

Truganina Terminal Station - Stormwater Management Strategy

Prepared for:
MVC Services

6 June 2025

Prepared by:
Stantec

Project/File:
300204244

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Revision Schedule

Revision No.	Date	Description	Prepared by	Quality Reviewer	Independent Reviewer	Project Manager Final Approval
1	14/03/2025	Client Issue	Priyanka Wickramasuriya	Andy Sheehan	Tommy Plahcinski	Andy Sheehan
2	10/06/2025	Incorporates updated detailed drawings	Priyanka Wickramasuriya	Andy Sheehan	Tommy Plahcinski	Andy Sheehan

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Prepared by: 

Signature

PRIYANKA WICKRAMASURIYA


Printed Name

Reviewed by: 

Signature

TOMMY PLAHCINSKI

Printed Name

Approved by: 

Signature

ANDY SHEEHAN

Printed Name



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1 Introduction

Stantec have been commissioned by MVC Services to prepare this Stormwater Management Strategy (SWMS) for the proposed 220kV shared connection into Truganina Terminal Station (the Site). The proposed development of the Terminal Station is detailed within the 'Mt Atkinson Development (MAD) Project Overview Site Plan (Drawing Ref.: MAD-AST-PEN-DR-1200.03) refer to Appendix B.

The Site is currently an undeveloped site accessible via Riding Boundary Road. The site has two 500 kV overhead transmission lines running in parallel which are connected by four (4) transmission towers.

The purpose of this SWMS is to identify and detail the stormwater infrastructure requirements for the proposed development. The SWMS including the preliminary conceptual design outlines:

- the proposed stormwater assets;
- the conveyance of stormwater runoff from contributing catchments;
- Stormwater runoff volumes and how the proposed temporary stormwater asset detains flows to mimic the existing 1% AEP flows; and
- Key maintenance requirements.

For the purposes of this investigation, all calculations have assumed that the infrastructure associated with the Terminal Stations are fully impervious in the developed scenario.

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2 Requirements

The Urban Stormwater Best Practice Environmental Management Guidelines, (CSIRO 1999) set the requirements and guidance for the use of stormwater treatment measures that improve the quality and reduce the flow of water discharged to waterways. Pollution reduction targets detailed within these Guidelines are outlined in **Table 2-1** below.

Table 2-1 MUSIC WSUD Guidelines

Parameter	Value (%)
Total Suspended Solids (TSS)	80
Total Phosphorus (TP)	45
Total Nitrogen (TN)	45
Gross Pollutants	70

The site is located within Melbourne Water's Truganina Drainage Scheme. The Truganina Drainage Scheme details permanent works to be constructed on the subject site and adjacent properties. Temporary works are proposed to be undertaken to achieve an appropriate free draining outfall for the proposed development with permanent works proposed to be deferred. Accordingly, water quality (MUSIC) modelling has not been undertaken as part of this SWMS. A permanent sediment basin is proposed to be built as part of these temporary works and has been approximately sized for guidance using Melbourne Water Wetland Design Guidelines.

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3 Property Site Details

The property site details are provided in **Table 3-1** below.

Table 3-1 Property Site Details

PROPERTY SITE DETAILS	COMMENTS
Site Address	442-542 Mt Atkinson Road, Truganina 3029
Latitude & Longitude	-37.785,144.68
Lot Number	1
Proposed Development	Terminal Station (AusNet Services)
Local Authority	Wyndham City Council
Directory Ref	Melway Pg. 357 E11

The subject site is located in Truganina, bordered by Mt Atkinsons Road in the south and east and Riding Boundary Road in the north. The land is currently undeveloped is approximately 45 hectares in area. The existing site contains 4 transmission towers with overhead lines running in a south-westerly to north-easterly direction.

The site generally slopes in a southeasterly direction with overland flows ultimately draining into Skeleton Creek. The natural ground levels of the site range from approximately 90m AHD at the north-western portion of the site to 78m AHD at the southeastern portion. Refer to **Figure 3-1** for the *Existing Site Plan* for further details.

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Truganina Terminal Station - Stormwater Management Strategy
3 Property Site Details



Figure 3-1: Existing Site Plan

Based on an assessment of the site undertaken, there are currently no known flood related development and/or planning controls affecting the site. Refer to **Figure 3-2** for the *VicPlan Planning Overlays Map*.

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Truganina Terminal Station - Stormwater Management Strategy
3 Property Site Details

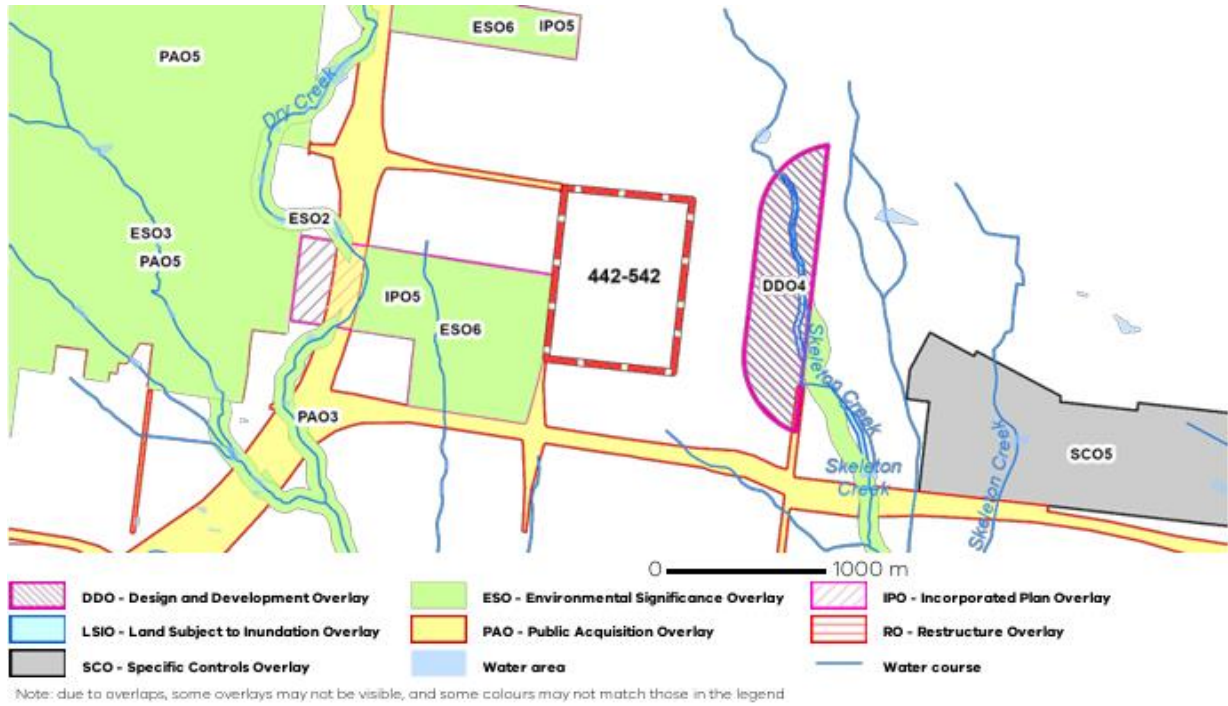


Figure 3-2: VicPlan Planning Overlays Map

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4 Permanent and Temporary Drainage Arrangements

4.1 Permanent drainage arrangements

The permanent drainage arrangements are detailed within the Truganina Drainage Scheme. The permanent outfall arrangements for the subject site are inclusive of a 20% AEP Council Pipeline with a length of 510m running from nodes F5 to F6 as per the Truganina Drainage Scheme running along the eastern boundary of the property from north to south for further details.

Details of the permanent drainage works identified within the Truganina Drainage Scheme applicable to the subject site and adjacent properties is detailed in **Table 4-1** and **Figure 4-1** below.

