

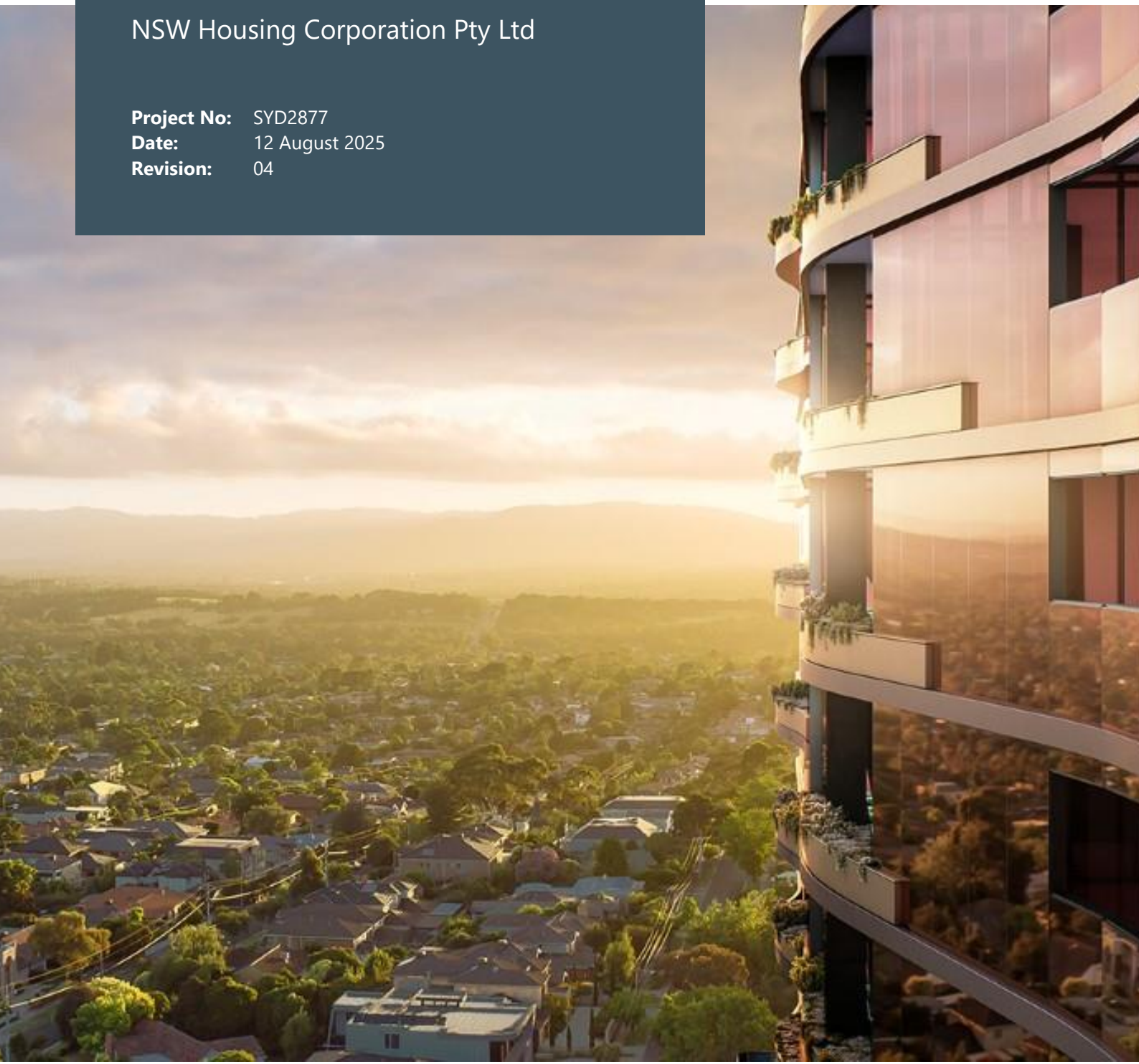
2-4 Burleigh St & 20-24 Railway Parade, Burwood

SEARs Report

Prepared for:

NSW Housing Corporation Pty Ltd

Project No: SYD2877
Date: 12 August 2025
Revision: 04



Project: 2-4 Burleigh St & 20-24 Railway Parade, Burwood

Location: 2-4 Burleigh St & 20-24 Railway Parade
Burwood, NSW, 2134

Prepared by: ADP Consulting Pty Ltd
Level 6, 33 Erskine Street
Sydney NSW 2000

Project No: SYD2877

Revision: 04

Date: 12 August 2025

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisation & QA	Signature
01	1/11/24		Harold Ip	HI	SS		SS	
02	15/1/25		Harold Ip	HI	SS		SS	
03	8/8/25		Kenaz Chan	KC	SS		SS	
04	12/8/25		Adam Yang	AY	SS		SS	

Project Team

Client / Principal NSW Housing Corporation Pty Ltd

Architect pti ARCHITECTURE



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1. Introduction

The report has been prepared for NSW Housing Corporation Pty Ltd to address the stormwater-related Secretary's Environmental Assessment Requirements (SEARs) of the affordable housing State Significant Development Application (SSDA). The proposed site is located at 2-4 Burleigh Street & 20-24 Railway Parade with an area of approximately 1330m². The site is bordered by Burleigh St to the west and Railway Parade to the north. There is a residential building on the east and a carpark on the south of the subject site.

Relevant sections of SEARs items 14 and 15 related to stormwater have been addressed in the following section in this report.

SEARs Item	Refer to section
14. Water Management	
Provide an Integrated Water Management Plan for the development that:	
Is prepared in consultation with the local council and any other relevant drainage or water authority.	2.1 Stormwater Drainage 2.2 Stormwater On-Site Detention
details the proposed drainage design (stormwater and wastewater) for the site including any on-site treatment, reuse and detention facilities, water quality management measures and nominated discharge points.	2.2 Stormwater On-Site Detention
demonstrates compliance with the local council or other drainage or water authority requirements and avoids adverse downstream impacts	2.2 Stormwater On-Site Detention 3.2 Upstream Catchment Assessment

15. Flood Risk

Identify the flood planning level as set out in the relevant council LEP or SEPP and identify any: 3 Flood Impact Risk

- flood risks on site having regard to adopted flood studies
- the potential effects of climate change, and
- any relevant provisions of the NSW Flood Risk Management Manual.

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 Guideline - LU01 (FIRA guide). When determining the scope and category of the FIRA the requirements outlined in the FIRA guide must be considered. 3 Flood Impact Risk

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). 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). 3 Flood Impact Risk

2. Stormwater Drainage

2.1 Stormwater Design

In accordance with Burwood Council water management code section 4.7, the stormwater drainage system has been designed to cater for the minor (20% AEP) event and control up to the major (1% AEP) event.

The Civil/Stormwater management plan attached in Appendix A shows the overall design intent of stormwater conveyance across the site. The discharge of stormwater from the site to the Council's drainage system is by gravity and controlled by an On-Site Detention (OSD) tank sized for storm events up to 1% AEP. The OSD discharges to the Council drainage system via a new connection to an existing Council kerb inlet pit located on the Railway Parade.

2.1.1 Surface Drainage

Surface runoff generated within podium areas will be captured by a series of grated drains and conveyed by gravity through suspended pipes towards the proposed OSD. Suspended drainage within ground floor podium area will be detailed by hydraulic engineer at CC stage.

2.1.2 Roof Drainage

Roof drainage will be effectively managed in accordance with the NCC and AS/NZS 3500.3 through strategically positioned surface drainage outlets on the roof slab. These outlets will connect to an appropriately sized gravity rainwater system, conveying flows to both the rainwater re-use tank and the on-site detention system.

During the design development phase, consideration will also be given to the potential use of a siphonic drainage system to improve efficiency. Overflow provisions will be coordinated with the architectural design and implemented to meet all statutory requirements. These will be documented and detailed by the hydraulic engineer at CC stage. Refer to Figure 1 below for roof concept.

