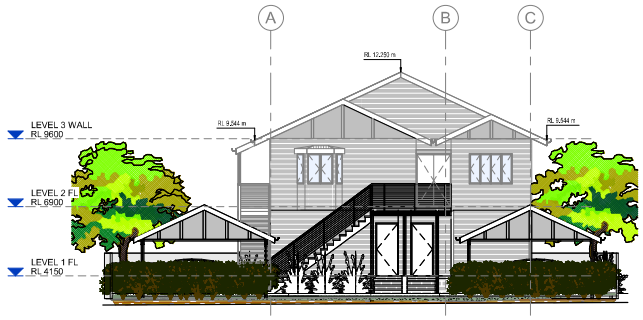
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ELEVATIONS

PROJECT:
PROPOSED MULTIPLE UNIT DWELLING DEVELOPMENT

428 HUGHES ST HERMIT PARK QLD 4812

CLIENT:
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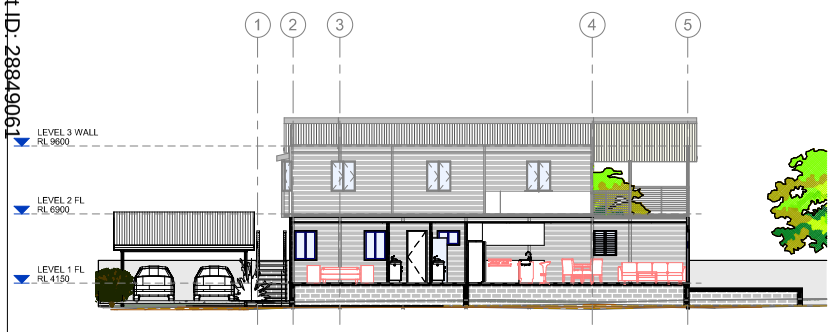
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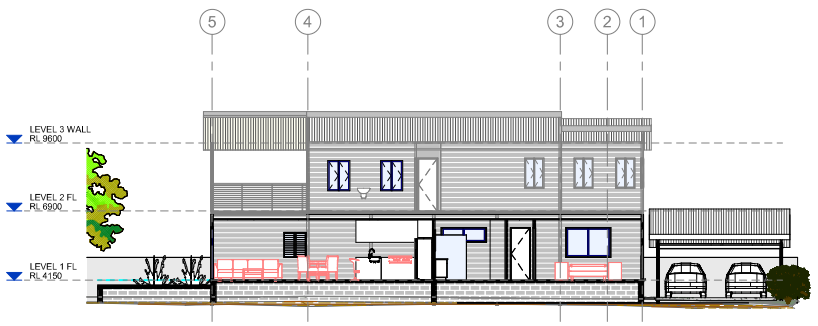
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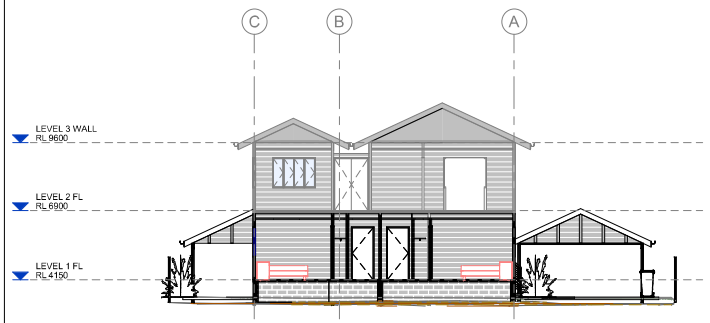
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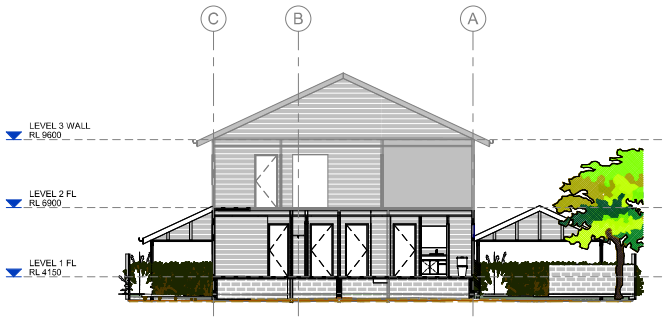
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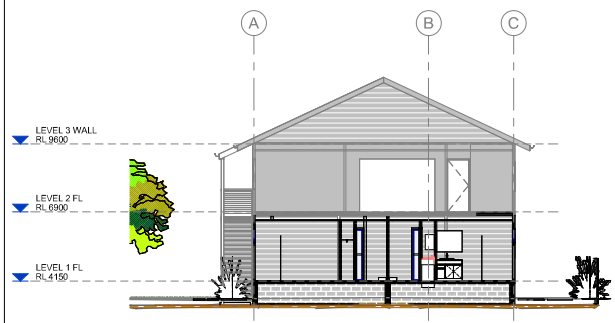
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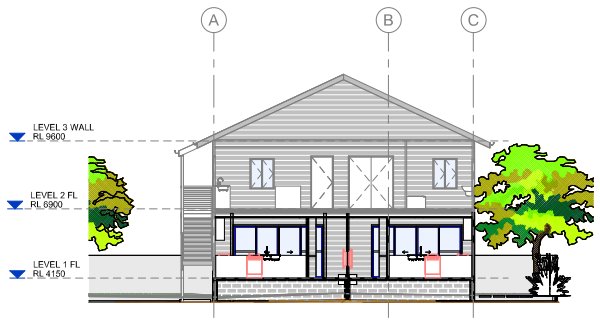
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PROJECT:
PROPOSED MULTIPLE UNIT DWELLING DEVELOPMENT

428 HUGHES ST HERMIT PARK QLD 4812

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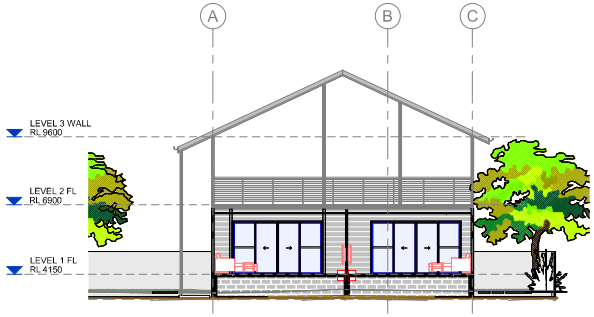
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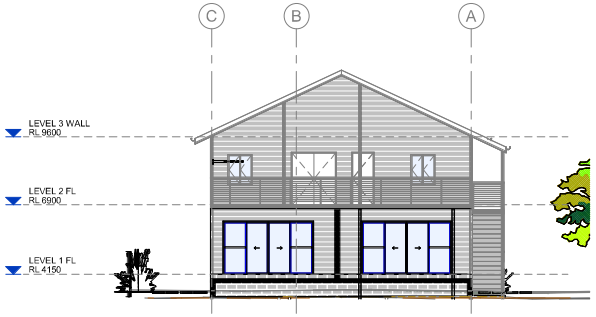
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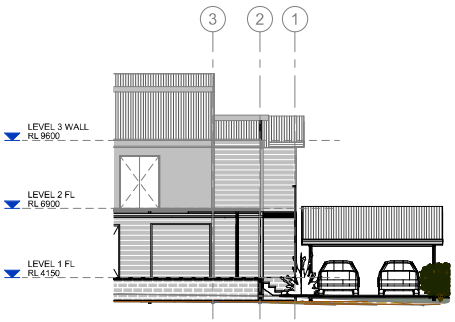
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PROJECT:
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Appendix 5

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FLOOD STUDY REPORT

42B Hughes Street Hermit Park, QLD 4812

Property Description:

Lot 2 on RP742182

Project no.

Prepared for:

30 June 2026

Ref:

BRAVO CONSULT

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Project Information

Site Address	**42B Hughes Street Hermit Park, QLD 4812**
RP Description	Lot 2 on RP742182
Project no.	
Client	
Council	Townsville City Council
Council Ref.	

Document Register

Document No	Version	Date	Author	Reviewer
FSR-001	02	30-Jun-26	K. Pfidze	

RPEQ Certification

I, in my professional capacity as a Registered Professional Engineer of Queensland (RPEQ), hereby certify that the assessment and all provided data and/or modelling has been undertaken in accordance with the relevant assessment authorities' current engineering best practices, guidelines and policies.

Name	RPEQ No.	Date	Signature
K. S Pfidze	31292	30-Jun-26	

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1.0 INTRODUCTION

Bravo Consult has been commissioned to undertake a Flood Impact Assessment for the proposed residential development at **42B Hughes Street, Hermit Park, QLD 4812 (Lot 2 on RP742182)** in support of a development application under the **Townsville City Plan**.

The assessment has been prepared in accordance with the **Townsville City Plan Flood Hazard Overlay Code (Section 8.2.6)** and **Planning Scheme Policy SC6.7 – Flood Hazard Planning Scheme Policy**, specifically **Attachment 1 – Guidelines for Preparation of Flood Studies and Reports**.

The purpose of this assessment is to evaluate the hydraulic impacts associated with the **proposed development**, establish the applicable **Flood Planning Levels (FPLs)**, and determine the minimum required finished floor levels for habitable and non-habitable areas in accordance with the Townsville City Plan.

The hydraulic assessment has been undertaken using the Council-supplied Ross River Flood Study hydraulic model, updated to represent the proposed development based on the survey information and architectural drawings provided by the client. The assessment compares the existing and proposed conditions to quantify any changes in flood behaviour resulting from the proposed works and to assess the acceptability of those changes.

The proposed works assessed as part of this report are limited to the development shown on the submitted plans, including the proposed building footprint, associated structural elements, and the minor filling required beneath the building footprint to achieve the nominated finished floor levels. The assessment does not consider future earthworks, filling, site regrading or drainage modifications outside the extent of the proposed development shown on the approved drawings.

1.1 Scope of Work

The scope of this Flood Impact Assessment includes:

- Review of the Townsville City Council flood mapping, Ross River Flood Study and Council-supplied hydraulic model applicable to the subject site.
- Review of the architectural drawings, detailed survey and other information provided by the client.
- Determination of the applicable **Flood Planning Levels (FPLs)** in accordance with the Townsville City Plan Flood Hazard Overlay Code.
- Assessment of the hydraulic impacts associated with the **proposed development**, including the proposed building footprint and the filling required beneath the building footprint to achieve the nominated finished floor levels.
- Assessment of changes in flood levels, flood extents, flood conveyance, hydraulic hazard and overland flow paths resulting from the proposed works.
- Assessment of potential hydraulic impacts on adjoining properties.
- Assessment of compliance with the relevant flood-related provisions of the Townsville City Plan.
- Preparation of a Flood Impact Assessment Report suitable for submission to Townsville City Council.

Exclusions

The assessment is limited to the proposed works shown on the submitted plans. It does not include the assessment of future site regrading, additional filling, retaining walls, drainage modifications or other earthworks outside the extent of the proposed development. Any changes to the proposed development may require additional hydraulic assessment.