Table 4-1: Permanent Truganina Drainage Scheme works

Node Ref.	Length(m)	Comments/Ownership
F3 to F4	600m	1% AEP Melbourne Water pipeline
CH1c to CH1d	450m	1% AEP Melbourne Water waterway
F5 to F6	510m	20% AEP Council pipeline
SB60		Council sediment basin
CH1 to CH2	310m	1% AEP Melbourne Water waterway
CH2 to CH3	210m	1% AEP Melbourne Water waterway
WL2/RB2		Melbourne Water Wetland/Retarding basin
J1 to J2	60m	1% AEP Melbourne Water pipeline
J2 to J3	280m	1% AEP Melbourne Water pipeline
WL6		Council Wetland

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Truganina Terminal Station - Stormwater Management Strategy

4 Permanent and Temporary Drainage Arrangements

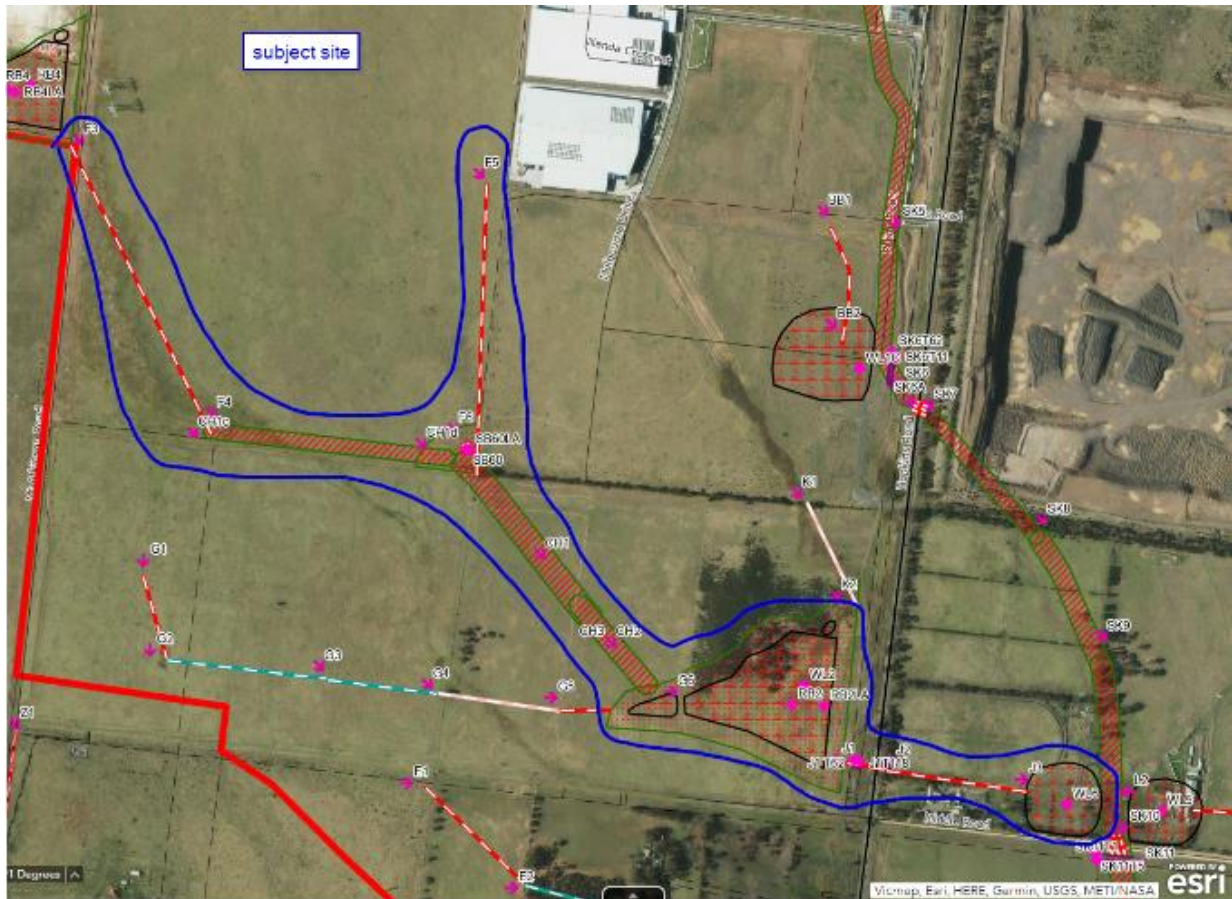


Figure 4-1: Melbourne Water Drainage Scheme Works

From the long list of permanent drainage assets within the subject site, the assets within the subject site are as follows:

- 600m 1% AEP Melbourne Water pipeline (Node Ref F3 to F4) which will be required to achieve free draining outfall for the property upstream;
- 450m 1% AEP Melbourne Water waterway (Node Ref CH1c to CH1d);
- 510m 20% AEP Council pipeline (Node Ref F5 to F6); and
- Council sediment basin (Node SB60).

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4.2 Temporary drainage arrangements

It is proposed that an interim & temporary drainage system will be delivered in lieu of constructing the permanent drainage works. The temporary drainage arrangements are inclusive of:

- Conveyance of overland flows via drainage swales within the site;
- Retarding Basin to mimic the 1% AEP flows; and
- Temporary drainage outlet arrangements from the Retarding Basin to the downstream drainage system.

It is proposed that the temporary drainage system will incorporate an outlet pipe to daylight to the existing surface at the approximate location of the future council pipe F3.

The Retarding Basin and Sediment Basin has been proposed in accordance with the Truganina Drainage Scheme permanent works and has been proposed to satisfy the requirements of the SB60 identified within the Drainage Scheme. As such, it is assumed that the Sediment Basin will be a Council asset.

4.3 Legal Point of Discharge application

The Legal Point of Discharge will be subject to an application to be lodged for a new stormwater connection to the authority drainage system from the proposed development.

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5 Stormwater Quantity

For the purposes of determining the requirements to achieve stormwater quality, the magnitude of the increase in stormwater runoff from the pre-developed and post-developed site is based on comparing the peak discharge flow rates for the 1% Annual Exceedance Probability (AEP) storm event. A stormwater attenuation asset is proposed with modelling undertaken confirming that the resultant post-development flows are no greater than the established pre-development flows for the 1% AEP event.

5.1 Catchment Analysis

The pre-development and post-development catchment areas are shown in **Table 5-1** below. The total catchment area is 29.1 ha with 100% perviousness assumed. For developed conditions, the percentage of imperviousness increases from 0% to 22.72%.

Table 5-1 220kV Catchment Analysis

Parameter	Existing	Design Criteria
Area	14.3	14.3
Impervious Initial Loss (mm)	1	1
Impervious Area Continuing Loss (mm/hr)	0	0
Pervious Area Initial Loss (mm)	11.0	11.0
Pervious Area Continuing Loss (mm/hr)	0.3	0.3
Effective Impervious Area (EIA) (%)	0	22.72
Pervious Area (PA) (%)	100	77.28
EIA Flow path Length (m)	0	160
PA Flow path Length (m)	680	222
EIA Retardance Coefficient n*	0	0.011
PA Retardance Coefficient	0.15	0.15
Overland Flow path Length (m)	380	210
Overland Flow path Slope (%)	1.2	1.4

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5.2 Peak Flow Analysis

The rainfall intensities utilised in the stormwater calculations are taken from **Table 5-2** BOM IFD table below.

