

Integrated Water Management Plan

**164-172, 174-194 William Street,
Woolloomooloo**

Prepared for: William Street Residential Pty Ltd

TTW Project No. 211734

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Rev	Date	Prepared By	Approved By	Remarks
1	08/08/2025	AW	CR	For SSDA
2	15/08/2025	AW	CR	For SSDA
3	29/08/2025	AW	CR	For SSDA

1.0 Executive summary

This Integrated Water Management Plan has been prepared by TTW to accompany the proposed State Significant Development Application (SSDA) for a mixed-use infill affordable housing development at 164-172 and 174-194 William Street Woolloomooloo. The site is made up of two (2) lots. The legal description of the site is outlined in Table 1.

Table 1 - Legal Description

Property Address	Title Description
164-172 William Street, Woolloomooloo	Lot 52 in DP1049805
174-194 William Street, Woolloomooloo	Lot 1 in DP816050

This report has been prepared to address the Secretary's Environmental Assessment Requirements (**SEARs**) issued for the project (SSD-80211463).

This report concludes that the proposed development is suitable and warrants approval subject to the implementation of the following mitigation measures.

- Erosion and sediment control
- Installation of OSD tank to meet minimum storage and Permissible Site Discharge (PSD) requirements specified by Sydney Water
- Operation of stormwater quality treatment train
- Implementation of the proposed stormwater management strategy shown in the civil engineering drawings

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.

2.0 Introduction and Background

TTW has been commissioned by William Street Residential Pty Ltd to prepare this report in accordance with the technical requirements of the Secretary's Environmental Assessment Requirements (SEARs), and in support of the State Significant Development Application (SSD-80211463) for the proposed mixed-use infill affordable housing development at 164-172 and 174-194 William Street Woolloomooloo.

Following the Design Excellence Competition, the scheme has been revised to include In-fill Affordable Housing (**IAH**) in line with the NSW Government's policy under the *State Environmental Planning Policy (Housing) 2021 (Housing SEPP)*. This policy allows for a 30% increase in Floor Space Ratio (**FSR**) and building height when 15% of the total FSR is provided as affordable housing for 15 years. The proposed development meets these criteria and is eligible for the bonus uplift.

Given the residential component's Capital Investment Value (**CIV**) exceeds \$75 million, an SSDA pathway can be taken. The proposal retains key design principles recommended by the Design Excellence Panel and aims to provide additional residential dwellings with a 30% increase in GFA and building height, in accordance with the Housing SEPP.

The purpose of the project is to facilitate the delivery of a high-quality mixed-use development containing residential and retail uses as well as a centrally located park, public domain improvements and improved through-site connectivity at a strategically located site. The proposal seeks to deliver a built form outcome that responds appropriately to its location on William Street in Woolloomooloo and in close proximity to Kings Cross

Station and the Sydney CBD. Furthermore, the proposed scheme seeks to deliver an outcome that is consistent with the desired and evolving character of the Woolloomooloo and Potts Point area.

Specifically, this SSDA seeks consent for:

- 227 apartments (167 market housing, 60 affordable housing units)
- Ground floor retail and commercial uses with 7 – 18 storeys of residential tower across four buildings being:
 - FJC - William Street (West)
 - FJC - William Street (East)
 - Studio Bright – Forbes Street
 - Tribe Studio – Dowling Street
- A publicly accessible central park
- Public domain works and improved through-site links
- Four basement levels for parking, services and storage
- Vehicular and loading access from Forbes Street

2.1 SEARs

This report has been prepared in response to the requirements contained within SEARs dated 21 February 2025 and issued for SSD-80211463. Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 2 - SEARs Requirements

Item	Description of Requirement	Section Reference (this Report)
11. Water Management	<ul style="list-style-type: none"> ▪ Detail the proposed drainage design and servicing infrastructure to be incorporated as part of the development (stormwater and wastewater) ▪ Demonstrate how the development complies with council's drainage requirements and identify proposed stormwater treatment and water quality management measures to minimise adverse environmental impact. 	Section 3.0 and 4.0
19. Flood Risk	<ul style="list-style-type: none"> ▪ Identify the flood planning area and level as set out in the relevant EPI and other supporting documents to determine: <ul style="list-style-type: none"> – The flood extent and velocity up to the Probable Maximum Flood and risk on-site having regard to adopted flood studies and, floodplain risk management studies and plans – The site access and egress routes – The potential effects of climate change – Any relevant provisions of the NSW Flood Risk Management Manual, and any other relevant guidelines ▪ Where the development is occurring on flood prone land a flood impact and risk assessment (FIRA) must be prepared having regard to the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01. When determining the scope and category of the FIRA the requirements outlined in the FIRA guide must be considered. ▪ Detail any flood risk management measures that are to be incorporated as part of the development having regard to relevant guidelines (including any design solutions, flood modification measures, property modification measures, operational procedures or Flood Emergency Response Plan). 	Refer to separate Flood Impact Risk Assessment Report (TTW)

2.2 The Site

The site is located at 164-172 and 174-194 William Street Woolloomooloo within the City of Sydney LGA. The site is comprised of multiple allotments and is legally described as:

- 164-172 William Street, Woolloomooloo
 - Lot 52 in DP1049805
- 174-194 William Street, Woolloomooloo
 - Lot 1 in DP816050

The land size totals 6,398m² and consists of a southern frontage to William Street, an eastern frontage to Dowling Street, a western frontage to Forbes Street and northern frontage to Judge Lane.

2.3 Surrounding Context

The immediate urban context surrounding the site is characterised by a mix of medium density residential, commercial, and retail uses. The site is in close proximity to Hyde Park, The Domain, and Rushcutters Bay Reserve. There are a number of educational and health services in proximity to the site, providing ample infrastructure support for the community.

William Street, to which the site fronts, is a classified road providing connection between the Eastern Suburbs of Sydney and the CBD. Vehicle access is currently provided from six points on the site from Judge Lane, Forbes Street, and Dowling Street. Pedestrian access to the site is currently available from all frontages.

The site is highly accessible to both bus and rail services, being approximately 300m away from Kings Cross Railway Station and having direct access to bus services on William Street that provide connections through the Metropolitan Transport Network.

At the time of lodgement, the site is improved by a warehouse style structure and glass office building to the site's frontage and an at-grade private carpark to the northwestern portion of the site.

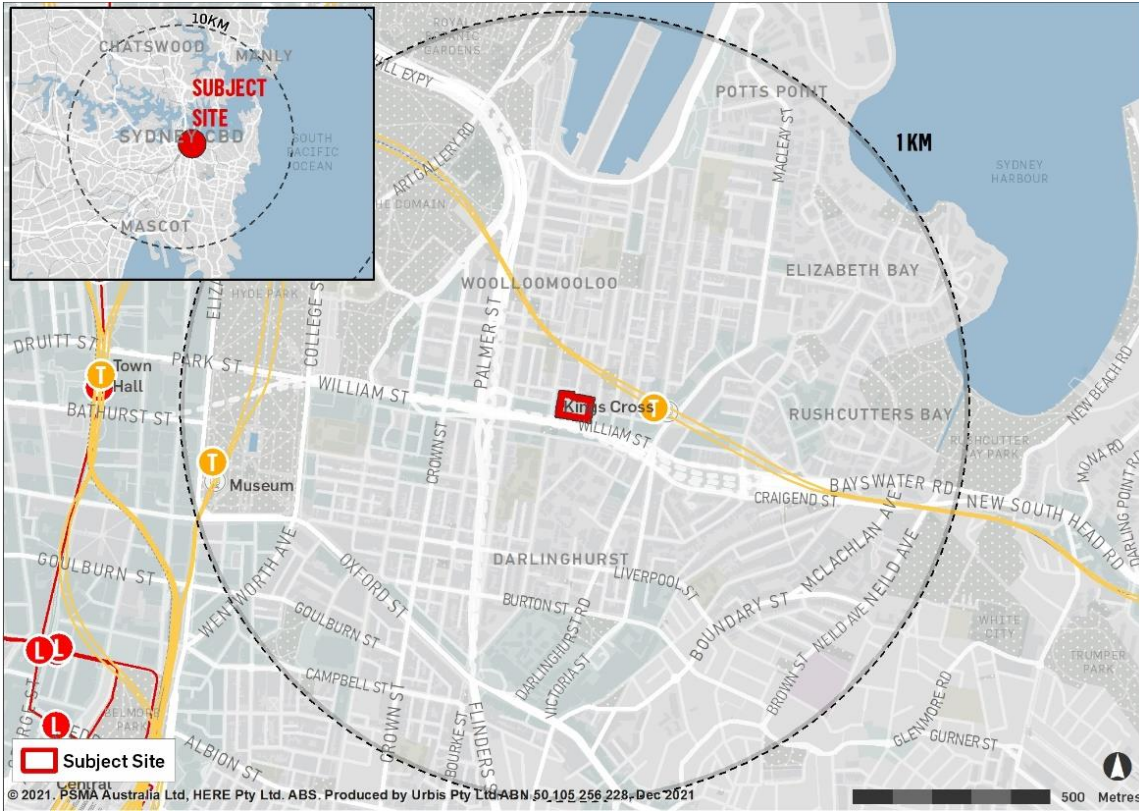


Figure 1 - Local Context

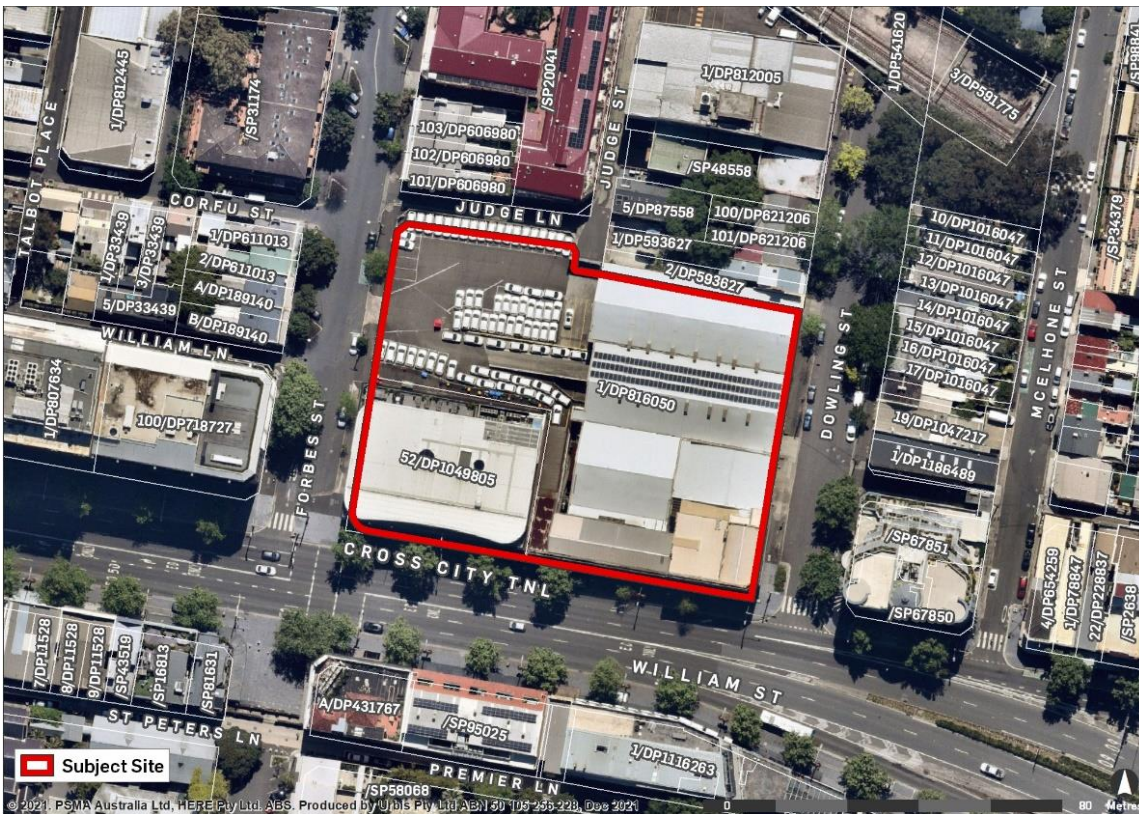


Figure 2 - The Site

2.4 Reference Documents

The following documents have informed the civil engineering design:

- AS/NZS 3500.3:2018 National Plumbing and Drainage Code: Stormwater Drainage;
- NSW Department of Housing Managing Urban Stormwater– Soils and Construction ‘Blue Book’, Volume 1, 4th Edition, Landcom;
- Australian Rainfall and Runoff 2019
- Blue Book – Managing Urban Stormwater Soils and Construction (Landcom NSW);
- NSW Floodplain Development Manual;
- City of Sydney Council’s (CoS) Development Control Plan (DCP), 2012 ⁽¹⁾;
- City of Sydney Council’s (CoS) Sydney Streets Technical Specifications, 2023;
- City of Sydney Council’s (CoS) Stormwater Drainage Manual, 2017;
- City of Sydney Council’s (CoS) Standard Drawings, 2023;
- City of Sydney Council’s (CoS) Darling Harbour Catchment Floodplain Risk Management Plan, 2016

Design inputs by others:

- Architectural Drawings prepared by fjcstudio dated 15 July 2025;
- Survey / Utility Investigation by LTS dated 26 November 2021;

Notes:

- ⁽¹⁾ The City of Sydney Council has exhibited draft amendments to the 2012 DCP which include updated provisions for flood planning levels, flood mitigation through design, drainage and stormwater mechanisms, stormwater quality and flood compatible materials.

3.0 Stormwater Management

3.1 Stormwater Quantity

The proposed stormwater design has been developed to be in accordance with the relevant Australian Standards, Australian Rainfall and Runoff 2019 (ARR 2019), the CoS Council's DCP and Technical Specifications.

Council's DCP has stipulated Drainage systems for a site with an area greater than 1,000 sq.m are to be designed so that:

- (i) stormwater flows up to the 5% annual exceedance probability event are conveyed by a minor drainage system; and
- (ii) stormwater flows above the 5% annual exceedance probability event are conveyed by a major drainage system.

Sydney Water has confirmed on 5th August 2024 that an Onsite Detention Tank (OSD) with minimum storage of 100 m³ and Permissible Site Discharge (PSD) of 237L/s will be required for the site.

3.1.1 Discharge Point

The subject site is located on a developed site with a total area of approximately 0.6398 hectares. In the immediate vicinity of the site, there are stormwater pits and pipe network identified on William Street and Forbes Street.

According to site survey and inspection, Stormwater discharge from the subject site is currently conveyed to the pit in the corner of Forbes Street and Judge Lane. (as shown in Figure 3). The proposed stormwater discharge point will remain at the same location.



Figure 3 – Existing Stormwater Discharge (Source: Google Streetview)

3.1.2 Proposed Stormwater Design

The proposed stormwater design is to be in accordance with the relevant Australian Standards, Australian Rainfall and Runoff 2019 (ARR 2019), the Council's DCP, Council's Sydney Streets Technical Specifications and Sydney Water requirements.

The stormwater catchments will consist of roof, footpath and landscape areas. All roof water will be collected by gutters and downpipes sized for the 1% annual exceedance probability (AEP) flow rates and directed to a rainwater tank (the rainwater tank and reticulation to be documented by the hydraulic engineer). The overflow from the rainwater tanks is to be conveyed to the OSD tank. In-ground pits and pipes will be installed in landscape and impervious area, then be conveyed to OSD tank. To ensure the effective hydraulic operation of the OSD tank, it will be located above the adjacent footpath levels which is in consideration with flood level at this location. Outlet flow from the OSD tank along with Bypass runoff from the OSD tank in landscape and pavement area will be conveyed by in-ground pits and pipes and discharge to the existing pit on Forbes Street as shown in Figure 4.

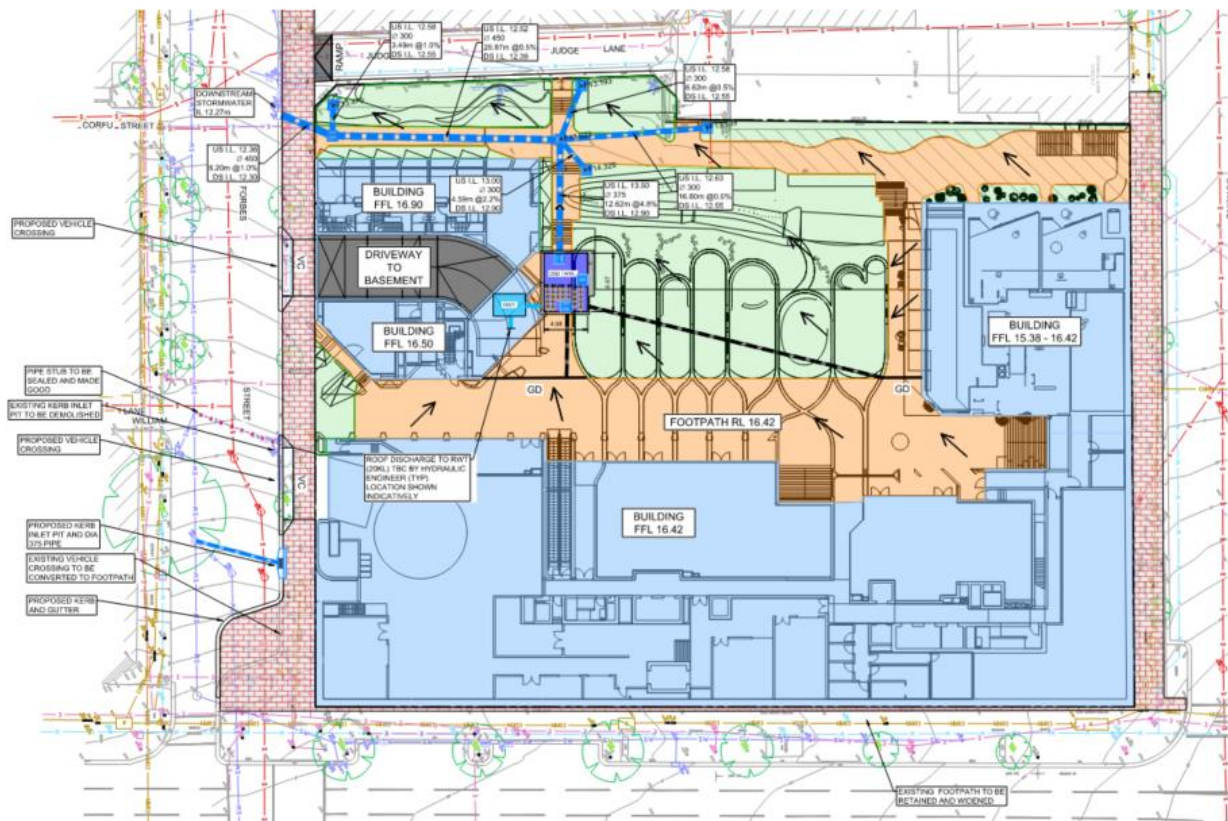


Figure 4: Stormwater Plan

3.1.3 DRAINS Modelling Schematic Results

DRAINS modelling software was undertaken to simulate the hydrological and hydraulic characteristics of the catchment and on-site detention system, as well as to review the overland flow regime for capacity and adequacy in the 20-year and 100-year storm events for the site during operation.

The results for the 20-year Annual Recurrence Interval (ARI) and 100-year Annual Recurrence Interval (ARI) storm events are shown in Figure 5 and Figure 6. 100-year ARI result shows that the tank, with a minimum

storage volume of 72 m³ and a Ø240mm orifice, can release a flow of 165 L/s to the existing pit on Forbes Street and the bypass discharge is 68 L/s, and it sums up to a site discharge of 233L/s, which meets the permissible site discharge requirements specified by Sydney Water.

