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15 December 2025

Chief Executive Officer
Douglas Shire Council
PO Box 723
PORT DOUGLAS QLD 4873

Our Reference – C1302

Attention: Jenny Elphinstone

Dear Jenny

RE: RESPONSE TO INFORMATION REQUEST FOR TOWN PLANNING APPLICATION FOR:-

- A) MATERIAL CHANGE OF USE – IMPACT ASSESSMENT FOR UNDEFINED USE (WORKERS' ACCOMMODATION), TOURIST PARK AND CARETAKER'S ACCOMMODATION AND ASSOCIATED AND ANCILLARY FACILITIES IN TWO (2) STAGES; AND**
- B) OPERATIONAL WORK – IMPACT ASSESSMENT FOR ADVERTISING DEVICE (FREESTANDING SIGN)**

**ON LAND DESCRIBED AS PART OF LOT 2 ON RP745166 AND LOCATED AT LOT 2 CAPTAIN COOK HIGHWAY, PORT DOUGLAS
COUNCIL REF: CA 2025_5732
SARA REF: 2503-45404 SRA**

We act on behalf of Krystal Marie DeMenna, the Applicant in relation to the above matter.

In this regard, we refer to Council's Information Request dated 3 April 2025 and Council's email dated 26 November 2025 providing an extension to the Applicant Response Period to 19 December 2025.

In accordance with Part 3 (Information Request) of the Development Assessment Rules, the following responses are provided to enable Council to complete the assessment of the Application:-

Director
Nick Hardy
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ABN: 78 666 346 201

“Cut and Fill Plan

The application advises that cut and fill will occur on the land.

1. Please provide a cut and fill plan for the development. The plans should include pre-development conditions (pre 2022 fill) and required post development fill necessary to achieve immunity for a minimum of 1% AEP event.”

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

*“Following completion of the draft Crees Creek flood study a concept cut and fill plan was prepared and drawing 23070-C05 is **attached** to this report (Refer **Appendix 1**). The levels are subject to a final review of the flood study and will be finalised at OWA stage. The current plan is sufficient to indicate the fill requirements, Initial calculations indicate that 2000 -2500 cubic metres of fill will be required to ensure the site is above the 1% AEP event.”*

“Flood Study

The majority of the development area (part of Lot 2 as nominated on the submitted plans) is mapped as Floodplain Assessment and in the 1 in 100-year Flood Event for Port Douglas. Throughout the OSE Group Engineering report comment is made that a substantial number of residential occupants will not have private motor vehicle ownership and will rely on walking and bicycle (or similar) type of transport.

It is important that the land, including pedestrian and cycle routes within the site have sufficient immunity from flood events. While the cabins may be constructed to achieve a minimum floor height immunity, access to the shared facilities, onsite manager etc needs also achieve a sufficient immunity. That is, for a minimum of 1% AEP flood event for pedestrian access and sites within the development. It is important that flood immunity be provided to a minimum flood immunity suitable for a habitable room floor level for the ground where camping will be provided.

The Applicant’s response in the Flood and Storm Tide Inundation Overlay Code to AO1.1, AO1.3, AO1.4 and PO1 is that buildings and structures will be established to provide suitable immunity. Similar responses are provided for other Acceptable Outcomes and Performance Outcomes under this Code, or alternatively, reference is made to compliance through the OSE Engineering Report. However, no specific detail is provided in either the OSE Report or other sections of the application.

It is not agreed that the flood considerations for the development can be suitably addressed without a localised flood study, nor that conditions of any approval can be determined prior to the flood study being provided. Given the extent of mapped flood over the land, the provision of a local flood study is essential for assessment of the application.

2. Please provide a copy of the flood study and flood modelling for the site. The Study must include modelling to confirm, hydraulic implications and confirm any drainage design necessary to mitigate hydraulic impact of the development. The flood study is to include at least the following matters:

- a. The contributing catchment boundaries;*
- b. The extent of the 100 year ARI flood event in relation to the site both pre- and post-development;*
- c. Primary and secondary flow paths for the 5, 20, 50 and 100 year ARI flood events;*
- d. Internal flow paths;*
- e. Information on the proposed works and any impacts proposed at the drainage outlet from the proposed development; and*
- f. Lawful point of discharge.*

The design needs to clarify the development will not increase runoff or direct water into neighbouring properties and stormwater design to ensure no detrimental impacts to the Crees Creek waterway.”

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

*“A draft flood study of Crees Creek was completed by WSM Engineers (Refer **Appendix 2**). It clearly shows the impact of flooding during the 1% AEP event on the subject land. As a result, the concept cut and fill plan was produced, however, this is subject to review at final design or OWA stage. The final flood study will be completed at OWA stage once the cut and fill plan has been modelled to determine if the final fill levels have caused any afflux in the surrounding area and what may be needed to reduce the effect of any afflux. Fill levels can, if required, be adjusted at OWA stage.”*

“Storm Tide Inundation Considerations

For Storm Tide Inundation, Council’s most recent study nominates a minimum habitable room level of 3.14m AHD. However, given the nature of the use connectivity with the shared facilities, managers and services should also achieve a suitable immunity.

3. Please provide detailed advice clarifying that the finished pad levels and connecting pedestrian access through the development achieves suitable storm tide immunity levels.”

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“Storm tide inundation has been considered and confirmed the minimum habitable floor level of 3.14 AHD. The flood study has indicated that this level will need to be raised in most areas of the site. The draft flood study (Refer **Appendix 2**) indicates that the 1% AEP flood level varies across the site, and the final access (accessibility) and habitable floor levels will be determined when the fill and flood study are finalised at OWA stage.”

“Water and Sewer infrastructure

Page 29 of the Town Planning Report states,

“7) The development will enable the extension of water and sewer infrastructure without compromising the “operational integrity” of this infrastructure.”

A concept of potential layout is not acceptable.

Sewer

The application does not demonstrate how the site will be connected to Council’s sewerage system in accordance with FNQROC Development Manual and therefore does not comply with P04 of the 9.4.5 Infrastructure Works Code.

Establishing a connection would require a significant length of sewer pressure main, installation within the Department of Transport and Main Roads Corridor, and crossing private property. The application does not demonstrate the feasibility of this connection and, as a result, does not comply with P04.

The proposed alignment plan appears to nominate new main service connections beneath mounded landscaping in the adjacent road area.

The OSE Group Engineering Report states the site will be serviced by a private sewer pump station.

The premises is located outside the Priority Infrastructure Areas and therefore the lot is not considered in Council’s Local Government Infrastructure Plan (LGIP) and the provision of infrastructure will be out of sequence and require an infrastructure agreement. In order for Council to condition an approval, Council needs to be fully informed as to the extent and requirements for the provision of infrastructure services, including any requirement for augmentation, ability and position to connect services and in turn requirements for an infrastructure agreement.

4. Please provide an Engineering Report, prepared by a suitably qualified RPEQ Engineer demonstrating how the site will be connected to Council’s sewerage system in accordance with FNQROC Development Manual. The following information is requested:

- a. A concept level sewerage connection plan showing the alignment of the sewer from the site to the connection point with Council’s system, specifying whether it will be pressure or a gravity system and indicate the pipe size.

In particular, the Report is to confirm the size of sewerage mains proposed to connect the site to Council’s sewerage network having regard to the current constructed infrastructure and any proposed upgrades identified in the LGIP. The Report is to confirm the increased main sizes required to accommodate the sewerage generation loads for the development. Issues such as alignment and land tenure are to be resolved.

- b. Calculations of expected sewerage generated by the development must be in accordance with FNQROC unless substantiated by appropriate detailed studies.
- c. The Report is to include an internal sewerage service plan for the site including details of levels and capacities for internal gravity sewers.
- d. Some of this work may be conditioned for later stages, however, appropriate clarity must be provided now to determine how the development will be connected to Council’s reticulated network and the additional demand placed on the sewerage treatment plant.

- e. *In-principle approval from the Department of Transport and Main Roads and evidence of consent from any private landowners for the proposed alignment;*
 - f. *Engineering Assessment of the capacity of Council's sewer system to receive the sewer from the development at the proposed connection point and any upgrades required to Council's system as a result of the development.*
 - g. *It is recommended that the applicant arrange a meeting with Council Officers to discuss and confirm proposed alignment and connection point options before submitting the above details.*
- 5. Please clarify the private pump station will be located on the applicant's land and will subject to the achievement of a separate ERA."**

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

***"Sewer:** Following discussions with Council Officers and their Consultants, the original concept of pumping sewerage to the Council system via the Captain Cook Highway has not been proceeded with. Instead, it is now proposed that the sewer will be pumped to Manholes in Arlington Court/Endeavour St via a pressure main under bored under Crees creek from a pump station located near the western boundary of the site. We have prepared a concept internal sewer reticulation plan C04 (Refer **Appendix 1**) that also shows the proposed location of the pump station and the proposed pressure line under Crees creek.*

Sewer discharge and pipe sizes will be finalised at OWA stage, Initial calculations have been based on a population of 198 persons which results in an ADWF of 53460 litres. It is anticipated that the internal reticulation mains will be 150mm dia and that the pressure main will be a maximum of 100mm dia. The flow and capacity of the downstream pump station will be checked and may result in requiring the pumps to be upgraded. All work will be designed in accordance with FNQROC requirements.

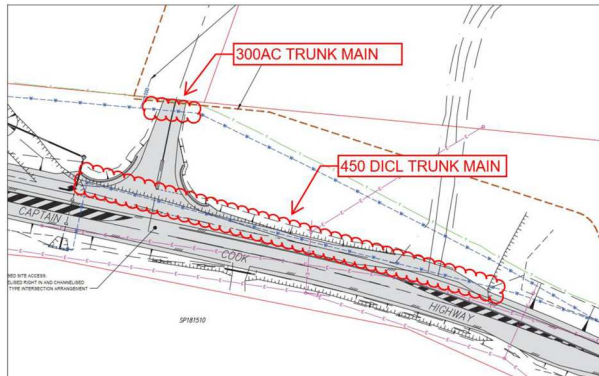
The top level of the pump station and the layout will be finalised at OWA stage once the fill levels have been finalised. The pump station will be private, located in the applicant's land and will be subject to the achievement of a separate ERA. Consultation has been undertaken with the relevant State Agencies and in-principle support has been provided for the installation of the pressure main underbore under Crees Creek and the establishment of a private pump station within the Subject Site.

“Water

The proposed water connection arrangement is generally acceptable. However, no detail has been provided on the expected water demand for the development and assessment of Council's reticulated water supply system's ability to supply this demand. While the proposed connection to Council's trunk main may have a low risk that the development will impact Council's network, the applicant needs to undertake an assessment to confirm this risk level.

The proposed intersection upgrade shown on Drawing C01, shows that a 140m length of the 450 DICL trunk main will be located beneath the road pavement (figure below). This is undesirable for maintenance and repair of the watermain. Relocation of the main to be outside of the road pavement or a protection measure (e.g. concrete encasement) may be warranted depending on the alignment and cover depth of the pipe relative to the finished surface.

The driveway access leg of the intersection crosses a 10m length of the 300 AC trunk main (figure below). Replacement of the main in DICL or protection measures (e.g. concrete encasement) may be warranted depending on the alignment and cover depth of the pipe relative to the finished surface.



RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“Once the intersection design is finalised with Transport and Main Roads the final location of the entrance access and road widening will be known. At that stage we will arrange for the exact location of the 300 and 450 water mains. Once the depth and cover have been determined any protective works, such as concrete encasing or watermain class upgrading, will be addressed at OWA stage.”

“6. Please provide an Engineering Report, prepared by a suitably qualified RPEQ Engineer detailing a network analysis of Council's reticulated water supply system. The following information is to be included in the report:

- a. Calculations of expected water demand of the development by the development. The demand is to include requirements to achieve firefighting requirements for the development having regard to volume required, pressures and flowrate for this class of development throughout the site, any booster requirements and whether a storage retention supply is required on the site. The demand must be in accordance with FNQROC unless substantiated by appropriate detailed studies.*
- b. An Engineering assessment of the capacity of Council's water reticulated supply system to supply the development demand at the required pressure and identify any augmentation required to Council's system as a result of the development.*
- c. Undertake potholing of the existing 450 DICL and 300 AC water mains to confirm their alignment in relation to the proposed roadworks and the likely depth of cover to the finished surface. Submit the potholing results to Council to review and decide in relocation or protection is required.*
- d. The report needs to confirm the level of risk associated with the impact on Council's network, of the proposed connection to Council's trunk main and advise on the acceptability of such risk. The report is to provide advice on how the level of risk can be reduced or mitigated.”*

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“Based on FNQROC requirements and a population of 198 persons, we have determined that the peak hour flow is 18600 litres. Councils' consultants have provided us with details that the boundary condition, at peak hour demand, is 300Kpa. Based on the connecting main to the site being 150mm dia we have determined the residual head within the site to be 28 metres during a fire flow demand of 7.5 l/s.”

“Access Road Upgrade

The application plans and report advise that the development will access the land via the adjacent unnamed, gazetted road. The unnamed gazetted road intersects with the Captain Cook Highway, a State-controlled Road. A design plan for the intersection upgrade has been developed and is included in the application. No detail has been provided as to the design for the unnamed, gazetted road.

7. Please provide a Not for Construction design plan for the unnamed, gazetted road, consistent with the general FNQROC Development Manual Standards and have regard to the intended development and need for two-way vehicle traffic and turn-around within the road.”

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“The **attached** Drawing C02 (Refer **Appendix 1**) shows the location, conformation and cross-section of the access road. It is in accordance with FNQROC requirements and caters for two way traffic and a cul-de-sac to cater for turning traffic.”

“Pedestrian / Cycle Connectivity

Page 35-36 of the Town Planning Report states as follows.

“ii. Transport

A specific outcome identified that “development is designed, located, maintained and where necessary improved to facility pedestrian, cycle and transport functions.

It is proposed that a mini bus service will be provided as part of the operation of the use.

It is submitted that the proposal complies with the planning intent of the Strategic framework.”

The Applicant’s response to the Port Douglas and Craiglie Local Plan AO1 and PO1, in respect to pedestrian and bicycle movement, refers to the OSE Engineering report. The OSE Report does not make any specific reference to this assessment outcome.

The OSE Engineering Report provides details on traffic demands. Page 2 of the OSE Group Report states, any occupants will use bicycles or similar transport to travel to work in Port Douglas as it is only 5km ride to the town centre.”

Page 7 of the Town Planning Report stated the previous approval on the land (now lapsed) required, “the construction of a pedestrian /cycle path from the access of the site to the intersection of the Captain Cook Highway and Port Douglas Road.

Page 35 of the Town Planning Report states.

“ii) the proposal will include “in-house” mini bus service for residents and connecting with the main employee locations within the township and surrounding rural areas and businesses.”

The Applicant’s response to AO6.1-AO6.2, specifically states,

“It is not proposed to provide a pedestrian / cycleway due to construction constraints of the Crees Creek bridge, the adjacent land and the Captain Cook Highway (a State controlled Road).”

The above response is contrary to the findings of the OSE Engineer’s Report and the Applicant’s response to AO8 of the Access, Parking and Servicing Code being,

“Complies -the proposed development will comply with the relevant standards,”

The land is beyond the urban footprint. The need and merit of the development is based on the provision of worker accommodation that would predominantly provide for tourism and hospitality businesses in the urban footprint of the Port Douglas/Craiglie area. Many of these employees are transient, are generally from a low socio-economic group and do not have a high private vehicle ownership. Council Officers concur with the OSE Group report that many of the workers accommodated in the proposed development will utilise bicycles or similar transport vehicles.

It is important that appropriate and safe pedestrian and bicycle connectivity accompany the development. In this instance, pedestrian and bicycle access needs to be provided to the intersection of the Captain Cook Highway and Port Douglas Road, where the local IGA Shopping complex is located. Without appropriate and safe pedestrian and bicycle connectivity the development is considered inconsistent with the Strategic Framework and the Planning Scheme Codes. The lack of suitable and safe pedestrian / bicycle connectivity is also considered to compromise the safety and functionality of the adjacent State-controlled Road.

8. Please clarify whether these traffic demands rely on the provision of a bicycle / pedestrian network connection being provided.

9. Does this statement infer that no pedestrian / bicycle network connection will be provided from the access point of the site to the intersection of Captain Cook Highway and Port Douglas Road?"

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

*"The **attached** Drawings (Refer **Appendix 3**) shows the intended layout of the path to serve as the required pedestrian/cycle pathway. The plan shows two options, and we advise that option B is the preferred location.*

*The Department of Transport and Main Roads has provided in-principle support for the alignment for Option B including the connection to the intersection of Captain Cook Highway and Port Douglas Road to the south (refer **Appendix 3**). Full design details for the Option B alignment will be provided at the OWA stage.*

"Mini Bus Service

*Page 2 of the OSE Engineering Report states,
"A shuttle bus service to port Douglas is available.*

Farms and resorts relying on labour will provide 14-seater minibuses to provide transport to and from accommodation."

The provision of minibuses by others is not considered to be an acceptable solution when these operate from land beyond the scope of the application before Council.

10. Please advise whether the "in-house" mini bus service will be provided at a cost or provided free to residents. Please provide detail of extent of service provision within the Shire and a detailed timetable."

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

"An in house mini bus service will be provided by the applicant at no cost to the occupants to provide transport to and from accommodation and places of work. A timetable may be set, however, it is intended to provide the service to suit demand."

"Internal Road Network

11. Please provide detail of the proposed finished surface and cross profile for the internal road network. The design needs to have regard to the FNQROC Development Manual or reference to an alternative suitable standard. Where an alternative standard is used, professional advice needs to substantiate the suitability of the alternative. Please clarify that this is shared vehicle / pedestrian / cycle low speed infrastructure. Where the internal road network is not to be sealed, please provide detail as to how the AO3.1, AO3.2 and PO3 of the Environmental Performance Code are achieved."

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

*"The internal network will generally be a road pavement sealed with bitumen or asphalt. They will generally be a minimum of 3.0 metres sealed surface as depicted on **attached** Drawing C02 (Refer **Appendix 1**). At final design stage there may be some sections with a concrete surface, however, this is yet to be determined."*

“Environmental Performance and Buffer to Sensitive Uses

The development is to be setback from the common property boundary by distance and buffers. The Applicant’s response to AO1.1-AO1.3 and PO1 (for Lighting) and AO2.1-AO2.4 and AO2 (for Noise) for the Environmental Performance Code simply advise “Complies – the proposal can show compliance with the relevant standard.” However, no further details are provided either in the application or in the OSE Engineering Report.

12. *Please provide details as to how lighting will be provided throughout the premises to ensure the safety of residents and mitigate spill lighting impacts.*

13. *Please provide detail as to expected noise emissions from the development, detail of an attenuation elements in the design and the resultant noise outcomes to nearby sensitive uses. Where an operational management plan is to mitigate this issue, please provide such operational management plan.”*

RESPONSE

The following responses are provided in relation to **Question 12:-**

- a) standard lighting will be provided within the internal road network and around the common buildings to provide illumination and security for residents and guests of the accommodation facility in accordance with Council’s requirements and in response to a Council Condition of Approval; and
- b) the proposed development includes a 6m wide landscape buffer along the entire common boundary with Lot 1 on SP166336 to the south. It is submitted that this screening and existing landscaping to the east and north will minimise any potential lighting impacts on surrounding sensitive uses.

The following responses are provided in relation to **Question 13:-**

- a) the accommodation facility will be operated by an on-site manager residing within the Caretaker’s Accommodation.
- b) the accommodation facility will be subject to an Operational Management Plan that will includes measures to mitigate noise generation to ensure that the residential amenity of the surrounding sensitive uses are reasonably maintained.

These mitigation measures will include nominated hours of operation (including general “quiet hours”), limitations of the operation of machinery and equipment on site, limitations on the use of common facilities (including the common laundry), guest management protocols and documented processes to respond to substantiated noise complaints. The Operational Management Plan will be provided in accordance with Council’s requirements and in response to a Council Condition of Approval; and

- c) it is further submitted that the proposed separation distance, including the landscape screening between the proposed uses on the land and the residential dwelling to the south will contribute to mitigating potential noise impacts.
-

“Bushfire Hazard

Page 3 of the OSE Engineering Report states this matter is addressed by the buffer that will be provided between the existing vegetation and building lines.

Page 10 of 15 of the Applicant's response to PO41 of the State Infrastructure Code nominates that a landscape buffer will be provided to the Southern boundary with Lot 1 on SP166336.

14. Please provide advice as to what is the form of the buffer to enable bushfire protection and provide a landscape buffer? Alternatively, please clarify the points of discrepancy.

Page 4 of the OSE Engineering Report states a fully reticulated water supply, including a ring main and hydrants, will be provided and water can be supplied at adequate pressure and volume for firefighting purposes. Concern is raised with the intended adequacy of the ring main and hydrants to supply sufficient pressure.

15. Please provide advice as to any augmentation of Council's services or additional infrastructure (such as holding tanks on site) to achieve and maintain sufficient pressure.”

RESPONSE

In response to **Question 14**, it is submitted that the 20m wide “Buffer Zone” will be maintained along the entire eastern section of the subject site. The section of the common boundary of the Subject Site with Lot 1 on SP166336 will not contain landscaping and instead will contain a screen fence. Therefore, the proposed landscaping buffer / screening along the southern boundary will not be “connected” to the existing vegetation associated with Crees Creek to the east.

It is further submitted that the proposed buffer areas along the eastern and northern boundaries will be subject to a maintenance program to mitigate potential bushfire risk.