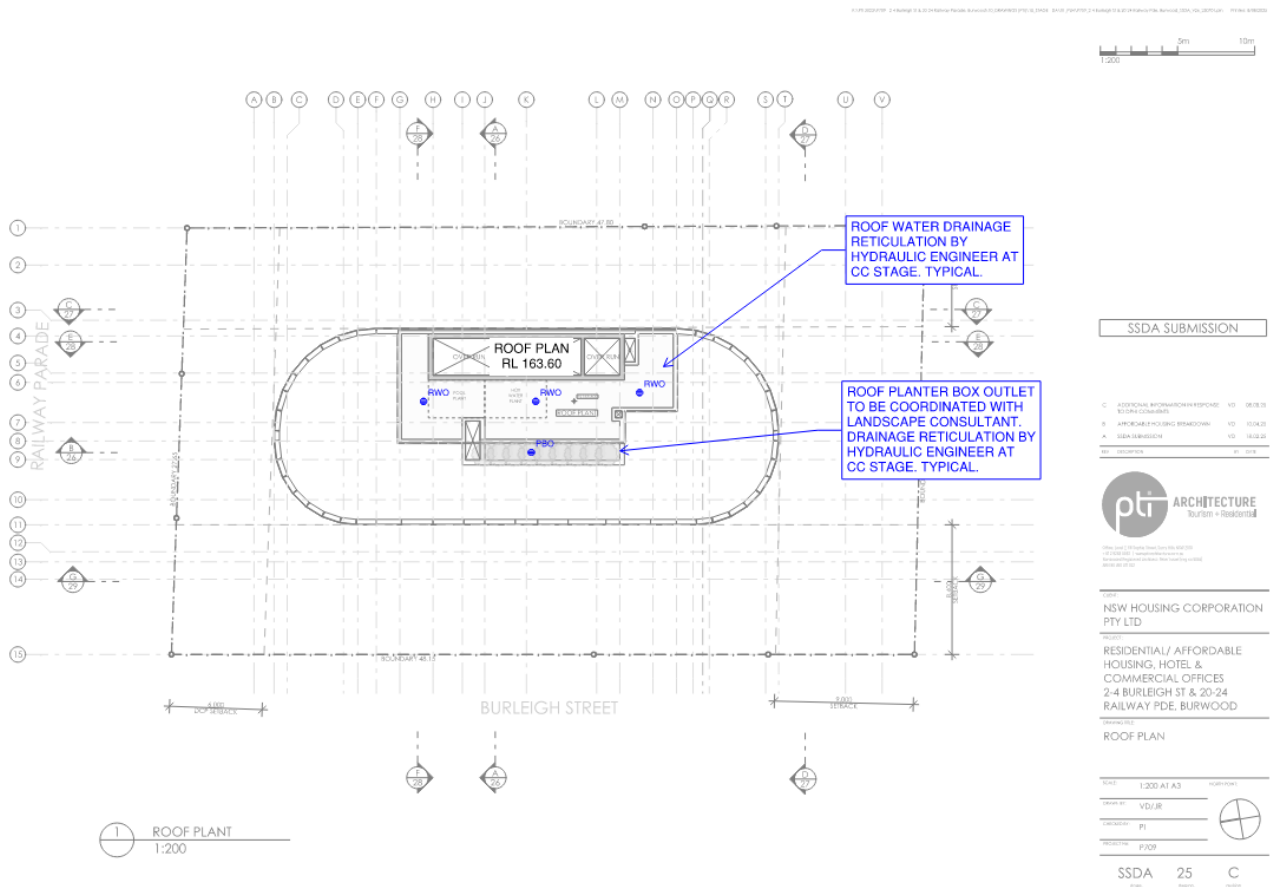


Figure 1 Roof drainage concept

2.2 Stormwater On-Site Detention

In accordance with Burwood Stormwater Management Code section 4.7, site discharge for the storm event up to 1% AEP must be controlled. The design intent is to limit post-development flows to the pre-development flows for the major (1% AEP) event and minor (20% AEP) event.

The pre-development catchment was assumed to be 60% impervious for the purposes of the OSD analysis. From architectural plans, the post-developed building has been determined to be 95% impervious. The site has been modelled in DRAINS using ILSAX hydrology and Australian Rainfall and Runoff 2019 (ARR 2019) methods. The pre-development and post-development analysis results are shown in Table 1 below.

Table 1 On-Site Detention Tank Calculation Details

Storm Event (AEP %)	Pre-Dev Flow (L/s)	Post-Dev Flow Non- Attenuated (L/s)	Post-Dev Flow Attenuated (L/s)	Required Storage Volume (m³)
20	36	44	36	3.96
1	68	77	67	9.19

The OSD is located at the northwest corner of the proposed site underneath the entrance driveway and planter box. Refer to Appendix A – Stormwater Management Plans for the detailed location. The 1% AEP top water level of the OSD is 25.60mAHD while the minimum ground floor FFL is 26.10, therefore, a 500mm freeboard has been achieved in compliance with Burwood Council Stormwater Management Code section 4.9. In case of emergencies or when storms larger than the 1% AEP event occur, stormwater will flow overland towards Burleigh Street via open grate pits.

3. Flood Impact Risk

Following a review of the Burwood Council's Consolidated Flood Identification Map (see Figure 1 below), The subject site has not been flagged as flood-identified property and therefore will not have any additional flood management controls applied to the development.

3.1 Flood map

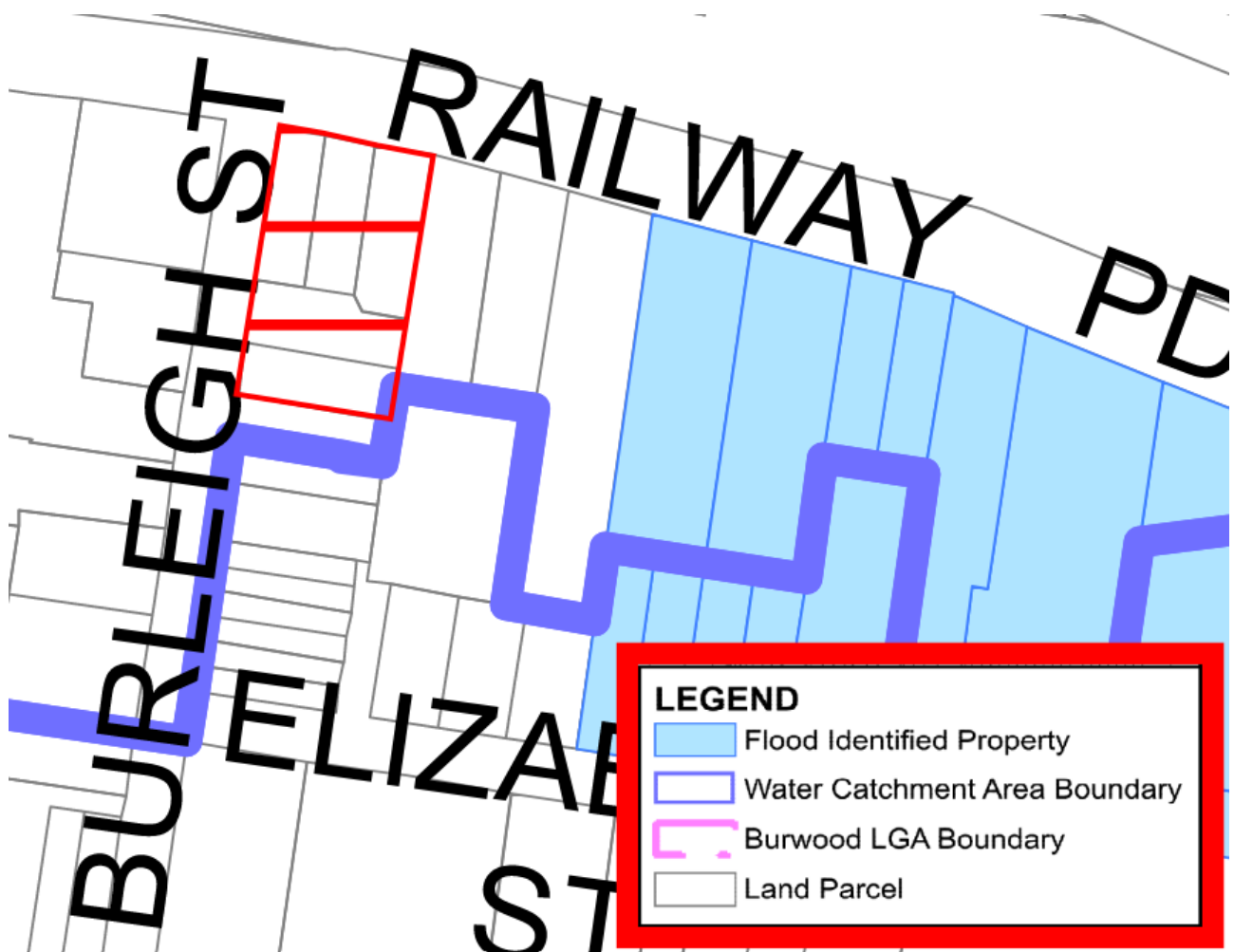


Figure 2 Consolidated Flood Identification Map by Burwood Council

3.2 Upstream Catchment Assessment

Digital Elevation Model (DEM) data was obtained from NSW Government - Spatial Services and it was determined that the area generally falls towards Railway Parade from south to north. The following assessment assumes the worst-case scenario of 1% AEP overland flow with all the pits and pipes blocked. In the 1% AEP event, the upstream catchments generate a total flow of $1.41\text{m}^3/\text{s}$ and $0.82\text{m}^3/\text{s}$ that will run through Burleigh St and Railway Parade respectively. The upstream catchments are shown in figure 2 below. Generated gutter flow cross-sections show that Burleigh St and Railway Parade will have flow depths of 0.204m and 0.190m respectively, shown in Figures 3 and 4 respectively.

