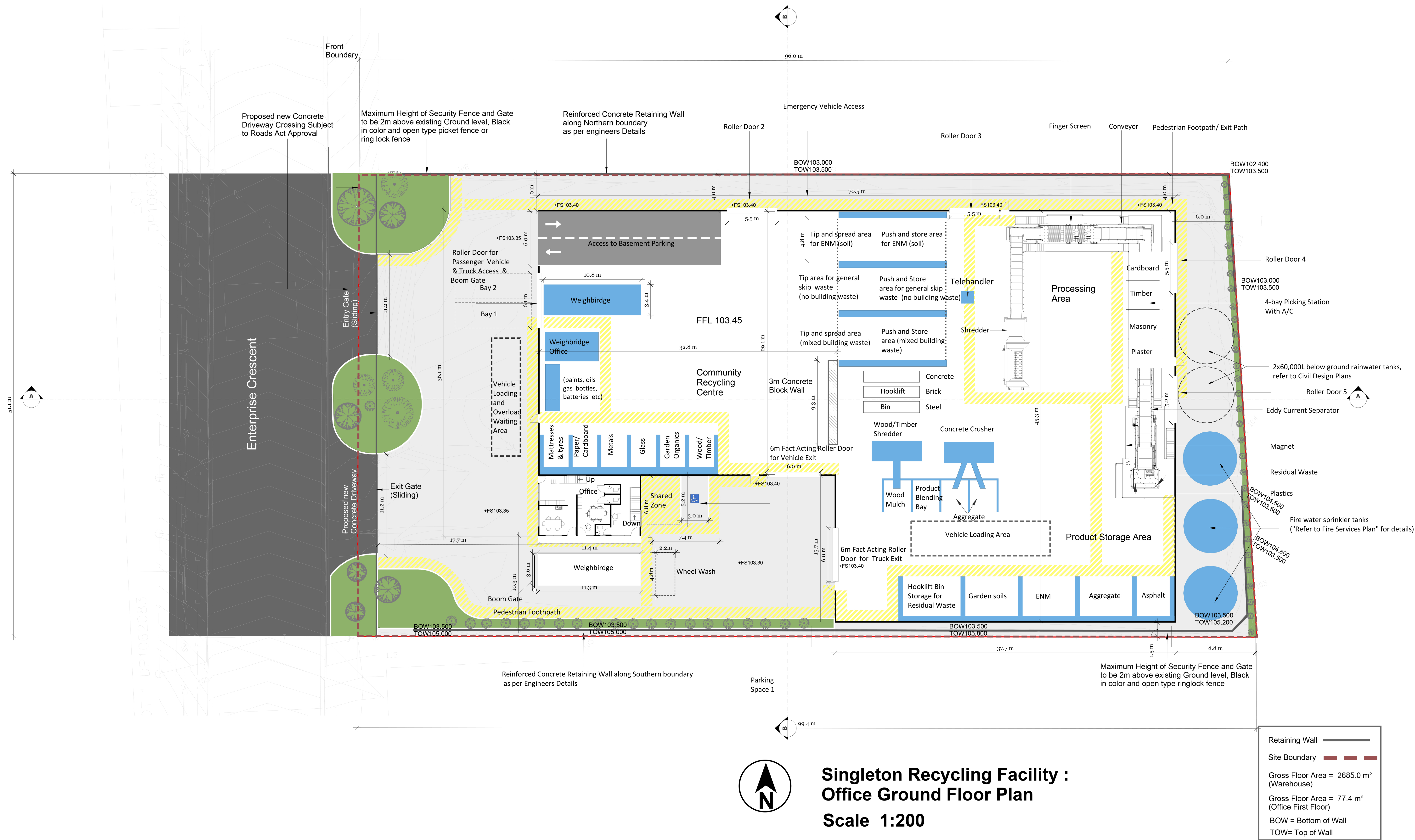
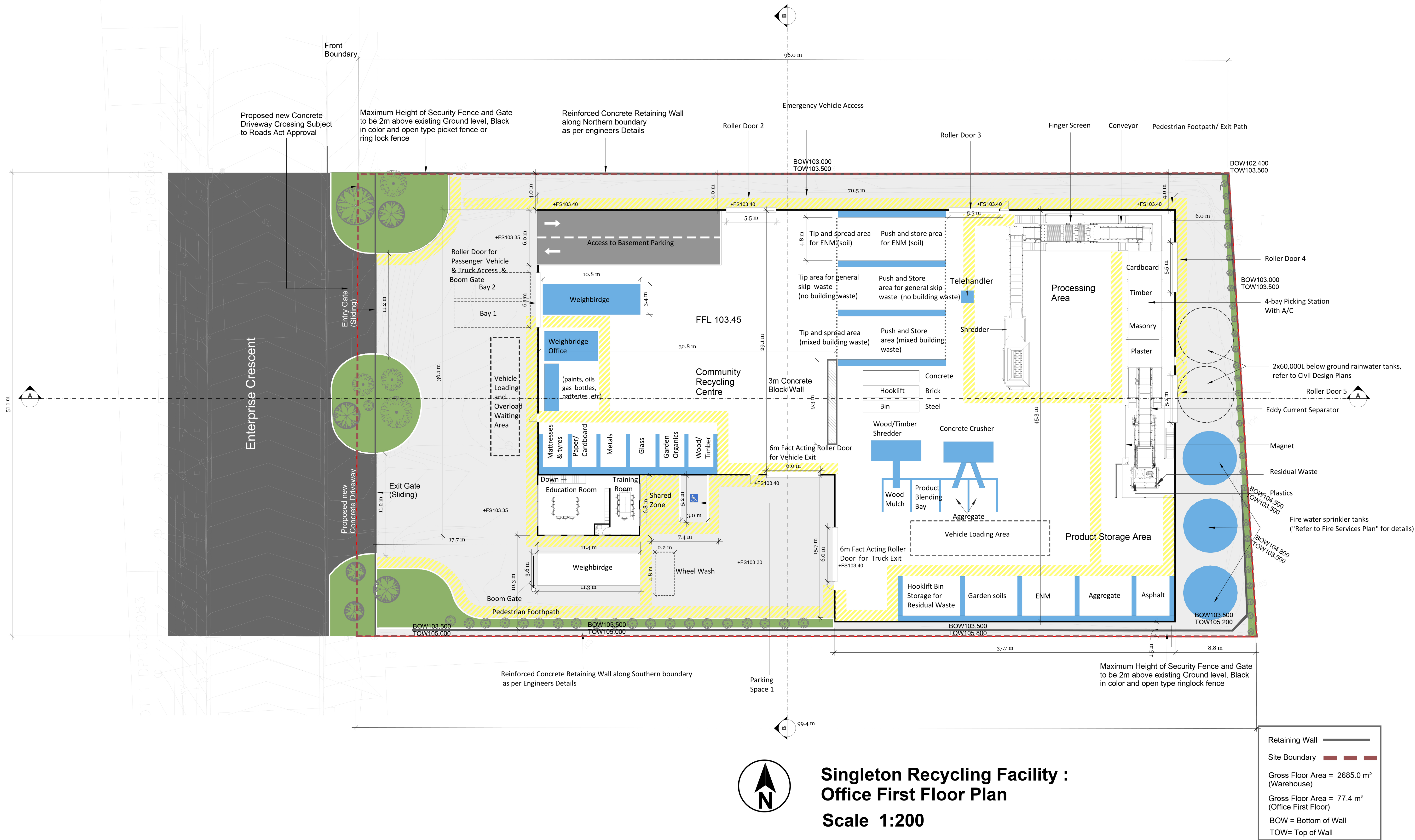
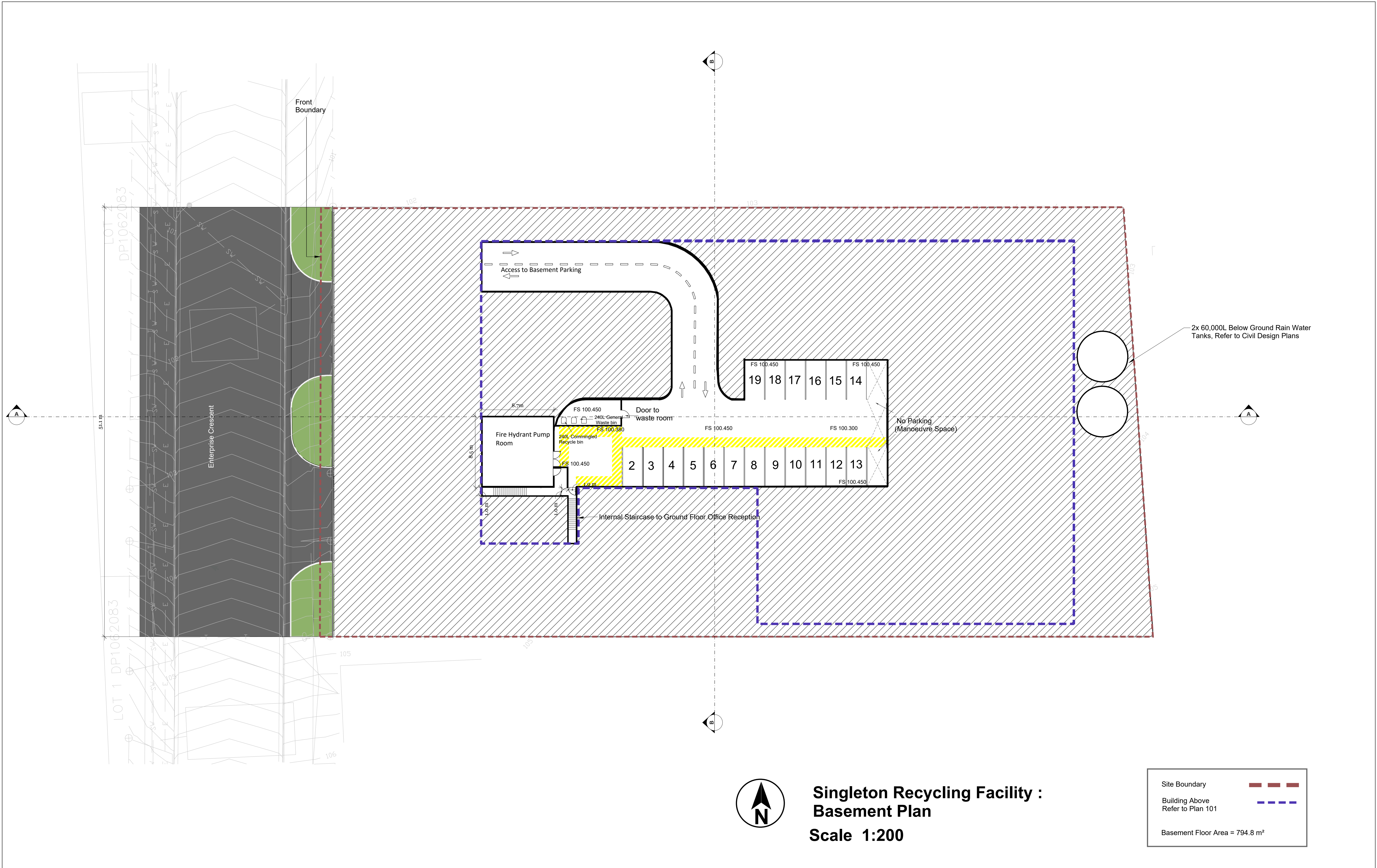




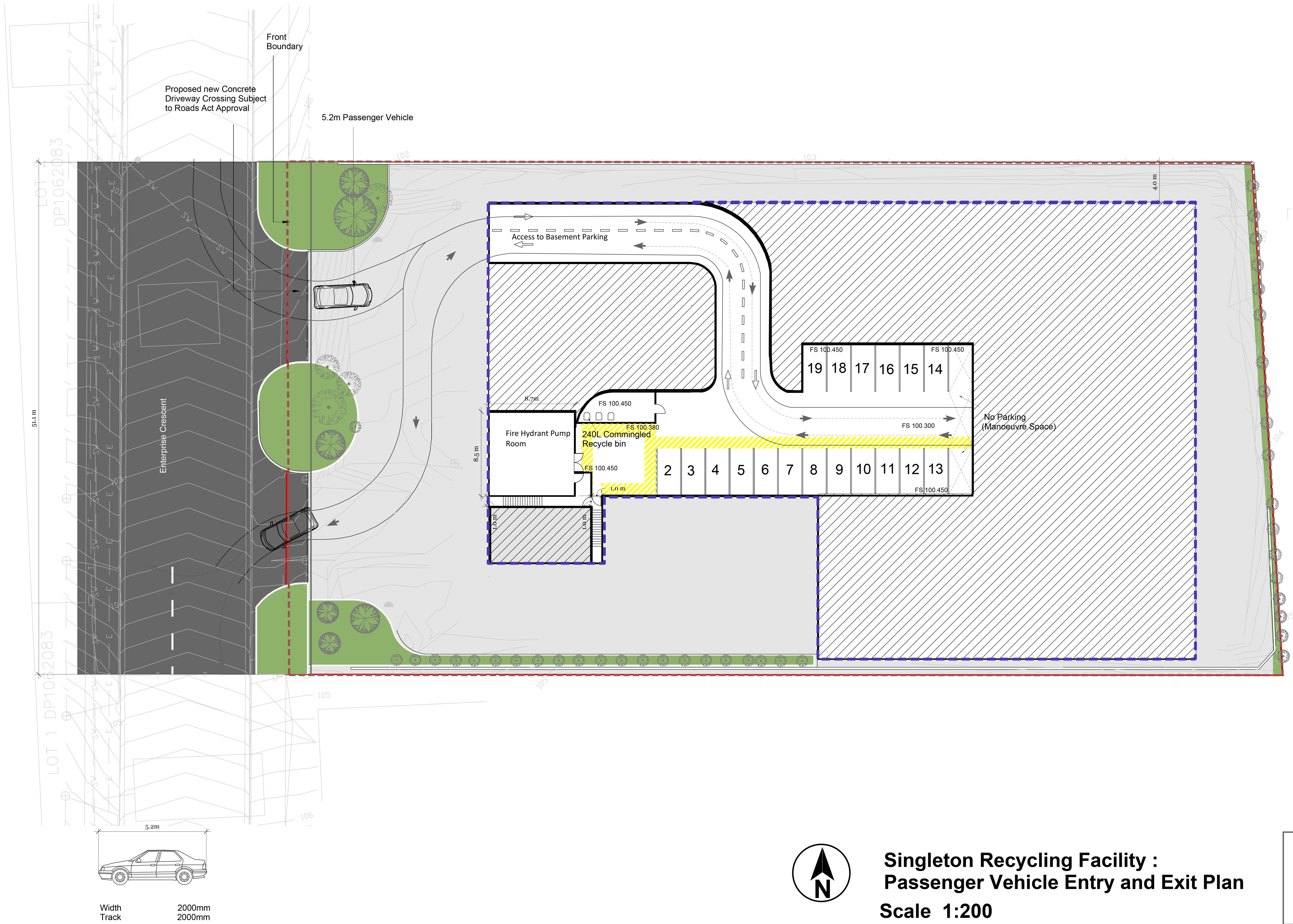
Date	Plan Number	Site & Office Ground Floor Plan	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	 JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A	01
						Project		
08-08-2020	101	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)			Title	Singleton Recycling Facility		
						Site and office ground floor plan		
					Scale	1:200		
						Jackson Environment and Planning Pty Ltd		
					Source			



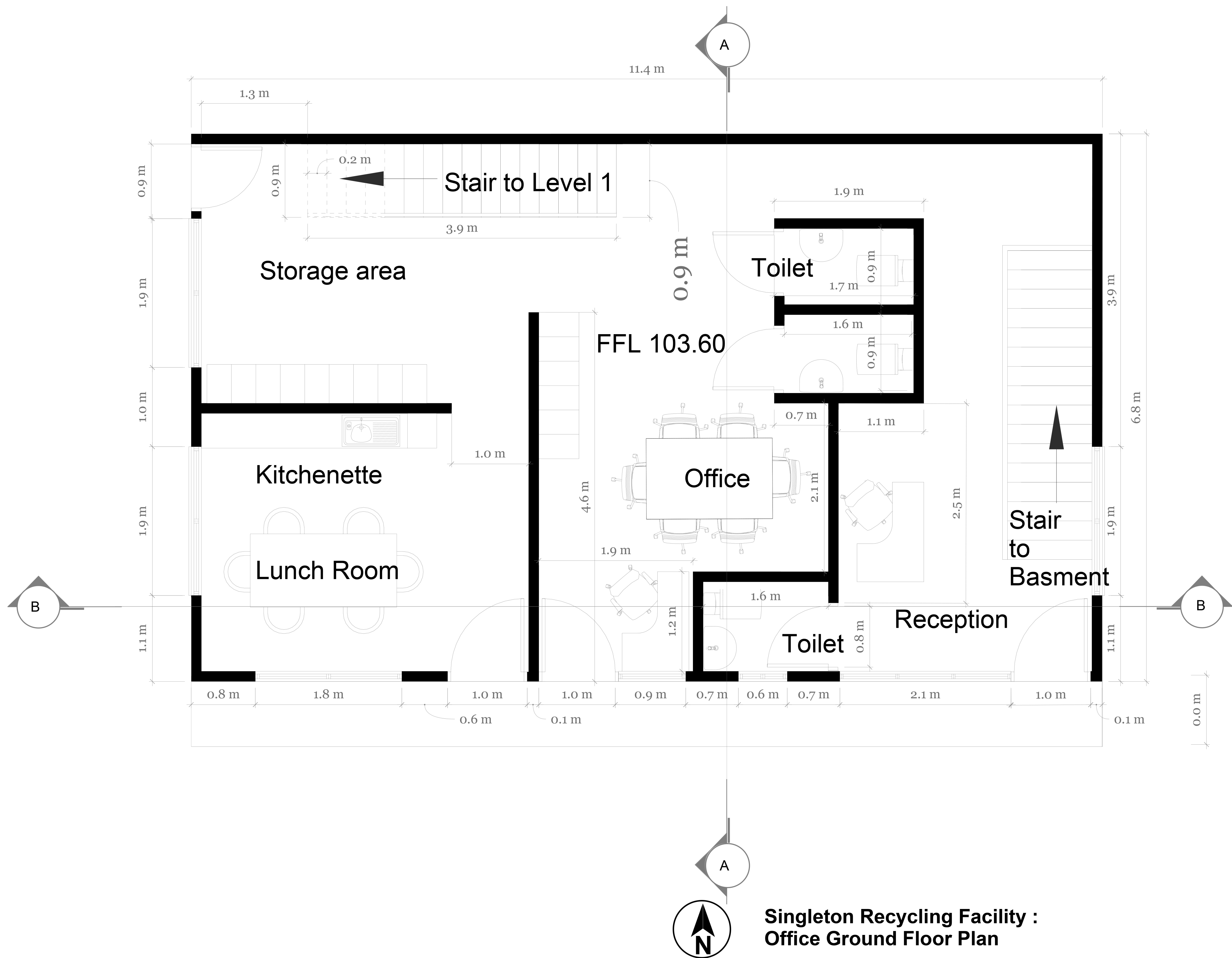
Date	Plan Number	Site & Office Ground Floor Plan	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd	
08-08-2020	102	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Strategy Infrastructure Compliance Procurement	Project		Singleton Recycling Facility
			A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060	Title		Site and Office first floor plan
			E: admin@jacksonenvironment.com.au	Scale		1:200
			T: 02 8056 1849	Source		Jackson Environment and Planning Pty Ltd
			W: http://www.jacksonenvironment.com.au			
						
