV: X9

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DEVELOPMENT PLAN

LEGEND

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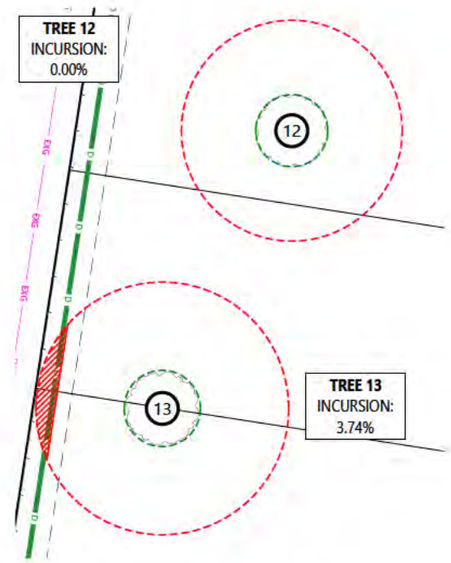
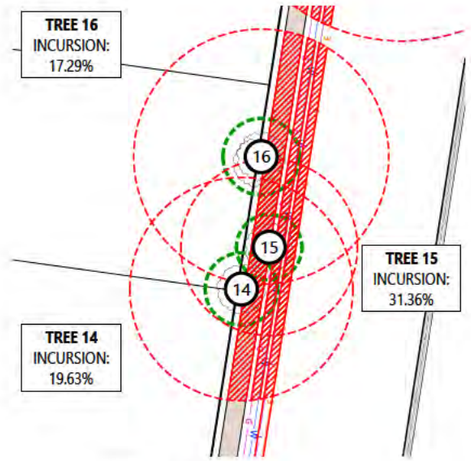
- ENCROACHMENT AREA
- TREE PROTECTION ZONE (TPZ)
- STRUCTURAL ROOT ZONE (SRZ)
- (1) TREE NUMBER

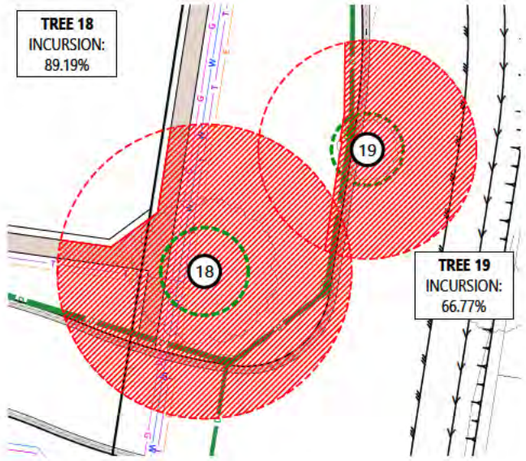


TREE 12 & 13 - INCURSION PLAN
SCALE 1:500

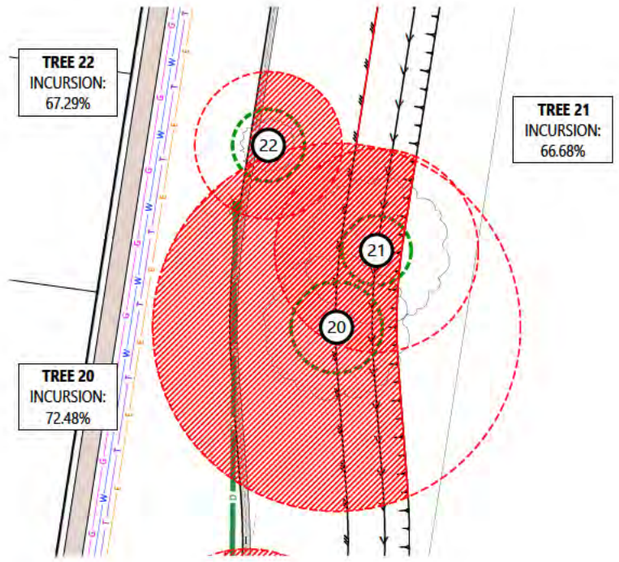


TREE 14-16 - INCURSION PLAN
SCALE 1:500

TREE 17 - INCURSION PLAN
SCALE 1:500



TREE 18 & 19 - INCURSION PLAN
SCALE 1:500



TREE 20-22 - INCURSION PLAN
SCALE 1:500

REV	DESCRIPTION	DATE
X9	INCURSION DETAILS ADDED - MINOR AMEND	06.09.2024
X1	PREPARED FOR REVIEW AND COMMENT	17.01.2024

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RESIDENTIAL SUBDIVISION
1-19 JUDE STREET, HOWLONG
LOTS 1-4, SECTION 82, DP 758528

TREE INCURSION PLANS (SHEET 2 OF 2)

SCALE 1:1,250 @ A3
12.5 0 12.5 25 37.5 50 62.5

MUNICIPALITY: FEDERATION COUNCIL
PROJECT & DWG No.: F1373CP04 / 04
REV: X9

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FISCHER
DEVELOPMENT SOLUTIONS

INFRASTRUCTURE SERVICING REPORT

1-21 JUDE STREET, HOWLONG
41 LOTS

PREPARED FOR

LONGFORD LAND HOLDINGS

FISCHER DEVELOPMENT SOLUTIONS
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DOCUMENT HISTORY AND STATUS

Rev.	Status	Date	Prepared by	Prepared for
A	Preliminary	April 2024	Matthew Fischer	Longford Land Holdings

EXECUTIVE SUMMARY

This report discusses the availability of services to the proposed residential development of a 4.06-hectare property at Jude St, Howlong. The Site is bounded by Jude St, Pearce St, Hammer St (unmade) & adjoining properties.

Stormwater	Available – Subject to External Works	The subject site will have self-contained drainage infrastructure that discharges to the existing table drain on the South-Western corner of the Jude & Pearce St intersection, with some deepening of the table drain required to service this. The internal road network is designed to ensure overland flow paths on the subject site traverse and ultimately discharge to Jude St and along the existing flow path.
Roads & Access	Available	Jude St is a local access street in the township. Part of this road is primarily sealed with other sections to the West unsealed and ad-hoc sections of kerb and channel fronting the newer developments along this road. The sites frontage to Jude St is not kerbed, and it is expected that the developer will upgrade the road to Federation Council Standards for a Collector Street for the full development frontage, with kerb & channel and footpath. Pearce St is a local access street in the township. Part of this road is primarily sealed with other sections to the North unsealed and ad-hoc sections of kerb and channel fronting the newer developments along this road. The sites frontage to Pearce St is unsealed and it is expected to remain unchanged as part of our development. Hammer St is a local access street in the township. The road is primarily sealed with other sections to the North unformed. The sites frontage to Pearce St is formed and it is expected that the developer will upgrade the road to Federation Council Standards for a Collector Street for the full development frontage, with kerb & channel and footpath. Local access roads will form the internal network of our development and will be as per the Federation Council Standards.
Sewer	Available – Subject to External Works	There is existing Sewer infrastructure located within Pearce St approximately 130m to the South of our development site. This has been identified as the connection point for our internal gravity sewer system. The internal gravity sewer system will be located within a combination of road reserve and easements, exiting out along the Northern side of Jude St and continue down South connecting into the existing gravity network within Pearce St.
Water	Available – Subject to External Works	There is an existing Watermain in Jude St (south side), however this main is not suitable to service the subject site. Supply would be subject to the extension of 225Ø potable watermain along Hammer St from Kennedy St. Internal watermain is to be reticulated with 100Ø.
Electricity	Available	Overhead lines are present in Jude St servicing existing properties in the area. It is considered that the current supply in the area should be sufficient to support the development, subject to timing. There will be some upgrades required, likely to be in the form of pad mounted substations as informed by detailed electrical design.
Gas	Available	The subject site is within the APA Group footprint with gas supply available to this area. The developer will be required to enter an agreement with APA Group to ensure gas infrastructure is installed during subdivisional works.
Telecommunications	Available	The subject site is within the NBN Co footprint

TABLE OF CONTENTS

TABLE OF FIGURES

1. INTRODUCTION

Fischer Development Solutions has been commissioned by Longford Land Holdings to review, investigate, and prepare a servicing report in relation to the necessary infrastructure required to service a development proposal for a 41 Lot residential subdivision development located at 1-21 Jude St, Howlong

This report has been prepared following a desktop review, site survey and site inspection.

1.1. SITE LOCATION

The subject site is bounded by Jude St (South), Pearce St (West) and existing residential properties to the North & East. The subject site has a road frontage of approximately 250m on Jude St & 250m along Pearce St. The site is square in shape and covers an area of approximately 4.06ha. The site is approximately 800m North-West of the Howlong Township Centre (Riverina Hwy/Sturt Street), refer to below figure for context.

Figure 1. Jude St, Howlong - Township Context

There is no current formal use of the site, and it is fenced as a grassland paddock. The site appears to currently have access to Stormwater Drainage, Water, Sewer, Electrical, Gas and Telecommunications services.

There appears to be no significant undulations or slopes across the site, with a reasonable flat topography present. Jude St which fronts the Southern side of the site falls to both the East and West with a high point in the road located centrally to the land parcel.

The parcel is situated approximately 800m North-West of the Howlong Township Centre. The township of Howlong contains two main roads: Riverina Hwy/Hawkins St and Sturt St/River Rd. Riverina Hwy runs through the Township Centre and while Sturt St heads South and crosses the Murray River.

The site is situated in the North-Western corner of the existing township R1 – General Residential Zone, at the time of writing this report, the land is designated for Residential Purposes as outlined in the Corowa LEP. There appears to be no other overlay or zoning requirement that affects the assessment and conclusions within this report.

Figure 2. Jude St, Howlong - Zoning Context

1.2. INFORMATION SOURCES

Our investigation into the availability of services included sourcing written and verbal information from service authorities, site feature survey and a site investigation.

The source of information relating to the Drainage, Water & Sewer infrastructure in the area is Federation Council (FC) as the municipal authority to which these infrastructure assets are owned and maintained. The supplied information included information supplied from the client as a result of a meeting with council officers, pre-application meeting with Council Officers, review of previous reports relating to this site and review of Federation Council's 'Intramaps' system. The supplied Asset plans are included as an appendix to this report.

Electricity, Telecommunications and Gas infrastructure was sourced from a 'Before You Dig Australia (BYDA) search with cross-referencing to ground surface indicators collected during the feature survey. These BYDA plans are also included in the appendix of this report.

1.3. ASSUMPTIONS & LIMITATIONS

This project has been scoped and undertaken as a desktop study, with an initial site visit to provide preliminary advice on the servicing works required for the vicinity of this property. There are limitations to the level of detail provided given the nature of this review. Desktop studies are reliant upon information made available from service authorities; with assumptions of the accuracy and completeness of the information provided. Further assessment and confirmation of details provided will be necessary during the detailed design stage.

The information supplied regarding servicing constraints and/or limitations of existing infrastructure was considered during the data collection process. Certain assumptions have been regarding network capacity and infrastructure required to service the subject development site.

2. SERVICING STRATEGY

2.1. STORMWATER

2.1.1. Methodology

The hydrological assessment for the proposed development site has been undertaken using the Rational Method to estimate the peak runoff generated from the site for multiple storm events, under pre-developed and post developed conditions. The full Stormwater Management Strategy Report and Calculations is included in Appendix A of this report.

The Rational Method is a simple statistical method to estimate the peak discharge from a catchment for a given storm intensity. This method is widely accepted to estimate runoff from small simple rural and urban catchments for up to 25 km^2 and 1 km^2 respectively. The overall catchment included in this assessment is comprised of the subject site only (0.04km^2).

Calculation of stormwater runoff using the rational method uses the inputs of the site area, coefficient of runoff and the design storm peak intensity, sourced from the Bureau of Meteorology (see below table).

	Annual Exceedance Probability (AEP)						
Duration	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	96.9	110	152	179	206	242	268
2 min	81.8	93.0	128	152	175	202	223
3 min	74.2	84.3	116	137	158	183	202
4 min	68.5	77.8	107	127	145	169	187
5 min	63.8	72.5	99.6	118	135	158	175
10 min	48.2	54.9	75.4	89.2	103	120	134
15 min	39.3	44.7	61.5	72.8	83.8	98.5	110
20 min	33.5	38.1	52.4	62.0	71.4	83.9	93.5
25 min	29.3	33.3	45.8	54.3	62.5	73.4	81.8
30 min	26.1	29.7	40.9	48.4	55.8	65.5	72.9
45 min	20.0	22.7	31.3	37.0	42.6	50.0	55.6
1 hour	16.5	18.7	25.6	30.3	34.9	40.9	45.4
1.5 hour	12.4	14.0	19.2	22.6	26.0	30.5	33.8
2 hour	10.1	11.4	15.5	18.3	21.1	24.6	27.4
3 hour	7.56	8.52	11.5	13.6	15.6	18.2	20.3
4.5 hour	5.66	6.36	8.57	10.1	11.6	13.6	15.1
6 hour	4.62	5.18	6.95	8.17	9.37	11.0	12.3

Figure 3. Rainfall Intensity - Frequency - Duration (IFD) data (Howlong, NSW, 2643)

Under the current best practice for stormwater management in urban development, detention of peak flows to 'pre-Development' rates allows for the development to proceed without causing nuisance or exceeding capacity of receiving drainage infrastructure.

Due to the close vicinity of our site to the outfall along the Murray River & being at the bottom of the stormwater drainage catchment, Federation Council have requested that stormwater detention not be considered for this development, but that the underground network and overland flow paths be able to convey minor and major storm events respectively.

2.1.2. Findings

The site is an existing small (4.09ha) site that is currently undeveloped grassland. The entire site has been considered for peak volumetric runoff calculations in the minor and major storm events, below Fig 4. shows the context for the site calculations.

Figure 4. Site Development Context

As previously mentioned, there will be no detention of stormwater onsite. The underground drainage network within the development will convey the minor (20% AEP) to the outfall table drain along Jude St, while the road reserve will provide an overland flow path for the major (1% AEP) event.

2.1.3. Conclusion

This Stormwater Management Strategy in Appendix A demonstrates that the proposed subdivision can meet the required objectives for stormwater management. The quality and quantity targets outlined in this report will be achieved by.

- Underground drainage to convey minor storm flows to the existing table drain along Jude St. Re-construction of the existing road crossings under Jude St and Pearce St are required, along with the deepening of the existing outfall table drain along Jude St.
- Overland flow path provided via the subdivision road network.

2.2. ROADS & ACCESS

Jude St appears to be in good working condition along the frontage of our development site, with kerb and channel along the Southern side. Pearce St is currently unsealed along the Western side of the development, while Hammer & Belmore St are unmade along the East and North respectively.

The proposed development intends to upgrade the roadway standard of Jude St along the development frontage to the Federation Council 'Local Access' standard. This will include the construction of kerb and channel & footpath along the Northern side of the road. Hammer St & Belmore St will be formed along our development as part of this project, and will also be to the 'Local Access' standard.

Internal to this site will be the construction of two (2) local access streets, connecting Jude St to Belmore St running North-South, and connecting this street to Hammer St running East-West.