The proposed landscape buffer arrangements are shown by **Appendix 4**.

The following response to **Question 15** is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“Bushfire protection will be provided by the internal water reticulation system which will provide fire-fighting flows from hydrants located around the internal ring main. As advised the available flow and pressure is sufficient to provide fire-fighting flows to the required standard.

“Landscaping

The AO4 and PO4 for the Local Plan, requires the site to be suitably landscaped, advises the proposal will contain suitable landscaping that complements the existing tropical character Port Douglas and Craiglie. The AO seeks screening of the development. The Applicant's response states the development will contain landscaping that complements the existing tropical character of Port Douglas and Craiglie, without providing any further detail.

Similarly, the response to AO1.1 – AO1.8 and PO1 of the Landscape Values Overlay Code indicate the buffer areas will be landscaped and will provide screening.

Conversely, the Applicant's advice regarding the Bushfire requirements indicate the buffer area will address the bushfire separation need, rather than tropical landscaping.

Species should reflect those as nominated in the Planning Scheme Policy.

16. Please provide general scope of landscape design for the areas to be landscaped. The scope needs to nominate the areas to be landscaped, details (including height and width) of any mounding, the general range of species and anticipated height at commencement and after five years growth.”

RESPONSE

The proposed extent and massing of on-site landscaping is shown by the Landscape Plan attached as **Appendix 4** and the proposed landscaping within the Cabins sites is shown by **Appendix 5**.

It is submitted that the provision of further information regarding the range of species and the “*anticipated height at commencement*” and “*after years growth*” of the proposed landscaping can be provided in response to a Condition of Approval.

“Cabin Site Layout

For the Relocatable home park and tourist park code, AO2 nominates outcomes for particular uses, with none specified for cabins, as opposed to relocatable homes. The Applicant’s response notes the design and siting features are suitable for the Worker’s Accommodation and Tourist Park use with floor plans provided and allocation of site areas for cabins.

17. Please provide a typical layout for a group of cabins on the intended lot plan layout to clarify each is capable of providing a car parking space, sufficient private open space, sufficient setback from the internal road network and from other adjacent cabins etc.”

RESPONSE

The typical layout for a group of cabins demonstrating that each site is capable of providing a car parking space, sufficient private open space, sufficient setback from the internal road network and other adjacent cabins is shown by **Appendix 5**.

“Waste Management

18. Please provide advice as to the location and extent of the waste storage facility. The advice needs to clarify the basis on which the facility is of sufficient capacity to accommodate all general waste and the number of recycle bins necessary for the extent of the proposed use. The advice also needs to clarify details of the anticipated collection and how odours will be mitigated.

Please note Council’s standard requirements usually include the following conditions:

- a. Storage facilities for general waste and recycling bins must be designed and appropriately located to ensure that leachate generated from waste products or wastewater from bin washing is captured and diverted to sewer. For example, a sealed base falling toward a sewer disposal point.*
- b. Storage facilities for waste receptacles must be appropriately screened to minimise impacts to the amenity of the site.*
- c. Storage facilities for waste receptacles must be roofed to minimise stormwater ingress into the sewerage network.*
- d. Storage facilities for waste receptacles must be of a sufficient size to accommodate all general waste and recycle bins for the premises.”*

RESPONSE

The following response is provided by **Alan McPherson, Senior Engineer, OSE Group:-**

“Waste will be collected by private operators on a commercial basis and part of the development’s internal management plan. Pick up time will be based on a fixed arrangement with the commercial operator. Bins will be kept in a bunded screened area close to the external access road and provided with a bin washdown area. Exact location is subject to the final design layout.”

“Freestanding Advertising Device

Little detail is provided regarding the proposed advertising device. Note, third party advertising can result in a different level of assessment

19. *Please provide scaled design drawings for the advertising device including dimensions, (height, width, depth), sign face(s) including content and colours / logos (if known); nature of illumination (internally or externally illuminated), intensity of illumination and extent of any spill lighting and nature of any animation.”*

RESPONSE

The following aspects are noted in relation to the proposed Freestanding Advertising Device (sign):-

- a) the sign will not include any Third Party Advertising and is limited to signage for the Accommodation Facility on the land;
- b) the location, dimensions and indicative “content” of the sign are detailed by **Appendix 6 – Advertising Device**;
- c) the proposed sign will be illuminated by downward facing lighting directed at the face of the sign. The lighting of the sign will be undertaken in accordance with Council’s requirements as detailed by AO2.2 of the Advertising Devices Code in relation to maximum lighting intensity and hours of operation. The sign will not incorporate any flashing lights or any form of “animation”.

It is submitted that the orientation of the sign to the west and the screening provided by the landscaping to the rear of the sign will minimise any potential light spill on surrounding land uses including the house to the south-east.

We submit that the combined consideration of the above matters enables Council to fully assess the town planning and engineering merits of the proposed development.

We confirm that this letter represents a full response to Council’s Information Request in accordance with Section 13.2 of the Development Assessment Rules (v3.0) and that Council is respectfully requested to proceed with the assessment of the application.

We await Council’s agreement to this extension and if you require any further information please contact me on 0412 756 622.

Yours faithfully

HARDY TOWN PLANNING AND CONSULTING



Nick Hardy
Director

cc: Krystal Marie DeMenna

cc: OSE Group
Attn: Alan McPherson

cc: State Assessment and Referral Agency

APPENDIX 1

WORKERS ACCOMMODATION COMPLEX FOR SUPERIOUR STAYS

LOT 2 RP745166

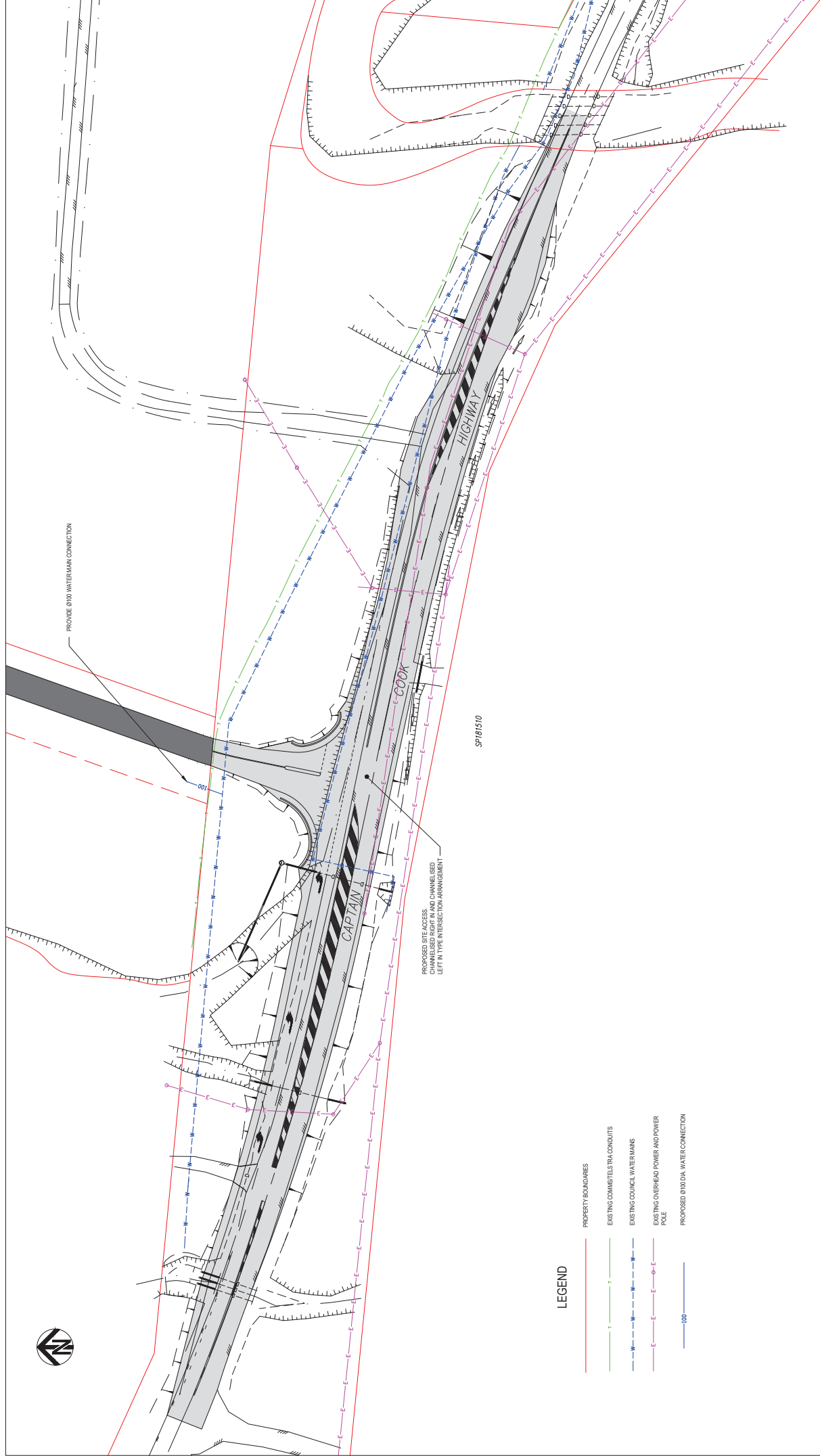
CAPTAIN COOK HIGHWAY

PORT DOUGLAS



DRAWING INDEX	TITLE
DWG No.	
C00	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
C01	SITE ACCESS PLAN, SERVICES CONNECTIONS
C02	WORKERS ACCOMMODATION LAYOUT INTERNAL SITE LAYOUT
C03	WORKERS ACCOMMODATION LAYOUT VEHICLE TURN MOVEMENTS
C04	WORKERS ACCOMMODATION LAYOUT SEWER RETIC. NETWORK - CONCEPT
C05	WORKERS ACCOMMODATION LAYOUT CUT TO FILL CONCEPT PLAN

REV	DATE	REVISION NOTES	DESIGNER	<div><p>OSE GROUP Address: 35 ARBUTT ST, CAIRNS QLD Email: info@osegroup.com.au</p></div>	CLIENT SUPERIOR STAYS	PROJECT WORKERS ACCOMMODATION COMPLEX - LOT 2 RP745166 CAPTAIN COOK HIGHWAY, PORT DOUGLAS	TITLE COVER SHEET, LOCALITY PLAN AND DRAWING INDEX					SCALE (Scale as shown)	DRAWING NO	REV	B
							TOWN D.M.	DESIGNED D.M.	DRAWING CHECK A.M.P.		APPROVED				
									DESIGNED REVIEW A.M.P.	DATE					



LEGEND

- PROPERTY BOUNDARIES
- EXISTING COMMISTELTRA CONDUITS
- EXISTING COUNCIL WATER MAINS
- EXISTING OVERHEAD POWER AND POWER POLE
- PROPOSED 600 DIA. WATER CONNECTION

SCALE 1:500	Orig. Sheet A3
DO NOT SCALE DRAWINGS	
Scales Before Reduction	

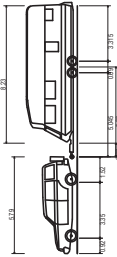
DESIGNER
OSE GROUP
Address: 35 Abbott St, Cairns QLD
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PROJECT
WORKERS ACCOMMODATION COMPLEX - LOT 2 RP745166
CAPTAIN COOK HIGHWAY, PORT DOUGLAS

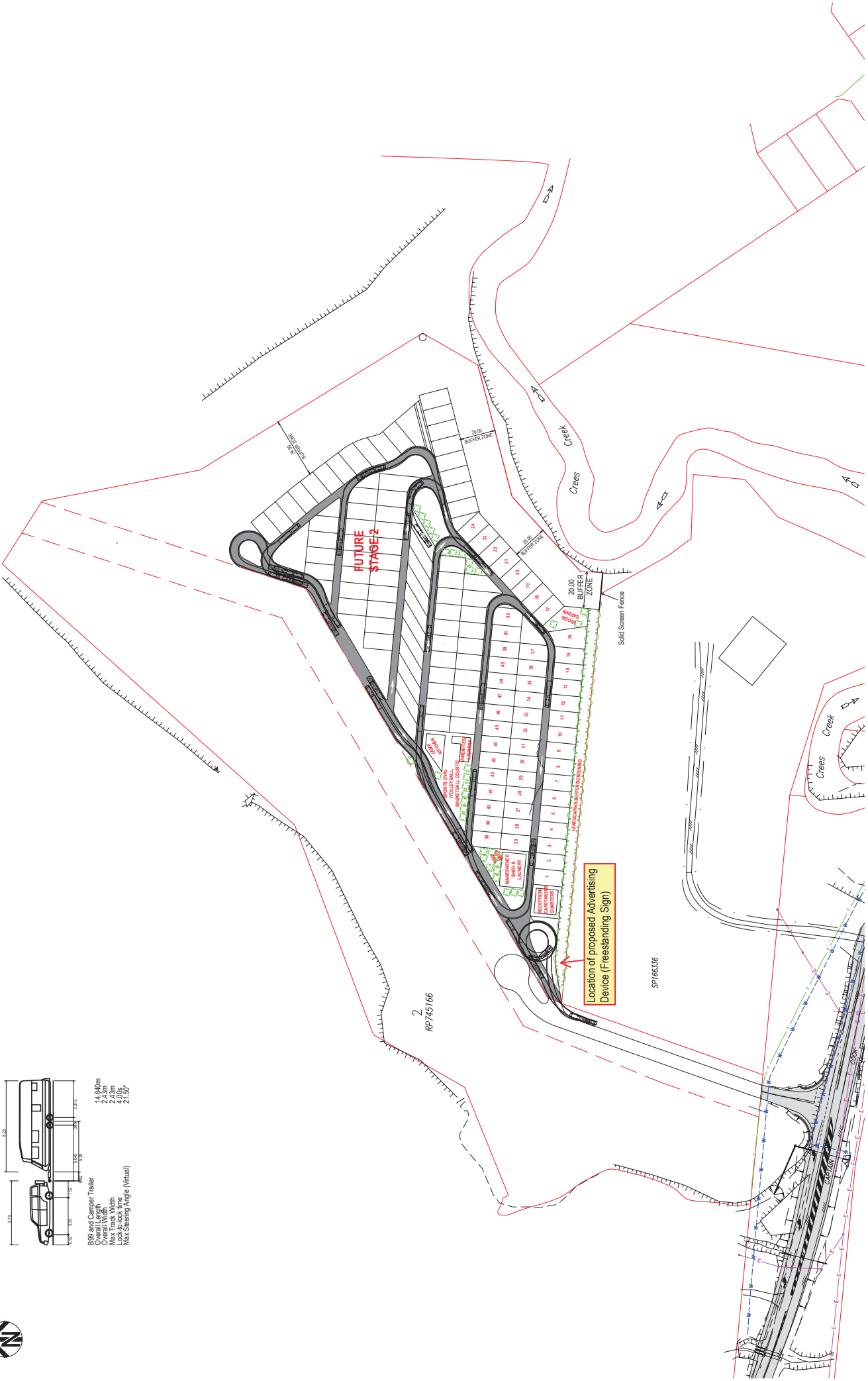
TITLE
SITE ACCESS PLAN, SERVICES CONNECTIONS

REV DATE REVISION NOTES
B 21/03/24 DRAFTING AMENDMENTS
A 04/12/23 FOR APPROVAL

SCALE (Scale as shown)
DRAWING
23070-C01
REF
B



B390 and Camper Trailer
Overall Length
14.940m
Overall Width
2.43m
Max Track Width
4.00m
Max Steering Angle (Virtual)
2.150°



C 210225 PLAN SCALE EXTENTS ADJUSTED TO 1:100		SCALE 1:1000	Orig. Sheet A3
B 071223 MINOR AMENDMENTS			
A 041223 FOR APPROVAL			
		DO NOT SCALE DRAWINGS	
		Scales Before Reduction	
			
		10 0 10 20 30 40 50 m	
REV	DATE	REVISION NOTES	

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DESIGNER

PROJECT		WORKERS ACCOMMODATION COMPLEX - LOT 2 RP745166	
CAPTAIN COOK HIGHWAY, PORT DOUGLAS		APPROVED	
DESIGNED	D.M.	DESIGNED	D.M.

TITLE		WORKERS ACCOMMODATION COMPLEX	
VEHICLE TURN MOVEMENTS		23070-C03	
SCALE	(Scale as shown)	DRAWING	REV C

REV	DATE	REVISION NOTES
C	21/02/25	PLAN SCALE EXTENTS ADJUSTED TO 1:1000
B	05/02/25	FOR APPROVAL
A	14/12/24	FOR APPROVAL

LEGEND

SEW — SEW — GRAVITY SEWER MAIN AND MANHOLE
RM — RM — SEWER RISING MAIN



**FUTURE
STAGE 2**

PUMP STATION

RISING MAIN - UNDERBONE UNDER
CREES CREEK TO DUBLINGTON
CREEK (APPROX. 90m)

RECEPTION/
CARETAKERS
QUARTERS

MAINTENANCE
SHED &
LAUNDRY

SPORTS OVAL
(VOLLEYBALL
BASKETBALL COURTS)

KITCHEN
CAMP

VEGETABLE
GARDEN

LANDSCAPING BUFFERSCREENING

Solid Screen Fence

Crees
Creek

SCALE 1:500	Orig. Sheet
DO NOT SCALE DRAWINGS	A3
Scale Before Reduction	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 25 m

DESIGNER



SUPERIOR STAYS

PROJECT WORKERS ACCOMMODATION COMPLEX - LOT 2 RP745166
CAPTAIN COOK HIGHWAY, PORT DOUGLAS

REV	DATE	FOR APPROVAL	REVISION NOTES
A	7/7/25		

DESIGNED	CHECKED	APPROVED	DATE
DM	AMP	AMP	

SCALE (Scale as shown) 23070-C04

TITLE WORKERS ACCOMMODATION COMPLEX
SEWER RETIC. NETWORK - CONCEPT

REV A

APPENDIX 2



WMS

CIVIL | WATER | ENVIRONMENT

FLOOD IMPACT ASSESSMENT FOR PROPOSED DEVELOPMENT ON LOT 2 RP745166, PORT DOUGLAS

PREPARED FOR

OSE Group

Project Details	
Title	Flood Impact assessment for Proposed Development on Lot 2 RP745166, Port Douglas
Prepared for	OSE Group
Document Name	

Document Control					
Revision	Author	Reviewer	Approved for Issue		
			Name	Signature	Report Date
Draft					28/11/2025

Revision Status	
Revision	Description
Draft	For Client Review

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In preparing this report, WMS has assumed that all data, reports and any other information provided to us by the Client, on behalf of the Client, or by third parties is complete and accurate, unless stated otherwise.

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1 INTRODUCTION

1.1 BACKGROUND

The following report presents the Flood Impact Assessment for the proposed development at Lot 2 RP745166, Port Douglas, QLD within the Douglas Shire Council. We understand that filling of the site is proposed as part of a new development on the land. To allow the filling to occur, a Flood Impact Assessment is required to determine the flood impacts of the proposed works. The objective of this report is therefore to assess the impacts and provide recommendations for mitigation works (if required).

1.2 SCOPE OF PROJECT

To achieve the report objective, the following scope of works was undertaken:

- Obtain and review the existing data.
- Develop a local flood model for Crees Creek and the small waterways adjacent to the subject site.
- Run the existing 20%, 5%, 2% and 1% Annual Exceedance Probability (AEP) flood events.
- Run the developed case 20%, 5%, 2% and 1% AEP flood events with the developed fill and impervious fraction added.
- Develop flood level impact mapping and provide initial advice on possible works required to reduce the flood impact.

1.3 SITE SPECIFIC DATA

Data obtained and how it was used in this project is detailed in **Table 1-1**.

Table 1-1 *Site Specific Data*

Data Category	Data	Source	Use in Project
GIS Layers	Cadastre	QSpatial	Mapping and assessment of offsite impacts
	Road corridor		Mapping
	Road centrelines		Delineation of materials
	Watercourse centrelines		Mapping and delineation of materials
	Building footprints	Bing Maps	Mapping and delineation of materials
Topography	2010 LiDAR	ELVIS	Base topography for the hydraulic model development. This is a major limitation to the study as the age of the available topography is such that new development may have occurred in the area since 2010 that would impact the results of this study.
Previous Studies	QRA Flood Hazard Mapping (AECOM, 2013)	QRA	Used to validate the hydrologic and hydraulic model.

1.4 STUDY AREA

The site of the proposed development is located on land appropriately described as Proposed Lot 2 RP745166 on Captain Cook Highway, Port Douglas (herein referred to as the subject site). The site generally falls from South to North and is surrounded by Crees Creek to the east, an unnamed tributary to the west, and the Captain Cook Highway to the south.

The location of the site and other key hydraulic features is shown in **Figure 1-1**.



Figure 1-1 Study Area

2 EXISTING CASE

A local, site-specific flood model was developed by WMS Engineering for the assessment of the proposed development in accordance with Australian Rainfall and Runoff (ARR) 2019 guidelines. The flood model consisted of a XP-RAFTS hydrologic model combined with a TUFLOW hydraulic model. A summary of the model development is provided below.

2.1 HYDROLOGIC MODELLING

XP-RAFTS was the hydrologic modelling software selected for use in this assessment. XP-RAFTS is an event based hydrologic model and calculates flood hydrographs from storm rainfall hyetographs. It can be used for modelling natural, partly urbanised and fully urbanised catchments. XP-RAFTS is an industry standard modelling package that is widely used in hydrological studies across Australia.