Table 5-2 BOM IFD Table

Duration	63.20%	50%	20%	10%	5%	2%	1%
1 min	80.1	92	132	162	193	239	276
2 min	67	76.5	109	133	158	194	223
3 min	60.5	69.1	98.3	120	143	175	202
4 min	55.6	63.6	90.6	111	132	162	187
5 min	51.6	59	84.3	103	123	151	175
10 min	38.4	44.1	63.5	78	93.2	115	133
15 min	31.1	35.8	51.6	63.4	75.8	93.7	109
20 min	26.4	30.3	43.8	53.8	64.4	79.6	92.2
25 min	23.1	26.5	38.2	47	56.2	69.5	80.5
30 min	20.6	23.7	34.1	41.9	50.1	62	71.8
45 min	15.9	18.2	26.2	32.1	38.4	47.4	55
1 hour	13.2	15.1	21.6	26.4	31.5	39	45.2
1.5 hour	10.2	11.6	16.4	20	23.8	29.5	34.2
2 hour	8.44	9.57	13.5	16.4	19.6	24.2	28.1
3 hour	6.52	7.36	10.3	12.5	14.9	18.4	21.3
4.5 hour	5.05	5.68	7.88	9.57	11.4	14	16.3
6 hour	4.21	4.74	6.56	7.95	9.45	11.7	13.5
9 hour	3.26	3.67	5.07	6.15	7.31	9	10.4
12 hour	2.7	3.05	4.23	5.14	6.11	7.5	8.67
18 hour	2.06	2.33	3.27	3.97	4.73	5.78	6.65
24 hour	1.68	1.91	2.7	3.3	3.93	4.78	5.47
30 hour	1.43	1.63	2.32	2.84	3.39	4.1	4.68
36 hour	1.24	1.42	2.04	2.5	2.99	3.61	4.1
48 hour	0.989	1.14	1.65	2.03	2.43	2.91	3.29
72 hour	0.706	0.819	1.2	1.48	1.77	2.11	2.36
96 hour	0.552	0.641	0.939	1.16	1.39	1.64	1.84
120 hour	0.456	0.528	0.768	0.947	1.14	1.34	1.49
144 hour	0.391	0.45	0.648	0.796	0.954	1.13	1.26
168 hour	0.344	0.394	0.558	0.684	0.819	0.968	1.08



Using DRAINS v2023.01, the pre-development and post-development peak flows for the development are provided below in **Table 5-3**.

Table 5-3 Peak Flow Analysis

Peak Flow Analysis (m ³ /s)				
	10% AEP (220kV)	10% AEP (500kV)	100% AEP (220kV)	100% AEP (500kV)
Pre-Development (m ³ /s)	0.336	0.347	0.927	0.96
Pre-Development Outlet (m ³ /s)	0.683		1.89	
Post Development (m ³ /s)	0.851	1.8	1.95	3.65
Post-Development (m ³ /s)	0.923		1.84	

5.3 Stormwater Attenuation Measures

5.3.1 Design assumptions and parameters

The proposed development increases the impervious area, reduces the time of concentration, decreases infiltration and thus increases the amount of stormwater runoff. To ensure that a non-worsening stormwater discharge from the post-development site can be achieved, attenuation is required to mitigate peak stormwater flows.

This hydraulic assessment undertaken demonstrates that through the use of stormwater attenuation measures, the proposed development has no adverse external impacts for all storm events up to and including the 1% AEP event.

A key design principle adopted is that the proposed retarding basin and sediment basin accounts for both the 220kV and 500kV station. This enables efficiencies to be realised and flexibility with the timing of the proposed developments of the 220kV and 500kV stations.

It is proposed that the retarding basin drain daylights within the property and disperse flows to pre-dev conditions.

The retarding basin and sediment basin have been sized based off assumptions using basic data and are subject to change during the detailed design phase.

5.3.2 DRAINS model set up & results

To determine the attenuation storage volumes required, the stormwater drainage system design and analysis program DRAINS has been utilised.

The retarding basin parameters are shown in **Table 5-4** below.

Table 5-4 Retarding Basin Parameters

Parameter	Design Criteria
Rainfall zone	Truganina
Existing Runoff Coefficient	0.3

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 5 Stormwater Quantity

Parameter	Design Criteria
Orifice Dia (mm)	1000
Orifice Centre Elevation (m)	79.25
Basin Base Elevation (m)	78.75
Basin Top Elevation (m)	80.25
Depth of Basin (m)	1.5
Batters	~1:4
Weir Coefficient	2
Crest Length (m)	10.0
Crest Level Elevation (m)	79.95
Proposed runoff coefficient	0.8
AEP flowrate	1%
AEP storage	1%
Outlet Pipe Diameter (mm)	1200
Outlet Pipe Slope	2.5%
Outlet Pipe Flowrate (m ³ /s)	1.85
Overland Flow Swale Slope	2.5%
Overland Flowrate (m ³ /s)	0.012
Permissible site discharge (PSD)	1889 L/s
Storage volume	6116 m ³

Preliminary calculations indicate the requirement to provide 6116m³ of stormwater detention. The calculations to arrive at this are as shown in **Figure 5-3**, with a max water level of 79.96 m reached as shown in **Figure 5-4**. This assumes a permissible site discharge to the 1% AEP event and site storage to the 1% AEP event.

The detention size is based on a preliminary assessment only and may be subject to change upon further assessment being undertaken.

Figure 5-1 below shows the DRANS setup for the existing scenario run for the 1% AEP event.