All roads will be constructed to Federation Council's Engineering Guidelines standard with kerb and channel and appropriate underground drainage infrastructure. The preliminary Civil Design Plans show the design of the roadways to meet council gradient requirements and ensure conveyance of overland flows are to the proposed drainage basin infrastructure.

2.3. SEWER

Federation Council (FC) is the municipal authority responsible for sewer infrastructure and service supply in this area. FC Intramaps provides existing infrastructure maps (Appendix B) showing the location of and size of existing sewer gravity mains and the existing pump station situated in Kennedy Street.

The sewer design flows have been calculated for the development proposed (41 equiv. ET) and the calculations are provided in the below figure 5.

Classification	Single Occupancy Lots
Unit	Lot
EP per Unit	3.5

Development Summary		
Area (a)	4.09	ha
Lot Yield	41	No

Equivalent Population		
EP	143.5	No.

ADWF (EP)	180	L/d/EP	Average Dry Weather Flow per EP
ADWF	0.298958333	L/s	Average Dry Weather Flow for development
d' Factor	5.2012		d' Factor from WSA 02-2014 Figure C.1
PDWF	1.5549	L/s	Peak Dry Weather Flow

Ground water Infiltration (GWI)			
$Portion_{WET}$	50.0%	%	estimated portion network groundwater table in excess of pipe
GWI	0.5113	L/s	groundwater ingress in L/s.

Rainwater dependent inflow and infiltration (RDI)						
C	0.8	Refer to Table C.1 to estimate				
$I_{1,2}$	21.26	mm/hr		I	27.9519	mm/hr
$Factor_{SIZE}$	1.31		-	A_{eff}	1.9781	ha
$Factor_{CONTAINMENT}$	1.00			RDI	1.2385	L/s

Design Flow			
Design Flow	3.3047	L/s	(PDWF + GWI + RDI)

Figure 5. Sewer Flow Calculations

Advice provided by Federation Council determined that the existing gravity mains along Pearce Street and pump station in Kennedy Street will be adequate to service the subject development site.

The preliminary Civil Engineering Design Plans further demonstrates that adopting WSAA compliant self-cleansing grades for the sewer main entering the proposed pump station provides adequate service coverage for the entire proposed development site including future development of the resulting land surrounding should it be developed further in future.

2.4. WATER

The Federation Council (FC) is the municipal authority responsible for water supply services in this area. FC Intramaps provides existing infrastructure maps (Appendix B) showing the location of and size of existing water supply mains in the vicinity. Advice was sought regarding any known constraints or limitations of this infrastructure. FC advised that the existing water main on the south side of Jude Street is not adequate for the development site to utilise for servicing.

FC advice is that a mains extension from the existing Watermain in Kennedy Street will be required to supply reticulated water supply to the site. A 250Ø potable watermain will be installed from this existing main and extended along the East side of Hammer Street to the development site. Internal reticulated water supply will be connected to this main to provide water supply to the allotments proposed in the development site.

The proposed development will create an additional 41 equivalent tenements demand within Howlong, requiring supply from the existing Howlong reticulated water supply network. The demand increases this development creates for the existing supply network is summarised below:

Lot Size	ET	Demand per ET* (annual)	Ave Day Demand (L/ET/day)	Peak Day Factor	Peak Day Demand (L/ET/day)
Std Residential	41	230 kL	630	2.28	1,436.40

*Sourced from Water Directorate Section 64 Determination of ET's guidelines.

^In absence of Council Local ET calculation, the above estimation contains high potential for variability.

Lot Size	ET	Ave Hour Demand (L/ET/hr)	Ave Hour Demand (L/hr)	Peak Hour Factor	Peak Hour Demand (L/hr)	Peak Hour Demand (L/s)
Std Residential	41	59.85	2,453.85	3.69	9,054.70	2.52

Advice received from Federation Council during pre-application meeting outlined that the current system supply available to this site is XXL/s at XXm head. The above demand calculations demonstrate that the subject site will not exceed the capacity of the supply arrangement.

The mains extension along Hammer Street will provision fire plugs/hydrants in accordance with RFS/CFA requirements, a 60m nominal interval will be adopted for all external and internal hydrant spacings.

2.5. ELECTRICITY

Based on information from the site survey, inspection and BYDA search there appear to be adequate infrastructure fronting the subject site, with overhead powerlines within Jude and Pearce Street.

Under Essential Energy's supply policy guidelines, the Developer will be required to pay for the cost of extending/upgrading the power supply if required. A development of this size will likely attract a need for substations to service the new dwellings and power supplied infrastructure (Pump Stations).

Design and construction of the mains extension and supply will be subject to Level 3 ASP design works with HV works to be installed by Level 1 ASP. Essential Energy standards and regulations will need to be complied with for these works.

Unfortunately for the purpose of the Development Application, we are not able to have preliminary designs completed as the DIP (Design Information Pack) is not able to be supplied by Essential Energy without a copy of a Development Consent. This is part of Essential Energy's policies and procedures.

2.6. GAS

The BYDA search completed for this site received a response from APA Group indicating that there is gas network infrastructure present in the vicinity of this subject site. Site survey and inspection was able to locate marker posts to confirm the presence of infrastructure. The existing infrastructure is located within the Jude & Pearce Street road reserves.

Whilst Gas is not deemed an essential service, this development will likely install Gas infrastructure for the future dwellings to utilise if they choose. At the time of writing this report, the APA policy for new developments is that the developer is responsible for the costs to bring Gas infrastructure to the subject site entrance with internal reticulation to be at no cost for materials.

The supply of network infrastructure at the site's entrance near the corner of Jude & Hammer St will allow the developer to take advantage of this incentive from APA and supply the infrastructure at reduced cost.

2.7. TELECOMMUNICATIONS

BYDA search and site feature survey located Telecommunications infrastructure in Jude Street on the southern side of the road reserve for the length of the site's frontage. The site will be provided with telecommunications with standard agreements to be entered into with NBNCo. The design and construction of this infrastructure will be subject to NBNCo regulations and standards.

3. CONCLUSION

The subject site is located within the R1 – General Residential Zone of Howlong as off time of writing. The site appears to have nearby infrastructure providing the site to all required services. The site has been zoned residential for many years and as such, it should be anticipated by service authorities that the site would be subject to development at some time.

Through traditional delivery models, developers are required to fund the infrastructure required to provide services to the development site proposed. Although where known limitations are identified, wider catchment infrastructure upgrades can be proposed using a reimbursement or proportionate cost model to ensure transparency and fairness for infrastructure costs to benefiting parties.

It is not expected that any wider infrastructure or servicing provisions are required for this development to proceed although Federation Council have noted that the supply of water to this catchment of the township may in future require trunk infrastructure upgrades. Thus, this development would be expected to have most infrastructure contained to servicing the subject site only and being at the full cost of the developer.

Fischer Development Solutions confirms that the extension of all services for development of the site at 1-21 Jude St, Howlong can be achieved through known and proven techniques and standard agreements with service providers. It is recommended that the site is suitable for Residential Development of 41 ET (equiv. tenements) as proposed from a servicing perspective.

APPENDIX A: STORMWATER MANAGEMENT STRATEGY

FISCHER
DEVELOPMENT SOLUTIONS

SUBMISSION TO FEDERATION COUNCIL

STORMWATER MANAGEMENT STRATEGY

PROPOSED RESIDENTIAL DEVELOPMENT

1-21 Jude Street, Howlong

CLIENT: Longford Land Holdings
DATE: APRIL 2024
FISCHER REF: F1373
DA REF: TBC

FISCHER DEVELOPMENT SOLUTIONS
ABN 30 136 220 716

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DOCUMENT HISTORY AND STATUS

Rev.	Status	Date	Prepared by	Reviewed by
A	Preliminary	April 2024	Corey Lowry	Matthew Fischer

Contents

1 INTRODUCTION

Fischer Development Solutions, on behalf of Longford Land Holdings has been engaged to prepare the Preliminary Design inclusive of a Stormwater Management Strategy (SWMS) for the proposed 41 lot residential subdivision at 1-21 Jude St, Howlong as part of the Development Application for this site.

The objective of this SWMS report is to demonstrate that the proposed stormwater infrastructure for this development can meet or exceed the stormwater quantity and quality management objectives set out within the *Federation Council Engineering Development Standards, Australian Rainfall and Runoff: A Guide to Flood Estimation 2019, Urban Stormwater – Best Practice Environmental Management Guidelines (1991)* and other applicable authority standards.

This report aims to investigate and propose an effective and efficient stormwater strategy to manage flows generated from the proposed development. The preliminary design process will incorporate an examination of the existing site and surrounds to ensure the proposed development and stormwater infrastructure is sympathetic to the site topography and surrounding area and can be integrated into the public open space areas allowed to achieve stormwater quantity and quality objectives.

The Development Application undertaken for this site, to which this Stormwater Management Strategy forms a part of, is for a single stage subdivision comprising of 41 lots and associated road infrastructure. Adequate consideration has been made to the increase in runoff that development on this site will have and the effects it may have on the stormwater infrastructure proposed for this development and surrounds. Refer to Figure 2 for a proposed layout of this development, existing allotments and contouring of the site.

The proposals outlined in this report are preliminary in nature and are subject to a detailed design process following the approval of a Development Application to develop this site. All proposals are subject to review and acceptance by Federation Council during the detailed design phase.

2 SITE & SURROUNDS

2.1 SITE OVERVIEW

The subject site is located approximately 800m North-West of the Howlong CBD (Riverina Hwy), refer to Figure 1 below. The site fronts Jude St to the South, Pearce St to the West, Hammer St (unmade) to the East & Belmore St (unmade) to the North.

Jude St appears to be in good working condition along the frontage of our development site, with kerb and channel along the Southern side. Pearce St is currently unsealed along the Western side of the development, while Hammer & Belmore St are unmade along the East and North respectively.

Adjacent to the subject site to the south are existing residential areas with generally a standard urban residential development pattern occurring. Development to the north, east and west of the site consists of rural style living properties and farmland.

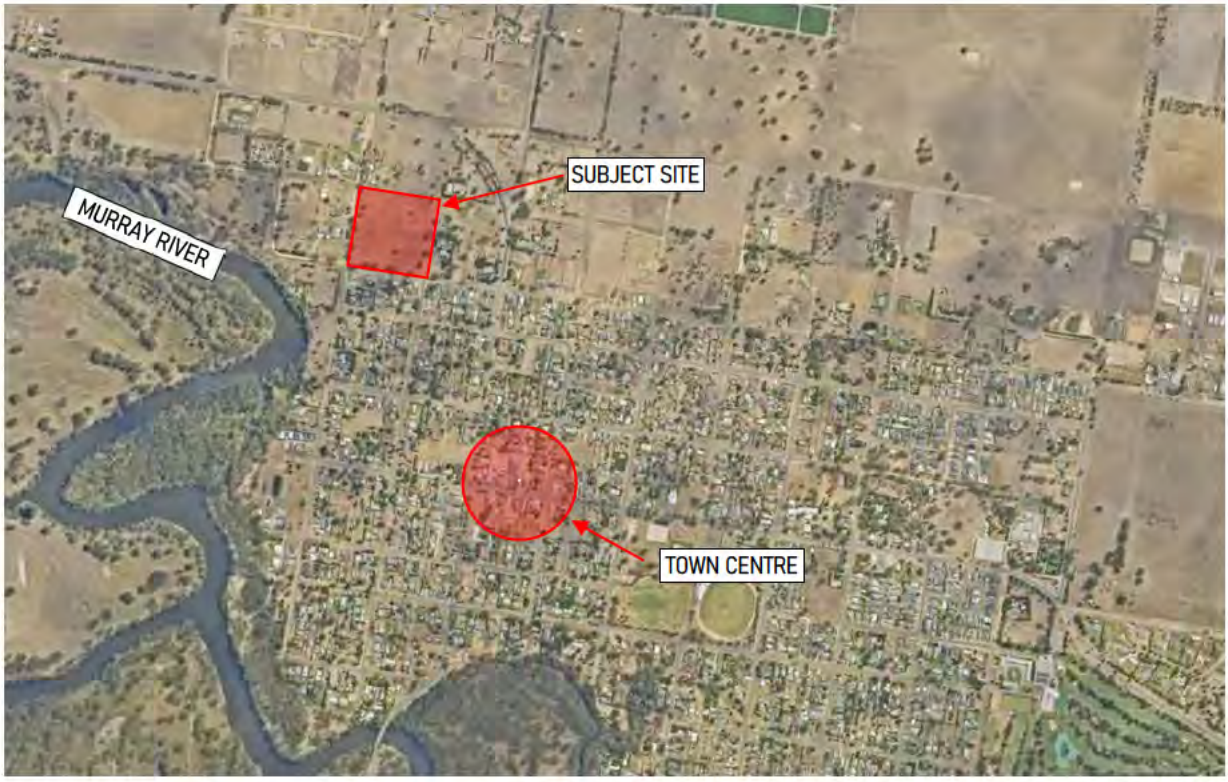

Figure 1 – Locality Plan & Site Context

2.2 EXISTING SITE CONDITIONS

The total subject site is approximately 4.06ha in area and is mostly clear with some individual trees scattered across the site. Figure 2 below shows a close-up aerial image of the site with the proposed lot layout of the development.

The subject site is typically grassed and is generally flat, with a defined outfall in the South-west corner along Jude St. Jude St itself has a crest at the centre of our development, with the road reserve falling towards the West and East at the front of proposed Lot No. 40.

All stormwater within our catchment, and the surrounding properties and road reserves enters the underground network along the Southern side of Jude St, and flows West into the open drain indicated in Figure 2. Overland flows also look to be directed to the West, with the Murray River approx. 250m from the development site.

Figure 2 –Site Aerial Image with Lot Layout

3 DESIGN INTENT

The objective of this report is to investigate and provide an effective and efficient stormwater management strategy for the proposed development site. All development has the potential to adversely impact downstream environments through urbanisation of upstream catchments making it necessary to implement mitigation measures.

Increased impervious areas and changed land use due to development can result in an increase in peak flows and an increase the contaminants within the stormwater runoff generated from a site. The impacts of these changes in runoff can negatively affect the downstream drainage network and waterways where capacity issues may be present and lead to the degradation of a receiving waterways health.

To alleviate the potential impacts of development on the downstream network, a range of stormwater quantity and quality mitigation measures may be required to achieve an acceptable outcome. The proposed mitigation measures for this site are presented in Section 5 and 6 below and stormwater management plans are attached in Appendix A.

Due to the close vicinity of our site to the outfall along the Murray River & being at the bottom of the stormwater drainage catchment, Federation Council have requested that stormwater detention not be considered for this development, but that the underground network and overland flow paths be able to convey minor and major storm events respectively.

3.1 STORMWATER CONVEYANCE

3.1.1 SUB-SURFACE DRAINAGE

Underground drainage for the development will be designed to cater for the minor storm event, known as the 20% AEP storm event for residential development. The underground drainage network will provide a legal point of discharge for each lot within the development along with capturing surface flows generated from the roads and reserves and convey the minor storm event runoff to the proposed sedimentation basin.