2.1.1 Catchment Delineation

Catchment delineation was based on a digital elevation model (DEM) derived from 2010 aerial survey sourced from the online spatial data source ELVIS. A total of 58 sub-catchments were delineated throughout the study area, with a total catchment area of approximately 4133 ha. The delineated sub-catchments are illustrated in **Figure 3-1**.

2.1.2 Design Rainfall / Temporal Patterns

Design rainfall data for the 20%, 10%, 5% and 1% AEP events was extracted from the ARR Data Hub using the TUFLOW ARR plugin tool for QGIS (Latitude -16.5391, Longitude 145.4449) as presented in **Table 2-1**. The tool interfaces directly with the ARR2019 Data Hub and obtains the relevant hyetographs based on the catchment shapefile input and the requested events, durations, temporal patterns, and other parameters such as losses and spatial patterns.

ARR Data Hub point source temporal patterns for the Wet Tropics region were adopted. The 20% and 10% AEP events used the intermediate temporal patterns while the 5% and 1% AEP events were assigned the rare temporal patterns.

Table 2-1 *Design Rainfall Depths for each AEP*

Duration (min)	63.20%	50%	20%	10%	5%	2%	1%
5	10.5	11.7	15.1	17.3	19.3	21.8	23.6
10	17.2	19	24.7	28.3	31.6	35.9	39
15	22.3	24.7	32	36.7	41.1	46.6	50.6
20	26.6	29.5	38.1	43.7	48.8	55.4	60.2
25	30.3	33.6	43.4	49.7	55.6	63	68.4
30	33.5	37.2	48.1	55	61.5	69.7	75.6
45	41.6	46.2	59.7	68.4	76.5	86.6	93.9
60	48.1	53.3	69.1	79.2	88.7	100	109
90	58.1	64.7	84.3	96.9	109	123	134
120	66.1	73.7	96.6	111	125	142	155
180	78.5	88	117	135	152	175	191
270	92.6	104	140	164	186	215	236
360	104	118	160	188	215	250	276
540	122	139	192	228	263	310	346
720	136	156	219	262	304	361	406

Duration (min)	63.20%	50%	20%	10%	5%	2%	1%
1080	160	185	263	318	373	449	510
1440	180	208	300	365	431	523	598

2.1.3 Climate Change

As the rainfall data was generated in 2016, and uplift factor to 2030 was applied to account for climate change. The uplift factors were sourced from the ARR DataHub for the SSP7-3.0 scenario.

2.1.4 Fraction Impervious

The fraction impervious varies throughout the catchment depending on the level of development present. In the more urbanised areas, a fraction impervious has been estimated from aerial survey, and ranges from 0.5 (ie. Catchment ID 24) to 0.1, with undeveloped/natural areas given a fraction impervious of 0.

2.1.5 Sub-Catchment Slope

The sub-catchment slope varied throughout the catchment. In the steep upper reaches, sub-catchment slopes of up to 45% were present, while in the lower reaches, sub-catchment slopes closer to 0.1% were adopted.

2.1.6 Sub-Catchment Mannings

Relatively conservative sub-catchment mannings 'n' values were adopted to represent the runoff from each sub-catchment. For pervious areas, a mannings 'n' value of 0.05 was used, while 0.015 was used for impervious areas.

2.1.7 Lag Times

Lag times were input within the links between each sub-catchment. The stream velocity method was used to determine the lag times, with a velocity of 1.5 m/s used in the steep upper reaches, and a velocity of 0.3 m/s used in the flatter lower reaches.

2.1.8 Storage Parameter

XPRAFTS's storage parameter remained unadjusted. As the model is uncalibrated, changes to the storage parameter were unwarranted. As such, the default BX value of 1 was maintained.

2.1.9 Rainfall Losses

ARR Datahub rainfall losses for the study area centroid location have been adopted for use in the hydrologic model. Pre-burst rainfall accounts for catchment wetted conditions at the start of a design rainfall event. Initially ARR median pre-burst rainfall values were subtracted from the initial losses for the ensemble events, however it was identified that the pre-burst loss decreased with increasing storm severity for storm durations less than 60 minutes, which impacts the probability neutral outcome anticipated. As a result, the median 90 minute pre-burst depths were applied to all durations less than 90 minutes

A fixed continuing loss of 1.2 mm/hr has been used. Northern Queensland have distinct wet and dry seasons and it is very likely a storm will occur within a period of prolonged wet weather. The Areal Reduction Factor (ARF) has been applied to the rainfall based on the catchment area to the subject site (~5.5km²). Based on this area, and ARF of 0.98 was adopted.

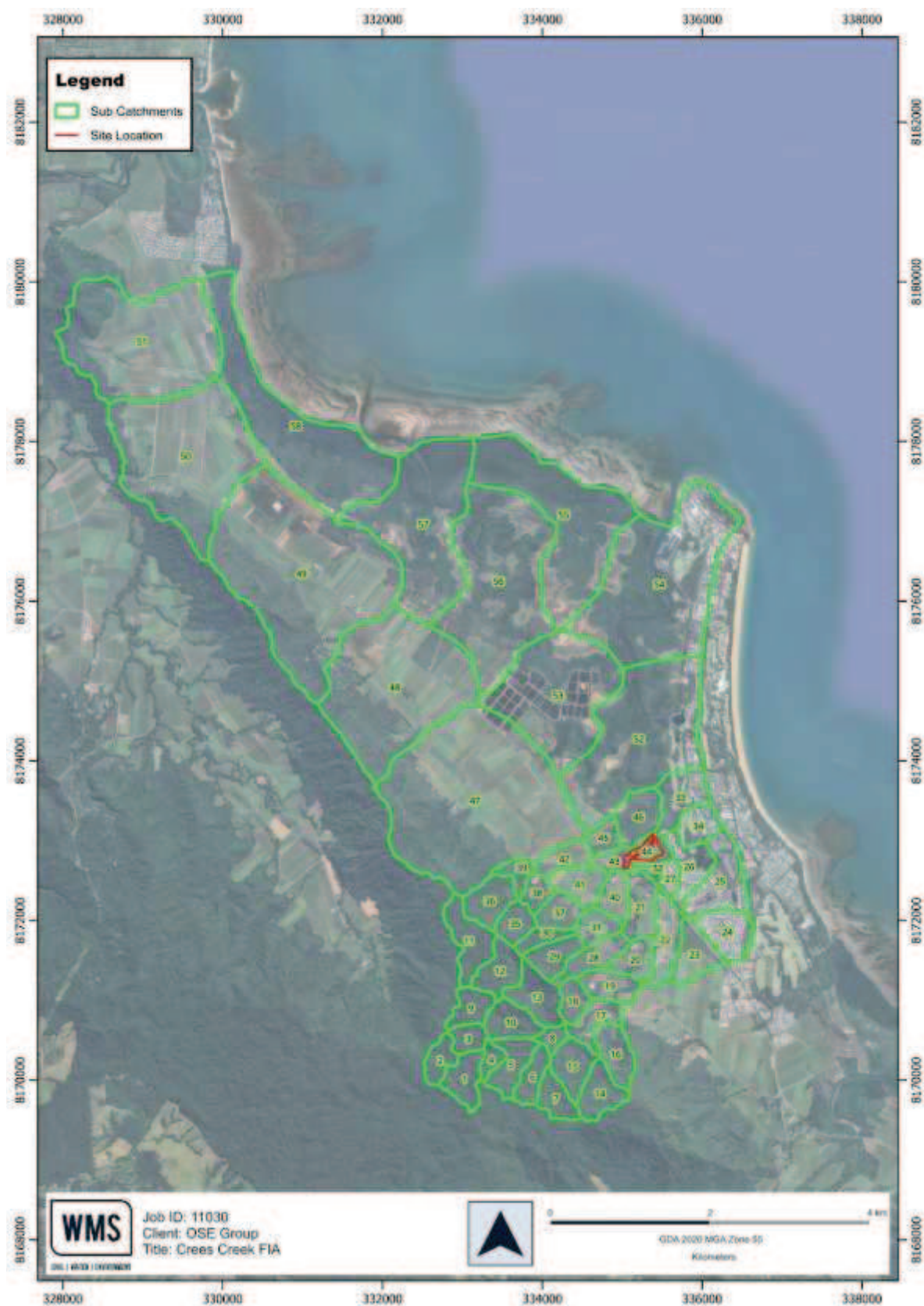


Figure 2-1 Catchment Plan

2.1.10 Critical Storm Selection

All design events were run in XP-RAFTS for all durations between 10 min to 24 hours and associated temporal patterns (TP) in accordance with ARR 2019. For each storm duration, the critical TP was identified as the median outflow from each sub-catchment. The peak outflow was then calculated as a maximum of the critical TPs, thus producing the critical duration in line with ARR 2019 guidelines.

The critical durations at the inflow points to the hydraulic model were simulated for all TPs and the median hydraulic model result determined. A summary of the storms modelled hydraulically is presented in **Table 2-2**.

Table 2-2 *Selected Critical Storms for Hydraulic Modelling*

Event	Durations	Temporal Patterns
All AEPs	30, 60, 90, 120, 180 and 360 min	TP 1 to 10

2.1.11 XP-Rafts Model Validation

The XP-Rafts model was validated at the outlet of Catchment ID 20 (model Node 21) (~483ha) by comparing the results to two methods at key locations within the catchment. The two methods chosen were the rational method and the Regional Flood Frequency Estimation Model. The XP-Rafts model validation is presented in **Table 2-3**, with a strong correlation shown to the rational method, while the RFFE appears to overestimate the flow in more extreme events.

Table 2-3 *Peak Flow Validation at Outlet of Catchment ID 20*

AEP (%)	Peak Flow (m ³ /s)		
	This Study	Rational Method (ToC ~ 38 mins)	RFFE
20	80	76	72
5	106	107	129
2	126	133	172
1	145	151	208

2.2 HYDRAULIC MODELLING

2.2.1 Modelling Software

A 2D TUFLOW hydraulic model was developed to determine the flood behaviour at and around the site. TUFLOW is widely used in Australia for flooding and drainage studies. The recent TUFLOW version (2025.2.1) was adopted for this study. The latest versions of TUFLOW incorporate the HPC (Heavily Parallelised Compute) model run engine. TUFLOW HPC is an explicit solver for the full 2D Shallow Water Equations, including a sub-grid scale eddy viscosity model. HPC can be used in GPU (Graphics Processing Unit) mode to reduce simulation times. TUFLOW HPC GPU was used for this assessment.

2.2.2 Model Resolution, Extent and Topography

A grid cell size of 4 m was selected for the assessment. This grid size allows for an appropriate representation of the key flow paths within the model area, without resulting in excessive run times. This resolution was deemed appropriate based on the size of the area to be modelled and considering the key hydraulic features that needed to be represented.

The only aerial survey available for the site was capture in 2010. This is notably old for an assessment of this type, and provides a risk to the assessment if recent developments/topography changes in the area have occurred since this date.

The model extent was delineated to capture all points of interest and outflow boundary was placed sufficiently far from the locations of interest as to not significantly influence flood behaviour. The TUFLOW model layout is illustrated in **Figure 2-2**.

2.2.3 Boundary Conditions

2.2.3.1 Inflow Boundaries

The hydrographs extracted from the XP-RAPTS model were applied to the TUFLOW model as 2D boundary conditions. Two types of inflow boundaries were used:

- **'2d_bc' Lines:** '2d_bc' lines were used to apply the hydrographs for the sub-catchments located outside the model extent. These inflows were applied to the model edges and include total flow hydrographs.
- **'2d_sa' Polygons:** '2d_sa' polygons were used to apply the local hydrographs for the sub-catchments located within the model extent.

The model inflow and initial water level boundaries are illustrated in **Figure 2-2**.

2.2.3.2 Outflow Boundaries

An outflow boundary condition was applied to the TUFLOW model to allow flow to exit the study area. The outflow boundary was based on a fixed water level within the ocean. The model outflow boundary is illustrated in **Figure 2-2**, and a fixed tailwater level of 1.9m AHD was adopted to represent the Highest Astronomical Tide.

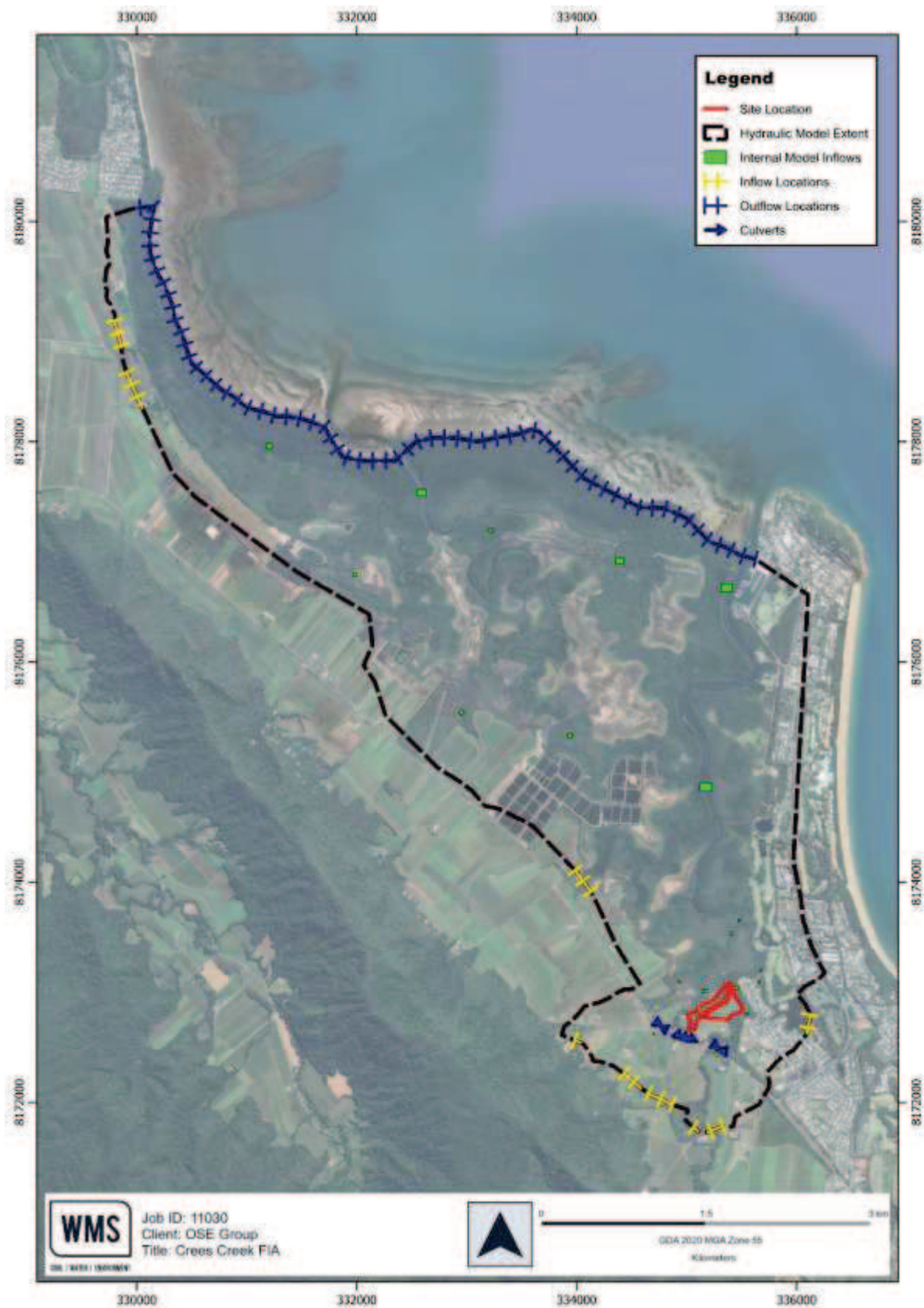


Figure 2-2 Hydraulic Model Layout

2.2.4 Materials

The 2D hydraulic roughness (Manning's 'n') values used in the hydraulic model are outlined in **Table 2-4**. Values are within the ranges recommended by ARR 2019 Guidelines. The delineation of land use was based on inspection of existing satellite imagery from Queensland Globe. The spatial distribution of the roughness is shown in **Figure 2-3**. Where data was available, buildings were removed from the hydraulic model domain.

Table 2-4 *Adopted Hydraulic Roughness Values per Land Use*

Land Use	Adopted Manning's 'n'
Buildings	0.02 (<30mm depth), 0.1 (>300mm depth)
Lot Remainder	0.04
Roads	0.02
Minimal Vegetation	0.03
Moderate Vegetation	0.05
Dense Vegetation	0.1
Waterway	0.07
Sugar Cane	0.12
Waterbodies	0.03
Railway	0.02

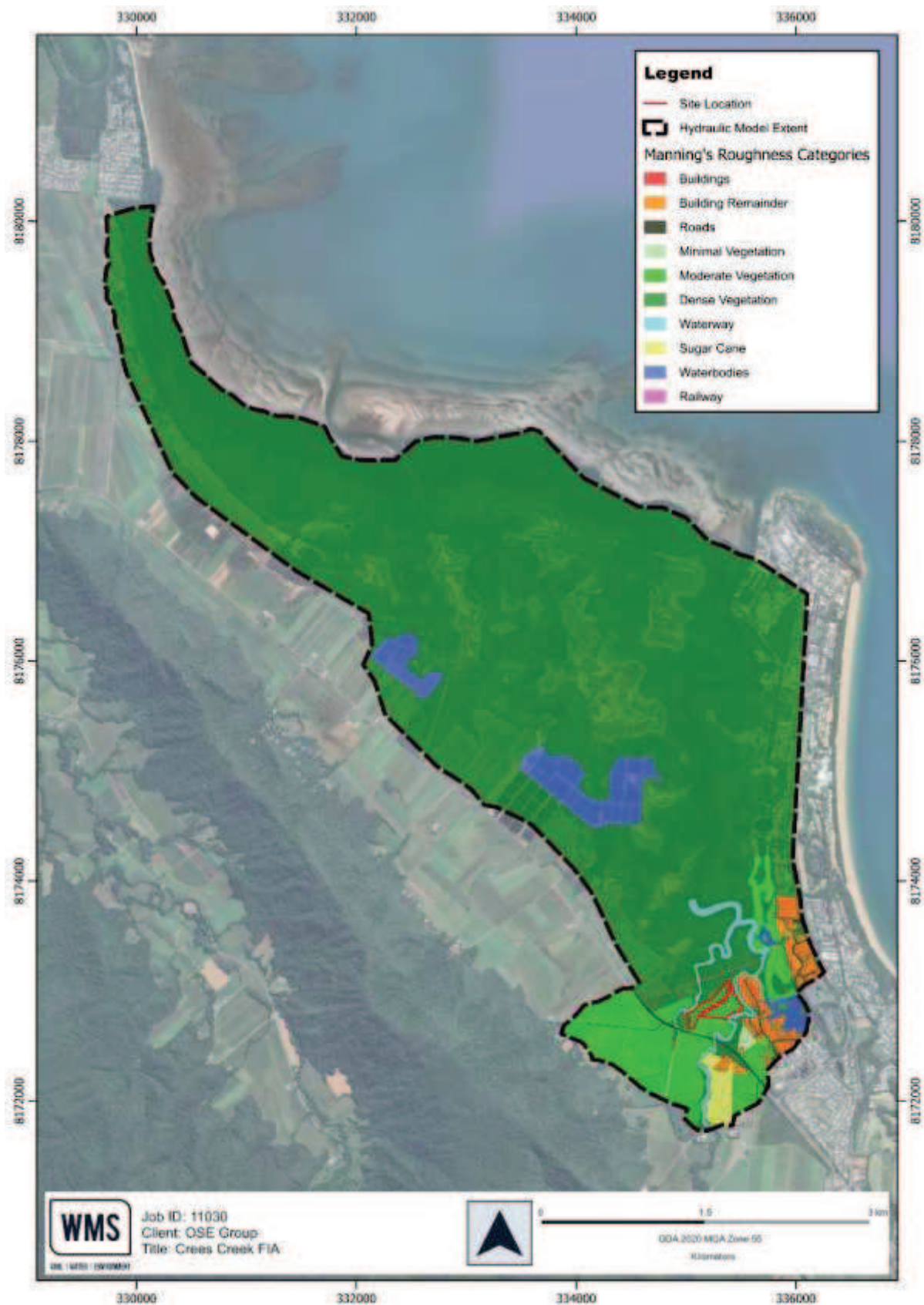


Figure 2-3 Spatial variation of hydraulic roughness

2.2.5 Hydraulic Structures

Hydraulic structures around the site were included in the model based on the information available in the Dougal Shire Council stormwater asset database. The location of key structures included in the model are shown in **Figure 2-2**.

2.2.6 Tufflow Model Validation

A study completed by QRA in 2013 highlighted a 1% AEP flood level of 2.95m AHD upstream of the railway bridge (immediately downstream of the subject site), however that study used a coincidental storm tide level as the downstream boundary. If a similar downstream boundary level was adopted, our study noted a flood level of 3.0m AHD immediately upstream of the railway bridge, providing some level validation of the results determined.

2.3 FLOOD MAPS

Existing case flood maps are presented in **Appendix A**. Based on the results, the subject site is impacted by flooding from Crees Creek in all events assessed, with the south western portion of the site particularly vulnerable. Filling of the subject site will be needed to achieve the desired freeboard.

3 DEVELOPED CASE

3.1 MODEL REVISIONS

To represent the developed case, the proposed development footprint was raised as shown in **Figure 3-1**. No other changes were made to represent the developed case, as it was assumed that measures will be taken on site to mitigate any increased runoff from the site resulting from the development.

