Prepared by:

Orion Consulting

CONSULT AUSTRALIA
Member Firm

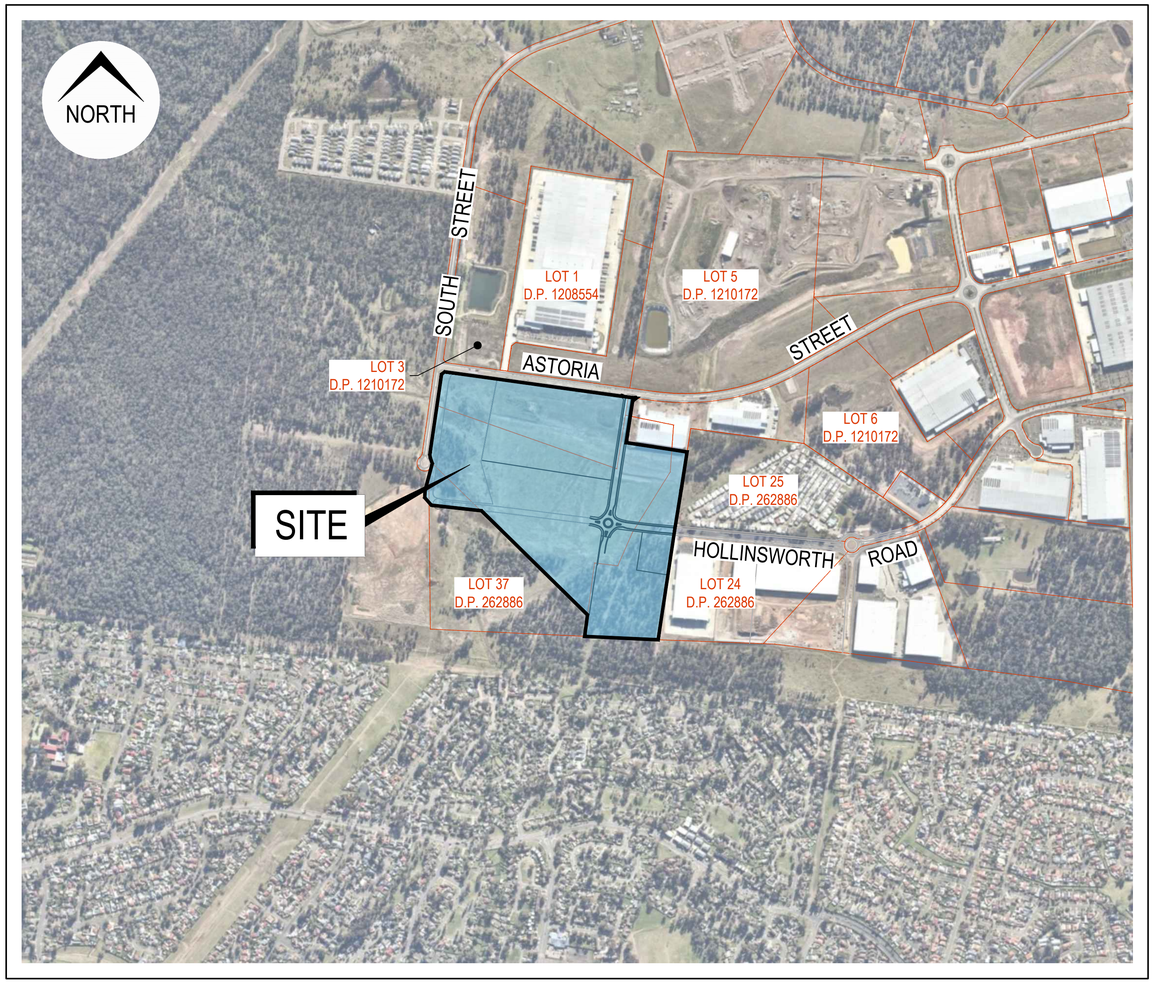
Prepared for:

sydney business park

LGA:

Blacktown City Council

DA: _____



SITE / LOCATION (Image courtesy of Nearmap 23.06.2020)

LOTS 4 & 5, D.P. 1210172
LOT 36, D.P. 262886

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	DA 201	ENGINEERING PLAN SHEET 02 OF 05	D
	DA 202	ENGINEERING PLAN SHEET 03 OF 05	E
D	DA 203	ENGINEERING PLAN SHEET 04 OF 05	E
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DA 416	DRAINAGE LONG SECTIONS SHEET 07 OF 17	B
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DA 421	DRAINAGE LONG SECTIONS SHEET 12 OF 17	B
DA 422	DRAINAGE LONG SECTIONS SHEET 13 OF 17	B
DA 423	DRAINAGE LONG SECTIONS SHEET 14 OF 17	B
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STAGE 3, SYDNEY BUSINESS PARK, MARSDEN PARK

ROAD, DRAINAGE & BULK EARTHWORKS DESIGN

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Project No. 20-0127 Set No. 02 Milestone DA Plan 000 Revision D



INSET A

LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY, GAS, SEWER, WATER, TELECOMS, NBN, OPTIC FIBRE	E G S W T NBN OF	E G S W T NBN OF	E G S W T NBN OF
CONTOUR LINE & LABEL		20.0	
LOT NUMBER & BOUNDARY	LOT #	LOT #	LOT #
APPROXIMATE LIMIT OF WORKS			
BUILDING / ENVELOPE			
ROAD, NUMBER, CONTROL LINE, CHAINAGE & CHAINAGE MARK	ROAD CH#	ROAD CH#	ROAD CH#
COUNCIL STANDARD KERB & GUTTER		K&G	
COUNCIL STANDARD DISH CROSSING		DC	
EDGE OF BITUMEN		EOB	
COUNCIL STANDARD CONCRETE FOOTPATH & KERB RAMP			
STORMWATER DRAINAGE PIPE AND STRUCTURE			
STORMWATER DRAINAGE PIPE AND STUB			
TEMPORARY STORMWATER DRAINAGE PIPE			
EASEMENT (REFER LEGEND)	(A) (B) (C)	(A) (B) (C)	
SUBSOIL DRAIN		ss ss	
DIVERSION SWALE			
RETAINING WALL		RW1	
ACOUSTIC WALL		RW2	
BATTER			
TREE - TO BE RETAINED OR TO BE REMOVED			
BATCH OF TREES - TO BE RETAINED OR TO BE REMOVED			
APPROXIMATE EDGE OF EXISTING PAVEMENT			
BASIN A NOT PART OF THIS APPLICATION. APPROVAL BY BLACKTOWN CITY COUNCIL UNDER SEPERATE S7.11 PROCESS. FINAL APPROVAL EXPECTED PRIOR TO CONSTRUCTION OF STAGE 3.			

GENERAL NOTES

1 ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH BLACKTOWN CITY COUNCIL'S WORKS SPECIFICATION CIVIL (CURRENT EDITION) AND/OR AS DIRECTED BY THEIR REPRESENTATIVE.

2 THE CONTRACTOR IS TO IDENTIFY, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION WORKS AND WHERE NECESSARY MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE OR ADJUST WHERE NECESSARY.

3 COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE SHALL BE FELLED, LOPPED OR REMOVED WITHOUT THE PRIOR APPROVAL OF COUNCIL.

4 DIMENSIONS SHALL NOT BE SCALED FROM THE PLANS. CLARIFICATION OF DIMENSIONS SHALL BE SOUGHT FROM THE SUPERINTENDENT OR REFERRED TO THE DESIGNER.