The drainage catchments for this development are separated into two defined networks, as shown in the stormwater management plans within Appendix A, to connect into the existing drainage infrastructure more efficiently along Jude St. Catchment 1A on the western side of the development connects into the existing underground drainage along Jude St, and requires a re-construction of the existing road crossings to achieve outfall in the table drain. Catchment 1B will discharge into the same underground network, but further upstream to the East.

The existing table drain outfall that our site will discharge into west of Pearce St along Jude St will require some re-shaping and deepening to service our development.

3.1.2 SURFACE DRAINAGE & OVERLAND FLOWS

Establishing clear overland flow paths within a development is required to convey excess stormwater flows through the site once the available capacity of the minor drainage system has been fully mobilised. Correctly designed overland flow paths will provide flood protection to private and public property while conveying overland flows to receiving waterways with minimal impact on the adjoining properties.

Roadways within the development will be employed to provide overland flow paths for surface runoff generated from the site. Grading of roads will convey 1% AEP overland flows to the outfall table drain along Jude St. Proposed overland flow paths are for this development are shown on the stormwater management plans in Appendix A.

Roadways will be designed to provide sufficient conveyance capacity to meet safe velocity and depth criteria during a 1% AEP storm event and consideration will be given to impact of rarer storm events and their ability to convey storms larger than the 1% AEP event.

3.2 STORMWATER QUANTITY REQUREMENTS

Under the current best practice for stormwater management in urban development, detention of peak flows to 'pre-Development' rates allows for the development to proceed without causing nuisance or exceeding capacity of receiving drainage infrastructure.

Due to the close vicinity of our site to the outfall along the Murray River & being at the bottom of the stormwater drainage catchment, Federation Council have requested that stormwater detention not be considered for this development, but that the underground network and overland flow paths be able to convey minor and major storm events respectively.

3.3 RUNOFF FROM ADJASCENT PROPERTIES

The adjacent residential properties on the Northern & Eastern sides of the site are located downslope, and thus no runoff from these properties enter our development site. Surface levels within the Pearce St road reserve also show that flows within the road run North away from our site.

3.4 SITE CONSTRAINTS

Topography of the subject site will present several challenges that will need to be to managed throughout the detailed design process and may require some form of compromise to achieve an appropriate outcome. Some site constraints due to the topography currently identified include:

- Road longitudinal grades to suit the existing site conditions will limit the ability to grade all overland flow paths to Jude St without undertaking considerable earthworks.
- Lots 1-11 backing onto Pearce St fall away from the internal road reserve. Overland flows may need to enter the Pearce St road reserve from these lots, or retaining may be required.

4 HYDROLOGY

The hydrological assessment for the proposed development site has been undertaken using the Rational Method to estimate the peak runoff generated from the site for multiple storm events, under pre-developed and post developed conditions.

4.1 RATIONAL METHOD

The Rational Method is a simple statistical method to estimate the peak discharge from a catchment for a given storm intensity. This method is widely accepted to estimate runoff from small simple rural and urban catchments for up to 25 km² and 1 km² respectively.

The drainage catchments included in this assessment and directed to the existing underground network in Jude St is comprised of all lots contained within this development & the existing unmade road reserves (Hammer & Belmore St) totalling 5.28 ha. The post developed catchments are shown below in Figure 3 below.

Figure 3 – Post Development Catchment Plan

4.1.1 Time in Concentration

Time in Concentration for the development is determined by the using the Pilgram McDermott formular as recommended in *Austroads Guide to Road Design – Part 5 Drainage – General and Hydrology Considerations* when using the Rational Method.

$$t_c = 0.76 * A^{0.38}$$

where:

t_c = time of concentration (hr)

A = area (km²)

The time in concentration differs for pre-developed and post developed site conditions to account for the urbanisation of the developed site.

Under pre-developed conditions the t_c is estimate using the Pilgram McDermott equation presented above for whole site including external catchments.

When estimating the time in concentration for the developed site, the Pilgram McDermott equation is only used to determine the t_c for the largest external sub-catchment to reach the nearest branch of the proposed stormwater network in the developed site. In this case t_c is selected at *6 minutes.*

A pipe network travel time t_p is estimated to be *6.6 minutes and 1.6 minutes* for the proposed network of Catchment 1A and Catchment 1B respectively when taking into consideration the average grade and estimated total length of the proposed underground stormwater network to the furthest reach of the underground drainage network. The total post developed catchment t_t is therefore a summation of t_c and t_p.

4.1.2 Rainfall Intensity

Rainfall Intensity – Frequency – Duration (IFD) data sourced from the Bureau of Meteorology (BoM) Data Hub and is unique to the development site. Figure 4 below shows the IFD data for this site at nominated storm durations.

IFD Coefficients values obtained from the BoM Data Hub are used in the calculation process to accurately determine the rainfall intensity of storm durations other than those nominated on the IFD table.

	Annual Exceedance Probability (AEP)						
Duration	**63.2%**	**50%#**	**20%***	**10%**	**5%**	**2%**	**1%**
1 min	96.9	110	152	179	206	242	268
2 min	81.8	93.0	128	152	175	202	223
3 min	74.2	84.3	116	137	158	183	202
4 min	68.5	77.8	107	127	145	169	187
5 min	63.8	72.5	99.6	118	135	158	175
10 min	48.2	54.9	75.4	89.2	103	120	134
15 min	39.3	44.7	61.5	72.8	83.8	98.5	110
20 min	33.5	38.1	52.4	62.0	71.4	83.9	93.5
25 min	29.3	33.3	45.8	54.3	62.5	73.4	81.8
30 min	26.1	29.7	40.9	48.4	55.8	65.5	72.9
45 min	20.0	22.7	31.3	37.0	42.6	50.0	55.6
1 hour	16.5	18.7	25.6	30.3	34.9	40.9	45.4
1.5 hour	12.4	14.0	19.2	22.6	26.0	30.5	33.8
2 hour	10.1	11.4	15.5	18.3	21.1	24.6	27.4
3 hour	7.56	8.52	11.5	13.6	15.6	18.2	20.3
4.5 hour	5.66	6.36	8.57	10.1	11.6	13.6	15.1
6 hour	4.62	5.18	6.95	8.17	9.37	11.0	12.3

Figure 4 – Rainfall Intensity – Frequency – Duration (IFD) data

4.1.3 Runoff Coefficients

Runoff coefficients for a used within the Rational Method can be a function of the design storm intensity. Frequency Factors are applied to the 10% AEP runoff coefficient (C_{10}) to estimate the runoff coefficient (C_Y) for a storm event of *Y% AEP* and are shown in Table 1 below.

$$C_Y = F_Y * C_{10}$$

Y (AEP)	63.2%	50%	20%	10%	5%	2%	1%
F_Y	0.80	0.85	0.95	1	1.05	1.15	1.2

Table 1 – Runoff Coefficient Frequency Factors

The C_{10} runoff coefficient for the site is estimated as follows:

$$C_{10} = 0.9 * f + C'_{10}(1 - f)$$

where:

f = fraction impervious of a catchment

C'_{10} = 10% AEP pervious area runoff coefficient

And

$$C'_{10} = 0.1 + 0.0133({}^{10}_{1}I - 25)$$

Where:

${}^{10}_{1}I$ = 10% AEP, 1 hour rainfall intensity

Using the formular above the 10% AEP pervious are coefficient *$C'_{10} = 0.1705$.*

With the variability in sub catchment type across the proposed development, fraction impervious values have been estimated for the differing land use types and proposed lot sizes in addition to the frequency factors. Table 2 shows the range of runoff coefficients used in the Rational Method calculations for this site.

Block Size / Land Use	*f*	63.2%	50%	20%	10%	5%	2%	1%
F_Y		0.80	0.85	0.95	1.00	1.05	1.15	1.20
< 450m²	0.70	0.54	0.58	0.65	0.68	0.72	0.78	0.82
450m² - 600m²	0.60	0.49	0.52	0.58	0.61	0.64	0.70	0.73
600m² - 800m²	0.50	0.43	0.45	0.51	0.54	0.56	0.62	0.64
800m² - 1000m²	0.40	0.37	0.39	0.44	0.46	0.49	0.53	0.55
1000m² - 2000m²	0.30	0.31	0.33	0.37	0.39	0.41	0.45	0.47
2000m² - 4000m²	0.25	0.28	0.30	0.34	0.35	0.37	0.41	0.42
> 4000m²	0.20	0.25	0.27	0.30	0.32	0.33	0.36	0.38
Reserve / Landscape	0.10	0.19	0.21	0.23	0.24	0.26	0.28	0.29
Road Reserve	0.60	0.49	0.52	0.58	0.61	0.64	0.70	0.73
Commercial Area	0.80	0.60	0.64	0.72	0.75	0.79	0.87	0.90

Table 2 – Site Runoff Coefficient

Sub catchments have been estimated for the post developed site conditions and an average site runoff coefficient has been calculated for the for the whole site for the use in the Rational Method based on the composition of the proposed developed.

4.1.4 Peak Runoff Estimation

Peak flow estimations for stormwater flows generated from this development have been undertaken for multiple storm events under pre-developed and post developed site conditions and are shown in Tables 3 and 4 below.

The peak stormwater flows calculated will be used to specify Permissible Site Discharge's (PSD's) for specified storm events and in the preliminary design of the stormwater infrastructure presented in Sections 5 and 6 below.

Sub- Catchment 1 (Total)	Area (ha)	$C_{20\%}$	$C_{1\%}$	Tc (min)	$I_{20\%}$ (mm/hr)	$I_{1\%}$ (mm/hr)	$Q_{20\%}$ (m³/s)	$Q_{1\%}$ (m³/s)
Catchment 1A	4.273	0.30	0.30	13.7	64.6	115.0	**0.230**	**0.410**
Catchment 1B	1.007	0.30	0.30	8.0	83.3	147.4	**0.070**	**0.124**
Total	5.280	0.30	0.30	14.9	61.8	110.1	**0.272**	**0.484**

Table 3 – Pre-Developed Major / Minor Peak Site Discharge Estimation

Sub- Catchment 1 (Total)	Area (ha)	$C_{20\%}$	$C_{1\%}$	Tc (min)	$I_{20\%}$ (mm/hr)	$I_{1\%}$ (mm/hr)	$Q_{20\%}$ (m^3/s)	$Q_{1\%}$ (m^3/s)
Catchment 1A	4.273	0.579	0.732	12.6	67.4	120.0	**0.463**	**1.043**
Catchment 1B	1.007	0.584	0.738	7.6	85.1	150.5	**0.139**	**0.311**
Total	5.280	0.580	0.733	12.6	67.4	120.0	**0.573**	**1.290**

Table 4 – Post Developed Major / Minor Peak Site Discharge Estimation

5 CONCLUSION

This Stormwater Management Plan demonstrates that the proposed subdivision can meet the required objectives for stormwater management utilising the proposed drainage infrastructure outlined in this report. The quality and quantity targets outlined in this report are achieved by.

- Underground drainage to convey minor storm flows to the proposed table drain outfall location within Jude Street.
- Overland flow path provided via the subdivision road network

The proposed drainage infrastructure outlined in this report is subject to change based on any Development Application conditions set by council and further detailed design.

6 REFERENCES

AUSTRALIAN RAINFALL AND RUNOFF (AR&R)

AUSTRALIAN BUREAU OF METEOROLOGY – Intensity-Frequency-Duration charts

STORMWATER DRAINAGE DESIGN IN SMALL CATCHMENTS, 1986

ROOF DRAINAGE, 1973, by K.G. Martin and CSIRO

AS3500-2003: Plumbing & Drainage

INFRASTRUCTURE DESIGN MANUAL (IDM)

WSUD ENGINEERING PROCEEDURES: Stormwater (CSIRO 2005)

CIVIL SITE DESIGN – Hydraulic Calculations

FISCHER DEVELOPMENT SOLUTIONS calculation spreadsheets (incorporating above references)

7 APPENDICIES

APPENDIX A – CONCEPT DESIGN PLANS

LEGEND: CATCHMENT PLAN

- PROPOSED DRAINAGE PIT & PIPE NETWORK
- DEVELOPMENT SITE CATCHMENT BOUNDARY
- FUTURE DEVELOPMENT CATCHMENT BOUNDARY
- EXISTING CATCHMENT BOUNDARY
- DEVELOPMENT OVERLAND FLOW PATHS
- EXISTING FALL DIRECTION
- EXISTING SITE CONTOURS 1m / 0.2m

DEVELOPMENT SITE

JUDE ST

PEARCE ST

HAMMER ST

REV	DESCRIPTION	DATE	APPROVED
X1	PRELIMINARY PLANS FOR STORMWATER MANAGEMENT STRATEGY	22/04/2024	M.FISCHER

AUTHORITY: FEDERATION COUNCIL

CLIENT: **LONGFORD LAND HOLDINGS**

FISCHER DEVELOPMENT SOLUTIONS
M | 0482 611 532
E | matt@fischerdevelopment.com.au
A | PO Box 74 Wangaratta VIC 3677
ABN 30 136 220 716

DRAFTED:	C.L.	NER REG: 4531546
DESIGNED:	C.L.	NER REG: 4531546
CHECKED:	M.F.	NER REG: 3718456

N

RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
STORMWATER MANAGEMENT PLANS | 41 LOTS
EXISTING CONDITIONS DRAINAGE PLAN

SCALE 1:1,250 @ A3
12.5 0 12.5 25 37.5 50 62.5

CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373SMP01 / 02
REV: X1

LEGEND: CATCHMENT PLAN

- PROPOSED DRAINAGE PIT & PIPE NETWORK
- DEVELOPMENT SITE CATCHMENT BOUNDARY
- FUTURE DEVELOPMENT CATCHMENT BOUNDARY
- EXISTING CATCHMENT BOUNDARY
- DEVELOPMENT OVERLAND FLOW PATHS
- EXISTING FALL DIRECTION
- EXISTING SITE CONTOURS 1m / 0.2m

EXISTING TABLE DRAIN ON JUDE STREET DESIGNATED AS OUTFALL FOR OUR SITE

JUDE ST

PEARCE ST

HAMMER ST

REV	DESCRIPTION	DATE	APPROVED
X1	PRELIMINARY PLANS FOR STORMWATER MANAGEMENT STRATEGY	22/04/2024	M.FISCHER

AUTHORITY: FEDERATION COUNCIL

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RESIDENTIAL DEVELOPMENT | 1-21 JUDE ST, HOWLONG
STORMWATER MANAGEMENT PLANS | 41 LOTS
DEVELOPMENT DRAINAGE PLAN