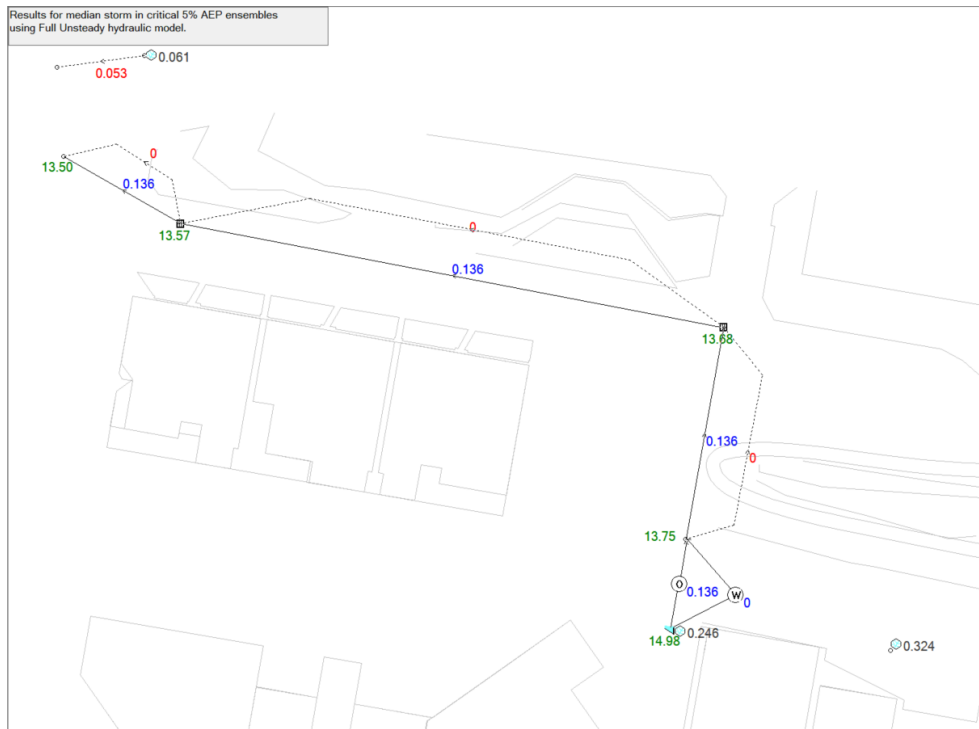


Figure 5 - DRAINS results (1 in 20-year ARI)

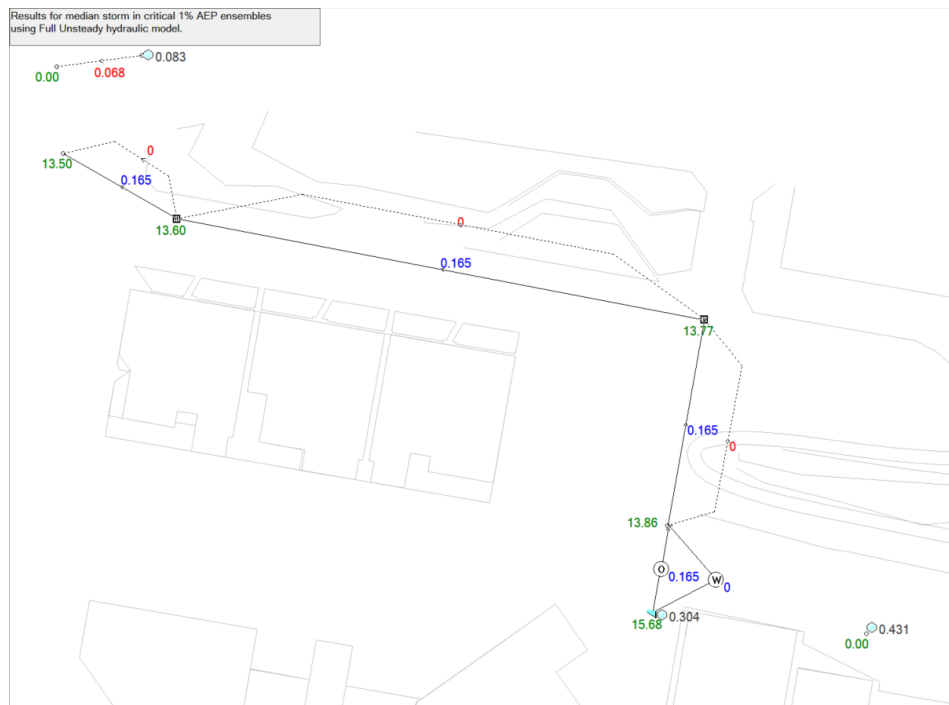


Figure 6 - DRAINS results (1 in 100-year ARI)

3.1.4 Management of Roof Water and Rainwater Reuse

The collection and reticulation of roof water and storage of collected water for re-use is the responsibility of the Hydraulic Engineer, and the hydraulic design will be completed post approval. At this stage, the ESD consultant GreenPerch has advised that a minimum 20KL rainwater tank will be provided for the site, which will collect roof water and overflow to the proposed OSD tank.

3.2 Stormwater Quality

3.2.1 Pollutant Reduction Requirements

Stormwater quality treatment is required to comply with the requirements outlined in Council's DCP Section 3.7.3 Stormwater quality (applicable to developments greater than 1,000 m²) as shown in Figure 7.

Water Quality Parameters	Pollutant Reduction Targets
Total Suspended Solids (TSS)	85%
Total Phosphorus (TP)	65%
Total Nitrogen (TN)	45%
Gross Pollutants	90% (>5mm)

Figure 7 - CoS Water Quality Targets (Source: CoS DCP 2012 Section 3)

3.2.2 Treatment Strategy

The proposed stormwater quality measures will need to be closely integrated with the landscaping, irrigation, water use/reuse and reticulation, which will ensure the implementation of appropriate water quality treatment for stormwater runoff to reduce the discharge of pollutants from roof, paved and other impermeable surfaces into waterways and council drainage systems. Stormwater quality reduction targets and maintenance of treatment measures for the proposed development can be met through a combination of the following treatment options:

- Filter Cartridges (e.g. Ocean Protect StormFilter or equivalent).
- gross pollutant traps (e.g. Oceanguard traps or equivalent) in new pits
- Rainwater reuse tanks.

3.2.3 Music link model

A preliminary Music model has been completed which confirms that the water quality treatment devices installation of 27x690 Ocean Protect StormFilter Cartridges, 10 Oceanguard gross pollutant traps and a rainwater tank of minimum volume 20kL (advised by ESD consultant and to be confirmed by Hydraulic Engineer).

MUSIC model is shown in Figure 8 and Stormwater reduction targets have been met as shown on Figure 9.

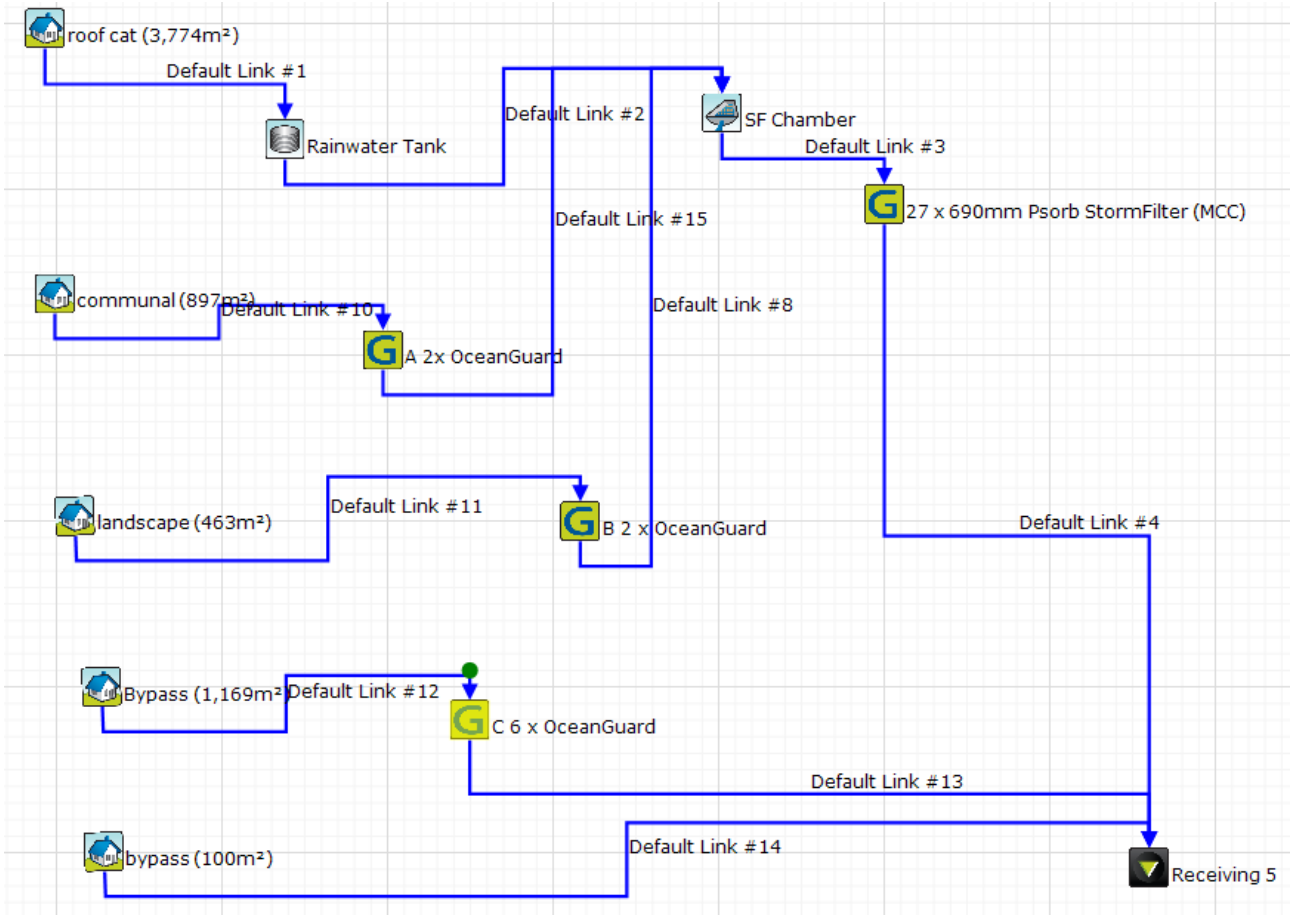


Figure 8 - MUSIC Model Layout

	Sources	Residual Load	% Reduction
Total Suspended Solids (kg/yr)	1121	167.3	85.08
Total Phosphorus (kg/yr)	1.837	0.5015	72.7
Total Nitrogen (kg/yr)	13.76	6.658	51.6
Gross Pollutants (kg/yr)	144.2	1.775	98.77

Figure 9 - City of Sydney MUSIC-link pollutant reduction results

3.3 Erosion and Sediment Control

3.3.1 Strategies

The proposed sedimentation and erosion control measures to manage runoff and ensure no detriment to the receiving environments have been divided into temporary and permanent strategies as summarised below.

Table 3: Temporary and Permanent Strategies

Strategy	Description
Temporary	<p>Temporary strategies generally refer to the control of sediment erosion and water pollution during the construction phase. The primary risks occur when soil is excavated and exposed to the elements during construction works. It is at this stage that suspended solids and other construction activity associated pollutants can be washed into the receiving stormwater network and subsequently the downstream waterways.</p> <p>The strategies that are implemented to prevent potential soil degradation and pollution of waterways include the adequate provision of sedimentation and erosion control measures. Generally, the measures outlined in this report form a minimum basis that should be considered and further documented by the contractor prior to commencement of the works through a Soil and Water Management Plan (SWMP).</p> <p>The temporary controls that are proposed in the concept plans by TTW will limit the displacement of sediment caused by runoff from disturbed areas and are designed to remove sediment prior to discharging from site.</p>

3.3.2 Proposed Measures

A detailed erosion and sediment control plan will be implemented during the construction stage and will be in accordance with Council's requirements and Landcom NSW's Managing Urban Stormwater, Soils and Construction ("Blue Book").

3.3.3 Installation of Measures

The measures are to be installed as per the requirements outlined below:

Clearly visible barrier, site fencing and hoarding shall be installed at the discretion of the Superintendent to ensure site security, safety of the public, manage traffic control and prohibit any unnecessary site disturbance. Vehicular access to the site shall be limited to only what is essential for the construction activities and shall enter the site only through the stabilised access points.

All disturbed areas are to be stabilised within 14 working days of the completion of earthworks. All disturbed areas are to be protected so that the land is permanently stabilised within six months.

Proprietary silt fencing shall be installed by the Contractor in accordance with the final approved Sedimentation and Erosion Control Plan and elsewhere at the discretion of the site superintendent to contain sedimentation to as near as possible to the original source.

Sediment removed from any sediment trapping device shall be relocated where further pollution to downslope lands and waterways cannot occur.

Stockpiles shall be located by the Contractor in accordance with the final approved Sedimentation and Erosion Control Plan and elsewhere at the discretion of the Project Manager and/or Superintendent. Where stockpiles are to be in place longer than 30 days they shall be stabilised.

Water shall be prevented from entering the permanent drainage system unless it is sediment free. Drainage

pits are to be protected in accordance with the final approved Sedimentation and Erosion Control Plan.

Temporary sediment traps located at pits shall be retained throughout the early works stage and until the appropriate replacement measures for the subsequent stages are installed.

3.3.4 Land Disturbance

- Where practicable, the soil erosion hazard shall be kept as low as possible. Limitations to access are to be in accordance with the 4.

Table 4: Limitations to Access

Land Use	Limitation
Access areas	Access is to be limited to the designated work zones via the stabilised site access.
Truck cleaning areas	Any truck exiting out of the site shall be thoroughly cleaned and limit the exportation of soil and sediment on public roads.
Remaining undisturbed areas	Access to any undisturbed areas and remaining lands is only permitted with permission from the Project Manager and/or Superintendent.

- Any spilled material shall be immediately removed from areas subject to runoff or concentrated flow;
- Trapped sediment shall be removed where the capacity of the sedimentation trapping device falls below 60%;
- Sedimentation traps are to be inspected after each rainfall event and/or weekly to;
- Ensure that all sediment is removed once the sediment storage zone is full;
- Ensure that outlet and emergency spillway works are maintained in a fully operational condition at all times;
- Ensure rehabilitated lands have effectively reduced the erosion hazard and initiate upgrading or repair as appropriate;
- Additional erosion or sediment control works may be required to be constructed as appropriate to ensure the protection of downslope lands and waterways;
- Erosion and sediment control measures are to be maintained in a fully functioning condition at all times until the site is rehabilitated or secondary stage measures are installed;
- Revegetation schemes are to be adhered to and that any grass coverings are kept healthy, including watering and mowing;

The removal of the temporary soil conservation and sedimentation control structures is to be the last activity in the rehabilitation program.

4.0 Wastewater and Potable Water Management

The design of wastewater and potable water for the site will be prepared by a qualified Hydraulic engineer as part of the detailed design.

5.0 Cumulative impacts

5.1 Surface Water Impact Assessment

The proposed development will have negligible impact on the existing surface water conditions as the design is in line with Sydney Water Permissible Site Discharge requirements. OSD system and overland flow paths will reduce flows from the site which will enhance protection of the downstream ecology. Further, the

introduction of water quality treatment will protect the receiving bodies from the pollutants introduced by impervious surfaces and landscape areas.

As such, the proposed drainage design will not adversely impact downstream ecosystems, nor impact existing hydrological systems.

6.0 Mitigation Measures

The following mitigation measures shown in Table 5 below are to be implemented as outlined in this report to minimise the impact of the proposal on the receiving system.

Table 5: Mitigation Measures

Mitigation Measures	Description
Erosion and sediment control	The proposed development is to implement measures as documented generally in accordance with NSW Department of Housing Managing Urban Stormwater
Stormwater management	Provision of OSD tanks systems and water quality treatment measures as part of a WSUD as documented on this report and on TTW's civil engineering drawing.
Surface water impact assessment	The proposed stormwater management strategy as discussed and as shown in the civil engineering drawings attached are to be implemented to ensure that the development has no impact on downstream drainage lines, assets, ecosystems, or existing hydrological systems.

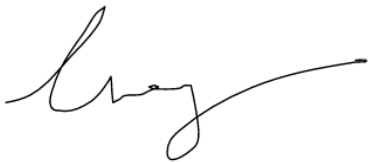
7.0 Conclusion

This integrated water management plan provides a summary of the concept stormwater management for the proposed development at 164-172 and 174-194 William Street, Woolloomooloo. The stormwater strategy has been prepared to address the requirements of the CoS DCP and CoS Stormwater Drainage Policy. In doing so, on-site detention and stormwater treatment measures have been introduced to manage stormwater runoff from the development. The sedimentation and erosion control measures have also been recommended to manage runoff and ensure no detriment to the receiving environments.

A flood impact assessment has been conducted and is detailed in a separate report.

Prepared by
TTW (NSW) PTY LTD

Authorised By
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APRIL WANG
Engineer

COLIN ROPE
Associate Director

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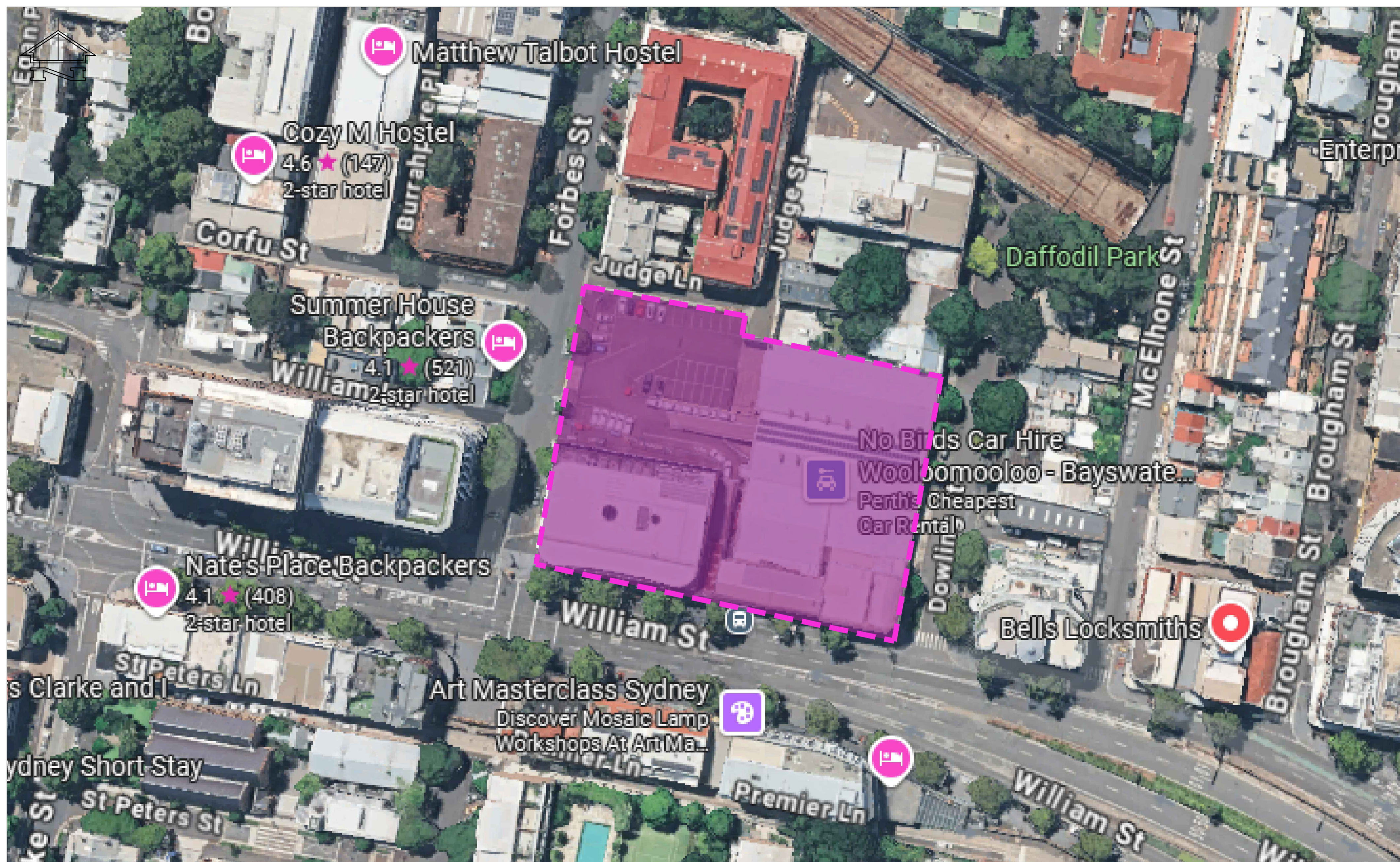
Appendix A

Civil Engineering Drawing

164-172 AND 174-194 WILLIAM STREET

WOOLLOOMOOLOO NSW 2011

CIVIL WORKS



LOCALITY PLAN

DRAWING INDEX

211734-TTW-00-DR-CI-00001	COVER SHEET AND DRAWING INDEX
211734-TTW-00-DR-CI-00002	GENERAL NOTES AND LEGEND SHEET 1
211734-TTW-00-DR-CI-01001	SITWORKS AND STORMWATER PLAN
211734-TTW-00-DR-CI-01002	CATCHMENT PLAN
211734-TTW-00-DR-CI-01101	STORMWATER DETAILS SHEET 1
211734-TTW-00-DR-CI-02001	EROSION AND SEDIMENT CONTROL DETAILS SHEET 1
211734-TTW-00-DR-CI-02002	EROSION AND SEDIMENT CONTROL DETAILS SHEET 2
211734-TTW-00-DR-CI-02021	EROSION AND SEDIMENT CONTROL PLAN

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A ISSUE FOR INFORMATION AW ES 28.08.2025 Rev Description Eng Draft Date			Architect: fjstudio			Engineer: TTW Structural Civil Traffic Façade 612 9439 7288 Level 6, 73 Miller Street, North Sydney, NSW 2060			Project: 164-194 WILLIAM STREET WOOLLOOMOOLOO			Drawing Title: COVER SHEET AND DRAWING INDEX			Scale at A1 Drawn: AW Designed: AW Approved: CR Project No: 211734-TTW-00-DR-CI-00001-A 28.08.2025 2:57 PM				
Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date

GENERAL

- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE SUPERINTENDENT. STRIP ALL TOPSOIL FROM THE CONSTRUCTION AREA. ALL STRIPPED TOPSOIL SHALL BE DISPOSED OF OFF-SITE UNLESS DIRECTED OTHERWISE.
- MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.
- COMPACT SUBGRADE UNDER BUILDINGS AND PAVEMENTS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.1.1. COMPACTION UNDER BUILDINGS TO EXTEND 2M MINIMUM BEYOND BUILDING FOOTPRINT.
- ALL WORK ON PUBLIC PROPERTY, PROPERTY WHICH IS TO BECOME PUBLIC PROPERTY, OR ANY WORK WHICH IS TO COME UNDER THE CONTROL OF THE STATUTORY AUTHORITY, THE CONTRACTOR IS TO ENSURE THAT THE DRAWINGS USED FOR CONSTRUCTION HAVE BEEN APPROVED BY ALL RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT SITE.
- ALL WORK ON PUBLIC PROPERTY, PROPERTY WHICH IS TO BECOME PUBLIC PROPERTY, OR ANY WORK WHICH IS TO COME UNDER THE CONTROL OF THE STATUTORY AUTHORITY IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITY. THE CONTRACTOR SHALL OBTAIN THESE REQUIREMENTS FROM THE AUTHORITY. WHERE THE REQUIREMENTS OF THE AUTHORITY ARE DIFFERENT TO THE DRAWINGS AND SPECIFICATIONS, THE REQUIREMENTS OF THE AUTHORITY SHALL BE APPLICABLE.
- FOR ALL TEMPORARY BATTERS REFER TO GEOTECHNICAL RECOMMENDATIONS.