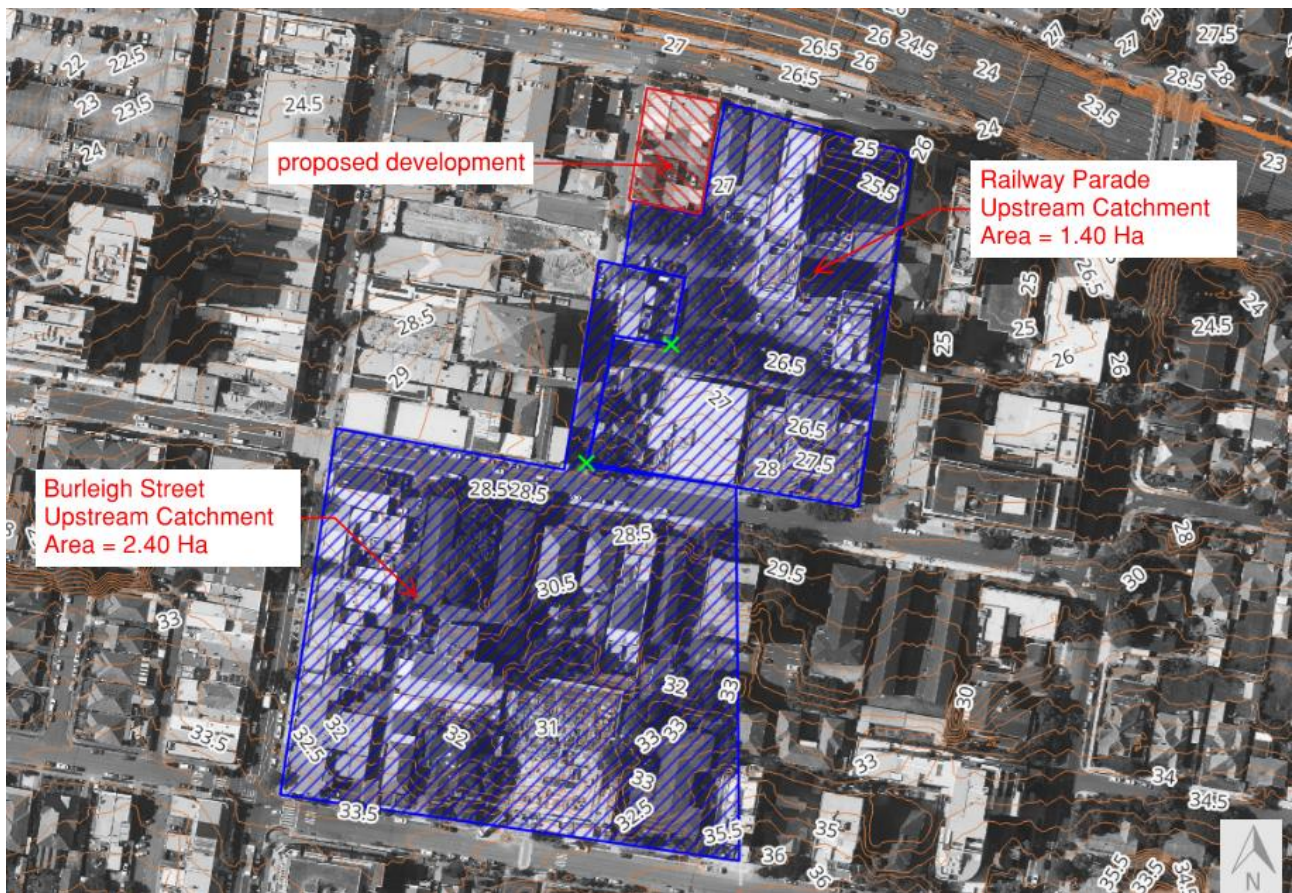


Figure 3 Burleigh Street and Railway Parade Upstream Catchment

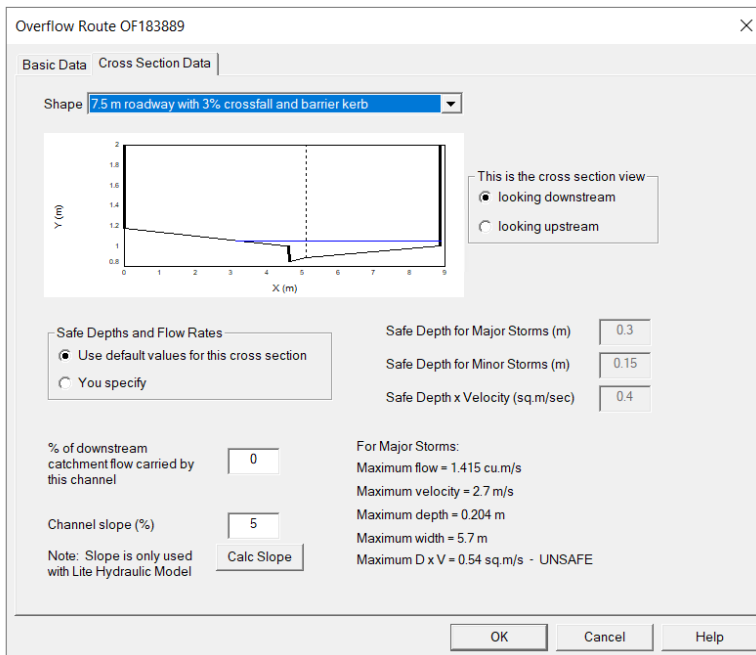


Figure 3 – Burleigh Street 1% AEP overland flow path

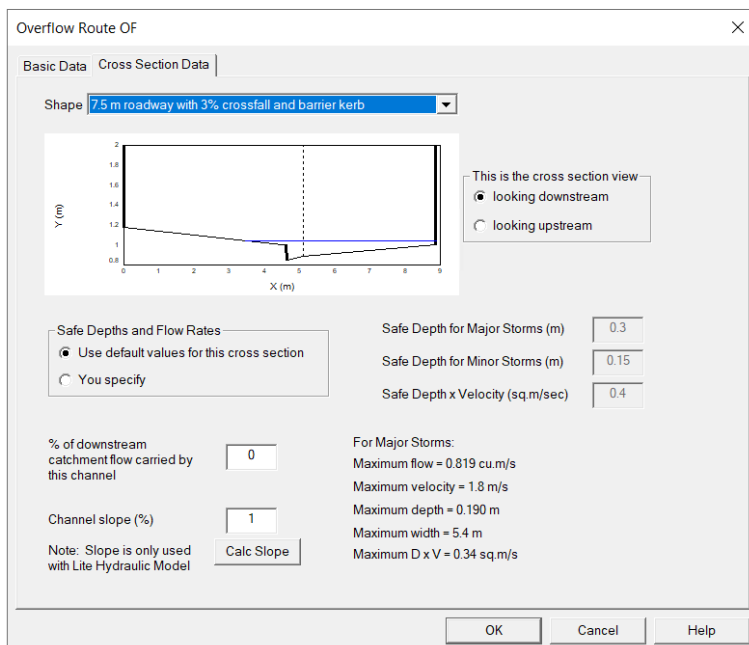


Figure 4 – Railway Parade 1% AEP overland flow path

In order to prevent external stormwater flow ingress into the basement through the driveway, a driveway crest is required to provide 100mm freeboard above 1% AEP top water level to comply with Burwood Council Stormwater Management Code section 4.9. The minimum driveway crest levels have been determined to be 25.96 and 27.16 mAHD for Railway Parade and Burleigh Street respectively, as shown in Figure 5.