5 ALL NEW WORK IS TO MAKE A SMOOTH JUNCTION WITH THE EXISTING CONDITIONS.

STORMWATER DRAINAGE NOTES

D1. STORMWATER DESIGN CRITERIA:
1:100 MAJOR SYSTEM
1:20 MINOR SYSTEM

SURVEY PROVIDED BY FREEBURN SURVEYING: (DATED 29/05/2020)
COORDINATES: M.G.A GDA94 DATUM: A.H.D.
COORDINATES ORIGIN: SSM 180705 LEVELS ORIGIN: R.L. 42.040

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

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Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 20 40 60 80 100 120 140 160 180 200
SCALE 1:2000 (A1) SCALE 1:4000 (A3)

For: sydney business park

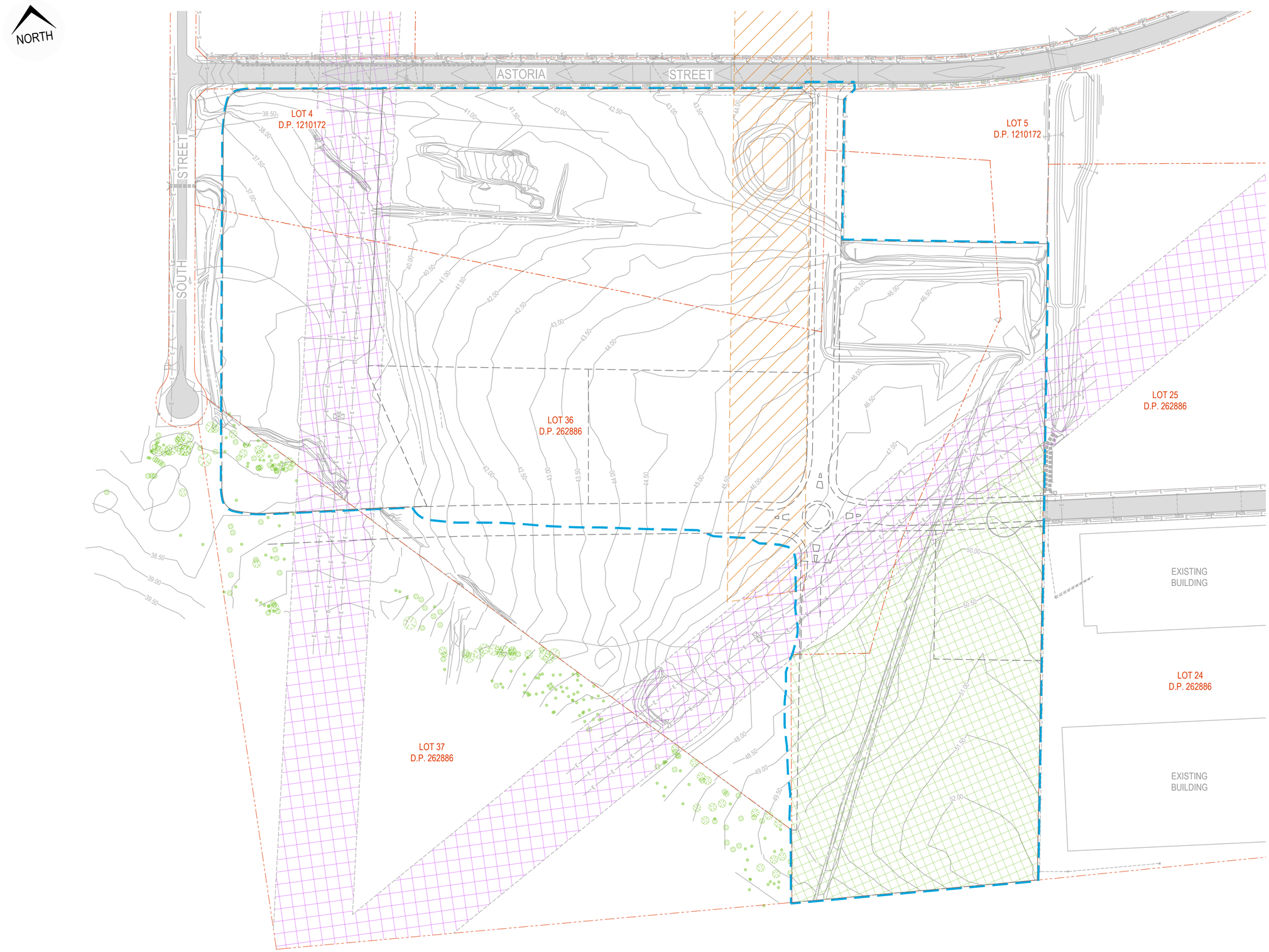
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: GENERAL LAYOUT PLAN, NOTES & LEGEND

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	001	C

Plotted: File Name:D:\12Excel\ORION_SYN\0102-DA Development Application - 2020\12DWGS\20-0127-02-DA-001.dwg



LEGEND

EXISTING 60.96m WIDE ELECTRICAL EASEMENT	
INDICATIVE FUTURE METRO CORRIDOR	
APPROXIMATE LIMIT OF WORKS	
EXISTING ELECTRICITY	E — E
EXISTING GAS	G — G
EXISTING SEWER	S — S
EXISTING WATER	W — W
EXISTING TELECOMS	T — T
EXISTING NBN	NBN — NBN
EXISTING OPTIC FIBRE	OF — OF
EXISTING TREES / EXISTING BATCH OF TREES	
EXISTING CONTOURS	60.0

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
SITE CONSTRAINTS PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	002	A

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-002.dwg

NORTH

DANGER
DEMOLITION WORK IN PROGRESS

DANGER
DEMOLITION WORK IN PROGRESS

PROVIDE LOCKABLE GATE

ASTORIA STREET

SOUTH STREET

LOT 4
D.P. 1210172

LOT 5
D.P. 1210172

LOT 36
D.P. 262886

LOT 25
D.P. 262886

LOT 37
D.P. 262886

LOT 24
D.P. 262886

DANGER
DEMOLITION WORK IN PROGRESS

PROVIDE LOCKABLE GATE

EXISTING BUILDING

EXISTING BUILDING

LEGEND

- EXISTING FENCE & GATE TO BE DEMOLISHED AND REMOVED OFFSITE TO APPROVED WASTE FACILITY
- EXISTING PAVEMENT TO BE DEMOLISHED AND REMOVED OFFSITE TO APPROVED WASTE FACILITY
- EXISTING TREES / EXISTING BATCH OF TREES TO BE REMOVED
- EXISTING TREES TO REMAIN
- EXISTING CONTOURS
- SITE SECURITY FENCE

1. SURVEY PROVIDED BY FREEBURN SURVEYING: (DATED 29/05/2020)
2. CONTRACTOR TO ESTABLISH EXTENT OF ALL EXISTING SERVICES WITHIN THE EXTENT OF WORKS.
3. CONTRACTOR TO GAIN ALL NECESSARY APPROVALS & PERMITS TO DEMOLISH, CAP OR REMOVE EXISTING SERVICES AS REQUIRED.
4. CONTRACTOR TO ALLOW FOR THE DEMOLITION OF ALL EXISTING STRUCTURES & FEATURES (ABOVE & BELOW GROUND) ON THE SITE REQUIRED, INCLUDING BUILDINGS, FENCES, EXISTING PAVEMENT, DRAINAGE, SIGNS ETC.
5. ALL DEMOLITION WORKS SHALL COMPLY WITH THE PROVISIONS OF AS2601:2001 THE DEMOLITION OF STRUCTURES.
6. REMOVAL OF EXISTING ELECTRICAL INFRASTRUCTURE TO BE COMPLETED IN ACCORDANCE ELECTRICAL CONSULTANTS SPECIFICATIONS & DRAWINGS.
7. EXISTING SERVICES TO BE LOCATED FROM DBYD PLANS AND ONSITE SERVICES LOCATION.
8. TREE REMOVAL SHALL BE IN ACCORDANCE WITH THE HAWKESBURY CITY COUNCIL'S REQUIREMENTS AND SPECIFICATIONS.

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SIGNS

DANGER
DEMOLITION WORK IN PROGRESS

"DANGER - DEMOLITION IN PROGRESS", OR SIMILAR MESSAGE SHALL BE MAINTAINED ON THE FENCING AT APPROPRIATE PLACES TO WARN THE PUBLIC.

