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Rutherglen BESS–Stormwater Management Plan with Incident Containment

Dear James,

WMS Engineering (WMS) has prepared this Stormwater Management Plan for Incident Containment for the proposed Rutherglen Switchyard and Battery Energy Storage System (BESS) located at 837 Red Hill Road, Bororen, Queensland. This report has been developed using project information and supporting documentation provided by Red Hill Renewable Energy (RHRE), including correspondence and materials received on 9 and 10 March 2026, as well as previous studies done by WMS regarding a proposed solar farm and the BESS. The purpose of this report is to outline the stormwater management approach for the site, with a focus on incident containment requirements for potential contaminant spills and fire-related runoff.

1 INTRODUCTION

WMS was engaged by Red Hill Renewable Energy (RHRE) in 2024 to undertake a flood and drainage study for the proposed Red Hill Solar Farm. It is understood that, since completing the study, the energy project has been altered and now includes a proposed BESS and switchyard located along the adjacent high voltage transmission line. WMS carried out a Flood Assessment and Stormwater Management Plan for the BESS development in August 2025. Red Hill Renewable Energy (RHRE) has now requested that WMS further develop the work with particular attention to the Stormwater Management Plan, which is required to provide containment for onsite incidents such as contaminant spills or fire response.

The Storm Water Management Plan will address requirements set out by the State Assessment and Referral Agency (SARA) and aim to satisfy community concerns regarding potential contaminants entering the local waterways and wider environment. The site is in proximity to a tributary of Killarney Creek, which flows into Baffle Creek and eventually to the ocean, where cumulative impacts to the Barrier Reef are of concern. The Stormwater Management Plan for Incident Containment will draw on the previous work and findings WMS has carried out and consolidate the details as needed.

Red Hill Renewable Energy proposes to develop a BESS with a maximum power rating of 400 MW and four hours of storage capacity (1,600 MWh) across an approximate 20-hectare site. The site is located approximately 8 km east of Bororen, Queensland, and is currently characterised by scattered bushland and grassed paddocks. Gladstone Regional Council (GRC) requires electrical infrastructure to be located above, or designed to mitigate, floodwater infiltration up to the 0.5% and 0.2% Annual Exceedance Probability (AEP) events. These requirements are prescribed under the Flood Hazard Overlay Code (Part 8.2.7) of the GRC Planning Scheme. The site location is shown in Figure 1-1.

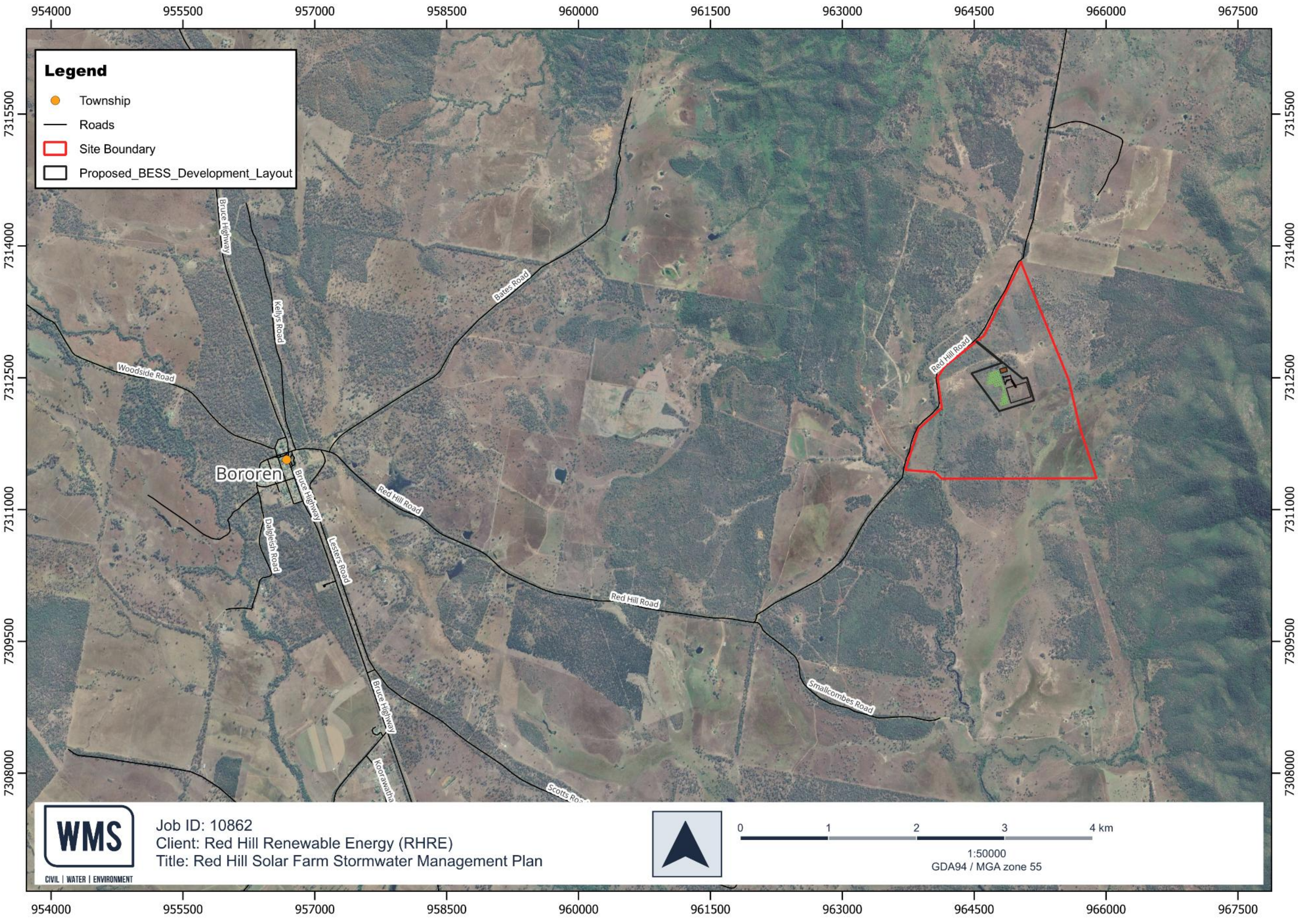

Figure 1-1 Site Location Overview

2 SCOPE

A detailed review of previous work, including documentation and regulatory requirements, was used to undertake the desktop assessment and develop the stormwater management plan with incident containment as outlined in Table 2-1.

Table 2-1: Scope of Work

Task	Assumptions/Exclusions
1.0 Data Collation and Detailed Review	
• Review and collate all available data, including: – All previous modelling, reporting and hydrological datasets sourced and produced by WMS – Documents and guidelines related to regulatory requirements – Relevant interdisciplinary reports provided by Red Hill Renewable Energy (RHRE) – Site layouts, GIS data, and other supporting information	• Site visit not included.
2.0 Desktop Assessment and Stormwater Management Plan Development	
The Stormwater Management Plan and Incident Containment will include the following: • GIS desktop assessment of data to develop a containment system for incident response, including identification of drainage pathways, drainage features, calculations of containment volumes and operational functionality. • The regulatory compliance framework, technical design requirements, and operational requirements will be as per the 'Technical Standard Bunding and Spill Requirements' provided by Red Hill Renewable Energy (RHRE). • Consideration of SARA requirements with particular attention to the State Code 27 section on 'Protecting water quality and stormwater management' (Section PO16 to PO19). • Development of the Stormwater Site Plan illustrating how development avoids impacts to waterways, wetlands, and drainage lines (with buffer zones). • Specific scope requirements requested by Red Hill Renewable Energy (RHRE) include: - In relation to waterway crossings, show low-impact methods, such as culverts, and detail how natural drainage patterns will be preserved. - Include measures to minimise erosion and sediment runoff. - Provide commitment to regular monitoring, especially during periods of heavy rain. - Provide a statement prepared by an RPEQ specialising in water quality and stormwater specifying systems that naturally manage runoff and prevent water flow concentration. The statement must also confirm that construction and operation will not destabilise waterway banks and detail any rehabilitation works, such as vegetation. - Demonstrate that the development incorporates water containment systems that, in the event of fire or explosion, will prevent contaminated runoff from entering surface water or groundwater.	• Construction-period erosion and sediment control measures and details (Erosion and Sediment Control Plan) have been excluded from this assessment.
3.0 Reporting	
• A Stormwater Management Plan Report detailing the approach, supporting calculations, site plans and outcomes. Reporting will include supporting figures, graphs, and tables. Recommendations for future work or design refinements at later stages will be provided where required.	• Final submission to include RPEQ sign off.

3 DATA COLLECTION AND REVIEW

A review of available data was undertaken, including all previous modelling, reporting and hydrological datasets sourced and produced by WMS, together with project information and supporting documentation provided by Red Hill Renewable Energy (RHRE).

3.1 PROJECT INFORMATION AND DESIGN DOCUMENTATION

The project inputs provided by Red Hill Renewable Energy (RHRE) include proposed layout drawings for the BESS and associated switchyard infrastructure, as seen in Figure 3-1. The BESS layout drawings depict a clustered arrangement of multiple containerised battery units (BESS sheds) located within a defined compound, together with internal access aisles, a proposed berm and potential detention areas. The drawings also show the spatial relationship between the BESS compound, the adjacent switchyard, and site access roads, defining the overall development footprint relevant to stormwater management and incident containment.

Proposed earthworks and site level drawings illustrate the intended finished ground levels across the BESS and switchyard areas, including areas of cut and fill required to create level platforms for the battery units and electrical infrastructure (refer

Figure 3-2). The plans indicate how the site is to be graded to manage overland flows, identify local high and low points, and direct surface runoff towards designated drainage corridors and containment features. The plans utilised for this stormwater assessment is provided in Appendix C.

Infrastructure shown on the drawings includes internal access roads, hardstand surfaces, equipment pads, and drainage features servicing the BESS and switchyard, defining the principal impervious areas within the site.

Relevant correspondence provided by Red Hill Renewable Energy (RHRE) confirms key stormwater management assumptions, including the presence and role of proposed detention basins within the site for incident containment. These basins are intended to form part of the overall strategy for managing site runoff and providing containment capacity during incident scenarios, such as fire-fighting activities or accidental releases.

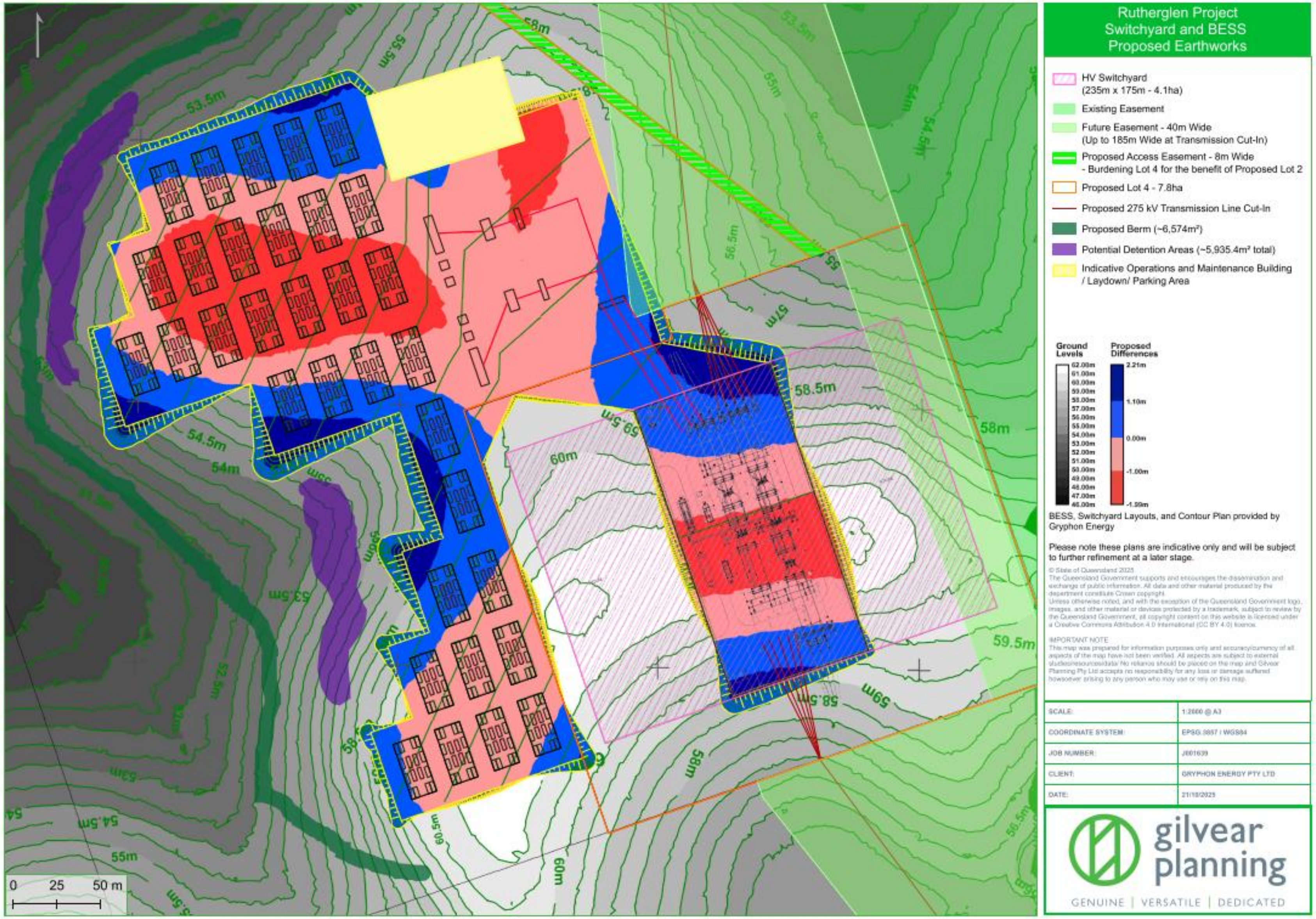

Figure 3-1 Proposed BESS and Switchyard Layout (Gilvear Planning, 2025)

