

Integrated Stormwater &
Wastewater Management Plan
Residential Development, Stage 2a
27 Railway Street, Corrimal
25152 – January 2026



INTEGRATED STORMWATER & WASTEWATER MANAGEMENT PLAN

Corrimal Coke Works Stage 2a, 27 Railway Street Corrimal

PREPARED FOR

Legacy Property Group
C/- Chester Project Management

PREPARED BY

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(Incorporated in NSW)
ACN 104 315 095

Document Tracking

Document Status		Report					
File Location		T:\Projects\25152 Corrimal Coke Works\Stormwater Management Report\25152 Integrated Stormwater and Wastewater Management Plan.doc					
Project No.		25152			Date		
Rev No	Issue	Author			Approved		
		Name	Signature	Date	Name	Signature	Date
1	DA Issue	Ian Bennett		12 Sept 2025	Andrew Craddock		12 Sept 2025
2	DA Issue	Ian Bennett		22 Jan 2026	Andrew Craddock		22 Jan 2026
3							
4							

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APPENDIX C:	Sydney Water Letter and Servicing Plan

Planning Secretary's Environmental Assessment Requirements

SEARs	How this is addressed
11. Water Management Detail the proposed drainage design and servicing infrastructure to be incorporated as part of the development (stormwater and wastewater).	Civil engineering plans have been provided (Appendix A) that outlines the drainage design to convey stormwater from the subject site. The civil engineering plans are to be read in conjunction with this Integrated Stormwater & Wastewater Management Plan. For wastewater, refer to section 1.7 and Appendix C.
Demonstrate how the development complies with council's drainage requirements and identify proposed stormwater treatment and water quality management measures to minimise adverse environmental impacts.	The proposed drainage network has been designed in accordance with Wollongong City Council's (WCC) DCP Chapter E14: Stormwater Management, and WCC's DCP 2009 Chapter E15 Water Sensitive Urban Design. The proposed drainage design utilises measures for treating both stormwater quantity and quality. WCC normally requires the peak flow rates of stormwater runoff in the post-developed state to be lower than the existing peak flows. In this case, post-developed peak flows did not need attenuation, as per the approved Water Cycle Management Study prepared by Maker Consulting Services, which recommended that no onsite detention is required for the subject site. Stormwater quality targets are met using Stormfilters and gross pollutant traps which treat the water before discharging from the subject site. MUSIC modelling is provided with the results shown in Section 3.3. The results show that the water quality measures provided achieve WCC's pollution reduction targets outlined in the WSUD policy.

EXECUTIVE SUMMARY

Site Plus Pty Ltd has been commissioned by Legacy Property Group c/- Chester Project Management to prepare an Integrated Stormwater & Wastewater Management Plan for the proposed residential development on 27 Railway Street, Corrimal to address Planning Secretary's Environmental Assessment Requirements (SEARs).

This plan outlines the proposed stormwater quantity and quality management that will be incorporated as part of the proposed development, and how this complies with Wollongong City Council's DCP.

The stormwater drainage design has been prepared in accordance with the following:

- Wollongong DCP 2009 Chapter E14 Stormwater Management
- Wollongong DCP 2009 Chapter E15 Water Sensitive Urban Design

The stormwater devices/assets incorporated in the stormwater drainage design are as follows:

- Three stormfilter tanks consisting of a total of 17 x 690mm PSORB stormfilter cartridges to comply with Wollongong's WSUD policy
- A total of 46 x Oceanguard filter baskets on grated surface inlet pits to treat surface runoff.

Stormwater management and stormwater quality for the proposed development have been considered. The computer model MUSIC (Model for Urban Stormwater Improvement Conceptualisation) has been used for the storm water quality assessment and DRAINS for the stormwater quantity analysis.

In summary, the analysis shows that water management and water quality measures are proposed for the development to meet Council standards. Both water management and quality targets have been met for the site.

1. INTRODUCTION

1.1. Preliminary

1.1.1. Siteplus Engagement

Site Plus Pty Ltd has been commissioned by Legacy Property Group c/- Chester Project Management to prepare an Integrated Stormwater & Wastewater Management Plan for the proposed residential development on 27 Railway Street, Corrimal.

The aim of the Integrated Stormwater & Wastewater Management Plan is to ensure that the downstream waters will not be impacted by the development with regards to water quality and peak flows.

1.1.2. Scope of Work

Site Plus has been engaged by Legacy Property Group c/- Chester Project Management to carry out the following services:

- Examine the existing site and proposed development to determine how drainage and mean annual pollutant loads will be controlled to meet Council standards.
- Provide Council with a drainage concept that complies with all the relevant Council policies and requirements.
- Assess the proposed storm water quality devices to meet the environmental standards sought by Wollongong City Council.
- Provide maintenance guidelines and procedures to ensure the functional longevity of the stormwater quality system, and
- Prepare an Integrated Stormwater & Wastewater Management Plan.

1.2. Subject Land

The subject site is located 5km north of Wollongong and approximately 1.5km west of Corrimal Beach. The site sits adjacent to Corrimal Train Station at the eastern boundary and is bordered by residential properties on the north and south boundaries. Refer to Figure 1-1 for details.

1.3. Existing Site Features and Catchment

1.3.1. Topography

The subject site is divided into 3 lots, with a total of 4 buildings (B2.1, B2.2, B2.3 & B2.4). Each of these lots grade gradually to the street frontage, allowing drainage to connect into the proposed kerb inlet pits.

Building B2.1's lot grades gradually from Northwest to Southeast from RL 15.22m to RL 13.64m at approximately 2.5%.

Building B2.2's lot grades gradually from Northeast to Southwest from RL 15.10m to RL 14.00m at approximately 1.5%.

Building B2.3 & B2.4 are located on the same lot, with the lot grading southwards from RL 14.27m to RL 12.5m at approximately 1%.

Refer to Figure 1-2 and civil plans in Appendix A.

1.3.2. Land use

The subject site was formally zoned industrial and was rezoned to medium density residential. Demolition works across the site has been completed, and currently the site is vacant. The current site levels are shown in the survey plans found in Appendix B.

Figure 1-1 Site Context



Figure 1-2 Site Topography



1.4. Study Objectives

The purpose of this study is to determine the impacts of the proposed residential development and surrounding landscape on stormwater runoff from the site. Then to propose measures which mitigate these impacts to acceptable standards.

1.5. Stormwater Management

The proposed stormwater system has been designed in accordance with Wollongong City Council's DCP 2009 Chapter E14 Stormwater Management. This means that the drainage system is designed to convey the minor system ARI of 10 years.

1.6. Stormwater Pollution Control Targets

The targets outlined below are the objectives and targets consistent with Wollongong City Council's DCP 2009 Chapter E15 Water Sensitive Urban Design Section 9.1 (Table 2).

The following targets are considered minimum standards for the proposed development:

- 90% reduction in the post development mean annual load of total gross pollutant (greater than 5mm).
- 80% reduction in the mean annual load of Total Suspended Solids (TSS), compared to a typical urban development.
- 55% reduction in the mean annual load of Total Phosphorous (TP), compared to a typical urban development.
- 40% reduction in the mean annual load of Total Nitrogen (TN), compared to a typical urban development.

1.7. Sewer Management

Legacy Property has engaged RMA Infrastructure Pty. Ltd. (RMA) as the project's Sydney Water Coordinator. RMA has applied on behalf of Legacy Property to Sydney Water for sewer connection for the stage 2 buildings and obtained a Feasibility Letter confirming connection is available for the development to the Sydney Water sewer mains. Accordingly, an on-site sewage system (OSS) is not required, as wastewater is able to be connected to Sydney Water sewer drainage infrastructure. Refer to Appendix C for Sydney Water letter and servicing plan showing the connection lines for the buildings.

2. WATER MANAGEMENT

2.1. Stormwater Objectives

Wollongong City Council normally requires the peak flow rates of stormwater runoff in the post-developed state to be lower than the existing peak flows, to minimise the impacts of flooding to the built and natural environment. However, in this case, post-developed peak flows did not need attenuation, as per the approved Water Cycle Management Study (MKR00452 July 2025) prepared by Maker Consulting Services, which recommended that no onsite detention is required for the subject site.

The proposed stormwater system has been designed in accordance with Wollongong City Council's DCP 2009 Chapter E14 Stormwater Management. This means that the drainage system is designed to convey the minor system ARI of 10 years.

2.2. Proposed Stormwater Design

Each of the building's site contours fall towards the street where a kerb inlet pit is available to connect into (refer to civil plans MKR00452-11 prepared by Maker Consulting Services). The piped network has been designed to cater for all storm events up to and including the 10% AEP storm event. The stormwater for each site goes through a Stormfilter tank before discharging to the kerb inlet pit in the street.

2.3. DRAINS Model

To evaluate the sites drainage system a DRAINS model was developed using ARR87 procedures. The model assessed the peak flows running through each hydraulic structure including pipes and overflow routes. The ILSAX routing method was adopted with parameters as per Table 1 below.

DRAINS ILSAX Parameters	
Paved area depression storage	1mm
Supplementary area depression storage	1mm
Grassed area depression storage	5mm
Soil type	3

Table 1 DRAINS ILSAX Parameters

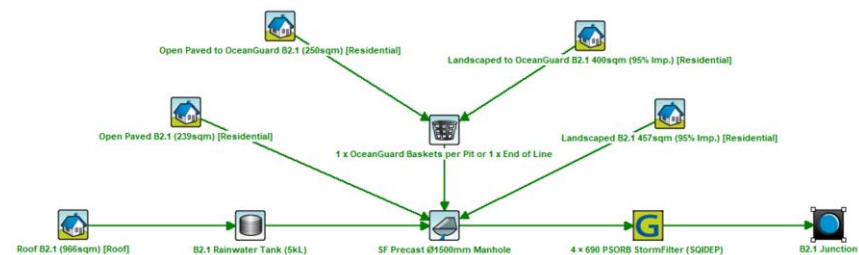
3. WATER QUALITY

Wollongong City Council's DCP 2009 Chapter E15 Water Sensitive Urban Design Section 4 outlines that stormwater quality treatment devices are required for any mixed-use developments with a gross floor area of 3,000 square metres or more.

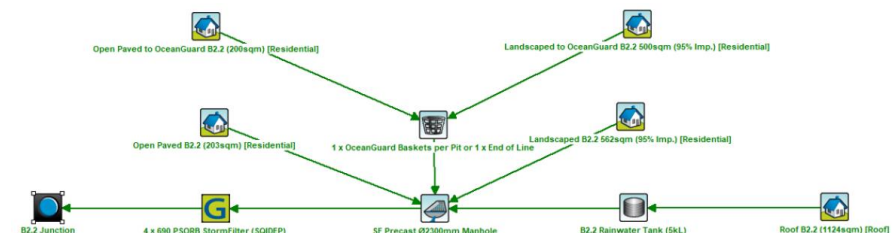
3.1. Source Nodes

3.1.1. Urban Node

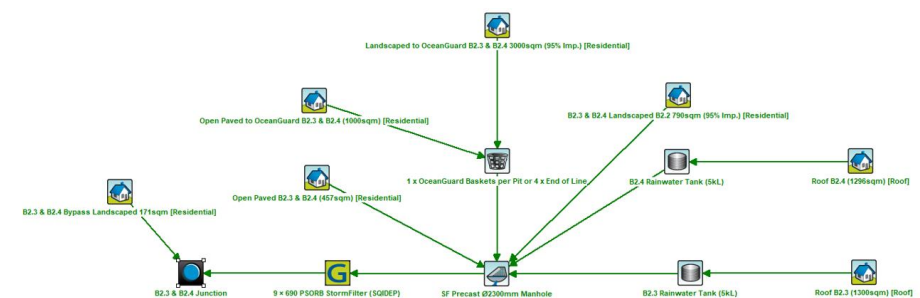
The proposed site has been modelled within MUSIC as an urban node with the required catchment parameters. Three different nodes or catchments have been used to represent the roof, paved area and landscape area. The MUSIC model for each building is shown in Figure 4.



Building B2.1



Building B2.2



Building B2.3 & B2.4

Figure 4. MUSIC Schematic Diagrams

3.2. Treatment Nodes

3.2.1. Oceanguard GPT's

Oceanguards are proposed on each grated surface inlet pit to filter the stormwater before being piped and discharging into the street's drainage system. A total of 46 Oceanguards are proposed across all 4 buildings. The Oceanguards operate as a primary filter being able to remove litter, vegetative, matter, free oils, grease and coarse sediments prior to discharging to the secondary treatment device.

3.2.2. StormFilter

For this development there will be a single off line Stormfilter for each building (3 total for the whole subject site). The Stormfilter uses a cartridge system which utilises special media to remove dissolved pollutants such as of nitrogen and phosphorus. The Stormfilter has been appropriately sized with 690mm PhosphoSorb cartridges to achieve the pollutant removal targets set by Wollongong City Council. Buildings B2.1 & B2.2 each have 4 x 690mm PhosphoSorb cartridges, while the stormfilter servicing buildings B2.3 & B2.4 has 9 x 690mm PhosphoSorb cartridges.

3.3. MUSIC Results

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.721	0.677	6.1
Total Suspended Solids (kg/yr)	72.2	13.7	81
Total Phosphorus (kg/yr)	0.157	0.0508	67.7
Total Nitrogen (kg/yr)	1.59	0.698	56
Gross Pollutants (kg/yr)	14.5	0	100

Building B2.1

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.783	0.739	5.7
Total Suspended Solids (kg/yr)	73.7	14.3	80.7
Total Phosphorus (kg/yr)	0.167	0.0551	67
Total Nitrogen (kg/yr)	1.71	0.758	55.7
Gross Pollutants (kg/yr)	15.3	0	100

Building B2.2

	Sources	Residual Load	% Reduction
Flow (ML/yr)	2.29	2.2	3.9
Total Suspended Solids (kg/yr)	264	51.3	80.5
Total Phosphorus (kg/yr)	0.533	0.2	62.4
Total Nitrogen (kg/yr)	5.03	2.45	51.3
Gross Pollutants (kg/yr)	41.4	0	100

Building B2.3 & B2.4

Figure 5. MUSIC Results

The results confirm that the Oceanguards, and Stormfilter have a beneficial impact on the water quality discharging from the site. Improvements are achieved for all pollutants.

The above table demonstrates that the results meet and exceed Council's targets.

3.4. Monitoring and Maintenance Procedures

Monitoring and maintenance of water sensitive urban design treatment measures is critical to ensure that performance is retained throughout its life cycle. Unmaintained stormwater quality controls can lead to an increase of pollutant loads on receiving waters.

The following section provides a guide into the monitoring and maintenance of both the gross pollutant traps and Stormfilters proposed within the development.

3.4.1. Oceanguards (GPT's)

Oceanguard GPT's should be cleaned every 3 months or after major storm events that exceed 35mm as per manufacturers standards and specifications. The Oceanguard GPT's specified can be easily cleaned as the basket unit can be removed from the pit. The following actions should be carried out every 3-month period:

- Remove litter and gross pollutants from basket via either material grab or suction means.
- Remove debris from inlet and outlet to ensure free flow through unit.
- Unblock screen and basket ensure that the basket has not compromised the function of the system.

3.4.2. Stormfilter

Predictive and regular inspections should be carried out on the system every 4 months. The predictive inspection is based on a storm event that exceed 35mm.

The performance of the filtration system can be based on the following performance indicators:

- If in dry conditions, standing water inside the back-wash pool, but not outside the backwash pool indicate that the filter cartridges will need to be rinsed.
- If in wet conditions, observing the rate and movement of the water in the unit. If little flow is exiting the cartridge lids and outlet pipe, it indicates that the filter cartridges are occluded with sediment and will need to be rinsed.

3.5. Treatment Device Life Cycle Costings

3.5.1. Oceanguard (GPT's)

The following costing is based upon an Ocean Project fee proposal for Oceanguards (GPT). The 46 Oceanguard units will have an installation cost \$450 each plus GST, in total it will cost \$20,700 plus GST.

Each device is expected to have a design life of 25yrs.

3.5.2. Stormfilter

The following preliminary costings are based on the standard rates applied by Ocean Project. To buy and install the Stormfilters will cost \$42,000 plus GST.

3.5.3. Maintenance Costs

The maintenance costs are based on a 5-year contract. A full-service maintenance estimate for both the Stormfilter and the Oceanguards would cost approximately \$5,061 per year plus GST. This total lifecycle cost is \$183,160.00 plus GST over the 30-year lifecycle. A full-service maintenance will include the following:

- Cleaning and servicing of GPT's every 4 months.
- Stormfilter inspections every 4 months.
- Servicing of the Stormfilter for every 6 months.
- Minimum 2 cartridges requiring exchanging every 5 years.
- Waste disposal and annual certification.

4. CONCLUSION

In conclusion, the proposed stormwater quantity and quality mitigation measures effectively treat stormwater to Councils standards.

On-Site detention is not required as per the approved Water Cycle Management Study prepared by Maker Consulting Services. The proposed stormwater systems have been designed to cater for the 10yr ARI event.

Measures have been proposed to ensure Council's stormwater quality targets are met. These include the following:

- At source Ocean guards (GPT's) to be treated all stormwater from the paved, landscape and roof areas.
- An end of line Stormfilter has been appropriately sized to filter stormwater discharging offsite for each building. For buildings B2.1 & B2.2, the Stormfilter utilises 4 x cartridges for each building to treat the 3-month flow to the required level, and Buildings B2.3 & B2.4 are both serviced by one Stormfilter which utilises 9 x cartridges.

5. REFERENCES

<http://www.toolkit.net.au/music>

Wollongong DCP, 2009, *Chapter E14: Stormwater Management*, Wollongong City Council, Wollongong.

Wollongong DCP, 2009, *Chapter E15: Water Sensitive Urban Design*, Wollongong City Council, Wollongong.

APPENDIX A

Civil Engineering Plans

PROPOSED RESIDENTIAL DEVELOPMENT
27 RAILWAY STREET, CORRIMAL NSW
DEVELOPMENT APPLICATION CIVIL PLANS
CORRIMAL COKE WORKS STAGE 2A

Sheet List Table	
Sheet Number	Sheet Title
01	TITLE PAGE
02	CIVIL WORKS PLAN
03	BULK EARTHWORKS
04	SITE SECTIONS 1
05	SITE SECTIONS 2
06	B2.1 DRIVEWAYS
07	B2.2. DRIVEWAYS
08	B2.3 DRIVEWAYS
09	SITE DRAINAGE PLAN
10	DRAINAGE PLAN 1 - B2.1
11	DRAINAGE PLAN 2 - B2.2
12	DRAINAGE PLAN 3 - B2.3
13	DRAINAGE PLAN 4 - B2.4
14	PIPE LONGSECTION 1
15	PIPE LONGSECTION 2
16	PIPE LONG SECTION 3
17	DRAINAGE CALCULATIONS B2.1
18	DRAINAGE CALCULATIONS - B2.2
19	DRAINAGE CALCULATION B2.3 & B2.4
20	DRAINAGE DETAILS 1
21	DRAINAGE DETAILS 2
22	BASEMENT PLAN 1 - B2.1
23	BASEMENT PLAN 2 - B2.2
24	BASEMENT PLAN 3 - B2.3
25	BASEMENT PLAN 4 - B2.4
26	MUSIC PLAN
27	SOIL & WATER MANAGEMENT PLAN



LOCALITY SKETCH
1:2500 @ A1

LEGEND PROPOSED

	STORMWATER PIPE		PAVEMENT LEVEL
	GRADED PIT		CONTOURS
	JUNCTION PIT		CATCHMENT BOUNDARY
	KERB INLET PIT		EDGE STRIP
	GRADED DRAIN		KERB & GUTTER
	DOWNPIPES		LAYBACK KERB & GUTTER
			BLOCK RETAINING WALL

LEGEND EXISTING

	STORMWATER LINE		EXISTING SPOT LEVEL
	STORMWATER PIT		EXISTING CONTOURS
	WATER LINE		GAS LINE
	SEWER LINE		ELECTRICAL LINE
	TELSTRA LINE		

GENERAL NOTES

- G1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH WOLLONGONG CITY COUNCIL'S STANDARD SPECIFICATIONS AND TO THE REQUIREMENTS OF THE PCA.
- G2. INSPECTIONS BY THE CIVIL ENGINEER SHALL BE CARRIED OUT AT THE FOLLOWING STAGES:
- (a) PRIOR TO INSTALLATION OF EROSION AND SEDIMENT CONTROL STRUCTURES
 - (b) PRIOR TO BACKFILLING PIPELINES, SUBSOIL DRAINS, TRENCH BEDDING AND DAMS
 - (c) PRIOR TO CASTING OF PITS AND OTHER CONCRETE STRUCTURES, INCLUDING KERB AND GUTTER
 - (d) PROOF ROLLER TEST OF SUBGRADE AND SUB-BASE
 - (e) ROLLER TEST OF COMPLETED PAVEMENT PRIOR TO PLACEMENT OF WEARING COURSE
 - (f) FORMWORKS PRIOR TO POURING CONCRETE IN PARKING AREA FOR FOOTPATH CROSSING AND OTHER ASSOCIATED WORK
 - (g) PRIOR TO BACKFILLING PUBLIC UTILITY CROSSINGS IN ROAD RESERVES
 - (h) PRIOR TO PLACEMENT OF ASPHALTIC CONCRETE
 - (i) FINAL INSPECTION AFTER ALL WORKS ARE COMPLETED.
- G3. MAKE SMOOTH JUNCTIONS WITH EXISTING WORKS.
- G4. NO WORK TO BE CARRIED OUT ON COUNCIL PROPERTY OR ADJOINING PROPERTIES WITHOUT THE WRITTEN PERMISSION FROM THE OWNER.
- G5. VEHICULAR ACCESS AND ALL SERVICES TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION.
- G6. ALL RUBBISH, BUILDINGS, SHEDS AND FENCES TO BE REMOVED TO SATISFACTION OF PCA AT COMPLETION OF WORKS.
- G7. ALL FILL AREAS ARE TO BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO STRIPPING AND ALL RECOMMENDATIONS OF THE SALINITY REPORT ARE TO BE FOLLOWED.
- G8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF THE LOCATION OF ANY EXISTING SERVICES AFFECTING THE WORKS AREA, ANY DAMAGED SERVICES SHALL BE REPAIRED AT THE CONTRACTORS COST.

EARTHWORKS NOTES

- E1. EARTHWORKS TO BE CARRIED OUT TO THE SATISFACTION OF THE PCA, SITE SUPERINTENDENT AND GEOTECHNICAL ENGINEER. UNSOUND MATERIALS ARE TO BE REMOVED FROM ROADS AND BUILDING PADFS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION CERTIFICATES WHERE REQUIRED.
- E2. WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS ONE IN FOUR (1:4), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE PCA AND GEOTECHNICAL ENGINEER.
- E3. ALL BATTERS ARE TO BE SCARIFIED TO ASSIST WITH ADHESION OF TOP SOIL TO BATTER FACE.
- E4. PROVIDE MINIMUM 150mm AND MAXIMUM 300mm TOPSOIL WITH GRASS SEEDING ON FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. WHERE AREAS ARE TO BE LEFT EXPOSED AFTER WORKS.
- E5. THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AUSTRALIAN STANDARD 3798 - 1996. WHERE IT IS PROPOSED TO USE TEST METHOD AS1289 E8.1 OR AS1289 E8.2 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS AS DIRECTED BY PCA.
- E6. THE GEOTECHNICAL TESTING AUTHORITY SHALL HAVE A LEVEL 1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS 3798-1996, AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS.
- E6. THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN PART OF THIS DRAWING SET SHEETS 11 AND 12.

ROADWORKS NOTES

- R1. SUBGRADE, SUB-BASE, AND BASE TO BE COMPACTED IN ACCORDANCE WITH SITEPLUS CIVIL DRAWINGS AND GEO-TECHNICAL RECOMMENDATIONS SPECIFICATION.
- R2. SUBSOIL DRAINS TO BE PROVIDED ON BOTH SIDES OF ROADS (EXCEPT WHERE THERE IS STORM WATER DRAINAGE).
- R3. SERVICE CONDUITS TO BE PLACED AS DIRECTED BY PROJECT MANAGER.
- R4. PROPOSED SERVICES CROSSING EXISTING ROADS SHALL BE THRUST BORED UNDER THE ROAD SO AS NOT TO DAMAGE EXISTING SURFACE.
- R5. ALL ROADS ARE TO BE TEMPORARILY SEALED WITH 30mm GAP GRADED AC10, THE FINAL AC IS TO BE PLACED FOLLOWING CONSTRUCTION OF THE BUILDING WORKS.
- R6. SIGNPOSTING AND LINEMARKING TO CONFORM WITH AS1742.2 RAISED RETRO- REFLECTIVE PAVEMENT MARKERS TO CONFORM WITH AS1906. ALL APRONS AND KERB FACE ON CENTRAL ISLANDS OF ROUNDABOUTS AND ALL OTHER ISLANDS SHOULD BE DELINEATED BY REFLECTIVE WHITE MARKING.
- R7. ALL LEVELS ARE TO BE SET OUT FROM ESTABLISHED STATE SURVEY MARKS.

STORMWATER NOTES

- S1. ALL PIPES TO BE SPIGOT AND SOCKET, RUBBER RING JOINTED.
- S2. ALL LONGITUDINAL PIPELINES IN ROADS MUST BE LOCATED UNDER KERB AND GUTTER AND BE BACKFILLED WITH APPROVED GRANULAR MATERIAL UNLESS OTHERWISE APPROVED BY THE CIVIL ENGINEER.
- S3. DRAINAGE LINES MUST BE BACKFILLED WITH APPROVED GRANULAR MATERIAL IN TRAFFICABLE AREAS. THREE (3) METRES OF SUBSOIL DRAINAGE WRAPPED IN GEOTEXTILE STOCKING MUST BE PROVIDED TO ALL DOWNSSTREAM PITS.
- S4. ALL GULLY PITS TO COUNCIL'S STANDARD AND LINTELS CENTRALLY PLACED AT SAG PITS.
- S5. ALL PITS MUST BE BENCHED AND STREAMLINED. PROVIDE SL72 REINFORCEMENT AND GALVANISED STEP IRONS IN ALL PITS OVER 12-METRES DEEP AS MEASURED FROM THE TOP OF GRATE TO THE INVERT OF THE PIT.
- S6. CONCRETE IS TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 32MPa AT 28-DAYS UNLESS OTHERWISE APPROVED BY THE CIVIL ENGINEER.
- S7. ALL DRAINAGE MUST HAVE A MINIMUM PIPE DIAMETER OF 100mm AND A MINIMUM GRADE OF 1% UNLESS OTHERWISE APPROVED BY THE CIVIL ENGINEER.
- S8. INTERALLOTMENT DRAINAGE LINES MUST BE INSTALLED AFTER SEWERAGE LINES HAVE BEEN INSTALLED WHERE SEWER IS PROPOSED ADJACENT TO DRAINAGE LINES.
- S9. 1% AEP OVERLAND FLOW PATHS MUST BE FORMED AND SHOWN ON 'WORKS AS EXECUTED' DRAWINGS.
- S10. ALL PLANS (BOTH DESIGN AND WAE) ARE TO CLEARLY DELINEATE THE EXTENT/LOCATION OF FLOOD LINES INCLUDING THE 5% AEP, 1% AEP AND PMF.
- S11. ADEQUATE PROVISION IS TO BE MADE TO PREVENT SCOURING AND SEDIMENTATION FOR ALL DRAINAGE WORKS IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS.
- S12. CATCH DRAINS MUST BE CONSTRUCTED AS REQUIRED BY THE APPROVED PLANS OR THE PRINCIPAL CERTIFYING AUTHORITY.
- S13. SOIL AND WATER MANAGEMENT PLANS ARE TO BE PREPARED FOR ALL DISTURBED SITES AND ADHERED TO AT ALL TIMES DURING THE CONSTRUCTION AND MAINTENANCE PERIODS.

GEOTECHNICAL NOTES

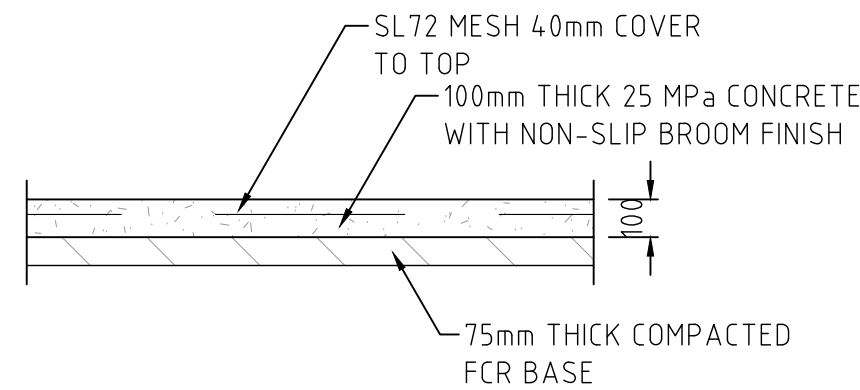
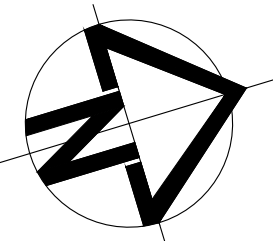
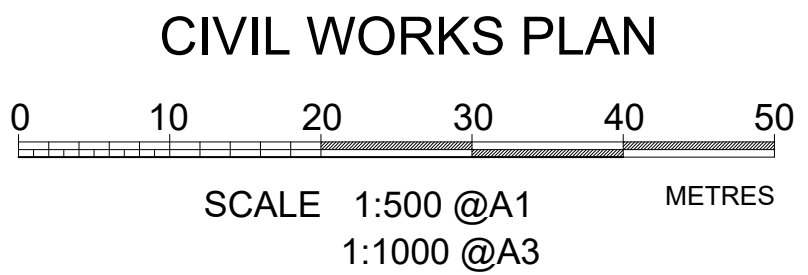
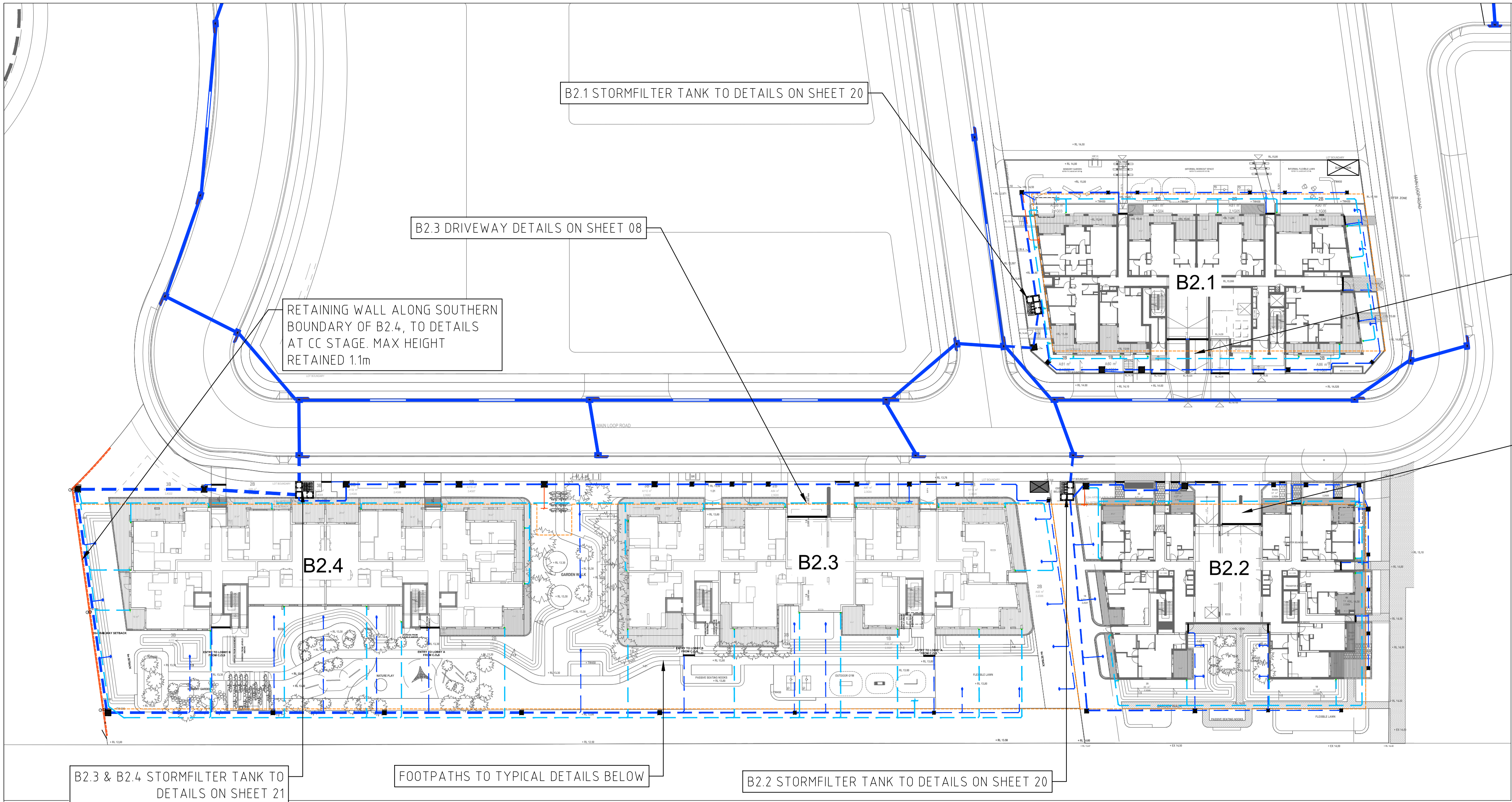
- GT1. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY, AND TO THE SATISFACTION OF THE CIVIL ENGINEER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND DURING CONSTRUCTION SEE SWMP.
- GT2. TESTS SHALL BE UNDERTAKEN ON ANY PROPOSED FILL MATERIALS TO ENSURE THAT THEY DO NOT HAVE A HIGH DISPERSION POTENTIAL AS DEFINED BY EMERSON CRUMB/DISPERSION TESTS (AS1289 C8-1980)
- GT3. ALL FILLING AND PAVEMENT CONSTRUCTION MUST BE UNDERTAKEN TO THE REQUIREMENTS OF AS3798-2007 THE FOLLOWING COMPACTION LEVELS ARE RECOMMENDED:
- | | | |
|-------------------|------|----------|
| LANDSCAPE FILLING | 98% | STANDARD |
| ROAD SUB-GRADE | 100% | STANDARD |
| ROAD SUB-BASE | 100% | MODIFIED |
| ROAD BASE | 98% | MODIFIED |
- GT4. ALL TESTING WORKS SHALL BE CONTROLLED AND CERTIFIED BY A N.A.T.A REGISTERED LABORATORY. A COLLATED COPY OF ALL TEST CERTIFICATES, ACCOMPANIED BY AN OVERALL SITE PLAN, CLEARLY INDICATING THE LOCATION OF EACH TEST AND FILL AREAS ETC, AND THE LABORATORY CERTIFICATE COVERING THE WHOLE OF THE AREA TESTED ARE TO BE FORWARDED TO COUNCIL UPON COMPLETION.
- GT5. FINAL PAVEMENT THICKNESS TO BE DETERMINED AFTER BOXING OUT BY JOINT INSPECTION BY N.A.T.A REGISTERED LABORATORY AND THE CIVIL ENGINEER. PAVEMENT REPORT TO BE AVAILABLE TO COUNCIL A MINIMUM OF TWO CLEAR DAYS PRIOR TO INSPECTION.

DIMENSIONS SHALL BE NOT BE OBTAINED BY SCALING FROM THIS SET OF PLANS

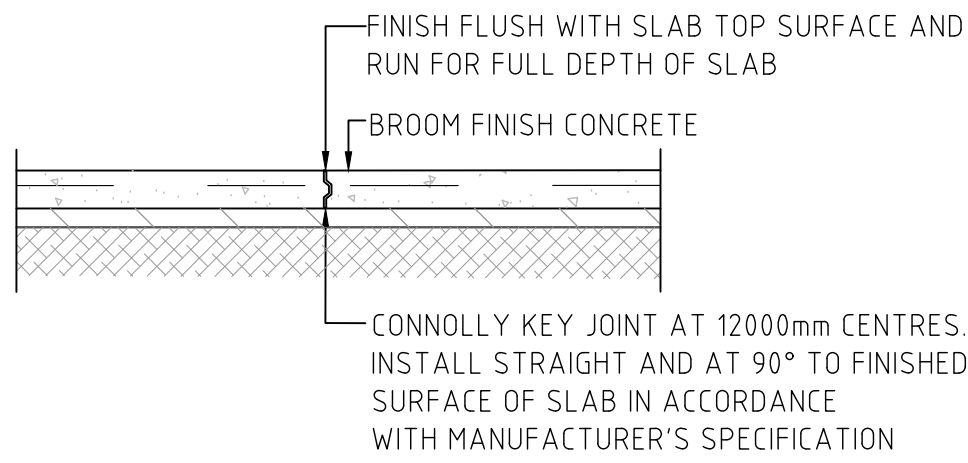
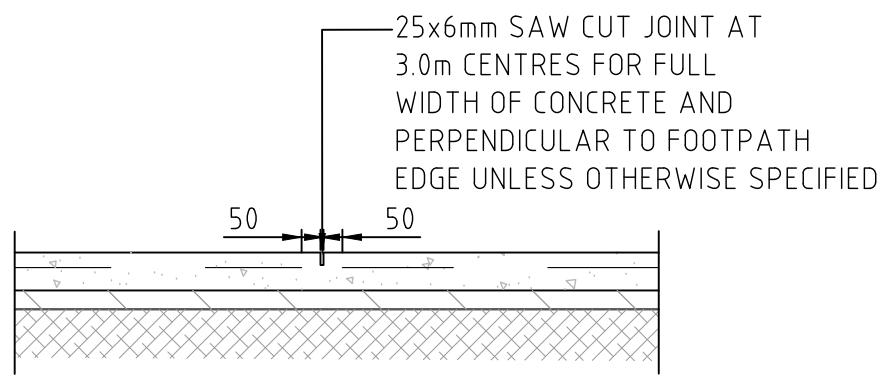
SERVICES ARE SHOWN INDICATIVE ONLY. CONTRACTOR TO CONFIRM ALL SERVICE LOCATIONS PRIOR TO CONSTRUCTION

ALL WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WOLLONGONG CITY COUNCIL'S ENGINEERING SPECIFICATIONS.

REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095 engineering landscape design flooding management				Height Datum	A.H.D.	Client Title		Dwg Title		Ref & Dwg No	
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25					Drawn	I.B.	LEGACY PROPERTY GROUP		PROPOSED RESIDENTIAL DEVELOPMENT		25152.DA.C01	
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25					Designed	I.B.	C/-		27 RAILWAY STREET, CORRIMAL		Sheet No 01 of 27	
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25					Checked	A.C.	CHESTER PROJECT MANAGEMENT		AS NOTED @ A1		Scale	
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25					Approved	A.C.	Dwg Status APPROVAL		Local Authority WOLLONGONG		Date 03.11.25	
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25									TITLE PAGE		Rev F	
																A1	

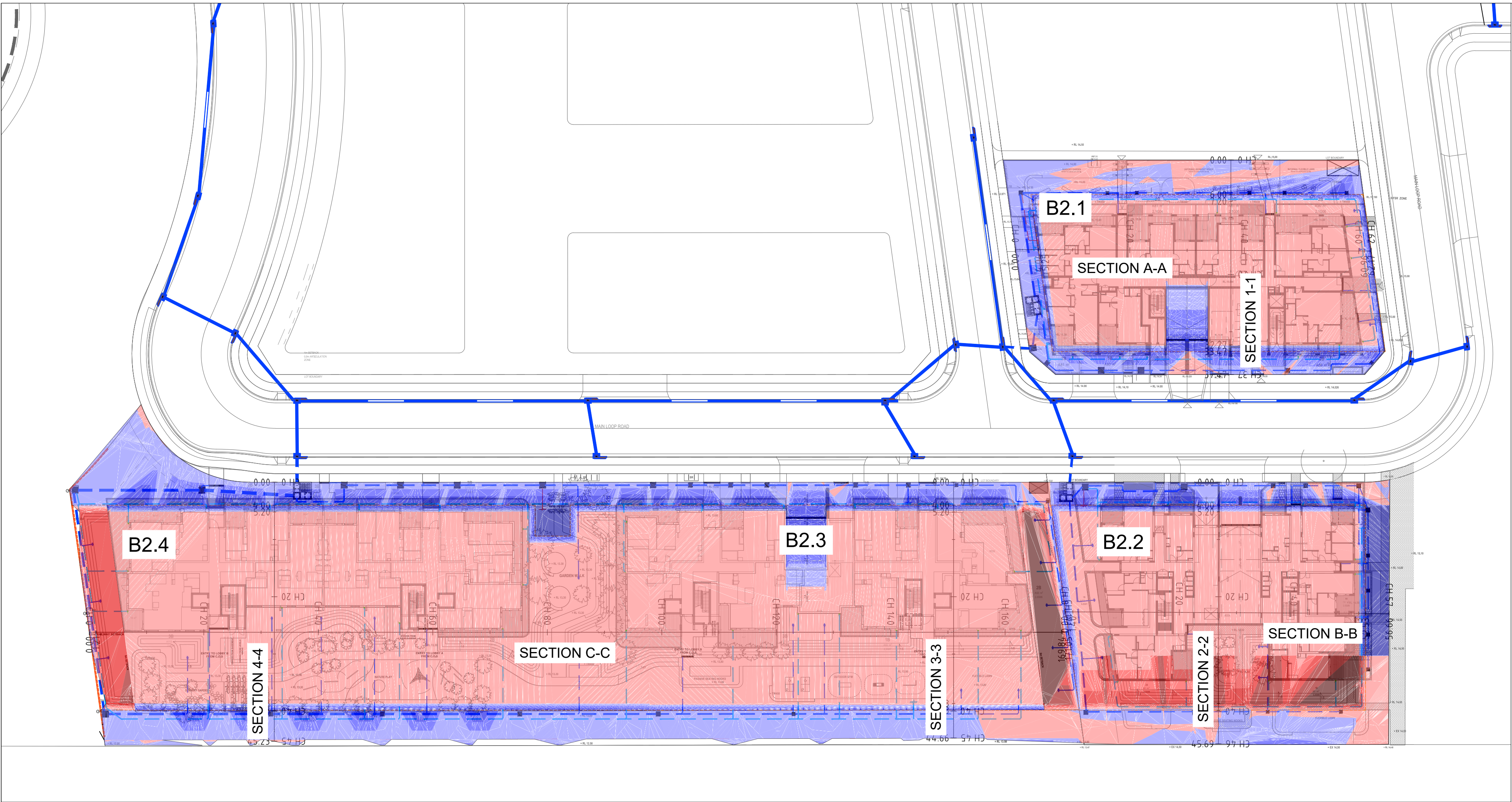


NOTE: CONTRACTION JOINTS TO BE PLACED
LATERALLY AT INTERVALS 4.0m
AND EXPANSION JOINTS AT 12.0m INTERVALS

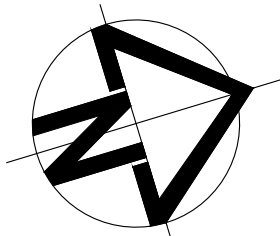
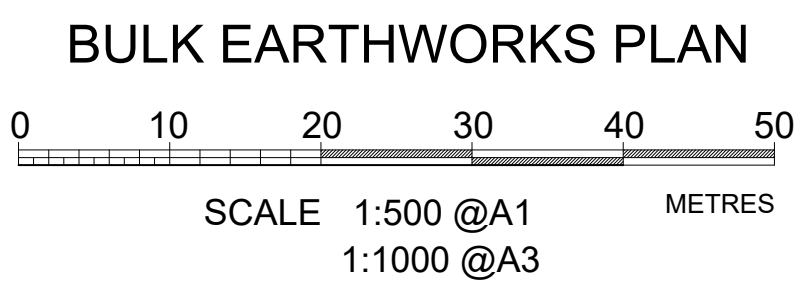


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REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095					WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 500 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au					Height Datum	A.H.D.	Client Title	LEGACY PROPERTY GROUP			Dwg Title	PROPOSED RESIDENTIAL DEVELOPMENT			Ref & Dwg No	25152.DA.C02		
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25						Drawn I.B. Designed I.B. Checked A.C. Approved A.C.							C/- CHESTER PROJECT MANAGEMENT	Dwg Status	APPROVAL	Local Authority	WOLLONGONG	CIVIL WORKS PLAN	Sheet No 02 of 27 Scale AS NOTED @ A1 Date 03.11.25 Rev F A1					
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25																								
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25																								
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25																								
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25																								



REFER TO STAGE 2A CIVIL PLANS PREPARED BY MAKER CONSULTING FOR MORE DETAILS OF EXISTING SURFACE



CUT/FILL SUMMARY

- CUT FILL SUMMARY BELOW ASSUMES 200mm TOP SOIL STRIPPING PRIOR TO EXCAVATION OF CUT OR PLACEMENT OF FILL.

- NO ALLOWANCE MADE FOR UNSUITABLE MATERIAL THAT MAY BE ENCOUNTERED ON SITE.