B - SITE SECURITY FENCING AMENDED

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

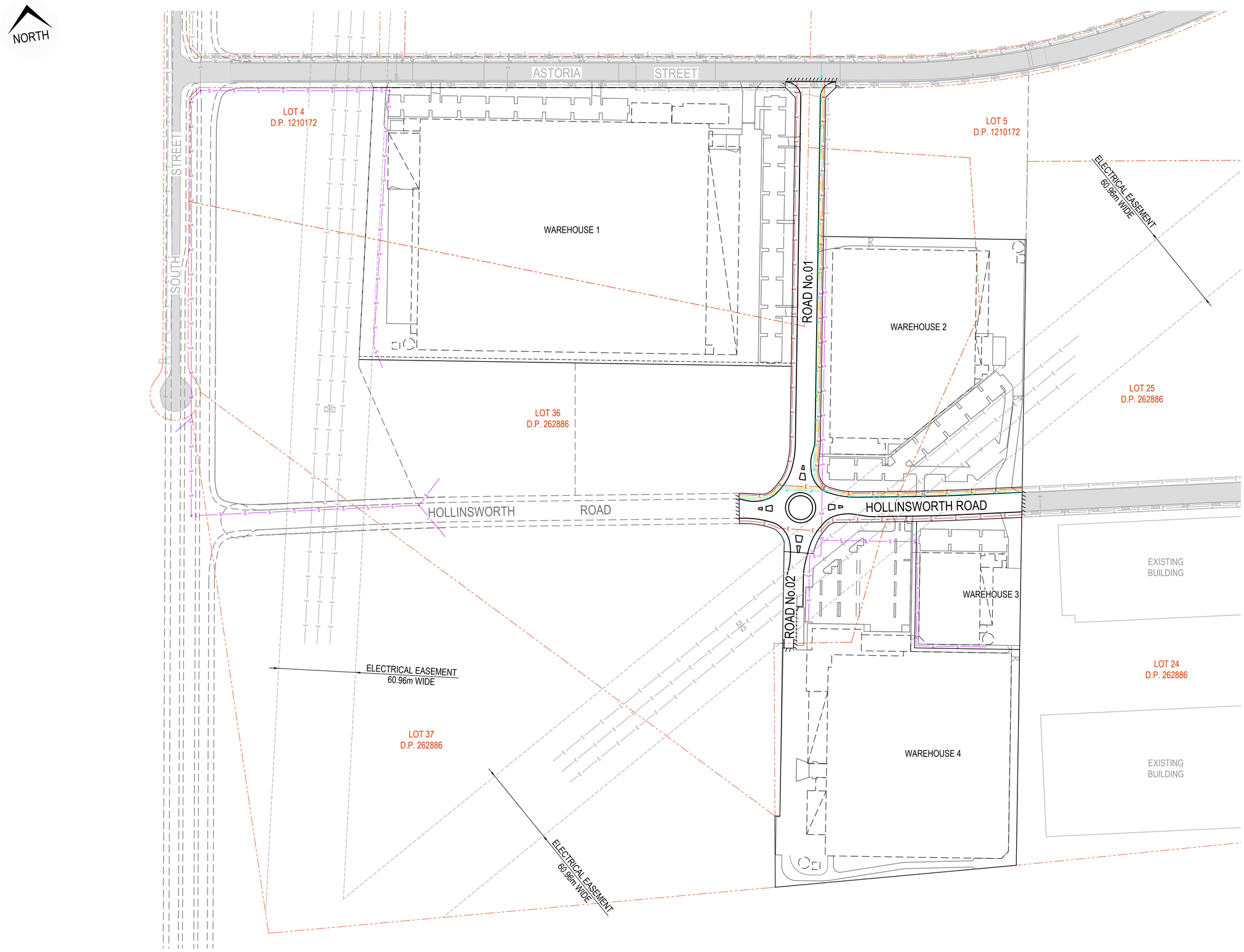
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DEMOLITION & TREE REMOVAL PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	003	B

Plotted: File Name:D:\12dSData\ORION-SYNO\102-DA Development Application_2020\DWGS\20-0127-02-DA-003.dwg



LEGEND

	EXISTING	PROPOSED	FUTURE
UTILITY - ELECTRICITY	E	E	E
GAS	G	G	G
SEWER	S	S	S
200 UPVC WATER	W	W	W
NBN	NBN	NBN	NBN

NOTES:

1. PLAN PROVIDED FOR INFORMATION PURPOSES ONLY. REFER TO (CURRENT) APPROVED VERSION SERVICE PROVIDER DRAWINGS BY OTHERS
2. EXISTING SERVICE INFORMATION PROVIDED BY UTILITY MAPPING (DATED: 02/03/2020)
3. ADDITIONAL TELSTRA INFORMATION OBTAINED FROM DBYD (DATED: 25/06/2020)
4. OVERHEAD INFORMATION OBTAINED FROM SURVEY INFORMATION PROVIDED BY BLACKTOWN CITY COUNCIL (RECEIVED: 01/11/2017)

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MS	DH	-	06/08/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

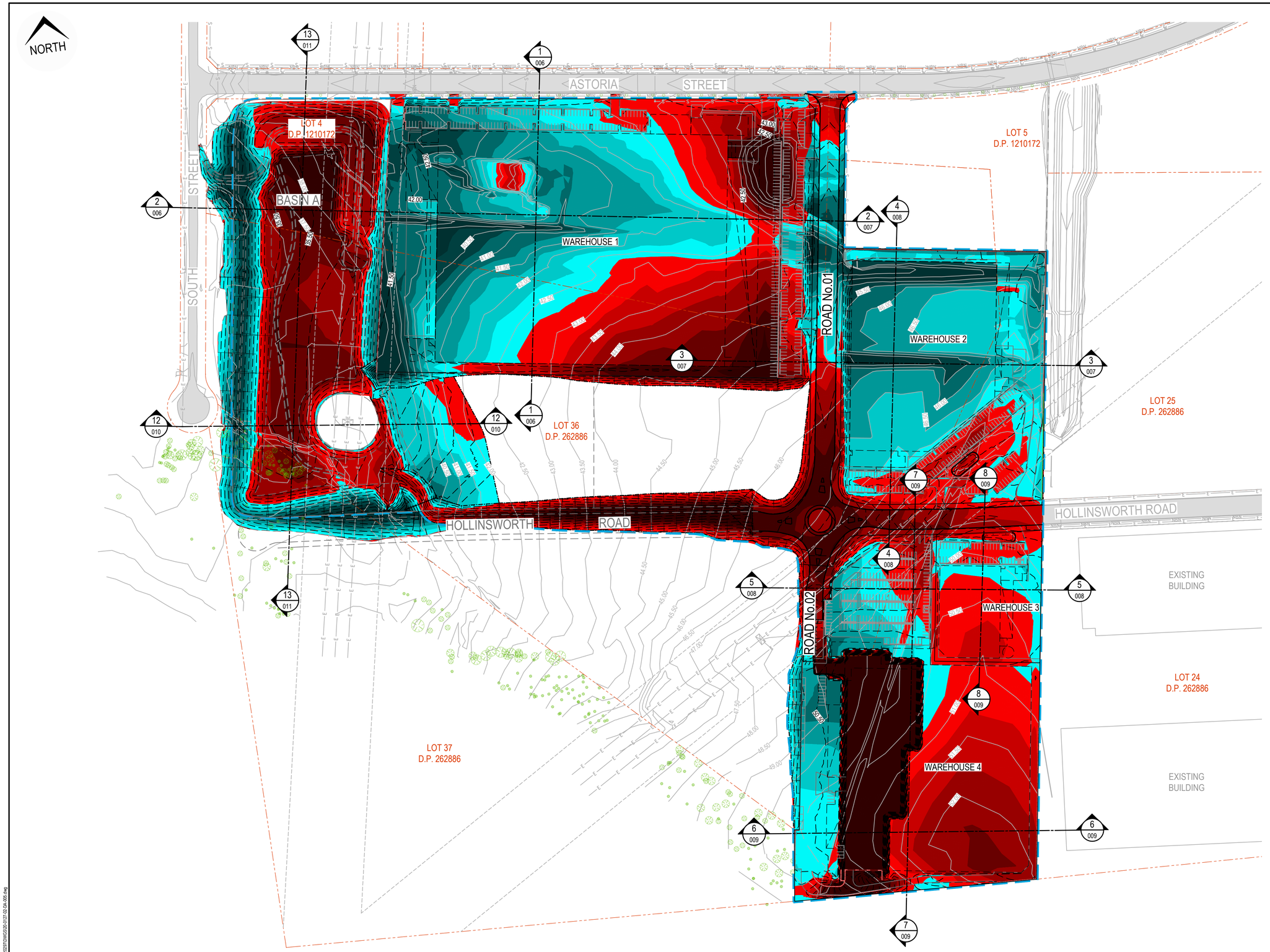
By: Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
COMBINED SERVICES PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	004	B

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-004.dwg



LEGEND

APPROXIMATE EXTENT OF FILL	0.0 - 0.5m
	0.5 - 1.0m
	1.0 - 1.5m
	1.5 - 2.0m
	2.0 - 2.5m
	> 2.5m
APPROXIMATE EXTENT OF CUT	0.0 - 0.5m
	0.5 - 1.0m
	1.0 - 1.5m
	1.5 - 2.0m
	2.0 - 2.5m
	> 2.5m