SCALE 1:1,250 @ A3
12.5 0 12.5 25 37.5 50 62.5

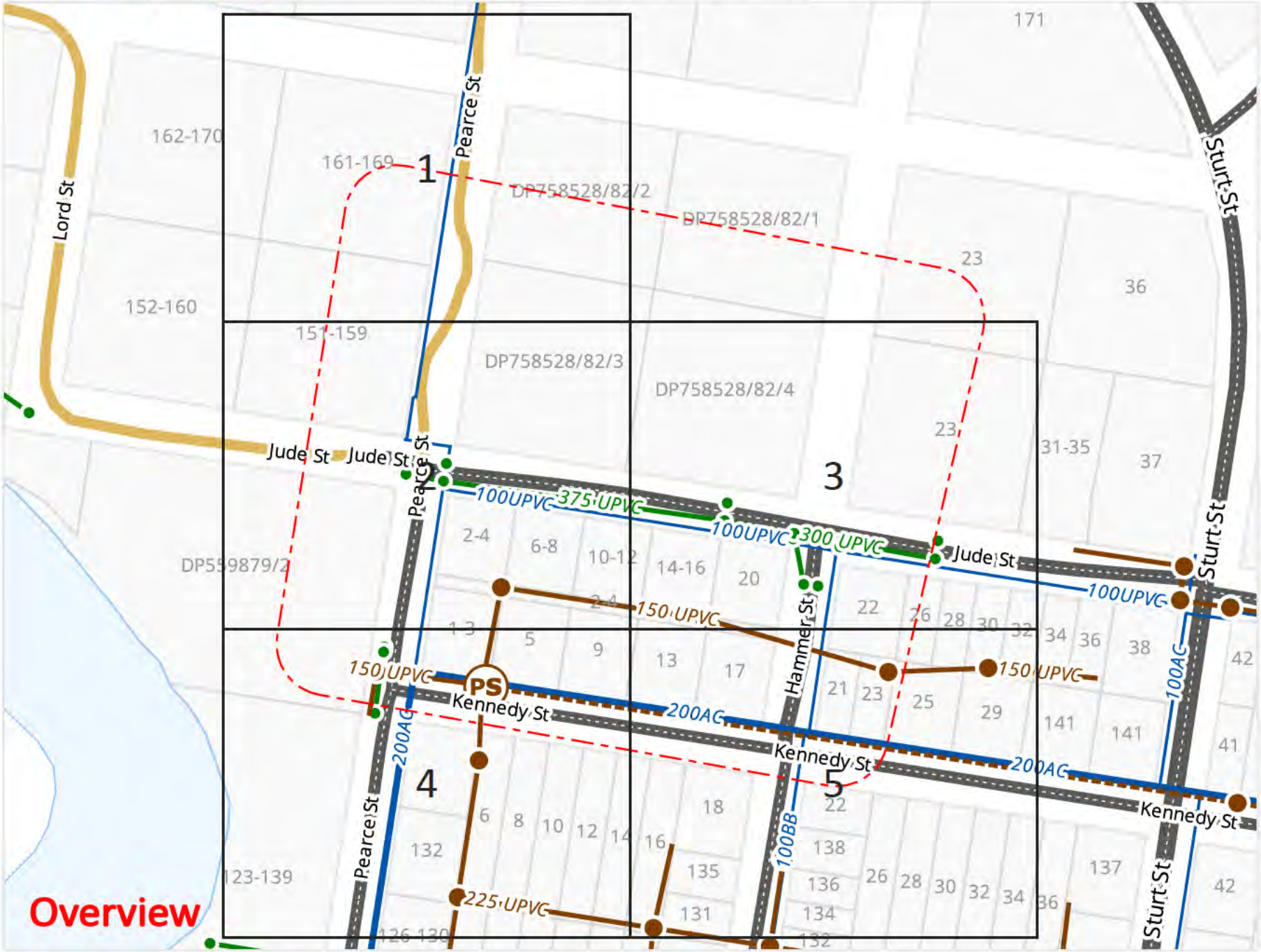
CONCEPT PLAN
NOT FOR CONSTRUCTION
AUTHORITY REF: TBC
PROJECT & DWG No: F1373SMP02/02 REV: X1

APPENDIX B: BEFORE YOU DIG AUSTRALIA ASSET MAPS

FEDERATION COUNCIL

Sequence No: 236693587
Job No: 36254337
Location: 1 Jude Street, Howlong, NSW 2643

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend

- Water Reticulation Main
- Water Trunk Main
- Water Rising Main
- Private Water Reticulation Main
- Private Water Trunk Main
- Private Water Rising Main
- Stormwater Main
- Stormwater Box Culvert
- Stormwater Rising Main
- Gravity Sewer Main
- Rising Sewer Main
- Private Gravity Sewer Main
- Private Rising Sewer Main
- Stormwater Headwall
- Stormwater Pump Station
- Stormwater Surface Inlet Pit
- Stormwater Side Entry Pit
- Stormwater Junction Pit
- Sewer Manhole
- Sewer Pump Station
- Private Sewer Manhole
- Private Sewer Pump Station

N

Scale: 1:3075
Expires: 11/04/2024

DISCLAIMER: While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither Federation Council or 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.

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Job No: 36254337
Location: 1 Jude Street, Howlong, NSW 2643

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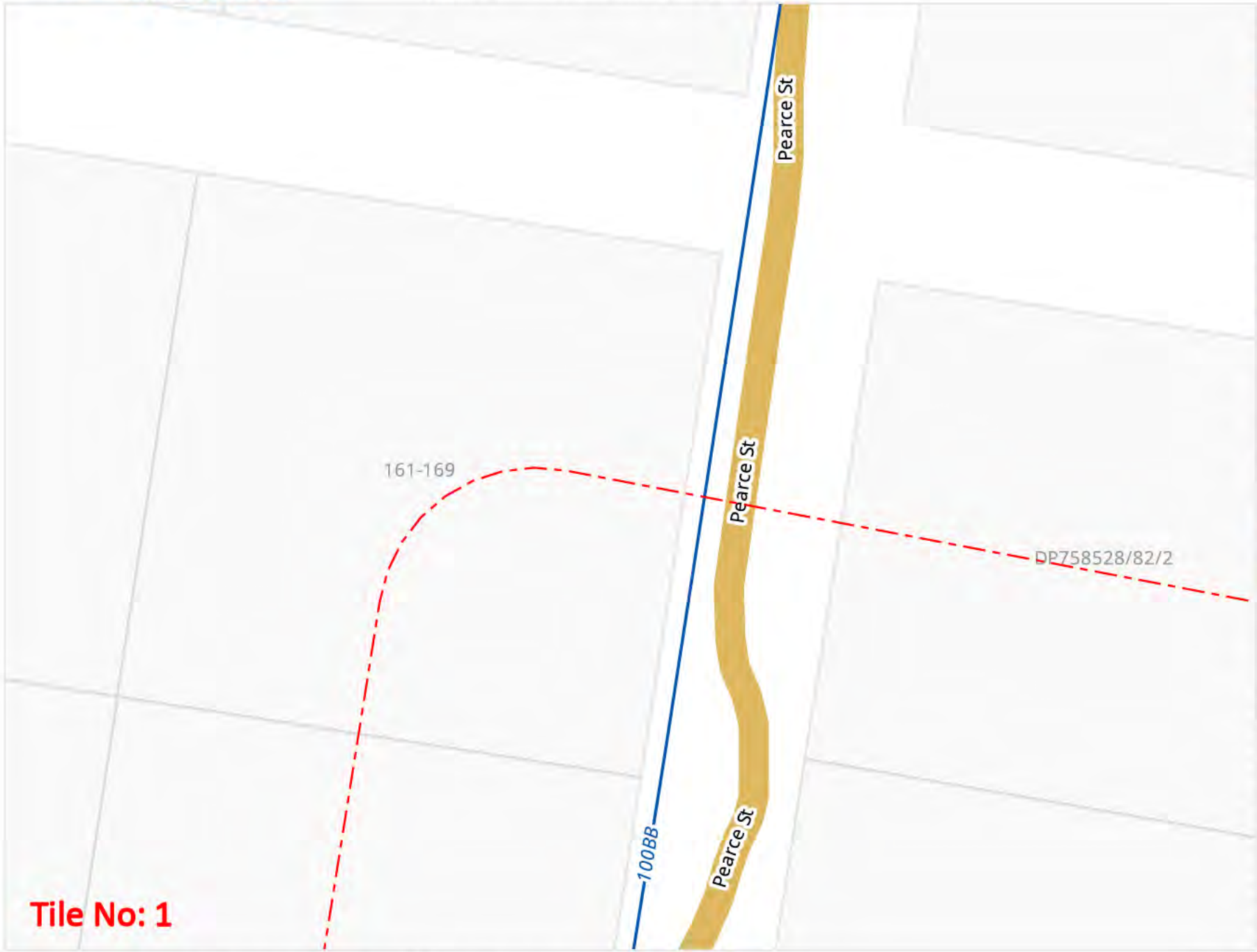
The Essential First Step.



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- Stormwater Pump Station
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- Stormwater Junction Pit
- Sewer Manhole
- Sewer Pump Station
- Private Sewer Manhole
- Private Sewer Pump Station

N

Scale: 1:1000
Expires: 11/04/2024

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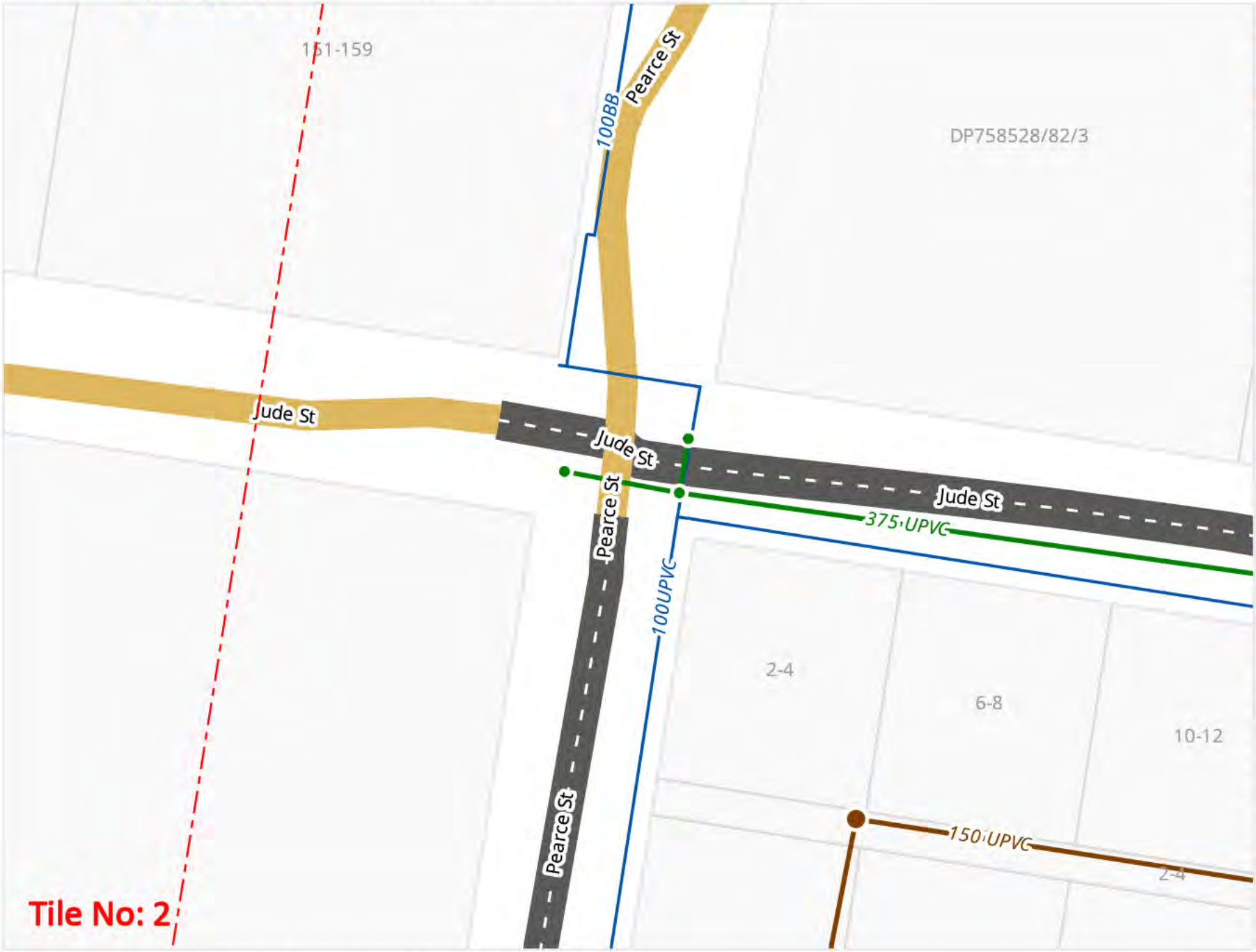
Location: 1 Jude Street, Howlong, NSW 2643

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



Legend

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- Private Sewer Pump Station

N

Scale: 1:1000
Expires: 11/04/2024

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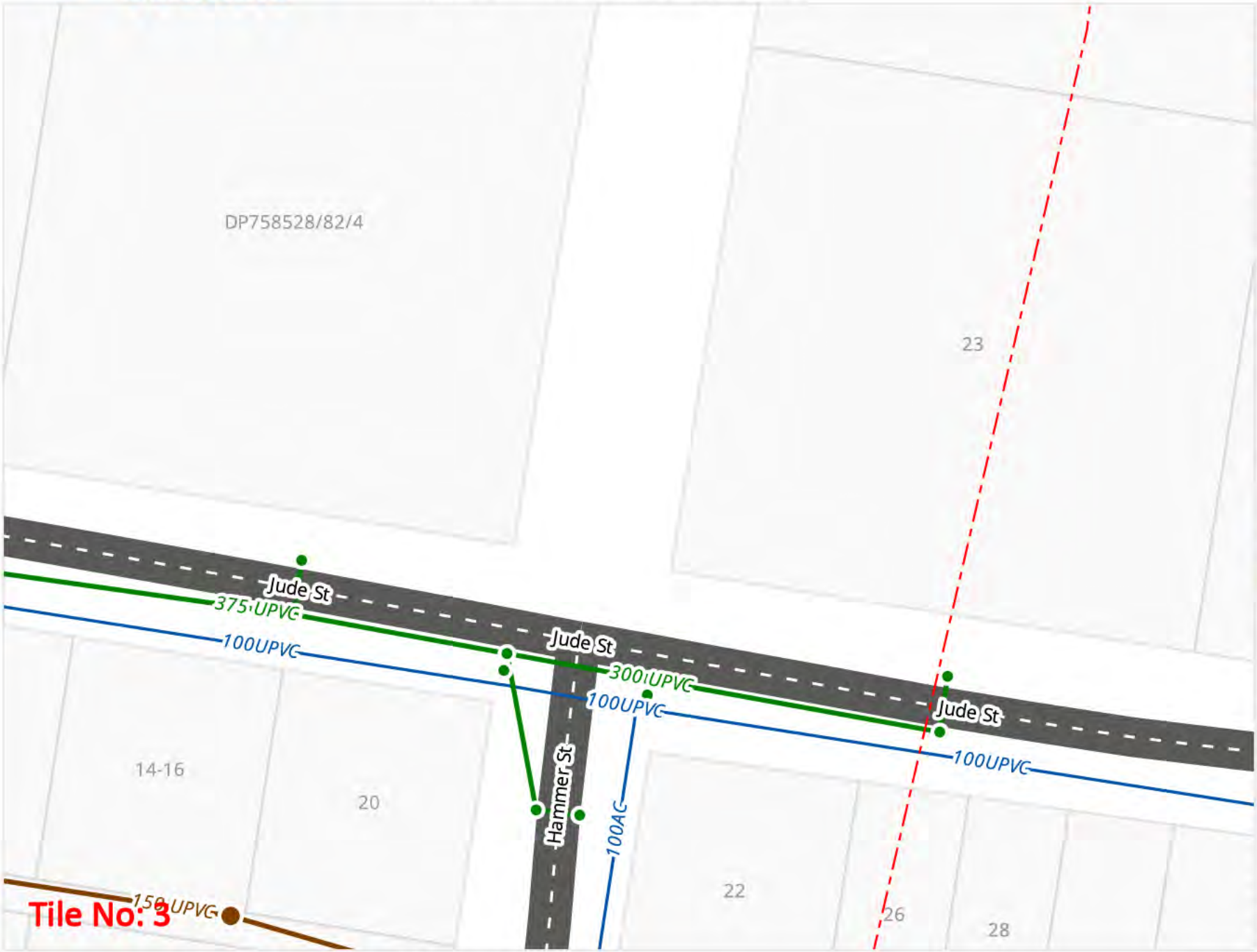
DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.