SUMMARY

CUT= - 5,375 cu.m
FILL= - 3,854 cu.m

TOTAL EXPORT OF FILL
FROM SITE = - 1,521 cu.m

SURFACE ELEVATION DATA

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
1	-5.00	-4.00	
2	-4.00	-3.00	
3	-3.00	-2.00	
4	-2.00	-1.00	
5	-1.00	0.00	
6	0.00	1.00	
7	1.00	2.00	
8	2.00	3.00	
9	3.00	3.81	

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REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095 	WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au	Height Datum	A.H.D.	Client Title LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT	Dwg Title PROPOSED RESIDENTIAL DEVELOPMENT 27 RAILWAY STREET, CORRIMAL BULK EARTHWORKS	Ref & Dwg No 25152.DA.C03	
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25			Drawn	I.B.			Sheet No 03 of 27 Scale 1:500 @ A1	
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25			Designed	I.B.				
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25			Checked	A.C.				
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25			Approved	A.C.				Dwg Status APPROVAL Local Authority WOLLONGONG
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25								

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REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25



Site Plus Pty Ltd ABN 73 104 315 095



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Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

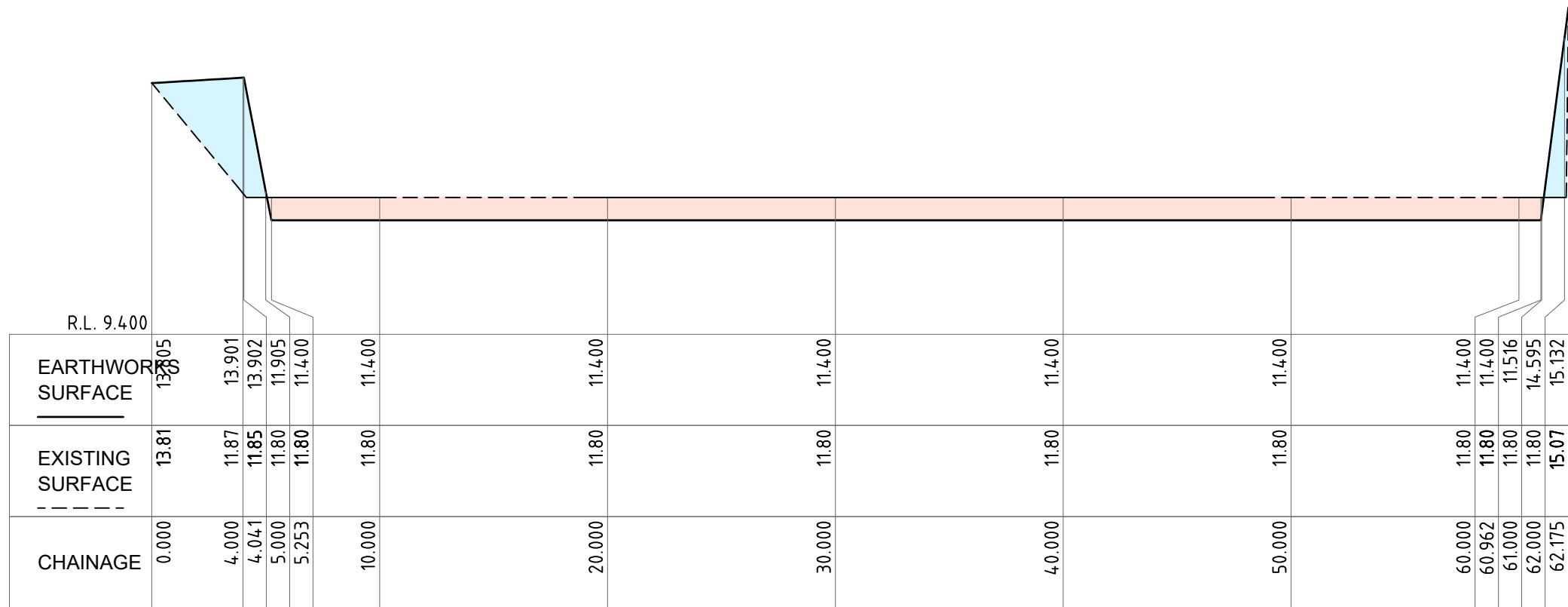
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LEGACY PROPERTY GROUP	
C/-	
CHESTER PROJECT MANAGEMENT	
Dwg Status	Local Authority
APPROVAL	WOLLONGONG

Dwg Title	
PROPOSED RESIDENTIAL DEVELOPMENT	
27 RAILWAY STREET, CORRIMAL	
SITE SECTIONS 1	

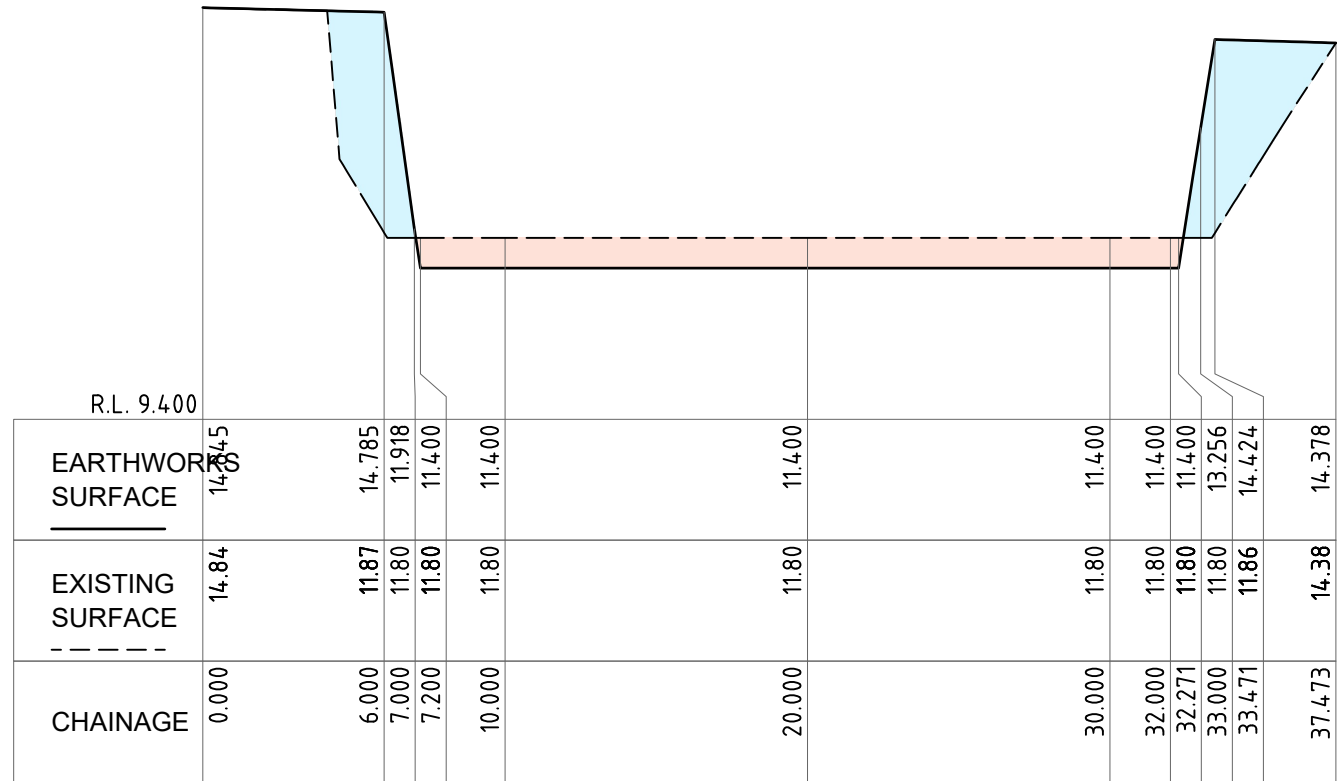
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25152.DA.C04		
Sheet No		
04 of 27		
Scale		
1:250 @ A1		
Date	Rev	
03.11.25	F	A1

LEGEND

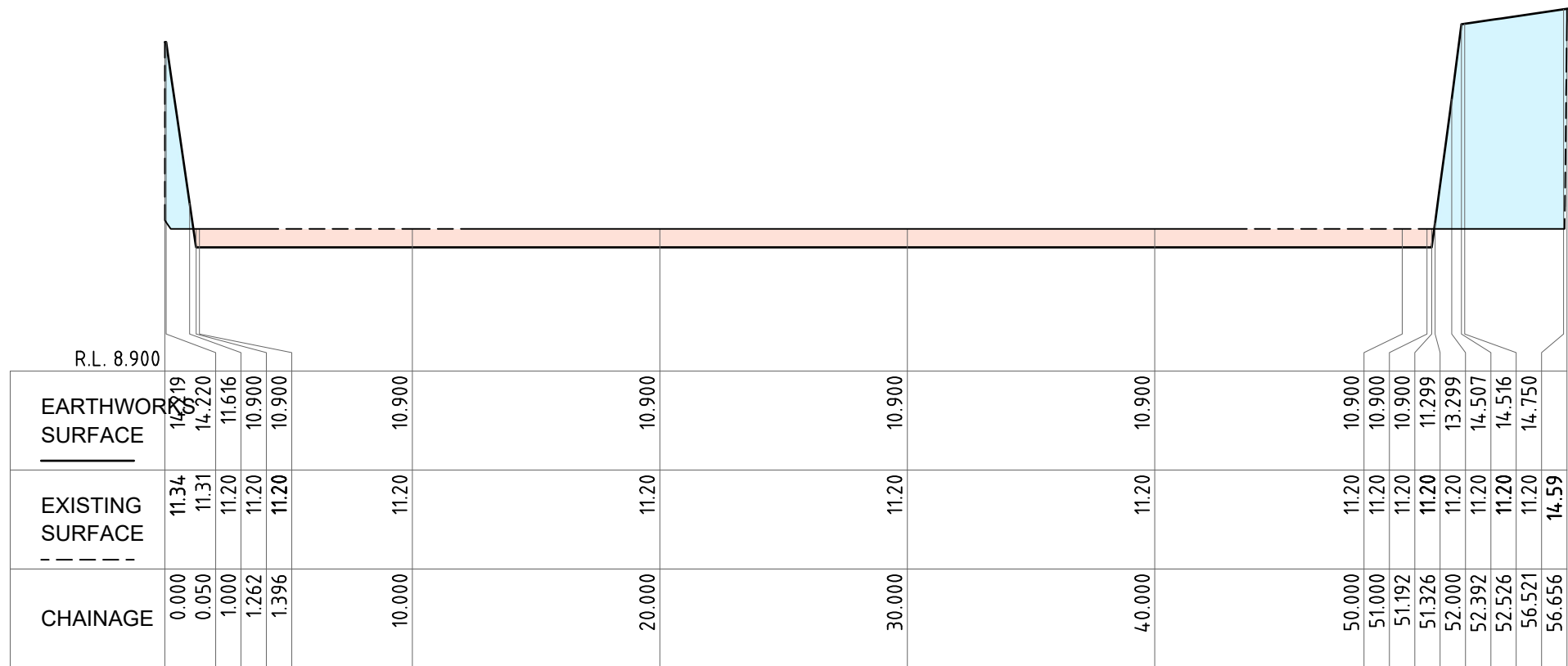
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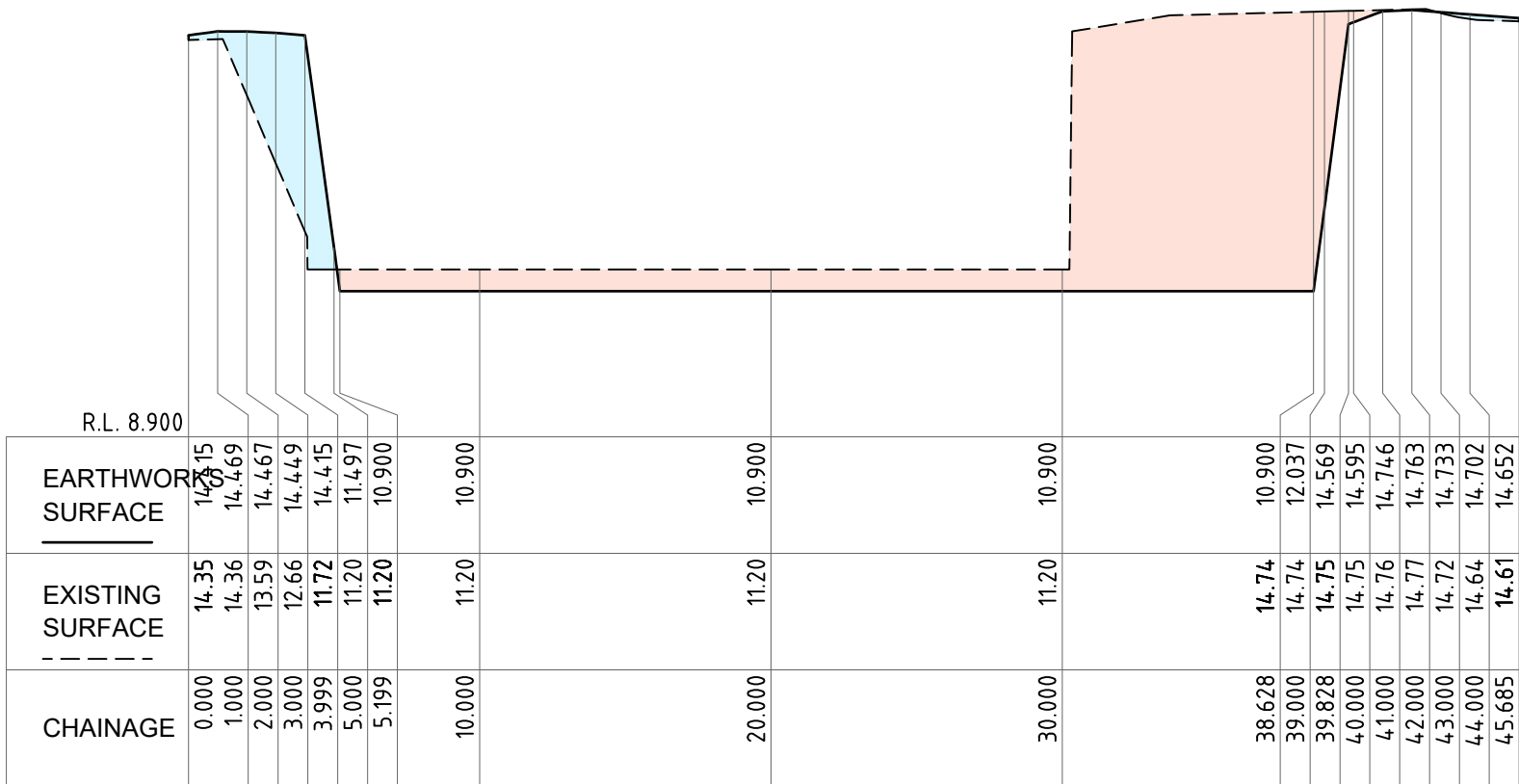
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Section A-A Ch 0.000 to Ch 62.175
SCALES: HORIZONTAL 1:250 VERTICAL 1:100



LONGITUDINAL SECTION
Section 1-1 Ch 0.000 to Ch 37.473
SCALES: HORIZONTAL 1:250 VERTICAL 1:100



LONGITUDINAL SECTION
Section B-B Ch 0.000 to Ch 56.656
SCALES: HORIZONTAL 1:250 VERTICAL 1:100



LONGITUDINAL SECTION
Section 2-2 Ch 0.000 to Ch 45.685
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

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REVISIONS

No.	DESCRIPTION
B	ADJUSTED PITS FOR B2.1 & B2.2
C	REVISED TO UPDATED ARCH
D	REVISED TO UPDATED ARCH
E	REVISED EXISTING SURFACE
F	SUBSTATION EASEMENT

DRN	APP	DATE
I.B.	A.C.	19.09.25
I.B.	A.C.	26.09.25
I.B.	A.C.	14.10.25
I.B.	A.C.	03.11.25
I.B.	a.c.	03.11.25

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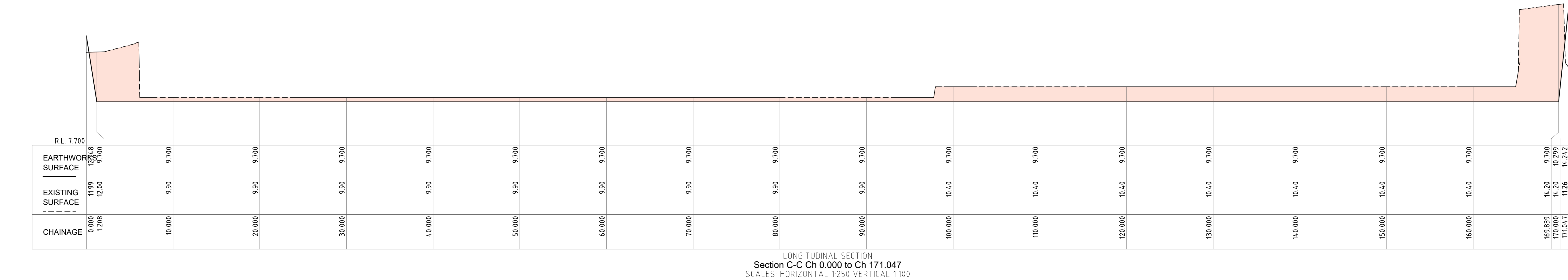
WOLLONGONG - HEAD OFFICE
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E info@siteplus.com.au

Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title	
LEGACY PROPERTY GROUP	
C/-	
CHESTER PROJECT MANAGEMENT	
Dwg Status	APPROVAL
Local Authority	WOLLONGONG

Dwg Title	
PROPOSED RESIDENTIAL DEVELOPMENT	
27 RAILWAY STREET, CORRIMAL	
SITE SECTIONS 2	

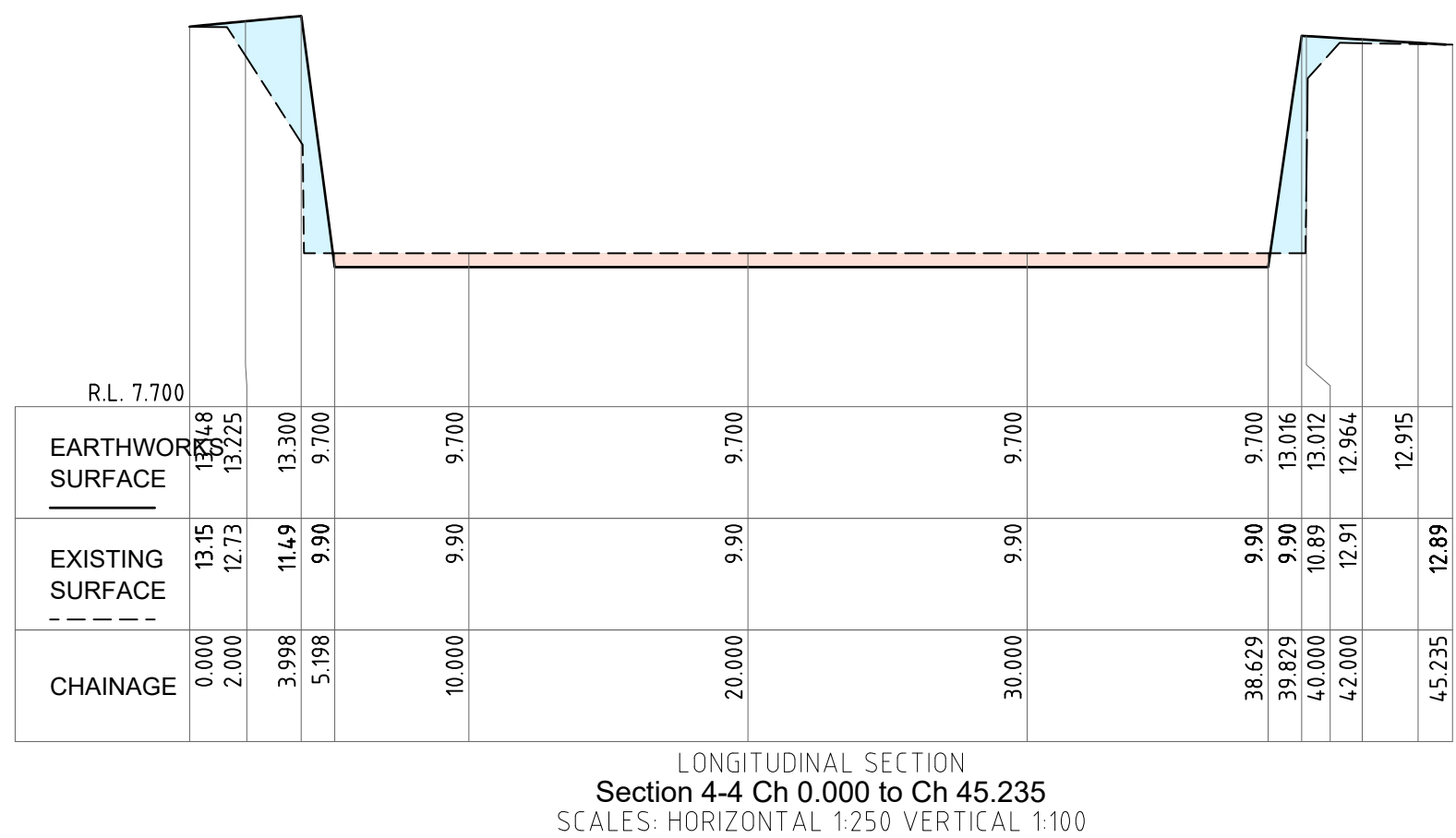
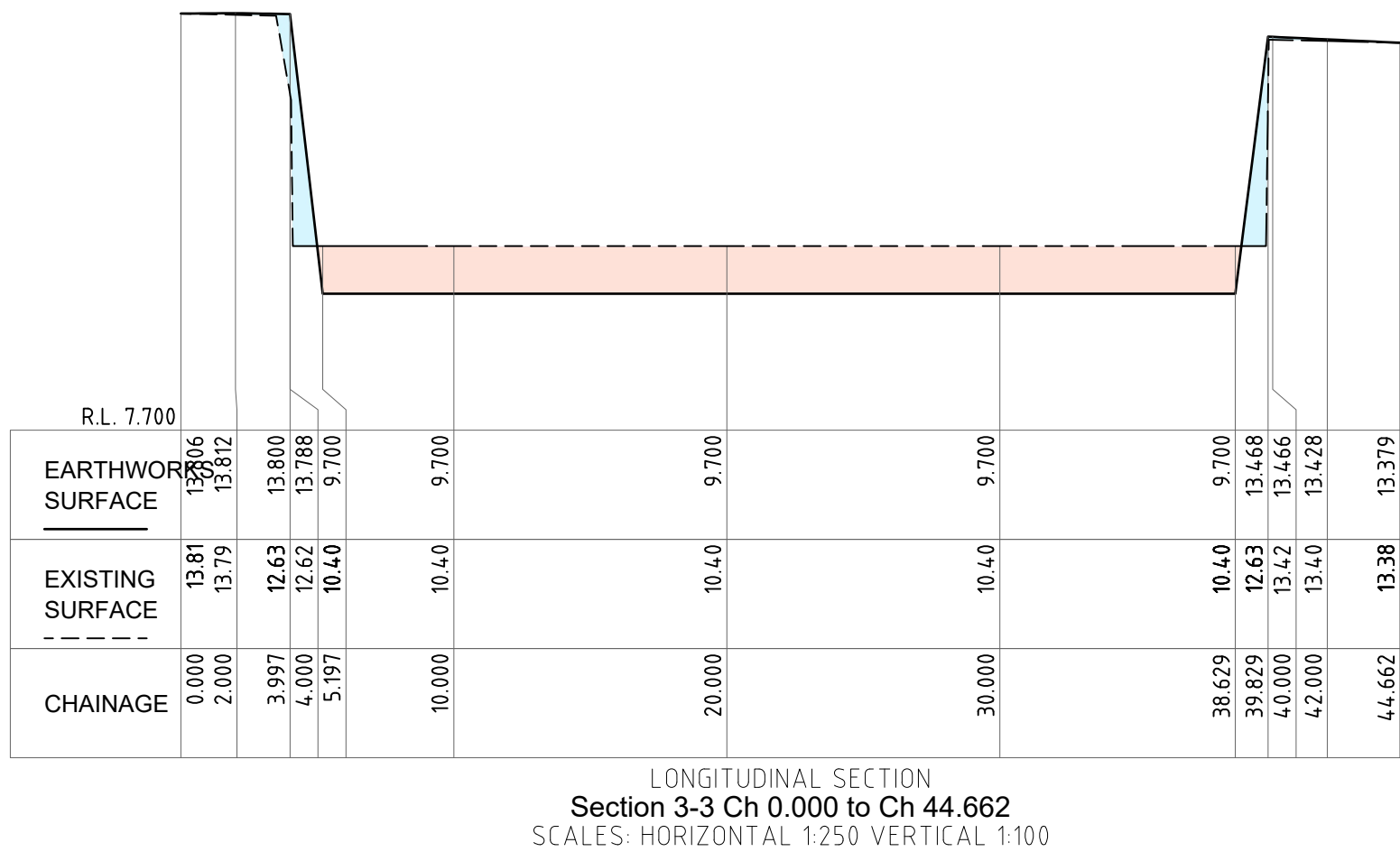
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Sheet No	05 of 27
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Date	03.11.25
Rev	F
	A1



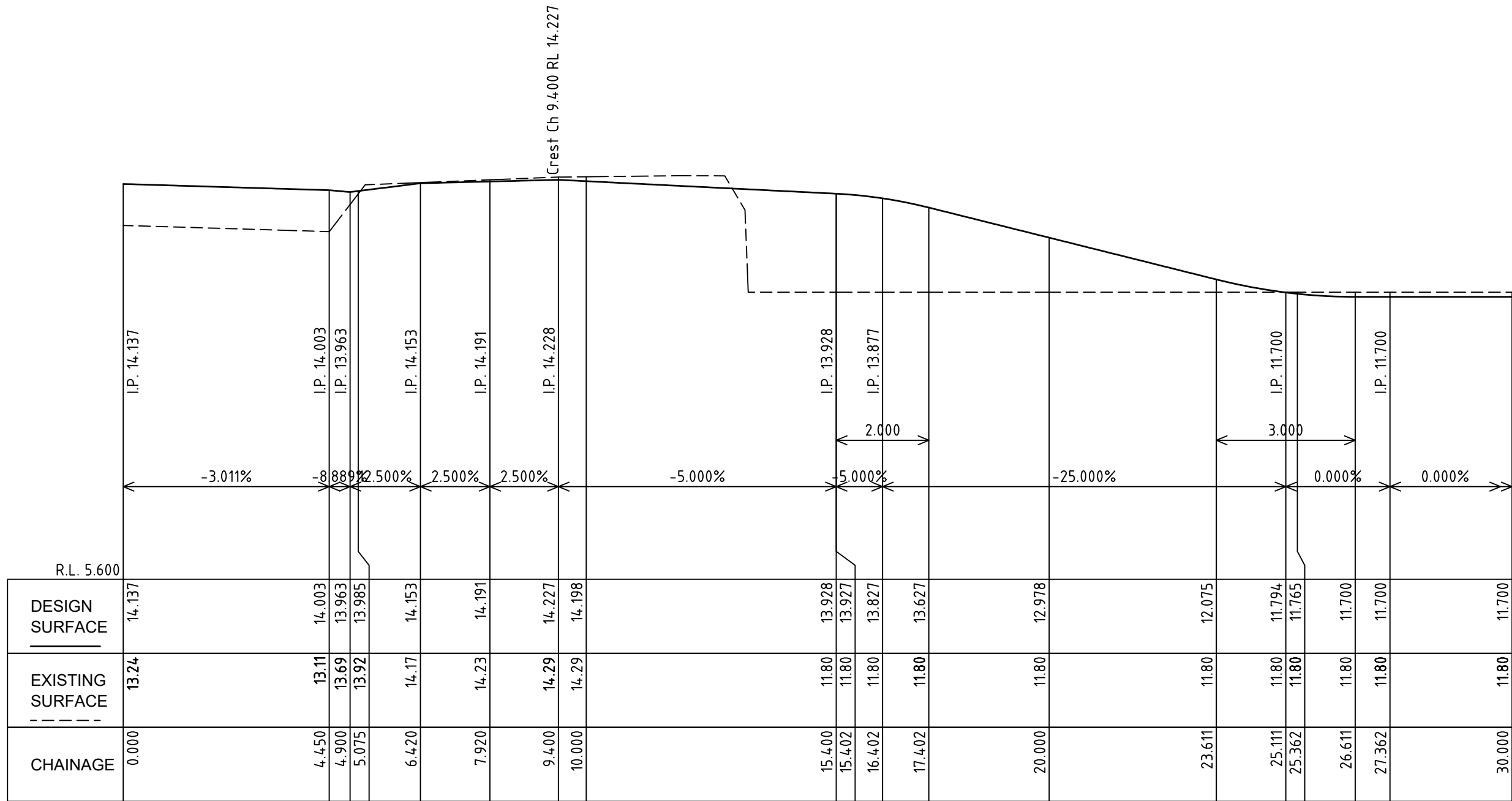
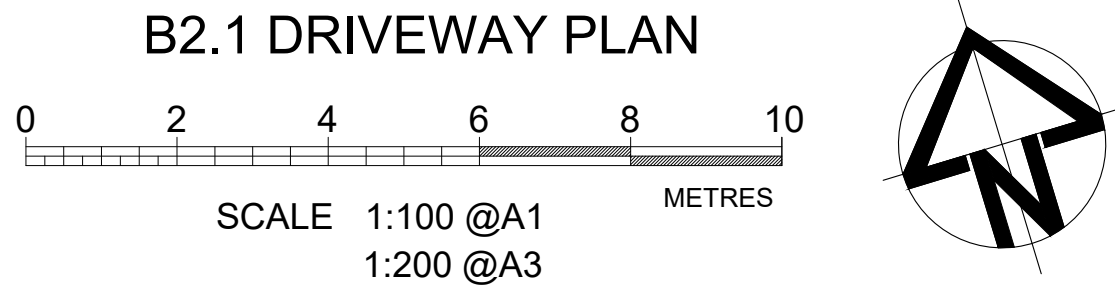
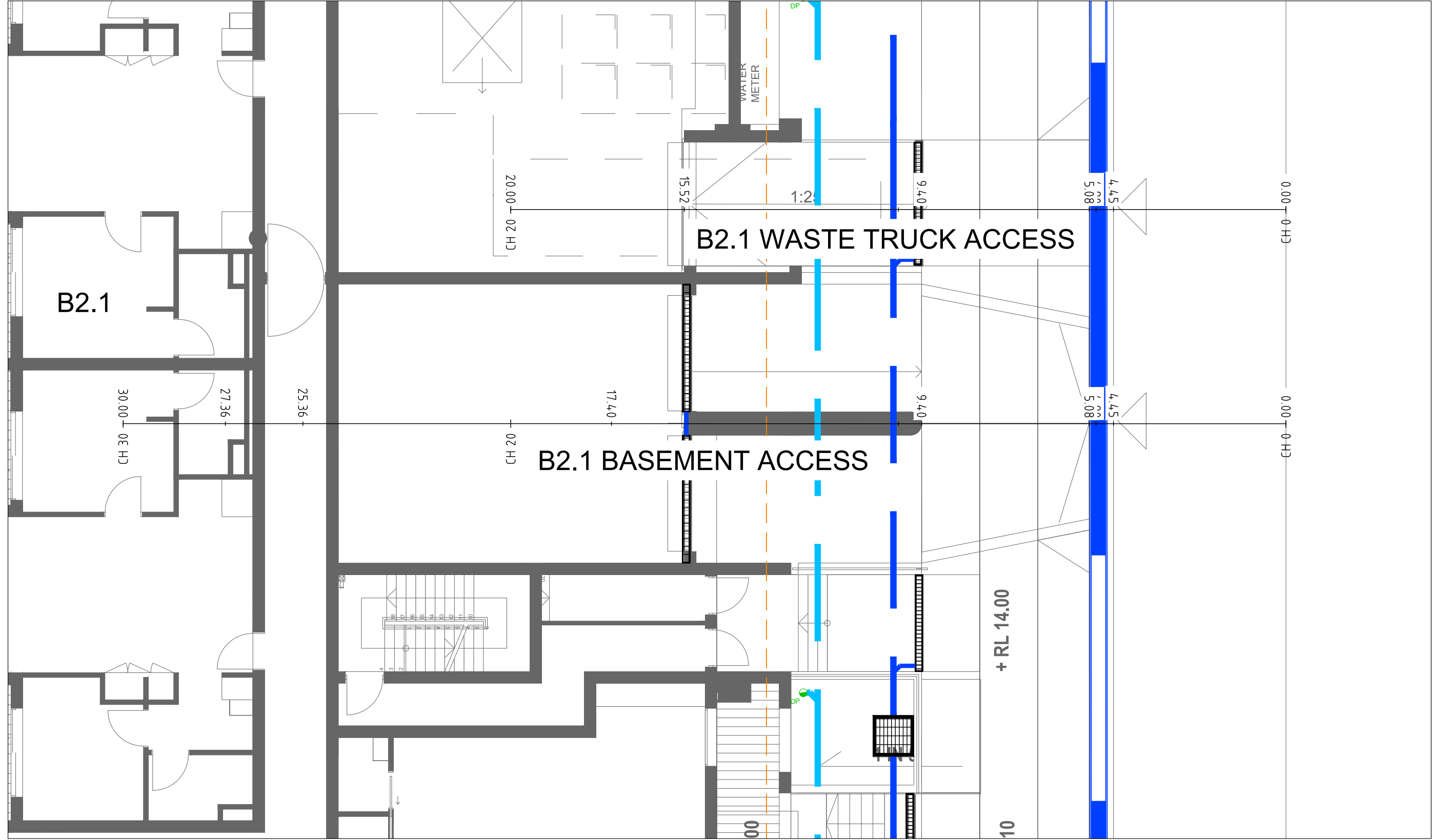
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PROPOSED CUT.

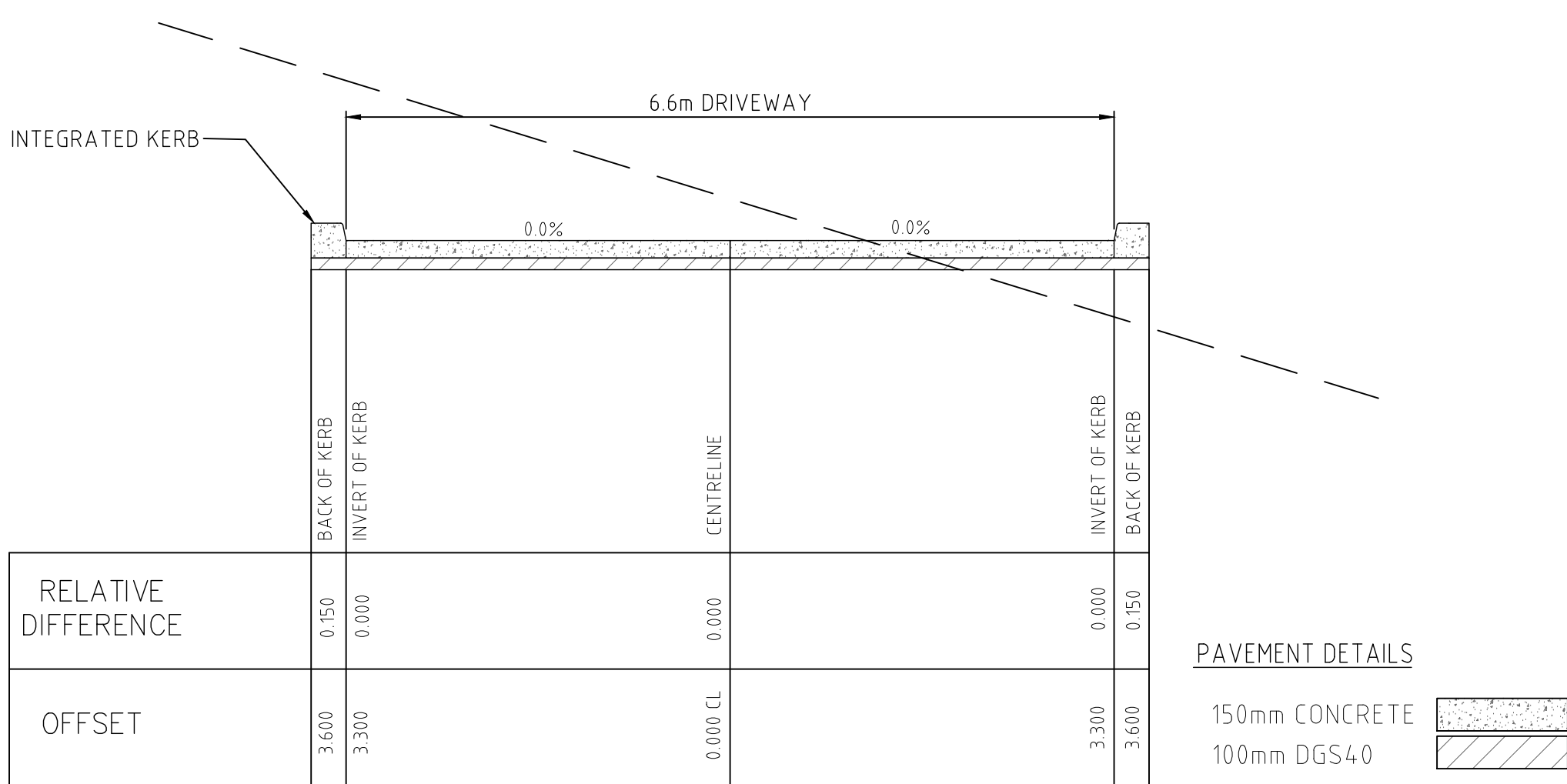
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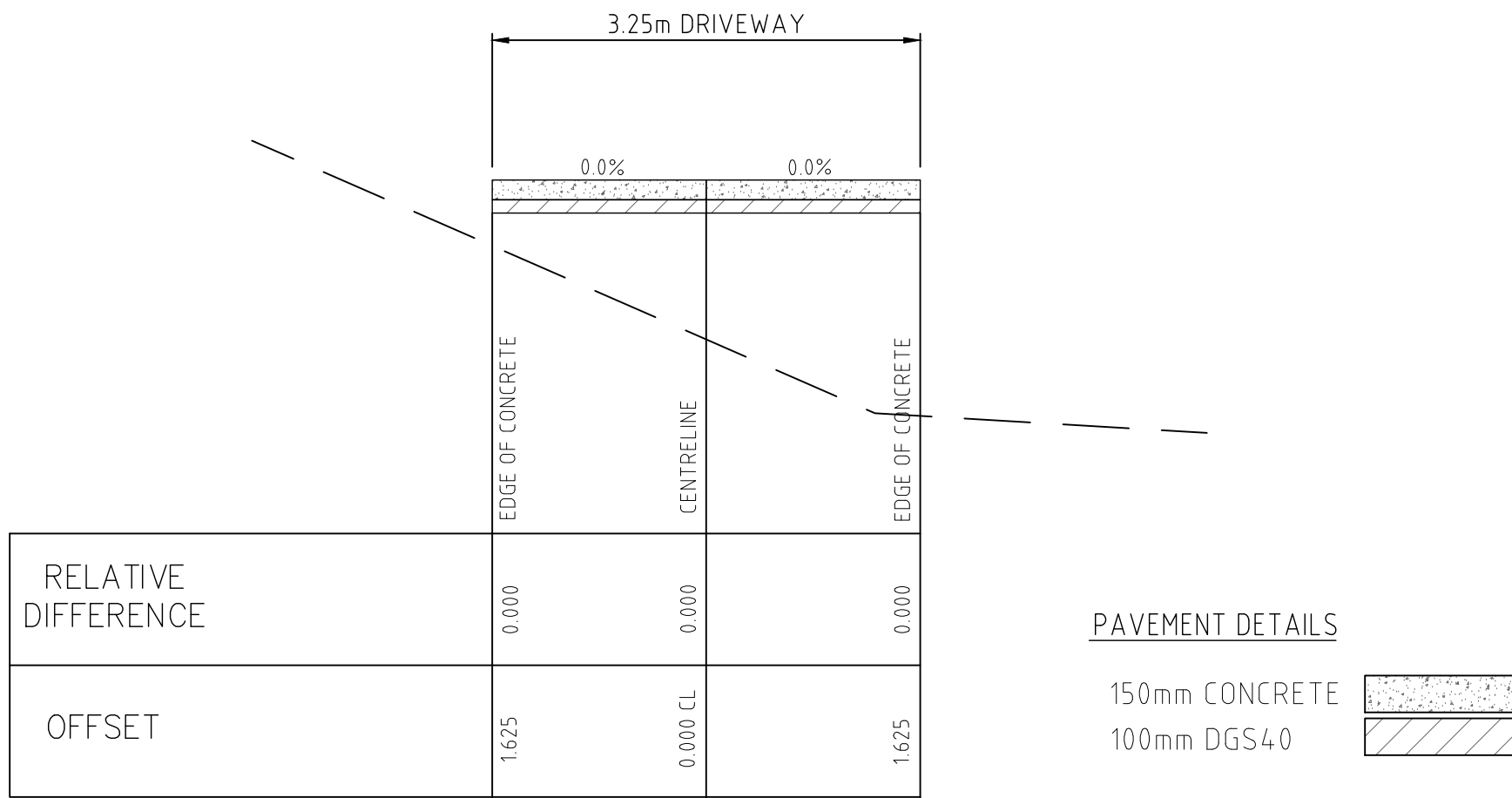
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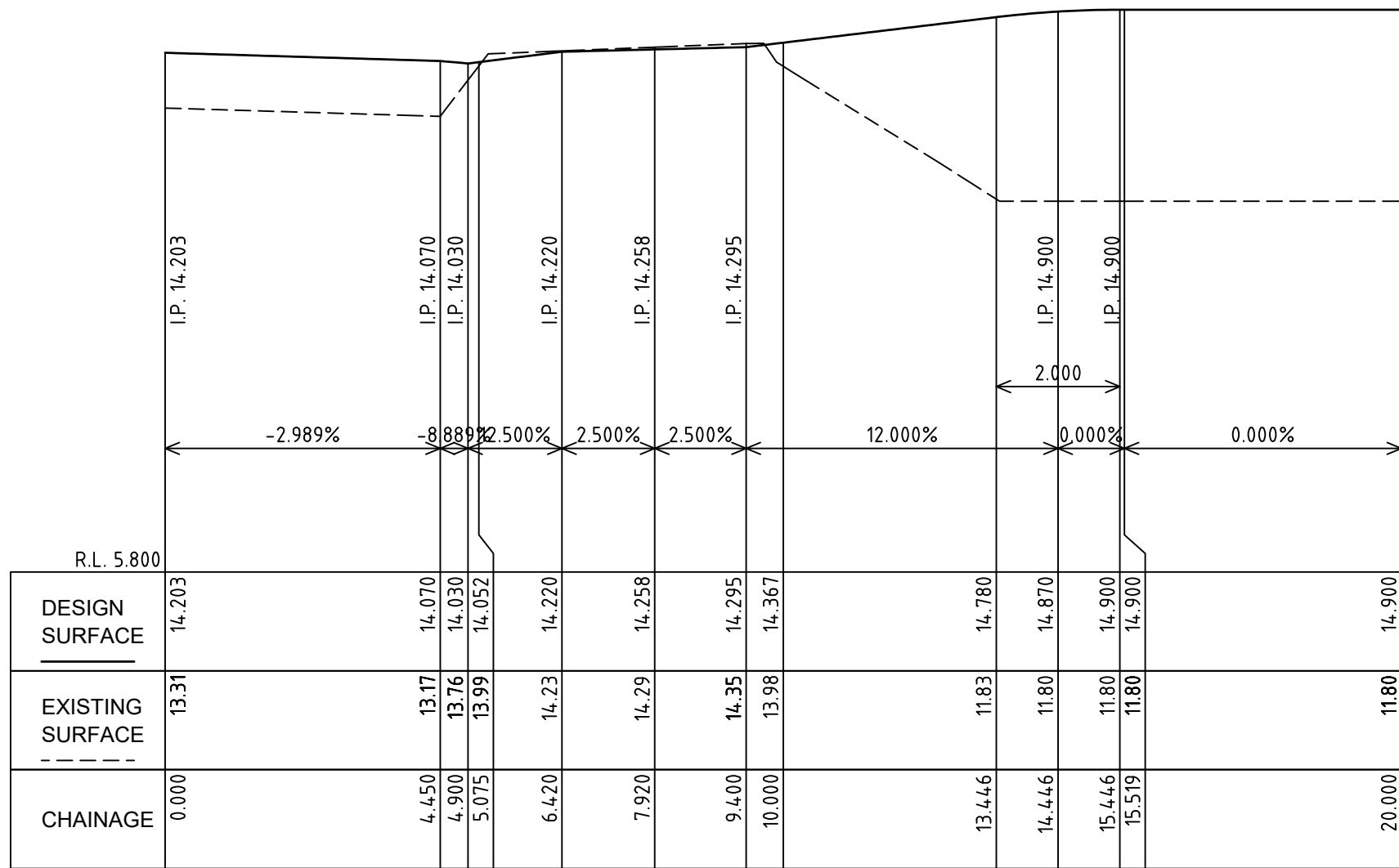
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SCALES: HORIZONTAL 1:100 VERTICAL 1:100



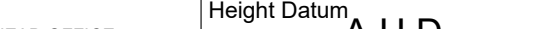
B2.1 BASEMENT ACCESS
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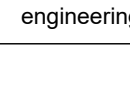


B2.1 WASTE TRUCK ACCESS
TYPICAL CROSS SECTION
SCALE 1:50



LONGITUDINAL SECTION
CL B2.1 Truck Access Ch 0.000 to Ch 20.000
SCALES: HORIZONTAL 1:100 VERTICAL 1:100

REVISIONS	No.	DESCRIPTION			DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095					WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 500 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au					Height Datum A.H.D.		Client Title LEGACY PROPERTY GROUP		Dwg Title PROPOSED RESIDENTIAL DEVELOPMENT		Ref & Dwg No 25152.DA.C06	
	B	ADJUSTED PITS FOR B2.1 & B2.2			I.B.	A.C.	19.09.25						Drawn I.B.		C/- CHESTER PROJECT MANAGEMENT		APPROVAL WOLLONGONG		B2.1 DRIVEWAYS		Sheet No 06 of 27				
	C	REVISED TO UPDATED ARCH			I.B.	A.C.	26.09.25																		
	D	REVISED TO UPDATED ARCH			I.B.	A.C.	14.10.25																		
	E	REVISED EXISTING SURFACE			I.B.	A.C.	03.11.25																		
	F	SUBSTATION EASEMENT			I.B.	a.c.	03.11.25																		
												Approved A.C.		Dwg Status APPROVAL		Local Authority WOLLONGONG				Date 03.11.25		Rev F A1			



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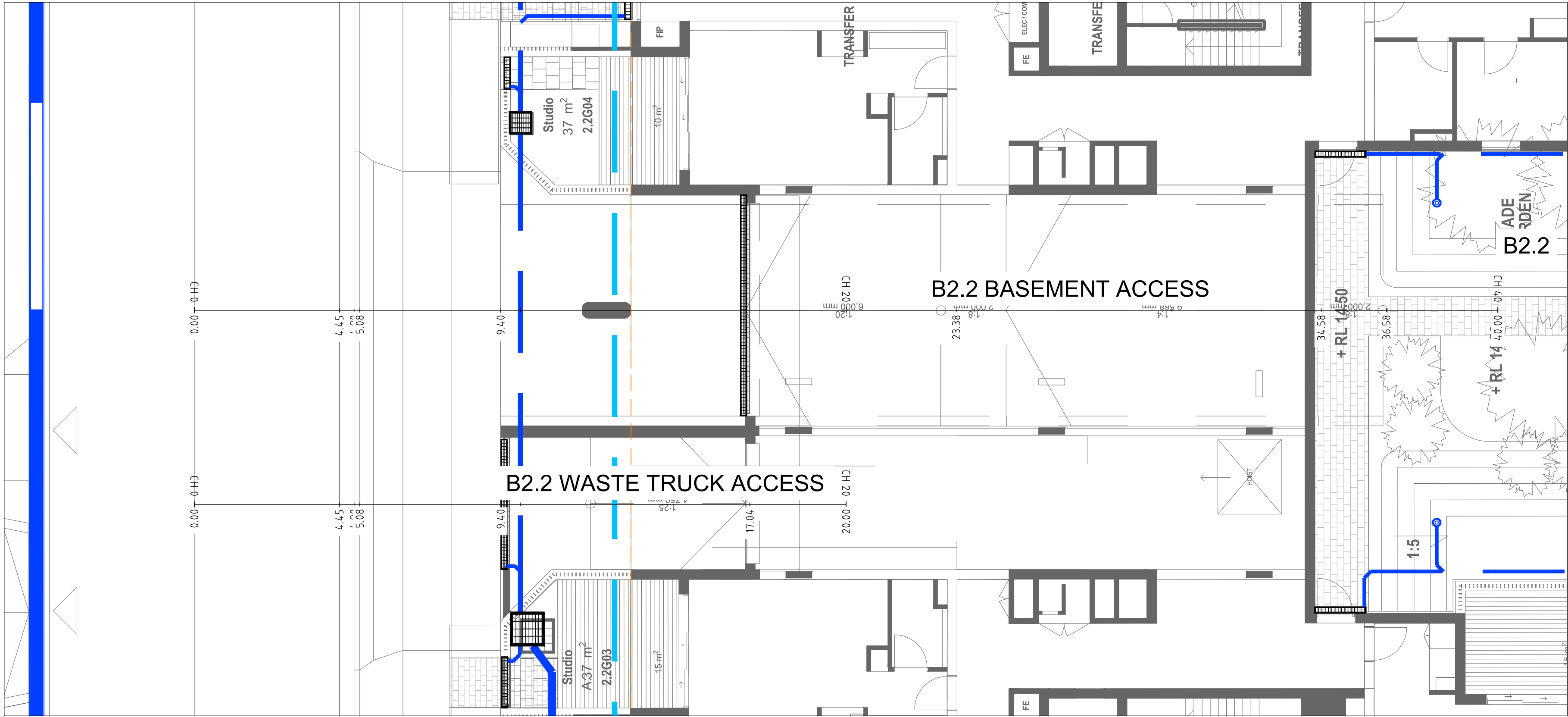
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A.H.D.
Drawn
I.B.
Designed
I.B.
Checked
A.C.
Approved
A.C.