Developed case flood maps are presented in **Appendix B**.

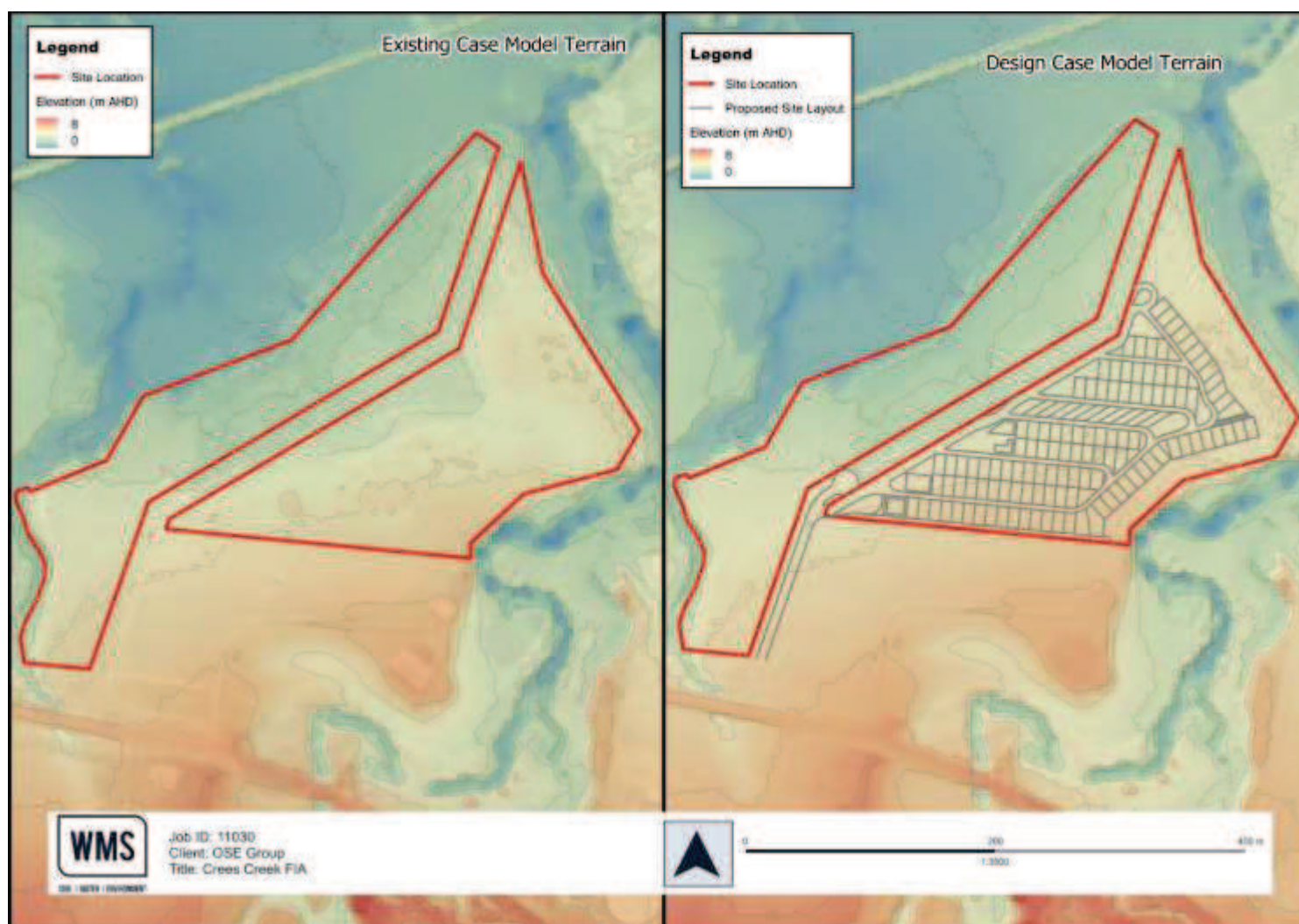


Figure 3-1 Existing Case (left) and developed case (right) topography

3.2 AFFLUX

Afflux (post development flood level minus pre development flood level) results are presented in **Appendix C**. From the results the following commentary can be made:

- Afflux occurs in all events assessed due to the proposed filling on the site.
- In the property immediately south (Lot 1 SP 166336), the afflux ranges from 150 to 250 mm.
- In the property immediately west (Lot 2 RP745166), the afflux ranges from 50 to 150 mm.

- In the property further west (Lot 1 RP745166), afflux up to 20mm is only evident in the 1% AEP event.

Additional flood mitigation measures will be required to offset the flood impacts stated.

3.3 FLOOD AND FLOOR LEVELS

Based on the assessment undertaken it is recommended that the 1% AEP flood level map be used to determine the floor levels on as the flood level varies across the site. It should be noted that Crees Creek to the south/east of the site is close to overtopping in the 1% AEP flood event, and therefore the all areas within the subject site should be raised above the natural survey level even if flooding is not shown to occur.

A revised design case event will need to be simulated with additional fill added on the site to ensure adequate freeboard to the design case 1% AEP flood level.

4 CONCLUSION

Existing and developed case flood modelling for the subject site has been undertaken using the information readily available. Both the hydrologic and hydraulic modelling showed a correlation with available validation methods, with minor discrepancies discussed further within the report.

From the assessment undertaken, the subject site is impacted by flooding from Crees Creek in all events assessed. As a result, filling of the subject site will have a local impact on flood levels, with increases on the sites to the south and west noted. Additional filling of the subject site will be needed to ensure adequate freeboard to the 1% AEP flood level, and additional mitigation works will be needed to offset the flood impacts shown in Appendix C.

It is recommended that the 1% AEP flood level map be used to determine the floor levels on as the flood level varies across the site. It should be noted that Crees Creek to the south/east of the site is close to overtopping in the 1% AEP flood event, and therefore the all areas within the subject site should be raised above the natural survey level even if flooding is not shown to occur.

APPENDIX A

EXISTING CASE FLOOD MAPS



CIVIL | WATER | ENVIRONMENT

Appendix A-1

Existing Case - 2030
Peak Depth and Water Level
Contours
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 25/11/2025



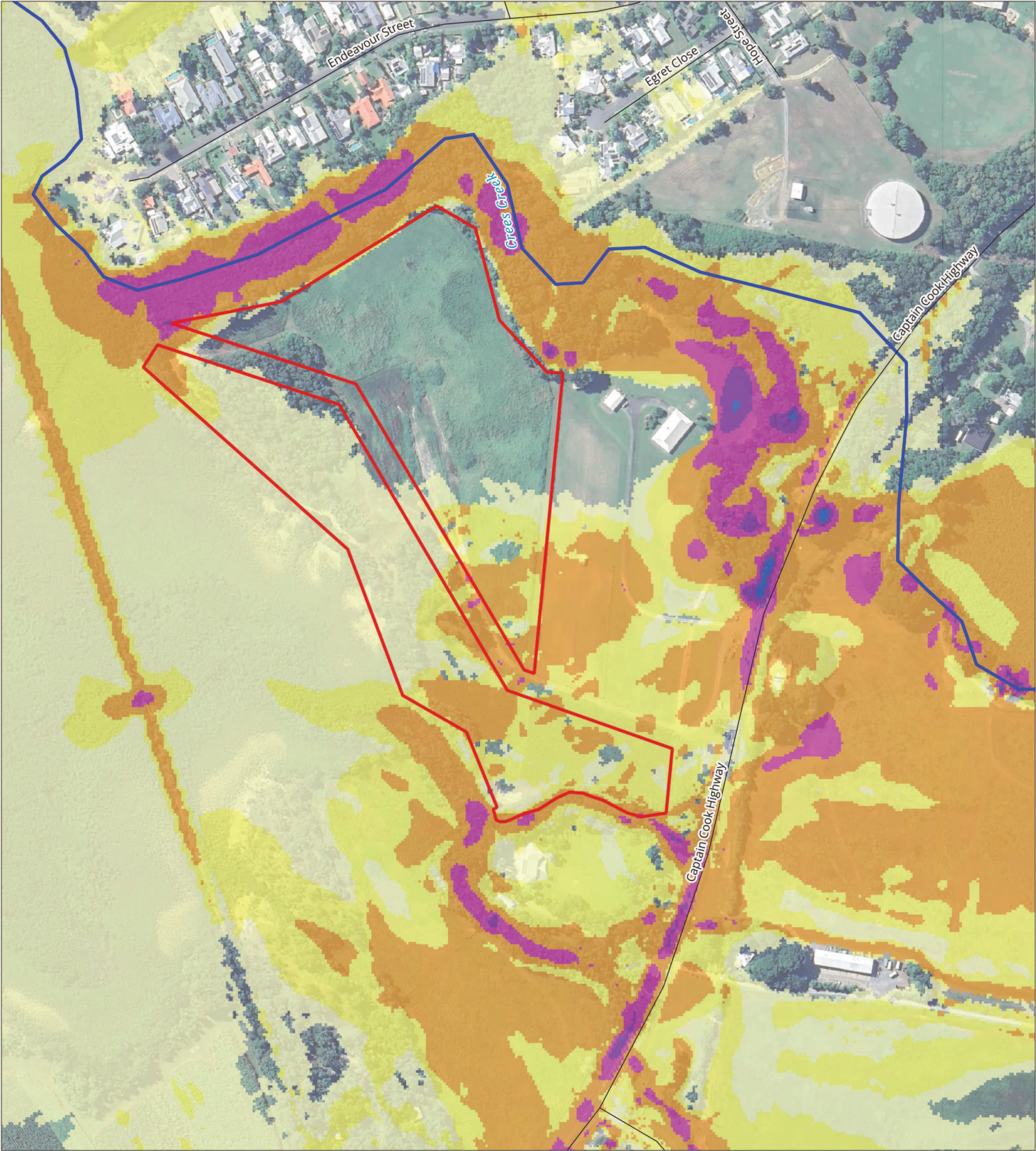
0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-2
Existing Case - 2030
Peak Velocity
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Peak Velocity (m/s)
 - ≤ 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



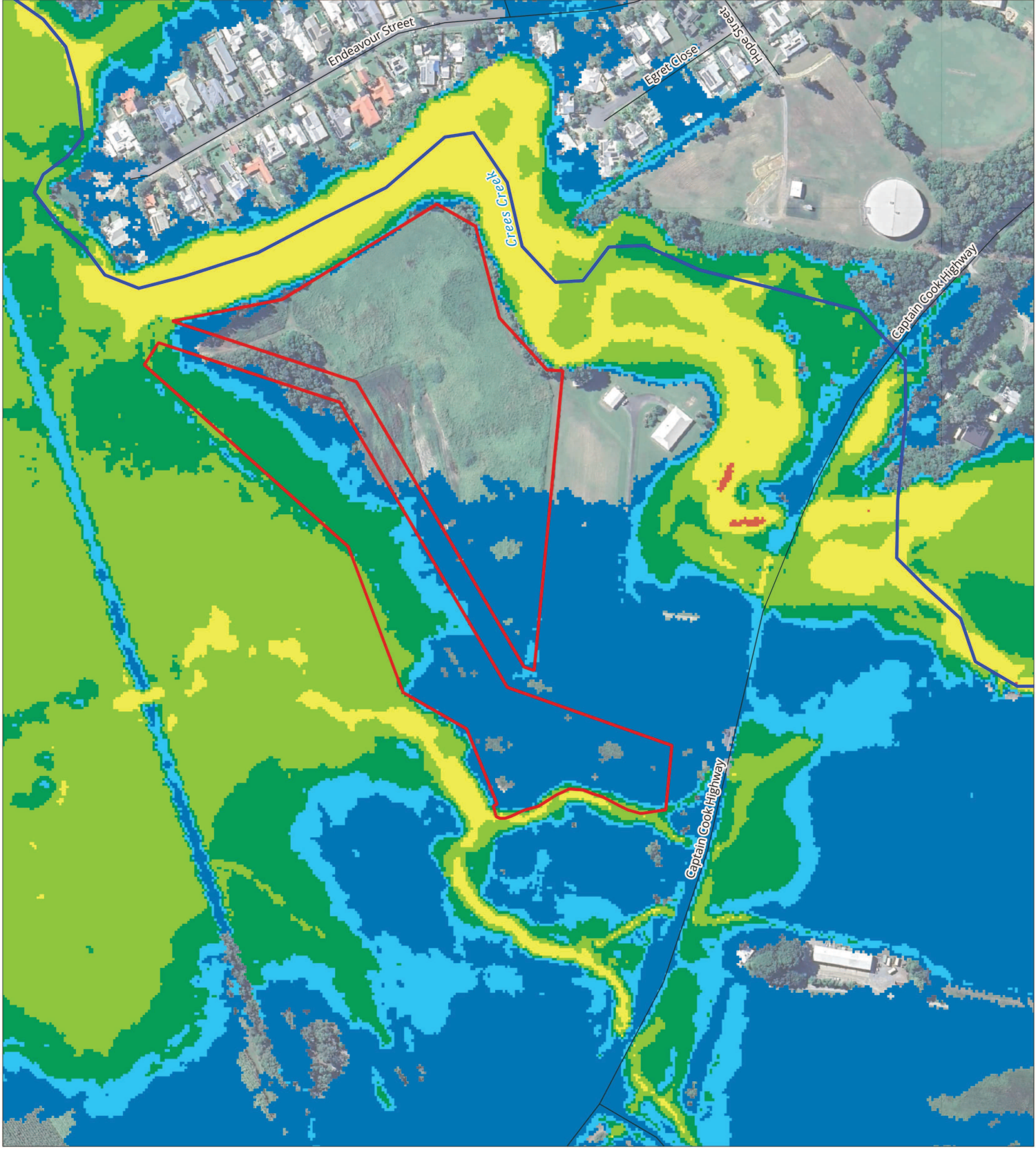
CIVIL | WATER | ENVIRONMENT

Appendix A-3

Existing Case - 2030
Hazard
1% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Hazard Categories
 - H1 - No Restrictions
 - H2 - Unsafe for Small Vehicles
 - H3 - Unsafe for Vehicles, Children & Elderly
 - H4 - Unsafe for People & Vehicles
 - H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
 - H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-4
Existing Case - 2030
Peak Depth and Water Level
Contours
2% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 25/11/2025



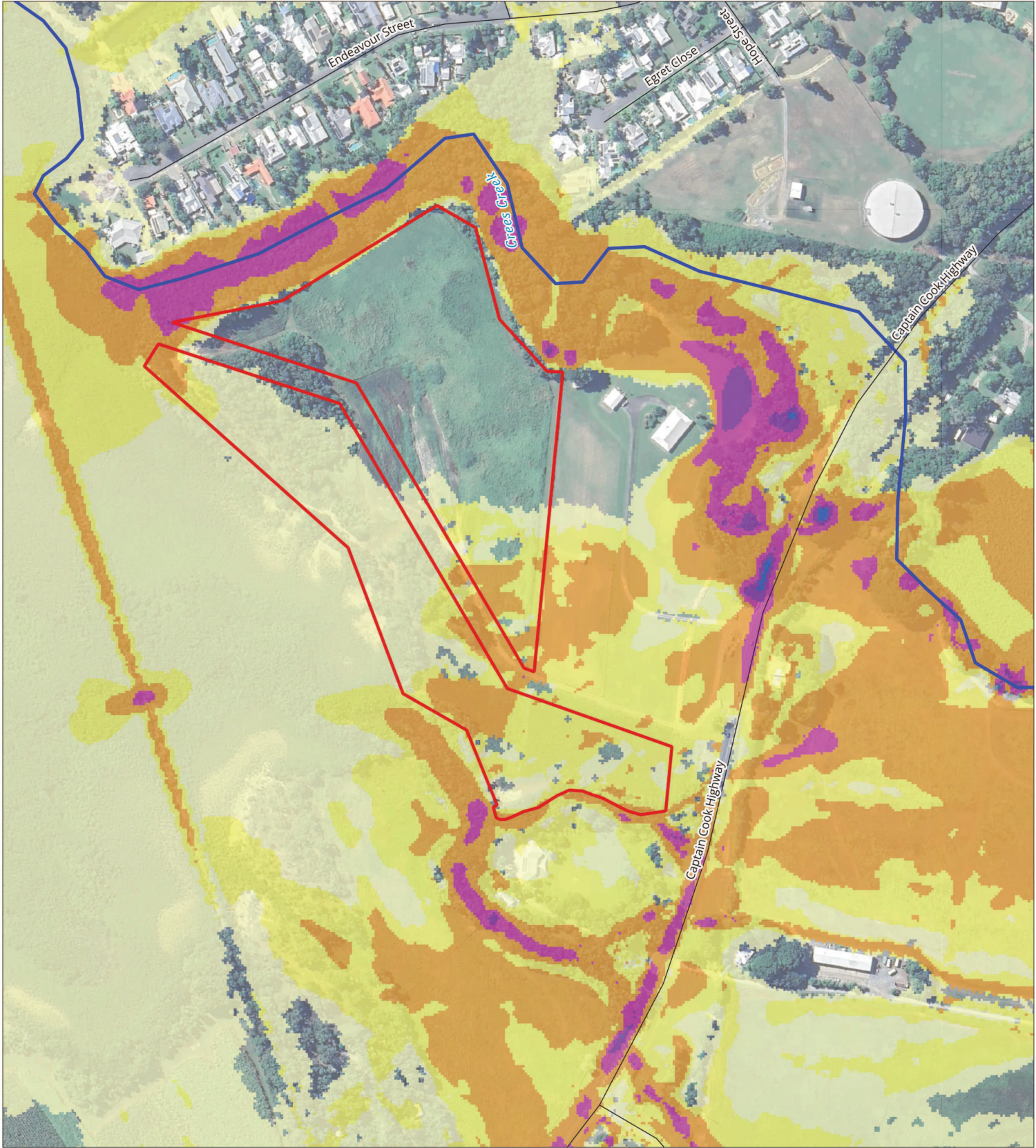
0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-5
Existing Case - 2030
Peak Velocity
2% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Peak Velocity (m/s)
 - ≤ 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



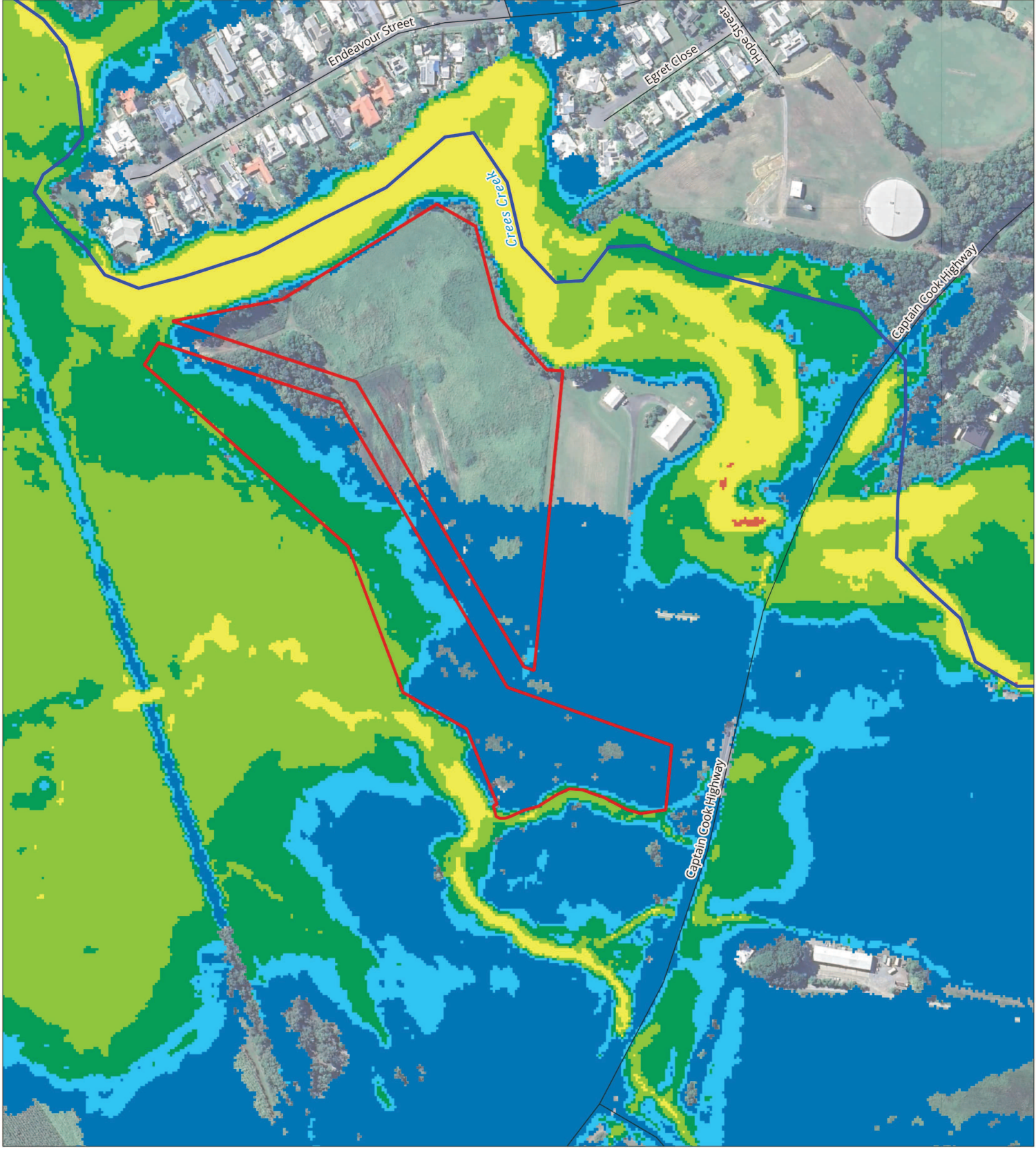


CIVIL | WATER | ENVIRONMENT

Appendix A-6
Existing Case - 2030
Hazard
2% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Hazard Categories
 - H1 - No Restrictions
 - H2 - Unsafe for Small Vehicles
 - H3 - Unsafe for Vehicles, Children & Elderly
 - H4 - Unsafe for People & Vehicles
 - H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
 - H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 25/11/2025