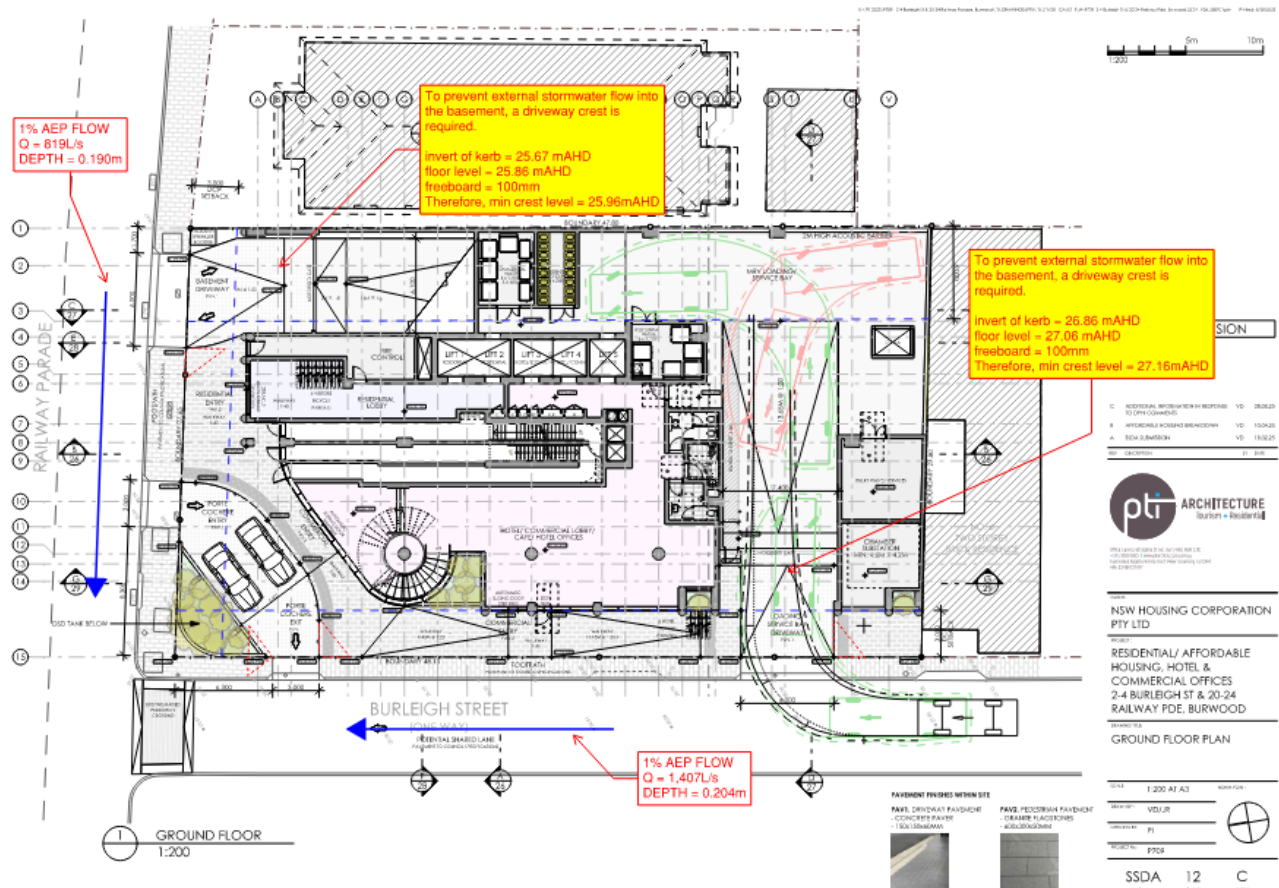


Figure 5 Flood extents and flow rate

4. Response to DPHI RtS

Response to Submission (RtS) comments from the Department of Planning, Housing and Infrastructure are outlined and addressed below.

Table 2 DPHI RtS Response

RtS Comment	Response
Provide Stormwater Management Plan and accompanying stormwater report that detail the stormwater design including roof drainage and surface drainage measures.	ADP have prepared a Stormwater Management Plan and Report detailing proposed surface and roof drainage. <u>Refer to Section 2 and Appendix A for details.</u>
The stormwater management and sediment control plans shall be designed and prepared by suitably qualified Hydraulic/Civil engineer in accordance with Council's stormwater Management Code to Council's satisfaction	ADP have prepared a Stormwater and Sediment Management Plan in accordance with Council's stormwater Management Code. <u>Refer to Section 2 and Appendix A for details.</u>
The applicant shall provide a high quality Public Domain and Streetscape Improvement elements and finishes on all publicly accessible areas at the property frontages on Railway Parade and Burleigh Street in accordance with Council's DCP & Public Works Element Manual. In this regard a detailed 'Public Domain Plan' is required.	Public Domain finishes and elements to be detailed by the landscape architect. ADP have shown proposed public domain elements with Stormwater Management Plans. <u>Refer to Appendix A for details.</u>



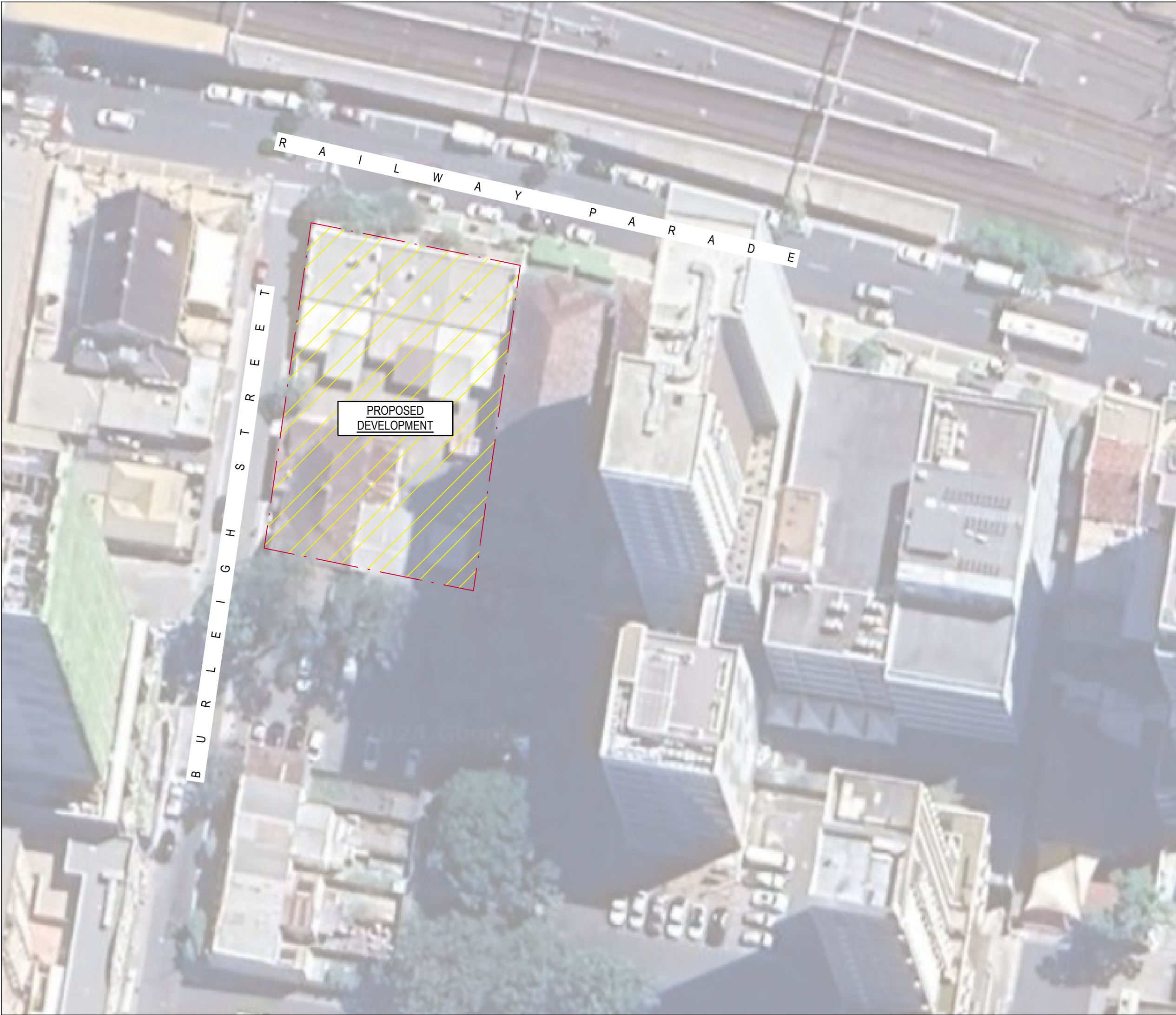
Appendix A

Stormwater

Management Plan

2-4 BURLEIGH STREET & 20-24 RAILWAY PARADE, BURWOOD, NSW

PROPOSED MIXED DEVELOPMENT



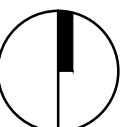
LOCALITY PLAN
SOURCE: Google Maps - 07.03.2024
NOT TO SCALE