VOLUMES

CUT - 169,510m³
FILL - 120,670m³

BALANCE - (EXPORT) 48,840m³

NOTE:
- BULK EARTHWORKS QUANTITIES MEASURED AS SOLID VOLUMES, NO BULKING FACTOR HAS BEEN APPLIED

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B
- CUT AND FILL HATCH UPDATED
- VOLUMES UPDATED

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C	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: SITE REGRADING PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	005	C

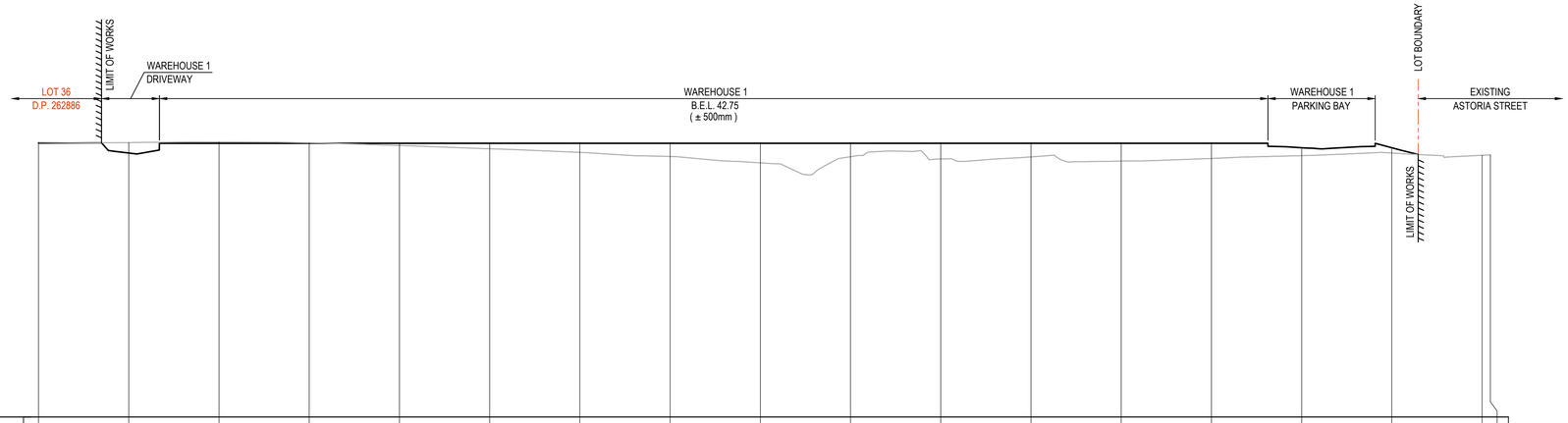
Plotted: File Name:D:\12\S\data\ORION-SYN\01\02-DA Development Application_20297\DWGS\20-0127-02-DA-005.dwg

LEGEND

- BULK EARTHWORKS LEVEL
- EXISTING SURFACE
- FUTURE SURFACE LEVEL
- SITE BOUNDARY

NOTE:
BATTERS STEEPER THAN 1:3 SUBJECT TO GEOTECHNICAL INVESTIGATION AND APPROVAL

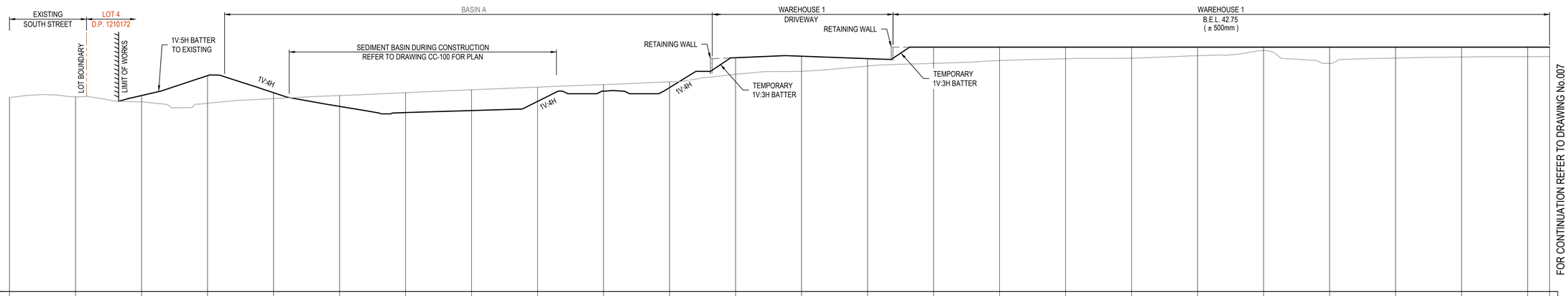
C



DATUM R.L. 20

BEW DESIGN LEVEL	42.77		41.95	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.38	42.38					
EXISTING LEVEL	42.84		42.81	42.86	42.79	42.57	42.3	42	41.65	41.12	41.63	41.45	41.62	41.27	41.49	41.72	41.94	41.75	41.78				
CHAINAGE	0		15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	241.374				

SITE SECTION 1
SCALE 1:500 (H)
SCALE 1:250 (V)
005



DATUM R.L. 15

BEW DESIGN LEVEL			37.26	39.51	37.58	36.03	35.32	35.55	36.59	37.76	38.16	41.56	41.73	41.45	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75	42.75
EXISTING LEVEL	37.03	37.12	36.54	36.37	36.9	37.26	37.58	37.91	38.21	38.5	38.81	39.68	40	40.6	40.91	41.23	41.44	41.5	41.78	42.36	40.89	41.51	41.63	41.66	41.68
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	350

SITE SECTION 2
SCALE 1:500 (H)
SCALE 1:250 (V)
005

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting

ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

SUSTAINABLE ENVIRONMENTAL ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING SECTIONS
SHEET 01 OF 06

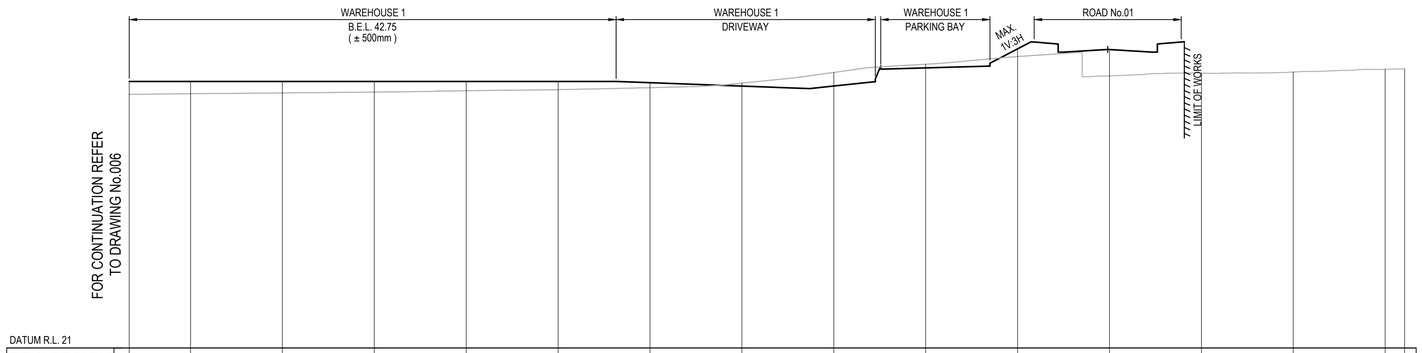
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	006	C

Plotted: File Name:D:\12455data\ORION SYNOT\02-DA Development Application\ 220370\WSS\20-0127-02-DA-006.dwg