REFERENCE DRAWINGS

- THESE DRAWINGS HAVE BEEN BASED FROM, AND TO BE READ IN CONJUNCTION WITH THE FOLLOWING CONSULTANTS DRAWINGS. ANY CONFLICT TO THE DRAWINGS MUST BE NOTIFIED IMMEDIATELY TO THE ENGINEER.

CONSULTANT	DRAWING TITLE	DRAWING NUMBER	REVISION	DATE
fjstudio	GROUND FLOOR PLAN	2001	1	15.08.2025
LTS	SURVEY	51095001DT	C	26.11.2021

BOUNDARIES AND EASEMENTS

- THE PROPERTY BOUNDARY AND EASEMENT LOCATIONS SHOWN ON TAYLOR THOMSON WHITTING DRAWING'S HAVE BEEN BASED ON INFORMATION RECEIVED FROM : PROJECT SURVEYORS
- TAYLOR THOMSON WHITTING MAKES NO GUARANTEES THAT THE BOUNDARY OR EASEMENT INFORMATION SHOWN IS CORRECT. TAYLOR THOMSON WHITTING WILL ACCEPT NO LIABILITIES FOR BOUNDARY INACCURACIES. THE CONTRACTOR/BUILDER IS ADVISED TO CHECK/CONFIRM ALL BOUNDARIES IN RELATION TO ALL PROPOSED WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. BOUNDARY INACCURACIES FOUND ARE TO BE REPORTED TO THE SUPERINTENDENT PRIOR TO CONSTRUCTION STARTING.

SURVEY

ORIGIN OF LEVELS: SSM 171577 RL 26.55
 DATUM OF LEVELS: AHD
 COORDINATE SYSTEM: GDA94
 SURVEY PREPARED BY: LTS

- TAYLOR THOMSON WHITTING DOES NOT GUARANTEE THAT THE SURVEY INFORMATION SHOWN ON THESE DRAWINGS IS ACCURATE AND WILL ACCEPT NO LIABILITY FOR ANY INACCURACIES IN THE SURVEY INFORMATION PROVIDED TO US FROM ANY CAUSE WHATSOEVER.

UNDERGROUND SERVICES - WARNING

- THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON TAYLOR THOMSON WHITTINGS DRAWINGS HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.
- THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.
- THE CONTRACTOR MUST CONFIRM THE EXACT LOCATION AND EXTENT OF SERVICES PRIOR TO CONSTRUCTION AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY TO THE ENGINEER/SUPERINTENDENT.
- THE CONTRACTOR IS TO GET APPROVAL FROM THE RELEVANT STATE SURVEY DEPARTMENT, TO REMOVE/ADJUST ANY SURVEY MARK. THIS INCLUDES BUT IS NOT LIMITED TO: STATE SURVEY MARKS (SSM), PERMANENT MARKS (PM), CADASTRAL REFERENCE MARKS OR ANY OTHER SURVEY MARK WHICH IS TO BE REMOVED OR ADJUSTED IN ANY WAY.
- TAYLOR THOMSON WHITTING PLANS DO NOT INDICATE THE PRESENCE OF ANY SURVEY MARK. THE CONTRACTOR IS TO UNDERTAKE THEIR OWN SEARCH.

BEFORE YOU DIG AUSTRALIA (BYDA)

- PUBLIC SERVICE UTILITY INFORMATION SHOWN ON PLAN HAS BEEN COMPLIED FROM INFORMATION RECEIVED FROM DIAL BEFORE YOU DIG INQUIRY, REFERENCE NUMBER 30960275 OBTAINED ON 24.11.21 UNLESS SPECIFICALLY SHOWN OTHERWISE, THIS LOCATION AND DEPTH OF SERVICES SHOWN ON THIS PLAN HAVE NOT BEEN VERIFIED.
- THE LOCATION OF SERVICES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES AND SHOULD BE CONFIRMED BY SITE INSPECTION.*

SITE WORKS

- ALL BASECOURSE MATERIAL TO COMPLY WITH RMS SPECIFICATION NO 3051 AND COMPACTED TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1.
- ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED SELECT MATERIAL AND COMPACTED TO A MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1

PUBLIC DOMAIN WORKS

- PUBLIC DOMAIN WORKS ARE NOT TO COMMENCE UNTIL THESE DRAWINGS ARE STAMPED AS APPROVED. SINSW TO CONFIRM IF THESE DRAWINGS WILL BE STAMPED AS APPROVED.

DESIGN AND CONSTRUCT DOCUMENTATION

- THE LEVEL OF DETAIL / DESIGN REFLECTED IN THESE DOCUMENTS IS BASED ON THE UNDERSTANDING THIS WILL BE BUILT AS PART OF A DESIGN & CONSTRUCT CONTRACT.
- THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY TO UNDERTAKE DETAILED DESIGN, CONFIRM COMPLIANCE WITH RELEVANT STANDARDS, CONSENT CONDITIONS & THE SPECIFICATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE FINAL DESIGN IS CO-ORDINATED FULLY WITH OTHER CONSULTANTS.
- NO VARIATION WILL BE ACCEPTED FOR DESIGN AMENDMENTS REQUIRED TO MEET THE FUNCTIONAL OBJECTIVE OF THIS DOCUMENTATION.

SAFETY IN DESIGN

CONTRACTOR TO REFER TO APPENDIX B OF THE CIVIL SPECIFICATION FOR THE CIVIL RISK AND SOLUTIONS REGISTER.

- EXISTING SERVICES
CONTRACTOR TO BE AWARE EXISTING SERVICES ARE LOCATED WITHIN THE SITE. LOCATION OF ALL SERVICES TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORKS. CONTRACTOR TO CONFIRM WITH RELEVANT AUTHORITY REGARDING MEASURES TO BE TAKEN TO ENSURE SERVICES ARE PROTECTED OR PROCEDURES ARE IN PLACE TO DEMOLISH AND/OR RELOCATE.
- EXISTING STRUCTURES
CONTRACTOR TO BE AWARE EXISTING STRUCTURES MAY EXIST WITHIN THE SITE. TO PREVENT DAMAGE TO EXISTING STRUCTURE(S) AND/OR PERSONNEL, SITE WORKS TO BE CARRIED OUT AS FAR AS PRACTICABLY POSSIBLE FROM EXISTING STRUCTURE(S).
- EXISTING TREES
CONTRACTOR TO BE AWARE EXISTING TREES EXIST WITHIN THE SITE WHICH NEED TO BE PROTECTED. TO PREVENT DAMAGE TO TREES AND/OR PERSONNEL, SITE WORKS TO BE CARRIED OUT AS FAR AS PRACTICABLY POSSIBLE FROM EXISTING TREES. ADVICE NEEDS TO BE SOUGHT FROM ARBORIST AND/OR LANDSCAPE ARCHITECT ON MEASURES REQUIRED TO PROTECT TREES.
- GROUNDWATER
CONTRACTOR TO BE AWARE GROUND WATER LEVELS ARE CLOSE TO EXISTING SURFACE LEVEL. TEMPORARY DE-WATERING MAY BE REQUIRED DURING CONSTRUCTION WORKS.
- EXCAVATIONS
DEEP EXCAVATIONS DUE TO STORMWATER DRAINAGE WORKS IS REQUIRED. CONTRACTOR TO ENSURE SAFE WORKING PROCEDURES ARE IN PLACE FOR WORKS. ALL EXCAVATIONS TO BE FENCED OFF AND BATTERS ADEQUATELY SUPPORTED TO APPROVAL OF GEOTECHNICAL ENGINEER.
- GROUND CONDITIONS
CONTRACTOR TO BE AWARE OF THE SITE GEOTECHNICAL CONDITIONS. REFER TO GEOTECHNICAL REPORT BY
- Douglas Partners DATED MARCH 2023 (REF.208700.00)
- HAZARDOUS MATERIALS
EXISTING ASBESTOS PRODUCTS & CONTAMINATED MATERIAL MAY BE PRESENT ON SITE. CONTRACTOR TO ENSURE ALL HAZARDOUS MATERIALS ARE IDENTIFIED PRIOR TO COMMENCING WORKS. SAFE WORKING PRACTICES AS PER RELEVANT AUTHORITY TO BE ADOPTED AND APPROPRIATE PPE TO BE USED WHEN HANDLING ALL HAZARDOUS MATERIALS. REFER TO GEOTECHNICAL/ENVIRONMENTAL REPORT BY
- Douglas Partners DATED MARCH 2023 (REF.208700.00)

- CONFINED SPACES
CONTRACTOR TO BE AWARE OF POTENTIAL HAZARDS DUE TO WORKING IN CONFINED SPACES SUCH AS STORMWATER PITS, TRENCHES AND/OR TANKS. CONTRACTOR TO PROVIDE SAFE WORKING METHODS AND USE APPROPRIATE PPE WHEN ENTERING CONFINED SPACES.
- MANUAL HANDLING
CONTRACTOR TO BE AWARE MANUAL HANDLING MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ENSURE MANUAL HANDLING PROCEDURES AND ASSESSMENTS ARE IN PLACE PRIOR TO COMMENCING WORKS.
- WATER POLLUTION
CONTRACTOR TO ENSURE APPROPRIATE MEASURES ARE TAKEN TO PREVENT POLLUTANTS FROM CONSTRUCTION WORKS CONTAMINATING THE SURROUNDING ENVIRONMENT.
- SITE ACCESS/EGRESS
CONTRACTOR TO BE AWARE SITE WORKS OCCUR IN CLOSE PROXIMITY TO FOOTPATHS AND ROADWAYS. CONTRACTOR TO ERECT APPROPRIATE BARRIERS AND SIGNAGE TO PROTECT SITE PERSONNEL AND PUBLIC.
- VEHICLE MOVEMENT
CONTRACTOR TO SUPPLY AND COMPLY WITH TRAFFIC MANAGEMENT PLAN AND PROVIDE ADEQUATE SITE TRAFFIC CONTROL INCLUDING A CERTIFIED TRAFFIC MARSHALL TO SUPERVISE VEHICLE MOVEMENTS WHERE NECESSARY.

CIVIL INSPECTION CERTIFICATES

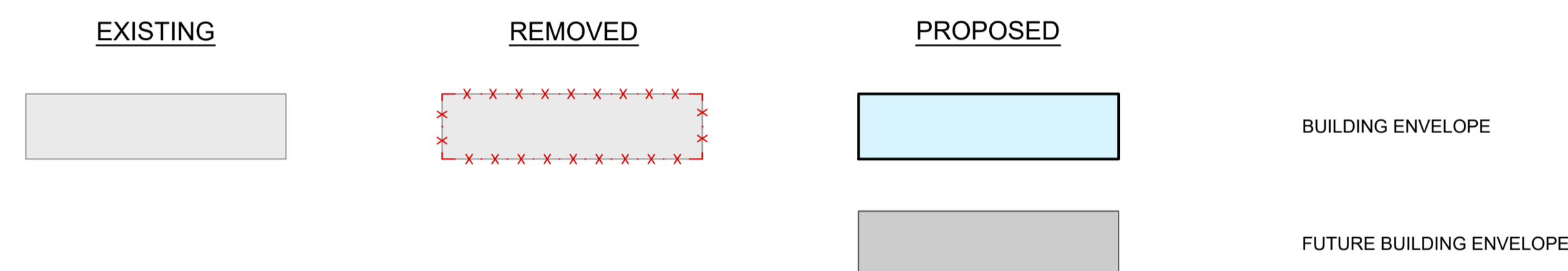
THE FOLLOWING MUST BE PROVIDED BY THE CONTRACTOR A MINIMUM 2 WEEKS PRIOR TO THE REQUESTED DATE OF A CIVIL INSPECTION CERTIFICATE FOR OCCUPATION CERTIFICATE. SUBMISSIONS MUST BE PROVIDED PROGRESSIVELY AS WORKS ARE COMPLETED IN ACCORDANCE WITH THE CIVIL SPECIFICATION. THE PROGRAM MUST ALLOW ADEQUATE TIME FOR DEFECTS TO BE RECTIFIED SHOULD THIS BE REQUIRED.

- NOTIFICATION THAT ALL CIVIL WORKS TO BE CERTIFIED HAVE BEEN COMPLETED TO ALLOW A FINAL INSPECTION TO BE UNDERTAKEN.
- WRITTEN CONFIRMATION FROM THE CONTRACTOR THAT ALL CIVIL SITE INSPECTION REPORTS HAVE BEEN CLOSED OUT.
- CCTV (INCLUDING WINCAN LOG OR EQUIVALENT) OF ALL CIVIL STORMWATER WORKS TO BE CERTIFIED.
- WAE FROM A REGISTERED SURVEYOR (PDF & DWG) FOR ALL CIVIL STORMWATER TO BE CERTIFIED.
- WAE FROM A REGISTERED SURVEYOR (PDF, DWG & 3D TIN) FOR ALL EXTERNAL CIVIL LEVELS TO BE CERTIFIED.
- HEAD CONTRACTORS STATEMENT OF CONSTRUCTION COMPLIANCE.
- HYDRAULIC CONTRACTORS INSTALLATION CERTIFICATE.
- 3RD PARTY INSTALLATION CERTIFICATES FOR PROPRIETARY PRODUCTS AND/OR D&C ELEMENTS.
- COMPACTION TEST RESULTS IN ACCORDANCE WITH THE CIVIL SPECIFICATION.
- MATERIALS CERTIFICATES PRIOR TO INSTALLATION IN ACCORDANCE WITH THE CIVIL SPECIFICATION.
- WRITTEN CONFIRMATION FROM TFNSW AND/OR COUNCIL CONFIRMING COMPLETION AND ACCEPTANCE OF S138 WORKS IF APPLICABLE.