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2.0 Description of current site and catchment

This section provides a detailed examination of the current conditions at 42B Hughes Street Hermit Park, QLD 4812, with a focus on the existing state of the site.

2.1 Location and Existing Features

The subject site falls under the jurisdiction of Townsville City Council (TCC) and spans an area of 603 m^2. The predevelopment scenario comprised of an existing dwelling and access driveway. Refer to Appendix A for the property report.



Figure 2-1 Subject SITE – (Google Maps)

2.2 Zoning

The subject site is located within General Residential Low Density Residential zone of the Townsville City Plan.

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2.3 Site Topography

The site ground levels range from approximately RL 2.70 m AHD to RL 3.10 m AHD, based on the LiDAR survey. A more detailed contour plan derived from the detailed survey is provided in Appendix B.

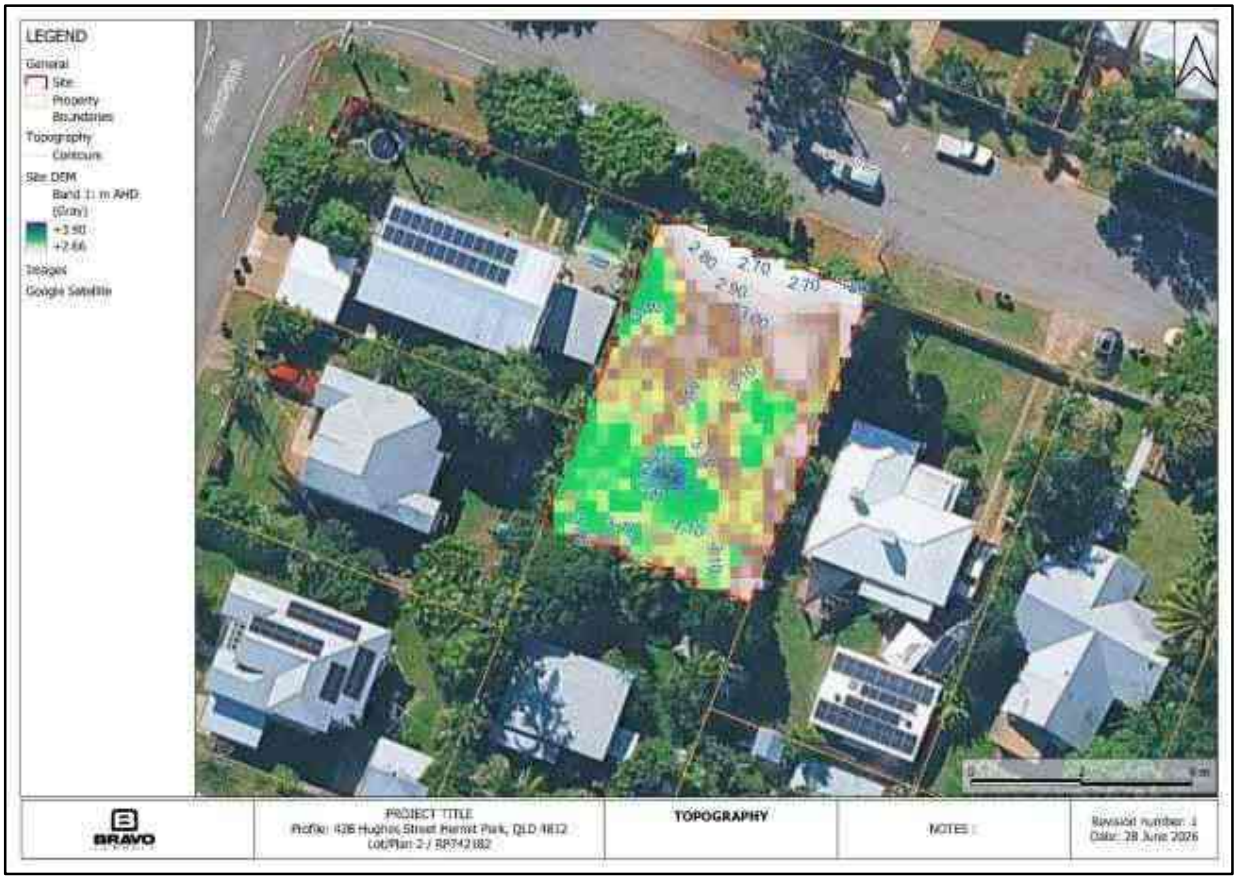


Figure 2-2: Site Topography

2.4 State Matter

A review of the Queensland Development Assessment Mapping System (DAMS) indicates that the site is affected by the following State Matters of Interest:

Coastal area – erosion prone area;

Coastal area – medium storm tide inundation area; and

Coastal area – high storm tide inundation area.

These matters are shown in Appendix A

2.5 Easements

An easement search shows no easement parcels intersecting Lot 2 RP742182

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2.6 Previous Flood Studies

The subject site is located within the extent of the Townsville City Council Ross River Flood Study in the Ross River catchment ID HM-13.00. The Council hydraulic model and associated flood mapping have been adopted as the basis of this Flood Impact Assessment. The flood study provides the existing flood behaviour and design flood levels used throughout this assessment.

2.7 Flood Source

The site is located within **Low Hazard Area**. The updated flood overlays issued by TCC have been adopted for this assessment and are illustrated in Figures 2.3 and 2.4. The max flood depth is up to approximately 0.51m high (0.5-0.750m range

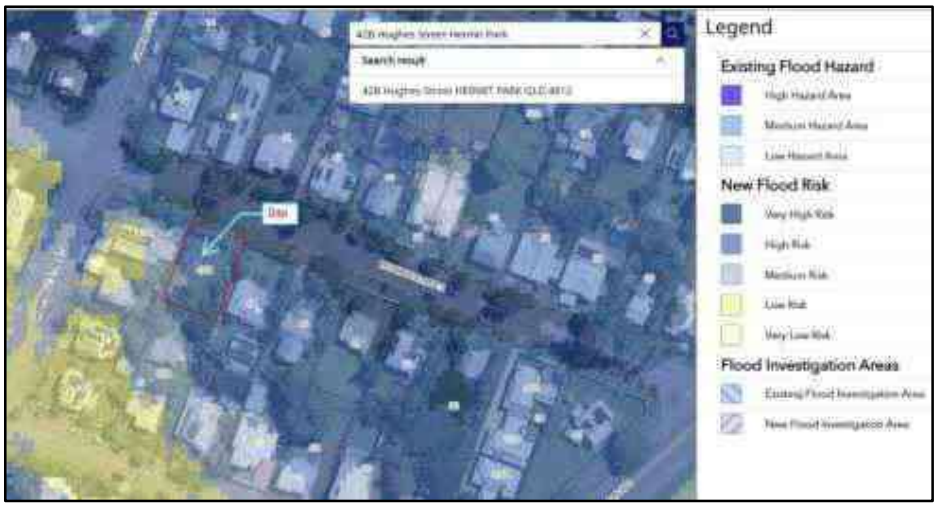


Figure 2-3- New Flood Risk

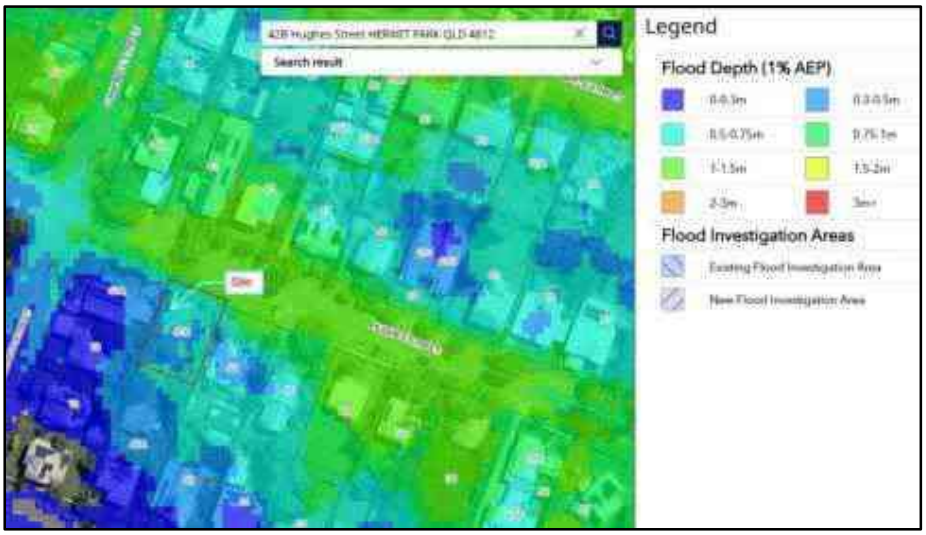


Figure 2-4 Flood Depth

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3.0 Proposed works

The proposed development comprises the relocation of an existing elevated dwelling to the subject site at 42B Hughes Street, Hermit Park. The upper floor of the dwelling has been installed at the required finished floor level, with the remaining works consisting of the construction of a reinforced concrete ground floor slab supported on masonry block strip footings. The slab footprint extends only marginally beyond the existing building footprint. The existing driveway, car parking and surrounding external areas will generally remain at existing ground levels, with no significant earthworks proposed outside the building footprint.

The current proposal is to relocate an existing elevated dwelling onto the site and complete the lower level.

Specifically, the proposed works comprise:

- Relocation of an existing two-storey dwelling onto **42B Hughes Street, Hermit Park (Lot 2 RP742182).**
- The relocated dwelling is already installed on structural stumps, with the **upper floor constructed at the required height.**
- Construction of a **ground floor reinforced concrete slab** beneath the existing elevated dwelling.
- Construction of **masonry block strip footings/walls** to support the ground floor slab and achieve the required finished floor level.
- The slab footprint will extend **no more than approximately 100 mm beyond the existing building footprint** shown on the survey.
- The **driveway, parking area and external ground levels will generally remain at existing ground level**, with no significant filling outside the building footprint.

