Powercor Australia

Proposed Powercor Terminal Station - Lot 4, 1005 Boundary Road, Tarneit

Flood Risk and Stormwater Management Strategy

January 2026

Public

Question today
Imagine tomorrow
Create for the future

Proposed Powercor Terminal Station - Lot 4, 1005 Boundary Road, Tarneit
Flood Risk and Stormwater Management Strategy

Powercor Australia

WSP
Level 11, 567 Collins St
Melbourne VIC 3000

Tel: +61 3 9861 1111
Fax: +61 3 9861 1144
wsp.com

Rev	Date	Details
A	11/02/2026	For Review

	Name	Date	Signature
Prepared by:	MC	11/02/2026	
Reviewed by:			
Approved by:			

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

Table of contents

Abbreviations

AEP	Annual Exceedance Probability
ARR	Australian Rainfall and Runoff
DSS	Drainage Service Scheme
MW	Melbourne Water
RB	Retarding Basin
RORB	Runoff Routing Over Basins
SSP	Shared Socioeconomic Pathway
TLH	Tarneit Logistics Hub
TUFLOW	Two-Dimensional Unsteady Flow
WCC	Wyndham City Council
WL	Wetland

Executive summary

This report presents a flood and stormwater assessment for the proposed development at **1005 Boundary Road, Tarneit**, located within the Tarneit Logistics Hub (TLH) precinct and governed by the **Melbourne Water Truganina Drainage Services Scheme (DSS)**.

The assessment was undertaken to define existing flood behaviour, confirm ultimate drainage conditions following implementation of the revised DSS infrastructure, and demonstrate that the development can be safely serviced without adverse flood impacts.

Historically, the site formed part of a broad overland flow corridor draining toward Dry Creek, receiving shallow regional sheet flow from approximately 188 hectares of upstream catchment within a total contributing catchment of approximately 4,060 hectares. Modelled existing conditions confirm that flood depths across the site are shallow (generally <50 mm in the 'baseline' 1% AEP event) and characterised by diffuse overland flow rather than defined flooding. Although not hazardous, these flows represent external catchment runoff that would constrain development in the absence of formal drainage infrastructure.

The amended Melbourne Water Truganina DSS fundamentally changes the hydraulic behaviour of the area. A regional retarding basin and wetland north of Boundary Road now intercept all upstream catchment runoff before it reaches the site. Flows are conveyed through a 1200 mm trunk drainage pipe within the TLH road reserve to downstream DSS wetlands and basins. As a result, the site no longer functions as part of a regional floodplain and instead operates as an internally drained parcel connected directly to formal drainage infrastructure.

A coupled hydrologic (RORB) and hydraulic (TUFLOW) modelling approach was adopted consistent with Melbourne Water guidelines and ARR version 4.2 procedures, including climate change scenarios (SSP3-7.0 2030 and 2070 horizons). The modelling confirms that, under ultimate DSS conditions, external flooding and overland flow paths do not interact with the site.

The proposed drainage strategy directs runoff generated within the site to the regional system as follows:

- Minor flows up to the 10% AEP event will discharge to the TLH underground drainage network and downstream DSS wetland and retarding basin
- Major flows up to the 1% AEP event will discharge via overland flow to the Melbourne Water easement along the eastern boundary and into the same DSS basin system

Water quality treatment and flow attenuation are provided regionally within the DSS wetlands and retarding basins. Accordingly, no onsite stormwater detention or treatment infrastructure is required, and the development will contribute via Melbourne Water DSS levies.

The assessment demonstrates that once the DSS infrastructure is delivered:

- The site will not be subject to flooding
- The development will not increase flood risk elsewhere
- Safe access will be maintained during the 1% AEP event including climate change
- The proposal complies with Melbourne Water drainage servicing intent

The proposed development is therefore considered acceptable from a flooding and stormwater management perspective and suitable for planning approval subject to detailed design.

1 Introduction

The purpose of this report is to define the flood risk and stormwater management for the proposed development of Lot 4 of 1005 Boundary Road by Powercor (hereafter referred to as the Site). Powercor is proposing to build a new terminal station on the Site (refer *Figure 1-1*).

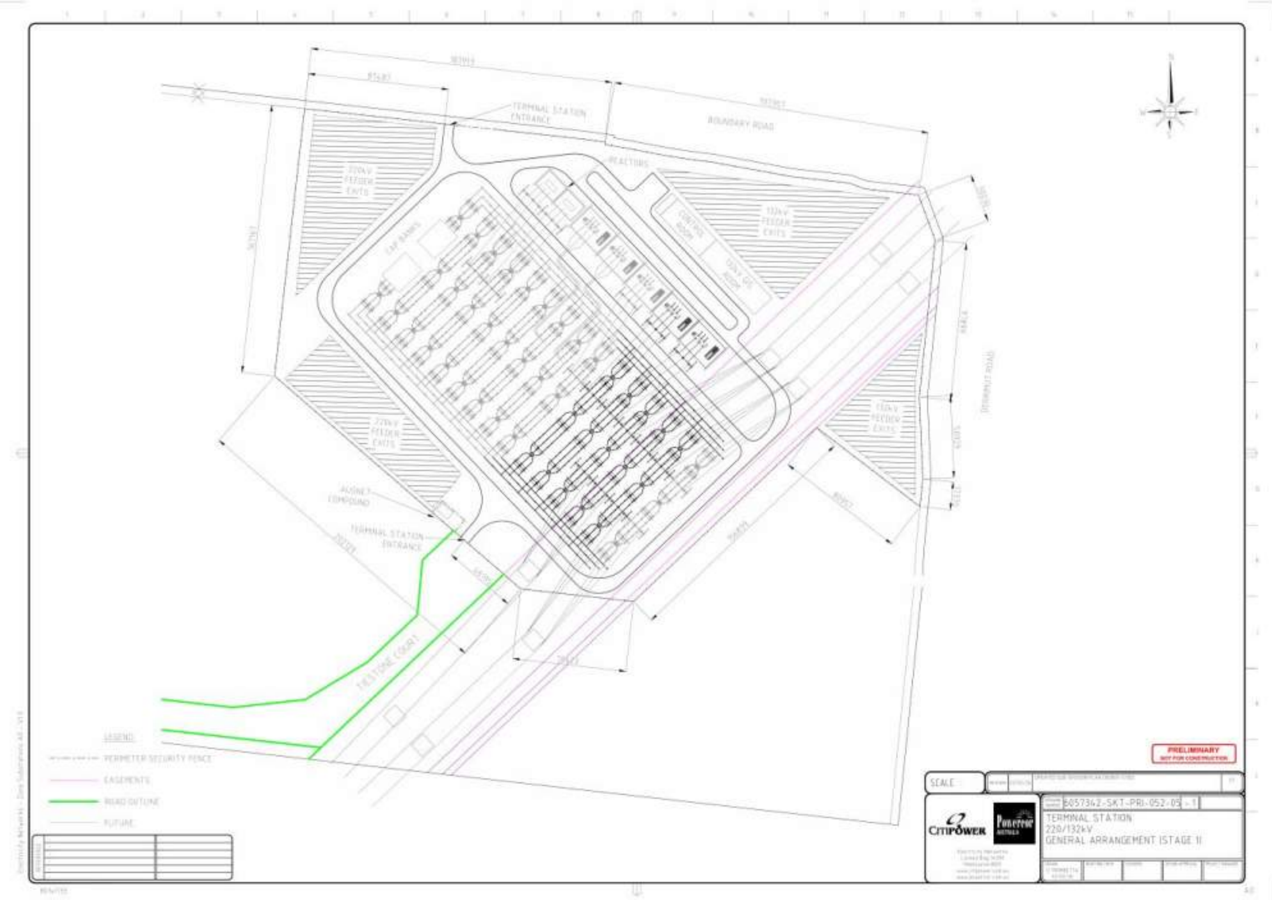


Figure 1-1 Preliminary terminal station layout (2 Feb 2026)

1.1 Project Background

The proposed development at 1005 Boundary Road, Tarneit forms part of the broader Tarneit Logistics Hub (TLH) precinct within the area governed by the Melbourne Water Truganina Drainage Services Scheme (DSS). The precinct is undergoing staged urbanisation transitioning from rural land to an employment and logistics land use consistent with the relevant planning framework and approved precinct structure planning. As part of this transition, regional drainage and water quality management is being delivered through formalised Melbourne Water infrastructure including retarding basins, constructed wetlands and trunk conveyance infrastructure designed to intercept and manage upstream catchment runoff prior to discharge to downstream waterways.

The DSS has recently been revised to incorporate a regional basin and wetland system north of Boundary Road which captures all upstream catchment flows before they reach the Site. Treated flows are conveyed via a 1200 mm trunk drainage pipe located within the TLH main road reserve to a downstream DSS basin and wetland system south of the Site. Consequently, the Site is no longer subject to uncontrolled external catchment runoff under ultimate conditions.

The development therefore interfaces directly with a functioning regional drainage network where flood conveyance and water quality treatment are managed at a catchment scale rather than a lot-scale. The role of the Site drainage is limited to collection and discharge of locally generated runoff into the formalised DSS infrastructure.

1.2 Study Area and Catchment Context

The study area includes the local catchments draining toward the Site and the downstream reaches of Dry Creek. The contributing Dry Creek catchment area at the Site is approximately 4,060 hectares, with a local sub-catchment of approximately 188 hectares draining directly toward the Site from the north.

1.3 Site Description and Drainage Context

The Site is located within the Wyndham growth corridor in an area transitioning from rural land to urban industrial development. The broader catchment historically drained toward a tributary of Dry Creek via shallow undefined overland flow paths across relatively flat terrain. Prior to implementation of the updated drainage scheme, regional runoff from upstream land parcels would have crossed the Site as shallow sheet flow mostly less than 50 mm in depth.

The revised Melbourne Water drainage strategy fundamentally changes the hydrologic behaviour of the area by intercepting upstream flows prior to reaching the Site. The upstream retarding basin north of Boundary Road captures and attenuates all catchment runoff external to the development parcel. Conveyance through the TLH road reserve trunk system prevents uncontrolled overland flow paths from entering individual lots.

Consequently, the Site functions hydrologically as an internally drained urban parcel connected directly to formal drainage infrastructure rather than part of a regional flow corridor.

1.4 Previous Studies and Planning Context

Relevant planning and flood management documents include the Wyndham Flood Management Plan (2018) and the, recently amended, Melbourne Water Truganina Drainage Scheme. These documents indicate that while regional flooding does not directly affect the Site, management of local overland flows and integration with planned regional drainage infrastructure are critical considerations.

1.5 Referenced Data and Report Documentation

The assessment referenced information provided by Powercor and publicly available datasets, including:

1. Verdent Hill Neighbourhood 2 and 5 – Stormwater Management Strategy (Spiire, October 2025)
2. Endorsed Tarneit Logistic Hub- Stormwater Drainage Strategy (DCE, October 2025)
3. Detailed topographic survey of the Site (Spiire, September 2025)

4 Construction Issue Civil Drawings External Watermain (DCE, 23 September 2025)

5 Concept layout of the proposed terminal station

6 Concept development plans for the Tarneit Logistics Hub

7 Publicly available LiDAR from the ELVIS Elevation and Depth Foundation Spatial Data website

8 Design rainfall and hydrologic parameters from the ARR Data Hub

9 Bureau of Meteorology design rainfall data

10 Wyndham Flood Management Plan (2018)

11 Melbourne Water Truganina Drainage Scheme **Amended by reference 1*

1.6 Report Structure

The following report describes the objectives of the study, the methodology and assumptions adopted, the stormwater and flood risk assessment outcomes, water quality considerations, and the conclusions and recommendations arising from the assessment.

2 Objectives

The objectives of this assessment are to:

- Develop a baseline flood model representing existing conditions at and upstream of the Site prior to DSS implementation
- Assess flood behaviour for the 20% and 1% AEP events incorporating climate change
- Define a compliant site drainage strategy consistent with Melbourne Water servicing intent
- Quantify and confirm how minor and major system flows generated within the Site will be conveyed to the DSS assets
- Confirm that water quality treatment will be provided regionally within the DSS infrastructure and that onsite treatment is not required.

3 Methodology and Assumptions

3.1 Catchment Characteristics

The Site is located within the Wyndham LGA and is zoned for urban growth. The surrounding land use is predominantly rural with emerging urban development along the northern and southern boundaries of the catchment. There are no major storages within the contributing catchments.