			JACKSON ENVIRONMENT AND PLANNING			



Date	Plan Number	Basement Plan	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	Client	Eco Logic Developments Pty Ltd	01 A
08-08-2020	103	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)		Project	Singleton Recycling Facility	
				Title	Basement Plan	
				Scale	1:200	
				Source	Jackson Environment and Planning Pty Ltd	



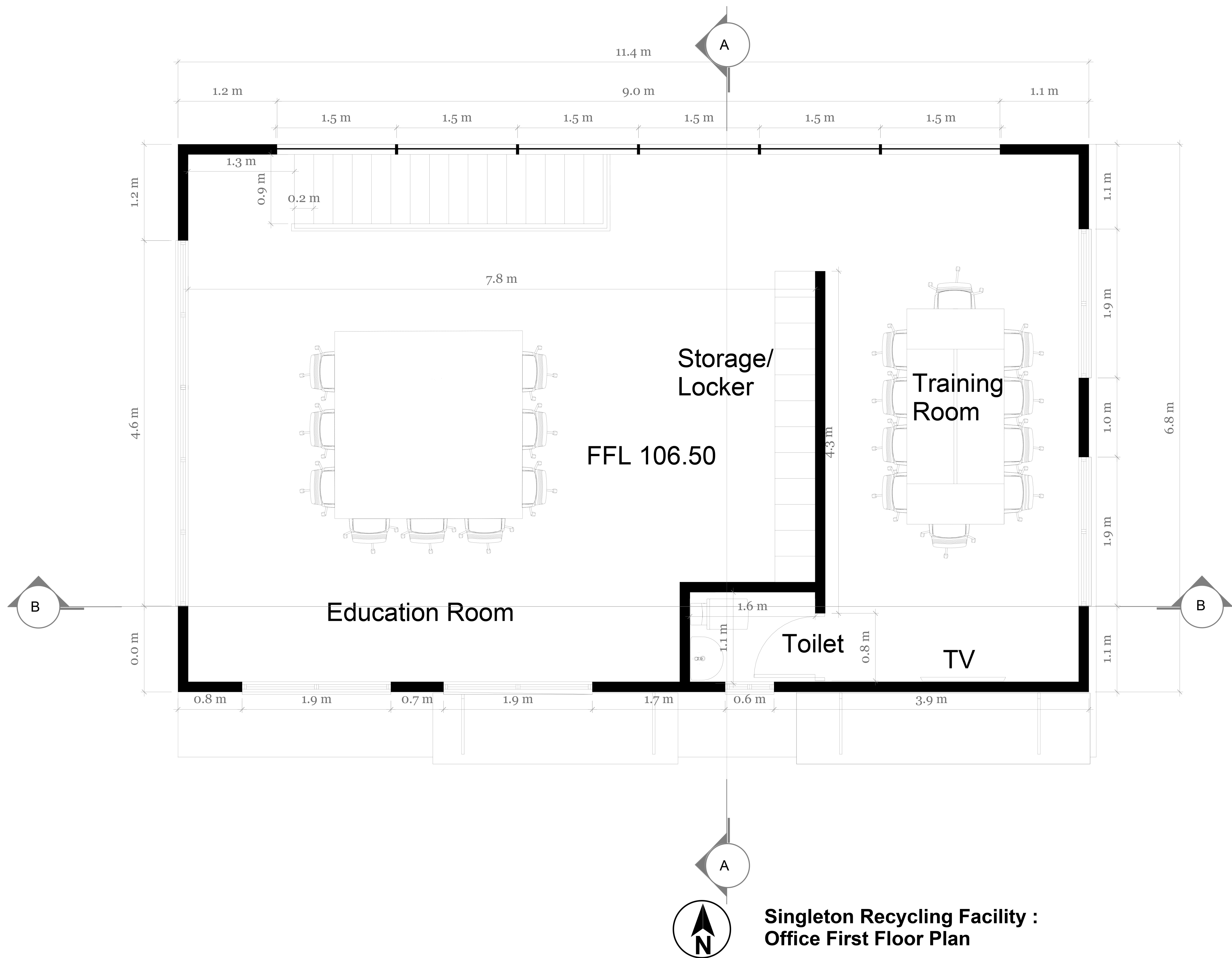
Date	Plan Number	Passenger Vehicle Entry and Exit Plan	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd
08-08-2020	104	Eco Logic Developments Pty Ltd	Strategy Infrastructure Compliance Procurement	Project	Singleton Recycling Facility
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	Title	Passenger Vehicle Entry and Exit Plan
			 JACKSON ENVIRONMENT AND PLANNING	Scale	1:200
				Source	Jackson Environment and Planning Pty Ltd



Gross Floor Area = 2685.0 m²
(Warehouse)

Gross Floor Area = 77.4 m²
(Office First Floor)

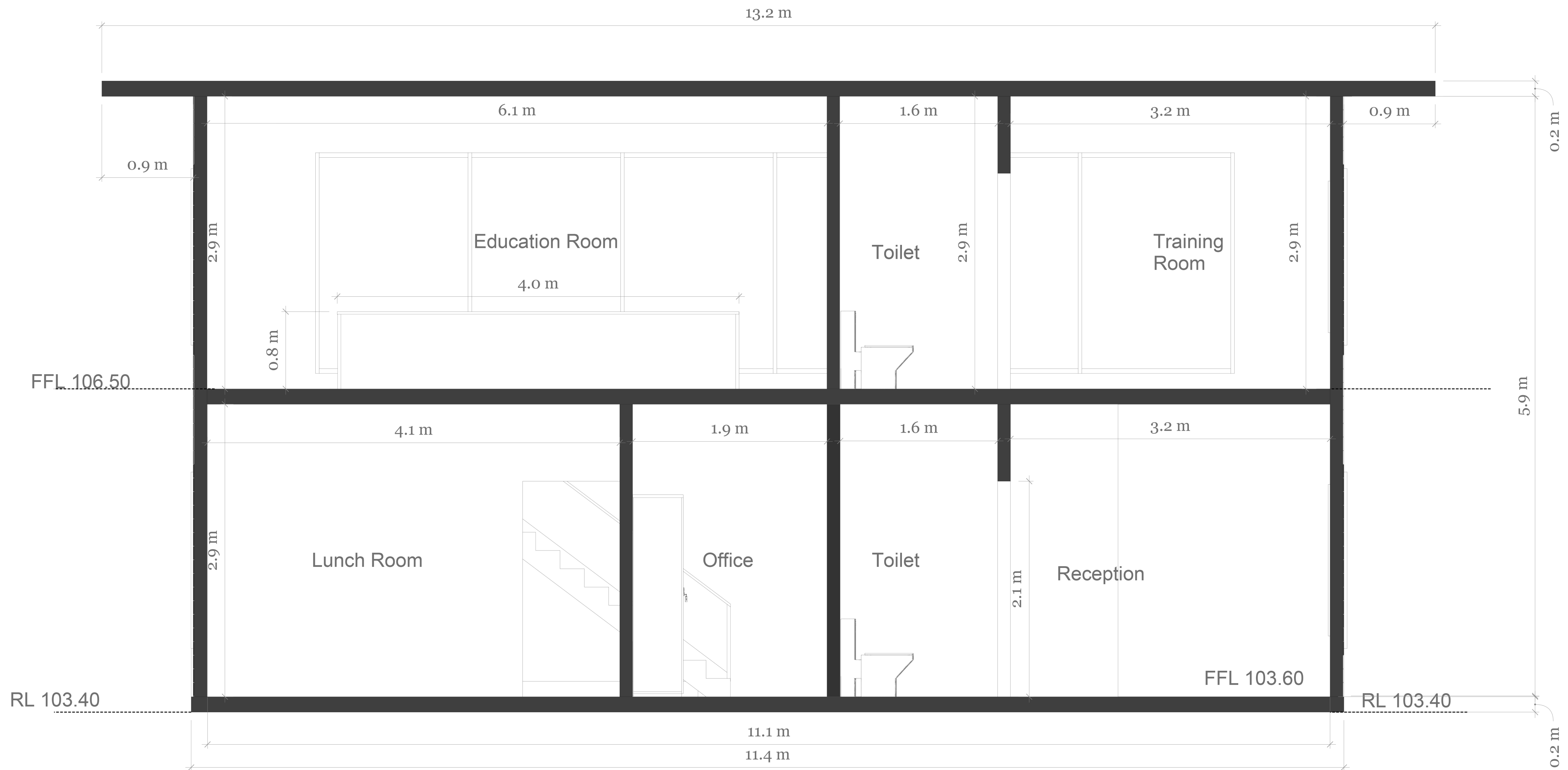
Date	Plan Number	Office Ground Floor Plan	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au  JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A 01
08-08-2020	105	Eco Logic Developments Pty Ltd		Project	Singleton Recycling Facility	
				Title	Office Ground Floor Plan	
				Scale	1:25	
				Source	Jackson Environment and Planning Pty Ltd	



Singleton Recycling Facility :
Office First Floor Plan
Scale 1:25

Gross Floor Area = 2685.0 m² (Warehouse)
Gross Floor Area = 77.4 m² (Office First Floor)

Date	Plan Number	Office First Floor Plan	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd	A 01
08-08-2020	106	Eco Logic Developments Pty Ltd	Strategy Infrastructure Compliance Procurement	Project	Singleton Recycling Facility	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	Title	Office First Floor Plan	
				Scale	1:25	
				Source	Jackson Environment and Planning Pty Ltd	



Section B
Scale 1:25

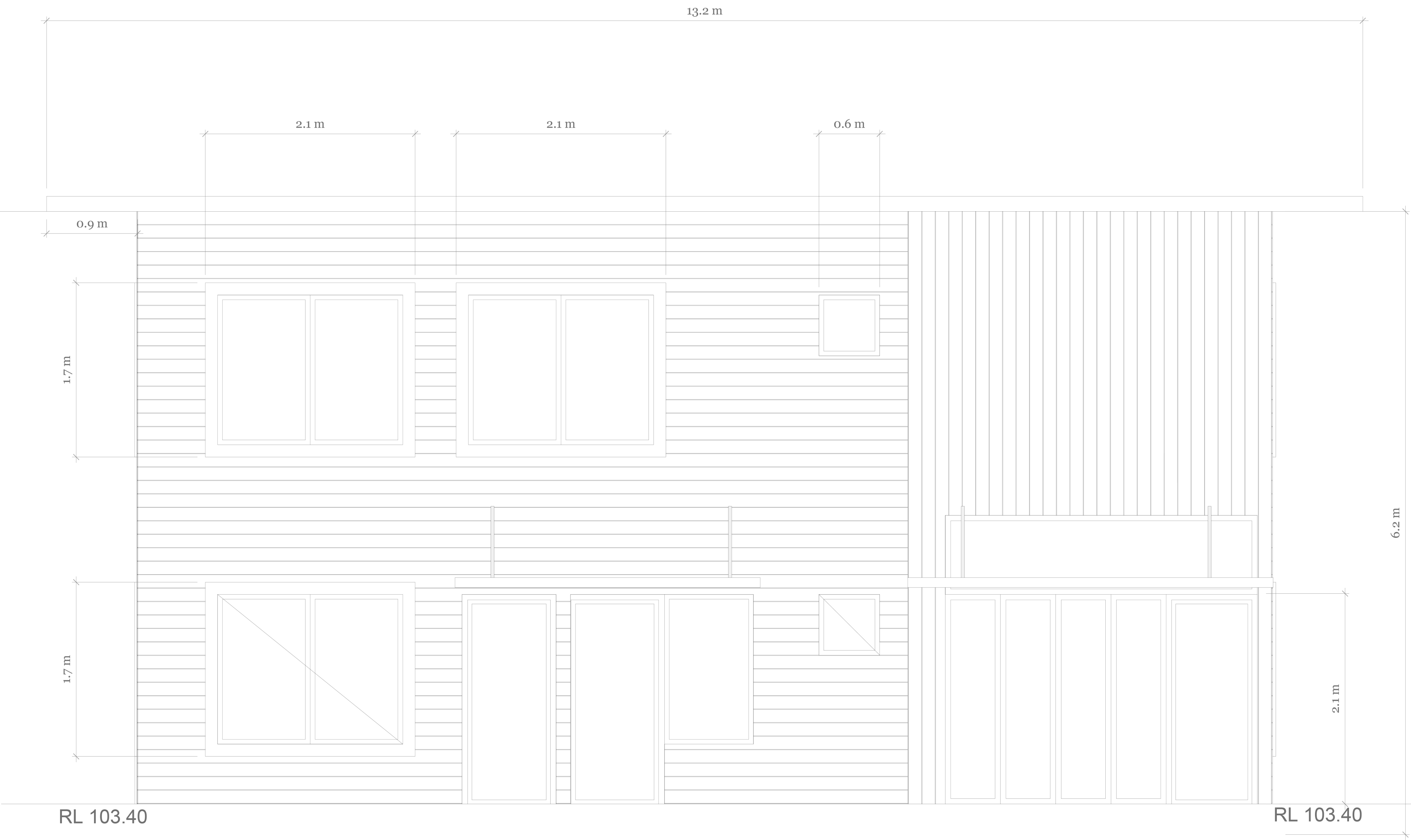
Date	Plan Number	Office Section B Plan	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au  JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A01
08-08-2020	107	Eco Logic Developments Pty Ltd, 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Project	Singleton Recycling Facility		
			Title	Office Section B Plan		
			Scale	1:25		
			Source	Jackson Environment and Planning Pty Ltd		



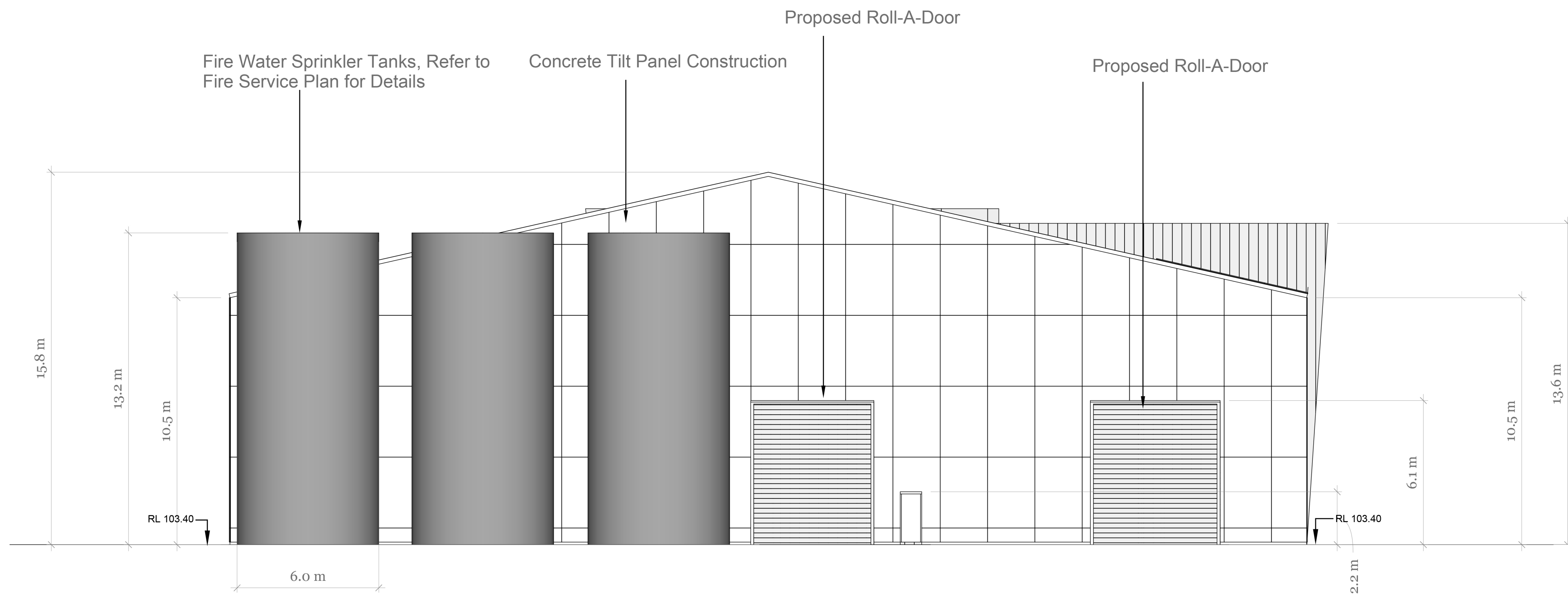
Section A
Scale 1:25



Date	Plan Number	Office East-West Elevation	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd	01
08-08-2020	109	Eco Logic Developments Pty Ltd	Strategy Infrastructure Compliance Procurement	Project	Singleton Recycling Centre	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au	Title	Office East-West Elevation	
					Scale	1:25
				Source	Jackson Environment and Planning Pty Ltd	A