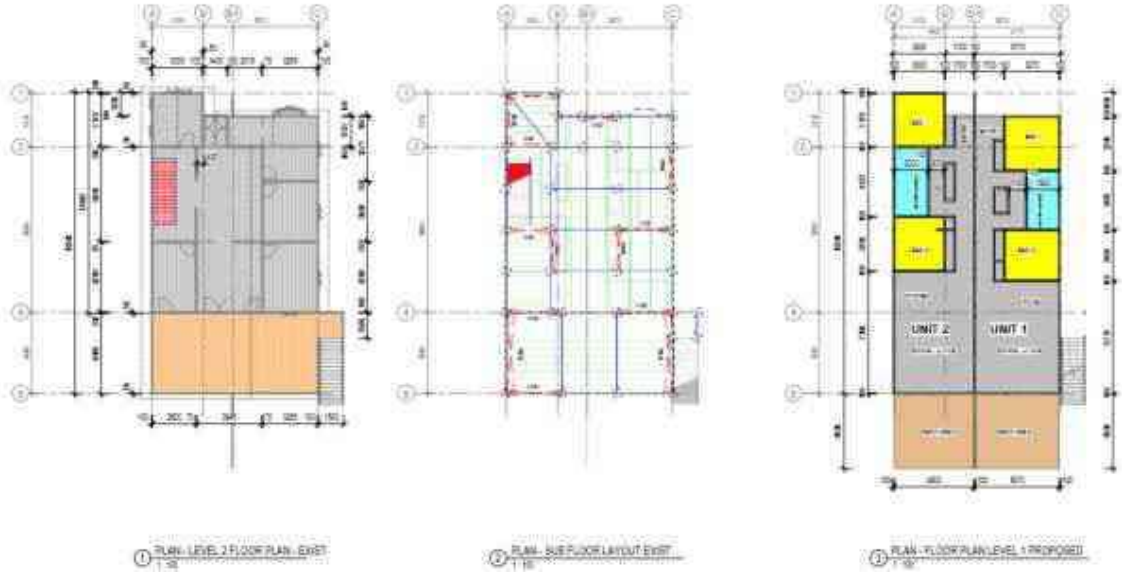


Figure 3-1: Proposed multistorey

Figure 3-1 shows the existing site conditions following completion of the earthworks. The proposed development involves 2 units for residential purposes with access via Hughes Street as shown in figure 3-1

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Proposed Development



Figure 3-2:Proposed Development

3.1 Flood planning levels

Townsville City Plan's SC6.7.4 Attachment 1, Schedule 1, Table SC1.2.2 Administrative Definitions "defined flood level' and Table 8.2.6.3(a) Flood overlay code. For residential development, floor levels must be 300 mm above the 1% AEP flood level plus climate change (1% AEP flood level (CC)). The proposed works are required to comply with the flood planning levels specified in Table 3-1.

Table 3-1: **Flood planning levels**

Flooding Source	Minimum floor level
Habitable room	1% AEP flood level (CC)+ 300mm
Non-habitable room (Floor levels of non-residential buildings (other than class 10 buildings))	1% AEP flood level
Carport, unroofed car park; vehicular manoeuvring area	1% AEP flood level
Driveway	Design the driveway so the driveway is not inundated in the 10% AEP event, and check trafficability in the 1% AEP (DFE) in line with QUDM 7.4

3.2 Council-supplied *Ross Flood Model*

Council-supplied *Ross Flood model* has been used to assess flooding at the site. The adopted methodology is consistent with **SC6.7.4 Attachment 1 – Guidelines for the Preparation of Flood Studies and Reports**. The model was trimmed down with boundary conditions maintained and detailed site survey has been added.

3.3 Climate Change

Climate change is considered through targeted sensitivity analyses that increase **rainfall intensities** and **downstream/tidal boundary conditions** to represent potential year-2100 conditions. The approach aligns with TCC's city-wide hydrologic review and ARR 2019 guidance on climate change treatment in flood studies. Flood behaviour is assessed using the adopted Ross River Flood Study baseline model (ARR 2019 compliant). The new 1% AEP accounts for an increase in rainfall intensity for a year 2100 climate change scenario, which is required to meet Queensland planning requirements which has been adopted in this report as per the Ross Flood Study.

SC6.7.4.4.7 provides "at the time" values:

- **Sea level rise to 2100 = 0.88 m**
- **Extreme rainfall intensities to 2100 = +15%**

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4.0 Hydrological and Hydraulic Modelling

Consistent with SC6.7.4 Attachment 1 - Guidelines for preparation of flood studies and reports in preparing the hydrologic model, information about the site was gathered from the following sources:

- Detailed Survey
- Rainfall and Meteorological Data (Australian Bureau of Meteorology (BOM) and the ARR Hub)
- Ross River Flood Study
- Review of Hydrological Methods for the Townsville Region Phase 4 - AR&R 2019 Hydrologic Model Updates 2019, TCC Ross River Flood Study Baseline Flooding Assess Report and Review Hydrological Methods for Tsv Region Report
- SC6.7.4 Attachment 1 - Guidelines for preparation of flood studies
- XP-RAFTS Channel Routing model

The site is located within Ross River catchment. The Townsville City Wide Flood Constraints Project involved the development of hydrologic and hydraulic models to enable baseline mapping of flood constraints across the city for incorporation into the Townsville City Plan (2014). Review of Hydrological Methods for the Townsville Region Phase 4 - AR&R 2019 Hydrologic Model Updates provides details of the updates and revision of hydrologic models across the Townsville Region to comply with ARR 2019 guidelines. An extract of the Ross River study is shown in Appendix F.

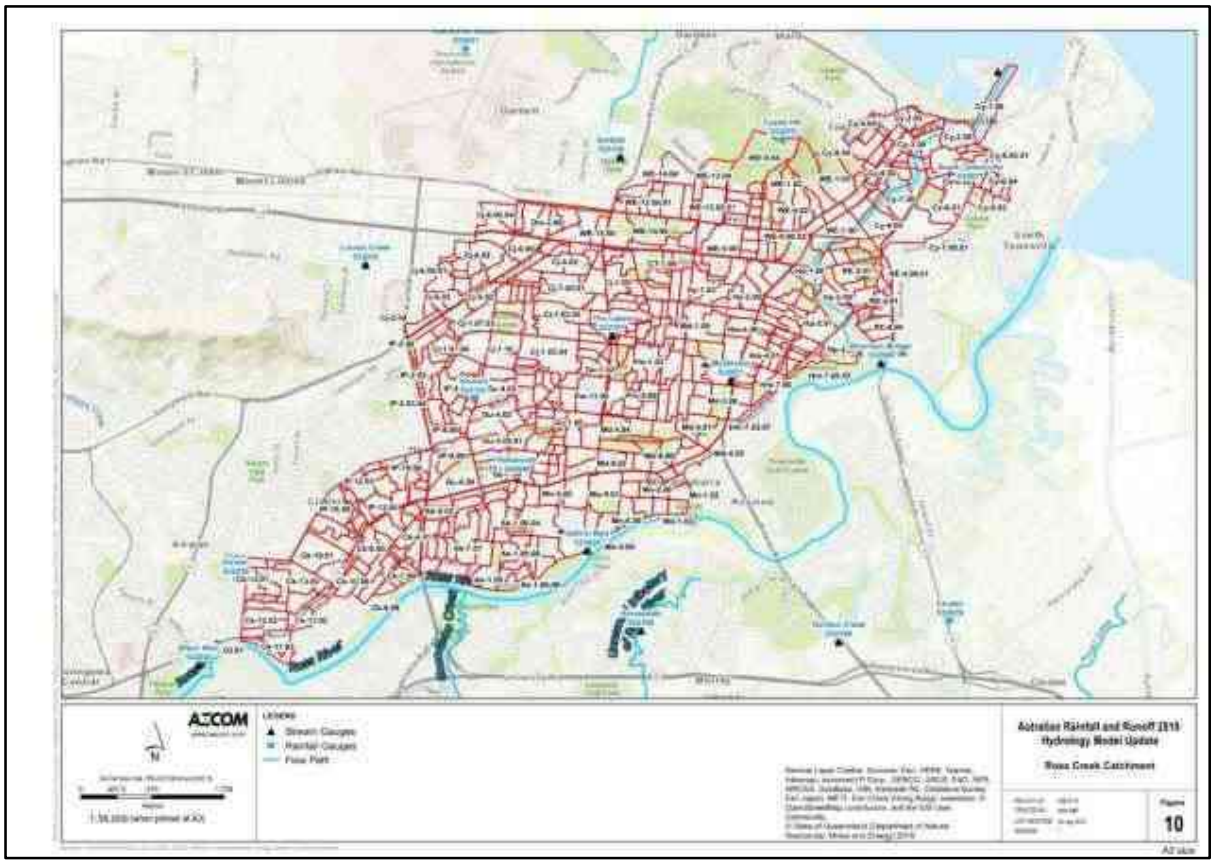


Figure 4-1: Review of Hydrological Methods for the Townsville Region Phase 4 - AR&R 2019 Hydrologic Model Updates

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4.1 Contributing catchments and Boundary conditions

The RORB hydrologic model, which forms part of the Council-supplied *Ross River Flood Study*, was reviewed and a sub-catchment of the hydrologic model was extracted to develop a reduced catchment for hydraulic modelling. This approach was adopted to reduce computational requirements and to focus the assessment on site-specific hydrologic and hydraulic behaviour, with inflows from the wider catchment appropriately represented through boundary conditions. This analysis was then validated against the exiting model and output in line with SC6.7.4.4.6.

4.2 Rainfall Routing Method

The rainfall routing was adopted from the council supplied Ross River flood study RORB model.

4.3 Adopted Infiltration Roughness

The Adopted Infiltration Roughness was adopted supplied Ross River flood study model data.

4.4 Land Use within the Catchment

The Land Use and Roughness values was adopted supplied Ross River flood study model data.

4.5 Hydraulic Infrastructure

The Hydraulic Infrastructure was adopted supplied Ross River flood study TUFLOW model data.

4.6 Reporting Lines

Reporting Lines in TUFLOW were used to validate and benchmark the reduced hydraulic model against the original Council-supplied model. Model results were further validated and verified against the updated flood models available via the Flood Portal.

4.7 Assessment of impacts

In accordance with SC6.7.4.4.8 the determination of impacts of development are summarised in Table 4-1.

Table 4-1:Assessment criteria for adverse impact

Content	Desired Outcome
Flood Extent	The flood extent should not increase offsite impacts
Peak Afflux Water level	Flood levels should not increase beyond the accuracy of the method of hydraulic determination (generally 0.0 m to account for flood noise in TUFLOW) either upstream, downstream or adjacent to the site;
Flood Hazards	No increase in food hazards
Peak Afflux Velocity level	Any changes in flow velocities should be shown to have minimal impact on erosion potential. No significant increase in flood velocity; erosion risk considered where velocity afflux >0.3 m/s.
Overland flow paths	There should be no significant change in flow patterns so that new flow paths on adjacent land are formed
Climate change scenario	Areas where the floor level freeboard above the DFE would be exceeded due to climate change must be identified as part of the sensitivity testing in line with **SC6.7.4.4.7 Impact of climate change. Any new flow paths that are formed must be identified**
Sensitivity testing	Confirm robustness of design against moderate events.
Off-Site impacts	No offsite impacts
Minor system drainage capacity	No material adverse impacts on flooding for the minor system drainage capacity AEP and the DFE
Flood Storage loss	No loss in flood storage

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4.8 Critical Duration

The TUFLOW model outputs and the *Ross River Flood Study* report were reviewed to identify the critical duration for each AEP event which was derived from XP-RAFTS Channel Routing.

4.9 Tailwater / tide boundary

Adopted MHWS as fixed tailwater for design to maintain probability from the council supplied flood model.

4.10 Pre and Post development TUFLOW models

In accordance with SC6.7.4.4.8 the determination of impacts of development. The pre-developed state (base case) and the developed state was assessed.