3.2 Flood Modelling Approach

A coupled hydrologic and hydraulic modelling framework was adopted to assess flood behaviour at and around the Site, consistent with Melbourne Water Flood Mapping Guidelines.

3.2.1 Assessment Philosophy

The modelling approach was undertaken in two stages. First, existing conditions flood behaviour was established to understand the natural flow regime and confirm the magnitude of regional runoff historically affecting the Site. Second, ultimate conditions were assessed with consideration of the revised drainage scheme and regrading of the Boundary Road and Derrimut Road intersection resulting in the redirection of external flows away from the site.

3.2.2 Hydrologic Modelling (RORB)

Hydrologic modelling was undertaken using RORB Version 6.45. Catchments and sub-catchments were delineated using publicly available LiDAR data, supplemented by the Site survey, urban drainage networks property boundaries, land uses and future development. The RORB model includes the Dry Creek catchment and the local catchment draining directly toward the Site.

Model parameters, including losses, routing parameters and impervious fractions, were adopted in accordance with ARR v4.2 guidance and planning scheme zoning. The model was run using the full ensemble of temporal patterns and storm durations ranging from 20 minutes to 18 hours to identify critical durations for key locations.

A summary of the key model parameters is provided in Table 3-1. The critical storm durations at key locations can be seen in Table 3-2.

Table 3-1 Key RORB model parameters

PARAMETER	INFORMATION
AEP's Assessed	20% and 1% AEP event with climate change
Durations and temporal patterns	A range of critical durations (20 minutes to 18 hours) and temporal patterns were identified for each AEP assessed, for 2 key locations - the Dry Creek and the local catchment upstream of the site. Critical storm durations were found to be between 12 hours for the dry creek and 90 minutes for the local catchment.
RORB Version	V6.45
Model Extent	Refer to **Error! Reference source not found.**

PARAMETER	INFORMATION
Number of sub-catchments	16
Total catchment area	4060 ha
Typical sub-catchment area	100-400 ha
Topographic data	10 m LiDAR
Rainfall	Frequent to rare IFD from Bureau of Meteorology website
Regional hydrologic parameters	Refer to Appendix A, downloaded from ARR Data Hub
Pre-burst	75th percentile
Kc, m values	14.02, 0.8 (kc value based on RORB V6 User Manual Equation 2-5)
Initial and continuing loss (base)	IL 11 mm, CL 0.3 mm/h
Aereal reduction factor (ARF)	Based on full catchment area

Table 3-2 Critical durations and temporal patterns

LOCATION	CRITICAL DURATION AND TEMPORAL PATTERN			
	1%AEP (2030/2070)		**20%AEP (2030/2070)**	
Dry Creek	12-hour TP1	12-hour TP1	12-hour TP7	12-hour TP7
Local catchment	90minutes TP9	60minutes TP9	90minutes TP6	90minutes TP5

For the broader catchment, longer duration storms governed peak flow response due to storage attenuation and flat topography, whereas local runoff was driven by shorter duration high intensity rainfall.

Several different kc values were trialled to determine the appropriate value to adopt for the Tarneit hydrology study. For validation, the peak flow from the Toomuc Creek catchment at Pakenham was used for comparison. While Toomuc Creek is not in the direct vicinity of the Site, it is a similar size (4,200 ha) and land use and has a long record of stream flow data for calibration.

The 1%AEP flow for Toomuc Creek was estimated to be 42 m^3/s, and the adopted kc value was 12. Based on this, a kc value of 14.02 was deemed to be the most appropriate for the Tarneit site. RORB Kc value sensitivity and peak flow validation can be seen in Table 3-3.

Table 3-3 Peak flow validation for Dry Creek

KC	BASIS	1%AEP RORB PEAK FLOW
14.02	**RORB V6 User Manual Equation 2-5 (Adopted)**	**69**
4.3	Pearse et al. (2002)	173
11	Based on Review of Laverton Creek Drainage Scheme Retarding Basins modelling*	83
12	Toomuc Creek**	42 (based on flood frequency analysis)

* Review of Laverton Creek Drainage Scheme Retarding Basins - Functional Design FINAL REPORT for Melbourne Water (Parsons Brinckerhoff, 2006); ** Benchmarking ARR2019 for Victoria – Technical Report (HARC, 2020)

Climate change rainfall adjustments consistent with ARR v4.2 SSP3-7.0 guidance were applied to ensure infrastructure suitability over the design life planning horizon. These factors increase rainfall intensity, temperature and losses but do not materially alter hydraulic behaviour due to the dominant influence of controlled drainage infrastructure under ultimate conditions. The climate change scenarios are discussed further in Section 3.3.

3.2.3 Hydraulic Modelling (TUFLOW)

Two-dimensional hydraulic modelling was undertaken using TUFLOW HPC Version 2025.2.2. The model terrain was developed using a combination of LiDAR and detailed Site survey data. Localised smoothing was applied at dataset transitions to manage minor elevation discrepancies. The model includes Dry Creek and the overland flow paths traversing the Site.

Under existing conditions, upstream inflows were applied as distributed inflow boundaries representing catchment runoff. Under ultimate conditions, upstream inflows were removed and replaced by fixed infrastructure conveyance reflecting the upstream basin and trunk drainage system. This allows the model to directly represent the hydraulic environment the Site will experience once development infrastructure is in place.

Ultimate development outputs are not reflective of future proposed conditions as civil and operational design information has not yet been developed for RB6. Therefore, flood mapping has not been presented within this report for this scenario. It did confirm that the capture and conveyance of flows from the upper catchment (north of Boundary Road) can be facilitated within the proposed 1200 mm trunk system and effectively redirect floodwater away from the site.

The model resolution and variable timestep were selected to ensure stable simulation of shallow sheet flows typical of low-gradient terrain. Sensitivity testing confirmed results were not dependent on grid size or timestep selection.

A summary of the key model parameters is provided in Table 3-4.

Table 3-4 Key TUFLOW model parameters

Parameter	Information
AEP's Assessed	20% and 1% AEP event with climate change (SSP3-7.0 2030 and 2070)
Durations and temporal patterns	Based on RORB model
Hydrologic Approach	Routed flows from RORB hydrological model
TUFLOW Version	2025.2.2-iSP-w64
Model Extent	Approximately 8 km^3 - covering the Local and upper Dry Creek catchments
Model Boundaries	2d BC inflows, 2d SA All regions and HQ outflow boundaries. For the defined creek lines 2d_BC inflows were applied and for the flat terrain upstream of the Site flows were applied as 2D_SA regions. The downstream boundary was based on a slope of 0.005
Grid Size	2 m grid
Topographic data	10 m LiDAR and detailed topographic survey for the site
Roughness	Spatially varying roughness values
Model Computational Timestep	Adaptive Timestep (HPC GPU)
Scenarios Modelled	Existing

3.3 Climate Change Assessment

Climate change adjustments were applied in accordance with ARR v4.2 guidance. The SSP3-7.0 scenario was adopted as representative of a conservative but reasonable future climate trajectory for critical infrastructure. Near-term (2030) and medium-term (2070) horizons were assessed as per recommended approach.

Rainfall intensity adjustment factors ranged from approximately 11–18% for 2030 conditions and 24–42% for 2070 conditions, depending on duration and AEP.

The Climate Change adjustment factors for the near-term and medium-term climate change scenarios under the SSP3-7.0 trajectory can be seen in

Table 3-5: Climate Change Adjustment Factors (ARR Datahub)

Factor	SSP3-7.0 Near-Term (2030)	SSP3-7.0 Medium-Term (2070)
Rainfall (<1 hr – 12 hr duration)	1.18 – 1.11	1.42 – 1.24
Temperature	1.2	2.5
Initial Loss (Continuing Loss)	1.05 (1.1)	1.1 (1.23)

3.4 Key Assumptions and Limitations

The assessment relies on publicly available LiDAR data, which is relatively coarse. While comparison with site survey indicates reasonable agreement, more detailed survey of upstream areas is recommended at later design stages to refine flow estimates. The modelling represents existing conditions only and does not include future upstream development beyond that implied by current planning controls.

4 Stormwater Management Framework

4.1 Existing Drainage Conditions

Prior to implementation of the drainage scheme, existing drainage across the Site is characterised by shallow sheet flow and undefined overland flow paths. These flows were broad, slow moving and typically less than 100 mm deep during a 1% AEP event. Flood behaviour was governed by terrain gradients rather than channel conveyance, resulting in multiple diffuse flow paths rather than a defined watercourse.

Although depths were shallow, these flows represent regional catchment runoff and would impose constraints on development if unmanaged. Raising site levels without provision for conveyance would divert flows toward neighbouring properties and roads.

The modelling confirmed that the Site historically functioned as part of a larger floodplain drainage corridor rather than an isolated parcel.

No formal drainage infrastructure currently exists within the Site, and some minor ponding (< 100 mm) is observed due to localised depressions within the modelled terrain. However, it is not expected that these provide or contribute to any effective floodplain storage.

4.2 Melbourne Water Drainage Scheme Context

4.2.1 Development Services Scheme

Melbourne Water utilises regional development services schemes (DSS) to *"…plan the infrastructure required to ensure new urban development meets appropriate standards for flood protection, water quality, waterway health and amenity."*[1].

Melbourne Water's DSS are *"…designed to provide an integrated solution to drainage, waterway and stormwater quality works including:*

- *Adoption of an integrated catchment approach to stormwater management*
- *User based pricing, full cost recovery and removal of cross subsidies that are not consistent with efficient and effective services*
- *Environmental requirements based on the best available scientific information*
- *Protection of waterway health and biodiversity values.*

The principles are designed to meet the tests of equity, transparency and nexus, while facilitating development in a way that leads to positive social, economic and environmental outcomes."

The design standards for the DSS are guided by the following:

---

[1] Principles for Provision of Waterway and Drainage Services for Urban Growth (Principles-for-provision-of-waterway-and-drainage-services-for-urban-growth.pdf)

— *"All new developments will be provided with 1-in-100-year (AEP) flood protection consistent with ResCode requirement*

— *The minor drainage system shall have a capacity to cater for a 1-in-5-year (AEP) storm event*

— *Water quality treatment to 'Best Practice'* (currently 45% reduction in total nitrogen and phosphorous, 80% reduction in total suspended solids)*

— *Protection of the environmental, social (including heritage) and economic values of waterways."*

4.2.2 Truganina DSS

The Site is located within the Melbourne Water Truganina DSS Drainage Scheme. The scheme identifies planned trunk drainage infrastructure and retarding basins downstream of the Site intended to manage regional runoff and protect downstream waterways.

The DSS underwent a detailed review and amendment by Spiire (2020) to improve functionality and feasibility and rectify inadequate assumptions and omissions in the original strategy developed by Engeny (2016).

The amended strategy can be seen relative to the original strategy in Figure 4-1 for the Dry Creek Upper DSS.