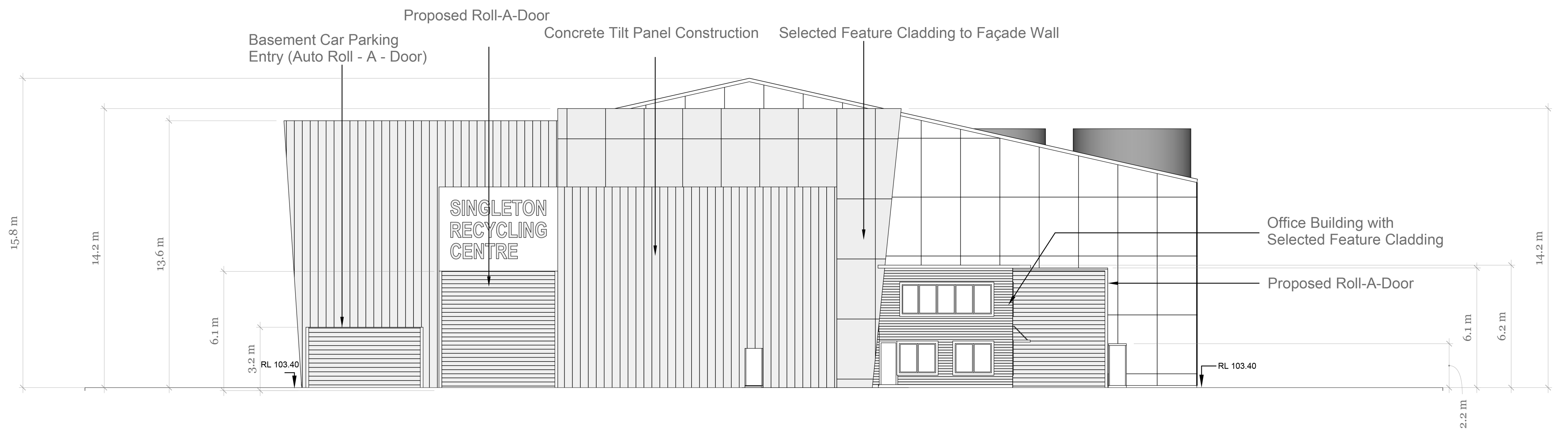


South Elevation
Scale 1:25



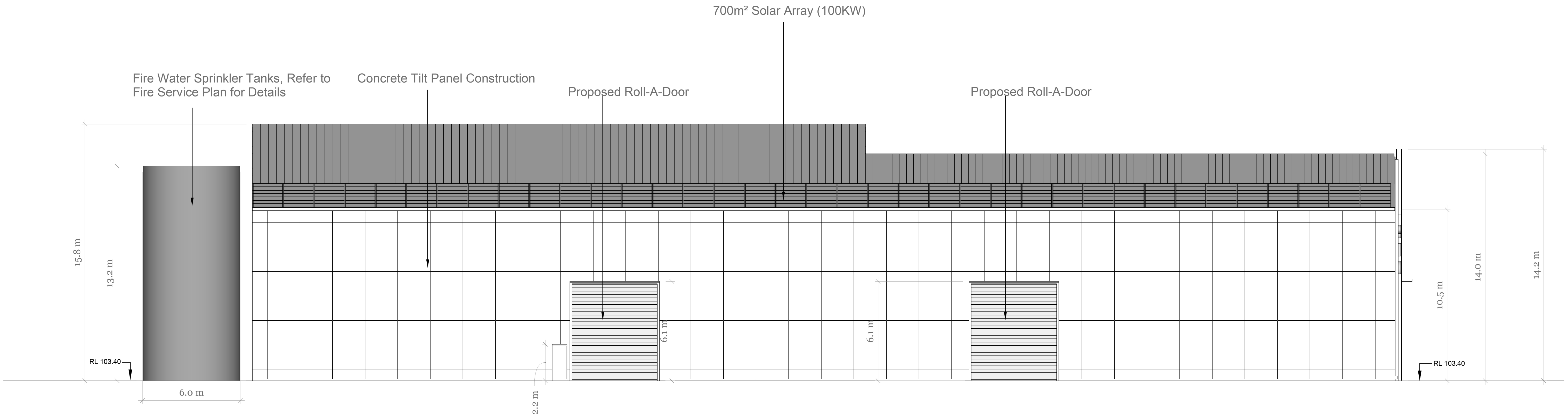
East Elevation
Scale 1:120

Date	Plan Number	East Elevation	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd
08-08-2020	111	Eco Logic Developments Pty Ltd		Project	Singleton Recycling Centre
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Title	East Elevation	A01
			Scale	1:120	
			Source	Jackson Environment and Planning Pty Ltd	



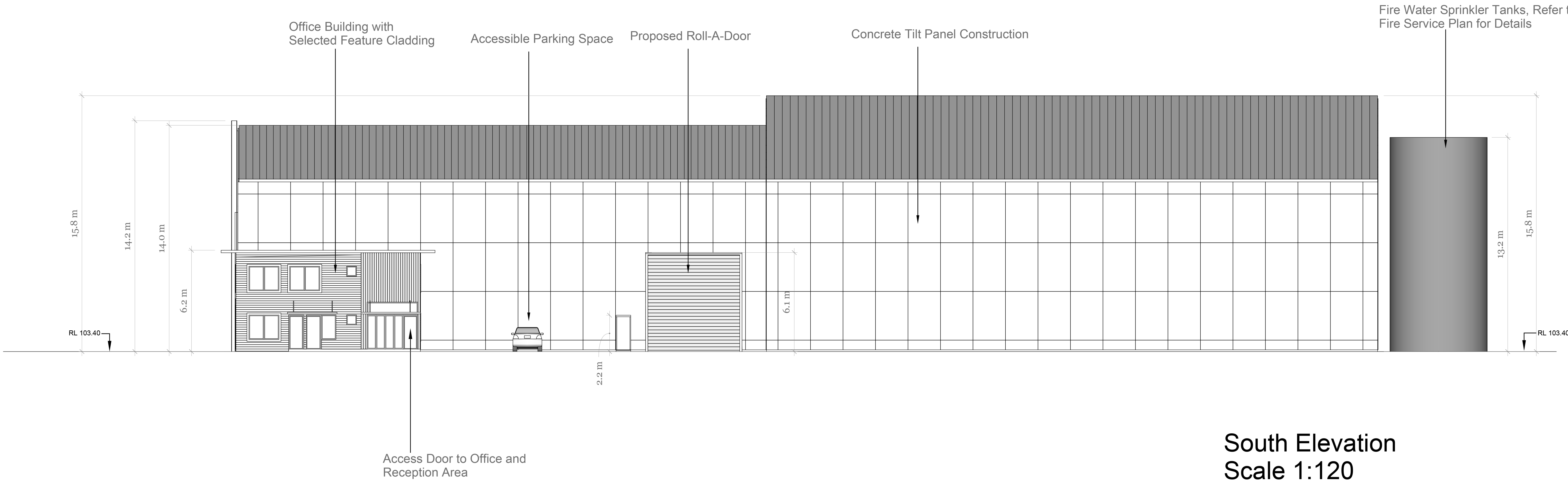
West Elevation
Scale 1:120

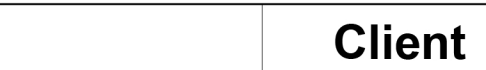
Date	Plan Number	West Elevation	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A01
8-8-2020	112	Eco Logic Developments Pty Ltd		Project	Singleton Recycling Centre	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)		Title	West Elevation	
				Scale	1:120	
				Source	Jackson Environment and Planning Pty Ltd	

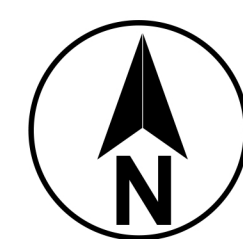
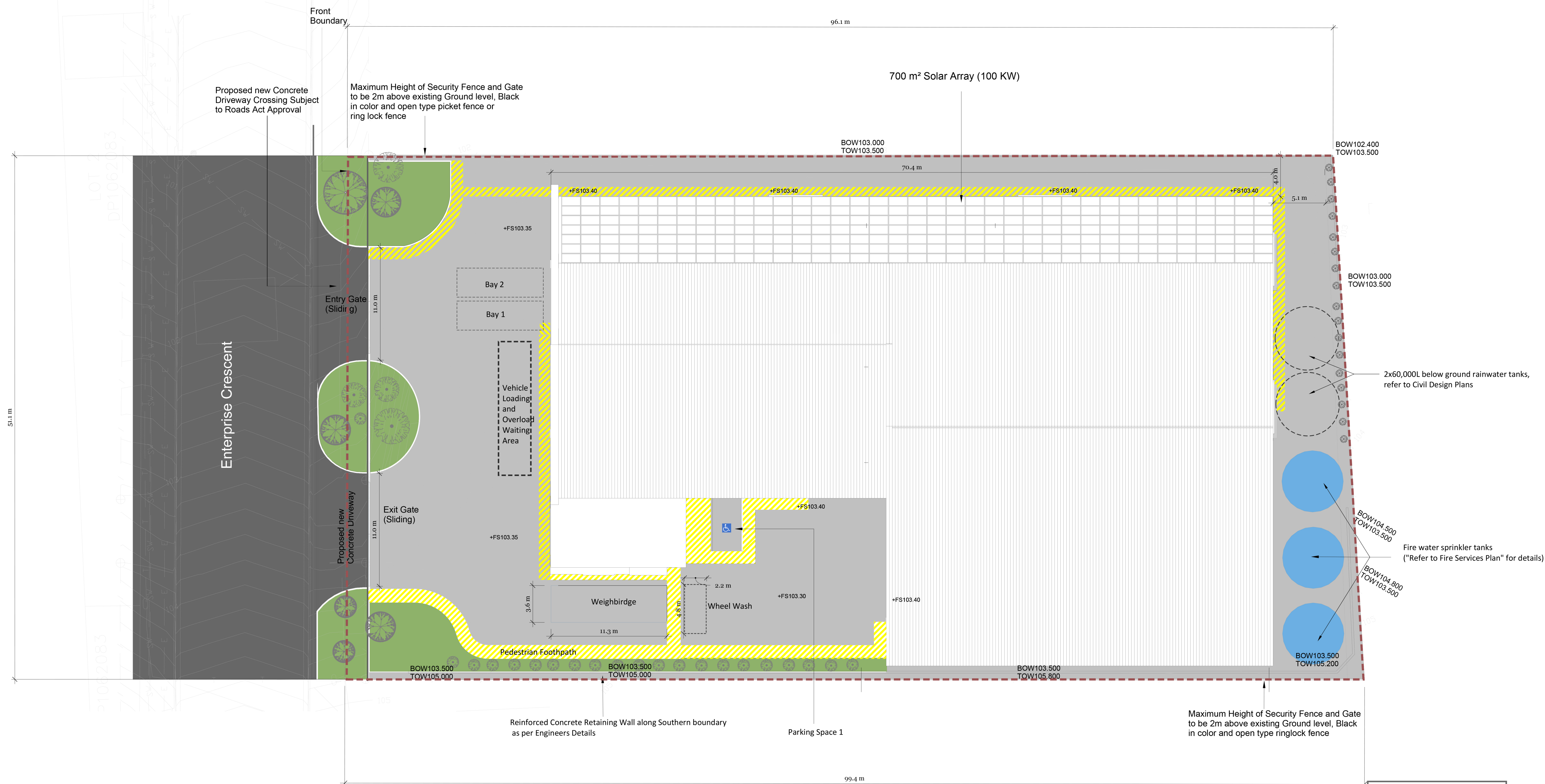


North Elevation
Scale 1:120

Date	Plan Number	North Elevation	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A01
8-8-2020	113	Eco Logic Developments Pty Ltd		Project	Singleton Recycling Centre	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)		Title	North Elevation	
				Scale	1:120	
				Source	Jackson Environment and Planning Pty Ltd	



Date	Plan Number	South Elevation	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au  JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	A01
8-8-2020	114	Eco Logic Developments Pty Ltd		Project	Singleton Recycling Centre	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)		Title	South Elevation	
				Scale	1:120	
				Source	Jackson Environment and Planning Pty Ltd	

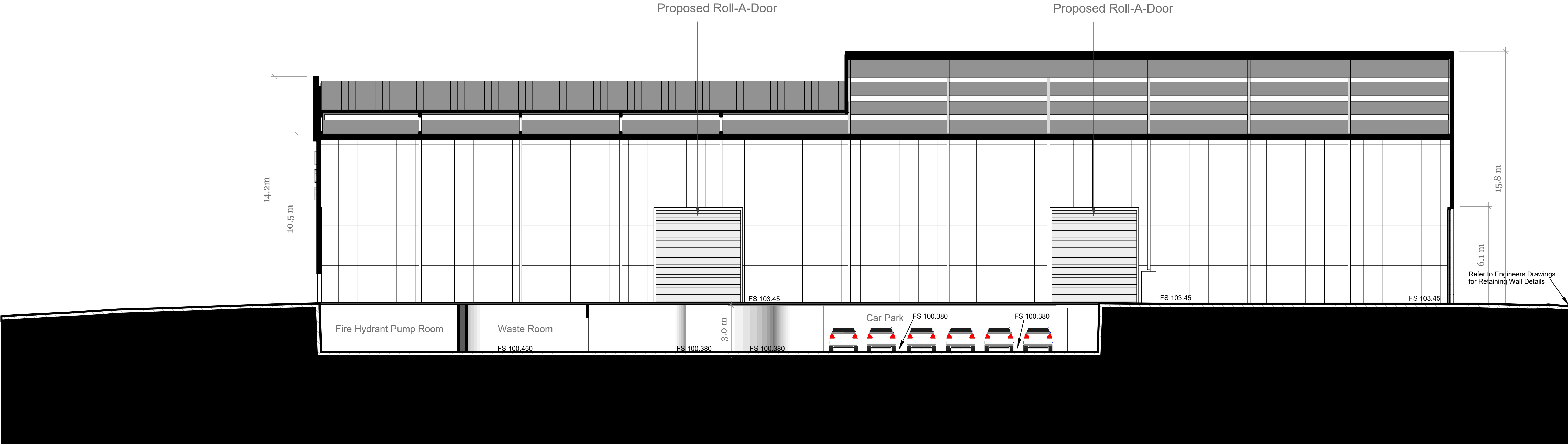


Singleton Recycling Facility :
Roof Plan
Scale 1:200

Retaining Wall	
Site Boundary	
Gross Floor Area = 2685.0 m² (Warehouse)	
Gross Floor Area = 77.4 m² (Office First Floor)	
BOW = Bottom of Wall	
TOW= Top of Wall	

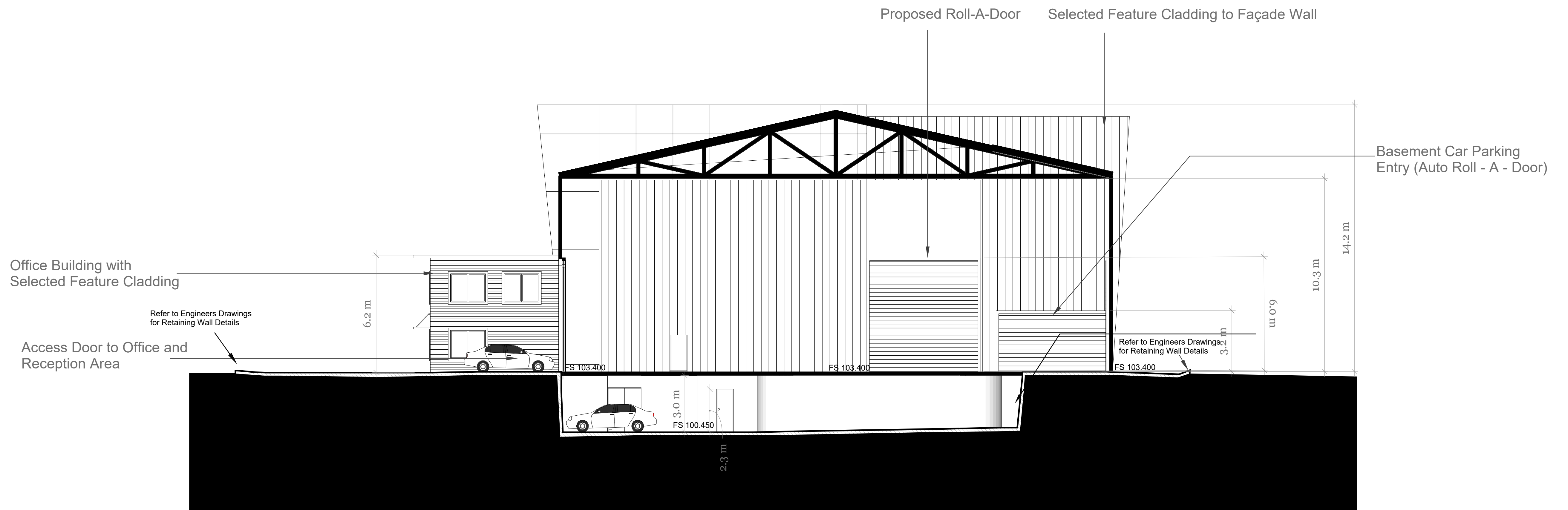
Date	Plan Number	Roof Plan	Jackson Environment and Planning Pty Ltd		Client	Eco Logic Developments Pty Ltd
08-08-2020	115	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	Strategy Infrastructure Compliance Procurement		Project	Singleton Recycling Facility
			A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060		Title	Roof Plan
			E: admin@jacksonenvironment.com.au		Scale	1:200
			T: 02 8056 1849		Source	Jackson Environment and Planning Pty Ltd
			W: http://www.jacksonenvironment.com.au			





Section AA
Scale 1:120

Date	Plan Number	Section AA	Jackson Environment and Planning Pty Ltd	Client	Eco Logic Developments Pty Ltd	01
08-08-2020	116	Eco Logic Developments Pty Ltd	Strategy Infrastructure Compliance Procurement	Project	Singleton Recycling Facility	
			A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060	Title	Section AA	
			E: admin@jacksonenvironment.com.au	Scale	1:120	
			T: 02 8056 1849	Source	Jackson Environment and Planning Pty Ltd	
		39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)	W: http://www.jacksonenvironment.com.au			A



Section BB
Scale 1:120

Date	Plan Number	Section BB	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 102, Level 1, 25-29 Berry St, North Sydney NSW 2060 E: admin@jacksonenvironment.com.au T: 02 8056 1849 W: http://www.jacksonenvironment.com.au  JACKSON ENVIRONMENT AND PLANNING	Client	Eco Logic Developments Pty Ltd	01 A
				Project	Singleton Recycling Facility	
				Title	Section BB	
				Scale	1:120	
08-08-2020	117	Eco Logic Developments Pty Ltd 39 Enterprise Crescent, McDougalls Hill, New South Wales, Australia (Lot 171 DP 1062083)		Source	Jackson Environment and Planning Pty Ltd	

RECYCLING FACILITY - 39 ENTERPRISE CRESCENT - SINGLETON

CONCEPT STORMWATER MANAGEMENT PLAN

SITE WORKS – GENERAL

- ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH LOCAL COUNCIL, AUSTRALIAN AND AUTHORITY STANDARDS.
- ALL TRENCHING WORKS ARE TO BE RESTORED TO ORIGINAL CONDITION.
- THE INTEGRITY OF ALL EXISTING AND NEW SERVICES IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- ALL PLANS ARE TO BE READ IN CONJUNCTION WITH APPROVED ARCHITECTS, STRUCTURAL ENGINEERS AND OTHER CONSULTANT'S PLANS. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER FOR CLARIFICATION.