BOUNDARIES



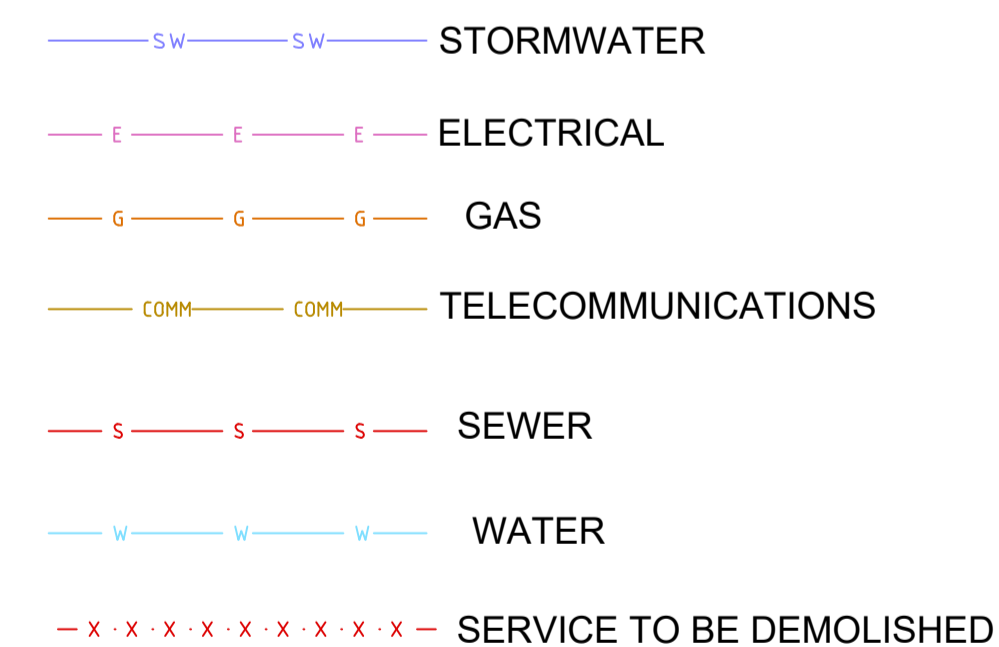
BUILDINGS



LANDSCAPE



EXISTING SERVICES

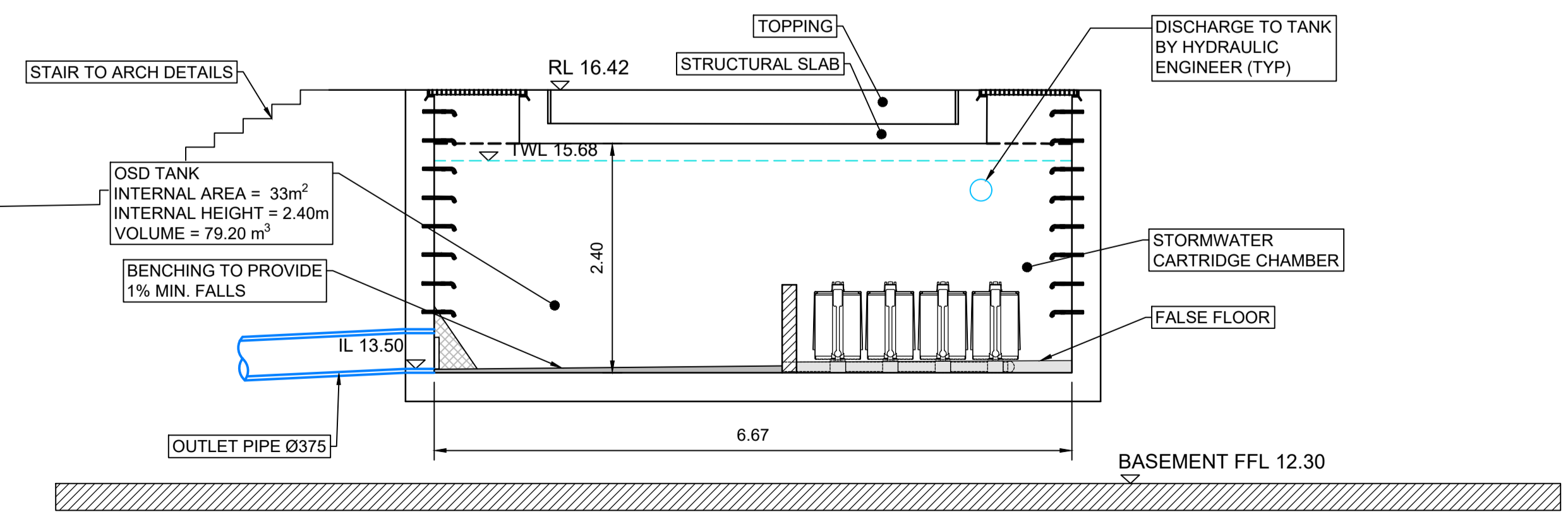
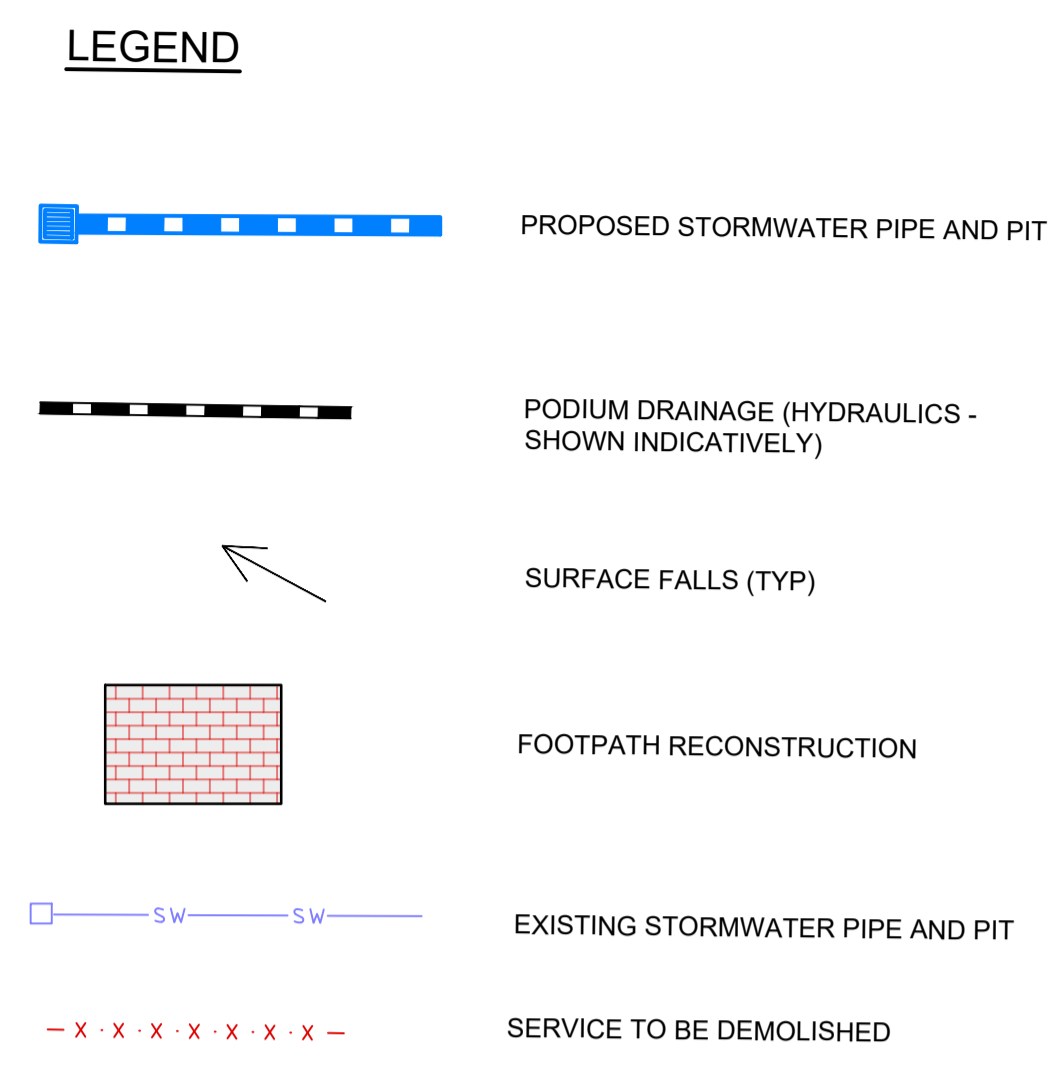
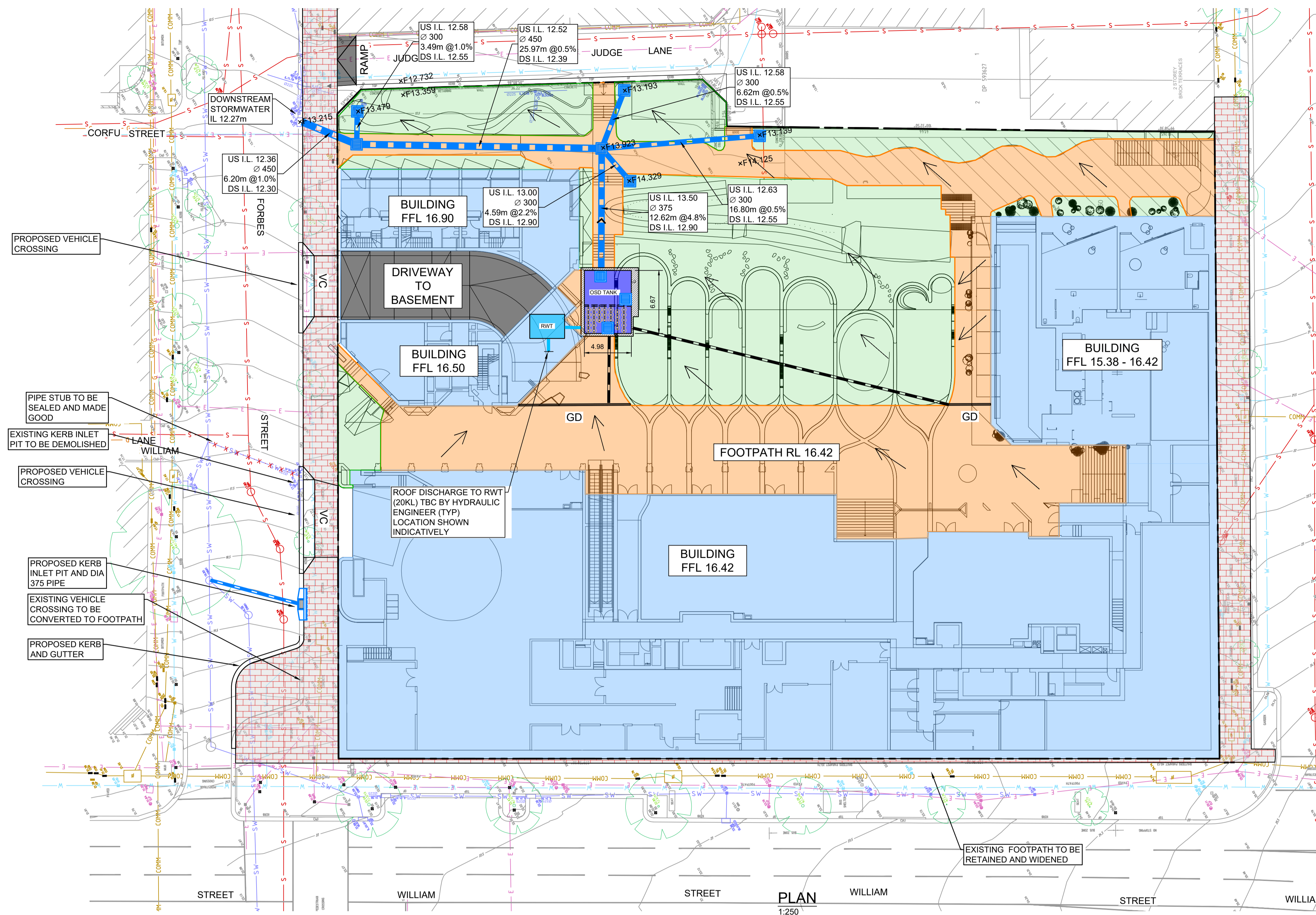


NOTE

- BELOW GROUND SERVICES CAN BE REPRESENTED AS GREY FOR EXISTING AND BLACK FOR PROPOSED DEPENDING ON THE PLAN.
- EXISTING SERVICES PITS, STRUCTURES AND COLUMNS ARE ILLUSTRATED AS PER THE ORIGINAL SURVEY.

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			Client:		Engineer:		Project: 164-194 WILLIAM STREET WOOLLOOMOOLOO		Drawing Title: GENERAL NOTES AND LEGEND SHEET 1		Scale at A1		Drawn: AW	Designed: AW	Approved: CR			
A ISSUE FOR INFORMATION AW ES 28.08.2025					612 9439 7288 Level 6, 73 Miller Street, North Sydney, NSW 2060						Project No		Originator	Zone	Type	Role	Sheet No.	Rev
Rev Description Eng Draft Date			Rev Description Eng Draft Date		Rev Description Eng Draft Date						211734-TTW-00-DR-CI-00002-A		28.08.2025		4:52 PM			



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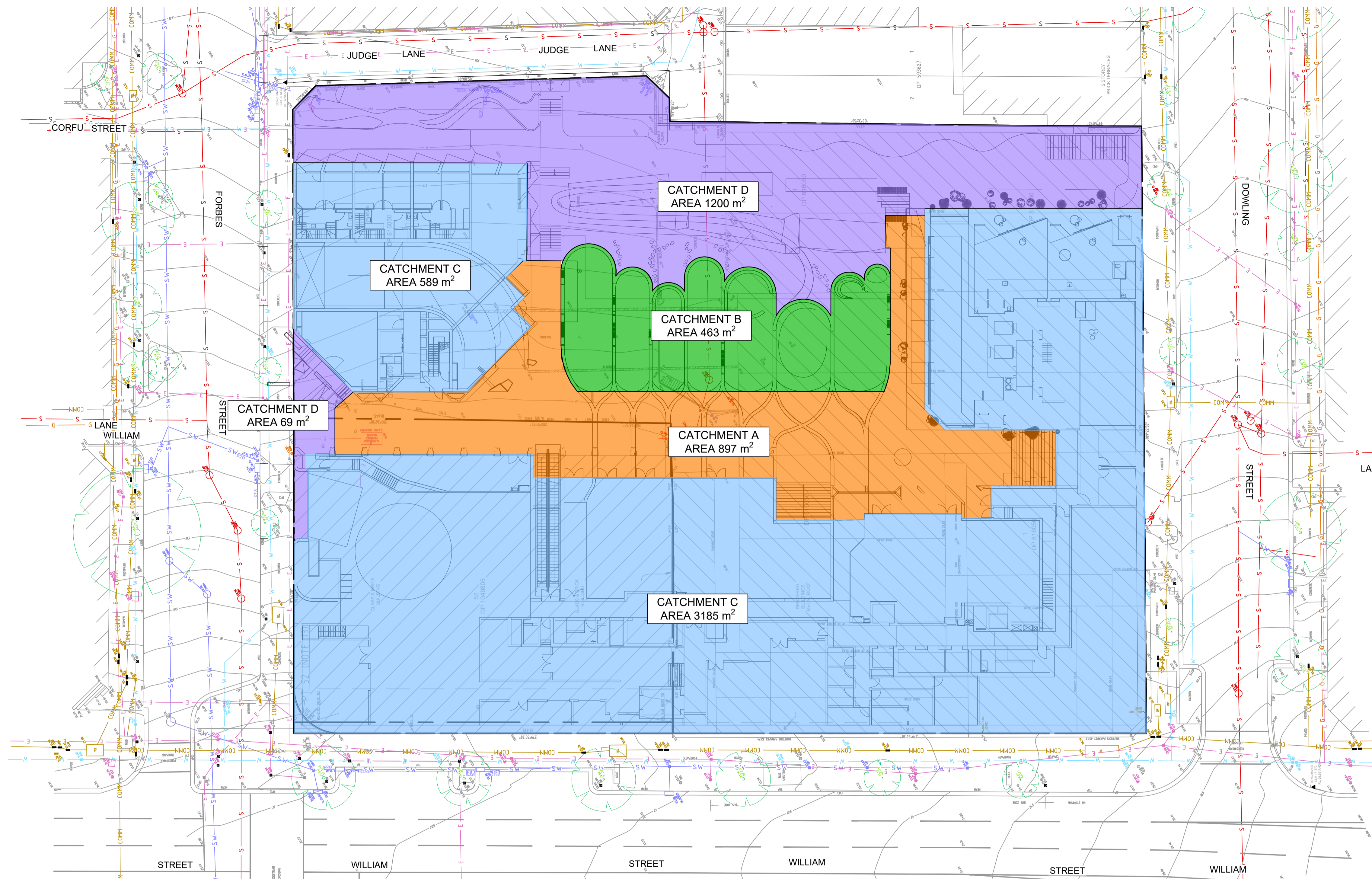
Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date
A	ISSUE FOR INFORMATION	AW	ES 28.08.2025				

Architect: **fjstudio**
 Engineer: **TTW Structural Civil Façade**
 612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project: **164-194 WILLIAM STREET WOOLLOOMOOLOO**

Drawing Title: **SITeworks AND STORMWATER PLAN**

Scale at A1	Drawn	Designed	Approved
1:250	AW	AW	CR
Project No	Originator	Zone	Type
211734-TTW-00-DR-CI-01001-A			
29.08.2025	9:31 AM		



CATCHMENT SUMMARY:

A - PAVED AREAS DRAINING TO OSD TANK	897m ²
B - LANDSCAPE AREAS DRAINING TO OSD TANK	463m ²
C - ROOF AREAS DRAINING TO OSD TANK	3,774m ²
D - LANDSCAPE / PAVEMENTS BYPASSING OSD TANK	1,269m ²
TOTAL SITE AREA	6,403 m²

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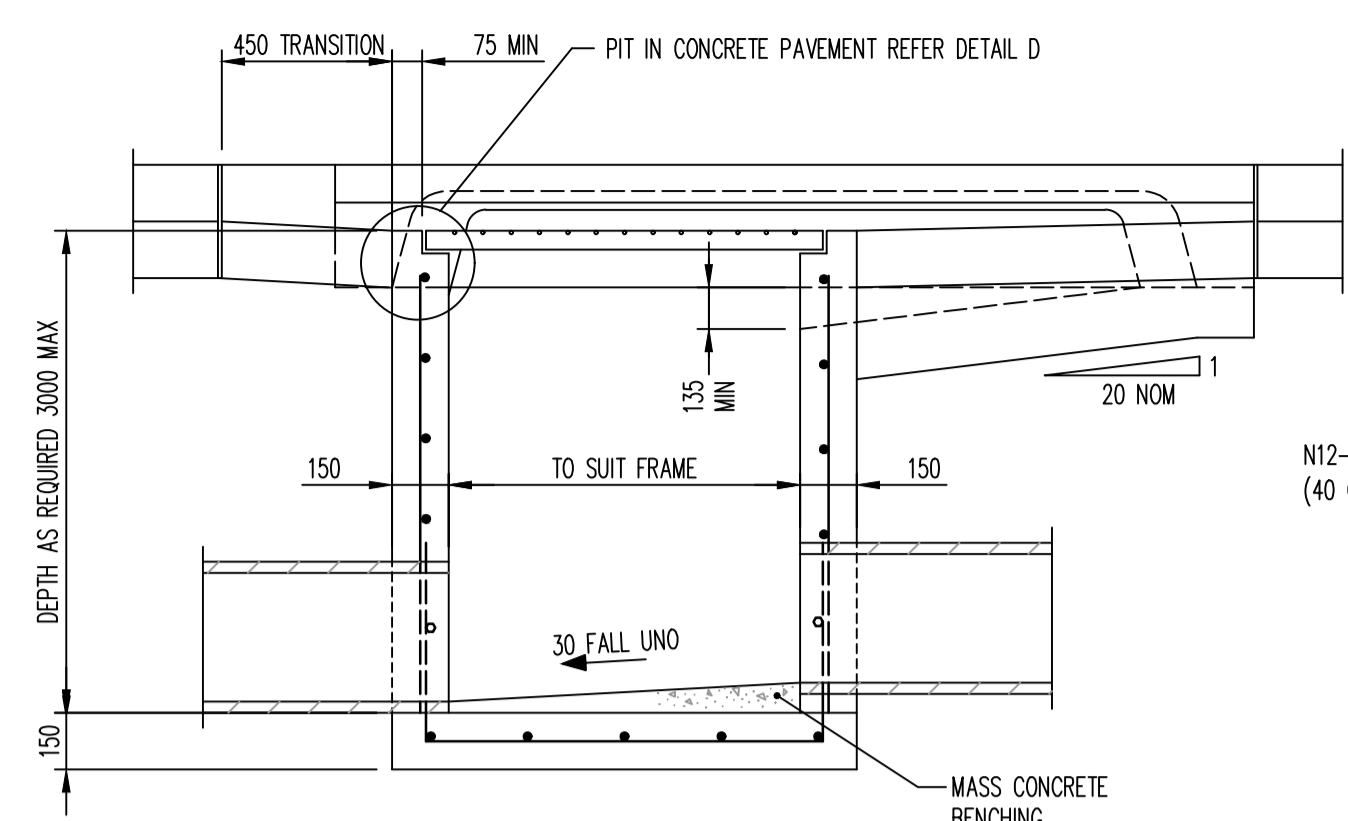
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A	ISSUE FOR INFORMATION	AW	ES 28.08.2025				



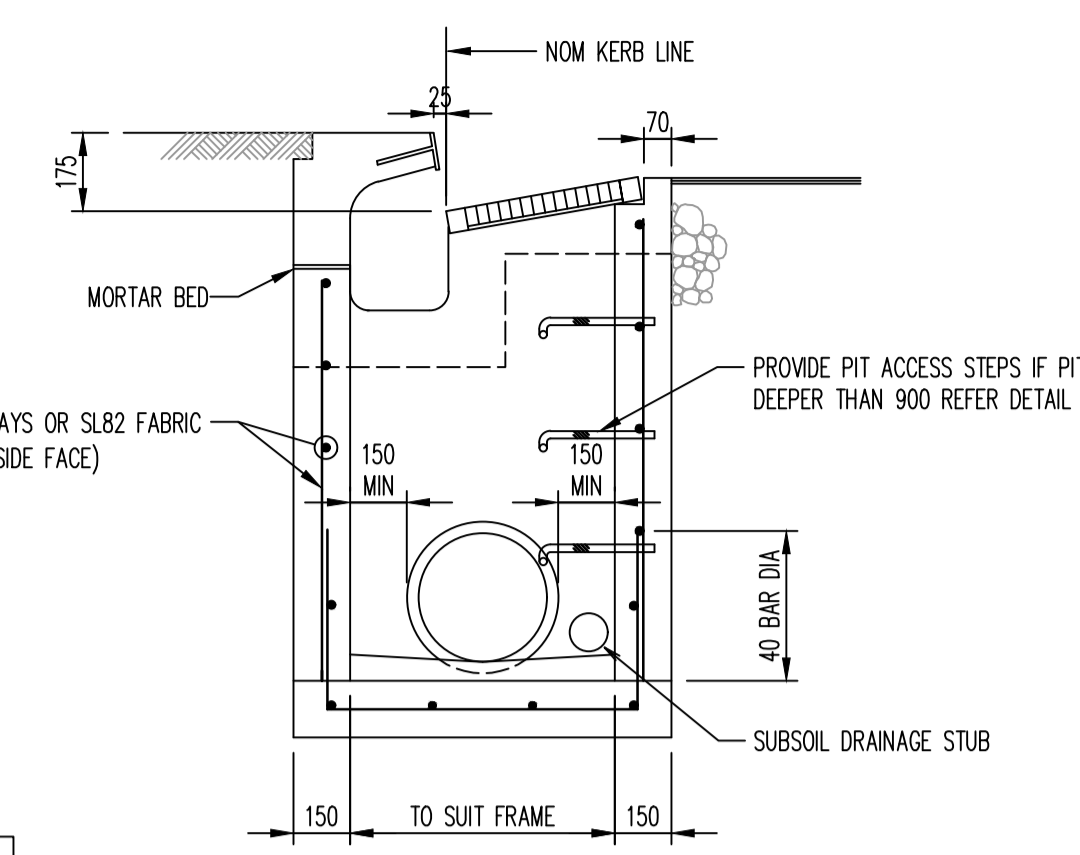
Project: 164-194 WILLIAM STREET WOOLLOOMOOLOO