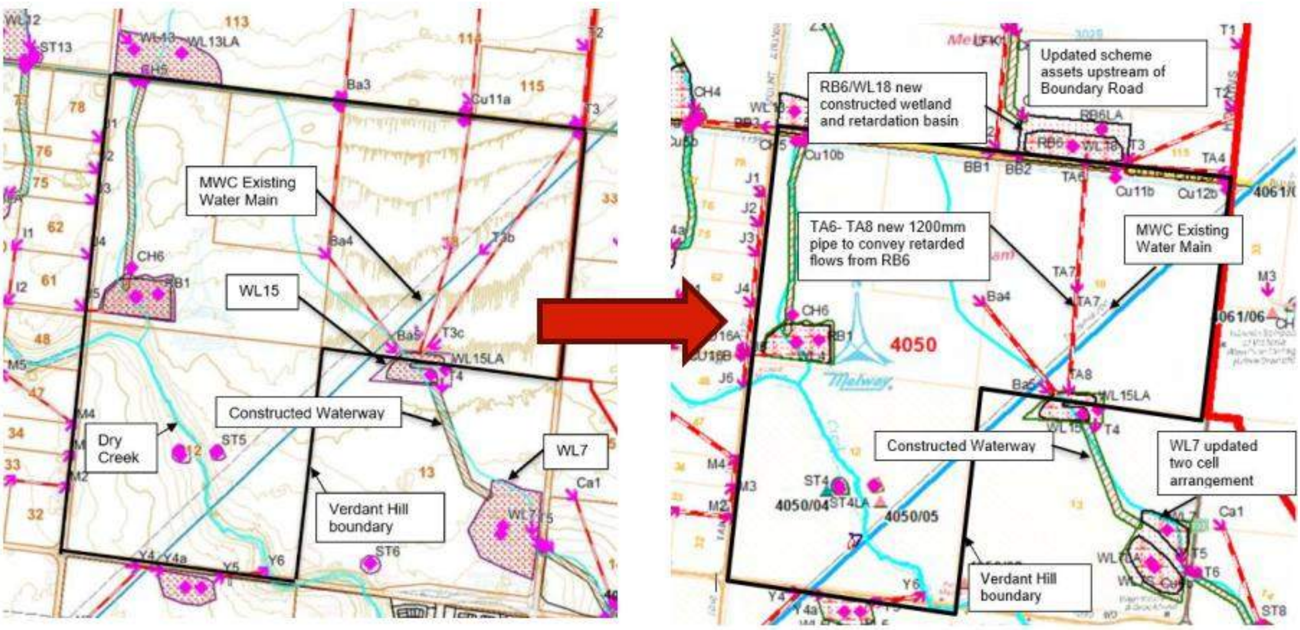


Figure 4-1: Dry Creek Upper DSS updates *(Spiire 2020)*

Stormwater management for the Site will be governed by the updated Melbourne Water Drainage Scheme. The DSS provides regional flood detention, conveyance and water quality treatment infrastructure for the catchment area and defines the legal point of discharge for new development. The revised DSS assets can be seen in Figure 4-2 that will service upper Dry Creek and the TLH.

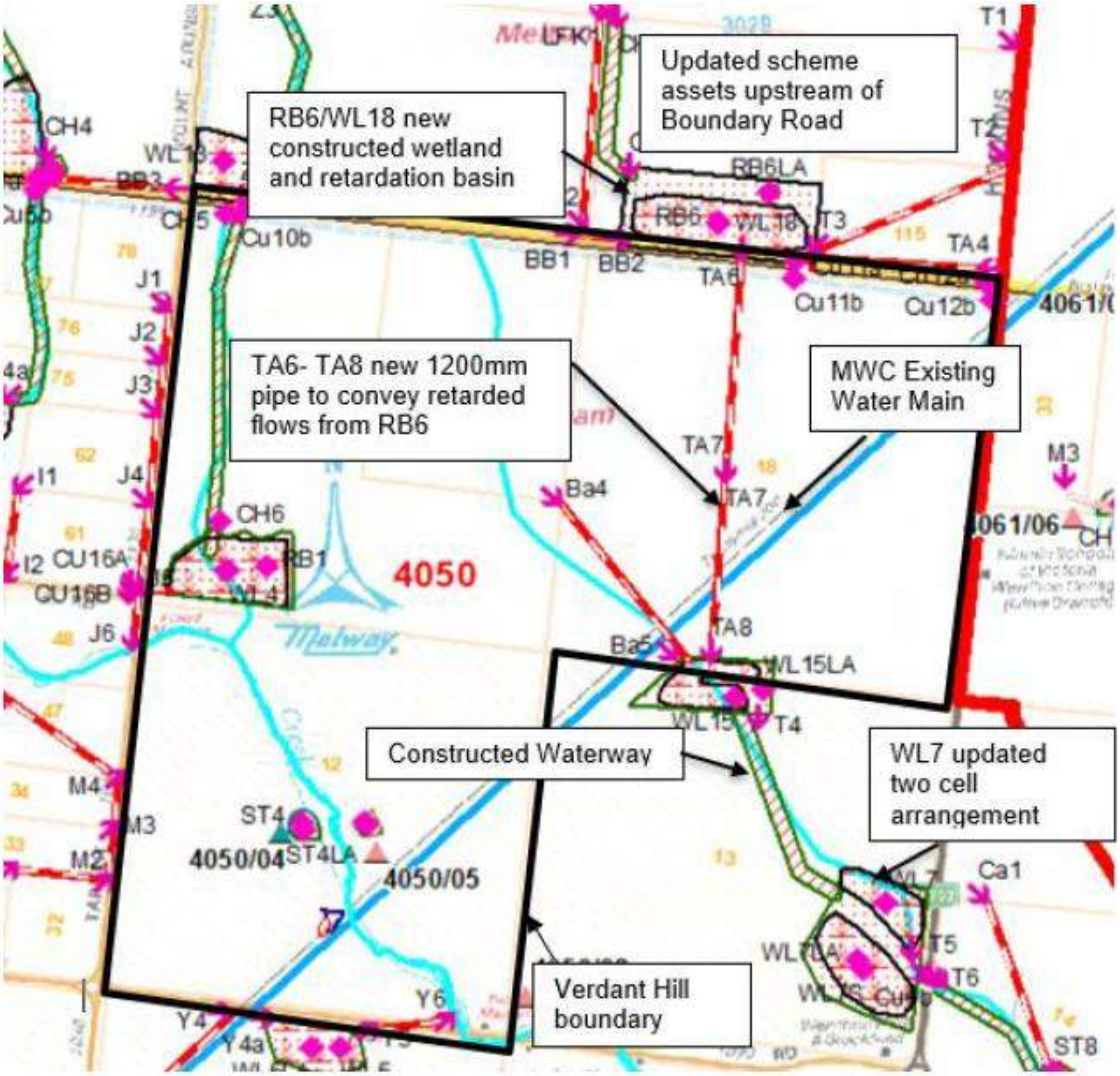


Figure 4-2: Dry Creek Upper DSS Overall Strategy *(Spiire 2020)*

4.3 Legal Point of Discharge and Internal Drainage Strategy

The ultimate legal point of discharge for the greater transit hub will be to Melbourne Water DSS infrastructure.

Two potential legal points of discharge have been identified for the terminal station site:

- Connection to the underground drainage network for flow up to and including the 10% AEP
- Discharge of gap flows up to and including the 1% AEP, with accommodation of the future near and medium-term climate change scenarios, to an open swale drain within the existing Melbourne Water and Ausnet easement at the south-east corner of the site.

4.4 Finished Surface Levels

Minimum finished levels should, typically, provide a minimum 300 mm freeboard above modelled design flood levels. Due to the absence of external flooding under the ultimate developed conditions, required level increases will be modest and primarily ensure positive drainage toward the legal point of discharge.

4.5 Stormwater Quality Considerations

The site is located within the Tarneit Logistics Hub and connected to Melbourne Water DSS. Stormwater discharge generated within the frequent storm events will be discharged to the TLH drainage system and into the regional wetland (WL15) south of the site.

It is expected that the delivery of the relevant DSS assets will be undertaken concurrently with the staged development of the TLH and Terminal Station. The endorsed *Tarneit Logistics Hub Stormwater Drainage Strategy (DCE, October 2025)* has accounted for the Terminal Station discharge.

An interim Stormwater Management Strategy has been developed by Dalton Consulting Engineers (DCE) and endorsed by Wyndham City Council (11 November 2025) which will provide interim stormwater management in the event that - *"…the construction of the downstream infrastructure is not complete, and Stage 1 is developed at the subject site."* - The Terminal Station is included in Stage 1 of the TLH development.

Due to these controls, no stormwater management (quality or quantity) is required for the Terminal Station.

5 Flood Risk Assessment

5.1 Flood Events Assessed

Flood behaviour was assessed for the 20% and 1% AEP events under SSP3-7.0 near-term 2030 and medium-term 2070 climate scenarios. The flood assessment has considered flood depths, peak flows, afflux and flood hazards. Detailed flood maps are provided in Appendix B.

5.2 Flood Extent and Depth

5.2.1 Existing conditions

Modelled results indicate that regional flooding from Dry Creek does not encroach onto the Site in events up to and including the modelled 1% AEP 2070 Climate Change scenario. Local overland flows, overtopping Boundary Road in the 2030 and 2070 1% AEP event, approach from the northwest corner and traverse along a broad undefined flow path in a south easterly direction across the site.

Flows overtopping Boundary Road near the Derrimut Road intersection are conveyed within a shallow swale drain which forms part of the Derrimut Road drainage. Modelling has shown that 1% AEP flows under base conditions (2030) and medium-term 2070 SSP3-7.0 climate change conditions exceed the capacity of the current swale drain and extend into the Site.

It is noted that the resolution of the LiDAR does not accurately capture the swale profile, resulting in an underestimation of the conveyance capacity. Flood extent within the site boundary can be considered conservative.

Runoff depths are shallow, generally less than 50 mm for the 1% AEP future medium-term (2070) climate change event – these are not considered flood depths but rather classified as shallow sheet flow. Flood depths traversing the site average < 60 mm and can reach 80 mm in small, localised depressions distributed within the site, during the 2030 and 2070 1% AEP events.

Note, no flooding is depicted within the site in the 2030 and 2070 20% AEP event scenarios.

Flood depths extending into the Site from the Derrimut Road drainage swale experience greater average depths, however, these do not exceed 150 mm in the 1% AEP event, and < 80 mm in the 20% AEP event.

The 1% AEP SSP3-7.0 near-term (2030) climate change horizon flood depth map can be seen in Figure 5-1, below. The 1% and 20% AEP flood depth mapping can be seen in Appendix B for the 'base-line' near-term (2030) and medium-term (2070) Climate Change scenarios under existing development conditions.

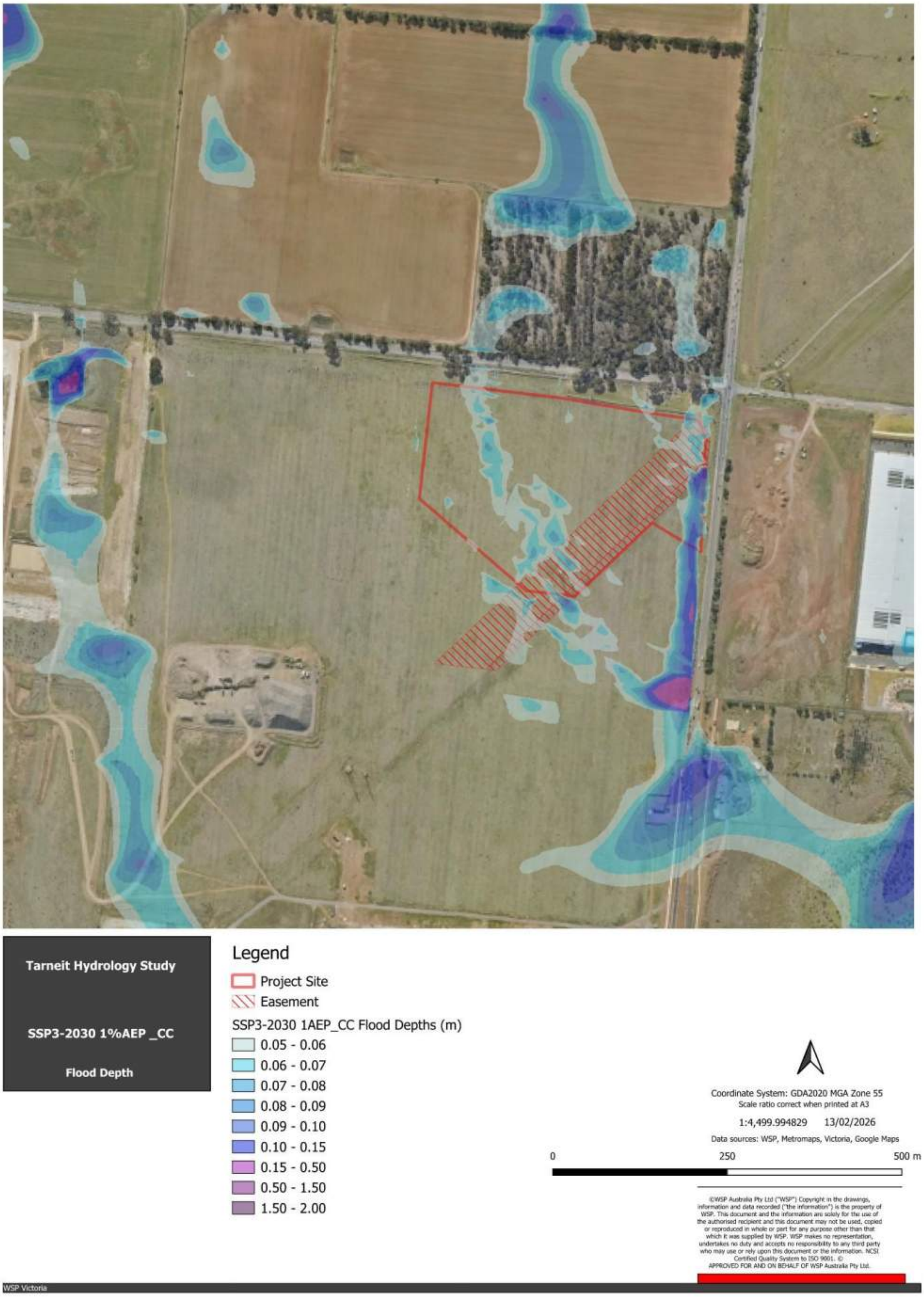


Figure 5-1 Existing conditions flood depth (1%AEP SSP3-7.0-2030)

5.2.2 Developed Conditions

The ultimate developed conditions will see all flooding generated in the upstream catchment (north of Boundary Road) be intercepted and managed within the revised DSS stormwater system, specifically RB6/WL18. This will be further facilitated by the proposed reconstruction and regrading of Boundary Road, and the Boundary Road-Derrimut Road intersection.