Client Title
LEGACY PROPERTY GROUP
C/-
CHESTER PROJECT MANAGEMENT
Dwg Status
APPROVAL
Local Authority
WOLLONGONG

Dwg Title
PROPOSED RESIDENTIAL DEVELOPMENT
27 RAILWAY STREET, CORRIMAL
B2.1 DRIVEWAYS

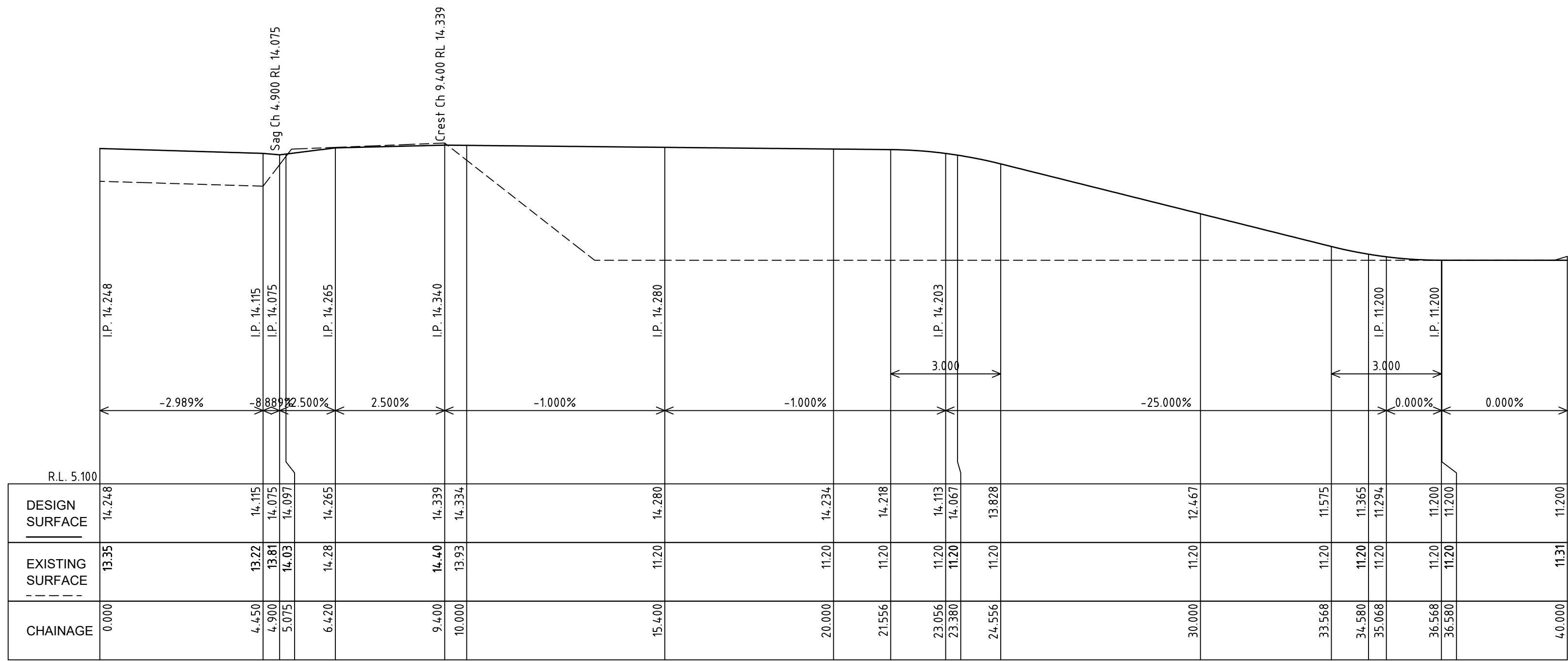
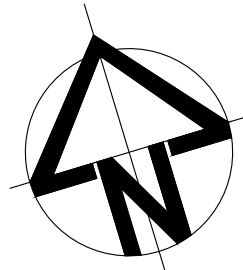
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Sheet No
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Date
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Rev
F
A1

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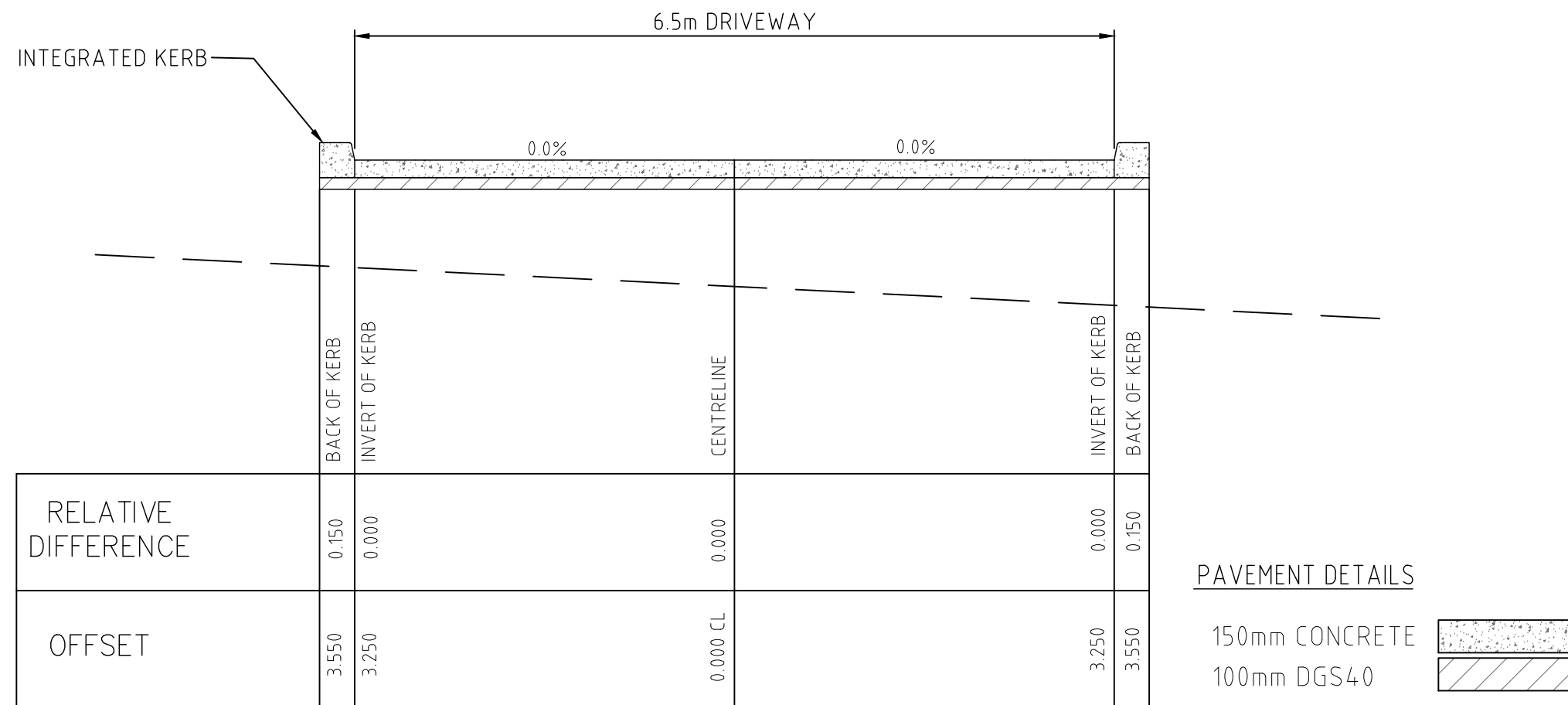


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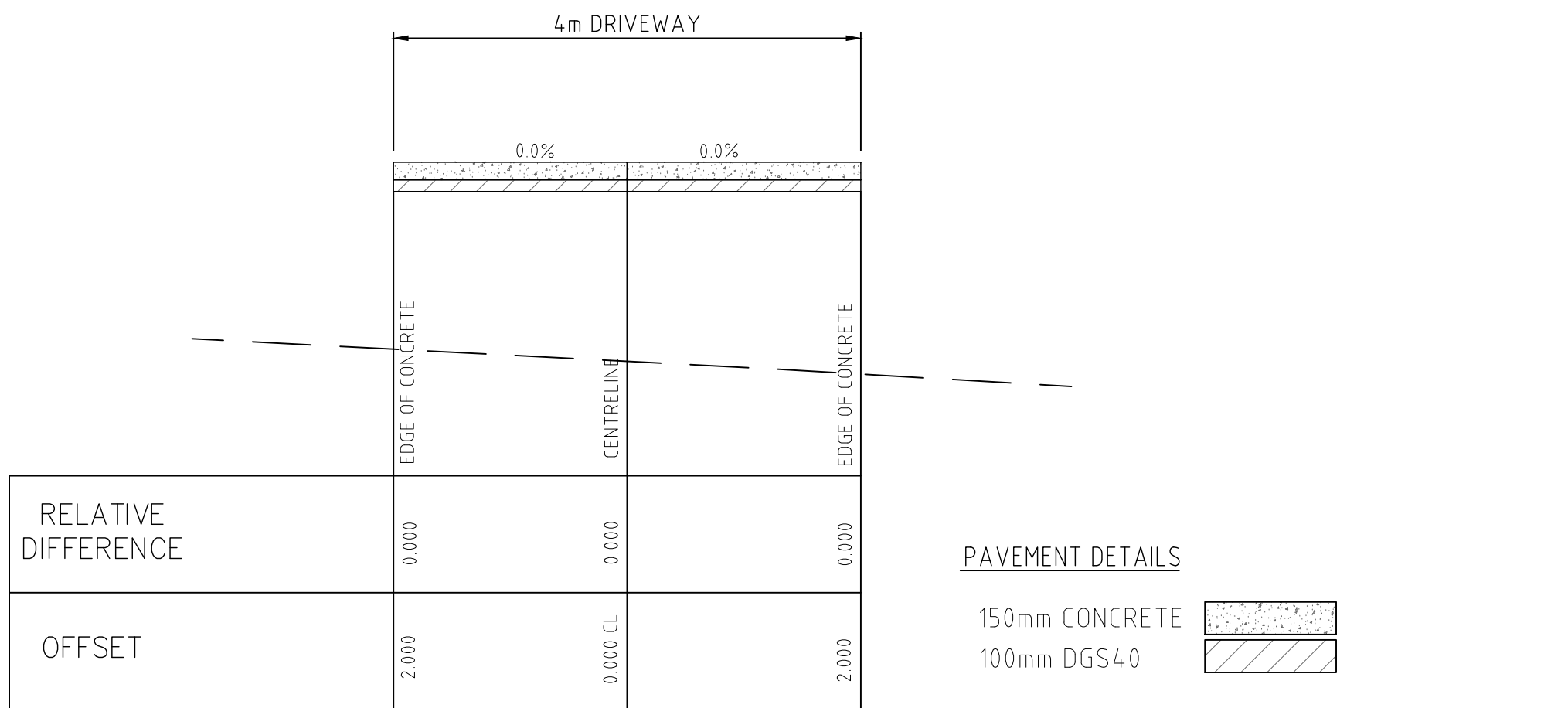
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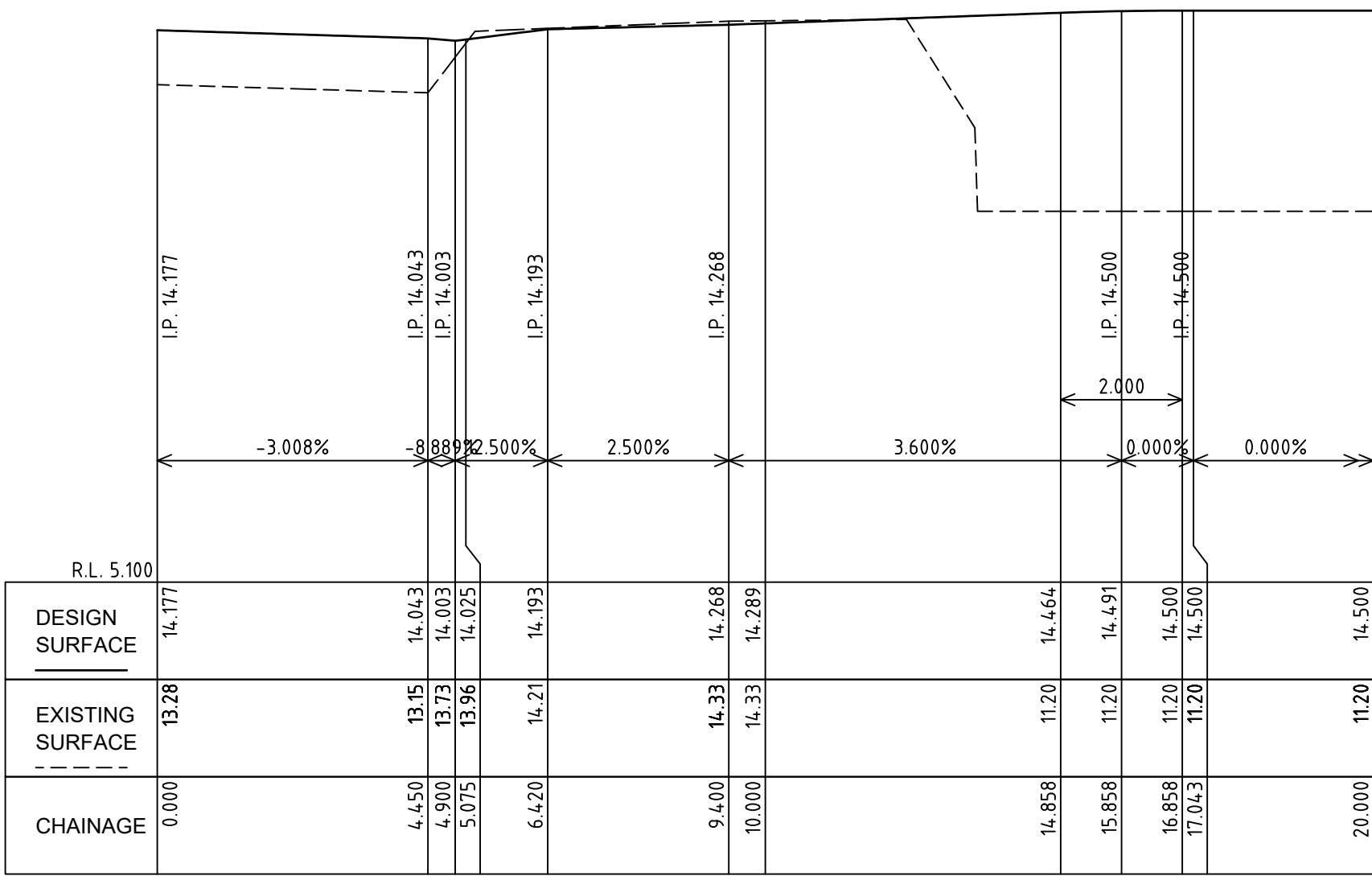
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SCALES: HORIZONTAL 1:100 VERTICAL 1:100



B2.2 BASEMENT ACCESS
TYPICAL CROSS SECTION
SCALE 1:50



B2.2 WASTE TRUCK ACCESS
TYPICAL CROSS SECTION
SCALE 1:50



LONGITUDINAL SECTION
CL B2.2 Truck Access Ch 0.000 to Ch 20.000
SCALES: HORIZONTAL 1:100 VERTICAL 1:100

REVISIONS

No.	DESCRIPTION
B	ADJUSTED PITS FOR B2.1 & B2.2
C	REVISED TO UPDATED ARCH
D	REVISED TO UPDATED ARCH
E	REVISED EXISTING SURFACE
F	SUBSTATION EASEMENT

DRN	APP	DATE
I.B.	A.C.	19.09.25
I.B.	A.C.	26.09.25
I.B.	A.C.	14.10.25
I.B.	A.C.	03.11.25
I.B.	a.c.	03.11.25



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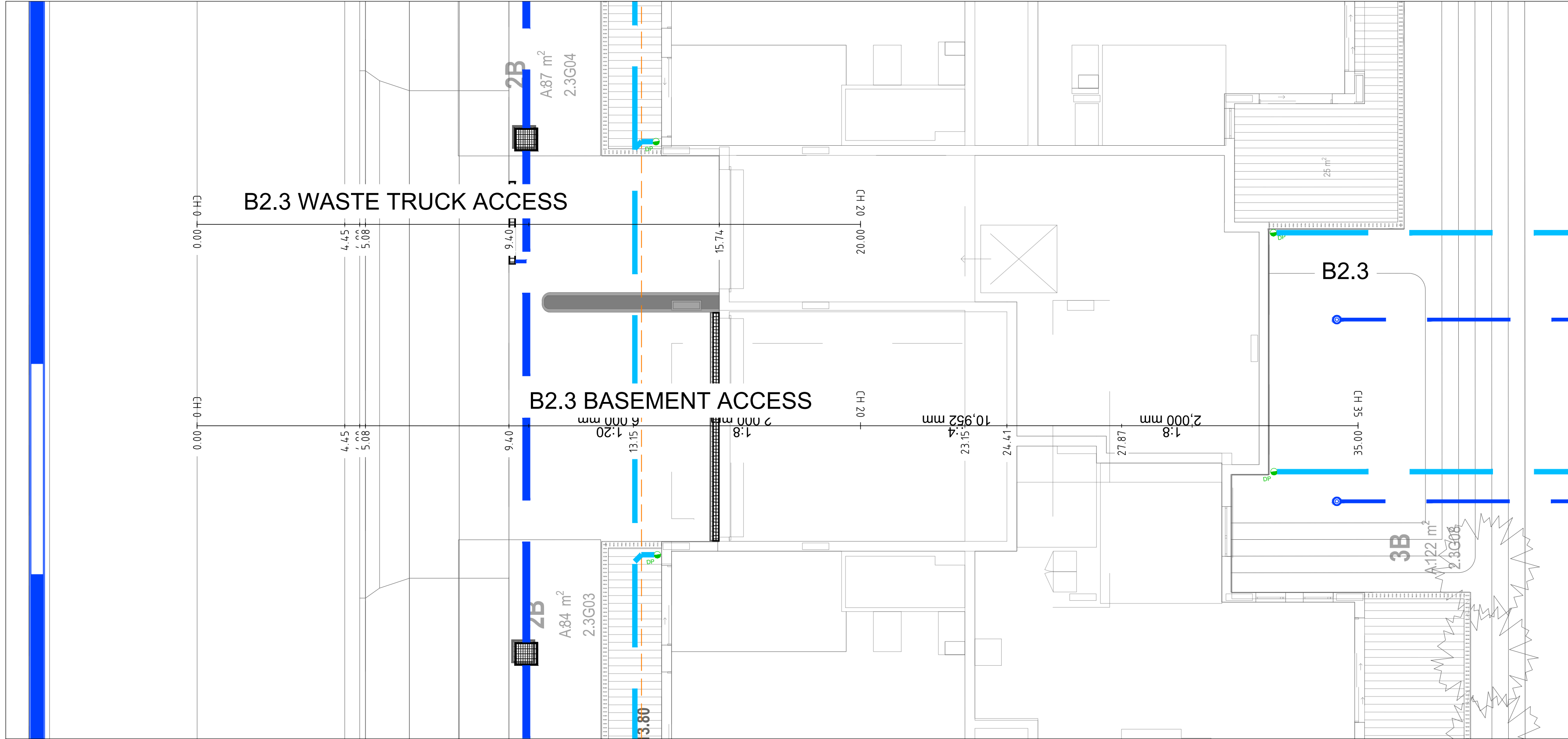
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Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title	LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT
Dwg Status	APPROVAL
Local Authority	WOLLONGONG

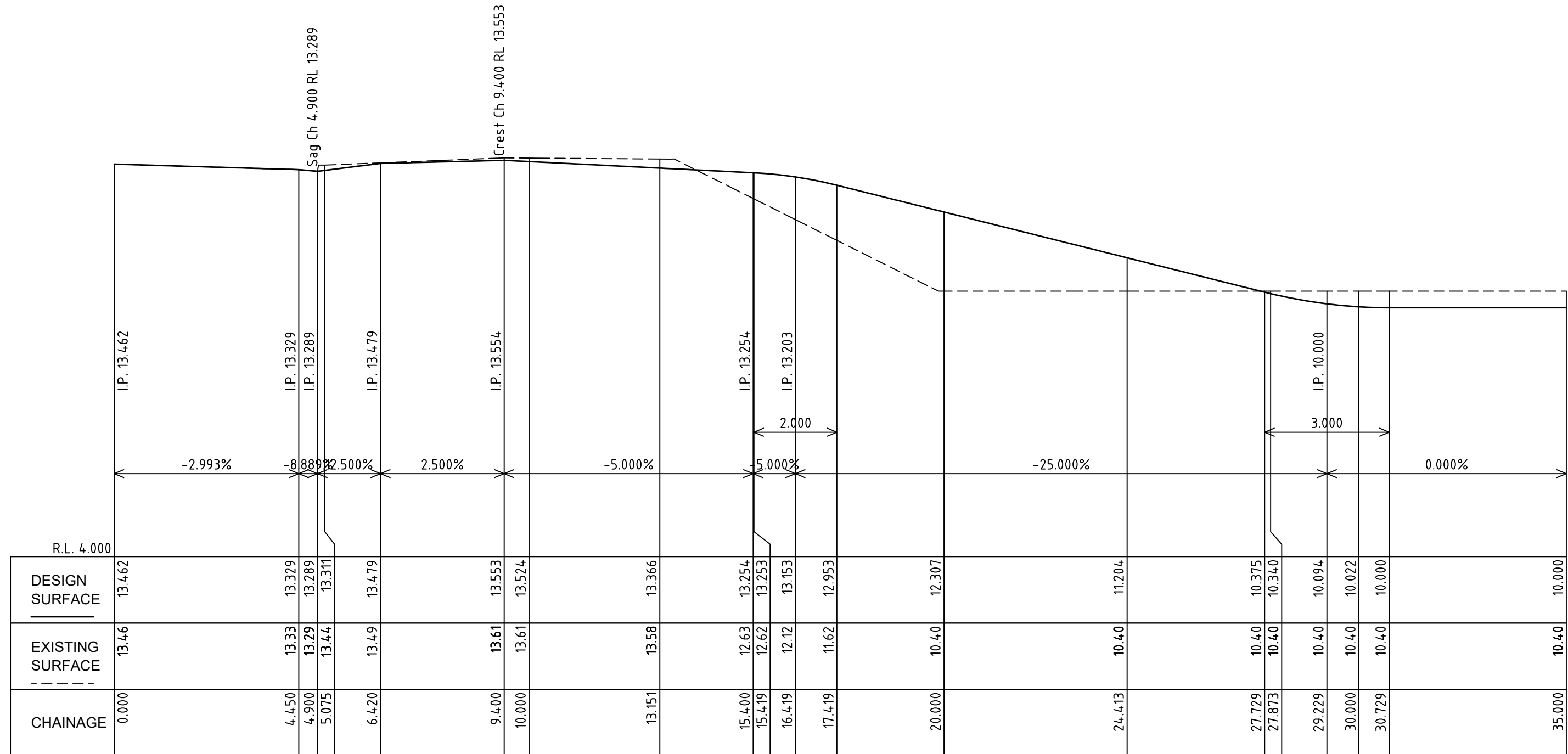
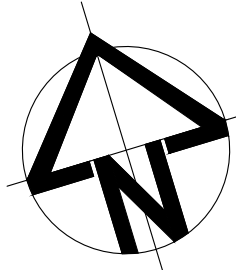
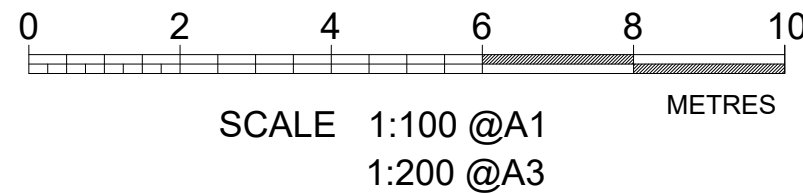
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Scale	AS NOTED @ A1
Date	03.11.25
Rev	F
A1	

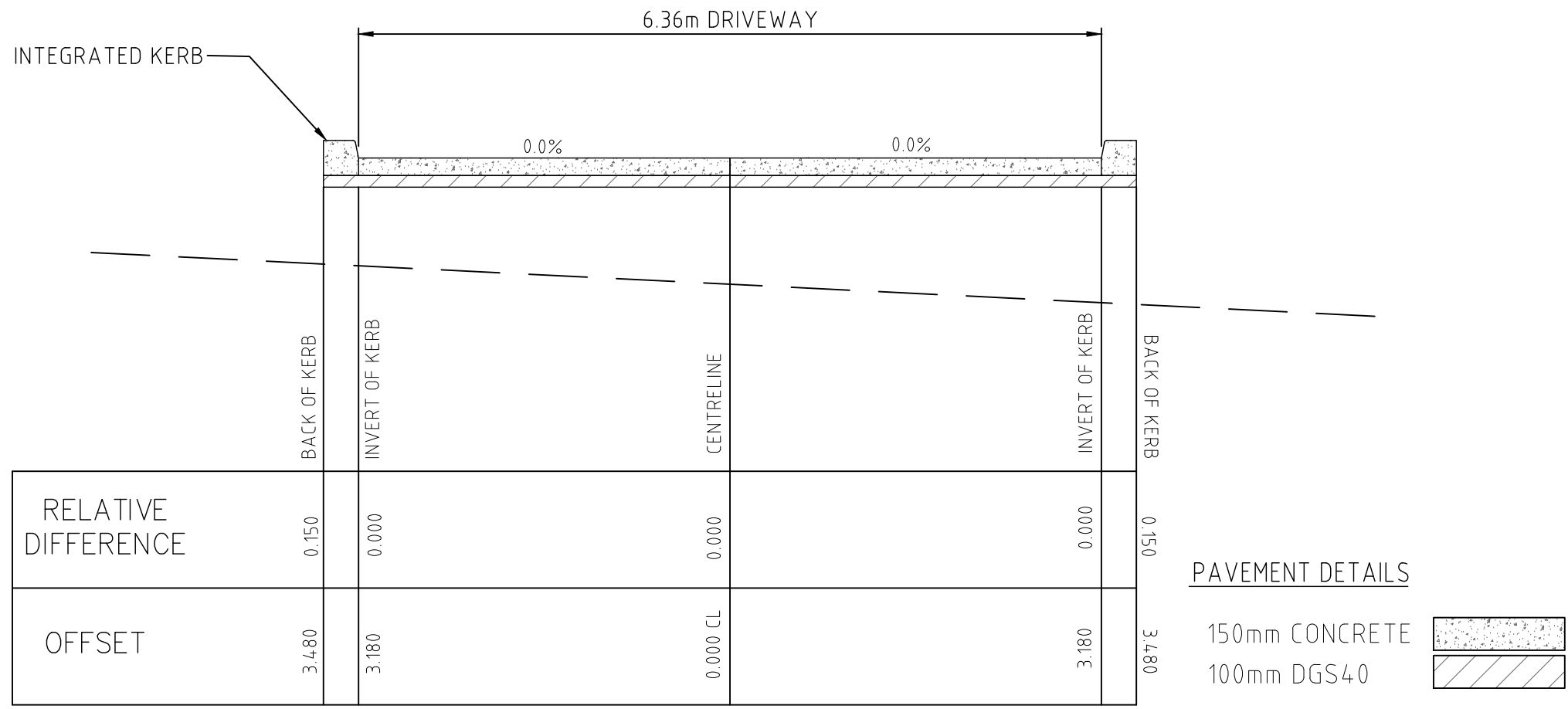
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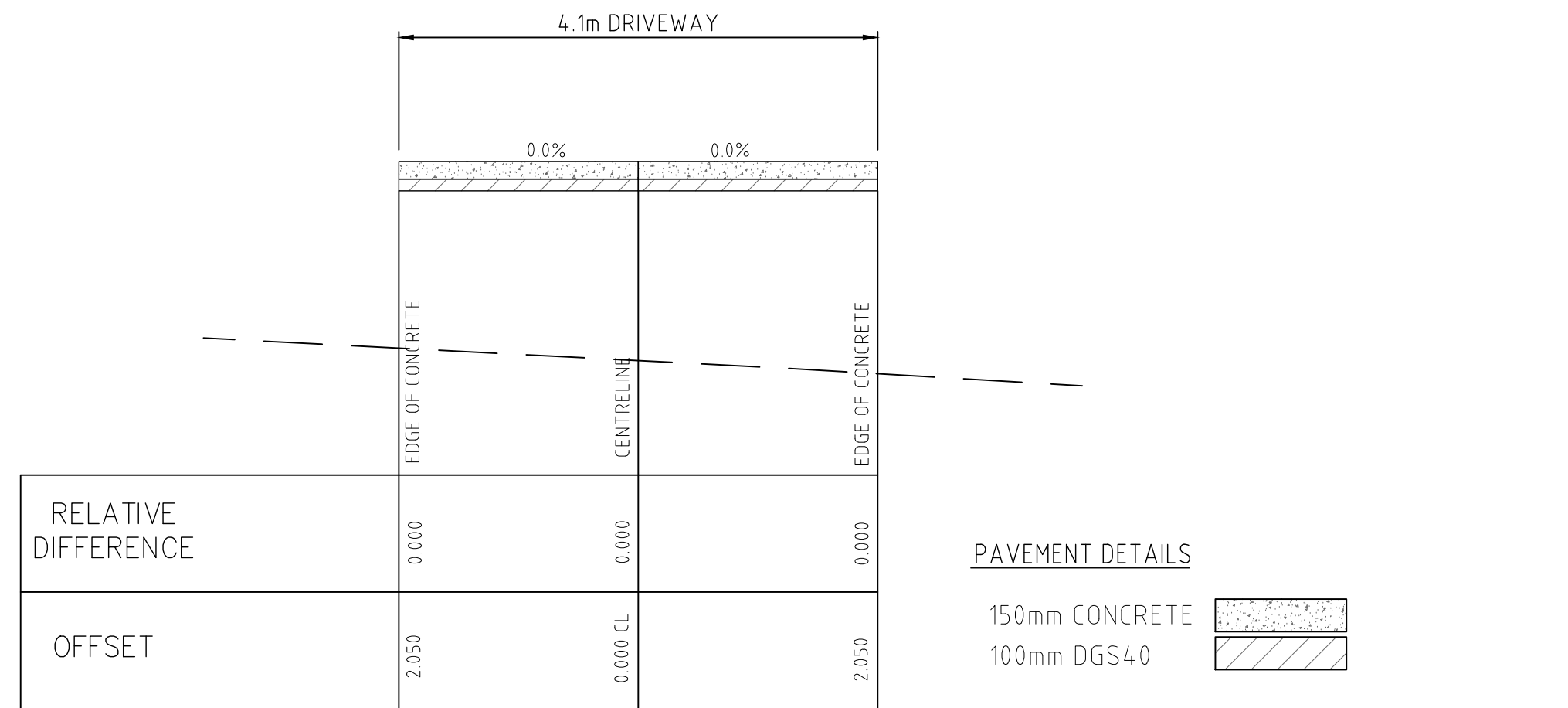
B2.3 DRIVEWAY PLAN



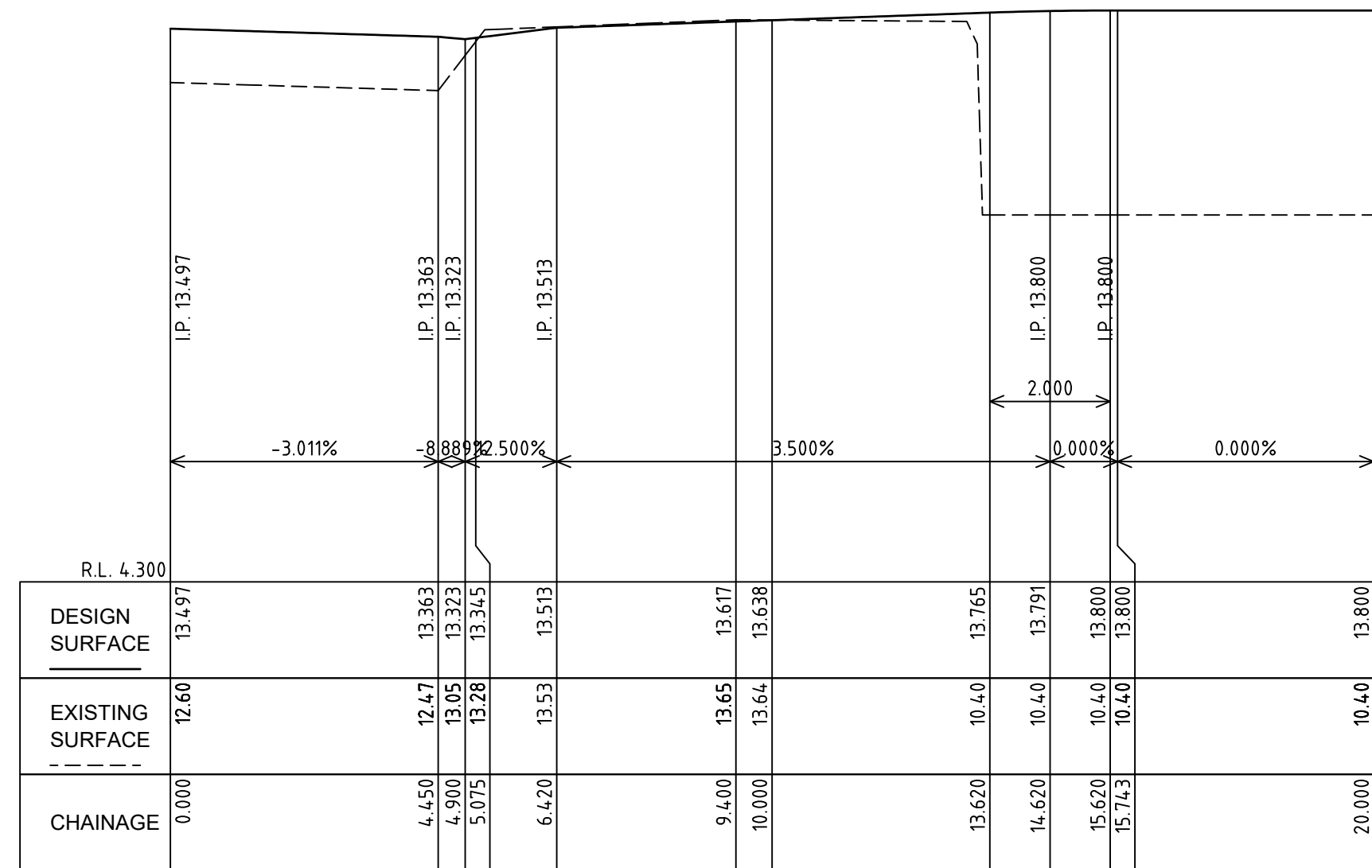
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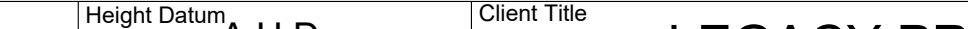
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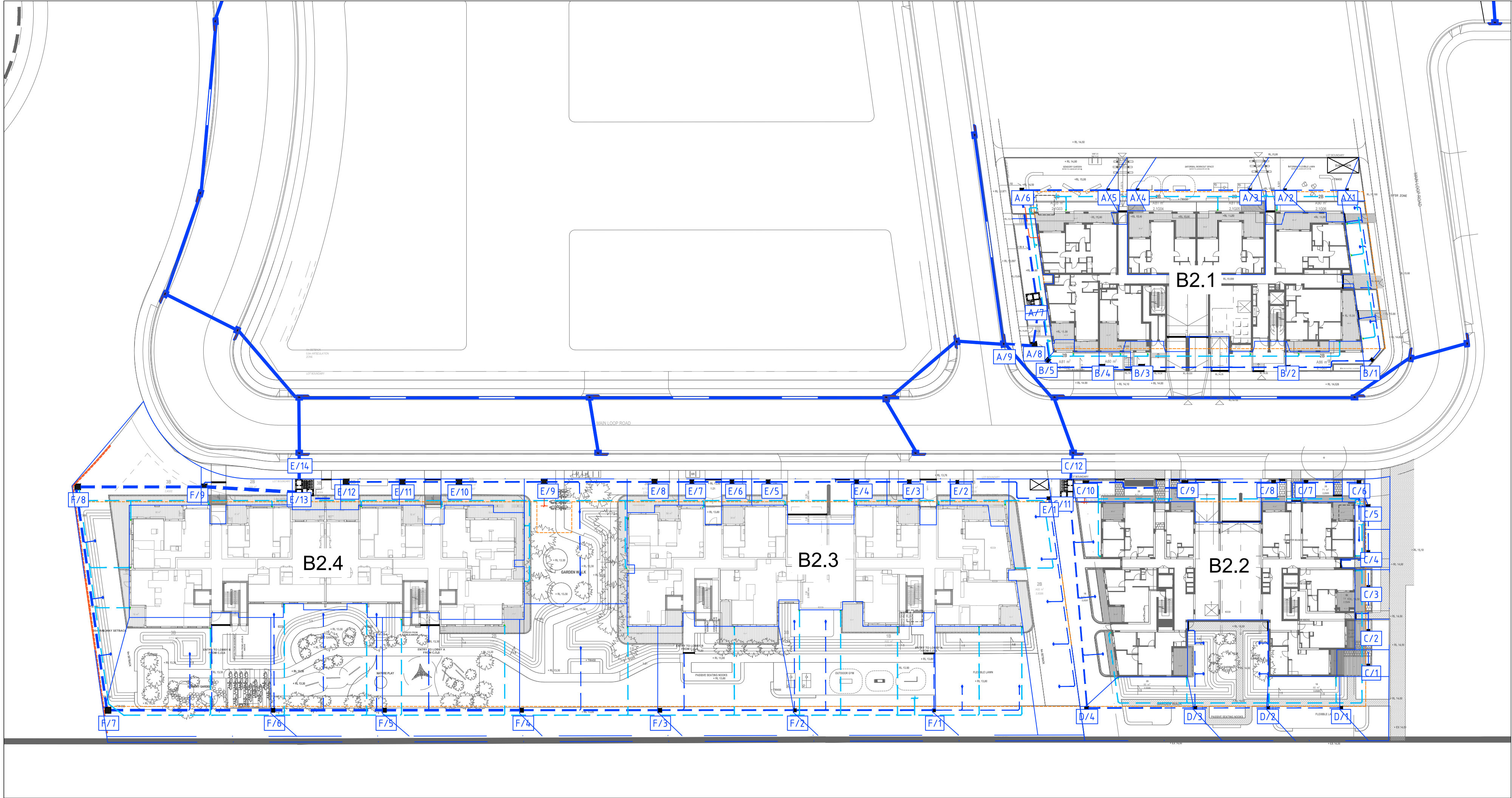


B2.3 WASTE TRUCK ACCESS
TYPICAL CROSS SECTION
SCALE 1:50



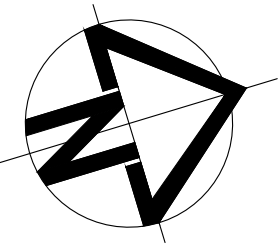
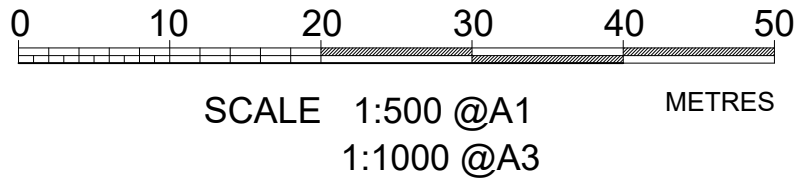
LONGITUDINAL SECTION
CL B2.3 Truck Access Ch 0.000 to Ch 20.000
SCALES: HORIZONTAL 1:100 VERTICAL 1:100

REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 engineering landscape design flooding management	WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4253 F 61 2 4227 4133 E info@siteplus.com.au	Height Datum A.H.D.	Client Title LEGACY PROPERTY GROUP	Dwg Title PROPOSED RESIDENTIAL DEVELOPMENT	Ref & Dwg No 25152.DA.C08		
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25		Drawn I.B.	C/- CHESTER PROJECT MANAGEMENT	Local Authority WOLLONGONG	B2.3 DRIVEWAYS	Date 03.11.25	Rev F	A1
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25		Designed I.B.						
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25		Checked A.C.						
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25		Approved A.C.						
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25								



REFER TO DRAINS MODEL FOR MORE DETAILS

SITE DRAINAGE PLAN



NOTES:

- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH WOLLONGONG CITY COUNCIL'S WORKS AND DRAINAGE SPECIFICATIONS
- THE CONTRACTOR IS TO LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST IF NECESSARY.
- THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJOINING LANDS WITHOUT THE PERMISSION OF THE SUPERINTENDENT.
- ALL NEW WORKS TO MAKE SMOOTH CONNECTION TO EXISTING CONDITIONS.
- ALL PIPES ARE TO BE 100mm U.P.V.C. ON 1% MINIMUM GRADE U.N.O. AND TO HAVE MIN 200mm COVER.
- MINIMUM SLOPE AS PER AS3500.3.2-1998:
DN 100 1.0%,
DN 150 1.0%,
DN 225 0.5%,
DN 375 0.5%
- THE CONTRACTOR IS TO MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
- ALL IMPORTED FILL TO BE USED TO SUPPORT GROUND SLABS TO BE COMPACTED TO A MINIMUM LEVEL OF COMPACTING OF 98% OF MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN +- 2% OF OPTIMUM (AS1289.5.1.1)
- ALL DOWNPIPES ARE SHOWN DIAGRAMMATICALLY. POSITION OF DOWNPIPES ARE TO BE CONFIRMED ON SITE USING THE WORKING DRAWINGS.
- THE CONTRACTOR IS TO LOCATE AND LEVEL ALL EXISTING DRAINAGE PITS AND PIPES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND THE CONSTRUCTION IS TO COMMENCE FROM THE DOWNSTREAM PIT AND STRUCTURES.