4.11 Model setup Summary

In accordance with SC6.7.4.4.8 the determination of impacts of development and consistent with SC6.7.4 Attachment 1 - Guidelines for preparation of flood studies and reports the pre-developed state (base case) and the developed state was assessed. The pre-developed state represents the state of development within the catchment and floodplain prior to time of construction of the proposed works.

The following information outlines the model used in TUFLOW.

Content	Description
Survey data	**Base case:** Adjusted with Survey data **Proposed development**: Detailed Tin surface was used.
Hydrologic Model	From the Council-supplied Ross River Flood Study data
Boundary conditions	From the Council-supplied Ross River Flood Study data which were used in the cut down version as inflows
Hydraulic models	Cut down version of the Council-supplied Ross River Flood Model
Roughness	From the Council-supplied Ross River Flood Study data
Rainfall	From the Council-supplied Ross River Flood Study data
Flood events	5%,1% AEP ,1% AEP+ climate change and 10% AEP
Adopted Infiltration Roughness	From the Council-supplied Ross River Flood Study data
Grid Size	The Council-supplied Ross River Flood Model using HPC solver and SGS

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Hydrologic Sub catchments-Ross River study -RAFTS analysis



Figure 4-2: Subcatchments

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Council supplied TUFLOW model



5.0 Results

The results of the modelling are shown in appendix A, B, C D and E

5.1 Model Validation/benchmarking

The pre-existing flood conditions (Peak flood Depth and flood extent) were validated and verified against the council supplied flood data and the new flood mapping data from Townsville flood portal.

The results of the hydraulic modelling and flood impact assessment are summarised in this section. The focus is on:

- Flood planning levels and compliance with the Flood Overlay Code (**8.2.6.3**,).
- Floodplain storage impacts, including cut–fill earthworks.
- Hydraulic hazard analysis, using depth × velocity thresholds.
- Overall compliance with QUDM Section 7.4 and SC6.11 Flood Planning Scheme Policy.

5.2 Flood Planning levels

Flood planning levels were established by comparing modelled maximum water levels (m AHD) with required freeboard criteria from the Flood Overlay Code

Table 5-1:Minimum Flood Planning levels

Element	**Model Outputs** (Maximum water level (m AHD) **DFE (1%AEP+ Climate Change)**	**Criteria**	**Recommended Minimums Including freeboard m AHD**
Habitable room		1% AEP-CC flood level + 300 mm n Flood Overlay Code	4.150 3.850+300mm freeboard
Non-habitable rooms (ancillary spaces (garages, storage, etc.)		1%+CC AEP flood level (Above DFE)	3.850

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5.3 Summary of results

Table 5-2:Summary Results

Content	Summary of Results
Flood Extent	Localised off-site changes in flood extent are predicted immediately adjacent to the proposed development. The changes are limited in extent and do not result in any significant increase in flood extent on adjoining properties.
Peak Afflux – Water Level	Peak afflux is predominantly confined to the adjacent road reserve, where increases are generally **less than 20 mm** and do not materially affect the hydraulic performance or trafficability of the road. In accordance with **Planning Scheme Policy SC6.7.4.4.8**, a hydraulic model uncertainty of **±10 mm** has been adopted when interpreting the modelling results.
Overland Flow Paths	Other than the localised afflux described above, no significant changes to existing flow patterns are predicted, and no new overland flow paths are created on adjoining land (refer to Appendix E).

.

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6.0 Conclusions and recommendations

This Flood Impact Assessment has been prepared for the proposed dwelling at **42B Hughes Street, Hermit Park, QLD 4812** in accordance with the **Townsville City Plan Flood Hazard Overlay Code (Section 8.2.6)** and **Planning Scheme Policy SC6.7 – Flood Hazard Planning Scheme Policy**, specifically **Attachment 1 – Guidelines for Preparation of Flood Studies and Reports**.

The assessment utilised the Council-supplied Ross River Flood Study hydraulic model to determine the applicable flood planning levels and to assess the hydraulic effects of the proposed development. The assessment considered the **1% AEP Defined Flood Event (DFE)** and the **1% AEP climate change scenario**, consistent with the adopted Council modelling.

The assessment establishes a minimum habitable floor level of **RL 4.150 m AHD** and a minimum non-habitable floor level of **RL** 3.850 **m AHD** for the proposed dwelling in accordance with the Townsville City Plan. The proposed driveway also satisfies the applicable flood immunity and trafficability requirements for the assessed events.

Hydraulic modelling indicates that the proposed development results in **minor and localised changes** to flood behaviour. The predicted afflux is predominantly confined to the adjacent road reserve, with minor localised changes to flood extent immediately adjoining the site. No new overland flow paths are formed, and no material change to the hydraulic function of the surrounding floodplain has been identified for the flood events assessed. In accordance with **Planning Scheme Policy SC6.7.4.4.8**, a hydraulic model uncertainty of **±10 mm** has been considered when interpreting the modelling results.

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6.1 Limitations

This Flood Impact Assessment has been prepared solely for the purpose of assessing the proposed development at **42B Hughes Street, Hermit Park, QLD 4812** against the relevant flood-related provisions of the **Townsville City Plan**.

The assessment is based on the architectural drawings, survey information and other documentation provided by the client, together with the Council-supplied Ross River Flood Study hydraulic model. The conclusions presented are dependent upon the accuracy and completeness of this information.

The assessment considers only the **proposed development** shown on the submitted plans, including the proposed building footprint and associated works incorporated into the hydraulic model. This report does not assess future alterations to the development, additional earthworks, filling, retaining walls, drainage modifications or other site changes not identified on the submitted drawings.

This report is limited to the assessment of **hydraulic and flood-related matters**. It does not constitute certification or approval of the structural design, footing system, geotechnical conditions, construction methodology, building compliance or any other aspect of the proposed development outside the scope of this assessment.

Flood modelling is a numerical representation of complex natural processes and is subject to inherent uncertainties associated with survey accuracy, hydrologic inputs, boundary conditions, model parameters and computational methods. In accordance with **Planning Scheme Policy SC6.7.4.4.8**, a hydraulic model uncertainty of **±10 mm** has been adopted when interpreting the modelling results.

The conclusions and recommendations contained within this report are applicable only to the proposed development assessed and should be read in conjunction with the assumptions, methodology and limitations presented herein. Any material changes to the proposed development, finished floor levels, site layout or drainage arrangements may alter the hydraulic response and should be supported by further hydraulic assessment.

.

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7.0 Appendix: List

7.1 Appendix A-Property Details

7.2 Appendix B- Proposed Development

7.3 Appendix C- Pre-Development

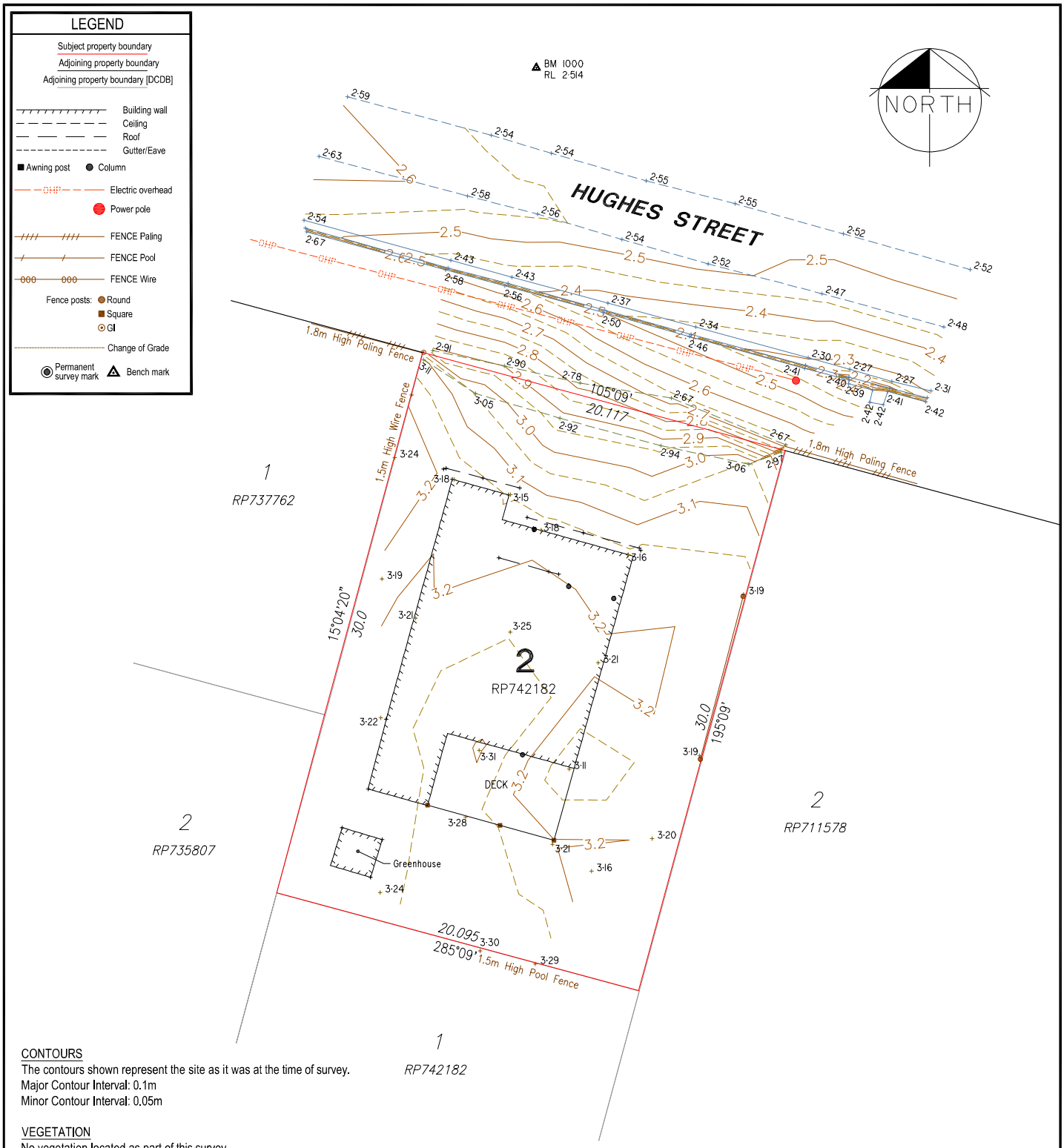
7.4 Appendix D - Post -Development

7.5 Appendix E - Afflux

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Version: 1, Version Date: 16/09/2026

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Version: 1, Version Date: 16/09/2026

Appendix A-Property Details



CONTOURS
The contours shown represent the site as it was at the time of survey.
Major Contour Interval: 0.1m
Minor Contour Interval: 0.05m

VEGETATION
No vegetation located as part of this survey.

PROPERTY BOUNDARIES
The property boundaries and dimensions shown on this plan are plotted from original title records. They have been plotted using surveying methodology that is generally accurate to within 75 millimetres of the true boundary position. Accurate boundary locations can only be determined by completing a cadastral survey as defined by the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003.