Under ultimate developed conditions, runoff depths within the Site are expected to remain shallow and the surface design will prevent ponding resulting in the generation of flood depths during extreme rainfall events prior to drainage capture. No external flooding or overland flow paths are anticipated to affect the Site following the delivery of the

5.3 Peak Flows Through Site

5.3.1 Existing Conditions

The peak flood flows within the site and within the Derrimut Road swale drain, generated by the upstream catchment, are shown in Table 5-1 for the base-line (2030) and medium-term (2070) SSP3-7.0 climate change scenarios for the 1% and 20% AEP's.

Table 5-1 Peak Flow within Site (m^3/s)

Peak Flow	SSP3-7.0-2030		SSP3-7.0-2070	
	1%AEP	20%AEP	1%AEP	20%AEP
North-West Overland Flow	1.14 m^3/s	0.48 m^3/s	1.36 m^3/s	0.57 m^3/s
Derrimut Road Swale	1.04 m^3/s	0.38 m^3/s	1.32 m^3/s	0.47 m^3/s

5.3.2 Developed Conditions

The revised Melbourne Water DSS removes regional runoff from the Site by intercepting upstream flows within the northern retarding basin (RB6) and conveying them through the 1200 mm trunk pipe. As a result, external overland flow paths no longer interact with the Site.

Under ultimate conditions the Site receives only direct rainfall runoff. Flood behaviour therefore becomes entirely localised and controlled by internal grading and drainage design. This fundamentally changes the risk profile from flood conveyance to stormwater management.

Under the ultimate developed conditions stormwater runoff generated within the site will be captured and conveyed within the site drainage system. The site drainage will consist of an underground pipe network to capture runoff generated from events up to and including the 10% AEP which will be connected to the drainage network within the greater Tarneit Logistics Hub, discharging ultimately to BA5/WL15.

The gap flows up to and including the 1% AEP event for the future medium-term climate change horizon 2070, will discharge to an open drain located within the existing Melbourne Wate and Ausnet easement along the south-east boundary. The swale drain will direct surface flows along the easement to the downstream DSS asset BA5/WL15.

5.4 Flood Hazard

Flood hazard across the Site, under existing conditions, has a H1 category classification, indicating conditions are unrestricted (safe) for all movement.

Development of the site is expected to coincide with delivery of the DSS assets TA6 > TA7 > TA8 – the 1% AEP (Q100) pipe conveying stormwater runoff from the DSS basin RB6, through the TLH to the downstream basin Ba5.

The provision of the DSS drainage assets, construction of the greater Tarneit Logistics Hub development and the regrading work along Boundary Road and Derrimut Road; stormwater runoff from the northern catchment area will be captured and conveyed through the DSS infrastructure providing flood immunity to the site.

Under the post developed scenario, the site will no longer interact with regional flooding and and/or be at risk of flood hazards.

5.5 Bench Level Assessment

The absence of external flood impacts means the Site can be developed without the need for regional flood mitigation measures. Finished surface levels will be designed to ensure positive drainage and compliance with design standards (AS5200).

5.6 Site Access and Flood Safety

Terminal Station access will be via a new road (Tiestone Court) from within the Tarneit logistics hub. Existing flooding across the site and future entrance location is shown to not be hazardous. The proposed development and construction of the DSS assets will facilitate the removal of flood depths from the site and entrance location. New roads will be designed to safely convey overland flows within safety thresholds. As such, site access will not be impeded during flood events up to and including the future 1% AEP medium-term (2070) horizon.

6 Conclusions

The revised Melbourne Water Drainage Scheme removes external catchment runoff from the Site. Stormwater Runoff affecting the development is therefore limited to rainfall falling directly on the parcel.

Provided finished levels are appropriately graded and internal drainage connects to the legal point of discharge, the development will:

- Not be subject to flooding
- Not cause adverse flood impacts
- Comply with Melbourne Water flood management intent
- Be suitable for planning approval subject to detailed design

Accordingly, the proposed development is considered acceptable from a flooding and stormwater management perspective under ultimate drainage scheme conditions.

7 Limitations

This Report is provided by WSP Australia Pty Limited (WSP) for Powercor Australia (Client) in response to specific instructions from the Client and in accordance with WSP's proposal dated December 10 2025 and agreement with the Client dated December 11 2025 (Agreement).

PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (Permitted Purpose).

QUALIFICATIONS AND ASSUMPTIONS

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (Conclusions) are based in whole or in part on information provided by the Client and other parties identified in the report (Information), those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

WSP has prepared the Report without regard to any special interest of any person other than the Client when undertaking the services described in the Agreement or in preparing the Report.

USE AND RELIANCE

This Report should be read in its entirety and must not be copied, distributed or referred to in part only. The Report must not be reproduced without the written approval of WSP. WSP will not be responsible for interpretations or conclusions drawn by the reader. This Report (or sections of the Report) should not be used as part of a specification for a project or for incorporation into any other document without the prior agreement of WSP.

WSP is not (and will not be) obliged to provide an update of this Report to include any event, circumstance, revised Information or any matter coming to WSP's attention after the date of this Report. Data reported and Conclusions drawn are based solely on information made available to WSP at the time of preparing the Report. The passage of time; unexpected variations in ground conditions; manifestations of latent conditions; or the impact of future events (including (without limitation) changes in policy, legislation, guidelines, scientific knowledge; and changes in interpretation of policy by statutory authorities); may require further investigation or subsequent re-evaluation of the Conclusions.

This Report can only be relied upon for the Permitted Purpose and may not be relied upon for any other purpose. The Report does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial commitment or otherwise. It is the responsibility of the Client to accept (if the Client so chooses) any Conclusions contained within the Report and implement them in an appropriate, suitable and timely manner.

In the absence of express written consent of WSP, no responsibility is accepted by WSP for the use of the Report in whole or in part by any party other than the Client for any purpose whatsoever. Without the express written consent of WSP, any use which a third party makes of this Report or any reliance on (or decisions to be made) based on this Report is at the sole risk of those third parties without recourse to WSP. Third parties should make their own enquiries and obtain independent advice in relation to any matter dealt with or Conclusions expressed in the Report.

DISCLAIMER

No warranty, undertaking or guarantee whether expressed or implied, is made with respect to the data reported or the Conclusions drawn. To the fullest extent permitted at law, WSP, its related bodies corporate and its officers, employees and agents assumes no responsibility and will not be liable to any third party for, or in relation to any losses, damages or expenses (including any indirect, consequential or punitive losses or damages or any amounts for loss of profit, loss of revenue, loss of opportunity to earn profit, loss of production, loss of contract, increased operational costs, loss of business opportunity, site depredation costs, business interruption or economic loss) of any kind whatsoever, suffered on incurred by a third party

ARR Data Hub

Appendix A

Results - ARR Data Hub
[STARTTXT]

Input Data Information
[INPUTDATA]
Latitude,-37.773000
Longitude,144.660000
[END_INPUTDATA]

River Region
[RIVREG]
Division,South East Coast (Victoria)
River Number,7
River Name,Werribee River
[RIVREG_META]
Time Accessed,18 December 2025 10:14AM
Version,2016_v1
[END_RIVREG]

ARF Parameters
[LONGARF]
Zone,Southern Temperate
a,0.158
b,0.276
c,0.372
d,0.315
e,0.000141
f,0.41
g,0.15
h,0.01
i,-0.0027
[LONGARF_META]
Time Accessed,18 December 2025 10:14AM
Version,2016_v1
[END_LONGARF]

Storm Losses
[LOSSES]
ID,3553.0
Storm Initial Losses (mm),11.0
Storm Continuing Losses (mm/h),0.3
[LOSSES_META]
Time Accessed,18 December 2025 10:14AM
Version,2016_v1
[END_LOSSES]

Temporal Patterns
[TP]
code,SSmainland
Label,Southern Slopes (Vic/NSW)
[TP_META]
Time Accessed,18 December 2025 10:14AM
Version,2016_v2
[END_TP]

Areal Temporal Patterns
[ATP]
code,SSmainland
arealabel,Southern Slopes (Vic/NSW)
[ATP_META]

Time Accessed,18 December 2025 10:14AM
Version,2016_v2
[END_ATP]

Median Preburst Depths and Ratios
[PREBURST]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),2.2 (0.151),1.8 (0.083),1.4 (0.056),1.1 (0.037),1.2 (0.031),1.2 (0.028)
90 (1.5),2.4 (0.140),2.0 (0.084),1.8 (0.061),1.6 (0.045),1.7 (0.040),1.8 (0.037)
120 (2.0),1.1 (0.057),1.3 (0.049),1.4 (0.045),1.6 (0.042),1.5 (0.033),1.5 (0.028)
180 (3.0),1.5 (0.069),1.1 (0.036),0.8 (0.023),0.6 (0.013),2.0 (0.037),3.0 (0.049)
360 (6.0),0.4 (0.015),1.2 (0.031),1.7 (0.037),2.2 (0.040),3.5 (0.051),4.5 (0.057)
720 (12.0),0.0 (0.000),1.1 (0.022),1.8 (0.030),2.5 (0.035),4.3 (0.048),5.6 (0.054)
1080 (18.0),0.0 (0.000),0.5 (0.008),0.8 (0.011),1.1 (0.013),2.3 (0.022),3.2 (0.027)
1440 (24.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.3 (0.003),0.6 (0.004)
2160 (36.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2880 (48.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
[PREBURST_META]
Time Accessed,18 December 2025 10:14AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST]From preburst class

10% Preburst Depths
[PREBURST10]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
90 (1.5),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
120 (2.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
180 (3.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
360 (6.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
720 (12.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1080 (18.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1440 (24.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2160 (36.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2880 (48.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
[PREBURST10_META]
Time Accessed,18 December 2025 10:14AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST10]From preburst class

25% Preburst Depths
[PREBURST25]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),0.1 (0.008),0.1 (0.003),0.0 (0.001),0.0 (0.000),0.0 (0.000),0.0 (0.000)
90 (1.5),0.1 (0.007),0.1 (0.003),0.0 (0.001),0.0 (0.000),0.0 (0.000),0.0 (0.000)
120 (2.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
180 (3.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
360 (6.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.1 (0.001),0.1 (0.002)
720 (12.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1080 (18.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1440 (24.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2160 (36.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2880 (48.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)

[PREBURST25_META]
Time Accessed,18 December 2025 10:14AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST25]From preburst class