ALL DRAINAGE LINES ARE TO BE A MINIMUM OF $\phi 100\text{mm}$ @ 1% UNLESS NOTED OTHERWISE.

ALL PIPES AND GUTTERS SIZED FOR STORM EVENTS UP TO AND INCLUDING THE 10YR ARI. ALL PIPES TO BE $\phi 100\text{mm}$ SEWER GRADE uPVC U.N.O.

SERVICES SHOWN ARE INDICATIVE ONLY. CONTRACTOR SHALL CONFIRM ALL SERVICE LOCATIONS AND DEPTH PRIOR TO EXCAVATION.

ALL DRAINAGE LINES, BENDS AND PITS ARE TO BE SEALED.

ALL PITS TO HAVE HEELGUARD GRATES OR SIMILAR

LEGEND PROPOSED

- STORMWATER PIPE
- CHARGED PIPES
- 200mm GRATED DRAIN
- GRATED PIT
- JUNCTION PIT
- KERB INLET PIT
- BASEMENT OUTLINE
- DESIGN SPOT LEVEL
- CONTOURS
- KERB ONLY
- TRUFLO RWO (DETAILS BELOW)
- DOWNPIPE

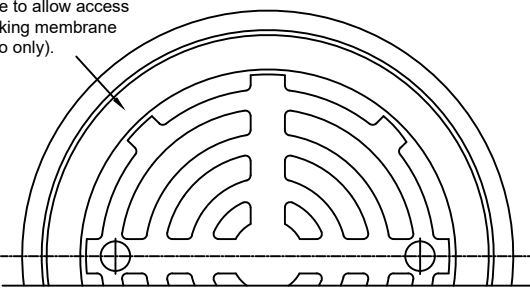
LEGEND EXISTING

- STORMWATER PIPE
- STORMWATER PIT
- KERB INLET PIT
- WATER LINE
- SEWER LINE
- TELSTRAL LINE
- EXISTING SPOT LEVEL
- EXISTING 100mm CONTOURS
- GAS LINE
- ELECTRICAL LINE

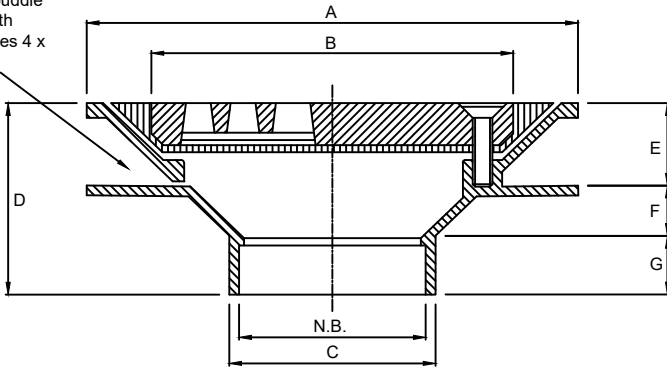
SPS Truflo & Superflo Flat Grate RWO
(With Membrane Clamping Ring)

Specification code:
TIA * F2 (CI body, gal. CI flat grate & aluminum membrane ring)
TIB * F2 (CI body, bronze flat grate & bronze membrane ring)
TBA * F2 (all-bronze assembly)
where * = 80, 100 or 150 n.b.
SIA150F2 (Superflo all-cast iron assembly 150 outlet only)

Membrane ring fastens to body independently of grate to allow access to sump without breaking membrane seal (100 & 150 Truflo only).



Integral puddle flange with weep holes 4 x places.

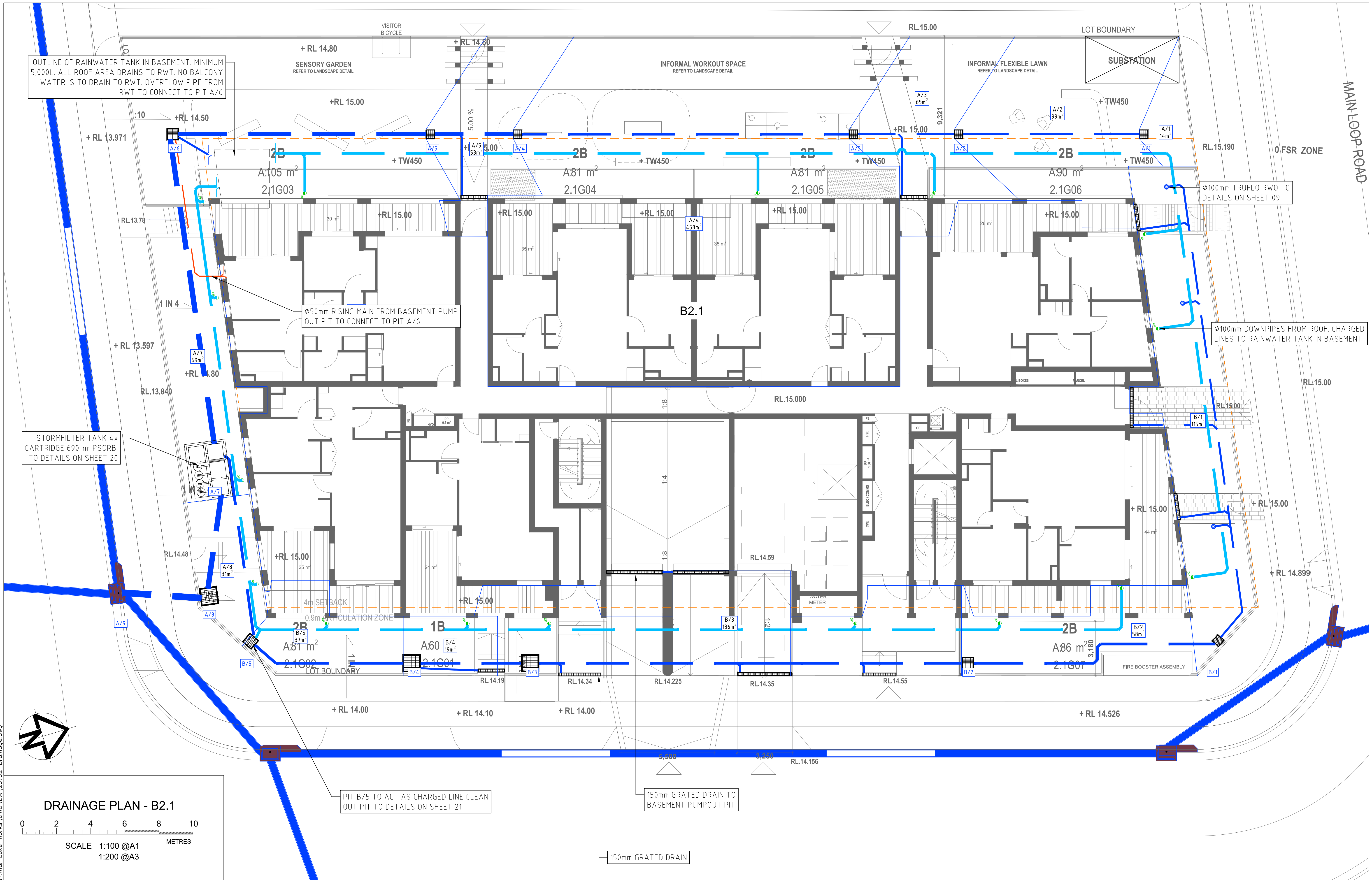


N.B.	A	B	C	D	E	F	G	Flow rate L/S
80	200	150	85	80	33	22	25	
100	260	200	110	95	44	26	25	8.2
150	260	200	160	80	48	4	28	10.2
SUPERFLO**	400	300	160	143	66	39	38	17

Speciality Plumbing Supplies Pty Ltd
Tel: (02) 9416 8031 Fax: (02) 9416 7614 E-mail: sps@bigpond.net.au

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REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095 	WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au	Height Datum	A.H.D.	Client Title LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT	Dwg Title PROPOSED RESIDENTIAL DEVELOPMENT 27 RAILWAY STREET, CORRIMAL SITE DRAINAGE PLAN	Ref & Dwg No 25152.DA.C09			
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25			Drawn	I.B.						
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25			Designed	I.B.						
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25			Checked	A.C.						
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25			Approved	A.C.						
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25			Sheet	09 of 27						
						Scale		1:500 @ A1		Date		Rev	A1		
								Dwg Status		APPROVAL		Local Authority		WOLLONGONG	



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REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
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C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25

siteplus
Site Plus Pty Ltd ABN 73 104 315 095

engineering landscape design flooding management

WOLLONGONG - HEAD OFFICE
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F 61 2 4227 4133
E info@siteplus.com.au

Height Datum
A.H.D.
Drawn
I.B.
Designed
I.B.
Checked
A.C.
Approved
A.C.

Client Title
LEGACY PROPERTY GROUP
C/-
CHESTER PROJECT MANAGEMENT

Dwg Status
APPROVAL
Local Authority
WOLLONGONG

Dwg Title
PROPOSED RESIDENTIAL DEVELOPMENT
27 RAILWAY STREET, CORRIMAL

DRAINAGE PLAN 1 - B2.1

Ref & Dwg No
25152.DA.C10

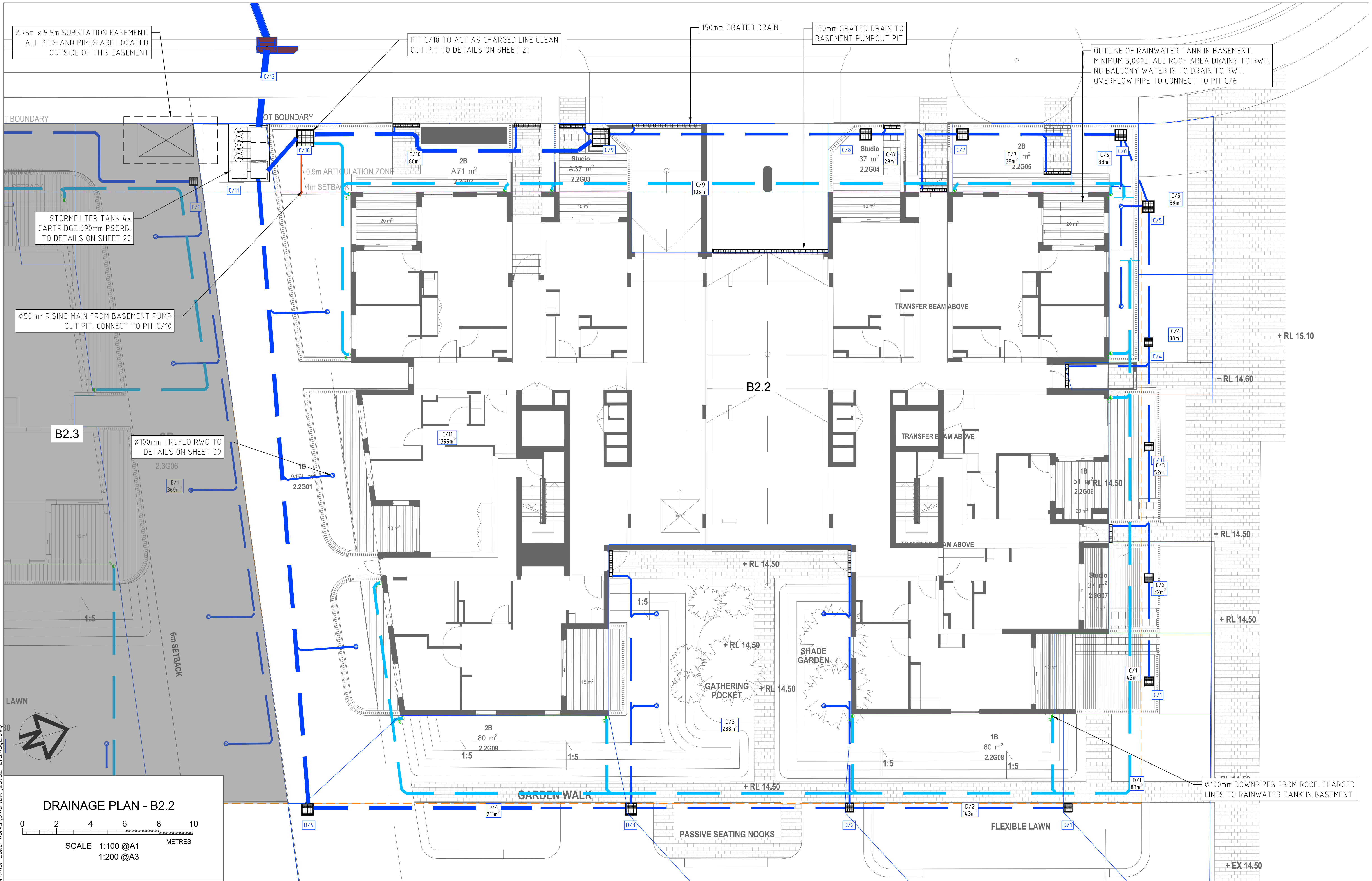
Sheet No
10 of 27

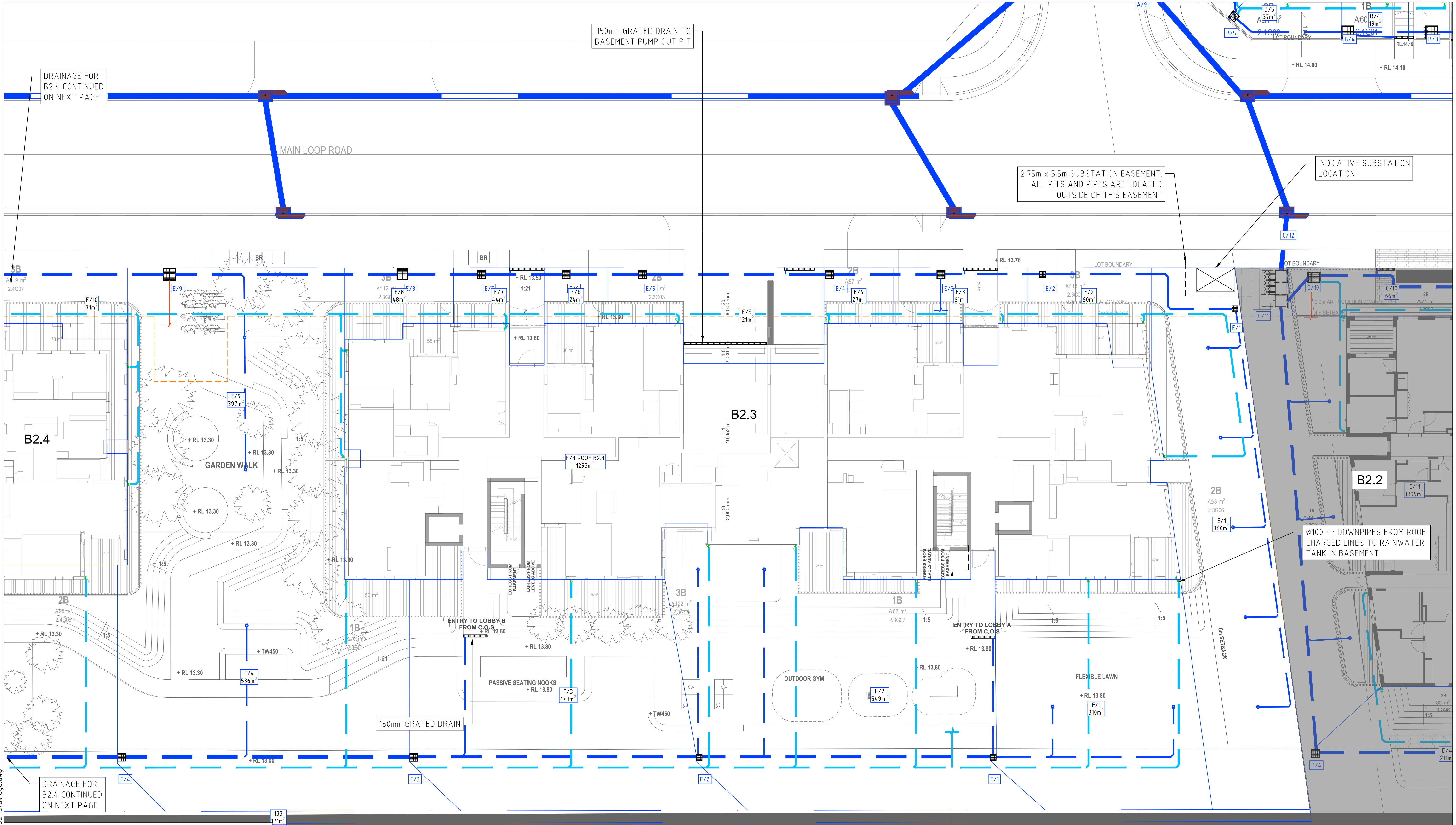
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Date
03.11.25

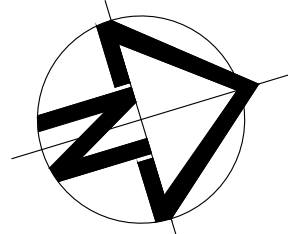
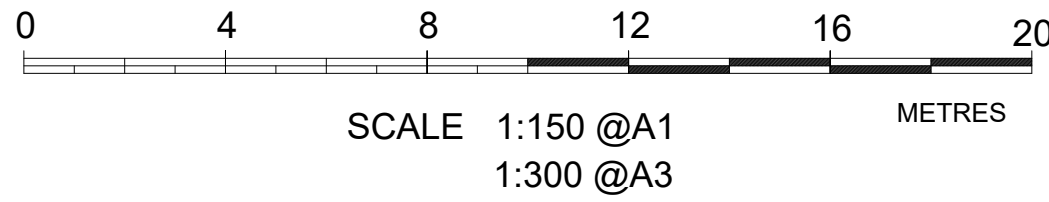
Rev
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A1





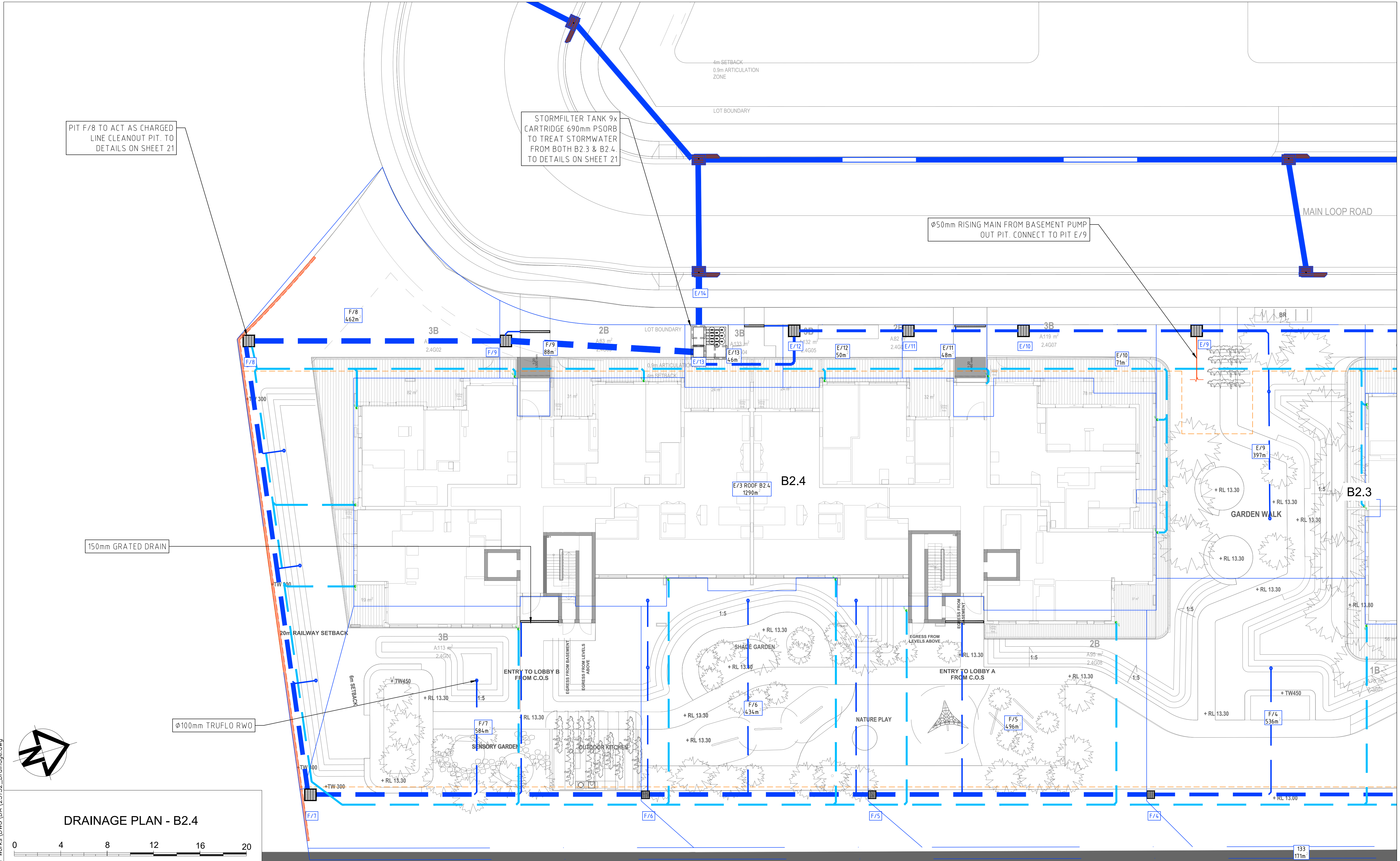
DRAINAGE PLAN - B2.3



OUTLINE OF RAINWATER TANK IN BASEMENT. MINIMUM 5,000L. ALL ROOF AREA DRAINS TO RWT. NO BALCONY WATER IS TO DRAIN TO RWT. OVERFLOW PIPE TO CONNECT TO PIT E/3

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REVISIONS		DRN	APP	DATE	siteplus Site Plus Pty Ltd ABN 73 104 315 095 WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au engineering landscape design flooding management					Height Datum	Client Title		Dwg Title	Ref & Dwg No	
No.	DESCRIPTION	I.B.	A.C.	19.09.25	siteplus Site Plus Pty Ltd ABN 73 104 315 095 WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au engineering landscape design flooding management	A.H.D.	LEGACY PROPERTY GROUP		PROPOSED RESIDENTIAL DEVELOPMENT	25152.DA.C12					
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	26.09.25		Drawn	C/-		27 RAILWAY STREET, CORRIMAL	Sheet No					
C	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25		Designed	CHESTER PROJECT MANAGEMENT			Sheet 12 of 27					
D	REVISED TO UPDATED ARCH	I.B.	A.C.	03.11.25		Checked	Dwg Status	Local Authority	DRAINAGE PLAN 3 - B2.3	Scale					
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25		Approved				1:150 @ A1					
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25			APPROVAL	WOLLONGONG		Date	Rev				
								03.11.25	F	A1					



REVISIONS		DESCRIPTION			DRN		APP	DATE	Height Datum		Client Title		Dwg Title		Ref & Dwg No	
B	No.	ADJUSTED PITS FOR B2.1 & B2.2			I.B.	A.C.	19.09.25		A.H.D.		LEGACY PROPERTY GROUP		PROPOSED RESIDENTIAL DEVELOPMENT		25152.DA.C13	
C		REVISED TO UPDATED ARCH			I.B.	A.C.	26.09.25		I.B.		C/-		27 RAILWAY STREET, CORRIMAL		Sheet 13 of 27	
D		REVISED TO UPDATED ARCH			I.B.	A.C.	14.10.25		I.B.		CHESTER PROJECT MANAGEMENT		Scale 1:150 @ A1		Scale 1:150 @ A1	
E		REVISED EXISTING SURFACE			I.B.	A.C.	03.11.25		A.C.		Dwg Status APPROVAL		Local Authority WOLLONGONG		Date 03.11.25	
F		SUBSTATION EASEMENT			I.B.	a.c.	03.11.25		A.C.				DRAINAGE PLAN 4 - B2.4		Rev F A1	

siteplus

Site Plus Pty Ltd ABN 73 104 315 095

engineering

landscape

design

flooding

management

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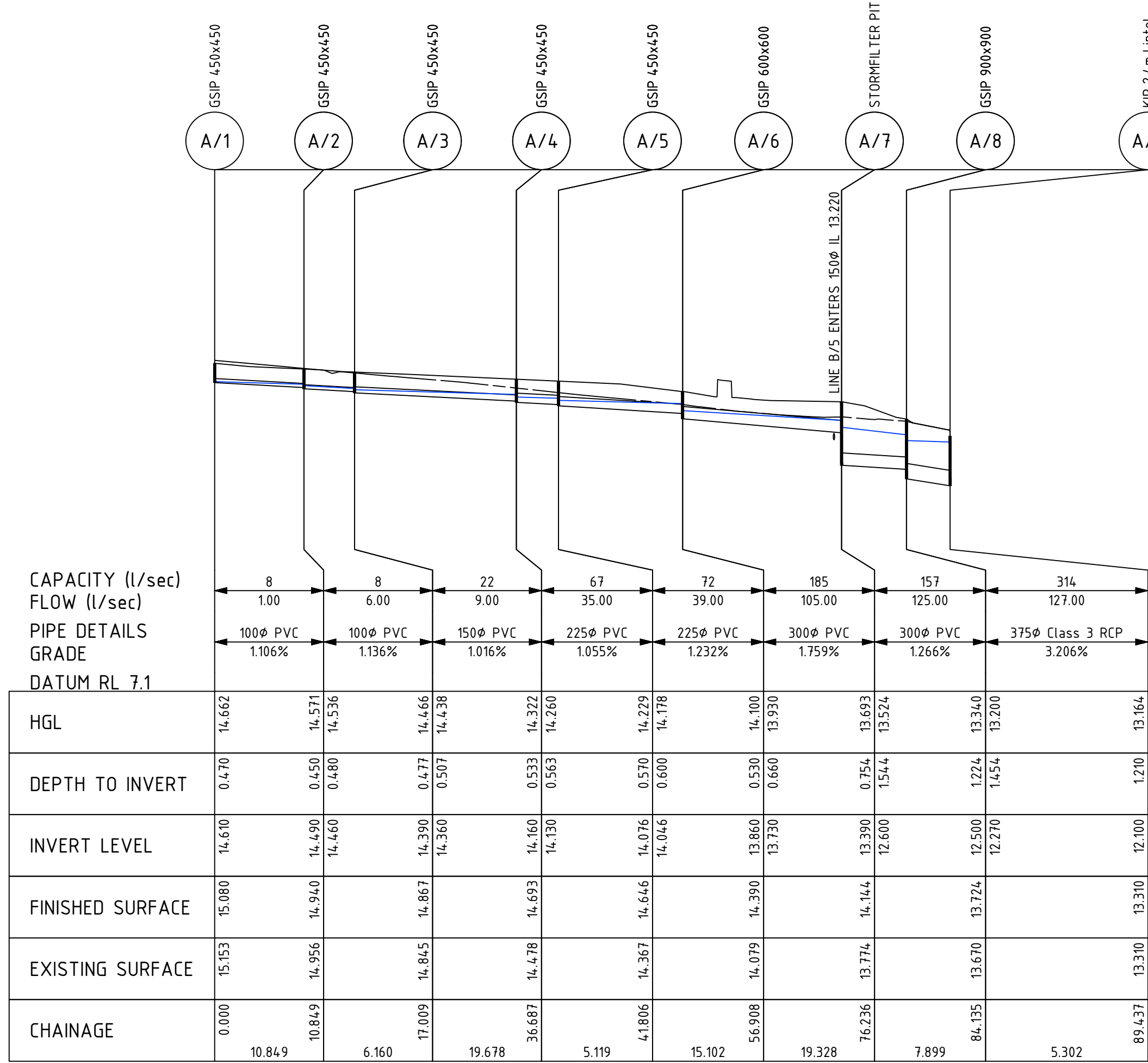
WOLLONGONG - HEAD OFFICE
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PO Box 506
Figtree NSW 2525
T 61 2 4227 4233
F 61 2 4227 4133
E info@siteplus.com.au

Client Title
LEGACY PROPERTY GROUP
C/-
CHESTER PROJECT MANAGEMENT
Dwg Status
APPROVAL
Local Authority
WOLLONGONG

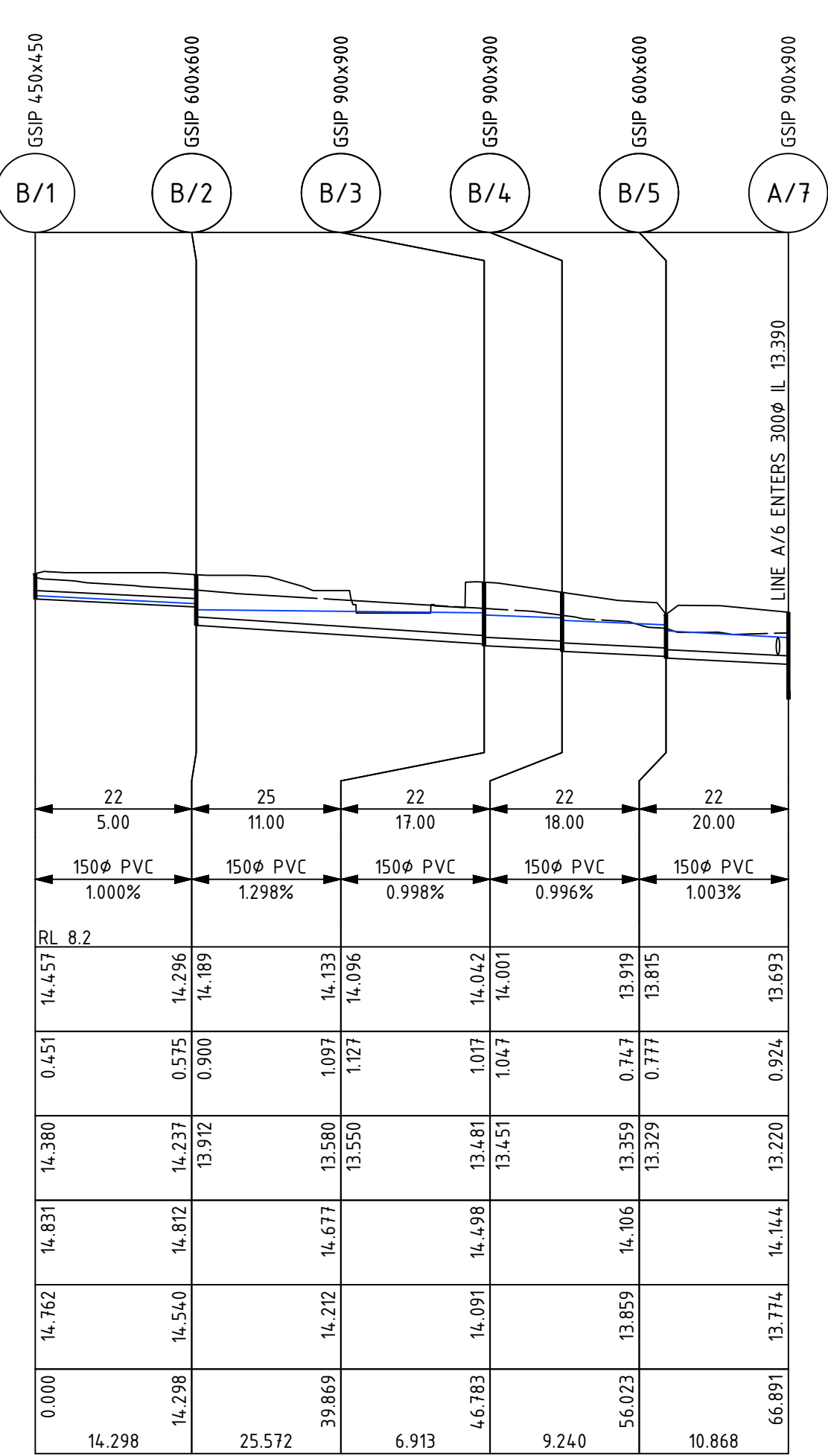
Dwg Title
PROPOSED RESIDENTIAL DEVELOPMENT
27 RAILWAY STREET, CORRIMAL
DRAINAGE PLAN 4 - B2.4

Ref & Dwg No
25152.DA.C13
Sheet No
13 of 27
Scale
1:150 @ A1
Date
03.11.25
Rev
F A1

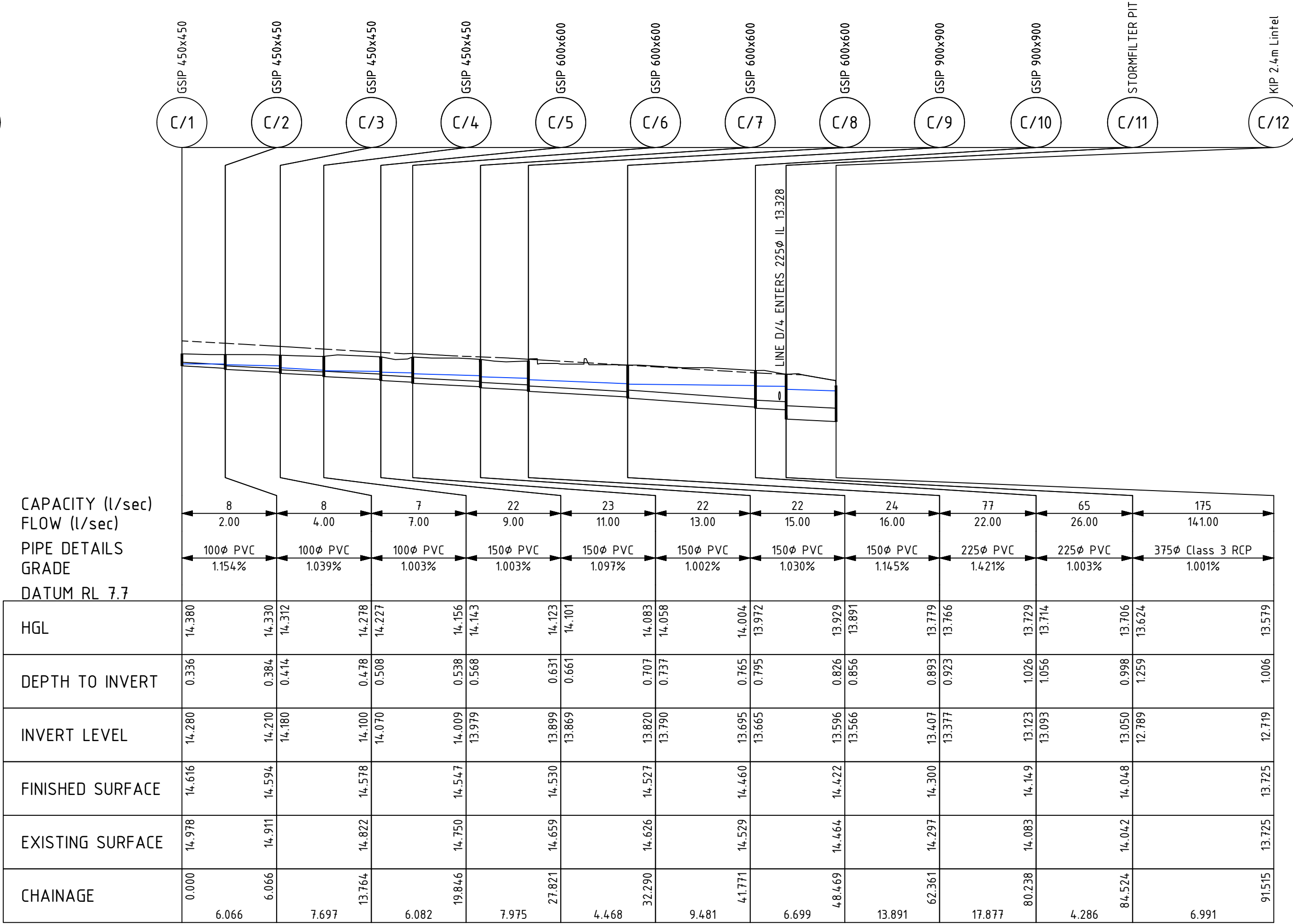
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LINE A
SCALES: HORIZ 1:500 VERT 1:100



LINE B
SCALES: HORIZ 1:500 VERT 1:100



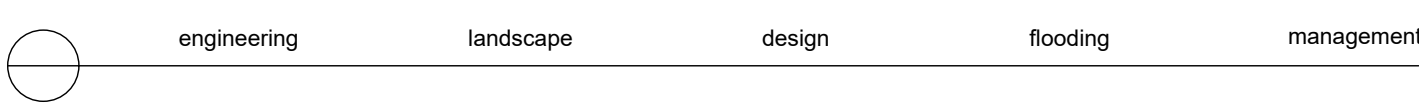
LINE C
SCALES: HORIZ 1:500 VERT 1:100

REVISIONS		DESCRIPTION				DRN		APP	DATE	siteplus		WOLLONGONG - HEAD OFFICE		Height Datum	Client Title		Dwg Title		Ref & Dwg No	
B	No.	ADJUSTED PITS FOR B2.1 & B2.2				I.B.	A.C.	19.09.25		engineering		Shop 1, 18 Arrow Avenue		A.H.D.	LEGACY PROPERTY GROUP		PROPOSED RESIDENTIAL DEVELOPMENT		25152.DA.C14	
C		REVISED TO UPDATED ARCH				I.B.	A.C.	26.09.25		landscape		Figtree NSW 2505		I.B.	C/-		27 RAILWAY STREET, CORRIMAL		Sheet No 14 of 27	
D		REVISED TO UPDATED ARCH				I.B.	A.C.	14.10.25		design		PO Box 506		I.B.	CHESTER PROJECT MANAGEMENT		Scale AS NOTED @ A1		Date 03.11.25	
E		REVISED EXISTING SURFACE				I.B.	A.C.	03.11.25		flooding		Figtree NSW 2505		A.C.	Dwg Status APPROVAL		Local Authority WOLLONGONG		Rev F	
F		SUBSTATION EASEMENT				I.B.	a.c.	03.11.25		management		E info@siteplus.com.au		A.C.			PIPE LONGSECTIONS 1		A1	

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REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25