DRAWING SCHEDULE	
DRAWING NO.	DRAWING NAME
CE000	COVER SHEET
CE100	STORMWATER MANAGEMENT PLAN - B1
CE101	STORMWATER MANAGEMENT PLAN - GF
CE200	STORMWATER DETAIL
CE400	SEDIMENT & EROSION CONTROL PLAN
CE410	SEDIMENT & EROSION CONTROL DETAILS

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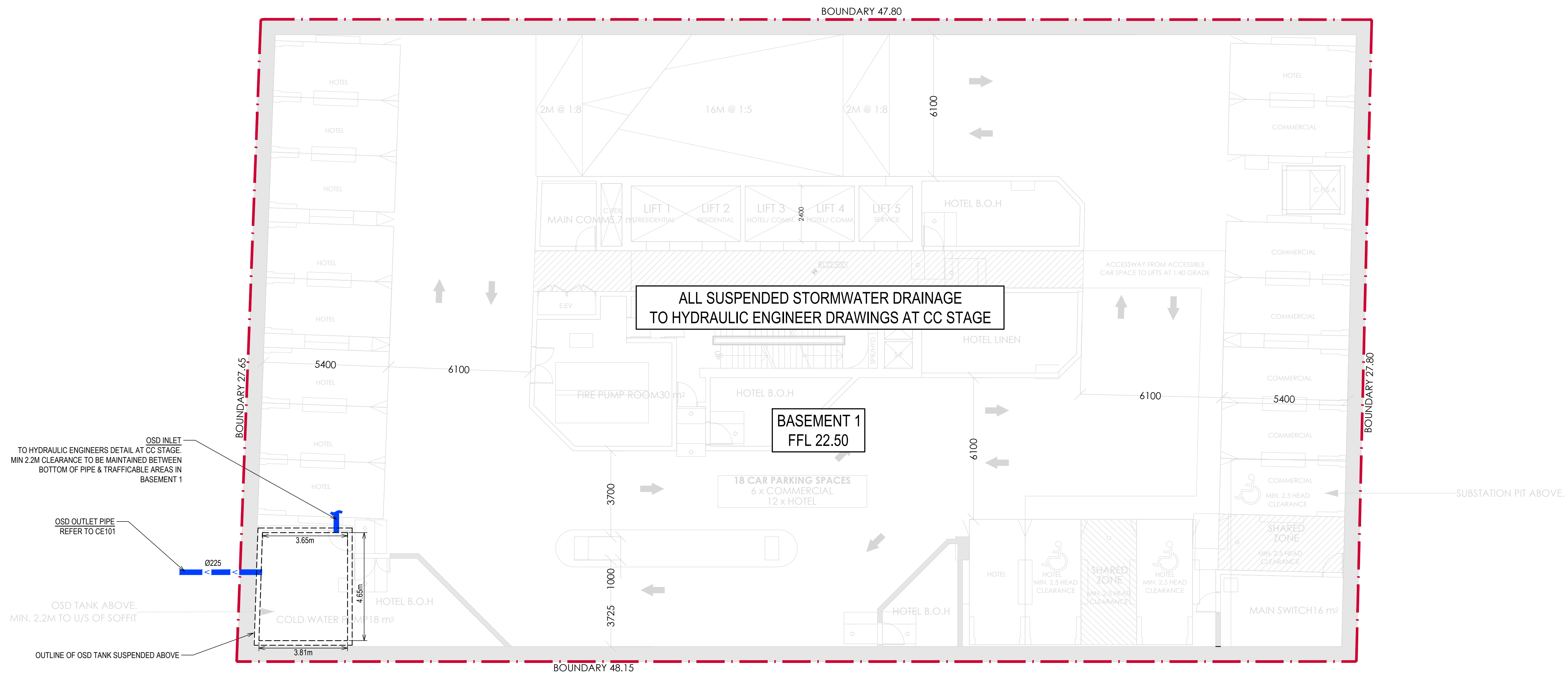


DEVELOPMENT APPLICATION

Revision	Description	Initial	Date	Client	Building Services Consultants	Project	Drawing Title	Drafted	Designed	Approved	Date	Scale	Sheet Size
				NSW HOUSING CORPORATION PTY LTD		2-4 BURLEIGH STREET, BURWOOD	CIVIL ENGINEERING SERVICES	FS	AY	SS	AUG 2025	NTS	@ A1
C	ISSUE FOR DEVELOPMENT APPLICATION		12.08.2025	Architect	    	2-4 BURLEIGH STREET & 20-24 RAILWAY PARADE	COVER SHEET	Job Number	Drawing Number	Revision	North Point		
B	ISSUE FOR DEVELOPMENT APPLICATION	FS	15.01.2025	PTI ARCHITECHTURE		BURWOOD		SYD2877	CE000	C			
A	ISSUE FOR DEVELOPMENT APPLICATION	HI	04.11.2024	LEVEL2/ 68 SOPHIA STREET, SURRY HILLS, NSW									

LEGEND

-
-  SITE BOUNDARY
 34.5 EXISTING CONTOUR (0.0Xxm)
 PROPOSED STORMWATER PIPE
 GRATED SURFACE INLET PIT
 SEALED JUNCTION PIT

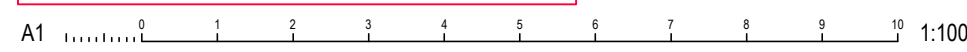


NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL REDUCED LEVELS ARE IN mAHD.
3. SURVEY INFORMATION OBTAINED FROM RGM PROPERTY SURVEYS/DRAWING TITLED "20-24 RAILWAY PARADE & 2-4 BURLEIGH STREET, BURWOOD", DATED 07/06/2022.
4. PROPOSED STORMWATER PIPES TO HAVE MINIMUM PIPE FALLS AS PER BELOW:
 - A. DIAMETER ≤ 150mm: 1.0% FALL.
 - B. DIAMETER ≥ 225mm: 0.5% FALL.
5. SLAB/PAVEDMENT TO HAVE MINIMUM 1% FALL TOWARDS STORMWATER INLETS AS PER AS2890 REQUIREMENTS.
6. REFER TO SEARS REPORT BY ADP CONSULTING FOR OSD DESIGN AND FLOOD MITIGATION.