SEDIMENT AND EROSION CONTROL

- THE CONTRACTOR SHALL INSTIGATE ALL SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH SINGLETON COUNCIL REQUIREMENTS AND THE "BLUE BOOK" (MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION, PRODUCED BY THE DEPARTMENT OF HOUSING). THESE MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED.
- THE SEDIMENT & EROSION CONTROL PLAN PRESENTS CONCEPTS ONLY. THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHING & MANAGEMENT OF A DETAILED SCHEME MEETING COUNCIL'S DESIGN, AND ALL OTHER REGULATORY AUTHORITY REQUIREMENTS.
- WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHALL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
 - INSTALL ALL TEMPORARY SEDIMENT FENCES AND BARRIER FENCES. WHERE FENCES ARE ADJACENT TO EACH OTHER THE SEDIMENT FENCE CAN BE INCORPORATED INTO THE BARRIER FENCE.
 - CONSTRUCT TEMPORARY STABILISED SITE ACCESS. INCLUDING SHAKE DOWN AND WASH PAD.
 - INSTALL SEDIMENT CONTROL MEASURES AS OUTLINED ON THESE SEDIMENT AND CONTROL PLANS (ONCE APPROVED)
- THE CONTRACTOR SHALL UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF MINIMUM WORKABLE SIZE.
- AT ALL TIMES AND IN PARTICULAR DURING WINDY AND DRY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. TACIFIERS MAY BE USED TO CONTROL DUST DURING EXTENDED PERIODS OF DRY WEATHER.
- ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) SHALL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN STABILISED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED OUT.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED / REHABILITATED.
- THE CONTRACTOR SHALL ALLOW FOR THE ESTABLISHMENT OF ANY OTHER EROSION PROTECTION MEASURES. (IF APPLICABLE).
- THE CONTRACTOR SHALL REGULARLY INSPECT (MINIMUM TWICE PER WEEK) ALL EROSION AND SEDIMENT CONTROL MEASURES TO ENSURE THEY ARE OPERATING EFFECTIVELY. REPAIRS AND/OR MAINTENANCE SHALL BE UNDERTAKEN REGULARLY AND AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.
- ACCEPTABLE RECEPTORS SHALL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER. WASTE FROM THESE RECEPTORS SHALL BE DISPOSED OF IN ACCORDANCE WITH REGULATORY AUTHORITY REQUIREMENTS. PAY ALL FEES AND PROVIDE EVIDENCE OF SAFE DISPOSAL.

SITE WORKS – ACCESS AND SAFETY

- ALL WORKS ARE TO BE UNDERTAKEN IN A SAFE MANNER IN ACCORDANCE WITH ALL STATUTORY AND INDUSTRIAL RELATION REQUIREMENTS.
- ACCESS TO ADJACENT BUILDINGS AND PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
- WHERE NECESSARY SAFE PASSAGE SHALL BE PROVIDED FOR VEHICLES AND PEDESTRIANS THROUGH OR ADJACENT TO THE SITE.

FINISHED LEVELS

- LEVELS BASED ON SURVEY PREPARED BY TONY MEXON AND ASSOCIATES REF No. 18-45 DATED: 17 DEC 2018. THE CONTRACTOR SHALL VERIFY LEVELS PRIOR TO CONSTRUCTION COMMENCEMENT, ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER OR SUPERINTENDENT FOR CLARIFICATION.
- FINISHED LEVELS SHOWN ARE CONCEPTUAL ONLY AND SUBJECT TO DETAILED DESIGN PRIOR TO CONSTRUCTION CERTIFICATE APPLICATION. FINAL FINISHED LEVELS TO BE +/- 0.5m FROM LEVELS SHOWN.
- ALL CONTOUR LINES & SPOT LEVELS INDICATE FINISHED PAVEMENT LEVELS U.N.O. ON PLAN.
- PERMANENT BATTER SLOPES ARE TO HAVE A MAXIMUM GRADE OF 1V:3H.
- ALL FOOTPATHS ARE TO FALL AWAY AS PER COUNCIL STANDARDS AND SPECIFICATIONS.

STORMWATER

- ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS AS2032, AS3500 AND AS3725 AS A MINIMUM.
- ALL PIPES LESS THAN OR EQUAL TO Ø300mm IN SIZE ARE TO BE SOLVENT WELD-JOINTED UPVC CLASS SN6 U.N.O.
- ALL PIPES Ø375mm OR GREATER IN SIZE ARE TO BE MIN. CLASS 2 REINFORCED CONCRETE PIPE (RCP) WITH SPIGGOT AND SOCKETED JOINT OR VANTAGE PIPE PLUS (VPIPE+) FIBRE REINFORCED CONCRETE (FRC) WITH VANTAGE PIPE PLUS JOINT U.N.O.
- ALL PIPES ARE TO BE LAID AT MIN. 10% GRADE U.N.O.
- PIPE BEDDING IS TO BE HS2 UNDER ROADS AND TRAFFICKED AREAS AND SHALL BE H2 IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS U.N.O.
- ALL PIPE BENDS AND JUNCTIONS ARE TO BE MADE WITH EITHER PURPOSE MADE FITTINGS OR STORMWATER DRAINAGE PITS.
- MINIMUM COVER FROM THE OBVERT OF THE STORMWATER PIPE OF 300mm IS TO BE PROVIDED IN LANDSCAPED AREAS AND 600mm IN VEHICULAR TRAFFICKED AREAS U.N.O.
- WHERE MINIMUM COVER CANNOT BE ACHIEVED CONCRETE ENCASEMENT OF THE AFFECTED PIPE IS MAY BE UNDERTAKEN WITH 20MPa CONCRETE WITH A MIN. COVER OF 150mm TO ALL SIDES OF THE PIPE. THE CONTRACTOR SHALL CONFIRM THIS REQUIREMENT WITH THE ENGINEER OR SUPERINTENDENT.
- LAID PIPELINES ARE TO HAVE THE FOLLOWING CONSTRUCTED TOLERANCES:
 - HORIZONTAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT.
 - VERTICAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT.
- ALL DRAINAGE PITS ARE TO BE CAST IN-SITU, PRECAST DRAINAGE PITS MAY BE USED WITH APPROVAL FROM THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A PRECAST PIT INSTALLATION WORK METHOD STATEMENT FOR ASSESSMENT BY THE ENGINEER FOR APPROVAL.
- DRAINAGE PIT COVERS ARE TO BE EITHER GALVANISED STEEL OR CAST IRON CLASS 'B' IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS AND CLASS 'D' IN ALL VEHICULAR TRAFFICKED AREAS U.N.O.
- DRAINAGE PIT COVERS ARE TO BE 'HEELSAFE' TYPE IN ALL PEDESTRIAN TRAFFICKED AREAS U.N.O.
- EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS ON SITE.
- PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- DOWN PIPES CONNECTED DIRECT TO PIPES TO BE CONNECTED AT 45° TO THE FLOW DIRECTION WITH A CLEANING EYE PROVIDED AT GROUND LEVEL.

BULK EARTHWORKS

- THE CONTRACTOR SHALL VERIFY LEVELS PRIOR TO CONSTRUCTION COMMENCEMENT, ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER OR SUPERINTENDENT FOR CLARIFICATION.
- THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL INVESTIGATION REPORT FOR SPECIFIC SITE CONDITIONS AND WORKS METHODOLOGY.
- BULK EARTHWORKS ARE TO BE TO BE UNDERTAKEN IN ACCORDANCE WITH AS3798-2007, GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.

STORMWATER DESIGN SUMMARY

WATER CONSERVATION

WATER CONSERVATION TO BE UNDERTAKEN IN ACCORDANCE WITH SECTION 2.22.3 (b) OF THE SINGLETON COUNCIL DCP.

MINIMUM 22.5KL RAINWATER TANK TO BE PROVIDED IF ROOF AREA IS GREATER THAN 500m²

BASED ON THE OPERATIONS AND WATER REUSE DEMAND FOR THE SITE. RAINWATER TANK WITH EFFECTIVE VOLUME OF 120KL IS TO BE ADOPTED. ROOF AREA DRAINING TO RAINWATER TANK = 2,775m²

ABOVE RAINWATER SIZE MEETS COUNCIL'S RAINWATER REUSE REQUIREMENTS FOR PROVIDING THE MINIMUM RAINWATER TANK SIZE.

STORMWATER QUALITY

STORMWATER QUALITY TO BE IN ACCORDANCE WITH SECTION 2.4.3 (a) OF THE SINGLETON CITY COUNCIL DCP.

POLLUTANT REDUCTION LOADS FOR STORMWATER RUNOFF TO BE ACHIEVED WHEN COMPARED TO UNTREATED RUNOFF FROM DEVELOPED SITE:

- 80% REDUCTION IN TOTAL SUSPENDED SOLIDS (TSS)
- 90% REDUCTION IN GROSSPOLLUTANTS (GP);
- 45% REDUCTION IN NUTRIENTS: TOTAL PHOSPHORUS (TP) TOTAL NITROGEN (TN)
- NO OIL AND GREASE, SEDIMENTS COARSER THAN Ø0.25mm AND LITTER GRATER THAN Ø0.5mm TO BE RETAINED ON SITE FOR PEAK FLOWS UP TO 50% 1yr ARI STORM EVENT.

STORMWATER TREATMENT MEASURES INCLUDE:

- SURFACE INLET PITS AS NOTED IN STORMWATER PLANS TO BE FITTED WITH ENVIROPOD PIT INSERTS.
- ROOFWATER TO BE PLUMBED TO RAINWATER REUSE TANK FOR REUSE WITHIN THE SITE AS PER CATCHMENT SHOWN IN STORMWATER PLANS.

MUSIC MODELLING UNDERTAKEN TO DEMONSTRATE COMPLIANCE WITH REQUIREMENTS AND DETERMINE RELEVANT SIZING OF TREATMENT MEASURES. MUSIC MODEL BASED ON NSW MUSIC GUIDELINES. IMPLEMENTING THE ABOVE TREATMENT DEVICES THE DEVELOPMENT MEETS THE REQUIREMENTS SET BY COUNCIL AS PER THE POLLUTANT REDUCTION PERFORMANCE RESULTS BELOW. FOR FURTHER DETAILS REFER TO 19023_SWDD REPORT.

POLLUTANT REDUCTION RESULTS

- 86.3% REDUCTION IN TSS
- 100% REDUCTION IN GP;
- 55.7% REDUCTION IN TP
- 48.8% REDUCTION IN TN
- ENVIROPODS TO BE INSTALLED WITH OILSORB TO CAPTURE OILS AND GREASE. REFER TO MANUFACTURER'S MANUAL

STORMWATER QUANTITY

ON-SITE DETENTION

OSD DESIGNED IN ACCORDANCE WITH SECTION 2.4.3 (a) OF THE SINGLETON CITY COUNCIL DCP. SITE DISCHARGE TO BE LIMITED TO THE PRE-DEVELOPED STATE OF NATURE PEAK FLOW FOR THE 5, 20, AND 100 YEAR ARI STORM EVENTS.

PRE-DEVELOPED SITE INFORMATION

SITE AREA = 0.50ha
IMPERVIOUS AREA = 0m²
PERVIOUS AREA = 0.50ha (100%)

POST DEVELOPED SITE INFORMATION

SITE AREA = 0.500ha
AREA DRAINING TO OSD = 0.476ha
IMPERVIOUS AREA = 0.451ha (95%)
PERVIOUS AREA = 0.025ha (5%)
AREA BYPASSING OSD = 0.024ha (70% PERVIOUS)

HGL IN CONNECTION POINT IN STREET TO BE TAKEN AS 150mm BELOW GRATE LEVEL OF EXISTING PIT AS PER SINGLETON DESIGN SPECIFICATIONS D5.07 (2). HGL 150mm BELOW GRATE LEVEL ADOPTED FOR MINOR STORM EVENTS UP TO AND INCLUDING THE 20 YEAR ARI STORMS.
FOR 1 IN 100 yr ARI STORMS ADOPT TOP OF KERB (150mm ABOVE GRATE)

USING DRAINS SOFTWARE TO CALCULATE THE OSD STORAGE REQUIRED TO MEET COUNCIL'S REQUIREMENTS AS PER ABOVE, OSD VOLUME CALCULATED AS 70m³ WITH COMBINATION OF ORIFICE AND WEIR DISCHARGE CONTROL TO ALLOW FOR STAGED DISCHARGED. REFER TO PEAK DISCHARGE SUMMARY TABLE FOR COMPARISON OF DISCHARGE FLOWS FOR EACH STORM EVENT.

AS PER SINGLETON COUNCIL DCP SECTION 2.22 (5), 30% OF RAINWATER TANK VOLUME CAN BE USED TO AS OSD VOLUME.
30% OF RWT VOLUME = 120KL x 0.3 = 36KL = 36m³
FINAL OSD VOLUME TO BE ADOPTED = 70 - 36 = 34m³

REFER TO STORMWATER MANAGEMENT PLANS DA4.01-DA4.11 FOR LAYOUT CONFIGURATION AND DETAILS OF OSD TANK

INGROUND STORMWATER DRAINAGE SYSTEM

AS PER THE SINGLETON COUNCIL DESIGN SPECIFICATIONS D5.04 (4), THE STORMWATER DRAINAGE SYSTEM HAS BEEN DESIGNED TO THE 10 YEAR ARI STORM EVENTS (INDUSTRIAL SITES)



LOCALITY PLAN

NOT TO SCALE - COURTESY OF SIXMAPS

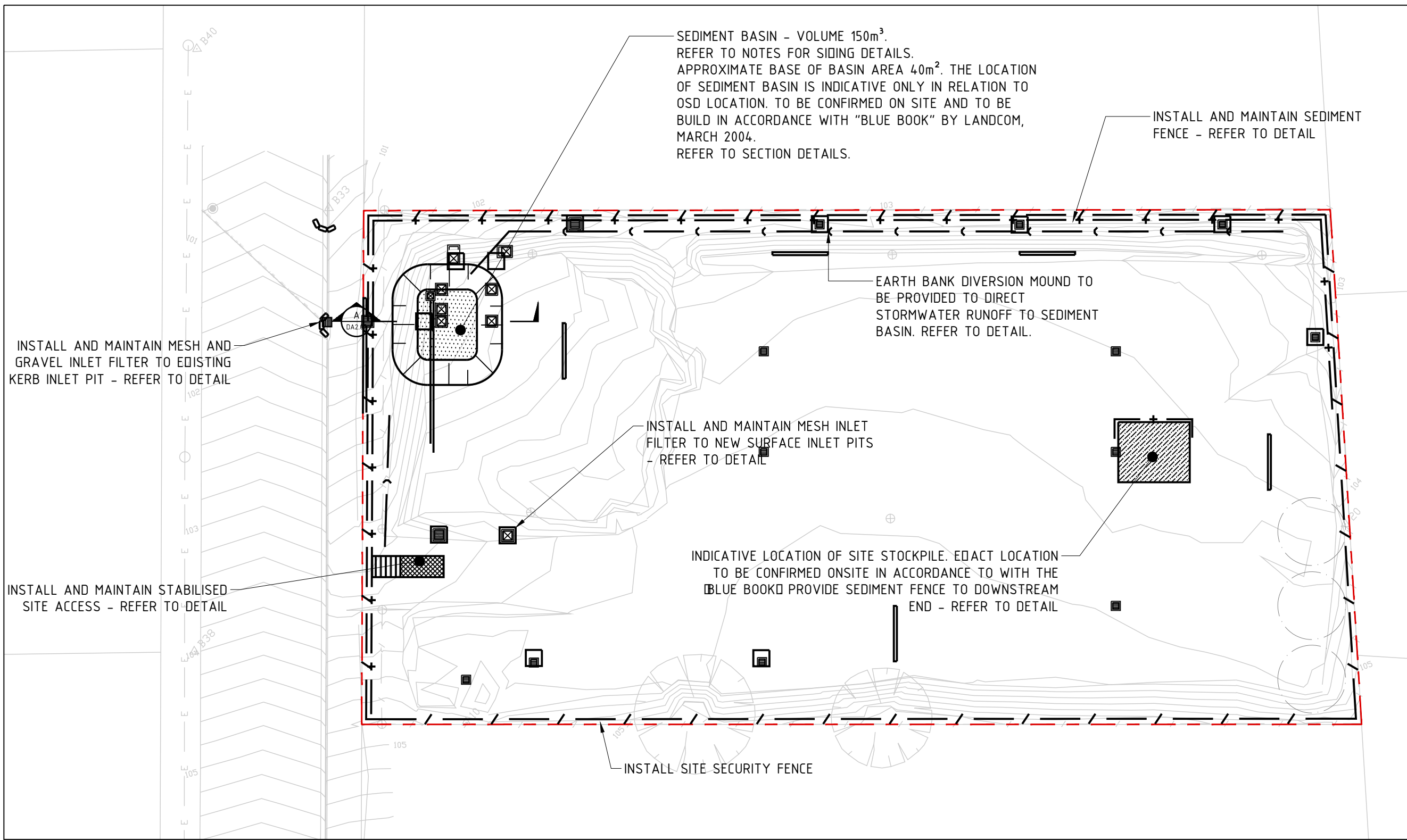
PEAK DISCHARGE SUMMARY TABLE						
ARI STORM EVENT (1 IN X)	PRE DEVELOPME NT FLOW (L/s)	POST DEVELOPMENT FLOW (L/s)				
		WEIR	ORIFICE	BYPASS	OTHER OVERFLO W	TOTAL POST DEV FLOW
5	112	0	102	6	1	109
20	157	0	121	8	2	131
100	205	48	118	11	2	179

DRAWING SCHEDULE

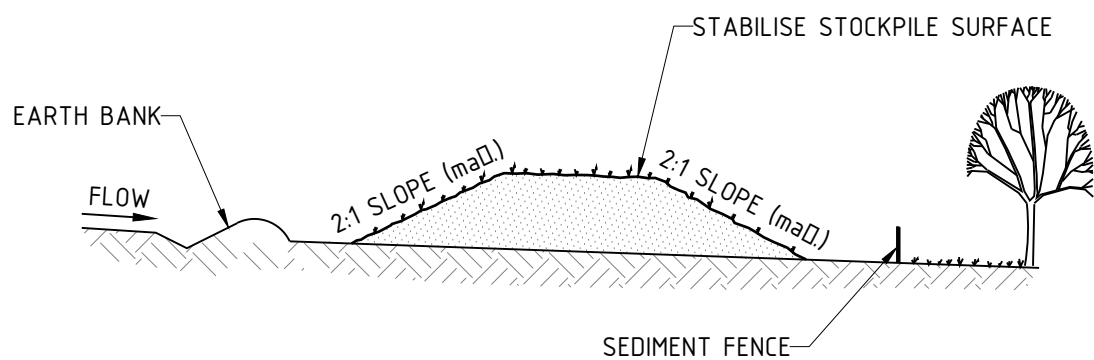
DA1.01	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE
DA2.01	CONCEPT SEDIMENT AND EROSION CONTROL PLAN AND DETAILS
DA2.02	CONCEPT SEDIMENT BASIN DETAILS
DA3.01	CONCEPT BULK EARTHWORKS CONTOUR PLAN
DA3.05	CONCEPT BULK EARTHWORKS CUT TO FILL DEPTHS PLAN
DA3.11	CONCEPT BULK EARTHWORKS SECTIONS SHEET 1
DA3.12	CONCEPT BULK EARTHWORKS SECTIONS SHEET 2
DA4.01	CONCEPT STORMWATER MANAGEMENT PLAN
DA4.02	CONCEPT FIRE WATER CONTAINMENT PLAN
DA4.05	CONCEPT STORMWATER CATCHMENT PLAN
DA4.11	CONCEPT STORMWATER MANAGEMENT DETAILS
DA5.21	RETAINING WALL ELEVATIONS