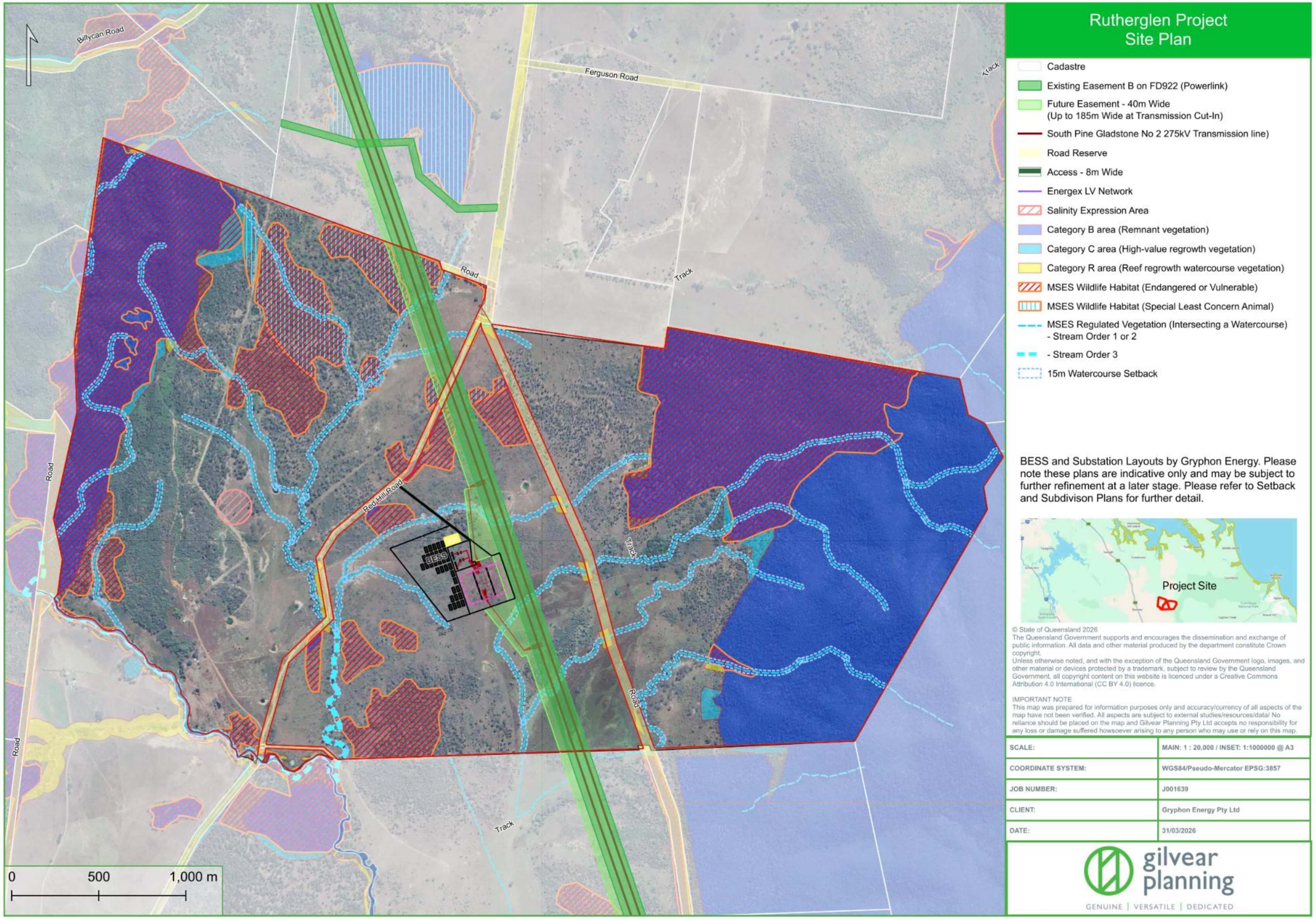

Figure 3-2 Proposed BESS Site Plan (Gilvear Planning, 2026)

3.2 Previous Studies And Modelling

WMS previously undertook a flood modelling and stormwater assessment for the proposed BESS in 2025. The assessment was completed to characterise both mainstream and overland flooding behaviour across the site and to inform development and flood risk management for events up to and including the 0.1% AEP. The key results are summarised below:

- The modelling demonstrated that for all events up to and including the 0.5% AEP flood event, flows within the main watercourse are largely contained within existing channels through most of the site, with localised bank overtopping occurring only near the southern boundary. Importantly, the model results indicated that floodwaters did not reach the proposed battery station locations for the defined flood events, refer (WMS Engineering, 2025).
- Rain-on-grid modelling showed that overland flows across the site are predominantly shallow and naturally conveyed towards the existing drainage lines. Channelised flow depths were typically in the order of 0.5 m to 1.5 m, while non-channelised sheet flow depths were generally less than 0.5 m for the 1% and 0.5% AEP events (refer Figure 3-4).
- The assessment confirmed that flooding up to and including the 0.1% AEP posed no risk to any of the key electrical infrastructure associated with the BESS, exceeding the minimum flood requirements outlined in the GRC Council Planning Scheme.
- Any local inundation within the switchyard area is attributable to minor local catchment runoff rather than external flood sources.
- Impervious areas (including equipment pads and access tracks) are limited in extent and are generally disconnected from formal piped drainage systems, reducing the potential for rapid runoff concentration.
- A comparison of pre- and post-development scenarios indicates that the proposed development results in no material change to flood levels, velocities, extents or peak discharges at the site or adjoining properties.
- No diversion of drainage paths is required, as modelling demonstrates that existing channels provide sufficient flow capacity for events up to and including the 0.1% AEP.
- The natural hydrological function of the catchment is effectively preserved, and lawful points of discharge remain unchanged from pre-development conditions.
- Overall, the hydraulic assessment demonstrates that the proposed Rutherglen BESS can be developed within the existing floodplain without adverse impacts to flood behaviour, stormwater conveyance or site safety.

The modelling results for the mainstream and overland flooding flood depths, extents and velocities for the post-development scenario under the 0.5% AEP event can be found in the figures below. Data from the models replicating the 0.5% AEP event were selected due to the GRC's requirement that electrical infrastructure must sit above, or mitigate floodwater infiltration up to this event.

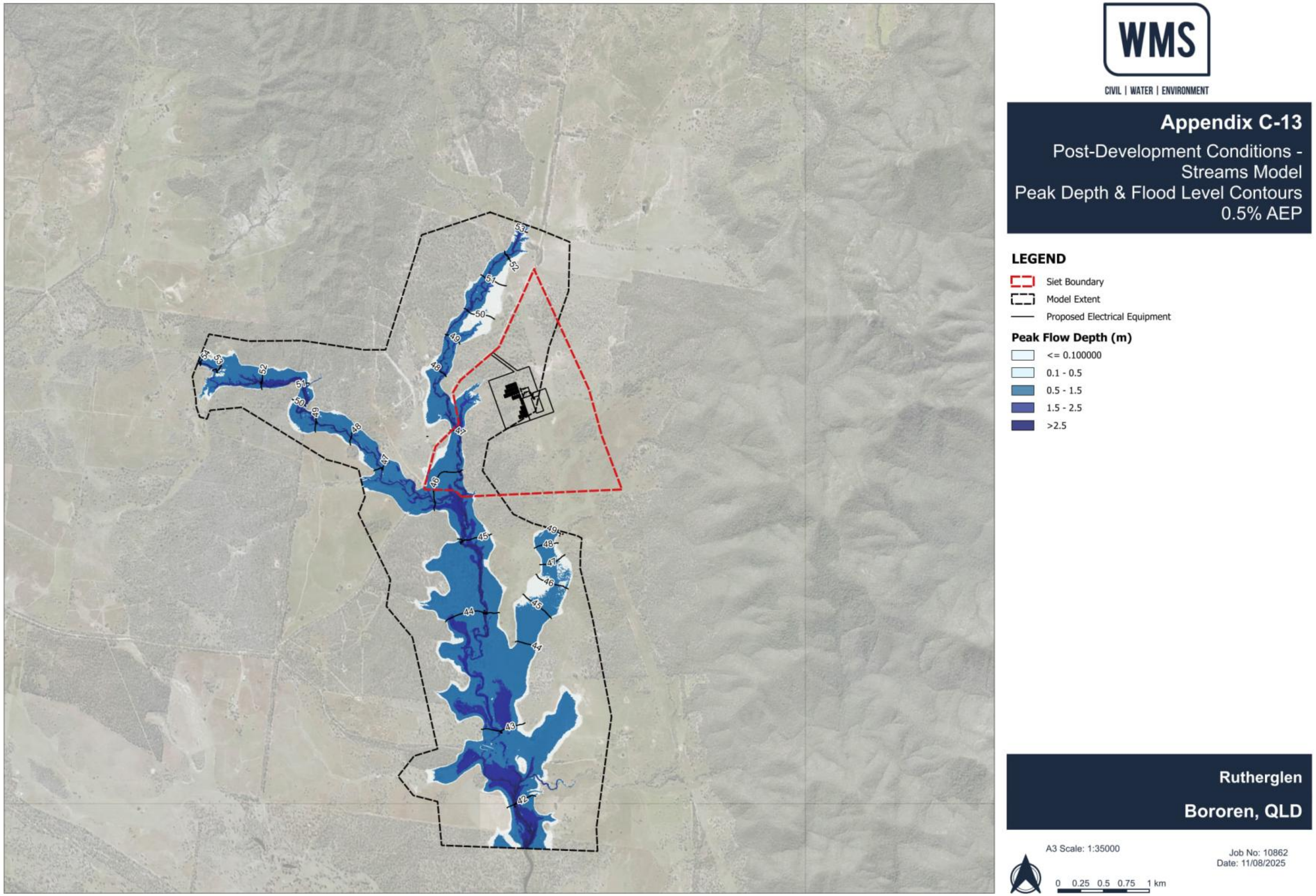

Figure 3-3 The Mainstream Flooding Peak Depth and Extent for the 0.5% AEP Event for the Post-Development Conditions Previously Modelled by WMS in 2025

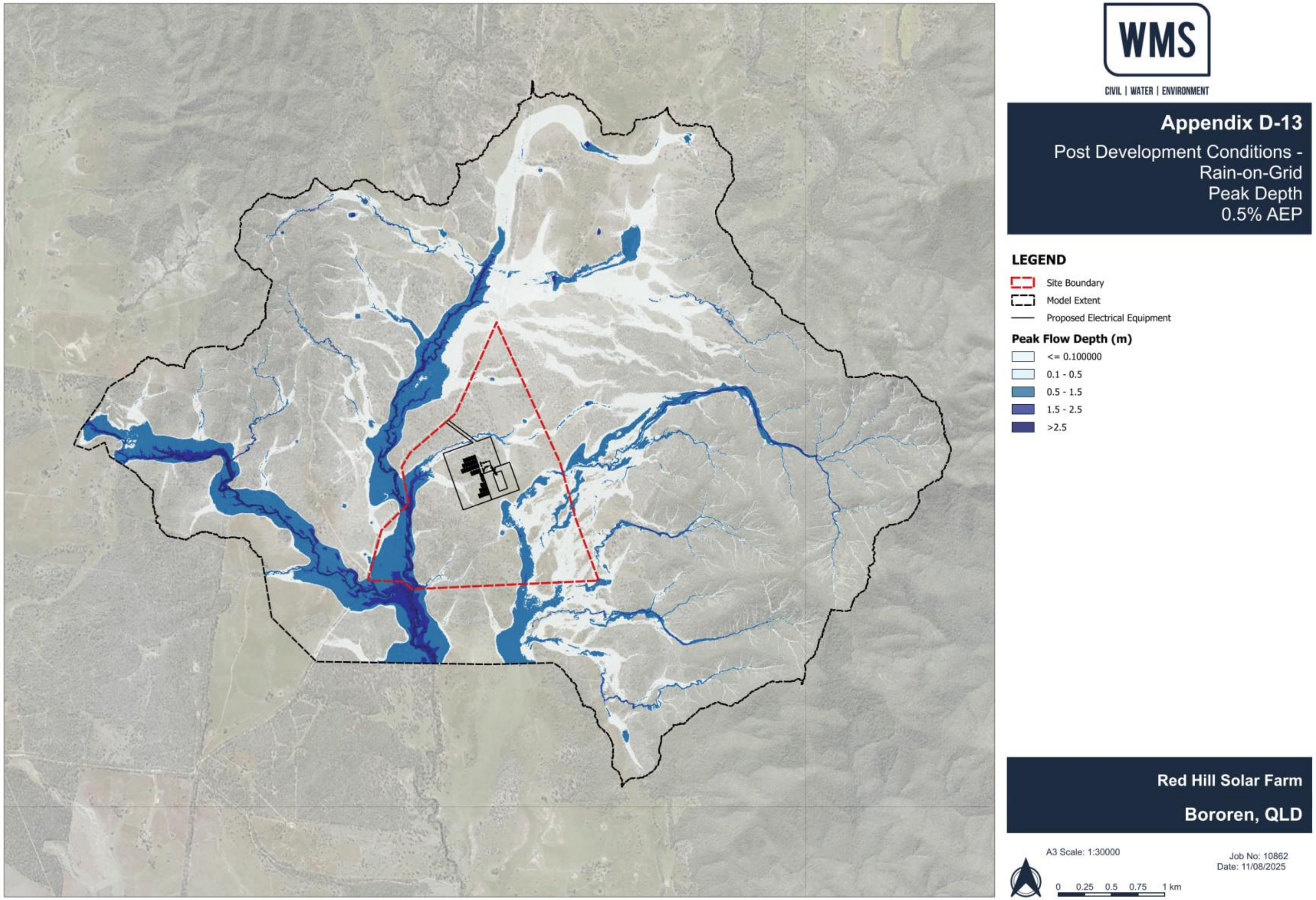

Figure 3-4 The Overland Flooding Peak Depth and Extent for the 0.5% AEP Event for the Post-Development Conditions Previously Modelled by WMS in 2025