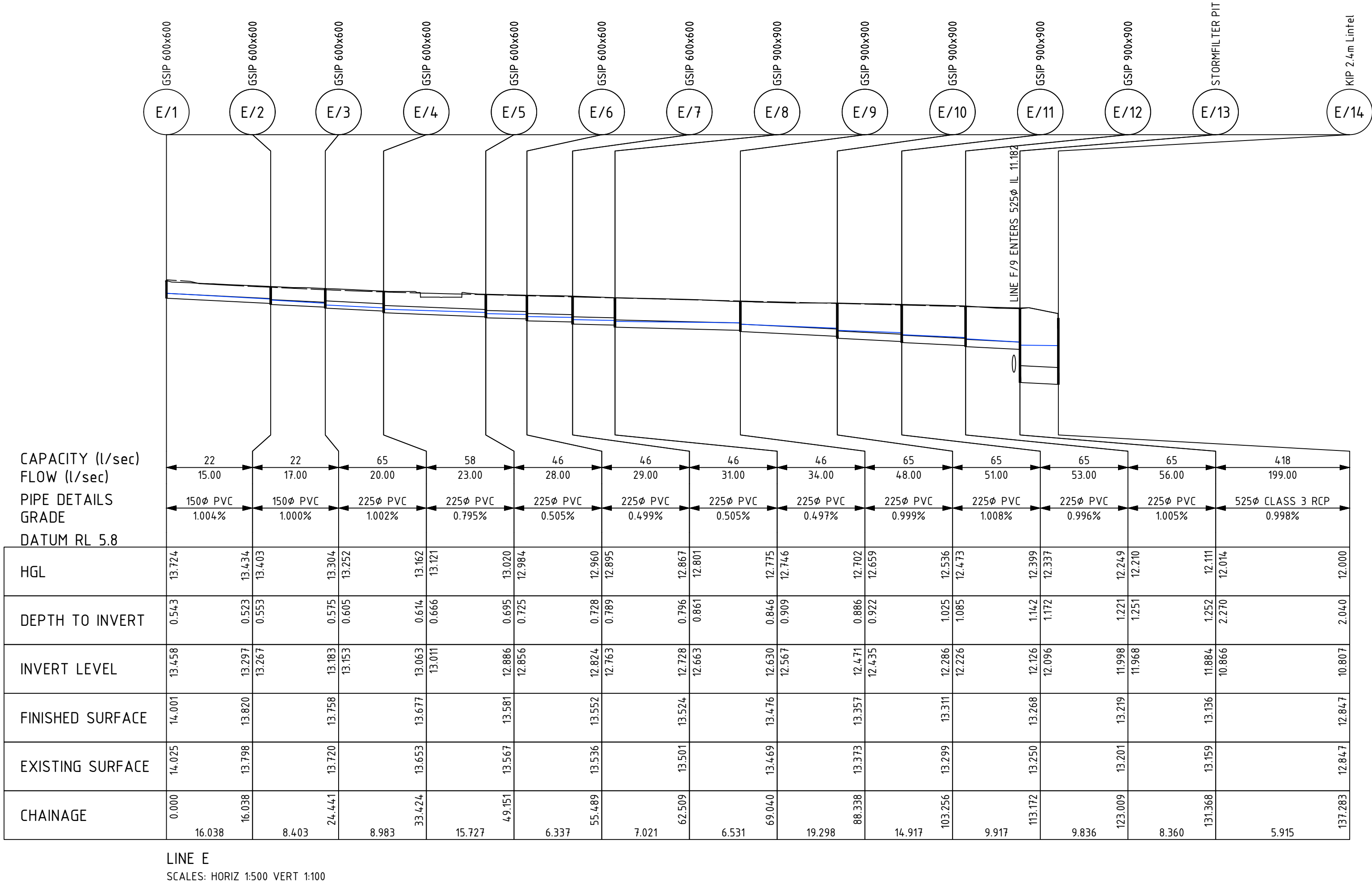
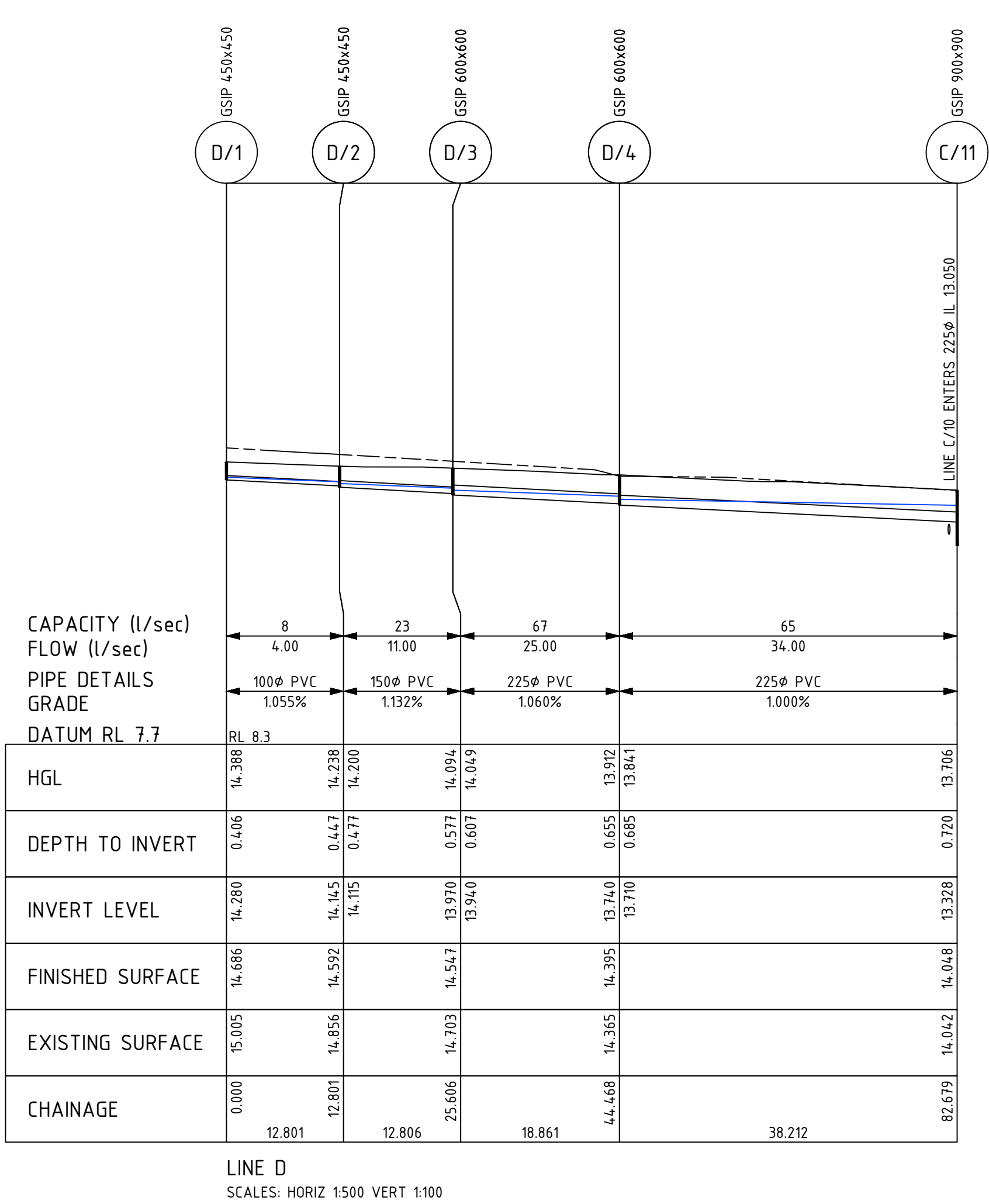
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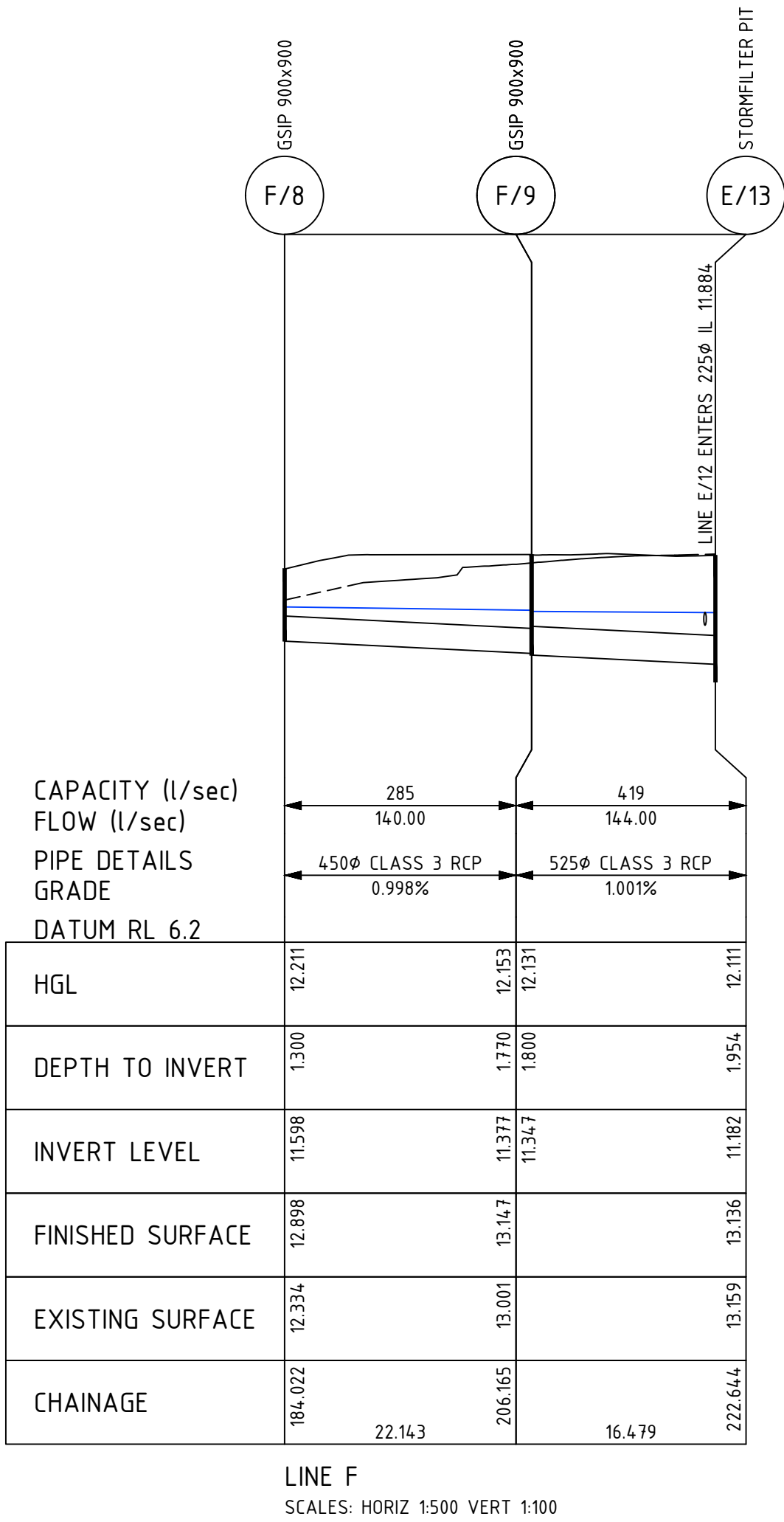
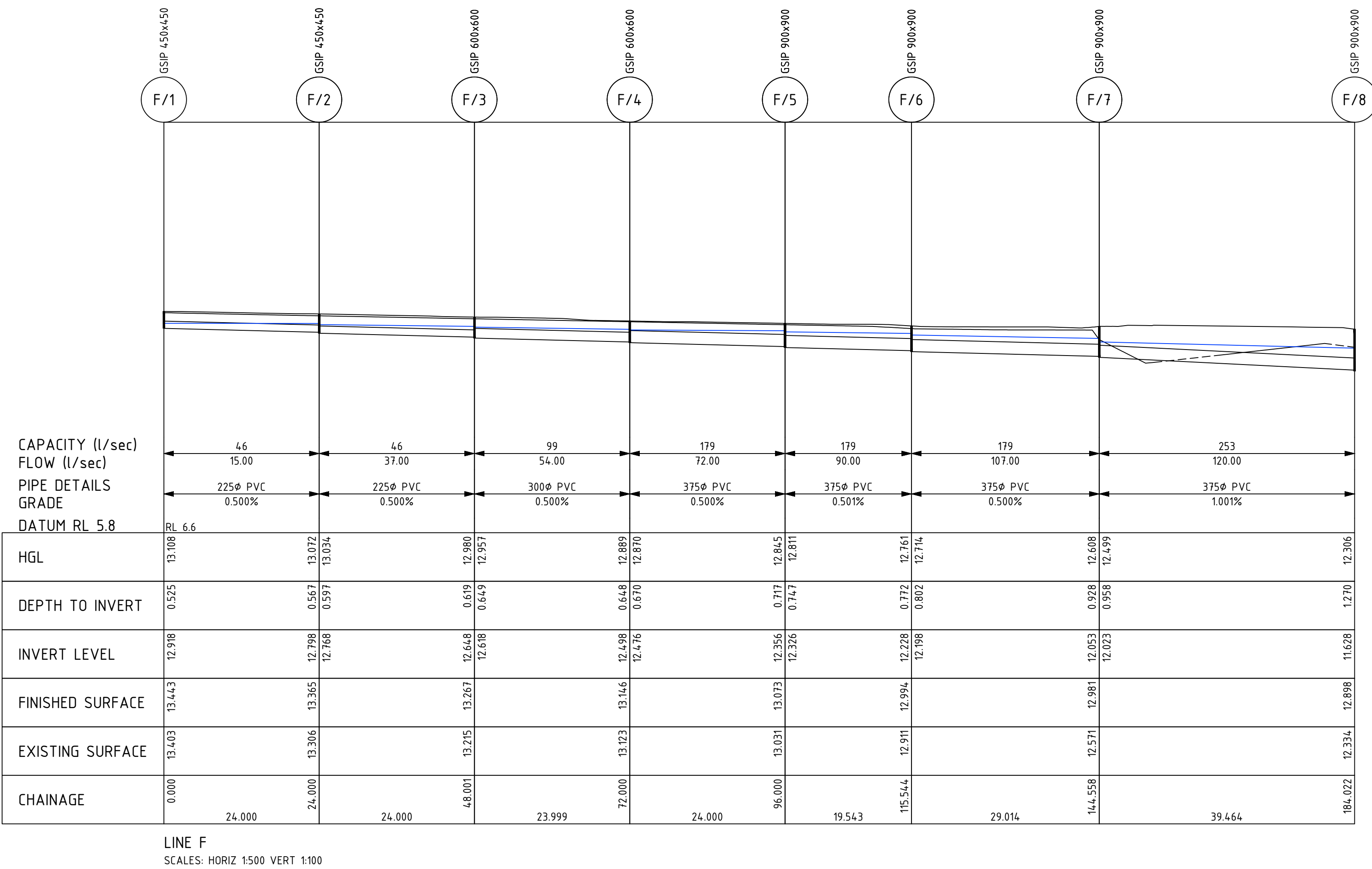
Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title	
LEGACY PROPERTY GROUP	
C/-	
CHESTER PROJECT MANAGEMENT	
Dwg Status	APPROVAL
Local Authority	WOLLONGONG

Dwg Title	
PROPOSED RESIDENTIAL DEVELOPMENT	
27 RAILWAY STREET, CORRIMAL	
PIPE LONGSECTIONS 2	

Ref & Dwg No	
25152.DA.C15	
Sheet No	15 of 27
Scale	AS NOTED @ A1
Date	03.11.25
Rev	F
	A1





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Hydrologic Design Sheet -Drainage - B2.1										Return Period: 10%		Location: depths				
Corrimal all design-2016																
Pit	Catchment Flow Length	Catchment Slope	Catchment Roughness	Catchment Flow Time	Gutter Flow Time	Total Time	Pit C Factor	Total Catchment Area	Aera Contributing	Rainfall Intensity	Total Catchment Flow	Pit Type	Gutter Pit Inflow	Gutter Slope	Gutter Flow Width	Total Upstream Catchment
	(m)	(%)	'n'	(min)	(min)	(min)		(ha)	(l/s)	(mm/hr)	(l/s)		(l/s)	(%)	(m)	(ha)
A/1				5.00		5	1.000	0.00	0.0	181.2	0.7	GSIP 450x450				0.0
							0.000									
	6.10	1.1	0.170				1.000	0.00								
A/2				5.00		5	1.000	0.01	0.0	181.2	5.0	GSIP 450x450	1.0			0.0
	14.19	1.9	0.010				1.000	0.00								
							0.000									
	14.19	1.9	0.170				1.000	0.01								
A/3				5.00		5	1.000	0.01	0.0	181.2	3.3	GSIP 450x450	0.7			0.0
	4.77	15.5	0.010				1.000	0.00								
							0.000									
	10.58	1.9	0.170				1.000	0.01								
A/4				6.66		7	1.000	0.05	0.1	168.4	21.4	GSIP 450x450	12.9			0.1
	26.64	10.1	0.010				1.000	0.03								
							0.000									
	23.67	2.0	0.170				1.000	0.02								
A/5				5.00		5	1.000	0.01	0.1	181.2	2.7	GSIP 450x450	1.6			0.1
	6.42	2.6	0.010				1.000	0.00								
							0.000									
	10.32	2.6	0.170				1.000	0.00								
A/6				5.47		5	1.000	0.12	0.2	177.6	57.1	GSIP 600x600	51.4			0.2
	39.27	2.7	0.010				1.000	0.10								
							0.000									
	19.31	2.4	0.170				1.000	0.01								
A/7				5.00		5	1.000	0.01	0.2	181.2	3.5	GSIP 900x900				0.2
							0.000									
							0.000									
	13.73	1.6	0.170				1.000	0.01								
A/8				5.00		5	1.000	0.00	0.2	181.2	1.6	GSIP 900x900				0.2
							0.000									
							0.000									
	6.35	2.6	0.170				1.000	0.00								
B/1				8.07		8	1.000	0.01	0.0	157.7	5.0	GSIP 450x450	1.0			0.0
							0.000									
	27.42	1.5	0.010				1.000	0.00								
	27.42	1.5	0.170				1.000	0.01								
B/2				5.86		6	1.000	0.01	0.0	174.6	2.8	GSIP 600x600	0.6			0.0
	12.31	0.8	0.010				1.000	0.00								
							0.000									
	12.72	0.8	0.170				1.000	0.00								
B/3				5.00		5	1.000	0.01	0.0	181.2	6.8	GSIP 900x900	5.5			0.0
	6.05	0.8	0.010				1.000	0.01								
							0.000									
	2.83	1.7	0.170				1.000	0.00								
B/4				5.00		5	1.000	0.00	0.0	181.2	1.0	GSIP 900x900				0.0
							0.000									
							0.000									
	3.35	1.5	0.170				1.000	0.00								
B/5				5.00		5	1.000	0.00	0.0	181.2	1.9	GSIP 600x600	0.4			0.0
							0.000									
	8.79	2.7	0.010				1.000	0.00								
	7.28	3.0	0.170				1.000	0.00								

HGL Report - Drainage - B2.1										Return Period: 10%yrs		Location: depths Corrimal all design-2016													
Pipe Connecting Pifs (Downstream Upstream)	Pipe ID	Pipe Class	Pipe Diameter	Pipe Length	Pipe Design Flow	Mannings n	Pipe Velocity	Pipe Part Velocity	Pipe Velocity Head	HGL at Downstream Pit	Pipe Friction Slope	Pipe Friction Loss	HGL at Upstream Pit	Pit Loss Coefficient	Pipe Head Loss	Adopted Upstream Water Level	Pit Surcharge Level (Pit Inlet/Outlet Level)	Downstream Pipe Obvert	Upstream Pipe Obvert	Downstream Pipe Invert	Upstream Pipe Invert	Pipe Slope	Pipe Design Flow	Pipe HGL Capacity	Pipe Manning Capacity
			(mm)	(m)	(l/s)		(m/s)	(m/s)	(m)	(m)	(%)	(m)	(m)	Ku	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(l/s)	(l/s)	(l/s)
A/2 A/1		PVC	100	10.849	0.7	0.009	0.62	0.621	0.000	14.579	0.00	0.002	14.699	17.157	0.007	14.706	15.080	14.590	14.710	14.490	14.610	1.106	0.7	8.0	7.8
A/3 A/2		PVC	100	6.160	5.6	0.009	1.10	1.095	0.026	14.452	0.01	0.035	14.522	2.169	0.057	14.579	14.940	14.490	14.560	14.390	14.460	1.136	5.6	8.1	8.0
A/4 A/3		PVC	150	19.678	8.8	0.009	1.18	1.181	0.013	14.367	0.00	0.035	14.426	1.000	0.013	14.438	14.867	14.310	14.510	14.160	14.360	1.016	8.8	22.4	22.2
A/5 A/4		PVC	225	5.119	29.8	0.009	1.63	1.630	0.029	14.262	0.00	0.012	14.316	1.805	0.052	14.367	14.693	14.301	14.355	14.076	14.130	1.055	29.8	66.6	66.6
A/6 A/5		PVC	225	15.102	32.2	0.009	1.76	1.762	0.033	14.042	0.00	0.040	14.228	1.000	0.033	14.262	14.646	14.085	14.271	13.860	14.046	1.232	32.2	72.2	72.0
A/7 A/6		PVC	300	19.328	85.6	0.009	2.57	2.567	0.075	13.533	0.00	0.078	13.873	2.261	0.169	14.042	14.390	13.690	14.030	13.390	13.730	1.759	85.6	185.4	185.3
A/8 A/7		PVC	300	7.899	95.3	0.009	2.33	2.330	0.093	13.255	0.00	0.039	13.294	1.110	0.103	13.397	14.144	12.800	12.900	12.500	12.600	1.266	95.3	156.2	157.2
A/9 A/8		Class 3 RCP	375	5.302	96.3	0.013	2.50	2.501	0.039	13.160	0.00	0.009	13.169	2.214	0.086	13.255	13.724	12.475	12.645	12.100	12.270	3.206	96.3	443.3	313.9
B/2 B/1		PVC	150	14.298	5.0	0.009	1.01	1.008	0.004	14.286	0.00	0.009	14.429	12.549	0.052	14.481	14.831	14.387	14.530	14.237	14.380	1.000	5.0	22.2	22.0
B/3 B/2		PVC	150	25.572	7.5	0.009	1.25	1.248	0.009	13.649	0.00	0.034	13.981	1.296	0.012	13.993	14.812	13.730	14.062	13.580	13.912	1.298	7.5	25.5	25.1
B/4 B/3		PVC	150	6.913	9.0	0.009	1.18	1.182	0.013	13.567	0.00	0.013	13.636	1.000	0.013	13.649	14.677	13.631	13.700	13.481	13.550	0.998	9.0	22.2	22.0
B/5 B/4		PVC	150	9.240	10.2	0.009	1.23	1.226	0.017	13.528	0.00	0.022	13.550	1.000	0.017	13.567	14.498	13.509	13.601	13.359	13.451	0.996	10.2	22.1	22.0
A/7 B/5		PVC	150	10.868	15.4	0.009	1.35	1.346	0.039	13.397	0.01	0.055	13.451	2.003	0.077	13.528	14.106	13.370	13.479	13.220	13.329	1.003	15.4	22.2	22.0

Pit Schedule - Drainage - B2.1												
Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Easting	Northing	Comment
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	(m)	(m)	
A/9	KIP 2.4m Lintel	600	900			375	12.100	1.214	13.314	307238.25	6194.085.515	
A/8	GSIP 900x900	900	900	375	12.270	300	12.500	1.454	13.724	307239.95	6194.090.537	
A/7	Stormfilter Pit	900	900	300	12.600	300	13.390	1.544	14.144	307232.46	6194.093.036	
						150	13.220					
A/6	GSIP 600x600	600	600	300	13.730	225	13.860	0.660	14.390	307213.42	6194.096.340	
B/5	GSIP 600x600	600	600	150	13.329	150	13.359	0.777	14.106	307243.30	6194.092.314	
A/5	GSIP 450x450	450	450	225	14.046	225	14.076	0.600	14.646	307217.79	6194.110.795	
B/4	GSIP 900x900	900	900	150	13.451	150	13.481	1.047	14.498	307245.98	6194.101.158	
A/4	GSIP 450x450	450	450	225	14.130	150	14.160	0.563	14.693	307219.27	6194.115.695	
B/3	GSIP 900x900	900	900	150	13.550	150	13.580	1.127	14.677	307247.98	6194.107.775	
A/3	GSIP 450x450	450	450	150	14.360	100	14.390	0.507	14.867	307224.97	6194.134.530	
B/2	GSIP 600x600	600	600	150	13.912	150	14.237	0.900	14.812	307255.39	6194.132.251	
A/2	GSIP 450x450	450	450	100	14.460	100	14.490	0.480	14.940	307226.76	6194.140.426	
B/1	GSIP 450x450	450	450	150	14.380			0.451	14.831	307259.53	6194.145.936	
A/1	GSIP 450x450	450	450	100	14.610			0.470	15.080	307229.90	6194.150.810	

REVISIONS

No.

DESCRIPTION

DRN

APP

DATE

engineering

landscape

design

floodong

management

siteplus

Site Plus Pty Ltd

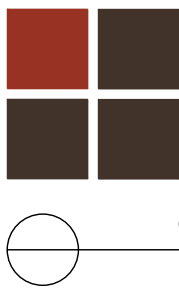
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REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25



engineering landscape design flooding management

design

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Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title		LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT
Dwg Status		
APPROVAL		
Local Authority		WOLLONGONG

Dwg Title	PROPOSED RESIDENTIAL DEVELOPMENT			Ref & Dwg No	
	27 RAILWAY STREET, CORRIMAL			25152.DA.C18	
	DRAINAGE CALCULATIONS - B2.2			Sheet No	
				Sheet	18 of 27
				Scale	
				N/A	
				Date	Rev
			03.11.25	F	

Hydrologic Design Sheet –Drainage – B2.2 Return Period: 10% Location: depths
Corrimal all design–2016

Pit	Catchment Flow Length	Catchment Slope	Catchment Roughness	Catchment Flow Time	Gutter Flow Time	Total Time	Pit C Factor	Total Catchment Area	Aera Contributing	Rainfall Intensity	Total Catchment Flow	Pit Type	Gutter Pit Inflow	Gutter Slope	Gutter Flow Width	Total Upstream Catchment
	(m)	(%)	'n'	(min)	(min)	(min)		(ha)	(l/s)	(mm/hr)	(l/s)		(l/s)	(%)	(m)	(ha)
C/1				5.00		5	1.000	0.00	0.0	181.2	2.2	GSIP 450x450	1.1			0.0
	6.73	1.0	0.010				1.000	0.00								
							0.000									
	5.57	1.0	0.170				1.000	0.00								
C/10				5.17		5	1.000	0.01	0.0	179.9	3.3	GSIP 900x900	0.7			0.0
							0.000									
	7.36	1.5	0.010				1.000	0.00								
	12.73	1.2	0.170				1.000	0.01								
C/11				11.86		12	1.000	0.14	0.3	133.7	52.0	GSIP 900x900	4.6.8			0.3
	36.61	1.6	0.010				1.000	0.13								
							0.000									
	37.61	1.0	0.170				1.000	0.01								
C/2				5.00		5	1.000	0.00	0.0	181.2	1.6	GSIP 450x450	1.0			0.0
	4.80	1.0	0.010				1.000	0.00								
							0.000									
	2.58	1.0	0.170				1.000	0.00								
C/3				5.00		5	1.000	0.01	0.0	181.2	2.6	GSIP 450x450	1.3			0.0
	5.74	1.0	0.010				1.000	0.00								
							0.000									
	3.51	1.0	0.170				1.000	0.00								
C/4				5.00		5	1.000	0.00	0.0	181.2	1.9	GSIP 450x450	1.0			0.0
	6.59	1.0	0.010				1.000	0.00								
							0.000									
	4.61	1.6	0.170				1.000	0.00								
C/5				5.00		5	1.000	0.00	0.0	181.2	2.0	GSIP 600x600	1.0			0.0
	5.77	0.8	0.010				1.000	0.00								
							0.000									
	4.51	0.8	0.170				1.000	0.00								
C/6				5.68		6	1.000	0.00	0.0	176.0	1.6	GSIP 600x600	0.2			0.0
							0.000									
	4.09	0.5	0.010				1.000	0.00								
	12.41	0.9	0.170				1.000	0.00								
C/7				5.00		5	1.000	0.00	0.0	181.2	1.4	GSIP 600x600	0.4			0.0
							0.000									
	7.03	1.1	0.010				1.000	0.00								
	5.21	1.1	0.170				1.000	0.00								
C/8				5.00		5	1.000	0.00	0.0	181.2	1.5	GSIP 600x600	1.0			0.0
	6.82	1.3	0.010				1.000	0.00								
							0.000									
	2.38	0.8	0.170				1.000	0.00								
C/9				5.00		5	1.000	0.01	0.0	181.2	5.3	GSIP 900x900	4.8			0.0
	15.14	1.1	0.010				1.000	0.01								
							0.000									
	1.88	0.6	0.170				1.000	0.00								
D/1				5.00		5	1.000	0.01	0.0	181.2	4.2	GSIP 450x450	0.8			0.0
	8.49	0.4	0.010				1.000	0.00								
							0.000									
	10.04	1.0	0.170				1.000	0.01								
D/2				7.17		7	1.000	0.01	0.0	164.5	6.5	GSIP 450x450	1.3			0.0
	12.86	0.9	0.010				1.000	0.00								
							0.000									
	18.67	1.0	0.170				1.000	0.01								
D/3				7.08		7	1.000	0.03	0.1	165.2	13.2	GSIP 600x600	5.3			0.1
							0.000									
	16.83	0.6	0.010				1.000	0.01								
	18.34	1.0	0.170				1.000	0.02								
D/4				8.57		9	1.000	0.02	0.1	153.8	9.0	GSIP 600x600	0.5			0.1
							0.000									
	18.20	1.7	0.010				1.000	0.00								
	24.07	1.0	0.170				1.000	0.02								

HGL Report – Drainage – B2.2 Return Period: 10%yrs Location: depths Corrimal all design–2016

Pipe Connecting Pits (Downstream Upstream)	Pipe ID	Pipe Class	Pipe Diameter	Pipe Length	Pipe Design Flow	Mannings n	Pipe Velocity	Pipe Part Velocity	Pipe Velocity Head	HGL at Downstream Pit	Pipe Friction Slope	Pipe Friction Loss	HGL at Upstream Pit	Pit Loss Coefficient	Pipe Head Loss	Adopted Upstream Water Level	Pit Surcharge Level (Pit Inlet/Outlet Level)	Downstream Pipe Obvert	Upstream Pipe Obvert	Downstream Pipe Invert	Upstream Pipe Invert	Pipe Slope	Pipe Design Flow	Pipe HGL Capacity	Pipe Manning Capacity
			(mm)	(m)	(l/s)		(m/s)	(m/s)	(m)	(m)	(%)	(m)	(m)	Ku	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(l/s)	(l/s)	(l/s)
C/2 C/1		PVC	100	6.066	2.2	0.009	0.87	0.867	0.004	14.248	0.00	0.006	14.318	11.327	0.044	14.362	14.616	14.310	14.380	14.210	14.280	1.154	2.2	8.2	8.0
C/11 C/10		PVC	225	4.286	17.5	0.009	1.39	1.388	0.010	13.593	0.00	0.004	13.597	1.000	0.010	13.607	14.149	13.275	13.318	13.050	13.093	1.003	17.5	64.9	65.0
C/12 C/11		Class 3 RCP	375	6.991	50.5	0.013	1.37	1.373	0.011	13.579	0.00	0.004	13.583	1.000	0.011	13.593	14.048	13.094	13.164	12.719	12.789	1.001	50.5	243.7	175.4
C/3 C/2		PVC	100	7.697	3.8	0.009	0.96	0.957	0.012	14.208	0.00	0.021	14.230	1.536	0.018	14.248	14.594	14.200	14.280	14.100	14.180	1.039	3.8	7.7	7.6
C/4 C/3		PVC	100	6.082	6.3	0.009	1.05	1.054	0.033	14.098	0.01	0.044	14.159	1.494	0.049	14.208	14.578	14.109	14.170	14.009	14.070	1.003	6.3	7.6	7.5
C/5 C/4		PVC	150	7.975	8.2	0.009	1.16	1.160	0.011	14.007	0.00	0.013	14.087	1.000	0.011	14.098	14.547	14.049	14.129	13.899	13.979	1.003	8.2	22.2	22.0
C/6 C/5		PVC	150	4.468	10.1	0.009	1.26	1.257	0.017	13.939	0.00	0.010	13.988	1.130	0.019	14.007	14.530	13.970	14.019	13.820	13.869	1.097	10.1	23.3	23.0
C/7 C/6		PVC	150	9.481	11.6	0.009	1.26	1.262	0.022	13.816	0.00	0.028	13.911	1.306	0.029	13.939	14.527	13.845	13.940	13.695	13.790	1.002	11.6	22.2	22.0
C/8 C/7		PVC	150	6.699	12.9	0.009	1.31	1.315	0.027	13.720	0.00	0.024	13.789	1.000	0.027	13.816	14.460	13.746	13.815	13.596	13.665	1.030	12.9	22.5	22.3
C/9 C/8		PVC	150	13.891	14.2	0.009	1.39	1.395	0.033	13.626	0.00	0.061	13.687	1.000	0.033	13.720	14.422	13.557	13.716	13.407	13.566	1.145	14.2	23.8	23.5
C/10 C/9		PVC	225	17.877	15.1	0.009	1.50	1.503	0.007	13.607	0.00	0.012	13.619	1.000	0.007	13.626	14.300	13.348	13.602	13.123	13.377	1.421	15.1	77.8	77.3
D/2 D/1		PVC	100	12.801	4.2	0.009	1.00	1.001	0.014	14.277	0.00	0.043	14.332	6.993	0.101	14.433	14.686	14.245	14.380	14.145	14.280	1.055	4.2	7.8	7.7
D/3 D/2		PVC	150	12.806	10.3	0.009	1.29	1.290	0.017	14.106	0.00	0.031	14.251	1.464	0.026	14.277	14.592	14.120	14.265	13.970	14.115	1.132	10.3	23.7	23.4
D/4 D/3		PVC	225	18.861	23.3	0.009	1.53	1.526	0.018	13.883	0.00	0.028	14.083	1.316	0.023	14.106	14.547	13.965	14.165	13.740	13.940	1.060	23.3	66.8	66.8
C/11 D/4		PVC	225	38.212	31.0	0.009	1.61	1.614	0.031	13.593	0.00	0.095	13.819	2.065	0.064	13.883	14.395	13.553	13.935	13.328	13.710	1.000	31.0	64.7	64.8

Pit Schedule – Drainage – B2.2

Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Easting	Northing	Comment
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	(m)	(m)	
C/12	KIP 2.4m Lintel	600	900			375	12.719	1.006	13.725	307260.05	6194091.594	
C/11	Stormfilter Pit	900	900	375	12.789	225	13.050	1.259	14.048	307265.84	6194087.669	
						225	13.328					
C/10	GSIP 900x900	900	900	225	13.093	225	13.123	1.056	14.149	307266.14	6194091.944	
D/4	GSIP 600x600	600	600	225	13.710	225	13.740	0.685	14.395	307303.47	6194081.032	
C/9	GSIP 900x900	900	900	225	13.377	150	13.407	0.923	14.300	307271.31	6194109.060	
D/3	GSIP 600x600	600	600	225	13.940	150	13.970	0.607	14.547	307308.93	6194099.085	
C/8	GSIP 600x600	600	600	150	13.566	150	13.596	0.856	14.422	307275.33	6194122.356	
D/2	GSIP 450x450	450	450	150	14.115	100	14.145	0.477	14.592	307312.64	6194111.342	
C/7	GSIP 600x600	600	600	150	13.665	150	13.695	0.795	14.460	307277.27	6194128.768	
D/1	GSIP 450x450	450	450	100	14.280			0.406	14.686	307316.35	6194123.594	
C/6	GSIP 600x600	600	600	150	13.790	150	13.820	0.737	14.527	307280.08	6194137.823	
C/5	GSIP 600x600	600	600	150	13.869	150	13.899	0.661	14.530	307284.30	6194139.283	
C/4	GSIP 450x450	450	450	150	13.979	100	14.009	0.568	14.547	307291.93	6194136.975	
C/3	GSIP 450x450	450	450	100	14.070	100	14.100	0.508	14.578	307297.76	6194135.228	
C/2	GSIP 450x450	450	450	100	14.180	100	14.210	0.414	14.594	307305.13	6194132.997	
C/1	GSIP 450x450	450	450	100	14.280			0.336	14.616	307310.93	6194131.240	

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REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25



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Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title		LEGACY PROPERTY GROUP	
		C/-	
		CHESTER PROJECT MANAGEMENT	
Dwg Status	APPROVAL	Local Authority	WOLLONGONG

Dwg Title		PROPOSED RESIDENTIAL DEVELOPMENT	
		27 RAILWAY STREET, CORRIMAL	
		DRAINAGE CALCULATION B2.3 & B2.4	
Ref & Dwg No		25152.DA.C19	
Sheet No		19 of 27	
Scale		N/A	
Date	03.11.25	Rev	F
			A1

Hydrologic Design Sheet –Drainage - B2.3 & B2.4 Return Period:
10% Location: depths Corrimal all design–2016

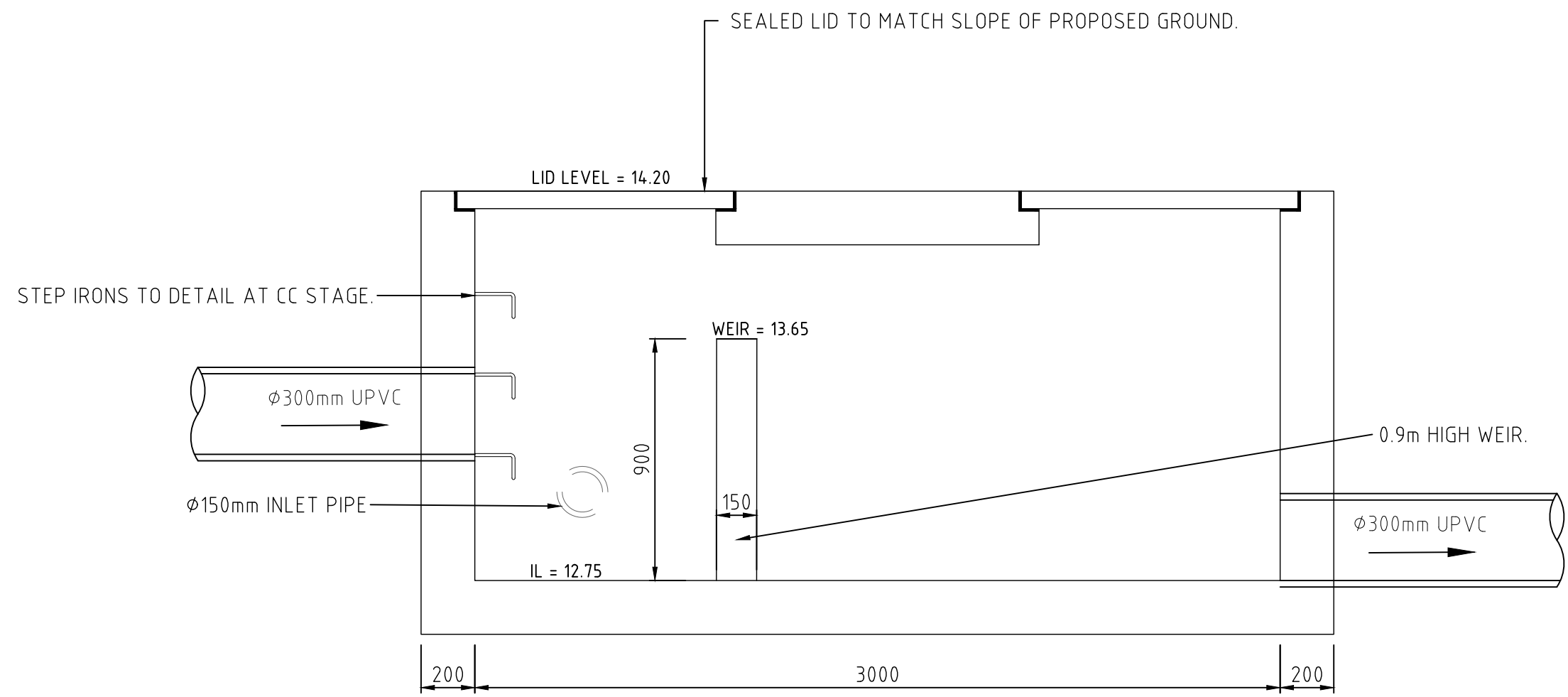
Pit	Catchment Flow Length	Catchment Slope	Catchment Roughness	Catchment Flow Time	Total Time	Pit C Factor	Total Catchment Area	Aera Contributing	Rainfall Intensity	Total Catchment Flow	Pit Type	Gutter Pit Inflow	Total Upstream Catchment
	(m)	(%)	'n'	(min)	(min)		(ha)	(l/s)	(mm/hr)	(l/s)		(l/s)	(ha)
E/1				12.91	13	1.000	0.04	0.0	128.6	15.0	GSIP 600x600		0.0
						0.000							
	42.03	1.0	0.170			1.000	0.04						
E/10				5.14	5	1.000	0.01	0.1	180.1	3.6	GSIP 900x900	0.7	0.1
	11.68	1.0	0.010			1.000	0.00						
						0.000							
	11.37	1.0	0.170			1.000	0.01						
E/11				5.00	5	1.000	0.00	0.1	181.2	2.4	GSIP 900x900	1.2	0.1
						0.000							
	6.50	1.0	0.010			1.000	0.00						
	3.60	0.7	0.170			1.000	0.00						
E/12				5.00	5	1.000	0.01	0.1	181.2	2.5	GSIP 900x900	0.5	0.1
	9.80	1.0	0.010			1.000	0.00						
						0.000							
	8.68	1.0	0.170			1.000	0.00						
E/13				5.00	5	1.000	0.00	0.5	181.2	2.3	GSIP 900x900	0.5	0.5
	8.33	0.5	0.010			1.000	0.00						
						0.000							
	5.60	2.1	0.170			1.000	0.00						
E/2				5.00	5	1.000	0.01	0.0	181.2	3.0	GSIP 600x600		0.0
						0.000							
	12.17	1.0	0.120			1.000	0.01						
E/3				5.00	5	1.000	0.01	0.1	181.2	3.1	GSIP 600x600	0.3	0.1
	7.71	0.5	0.010			1.000	0.00						
						0.000							
	7.71	0.5	0.170			1.000	0.01						
E/4				5.00	5	1.000	0.00	0.1	181.2	1.4	GSIP 600x600		0.1
						0.000							
	6.03	2.1	0.170			1.000	0.00						
E/5				5.00	5	1.000	0.01	0.1	181.2	6.1	GSIP 600x600	4.9	0.1
	14.74	1.0	0.010			1.000	0.01						
						0.000							
	3.50	1.0	0.170			1.000	0.00						
E/6				5.00	5	1.000	0.00	0.1	181.2	1.2	GSIP 600x600		0.1
						0.000							
	4.79	2.9	0.170			1.000	0.00						
E/7				5.00	5	1.000	0.00	0.1	181.2	2.2	GSIP 600x600	0.9	0.1
	4.86	5.4	0.010			1.000	0.00						
						0.000							
	2.76	5.1	0.170			1.000	0.00						
E/8				5.00	5	1.000	0.00	0.1	181.2	2.4	GSIP 900x900	0.2	0.1
						0.000							
	4.76	1.0	0.010			1.000	0.00						
	2.89	2.6	0.170			1.000	0.00						
E/9				7.71	8	1.000	0.04	0.1	160.4	17.7	GSIP 900x900	1.8	0.1
						0.000							
	23.49	1.0	0.010			1.000	0.00						
	20.74	1.0	0.170			1.000	0.04						
F/1				5.26	5	1.000	0.03	0.0	179.2	15.4	GSIP 450x450		0.0
						0.000							
						0.000							
	17.78	2.3	0.170			1.000	0.03						
F/2				9.67	10	1.000	0.05	0.1	145.3	22.2	GSIP 450x450	2.2	0.1
						0.000							
	25.44	0.9	0.010			1.000	0.01						
	28.29	1.0	0.170			1.000	0.05						
F/3				9.69	10	1.000	0.04	0.1	145.2	17.8	GSIP 600x600	1.8	0.1
						0.000							
	23.48	1.5	0.010			1.000	0.00						
	28.37	1.0	0.170			1.000	0.04						
F/4				9.53	10	1.000	0.05	0.2	146.4	21.8	GSIP 600x600	2.2	0.2
						0.000							
	24.68	2.3	0.010			1.000	0.01						
	27.74	1.0	0.170			1.000	0.05						
F/5				8.60	9	1.000	0.05	0.2	153.5	21.2	GSIP 900x900	2.1	0.2
						0.000							

	24.19	1.0	0.010			1.000	0.00						
	24.19	1.0	0.170			1.000	0.04						
F/6				9.78	10	1.000	0.04	0.3	144.5	17.4	GSIP 900x900	1.7	0.3
						0.000							
	25.39	1.1	0.010			1.000	0.00						
	28.72	1.0	0.170			1.000	0.04						
F/7				15.98	16	1.000	0.06	0.3	115.2	18.7	GSIP 900x900	1.9	0.3
						0.000							
	25.03	1.2	0.010			1.000	0.01						
	56.03	1.0	0.170			1.000	0.05						
F/8				5.84	6	1.000	0.05	0.4	174.7	22.4	GSIP 900x900		0.4
						0.000							
						0.000							
	21.43	2.4	0.170			1.000	0.05						
F/9				6.14	6	1.000	0.01	0.4	172.5	4.2	GSIP 900x900	0.4	0.4
						0.000							
	6.41	1.5	0.010			1.000	0.00						
	14.85	1.0	0.170			1.000	0.01						

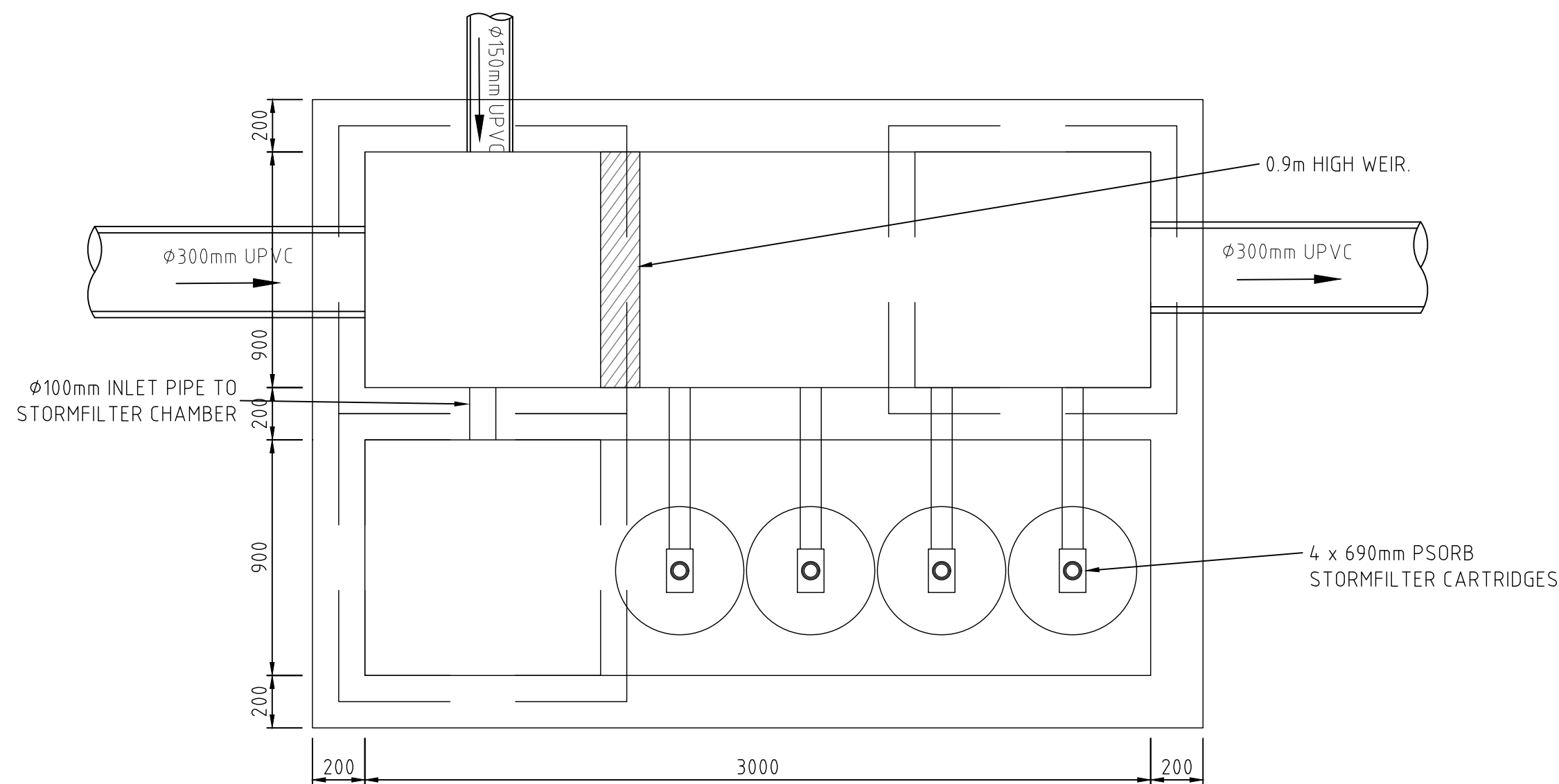
Pit Schedule - Drainage - B2.3 & B2.4

Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Easting	Northing
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	(m)	(m)
E/14	KIP 2.4m Lintel	600	900			525	10.807	2.040	12.847	307220.82	6193961.968
E/13	Stormfilter Pit	900	900	525	10.866	225	11.884	2.270	13.136	307226.44	6193960.112
						525	11.182				
E/12	GSIP 900x900	900	900	225	11.968	225	11.998	1.251	13.219	307228.88	6193968.107
F/9	GSIP 900x900	900	900	525	11.347	450	11.377	1.800	13.147	307221.93	6193944.262
E/11	GSIP 900x900	900	900	225	12.096	225	12.126	1.172	13.268	307231.73	6193977.522
F/8	GSIP 900x900	900	900	450	11.598	375	11.628	1.300	12.898	307215.27	6193923.142
E/10	GSIP 900x900	900	900	225	12.226	225	12.286	1.085	13.311	307234.60	6193987.014
F/7	GSIP 900x900	900	900	375	12.023	375	12.053	0.958	12.981	307254.24	6193916.896
E/9	GSIP 900x900	900	900	225	12.435	225	12.471	0.922	13.357	307238.92	6194001.292
F/6	GSIP 900x900	900	900	375	12.198	375	12.228	0.802	13.000	307262.64	6193944.667
E/8	GSIP 900x900	900	900	225	12.567	225	12.630	0.909	13.476	307244.51	6194019.763
F/5	GSIP 900x900	900	900	375	12.326	375	12.356	0.747	13.073	307268.30	6193963.373
E/7	GSIP 600x600	600	600	225	12.663	225	12.728	0.861	13.524	307246.40	6194026.014
F/4	GSIP 600x600	600	600	375	12.476	300	12.498	0.670	13.146	307275.25	6193986.345
E/6	GSIP 600x600	600	600	225	12.763	225	12.824	0.789	13.552	307248.43	6194032.734
F/3	GSIP 600x600	600	600	300	12.618	225	12.648	0.649	13.267	307282.20	6194009.316
E/5	GSIP 600x600	600	600	225	12.856	225	12.886	0.725	13.581	307250.27	6194038.800
F/2	GSIP 450x450	450	450	225	12.768	225	12.798	0.597	13.365	307289.15	6194032.288
E/4	GSIP 600x600	600	600	225	13.011	225	13.063	0.666	13.677	307254.82	6194053.853
F/1	GSIP 450x450	450	450	225	12.918		0.525	13.443	13.443	307296.10	6194055.260
E/3	GSIP 600x600	600	600	225	13.153	150	13.183	0.605	13.758	307257.42	6194062.451
E/2	GSIP 600x600	600	600	150	13.267	150	13.297	0.553	13.820	307259.86	6194070.494
E/1	GSIP 600x600	600	600	150	13.458			0.543	14.001	307266.13	6194085.254