Where indicated adjoining boundaries shown on this plan are plotted from the Digital Cadastral Data Base provided by the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development, which gives no warranty in relation to the data (including accuracy, reliability, completeness or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data.

The property boundaries and dimensions shown on this plan must not be relied upon when designing services, buildings or other structures that will be constructed in close proximity to them. Designs of services, buildings or structures that require critical boundary offsets will require accurate boundary locations determined by completing a cadastral survey as defined by the Survey and Mapping Infrastructure Act 2003 and Surveyors Act 2003.

Boundary corners were not marked at the time of survey.

1:200
0 2m 4m 6m 8m 10m

AMT	DESCRIPTION	DATE	SURV	DRAFT
	ORIGINAL ISSUE	18.05.2026	JS	AWP

Horiz. Datum Arbitrary
Azimuth RP742182
Origin PM 156313 E 499.000 N 1000.000
Vert. Datum AHD Derived
Origin PM 156313
RL RL 2.884
Locality HERMIT PARK
Local Auth. TOWNSVILLE CITY COUNCIL
Lat Long
DWG: 438916-001 Detail.dwg
12D: 438916_001_Detail.project

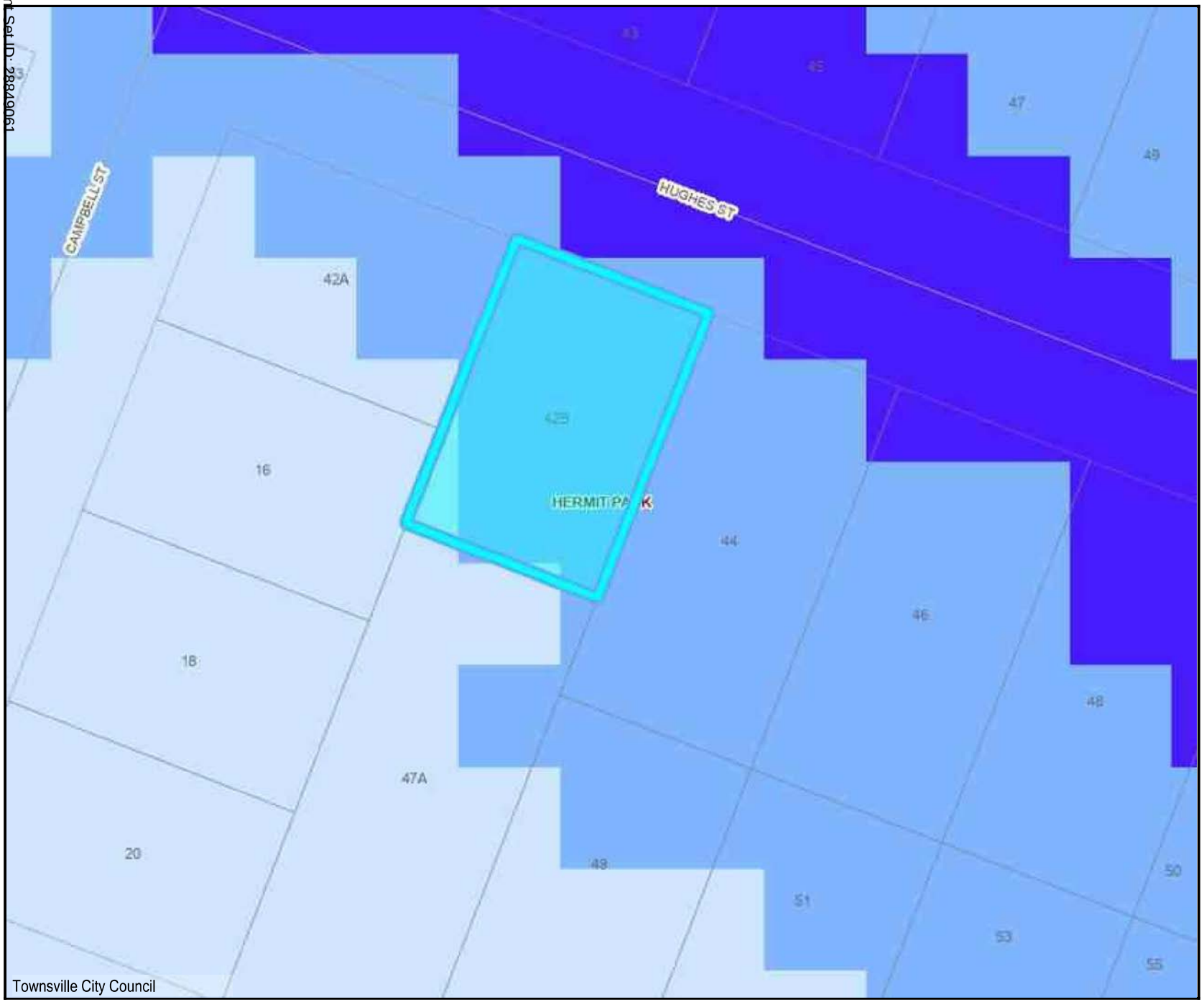
CLIENT: KROGHS NEST LIVING

RPS AAP Consulting Pty Ltd
ACN 117 883 173
Unit 7, 5 - 7 Barlow Street
South Townsville
QLD 4810
t +61 7 4724 4244
web: rpsgroup.com.au
A TETRA TECH COMPANY
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PROJECT: 42B HUGHES STREET, HERMIT PARK
PLAN TITLE: CONTOUR & DETAIL SURVEY
Part of Lot 2 on RP742182
SCALE: 1:500
SHEET: 1 of 1
DRN No.: 438916-001
REV:

Document Set ID: 28849061
Version: 1, Version Date: 16/09/2026

Document Set ID: 28849061
Version: 1, Version Date: 16/09/2026



Townsville City Council

Map Title

Legend

EXT_CORE

CORE - Properties

Properties

CORE - Road Corridor Centreline

Trafficable Road

CORE - Suburbs

Suburbs

EXT_CityPlanningScheme_Current

Flood hazard overlay (OM-06.1)

High hazard area

Medium hazard area

Low hazard area

0 5 10

m

Scale 1: 500

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City of Townsville

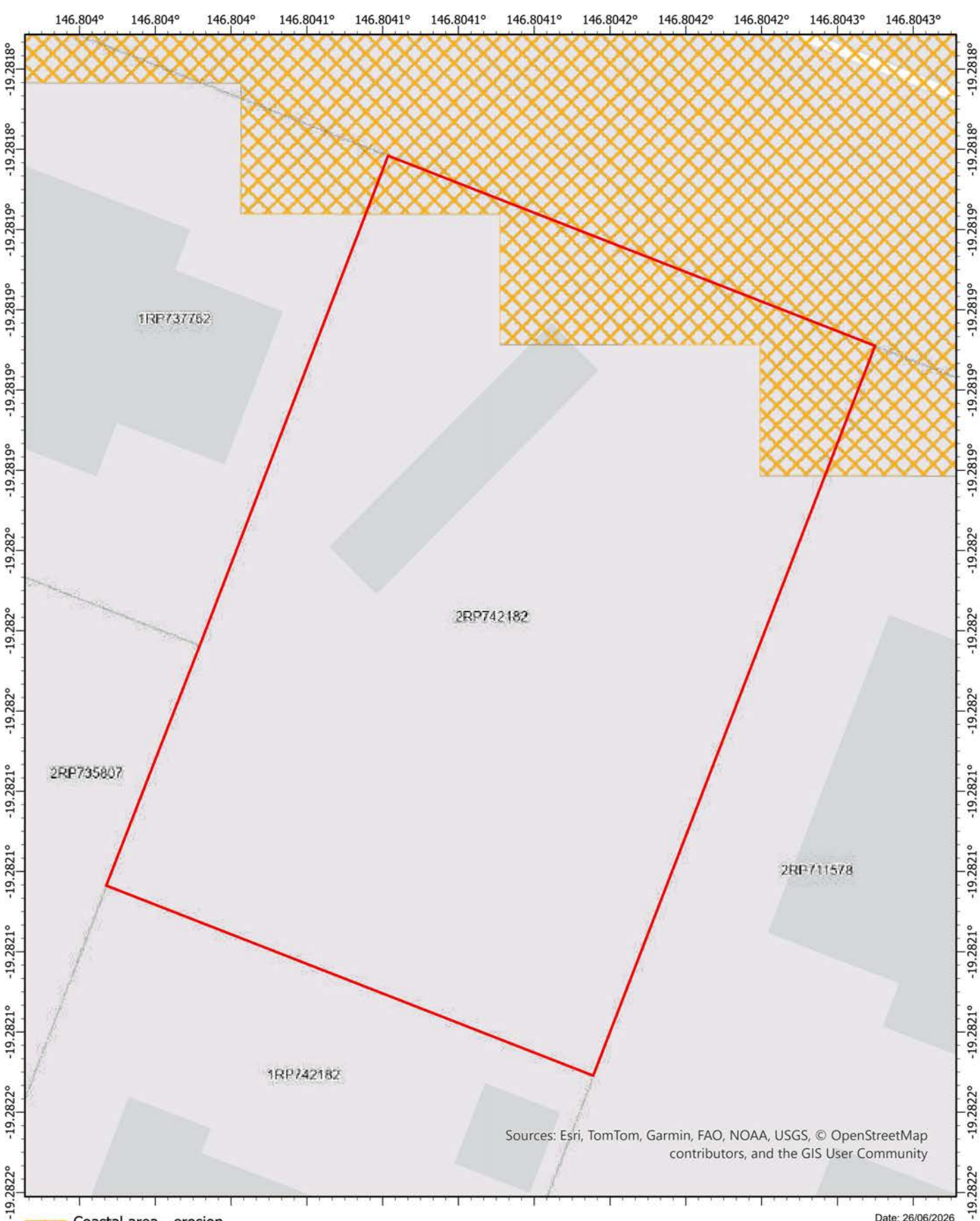
Matters of Interest for all selected Lot Plans

Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area

Matters of Interest by Lot Plan

Lot Plan: 2RP742182 (Area: 603 m²)

Coastal area - erosion prone area
Coastal area - medium storm tide inundation area
Coastal area - high storm tide inundation area