Drawing Title: CATCHMENT PLAN

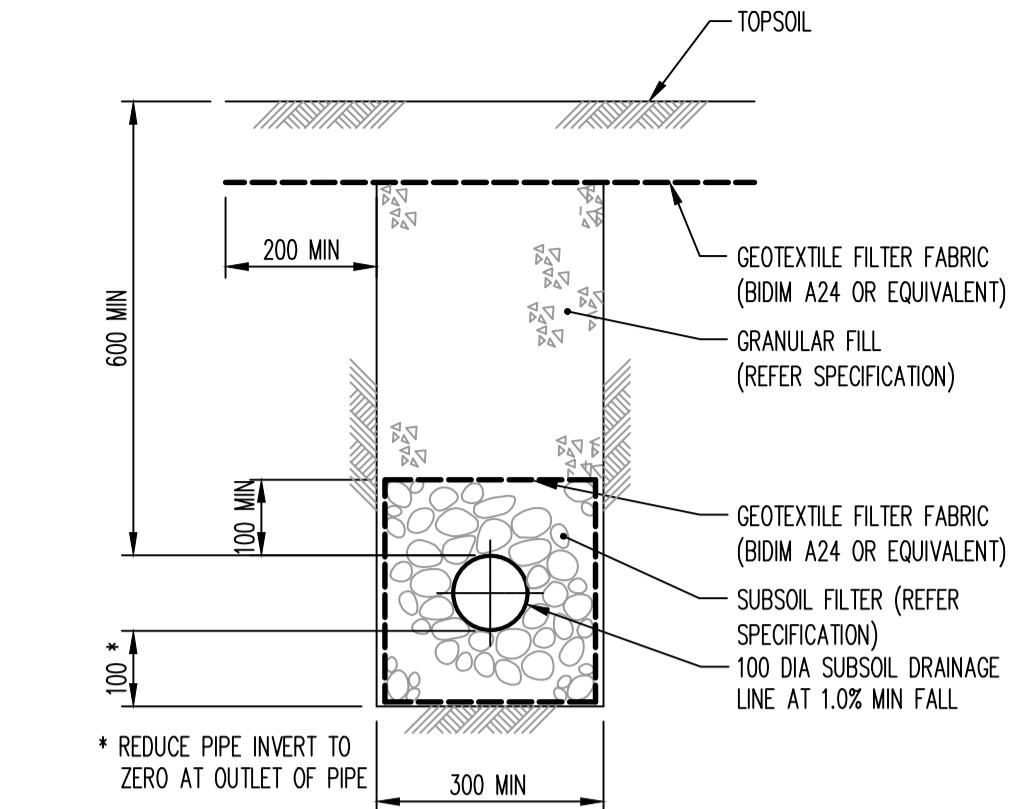
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211734-TTW-00-DR-CI-01002-A						
29.08.2025 9:54 AM						



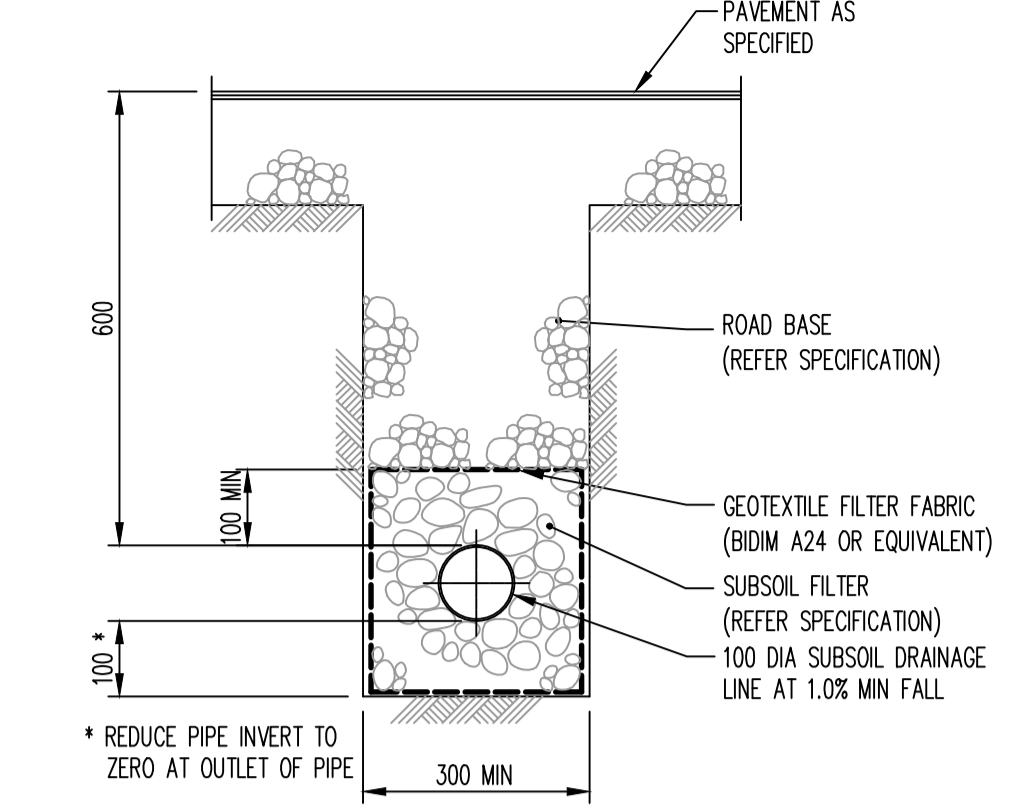
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SCALE 1:20



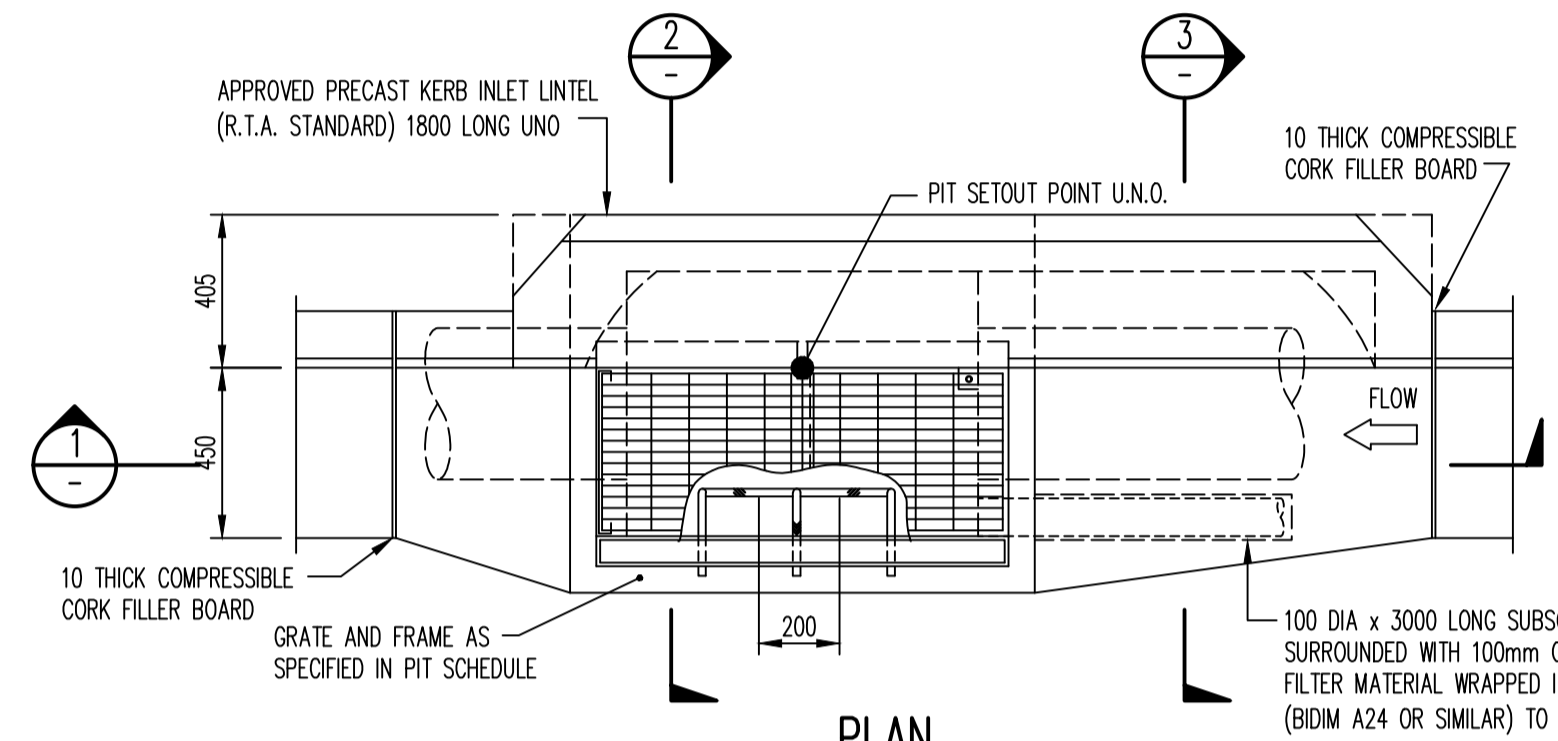
SECTION 2
SCALE 1:20



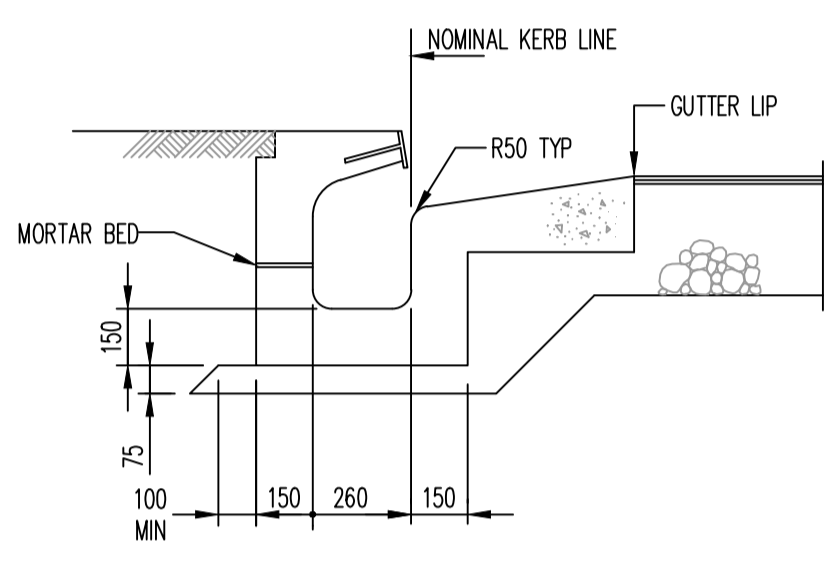
SUBSOIL IN LANDSCAPED AREAS
SCALE 1:10



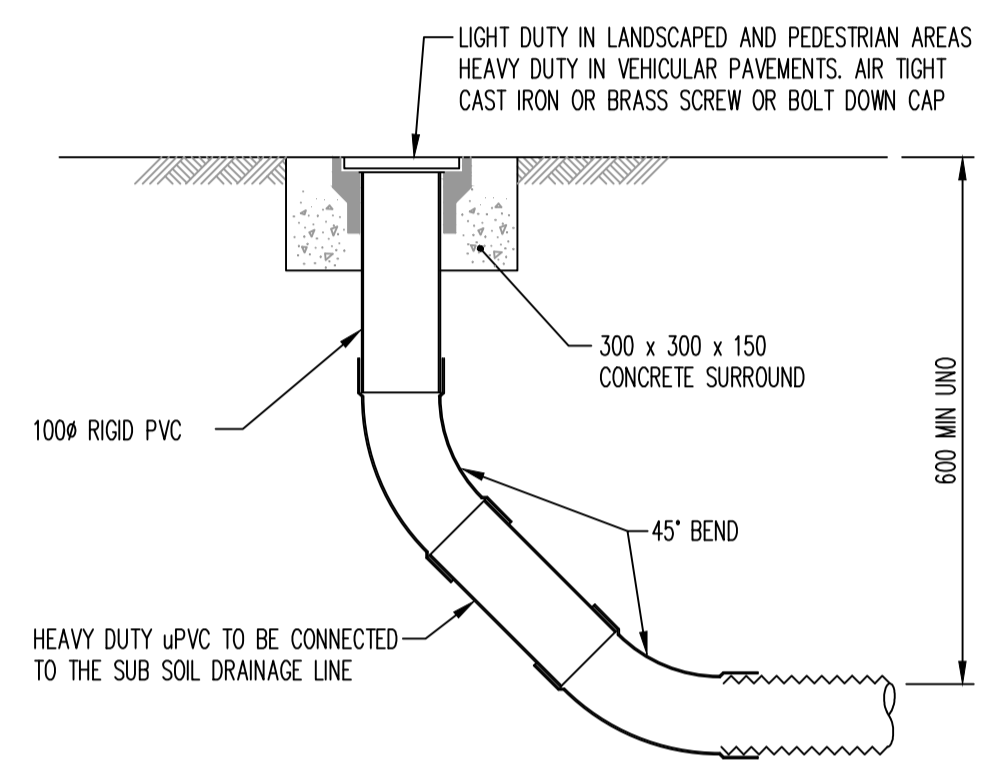
SUBSOIL IN PAVED AREAS
SCALE 1:10



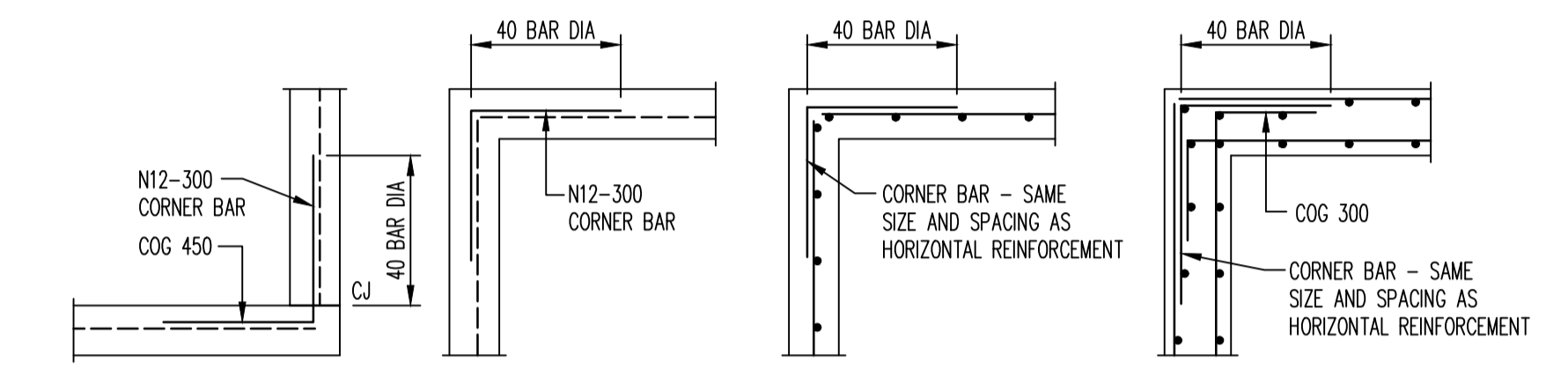
PLAN
SCALE 1:20



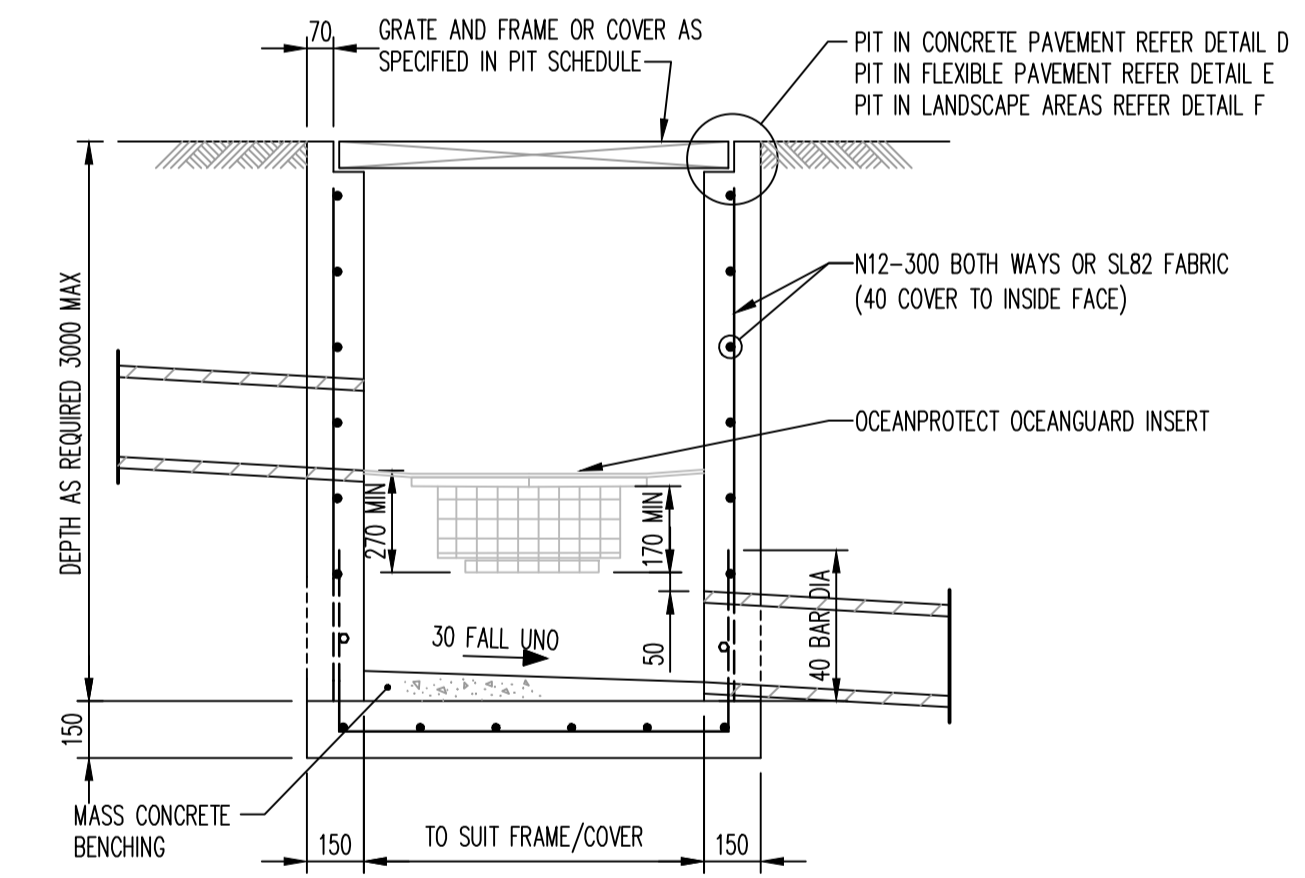
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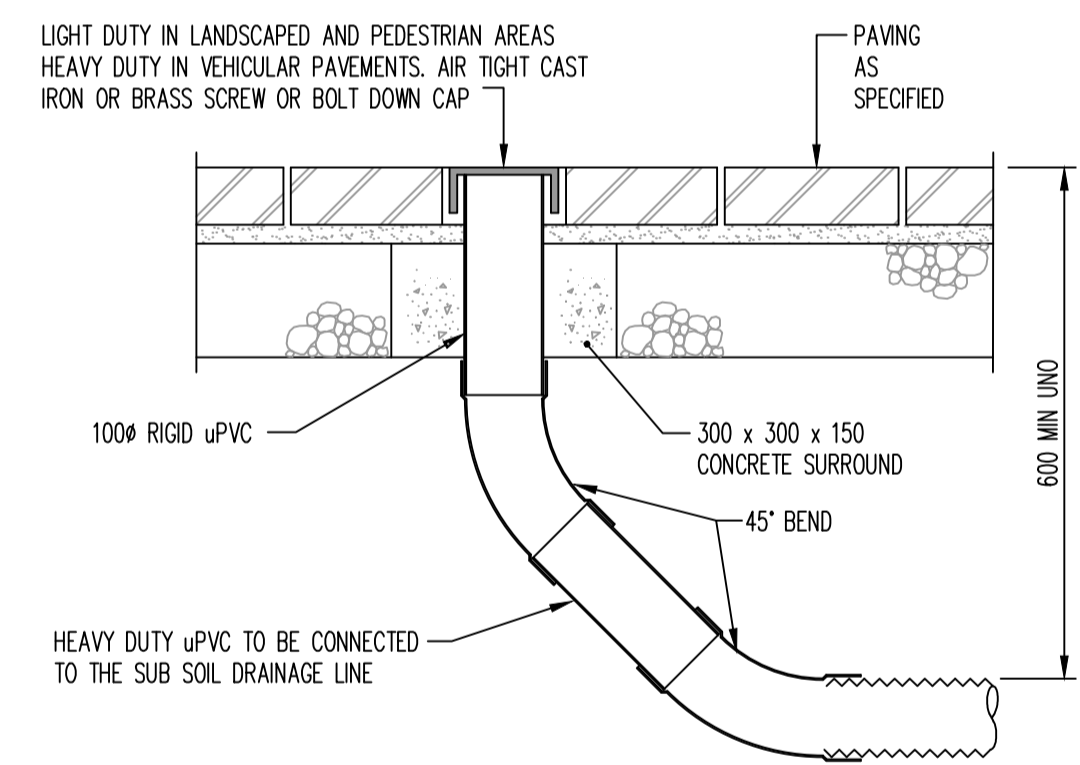
FLUSHING POINT (FP)
SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