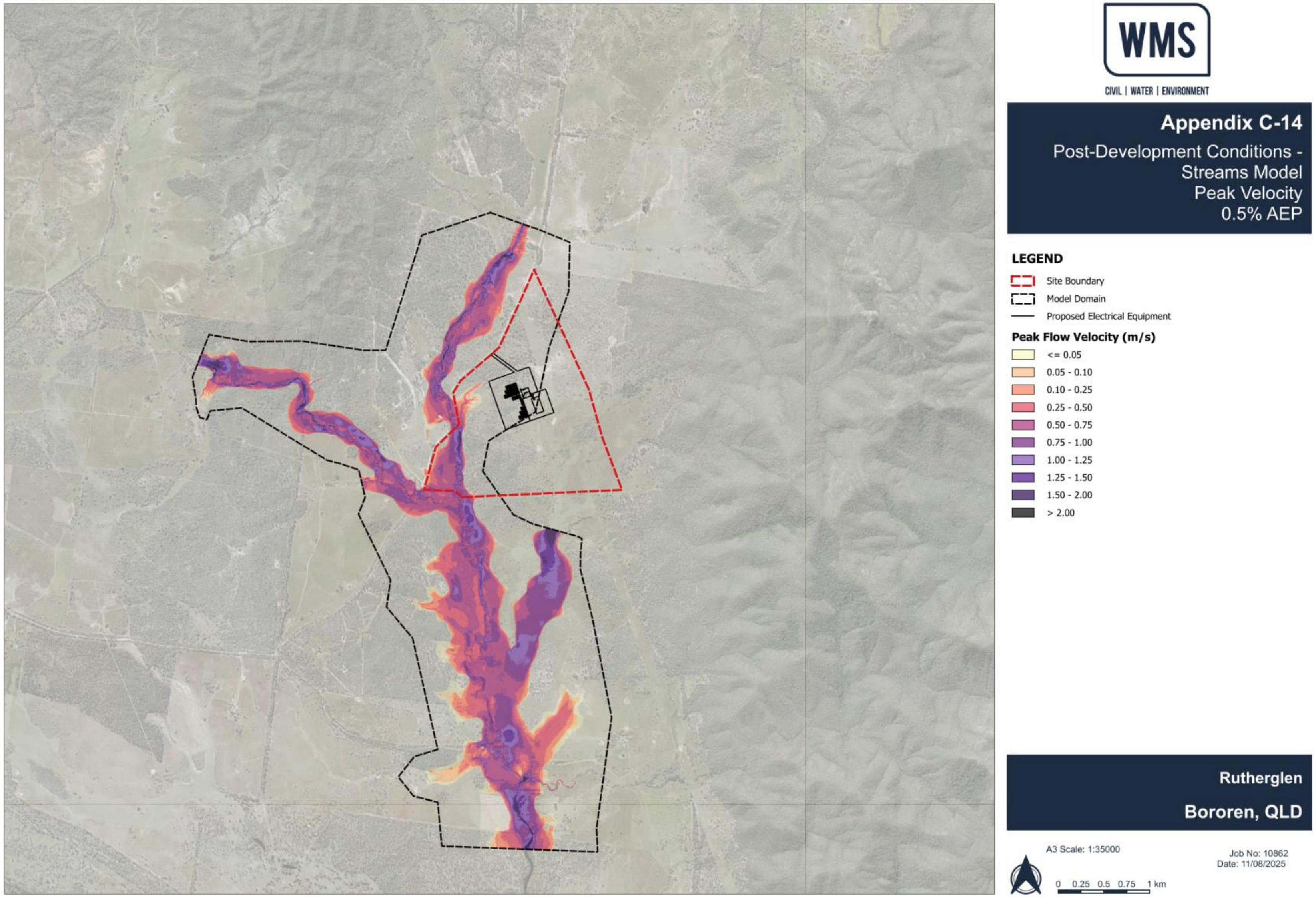

Figure 3-5 The Velocity of Mainstream Flooding During the 0.5% AEP Event for Post-Development Conditions Previously Modelled by WMS in 2025

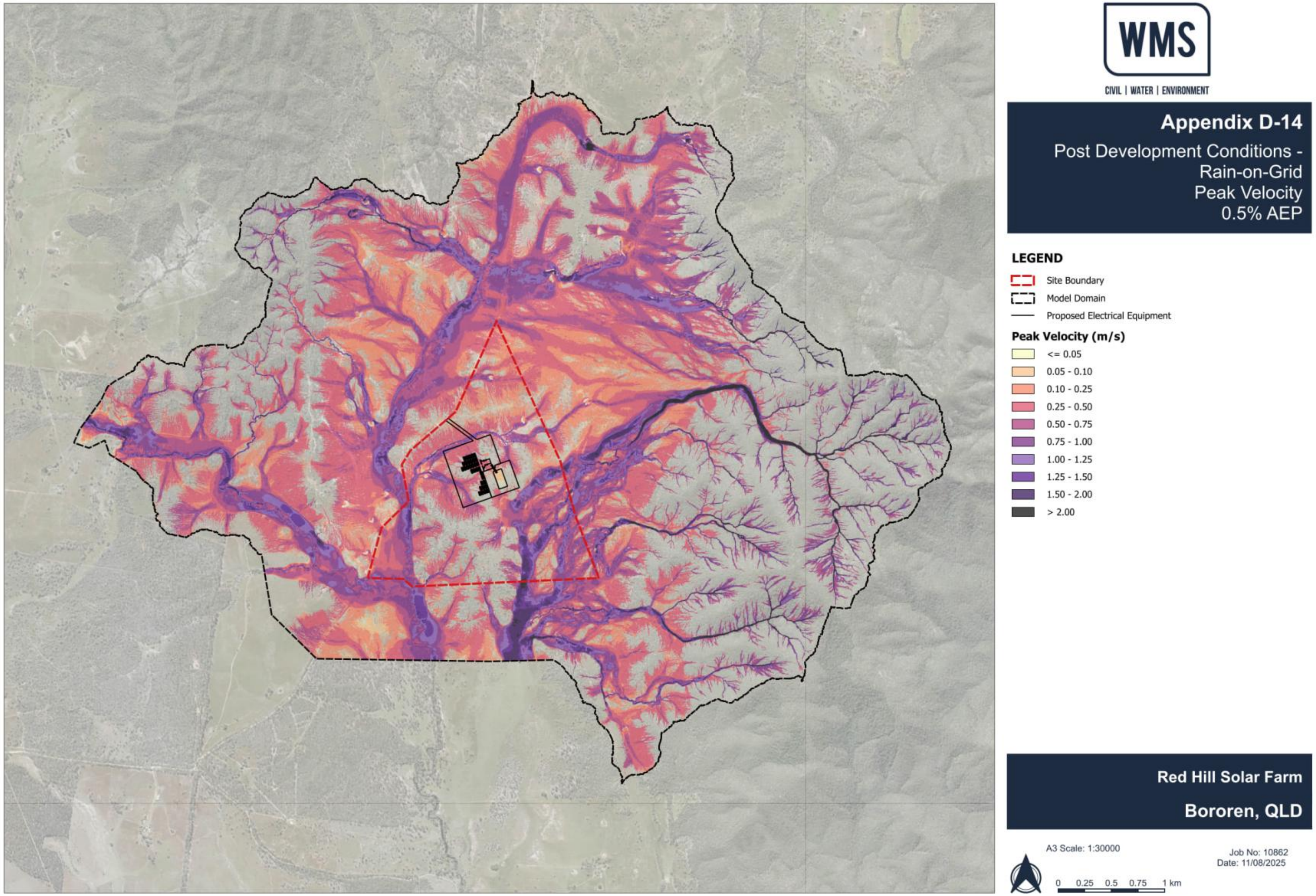

Figure 3-6 The Velocity of Overland Flooding during the 0.5% AEP Event for Post-Development Conditions Previously Modelled by WMS in 2025

3.3 TOPOGRAPHY

The site is proposed to be developed on rural land, consisting of grassed paddocks and scattered bushland. The local topography shows that the highest point within the proposed BESS development is approximately 64 mAHD in the south-western corner, and the lowest point is approximately 50 mAHD in the north-western corner (refer Figure 3-7).

In the previous report done by WMS in 2025, the catchment was delineated using 1 m resolution LiDAR-derived topographic data sourced by ELVIS. The total catchment area for the study was determined to be approximately 64 km^2. The sub-catchment delineations were created using GIS techniques and manually refined, and the results can be seen in Figure 3-8. Overland flows and watercourses naturally drain from the north to the south, discharging to downstream waterways and eventually into Killarney Creek.

The post-development topography given by Red Hill Renewable Energy (RHRE) (Figure 3-1) indicate minor cut and fill of the land primarily to create level equipment pads, and the broader slopes and drainage gradients remain unchanged. Additionally, final levels sit above the overland and mainstream flood extents (Figure 3-3 and Figure 3-4) following compliance with the GRC requirements, and indicating that no flood protection structures need to be implemented in the design.

Local topography in the post-development plans within the BESS containerised area indicates a gentle slope of approximately 1.70% toward the north-west, with elevations ranging from approximately 61 mAHD to 54 mAHD. This slope promotes controlled sheet flow across the compound and directs overland runoff toward the north-west. Steeper gradients are confined to existing drainage lines located outside the BESS and switchyard extents. These topographic features support predictable overland flow behaviours (refer Figure 3-9) and limit the potential for erosion within the developed BESS area.

Finished site levels are designed to broadly follow existing ground conditions, with minor cut and fill done where required to establish level equipment pads. No regrading is proposed that would alter drainage patterns or redirect overland flow paths.