LEGEND

BULK EARTHWORKS LEVEL	
EXISTING SURFACE	
FUTURE SURFACE LEVEL	
SITE BOUNDARY	

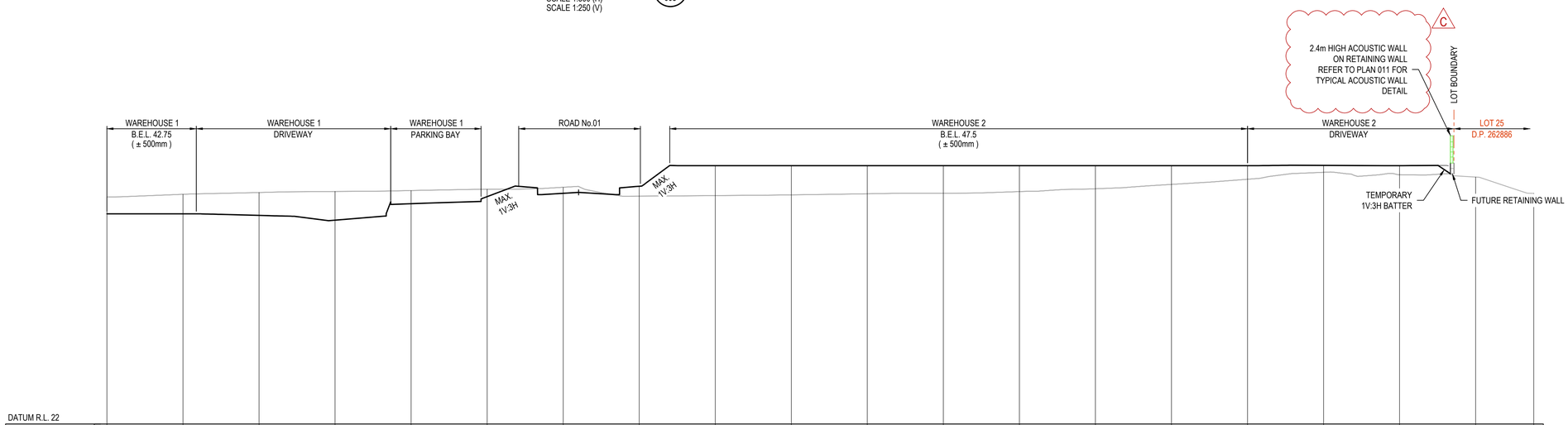
NOTE:
BATTERS STEEPER THAN 1:3 SUBJECT TO GEOTECHNICAL INVESTIGATION AND APPROVAL



DATUM R.L. 21

BEW DESIGN LEVEL	42.75	42.75	42.75	42.75	42.75	42.75	42.65	42.37	42.37	43.85	45.4	45.35					
EXISTING LEVEL	41.68	41.74	41.81	41.88	41.99	42.07	42.23	42.61	43.48	44.16	44.78	43.2	43.44	43.51	43.74	43.77	
CHAINAGE	350	360	375	390	405	420	435	450	465	480	495	510	525	540	555	558.185	

SITE SECTION 2 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 22

BEW DESIGN LEVEL	42.75	42.75	42.59	42.12	43.75	44.44	44.77	45.47	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.52	47.5		
EXISTING LEVEL	44.41	44.67	44.85	44.96	45.05	45.17	45.36	44.49	44.54	44.62	44.73	44.78	44.95	45.22	45.65	46.16	46.84	46.6	46.38	44.76
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	281.473

SITE SECTION 3 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING SECTIONS
SHEET 02 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	007	C

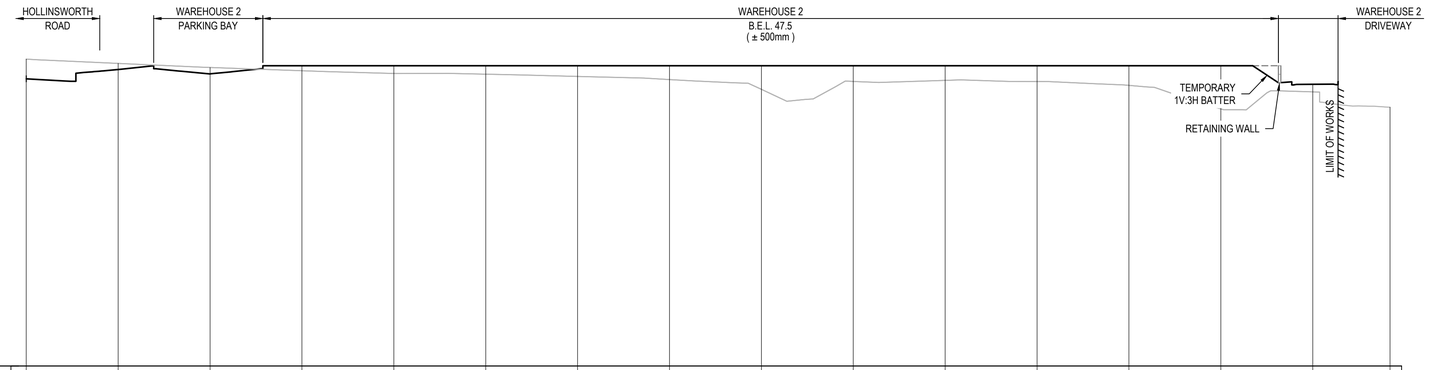
Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-007.dwg

LEGEND

BULK EARTHWORKS LEVEL	
EXISTING SURFACE	
FUTURE SURFACE LEVEL	
SITE BOUNDARY	

NOTE:
BATTERS STEEPER THAN 1:3 SUBJECT TO GEOTECHNICAL INVESTIGATION AND APPROVAL

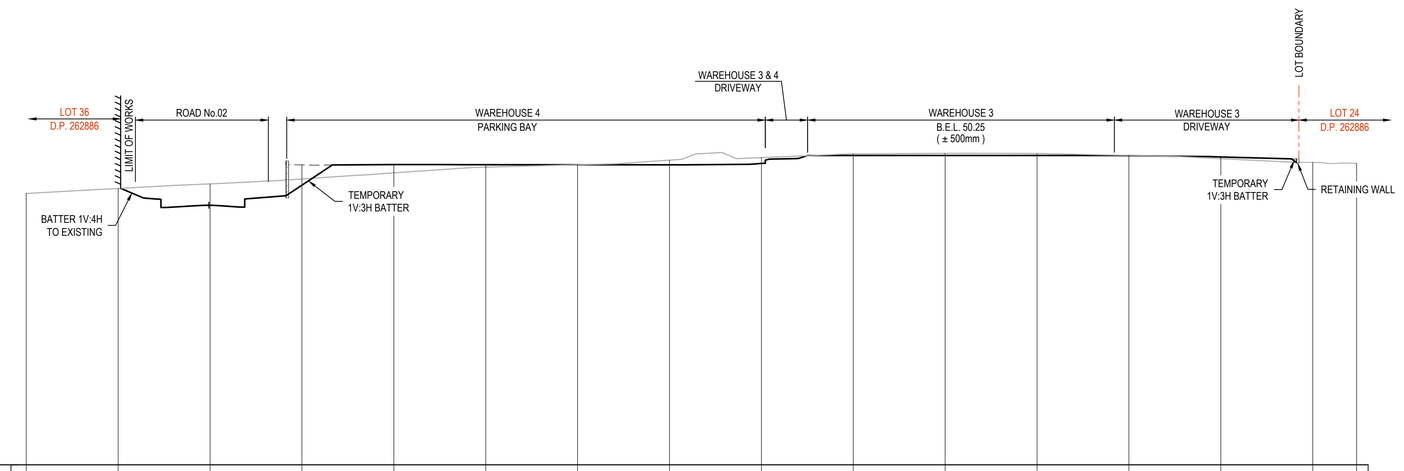
B



DATUM R.L. 23

BEW DESIGN LEVEL	46.43	47.19	46.83	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	45.99	
EXISTING LEVEL	48.03	47.69	47.35	47.09	46.87	46.81	46.62	46.36	45.57	46.21	46.3	46.21	45.89	43.97	45.36	44.11
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	222.633

SITE SECTION 4 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 25

BEW DESIGN LEVEL			46.18	49.48	49.51	49.49	49.49	49.48	49.6	50.25	50.25	50.25	50.23	50.13		
EXISTING LEVEL	47.14	47.56	47.93	48.33	48.83	49.29	49.49	49.87	50.07	50.38	50.41	50.4	50.25	49.99	49.68	49.6
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	217.169