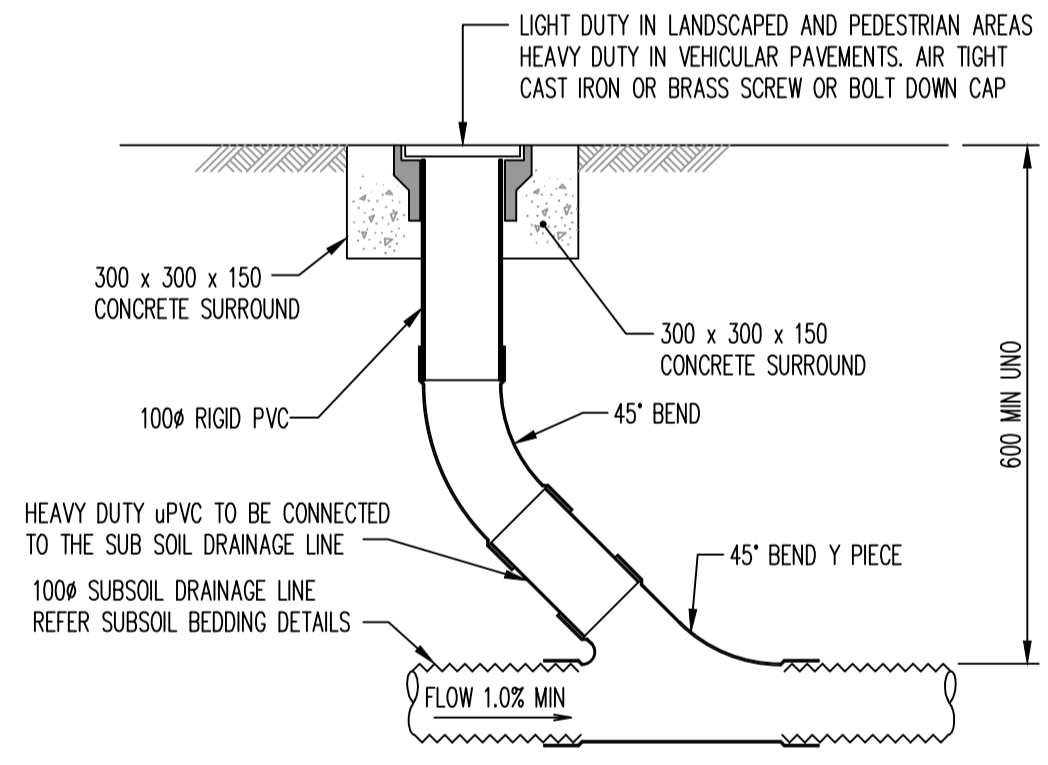
FABRIC REINFORCEMENT
SCALE 1:20



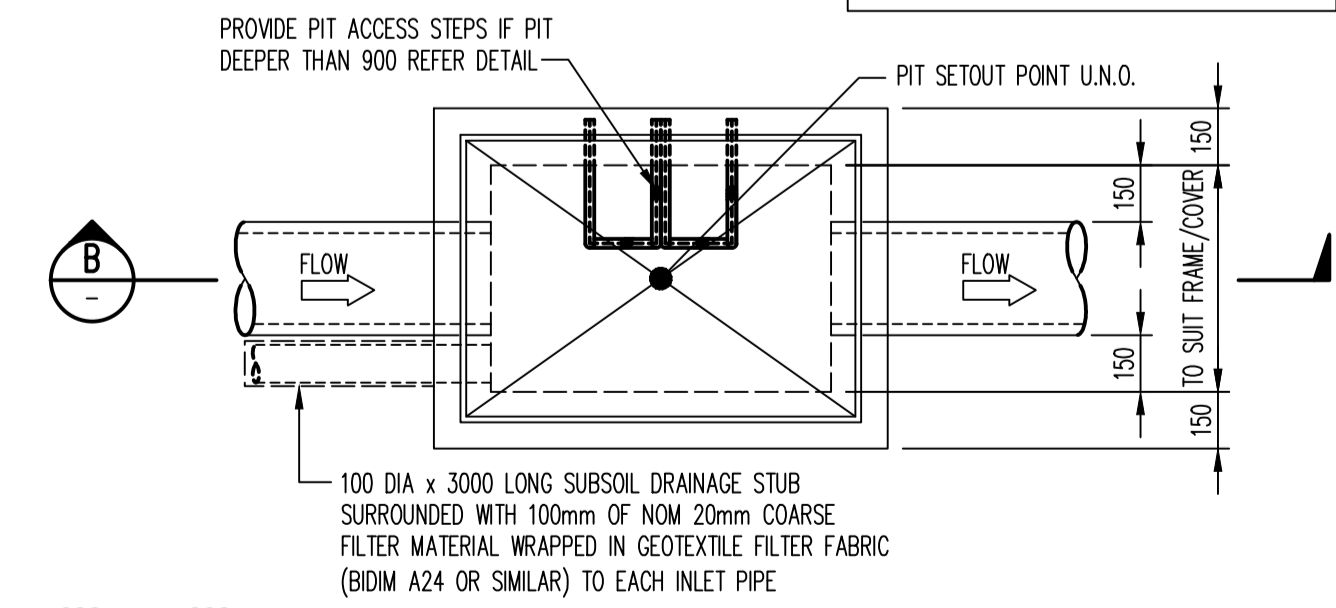
SECTION B
SCALE 1:20



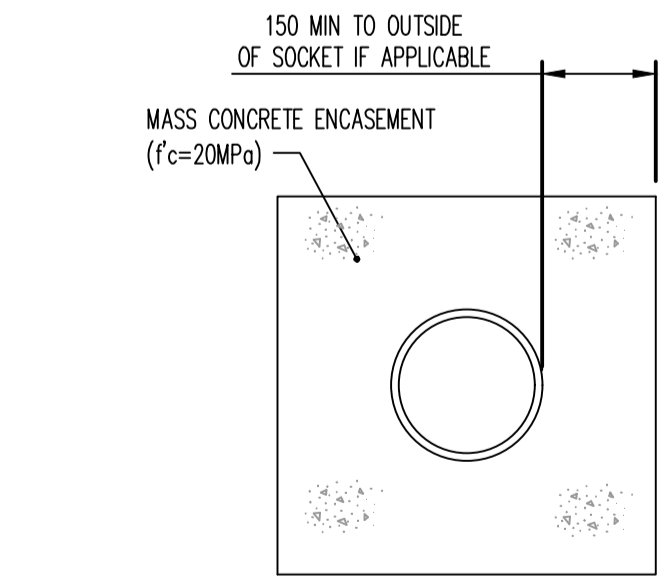
FLUSHING POINT (FP) IN PAVERS
SCALE 1:10



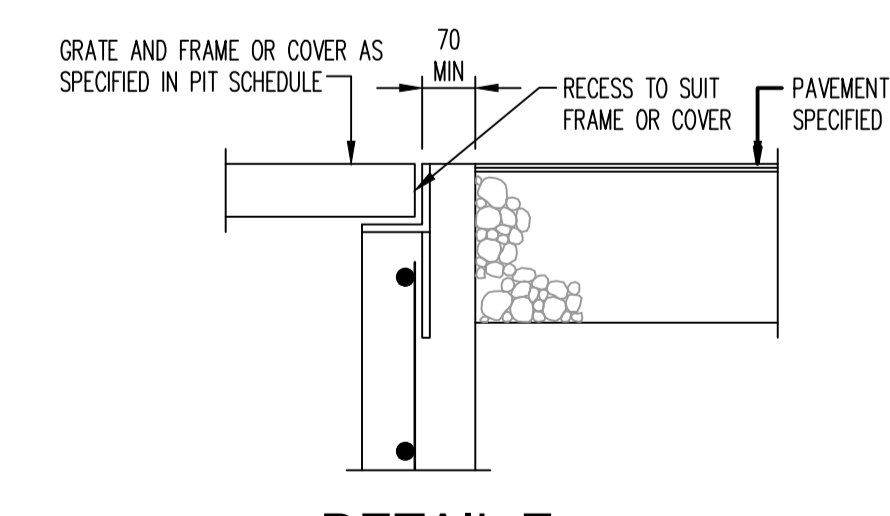
INTERMEDIATE RISER (IR)
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NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED



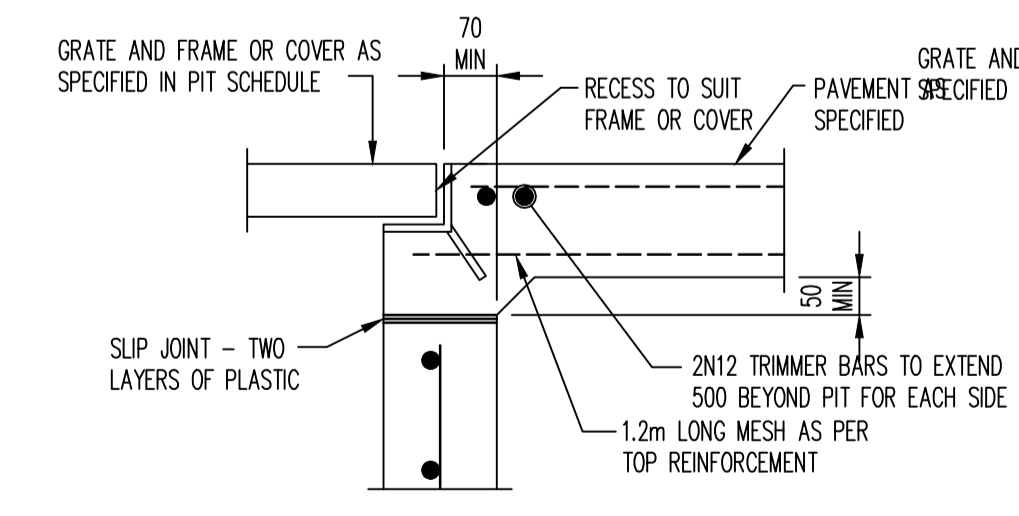
PLAN
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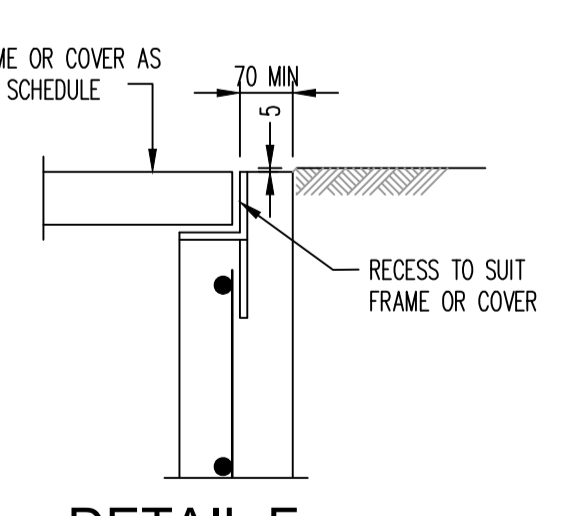
CONCRETE ENCASUREMENT DETAIL
SCALE 1:10



DETAIL E
SCALE 1:10

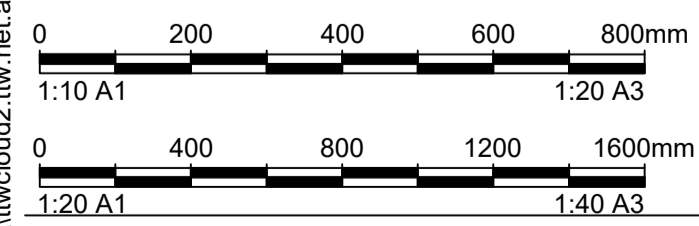


DETAIL D
SCALE 1:10



DETAIL F
SCALE 1:10

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Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date
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		Project: 164-194 WILLIAM STREET WOOLLOOMOOLOO	Drawing Title: STORMWATER DETAILS SHEET 1	Scale at A1 Drawn: AW Designed: AW Approved: CR
Architect:			Project No: 211734-TTW-00-DR-CI-01101-A 28.08.2025 2:14 PM	

EROSION AND SEDIMENT CONTROL NOTES

- ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:-
 - LOCAL AUTHORITY REQUIREMENTS.
 - EPA POLLUTION CONTROL MANUAL FOR URBAN STORMWATER.
 - LANDCOM NSW - MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION ("BLUE BOOK").
- EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES ARE PROVIDED FOR THE WHOLE OF THE WORKS. SHOULD THE CONTRACTOR STAGE THESE WORKS THEN THE DESIGN MAY BE REQUIRED TO BE MODIFIED. VARIATION TO THESE DETAILS MAY REQUIRE APPROVAL BY THE RELEVANT AUTHORITIES. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED AND ADAPTED TO MEET THE VARYING SITUATIONS AS WORK ON SITE PROGRESSES.
- THE EROSION & SEDIMENT CONTROL PLAN IS PREPARED FOR INFORMATION & PLANNING APPROVALS ONLY. THE CONTRACTOR SHALL PREPARE THE CONSTRUCTION EROSION & SEDIMENT CONTROL PLAN BASED ON THEIR WORKS STAGING & PROPOSED SITE FACILITIES.
- MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
- WHEN STORMWATER PITS ARE CONSTRUCTED PREVENT SITE RUNOFF ENTERING THE PITS UNLESS SILT FENCES ARE ERECTED AROUND PITS.
- MINIMISE THE AREA OF SITE BEING DISTURBED AT ANY ONE TIME.
- PROTECT ALL STOCKPILES OF MATERIALS FROM SCOUR AND EROSION. DO NOT STOCKPILE LOOSE MATERIAL IN ROADWAYS, NEAR DRAINAGE PITS OR IN WATERCOURSES.
- ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY, AND MODIFIED TO BEST SUIT SITE CONDITIONS.
- CONTROL WATER FROM UPSTREAM OF THE SITE SUCH THAT IT DOES NOT ENTER THE DISTURBED SITE.
- ALL CONSTRUCTION VEHICLES SHALL ENTER AND EXIT THE SITE VIA THE TEMPORARY CONSTRUCTION ENTRY/EXIT.
- ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED AND INSPECTED BEFORE LEAVING.
- MAINTAIN ALL STORMWATER PIPES AND PITS CLEAR OF DEBRIS AND SEDIMENT. INSPECT STORMWATER SYSTEM AND CLEAN OUT AFTER EACH STORM EVENT.
- CLEAN OUT ALL EROSION AND SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT.

SEQUENCE OF WORKS

- PRIOR TO COMMENCEMENT OF EXCAVATION THE FOLLOWING SOIL MANAGEMENT DEVICES MUST BE INSTALLED.
 - CONSTRUCT SILT FENCES BELOW THE SITE AND ACROSS ALL POTENTIAL RUNOFF SITES.
 - CONSTRUCT TEMPORARY CONSTRUCTION ENTRY/EXIT AND DIVERT RUNOFF TO SUITABLE CONTROL SYSTEMS.
 - CONSTRUCT MEASURES TO DIVERT UPSTREAM FLOWS INTO EXISTING STORMWATER SYSTEM.
 - CONSTRUCT SEDIMENTATION TRAPS/BASIN INCLUDING OUTLET CONTROL AND OVERFLOW.
 - CONSTRUCT TURF LINED SWALES.
 - PROVIDE SANDBAG SEDIMENT TRAPS UPSTREAM OF EXISTING PITS.
- CONSTRUCT GEOTEXTILE FILTER PIT SURROUND AROUND ALL PROPOSED PITS AS THEY ARE CONSTRUCTED.
- ON COMPLETION OF PAVEMENT PROVIDE SAND BAG KERB INLET SEDIMENT TRAPS AROUND PITS.
- PROVIDE AND MAINTAIN A STRIP OF TURF ON BOTH SIDES OF ALL ROADS AFTER THE CONSTRUCTION OF KERBS.