ISSUED FOR JRPP REVIEW

1. DO NOT SCALE OFF THIS DRAWING. USE DIMENSIONS & ARCHITECTURAL DRAWINGS ONLY 2. DRAWINGS TO BE READ IN CONJUNCTION WITH SPECIFICATION. 3. LEVELS ARE INDICATIVE ONLY AND ARE TO BE CHECKED PRIOR TO COMMENCEMENT OF ANY WORKS 4. AUTHORITIES MAINS AND/OR EXISTING SERVICES ARE TO BE LOCATED AND CHECKED PRIOR TO COMMENCEMENT OF ANY WORKS 5. COMPLETION OF THE QUALITY RECORD IS EVIDENCE THAT THE DESIGN AND DRAWING HAVE BEEN VERIFIED. VERIFICATION COMPLETION OF THE DRAWING STATUS IS EVIDENCE THAT THE DESIGN HAS BEEN VERIFIED AS CONFORMING TO THE REQUIREMENTS OF THE PROJECT QUALITY PLAN DRAWING STATUS PRELIMINARY FOR INFORMATION ONLY FOR CLIENT APPROVAL FOR TENDER FOR CONSTRUCTION	CHECKED DATE APPROVED DATE PAGE PLOT DATE A1 July 31, 2020 SCALE NOT TO SCALE	NORTH POINT	<table><tr><th>DATE</th><th>No</th><th>AMENDMENT</th><th>INIT</th><th>REV</th></tr><tr><td>15.03.19</td><td></td><td>75% DA ISSUE</td><td>SK</td><td>1</td></tr><tr><td>01.04.19</td><td></td><td>ISSUED FOR DA</td><td>SK</td><td>2</td></tr><tr><td>31.07.20</td><td></td><td>ISSUED FOR JRPP REVIEW</td><td>SK</td><td>3</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	DATE	No	AMENDMENT	INIT	REV	15.03.19		75% DA ISSUE	SK	1	01.04.19		ISSUED FOR DA	SK	2	31.07.20		ISSUED FOR JRPP REVIEW	SK	3																																				<table><tr><th>DATE</th><th>No</th><th>AMENDMENT</th><th>INIT</th><th>REV</th></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	DATE	No	AMENDMENT	INIT	REV																																																			CLIENT Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 180, Level 1, 20-28 Berry St, North Sydney NSW 2060 A: central@jacksonenvironment.com.au T: 02 9891 5033 W: http://www.jacksonenvironment.com.au ARCHITECT	PROJECT SINGLETON RECYCLING CENTER - ENTERPRISE CRESCENT DRAWING TITLE CIVIL DESIGN COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE	Level 1, 91 George Street Parramatta NSW 2150 P 02 9891 5033 F 02 9891 3898 E admin@sparksandpartners.com.au DATE JULY 2020 SCALE NTS JOB No 19023 DESIGNED SK DRAWN SK BWG No DA1.01 OF 3 REV 3 AHSCA The Australian Society of Consulting Engineers HYDRAULIC CIVIL FIRE
DATE	No	AMENDMENT	INIT	REV																																																																																																																	
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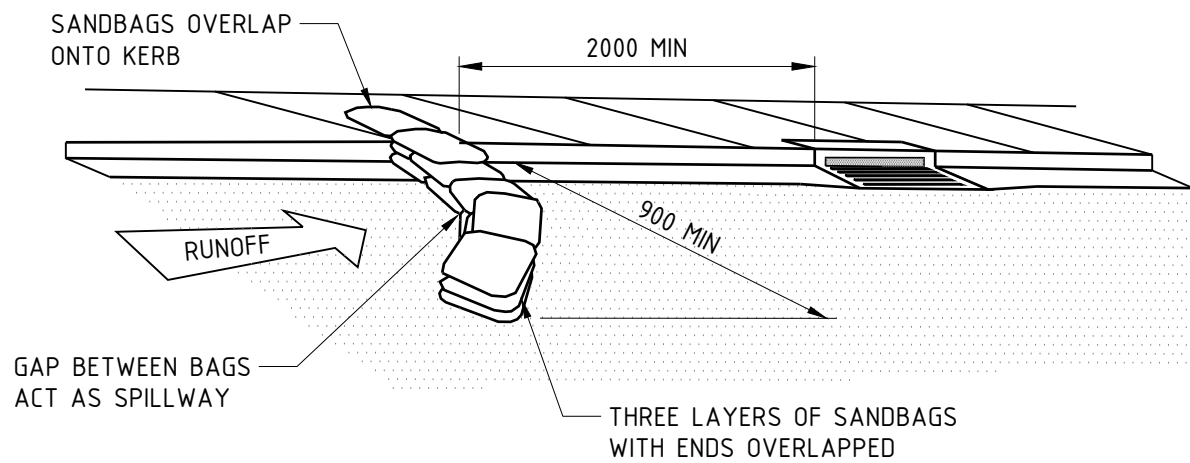
EROSION & SEDIMENT CONTROL PLAN
SCALE 1:400



STOCKPILE
NOT TO SCALE

NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARDOUS AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT. 4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.



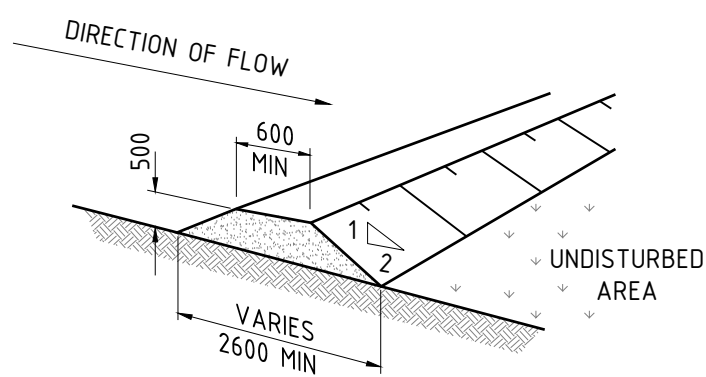
**SEDIMENT TRAP FOR KERB INLET
(ON GRADE - SANDBAG)**
NOT TO SCALE

NOTES

1. REFER TO DA1.01 FOR GENERAL NOTES AND SPECIFICATIONS.
2. REFER TO DA2.02 FOR SEDIMENT BASIN DETAILS, SIDING AND SECTIONS.

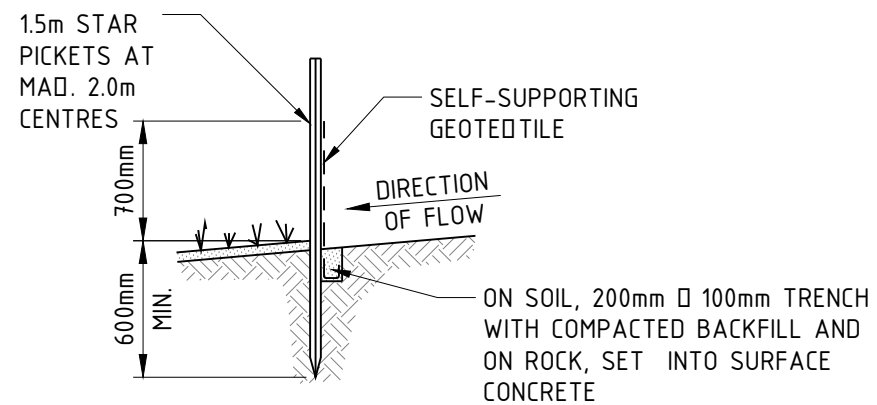
LEGEND

- SITE SECURITY FENCE
- - - SEDIMENT FENCE
- STABILISED SITE ACCESS
- SITE STOCKPILE
- MESH AND GRAVEL INLET FILTER
- EARTH BANK DIVERSION MOUND
- GEOTEXTILE INLET FILTER

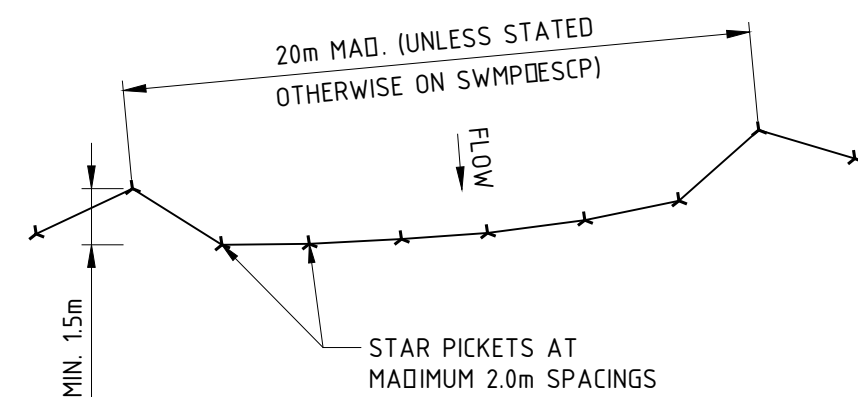
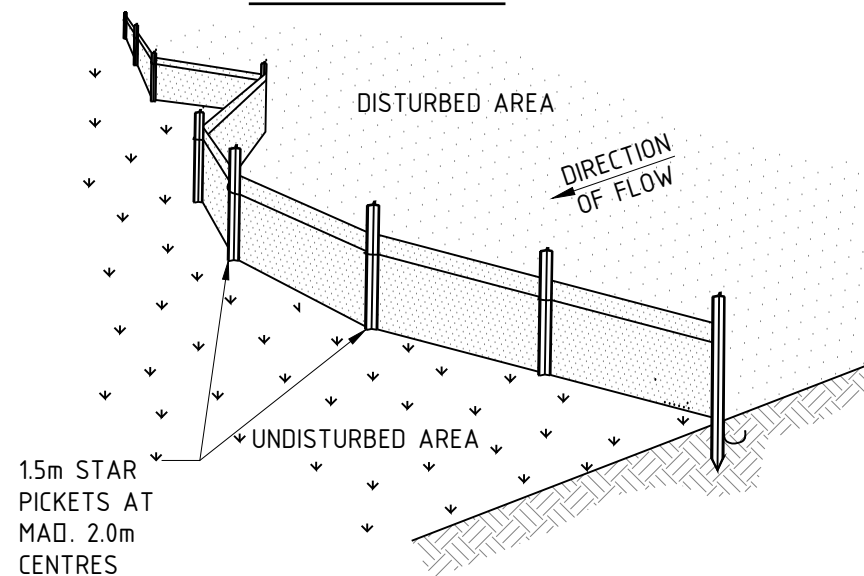


DIVERSION BANK TYPE 1
NOT TO SCALE

(FOR CATCHMENT ≤ 2ha)



SECTION DETAIL

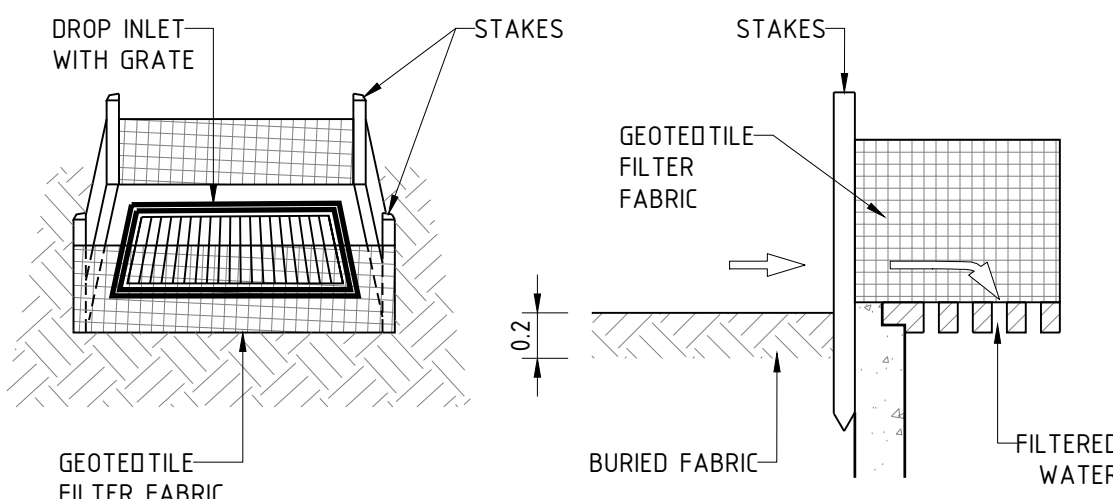


PLAN

SEDIMENT FENCE
NOT TO SCALE

NOTES:

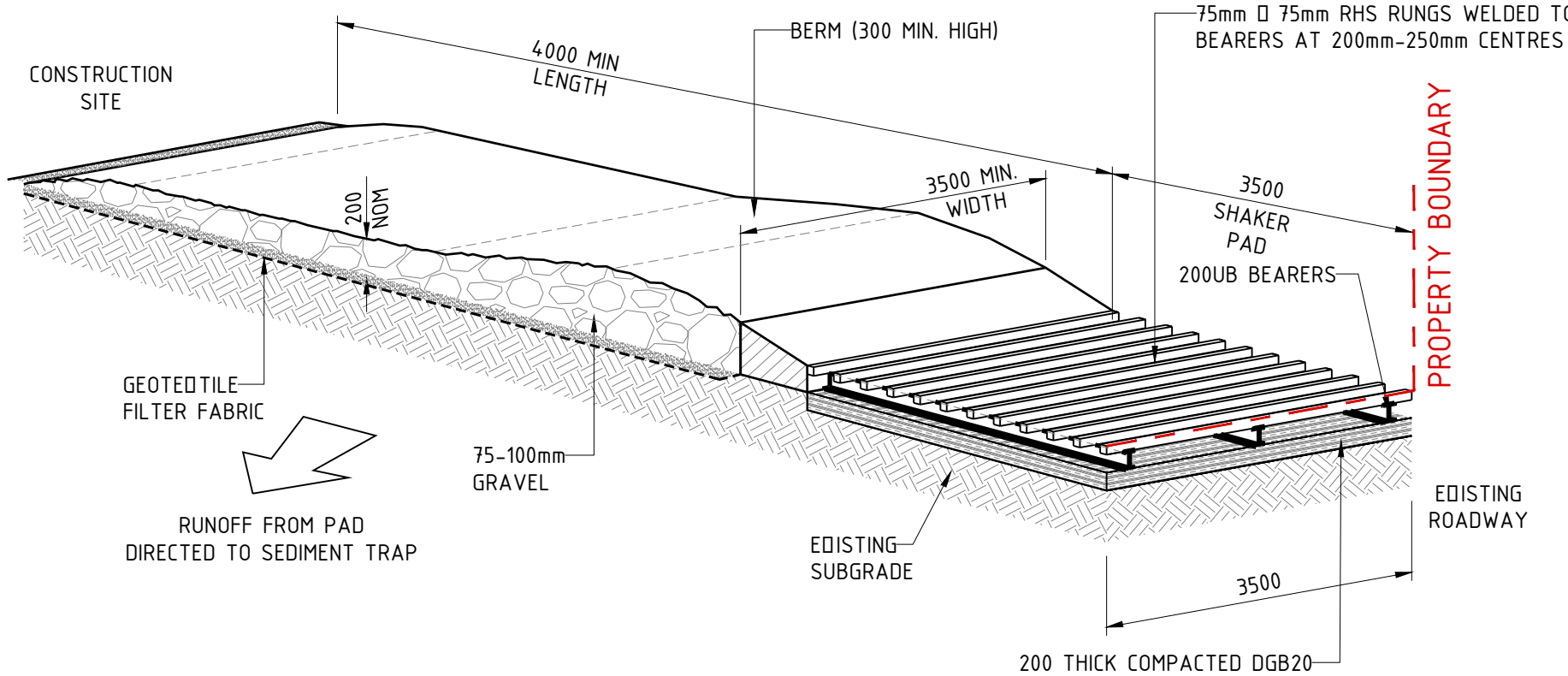
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 5000 IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 15m LONG STAR PICKETS INTO GROUND AT 2.0m INTERVALS (MAD) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FID SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FID THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



GEOTEXTILE INLET FILTER DROP AND SEDIMENT TRAP
NOT TO SCALE

NOTES:

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. CUT A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 10m LONG STAR PICKETS INTO GROUND AT THE FOUR CORNERS OF PIT WALLS. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FID SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FID THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



STABILISED SITE ACCESS
NOT TO SCALE

MAINTENANCE

- THE TEMPORARY ACCESS SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY.
- THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
- INSTALL BARRIER ON EITHER SIDE OF SHAKER PAD TO ENSURE VEHICLES ARE GUIDED ON TO THE PAD.
- INVERT OF SHAKER PAD TO BE DRAINED VIA AGRICULTURAL PIPE WRAPPED IN GEOTEXTILE FABRIC.

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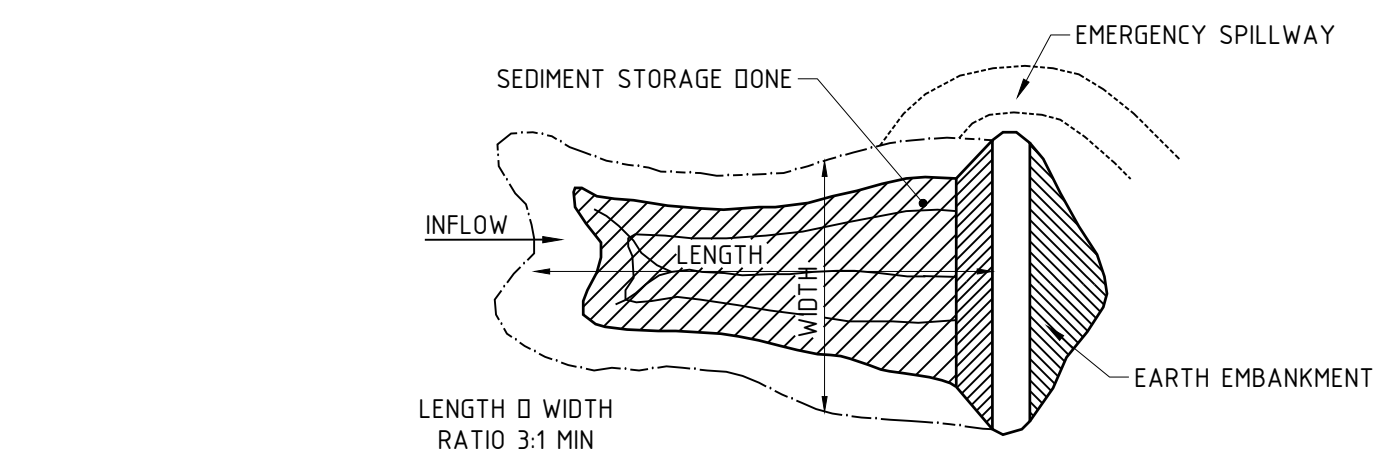


Diagram illustrating the cross-section of a bank stabilization structure, showing the relationship between the embankment, sediment storage, and topsoil layers.