SITE SECTION 5 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
SITE REGRADING SECTIONS
SHEET 03 OF 06

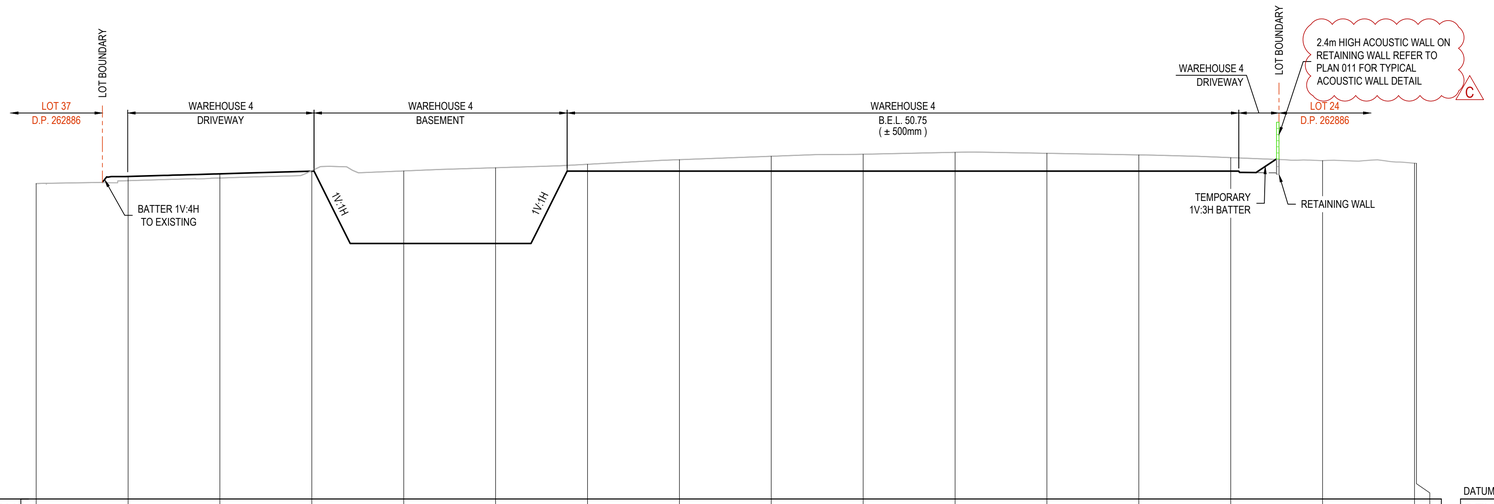
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	008	B

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-008.dwg

LEGEND

- BULK EARTHWORKS LEVEL
- EXISTING SURFACE
- FUTURE SURFACE LEVEL
- SITE BOUNDARY

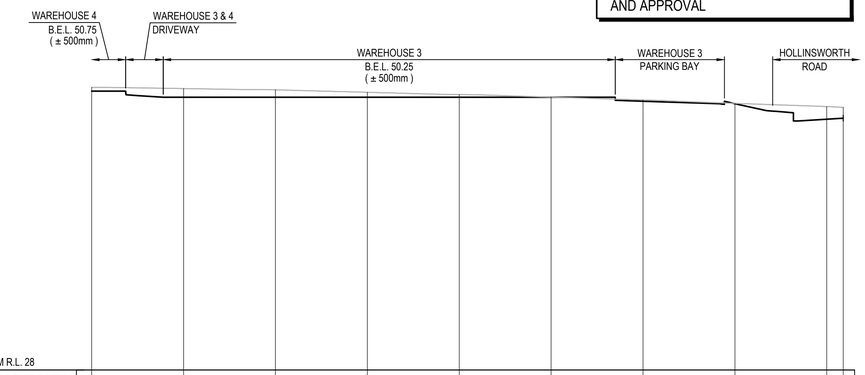
NOTE:
BATTERS STEEPER THAN 1:3 SUBJECT TO GEOTECHNICAL INVESTIGATION AND APPROVAL



DATUM R.L. 24

BEW DESIGN LEVEL		50.32	50.53	50.74	44.85	44.85	50.75	50.75	50.75	50.75	50.75	50.75	50.75	50.75	50.75				
EXISTING LEVEL	49.73	49.97	50.19	50.79	50.76	51.03	51.31	51.68	51.97	52.13	52.28	52.21	52.08	51.85	51.61	51.39	51.38		
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	225.32		

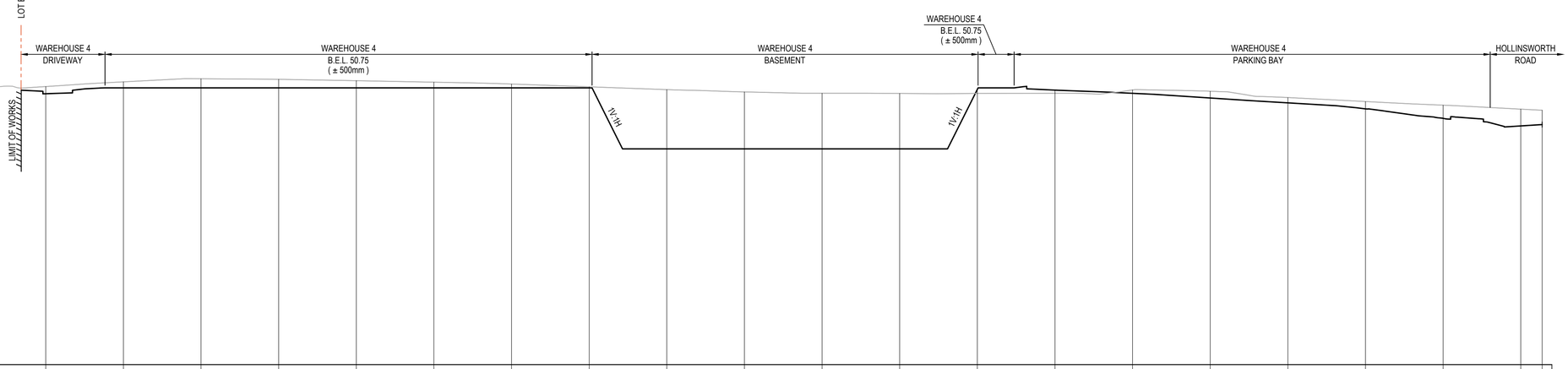
SITE SECTION 6 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 28

BEW DESIGN LEVEL	50.75	50.25	50.25	50.25	50.25	50.25	50.25	49.93	49.72	48.46	48.54								
EXISTING LEVEL	51.06	50.96	50.86	50.66	50.47	50.27	50.04	49.75	49.49	49.43									
CHAINAGE	0	15	30	45	60	75	90	105	120	122.674									

SITE SECTION 8 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 24

BEW DESIGN LEVEL		50.18	50.75	50.75	50.75	50.75	50.75	50.75	50.75	44.85	44.85	44.85	44.85	50.6	50.53	50.23	49.78	49.3	48.72	47.8	47.07	47.2
EXISTING LEVEL	50.49	50.88	51.33	51.63	51.58	51.44	51.3	51.12	50.85	50.58	50.35	50.23	50.21	50.21	50.22	50.55	50.42	49.81	49.43	49.08	48.69	48.58
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	304.141

SITE SECTION 7 / 005
SCALE 1:500 (H)
SCALE 1:250 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au
SUSTAINABLE ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

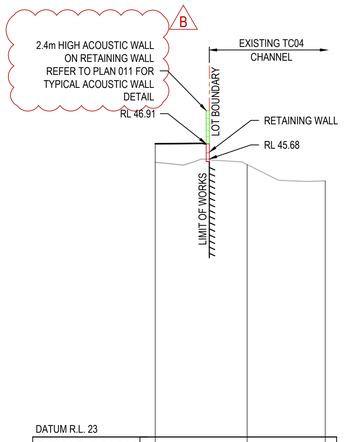
Title:
SITE REGRADING SECTIONS
SHEET 04 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	009	C

Plotted: File Name:D:\12\Estate\ORION-SYN\0102.0A Development Application_2020\10\WIS\520-0127-02-0A-009.dwg

LEGEND

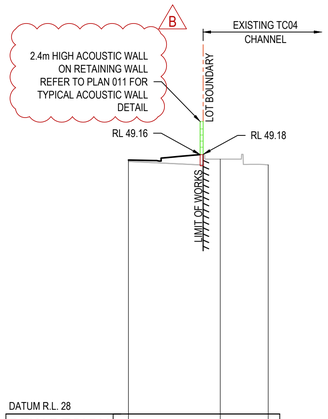
BULK EARTHWORKS LEVEL	
EXISTING SURFACE	
FUTURE SURFACE LEVEL	
SITE BOUNDARY	



DATUM R.L. 23

BEW DESIGN LEVEL	46.93		
EXISTING LEVEL	45.42	45.22	43.9
CHAINAGE	0	15	27.741

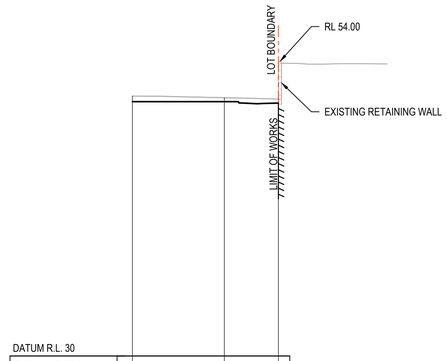
SITE SECTION 9 / 202
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 28