Figure 3-7 The Local Topography

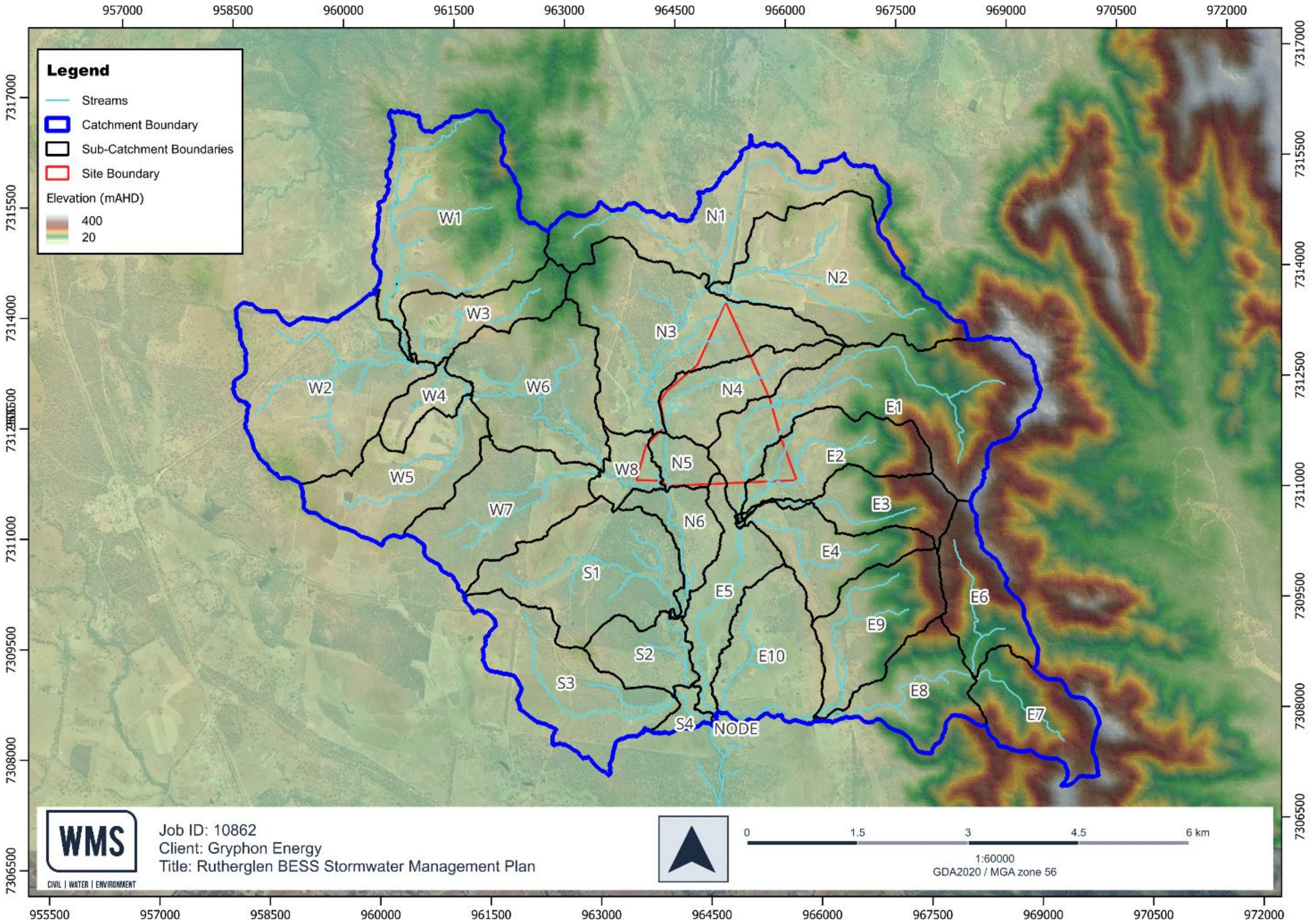

Figure 3-8 Catchment Delineation

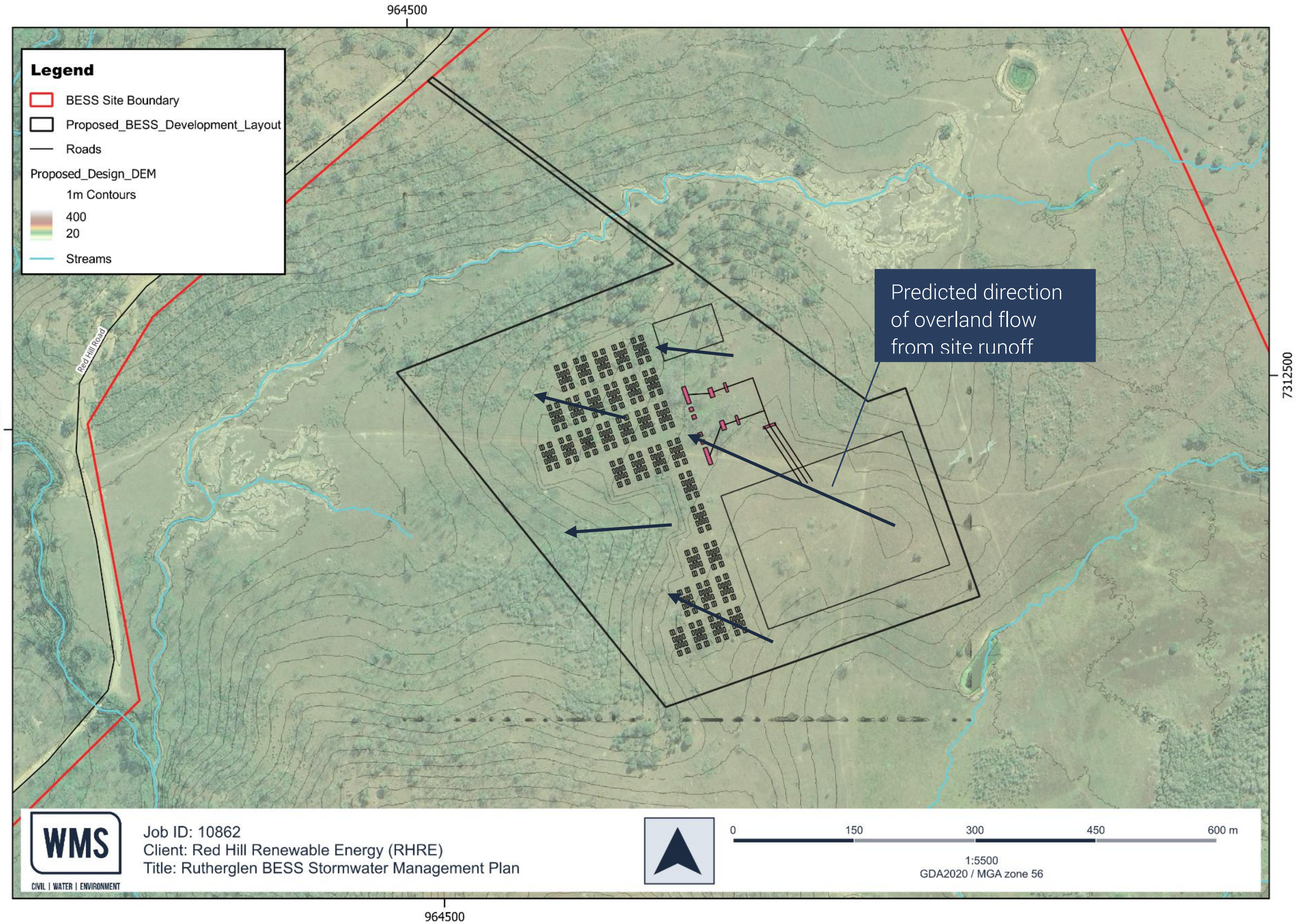

Figure 3-9 Predicted Direction of Overland Flow Within the Proposed BESS Development (Pre-Development Topography Levels)

3.4 RAINFALL

For a conservative design basis, the containment system will be designed to account for, and retain both fire-fighting water, as well rainfall runoff generated within the BESS. This acknowledges the possibility of a BESS fire incident occurring simultaneously to a rainfall event, and that containerised modules will burn irrespective of rain.

For the purpose of this management plan, a 10% AEP rainfall event was chosen as a credible and conservative design scenario, representing a rainfall event that is neither too rare nor extreme. A 24-hour rainfall duration was selected to continue accounting for a worst-case scenario fire incident, aligning with assumptions involving the duration of post-incident management, fire-fighting activities and the potential mobilisation of contaminants. This design basis ensures that the containment system has sufficient capacity to retain all the fire-fighting water alongside rainfall runoff that may become contaminated during an incident.

Design rainfall data for the 10% AEP event at the proposed BESS location was obtained from the Bureau of Meteorology (BoM) (2026), and summarised in the table below:

Table 3-1: The IFD Design Rainfall Depth for a 10% AEP Event at the BESS Location Over a 24-Hour Period

Duration (minutes)	Design Rainfall Depth (mm)
60	63.3
1440	222

A Depth-Area-Runoff Coefficient equation, together with the Queensland Drainage Urban Manual (QUDM) information, was used to estimate peak runoff volumes from the BESS under the 10% AEP event. Rainfall runoff volumes have been calculated using the total 24-hour IFD rainfall depth multiplied by the catchment area and representative runoff coefficients. This method directly estimates runoff volume and avoids the application of peak-flow equations beyond their intended use. The catchment extents are shown in Figure 3-10, with calculations provided in Appendix B.

Therefore, based on the catchment sizes and available IFD rainfall data, the total expected amount of rainfall over a 24-hour period from each catchment was calculated:

Table 3-2: The Total Predicted Volume of Rainfall Runoff Generated Each Catchment Within the BESS Over 24 Hours Under the 10% AEP Conditions

	Catchment 1	Catchment 2
Size of Catchment (m^2)	49518	58718
C_{10} value (based on QUDM table)	0.87	0.78
Fraction Impervious (Assumed)	0.9	0.6
Q Value (m^3/s)	0.11069	0.11768
Duration of event (seconds)	86400	86400
Total Rain Run-off Volume (m^3)	9563.91	10285.35

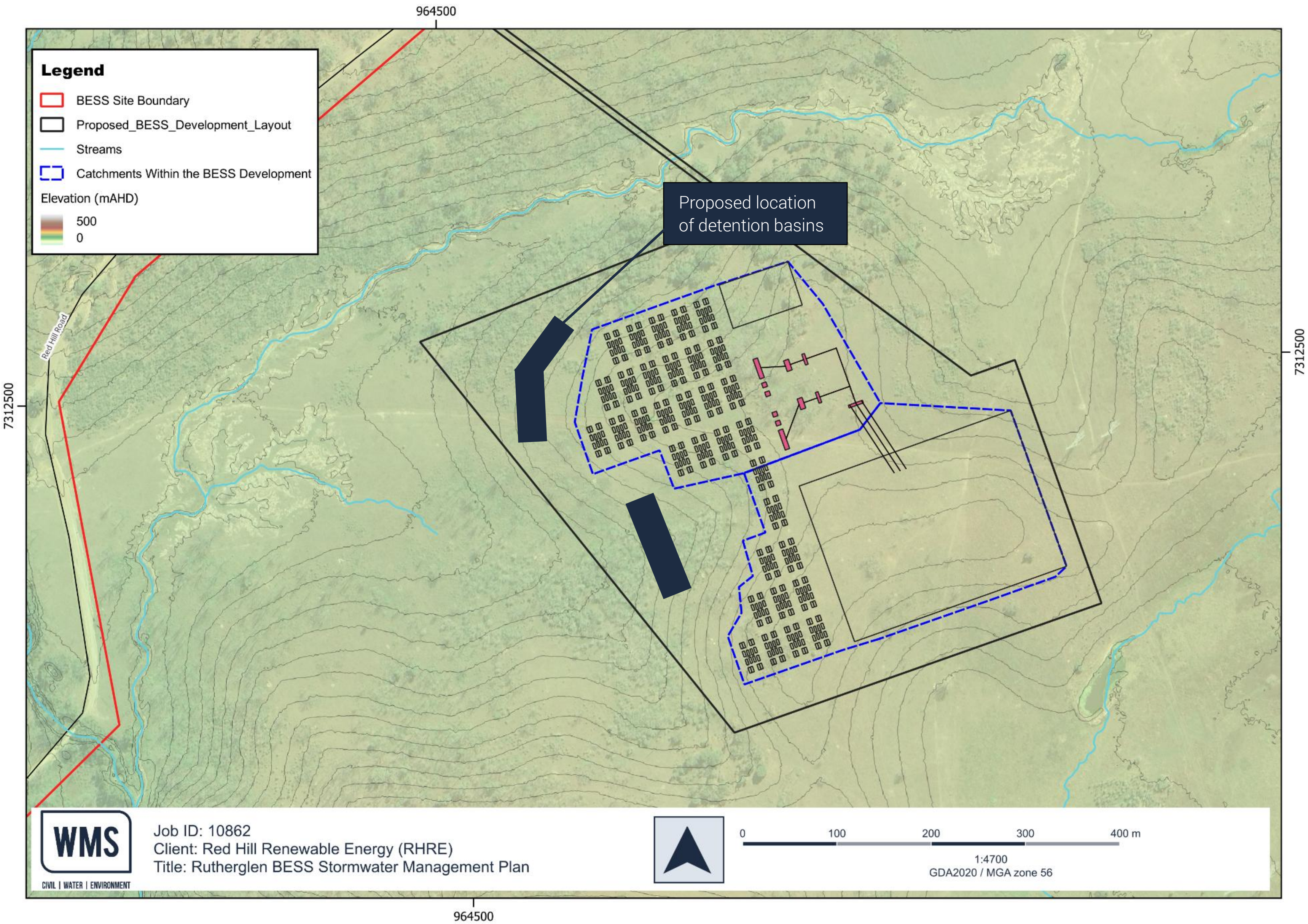

Figure 3-10 The Proposed Location of Basins in Relation to the Post-Development Topography, and Catchments within the BESS

3.5 REGULATORY REQUIREMENTS

The Stormwater Management Plan with Incident Containment has been prepared regarding the requirements of the SARA, specifically State Code 27 provisions relating to protecting water quality and stormwater management, which include Performance Outcomes PO16 to PO19 (refer Table 3-3). The plan also regards the "Construction Phase: Stormwater Management Design Objectives" outlined in Section 9.3.2 of the GRC Planning Scheme 2026 (Table 3-4).

Furthermore, Red Hill Renewable Energy (RHRE) has provided a 'Technical Standard Bunding and Spill Containment' framework which will also be considered in this management plan. The framework defines the minimum technical design, operational and maintenance requirements for the BESS (refer Section 3.5.3).

3.5.1 State Code 27: Battery Storage Facility 2025

The purpose of the code is to ensure development for a BSF:

1. *avoids and/or appropriately integrates risk mitigation strategies and responsive design measures to address potential fire hazards, and other environmental risks, ensuring long-term safety and resilience for people, surrounding land uses and the environment,*
2. *minimises the loss or fragmentation of high-quality agricultural land;*
3. *does not result in unacceptable adverse impacts on individuals, communities, the environment, adjacent sensitive land uses and sensitive receptors, landscape values and infrastructure and services,*
4. *is decommissioned in a timely and efficient manner that reuses, recycles, and/or repurposes materials to the greatest extent possible and rehabilitates the environment.*

Table 3-3: State Code 27 provisions for Battery Storage Facility Development (Queensland Government, 2025)

Performance Outcome	Assessment Benchmarks
PO16	Development: • Minimises the disturbance of high risks soils; and • Manages the release of soil based contaminants
PO17	Development maintains the water quality of receiving waters, waterways and wetlands by: • Avoiding locating in waterways and wetlands; • Minimising crossings of and interference with natural drainage lines, farm drainage and irrigation infrastructure; • Minimising erosion and sediment run off; • Managing drainage control; and • Preserving the bank stability of affected waterways and drainage lines avoiding non-essential hardening or unnatural modification of the waterway.
PO18	Development prevents the release of contaminants to surface water or groundwater in the event of an incident, including a fire or explosion.
PO19	Development minimises interference with overland flow paths.

3.5.2 Gladstone Regional Council Planning Scheme 2026

The GRC Planning Scheme 2026 establishes the statutory framework for assessing development, setting out land use controls and performance outcomes to manage flood risk, stormwater, environmental protection and infrastructure design within the local government area.

The stormwater management design objectives aim to reduce environmental harm, protect waterways and increase compliance with erosion and sediment control measures, and the objectives are outlined below:

Table 3-4: Gladstone Regional Council "Construction Phase: Stormwater Management Design Objectives" (Adapted from Table 9.3.2.3.2 of the Gladsone Region Planning Scheme, Section 9.3.2 Development Design)

Issue		Design Objectives
Drainage control	Temporary drainage works	a. Design life and design storm for temporary drainage works: i. disturbed area open for < 12 months—1 in 2–year ARI event ii. disturbed area open for 12–24 months—1 in 5–year ARI event iii. disturbed area open for > 24 months—1 in 10–year ARI event b. design capacity excludes minimum 150 mm freeboard c. temporary culvert crossing—minimum 1 in 1–year ARI hydraulic capacity.
Erosion control	Erosion control measures	a. Minimise exposure of disturbed soils at any time b. divert water run-off from undisturbed areas around disturbed areas c. determine the erosion risk rating using local rainfall erosivity, rainfall depth, soil–loss rate or other acceptable methods d. implement erosion control methods corresponding to identified erosion risk rating.
Sediment control	Sediment control measures Design storm for sediment control basins Sediment basin dewatering	a. Determine appropriate sediment control measures using: i. potential soil loss rate, or ii. monthly erosivity, or iii. average monthly rainfall b. collect and drain stormwater from disturbed soils to sediment basin for design storm event: i. design storm for sediment basin sizing is 80th% five–day event or similar c. site discharge during sediment basin dewatering: i. TSS < 50 mg/L TSS, and ii. Turbidity not >10% receiving waters turbidity, and iii. pH 6.5–8.5.
Water quality	Litter and other waste, hydrocarbons and other contaminants	• Avoid wind–blown litter; remove gross pollutants • Ensure there is no visible oil or grease sheen on released waters • Dispose of waste containing contaminants at authorised facilities
Water stability and flood flow management	Changes to the natural waterway hydraulics and hydrology	For peak flow for the 1–year and 100–year ARI event, use constructed sediment basins to attenuate the discharge rate and to treat stormwater runoff from the site.

3.5.3 Technical Standard Bunding and Spill Containment framework provided by Red Hill Renewable Energy (RHRE)

The framework provided by Red Hill Renewable Energy (RHRE) intends to satisfy the "General Environmental Duty" under the *Queensland Environmental Protection Act 1994* by preventing the release of contaminants into stormwater, groundwater, and sensitive agricultural and reef ecosystems, and to ensure compliance with applicable regulatory benchmarks under relevant Australian Standards. This full framework can be found in Appendix A. The considerations outlined in this framework regarding incident containment are mentioned below:

- Incident containment for the BESS and associated transformers is designed to prevent any uncontrolled release of electrolytes, coolants, transformer oils, or fire-fighting effluent to soil, groundwater or stormwater systems in accordance with the Queensland Environmental Protection Act 1994.
- BESS units are installed within fully sealed and impervious bunded enclosures to isolate contaminants from the environment.
- BESS bunding is sized to contain a minimum of 110% of the largest single liquid vessel, or 25% of the total liquid inventory (whichever is greater), plus the full retention of fire-fighting water volumes.
- Under normal conditions, clean stormwater is allowed to discharge from the BESS containment area; however, upon detection of a leak, thermal runaway or fire event, automated fail-safe valves close to isolate the system and retain all contaminated liquids onsite for controlled removal.
- Oil-filled transformers are located within dedicated, impermeable bunds separate from the BESS system, sized to contain at least 110% of transformer oil volume plus rainfall and fire allowances.
- Transformer bunds are fitted with passive oil-water separator valves that permit clean rainwater discharge during normal operation but automatically and permanently seal if oil is detected to prevent off-site discharge.
- Alarms are generated for bund high-water levels or oil-leak events, enabling timely incident response and recovery.
- These combined passible and automated containment measures ensure spills and firewater are fully contained onsite, with no reliance on operator intervention during emergencies, always protecting environmental receptors.