Labels and Dimensions:

- PREVIOUSLY STRIPPED TOPSOIL SHOULD BE RETURNED TO SURFACES OF THE BANK TO PROVIDE A MINIMUM OF 40mm AND A MAXIMUM OF 60mm DEPTH OF TOPSOIL** (Pointing to the topsoil layer on the left bank).
- 600mm SETTLING DONE** (Pointing to the sediment storage area).
- SEDIMENT STORAGE DONE** (Pointing to the sediment storage area).
- FREEBOARD 500mm MIN** (Pointing to the vertical distance from the water level to the crest).
- CREST WIDTH** (Pointing to the top width of the embankment).
- BEFORE CONSTRUCTION OF BANK, STRIP 100mm DEPTH OF TOPSOIL UNDER AREA OF BANK AND ALL TOPSOIL FROM AREA OF EDCAVATION** (Pointing to the area of topsoil removal).
- HEIGHT VARIES** (Pointing to the vertical height of the embankment).
- 2400 MIN** (Pointing to the minimum width of the embankment base).
- 3000 MIN** (Pointing to the minimum width of the embankment base).
- CUT-OFF TO BE TAKEN AT LEAST 300mm INTO IMPERVIOUS MATERIAL AND TO BE A MINIMUM OF 600mm DEEP** (Pointing to the cut-off wall).
- THE MATERIAL FORMING THE EMBANKMENT SHOULD BE SPREAD IN LAYERS NOT EXCEEDING 100mm LOOSE THICKNESS AND EACH LAYER THOROUGHLY COMPACTED BEFORE THE NEXT LAYER IS ADDED** (Pointing to the embankment material).

CONSTRUCTION NOTES:

1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA
2. CONSTRUCT A CUT-OFF TRENCH 500mm DEEP AND 1200mm WIDE ALONG THE CENTERLINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIAL WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95% STANDARD PROCTOR DENSITY
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100mm TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE
6. SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP
7. CONSTRUCT THE EMERGENCY SPILLWAY
8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP

NOTES

1. REFER TO DA2.01 FOR SEDIMENT AND EROSION CONTROL PLAN

SEDIMENT BASIN CATCHMENT AREA= 0.5Ha

SETTLING DONE VOLUME CALCULATION:

10 0 CO 0 A 0 R
(BLUE BOOK 6.3.4 (D))

$R = y - \frac{y - y_0}{1000000} \cdot D \cdot day$

$R = 31$
(DERIVED FROM BLUE BOOK FIGURE 6.5 FOR 5 DAY 85%[D])

$CO = 0.64$
(FROM TABLE F2 IN A00 F IN BLUE BOOK FOR CONSERVATIVE APPROACH OF HIGH RUNOFF POTENTIAL, AND RAINFALL DEPTH (31-40))

$A = \text{CATCHMENT AREA} = 0.50\text{ha}$

$100(31)(0.64)(0.50\text{ha})$

SETTLING ZONE VOLUME = 99.2m^3

REQUIRED SEDIMENT STORAGE
=SETTLING VOLUME 0 0.5 = 50.0m^3

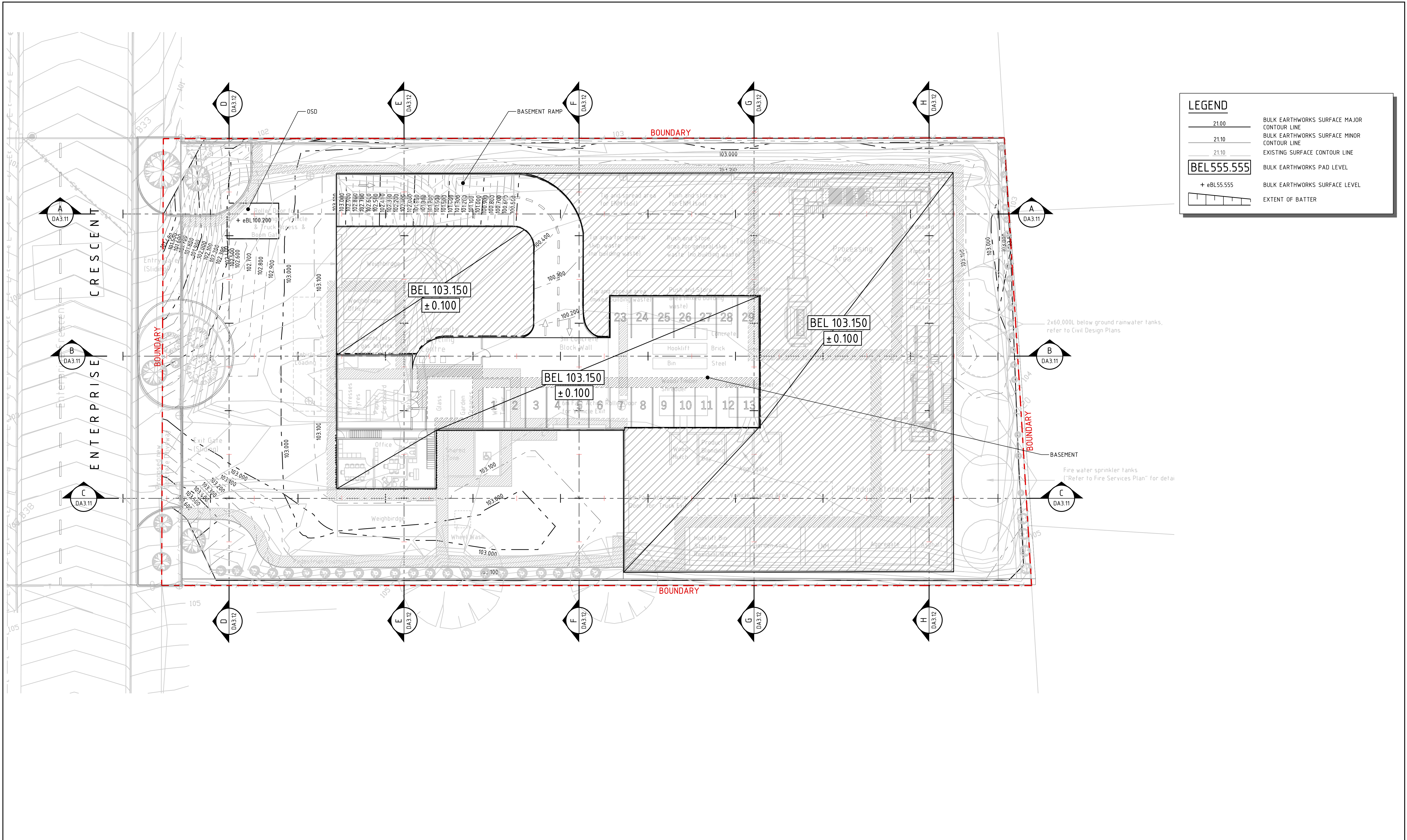
REQUIRED BASIN VOLUME = $99.50\text{m}^3 = 149\text{m}^3$

VOLUME PROVIDED =
 $4.0\text{m}^2 \text{ (BASE)} \times 1.5\text{m [DEEP]} + \left\{ \frac{(120\text{m}^2 \text{ (TOP)} - 4.0\text{m}^2) \times 1.5\text{m} \times 0.5}{150\text{m}^2} \right\}$

MAQ. SIDE SLOPE = 1V:2H

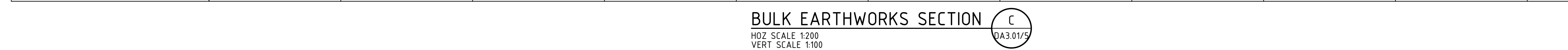
2m WIDE EMERGENCY SPILLWAY LOCATED AT THE LOWEST POINT OF THE NATURAL SURFACE TO ALLOW GRAVITY FLOW FROM SITE

[illegible]



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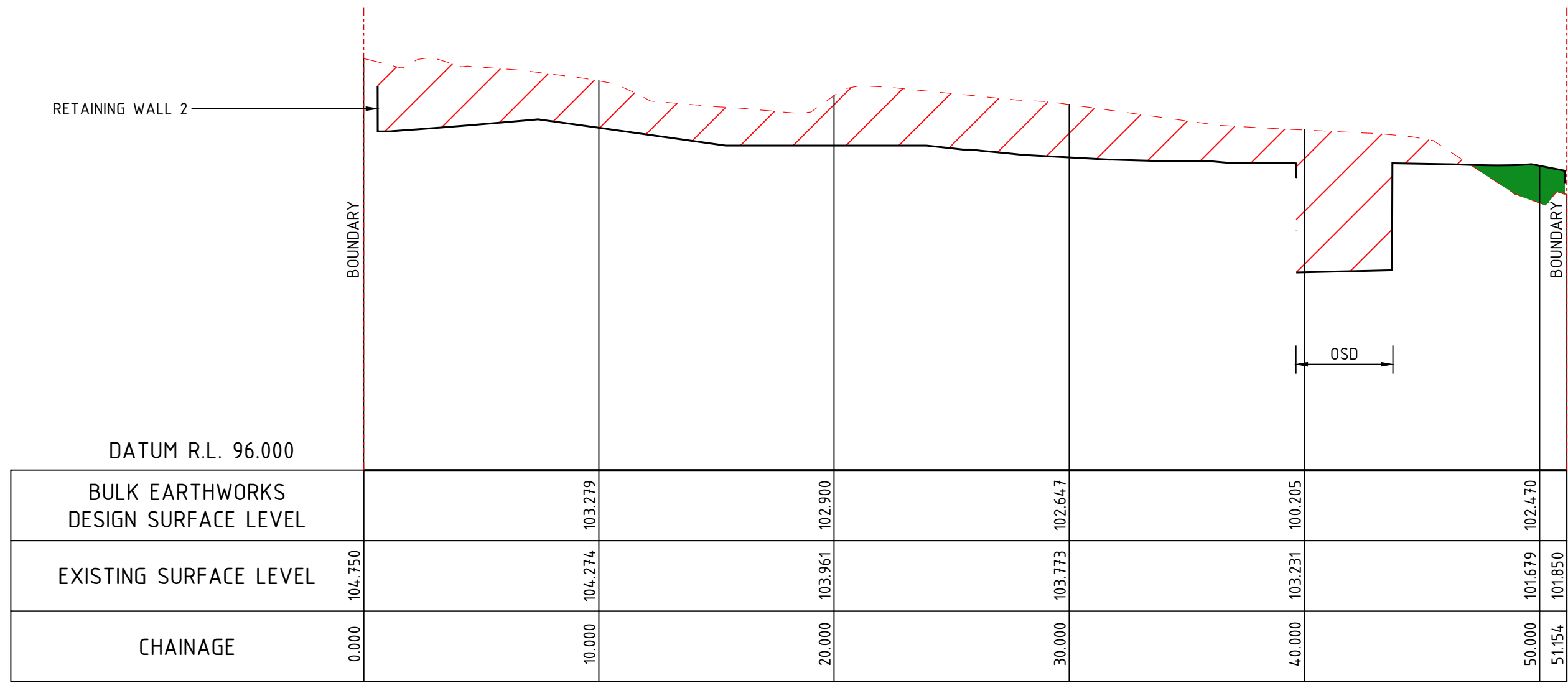
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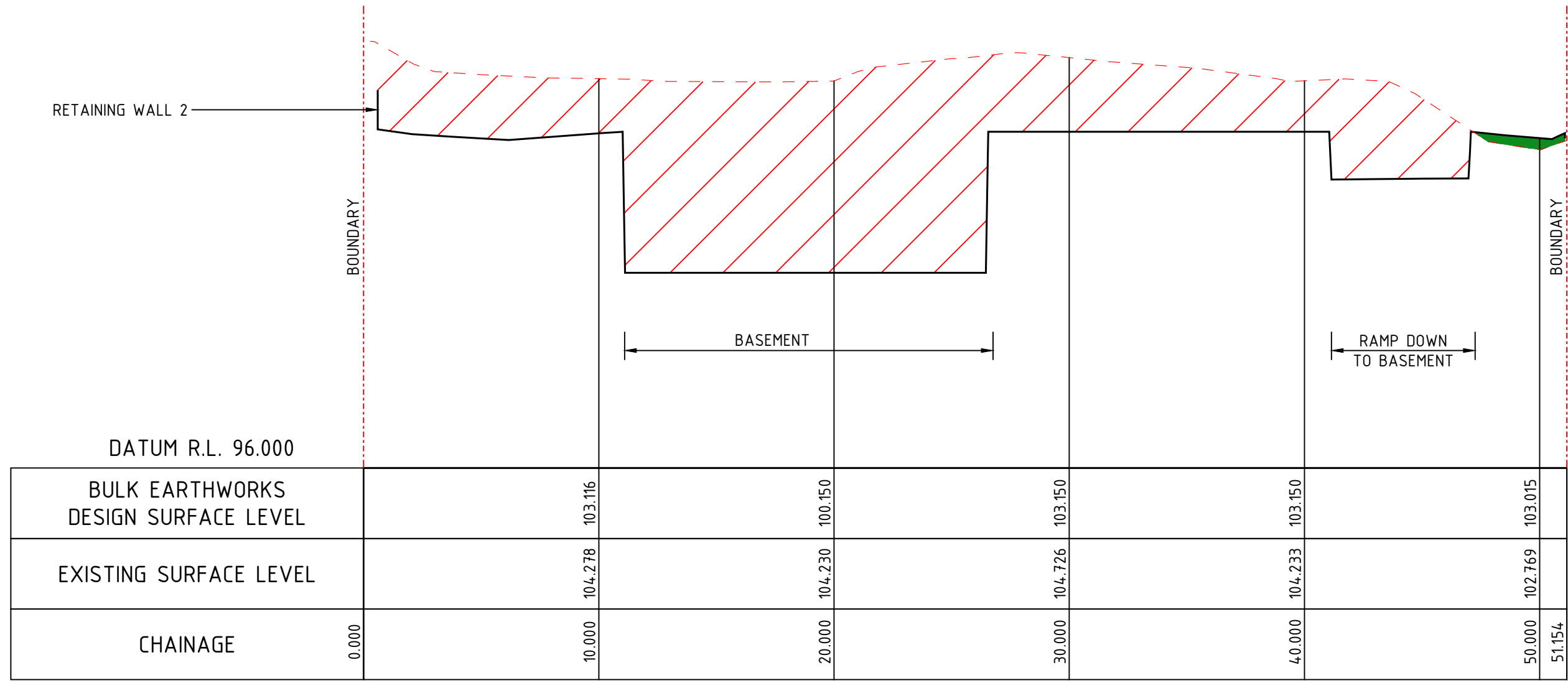
LEGEND