75% Preburst Depths
[PREBURST75]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),11.0 (0.746),10.1 (0.479),9.5 (0.368),8.9 (0.289),11.6 (0.306),13.6 (0.311)
90 (1.5),10.4 (0.610),10.6 (0.440),10.7 (0.366),10.8 (0.311),11.6 (0.271),12.2 (0.246)
120 (2.0),5.4 (0.286),8.2 (0.310),10.0 (0.312),11.8 (0.309),13.5 (0.288),14.8 (0.272)
180 (3.0),9.8 (0.450),10.7 (0.356),11.4 (0.311),12.0 (0.276),15.0 (0.280),17.2 (0.277)
360 (6.0),3.8 (0.137),8.4 (0.218),11.5 (0.245),14.4 (0.259),16.2 (0.237),17.6 (0.222)
720 (12.0),1.2 (0.033),7.3 (0.145),11.4 (0.186),15.3 (0.210),19.4 (0.217),22.5 (0.218)
1080 (18.0),1.7 (0.041),5.7 (0.096),8.3 (0.115),10.8 (0.126),14.6 (0.140),17.5 (0.146)
1440 (24.0),2.3 (0.049),4.1 (0.063),5.3 (0.066),6.5 (0.068),9.6 (0.083),11.9 (0.090)
2160 (36.0),0.0 (0.000),0.8 (0.011),1.3 (0.015),1.9 (0.017),4.5 (0.034),6.5 (0.044)
2880 (48.0),0.0 (0.000),0.3 (0.003),0.4 (0.004),0.6 (0.005),2.1 (0.015),3.3 (0.020)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
[PREBURST75_META]
Time Accessed,18 December 2025 10:14AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST75]From preburst class

90% Preburst Depths
[PREBURST90]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),31.4 (2.122),27.3 (1.295),24.6 (0.955),22.0 (0.717),24.8 (0.657),26.9 (0.617)
90 (1.5),21.2 (1.249),21.1 (0.880),21.0 (0.720),21.0 (0.603),24.6 (0.575),27.3 (0.552)
120 (2.0),16.8 (0.898),19.3 (0.733),20.9 (0.653),22.5 (0.591),33.0 (0.704),40.9 (0.754)
180 (3.0),18.8 (0.869),21.0 (0.696),22.4 (0.613),23.8 (0.548),30.0 (0.560),34.6 (0.558)
360 (6.0),13.2 (0.470),20.3 (0.523),25.0 (0.532),29.5 (0.530),31.6 (0.461),33.2 (0.418)
720 (12.0),16.2 (0.443),21.6 (0.427),25.2 (0.410),28.7 (0.393),37.7 (0.421),44.5 (0.430)
1080 (18.0),14.1 (0.334),16.9 (0.286),18.8 (0.261),20.6 (0.241),27.2 (0.260),32.1 (0.268)
1440 (24.0),10.3 (0.221),17.0 (0.259),21.5 (0.269),25.8 (0.271),28.1 (0.243),29.8 (0.225)
2160 (36.0),15.8 (0.302),15.0 (0.201),14.5 (0.159),14.1 (0.129),24.1 (0.183),31.6 (0.212)
2880 (48.0),0.5 (0.009),1.9 (0.024),2.9 (0.029),3.8 (0.032),12.4 (0.087),18.8 (0.117)
4320 (72.0),2.1 (0.035),3.7 (0.042),4.8 (0.044),5.8 (0.044),6.9 (0.045),7.8 (0.045)
[PREBURST90_META]
Time Accessed,18 December 2025 10:14AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST90]From preburst class

Climate Change Factors
[CCF]
[SSP1-2.6]
,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours
2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1
2040,1.21,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.11,1.11
2050,1.22,1.2,1.18,1.17,1.15,1.15,1.14,1.13,1.12,1.11
2060,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12
2070,1.24,1.22,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12
2080,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12
2090,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2100,1.22,1.2,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.12
[END_SSP1-2.6]
[SSP2-4.5]
,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours
2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1
2040,1.22,1.2,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.12
2050,1.27,1.24,1.23,1.21,1.19,1.18,1.17,1.16,1.15,1.14
2060,1.3,1.27,1.25,1.23,1.21,1.2,1.19,1.18,1.16,1.16
2070,1.33,1.3,1.28,1.26,1.24,1.22,1.21,1.19,1.18,1.17
2080,1.37,1.33,1.31,1.28,1.26,1.24,1.22,1.21,1.2,1.19
2090,1.4,1.36,1.34,1.31,1.28,1.26,1.24,1.23,1.21,1.2
2100,1.41,1.37,1.35,1.32,1.29,1.27,1.25,1.24,1.22,1.21
[END_SSP2-4.5]
[SSP3-7.0]
,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours
2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1
2040,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12
2050,1.29,1.26,1.24,1.22,1.2,1.19,1.18,1.17,1.16,1.15
2060,1.35,1.32,1.3,1.27,1.25,1.23,1.22,1.2,1.19,1.18
2070,1.42,1.38,1.35,1.32,1.29,1.28,1.26,1.24,1.22,1.21
2080,1.5,1.45,1.42,1.38,1.35,1.33,1.3,1.28,1.26,1.25
2090,1.59,1.53,1.49,1.44,1.4,1.38,1.35,1.33,1.3,1.29
2100,1.66,1.59,1.55,1.5,1.45,1.42,1.39,1.37,1.34,1.32
[END_SSP3-7.0]
[SSP5-8.5]
,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours
2030,1.2,1.18,1.17,1.16,1.14,1.13,1.13,1.12,1.11,1.11
2040,1.26,1.24,1.22,1.2,1.18,1.17,1.16,1.15,1.14,1.14
2050,1.34,1.31,1.29,1.26,1.24,1.23,1.21,1.2,1.18,1.18
2060,1.42,1.38,1.35,1.32,1.29,1.28,1.26,1.24,1.22,1.21
2070,1.52,1.47,1.43,1.4,1.36,1.34,1.31,1.29,1.27,1.26
2080,1.63,1.57,1.52,1.48,1.43,1.4,1.37,1.35,1.33,1.31
2090,1.77,1.69,1.64,1.58,1.52,1.49,1.45,1.42,1.39,1.37
2100,1.86,1.77,1.71,1.64,1.58,1.54,1.5,1.47,1.43,1.41
[END_SSP5-8.5]
[Climate_Change_INITIAL_LOSS]
,Losses SSP1-2.6,Losses SSP2-4.5,Losses SSP3-7.0,Losses SSP5-8.5
2030,1.05,1.05,1.05,1.05
2040,1.05,1.06,1.06,1.07
2050,1.06,1.07,1.07,1.08
2060,1.06,1.07,1.09,1.1
2070,1.06,1.08,1.1,1.12
2080,1.06,1.09,1.12,1.14
2090,1.06,1.09,1.13,1.17
2100,1.06,1.1,1.15,1.19
[END_Climate_Change_INITIAL_LOSS]
[Climate_Change_CONTINUING_LOSS]
,Losses SSP1-2.6,Losses SSP2-4.5,Losses SSP3-7.0,Losses SSP5-8.5
2030,1.1,1.1,1.1,1.11
2040,1.12,1.12,1.13,1.14
2050,1.12,1.15,1.16,1.18
2060,1.13,1.17,1.19,1.23
2070,1.13,1.18,1.23,1.28
2080,1.13,1.2,1.27,1.33
2090,1.13,1.21,1.31,1.39
2100,1.12,1.22,1.34,1.44
[END_Climate_Change_CONTINUING_LOSS]
[TEMPERATURE_CHANGES]
,SSP1-2.6,SSP2-4.5,SSP3-7.0,SSP5-8.5
2030,1.2,1.2,1.2,1.3

2040,1.3,1.4,1.5,1.6
2050,1.4,1.7,1.8,2.1
2060,1.5,1.9,2.2,2.5
2070,1.5,2.1,2.5,3.0
2080,1.5,2.2,2.9,3.5
2090,1.5,2.4,3.3,4.1
2100,1.4,2.5,3.6,4.5
[END_TEMPERATURE_CHANGES]

[CCF_META]
Time Accessed,18 December 2025 10:14AM
Version,2024_v1
Note,Updated climate change factors for IFD Initial loss and continuing loss based on IPCC AR6 temperature increases from the updated Climate Change Considerations (Book 1: Chapter 6) in ARR (Version 4.2). ARR recommends athe use of Current and near-term (2030 midpoint). Medium-term (2050 midpoint) and Long-term (2090 midpoint)
[END_CCF]

[ENDTXT]

Flood Maps

Appendix B

Tarneit Hydrology Study

SSP3-2030 20%AEP _CC

Flood Depth

Legend

- Project Site
- Easement

SSP3-2030 20%AEP CC Flood Depth (m)

- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.10
- 0.10 - 0.15
- 0.15 - 0.50
- 0.50 - 1.50
- 1.50 - 2.00

Coordinate System: GDA2020 MGA Zone 55
Scale ratio correct when printed at A3

1:4,499.994829 13/02/2026

Data sources: WSP, Metromaps, Victoria, Google Maps

0 250 500 m

Tarneit Hydrology Study

SSP3-2070 20%AEP _CC

Flood Depth

Legend

Project Site

Easement

SSP3-2070 20%AEP_CC Flood Depths (m)

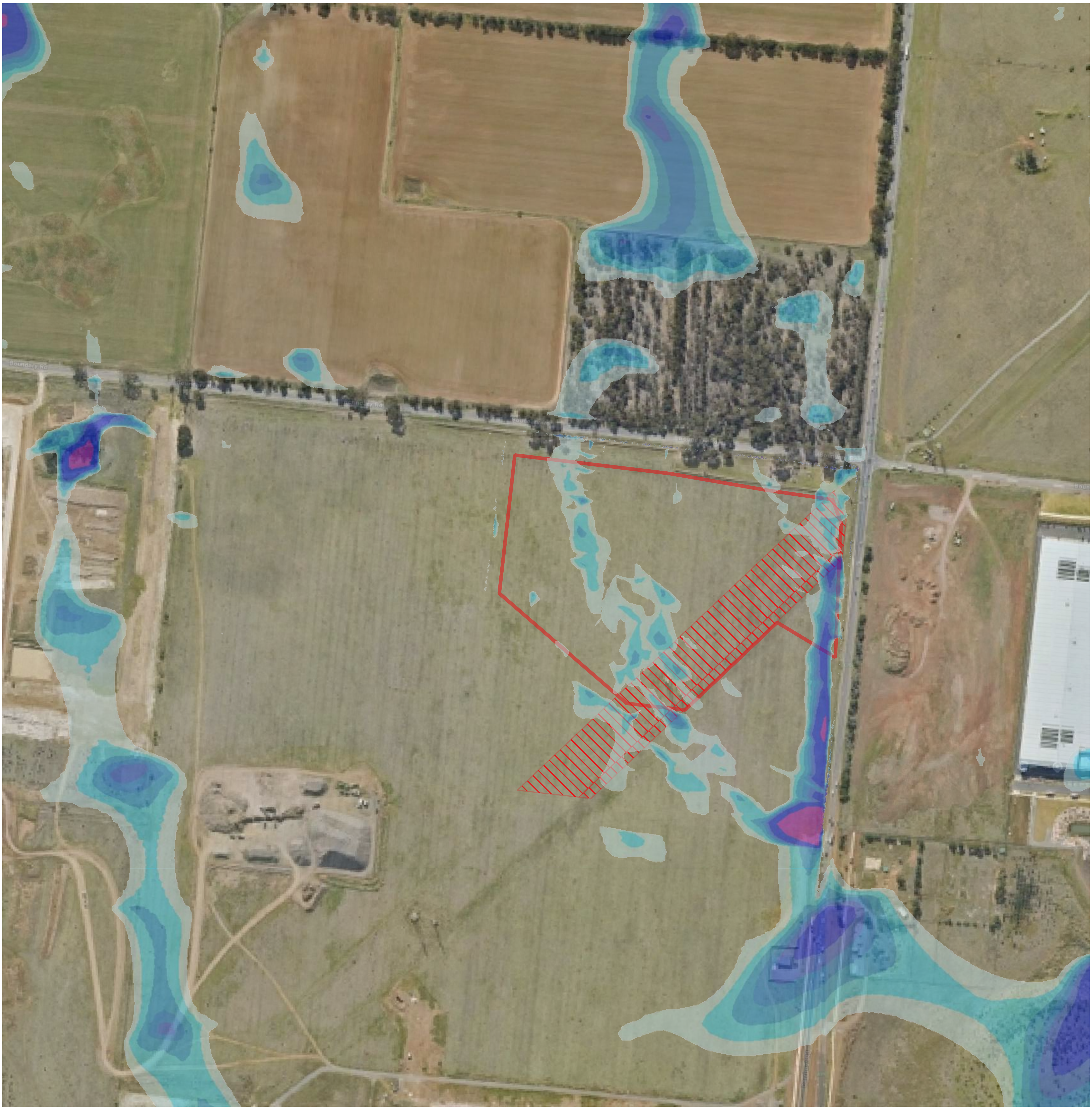
- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.10
- 0.10 - 0.15
- 0.15 - 0.50
- 0.50 - 1.50
- 1.50 - 2.00