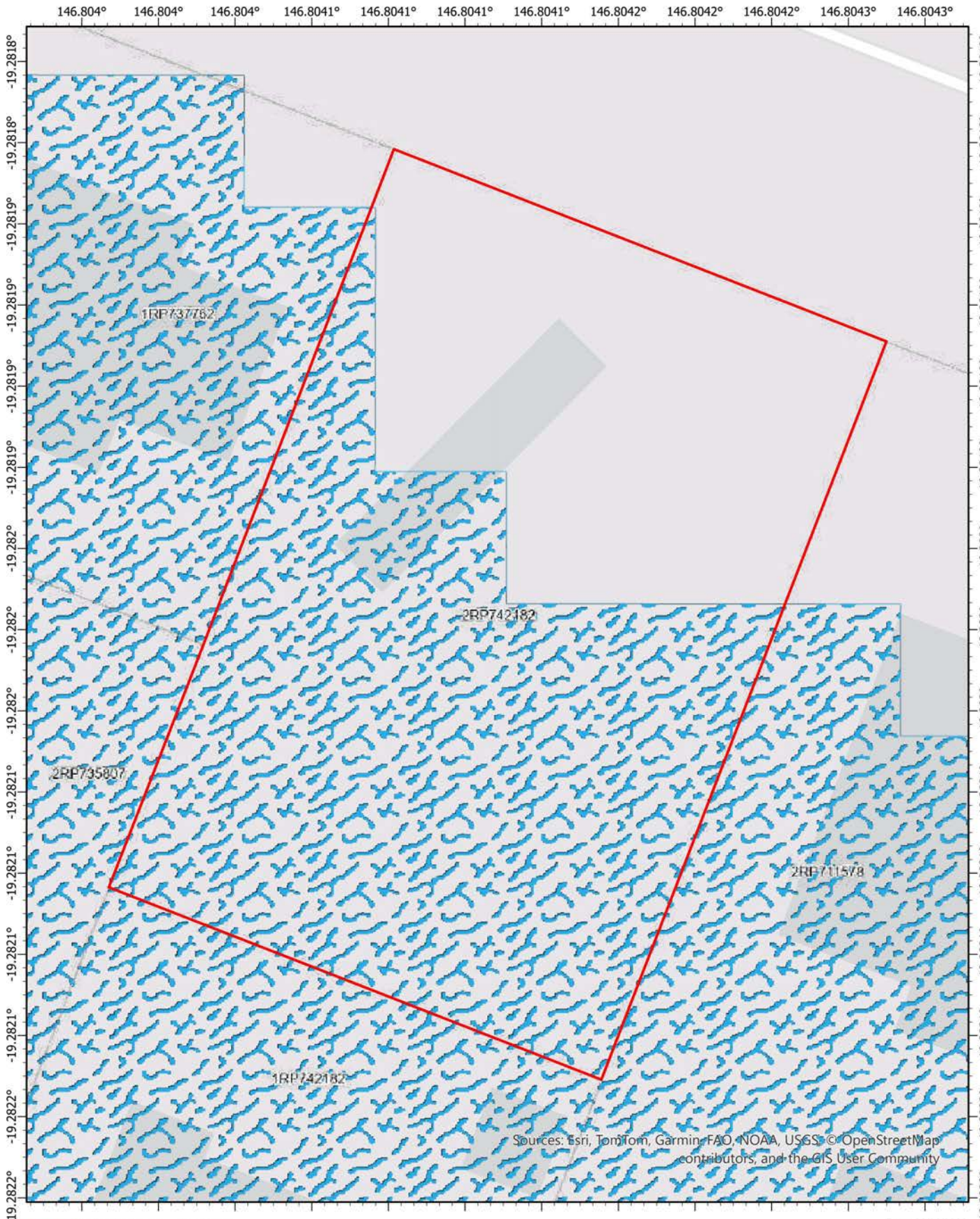
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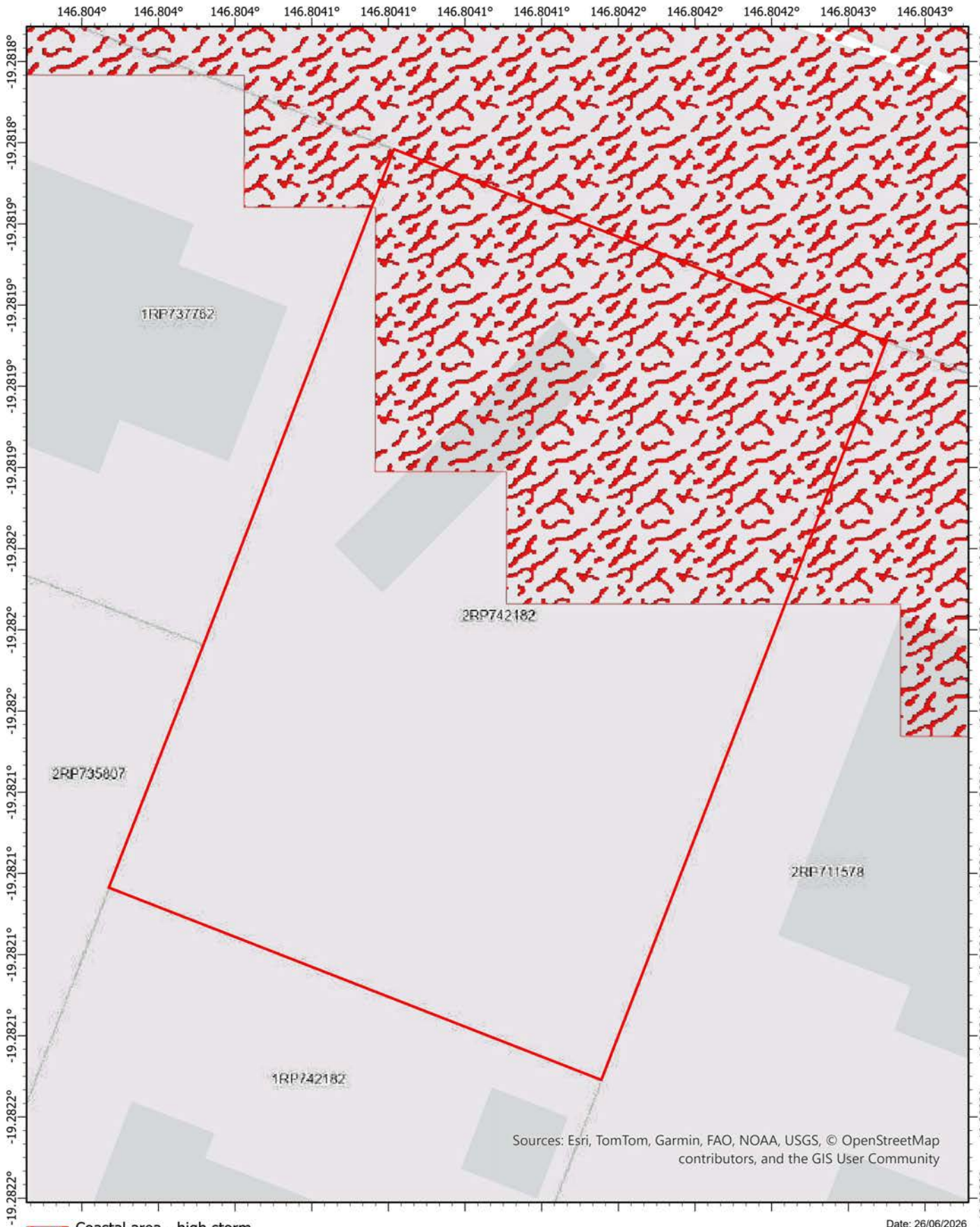
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Map Title

Legend

EXT_CORE

CORE - Properties

Properties

CORE - Road Corridor Centreline

Trafficable Road

CORE - Suburbs

Suburbs

EXT_CityPlanningScheme_Current

Stormtide inundation areas (OM-03.1)

High hazard

Medium hazard

Flood hazard overlay (OM-06.1)

High hazard area

Medium hazard area

Low hazard area

0 5 10 m

Scale 1: 500

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19°16'54"S 146°48'13"E

19°16'54"S 146°48'16"E



19°16'56"S 146°48'13"E

19°16'56"S 146°48'16"E

A product of Queensland Globe



Legend located on next page

N

0 10 metres

Scale: 1:330

Printed at: A3

Print date: 26/6/2026

Not suitable for accurate measurement.

Projection: Web Mercator EPSG 102100 (3857)

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Department of Natural Resources and Mines, Manufacturing, and Regional and Rural Development

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Legend

Easement parcel

Land parcel label

Land parcel label - gt 1 ha

Land parcel label - gt 10 ha

Land parcel label - gt 1000 ha

Land parcel

Land parcel - gt 1 ha

Land parcel - gt 10 ha

Land parcel - gt 1000 ha

Green bridges

Bridges

Tunnels

Railway stations

Roads and tracks

- Motorway
- Highway
- Secondary
- Connector
- Local
- Restricted Access Road
- Mall
- Busway
- Bikeway
- Restricted Access Bikeway
- Walkway
- Restricted Access Walkway
- Non-vehicular Track
- Track
- Restricted Access Track
- Ferry
- Proposed Thoroughfare

Railways

Attribution

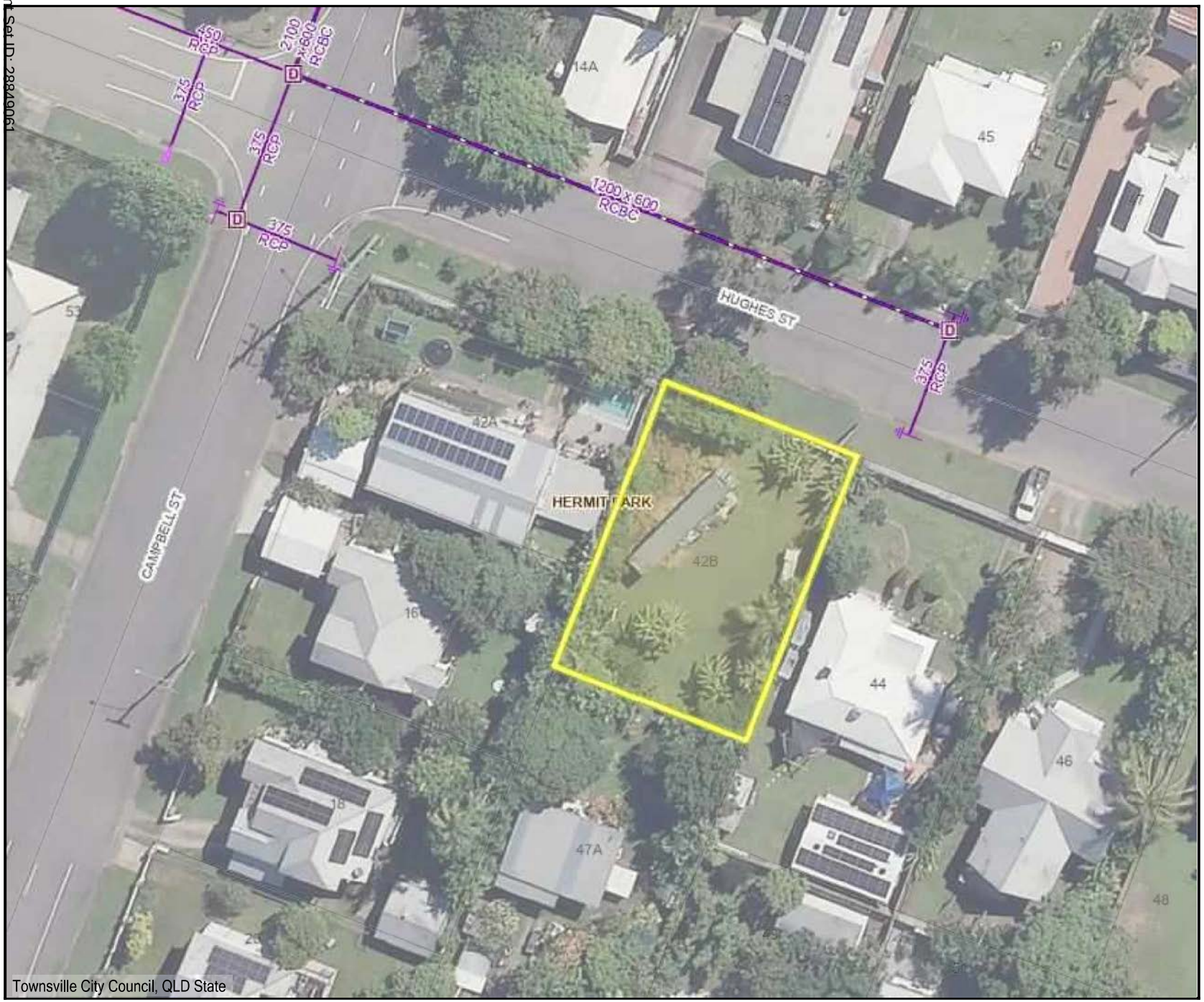
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Map Title