3.6 INTERDISCIPLINARY REPORTS

A Fire Safety Study and Risk Assessment has been prepared for the proposed Rutherglen BESS by Arriscar Risk Engineering Solutions (2026) in accordance with the requirements of State Code 27. The study assesses credible fire scenarios associated with the BESS and related transformer infrastructure, including battery thermal runaway and transformer oil pool fires.

The findings of the fire safety assessment have been adopted as a key interdisciplinary input to inform the stormwater management plan incident containment strategy.

3.6.1 Incident Scenarios Relevant to Stormwater Management

The Fire Safety Study and Risk Assessment (Arriscar, 2026) identifies that credible incident scenarios which may result in contaminated runoff include:

- Fire-fighting response to a BESS container fire resulting from thermal runaway; and
- Fire-fighting response to oil-filled transformer fires within bunded areas.

These scenarios have the potential to generate fire-fighting water mixed with contaminants such as battery electrolytes, dissolved metals, transformer oil, and combustion by-products. The management of this runoff is to be addressed through containment measures, rather than discharge to surface water or infiltration to groundwater.

3.6.2 Firewater Volumes – Basis for Containment

The study defines the minimum firewater requirements for credible fire scenarios, including the simultaneous cooling of a burning BESS container and an adjacent downwind container. The study identifies a maximum indicative firewater demand of approximately 1345.2 L/min, with a required fire-fighting duration of up to four hours, consistent with applicable Australian fire standards. Additionally, it requires a height of 1 m above the net positive suction head for the pumps to be available in the tank, which has been assumed to approximately 10% of the total volume. During maintenance, half of the water demand must be available for operating the plant, therefore two 180 kL tanks were recommended.

Furthermore, the study assumed an oil volume of 12000L be used in the transformers, where bunds must be able to contain 110% of this total volume. These volumes have been used as the basis for determining the sizing of the containment system to ensure it is capable of storing fire-fighting and associated runoff during incidents (refer Section 4.1.2).

4 STORMWATER MANAGEMENT PLAN FOR INCIDENT CONTAINMENT

4.1 DESKTOP ASSESSMENT

4.1.1 Identification of Drainage Pathways and Features

Following inspection of the local topography within the proposed BESS development area using available LiDAR data and GIS tools, overland flow paths across the site were identified, as seen in Figure 3-9. Design plans provided by Red Hill Renewable Energy (RHRE), highlighting post-development surface levels, were incorporated into the existing LiDAR to assess changes to local topography and derive local water streamlines (refer Figure 4-1)

The site lies within the broader catchment shown in Figure 3-3, which generally drains southward towards Killarney Creek. Consistent with this catchment-scale drainage pattern and the locally derived post-development watercourses and topography, it is recommended that two lined detention basins be incorporated as part of the incident containment strategy. Based on predicted overland flow paths and the locations of waterway entry points (refer Figure 4-1), the detention basins are proposed to be placed along the western boundary and the north-western corner of the BESS (refer Figure 3-10). These locations will intercept runoff travelling toward adjacent waterways and provide containment of fire-fighting water during incident scenarios. Furthermore, this orientation aligns with existing overland flow paths and do not require any diversion of natural drainage features, ensuring compliance with the State Code 27 requirements.

As shown in Figure 3-6, the highest overland flow velocities within the developed area occur along the western boundary of the BESS. In accordance with the site topography and previously modelled flood behaviour, fire-fighting runoff generated during an incident is expected to drain along this channel toward the downstream watercourse. The placement of a detention basin along this western boundary therefore aligns with the dominant flow pathway, utilises existing drainage behaviours, and ensures that contaminated runoff is captured prior to entering the natural waterway networks.

A second detention basin is proposed at the north-western corner of the BESS to capture runoff in this part of the site before entering the northern open waterway. This basin location also corresponds with natural topographic low points and expected overland flow directions associated with the subtle slope within the BESS containerised area mentioned in Section 3.3 . The basin is therefore well placed to intercept and contain fire-fighting water and potential rain runoff before it can enter the natural waterway network and pose risk to the surrounding environment.

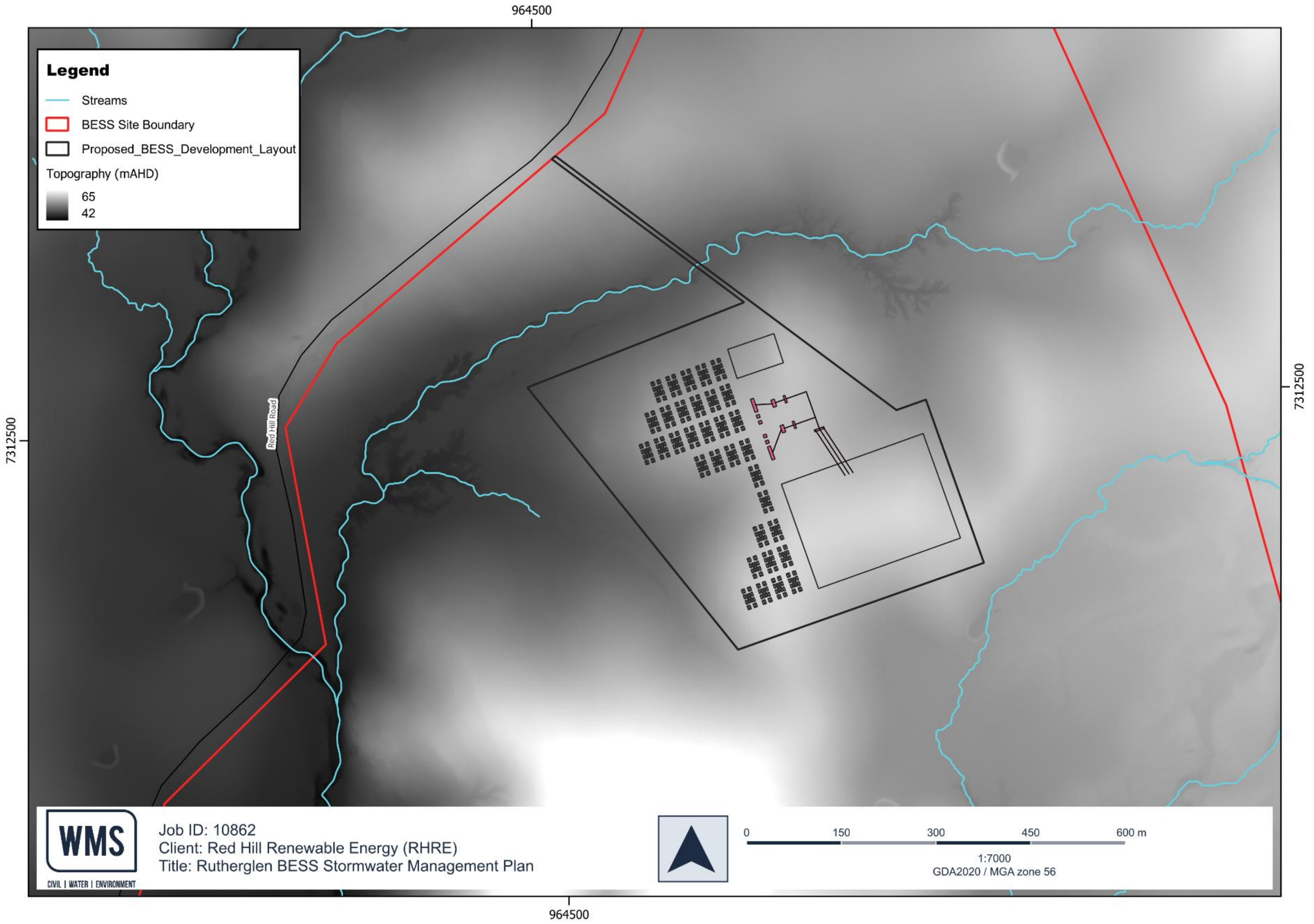

Figure 4-1 The Local Topography Post-Development at the BESS and the Local Stream Network

4.1.2 Calculations of Containment Volumes

The containment system is required to retain all the fire-fighting water, in addition to the rainfall runoff generated on site over a 24-hour 10% AEP event. Based on the rainfall assessment in Section 3.4 , it is estimated that a total of 19,849.26 kL of rainfall runoff from the BESS site will be present over a 24-hour period under 10% AEP conditions.

To provide a conservative design, an additional 15% of contingency has been applied to the total fire-fighting water demand when determining the required containment volume. This allowance accounts for uncertainties in incident response conditions and ensures that all firefighting water and associated contaminants can be fully retained onsite during an incident.

Based on these assumptions, the required fire-fighting water containment volume has been calculated as follows:

360,000 L (total fire tank volumes) + (13,200 (total retaining size of transformer bund) x 2 (worst-case scenario involves two modules on fire)) x 1.15 (additional 15% leeway) = 444,360 L

This results in a total required fire-fighting containment volume of 444.36 kL.

The calculated rainfall runoff volumes were subsequently added to the firefighting water requirement to determine the total detention basin storage volumes. As the north-western basin is expected to intercept runoff and fire-fighting water from a greater number of BESS containers, the required fire-fighting volume has been apportioned between the basins in a 60:40 split. The resulting minimum containment volumes were determined as follows:

Basin 1 (north-western):

444.36 kL (total fire-fighting requirement) x 0.60 (60% split) + 9563.91 kL (24-hour runoff volume from the respective catchment under the 10% AEP) = 9830.53 kL

Basin 2 (western):

444.36 kL (total fire-fighting requirement) x 0.40 (40% split) + 10,167.61 kL (24-hour runoff volume from the respective catchment under the 10% AEP) = 10,345.35 kL

Indicative basin sizing is reflected in Figure 4-2 with size requirements and associated rainfall calculations included in Appendix B. The rough basin shapes and sizes were determined following the local topography and necessary area requirements.

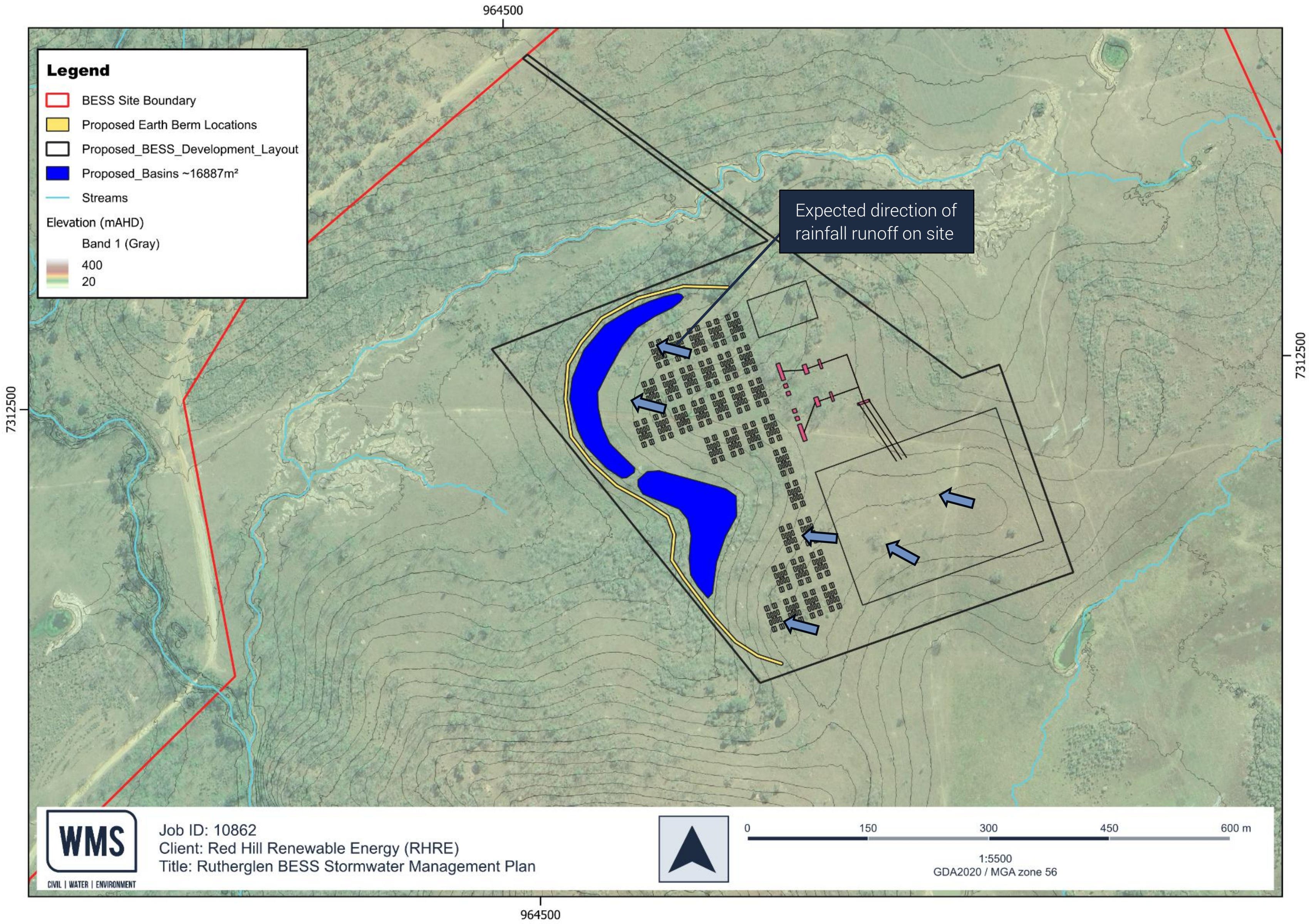

Figure 4-2 The Location and Rough Sizing Scale of the Proposed Detention Basins in Relation to the Post-Development Topography

4.1.3 Implementation of Containment System and Operational Functionality

As highlighted in the report by Arriscar 2026, stormwater is managed through the natural overland flow paths, vegetated surfaces and runoff through open bund valves. The stormwater drainage and containment systems are intended to operate independently, allowing stormwater to pass through the site under normal conditions, while ensuring that full retention of contaminated runoff is possible during incidents.