Coordinate System: GDA2020 MGA Zone 55
Scale ratio correct when printed at A3

1:4,499.994829 13/02/2026

Data sources: WSP, Metromaps, Victoria, Google Maps

0 250 500 m



Tarneit Hydrology Study

SSP3-2030 1%AEP _CC

Flood Depth

Legend

Project Site

Easement

SSP3-2030 1AEP_CC Flood Depths (m)

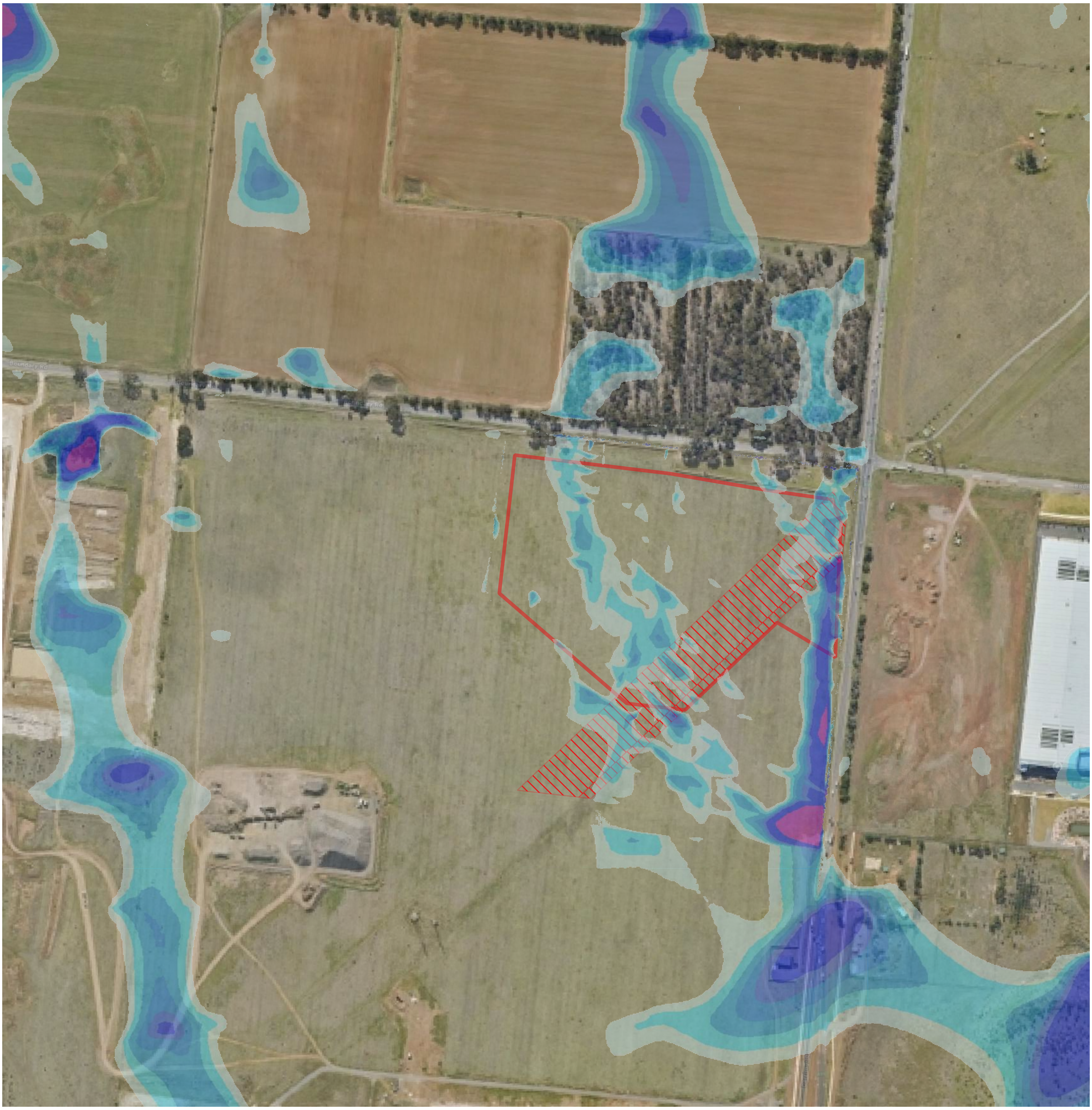
- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.10
- 0.10 - 0.15
- 0.15 - 0.50
- 0.50 - 1.50
- 1.50 - 2.00

Coordinate System: GDA2020 MGA Zone 55
Scale ratio correct when printed at A3

1:4,499.994829 13/02/2026

Data sources: WSP, Metromaps, Victoria, Google Maps

0 250 500 m



Tarneit Hydrology Study

SSP3-2070 1%AEP _CC

Flood Depth

Legend

- Project Site
- Easement

SSP3-2070 1%_CC Flood depths (m)

- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.10
- 0.10 - 0.15
- 0.15 - 0.50
- 0.50 - 1.50
- 1.50 - 2.00

Coordinate System: GDA2020 MGA Zone 55
Scale ratio correct when printed at A3

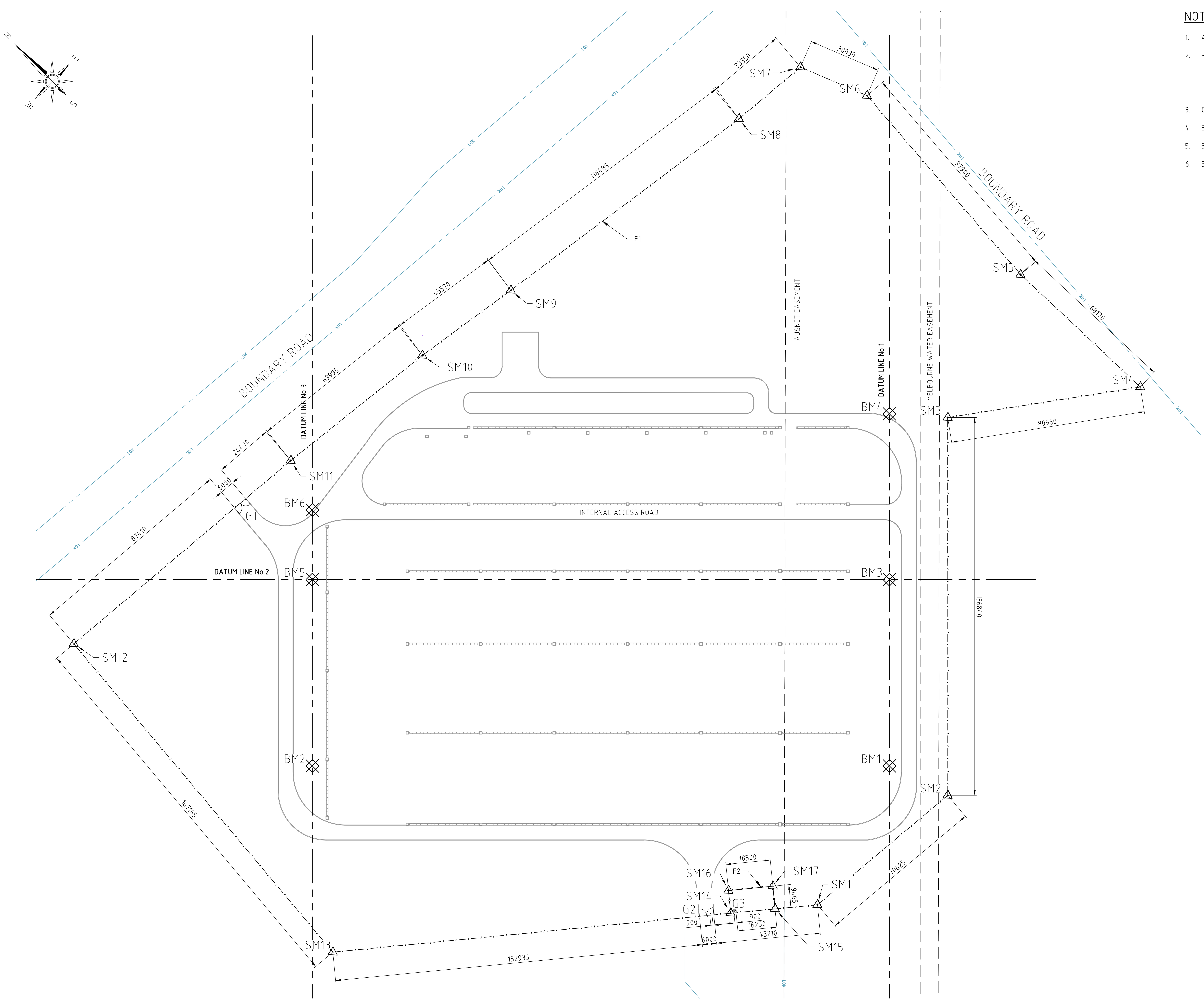
1:4,499.994829 13/02/2026

Data sources: WSP, Metromaps, Victoria, Google Maps

0 250 500 m

Preliminary Development Plans

Appendix C



SITE PLAN

SCALE 1:750

NOTES:

1. ANY CHANGES MADE ON SITE SHALL BE CONFIRMED BY THE DESIGNER.
2. REFER:
   - "SPIIRE - 1005 BOUNDARY ROAD - TITLE RE-ESTABLISHMENT & LEVEL AND FEATURE SURVEY" FOR SITE SURVEY
   - MCTS/TBC FOR GENERAL ARRANGEMENT
   - MCTS/604/1 FOR BENCHING & EARTHWORKS PLAN AND DETAILS
   - MCTS/TBC FOR FENCE & GATE DETAILS
3. COORDINATES ARE GIVEN IN METRES TO MGA2020 ZONE 55.
4. BASE LINES ARE INDICATED BY PERMANENT MARKERS WHICH SHALL CONSIST OF A STEEL MARKER LOCATED IN THE CENTRE OF A CONCRETE BLOCK.
5. BASE LINE MARKS HAVE BEEN LOCATED OUT OF TRAFFICABLE AREAS.
6. BASE LINES ARE ESTABLISHED TO ENSURE A CLEAR VIEW ALONG THEIR ALIGNMENTS.

SETOUT POINTS

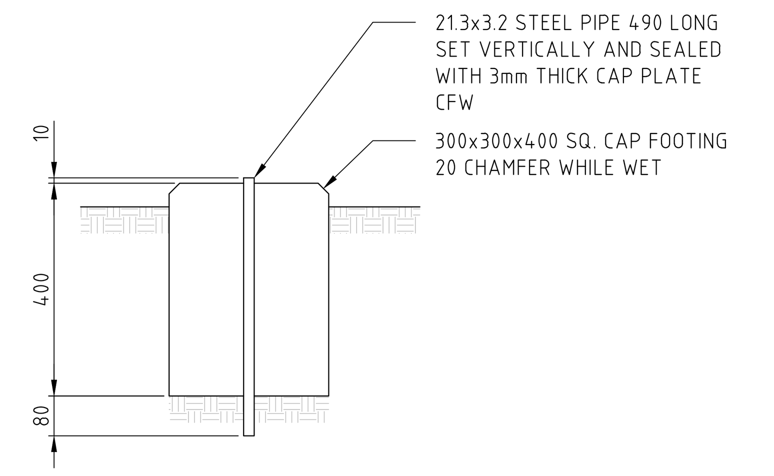
MARKER	Northing	Easting	COMMENT
BM1	5813043.879	296934.625	DATUM AMRKER
BM2	5813217.470	296769.526	DATUM MARKER
BM3	5813097.192	296990.681	DATUM INTERSECTION
BM4	5813144.605	297040.532	DATUM MARKER
BM5	5813270.783	296825.582	DATUM INTERSECTION
BM6	5813290.684	296846.506	DATUM MARKER
SM1	5813025.802	296872.250	FENCE CORNER
SM2	5813017.929	296942.429	FENCE CORNER
SM3	5813126.019	297056.073	FENCE CORNER
SM4	5813076.844	297120.385	FENCE CORNER
SM5	5813145.023	297119.888	FENCE CORNER
SM6	5813242.416	297129.828	FENCE CORNER
SM7	5813270.572	297119.396	FENCE CORNER
SM8	5813274.272	297086.248	FENCE CORNER
SM9	5813293.859	296969.395	FENCE CORNER
SM10	5813301.819	296924.528	FENCE CORNER
SM11	5813311.328	296855.209	FENCE CORNER
SM12	5813324.142	296738.025	FENCE CORNER
SM13	5813158.018	296719.380	FENCE CORNER
SM14	5813049.490	296844.908	FENCE CORNER
SM15	5813037.390	296858.903	FENCE CORNER
SM16	5813056.648	296851.097	FENCE CORNER
SM17	5813044.549	296865.092	FENCE CORNER

GATE SCHEDULE

ITEM	TYPE	No.	CLEAR OPENING DIMENSIONS (mm)	DRAWING NUMBER
G1	DOUBLE (VEHICLE)	1	6000	MCTS/TBC
G2	DOUBLE (VEHICLE & PEDESTRIAN)	1	6000	MCTS/TBC
G3	PEDESTRIAN	1	900	MCTS/TBC

FENCE SCHEDULE

ITEM	TYPE	LENGTH (m)	REFER DRAWING
F1	TBC	1259.1	MCTS/TBC
F2	TBC	37.5	MCTS/TBC



DATUM MARKER DETAILS

SCALE 1:10

LEGEND

- DATUM
- DATUM MARKER
- FENCE MARKER
- SUBSTATION SECURITY FENCE (F1)
- COLORBOND SECURITY FENCE (F2)

SCALE 1 : 10 (200 100 0 200 400 600 800 1000)

SCALE 1 : 500 (10000 5000 0 10000 20000 30000 40000 50000)

ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.