STORMWATER MANAGEMENT PLAN - B1
SCALE 1:100

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Revision	Description	Initial	Date	Client
				NSW HOUSING CORPORATION PTY LTD
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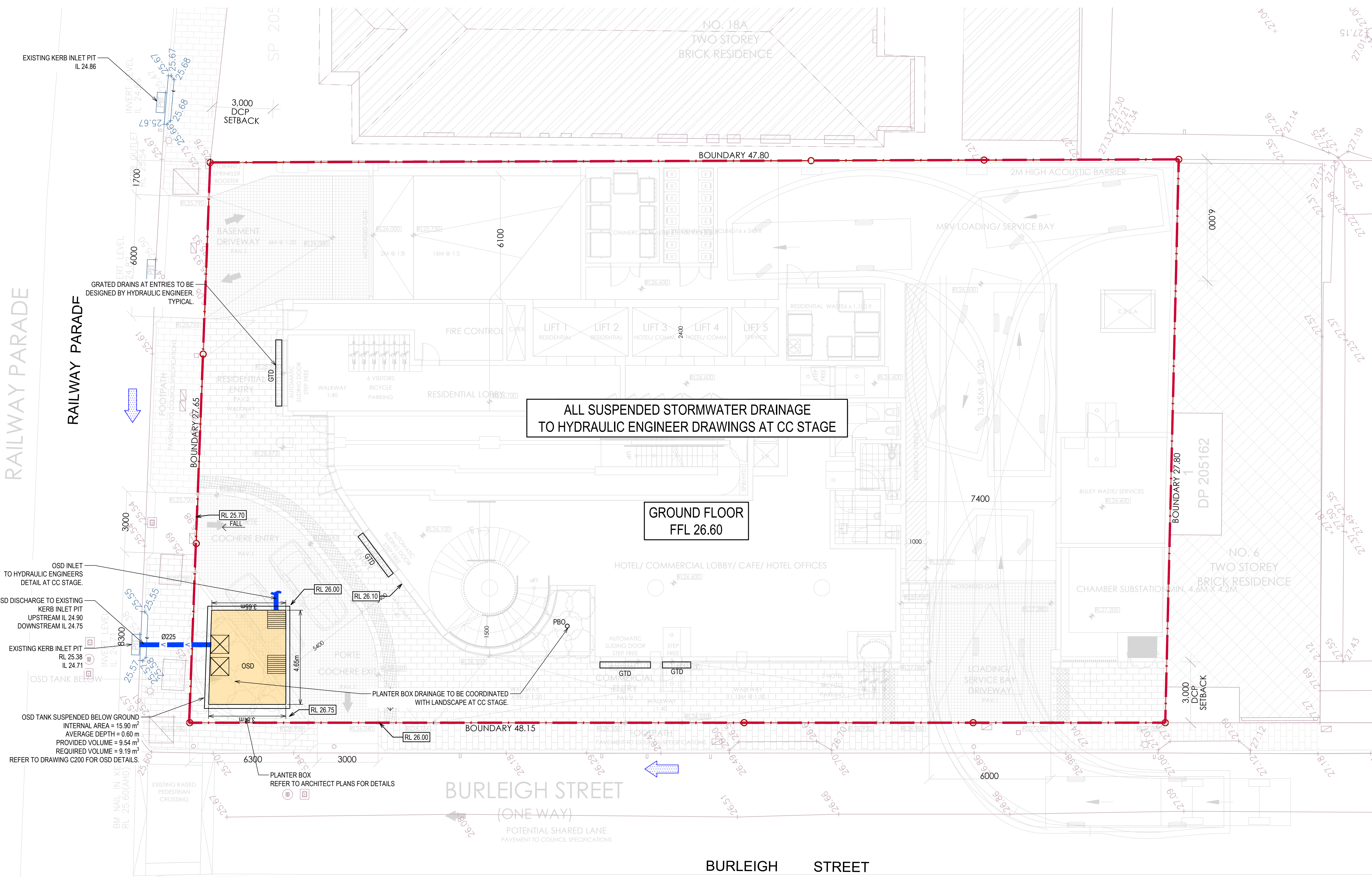
Project

2-4 BURLEIGH STREET, BURWOOD
2-4 BURLEIGH STREET & 20-24 RAILWAY PARADE
BURWOOD

Drawing Title

CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - B1

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Job Number		Drawing Number	Revision	North Point	
SYD2877		CE100	C		



LEGEND

- SITE BOUNDARY
- 34.5 EXISTING CONTOUR
- PROPOSED STORMWATER PIPE
- GRATED SURFACE INLET PIT
- SEALED JUNCTION PIT
- UPSTREAM CATCHMENTS OVERLAND FLOW RUNOFF
- PROPOSED ON SITE DETENTION TANK
- GTD PROPOSED GRATED DRAIN
- PBO PLANTER BOX DRAINAGE

- NOTES:
- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
 - ALL REDUCED LEVELS ARE IN mAHD.
 - SURVEY INFORMATION OBTAINED FROM RGM PROPERTY SURVEY'S DRAWING TITLED '20-24 RAILWAY PARADE & 2-4 BURLEIGH STREET, BURWOOD', DATED 07/06/2022.
 - PROPOSED STORMWATER PIPES TO HAVE MINIMUM PIPE FALLS AS PER BELOW:
 - A. DIAMETER $\leq 150\text{mm}$: 1.0% FALL.
 - B. DIAMETER $\geq 225\text{mm}$: 0.5% FALL.
 - SLAB/PAVEMENT TO HAVE MINIMUM 1% FALL TOWARDS STORMWATER INLETS AS PER AS2890 REQUIREMENTS.
 - REFER TO SEARs REPORT BY ADP CONSULTING FOR OSD DESIGN AND FLOOD MITIGATION.

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A1 1:100

Revision	Description
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B	ISSUE FOR DEVELOPMENT APPLICATION
A	ISSUE FOR DEVELOPMENT APPLICATION

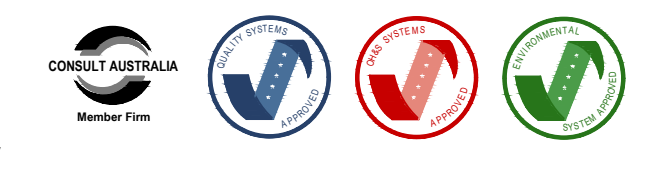
Initial	Date	Client
FS	12.08.2025	NSW HOUSING CORPORATION PTY LTD
HI	15.01.2025	
HI	04.11.2024	

Client	Architect
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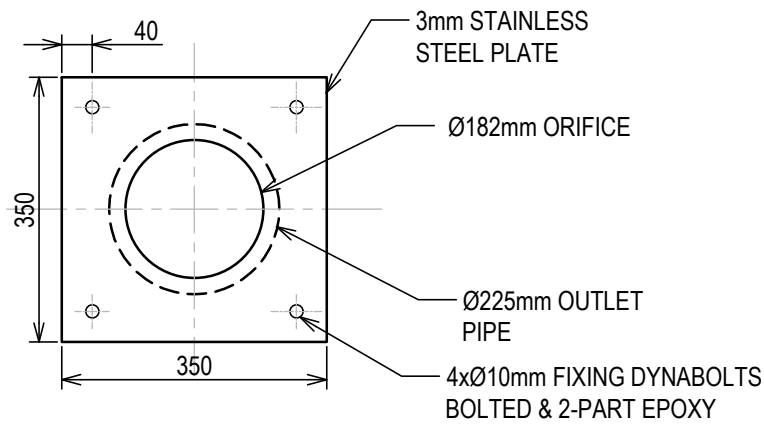
Project