4.1.3.1 Berms

Development plans provided by Red Hill Renewable Energy (RHRE) indicate the use of an earth berm surrounding the BESS site. It is recommended that the extent of this berm be increased, as shown in Figure 4-2 to provide a secondary means of incident containment. The berm is intended to generally follow the existing topography, enabling it to intercept and direct fire-fighting runoff toward the detention basins while maintaining natural overland flow paths.

4.1.3.2 Bunds and Valves

Bunded containment systems are provided around each individual BESS container and form the primary defence against the release of contaminants as mentioned in the fire study by Arriscar 2026. Each BESS module is independently bunded using sealed, impervious upturn bunds, preventing any interaction between contaminants and the underlying soil or groundwater. The overall sizing of the bunds requires that 100% of the firefighting water applied to the BESS is contained.

Discharge from each bunded area is controlled via automated bund valves, which are normally open to allow clean stormwater to drain under normal operating conditions. In the event of a fire, activation of the fire alarm will automatically close the relevant bund valves for the affected module, isolating the area and retaining contaminated firefighting water onsite. Transformer bunds are fitted with oil-water separator valves that will automatically seal when oil is detected.

Once isolated, retained incident liquids are directed to the lined detention basins via controlled outlets through manual activation. This forms part of the operational response and is not required for immediate containment, which is achieved automatically through the closure of bund valves. Outlet configurations can be adjusted to suit site-specific operational requirements, providing flexibility in directing flow to the detention basins. The battery management system permits the discharge of water of acceptable quality under non-incident conditions, while contaminated fire-fighting water captured within the detention basins is retained for controlled removal and offsite disposal by licensed waste disposal tankers organised by Red Hill Renewable Energy (RHRE).

Under normal operating conditions, clean rainfall runoff is discharged from the detention basins via normally open outlet controls to the lawful points of discharge, ensuring that the basins remain available for incident containment. In the event of extreme rainfall, controlled discharge or pumping of clean rainwater may be undertaken to maintain available containment capacity. Discharge is automatically isolated during incident conditions to ensure containment of contaminated runoff.

4.1.3.3 Detention Basins

It is recommended that two-lined detention basins be implemented on site and sized to accommodate the full volume of firefighting water, transformer oil from two BESS containers under a worst-case scenario, and up to 24 hours of surface runoff associated with a coincident 10% AEP rainfall event. To ensure compliance with regulatory requirements and to avoid the need for additional safety measures, such as drowning-prevention fencing, it is recommended that the basins remain shallow, with a maximum depth of 1.2 m, and to follow the indicative footprint shown in Figure 4-2. Due to size and area constraints, both basins have been sized to reflect a depth of 1.2 m.

As the direction of fire-fighting runoff will depend on the location of affected BESS containers, the basins are sized with partial redundancy to provide a robust, cost-effective containment strategy that reflects the topography. The combined storage capacity of the basins exceeds the defined worst-case containment requirements, and this approach provides operational flexibility, allowing for scenarios in which one basin may be partially unavailable (for example, due to maintenance or prior use) without compromising environmental protection outcomes.

Under normal operating conditions, the proposed detention basins are intended to remain empty and lined. The basins would only be utilised during incident scenarios to temporarily contain contaminated runoff. In the event of flooding, the basins would function as passive low points within the floodplain and would not compromise flood behaviour or containment performance.

4.2 REGULATORY AND PLANNING FRAMEWORK

The proposed BESS incident containment strategy is evaluated against the requirements set out in the GRC Planning Scheme Stormwater Management Performance Outcomes (refer Table 4-1) and the SARA Code 27 (refer Table 4-2). Compliance with the GRC Planning Scheme stormwater management benchmarks has been assessed where it was relevant to the proposed incident containment strategy. Benchmarks relating to formal stormwater drainage networks or construction-phase works are not applicable to this plan, as the proposed measures focus on preventing contaminated runoff from entering receiving waterways during incident scenarios.

In line with the requirements requested by Red Hill Renewable Energy (RHRE), recommendations for the stormwater management plan for incident containment are addressed below:

- The development of the BESS and implementation of the proposed detention basins are considered low-impact and do not hinder natural drainage patterns within or surrounding the site.
- Grass and vegetated surface along established overland flow paths surrounding the BESS should be retained and maintained to reduce runoff velocities, minimise erosion, and limit the mobilisation of sediments and potential contaminants during incident scenarios. Standard erosion and sediment control measures should be implemented where applicable.
- The use and extent of impervious surfaces within and surrounding the BESS should be minimised to reduce runoff concentration and maintain pre-development drainage patterns.
- Regular monitoring of water quality within the adjacent watercourses should be undertaken by a suitably qualified environmental specialist to enable early detection of potential incident-related contamination, particularly during and following high rainfall events.

Table 4-1 Compliance against the Gladstone Regional Council Planning Benchmarks 2026, focused on performance outcomes that relate to stormwater management with incident containment (extracted from Table 9.3.2.3.1)

Performance Outcome	Response
PO5 Stormwater management is designed and operated to: a) Ensure that adjoining land and upstream and downstream areas not adversely affected through any ponding or change in flow, and b) Direct stormwater to a lawful point of discharge through competently designed and constructed outlet works in a manner that reflects the predevelopment status	BESS development does not result in an increase in flood levels, flow velocity or duration upstream, downstream or on adjacent properties.
PO6 Stormwater drainage network elements are designed and constructed with the capacity to control stormwater flows under normal and minor system blockage conditions for the applicable defined flood event ensuring there is no damage to property or hazards for motorists	Not applicable, as no stormwater drainage network is proposed in this report.
PO23 Stormwater management systems: a) Implement water sensitive design (WSUD) principles that: i) Protect natural systems and waterways ii) Allow for the detention of stormwater instead of rapid conveyance	The proposed detention basins and containment measures form part of the incident-response containment system rather than a stormwater management system. However, elements of this performance outcome are addressed through the BESS design and containment strategy by preserving natural drainage lines, minimising impervious

iii) Minimise impervious areas iv) Utilise stormwater to conserve potable water v) Integrate stormwater treatment into the landscape vi) Ensure water quality values are protected b) Where privately owned, must be maintained (including costs) for the life of the system, c) Provide for safe access and maintenance, d) Maintain natural drainage lines and adequate filtering and settlement of sediment for the protection of watercourses, coastal wetlands and beaches from point source and non-point source stormwater discharges, and e) Are designed to minimise ongoing maintenance costs	surfaces, providing detention of runoff during incident scenarios, and preventing contaminated fire-fighting water from discharging into the local waterways.
PO24 Development allows for a sufficient site area to accommodate an effective stormwater management system.	No stormwater drainage network planned is proposed in this report.
PO25 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to: a) Existing capacity of a stormwater infrastructure and ultimate catchment conditions b) Discharge for existing and future upstream development	Not applicable, as no stormwater infrastructure or drainage network is proposed. The development does not alter existing catchment drainage behaviour and does not affect runoff from existing development.
PO26 Construction activities for the development should avoid or minimise adverse impacts on stormwater quality	Construction activities are limited to the installation of the BESS blocks, switchyard and associated infrastructure. This involves minimum changing of the terrain and earthworks (refer Figure 3-1). As mentioned, the natural hydrological functions of the site are to be maintained as part of the development. No impacts on the stormwater quality to flow paths and nearby watercourses are expected to occur due to the minimal-impact nature of construction on the proposed site.
PO27 Reconfiguration of lots includes stormwater management measures in the design of any road reserve, streetscape or drainage networks to: (a) minimise impacts on the water cycle (b) protect waterway health by improving stormwater quality and reducing site run–off, and (c) avoid large impervious surfaces	Not relevant to this containment strategy as no reconfiguration of lots, road reserves, streetscapes or drainage networks are proposed. Incident runoff is managed within the site without implementing new drainage infrastructure or large impervious surfaces.

Table 4-2 Compliance against the SARA State Code 27, 2025 section on 'Protecting Water Quality and Stormwater Management'

Assessment Benchmarks	Response
PO16 Development: • Minimises the disturbance of high-risk soils; and • Manages the release of soil-based contaminants	• Disturbance of soils is minimised through limiting earthworks, preserving existing vegetated surfaces and designing surface levels to promote controlled sheet flow.

	• Existing vegetation is retained to reduce erosion, maintain soil stability and limit the mobilisation of soil-based contaminants. • Lined detention basins are implemented as part of the containment strategy to prevent fire-fighting runoff from interacting with underlying soils and causing adverse impacts on the receiving environment.
PO17 Development maintains the water quality of receiving waters, waterways and wetlands by: • Avoiding locating in waterways and wetlands; • Minimising crossings of and interference with natural drainage lines, farm drainage and irrigation infrastructure; • Minimising erosion and sediment run off; • Managing drainage control; and • Preserving the bank stability of affected waterways and drainage lines avoiding non-essential hardening or unnatural modification of the waterway.	• All infrastructure is located outside defined waterway boundaries, and development footprints follow previously modelled flood extents and natural drainage patterns. • No diversion or realignment of natural drainage lines is proposed, and existing waterways and banks will not be contained or altered. • Existing vegetation is retained to support bank stability, minimise erosion and maintain downstream water quality. • Existing overland flow paths are utilised and pre-development drainage and flood behaviours are maintained, ensuring incident runoff is intercepted prior to entering receiving waterways.
PO18 Development prevents the release of contaminants to surface water or groundwater in the event of an incident, including a fire or explosion.	• Sealed and bunded containment systems are implemented around the BESS and associated infrastructure, and detention basins are lined to prevent infiltration of contaminated fire-fighting runoff to soil or groundwater. • Immediate isolation of contaminants during an incident is achieved through automatic valves. • Contaminated runoff is retained onsite and removed for appropriate off-site treatment and disposal by licensed waste contractors.
PO19 Development minimises interference with overland flow paths.	• All infrastructure and incident containment systems, including bunds and detention basins, are located in accordance with local topography and existing overland flow paths to maintain natural drainage pathways. • Detention basins and berms are positioned at natural low points to intercept incident-related runoff while maintaining normal stormwater drainage under non-incident conditions.

4.3 RECOMMENDATIONS

Based on the findings of this desktop assessment and the proposed stormwater management with incident containment strategy, the following recommendations are made:

- A detailed design of the proposed lined detention basins should be undertaken to confirm final sizing, dimensions, lining systems, inlet and outlet arrangements, and integration with the site drainage network, ensuring full containment of fire-fighting runoff under an incident scenario. A nominal freeboard of 300mm is recommended as a minimum for the basins.
- At present, all impervious areas are presumed to be contained and channelled towards the basins. If deemed necessary, the basin placements can be altered, but must be proportionate to the design volume capacity needed to contain the relative catchment area.
- The bunded containment systems should be designed to provide primary, local containment at each cluster of BESS containers. Bund capacities should be confirmed based on the final equipment specifications and sized in accordance with the Technical Plan provided by Red Hill Renewable Energy (RHRE)

- Reviewing rainfall runoff requirements against different AEP events to understand the sensitivity of containment volumes to varying rainfall magnitudes and durations, and to confirm the most appropriate basin sizes, without compromising cost efficiency, system robustness, or credible worst-case scenarios.
- The final designs should continue to align with previously modelled mainstream and overland flood behaviours.
- Future design refinements may consider separating the firefighting water onsite requirements from the incident containment system. This would reduce the required detention basin sizes, however it would come with an additional cost of implementing a dedicated rainwater tank onsite.
- An operational and maintenance plan should be developed for the BESS outlining the inspection, monitoring and maintenance requirements and expectations for containment infrastructure. Additionally, an appropriate disposal plan for contaminated firefighting water after an incident should be established.
- Water quality monitoring of drainage lines and downstream waterways should be regularly undertaken by an environmental professional during the operation of the BESS, especially following incident events or significant rainfall, to ensure the ongoing effectiveness of containment measures.
- Should any updated designs or site modifications be made that alter current site topography levels or drainage characteristics, the containment strategy should be reviewed and updated accordingly.
- An Environmental Management Plan, as well as a certified Erosion and Sediment Control Plan, should be prepared by relevant professionals to ensure ongoing compliance with relevant regulatory requirements throughout development and to protect local waterways and ecosystems from potential contamination during construction and operation.

5 CONCLUSION

WMS has undertaken a desktop assessment to develop a stormwater management plan focused on the containment of firefighting water and incident-related runoff for the proposed Rutherglen BESS. Conceptual detention basins have been strategically sized and located at hydraulically appropriate low points, aligned with overland flow paths, to contain fire-fighting runoff, together with rainfall runoff generated within the BESS during a coincident 10% AEP event under an incident scenario. This approach is designed to prevent the discharge of contaminated runoff to surrounding waterways and the wider receiving environment. Rainfall runoff volumes have been calculated using the total 24-hour design rainfall depths from BoM IFD data, multiplied by catchment area and representative runoff coefficients derived from QUDM. This approach directly estimates runoff volume for containment sizing and avoids the application of peak-flow equations beyond their intended use. The methodology is conservative and appropriate for worst-case incident containment design.

The proposed detention basin locations have been selected to preserve natural drainage patterns across the site and achieve compliance with the relevant requirements of the SARA State Code 27 and GRC Planning Scheme.

Yours sincerely,

Miré Cloete
Graduate Hydrologist

R.van Doorn

Reviewed by Ryan van Doorn RPEQ 20273.

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APPENDIX A – THE 'TECHNICAL STANDARD BUNDING AND SPILL CONTAINTMENT' FRAMEWORK PROVIDED BY RED HILL RENEWABLE ENERGY (RHRE)

1. PURPOSE & SCOPE

This document defines the minimum technical requirements for the design of bunding, spill management, and contamination control systems for Battery Energy Storage System (BESS) and associated electrical transformer (TX) projects.