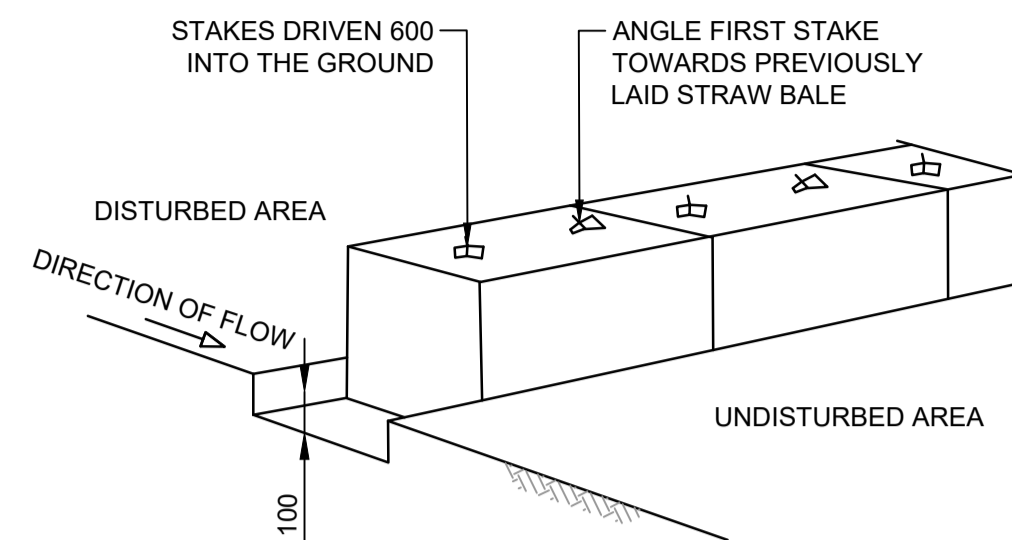
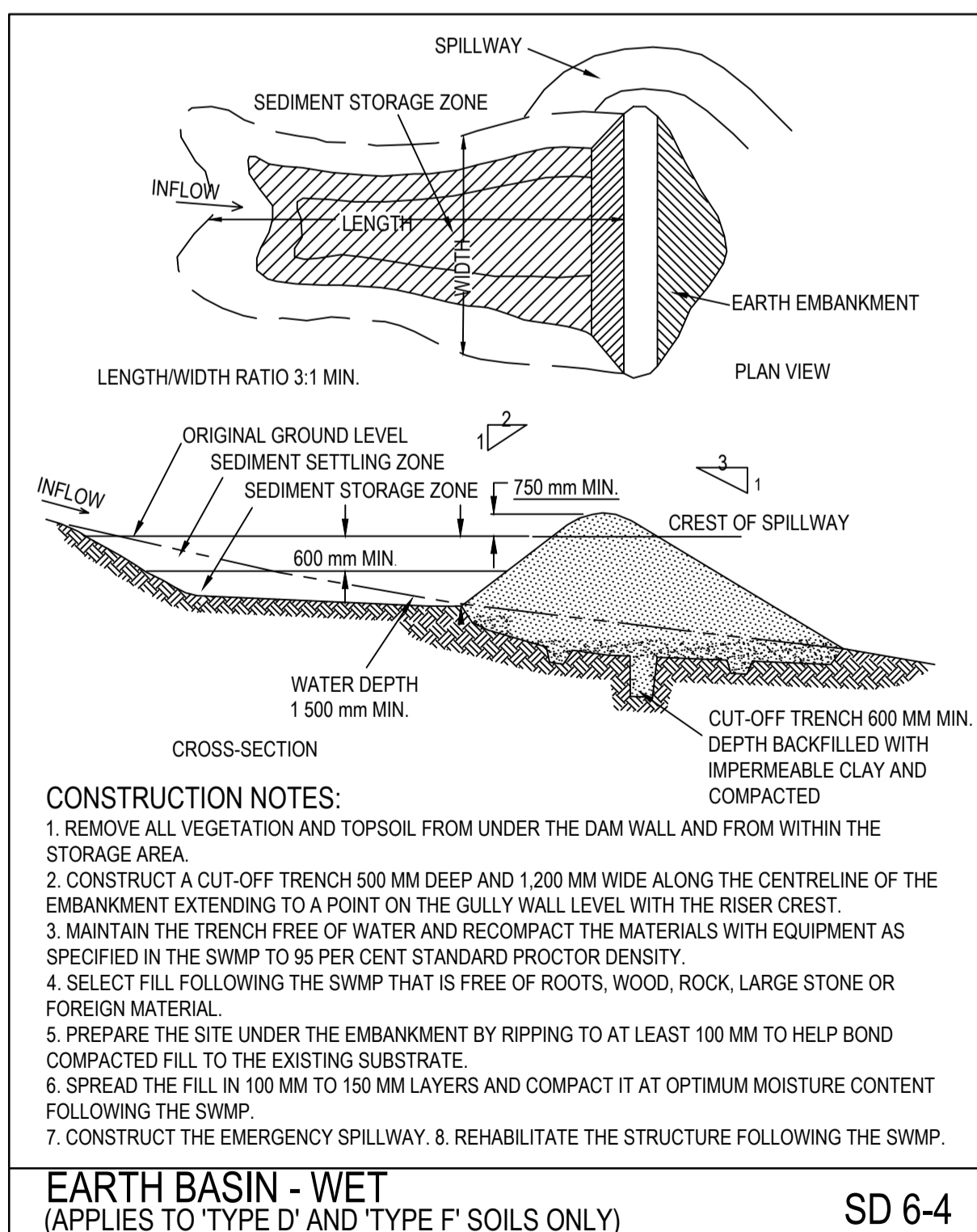
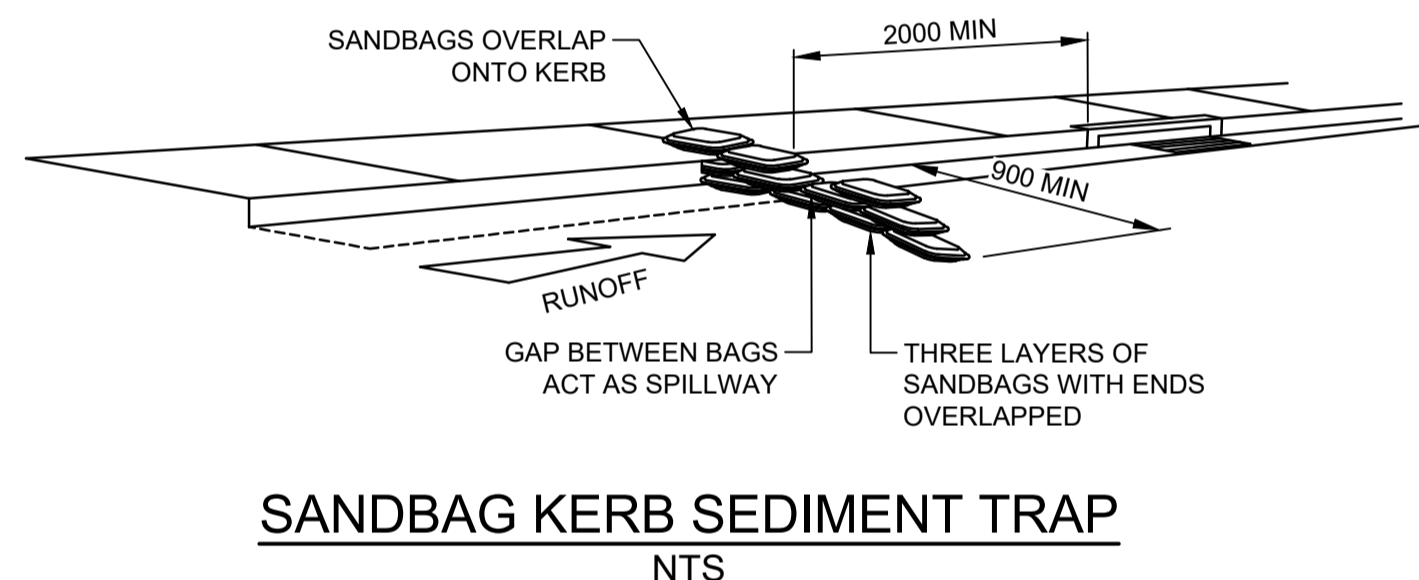
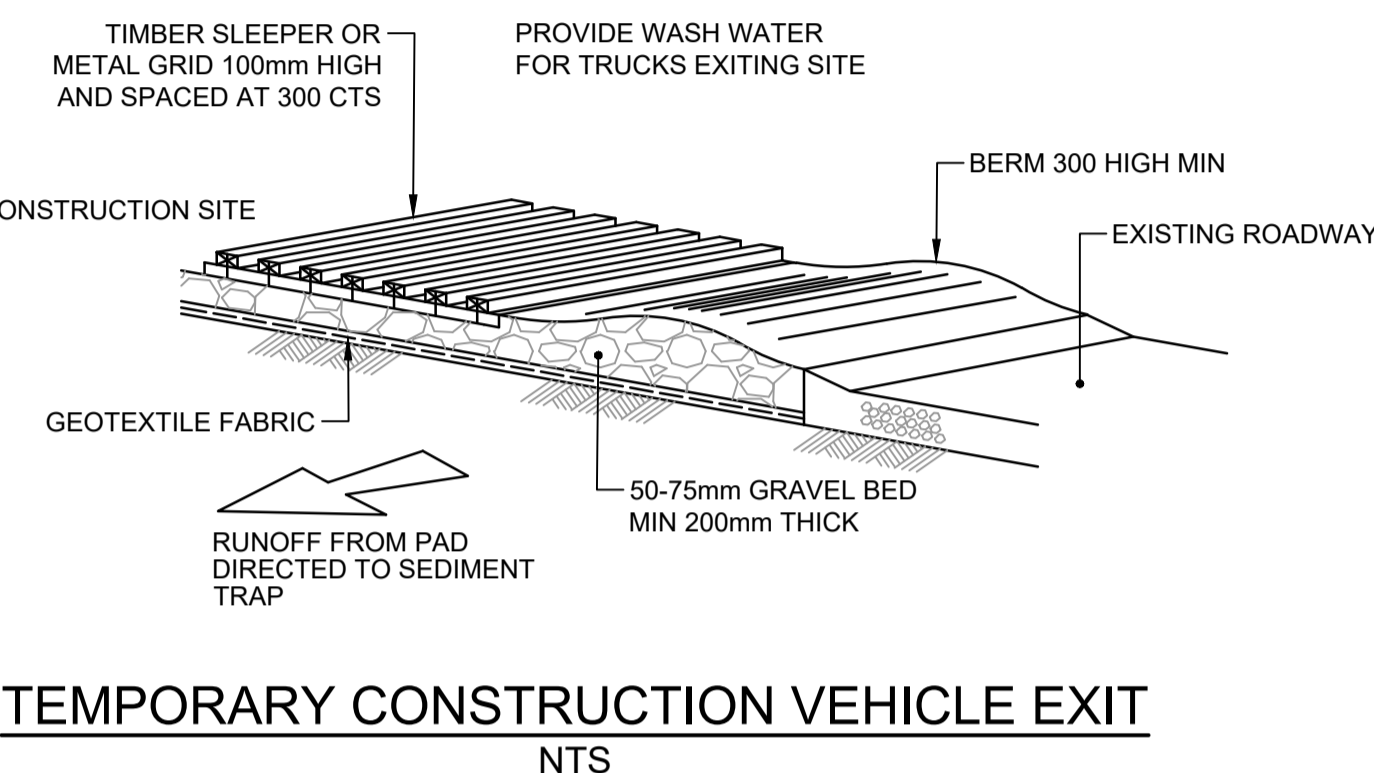
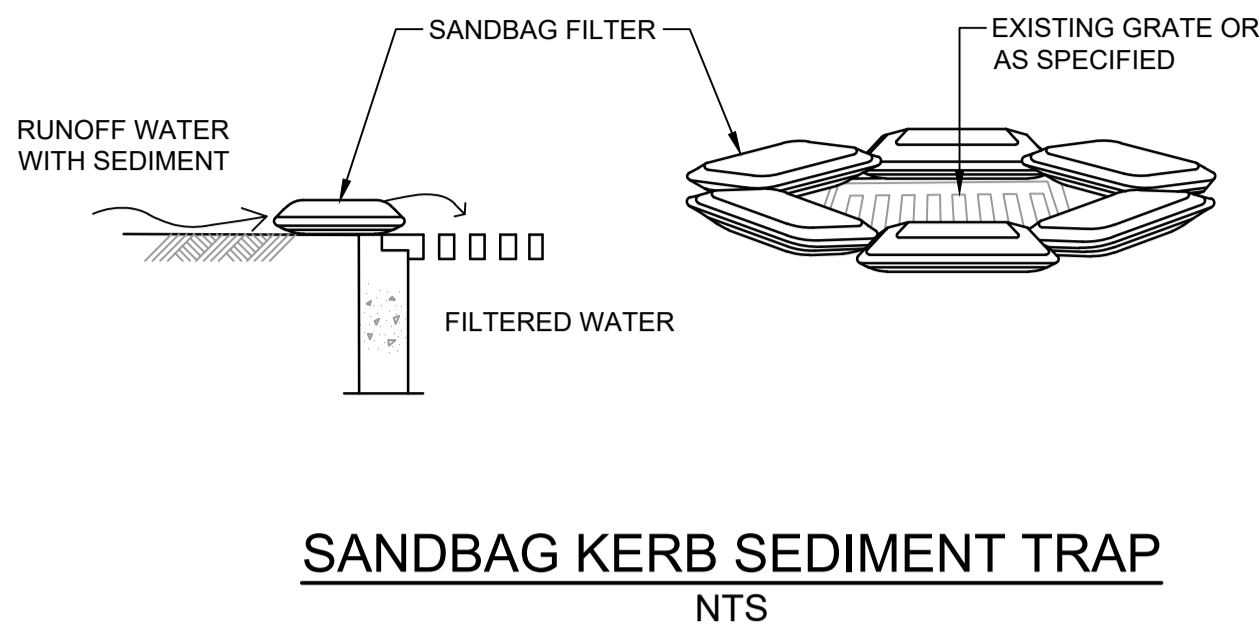
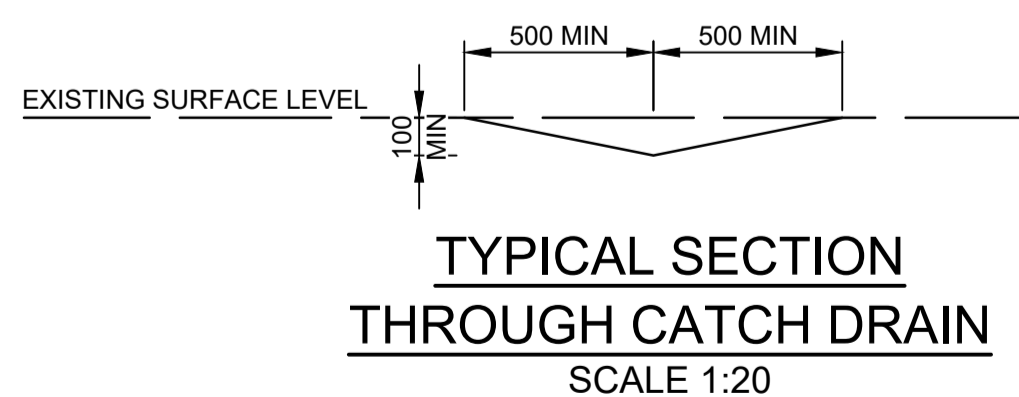
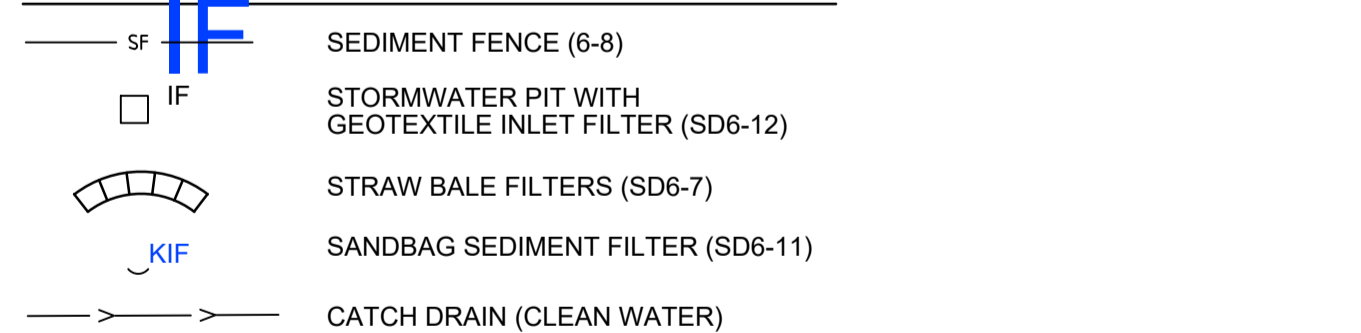
WATER QUALITY TESTING REQUIREMENTS

- PRIOR TO DISCHARGE OF SITE STORMWATER, GROUNDWATER AND SEEPAGE WATER INTO COUNCIL'S STORMWATER SYSTEM, CONTRACTORS MUST UNDERTAKE WATER QUALITY TESTS IN CONJUNCTION WITH A SUITABLY QUALIFIED ENVIRONMENT CONSULTANT OUTLINING THE FOLLOWING:-
 - COMPLIANCE WITH THE CRITERIA OF THE AUSTRALIAN AND NEW ZEALAND GUIDELINES FOR FRESH AND MARINE WATER QUALITY (2000)
 - IF REQUIRED SUBJECT TO THE ENVIRONMENTAL CONSULTANT'S ADVICE, PROVIDE REMEDIAL MEASURES TO IMPROVE THE QUALITY OF WATER THAT IS TO BE DISCHARGED INTO COUNCILS STORM WATER DRAINAGE SYSTEM. THIS SHOULD INCLUDE COMMENTS FROM A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT CONFIRMING THE SUITABILITY OF THESE REMEDIAL MEASURES TO MANAGE THE WATER DISCHARGED FROM THE SITE INTO COUNCILS STORM WATER DRAINAGE SYSTEM. OUTLINING THE PROPOSED, ONGOING MONITORING, CONTINGENCY PLANS AND VALIDATION PROGRAM THAT WILL BE IN PLACE TO CONTINUALLY MONITOR THE QUALITY OF WATER DISCHARGED FROM THIS SITE. THIS SHOULD OUTLINE THE FREQUENCY OF WATER QUALITY TESTING THAT WILL BE UNDERTAKEN BY A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT.

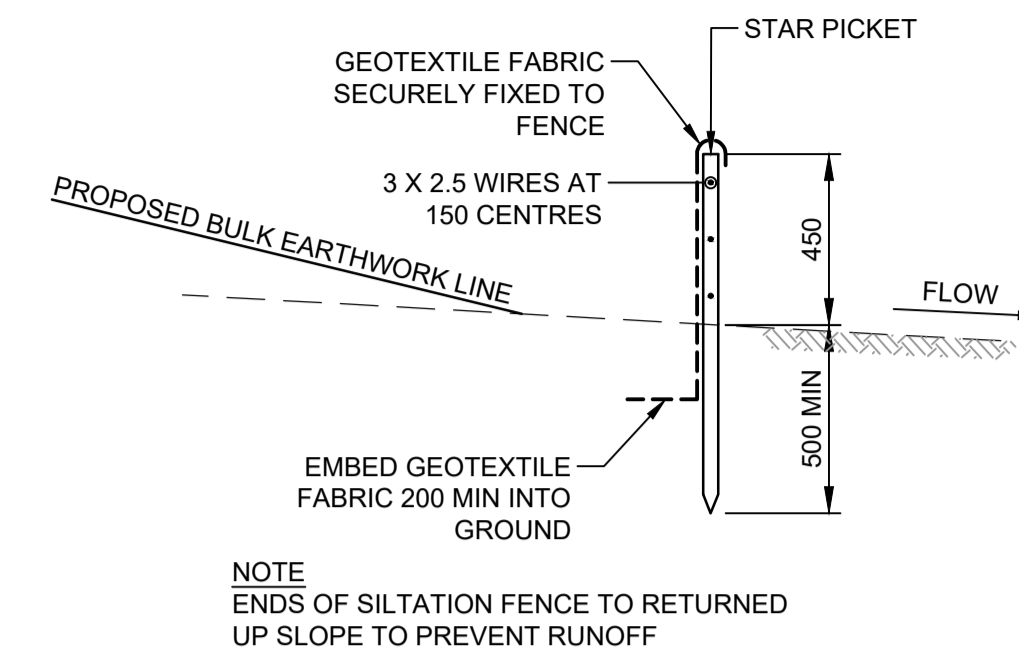
EROSION AND SEDIMENT CONTROL PUMP OUT NOTES

- ANY ACCUMULATED WATER CONTAMINATED WITH SEDIMENT, FROM A SEDIMENT BASIN OR EXCAVATION PIT, IS TO BE FLOCCULATED OR FILTERED IN ORDER TO LOWER THE SUSPENDED SOLID LOAD TO LESS THAN 50MG PER LITER.
- GYPSUM GAS OR OTHER APPROVED FLOCCULANT SHOULD BE APPLIED WITHIN 24 HOURS OF THE END OF THE STORM EVENT. THE GYPSUM MUST BE SPREAD EVENLY OVER THE ENTIRE WATER SURFACE. PUMPING IS NOT OCCUR FOR AT LEAST 36 HOURS AND PREFERABLY 48 HOURS AFTER APPLICATION. CLEAN WATER IS TO BE DISCHARGED TO THE WATER TABLE VIA A HAILE BAIL SEDIMENT FILTER IN A WAY THAT DOES NOT PICK UP SEDIMENT THAT HAS DROPPED TO THE BOTTOM.
- NOTE: GYPSUM IS A HYDRATED FORM OF CALCIUM SULPHATE AND IS AVAILABLE AT MANY SWIMMING POOL SHOPS AND HARDWARE STORES.

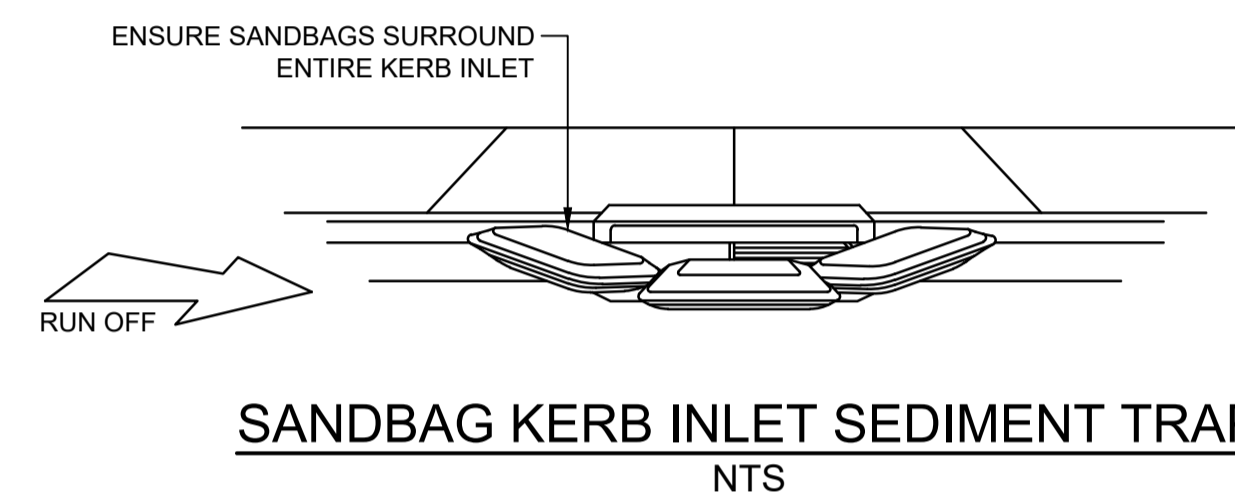
EROSION AND SEDIMENT CONTROL LEGEND



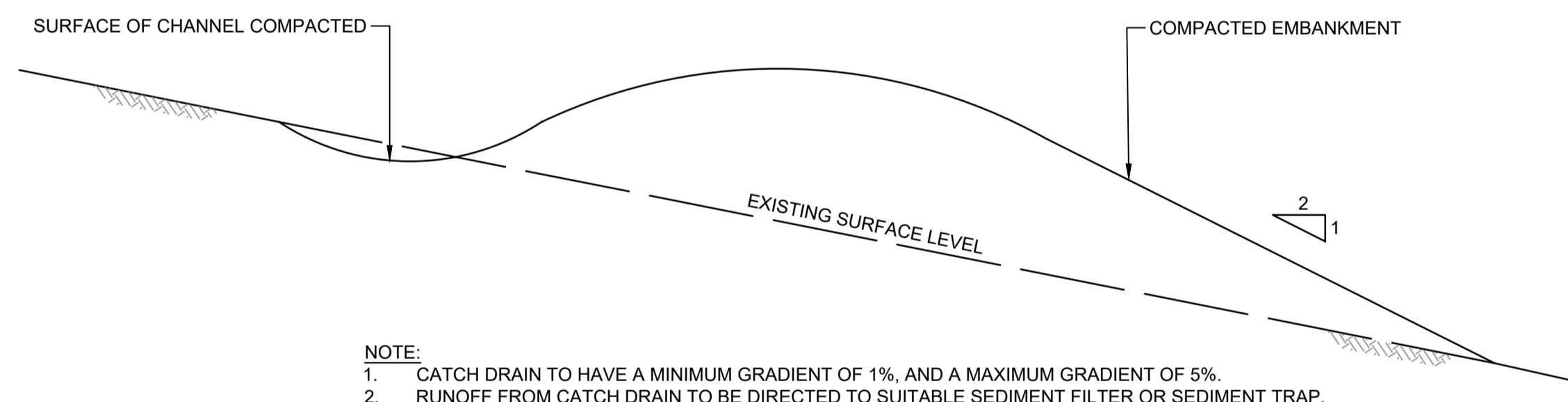
STRAW BALE SEDIMENT FILTER
NTS
NOTE: STAKE TO BE EITHER TAR COATED STAR OR 50 x 50 HARDWOOD