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N

Scale: 1:1000
Expires: 11/04/2024

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Sequence No: 236693587
Job No: 36254337
Location: 1 Jude Street, Howlong, NSW 2643

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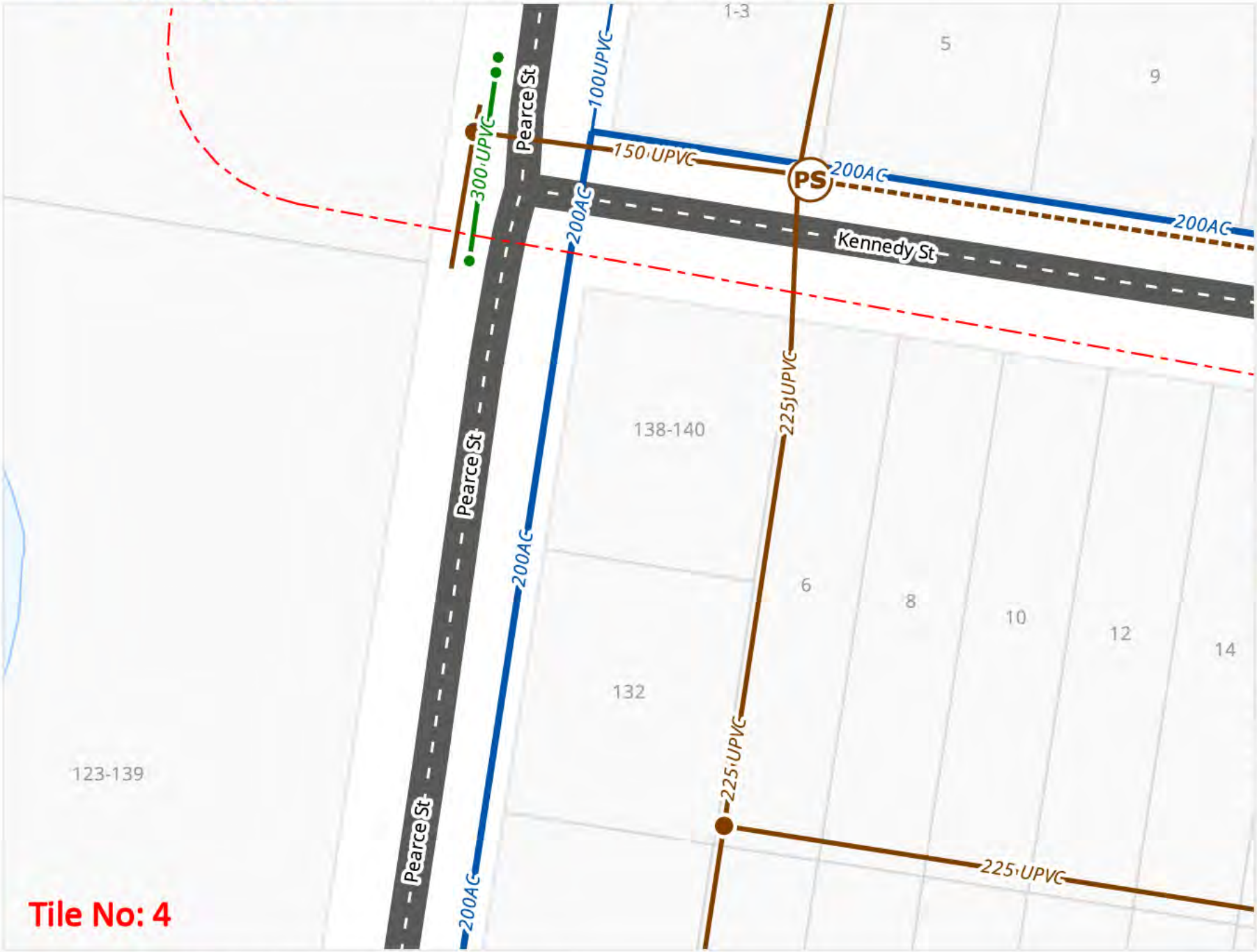

Tile No: 4

Legend

- Water Reticulation Main
- Water Trunk Main
- Water Rising Main
- Private Water Reticulation Main
- Private Water Trunk Main
- Private Water Rising Main
- Stormwater Main
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- Sewer Pump Station
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- Private Sewer Pump Station

N

Scale: 1:1000
Expires: 11/04/2024

FEDERATION COUNCIL

Sequence No: 236693587
Job No: 36254337
Location: 1 Jude Street, Howlong, NSW 2643

DIAL BEFORE YOU DIG www.1100.com.au
The Essential First Step.

Legend

- Water Reticulation Main
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N

Scale: 1:1000
Expires: 11/04/2024

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Overhead wires not shown
LOOK UP & LIVE!

LEGEND

- LV Underground Cable
- HV Underground Cable
- Underground Pipe
- Underground Earth or Wires
- Ground Substation
- Pole
- Cubicle
- Pit
- Area of Interest

Critical Assets

Contact Essential Energy on 13 23 91

- Zone Substation
- Underground Cable
- Underground Fibre

Proposed Works

- Area of proposed works

Proposed assets are shown as orange symbols

THE INFORMATION ON THIS MAP MAY NOT BE ACCURATE. If details are incorrect, please notify Essential Energy on 13 23 91 (or fax 1800 354 636)

ISSUE DATE: 14/03/2024

You must resubmit your request if you have not started work within 4 weeks of the 'Issue Date' above

A4 | SCALE: 1:2642

Job Number: 36254337 Sequence number: 236693586 Job location: 1 Jude Street, Howlong

Map Centre: 146° 37' 21.2", -35° 58' 24.9"

essential energy

APA Group
PO Box 6014 Halifax Street,
South Australia 5000

For your immediate information THERE IS A GAS PIPELINE OR INFRASTRUCTURE (Gas Assets) located in close vicinity to your works.

14/03/2024

Company: BM Civil Design
Brad MacCallum
68 Green Street
California Gully
VIC 3556

brad@bmcivildesign.com.au

Dear Brad MacCallum

Sequence Number: 236693588
Worksite Address: 1 Jude Street
Howlong
NSW 2643

Thank you for your Before You Dig enquiry regarding the location of Gas Assets.

We confirm there are Gas Assets located in close vicinity of the above location. Damage to gas assets may result in explosion, fire and personal injury.

Please ensure you read and comply with all the relevant requirements contained in this response to your enquiry.

Contacts – APA Group	
Enquiry	**Contact Numbers**
General enquiries or feedback regarding this information or gas assets. QLD Only All other States	**APA - Before You Dig Officer** Phone: 1800 085 628 Email: PermitsQld@apa.com.au Phone: 1800 085 628 Email: DBYDNetworksAPA@apa.com.au
Gas Emergencies	Phone: 1800 GAS LEAK (1800 427 532)

Please find below the following information:

1. **Duty of Care** - If you are unclear of your obligations under these requirements please contact the Before You Dig officer for clarification.
2. **An overview map** highlighting the area of your intended works.
3. **Map(s) showing APA operated Gas Assets** within the area of your intended works.

Important Information:

- This information is valid for 30 days from the date of this response.
- This information shall be available on site whilst conducting works.
- This information has been generated by an automated system based on the area highlighted in your BYDA request and has not been independently verified. Please check the maps represent the area you requested. If they do not, please contact the APA - Before You Dig officer.
- For some BYDA enquiries, you may receive two (2) responses from APA. Please read both responses carefully as they relate to different assets.

Yours Faithfully,

APA Group

Duty of Care - Working Around Gas Assets

General Conditions

- BYDA enquiries are valid for 30 days. If your works commence after 30 days from the date of this response a new enquiry is required to validate location information.

- The location information supplied in this document shall be used as a guide only. APA does not guarantee the accuracy or completeness of the map and does not make any warranty about the data. APA is not under any liability to the user for any loss or damage (including consequential loss or damage) which the user may suffer resulting from the use of this information or maps.

- It is the responsibility of the excavator to expose all Gas Assets by hand digging**.** Gas Asset depths may vary according to ground conditions.

- Gas (inlet) Services connecting Gas Assets in the street to the gas meter on the property are not marked on the map. South Australia Only - If a meter box is installed on the property, a sketch of the gas service location may be found inside the gas meter box. APA does not guarantee the accuracy or completeness of these sketches.

- Road authorities, council's, and their authorised contractors and agents are responsible to pot-hole or use other suitable methods to verify the location and depth of all gas assets, including Gas (inlet) Services, prior to commencing any works.

- The location and depth of underground mains & services, including those in the road corridor and footpath, may vary in alignment and depth of cover, as a result of changes to road, footpath or surface levels subsequent to installation.

- Some Gas Assets may be installed inside a casing. Locations where a Gas Asset changes from being located within, to being located outside a casing may not be marked on the maps provided.

- The use of hydro-vacuum excavation in vicinity to Gas Assets is permitted under the following conditions:
    - Maximum water pressure of 1000psi unless otherwise advised.
    - A minimum distance of 100mm shall be maintained between the end of the pressure wand nozzle and gas assets.
    - Vertical movements of the pressure wand nozzle or inserting the nozzle in vicinity of the gas asset prohibited
    - The use of root cutting heads is prohibited.

  Where a gas asset has been exposed via hydro-vacuum excavation a visual check must be undertaken to ensure no damage has occurred to the pipe or it's coating. If any damage has occurred notify the APA Before You Dig Officer.

Site Watch / Locate Services

Site Watch - A condition of an APA Authority To Work permit is for an APA Site Watch representative be present on site whilst conducting works. The purpose is to monitor works and protect gas assets in the vicinity from potential damage by the works.

Locate – This service is available on request, where an APA representative will visit your work site before work commencement to electronically locate and mark on the ground surface all gas assets in vicinity of the work site.

These services are provided under the following conditions:

- Contact APA - Before You Dig officer to make a booking. Contact details in the table above.
- The following rates are chargeable for these services:

Item	Rate (excl. gst)
Site Watch – Business Hours	$143.42 per hour
Site Watch - After Hours	$175.06 per hour
Electronic Locate – Business Hours	$143.42 per hour
Electronic Locate – After Hours	$175.06 per hour
Cancellation Fee	2 hrs Business Hours rate (where cancellations received after 12pm (midday) 1 business day prior to the booking)
Mains Proving	Quoted on request

Notes:

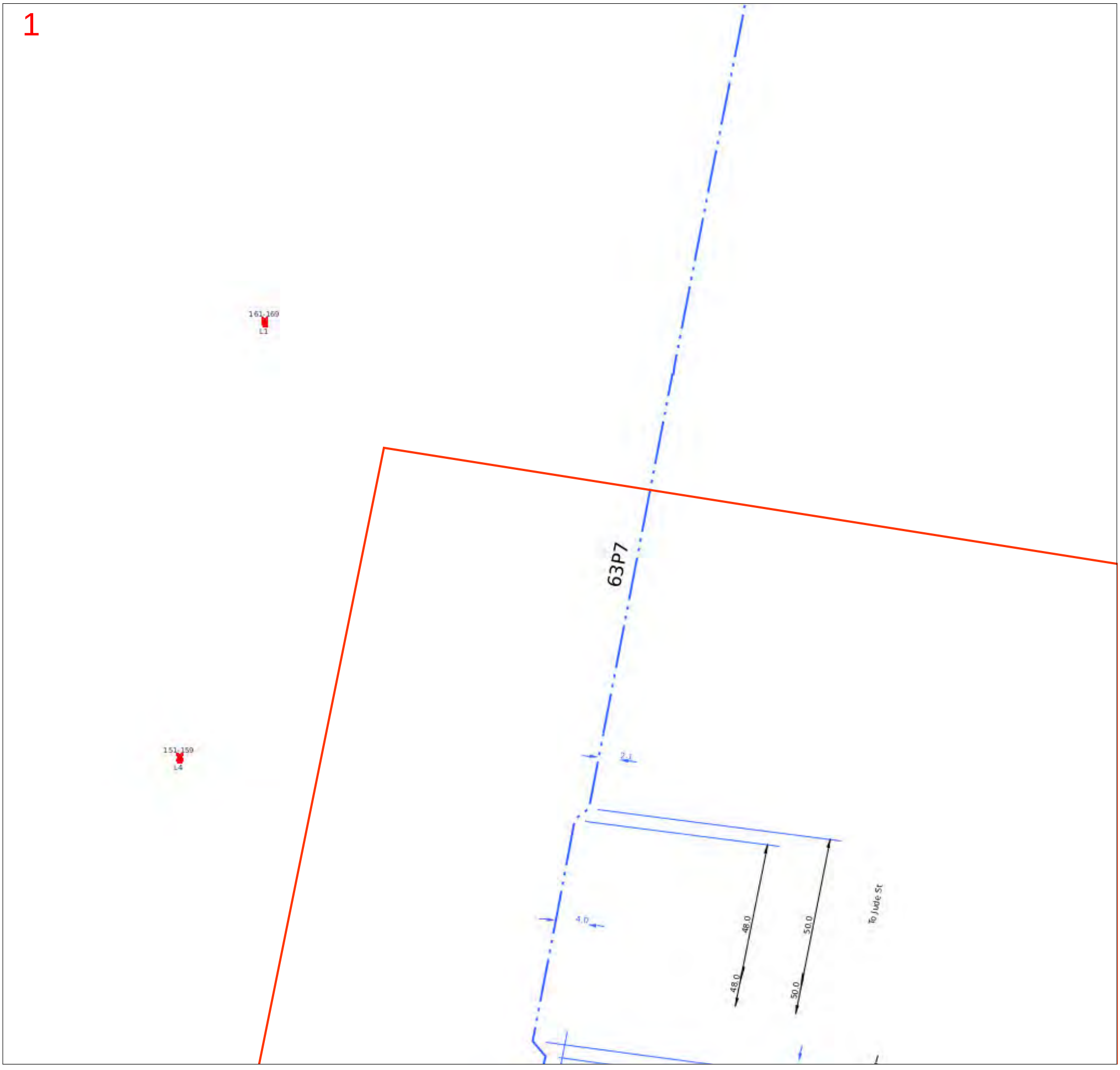
- 1hr minimum charge applies.
- A Cancellation Fee applies where cancellations are received after 12pm (midday) one(1) business day prior to the booked Site Watch / Locate service
- Contact APA - Before You Dig officer for state specific hours of business.