The objective is to ensure a standardized approach to environmental protection, satisfying "General Environmental Duty" requirements by preventing the release of contaminants (coolants, electrolytes, transformer oil, fire-fighting effluent) into stormwater, groundwater, or sensitive agricultural/reef ecosystems.

2. REGULATORY COMPLIANCE FRAMEWORK

All BESS and Transformer designs must comply with the following statutory and regulatory benchmarks:

- Queensland *Environmental Protection Act 1994* (EP Act): Adherence to Section 319 (General Environmental Duty) to take all reasonable and practicable measures to prevent environmental harm.
- AS 1940:2017 (Storage and Handling of Flammable and Combustible Liquids): Adopted as the primary engineering standard for spill containment capacities and separation distances.
- AS/NZS 5139:2019 (Electrical Installations – Safety of Battery Systems): Compliance with specific barrier and location requirements.
- AS 2067:2016 (Substations and High Voltage Installations): Specific to the containment of transformer oils and fire suppression.

3. TECHNICAL DESIGN REQUIREMENTS: BESS UNITS

3.1. Physical Containment Architecture

The BESS compound must utilize a "sealed bath" containment strategy. To allow for site-specific engineering and commercial flexibility, the following options are accepted:

- Foundation & Impermeability Options: The foundation must be impervious to electrolytes and coolants to prevent soil and groundwater contamination. Accepted options include:
  - Option A: Reinforced concrete slabs, sealed and chemically treated.
  - Option B: Compacted structural fill utilizing heavy-duty chemical-resistant geo-membranes combined with a protective aggregate/crushed rock top layer.
- Perimeter Upturns: Containment must be achieved through perimeter structures such as concrete upturn bunds, blockwork walls, or lined earth berms/swales.
- Containment Capacity (The 110% Rule): The net volume of the bunded area must be sized to contain the greater of:
  - 110% of the volume of the largest single liquid vessel; OR
  - 25% of the total aggregate volume of liquids stored within the bund; PLUS
  - Fire Water Allowance: Additional capacity to retain 100% of the estimated fire suppression water volume for the duration of a standard fire event.

3.2. Active Flow Management (BMS Integration)

The BESS drainage design must distinguish between "clean" (rainwater) and "contaminated" (chemical/fire) states via active control logic:

- Default State (Open): Isolation valves remain open to allow clean stormwater to drain.
- Hazard State (Closed): Upon detection of a hazard (thermal runaway, leak, or fire alarm) via the BESS Building Management System (BMS), the diversion valves must automatically fail-safe to the CLOSED position. Contained fluids are then removed via vacuum truck.

4. TECHNICAL DESIGN REQUIREMENTS: TRANSFORMER (TX) OIL BUNDING

High Voltage/Medium Voltage Transformers containing mineral or synthetic ester oils must have dedicated containment distinct from the general BESS system.

4.1. TX Physical Containment

- Bund Construction: Each oil-filled transformer must be located within a dedicated bund (concrete or geo-membrane lined) capable of holding 110% of the transformer's oil capacity plus a 20-minute heavy rainfall/fire-water allowance.

4.2. TX Water/Oil Filter Separator & Drainage

To prevent bunds from filling with rainwater while ensuring no oil escapes, each transformer bund must be fitted with an automated discharge system:

- Passive Oil/Water Separator Valve: The drain of each TX bund must be equipped with a specific filter/separator valve (e.g., Imbiber bead technology or similar smart-valve).
- Operation: The filter allows clean rainwater to pass through to the general stormwater system. If transformer oil is detected (via a leak or catastrophic rupture), the filter matrix expands, instantly and permanently sealing the discharge point.
- Interconnection: In the event of valve sealing, an alarm must be raised in the site control room indicating a bund high-water/oil-leak event.

5. Operational & Maintenance Requirements

- Routine Inspection: Visual inspection of geomembranes, concrete integrity, BMS valves, and TX oil separators must be included in the monthly O&M schedule.
- Disposal Protocol: Spent TX oil filters and any chemically contaminated fluids must be disposed of at a licensed regulated waste facility.

APPENDIX B – THE DATA AND CALCULATIONS USED TO DETERMINE DETENTION BASIN VOLUME REQUIREMENTS

Table 1: IFD Depth Data from BoM (2026) for the given coordinates of the BESS development location

	Annual Exceedance Probability (AEP)						
Duration (minutes)	63.20%	50%	20%	10%	5%	2%	1%
1	2.58	2.89	3.85	4.49	5.11	5.91	6.52
2	4.31	4.82	6.42	7.5	8.55	9.91	10.9
3	6.1	6.83	9.1	10.6	12.1	14	15.5
4	7.8	8.73	11.6	13.6	15.5	17.9	19.8
5	9.37	10.5	14	16.3	18.6	21.5	23.7
10	15.6	17.5	23.2	27.1	30.8	35.6	39.3
15	19.9	22.3	29.7	34.6	39.3	45.5	50.1
20	23.2	26	34.5	40.2	45.7	52.9	58.3
25	25.8	28.9	38.4	44.7	50.9	58.9	64.9
30	27.9	31.2	41.6	48.5	55.2	63.9	70.4
45	32.7	36.6	48.8	57	65	75.4	83.3
60	36.1	40.5	54.1	63.3	72.3	84.1	93
90	41.1	46.2	62.1	72.9	83.5	97.5	108
120	44.9	50.5	68.3	80.4	92.4	108	121
180	50.7	57.3	78.3	92.8	107	127	142
270	57.6	65.4	90.5	108	126	149	168
360	63.2	72.1	101	121	141	169	192
540	72.5	83.3	118	144	169	204	232
720	80.3	92.6	133	163	193	235	268
1080	92.9	108	158	195	234	287	329
1440	103	120	179	222	268	330	379

Table 2: The QUDM table information used to determine the C value for rainfall volume calculations

QUDM Table 4.05.3(a)/DTMR Table 5.9.2(b) Table of C_{10} Values

$^{1}I_{10}$	Fraction Impervious f_i						
(mm/h)	0.0	0.2	0.4	0.6	0.8	0.9	1.0
0		0.44	0.55	0.67	0.78	0.84	0.90
39		0.44	0.55	0.67	0.78	0.84	0.90
45		0.49	0.60	0.70	0.80	0.85	0.90
50		0.55	0.64	0.72	0.81	0.86	0.90
55		0.60	0.68	0.75	0.83	0.86	0.90
60		0.65	0.72	0.78	0.84	0.87	0.90
65		0.71	0.76	0.80	0.85	0.88	0.90
70		0.74	0.78	0.82	0.86	0.88	0.90

Calculations for Catchment and Area of Basin 1:

	10% AEP	20% AEP	50% AEP
Duration (hours)	24	24	24
AEP total depth (mm in 24hrs)	222	179	120
Depth (mm/hr)	9.25	7.4583333	5
Time of event (seconds)	86400	86400	86400
Catchment area (m^2)	49518	49518	49518
C_{10} (assuming impervious fraction of 0.9)	0.87	0.86	0.84
Peak runoff flow rate (Q) (m^3/s)	0.110693363	0.0882269	0.057771
Volume (m^3)	9563.90652	7622.8009	4991.414
Volume of fire water in (m^3) (60% of 444.36)	266.62	266.62	266.62
Total volume (m^3) (rainfall + firewater)	9830.52652	7889.4209	5258.034
Depth of basin (m)	1.2	1.2	1.2
Area (m^2) (volume/depth)	8192.105433	6574.5174	4381.695

Determining Q for Catchment 1:

$$Q = C \times I \times A$$

Where:

C = runoff coefficient for 10% AEP (found using QUDM table above, with impervious fraction of 0.9)

I = IFD rainfall intensity (litres per second)

A = area of catchment

Therefore,

$$Q = 0.87 \times (9.25/1000/3600) \times 49518$$

$$Q = 0.11069\ldots$$

Determining Volume of Rainfall for Catchment 1:

$$V = Q \times \text{Duration of event}$$

Therefore,

$$V = 0.11069\ldots\ m^3/s \times 86400 \text{ seconds}$$

$$V \approx 9563.91\ m^3$$

Calculations for Catchment and Area of Basin 2:

	10% AEP	20% AEP	50% AEP
Duration (hours)	24	24	24
AEP total depth (mm in 24hrs)	222	179	120
Depth (mm/hr)	9.25	7.4583333	5
Time of event (seconds)	86400	86400	86400
Catchment area (m^2)	58718	58718	58718
C_{10} (assuming impervious fraction of 0.6)	0.78	0.75	0.68
Peak runoff flow rate (Q) (m^3/s)	0.117680658	0.0912372	0.055456
Volume (m^3)	10167.60888	7882.8915	4791.389
Volume of fire water in (m^3) (40% of 444.36)	177.744	177.744	177.744
Total volume (m^3) (rainfall + firewater)	10345.35288	8060.6355	4969.133
Depth of basin (m)	1.2	1.2	1.2
Area (m^2) (volume/depth)	8621.1274	6717.1963	4140.944

<u>Determining Q for Catchment 2:</u>

$$Q = C \times I \times A$$

Where:

C = runoff coefficient for 10% AEP (found using QUDM table above, with impervious fraction of 0.9)

I = IFD rainfall intensity (litres per second)

A = area of catchment

Therefore,

$$Q = 0.78 \times (9.25/1000/3600) \times 58718$$

$$Q = 0.11768\ldots$$

<u>Determining Volume of Rainfall for Catchment 2:</u>

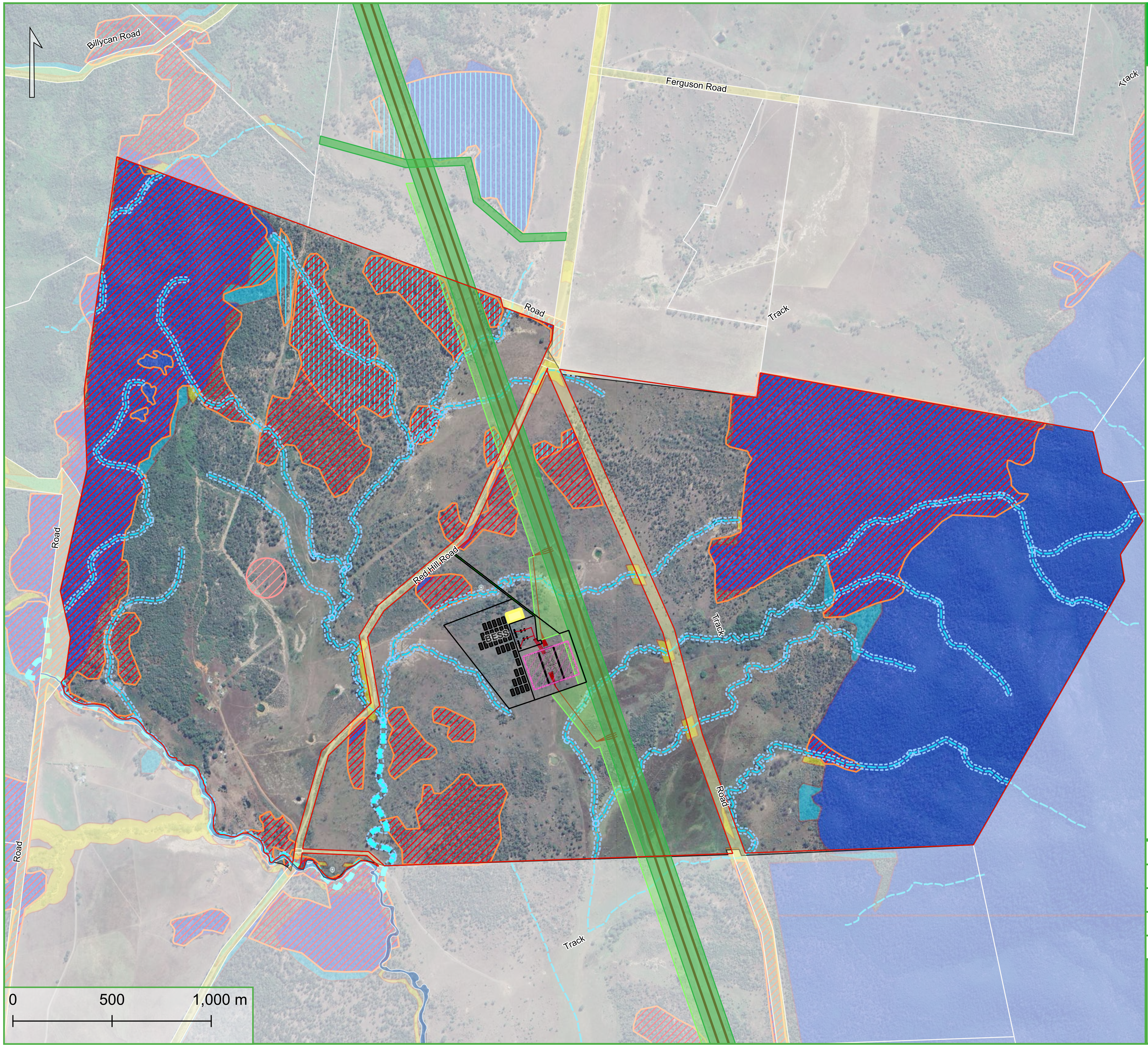
$$V = Q \times \text{Duration of event}$$

Therefore,

$$V = 0.11768\ldots\ m^3/s \times 86400 \text{ seconds}$$

$$V \approx 10167.61\ m^3$$

APPENDIX C – PROPOSED DEVELOPMENT PLANS



Rutherglen Project
Site Plan

- Cadastre
- Existing Easement B on FD922 (Powerlink)
- Future Easement - 40m Wide (Up to 185m Wide at Transmission Cut-In)
- South Pine Gladstone No 2 275kV Transmission line)
- Road Reserve
- Access - 8m Wide
- Energex LV Network
- Salinity Expression Area
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watercourse vegetation)
- MSES Wildlife Habitat (Endangered or Vulnerable)
- MSES Wildlife Habitat (Special Least Concern Animal)
- MSES Regulated Vegetation (Intersecting a Watercourse)
  - Stream Order 1 or 2
  - Stream Order 3
- 15m Watercourse Setback

BESS and Substation Layouts by Gryphon Energy. Please note these plans are indicative only and may be subject to further refinement at a later stage. Please refer to Setback and Subdivison Plans for further detail.