CIVIL | WATER | ENVIRONMENT

Appendix A-7

Existing Case - 2030
Peak Depth and Water Level
Contours
5% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 25/11/2025



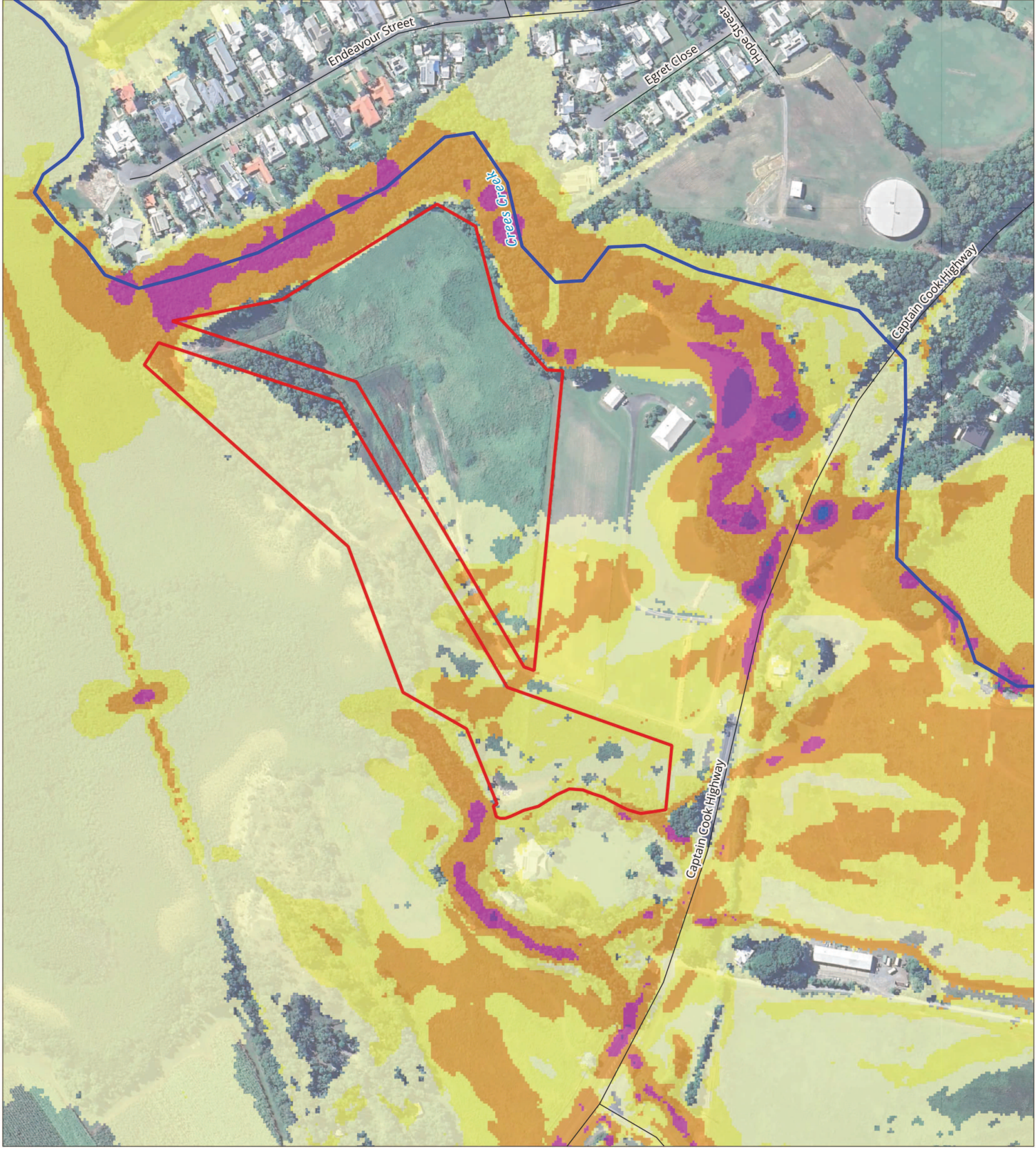
0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-8
Existing Case - 2030
Peak Velocity
5% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Peak Velocity (m/s)
 - <= 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025





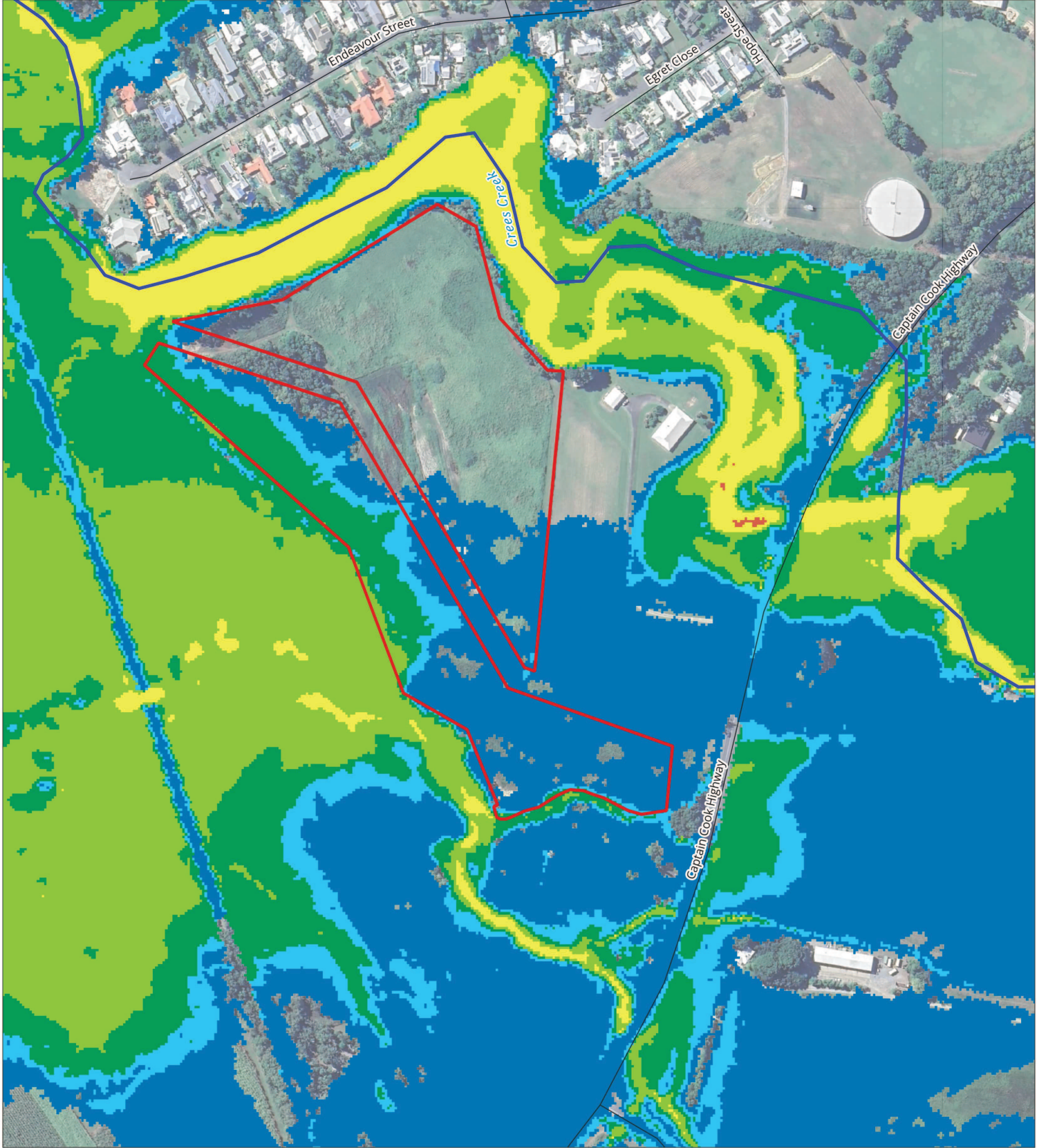
CIVIL | WATER | ENVIRONMENT

Appendix A-9

Existing Case - 2030
Hazard
5% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Hazard Categories
 - H1 - No Restrictions
 - H2 - Unsafe for Small Vehicles
 - H3 - Unsafe for Vehicles, Children & Elderly
 - H4 - Unsafe for People & Vehicles
 - H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
 - H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-10

Existing Case - 2030
Peak Depth and Water Level
Contours
20% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0

Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



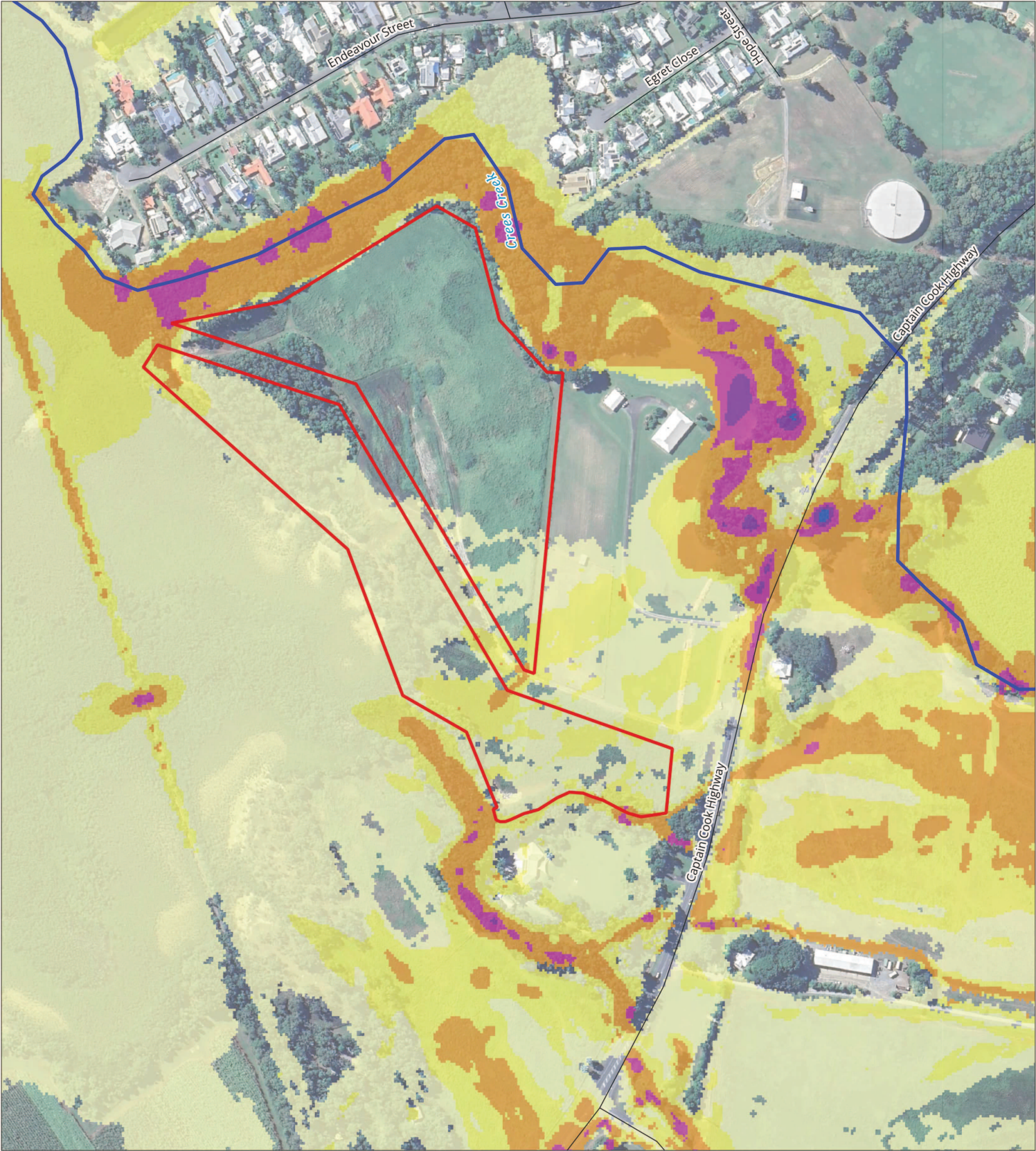


CIVIL | WATER | ENVIRONMENT

Appendix A-11
Existing Case - 2030
Peak Velocity
20% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Peak Velocity (m/s)
 - <= 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



A3 Scale: 1:3000

Job No: 11030
Date: 25/11/2025



0 100 200 m



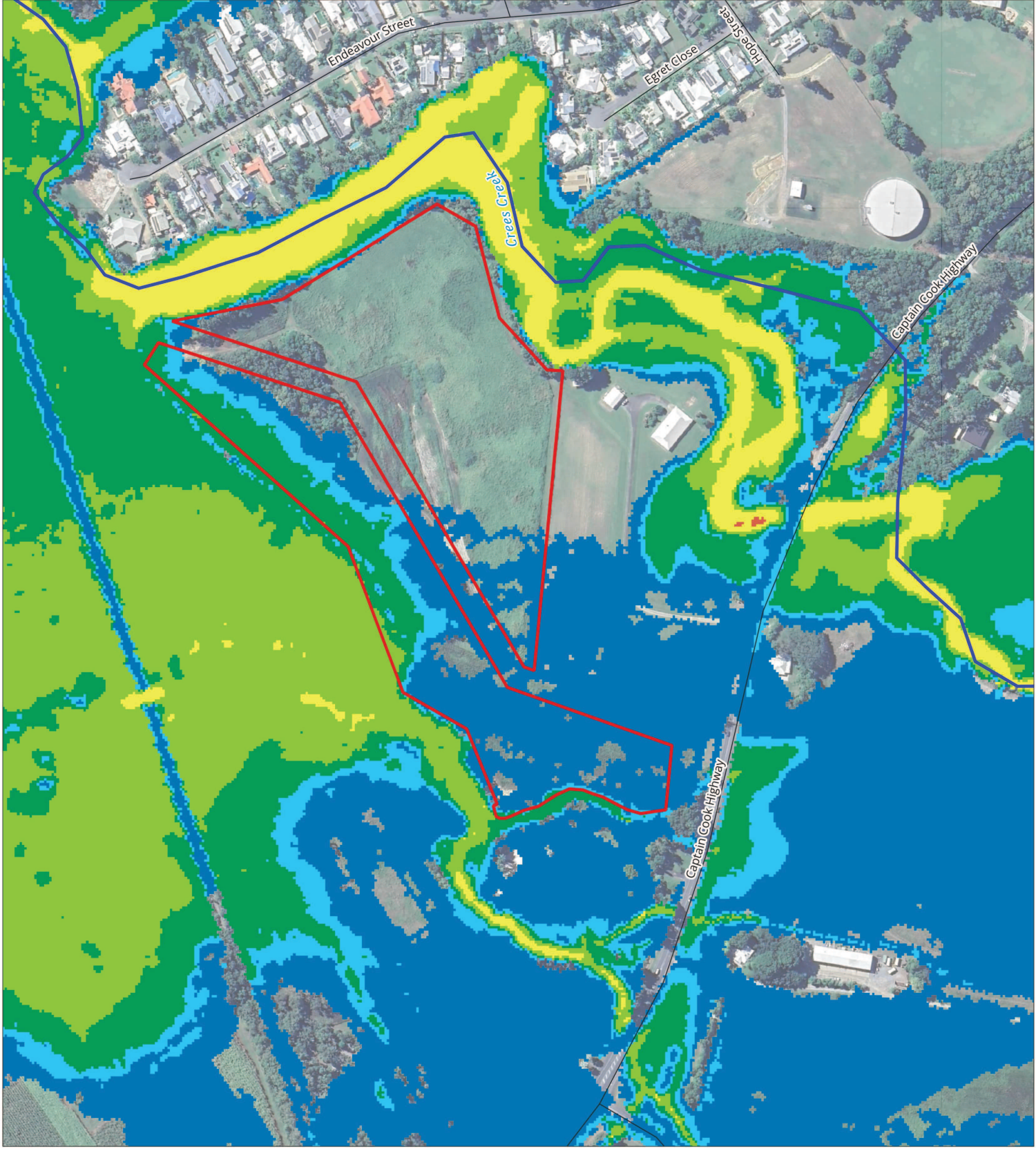
CIVIL | WATER | ENVIRONMENT

Appendix A-12

Existing Case - 2030
Hazard
20% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Hazard Categories
 - H1 - No Restrictions
 - H2 - Unsafe for Small Vehicles
 - H3 - Unsafe for Vehicles, Children & Elderly
 - H4 - Unsafe for People & Vehicles
 - H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
 - H6 - Not Suitable for People, Vehicles or Buildings



A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-13

Existing Case - 2090
Peak Depth and Water Level
Contours
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-14
Existing Case - 2090
Peak Velocity
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Peak Velocity (m/s)
 - <= 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



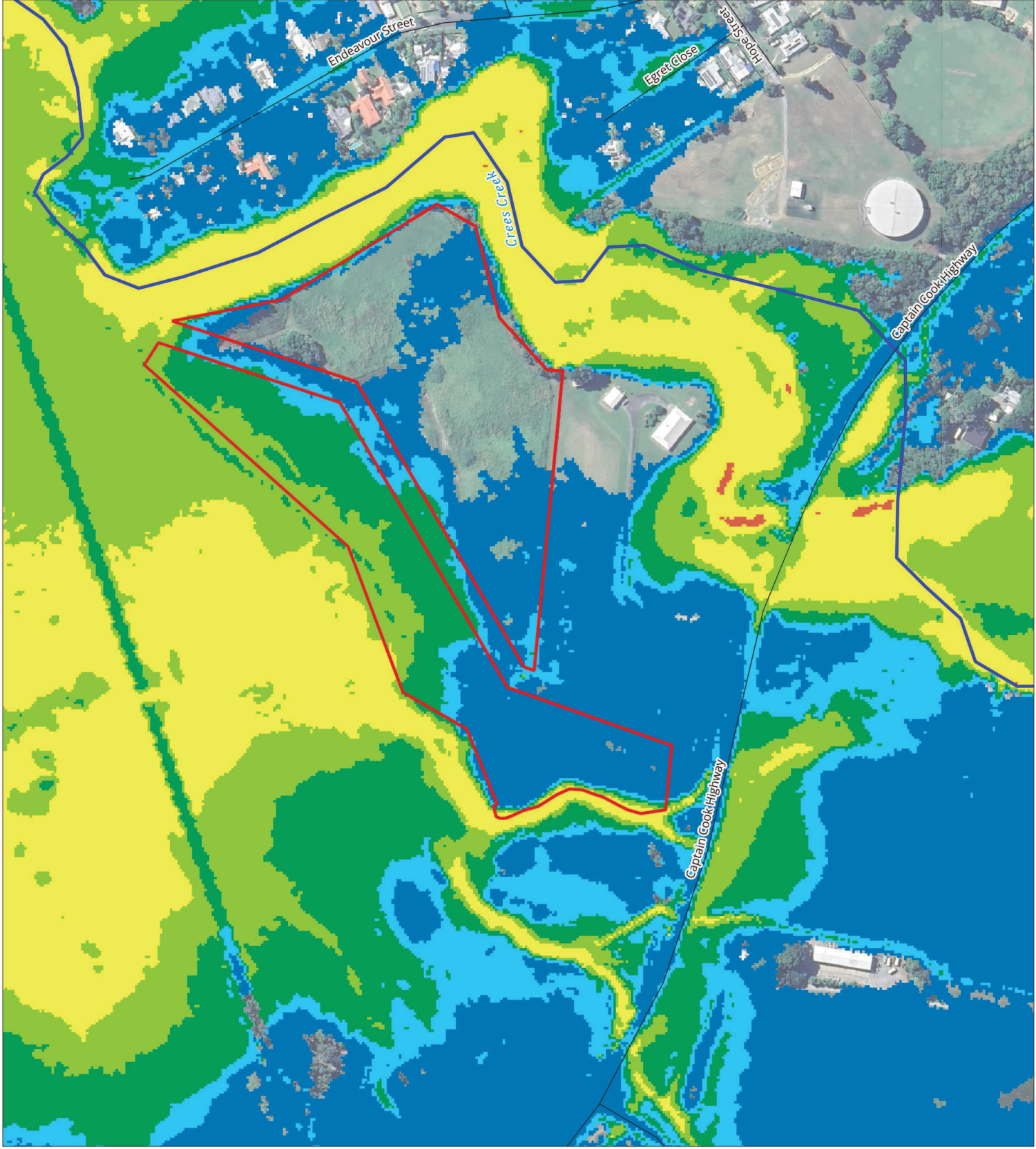


CIVIL | WATER | ENVIRONMENT

Appendix A-15
Existing Case - 2090
Hazard
1% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Hazard Categories
 - H1 - No Restrictions
 - H2 - Unsafe for Small Vehicles
 - H3 - Unsafe for Vehicles, Children & Elderly
 - H4 - Unsafe for People & Vehicles
 - H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
 - H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 25/11/2025