Site Address	1 Jude Street Howlong 2643	**Sequence No**	236693588
Name	Brad MacCallum		
Email	brad@bmcivildesign.com.au		

Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community Community

Scale 1: 6000	N	Enquiry Area / Map Key Area

Site Address	1 Jude Street Howlong 2643	Sequence No	236693588



LEGEND

PIPE AND BOUNDARIES	PIPE CODE / MATERIALS		OBJECTS or TERMS	
LOW PRESSURES	C# (e.g. C2)	Cast Iron	VALVES	
MEDIUM PRESSURES	CU	Copper	BURIED VALVES	
HIGH PRESSURES	N2	Nylon	REGULATORS	
TRANSMISSION PRESSURES	P# (e.g. P6)	Polyethylene (PE)	GAS SUPPLIED = YES	
PRIORITY MAIN (BEHIND PIPE)	P6,P7,P9-P12	Medium Density PE	CP RECTIFIER UNIT	
PROPOSED (COLOUR BY PRESSURE)	P2,P4,P8	High Density PE	CP TEST POINT/ ANODE	/
LPG (COLOUR BY PRESSURE)	S# (e.g. S8)	Steel	SYPHON	
ABANDONED	W2	Wrought Galv. Iron	TRACE WIRE POINT	
IDLE	W3	Poly Coat Wrought Galv. Iron	PIPELINE MARKER	
SLEEVE	*Pipe diameter in millimetres is shown before pipe code*		NOT TIED IN	N.T.I.
CASING / SPLIT (BEHIND PIPE)	*e.g. 40P6 = 40mm nominal diameter*		DEPTH OF COVER	C
EASEMENT/ JURISDICTION			BACK / FRONT OF KERB	Bok Fok

EXAMPLES

40P6 in 80C2 — 40mm High Pressure Medium Density Polyethylene in an 80mm Cast Iron Casing

63S8 — 63mm Medium Pressure Steel

This map is created in colour and shall be printed in colour

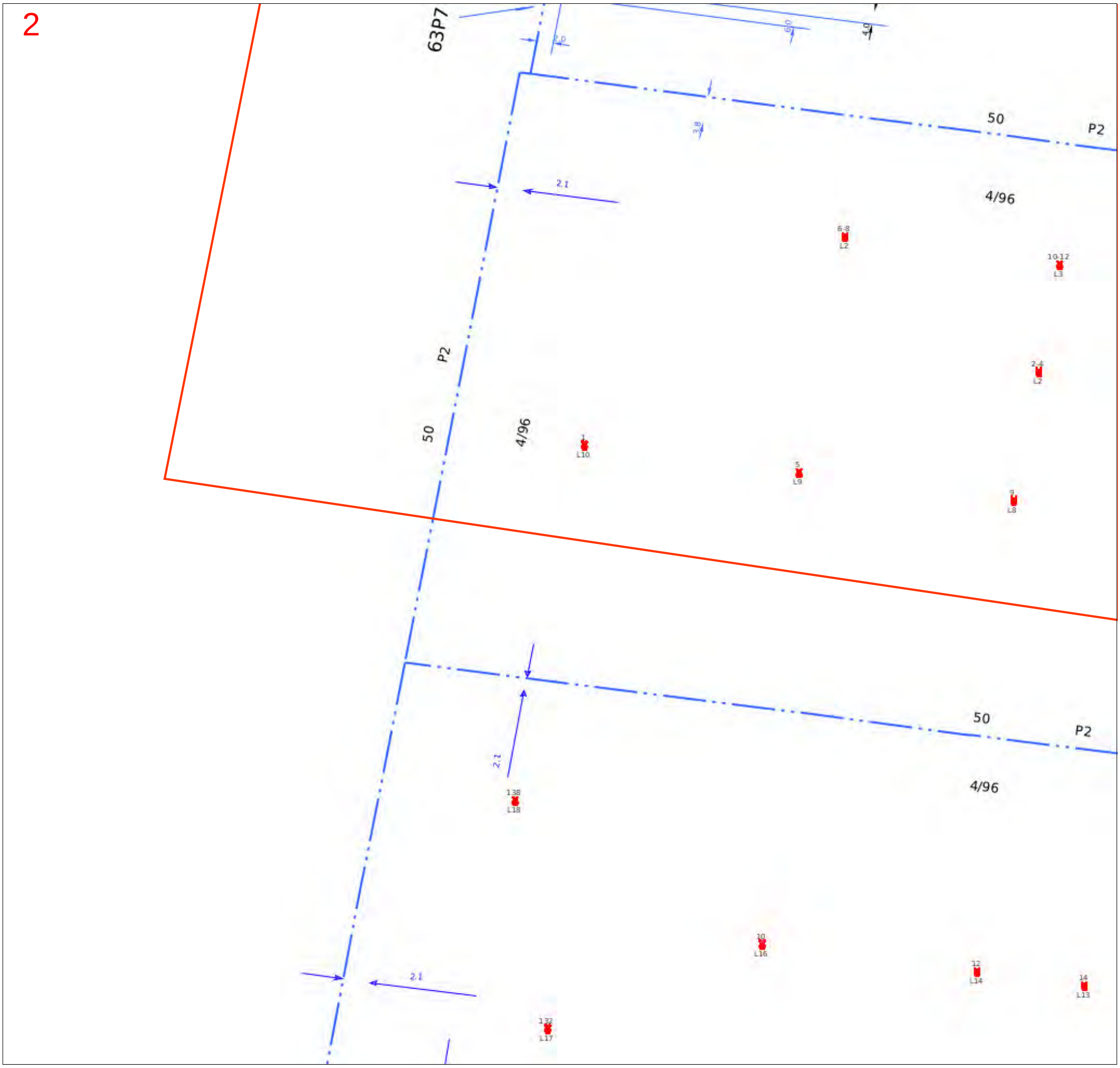
Line / Polygon Request

Map Key

Scale 1:700

0 0.008km

Site Address	1 Jude Street Howlong 2643	Sequence No	236693588



LEGEND

PIPE AND BOUNDARIES		PIPE CODE / MATERIALS		OBJECTS or TERMS	
LOW PRESSURES		C# (e.g. C2)	Cast Iron	VALVES	
MEDIUM PRESSURES		CU	Copper	BURIED VALVES	
HIGH PRESSURES		N2	Nylon	REGULATORS	
TRANSMISSION PRESSURES		P# (e.g. P6)	Polyethylene (PE)	GAS SUPPLIED = YES	
PRIORITY MAIN (BEHIND PIPE)		P6,P7,P9-P12	Medium Density PE	CP RECTIFIER UNIT	
PROPOSED (COLOUR BY PRESSURE)		P2,P4,P8	High Density PE	CP TEST POINT/ ANODE	/
LPG (COLOUR BY PRESSURE)		S# (e.g. S8)	Steel	SYPHON	
ABANDONED		W2	Wrought Galv. Iron	TRACE WIRE POINT	
IDLE		W3	Poly Coat Wrought Galv. Iron	PIPELINE MARKER	
SLEEVE		*Pipe diameter in millimetres is shown before pipe code*		NOT TIED IN	N.T.I.
CASING / SPLIT (BEHIND PIPE)	/	*e.g. 40P6 = 40mm nominal diameter*		DEPTH OF COVER	C
EASEMENT/ JURISDICTION				BACK / FRONT OF KERB	Bok Fok

EXAMPLES

40P6 in 80C2 — 40mm High Pressure Medium Density Polyethylene in an 80mm Cast Iron Casing

63S8 — 63mm Medium Pressure Steel

This map is created in colour and shall be printed in colour

Line / Polygon Request

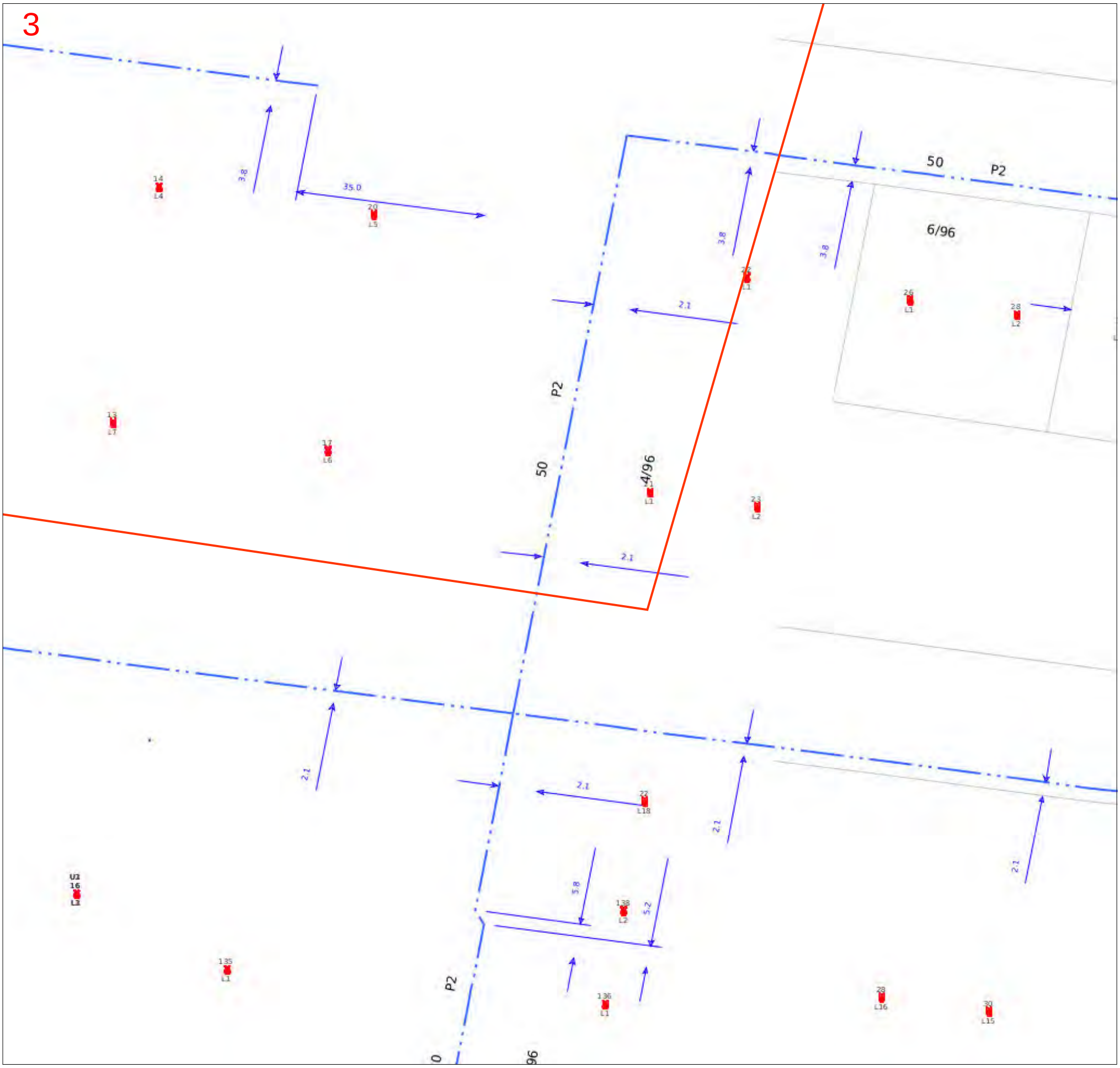
Map Key

1
2 3

Scale 1:700

0 0.008km

Site Address	1 Jude Street Howlong 2643	Sequence No	236693588



LEGEND

PIPE AND BOUNDARIES		PIPE CODE / MATERIALS		OBJECTS or TERMS	
LOW PRESSURES		C# (e.g. C2)	Cast Iron	VALVES	
MEDIUM PRESSURES		CU	Copper	BURIED VALVES	
HIGH PRESSURES		N2	Nylon	REGULATORS	
TRANSMISSION PRESSURES		P# (e.g. P6)	Polyethylene (PE)	GAS SUPPLIED = YES	
PRIORITY MAIN (BEHIND PIPE)		P6,P7,P9-P12	Medium Density PE	CP RECTIFIER UNIT	
PROPOSED (COLOUR BY PRESSURE)		P2,P4,P8	High Density PE	CP TEST POINT/ ANODE	/
LPG (COLOUR BY PRESSURE)		S# (e.g. S8)	Steel	SYPHON	
ABANDONED		W2	Wrought Galv. Iron	TRACE WIRE POINT	
IDLE		W3	Poly Coat Wrought Galv. Iron	PIPELINE MARKER	
SLEEVE		*Pipe diameter in millimetres is shown before pipe code*		NOT TIED IN	N.T.I.
CASING / SPLIT (BEHIND PIPE)	/	*e.g. 40P6 = 40mm nominal diameter*		DEPTH OF COVER	C
EASEMENT/ JURISDICTION				BACK / FRONT OF KERB	Bok Fok

EXAMPLES

40P6 in 80C2 — 40mm High Pressure Medium Density Polyethylene in an 80mm Cast Iron Casing

63S8 — 63mm Medium Pressure Steel

This map is created in colour and shall be printed in colour

Line / Polygon Request

Map Key

1
2 3

Scale 1:700

0 0.008km

Cable Plan

Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 236693589
TELSTRA LIMITED A.C.N. 086 174 781	Please read Duty of Care prior to any excavating
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WARNING

Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

FISCHER
DEVELOPMENT SOLUTIONS

SUBMISSION TO FEDERATION COUNCIL

1-19 JUDE STREET, HOWLONG

41 LOT SUBDIVISION & REMOVAL OF NATIVE VEGETATION

PREPARED FOR

LONGFORD LAND HOLDINGS

FISCHER DEVELOPMENT SOLUTIONS
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DOCUMENT HISTORY AND STATUS

Rev.	Status	Date	Prepared by	Prepared for
A	Preliminary	April 2024	Matthew Fischer	Longford Land Holdings

EXECUTIVE SUMMARY

SUBJECT LAND	
AREA	4.06ha
PROPOSAL	Forty-One Lot Subdivision

ZONE

General Residential Zone (R1)

OVERLAYS

Riverine Land

Bushfire Prone Land (Buffer)

STATE ENVIRONMENTAL PLANNING POLICIES

- SEPP (Biodiversity and Conservation) 2021: Excluded (pub. 21-10-2022)
- SEPP (Biodiversity and Conservation) 2021: Land Application (pub. 2-12-2021)
- SEPP (Biodiversity and Conservation) 2021: Subject Land (pub. 2-12-2021)
- SEPP (Exempt and Complying Development Codes) 2008: Land Application (pub. 12-12-2008)
- SEPP (Housing) 2021: Land Application (pub. 26-11-2021)
- SEPP (Industry and Employment) 2021: Land Application (pub. 2-12-2021)
- SEPP (Planning Systems) 2021: Land Application (pub. 2-12-2021)
- SEPP (Primary Production) 2021: Land Application (pub. 2-12-2021)
- SEPP (Resources and Energy) 2021: Land Application (pub. 2-12-2021)
- SEPP (Sustainable Buildings) 2022: Land Application (pub. 29-8-2022)
- SEPP (Transport and Infrastructure) 2021: Land Application (pub. 2-12-2021)
- SEPP No 65 – Design Quality of Residential Apartment Development: Land Application (pub. 26-7-2002)

MERITS TO SUPPORT PROPOSAL

- Consistency with Corowa Local Environmental Plan 2012 and Corowa Shire Development Control Plan 2013
- Site responsive design
- Efficient use of existing services and upgrade of services and road infrastructure
- Provides diverse land supply options for the community.
- Proposal appropriately considers existing site natural features and meets requirements to be supported under Aboriginal Heritage IMS Search Results
- Proposal follows existing Jude Street Development Pattern and does not inhibit future development opportunities.