IMPORTANT NOTE
This map was prepared for information purposes only and accuracy/currency of all aspects of the map have not been verified. All aspects are subject to external studies/resources/data/ No reliance should be placed on the map and Gilvear Planning Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this map.

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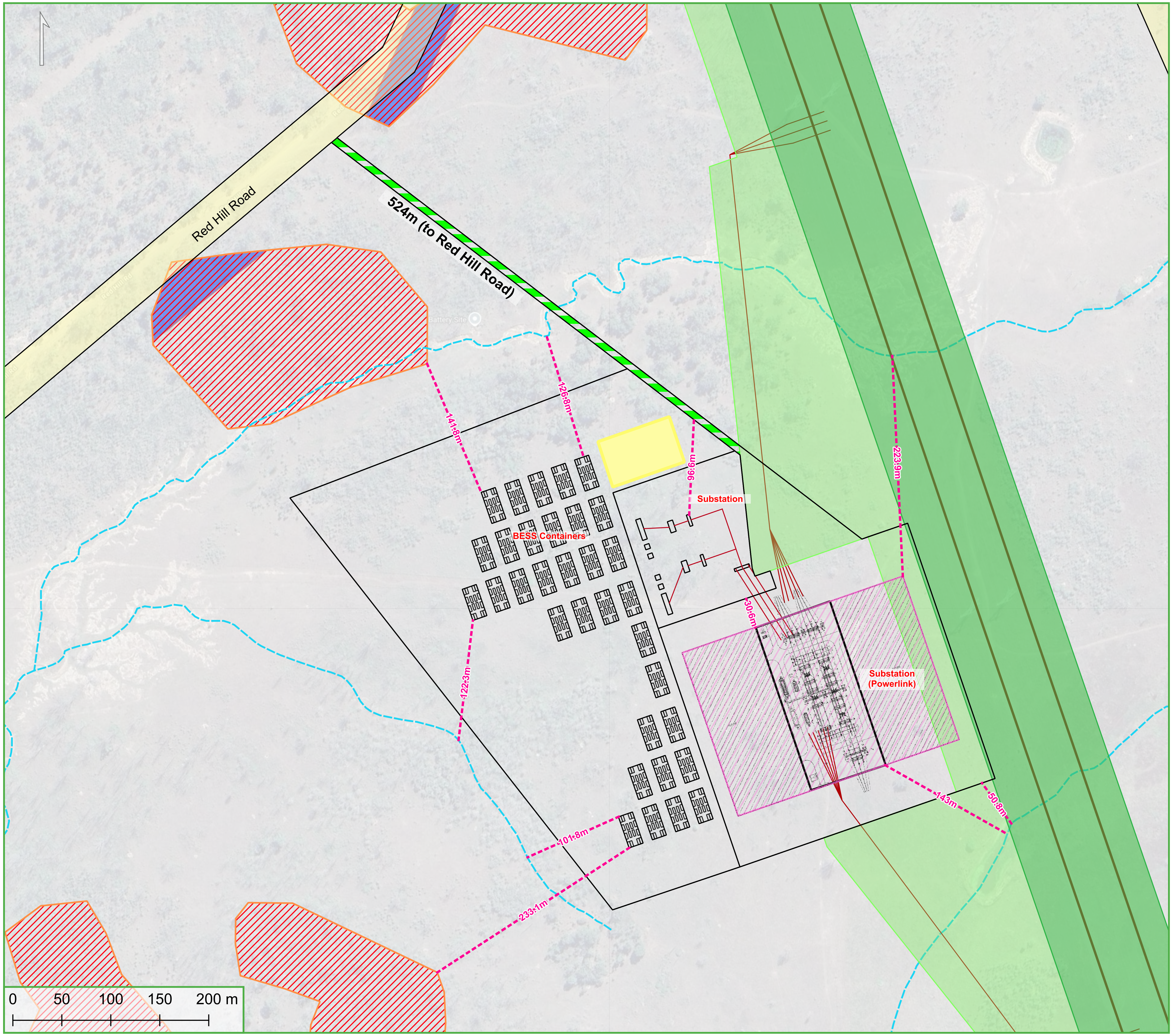
CLIENT:	Gryphon Energy Pty Ltd
DATE:	31/03/2026

GENUINE | VERSATILE | DEDICATED



Rutherglen Project
BESS and Substation Setbacks

- Existing Easement B on FD922 (Powerlink)
- Future Easement - 40m Wide (Up to 185m Wide at Transmission Cut-In)
- Proposed Access Easement - 8m Wide - Burdening Lot 2 for the benefit of Lot 1
- South Pine Gladstone No 2 275kV Transmission line
- DCA Links / 275kV Transmission Line Cut-In
- MSES Regulated Vegetation - Intersecting a Watercourse - Stream Order 1 and 2
- Category B area (Remnant vegetation)
- MSES Wildlife Habitat (Endangered or Vulnerable)
- Setbacks
- Substation (Powerlink) Area - (235m x 175m - 4.1ha)
- Indicative Operations and Maintenance Building / Laydown / Parking Area

Substation Layouts provided by Gryphon Energy

IMPORTANT NOTE
This map was prepared for information purposes only and accuracy/currency of all aspects of the map have not been verified. All aspects are subject to external studies/resources/data/ No reliance should be placed on the map and Gilvear Planning Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this map.

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CLIENT:	GRYPHON ENERGY PTY LTD
DATE:	31/03/2026

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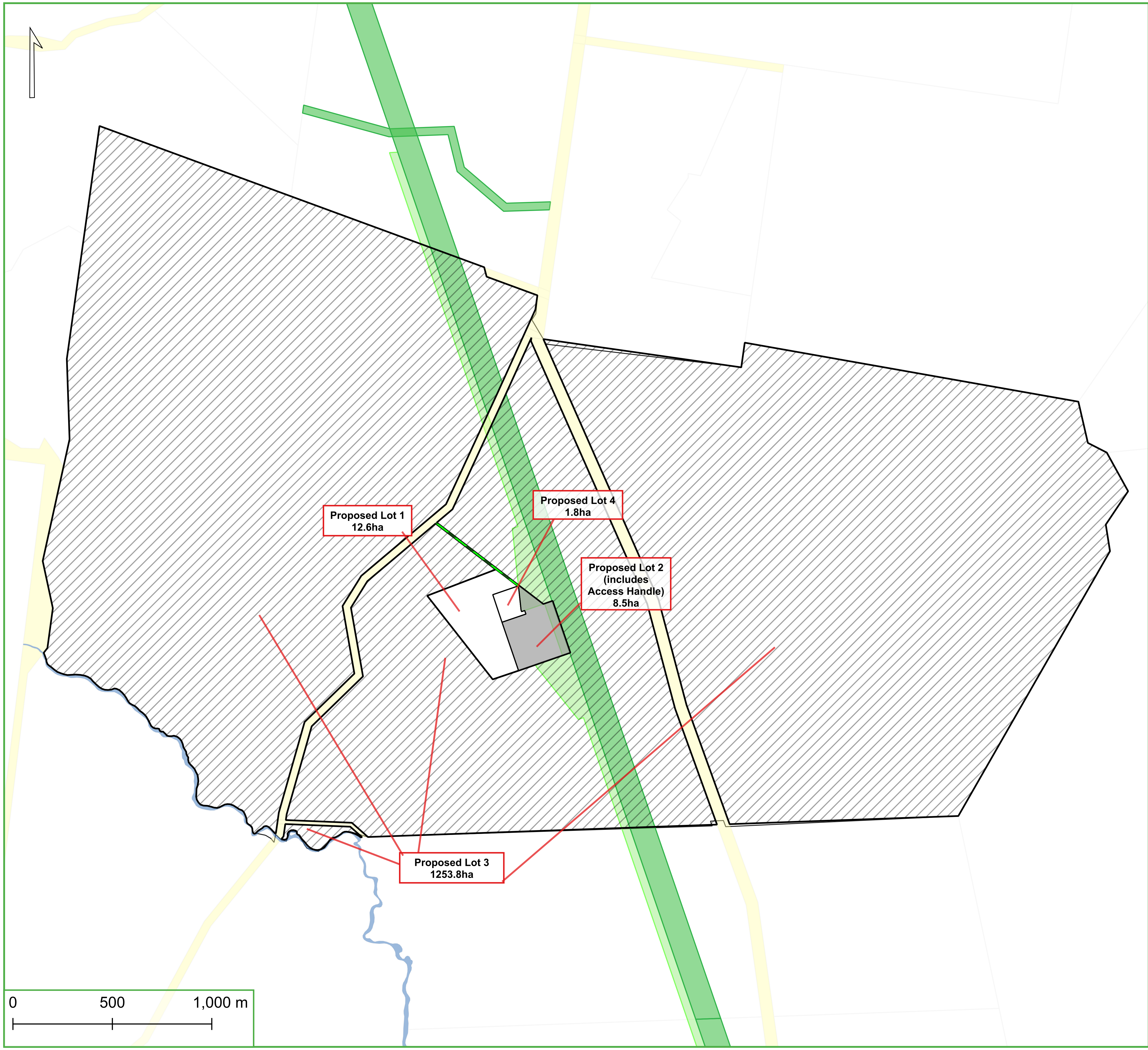

Rutherglen Project
Subdivision Plan - Lot 132 on FD700

- Existing Easement B on FD922
- Future Easement - 40m Wide (Up to 185m Wide at Transmission Cut-In)
- Proposed Access Easement - 8m Wide - Burdening Lot 2 for the benefit of Lots 1 and 4
- Cadastre
- Road Reserve
- Watercourse

IMPORTANT NOTE
This map was prepared for information purposes only and accuracy/currency of all aspects of the map have not been verified. All aspects are subject to external studies/resources/data/ No reliance should be placed on the map and Gilvear Planning Pty Ltd accepts no responsibility for any loss or damage suffered howsoever arising to any person who may use or rely on this map.

SCALE:	MAIN: 1 : 20,000 / INSET: 1:1000000 @ A3
COORDINATE SYSTEM:	WGS84/Pseudo-Mercator EPSG:3857
JOB NUMBER:	J001639
CLIENT:	Gryphon Energy Pty Ltd
DATE:	31/03/2026

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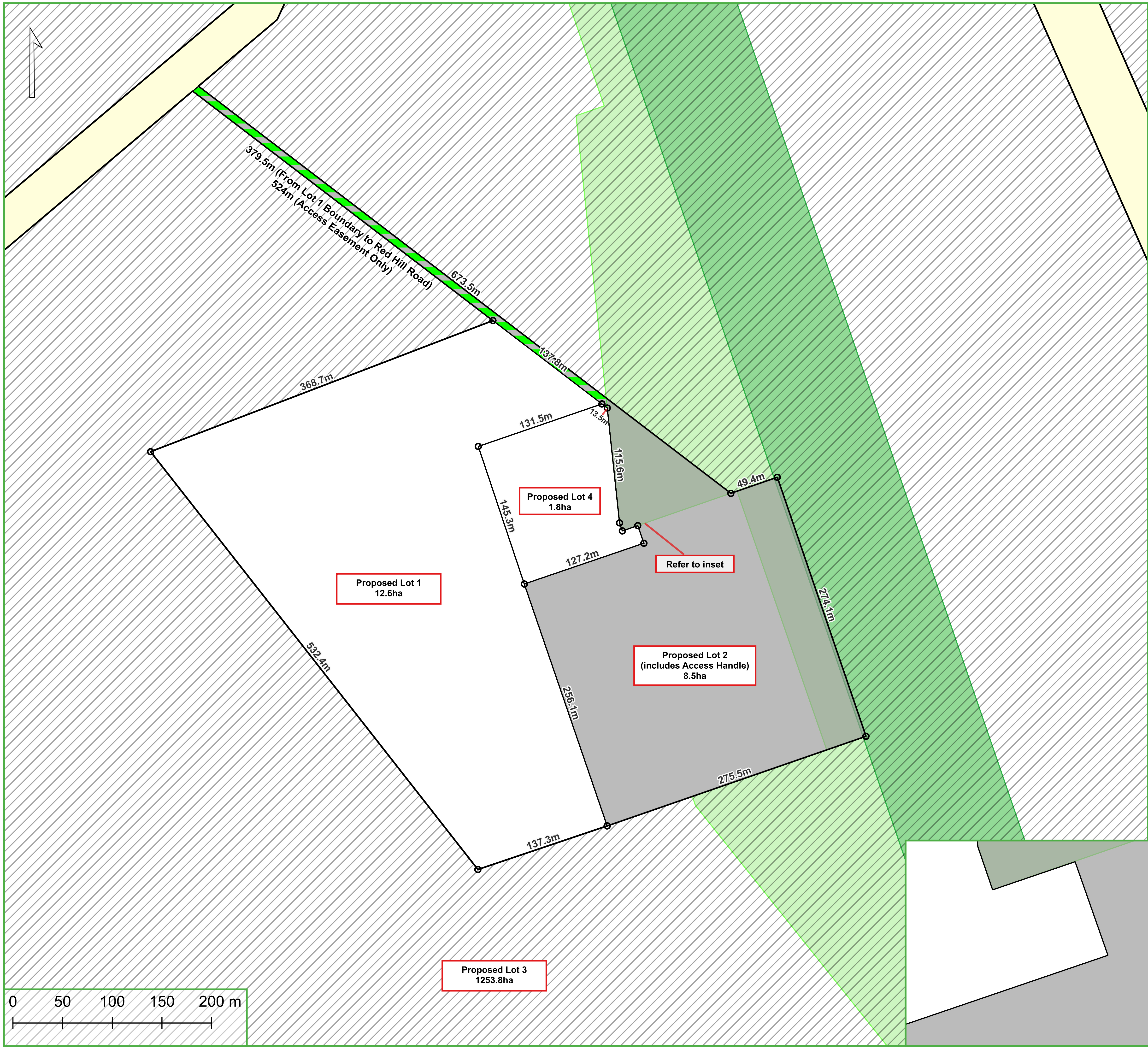
Rutherglen Project
Subdivision Plan - Lot 132 on FD700



- Existing Easement B on FD922
- Future Easement - 40m Wide (Up to 185m Wide at Transmission Cut-In)
- Proposed Access Easement - 8m Wide - Burdening Lot 2 for the benefit of Lots 1 and 4
- Cadastre
- Road Reserve
- Watercourse

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SCALE:	MAIN: 1 : 4000 / INSET: 1:750 @ A3
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