0 100 200 m

APPENDIX B

DEVELOPED CASE FLOOD MAPS



CIVIL | WATER | ENVIRONMENT

Appendix A-1

Developed Case - 2030
Peak Depth and Water Level
Contours
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025





CIVIL | WATER | ENVIRONMENT

Appendix A-2

Developed Case - 2030

Peak Velocity

1% AEP

LEGEND

Site Location

Roads

Watercourses

Peak Velocity (m/s)

≤ 0.25

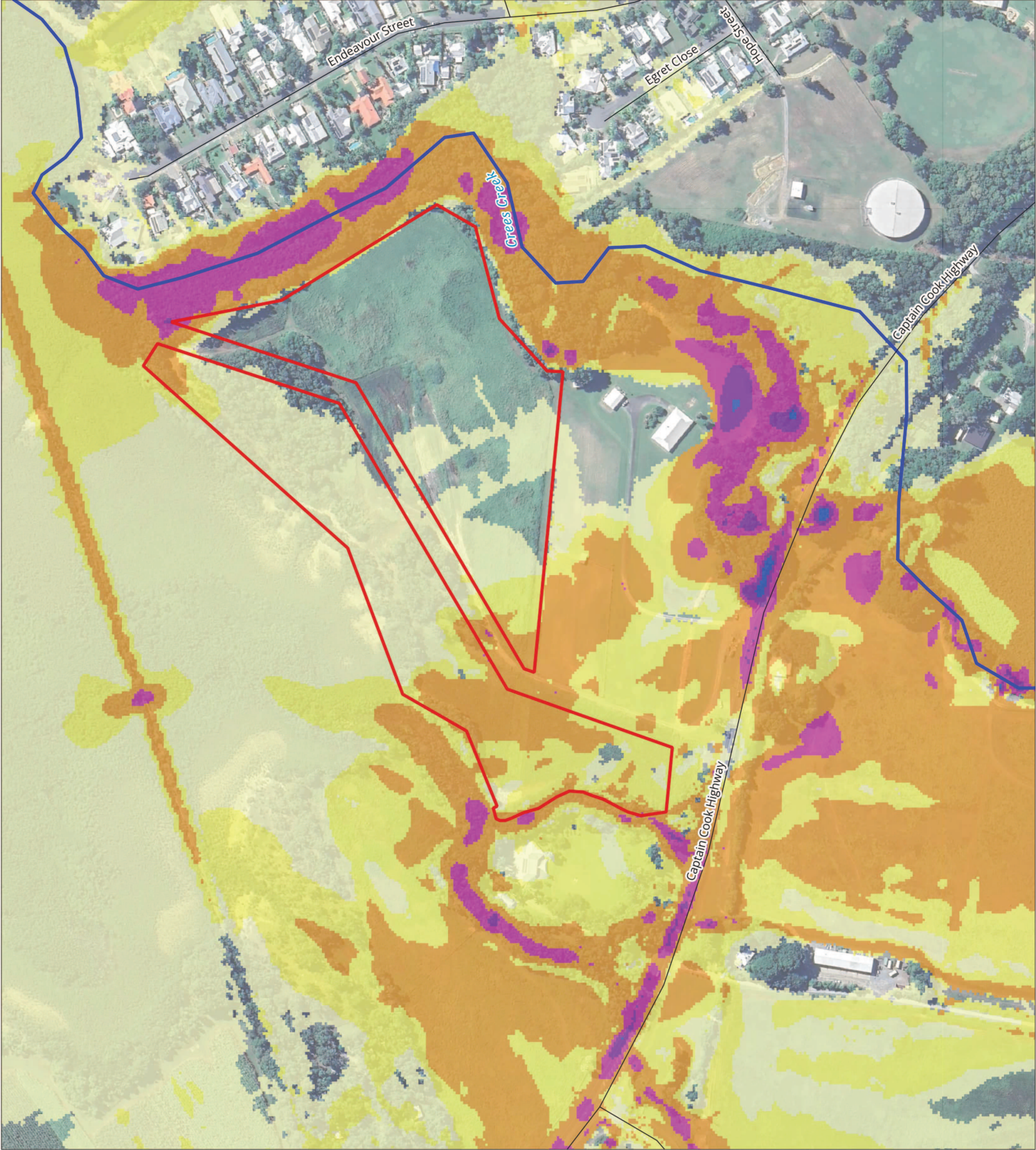
0.25 - 0.50

0.50 - 1.00

1.00 - 1.50

1.50 - 2.00

> 2.00



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-3

Developed Case - 2030
Hazard
1% AEP

LEGEND

Site Location

Roads

Watercourses

Hazard Categories

H1 - No Restrictions

H2 - Unsafe for Small Vehicles

H3 - Unsafe for Vehicles, Children & Elderly

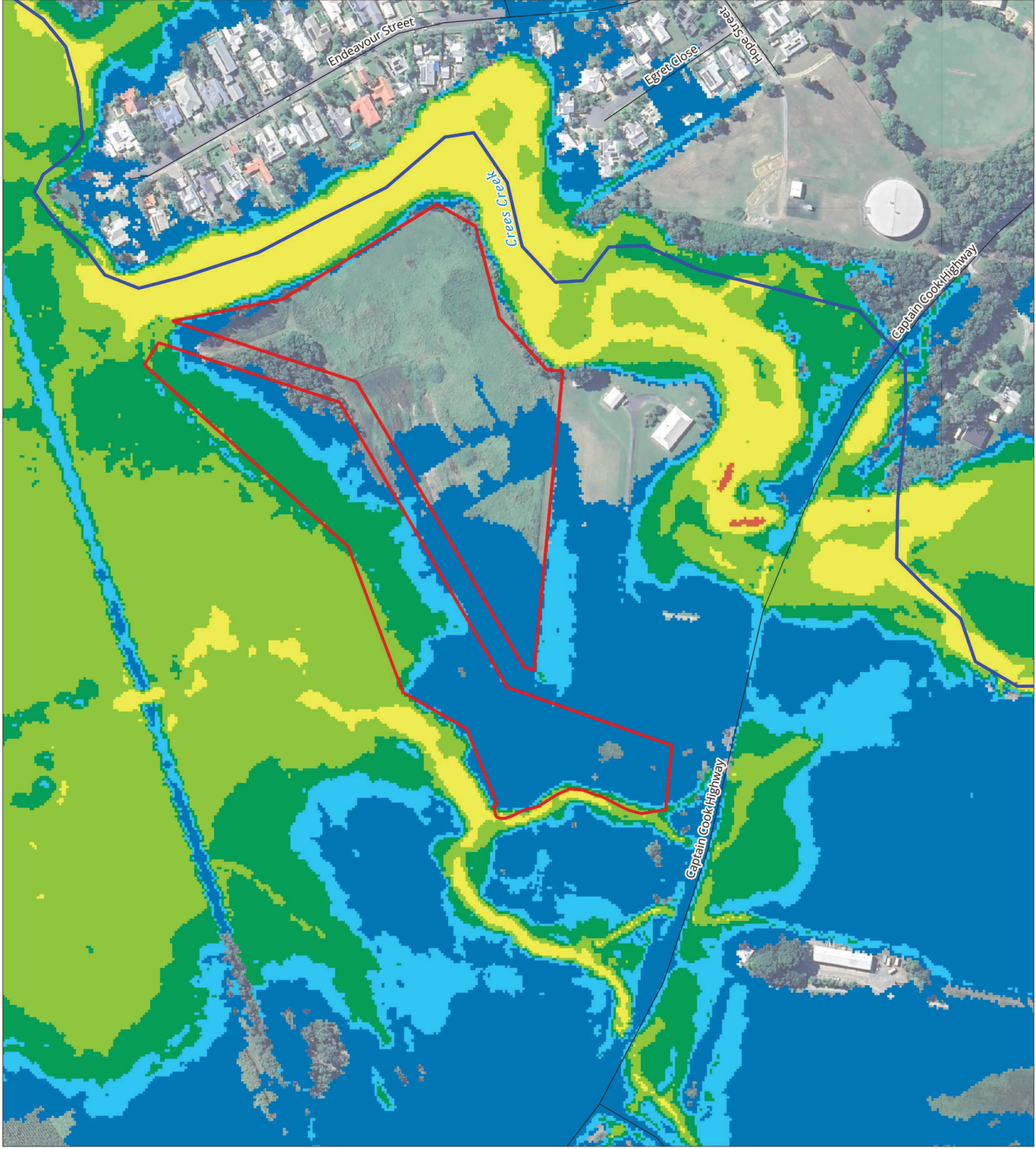
H4 - Unsafe for People & Vehicles

H5 - Unsafe for People & Vehicles

(Buildings Require Special

Engineering Design and Construction)

H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-4
Developed Case - 2030
Peak Depth and Water Level
Contours
2% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025





CIVIL | WATER | ENVIRONMENT

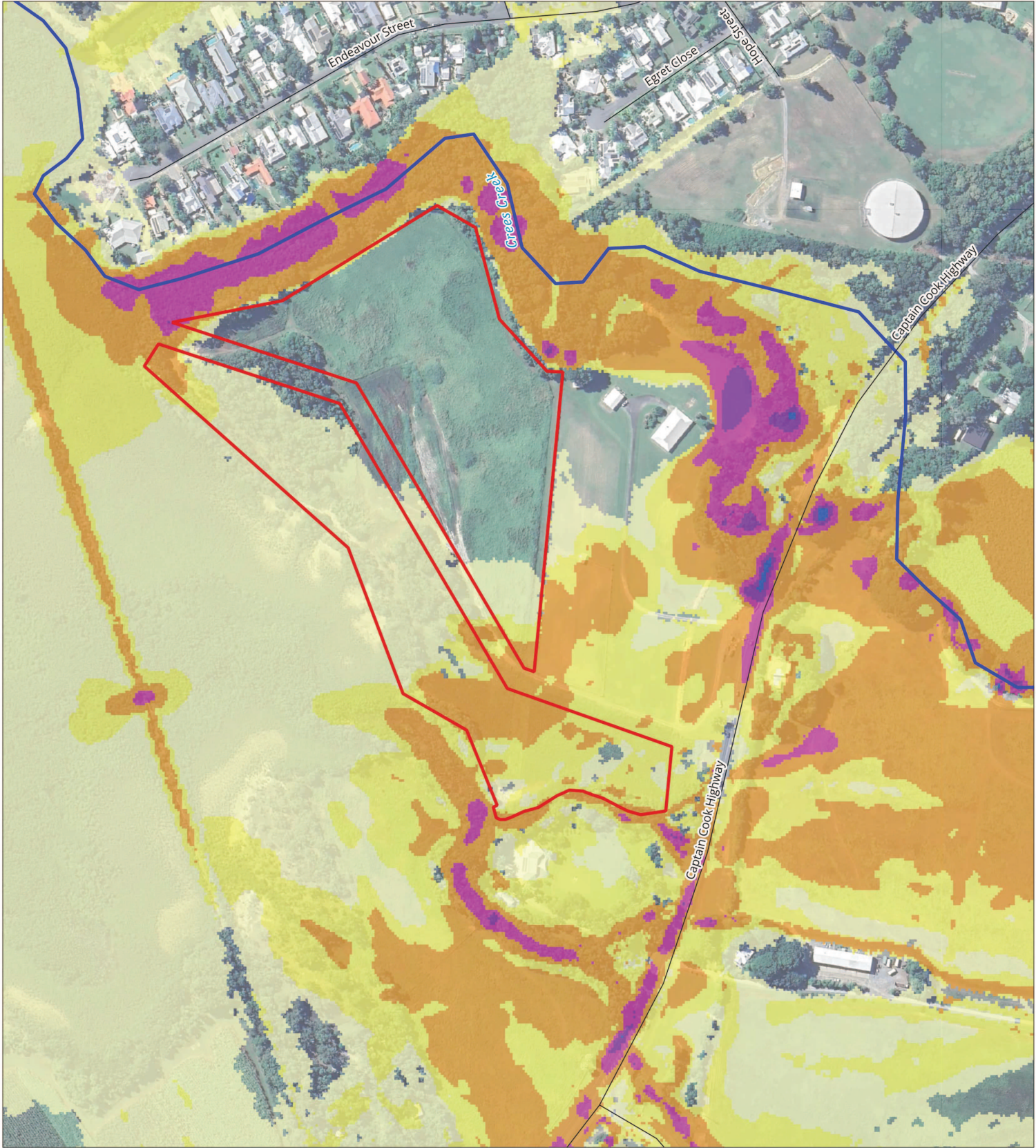
Appendix A-5
Developed Case - 2030
Peak Velocity
2% AEP

LEGEND

Site Location
Roads
Watercourses

Peak Velocity (m/s)

<= 0.25
0.25 - 0.50
0.50 - 1.00
1.00 - 1.50
1.50 - 2.00
> 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025





CIVIL | WATER | ENVIRONMENT

Appendix A-6

Developed Case - 2030 Hazard 2% AEP

LEGEND

Site Location

Roads

Watercourses

Hazard Categories

H1 - No Restrictions

H2 - Unsafe for Small Vehicles

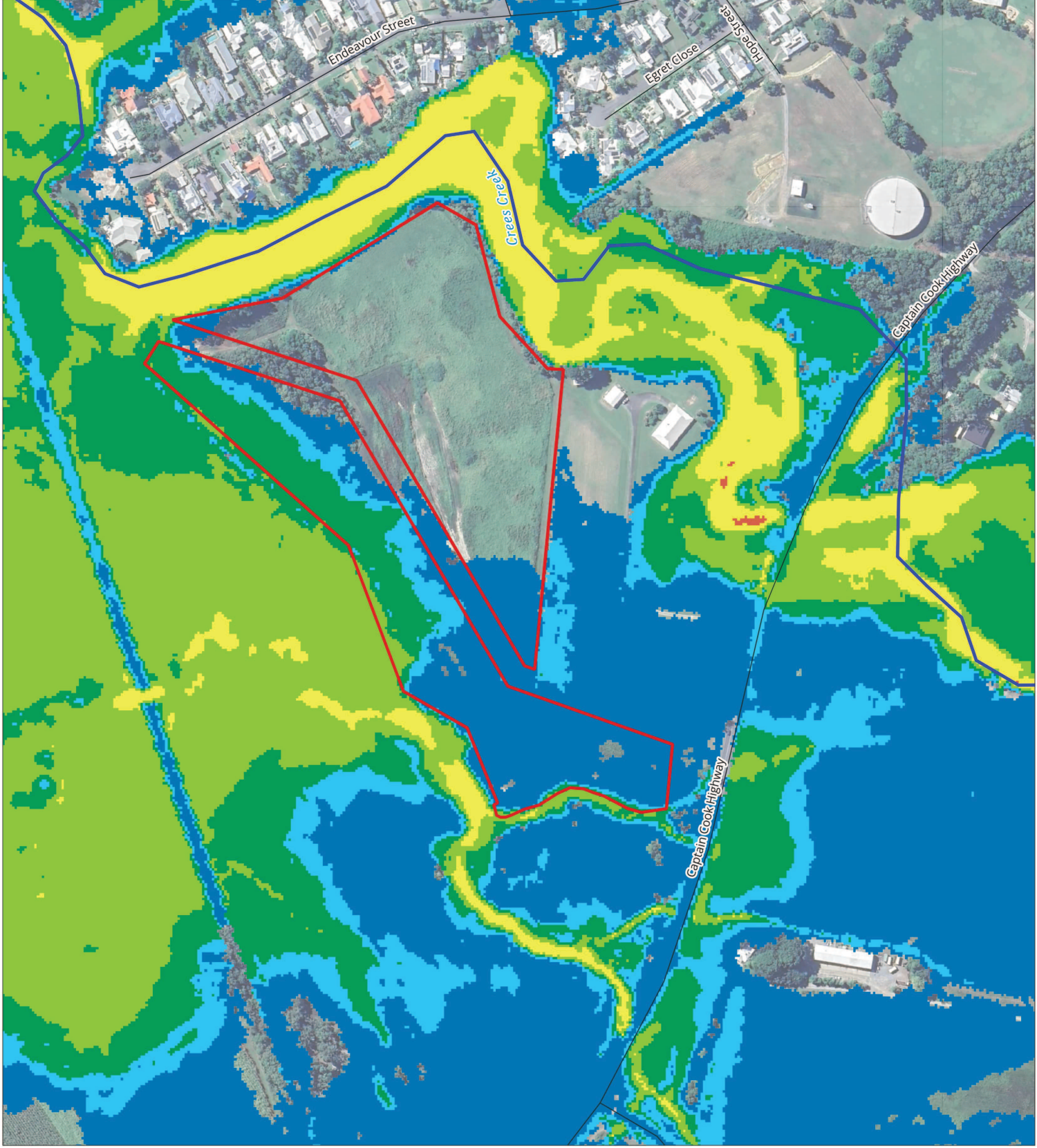
H3 - Unsafe for Vehicles, Children & Elderly

H4 - Unsafe for People & Vehicles

H5 - Unsafe for People & Vehicles

(Buildings Require Special Engineering Design and Construction)

H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0

100

200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-7

Developed Case - 2030
Peak Depth and Water Level
Contours
5% AEP

LEGEND

Site Location
Roads
Watercourses

Water Level Contours
Minor (0.10m)
Major (1.0m)

Peak Depth (m)
≤ 0.3
0.3 - 0.6
0.6 - 0.9
0.9 - 1.2
1.2 - 1.5
1.5 - 1.8
1.8 - 2.1
2.1 - 2.4
2.4 - 2.7
2.7 - 3.0
3.0 - 3.5
3.5 - 4.0
4.0 - 4.5
4.5 - 5.0
> 5.0



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

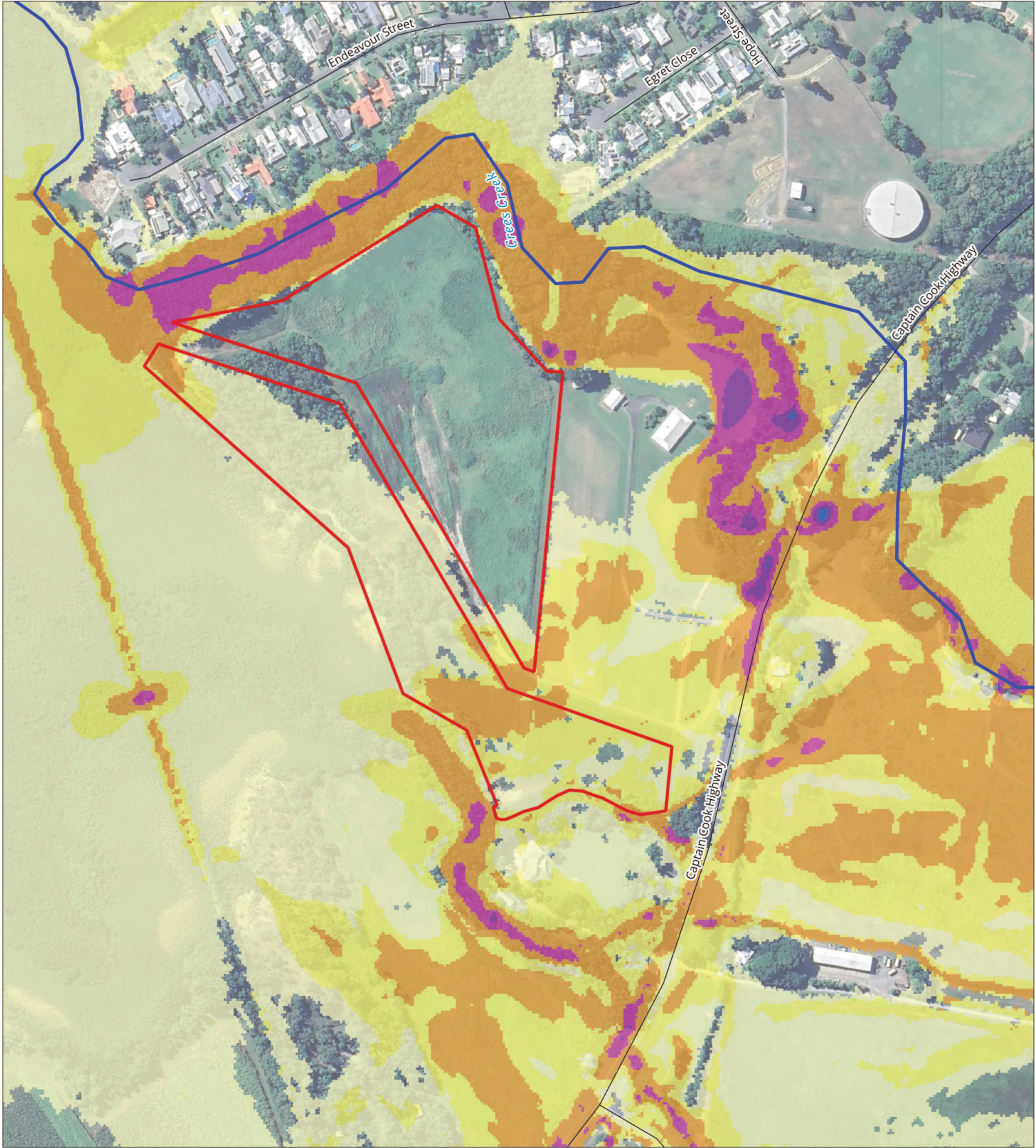
Appendix A-8
Developed Case - 2030
Peak Velocity
5% AEP

LEGEND

Site Location
Roads
Watercourses

Peak Velocity (m/s)