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 5 Stormwater Quantity

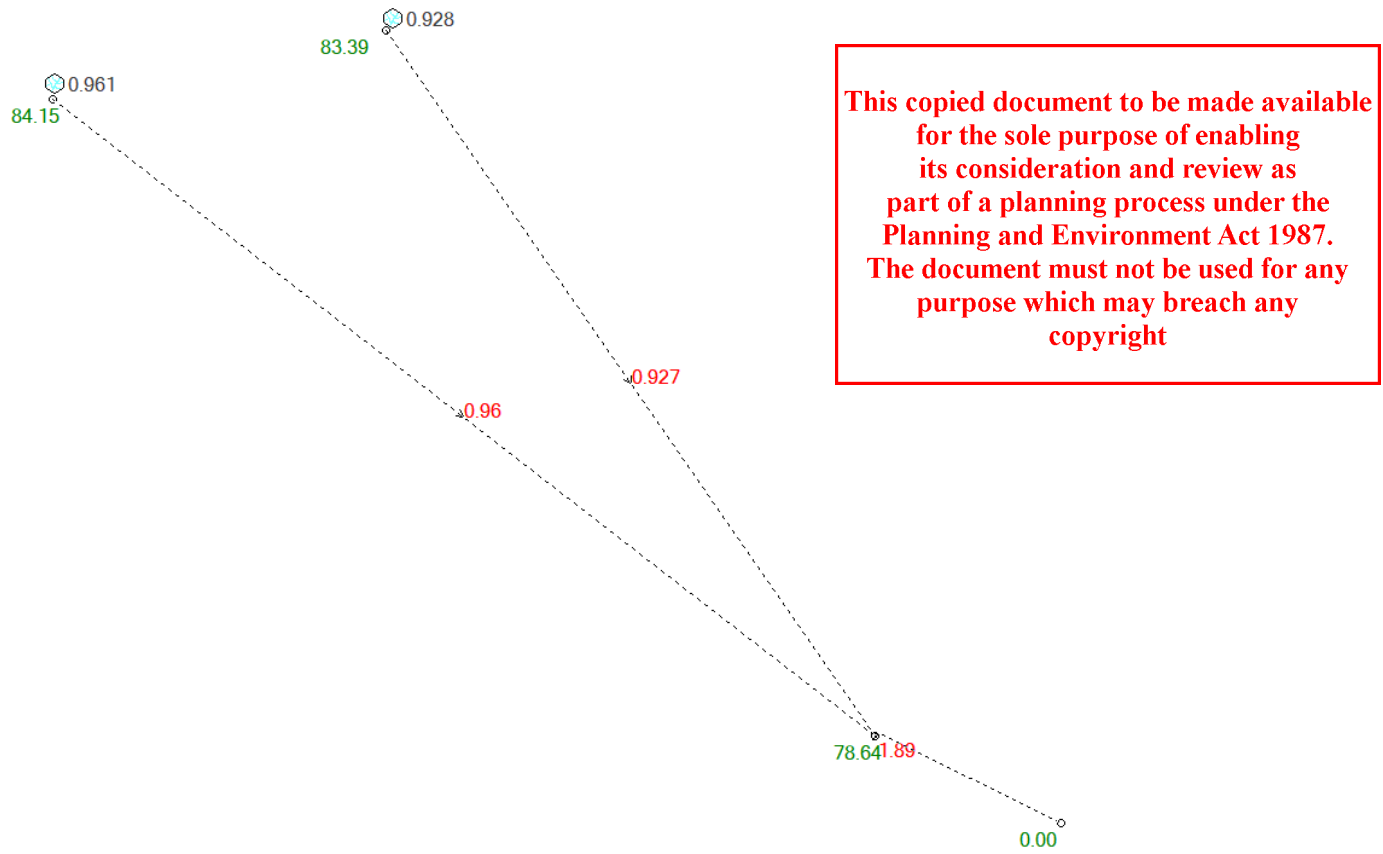


Figure 5-1: Existing Scenario

Figure 5-2 below shows the DRAINS setup for the developed scenario run for the 1% AEP event.