BEW DESIGN LEVEL	48.72		
EXISTING LEVEL	48.6	48.79	48.32
CHAINAGE	0	15	22.832

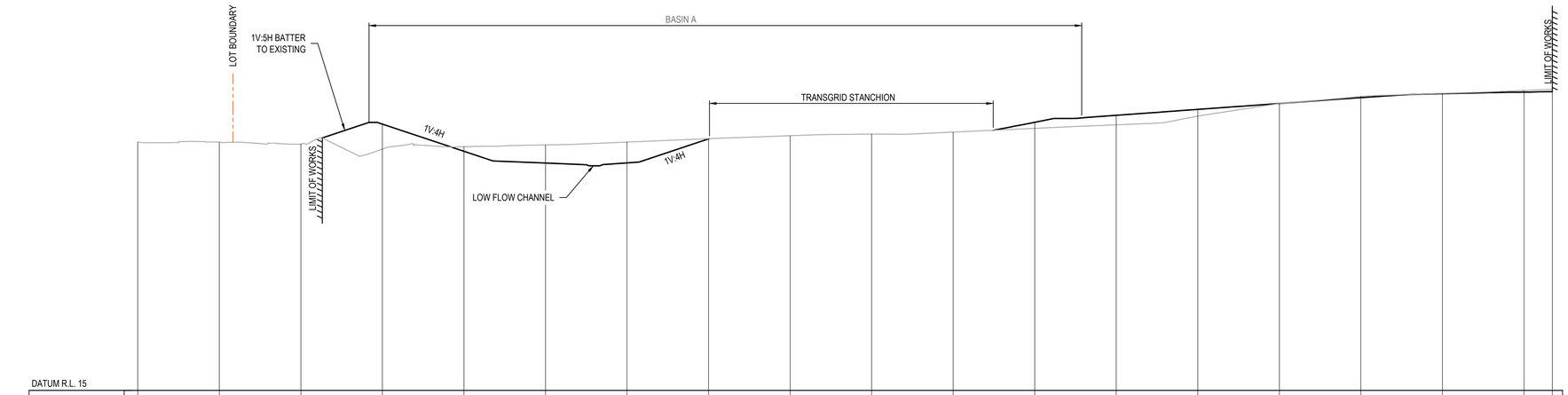
SITE SECTION 10 / 203
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 30

BEW DESIGN LEVEL	50.75	50.75	
EXISTING LEVEL	51.2	51.07	
CHAINAGE	0	15	23.821

SITE SECTION 11 / 204
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 15

BEW DESIGN LEVEL				39.49	36.98	35.9	35.92	38.12				39.65	40.29	40.83	41.38	41.92	42.28	42.42	42.47
EXISTING LEVEL	37.84	37.83	37.66	37.19	37.41	37.57	37.84	38.15	38.42	38.57	38.75	39.09	39.42	40.21	41.37	42.03	42.31	42.58	42.68
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	260.216

SITE SECTION 12 / 008
SCALE 1:500 (H)
SCALE 1:250 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

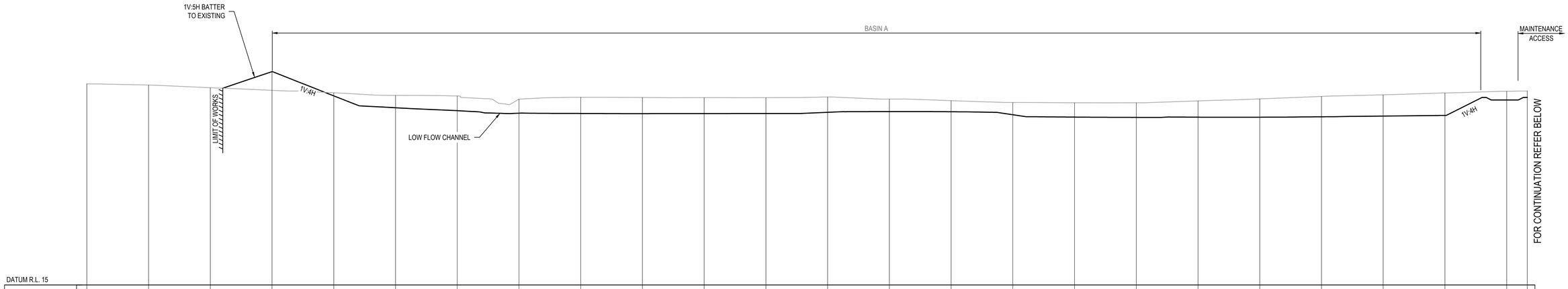
Title: SITE REGRADING SECTIONS SHEET 05 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	010	B

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-010.dwg

LEGEND

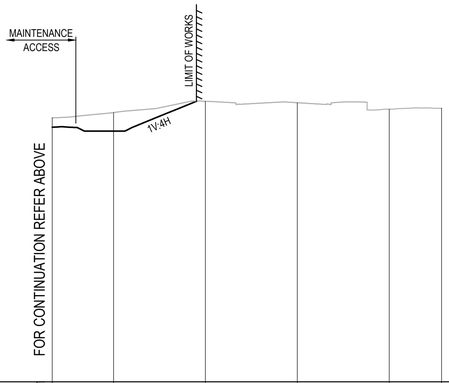
- BULK EARTHWORKS LEVEL
- EXISTING SURFACE
- FUTURE SURFACE LEVEL
- SITE BOUNDARY



DATUM R.L. 15

BEW DESIGN LEVEL				40.9	37.96	36.51	36.16	35.85	35.82	35.8	35.81	35.81	35.96	36.05	36.02	35.66	35.38	35.34	35.37	35.36	35.42	35.5	35.58	37.46	37.77
EXISTING LEVEL	39.41	39.27	38.95	38.62	38.32	38.02	37.94	37.55	37.78	37.76	37.74	37.73	37.82	37.57	37.38	37.15	37.12	37.12	37.34	37.59	37.88	38.08	38.31	38.51	38.55
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	350

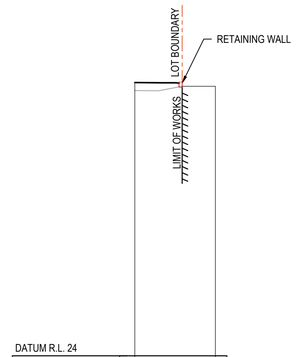
SITE SECTION 13 / 008
SCALE 1:500 (H)
SCALE 1:250 (V)



DATUM R.L. 17

BEW DESIGN LEVEL	37.77	37.46				
EXISTING LEVEL	38.55	38.97	39.89	39.77	39.25	39.34
CHAINAGE	360	360	375	390	405	413.556

SITE SECTION 13 / 008
SCALE 1:500 (H)
SCALE 1:250 (V)