FOR INFORMATION
NOT FOR CONSTRUCTION

REFERENCE	
-	
-	
-	
FENCE & GATE DETAILS	MCTS/TBC
SWITCHYARD BENCHING & EARTHWORKS PLAN & SECTIONS	MCTS/604/1
GENERAL ARRANGEMENT PLAN	MCTS/TBC

SCALE 1:750

REVISION	03/02/26	6057342 - ISSUED FOR INFORMATION	JB ABJ

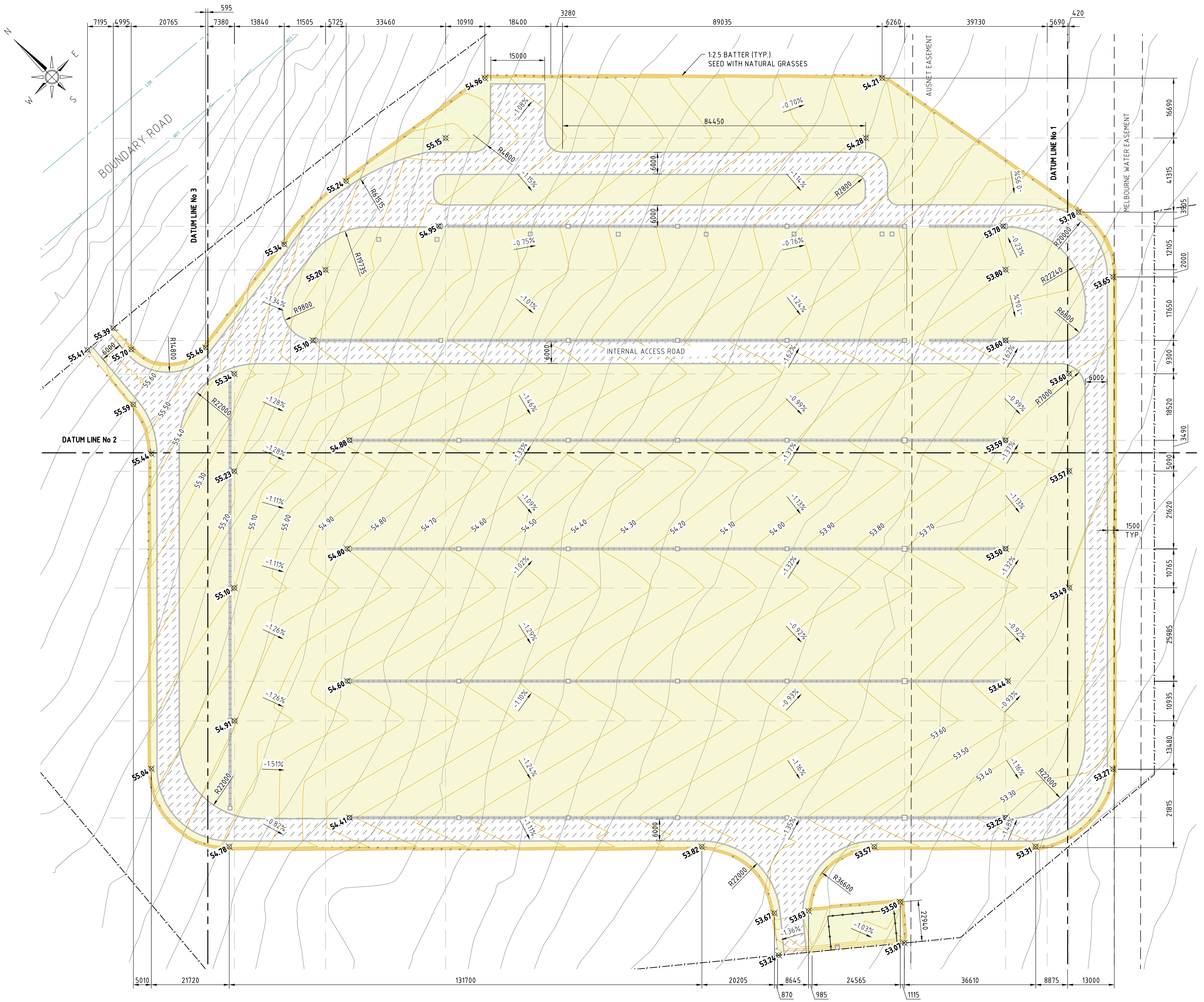
CITIPOWER / Powercor AUSTRALIA

Electricity Networks
Locked Bag 14090
Melbourne 8001
www.citipower.com.au
www.powercor.com.au

DRAWING NUMBER: MCTS 603 -.1 — SHEET 1 OF 1

SUBSTATION MCTS - MOUNT COTTRELL SWITCHYARD FENCING & SITE SETOUT PLAN

DRAWN	DRAFTING CHECK	DESIGNER	DESIGN APPROVAL	PROJECT MANAGER
J.Bessinger xx/xx/xx	xxx xx/xx/xx	J.Bessinger xx/xx/xx	A.Britten-Jones xx/xx/xx	6057342



BENCHING & EARTHWORKS PLAN

SCALE 1:500

NOTES:

GENERAL

1. ANY CHANGES MADE ON SITE SHALL BE CONFIRMED WITH THE DESIGNER.
2. REFER:
   - "SPIIRE - 1005 BOUNDARY ROAD - TITLE RE-ESTABLISHMENT & LEVEL AND FEATURE SURVEY" FOR SITE SURVEY
   - MCTS/TBC FOR GENERAL ARRANGEMENT
   - MCTS/TBC FOR FENCING & SITE SETOUT
   - MCTS/605/01 FOR OIL CONTAINMENT & DRAINAGE PLAN
3. THE DESIGN IS BASED ON GEOTECHNICAL INVESTIGATION REPORT No. 121526 BY A.S. JAMES Pty Ltd DATED 03 MAY 2022.
4. SUBSTATION BENCH DESIGN LEVEL IS BASED ON THE 1:100 YEAR FLOOD WATER SURFACE LEVEL AS DEFINED IN THE HYDROLOGY STUDY REPORT No. PS229327-SWP-MEL-CIV-MEM-0001 Rev A BY WSP DATED 23 DECEMBER 2025.
5. SUBSTATION BENCH SHALL BE INSTALLED IN ACCORDANCE WITH RLs SHOWN ±10 mm
6. RL's ARE GIVEN IN METRES TO AHD.

BENCH PREPARATION

7. ALL AREAS OF THE PROPOSED ACCESS TRACKS AND SUBSTATION BENCH EARTHWORKS SHALL BE STRIPPED OF TOPSOIL AND ALL ORGANIC MATTER TO MIN. 200 mm DEPTH.
8. FOLLOWING STRIPPING, PROOF ROLL THE EXPOSED MATERIAL WITH A 10-TONNE OR LARGER SMOOTH DRUM ROLLER IN THE PRESENCE OF A GEOTECHNICAL PRACTITIONER TO ACHIEVE MIN CBR OF 2.5%.
9. FOLLOWING PROOF ROLLING, ANY SECTION OF SOFT OR WET MATERIAL SHALL BE EXCAVATED TO A DEPTH OF 300 mm BELOW CUT LEVEL AND CHECKED BY A GEOTECHNICAL ENGINEER PRIOR TO BACKFILLING WITH ENGINEERED FILL.
10. THE TIME THAT THE SUBGRADE IS EXPOSED PRIOR TO PLACING PAVEMENT AND BENCH MATERIAL SHALL BE MINIMISED IN ORDER TO GUARANTEE ADEQUATE CAPACITY. ENGINEEERED FILL MATERIAL SHALL BE TESTED AS BELOW PRIOR TO PLACEMENT OF CRUSHED ROCK MATERIAL. ANY SOFT SPOTS OR WET MATERIAL SHALL BE REMOVED AND REPLACED AS ABOVE AT THE CONTRACTOR'S COST.
11. DRAINAGE SHALL BE MAINTAINED SUCH THAT INTERNAL DISHED EARTHWORK PROFILE REMAINS DRAINED THROUGH-OUT CONSTRUCTION. ANY DAMAGE OR FAILED COMPACTION DUE TO SATURATION SHALL BE REMEDIATED AT THE CONTRACTOR'S COST.

SUBSTATION BENCH

11. BENCH SHALL CONSIST OF A MINIMUM OF 150mm THICK OF COMPACTED FILL MATERIAL BENEATH A 200mm THICK COMPACTED CRUSHED ROCK SURFACE LAYER AS SHOWN IN THE TYPICAL BENCH PROFILE.
12. THE FILL MATERIAL SHALL BE COMPACTED IN MAXIMUM 300mm THICK HORIZONTAL LAYERS TO 95% MAXIMUM DRY DENSITY USING STANDARD COMPACTION EFFORT AT RECOMMENDED ±2% OPTIMUM MOISTURE CONTENT.
13. CRUSHED ROCK MATERIAL SHALL BE BLUE METAL SOURCED, WITH PROPERTIES TO BE REVIEWED AND APPROVED BY THE DESIGN CIVIL ENGINEER AGAINST VICROADS CLASS 2 CRUSHED ROCK STANDARDS.
14. A 200mm THICK CLASS 2 CRUSHED ROCK LAYER SHALL BE USED TO FINISHED SURFACE LEVEL WITHIN THE SUBSTATION. THE CRUSHED ROCK SHALL BE COMPACTED IN MAXIMUM 100 mm THICK HORIZONTAL LAYERS TO 95% MAXIMUM DRY DENSITY USING STANDARD COMPACTION EFFORT AT RECOMMENDED ±2% OPTIMUM MOISTURE CONTENT, THEN CUT TO FINAL BATTER SLOPE.
15. INDICATES EXTENT OF ROAD, THIS AREA SHALL HAVE A MINIMUM OF 300mm COMPACTED CLASS 2 CRUSHED ROCK BASE. COMPACTED IN 100mm LAYERS TO 98% MAXIMUM DRY DENSITY USING STANDARD COMPACTION EFFORT AT RECOMMENDED ±2% OPTIMUM MOISTURE CONTENT.
16. COMPACTION TESTING SHALL BE IN ACCORDANCE WITH AS 1289.5, TESTING SHALL BE BASED ON A MINIMUM OF THREE TESTS PER LOT.
17. COMPLETED BENCH SHALL BE TESTED AND VERIFIED BY A GEOTECHNICAL ENGINEER TO ACHIEVE 200kPa CAPACITY USING 6-OFF PLATE LOAD TESTS OR TEST ROLLING METHOD AT A FREQUENCY OF ONE TEST PER LOT WHERE USED WITH COMPACTION TESTING.
18. CONTRACTOR SHALL KEEP SITE RECORDS AT THEIR DISCRETION FOR QUALITY ASSURANCE PURPOSES, IN ACCORDANCE WITH REQUIREMENTS OF ITR.