Legend

EXT_Asset_Stormwater

Stormwater - Manhole

Drainage Manhole

Stormwater - Pit

Combo

Side Inlet Pit

Stormwater - Box Culvert

Stormwater Pipe Box

Stormwater - Pipe

Stormwater Pipe

EXT_CORE

CORE - Properties

Properties

CORE - Road Corridor Centreline

Trafficable Road

CORE - Suburbs

Suburbs

0 5 10 m

Scale 1: 500

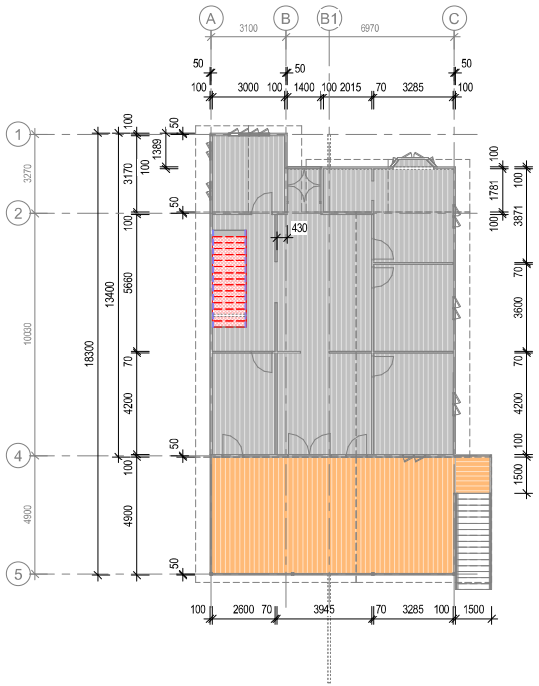
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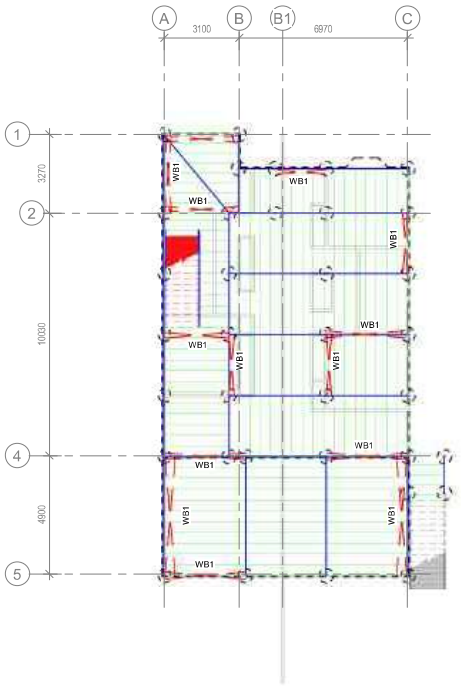
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Appendix B- Proposed Development

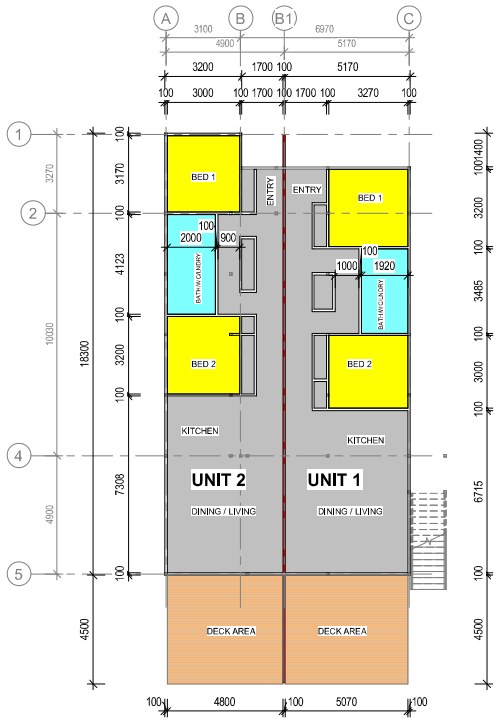
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Version: 1, Version Date: 16/09/2026



1 PLAN - LEVEL 2 FLOOR PLAN - EXIST.
1 : 100



2 PLAN - SUB FLOOR LAYOUT EXIST.
1 : 100



3 PLAN - FLOOR PLAN LEVEL 1 PROPOSED
1 : 100

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building design
project development
planning service
drafting service
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Ayr:
141 Mackenzie St,
Ayr Qld 4807
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REMEMBER SAFETY FIRST

BUILDING CLASSIFICATION
- EXIST: CLASS 1a
- NEW: CLASS 2 SOLE OCCUPANCY UNITS - MULTI UNIT DEVELOPMENT - TBA

FLOOR LEVELS:
- LEVEL 1 - GND FLOOR
- LEVEL 2 - UPPER LEVEL

MATERIAL CHANGE OF USE:
- CODE ASSESSABLE
- IMPACT ASSESSABLE

FIRE SEPARATION:
- LEVEL 1 CEILING
- LEVEL 1 COMMON WALL
- ARE THERE ANY EXIST. FLOOR PENETRATIONS FROM UPPER LEVEL (LEVEL 2)

FLOOD ZONE:
- IS THE PROPERTY LOCATED IN A FLOOD ZONE.
- REQUIRED FLOOR LEVEL OF THE HABITABLE ROOMS (GF & 1F)

REV	DESCRIPTION	INITIAL	DATE
1	PRELIMIN. CONCEPTS	BBD	NOV 25

TITLE:
FLOOR PLANS

PROJECT:
PROPOSED NEW MULTI UNIT DEVELOPMENT

428 HUGHES ST HERMIT PARK QLD 4812

CLIENT:
KROGHS NEST LIVING HTB003

DRAWN	BBD	DATE	NOV 25
CHECKED	Checker	SCALE	1 : 100
PHASE	PROJECT NO.	DRAWING NO.	ISSUE
SD	BBD2505	B001	1

A1

PRELIMINARY

Document Set ID: 28849061
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Appendix C- Pre-Development

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Version: 1, Version Date: 16/09/2026

LEGEND

General

Site

Pre-Post Results

DEM

1%AEP Pre Development Clima

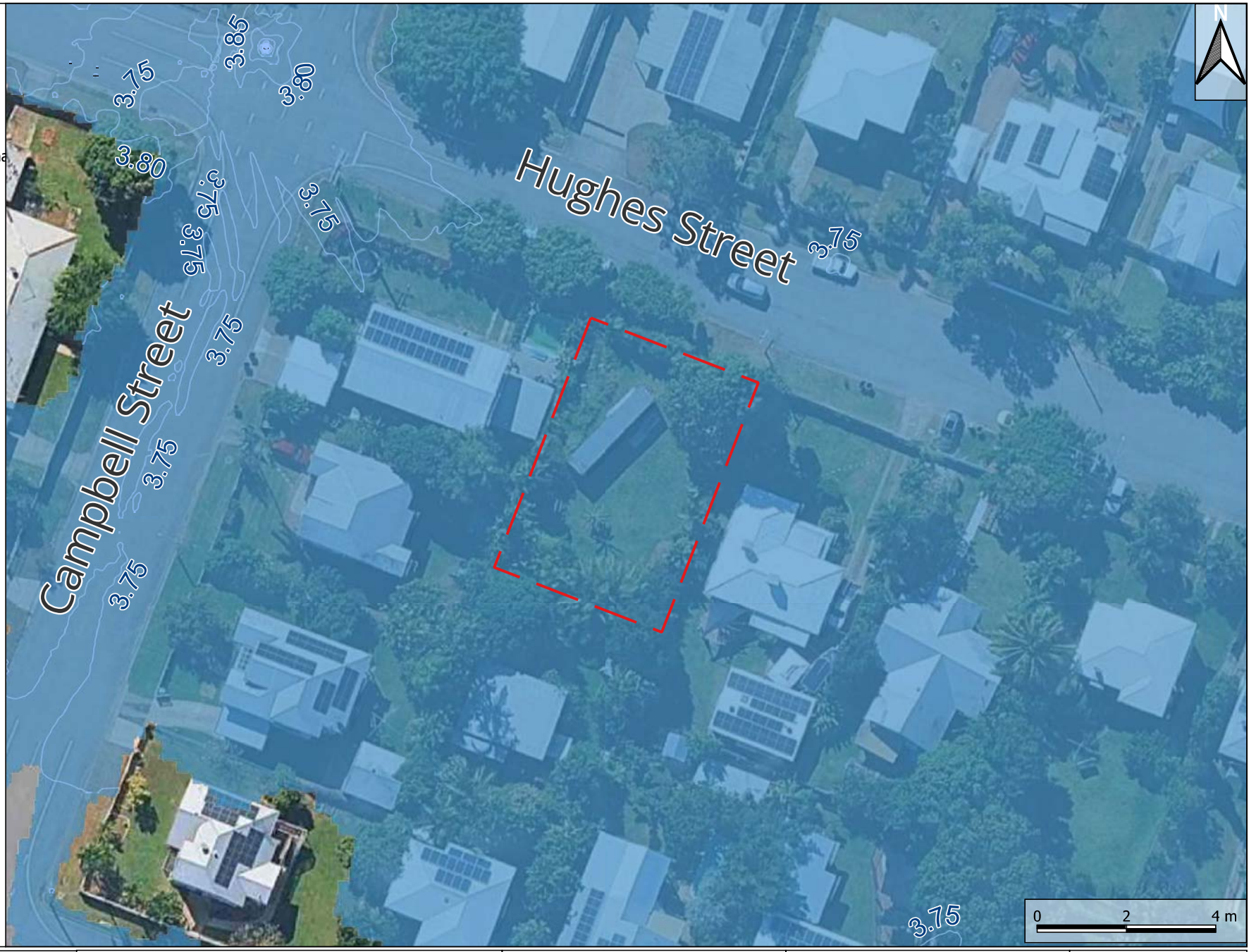
WSL

m AHD

- <= 5.0
- 5.0 - 5.2
- 5.2 - 5.6
- 5.6 - 6.0
- 6.0 - 6.5
- 6.5 - 7.0
- > 7.0

Images

Google Satellite



BRAVO CONSULT	PROJECT TITLE Profile: 42B Hughes Street Hermit Park, QLD 4812 Lot/Plan 2 / RP742182	**1%AEP PRE DEVELOPMENT CLIMATE CHANGE**	NOTES :	Revision number: 1 Date: 30 June 2026