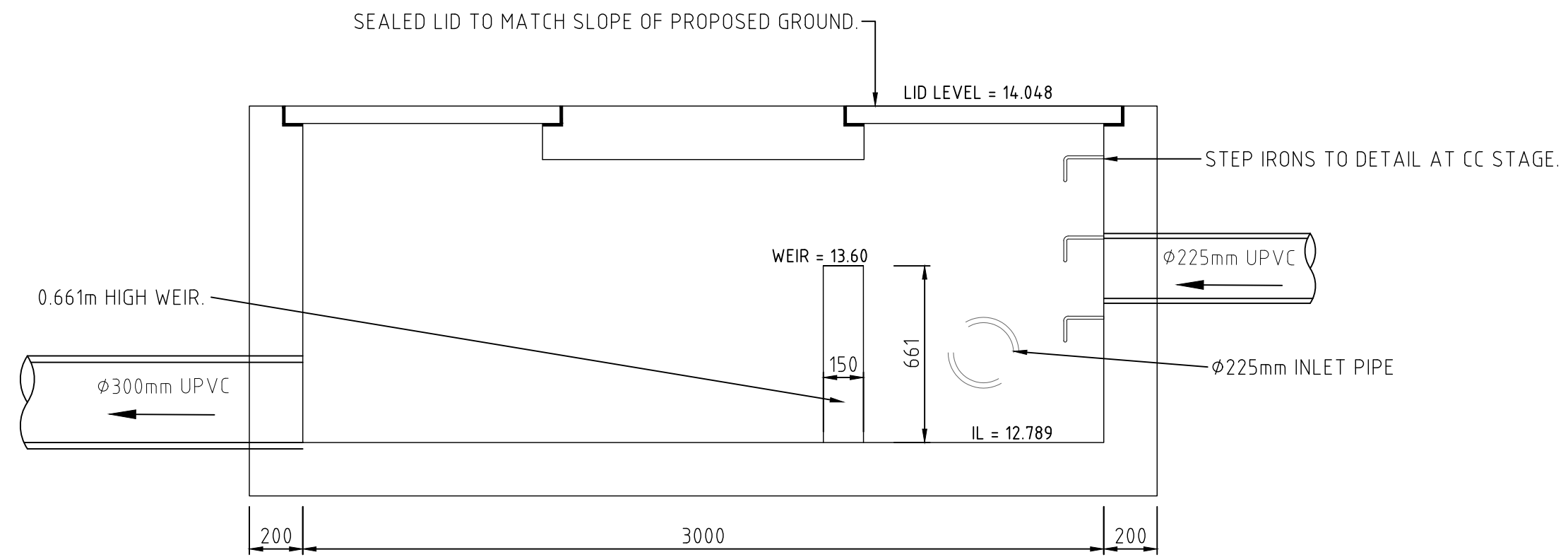
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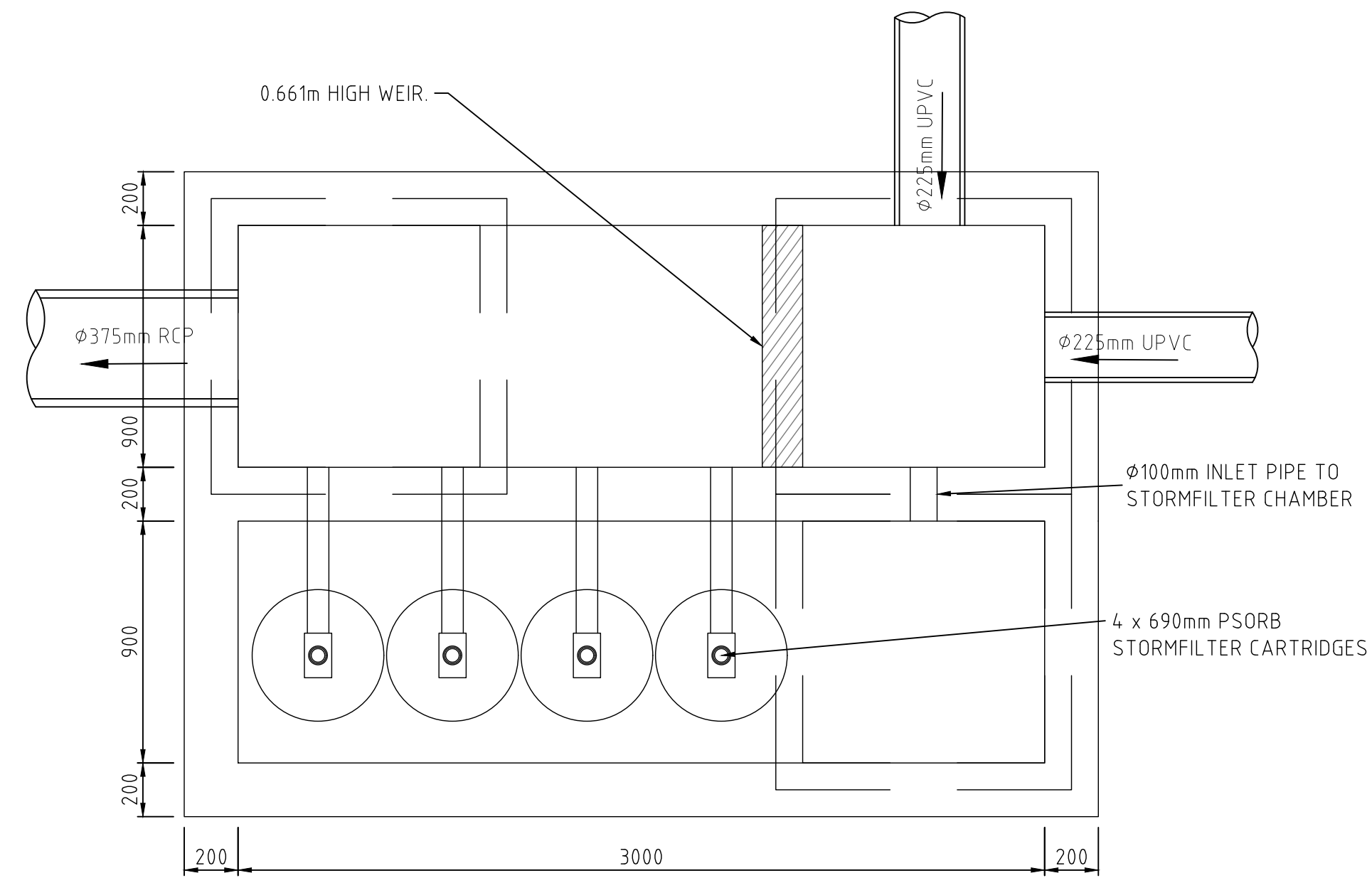
PIT A/7 STORMFILTER PIT - SECTION
SCALE 1:20



PIT A/7 STORMFILTER PIT - PLAN
SCALE 1:20



PIT A/7 STORMFILTER PIT - SECTION
SCALE 1:20



PIT C/11 STORMFILTER PIT - PLAN
SCALE 1:20

B2.1 - PIT A/7 DISCHARGE CONTROL

ORIFICE PIPE DIAMETER	=	100 mm
NUMBER OF PIPES	=	1
CENTRE OF ORIFICE LEVEL	=	12.80 m
WEIR LEVEL	=	13.65 m
WEIR LENGTH	=	0.90 m

ARI (YEARS)	DISCHARGE IN (L/S)	MAX WATER LEVEL	DISCHARGE ORIFICE	DISCHARGE WEIR	DISCHARGE TOTAL
0.25	20.0	13.65	19.0		19.0
10	105.0	13.87	21.4	77.5	99.0

B2.2 - PIT C/11 DISCHARGE CONTROL

ORIFICE PIPE DIAMETER	=	100 mm
NUMBER OF PIPES	=	1
CENTRE OF ORIFICE LEVEL	=	12.99 m
WEIR LEVEL	=	13.60 m
WEIR LENGTH	=	0.90 m

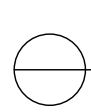
ARI (YEARS)	DISCHARGE IN (L/S)	MAX WATER LEVEL	DISCHARGE ORIFICE	DISCHARGE WEIR	DISCHARGE TOTAL
0.25	20.0	13.60	15.9		15.9
10	60.0	13.74	17.8	39.4	57.1

REVISIONS

No.	DESCRIPTION	DRN	APP	DATE
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25



Site Plus Pty Ltd ABN 73 104 315 095



engineering

landscape

design

flooding

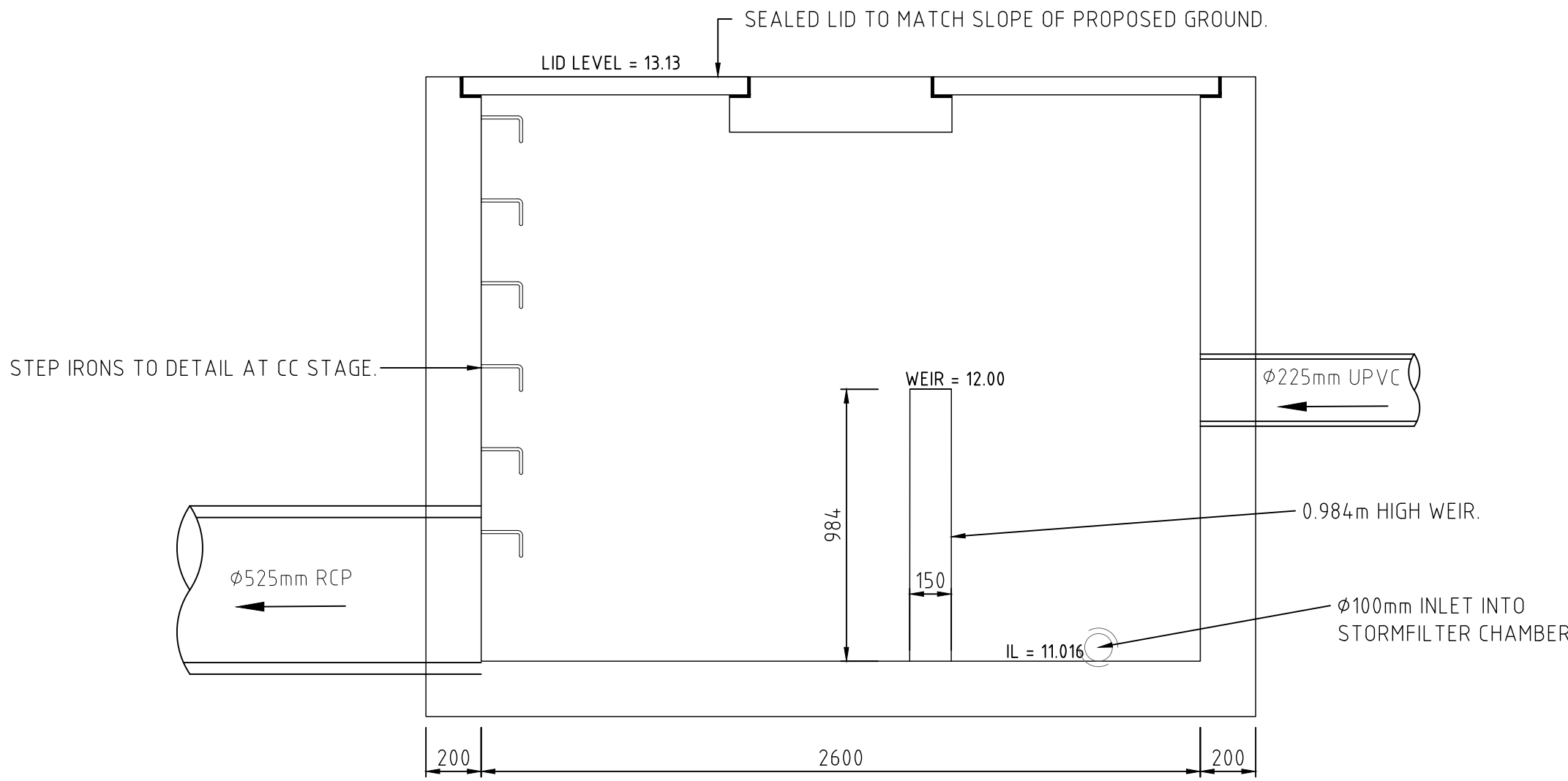
management

WOLLONGONG - HEAD OFFICE
Shop 1, 18 Arrow Avenue
Figtree NSW 2555
PO Box 506
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E info@siteplus.com.au

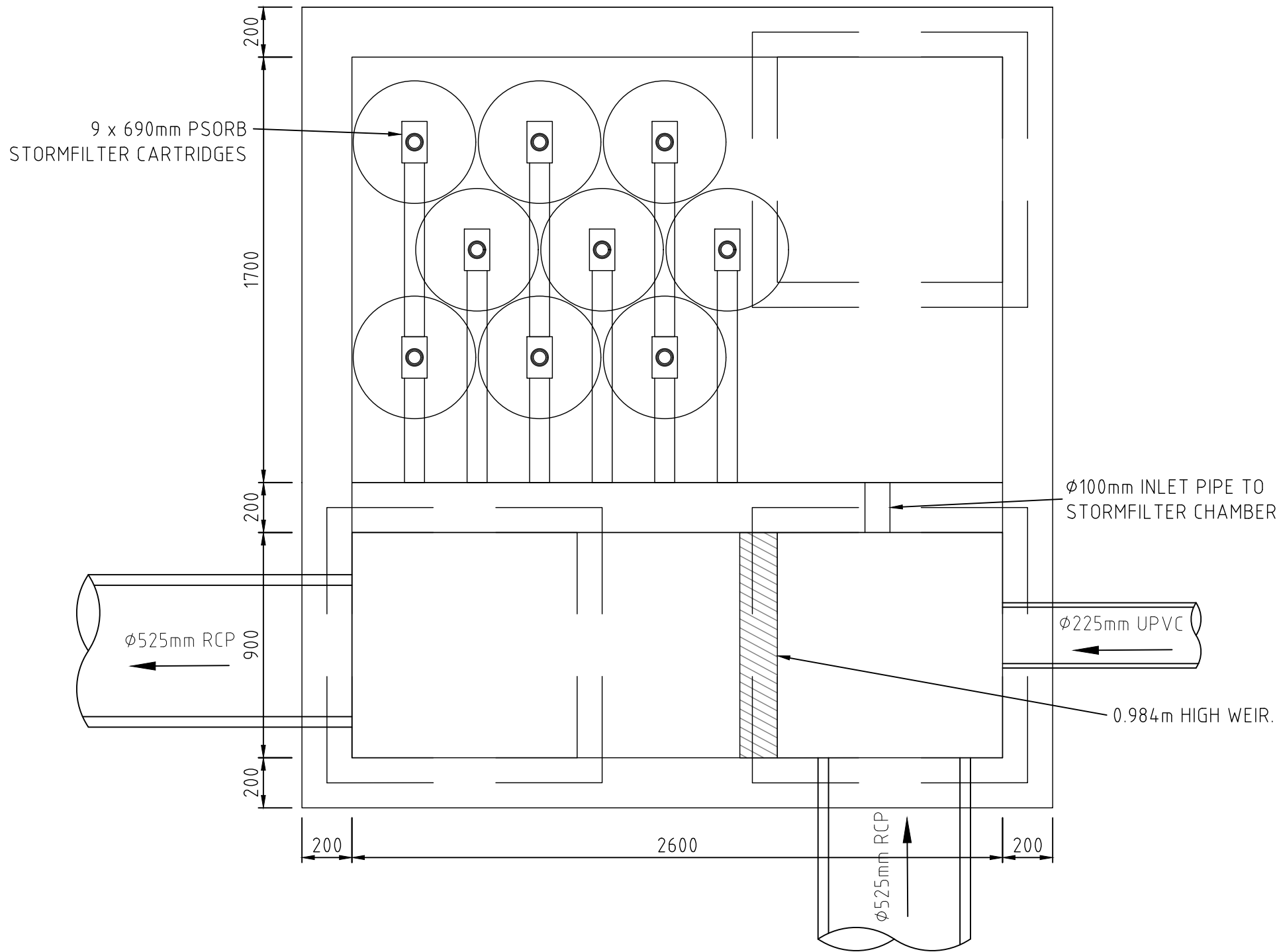
Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title	LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT
Dwg Status	APPROVAL
Local Authority	WOLLONGONG

Dwg Title	PROPOSED RESIDENTIAL DEVELOPMENT 27 RAILWAY STREET, CORRIMAL DRAINAGE DETAILS 1
Ref & Dwg No	25152.DA.C20
Sheet No	20 of 27
Scale	AS NOTED @ A1
Date	03.11.25
Rev	F
A1	



PIT E/13 STORMFILTER PIT - SECTION
SCALE 1:20

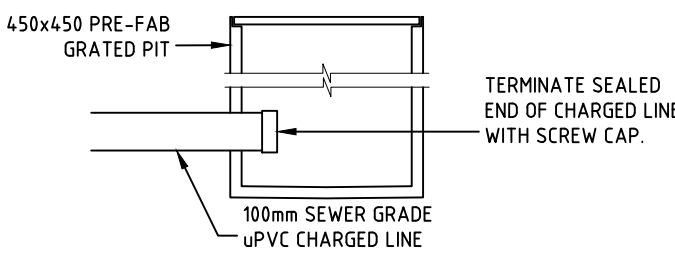


PIT E/13 STORMFILTER PIT - PLAN
SCALE 1:20

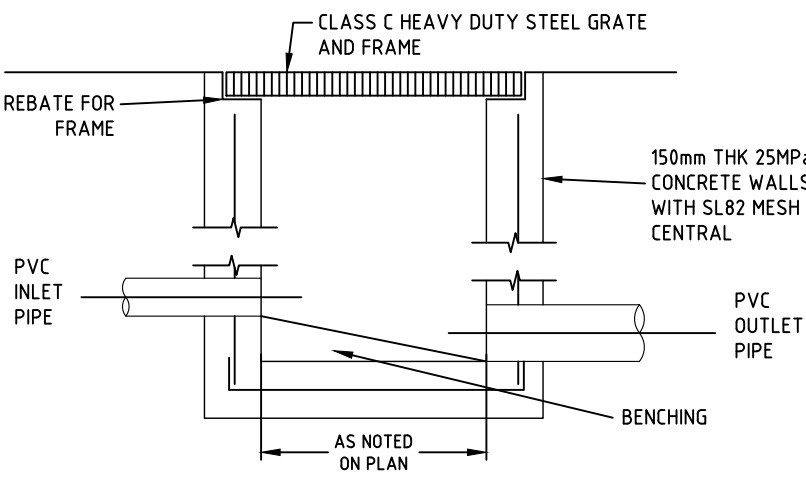
B2.3 & B2.4 - PIT E/13 DISCHARGE CONTROL

ORIFICE PIPE DIAMETER	=	100 mm
NUMBER OF PIPES	=	1
CENTRE OF ORIFICE LEVEL	=	11.07 m
WEIR LEVEL	=	12.00 m
WEIR LENGTH	=	0.90 m

ARI (YEARS)	DISCHARGE IN (L/S)	MAX WATER LEVEL	DISCHARGE ORIFICE	DISCHARGE WEIR	DISCHARGE TOTAL
0.25	20.0	12.00	20.0		20.0
10	200.0	12.37	23.8	169.1	192.9



CHARGED LINE CLEAN OUT PIT
SCALE 1:20



TYPICAL PIT DETAIL
SCALE 1:20

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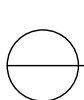
REVISIONS

No.	DESCRIPTION
B	ADJUSTED PITS FOR B2.1 & B2.2
C	REVISED TO UPDATED ARCH
D	REVISED TO UPDATED ARCH
E	REVISED EXISTING SURFACE
F	SUBSTATION EASEMENT

DRN	APP	DATE
I.B.	A.C.	19.09.25
I.B.	A.C.	26.09.25
I.B.	A.C.	14.10.25
I.B.	A.C.	03.11.25
I.B.	a.c.	03.11.25



Site Plus Pty Ltd ABN 73 104 315 095



engineering

landscape

design

flooding

management

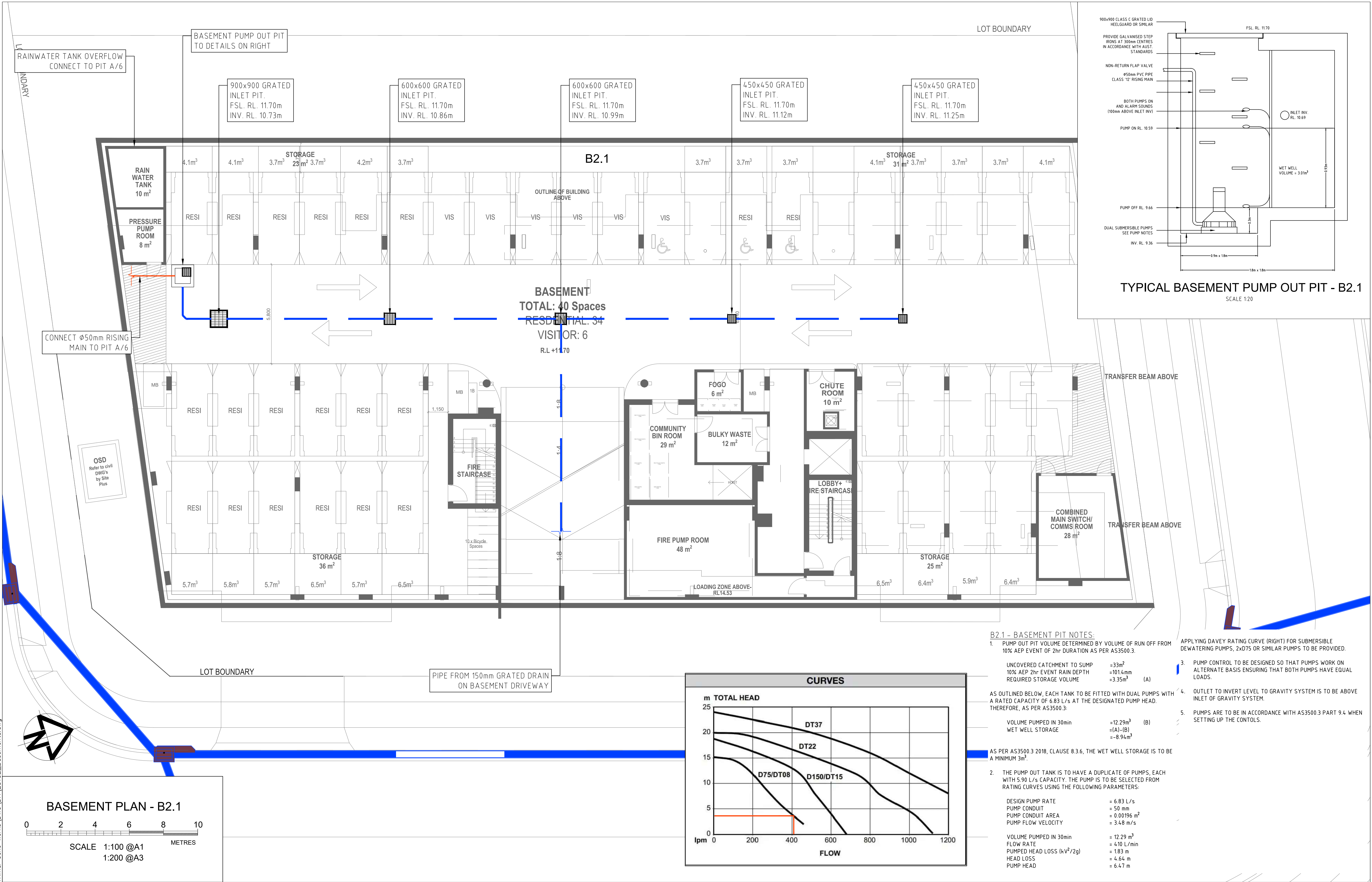
WOLLONGONG - HEAD OFFICE
Shop 1, 18 Arrow Avenue
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PO Box 506
Figtree NSW 2528
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E info@siteplus.com.au

Height Datum	A.H.D.
Drawn	I.B.
Designed	I.B.
Checked	A.C.
Approved	A.C.

Client Title	LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT
Dwg Status	APPROVAL
Local Authority	WOLLONGONG

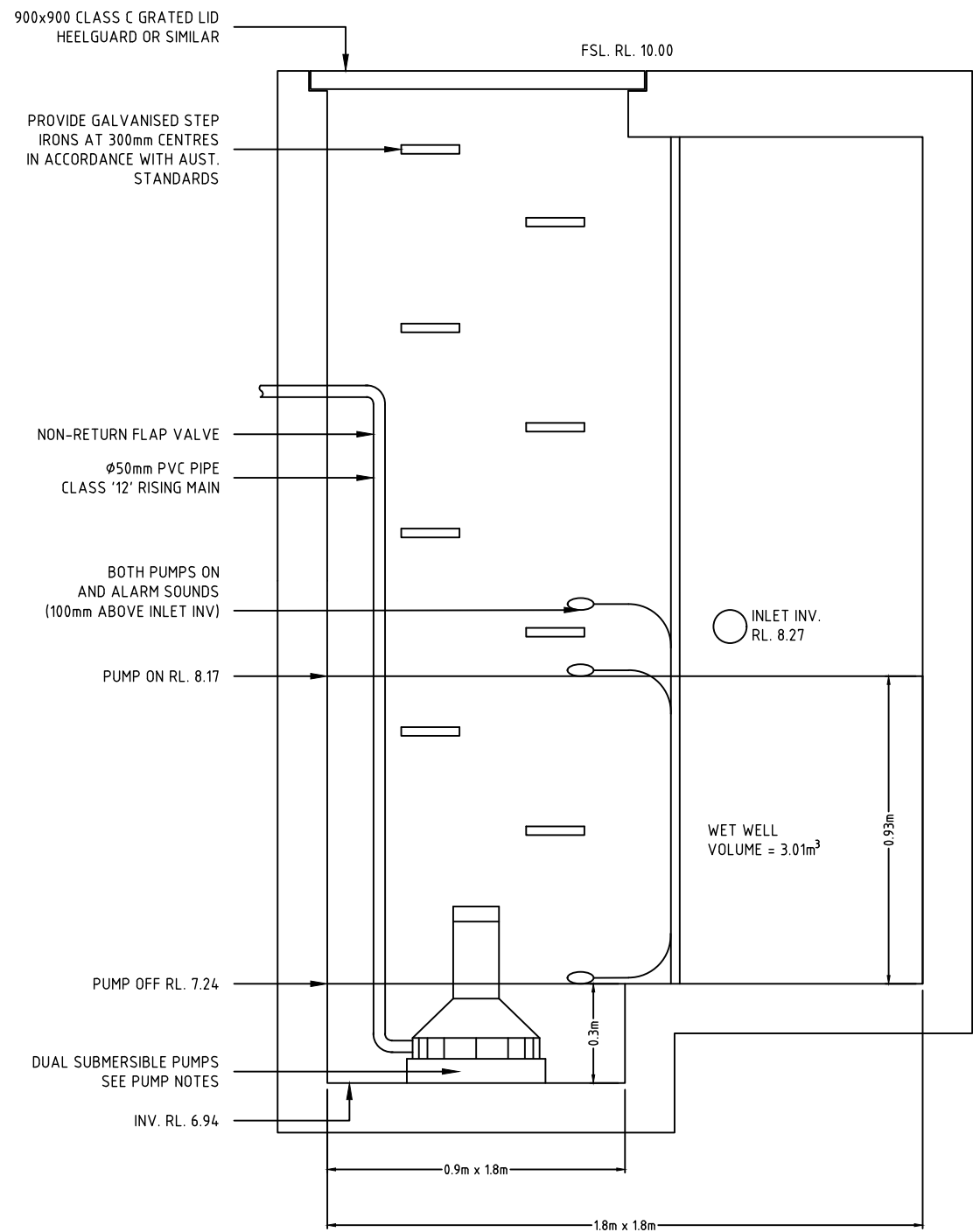
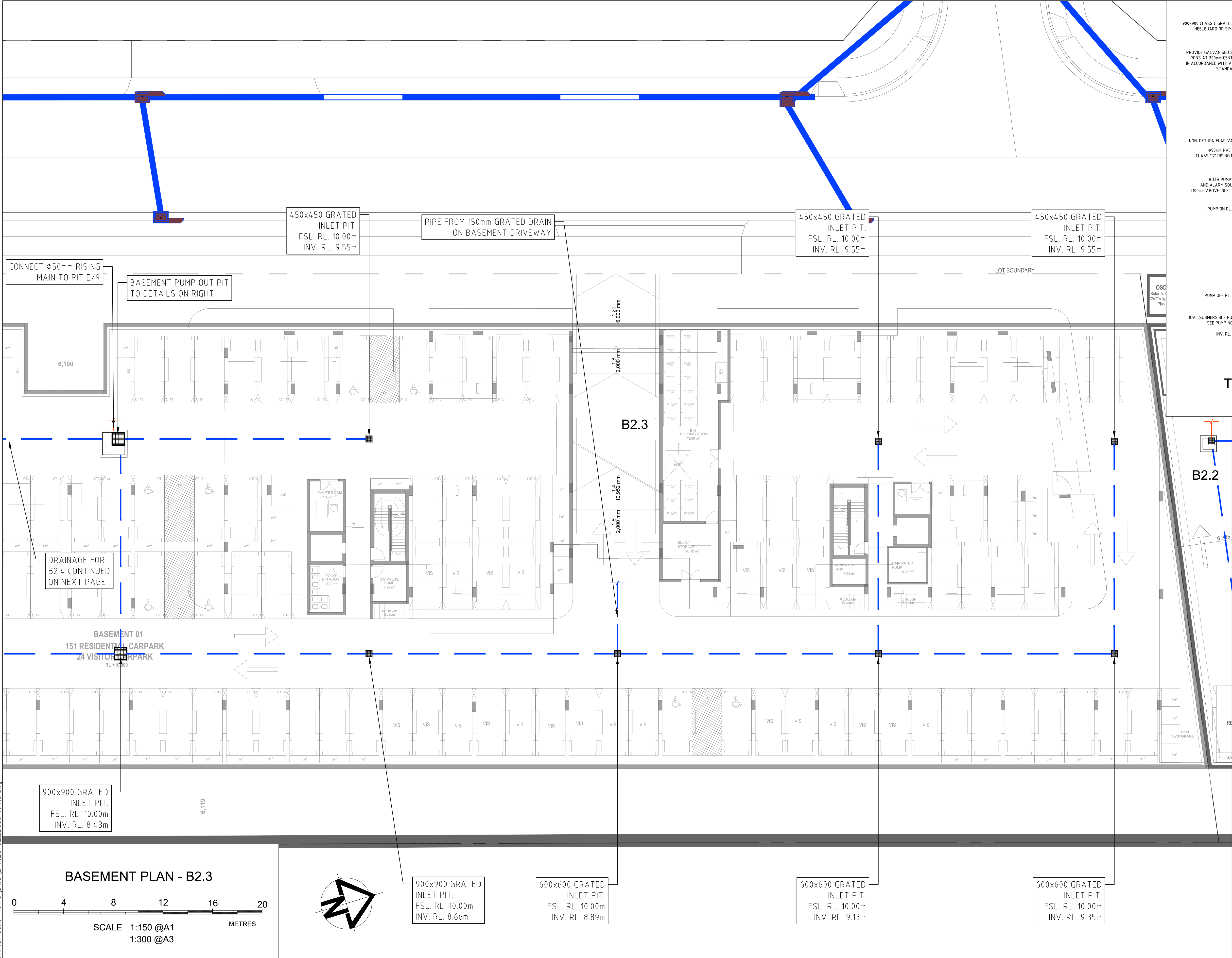
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Ref & Dwg No	25152.DA.C21
Sheet No	21 of 27
Scale	AS NOTED @ A1
Date	03.11.25
Rev	F
A1	



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REVISIONS	No.	DESCRIPTION	DRN	APP	DATE	 WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au	Height Datum	A.H.D.	Client Title LEGACY PROPERTY GROUP C/- CHESTER PROJECT MANAGEMENT	Dwg Title PROPOSED RESIDENTIAL DEVELOPMENT 27 RAILWAY STREET, CORRIMAL	Ref & Dwg No 25152.DA.C22					
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25		Drawn	I.B.			Sheet No					
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25		Designed	I.B.			Sheet 22 of 27					
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25		Checked	A.C.			Scale					
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25		Approved	A.C.			1:100 @ A1					
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25						Dwg Status	APPROVAL	Local Authority	WOLLONGONG	BASEMENT PLAN 1 - B2.1	Date



TYPICAL BASEMENT PUMP OUT PIT - B2.3
SCALE 1:20

B2.3 - BASEMENT PIT NOTES:

1. PUMP OUT PIT VOLUME DETERMINED BY VOLUME OF RUN OFF FROM 10% AEP EVENT OF 2hr DURATION AS PER AS3500.3.

UNCOVERED CATCHMENT TO SUMP	=55m ²	
10% AEP 2hr EVENT RAIN DEPTH	=101.4mm	
REQUIRED STORAGE VOLUME	=5.58m ³	(A)

AS OUTLINED BELOW, EACH TANK TO BE FITTED WITH DUAL PUMPS WITH A RATED CAPACITY OF 5.83 L/s AT THE DESIGNATED PUMP HEAD. THEREFORE, AS PER AS3500.3:

VOLUME PUMPED IN 30min	=9.90m ³	(B)
WET WELL STORAGE	=4.32m ³	

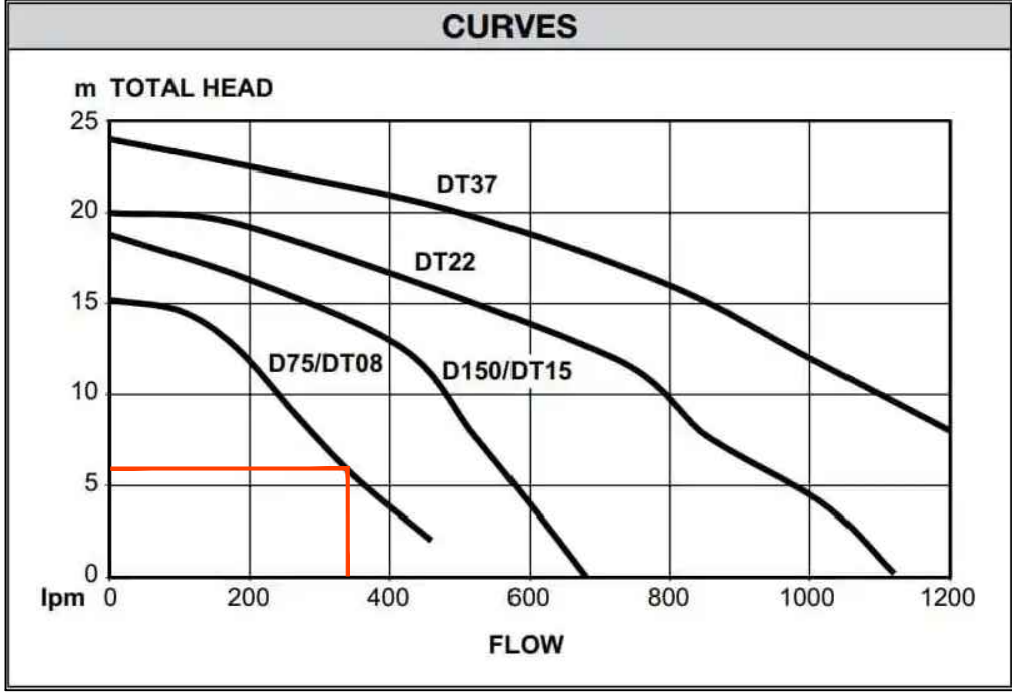
AS PER AS3500.3 2018, CLAUSE 8.3.6, THE WET WELL STORAGE IS TO BE A MINIMUM 3m³.

2. THE PUMP OUT TANK IS TO HAVE A DUPLICATE OF PUMPS, EACH WITH 5.83 L/s CAPACITY. THE PUMP IS TO BE SELECTED FROM RATING CURVES USING THE FOLLOWING PARAMETERS:

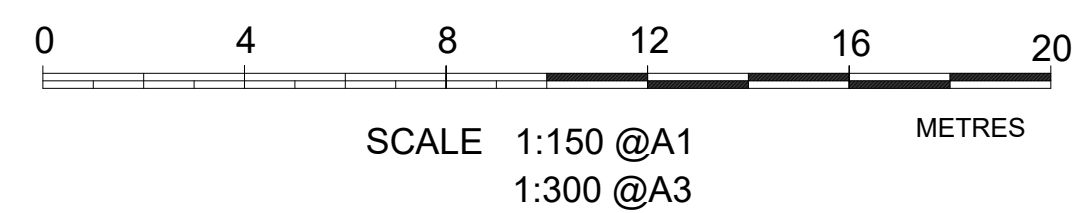
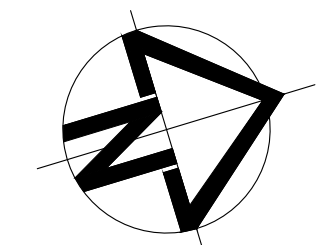
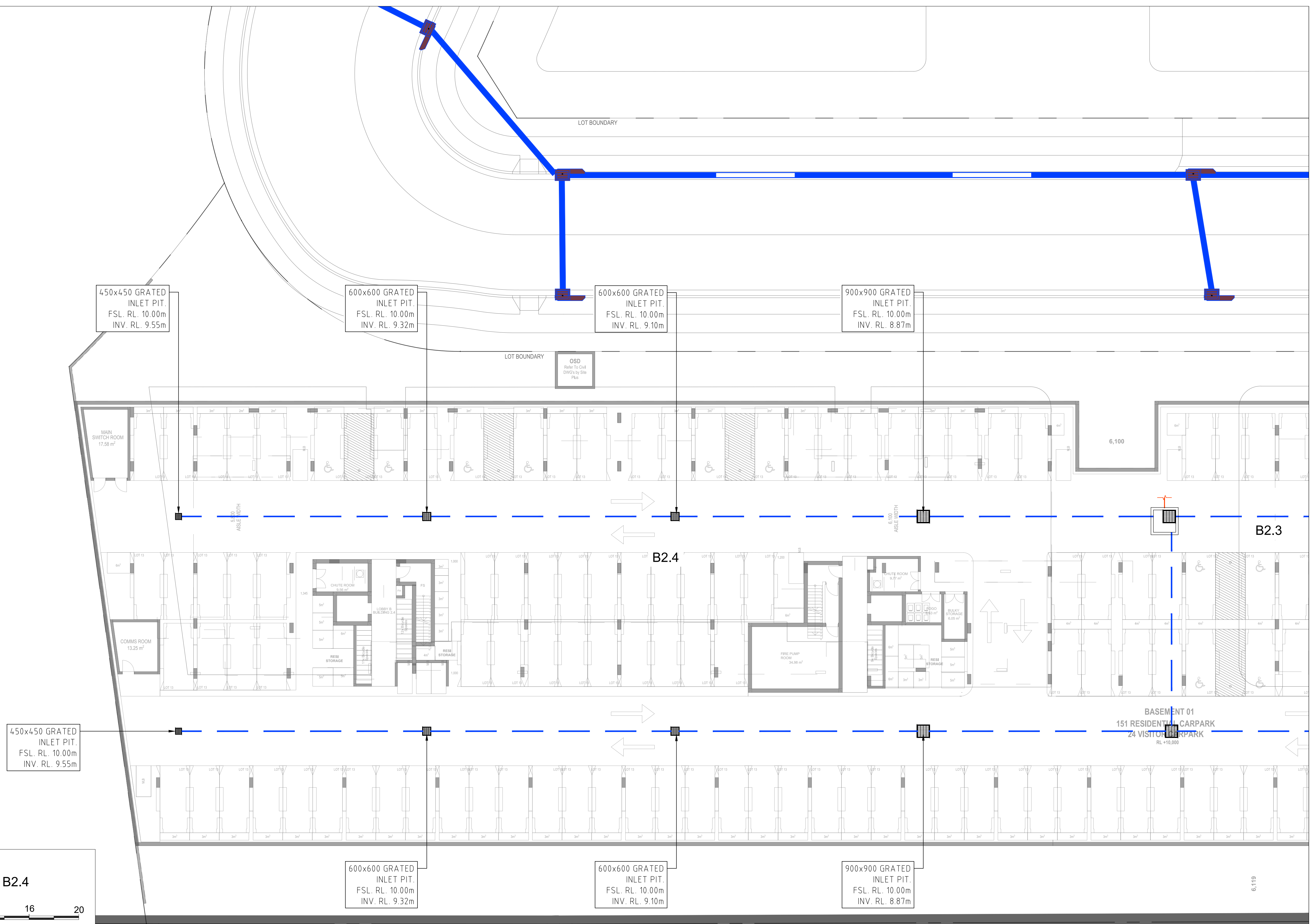
DESIGN PUMP RATE	= 5.83 L/s
PUMP CONDUIT	= 50 mm
PUMP CONDUIT AREA	= 0.00196 m ²
PUMP FLOW VELOCITY	= 2.98 m/s
VOLUME PUMPED IN 30min	= 10.49 m ³
FLOW RATE	= 350 L/min
PUMPED HEAD LOSS (kV ² /2g)	= 1.34 m
HEAD LOSS	= 6.06 m
PUMP HEAD	= 7.40 m

APPLYING DAVEY RATING CURVE (RIGHT) FOR SUBMERSIBLE DEWATERING PUMPS, 2xDT5 OR SIMILAR PUMPS TO BE PROVIDED.

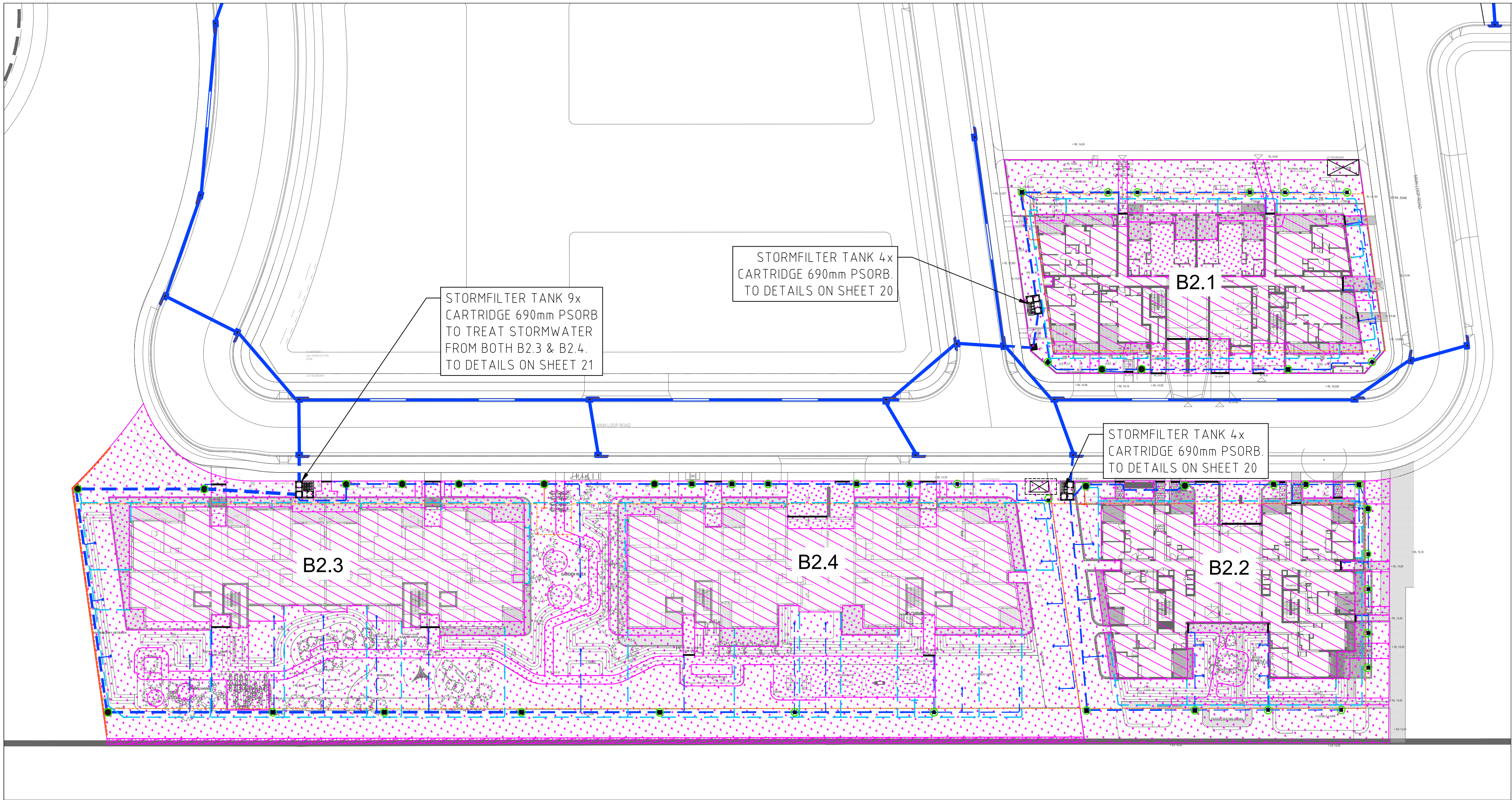
3. PUMP CONTROL TO BE DESIGNED SO THAT PUMPS WORK ON ALTERNATE BASIS ENSURING THAT BOTH PUMPS HAVE EQUAL LOADS.
4. OUTLET TO INVERT LEVEL TO GRAVITY SYSTEM IS TO BE ABOVE INLET OF GRAVITY SYSTEM.
5. PUMPS ARE TO BE IN ACCORDANCE WITH AS3500.3 PART 9.4 WHEN SETTING UP THE CONTROLS.