INDICATIVE CUT AND FILL VOLUMES FOR BENCHING AREA :

19. EARTHWORKS VOLUMES BASED ON 200 mm STRIPPING OF EXISTING SURFACE.
   - EARTHWORKS AREA TBC m^2 (APPROX.)
   - CUT VOLUME TBC m^3 (APPROX.)
   - FILL VOLUME (LOOSE) TBC m^3 (APPROX.)

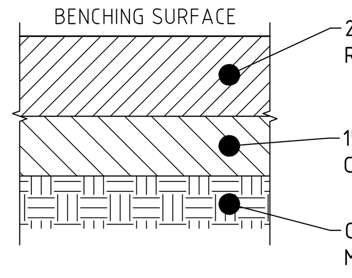
AVOID USING FILL MATERIALS WITH:
- ORGANIC MATERIAL
- HIGH CONTENTS OF SAND
- HIGH CONTENTS OF GRAVEL
- HIGH CONTENTS OF SILT
- DRY PROPERTIES

FILL MATERIAL NOTES:

19. PRIOR TO COMMENCEMENT OF THE WORKS, CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION RELATING TO IMPORTED FILL MATERIAL:
   (A) SOURCE OF QUARRY MATERIAL.
   (B) OPTIMUM MOISTURE CONTENT AND MAXIMUM MODIFIED DRY DENSITY OF THE FCR TO BE USED (FROM NATA APPROVED LABORATORY).

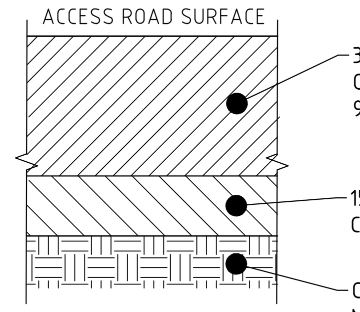
FILL SHALL MEET THE FOLLOWING SPECIFICATIONS:
- CBR > 4%m, MIN. 1 TEST PER MATERIAL
- PLASTICITY INDEX: MINIMUM 10%, MAXIMUM 30%
- EMERSON CLASS ≥ 3
- % PASSING 0.075 mm SIEVE ≥ 12% AND ≤ 40%
- MAXIMUM PARTICLE SIZE: 75 mm

IF THE SOURCE OF THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF THE WORKS, NEW TEST RESULTS SHALL BE PROVIDED AT THE CONTRACTOR'S COST.



TYPICAL BENCH PROFILE

NTS



TYPICAL ACCESS ROAD PROFILE

NTS

LEGEND:
- DATUM
- SECURITY FENCE
- CONTOUR LINE
- EXISTING CONTOUR LINE
- SUBSTATION BENCH
- INTERNAL ACCESS ROAD
- NATURAL GRASS SEEDED BATTER

SCALE 1 : 500

ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.

FOR INFORMATION
NOT FOR CONSTRUCTION

REFERENCE	
-	
-	
SWITCHYARD OIL CONTAINMENT & DRAINAGE PLAN	MCTS/605
SWITCHYARD FENCING & SITE SETOUT PLAN	MCTS/TBC
FOUNDATION LAYOUT PLAN	MCTS/TBC
GENERAL ARRANGEMENT PLAN	MCTS/TBC

SCALE 1:500	REVISION 15/07/25	6057342 - ISSUED FOR INFORMATION	JB ABJ

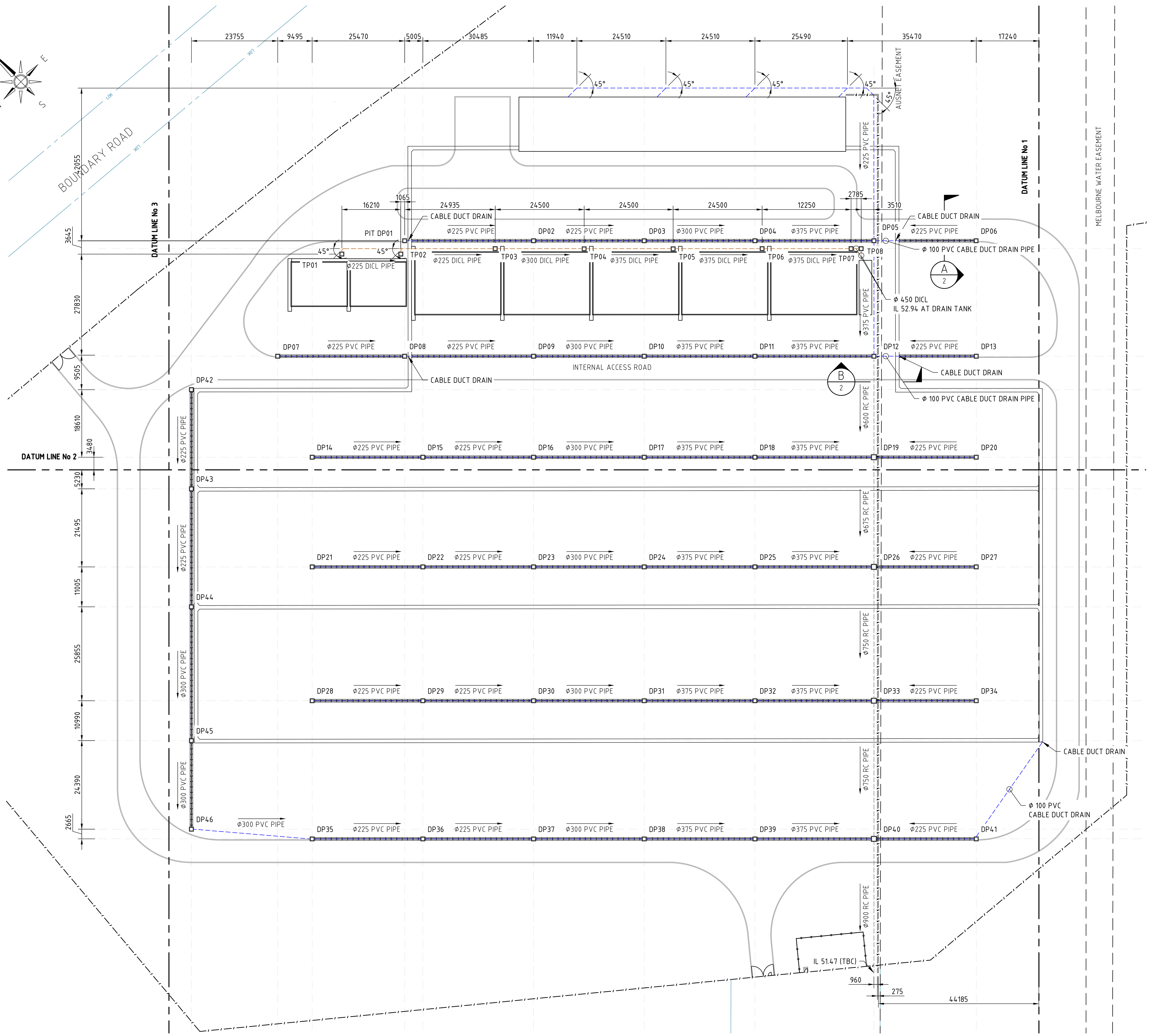
DRAWING NUMBER: MCTS 604 1 -.1 — SHEET 1 OF 1

SUBSTATION MCTS - MOUNT COTTRELL SWITCHYARD BENCHING & EARTHWORKS PLAN & SECTIONS

CITIPOWER / Powercor AUSTRALIA

Electricity Networks
Locked Bag 14090
Melbourne 8001
www.citipower.com.au
www.powercor.com.au

DRAWN	DRAFTING CHECK	DESIGNER	DESIGN APPROVAL	PROJECT MANAGER
J.Bessinger xx/xx/xx	xxx xx/xx/xx	J.Bessinger xx/xx/xx	A.Britten-Jones xx/xx/xx	6057342



SUBSTATION DRAINAGE PLAN

SCALE 1:500

LEGEND:

- DATUM LINE
- SUBSTATION SECURITY FENCE
- COLORBOND SECURITY FENCE
- WATER PIPEWORK
- SEWER PIPEWORK
- PVC PIPE (DRAIN PIPEWORK)
- DICL PIPE (DRAIN PIPEWORK)
- RCP PIPE (DRAIN PIPEWORK)
- DISHED INVERT

400 200 0 400 800 1200 1600 2000

SCALE 1 : 20

10000 5000 0 10000 20000 30000 40000 50000

SCALE 1 : 500

ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.

NOTES:

GENERAL:

1. REFER:
   - MCTS/TBC FOR CIVIL & STRUCTURAL GENERAL NOTES
   - MCTS/TBC FOR GENERAL ARRANGEMENT PLAN
   - MCTS/TBC FOR FOUNDATION LAYOUT PLAN
   - MCTS/605/2 FORSWITCHYARD OIL CONTAINMENT & DRAINAGE DETAILS
   - MCTS/604/1 FOR BENCHING & EARTHWORKS PLAN & DETAILS
   - MCTS/TBC FOR WATER SUPPLY PLAN

DRAINAGE:

1. ALL STORMWATER DRAINAGE SHALL COMPLY WITH AS/NZS 3500.3
2. ALL REINFORCED CONCRETE (RC) PIPES SHALL BE OF MIN. CLASS 4 AS OER AS/NZS4058-2007 WITH FLUSH JOINTS AND EXTERNAL JOINT BANDS.
3. RC PIPE SUPPORT SHALL BE TYPE H2 AS PER AS/NZS3725-2007 WITH 3% CEMENT STABILISED BEDDING MATERIAL.
4. PVC PIPES SHALL BE CLASS SN4 AS PER AS/NZS1254-2010 WITH ALL JOINTS FULLY GLUED AND PIT ENTRIES GROUTED WITH 40 MPa NON-SHRINK GROUT.
5. PVC PIPE BACKFILL SHALL BE WASHED SAND COMPACTED TO 95% SMD. PVC PIPES SHALL BE BACKFILLED WITH MIN 100mm 5% CEMENT-SATBILISED SAND FOR ROAD CROSSING SECTIONS AS SHOWN.
6. ALL CABLE DUCTS SHALL BE DRAINED AT THE LOWEST POINT WITH ø100 PVC DRAIN PIPE. DRAIN PIPES SHALL BE FITTED WITH ALLPROOF STORMWATER DRAIN.
7. A MINIMUM OF 450mm COVER SHALL BE MAINTAINED OVER ALL BUILDING PVC DOWN PIPES AND CABLE DUCT PVC DRAIN PIPES.
8. ALL DRAINAGE PIPEWORK SHALL BE FLUSHED CLEAN AND CAMERA-SURVEYED PROMPTLY AFTER FINAL BACKFILL & COMPACTION AT THE DISCRETION OF NS ENGINEER. FOOTAGE SHALL BE PROVIDED TO THE NS ENGINEER WITHIN 5 DAYS OF BACKFILLING.

REFERENCE	
CIVIL & STRUCTURAL GENERAL NOTES	MCTS/TBC
SWITCHYARD WATER SUPPLY PLAN	MCTS/TBC
SWITCHYARD BENCHING & EARTHWORKS PLAN & SECTIONS	MCTS/604/1
SWITCHYARD OIL CONTAINMENT & DRAINAGE - DETAILS	MCTS/605/2
SWITCHYARD FOUNDATION PLAN	MCTS/TBC
GENERAL ARRANGEMENT PLAN	MCTS/TBC

FOR INFORMATION
NOT FOR CONSTRUCTION

SCALE 1:500

REVISION	03/02/26	6057342 - ISSUED FOR INFORMATION	JB ABJ

CITIPOWER — Powercor AUSTRALIA

Electricity Networks
Locked Bag 14090
Melbourne 8001
www.citipower.com.au
www.powercor.com.au

DRAWING NUMBER	MCTS		605	1	-.1	SHEET 1 OF 2

SUBSTATION MCTS - MOUNT COTTRELL
SWITCHYARD OIL CONTAINMENT & DRAINAGE PLAN

DRAWN	DRAFTING CHECK	DESIGNER	DESIGN APPROVAL	PROJECT MANAGER
J.Bessinger xx/xx/xx	xxx xx/xx/xx	J.Bessinger xx/xx/xx	A.Britten-Jones xx/xx/xx	XXX

Electricity Networks - Zone Substations B1 - V1.0

679x960

B1