Document Set ID: 2889061
Version: 1, Version Date: 16/09/2026

LEGEND

General
- Site

Pre-Post Results
- DXG
- 1%AEP Pre Development Clima
- Depth_Contours

Depth
m
- <= 0.050
- 0.050 - 0.1
- 0.1 - 0.15
- 0.1 - 0.3
- 0.3 - 0.6
- 0.6 - 1.2
- 1.2 - 1.5
- 1.5 - 2.0
- > 2.0

Images
- Google Satellite



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Document Set ID: 2889081
Version: 1, Version Date: 16/09/2026



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Document Set ID: 2889061
Version: 1, Version Date: 16/09/2026

LEGEND

General

Site

Pre-Post Results

DXG

1%AEP Pre Development Clima

DV

Depth-Velocity

- <= 0.12
- 0.12 - 0.25
- 0.25 - 0.40
- 0.40 - 0.48
- 0.48 - 0.60
- 0.60 - 1.80
- > 1.80

Images

Google Satellite



BRAVO CONSULT	PROJECT TITLE Profile: 42B Hughes Street Hermit Park, QLD 4812 Lot/Plan 2 / RP742182	**1%AEP PRE DEVELOPMENT CLIMATE CHANGE**	NOTES :	Revision number: 1 Date: 30 June 2026

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Version: 1, Version Date: 16/09/2026

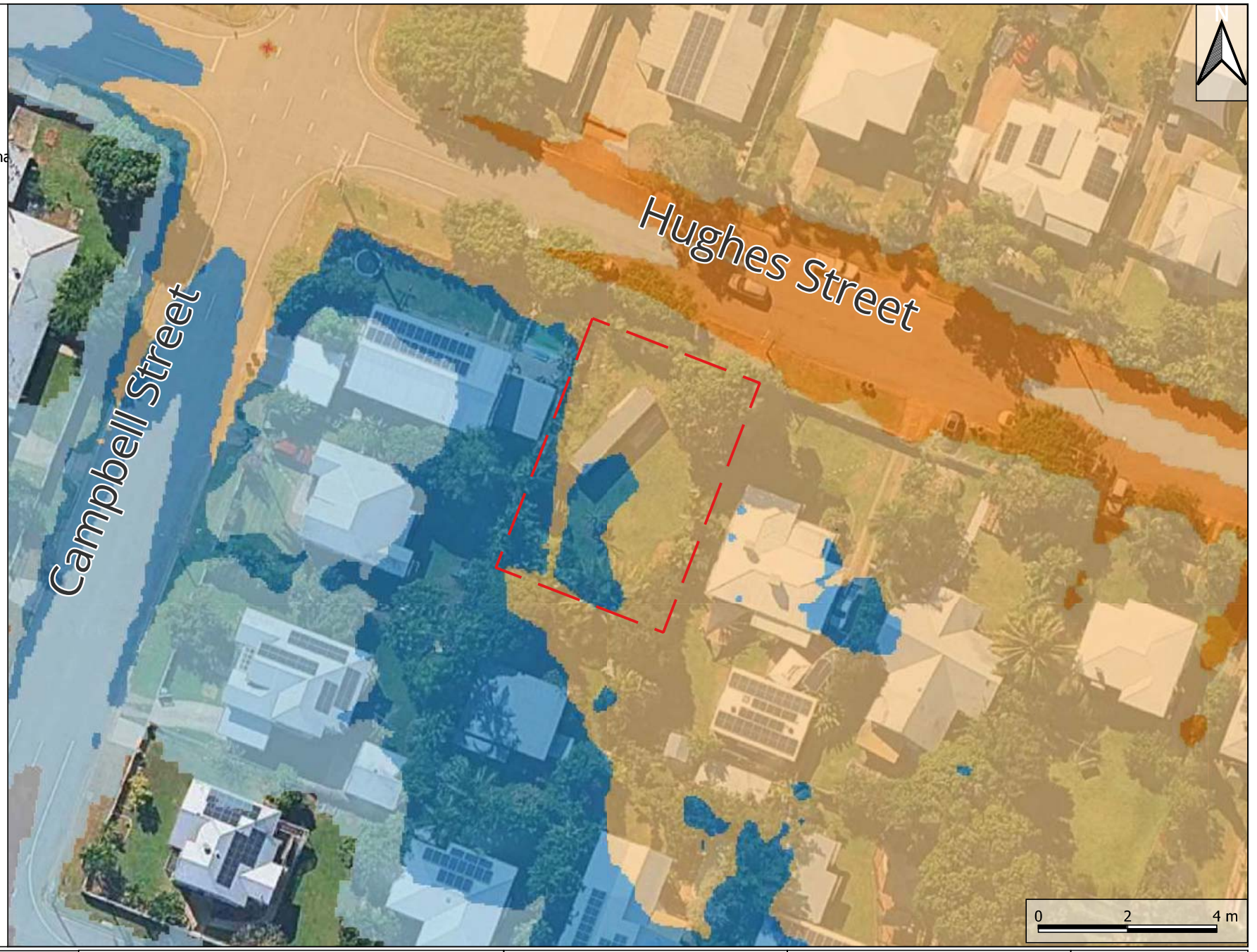
LEGEND

General
- Site

Pre-Post Results
- EXG
- 1%AEP Pre Development Clima

Hazard
- Hazard Category
- H1
- H2
- H3
- H4
- H5
- H6

Images
- Google Satellite



BRAVO CONSULT	PROJECT TITLE Profile: 42B Hughes Street Hermit Park, QLD 4812 Lot/Plan 2 / RP742182	**1%AEP PRE DEVELOPMENT CLIMATE CHANGE**	NOTES :	Revision number: 1 Date: 30 June 2026

Document Set ID: 2889061
Version: 1, Version Date: 16/09/2026

LEGEND

General

Site

Pre-Post Results

DEM

1%AEP Pre Development

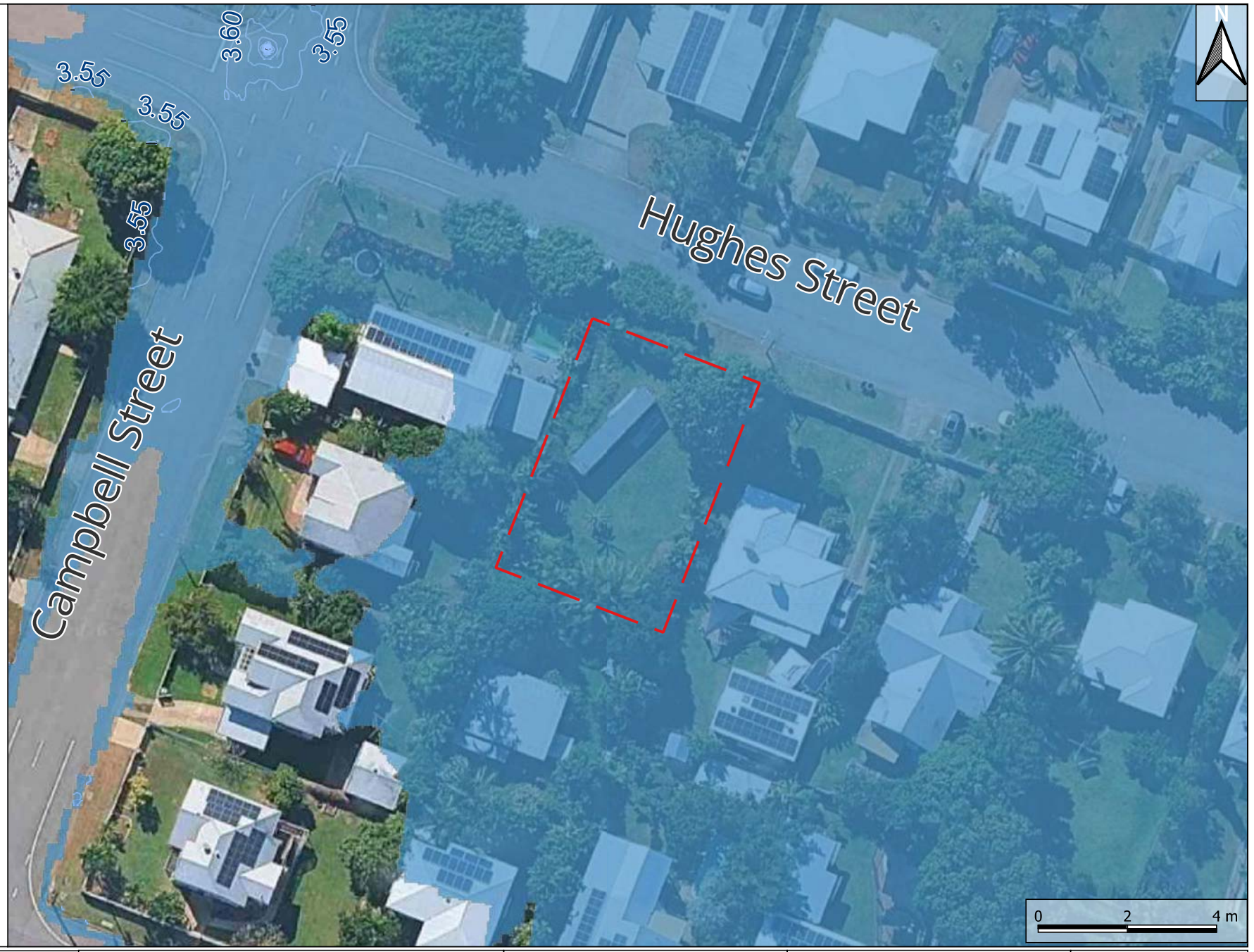
WSL

m AHD

- <= 5.0
- 5.0 - 5.2
- 5.2 - 5.6
- 5.6 - 6.0
- 6.0 - 6.5
- 6.5 - 7.0
- > 7.0

Images

Google Satellite



BRAVO CONSULT	PROJECT TITLE Profile: 42B Hughes Street Hermit Park, QLD 4812 Lot/Plan 2 / RP742182	**1%AEP PRE DEVELOPMENT** **WATER SURFACE LEVEL**	NOTES :	Revision number: 1 Date: 30 June 2026