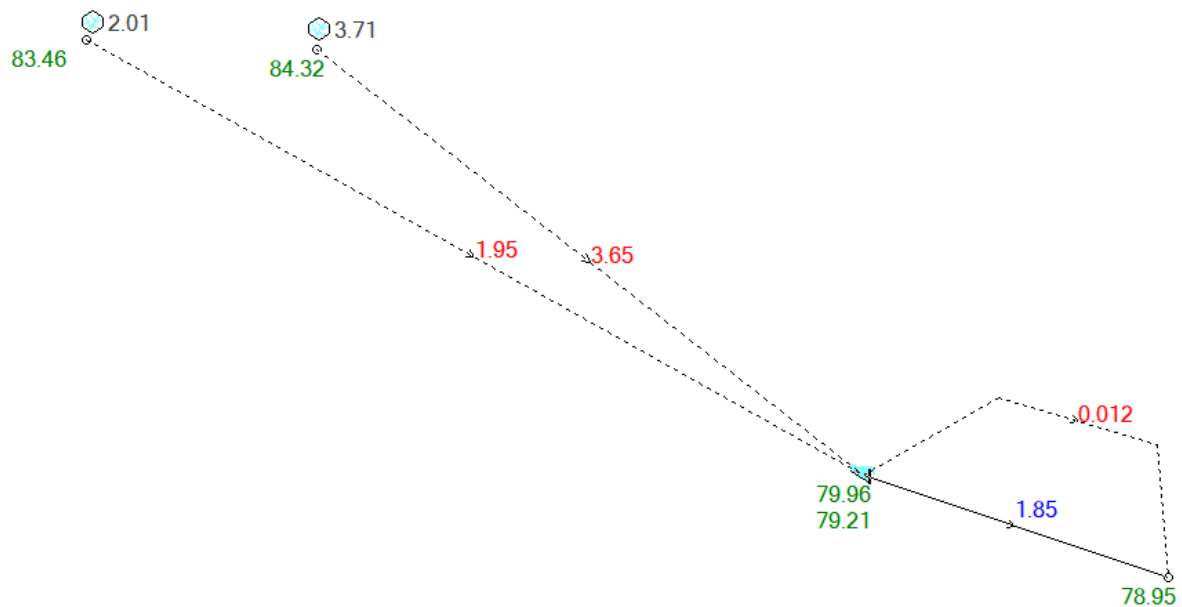


Figure 5-2: Developed Scenario



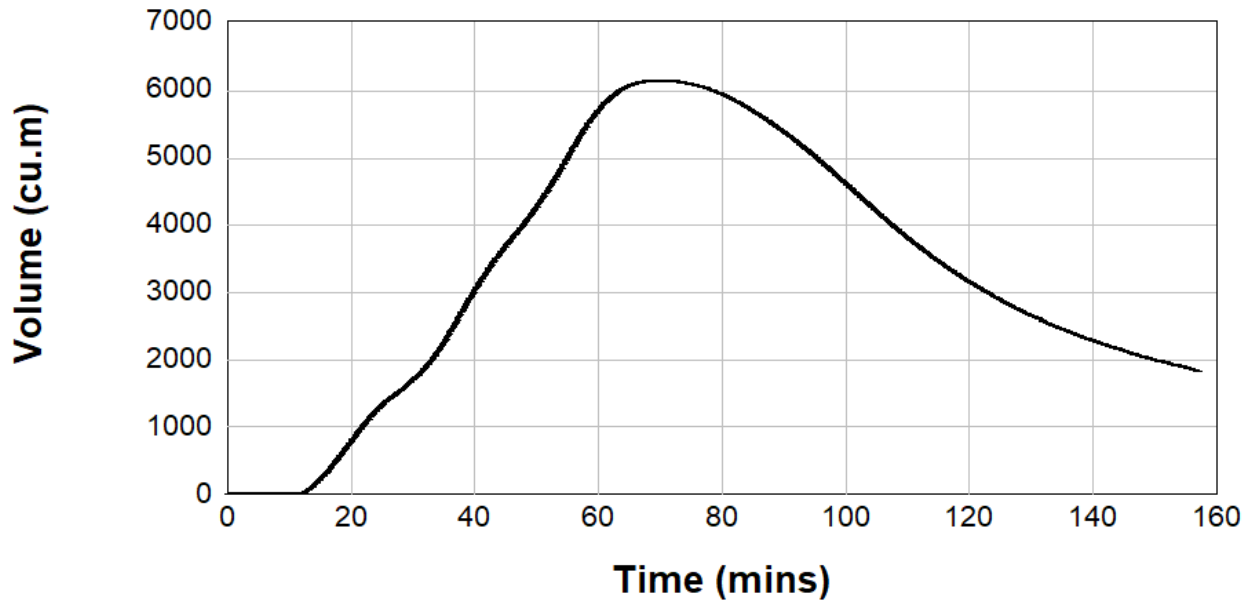


Figure 5-3: Basin Storage Volume 1% AEP

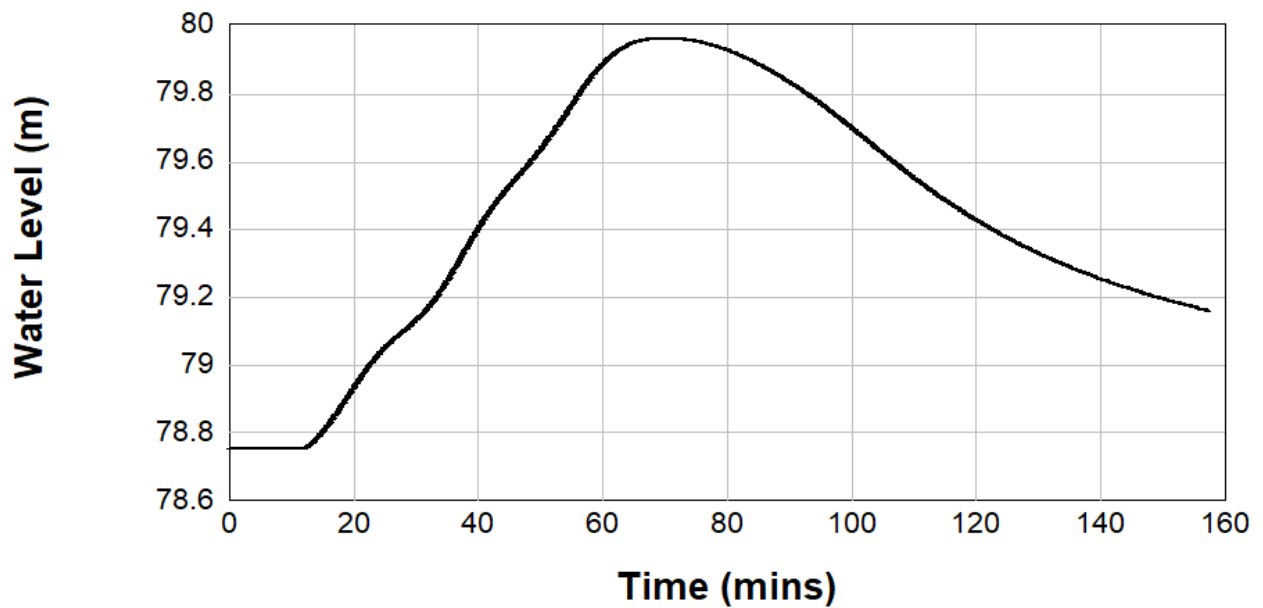


Figure 5-4: Basin Water Level 1% AEP

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Figure 5-5 shows the indicative (*zoomed in*) layout for site with the temporary retarding basin and swale/drainage locations. The temporary retarding basin's outlet pipe is proposed to daylight to the existing surface at the approximate location of the future council pipe F5-F6. The outlet is to be protected for scour in accordance with Melbourne Water Drawing 7251/08/103.

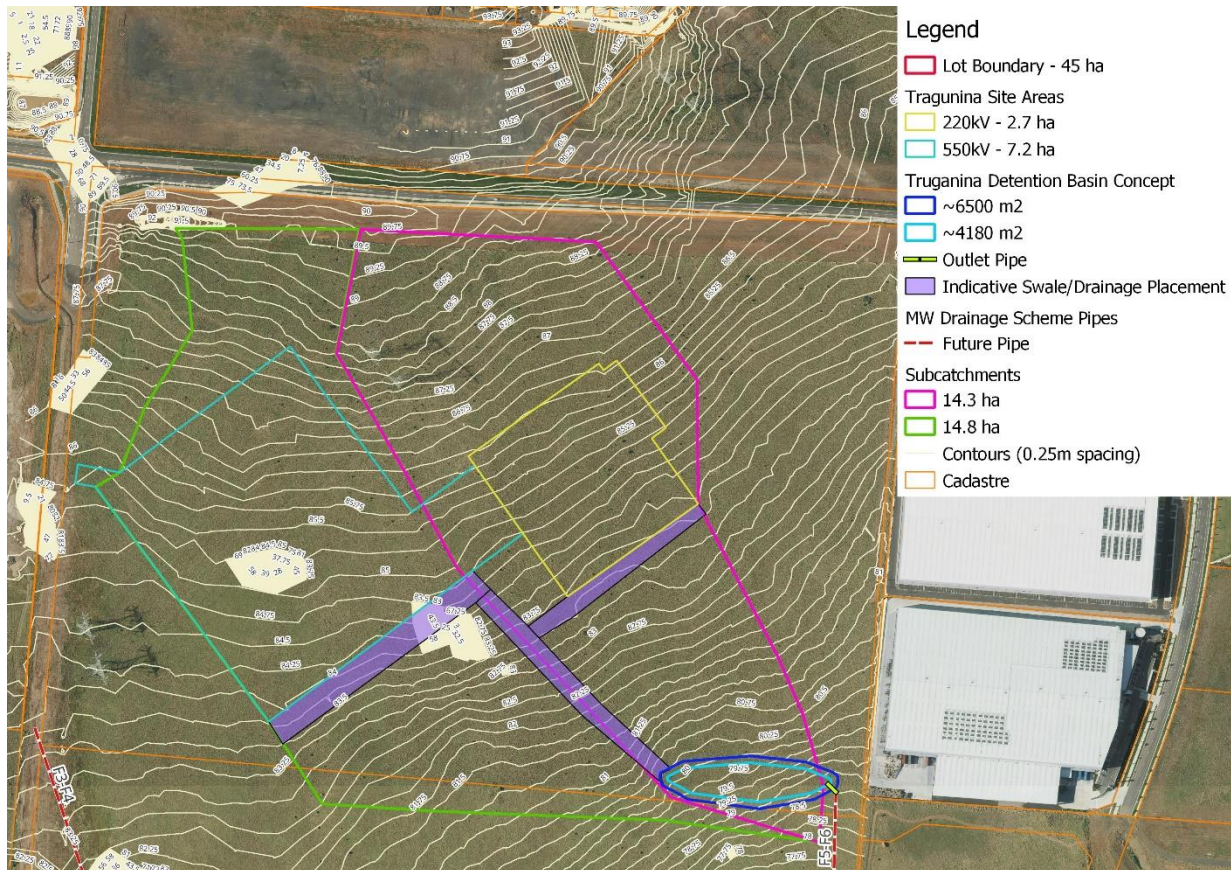


Figure 5-5: Indicative (Zoomed in) Layout of Site with Temporary Retarding Basin and Swale/Drainage

5.4 Stormwater Quality

Figure 5-6 shows the layout of the subject site in relation to the future works as part of the Melbourne Water Drainage Scheme. The sediment basin SB60 has been sized as part of this SWMS using Melbourne Water Wetlands Design Guidelines. The sediment basin location and sizing are subject to change during the detailed design as the assumptions are based on basic data and is only for treatment of the currently proposed works. The parameters and size of the sediment basin are shown in the **Table 5-5** below.

Table 5-5: Sediment Basin Parameters and Sizing

Parameter	Value
Sediment Pond Design Flow and Shape	
Design flow for sed pond	4EY
ARI	3-Month

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Truganina Terminal Station - Stormwater Management Strategy
5 Stormwater Quantity

Parameter	Value
Peak Flow (m ³ /s) (downstream of both developed subcatchments)	0.429
Target particle size assumed to be the recommended	Very Fine Sand
Particle Diameter (microns)	125
Settling Velocity (v _s) (m/s)	0.011
Turbulence parameter - n	1.429
Pond length to width ratio	2:1
Sediment Area at NWL	395
Sediment Basin Sizing	
Sediment Basin is empty	
d _e – extended detention depth (m)	0.35
d _p – permanent pool depth (m)	1.5
d [*] - depth below the permanent pool level	1.0
R – Fraction of initial solids removed – target >95%	96.6%
Sediment Basin is full	
d _e – extended detention depth (m)	0.35
d _p – permanent pool depth (m)	0.5
d [*] - depth below the permanent pool level	0.5
R – Fraction of initial solids removed – target >95%	95.0%
Sediment Basin Storage Check	
Contributing Catchment (ha)	45
L _o – Sediment loading rate (m ³ /ha/year)	1.6
F _c – desired cleanout frequency – target 5 years	5
V _s – Volume of sediment storage required (m ³)	342
Dewatering Area (m ²) – max 0.5m depth	684

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The sediment basin surface area has been estimated to be 395 m² with a storage volume of approximately 342 m³.