<= 0.25
0.25 - 0.50
0.50 - 1.00
1.00 - 1.50
1.50 - 2.00
> 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-9

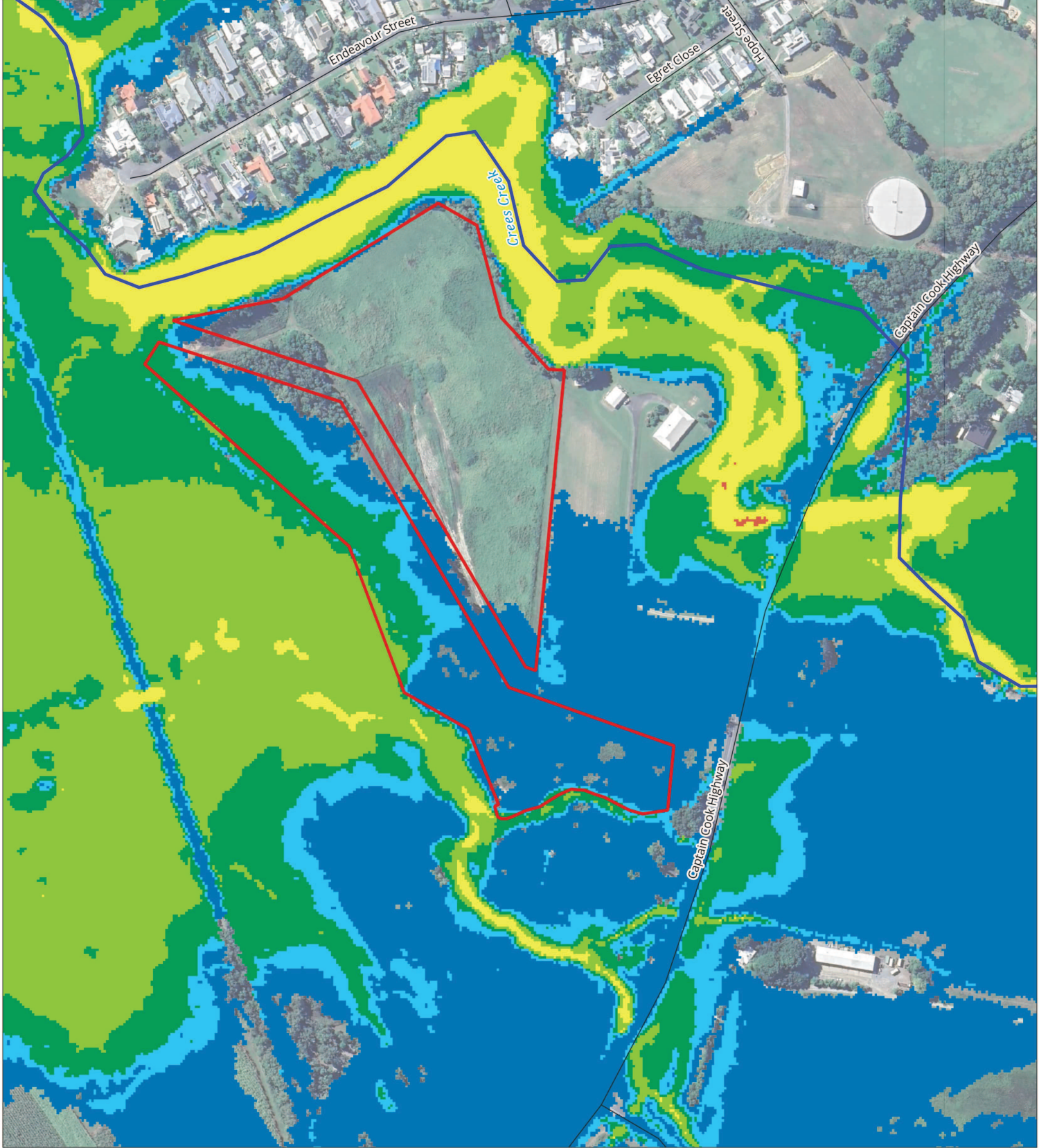
Developed Case - 2030
Hazard
5% AEP

LEGEND

- Site Location
- Roads
- Watercourses

Hazard Categories

- H1 - No Restrictions
- H2 - Unsafe for Small Vehicles
- H3 - Unsafe for Vehicles, Children & Elderly
- H4 - Unsafe for People & Vehicles
- H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
- H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-10

Developed Case - 2030
Peak Depth and Water Level
Contours
20% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
 - Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0

Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m





CIVIL | WATER | ENVIRONMENT

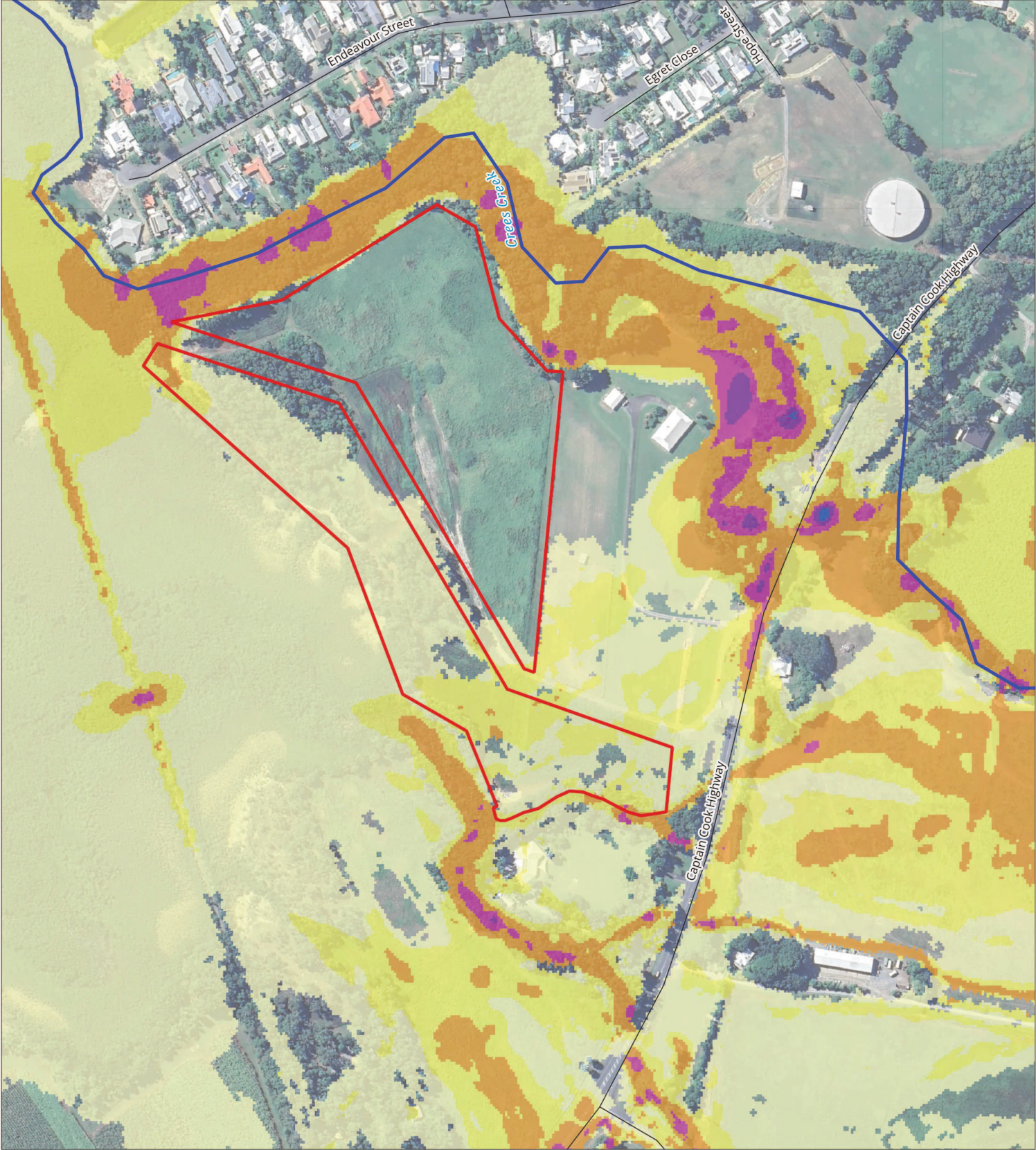
Appendix A-11
Developed Case - 2030
Peak Velocity
20% AEP

LEGEND

Site Location
Roads
Watercourses

Peak Velocity (m/s)

<= 0.25
0.25 - 0.50
0.50 - 1.00
1.00 - 1.50
1.50 - 2.00
> 2.00



A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-12

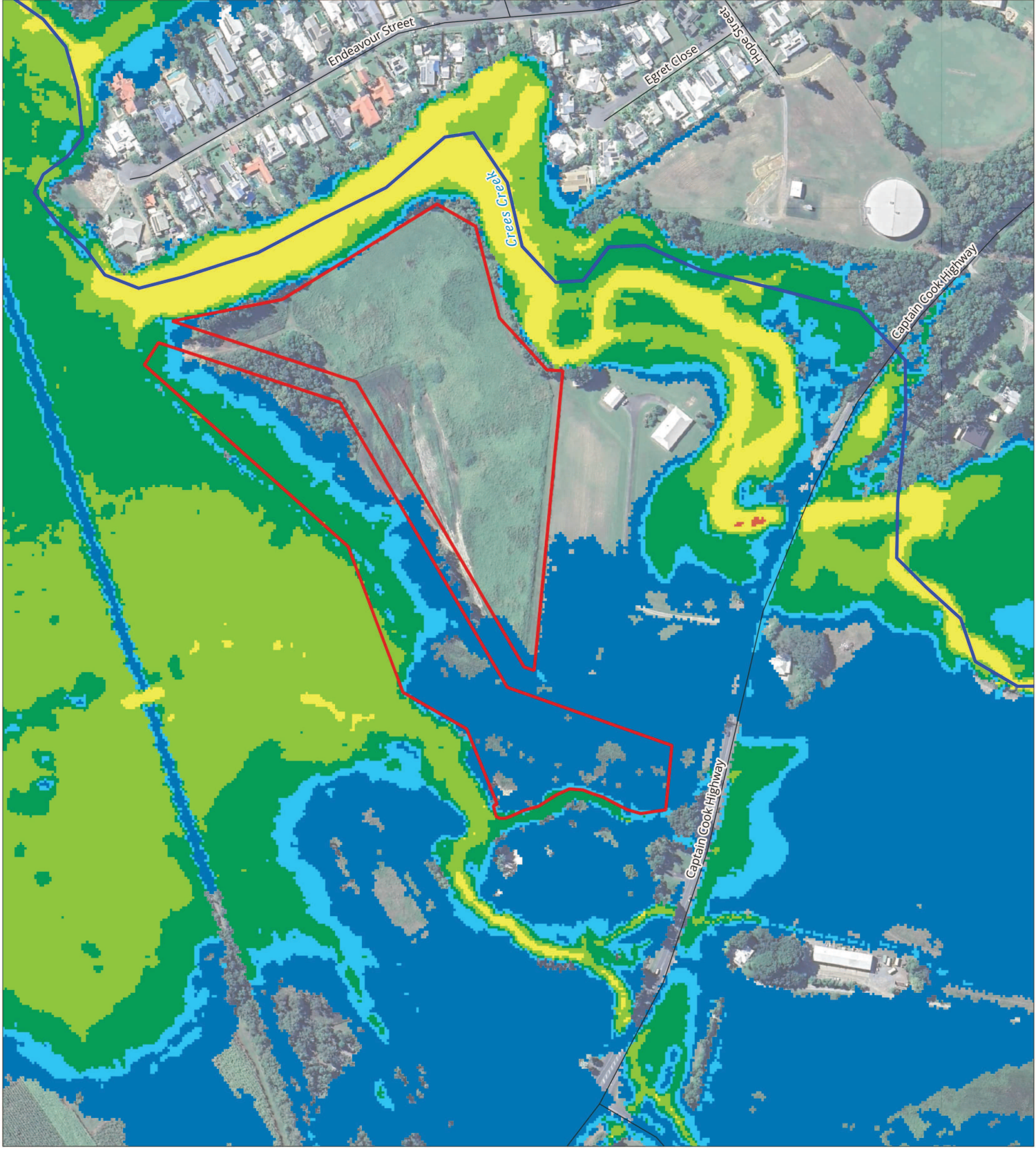
Developed Case - 2030
Hazard
20% AEP

LEGEND

- Site Location
- Roads
- Watercourses

Hazard Categories

- H1 - No Restrictions
- H2 - Unsafe for Small Vehicles
- H3 - Unsafe for Vehicles, Children & Elderly
- H4 - Unsafe for People & Vehicles
- H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
- H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-13

Developed Case - 2090
Peak Depth and Water Level
Contours
1% AEP

LEGEND

- Site Location
- Roads
- Watercourses
- Water Level Contours
 - Minor (0.10m)
 - Major (1.0m)
- Peak Depth (m)
 - <= 0.3
 - 0.3 - 0.6
 - 0.6 - 0.9
 - 0.9 - 1.2
 - 1.2 - 1.5
 - 1.5 - 1.8
 - 1.8 - 2.1
 - 2.1 - 2.4
 - 2.4 - 2.7
 - 2.7 - 3.0
 - 3.0 - 3.5
 - 3.5 - 4.0
 - 4.0 - 4.5
 - 4.5 - 5.0
 - > 5.0



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



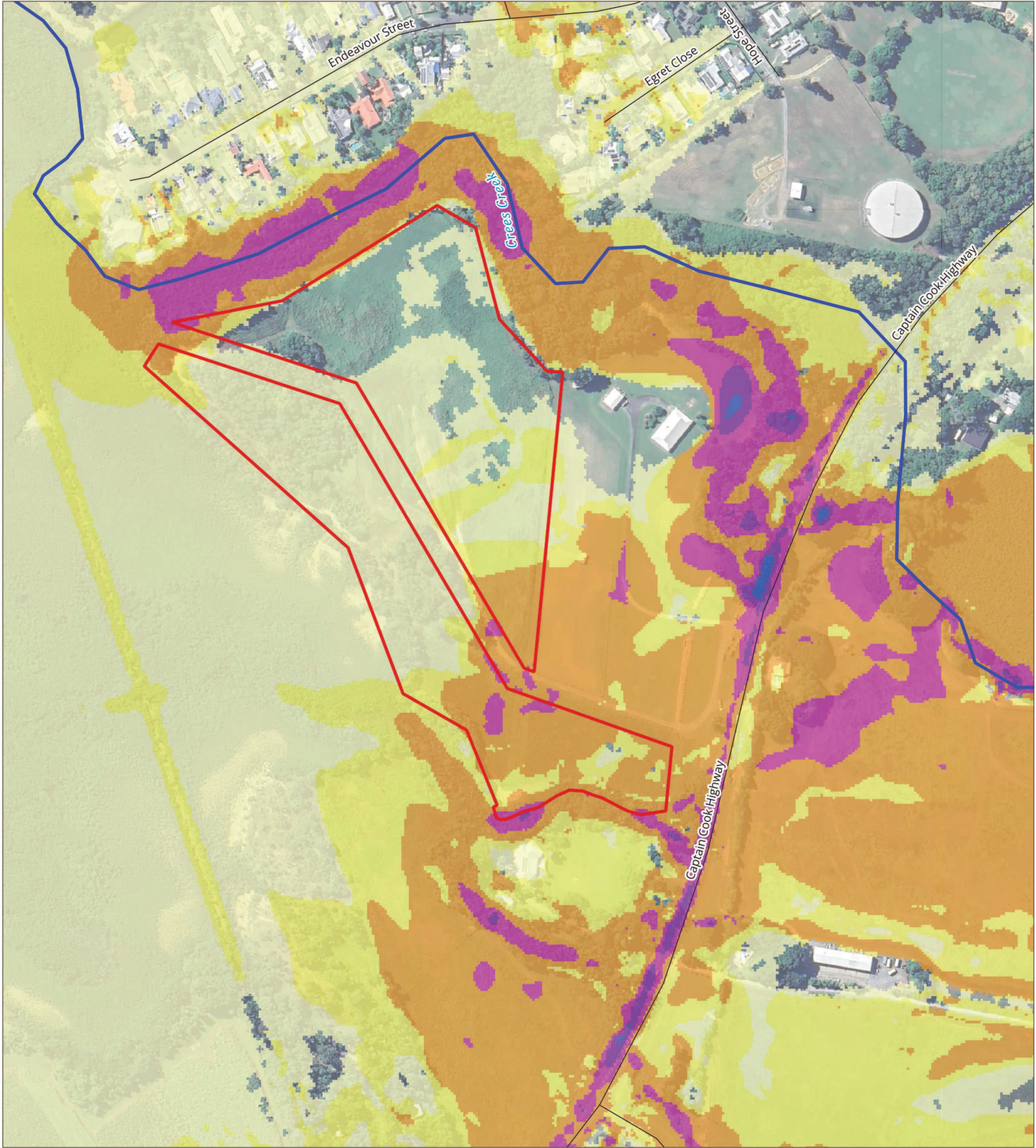
0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix A-14
Developed Case - 2090
Peak Velocity
1% AEP

- LEGEND**
- Site Location
 - Roads
 - Watercourses
 - Peak Velocity (m/s)
 - ≤ 0.25
 - 0.25 - 0.50
 - 0.50 - 1.00
 - 1.00 - 1.50
 - 1.50 - 2.00
 - > 2.00



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025





CIVIL | WATER | ENVIRONMENT

Appendix A-15

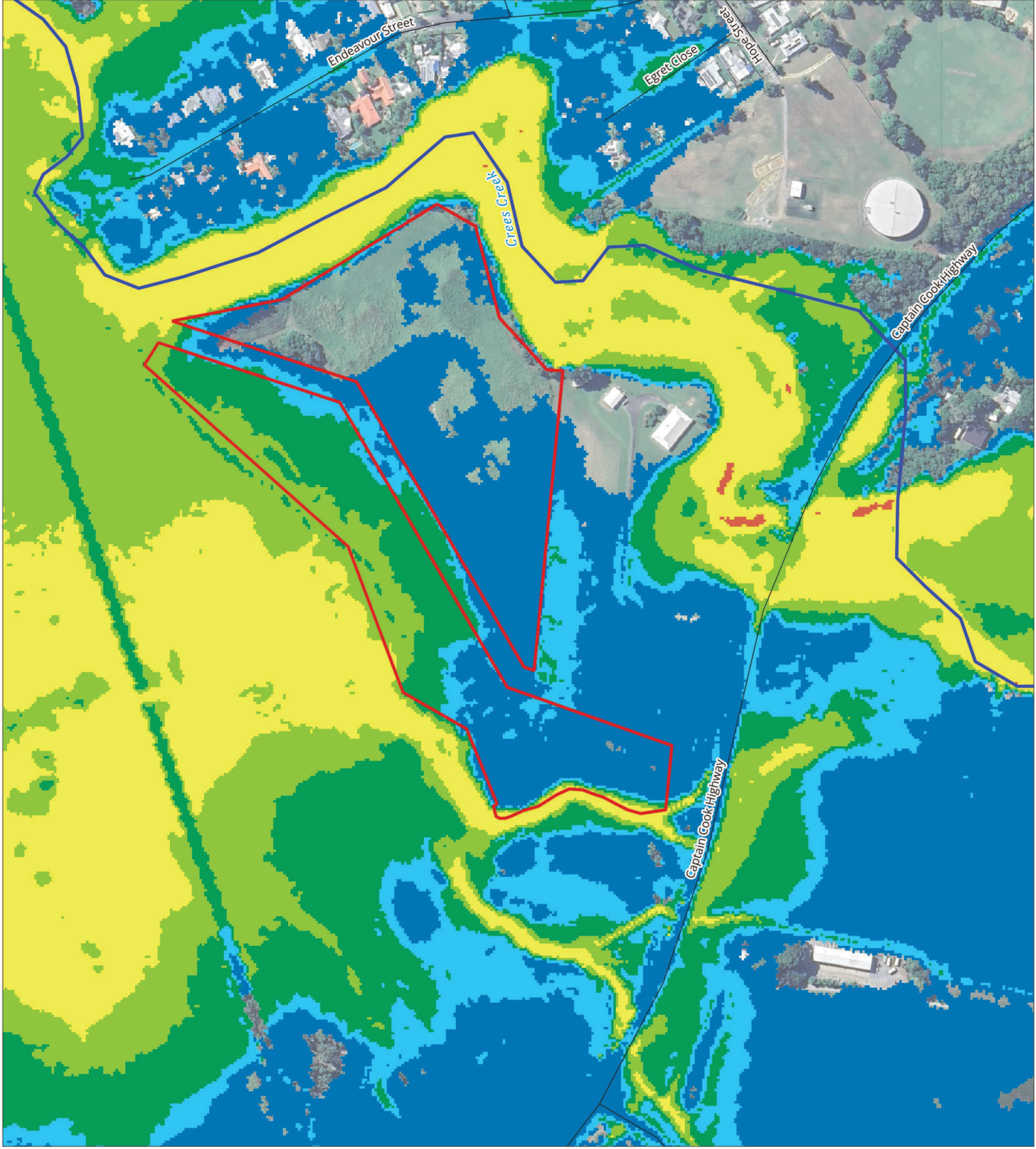
Developed Case - 2090
Hazard
1% AEP

LEGEND

- Site Location
- Roads
- Watercourses

Hazard Categories

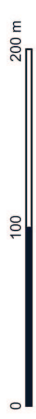
- H1 - No Restrictions
- H2 - Unsafe for Small Vehicles
- H3 - Unsafe for Vehicles, Children & Elderly
- H4 - Unsafe for People & Vehicles
- H5 - Unsafe for People & Vehicles (Buildings Require Special Engineering Design and Construction)
- H6 - Not Suitable for People, Vehicles or Buildings