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TABLE OF FIGURES

1. INTRODUCTION

This submission is made on behalf of Longford Land Holdings seeking approval for a 41-lot residential subdivision at 1-19 Jude Street, Howlong.

The subject site is located within the General Residential Zone (R1 zone) under the Corowa Local Environment Plan (LEP) and is subject to minimum lot size of 550 sqm. The site is also covered by a Riverine Land Overlay and is in part covered by a Bushfire Prone Land Buffer.

The proposal provides diversity of land supply for Howlong with limited current available options for prospective residents who desire opportunity for new dwelling development within proximity to the services and facilities of the Howlong Township Centre.

The Development Application and this report have been prepared in accordance with the *Environmental Planning and Assessment Act 1973* ('EP&A Act') and the *Environmental Planning & Assessment Regulation 2000* ('EP&A Regs').

Details of the site and its surrounds are provided in Section 3, details of the proposal are provided in Section 4, and a statement of environmental effects is provided in Section 5 of this Planning report.

The following documents must be read in conjunction with this report and are provided as part of the application:

- Photos of the site and surrounds (Attachment 1).
- Site and Context Plan (Attachment 2)
- Proposed Development Plans (Attachment 3).
- Copy of Title (Attachment 4).
- AHIMS Search Results (Attachment 5).
- Infrastructure Servicing Report (Attachment 6)

2. APPLICATION AND SITE DETAILS

APPLICATION DETAILS	
Municipality	Federation Council
Title Description	Lots 1-4, Section 82, DP758528
Lot Zoning	General Residential (R1)
Min. Lot Size	550 m^2
Overlays	Riverine Land Bushfire Prone Land (Buffer)
SITE DESCRIPTION	
Site Shape	Square
Site Dimensions	202.78m, 200.78m, 202.31m, 200.74m
Site Area	4.06 ha
Proposed Lot Sizes	Lots 1–41: 644 m^2 – 1,095 m^2

3. SITE AND SURROUNDS

3.1 Site and Context Description

The site is square in shape with a total land area of approximately 4.06 ha. It fronts Jude Street to the south and Pearce Street to the west with respective street frontages of approximately 250 metres each. The site's northern and eastern boundaries front existing residential allotments with the boundary land reserved for future road reserves to accommodate the continuation of Hammer Street and Belmore Street.

There is no current formal use for the site, and it is fenced as a grassland paddock. There are no existing dwellings or sheds on the proposed site.

There are no significant undulations or slopes across the site, with a reasonably flat topography present. Jude Street which fronts the southern side of the site falls to both the east and west with a high point in the road located centrally to the land parcel.

The subject site has access to available services including electricity, telecommunications, water supply, sewerage, stormwater drainage, and gas. Services are available in the Jude Street and Pearce Street Road reservation areas at the subject site's street frontages.

There is a vehicle access gate on the western boundary of the site which can be accessed from Pearce Street, however, no formal vehicle driveway access is currently available to the site from Jude Street or Pearce Street. Pedestrian access to the site is available from the center of the Jude Street frontage.

Native and exotic vegetation is scattered across the site and within the road reserves fronting the site and some removal is proposed to facilitate the development of the subject site and construction of the proposed roads.

The subject site is located approximately 800m North-West of the services and facilities of the Howlong Township Centre. Figure 1 and Figure 2 show the location of the site.

Figure 1 - Aerial image of subject site, Metro Map, 21st February 2024

3.2 Surrounding Development

The subject land is situated on the north-western fringe of Howlong Township. The surrounding land to the south and east is primarily residential development, zoned General Residential (R1). Further south-east of the site is the Howlong Township Centre and hence land zoned Mixed Use (MU1), Local Centre (E1) and Public Recreation (RE1) which is surrounded by more residential development, zoned General Residential (R1).

The surrounding land to north and west is typical of residential development on larger lots, zoned Low Density Residential (R2). Further north of the Low Density Residential (R2) land is farmland, zoned Primary Production (RU1) and to the north-east is the Sewer Treatment Works, Waste Depot (both zoned Primary Production (RU1)) and the Howlong Industrial Estate, zoned General Industrial (E4). South-west of the site is the Environmental Management Zone (C3) bordering the Murray River.

The site is bound by Jude Street to the south, Pearce Street to the west and existing residential allotments to the north and east, with the northern and eastern boundary land reserved for Belmore Street and Hammer Street respectively.

The southern side of Jude Street between Pearce Street and Hovell Street contains existing residential allotments containing single story dwellings on land size ranging from 804m^2 to 2,049m^2, with the majority being around 1,025m^2. The northern side of Jude Street is expected to follow a similar pattern of development. Pearce Street and Hammer Street, to the south of Jude Street, contain existing residential allotments and dwellings on similar land size and with similar dwelling type to that seen along the southern side of Jude Street. It is expected that Pearce Street and Hammer Street, to the north of Jude Street, will follow a similar pattern of development as future development expansion occurs in Howlong.

The established development fronting Jude Street, Pearce Street and Hammer Street supports the proposed allotment sizes for this development, that being the neighbourhood character of the streets and surrounding area.

Jude Street is a sealed Council Street with formal kerb and channel along southern side of the road along the site's frontage, however formal kerb and channel is not present along the northern side of the road along the site's frontage. Pearce Street is Council Street, which is not sealed, nor does it contain formal kerb and channel along the site's frontage. Hammer Street and Belmore Street are unmade roads.

Both Jude Street and Pearce Street have ease of access to the sealed regional road, Riverina Highway, which is the main arterial road linking Howlong to Corowa in the west and Howlong to Albury in the east. The Riverina Highway/Sturt Street also serves as the main thoroughfare from the site to the town center, with the shops and amenity of the town center being approximately 800 metres south-east of the site. The Riverina Highway/Sturt Street and the Howlong town center can also be accessed from local roads to the south of the site, namely Hawkins Street (Riverina Highway) to the east of Sturt Street, containing further local shops.

A basic search of the Aboriginal Heritage Information Management System (AHIMS) has been undertaken to determine the presence of any recorded aboriginal heritage sites or objects within, or in proximity to the subject site. Given the site's long-term clearance, it is considered unlikely that there are any Aboriginal objects within the site. A review of Schedule 5 of the Corowa Local Environment Plan 2012 and the OEH State Register found no heritage items occur within the area of the subject site. The site has long been cleared and does not contain any 'landscape features' that would indicate the presence of previous occupation by traditional landowners.

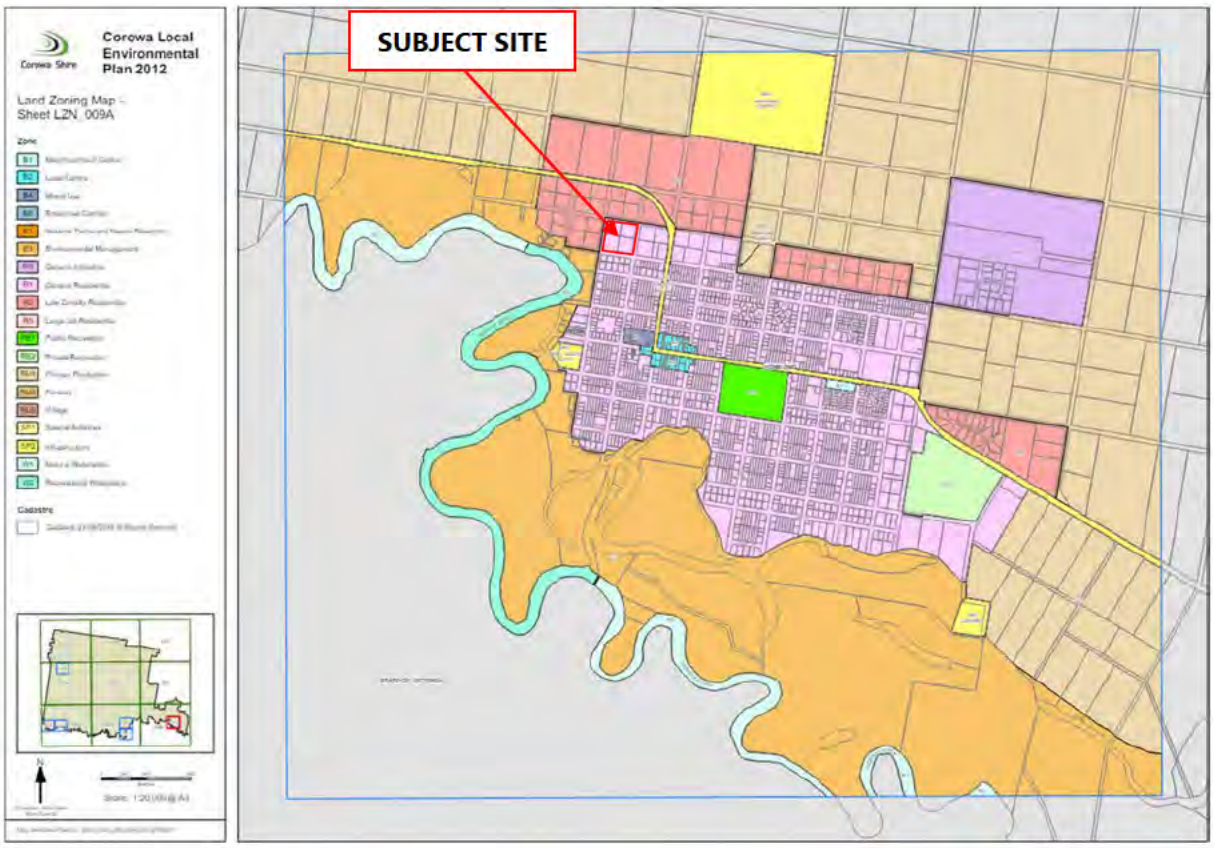

Figure 2 - Location of Subject Land and Zoning Context, Corowa Local Environmental Plan 2012

4. THE PROPOSAL

4.1. Overview

This proposal seeks approval for subdivision of the subject land into forty-one (41) general residential allotments. Consent is requested for the creation of two new internal subdivision roads and for the extension of Hammer Street and Belmore Street along the eastern and northern respective boundaries of the proposed site.

The proposal requests to remove exotic and native vegetation from the proposed site and from the road reserves at the site's frontage.

The design intention of this proposed development is to complement an existing development pattern that has occurred over many years to the south of Jude Street.

The subdivision design has been prepared with consideration to provision of services and appropriate access for future residents, offering an urban style living opportunity while also efficiently developing the land within proximity of the amenity of the Howlong township.

4.2. Vegetation

The proposed development seeks consent for the removal of five (5) exotic street trees and ten (10) native street trees which will be affected by the construction of council roads and the installation of the underground drainage across the frontage of the proposed site. To improve council infrastructure while facilitating the council streetscape standard it is necessary to remove the street trees. The development proposes to replace these trees in a more appropriate location, with the species to be confirmed by the council.

A further five (5) native trees on the subject site (internal) are proposed for removal. Three (3) of the internal trees proposed for removal are impeding the alignment of the proposed sewer. Removal of internal trees is required for the sound development of the site.

4.3. Access

Jude Street will be widened and upgraded with formal kerb and channel and footpath along the site's frontage. The extension of Hammer Street and Belmore Street will have formal kerb and channel and footpath along the site's frontage. The newly created internal subdivision roads will have formal kerb and channel and footpath fronting proposed lots.

Proposed Lots 1, 2, 32, 34, 36, 38 & 40 will be accessed from Jude Street, proposed Lots 3-15 will be accessed from newly constructed 'Street One', proposed Lots 16, 18, 20, 25, 26, 33, 35, 37, 39 & 41 will be accessed from newly constructed 'Street Two', proposed Lots 22-24 & 27-31 will be accessed from the extension of Hammer Street and proposed Lots 17, 19 & 21 will be accessed from the extension of Belmore Street.

All proposed lots will be accessed via newly constructed driveway crossovers. All proposed driveways will be in accordance with Federation Council Engineering Development Standards 'SD 406 – Vehicular Crossing at Culvert Urban & Rural Roads'.

4.4. Infrastructure and Services

The frontage at Jude Street provides legal access to allotments, new road access to subdivision, electricity, water, telecommunications, and gas supply connection points for the proposed development.

Sewer is available via an existing main which runs within the western portion of the Pearce Street Road reserve, to the south of Jude Street. A sewer main extension will be required to service the proposed development.

Drainage infrastructure will be upgraded as part of the proposed development with the drainage outfall location to be situated at the existing table drain in the southern portion of the Jude Street Road reserve, to the west of Pearce Street.

For further detail on the proposed infrastructure required to service the subject site, please refer to the Infrastructure Servicing Report (Attachment 6) which accompanies this Development Application Report.

4.5. Proposed Dwellings

The proposed site is vacant land and hence this proposal will not result in any loss of rental/housing supply to the local area. The forty-one vacant allotments created will provide an opportunity for the local market to develop new housing opportunities. Thus, increasing housing supply for the region's residents and workers. This proposal does not seek approval to construct any new dwellings.

5. PLANNING ASSESSMENT

5.1. LOCAL ENVIRONMENT PLAN

The Corowa Local Environment Plan 2012 (LEP) is the principal planning instrument that guides development within the former Corowa Shire. Outlined below is the compliance this proposal has aligned with the relevant provisions. All relevant legislation including State Environmental Planning Policies which apply to the subject site are assessed and addressed where necessary in this statement of environmental effects.