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5 Stormwater Quantity

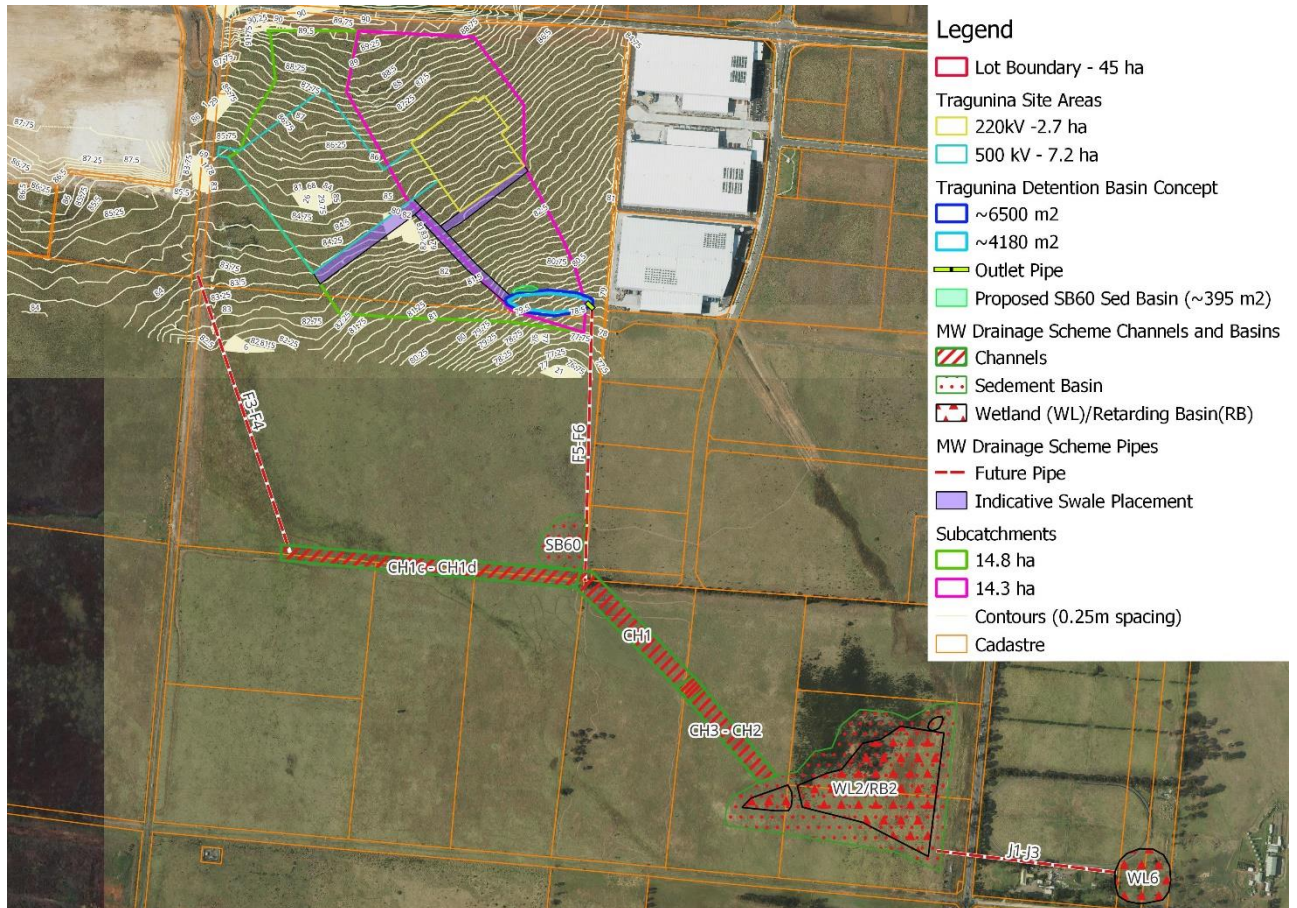


Figure 5-6: Indicative Layout of Site with Temporary Retarding Basin, Swale/Drainage and downstream Melbourne Water Drainage Scheme works

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6 Conclusions and Recommendations

This Stormwater Management Plan has been prepared for the proposed development at 442 Mount Atkinson Road, Truganina inclusive of the 220kV shared connection into the Truganina Terminal Station.

Stormwater attenuation assets are proposed to manage the impact the development has on the external environment. The temporary drainage assets proposed have been designed to cater for the development of both the 220kV terminal station and the 500kV terminal station.

The assessments undertaken have demonstrated that the proposed detention method ensures a non-worsening effect in runoff volumes for all flows up to and including the 1% AEP storm event.

Temporary drainage arrangements are proposed in lieu of constructing the permanent drainage pipeline works which are to be deferred to a later date. The Retarding Basin and Sediment Basin has been proposed in accordance with the Truganina Drainage Scheme permanent works and has been proposed to satisfy the requirements of the SB60 identified within the Drainage Scheme. As such, it is assumed that the Sediment Basin will be a Council asset. The basin has been designed to mimic the 1% AEP flows.

As part of delivering the temporary drainage works the following is recommended:

- Detailed Design and/or Construction Drawings to confirm design parameters;
- A Site Management Plan to be developed for construction phase works to detail erosion and/or sediment controls, construction environmental management planning controls etc.; and
- Maintenance Plans to be developed for the key drainage assets including swales, drains and the sediment basin and retarding basin.

The proposed temporary drainage arrangements have been designed to allow for the design of and implementation of permanent drainage works in accordance with the Truganina Drainage Scheme.

The Legal Point of Discharge for the proposed development will be subject to an application to be lodged for a new stormwater connection to the authority drainage system from the proposed development.

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Appendices

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Appendix A Melbourne Water Pre-Development Advice

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13 February 2025

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Proposal: Pre-development advice

Site location: Lot No 1, 442-542 MT ATKINSON ROAD TRUGANINA 3029

Melbourne Water reference: MWA-1358003

Date Received: 28/01/2025

Development Services Scheme: Truganina DS, Melton City

Thank you for your application requesting pre-development information for the above mentioned property. The following development advice is applicable to the property :

Drainage Agreement

Prior to the issue of a Statement of Compliance, the Owner must enter into and comply with an agreement with Melbourne Water Corporation, under the Water Act 1989, for the provision of drainage works and the acceptance of surface and storm water from the subject land directly or indirectly into Melbourne Water's drainage system. The agreement may include the following components.

Drainage Contributions

A drainage agreement usually includes the payment of drainage contributions, where a property is being developed. These contributions are used to recover the cost of constructing drainage works such as:

- Main drains, retarding basins, waterway improvements and flood mitigation works that will mitigate hydraulic impacts of the development/subdivision.
- Wetlands and Water Sensitive Urban Design WSUD elements to mitigate stormwater quality risks to Melbourne Water's drainage system.

The contributions are based on the increased load to the drainage system created by the development.

The site in question is located within Melbourne Water's Truganina DS. Melbourne Water advises that the current Industrial contribution rates are:

- **\$204,573**/Ha, comprising of a hydraulic charge of **\$112,507**/Ha and a stormwater quality charge of **\$92,066**/Ha

The stormwater quality charge can be reduced or removed by providing on-site treatment works, in-line with Melbourne Water's 'Stormwater Quality Offset Policy'. Please see the 'Stormwater Quality' section below.

It should be noted that contribution rates are subject to periodical review and hence the future contribution rate may be higher than the current rate provided here. For registered users, two months' notice of any change in rates is provided via email and on the Planning and Building page on Melbourne Water's website. Contributions payable will be calculated upon receipt of an application for ['Drainage conditions for a site'](#) along with a council referred/certified plan of subdivision.

Stormwater Quality SWQ

The Urban Stormwater Best Practice Environmental Management Guidelines require that runoff from all new developments (including redevelopments) are treated to comply with the following targets:

- 80% Total Suspended Solids reduction

- 45% Total Phosphorus reduction
- 45% Total Nitrogen reduction

Stormwater quality performance (targets) is assessed by using specialist software. Usually the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) is used for developments within schemes. Please refer to the end of this document for links to Melbourne Water's guidelines for the use of MUSIC.

Non-compliance with best practice objectives for stormwater quality will require the payment of a stormwater quality offset. Contributions collected for stormwater quality, can be applied for as a grant from Melbourne Water by council's to construct stormwater quality works elsewhere in the catchment.