Crees Creek FIA
OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



APPENDIX C

AFFLUX MAPS



CIVIL | WATER | ENVIRONMENT

Appendix C-1

2030 Developed - Existing Afflux 1% AEP

LEGEND

Site Location

Roads

Watercourses

Afflux (m)

<= -0.5

-0.5 - -0.4

-0.4 - -0.2

-0.2 - -0.1

-0.1 - -0.05

-0.05 - -0.035

-0.035 - -0.01

-0.01 - 0.01

0.01 - 0.035

0.035 - 0.05

0.05 - 0.1

0.1 - 0.2

0.2 - 0.4

0.4 - 0.5

> 0.5

Was Wet Now Dry

Was Dry Now Wet



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix C-1

2030 Developed - Existing Afflux 1% AEP

LEGEND

Site Location
Roads
Watercourses

Afflux (m)

<= -0.5
-0.5 - -0.4
-0.4 - -0.2
-0.2 - -0.1
-0.1 - -0.05
-0.05 - -0.035
-0.035 - -0.01
-0.01 - 0.01
0.01 - 0.035
0.035 - 0.05
0.05 - 0.1
0.1 - 0.2
0.2 - 0.4
0.4 - 0.5
> 0.5
Was Wet Now Dry
Was Dry Now Wet



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix C-2

2030 Developed - Existing
Afflux
2% AEP

LEGEND

Site Location
Roads
Watercourses

Afflux (m)

<= -0.5	-0.5 - -0.4	-0.4 - -0.2	-0.2 - -0.1	-0.1 - -0.05	-0.05 - -0.035	-0.035 - -0.01	-0.01 - 0.01	0.01 - 0.035	0.035 - 0.05	0.05 - 0.1	0.1 - 0.2	0.2 - 0.4	0.4 - 0.5	> 0.5	Was Wet Now Dry	Was Dry Now Wet



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix C-3

2030 Developed - Existing Afflux 5% AEP

LEGEND

Site Location
Roads
Watercourses

Afflux (m)

<= -0.5
-0.5 - -0.4
-0.4 - -0.2
-0.2 - -0.1
-0.1 - -0.05
-0.05 - -0.035
-0.035 - -0.01
-0.01 - 0.01
0.01 - 0.035
0.035 - 0.05
0.05 - 0.1
0.1 - 0.2
0.2 - 0.4
0.4 - 0.5
> 0.5
Was Wet Now Dry
Was Dry Now Wet



Crees Creek FIA

OSE Group

A3 Scale: 1:3000

Job No: 11030

Date: 28/11/2025



0 100 200 m



CIVIL | WATER | ENVIRONMENT

Appendix C-4

2030 Developed - Existing Afflux 20% AEP

LEGEND

Site Location

Roads

Watercourses

Afflux (m)

<= -0.5

-0.5 - -0.4

-0.4 - -0.2

-0.2 - -0.1

-0.1 - -0.05

-0.05 - -0.035

-0.035 - -0.01

-0.01 - 0.01

0.01 - 0.035

0.035 - 0.05

0.05 - 0.1

0.1 - 0.2

0.2 - 0.4

0.4 - 0.5

> 0.5

Was Wet Now Dry

Was Dry Now Wet





CIVIL | WATER | ENVIRONMENT

Appendix C-5
2090 Developed - Existing
Afflux
1% AEP

LEGEND

Site Location
Roads
Watercourses

Afflux (m)

<= -0.5	-0.5 - -0.4	-0.4 - -0.2	-0.2 - -0.1	-0.1 - -0.05	-0.05 - -0.035	-0.035 - -0.01	-0.01 - 0.01	0.01 - 0.035	0.035 - 0.05	0.05 - 0.1	0.1 - 0.2	0.2 - 0.4	0.4 - 0.5	> 0.5	Was Wet Now Dry	Was Dry Now Wet



Crees Creek FIA
OSE Group

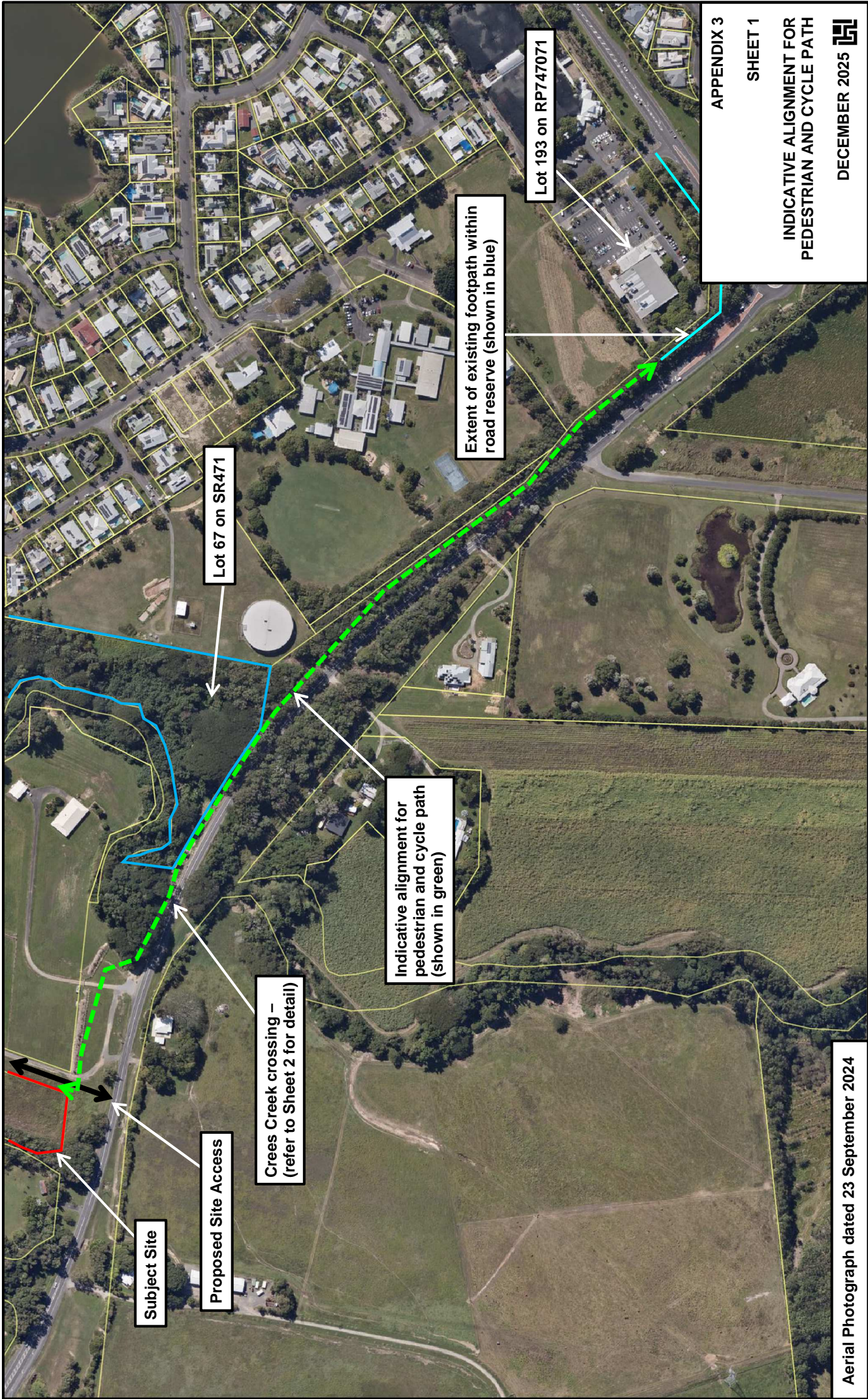
A3 Scale: 1:3000

Job No: 11030
Date: 28/11/2025



0 100 200 m

APPENDIX 3



APPENDIX 3

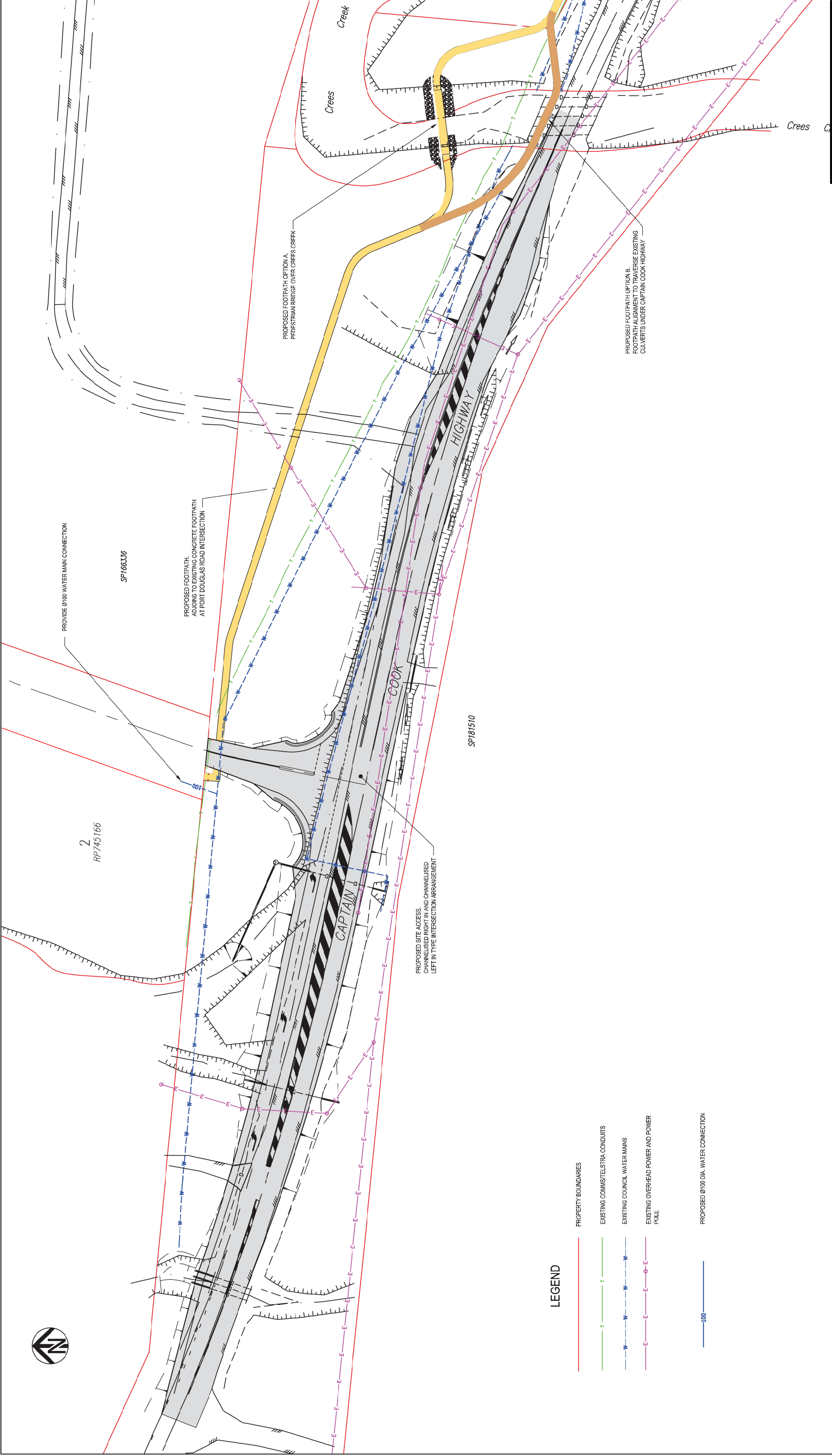
SHEET 1

INDICATIVE ALIGNMENT FOR
PEDESTRIAN AND CYCLE PATH

DECEMBER 2025



Aerial Photograph dated 23 September 2024



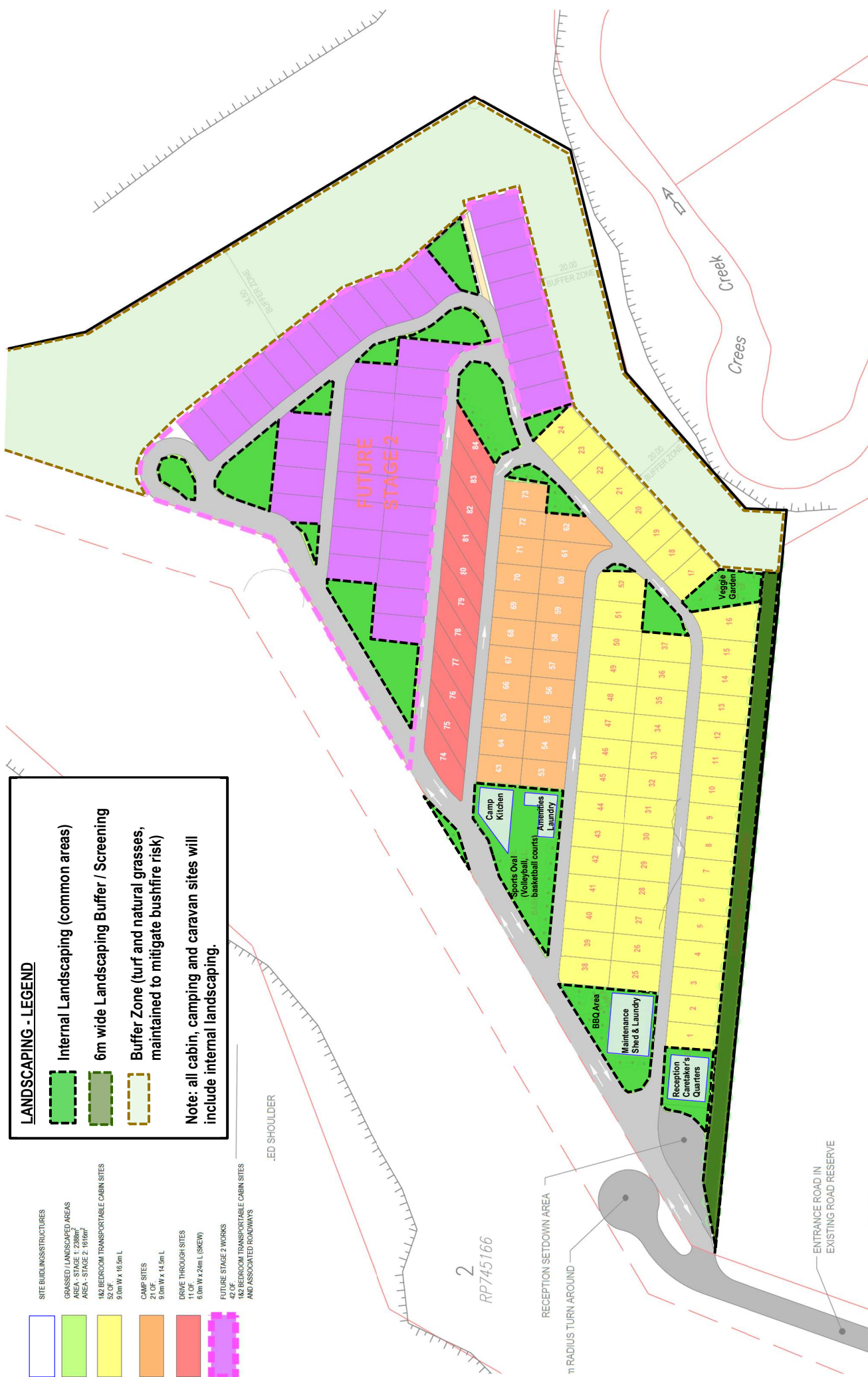
APPENDIX 3
SHEET 2
CREES CREEK CROSSING
AND SITE ACCESS PLAN
DECEMBER 2025

A 04.12.23 FOR APPROVAL REV DATE REVISION NOTES	DESIGNER	<div><p>Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au</p></div>	CLIENT SUPERIOR STAYS	PROJECT WORKERS ACCOMODATION COMPLEX - LOT 2 RP745166 CAPTAIN COOK HIGHWAY, PORT DOUGLAS	TITLE SITE ACCESS PLAN, SERVICES CONNECTIONS AND CYCLEWAY OPTIONS	DRAWING CHECK		DRAWING No	REV	
						DRAWN D/M	AM/CP			DATE
						DESIGNED D/M	AM/CP			
						APPROVED				
A 04.12.23 FOR APPROVAL		SCALE 1:500		Orig. Sheet A3						
		DO NOT SCALE DRAWINGS								
		Scales Before Reduction								



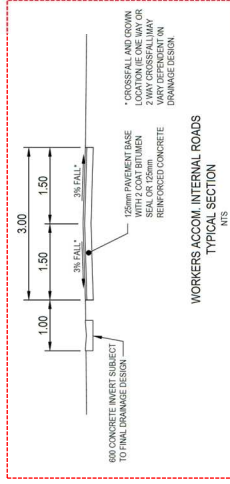
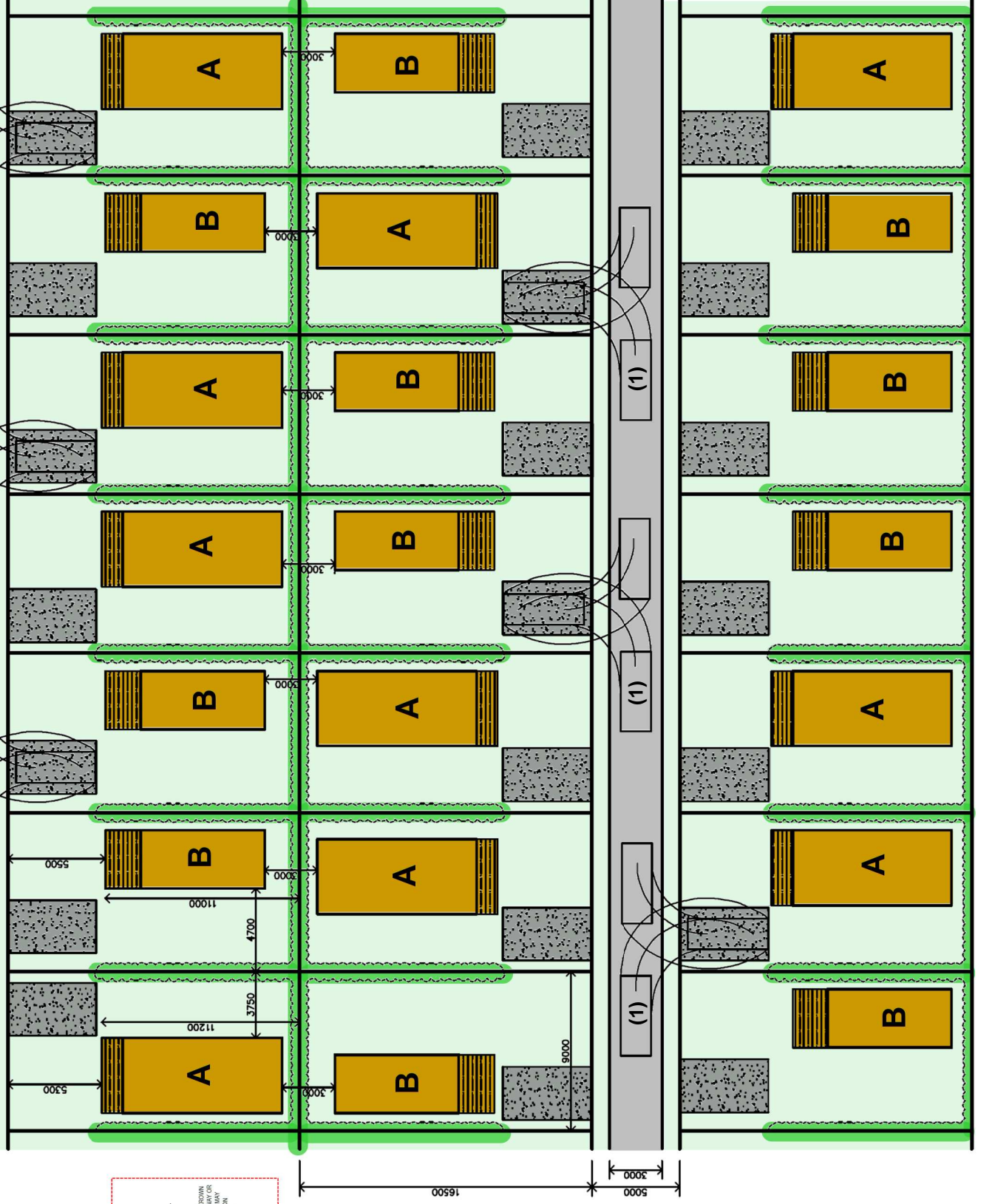
APPENDIX 4

APPENDIX 4 - LANDSCAPE CONCEPT PLAN



APPENDIX 5

APPENDIX 5 – TYPICAL CABIN LAYOUT PLAN



Note: (1) Swept Path for B85 Vehicle

LEGEND

- Internal Roadway (refer Section)
- 1m wide Landscape Screening
- Cabin Sites (9m x 16.5m)
- Hardstand car parking space (5m x 3m)
- Cabin Type A (2 Bedroom) (Refer Appendix F of Town Planning Report)
- Cabin Type B (1 Bedroom) (Refer Appendix F of Town Planning Report)

APPENDIX 6

APPENDIX 6 - ADVERTISING DEVICE