CUT AREA

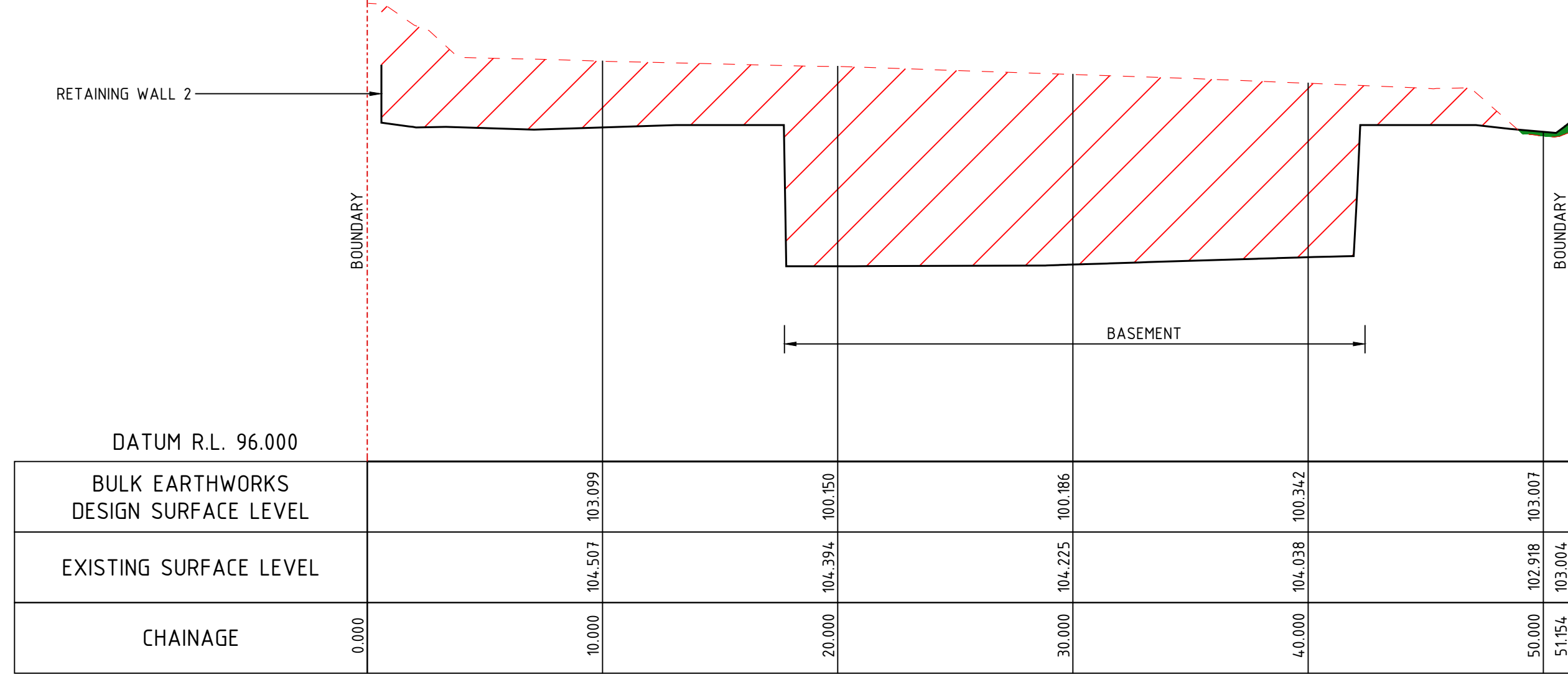
FILL AREA



BULK EARTHWORKS SECTION D
HOZ SCALE 1:200
VERT SCALE 1:100



BULK EARTHWORKS SECTION E
HOZ SCALE 1:200
VERT SCALE 1:100

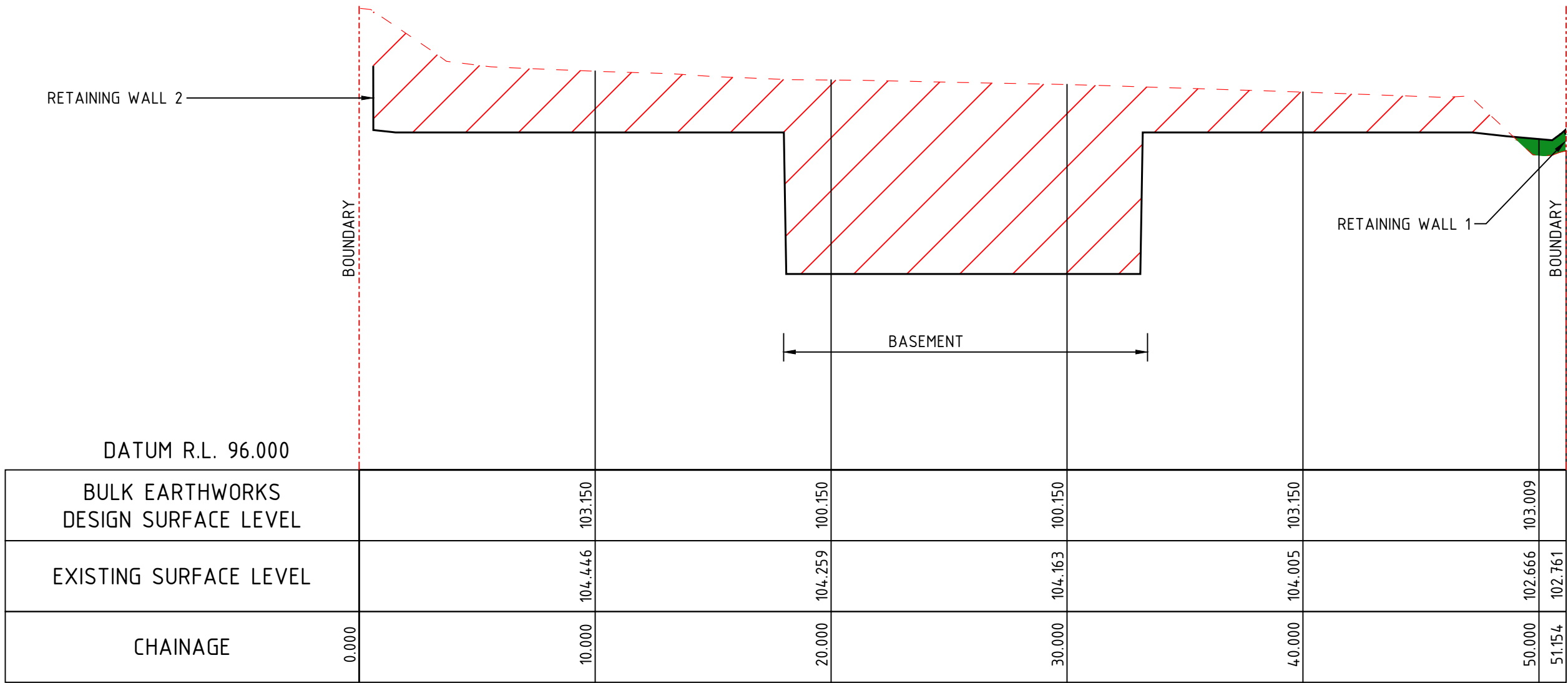


BULK EARTHWORKS SECTION F
HOZ SCALE 1:200
VERT SCALE 1:100

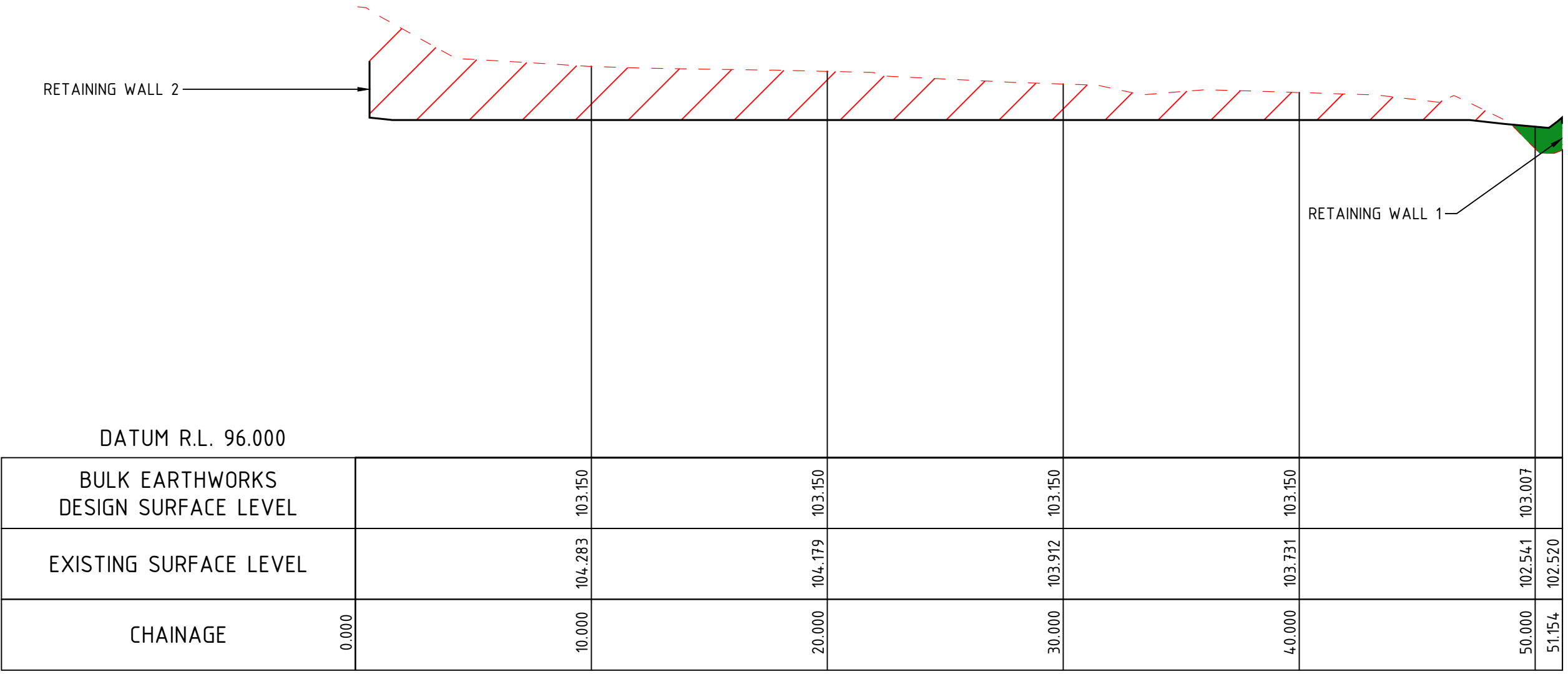
LEGEND

CUT AREA

FILL AREA



BULK EARTHWORKS SECTION G
HOZ SCALE 1:200
VERT SCALE 1:100



BULK EARTHWORKS SECTION H
HOZ SCALE 1:200
VERT SCALE 1:100

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VERIFICATION COMPLETION OF THE DRAWING STATUS IS EVIDENCE THAT THE DESIGN HAS BEEN VERIFIED AS CONFORMING TO THE REQUIREMENTS OF THE PROJECT QUALITY PLAN
PRELIMINARY FOR INFORMATION ONLY
FOR CLIENT APPROVAL
FOR TENDER
FOR CONSTRUCTION

CHECKED	DATE
APPROVED	DATE
PAGE	PLOT DATE
A1	July 31, 2020
SCALE	
SCALE AS SHOWN ON PLAN	

DATE	No	AMENDMENT	INIT	REV
31.07.20		ISSUED FOR JRPP REVIEW	SK	1

DATE	No	AMENDMENT	INIT	REV

DATE	No	AMENDMENT	INIT	REV

CLIENT	Jackson Environment and Planning Pty Ltd Strategy Infrastructure Compliance Procurement A: Suite 180, Level L, 25-28 Berry St, North Sydney NSW 2060 A: 002 9891 5033 F: 02 9891 3898 W: http://www.jacksonenvironment.com.au
ARCHITECT	

PROJECT	SINGLETON RECYCLING CENTER - ENTERPRISE CRESCENT
DRAWING TITLE	CIVIL DESIGN CONCEPT BULK EARTHWORKS SECTIONS SHEET 2

DATE	JULY 2020
SCALE	AS SHOWN
JOB No	19023

DESIGNED	SK
DRAWN	SK
NO IN SET	1

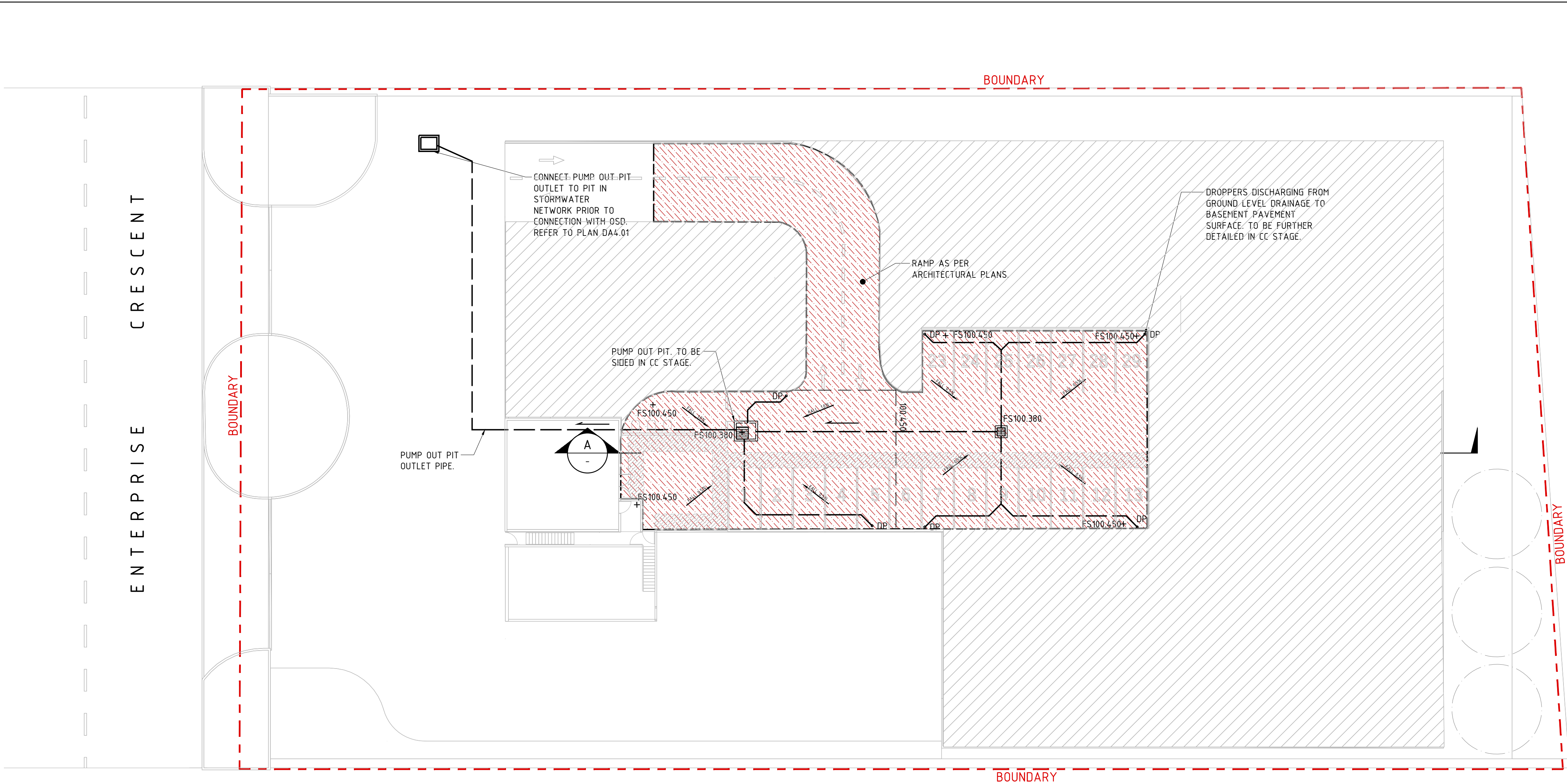
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Level 1, 91 George Street | Parramatta | NSW 2150
P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au

AHSCA

THE AUSTRALIAN HYDRAULIC & CIVIL ASSOCIATION



LEGEND

21.10

FINISHED SURFACE CREST LINE

+ FS55.555

FINISHED SURFACE LEVEL

FALL 1.28%

DIRECTION OF SURFACE FALL

PROPOSED SURFACE INLET PIT U.N.O.

PROPOSED JUNCTION PIT U.N.O.

o DR

PROPOSED OPEN ENDED DROPPER DISCHARGING TO PAVEMENT SURFACE

PROPOSED STORMWATER PIPE (ø225)

PIPE FLOW DIRECTION

FIRE WATER CONTAINMENT STORAGE EDENTS

NOTES

1. REFER TO DA4.01 FOR NOTES AND SPECIFICATIONS

2. REFER TO DA4.01 FOR GROUND FLOOR STORMWATER MANAGEMENT PLAN

3. REFER TO DA4.11 FOR STORMWATER MANAGEMENT DETAILS

4. FIREWATER TO BE DRAINED FROM GROUND FLOOR AREAS TO BASEMENT IN THE EVENT OF A FIRE. DETAILS TO BE FINALISED FOR DRAINAGE TO BASEMENT IN CC STAGE

5. PUMP OUT PIT TO BE DETAILED IN CC STAGE

PUMP OUT PIT TO BE SHUT OFF IN THE EVENT OF A FIRE.

NOTES

FIRE WATER CONTAINMENT STORAGE WITHIN BASEMENT EDENTS WITH THE FOLLOWING VOLUME:

MAIN BASEMENT AREA EXTENTS: 480m²

AVERAGE DEPTH FROM TOP WATER LEVEL BASEMENT LEVELS: 2.2m

(TOP WATER LEVEL OF FIREWATER CONTAINMENT STORAGE AT LEVEL OF GTD IN HARDSTAND - REFER TO DA4.01 AND DA4.11)

VOLUME OF FIREWATER STORAGE IN MAIN BASEMENT EDENTS:

- 1055m³

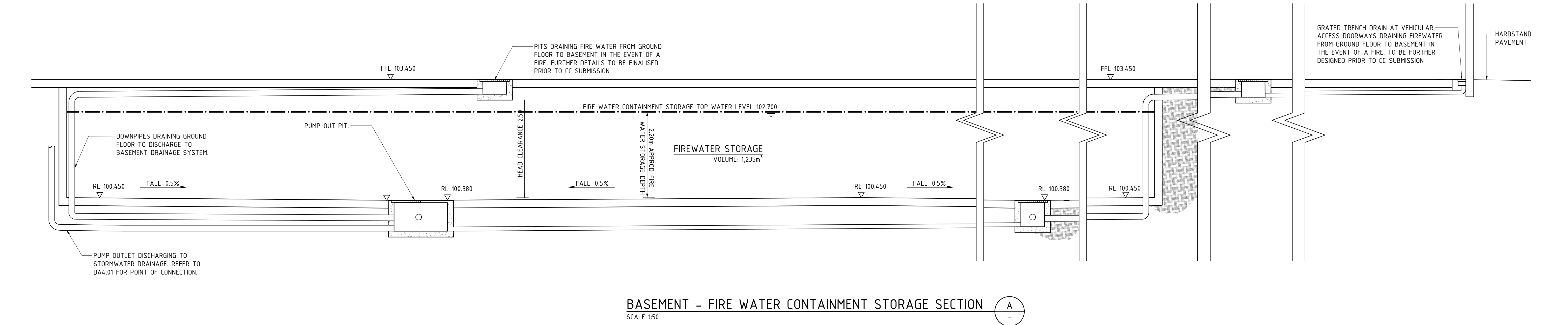
VOLUME IN RAMP AREA WITH APPROX RAMP EXTENTS 160m²:

= 160 (A) □ 0.5 □ 2.2m (D)

= 180m³

TOTAL FIREWATER CONTAINMENT STORAGE VOLUME: 1,235m³

FIREWATER VOLUME FROM HYDRANT AND SPRINKLER TANK APPROX 1224m³ AS PER FIRE SERVICES PLANS THEREFORE VOLUME TO BE PROVIDED MEETS REQUIREMENTS FOR FIREWATER STORAGE.



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VERIFICATION

COMPLETION OF THE DRAWING STATUS IS EVIDENCE THAT THE DESIGN HAS BEEN VERIFIED AS CONFORMING TO THE REQUIREMENTS OF THE PROJECT QUALITY PLAN

PRELIMINARY

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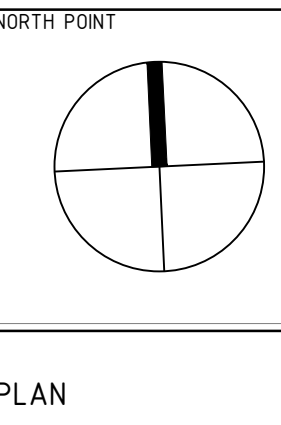
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DATE	No	AMENDMENT	INIT	REV
15.03.19		75% DA ISSUE	SK	1
01.04.19		ISSUED FOR DA	SK	2



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DATE	No	AMENDMENT	INIT	REV

CLIENT

Jackson Environment and Planning Pty Ltd

Strategy | Infrastructure | Compliance | Procurement

A Suite 180, Level 1, 25-29 Berry St, North Sydney NSW 2060

T: 02 9891 5033

W: <http://www.jacksonenvironment.com.au>

ARCHITECT

PROJECT

SINGLETON RECYCLING CENTER - ENTERPRISE CRESCENT

DRAWING TITLE

CIVIL DESIGN CONCEPT FIRE WATER CONTAINMENT PLAN

ISSUED FOR DA

SPARKS+PARTNERS

CONSULTING ENGINEERS

HYDRAULIC | CIVIL | FIRE

Level 1, 91 George Street | Parramatta | NSW 2150

P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au

DATE

DESIGNED

SCALE

1:200 @ A1

JOB No

19023

DRAWN

SK

DA4.02

OF

2

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THE AUSTRALIAN HYDRAULIC SOCIETY