2-4 BURLEIGH STREET, BURWOOD
2-4 BURLEIGH STREET & 20-24 RAILWAY PARADE
BURWOOD

Drawing Title

CIVIL ENGINEERING SERVICES
STORMWATER MANAGEMENT PLAN - GROUND
FLOOR

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SYD2877	CE101	C			



ORIFICE PLATE DETAIL
SCALE 1:10

OSD DETAILS

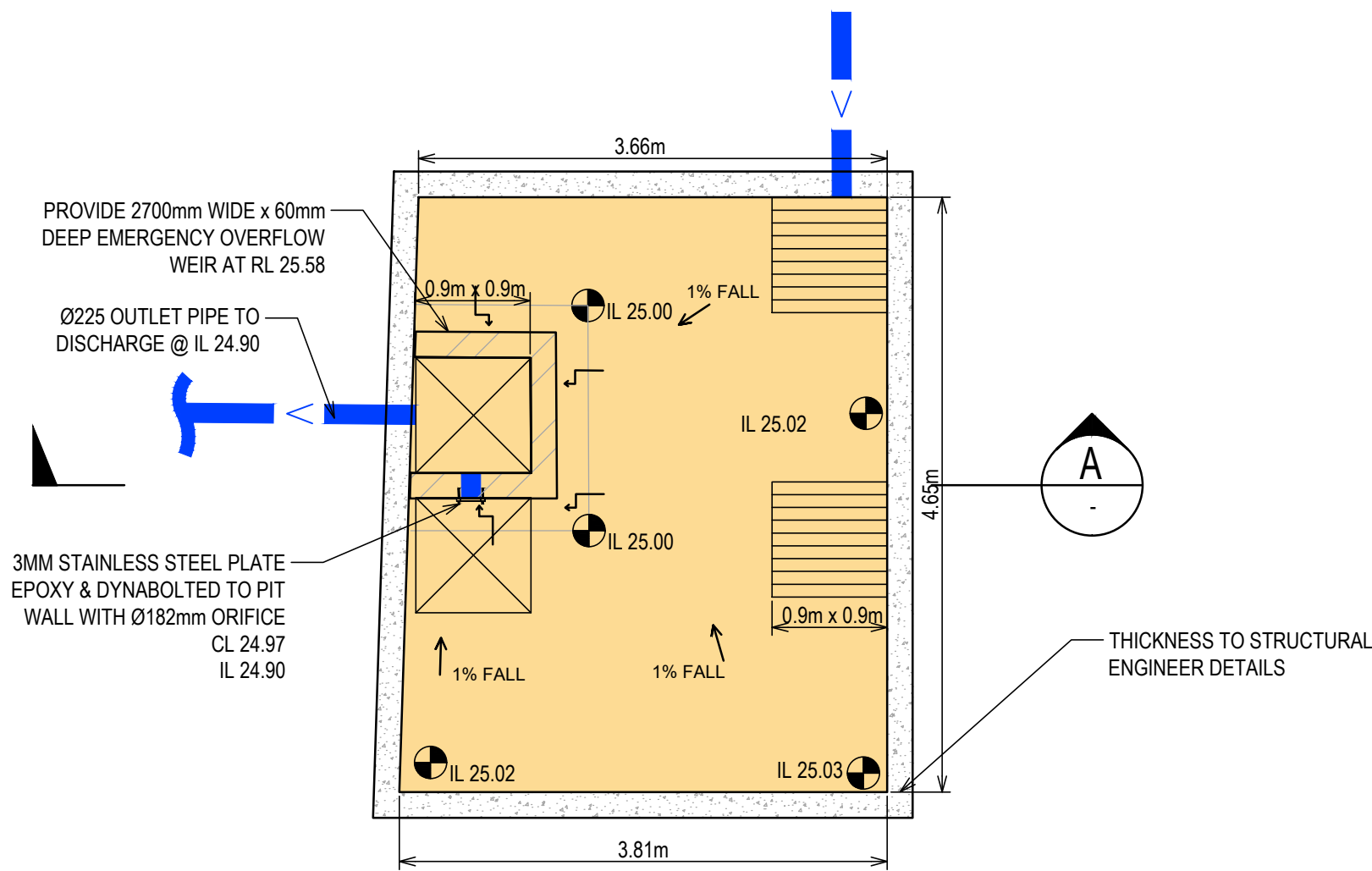
INTERNAL AREA = 15.90m²
AVERAGE DEPTH = 0.60 m
VOLUME PROVIDED = 9.54m³
REQUIRED VOLUME = 9.19m³

EMERGENCY OVERFLOW WEIR SIZING

$Q_{1\%} = 0.068 \text{ m}^3/\text{s} = 68 \text{ L/s}$
2.7m LONG WEIR PROVIDED

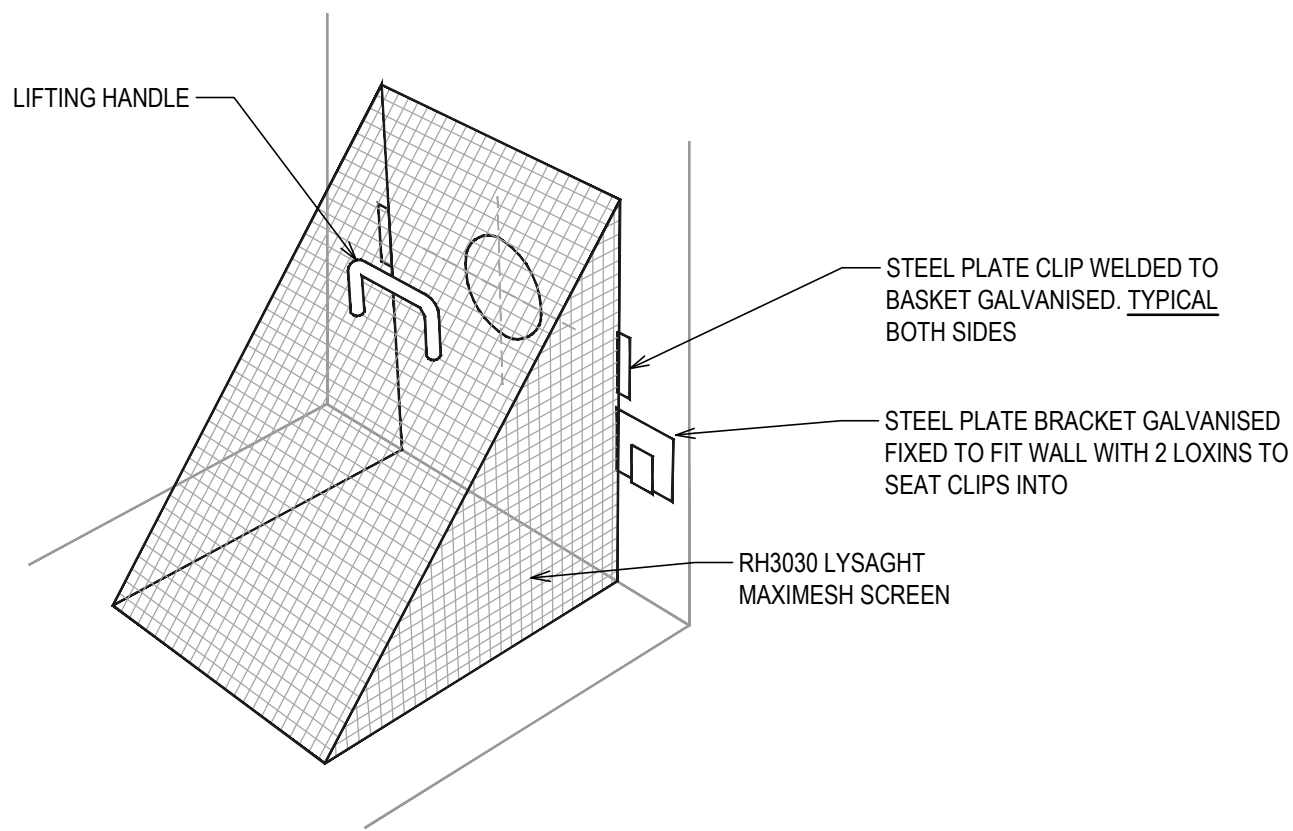
$Q = 1.7 \times L \times D^{1.5}$
 $0.068 = 1.7 \times 2.7 \times D^{1.5}$