Drainage Scheme Works

A drainage agreement usually requires the construction of permanent works in conjunction with the development as outlined by the appropriate Development Services Scheme. A review of the Truganina DS, Melton City Development Services Scheme has identified that there are permanent Melbourne Water works to be constructed on this property.

Such works may require that several land surveys be undertaken to determine the most efficient and environmentally friendly design outcomes. These may include, but are not limited to, a Flora & Fauna Assessment and an Archaeological Investigation, which would guide the most appropriate design. Design approval from Melbourne Water and any other relevant authorities will be required prior to commencement of the drainage works.

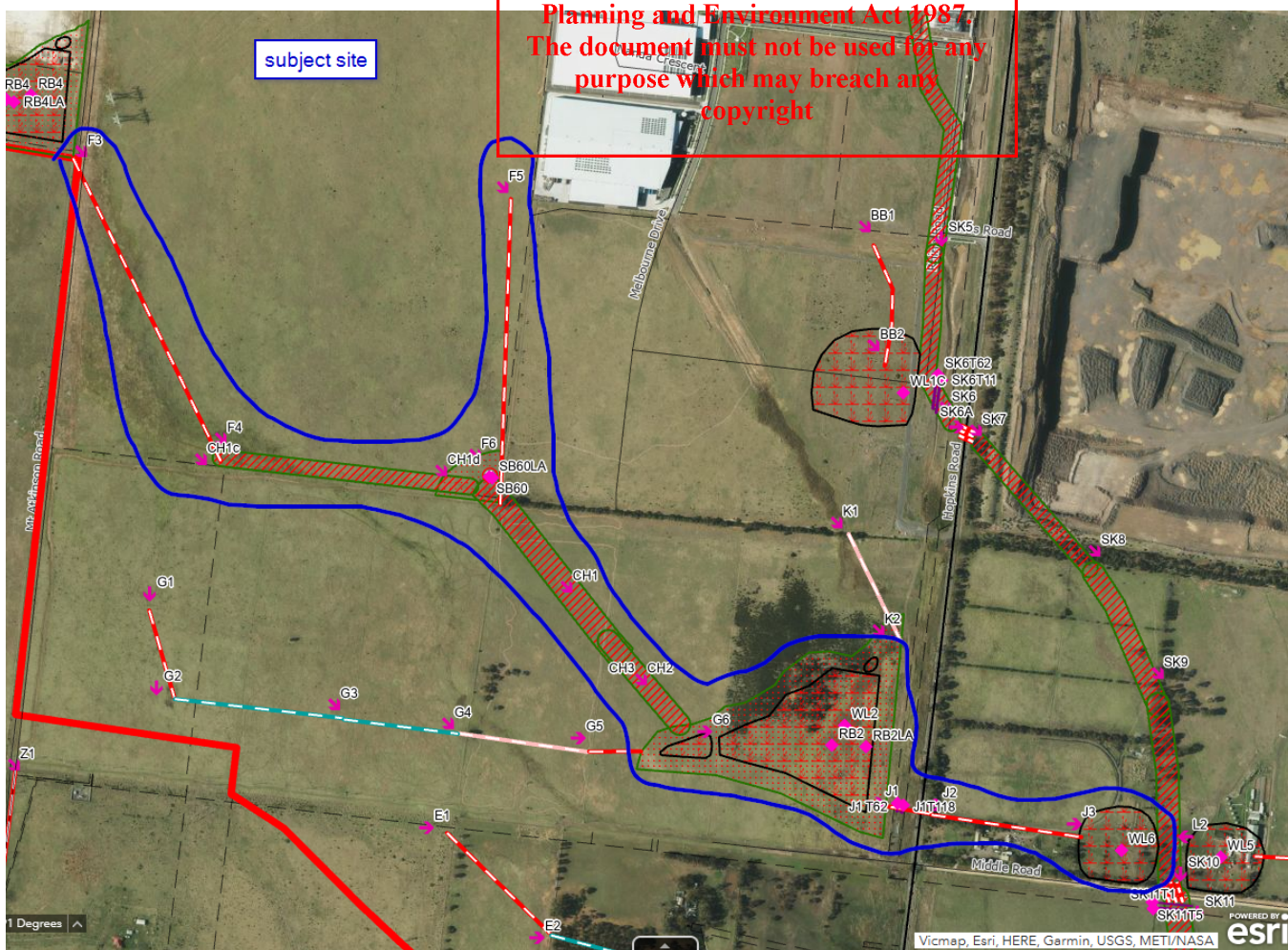
Please refer to the attached plans for a layout of the proposed works and any overland flow paths, which must be catered for by the development. The following table details the expected drainage works and design criteria for their sizing.

Node Ref.	Length(m)	Comments/Ownership
F3 to F4	600m	1% AEP Melbourne Water pipeline
CH1c to CH1d	450m	1% AEP Melbourne Water waterway
F5 to F6	510m	20% AEP Council pipeline
SB60		Council sediment basin
CH1 to CH2	310m	1% AEP Melbourne Water waterway
CH2 to CH3	210m	1% AEP Melbourne Water waterway
WL2/RB2		Melbourne Water Wetland/Retarding basin
J1 to J2	60m	1% AEP Melbourne Water pipeline
J2 to J3	280m	1% AEP Melbourne Water pipeline
WL6		Council Wetland

Please be advised that this information may be refined and/or modified upon any application for a works or Non-works offer.

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Specific Property Advice

- To achieve appropriate outfall for this development, temporary works will/may be required as part of the drainage agreement. If the development proceeds out of sequence then the developer must fund the costs of these temporary works.
- The developer must negotiate any temporary works with downstream landowner(s) to obtain a free draining outfall solution through their property/ies. Approval must be granted and forwarded to Melbourne Water before construction of the drainage works commences.
- Melbourne Water requires evidence demonstrating that appropriate interim drainage solutions (retardation and sediment control) have been implemented to mitigate the risk to downstream landowners. Council acceptance of any temporary drainage infrastructure should be forwarded to Melbourne Water; and for any works proposed around our mains, drains and waterways, a separate application must be made direct to Melbourne Water’s Asset Services Team.
- A Stormwater Management Strategy must be submitted via our website and accepted by Melbourne Water. The strategy must demonstrate the following:
 - The proposed alignment for any 10% AEP drainage infrastructure and any associated overland flow path directions for the 1% AEP flood event,
 - That the lot layout adequately conveys the flows,
 - The details of the outfall/s for the development and calculations of the flows, volumes and flood levels for the 1% AEP storm event within the property.
- The table above lists all of the assets required to achieve ultimate outfall. As part of the stormwater management strategy that is to be submitted, it should be detailed the extent of the assets that is intended to be delivered, how this will affect scheme treatment, and downstream landowners.
- Details must be contained within the strategy as to the interaction with the conservation reserves to

the west. Rural runoff from the conservation reserve should be catered for within the internal drainage/overland flows of the development. The connection to the conservation reserve will require further investigation, and potentially sign off from DELWP or the relevant authority.

Overland Flow Paths

Melbourne Water expects that upon any application for certification of any subdivision plan associated with the property, due consideration must be given to the alignment of roads and reserves with any adjoining estates, to ensure continuity and provide uninterrupted conveyance of overland flows. These overland flow paths must be designed in accordance with the safety criteria outlined in the Standards and Specifications section on the Planning and Building of Melbourne Water's website.

Before starting any works, a separate application, direct to Melbourne Water, must be made for any new or modified storm water connection to Melbourne Water's drains or watercourses. Before accepting an application, evidence must be provided demonstrating that council has considered that it is not feasible to connect to the local drainage system.