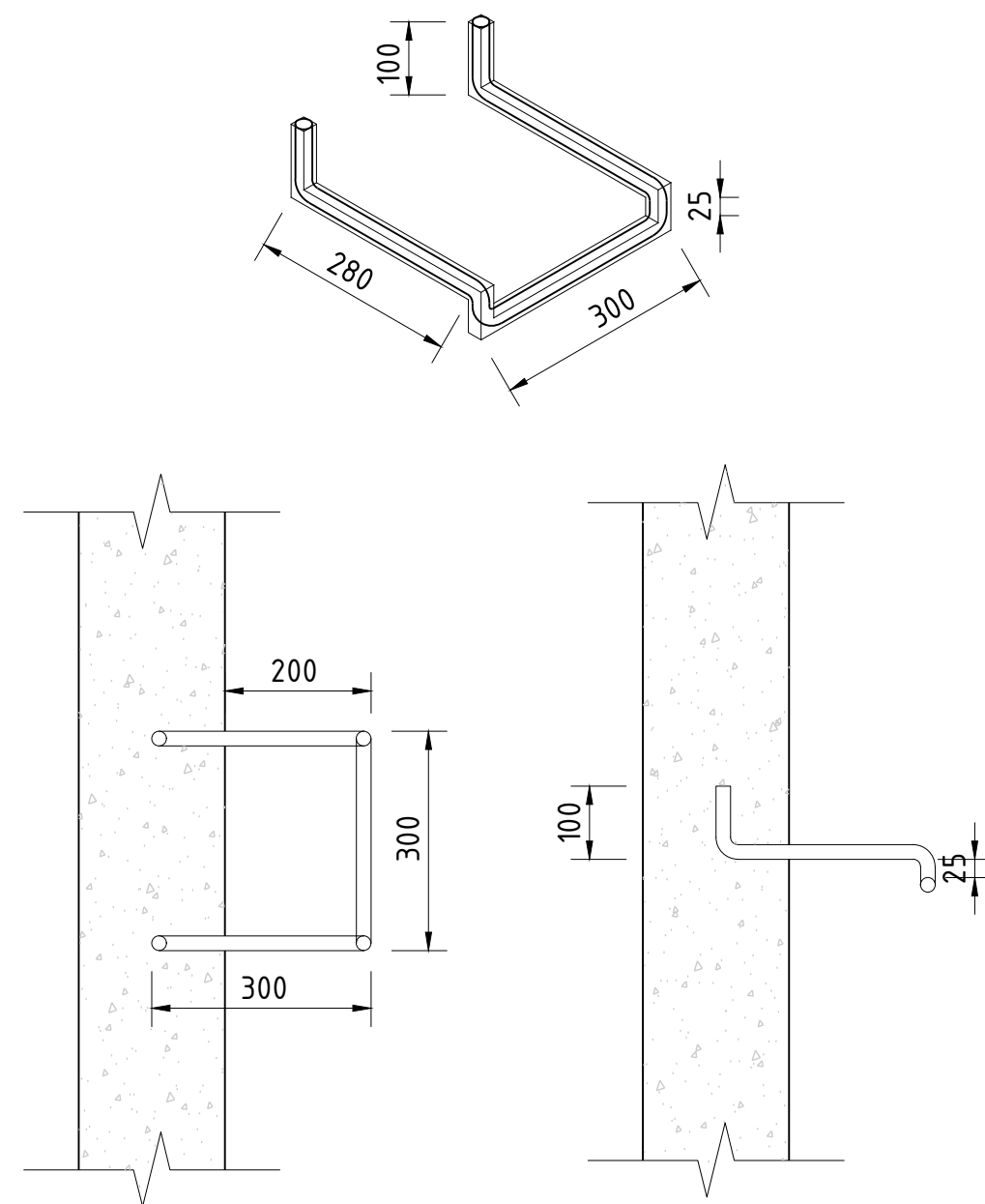
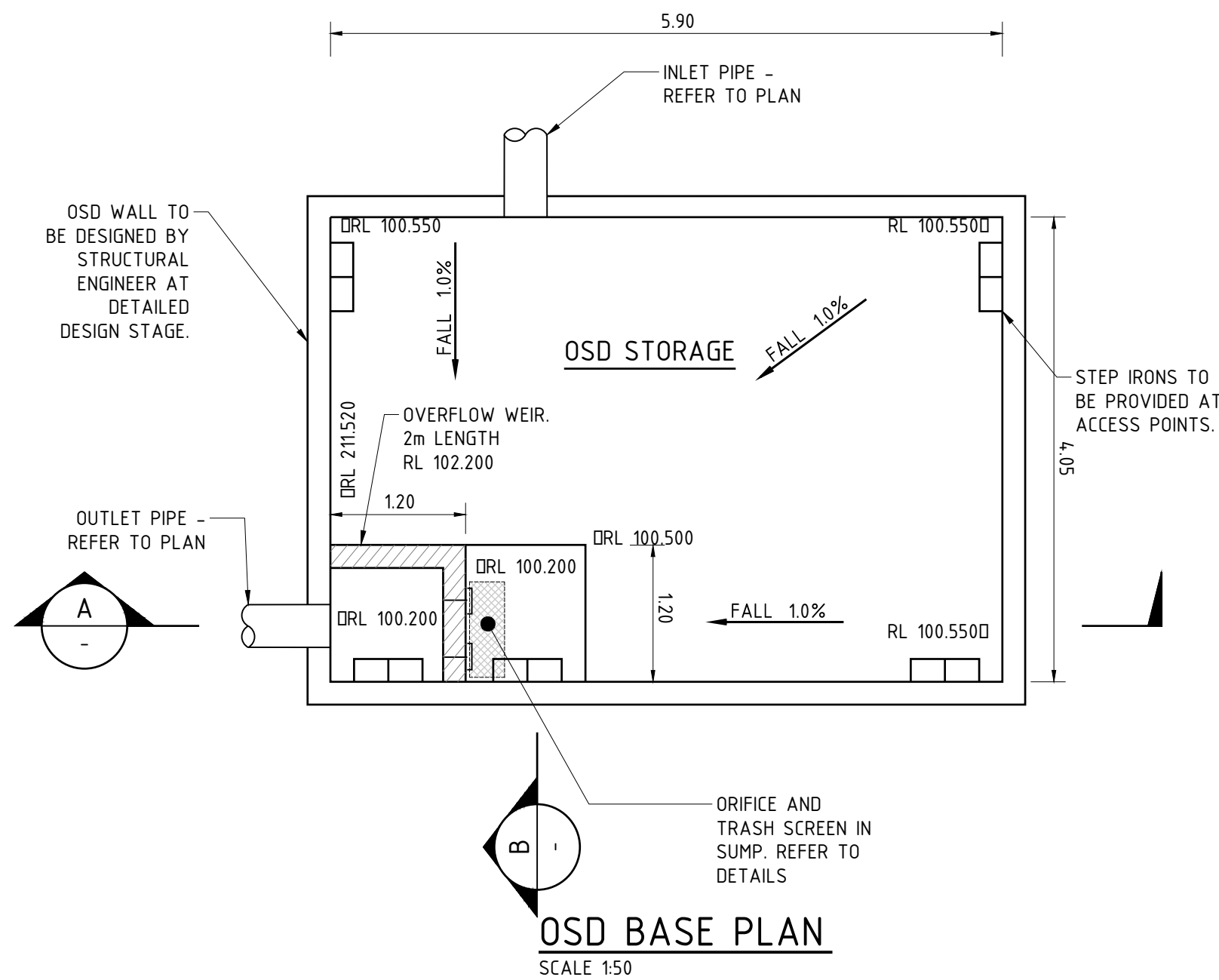
NOTES

- REFER TO DA1.01 FOR OSD DESIGN AND WSUD SUMMARIES.
- REFER TO DA4.01 FOR OVERALL SITE STORMWATER MANAGEMENT PLAN.
- REFER TO DA4.01 FOR OSD ROOF PLAN.
- REFER TO DA4.05 FOR SITE CATCHMENT PLAN.
- FINAL DESIGN TO BE COORDINATED WITH STRUCTURAL ENGINEER.
- CONTRACTOR TO PROVIDE COST EFFECTIVE DESIGN OF THE TANK STRUCTURE, IN COORDINATION WITH THE ADJACENT STRUCTURES.
- ALL PIT LIDS/GRATES TO BE CLASS D AND TO BE PLACED AT MAXIMUM 6m CENTERS.

OSD STORAGE VOLUME CALCULATIONS
OSD TANK BASE AREA = 22m²

1 IN 100 yr ARI OSD TOP WATER LEVEL = 102.200
OSD STORAGE AVERAGE DEPTH = 1.675m
OSD STORAGE VOLUME = 22 x 1.675 = 37m³

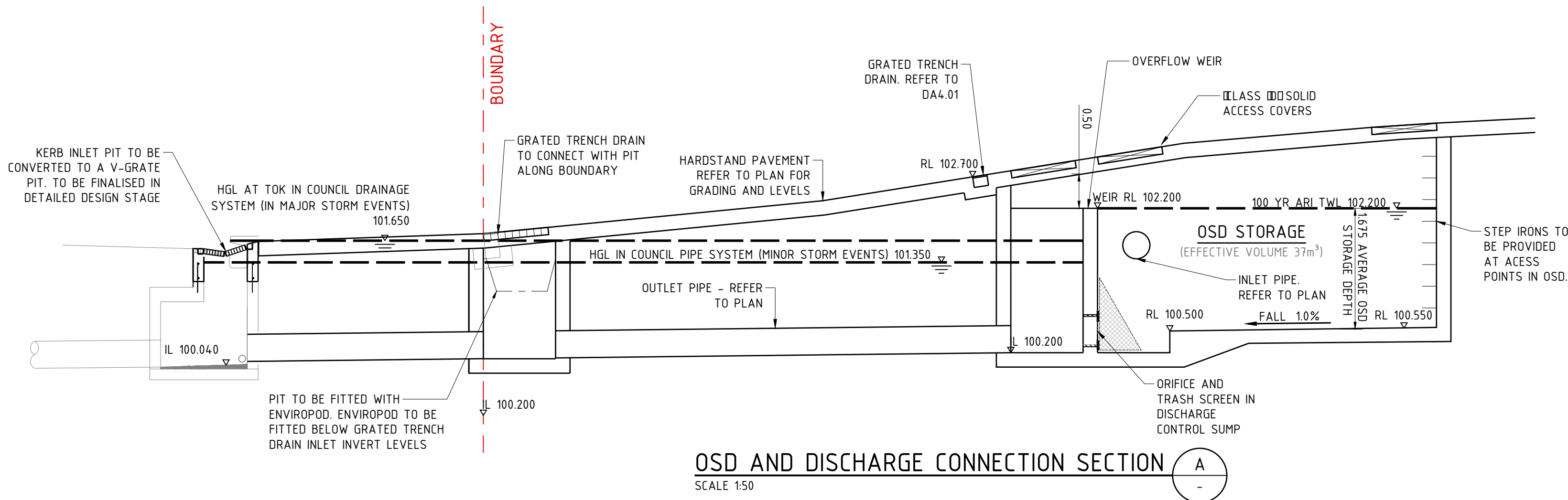
OSD VOLUME PROVIDED = OSD VOLUME TO BE ADOPTED AS PER OSD DESIGN SUMMARY ON DA1.01.



STEP IRON DETAIL

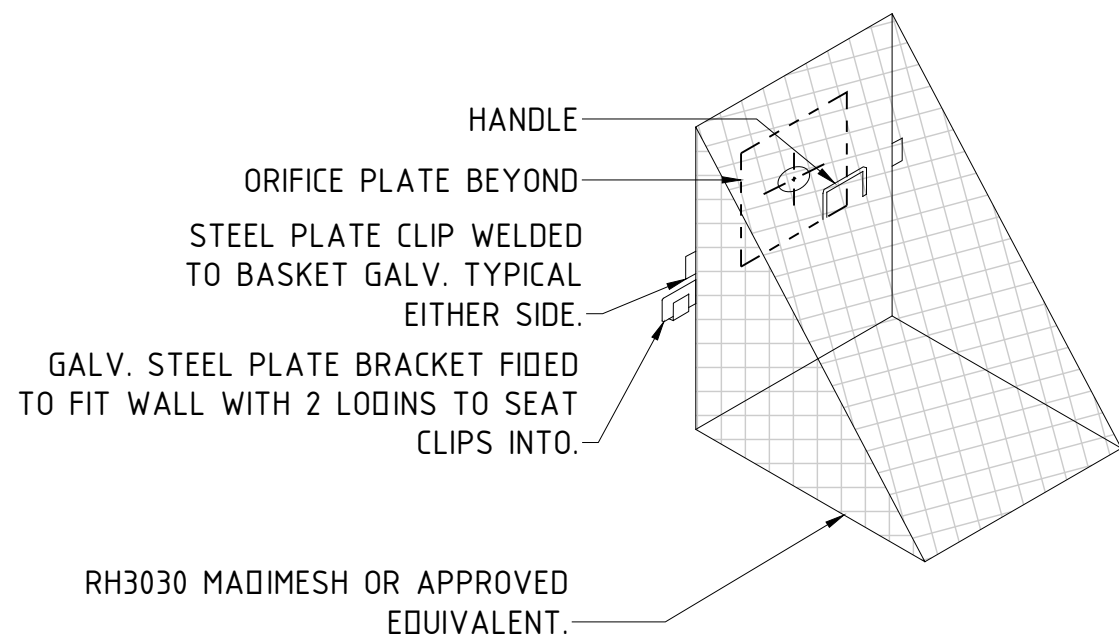
NOT TO SCALE

STEP IRON OF 20mm GALVANIZED STEEL MADE TO SHAPE AND DIMENSIONS SHOWN AND PLACED AT 300 CENTRES AND STAGGERED HORIZONTALLY FOR PITS DEEPER THAN 1.0m.

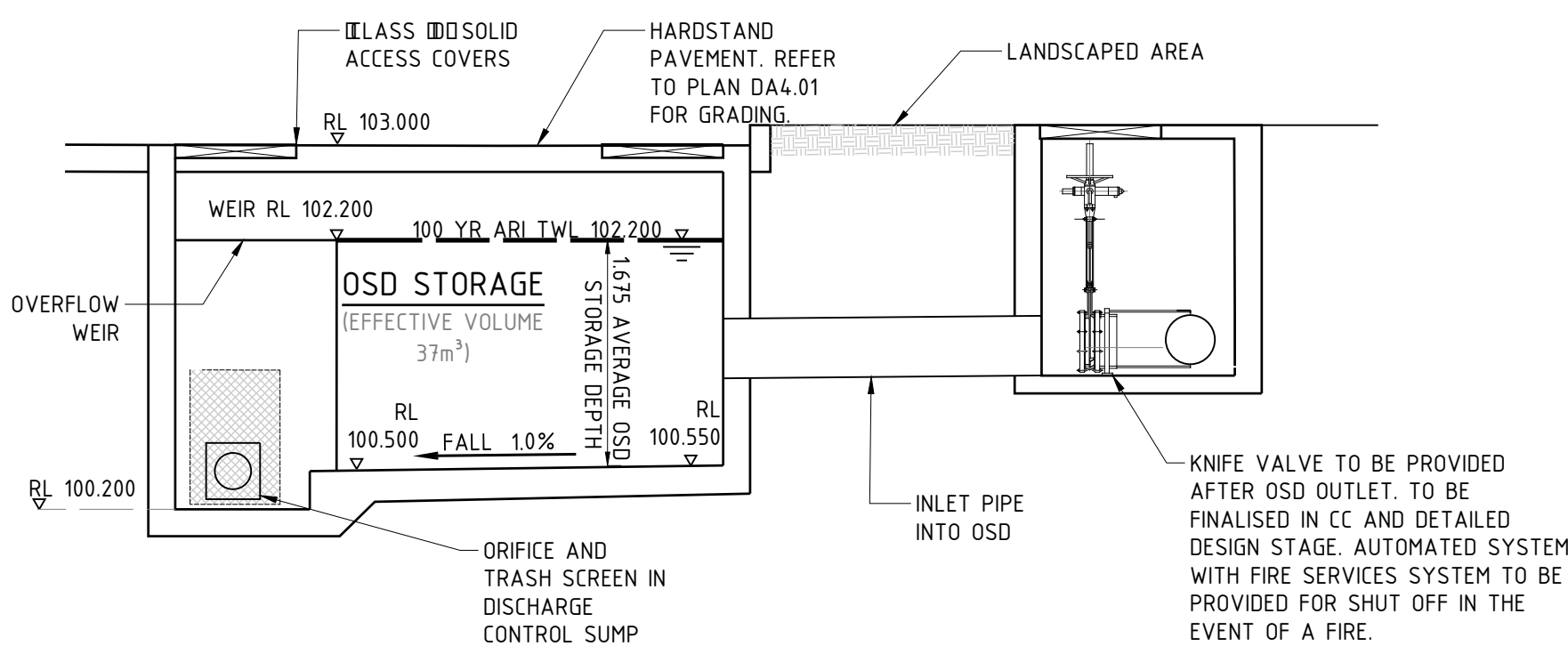


OSD AND DISCHARGE CONNECTION SECTION A

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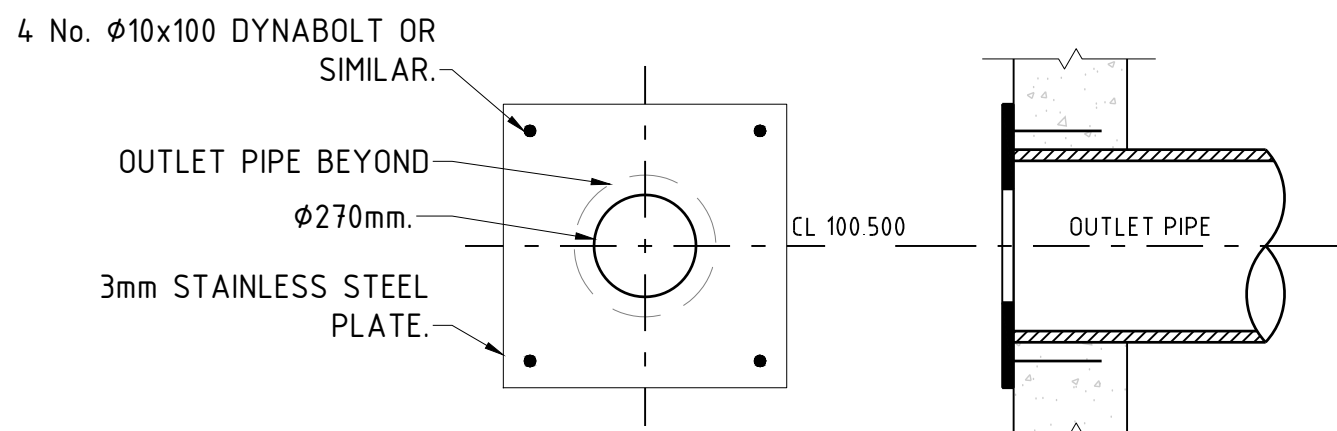


TRASH SCREEN DETAIL



OSD AND DISCHARGE CONNECTION SECTION B

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ORIFICE PLATE DETAIL

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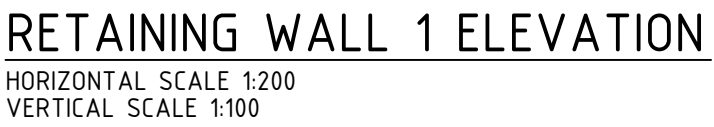
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ARCHITECT	

PROJECT	SINGLETON RECYCLING CENTER - ENTERPRISE CRESCENT
DRAWING TITLE	CIVIL DESIGN CONCEPT STORMWATER MANAGEMENT DETAILS

DATE	DESIGNED	SK
SCALE	DRAWN	SK
JOB No	BWG No	No IN SET
19023	DA4.11	OF 2

SPARKS+PARTNERS CONSULTING ENGINEERS HYDRAULIC CIVIL FIRE
Level 1, 91 George Street Parramatta NSW 2150 P 02 9891 5033 F 02 9891 3898 E admin@sparksandpartners.com.au
AHSCA Australian Hydraulic Society of Consulting Engineers

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NORTH POINT

PLAN

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ARCHITECT	

PROJECT	SINGLETON RECYCLING CENTER - ENTERPRISE CRESCENT
DRAWING TITLE	CIVIL DESIGN CONCEPT RETAINING WALL ELEVATIONS



SPARKS

SPARKS+PARTNERS

CONSULTING ENGINEERS
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JULY 2020

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DA5.21



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HYDRAULIC & CIVIL ENGINEERS
OF AUSTRALIA

THE ASSOCIATION OF CONSULTANTS ENGINEERS (A/CSE)
IS AN INCORPORATE MEMBER

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