No.	DESCRIPTION	DRN	APP	DATE	Height Datum	Client Title	Dwg Title	Ref & Dwg No
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25	A.H.D.	LEGACY PROPERTY GROUP	PROPOSED RESIDENTIAL DEVELOPMENT	25152.DA.C24
C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25	Drawn	C/-	27 RAILWAY STREET, CORRIMAL	Sheet No 24 of 27
D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25	Designed	CHESTER PROJECT MANAGEMENT	BASEMENT PLAN 3 - B2.3	Scale 1:150 @ A1
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25	Checked			Date 03.11.25
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25	Approved	APPROVAL	WOLLONGONG	Rev F A1



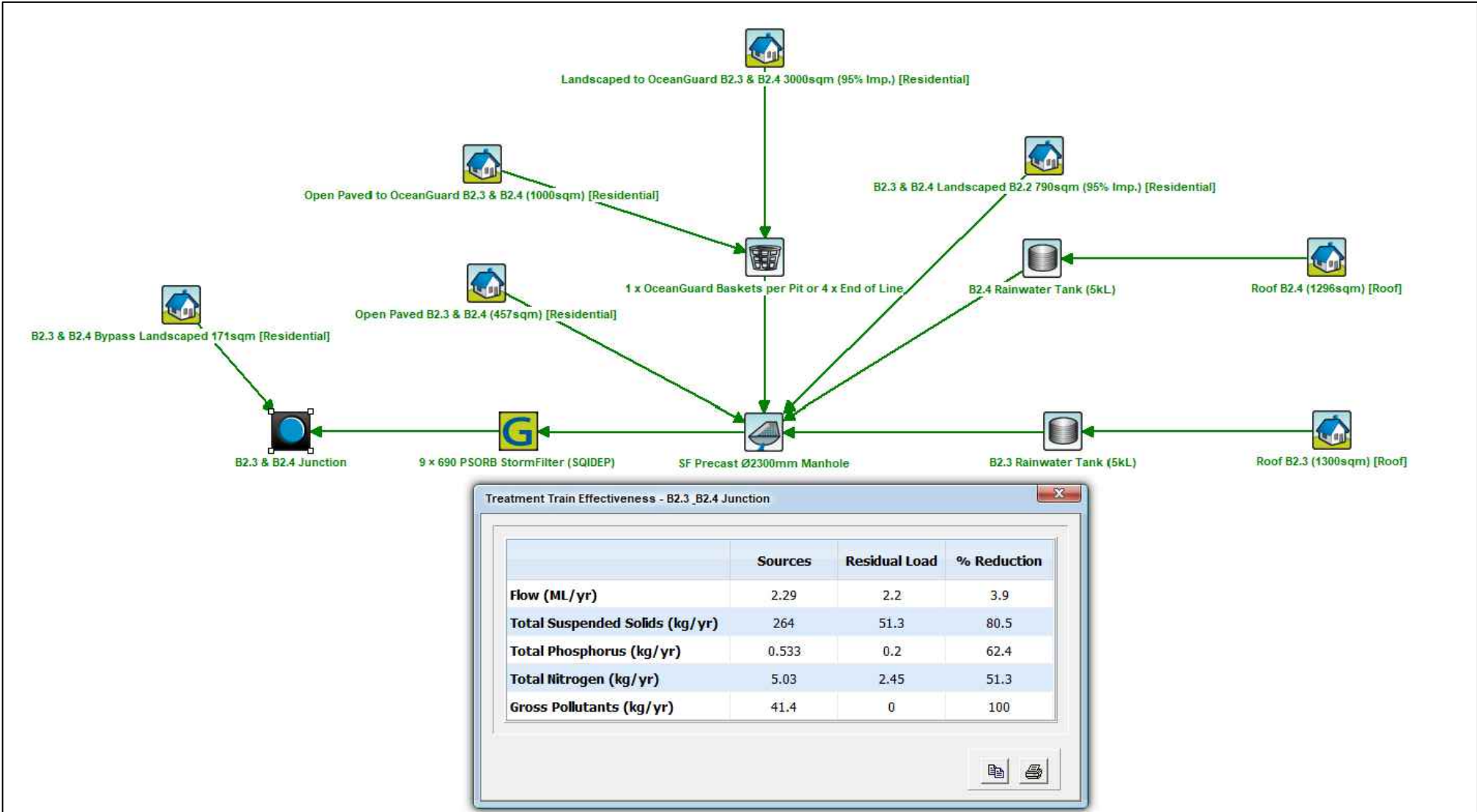
REVIEWS	No.	DESCRIPTION	DRN	APP	DATE	 Site Plus Pty Ltd ABN 73 104 315 095 engineeringlandscapedesignfloodingmanagement	Height Datum	A.H.D.	Client Title	WOLLONGONG - HEAD OFFICE		Dwg Title	PROPOSED RESIDENTIAL DEVELOPMENT		Ref & Dwg No			
	B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	19.09.25		Shop 1, 18 Arrow Avenue	C/-		LEGACY PROPERTY GROUP	27 RAILWAY STREET, CORRIMAL		25152.DA.C25					
	C	REVISED TO UPDATED ARCH	I.B.	A.C.	26.09.25		Figtree NSW 2525											
	D	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25		PO Box 506											
	E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25		Figtree NSW 2525											
	F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25		F 61 2 4227 4133											
							Checked	A.C.	CHESTER PROJECT MANAGEMENT		Scale	1:150 @ A1						
							Approved	A.C.	Dwg Status	APPROVAL	Local Authority	WOLLONGONG	BASEMENT PLAN 4 - B2.4	Date	03.11.25	Rev	F	A1



LEGEND

- ROOF AREA 100% IMPERVIOUS.
- PAVED AREA 100% IMPERVIOUS.
- LANDSCAPE AREA 5% IMPERVIOUS.
- BYPASS LANDSCAPE AREA 0% IMPERVIOUS.
- PITS WITH STANDARD OCEAN GUARDS (TO DETAILS BELOW)

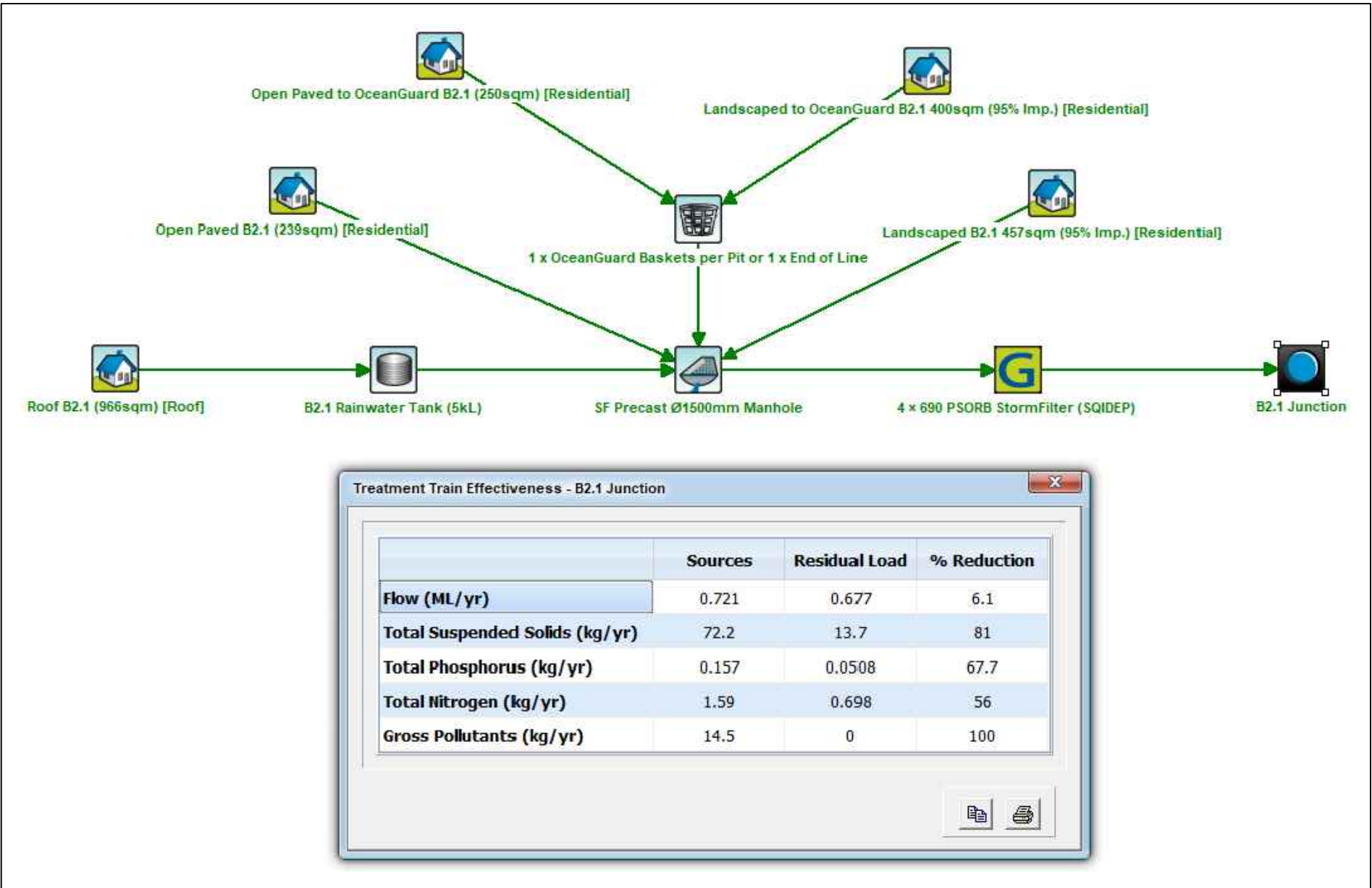
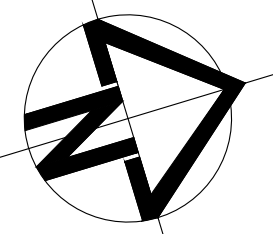
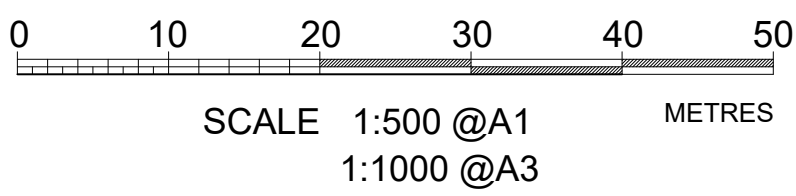
STORMFILTER DETAILS 690mm PSORB	
CARTRIDGE NAME / SIPHON HEIGHT (mm)	690
CARTRIDGE PHYSICAL HEIGHT (mm)	840
TYPICAL WEIR HEIGHT [H] (mm)	920
CARTRIDGE FLOW RATE FOR ZPG MEDIA (L/s)	1.6
CARTRIDGE FLOW RATE FOR PSORB MEDIA (L/s)	0.90



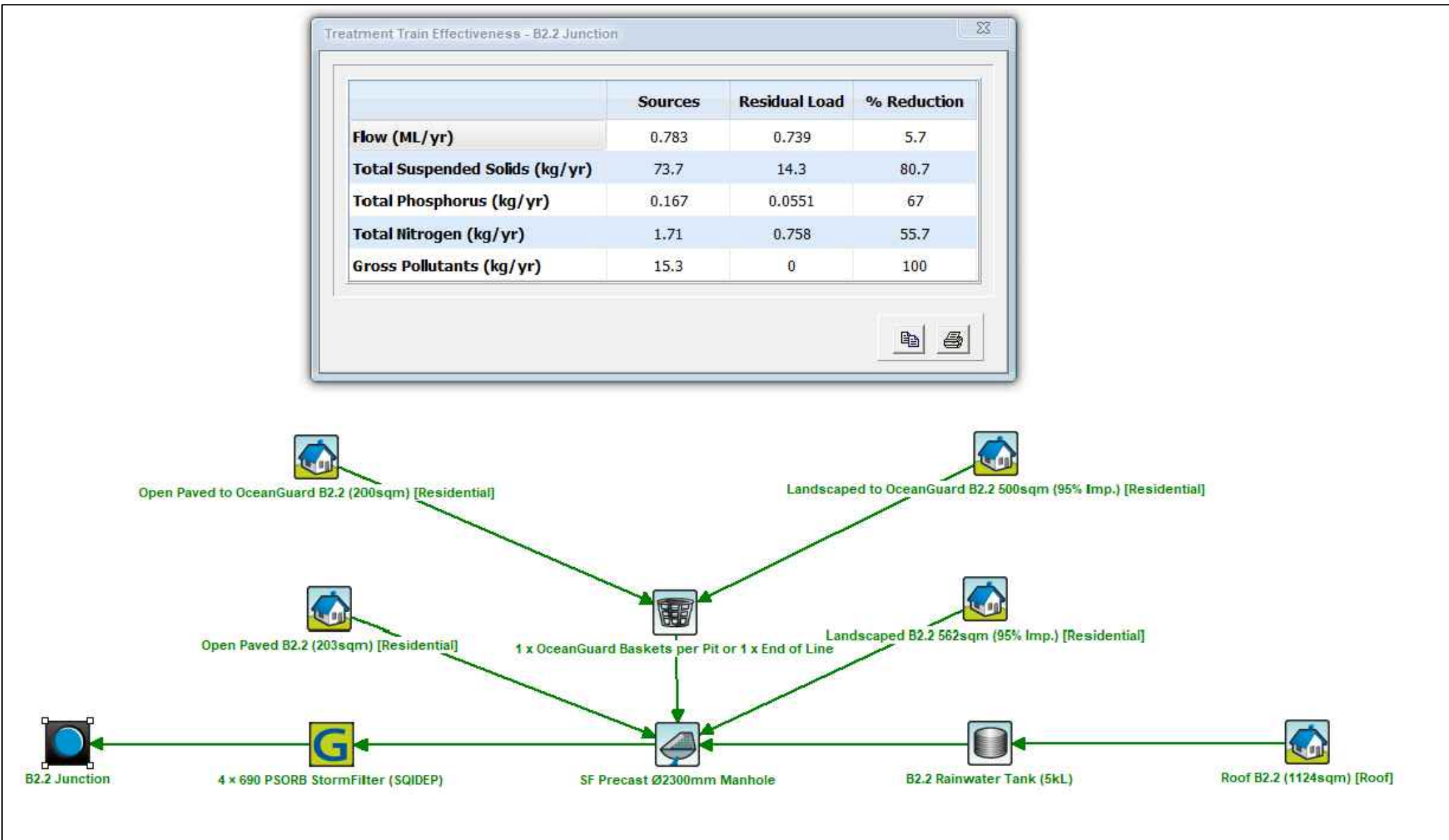
MUSIC MODEL RESULTS - B2.3 & B2.4

REFER TO MUSIC MODEL PROVIDED FOR FURTHER DETAILS

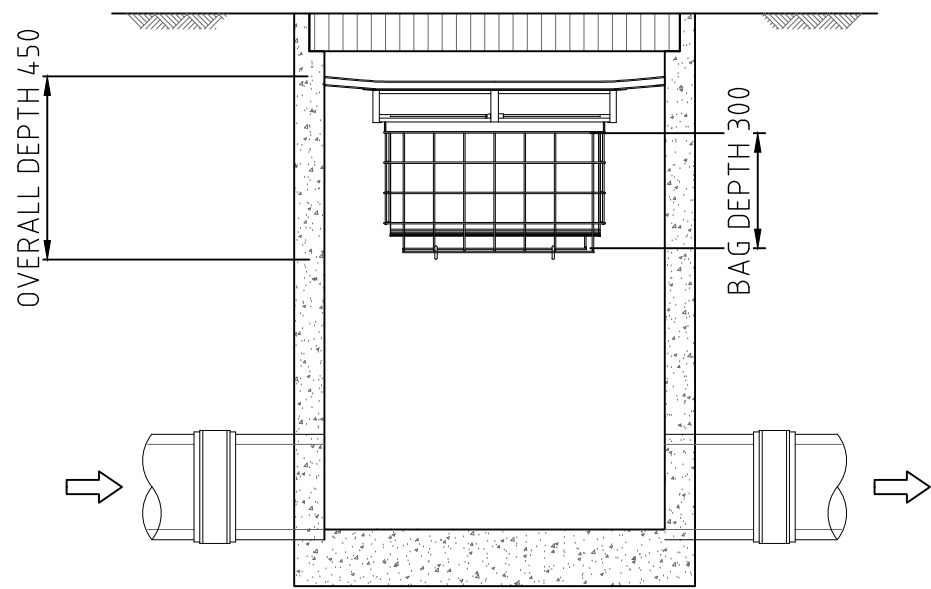
MUSIC CATCHMENT PLAN



MUSIC MODEL RESULTS - B2.1



MUSIC MODEL RESULTS - B2.2

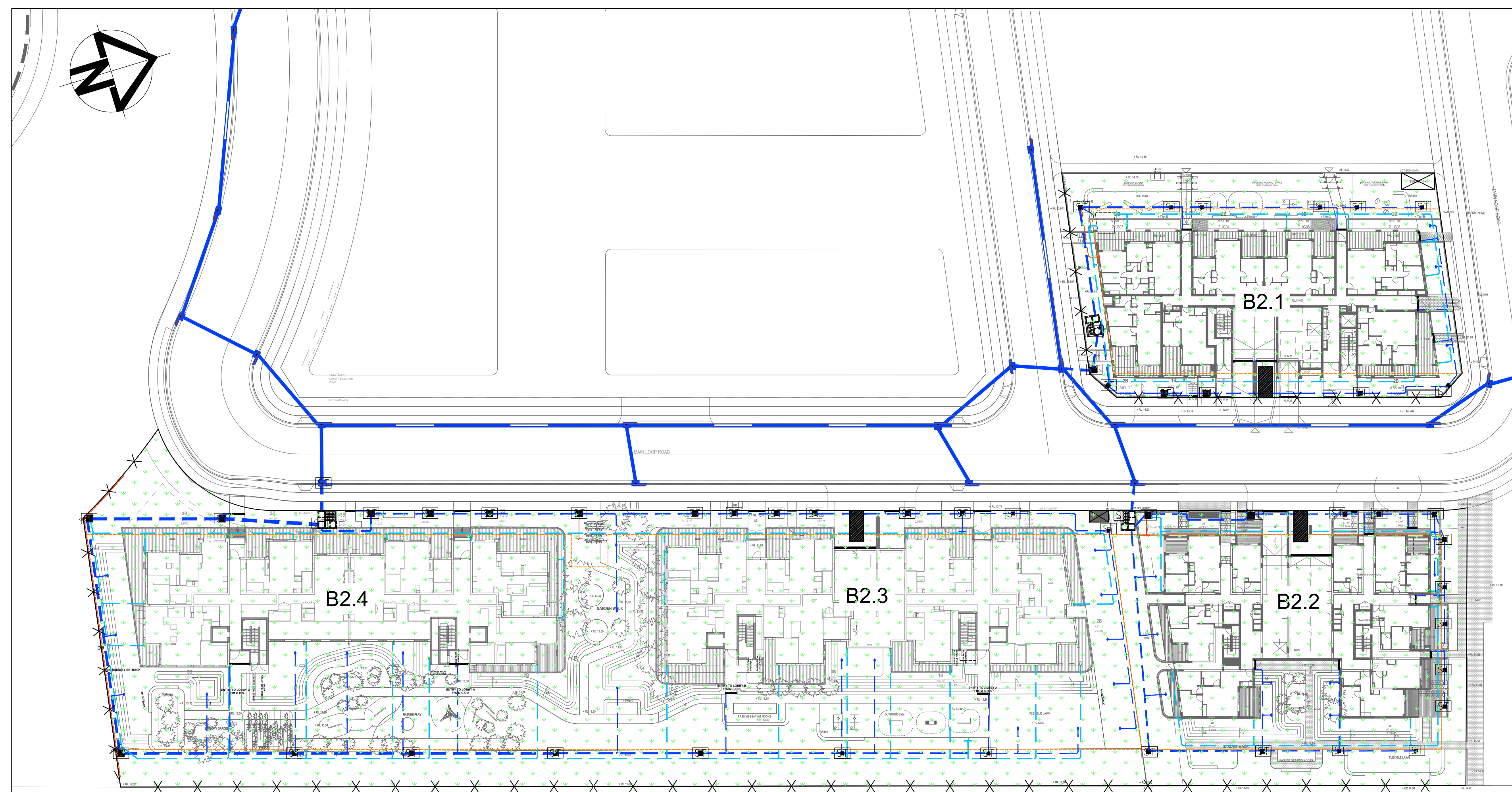


OCEANGUARD SURFACE FLOW CONFIGURATION
SCALE 1:20

NOTE: ALL GRATED PITS TO CONTAIN OCEANGUARDS.

T:\Projects\25152 Capital Coke Works\DWG\DA\25152_Drainage.dwg

REVISIONS		DRN	APP	DATE	siteplus		WOLLONGONG - HEAD OFFICE	Height Datum	Client Title		Dwg Title		Ref & Dwg No
No.	DESCRIPTION	I.B.	A.C.	19.09.25			Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 506 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au	A.H.D.	LEGACY PROPERTY GROUP		PROPOSED RESIDENTIAL DEVELOPMENT		25152.DA.C26
B	ADJUSTED PITS FOR B2.1 & B2.2	I.B.	A.C.	26.09.25				Drawn	C/-		27 RAILWAY STREET, CORRIMAL		Sheet No
C	REVISED TO UPDATED ARCH	I.B.	A.C.	14.10.25				Designed	CHESTER PROJECT MANAGEMENT		AS NOTED @ A1		Sheet 26 of 27
D	REVISED TO UPDATED ARCH	I.B.	A.C.	03.11.25				Checked	APPROVAL		MUSIC PLAN		Scale
E	REVISED EXISTING SURFACE	I.B.	A.C.	03.11.25				Approved	WOLLONGONG				Date
F	SUBSTATION EASEMENT	I.B.	a.c.	03.11.25									Rev
													F
													A1

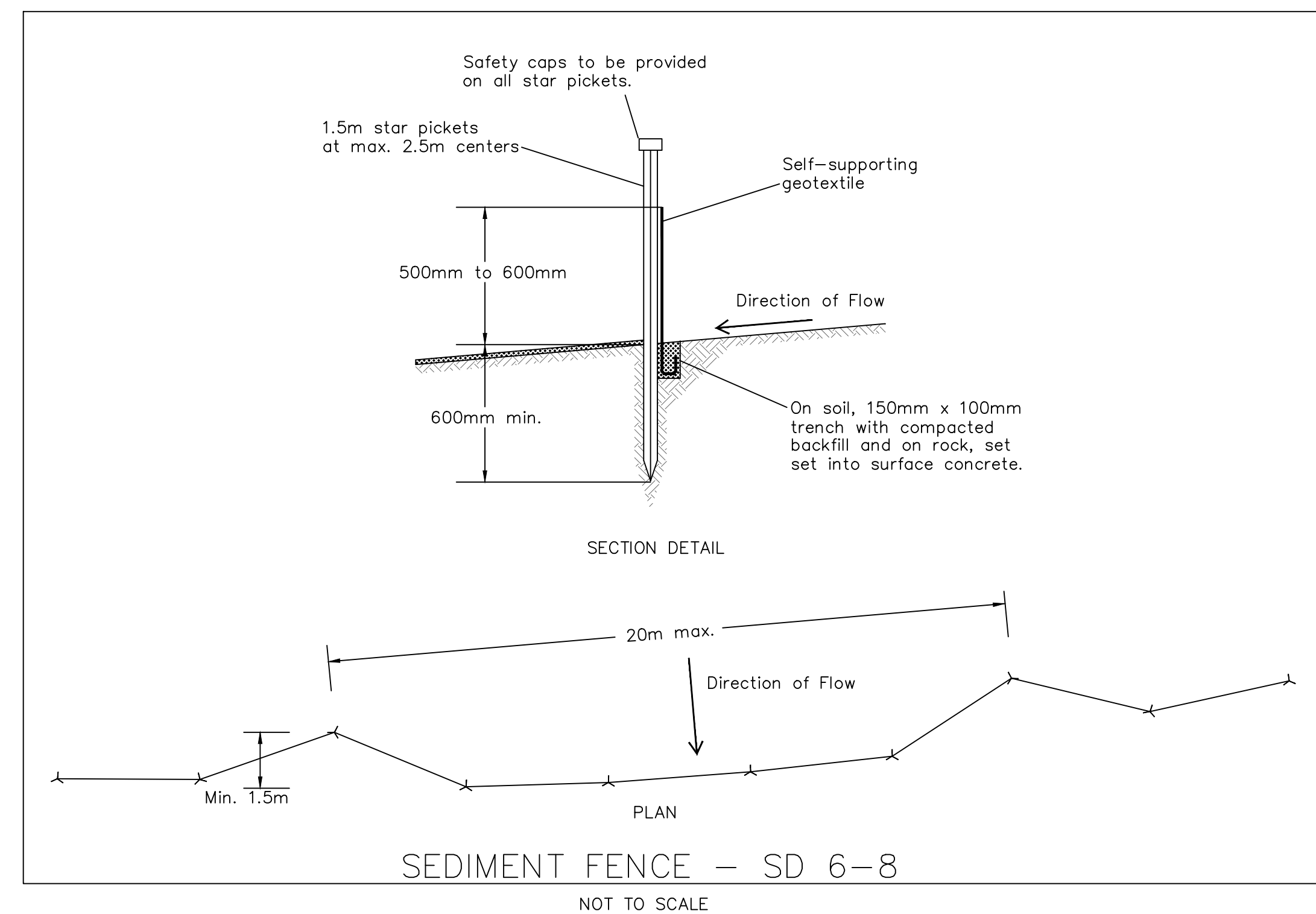
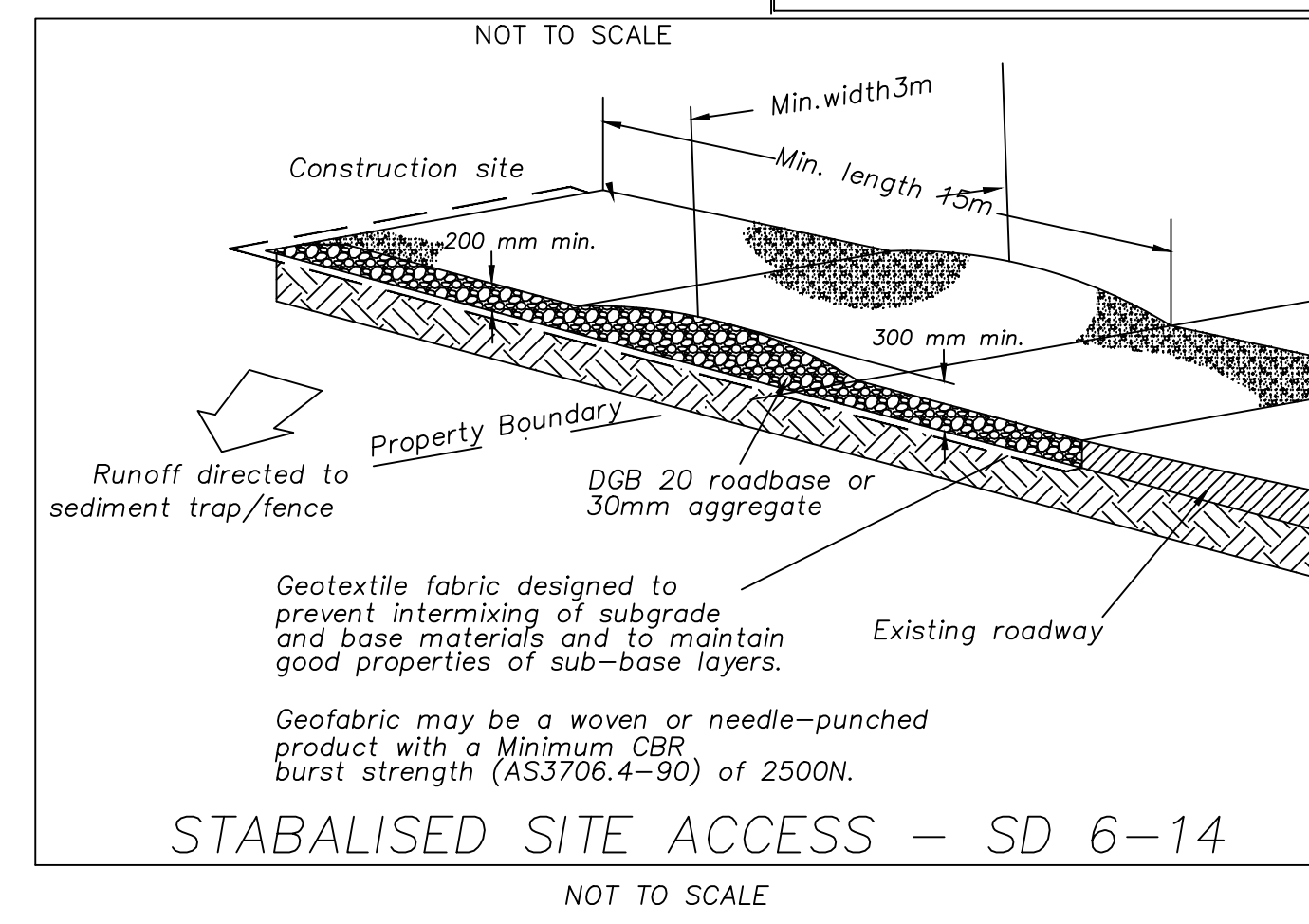
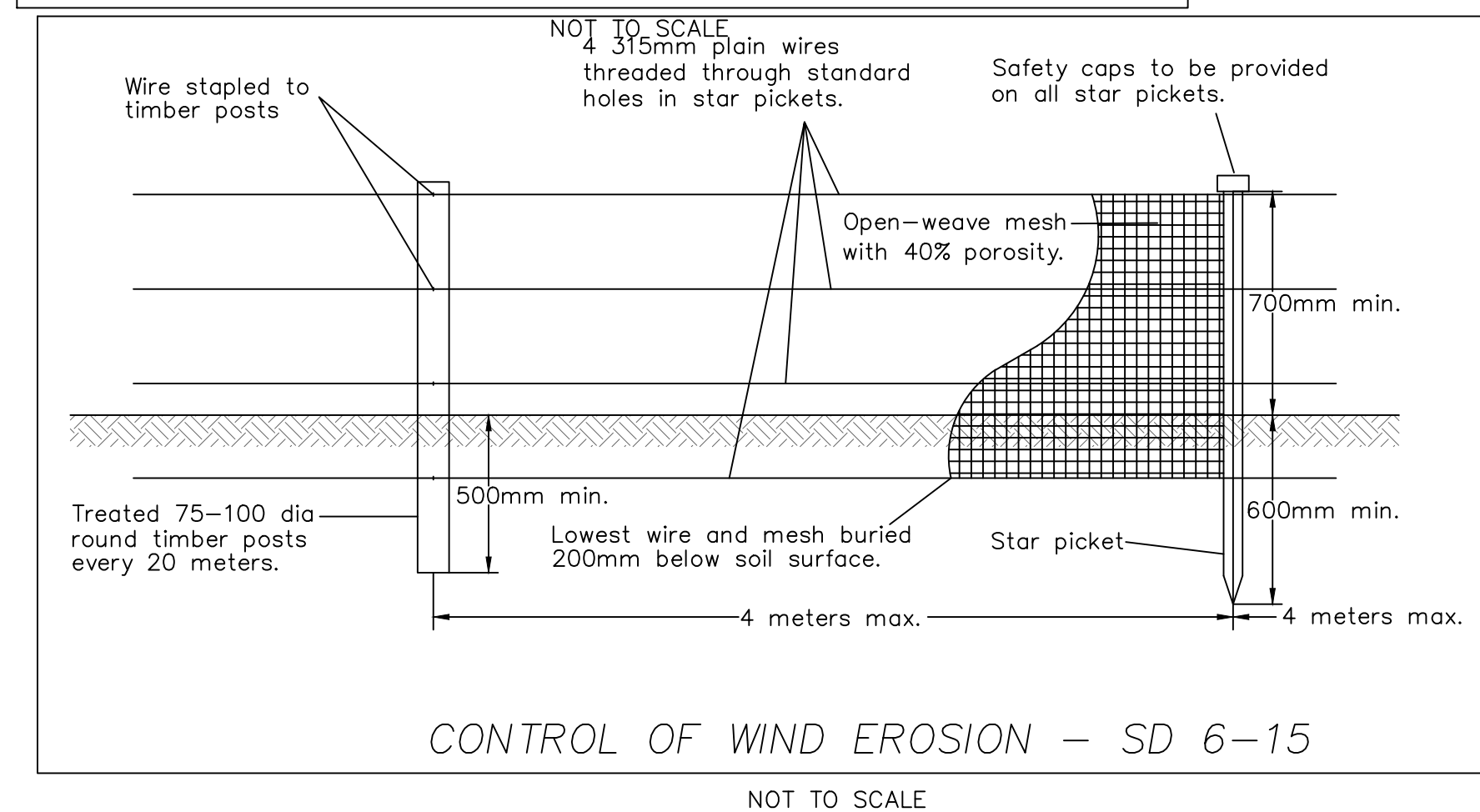
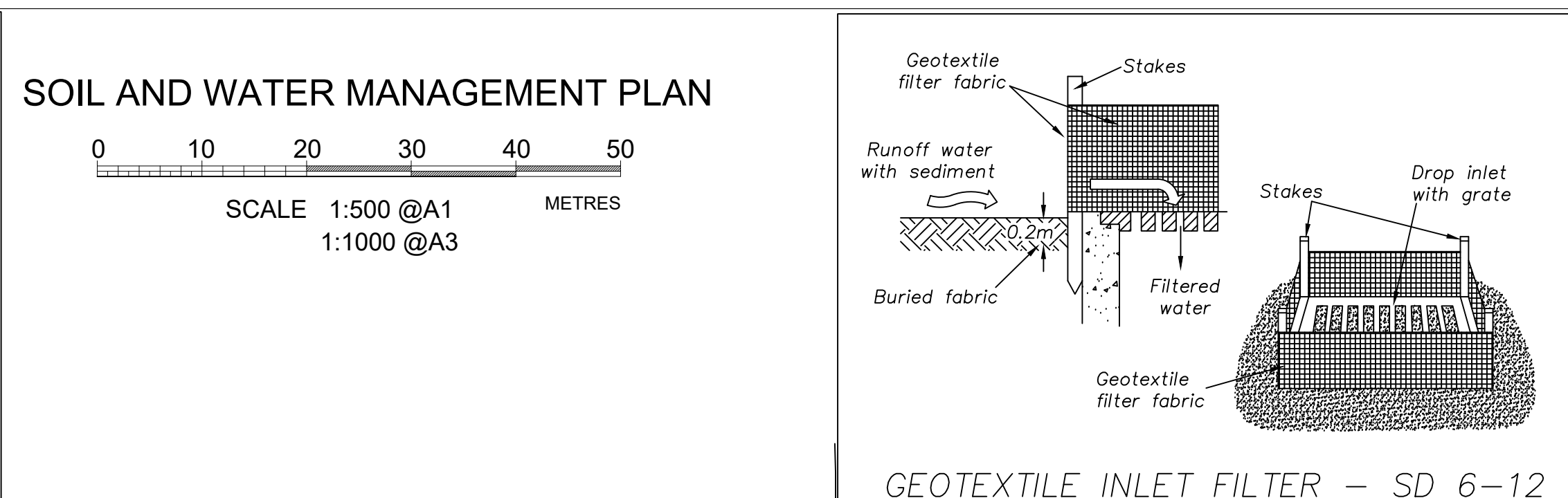
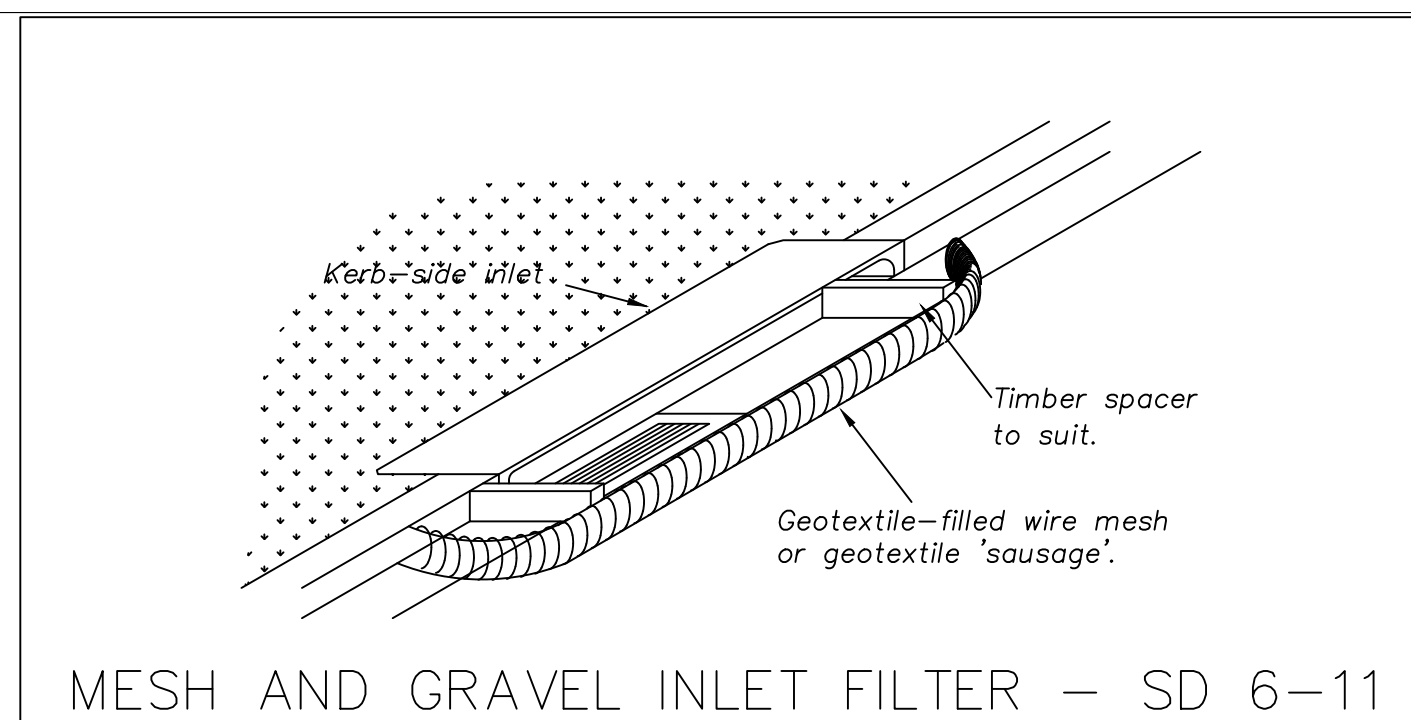


- LEGEND PROPOSED**

	LEVEL SPREADER
	STORMWATER PIPE
	GRATED PIT
	JUNCTION PIT
	KERB INLET PIT
	SEDIMENT FENCE
	SEDIMENT TRAP
	STABILISED CONSTRUCTION EXIT
	DISTURBED AREA
	DIVISION BANK AND CHANNEL
	BARRIER FENCE
	DIVISION BANK ONLY

STATEMENT OF SOIL MANAGEMENT

- 1 ALL TOPSOIL IS TO BE STOCKPILED IN AREAS DESIGNATED ON PLAN.
- 2 ALL FORMED EMBANKMENTS (CUT & FILL) ARE TO BE SEEDD WITHIN 7 DAYS
- 3 ALL DISTURBED AREAS INCLUDING ANY CONTROLLED FILL ARE TO BE TOPSOILED & SEEDD PRIOR TO COMPLETION OF WORKS. ALL DISTURBED AREAS THAT WILL NOT BE STABILIZED WITHIN 2 MONTHS MUST BE TEMPORARILY REVEGETATED WITHIN 7 DAYS OF CLEARING AREAS THAT FAIL TO ESTABLISH MUST BE RESOWN IMMEDIATELY.
- 4 ALL GULLY PITS ARE TO BE PROVIDED WITH SEDIMENT FILTER BARRIERS SUCH AS STRAW BAIL OR SANDBAGS.
- 5 PROVIDE TEMPORARY DIVERSION BANKS ON SITE AS DIRECTED.
- 6 AT THE TOP OF ALL FILL EMBANKMENTS, PROVIDE A BERM TO PREVENT WATER RUNNING DOWN EMBANKMENTS, BERM IS TO BE MAINTAINED AT ALL TIMES AS THE FILL EMBANKMENT PROGRESSES TO FINAL LEVEL
- 7 ALL FORMED EMBANKMENTS (CUT & FILL) ARE TO BE TOPSOILED & SEEDD/FERTILIZED ON FINAL TRIMMING.
- 8 FOR TEMPORARY REVEGETATION PURPOSES, THE REVEGETATION MIXTURE SHOULD BE TO COUNCIL SPECIFICATIONS
- 9 TRENCHES FOR INTERLOT DRAINAGE LINES ARE TO BE REINSTATED WITH TOPSOIL FOLLOWING PIPE INSTALLATION & BACKFILLING & IMMEDIATELY SEEDD/SEEDD/FERTILIZED
- 10 THE GROUND SHALL BE TYNED / SCARIFIED TO A MIN DEPTH 100mm PRIOR TO SEEDING
- 11 CONTRACTOR SHOULD LIASE REGULARLY WITH ENGINEER TO DETERMINE AREAS WHICH CAN BE PROGRESSIVELY REVEGETATED
- 12 TO ASSIST IN DUST CONTROL/WIND EROSION A TRAFFICIFIER SUCH AS CUROSOL SHOULD BE USED. OR EQUIVALENT ENDORSED PRODUCT BY EPA, RATES AS PER MANUFACTURES SPECIFICATION
- 13 DESIGNATED PLANT AND MACHINERY ACCESSWAYS TO BE DEFINED ON SITE BY THE INSTALLATION OF PARABEWEAVING FENCING TO MINIMIZE UNNECESSARY SITE DISTURBANCE
- 14 IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN SOIL EROSION CONTROL DEVICES AND CONTROL DUST.
- 15 A LOG BOOK IS TO BE MAINTAINED ON SITE, MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL. ENTRIES WILL INCLUDE:
 - (i) THE VOLUME AND INTENSITY OF ANY RAINFALL EVENTS;
 - (ii) THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS AND WETHER IT IS LIKELY TO BE EFFECTIVE UNTIL THE NEXT AUDIT;
 - (iii) INSTALLATION, REMOVAL & REPAIRS OF ANY EROSION CONTROLS;
 - (iv) THE CONDITION OF VEGETATION AND ANY NEED TO IRRIGATE;
 - (v) THE NEED FOR DUST PREVENTION STRATEGIES;
 - (vi) ANY REMEDIAL WORKS TO BE UNDERTAKEN;
 - (vii) INSTANCES RESULTING IN DAMAGE TO CONTROLS, ACCIDENTAL OR OTHERWISE;
 - (viii) TIME, DATE, VOLUME AND TYPE OF ANY FLOCCULANTS;
 - (ix) TIME, DATE, VOLUME AND TYPE OF SEDIMENT REMOVED FROM CONTROL STRUCTURES AND WHERE IT HAS BEEN DISPOSED.
- 16 THE LOG BOOK IS TO BE KEPT ON-SITE AND MADE AVAILABLE ON SITE TO ANY ONE REQUIRING IT. IT SHOULD ALSO CONTAIN MAINTENANCE REQUIREMENTS AND PROCEDURES FOR ANY CONTROL REQUIRING IT.