COROWA LOCAL ENVIRONMENT PLAN	
CLAUSE	**RESPONSE**
Clause 2.3 **Zone Objectives and Land Use Table**	The subject land is Zone R1 General Residential under the LEP. The objectives of the R1 zone are as outlined: • To provide for the housing needs of the community. • To provide for a variety of housing types and densities. • To enable other land uses to provide facilities or services to meet the day to day needs of the residents. The proposed development is consistent with the objective of the zone as it will provide for the housing needs of the community. The proposal offers a variety of lot sizes and hence will provide opportunity for a variety of housing types and densities to be constructed on the proposed lots.
Clause 2.6 **Subdivision**	Clause 2.6 of the LEP requires that development consent is required to subdivide land unless it is classified as exempt or complying development under the applicable Environmental Planning Instrument including *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* **The proposed subdivision is not exempt or complying development.** **This application is made seeking development consent.**
Clause 2.7 **Demolition**	Clause 2.7 of the LEP states that the demolition of a building or work may be carried out only with development consent. **This development does not propose any demolition of a dwelling.**
Clause 4.1 **Minimum Subdivision Lot Size**	Clause 4.1 of the LEP requires that any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum lot size shown on the Lot Size Map in relation to that Land. **The proposed subdivision is situated within Lot Size 'K', Minimum 550m2 lot size.** **This development proposes lots not less than 550m2.**

COROWA LOCAL ENVIRONMENT PLAN	
CLAUSE	**RESPONSE**
Clause 5.3 **Development Near Zone Boundaries**	Clause 5.3 of the LEP seeks to provide flexibility for development across zone boundaries within 25 metres, subject to objectives and land use compatibility for the adjoining zone. **This development is consistent with the objectives for development of the zone in which it is located.**
Clause 5.10 **Heritage Conservation**	Clause 5.10 seeks to conserve the environmental heritage of Corowa and Aboriginal objects and places of heritage significance. **The subject land is not identified as a heritage item or a heritage conservation area within Schedule 5 or the Heritage Map of the LEP.** A basic AHIMS search has been conducted to determine if any recorded aboriginal heritage sites or objects/artefacts have been identified within the subject site or within proximity to the subject site. The site has long been cleared and does not contain any 'landscape features' that would indicate the presence of previous occupation by traditional landowners. **It is considered unlikely that the site contains any Aboriginal objects.** **The proposed development has adequately considered Heritage matters.**
Clause 7.1 **Earthworks**	Clause 7.1 of the LEP refers to earthworks and requires that development consent is required for earthworks unless the earthworks are exempt development under the LEP or any other environmental planning instrument, or the earthworks are ancillary to other development for which development consent has been given. **The establishment of this subdivision will require establishment earthworks including cut and fill of the site for formation of the allotments, formation of roads and open drains, trenching and boring of services, and filling of the existing open drain in Jude Street.** Before granting consent, Council must be satisfied that: *a) the likely disruption of, or any detrimental effect on, existing drainage patterns and soil stability in the locality of the development,* *b) the effect of the development on the likely future use or redevelopment of the land* *c) the quality of the fill or the soil to be excavated, or both.* *d) the effect of the development on the existing and likely amenity of adjoining properties,* *e) the source of any fill material and the destination of any excavated material,* *f) the likelihood of disturbing relics* *g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,* *h) any appropriate measures proposed to avoid, minimise, or mitigate the impacts of the development.*

COROWA LOCAL ENVIRONMENT PLAN	
CLAUSE	**RESPONSE**
	The present condition of the subject site is generally flat, disturbed residential land in the form of a grassland paddock. Established residential development surrounds the site and there are no defined watercourse or flow paths through the site. **The earthworks required to properly establish the new development will be appropriately integrated into the design. There are no expected adverse effects from the works as it is proposed that typical subdivision development impacts occur.** **The development works will include appropriate Soil & Water Management techniques in accordance with Council's guidelines. At a minimum, this will include sediment fencing, stabilisation and compaction and landscaping following works.**
Clause 7.3 **Stormwater Management**	Clause 7.3 of the LEP refers to stormwater management and aims to minimise the impacts of urban stormwater on land, adjoining properties, native bushland and receiving waters. The clause applies to all land in the residential, commercial, and industrial zones. **As the subject land is zoned residential, the provisions of this clause apply.** Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development: *a) is designed to maximise the use of water permeable surfaces on the land having regard to the soil characteristics affecting on-site infiltration of water, and* *b) includes, if practicable, on-site stormwater retention for use as an alternative supply to mains water, groundwater, or river water, and* *c) avoids any significant adverse impacts of stormwater runoff on adjoining properties, native bushland and receiving waters, or if that impact cannot be reasonably avoided, minimises, and mitigates the impact.* **The proposal will be designed in accordance with council's engineering design guidelines with each lot to be connected to either existing or constructed urban drainage services along the site's frontage, this includes existing/new grassed roadside swale drains and new roadside kerb & channel which will drain to newly constructed drainage pits and pipes which will facilitate stormwater drainage flow into the existing drainage network.** **The internal road network is designed to ensure overland flow paths on the subject site traverse and ultimately discharge to Jude Street and along the existing flow path.** **All lots created by the development will be subject to covenants requiring installation of rainwater tanks for detention and re-use. (min. gardens and toilets)**

COROWA LOCAL ENVIRONMENT PLAN	
CLAUSE	**RESPONSE**
Clause 7.9 **Essential Services**	Clause 7.9 of the LEP requires that development consent must not be granted unless the consent authority is satisfied that services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required. **The proposed development satisfies this requirement as the subdivision will be connected to reticulated water, electricity, sewer, stormwater drainage and roads.** **Connection to gas services is available and will be subject to Australian Gas Networks servicing requirements, if applicable.** **Telecommunication services are available for connection and will be subject to servicing provisions made by NBNCo, if applicable.**

5.2. DEVELOPMENT CONTROL PLAN

The Corowa Development Control Plan 2013 (DCP) provides specific requirements for development within the former Corowa Shire LGA, including the subject site. The below table provides an overview of consistency and compliance of the proposal against the relevant provisions. All relevant legislation including State Environmental Planning Policies which apply to the subject site are assessed and addressed where necessary in this statement of environmental effects.

COROWA DEVELOPMENT CONTROL PLAN		
STANDARD	**COMPLIES**	**COMMENT**
Chapter 2 – Residential Character		
2.1 Neighbourhood Character	**Yes**	The subject land is located on a green field site on the north-western urban fringe of Howlong Township. The proposed development is positioned approximately 800metres north-west of the amenity/commercial activity centers and open space areas of the Howlong Township. The site is located at a zone boundary where the R1 zone interfaces with the R2 zone and hence the density of the proposed lots is varied to provide transition from higher to lower residential density. All proposed lots are greater than the minimum 550 square metres as per the Corowa LEP Lot Size Map. All proposed lots are greater than 15metres in width. The proposal is for a residential development that matches the pre-existing development pattern to the south of Jude Street. The lot density matches the pattern of lot densities for existing and emerging developments in this precinct. The lot density meets the demand of this style of land for housing and prior to this application significant research and enquiry into the real estate market has occurred to ensure this development meets the market demands.
2.2 Streetscape **Dwellings are to 'face' street frontages.**	**Yes**	All proposed lots are of adequate size with orientation so that a future constructed dwelling will address their respective street frontages. Proposed Lots 1, 2, 32, 34, 36, 38 & 40 will face Jude Street, proposed Lots 3-15 will face newly constructed 'Street One', proposed Lots 16, 18, 20, 25, 26, 33, 35, 37, 39 & 41 will face newly constructed 'Street Two', proposed Lots 22-24 & 27-31 will face the extension of Hammer Street and proposed Lots 17, 19 & 21 will face the extension of Belmore Street.

The rear or service areas of a dwelling (bathrooms, laundry, etc) shall not face a primary street frontage or be visible from a secondary street frontage.	**Yes**	The configuration of the proposed subdivision has been generated to discourage service areas from being designed at the street frontage.
2.7 Landscaping **A Minimum of 15% of lot area should have a surface permeable to water.**	**Yes**	The proposed lot density provided will allow for more than 15% of lot area to be permeable surface.
Existing Mature trees should be incorporated in the development wherever possible. Selection of species should have regard to the surrounding context and Council's preferred species list.	**Yes**	The proposal seeks to retain and incorporate existing mature trees where possible.
Wherever possible native plant species are to be utilised in landscaping with preference given to drought tolerant species.	**Yes**	The submitted concept plan for subdivision envisages the planting of street trees at regular intervals within the road reserve where they are not currently established. Where possible it is envisaged that the plant species will be suitably selected for street planting.
2.9 Car parking & access **As per General Housing Code in Subdivision 5, Division 2, Part 3 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008**	**Yes**	The development provides sufficient on-site parking for residents and their visitors.
2.10 Earthworks & Drainage **As per General Housing Code in Subdivision 6, Division 2, Part 3 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008**	**Yes**	The development generally complies with the earthworks and drainage requirements of the SEPP and the development is seeking consent.
2.17 Subdivision **Compliance with Council's Design Manual for the Subdivision of Land regarding:** • Road Layout • Road Pavement	**Yes**	The subdivision complies with the provisions of the Corowa Shire Infrastructure Design Manual. This proposal considers the State Environmental Planning Policy (Transport and Infrastructure) 2021 to balance the need for the development of the transport infrastructure along the site's frontage with environmental, social and economic considerations,

• Sub-surface drainage • Stormwater drainage • Site works (e.g. cut & fill) • Soil & Water management • Waterfront Development • Cycleway and Pedestrian paths • Bushfire protection • Water reticulation • Sewerage system		thereby contributing to sustainable development and improved living quality for the residents of Howlong.
Minimum lot widths should be provided in accordance with the DCP table. • Non-corner lot: 15m • Corner lot: 15m • Battle-axe lot: 15m (access excl.) • Lot where slope exceeds 12%: 25m.	**Yes**	All proposed lots are greater than 15m in width.
A minimum of 70% of allotments in a subdivision are to have favourable northern orientation as per the DCP.	**Yes**	The proposed lots fit within compliant north-south or east-west solar orientation requirements as outlined in the DCP. Furthermore, due to the size of the allotments, the proposed lots can achieve a suitable building envelope to obtain solar access and avoid impacts from overshadowing by adjoining properties.
Allotments orientated in a north-south direction can be longer and narrower than required to allow good solar access to yards and living areas.	**Noted**	Large lots allow good solar access to the proposed lots' yards and living areas.
Allotments orientated in east-west direction need to be wider than required to provide greater opportunity for solar access to yards and living areas	**Noted**	As detailed above, good solar access to the proposed lots' yards and living areas can be achieved.
Battle-axe allotments are not encouraged. **However, where they are necessary the minimum access handle within is to be 5m and the maximum length to the land is to be 30m.**	**Yes**	No battle-axe allotments are proposed in this development.

Shared access handles may be a minimum of 5m width **No more than two battle-axe allotments should adjoin on another or share access handle**	**Yes**	No battle-axe allotments are proposed in this development.
Chapter 9 – Vegetation Removal		
9.0 Vegetation Removal **This chapter of the CDCP applies to vegetation removal and should be read in conjunction with sections 5.9 and 5.9AA of the LEP. The purpose therefore of this chapter is to prescribe the species of tree and vegetation to which Section 5.9 of the LEP applies. Section 5.9 of the LEP relates to the "preservation of trees or vegetation". It requires a development application to be lodged to "ringbark, cut down, top, lop, remove, injure or wilfully destroy" certain species of trees or vegetation nominated in a CDCP.**	**No - Seeking Approval**	Native vegetation and planted exotic vegetation removal is required to facilitate development of the subdivision.

6. CONCLUSION

This application seeks consent for a 41-lot subdivision of land & removal of vegetation on the land described as Lots 1-4, Section 82, DP758528, addressed as 1-19 Jude Street, Howlong.

The application seeks development consent under Part 4 of the EP&A Act and has been assessed against the provisions of Section 5.15(1) of the EP&A Act.

As demonstrated within the report, the proposal is consistent with the relevant provisions, objectives and policies of the Corowa Local Environment Plan and will result in a positive opportunity for supply of residential land supporting the future growth of Howlong.

The proposal represents sound outcomes and deserves the support of council due to.

- Consistency with relevant environmental planning instruments and development objectives
- Representation of diversity of land supply for housing within the Howlong Township
- Provision of a responsive lot density that supports a current supply gap in the marketplace.
- Representation of development that seamlessly integrates with existing development patterns in the vicinity of the site.
- Generation of positive economic and social outcomes for the local community supporting retention and expansion of existing trades and services
- Provide local housing market with diversity of choice in lot sizes with current available lots in the market.
- Compliments existing infrastructure with no detrimental impact to current levels of services to existing residents.

The proposal is commended to Council, and, on behalf of our client, we look forward to a positive outcome from the application.

ATTACHMENT 1 – PHOTOS OF THE SITE AND SURROUNDS

Photo 1. Looking north along Pearce Street from the south-western corner of the proposed site

Photo 2. Looking east along Jude Street from the south-western corner of the proposed site

Photo 3. Looking north along the western boundary of the proposed site from the south-western corner

Photo 4. Looking across the proposed site from the south-western corner

Photo 5. Looking east along the southern boundary of the proposed site from the south-western corner

Photo 6. Jude Street frontage (proposed site on left of photo)

Photo 7. Looking north at the proposed site from the centre of the southern boundary

Photo 8. Looking south at existing residential development from the centre of the southern boundary of the proposed site

Photo 9. Looking west along Jude Street from the south-eastern corner of the proposed site

Photo 10. Looking north along the eastern boundary of the proposed site from the south-eastern corner (Hammer Street will continue north in this location)

Photo 11. Looking north along the eastern boundary of the proposed site from the south-eastern corner

Photo 12. Looking across the proposed site from the south-eastern corner

Photo 13. Looking west along the southern boundary of the proposed site from the south-eastern corner

Photo 14. Looking south down Pearce Street from the north-western corner of the proposed site

Photo 15. Looking east along the northern boundary of the proposed site from the north-western corner

Photo 16. Looking across the proposed site from the north-western corner

Photo 17. Looking south along the western boundary of the proposed site from the north-western corner

Photo 18. Looking east at the proposed site from the centre of the western boundary

Photo 19. Existing vehicle access to proposed site from Pearce Street (southern end of Pearce Street)

Photo 20. Looking north along Hammer Street to the south of the proposed site

Photo 21. Looking north along Pearce Street to the south of the proposed site

Photo 22. Looking south along the Riverina Highway from its intersection with Jude Street (main thouroughway through to Howlong Town Centre)

Photo 23. Looking north along the Riverina Highway from its intersection with Jude Street (main thouroughway through to Corowa)

ATTACHMENT 2 – PROPOSED PLAN OF SUBDIVISION

ATTACHMENT 3 – COPY OF TITLE

ATTACHMENT 4 – AHIMS SEARCH RESULTS

ATTACHMENT 5 – INFRASTRUCTURE SERVICING REPORT