Water Sensitive Urban Design WSUD

WSUD is a design process that enables localised collection and treatment of stormwater runoff. Melbourne Water acknowledges the potential for WSUD to be incorporated into the development to enable sustainable management of stormwater across the property and to compliment the social and environmental values of the area.

Melbourne Water recommends that initiatives such as sediment ponds, bio-filtration systems, grassed swales, grey water re-use, rainwater tanks and porous soils be considered in the design of the development. Stormwater runoff from paved areas can also be a valuable resource for irrigating trees, grassed areas and landscaped garden beds.

Offer Application

Prior to any application for an offer of drainage conditions, Melbourne Water requests that you forward a drainage strategy demonstrating that the proposed drainage plan for the property coincides with the intent of Melbourne Water's Truganina DS, Melton City Development Services Scheme and the local Precinct Structure Plan, if relevant.

The following information should be included within the strategy:

- General site information
- Options for the proposed drainage of the property
- Consideration for Water Sensitive Urban Design

Advice Links

For further information on Melbourne Water's role in planning please refer to the following links:

- **Contribution Rates:** <https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/drainage-schemes-and-contribution-rates-0-2>
- **Drainage Schemes:** <https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/drainage-schemes-and-contribution-rates>
- **Water Sensitive Urban Design-** <https://www.melbournewater.com.au/planning-and-building/stormwater-management/introduction-wsud>
- **Reducing Water Quality Contributions/Stormwater Offset Rate review** - <https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/drainage-schemes-and-contribution-rates-0-3>
- **Overland Flow Paths** (These overland flow paths will need to be designed in accordance with the safety criteria outlined in the Standards and Specifications section of Melbourne Water's Planning and Building website found on <https://www.melbournewater.com.au/planning-and-building/developer->

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[guides-and-resources/standards-and-specifications](#)

- **Working near or Connection to MW assets**-<https://www.melbournewater.com.au/planning-and-building/work-or-build-near-our-assets-or-easements>
- **Stormwater Quality:** The Urban Stormwater Best Practice Environmental Management Guidelines require that runoff from all new developments (including redevelopments) be treated to comply with the following, 'Best Practice' standards criteria: Removal of 80% of the suspended solid annual load, 45% of total phosphorus and 45% of total nitrogen annual loads.
<http://www.publish.csiro.au/book/2190>

Disclaimers

The feasibility information provided in this email is conceptual/indicative only and must be used in conjunction with an informed catchment analysis when undertaking the detailed design.

Under the QA process the consultant is required to perform their own informed catchment analysis and calculations for the design of scheme assets which reflects the actual development and on ground conditions. As a part of the functional design process your calculations, assumptions, models and catchment analysis are to be submitted for our acceptance/records.

Please note that as schemes develop and Melbourne Water receives additional information, the conceptual/indicative advice you have been provided as part of the feasibility request may now be outdated. Under the QA process it is the responsibility of the consultant to certify that all information provided to Melbourne Water is correct having completed their own detailed catchment analysis.

This information is preliminary and forms no contractual agreement between your company and Melbourne Water. Melbourne Water reserves the right to alter any or all of the information provide in this letter.

For general development enquiries contact our Customer Service Centre on 131 722.

Regards,



Brendan Alexander
Development Engineering and Planning
Services

Cc:AusNet, Email:

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Appendix B 220 kV Terminal Station Site Plan

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Appendix C 500 kV Terminal Station Site Plan

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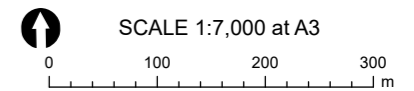


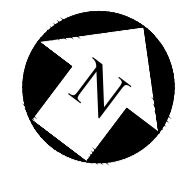


PROJECT		Truganina Terminal Station (TNTS)	
TITLE			
PROJECT OVERVIEW			
DATE	29/05/2025	STATUS	DRAFT
DATUM	GDA2020 MGA Zone 55	PRODUCED	AC
FILE	TNTS-001-E PROJECT OVERVIEW	REV	E

- LEGEND
- Connection Route
 - Customer substation
 - Truganina Terminal Station (TNTS)
 - Existing 500 kV transmission line

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MOUNT ATKINSON ROAD

RIDING BOUNDARY ROAD

10000

CONTROL BUILDING
253600

500kV U/G CABLE
(FUTURE)

MAIN ACCESS ROAD INTO TNTS
WIDTH 8.0m

EXISTING 500kV LINE
(TO BE RELOCATED
TO BAYS E & F)

NEW 500kV
LINE

NEW TOWER,
TYPE TBC

500kV U/G CABLE
ROUTE TO LOT 101

SWITCHYARD FENCE

500kV U/G CABLE
(FUTURE)

EMERGENCY
EGRESS GATE ONLY

PLOT BOUNDARY
(TBC)

PLOT BOUNDARY
SETBACK (TBC)

EXISTING
TOWER
T37A TYPE
5E SCHST

MLTS No.1
LINE

T36 TYPE
5A SCLSU

NEW TOWER, T36A
TYPE: HST-5SC
LOCATION INDICATIVE

SYTS No.1 LINE

NEW TOWER,
TYPE TBC

500kV SWITCHYARD

SYTS No.2 LINE

NEW TOWER, T36A
TYPE: HST-5SC
LOCATION INDICATIVE

EXISTING
TOWER
T37B TYPE
5E SCHST

MLTS No.2
LINE

EXISTING
500kV LINE

243600

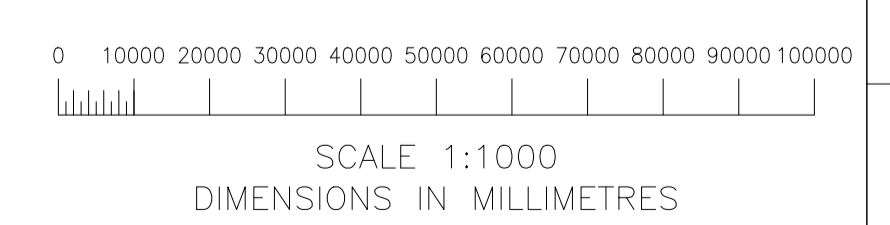
220000

NOTES:

1. ALL DIMENSIONS SHOWN IN MILLIMETRES U.N.O.
2. THE DRAWING IS FOR ESTIMATING PURPOSES ONLY AND IS NOT FOR CONSTRUCTION. DIMENSION, POSITION AND DETAILS ARE SUBJECT TO DETAILED DESIGN.
3. THE SITE LAYOUT IS BASED ON SURVEY FILE 310588CR000.dwg
4. SITE PROPERTY PERIMETER FENCE (CHAIN LINK FENCE TYPE) AND SWITCHYARD FENCE (ELECTRIFIED 358 WELDED MESH FENCE) ARE APPLICABLE.

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PLAN - 500kV SWITCHYARD
SCALE 1:1000



LEGEND:
 - - GOODMAN DATACENTRE SCOPE
 - - BY OTHERS
 - - EXISTING

REFERENCE DRAWINGS		REVISION					
500kV SWITCHYARD LAYOUT	TNTS-P02-001	28.03.25	0.1	ISSUED FOR REVIEW (TC-0014393)	IVM	JACOBS	
DRAWING TITLE	DRAWING No.	DATE	REV	DESCRIPTION	BY	CONTRACTOR	ISSUED

AusNet		TRUGANINA TERMINAL STATION 500kV SWITCHYARD SITE PLAN	
DRAWN I.MOTOVILOV	ENDORSED REV 01	ENDORSED DATE	LEGACY No.
SPEC No.	ORDER No.	CONTRACTORS No.	DRAWING No.
			TNTS-P01-001
			0.1

566 x 800mm

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Stantec Australia Pty Ltd
Level 28, 600 Bourke Street
Melbourne VIC 3000
AUSTRALIA
ABN 17 007 820 322
stantec.com