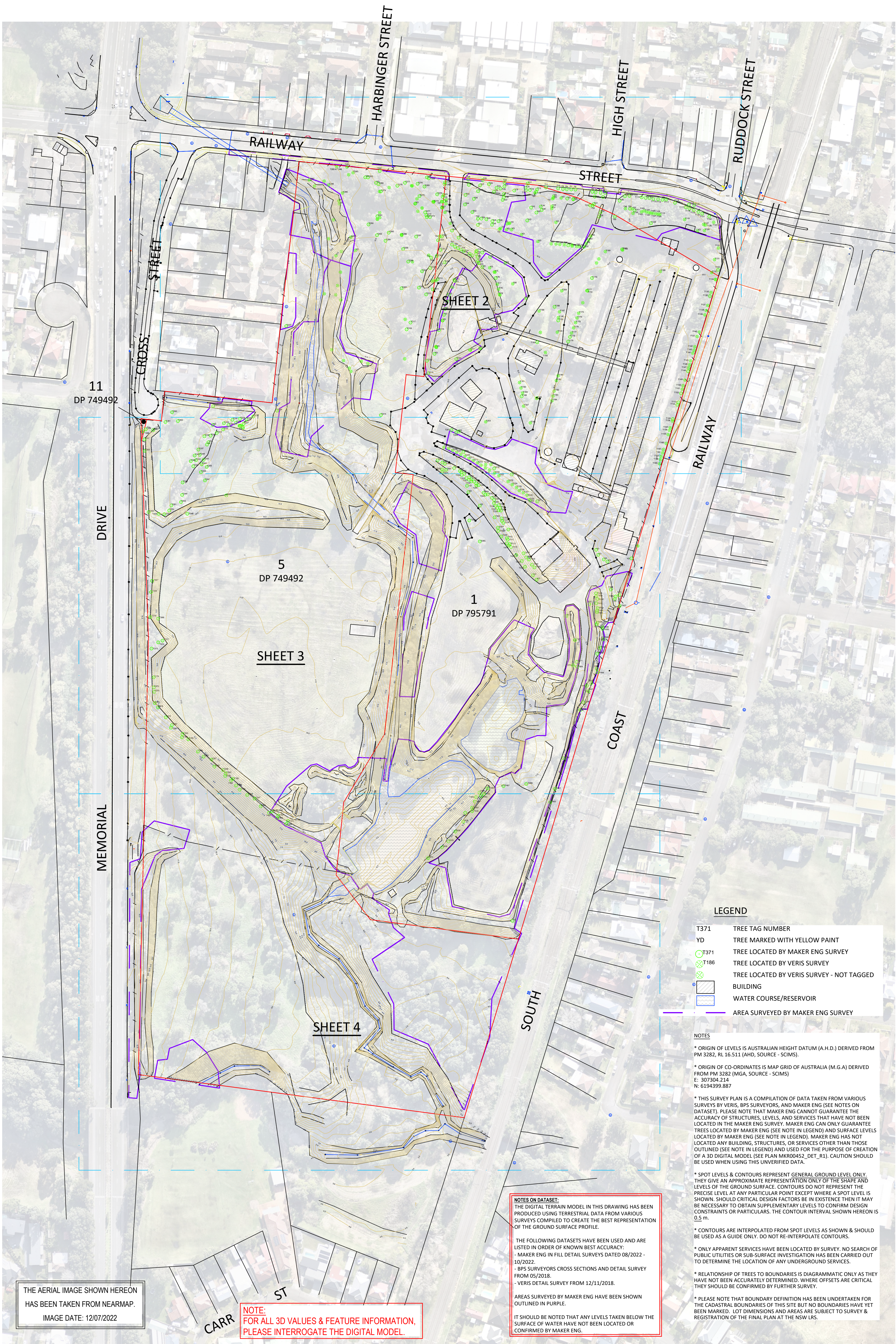


J:\Projects\25152 Corral Coke Works\DWG\DA\25152_Plans.dwg

No. B C D E F	DESCRIPTION			DRN	APP	DATE	siteplus Site Plus Pty Ltd ABN 73 104 315 095 engineering landscape design flooding management	WOLLONGONG - HEAD OFFICE Shop 1, 18 Arrow Avenue Figtree NSW 2525 PO Box 508 Figtree NSW 2525 T 61 2 4227 4233 F 61 2 4227 4133 E info@siteplus.com.au		Height Datum	A.H.D.	Client Title	LEGACY PROPERTY GROUP		Dwg Title	PROPOSED RESIDENTIAL DEVELOPMENT		Ref & Dwg No	25152.DA.C27
	ADJUSTED PITS FOR B2.1 & B2.2			I.B.	A.C.	19.09.25		Drawn	I.B.	C/- CHESTER PROJECT MANAGEMENT	Dwg Status	APPROVAL	Local Authority	WOLLONGONG	Sheet No	27 of 27			
	REVISED TO UPDATED ARCH			I.B.	A.C.	26.09.25		Designed	I.B.		Scale	AS NOTED @ A1							
	REVISED TO UPDATED ARCH			I.B.	A.C.	14.10.25		Checked	A.C.		Date	03.11.25	Rev	F	A1				
	REVISED EXISTING SURFACE			I.B.	A.C.	03.11.25		Approved	A.C.										
	SUBSTATION EASEMENT			I.B.	a.c.	03.11.25													

APPENDIX B

Survey



LEGEND

- T371

YD
- TREE TAG NUMBER

TREE MARKED WITH YELLOW PAINT

TREE LOCATED BY MAKER ENG SURVEY

TREE LOCATED BY VERIS SURVEY

TREE LOCATED BY VERIS SURVEY - NOT TAGGED

BUILDING

WATER COURSE/RESERVOIR

AREA SURVEYED BY MAKER ENG SURVEY

NOTES

- * ORIGIN OF LEVELS IS AUSTRALIAN HEIGHT DATUM (A.H.D.) DERIVED FROM PM 3282, RL 16.511 (AHD, SOURCE - SCIMS).

* ORIGIN OF CO-ORDINATES IS MAP GRID OF AUSTRALIA (M.G.A) DERIVED FROM PM 3282 (MGA, SOURCE - SCIMS)
E: 307304.214
N: 6194399.887

* THIS SURVEY PLAN IS A COMPILATION OF DATA TAKEN FROM VARIOUS SURVEYS BY VERIS, BPS SURVEYORS, AND MAKER ENG (SEE NOTES ON DATASET). PLEASE NOTE THAT MAKER ENG CANNOT GUARANTEE THE ACCURACY OF STRUCTURES, LEVELS, AND SERVICES THAT HAVE NOT BEEN LOCATED IN THE MAKER ENG SURVEY. MAKER ENG CAN ONLY GUARANTEE TREES LOCATED BY MAKER ENG (SEE NOTE IN LEGEND) AND SURFACE LEVELS LOCATED BY MAKER ENG (SEE NOTE IN LEGEND). MAKER ENG HAS NOT LOCATED ANY BUILDING, STRUCTURES, OR SERVICES OTHER THAN THOSE OUTLINED (SEE NOTE IN LEGEND) AND USED FOR THE PURPOSE OF CREATION OF A 3D DIGITAL MODEL (SEE PLAN MKR00452_DET_R3). CAUTION SHOULD BE USED WHEN USING THIS UNVERIFIED DATA.

* SPOT LEVELS & CONTOURS REPRESENT GENERAL GROUND LEVEL ONLY. THEY GIVE AN APPROXIMATE REPRESENTATION ONLY OF THE SHAPE AND LEVELS OF THE GROUND SURFACE. CONTOURS DO NOT REPRESENT THE PRECISE LEVEL AT ANY PARTICULAR POINT EXCEPT WHERE A SPOT LEVEL IS SHOWN. SHOULD CRITICAL DESIGN FACTORS BE IN EXISTENCE THEN IT MAY BE NECESSARY TO OBTAIN SUPPLEMENTARY LEVELS TO CONFIRM DESIGN CONSTRAINTS OR PARTICULARS. THE CONTOUR INTERVAL SHOWN HEREON IS 0.5 m.

* CONTOURS ARE INTERPOLATED FROM SPOT LEVELS AS SHOWN & SHOULD BE USED AS A GUIDE ONLY. DO NOT RE-INTERPOLATE CONTOURS.

* ONLY APPARENT SERVICES HAVE BEEN LOCATED BY SURVEY. NO SEARCH OF PUBLIC UTILITIES OR SUB-SURFACE INVESTIGATION HAS BEEN CARRIED OUT TO DETERMINE THE LOCATION OF ANY UNDERGROUND SERVICES.

* RELATIONSHIP OF TREES TO BOUNDARIES IS DIAGRAMMATIC ONLY AS THEY HAVE NOT BEEN ACCURATELY DETERMINED. WHERE OFFSETS ARE CRITICAL THEY SHOULD BE CONFIRMED BY FURTHER SURVEY.

* PLEASE NOTE THAT BOUNDARY DEFINITION HAS BEEN UNDERTAKEN FOR THE CADASTRAL BOUNDARIES OF THIS SITE BUT NO BOUNDARIES HAVE YET BEEN MARKED. LOT DIMENSIONS AND AREAS ARE SUBJECT TO SURVEY & REGISTRATION OF THE FINAL PLAN AT THE NSW LRS.

NOTES ON DATASET:
THE DIGITAL TERRAIN MODEL IN THIS DRAWING HAS BEEN PRODUCED USING TERRESTRIAL DATA FROM VARIOUS SURVEYS COMPILED TO CREATE THE BEST REPRESENTATION OF THE GROUND SURFACE PROFILE.

THE FOLLOWING DATASETS HAVE BEEN USED AND ARE LISTED IN ORDER OF KNOWN BEST ACCURACY:
- MAKER ENG IN FILL DETAIL SURVEYS DATED 08/2022 - 10/2022.
- BPS SURVEYORS CROSS SECTIONS AND DETAIL SURVEY FROM 05/2018.
- VERIS DETAIL SURVEY FROM 12/11/2018.

AREAS SURVEYED BY MAKER ENG HAVE BEEN SHOWN OUTLINED IN PURPLE.

IT SHOULD BE NOTED THAT ANY LEVELS TAKEN BELOW THE SURFACE OF WATER HAVE NOT BEEN LOCATED OR CONFIRMED BY MAKER ENG.

THE AERIAL IMAGE SHOWN HEREON HAS BEEN TAKEN FROM NEARMAP.
IMAGE DATE: 12/07/2022

NOTE:
FOR ALL 3D VALUES & FEATURE INFORMATION, PLEASE INTERROGATE THE DIGITAL MODEL.

R7		
R6		
R5		
R4		
R3		
R2	01/12/2022	ADDED CONTOUR LABELS
R1	29/11/2022	INITIAL ISSUE
REV	DATE	DESCRIPTION

CLIENT:

LEGACY PROPERTY

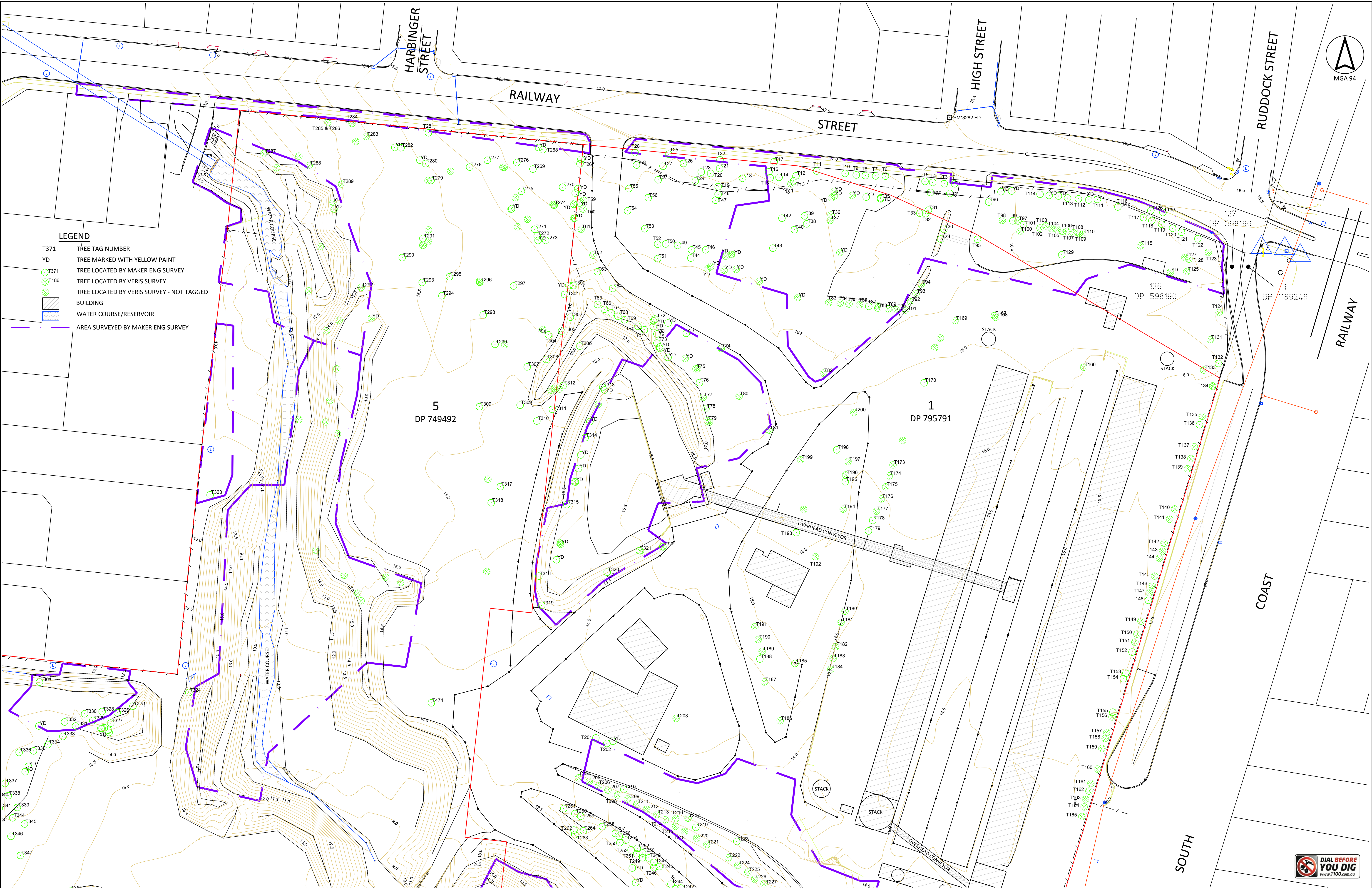
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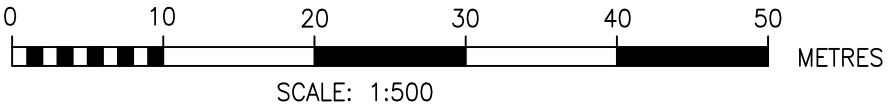
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DATE OF SURVEY:	08/2022-10/2022
DATUM:	AHD / MGA 94
SURVEYED:	DDR/JR/JF/SG
CHECKED:	BS/KP

COMPILATION DETAIL SURVEY - LOCATION PLAN			
SITE ADDRESS: Railway Street, Corrimal - Corrimal Cokeworks			
LOTS 5 & 11 DP 749492 & LOT 1 DP 795791 LGA: Wollongong			
DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKR00452-DET	1 of 4	A1	R2





R7		
R6		
R5		
R4		
R3		
R2	01/12/22	ADDED CONTOUR LABELS
R1	29/11/22	INITIAL ISSUE
REV	DATE	DESCRIPTION

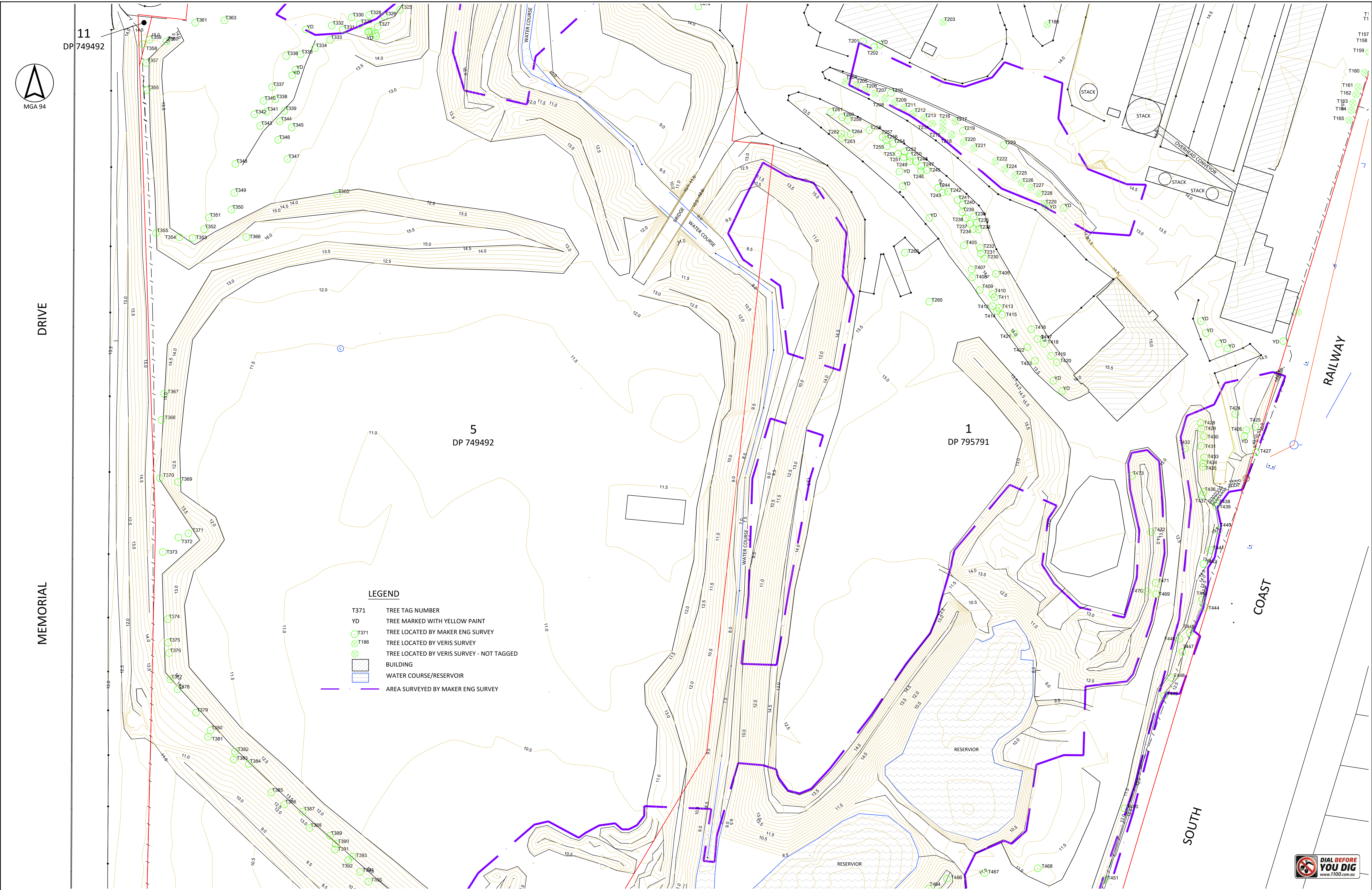


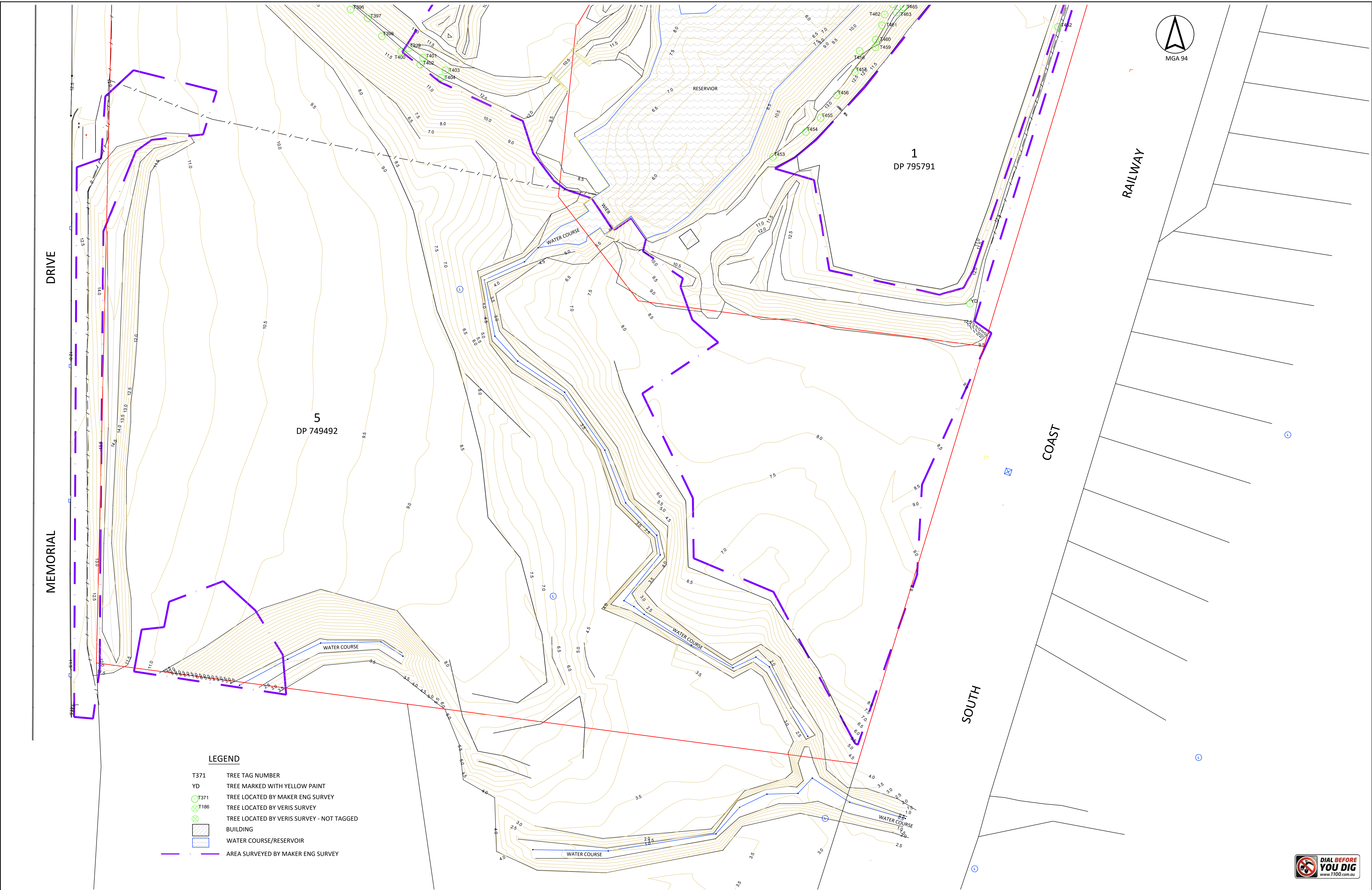
CLIENT:

LEGACY PROPERTY

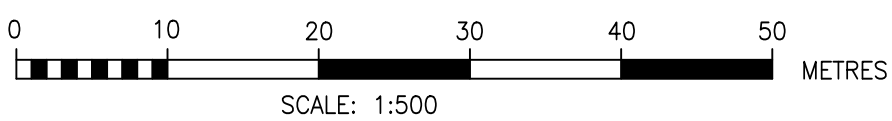


DRAWN: DDR	SURVEYED: DDR/RJ/J/SG	COMPILATION DETAIL SURVEY		
DATE OF SURVEY: VARIOUS	CHECKED: BS/KP	SITE ADDRESS: Railway Street, Corrimal - Corrimal Cokeworks		
DATUM: AHD / MGA 94		LOTS 5 & 11 DP 749492 & LOT 1 DP 795791 LGA: Wollongong		
		DRAWING NUMBER: MKR00452-DET	SHEET No: 2 of 4	ORIG. SIZE: A1
				REVISION: R2





R7		
R6		
R5		
R4		
R3		
R2	01/12/22	ADDED CONTOUR LABELS
R1	29/11/22	INITIAL ISSUE
REV	DATE	DESCRIPTION



CLIENT:
LEGACY PROPERTY



DRAWN: DDR	SURVEYED: DDR/JR/JF/SG	COMPILATION DETAIL SURVEY - LOCATION PLAN		
DATE OF SURVEY: VARIOUS	CHECKED: BS/KP	SITE ADDRESS: Railway Street, Corrimal - Corrimal Cokeworks		
DATUM: AHD / MGA 94		LOTS 5 & 11 DP 749492 & LOT 1 DP 795791 LGA: Wollongong		
DRAWING NUMBER MKR00452-DET		SHEET No. 4 of 4	ORIG. SIZE A1	REVISION R2

APPENDIX C

Sydney Water Letter and Servicing Plan

Case Number: 220974

March 5, 2025

Legacy Property Services Pty Ltd
c/- RMA INFRASTRUCTURE PTY LTD.

Feasibility Letter

Developer: Legacy Property Services Pty Ltd
Your WSC's reference: W-12429
Development: Lot 102 DP1301632 RAILWAY ST, Corrimal
Development Description: Construction of 15 residential flat buildings up to 6 storeys and retail premises
Your application date: January 31, 2025

Dear Applicant

This Feasibility Letter (Letter) is a guide only. It provides general information about what our requirements could be if you applied to us for a Section 73 Certificate (Certificate) for your proposed development. **The information is accurate at today's date only.**

We have not allocated any system capacity to your proposal from the investigation into this Feasibility advice. This advice is only an indication of our systems and possible requirements as of today. Where there is system capacity, it may have been fully utilised by the time you obtain a Consent. The requirements applied to any approved Development proposal may differ significantly in the future since the original advice was issued.

If you obtain development consent for that development from your consent authority (this is usually your local Council) they will require you to apply to us for a Section 73 Certificate. You will need to submit a new application (and pay another application fee) to us for that Certificate by using your current or another Water Servicing Coordinator (WSC).

We'll then send you either a:

- Notice of Requirements (Notice) and Developer Works Deed (Deed)
or
- Certificate.

These documents will be the definitive statement of our requirements.

There may be changes in our requirements between the issue dates of this Letter and the Notice or Certificate. The changes may be:

- if you change your proposed development eg the development description or the plan/site layout, after today, the requirements in this Letter could change when you submit your new application
- if you decide to do your development in stages then you must submit a new application (and pay another application fee) for each stage.

What You Must Do To Get A Section 73 Certificate In The Future.

To get a Section 73 Certificate you must do the following things. You can also find out about this process by visiting [Plumbing, building & developing](#) page on our website.

1. **Obtain Development Consent from the consent authority for your development proposal.**
2. **Engage a Water Servicing Coordinator (WSC).**

You must engage your current or another authorised WSC to manage the design and construction of works that you must provide, at your cost, to service your development. If you wish to engage another WSC (at any point in this process) you must write and tell us.

You'll find a list of WSC's at [Listed providers](#) on our website.

The WSC will be your point of contact with us. They can answer most questions that you might have about the process and developer charges and can give you a quote or information about costs for services/works (including our costs).

3. Developer Works Deed

After the WSC has submitted your new application, they'll receive the our Notice and Developer Works Deed. You and your accredited Developer Infrastructure Providers (Providers) will need to sign and lodge both copies of the Deed with your nominated Coordinator. After we've signed the documents, one copy will be returned to the WSC.

The Deed sets out for this project:

- your responsibilities
- our responsibilities
- the Provider's responsibilities.

You must do all the things that we ask you to do in that Deed. This is because your development does not have water and sewer services and you must construct and pay for the following works extensions under this Deed to provide these services.

Note: The Coordinator must be fully authorised by us for the whole time of the agreement.

4. Water and Sewer Works

4.1 Water

Your development must have a frontage to a water main that is the right size and can be used for connection.

We've assessed your application and found that:

The proposed development site is located in the Corrimal Water Supply Zone (WSZ) which forms part of the Illawarra Water Delivery System (WDS).

- The drinking water mains adjacent to the proposed development site is a DN200 main along Railway St which is part of Corrimal Remainder Zone as shown in **Figure 2**.
- Assessment indicates that the system has the capacity to service the proposed development based on the Concept Plan as per **Figure 1**.
- To service the development, the developer will need to upsize the existing DN150 to DN200 (~350 m) along Railway Street (refer **Figure 2**), previously proposed under CN214133.
- The development can be serviced via one connection at Railway St.

- The proposed drinking water infrastructure for the internal reticulation should be appropriately sized and configured according to the WSA code requirements and submit to Sydney Water for review.

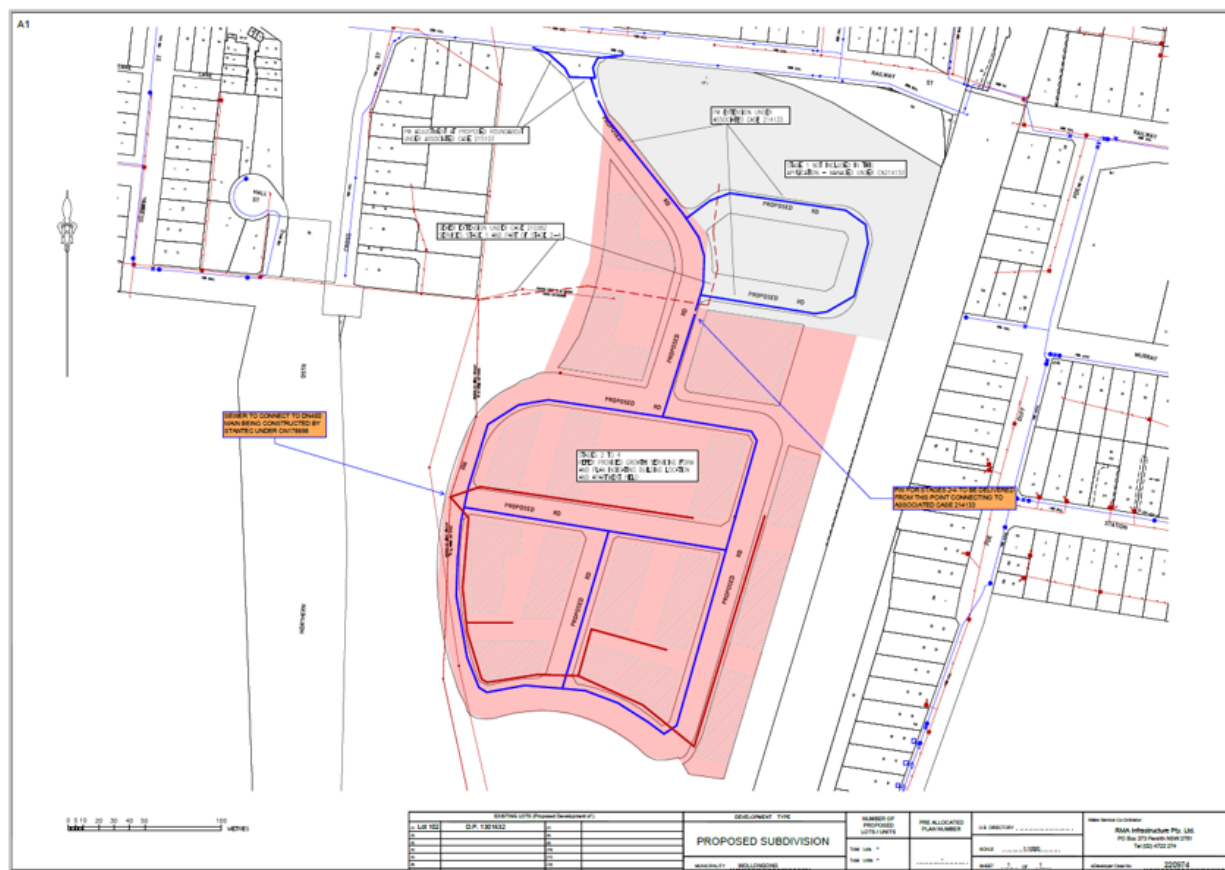


Figure 1 Proposed Development Lots and Servicing Concept Plan



Figure 2 – Drinking Water Location Map and Proposed Development Site

4.2 Sewer

Your development must have a sewer main that is the right size and can be used for connection. That sewer must also have a connection point within your development's boundaries.

We've assessed your application and found that:

- The development land falls within the Corrimal Scamp.
- The development can be serviced by existing main.

A further investigation will be required at Section 73 application stage.

5. Ancillary Matters

5.1 Asset adjustments

After we issue this Notice (and more detailed designs are available), we may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you'll need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it **before we can issue the Certificate**. We'll need to see the completed designs for the work, and we'll require you to lodge a security. The security will be refunded once the work is completed and all charges paid.

5.2 Entry onto neighbouring property

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use our **Permission to Enter** form(s) for this. You can get copies of these forms from your WSC or on our website. Your WSC can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

5.3 Costs

Construction of these **future** works will require you to pay project management, survey, design, and construction costs **directly to your suppliers**. Additional costs payable to us may include:

- water main shutdown and disinfection
- connection of new water mains to our system(s)
- design and construction audit fees
- contract administration, Operations Area Charge & Customer Redress prior to project finalisation
- creation or alteration of easements etc
- water usage charges where water has been supplied for building activity purposes prior to disinfection of a newly constructed water main.

Note: Payment for any Goods and Services (including Customer Redress) provided by Sydney Water will be required prior to the issue of the Section 73 Certificate or release of the Bank Guarantee or Cash Bond.

Your WSC can tell you about these costs.

6. Infrastructure contributions

You will need to pay an infrastructure contribution towards the cost of each Sydney Water system that will serve your development.

The infrastructure contributions are calculated in accordance with the Development Servicing Plans registered with the Independent Pricing and Regulatory Tribunal (IPART) under the *Independent Pricing and Regulatory Tribunal Act*.

An estimate of your infrastructure contributions is shown in the table below. These amounts have the NSW Government-directed cap applied for the current financial year. **These amounts are subject**

to the NSW Government transition pathway and other factors and will change – see Section 6.1 Price Changes for full details.

No payments can be accepted for these estimates. Should you obtain Development Approval for this proposal and apply for a Section 73 Certificate in the future, then we'll advise you of the applicable charges to your Development.

Development Servicing Plan (DSP)	Basis of Calculation	Charge (\$) for Applicable Period (3/5/25-6/30/25)
Illawarra Drinking Water	Residential Development Density 61 - 100 lots/dwellings per ha band 713 lots/dwellings @ \$0 = \$0 less Credit of \$0.0 for previous use	\$0.00
Northern Illawarra Wastewater	Residential Development Density 61 - 100 lots/dwellings per ha band 713 lots/dwellings @ \$0 = \$0 less Credit of \$0.0 for previous use	\$0.00
DEVELOPER CHARGES TOTAL:		\$Nil

6.1 Price changes

The infrastructure contribution you must pay may also change due to:

1. Changes to the Consumer Price Index (CPI). Our prices increase by CPI each financial year. CPI is the weighted average of the capital cities CPI for the 12 months to the end of the previous March.
2. The NSW Government-directed transition pathway for infrastructure contributions for drinking water and wastewater infrastructure:

Financial Year payment is made	Percentage of infrastructure contribution payable
1 July 2023 to 30 June 2024	Infrastructure contribution capped at 0% of the full price
1 July 2024 to 30 June 2025	Infrastructure contribution capped at 25% of the full price

1 July 2025 to 30 June 2026	Infrastructure contribution capped at 50% of the full price
1 July 2026 onwards	Full price payable

3. Any updates to our Development Servicing Plans (including prices). Our Development Servicing Plans must be updated every five years. The next updates will be introduced by 31 December 2028.

Your infrastructure contributions become payable once your WSC has submitted all Project Completion Packages under each Developer Works Deed to us confirming that the works required under the Notice are complete.

7. Special Requirements

Multi-level individual metering requirements

Your development must either allow for or provide individual metering. This means that you must:

1. comply at all times and in all respects with the requirements of our “*Multi-level Individual Metering Guide*”. You can find this in the [Meters & metered standpipes](#) page on our website.
2. provide and install plumbing and space for individual metering in accordance with our “*Multi-level Individual Metering Guide*”.
3. if and when you implement a strata/ stratum plan (or strata/ stratum subdivide) you must:
 - a. engage an Accredited Metering Supplier (“**AMS**”) to provide individual metering in accordance with the “*Multi-level Individual Metering Guide*” and meet the cost of the meters and metering system.
 - b. transfer the meters and metering system to us once the Testing Certificate has been issued by us to the AMS and the AMS has confirmed that payment for the meters and metering system has been paid in full.

Before the Section 73 Certificate can be issued, you will be required to sign an undertaking to show that you understand and accept these metering requirements and associated costs.

Visit [Meters & metered standpipes](#) to see the *Multi-level individual metering guide* and find out more.

OTHER THINGS YOU MAY NEED TO DO

Shown below are other things you need to do that are NOT a requirement for the Certificate. They may well be a requirement from us in the future because of the impact of your development on our assets. You must read them before you go any further.

Approval of your building plans

Please note that the building plans must be approved when each lot is developed. This can be done at in our Tap in™ system [Sydney Water Tap in](#)™.

This is not a requirement for the Certificate, but the approval is needed because the construction/building works may affect our assets (e.g. water, sewer, and stormwater mains).

If our stormwater channel, pipe, or culvert is located within ten (10) metres of your development site it must be referred to us for a detailed review.

Your Coordinator can tell you about the approval process including:

- Possible requirements
- Their costs
- Timeframes.

If your building plans need to be referred to us for detailed review you will be required to pay us for the costs associated with the detailed review.

Disused Sewerage Service Sealing

Please do not forget that you must pay to disconnect all disused private sewerage services and seal them at the point of connection to our sewer main. This work must meet our standards in the Plumbing Code of Australia (the Code) and be done by a licensed drainer. The licensed drainer must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Soffit Requirements

Please be aware that floor levels must be able to meet our soffit requirements for property connection and drainage.

Fire Fighting

Definition of fire fighting systems is the responsibility of the developer and is not part of the Section 73 process. It is recommended that a consultant should advise the developer regarding the fire fighting flow of the development and the ability of our system to provide that flow in an emergency. Sydney Water's Operating Licence directs that our mains are only required to provide domestic supply at a minimum pressure of 15 m head.

A report supplying modelled pressures called the Statement of Available pressure can be purchased through [Sydney Water Tap in](#)™ and may be of some assistance when defining the fire fighting system. The Statement of Available pressure may advise flow limits that relate to system capacity or diameter of the main and pressure limits according to pressure management initiatives. If mains are required for fire fighting purposes, the mains shall be arranged through the water main extension process and not the Section 73 process.

Large Water Service Connection

A water main will be available, once you have completed your drinking water main construction to provide your development with a domestic supply. The size of your development means that you will need a connection larger than the standard domestic 20 mm size.

To get approval for your connection, you will need to lodge an application with [Sydney Water Tap in](#)™. You, or your hydraulic consultant, may need to supply the following:

- a plan of the hydraulic layout
- a list of all the fixtures/fittings within the property
- a copy of the fireflow pressure inquiry issued by us
- a pump application form (if a pump is required)
- all pump details (if a pump is required).

You'll have to pay an application fee.

We don't consider whether a water main is adequate for fire fighting purposes for your development. We can't guarantee that this water supply will meet your Council's fire fighting requirements. The Council and your hydraulic consultant can help.

Disused Water Service Sealing

You must pay to disconnect all disused private water services and seal them at the point of connection to our water main. This work must meet our standards in the Plumbing Code of Australia (the Code) and be done by a licensed plumber. The licensed plumber must arrange for an inspection of the work by a NSW Fair Trading Plumbing Inspection Assurance Services (PIAS) officer. After that officer has looked at the work, the drainer can issue the Certificate of Compliance. The Code requires this.

Other fees and requirements

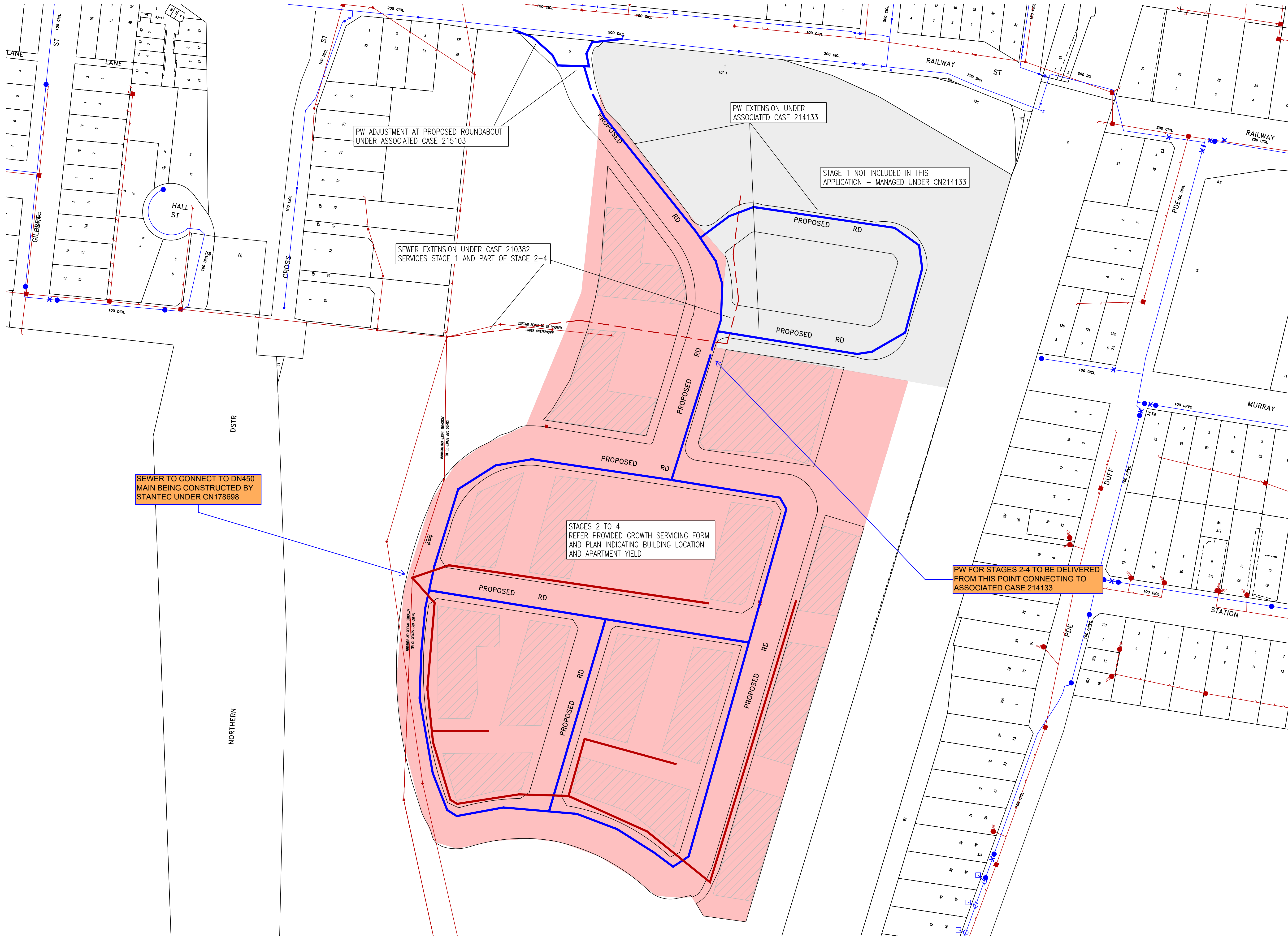
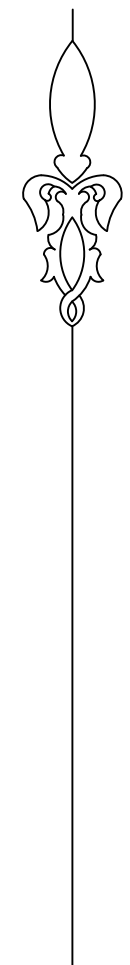
The requirements in this Advice Letter relate to your future Certificate application only. We may be involved with other aspects of your development and there may be other fees or requirements. These include:

- construction/building plan approval fees
- plumbing and drainage inspection costs
- the installation of backflow prevention devices
- trade waste requirements
- large water connections and
-

- council firefighting requirements. (It will help you to know what the firefighting requirements are for your development as soon as possible. Your hydraulic consultant can help you here)

No warranties or assurances can be given about the suitability of this document or any of its provisions for any specific transaction. It does not constitute an approval from us and to the extent that it is able, we limit its liability to the reissue of this Letter or the return of your application fee. You should rely on your own independent professional advice.

END OF ADVICE



EXISTING LOTS (Proposed Development of)				DEVELOPMENT TYPE		NUMBER OF PROPOSED LOTS / UNITS	PRE ALLOCATED PLAN NUMBER	U.B. DIRECTORY	Water Service Co-Ordinator: RMA Infrastructure Pty. Ltd. PO Box 273 Penrith NSW 2751 Tel (02) 4722 274
(1) Lot 102	D.P. 1301632	(7)		PROPOSED SUBDIVISION					
(2)		(8)							
(3)		(9)							
(4)		(10)							
(5)		(11)				Total Lots -		SCALE1:1000.....	
(6)		(12)		MUNICIPALITY WOLLONGONG		Total Units -	-	SHEET1..... OF1.....	
								eDeveloper Case No.220974.....	