D = 60mm DEPTH OF FLOW

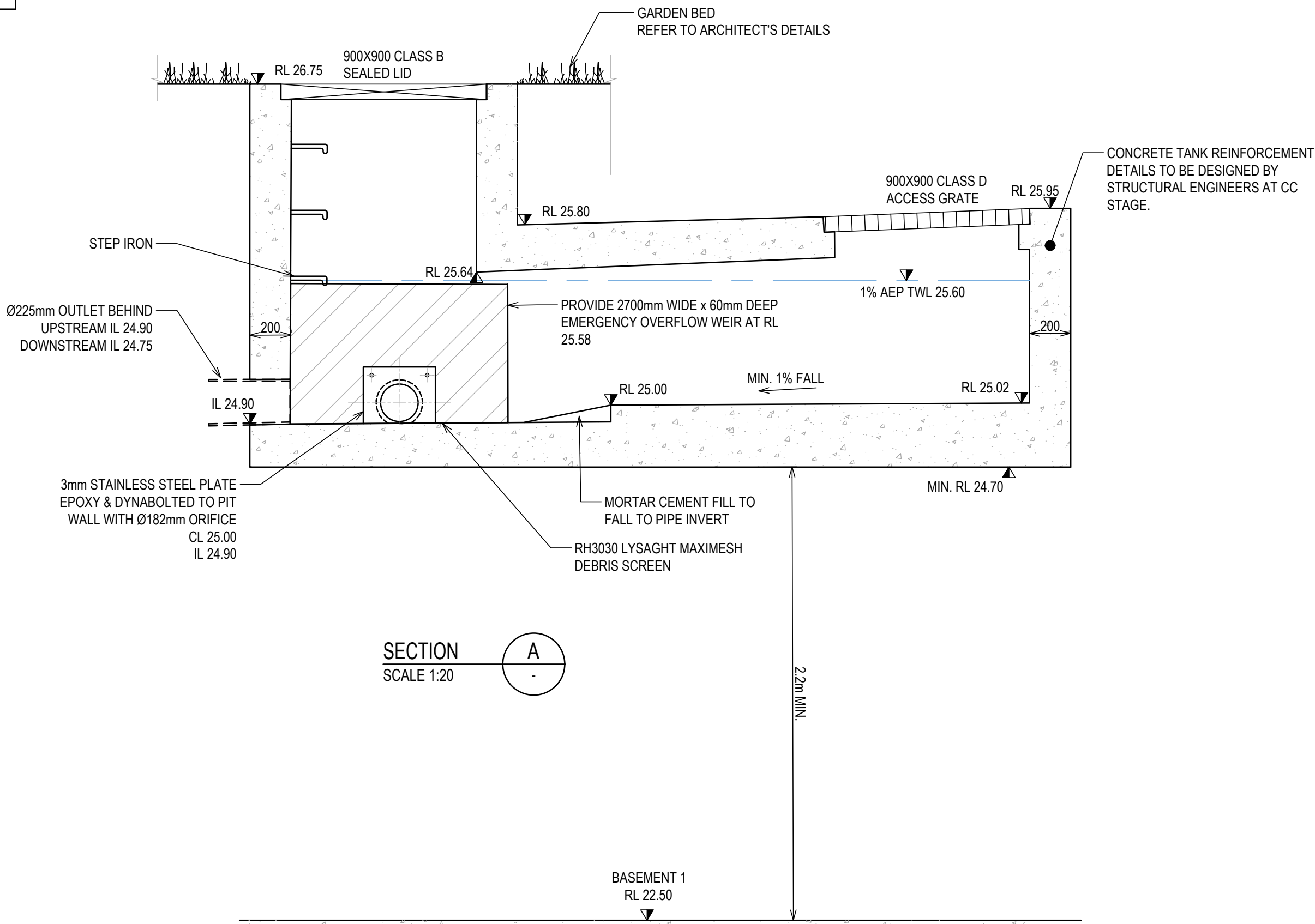


OSD TANK PLAN
SCALE 1:50

ON SITE DETENTION TANK - CALCULATION					
STORM EVENT (AEP %)	PRE-DEVELOPMENT FLOW (L/s)	POST-DEVELOPMENT NON-ATTENUATED FLOW (L/s)	POST-DEVELOPMENT ATTENUATED FLOW (L/s)	REQUIRED STORAGE VOLUME (m ³)	TOP WATER LEVEL (mAHD)
20%	36	44	36	3.96	25.25
1%	68	77	67	9.19	25.60

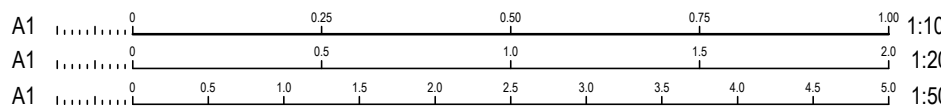


DEBRIS SCREEN
SCALE 1:20



SECTION A-A
SCALE 1:20

NOTES:
1. REFER TO SEARs REPORT FOR STORMWATER PLAN DETAILS AND DESIGN INTENT



Revision	Description	Initial	Date	Client
				NSW HOUSING CORPORATION PTY LTD
				Architect
				PTI ARCHITECHTURE LEVEL2/ 68 SOPHIA STREET, SURRY HILLS, NSW
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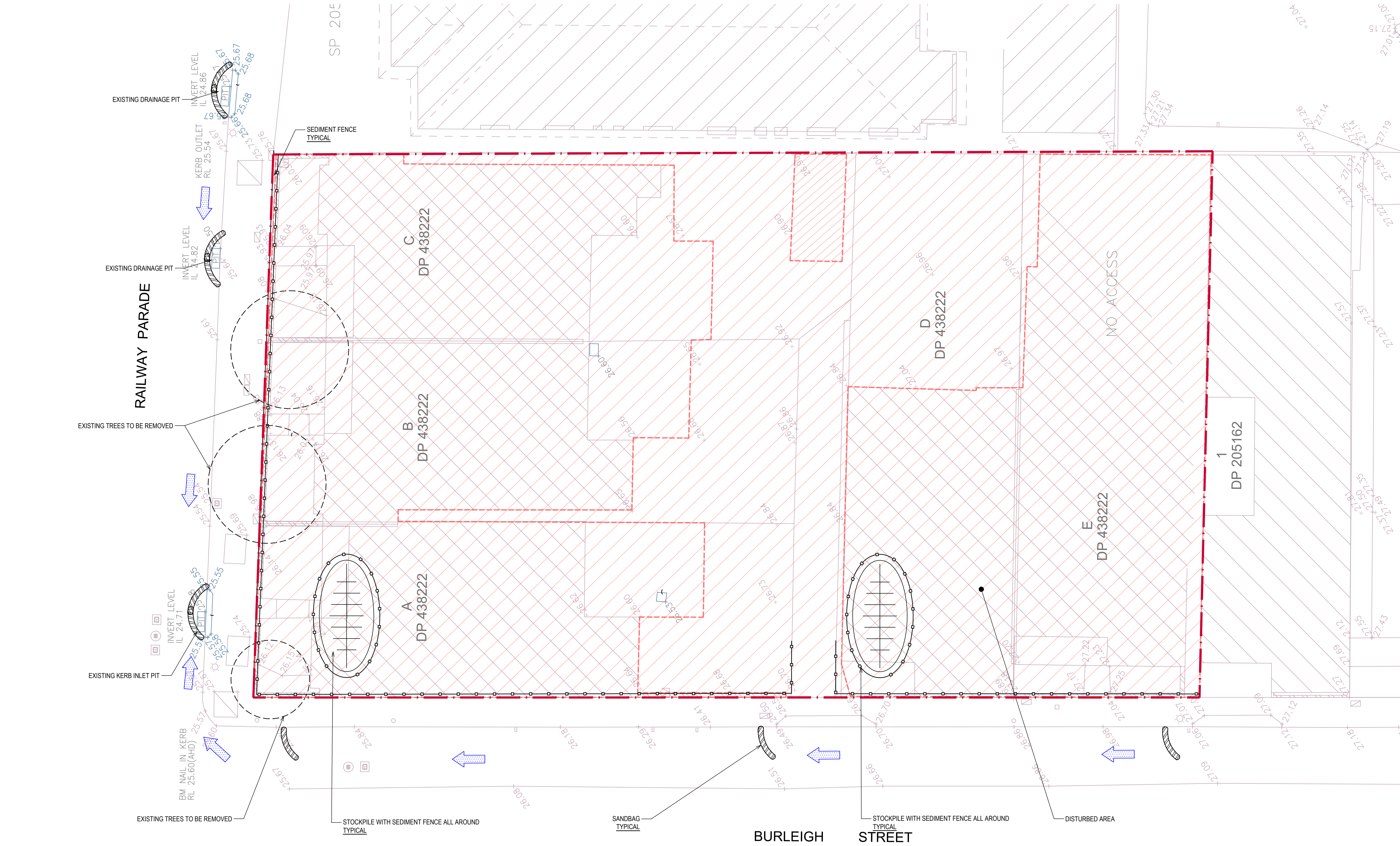
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CIVIL ENGINEERING SERVICES
STORMWATER DETAIL

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SYD2877	CE200	B			

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LEGEND

- SITE BOUNDARY
- EXISTING CONTOUR
- DISTURBED AREA
- SEDIMENT FENCE
- SAND BAG
- FLOW DIRECTION
- PROPOSED STOCKPILE LOCATION WITH SEDIMENT FENCE
- STABILISED SITE ACCESS
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED

- NOTES:
- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
 - ALL REDUCED LEVELS ARE IN mAHD.
 - SURVEY INFORMATION OBTAINED FROM RGM PROPERTY SURVEY'S DRAWING TITLED '20-24 RAILWAY PARADE & 2-4 BURLEIGH STREET, BURWOOD', DATED 07/06/2022.
 - NO WORKS ARE TO OCCUR OUTSIDE THE SITE PROPERTY BOUNDARY UNLESS PRIOR APPROVAL IS PROVIDED BY COUNCIL.
 - REFER TO DRAWING CE410 FOR EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE AND GENERAL INSTRUCTIONS NOTES.

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A1 0 1 2 3 4 5 6 7 8 9 10 1:100

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B	ISSUE FOR DEVELOPMENT APPLICATION
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Initial	Date	Client
		NSW HOUSING CORPORATION PTY LTD
Initial	Date	Architect
HI	15.01.2025	PTI ARCHITECTURE
HI	04.11.2024	LEVEL2/ 68 SOPHIA STREET, SURRY HILLS, NSW

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Project

2-4 BURLEIGH STREET, BURWOOD

2-4 BURLEIGH STREET & 20-24 RAILWAY PARADE BURWOOD

Drawing Title

CIVIL ENGINEERING SERVICES

SEDIMENT & EROSION CONTROL PLAN

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