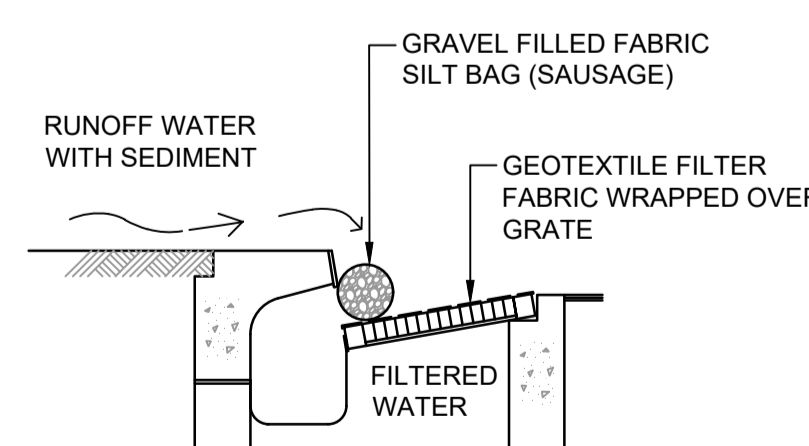
SILTATION FENCE DETAIL
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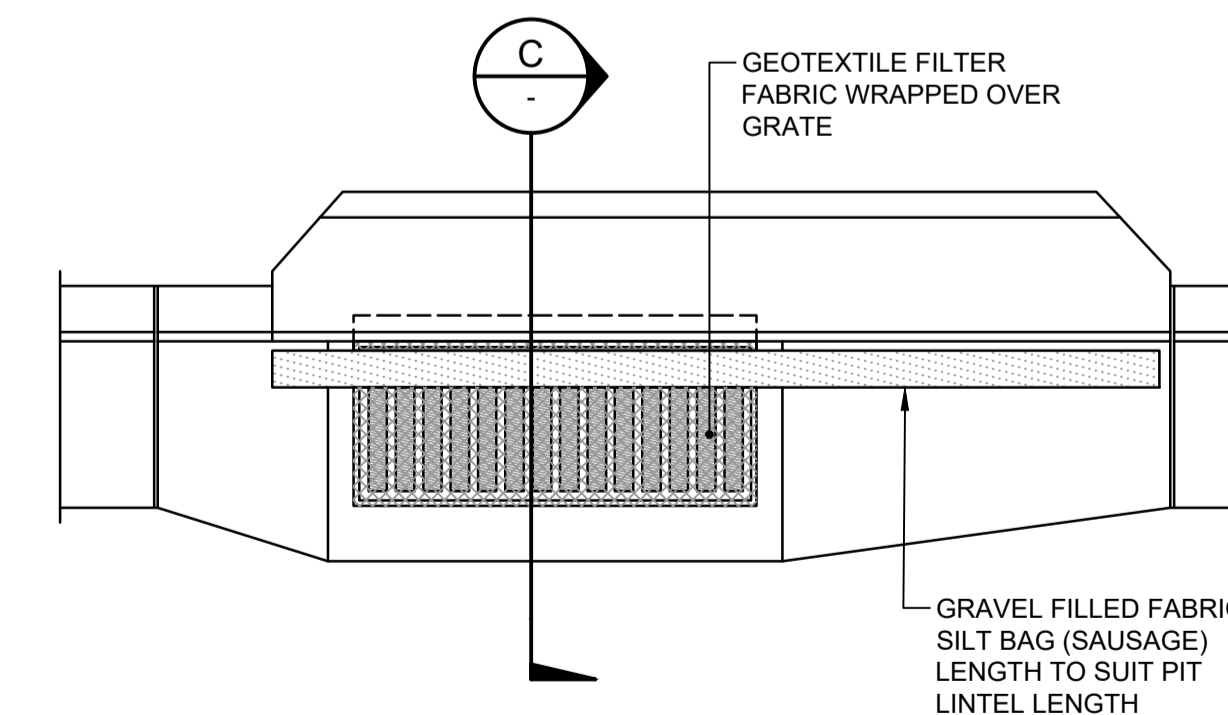
SANDBAG KERB INLET SEDIMENT TRAP
NTS



TYPICAL SECTION THROUGH CATCH DRAIN
SCALE 1:20



SECTION C
SCALE 1:20



KERB INLET SEDIMENT TRAP
SCALE 1:20

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Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date
A	ISSUE FOR INFORMATION	AW	ES 28.08.2025				

Architect: **fjstudio** Engineer: **TTW Structural Civil Traffic Façade**

Project: **164-194 WILLIAM STREET WOOLLOOMOOLOO**

Scale at A1: **AS SHOWN** Drawn: **AW** Designed: **AW** Approved: **CR**

Project No: **211734-TTW-00-DR-CI-02001-A** Scale at A1: **AS SHOWN** Drawn: **AW** Designed: **AW** Approved: **CR**

Rev Description Eng Draft Date Rev Description Eng Draft Date Rev Description Eng Draft Date

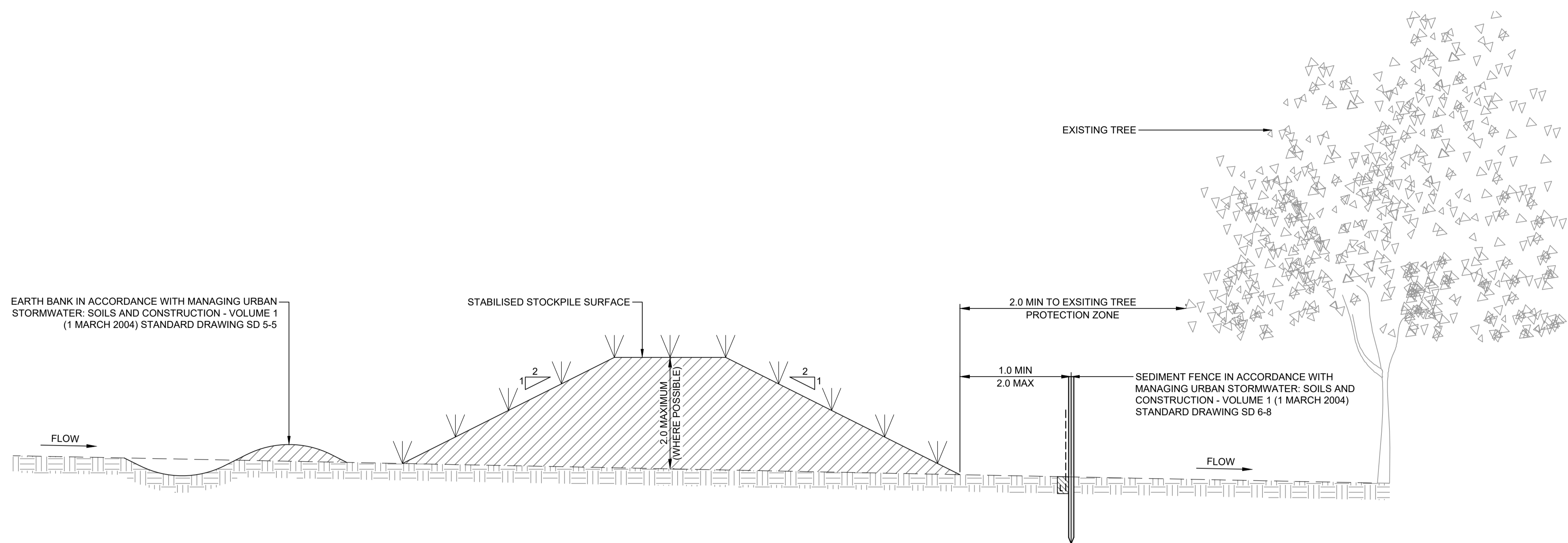
812 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Drawing Title: **EROSION AND SEDIMENT CONTROL DETAILS SHEET 1**

Scale at A1: **AS SHOWN** Drawn: **AW** Designed: **AW** Approved: **CR**

Project No: **211734-TTW-00-DR-CI-02001-A** Scale at A1: **AS SHOWN** Drawn: **AW** Designed: **AW** Approved: **CR**

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STOCKPILES SD 4-1
SCALE 1:25

- SD 4-1 NOTES:**
1. PLACE STOCKPILES MORE THAN 2m (PREFERABLY 5m) FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS, AND HAZARDS
 2. CONSTRUCT THE CONTOURS AS LOW, FLAT, ELONGATED MOUNDS
 3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT
 4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C- FACTOR TO LESS THAN 0.10
 5. CONSTRUCT EARTH BANKS (STANDARD DRAWING SD 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCE (STANDARD DRAWING SD 6-8) 1m TO 2m DOWNSLOPE

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Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date
A	ISSUE FOR INFORMATION	AW	ES 28.08.2025								

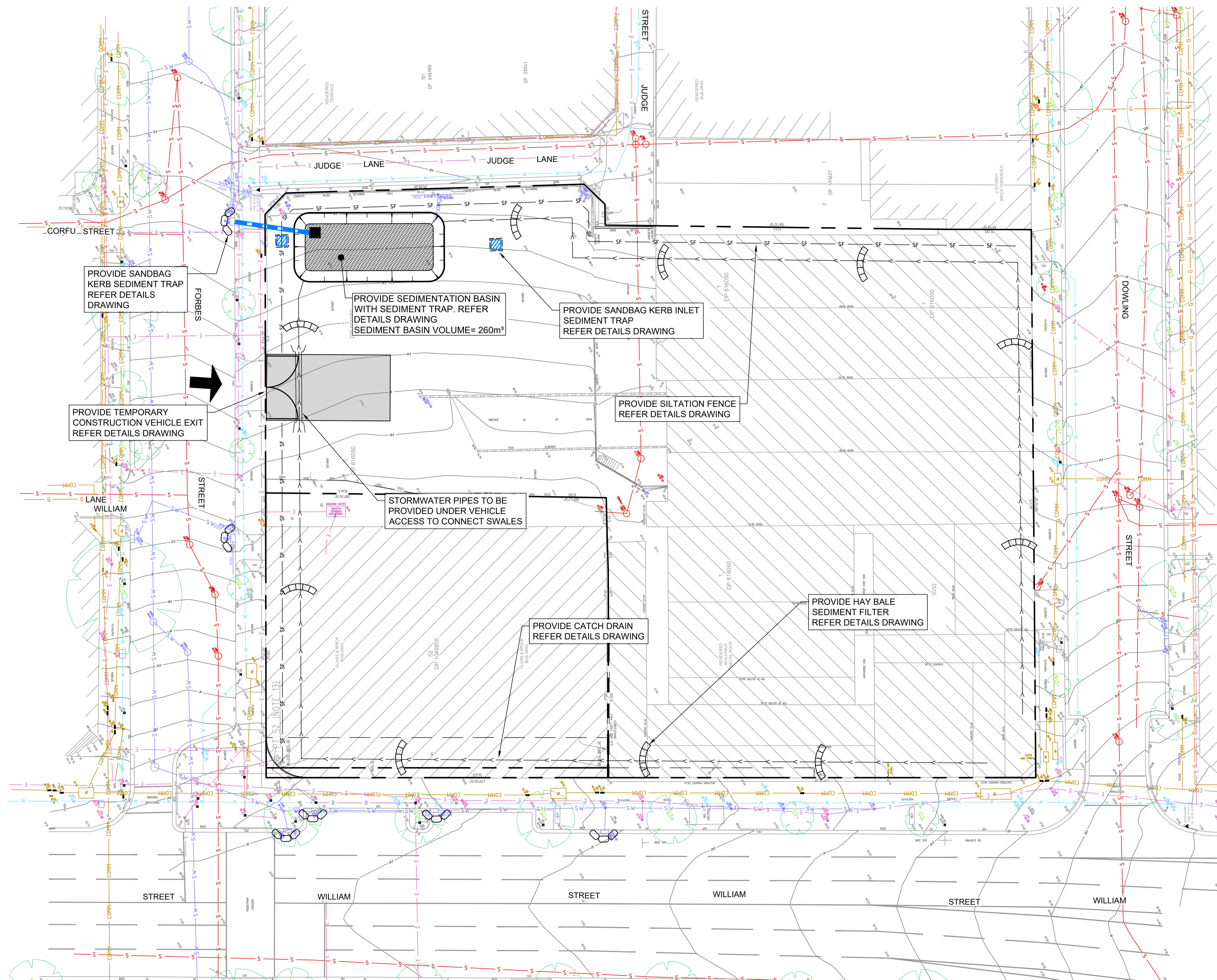
Architect:
fjcestudio

Engineer:
TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project:
164-194 WILLIAM STREET
WOOLLOOMOOLOO

Drawing Title:
EROSION AND SEDIMENT
CONTROL DETAILS
SHEET 2

Scale at A1	Drawn	Designed	Approved			
AS SHOWN	AW	AW	CR			
Project No	Originator	Zone	Type	Role	Sheet No.	Rev
211734-TTW-00-DR-CI-02002-A						
28.08.2025 2:13 PM						



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Rev	Description	Eng Draft	Date	Rev	Description	Eng Draft	Date
A	ISSUE FOR INFORMATION	AW	ES 28.08.2025				

Architect:
fjstudio

Engineer:
TTW Structural Civil Traffic Façade
812 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Project:
164-194 WILLIAM STREET WOOLLOOMOOLOO

Drawing Title:
EROSION AND SEDIMENT CONTROL PLAN

Scale at A1	Drawn	Designed	Approved			
1:500	AW	AW	CR			
Project No	Originator	Zone	Type	Role	Sheet No.	Rev
211734-TTW-00-DR-CI-02101-A						
28.08.2025	2:12 PM					

Appendix B

Sydney Water Correspondence of OSD Requirements

RE: [External] OSD Requirements for 164-194 William St, Woolloomooloo




Stormwater <Stormwater@sydneywater.com.au>

To:  Kirusan Subakaran

Cc:  Colin Rope

Mon 2024-08-05 7:44

 Some content in this message has been blocked because the sender isn't in your Safe senders list.

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[External Email]: Do not click links or open attachments unless you recognize the sender and know the content is safe.

Kirusan,

The On Site Detention requirements for the 6405 square meters site at 164-194 William St, Woolloomooloo, are as follows:

- On Site Detention 100 cubic meters
- Permissible Site Discharge 237 L/s

The approval for the On Site Detention would only be given as part of the Section 73 application for this development. The On Site Detention is to be designed according to the above values and submitted to Sydney Water for approval with the Section 73 application. The following details are to be included in your submission for On Site Detention approval:

- Location of the On Site Detention in relation to the development
- Location of the On Site Detention in relation to overall stormwater network of the property
- Plan and Elevation of the On Site Detention tank with all dimensions
- Orifice plate calculation

Best Regards

[Planning and Technical](#)

Water and Environment Services

Sydney Water, Level 13, 1 Smith Street, Parramatta NSW 2150

From: Kirusan Subakaran <kirusan.subakaran@ttw.com.au>
Sent: Tuesday, July 30, 2024 3:18 PM
To: Stormwater <Stormwater@sydneywater.com.au>
Cc: Colin Rope <colin.rope@ttw.com.au>
Subject: [External] OSD Requirements for 164-194 William St, Woolloomooloo

CAUTION: This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Dear Sir/Madam,

Could you please advise us on the OSD requirements for a development at 164-194 William St, Woolloomooloo NSW 2011?

The details are as follows:

- Address: **164-194 William St, Woolloomooloo NSW 2011**
- Total Site Area (m²) ≈ **6405**
- Existing Pre-development Impervious Area (m²) ≈ **6405**
- Proposed Post-development Impervious Area (m²) ≈ **6000**

Regards,

Kirusan Subakaran | Graduate Civil Engineer
+61 2 9439 7288 | +61 2 9067 5064 | kirusan.subakaran@ttw.com.au
TTW Engineers | Sydney
Read our latest news [here](#)

Appendix C

Music link Report

MUSIC-link Report

Project Details		Company Details	
Project:	164-194 William Street	Company:	TTW
Report Export Date:	8/29/2025	Contact:	ApriW
Catchment Name:	Receiving 5	Address:	
Catchment Area:	0.6403ha	Phone:	
Impervious Area*:	82.8595970638763%	Email:	
Rainfall Station:	66062 SYDNEY		
Modelling Time-step:	Six minutes		
Modelling Period:	01/01/82 - 12/31/1986 11:54:00 PM		
Mean Annual Rainfall:	1278.438mm		
Evapotranspiration:	1265.834mm		
MUSICX Version:	1.40.0.13336 (5.40.0.13336)		
MUSIC-link data Version:	5.1		
Study Area:	City of Sydney		
Scenario:	City of Sydney Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node:	Reduction	Node Type	Number	Node Type	Number
Flow	8.779%	Rainwater Tank Nodes	1	Urban_Mxed Nodes	5
TSS	85.078%	Generic Treatment Nodes	4		
TP	72.696%	Sedimentation Basin Nodes	1		
TN	51.601%				
GP	98.769%				

Comments

sf default setting

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Generic	27 x 690mm Psorb StormFilter (MCC)	High Flow Bypass	None	99	0.024 m ³ /s
Generic	A2x OceanGuard	High Flow Bypass	None	99	0.04 m ³ /s
Generic	B 2 x OceanGuard	High Flow Bypass	None	99	0.04 m ³ /s
Generic	C 6 x OceanGuard	High Flow Bypass	None	99	0.12 m ³ /s
Rainwater	Rainwater Tank	% Reuse Demand Met	None	None	46.388 %
Receiving	Receiving 5	Flow Reduction	None	None	8.779 %
Receiving	Receiving 5	GP Reduction	90	None	98.769 %
Receiving	Receiving 5	TN Reduction	45	None	51.601 %
Receiving	Receiving 5	TP Reduction	65	None	72.696 %
Receiving	Receiving 5	TSS Reduction	85	None	85.078 %
Sedimentation	SF Chamber	% Reuse Demand Met	None	None	0 %
Sedimentation	SF Chamber	ExfiltrationRate	0	0	0 mm/h
Sedimentation	SF Chamber	ExtendedDetentionDepth	0.25	1	0.77 m
Sedimentation	SF Chamber	High Flow Bypass Out	None	None	0 ML/y
Urban_Mixed	Bypass (1,169m ²)	Impervious Area	None	None	0.058 ha
Urban_Mixed	Bypass (1,169m ²)	Pervious Area	None	None	0.058 ha
Urban_Mixed	Bypass (1,169m ²)	Total Area	None	None	0.117 ha
Urban_Mixed	bypass (100m ²)	Impervious Area	None	None	0.005 ha
Urban_Mixed	bypass (100m ²)	Pervious Area	None	None	0.005 ha
Urban_Mixed	bypass (100m ²)	Total Area	None	None	0.01 ha
Urban_Mixed	communal (897m ²)	Impervious Area	None	None	0.09 ha
Urban_Mixed	communal (897m ²)	Pervious Area	None	None	0 ha
Urban_Mixed	communal (897m ²)	Total Area	None	None	0.09 ha
Urban_Mixed	landscape (463m ²)	Impervious Area	None	None	0 ha
Urban_Mixed	landscape (463m ²)	Pervious Area	None	None	0.046 ha
Urban_Mixed	landscape (463m ²)	Total Area	None	None	0.046 ha
Urban_Mixed	roof cat (3,774m ²)	Impervious Area	None	None	0.377 ha
Urban_Mixed	roof cat (3,774m ²)	Pervious Area	None	None	0 ha
Urban_Mixed	roof cat (3,774m ²)	Total Area	None	None	0.377 ha

Only certain parameters are reported when they pass validation

Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Sedimentation	SF Chamber	Nitrogen Parameters.K	500	500	1 m/y
Sedimentation	SF Chamber	Notional Detention Time	8	12	0.033 h
Sedimentation	SF Chamber	Phosphorus Parameters.K	6000	6000	1 m/y
Sedimentation	SF Chamber	Total Suspended Solids Parameters.K	8000	8000	1 m/y

Only certain parameters are reported when they pass validation