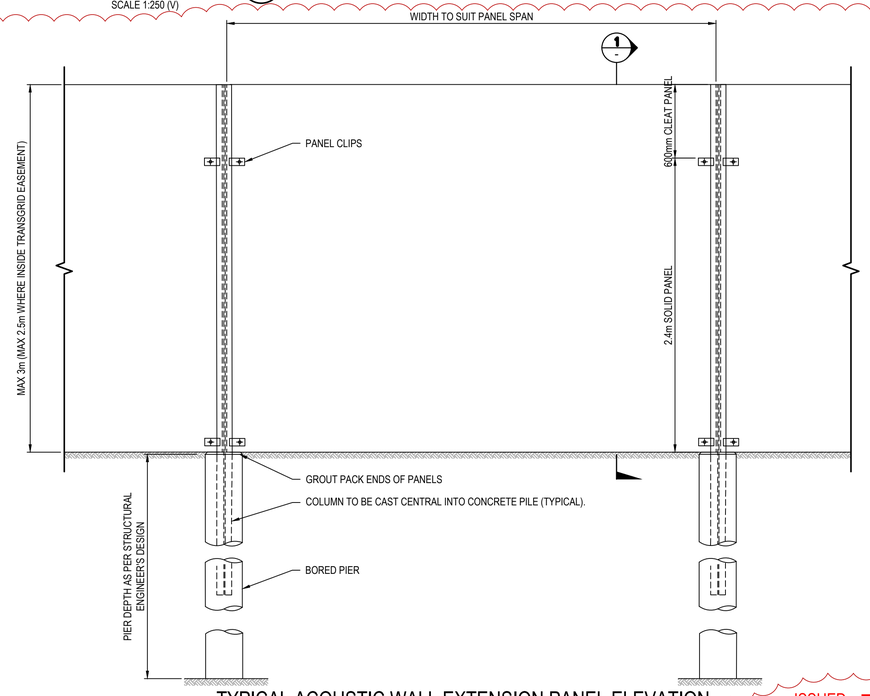


DATUM R.L. 24

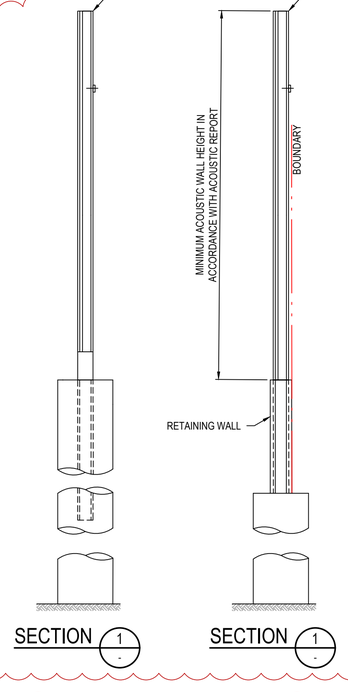
BULK LEVEL	46.31	
EXISTING LEVEL	45.65	46.00
CHAINAGE	0	13.151

SITE SECTION 14 / 201
SCALE 1:500 (H)
SCALE 1:250 (V)

B



TYPICAL ACOUSTIC WALL EXTENSION PANEL ELEVATION
NTS



ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE AUSTRALIA ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: SITE REGRADING SECTIONS SHEET 06 OF 06

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	011	B

Plotted: File Name:D:\12x05data\ORION SYNOT\02-DA Development Application\ 220270WSS02-0127-02-DA-011.dwg

NORTH

ASTORIA STREET

LOT 4
D.P. 1210172

BASIN A

BASIN A TO BE USED AS SEDIMENT BASIN DURING CONSTRUCTION

PROVIDE STABILISED SITE ACCESS

PROVIDE LOCKABLE ACCESS GATE

LOT 5
D.P. 1210172

ELECTRICAL EASEMENT
60.96m WIDE

ROAD No.01

SOUTH

SP

HOLLINSWORTH ROAD

ROAD No.02

PROVIDE LOCKABLE ACCESS GATE

PROVIDE STABILISED SITE ACCESS

EXISTING BUILDING

LOT 25
D.P. 262886

LOT 24
D.P. 262886

LOT 37
D.P. 262886

ELECTRICAL EASEMENT
60.96m WIDE

LEGEND

CONTOURS	55.0 -60.0-
STABILISED SITE ACCESS	
POSSIBLE STOCKPILE LOCATION	
SITE SECURITY FENCE	B B B
SEDIMENT FENCE	
CATCH DRAIN / DIVERSION SWALE	
PIT INLET FILTER (GEOTEXTILE OR MESH & GRAVEL)	
STRAW / HAY BALE FILTER	

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

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1. Erosion Hazard and Sediment Basins

Site Name: Sydney Business Park

Site Location: Astoria Street, Marsden Park

Precinct/Stage: Stage 3

Other Details:

Site area	Sub-catchment or Name of Structure 1	2	3	Notes
Total catchment area (ha)	23.7	1.04	0.3	
Disturbed catchment area (ha)	16	1.04	0.3	
Soil analysis (enter sediment type if known, or laboratory particle size data)				
Sediment Type (C, F or D) if known	D	D	D	From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)				Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)				
% clay (fraction finer than 0.002 mm)				
Dispersion percentage				E.g. enter 10 for dispersion of 10%
% of whole soil dispersible				See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D	D	Automatic calculation from above
Rainfall data				
Design rainfall depth (no of days)	5	5	5	See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	75	75	75	
x-day , y-percentile rainfall event (mm)	19	19	19	
Rainfall R-factor (if known)				Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	10.1	10.1	10.1	
RUSLE Factors				
Rainfall erosivity (*R*-factor)	2250	2250	2250	Auto-filled from above
Soil erodibility (*K*-factor)	0.038	0.038	0.038	RUSLE LS factor calculated for a high rill/interrill ratio.
Slope length (m)	80	80	80	
Slope gradient (%)	3	2	2	
Length/gradient (*LS*-factor)	0.65	0.41	0.41	
Erosion control practice (*P*-factor)	1.3	1.3	1.3	1.3 1.3 1.3
Ground cover (*C*-factor)	1	1	1	1 1 1
Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)				
Storage (soil) zone design (no of months)	2	2	2	2 2 2 Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5	0.5	0.5	See Table F2, page F-4 in Appendix F
Calculations and Type D/F Sediment Basin Volumes				
Soil loss (t/ha/yr)	72	45	45	
Soil Loss Class	1	1	1	See Table 4.2, page 4-13
Soil loss (m^3/ha/yr)	56	35	35	Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	148	6	2	See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	2252	99	29	See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	2400	105	31	

- DRAINAGE NETWORK UPDATED
- DESIGN SURFACE UPDATED
- SEDIMENT TRAPS UPDATED
- SEDIMENT FENCE UPDATED
- SITE SECTION ALIGNMENTS ADDED

C

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: SEDIMENT & EROSION CONTROL PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	100	C

Plotted: File Name:D:\12xSolas\ORION-SYN01\02-DA-Development Application_2020\7DWG\20-0127-02-DA-100.dwg

GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "ENVIRONMENT PROTECTION AUTHORITY".AND "DEPT OF LAND AND WATER CONSERVATION". MEASURES OUTLINED IN THE SEDIMENT & EROSION CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.
2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
4. ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
6. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
7. ALL DISTURBED AREAS SHALL BE REVEGETATED WITHIN 14 WORKING DAYS FROM THE CONCLUSION OF LAND SHAPING.
8. MINIMISE DUST BY WATERING WHEN REQUIRED.

STOCKPILE NOTES:

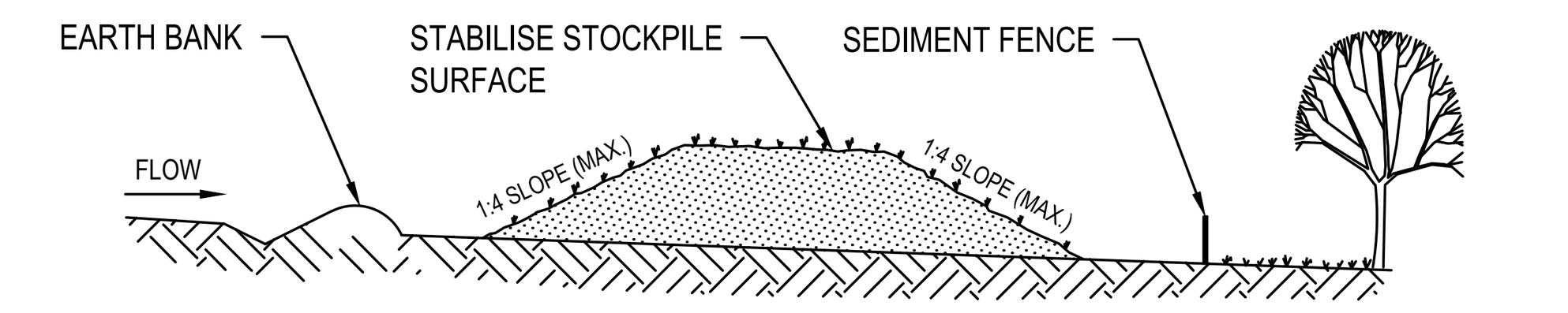
9. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
10. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
11. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATE.
12. ALL STOCKPILES TO BE (MAX) 2m HIGH AND PROTECTED WITH SILT FENCE.

SPECIAL NOTES:

13. LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.
14. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES SET OUT IN "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION " -4TH EDITION AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.
15. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.
16. MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS. WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.
17. PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS, AND AFTER THE ROAD CENTRELINES HAVE BEEN PEGGED AND/OR PERMANENTLY MARKED, THE SITE MUST BE INSPECTED BY COUNCIL'S REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE TO IDENTIFY AND APPROPRIATELY MARK:-
a) THE TREES TO BE RETAINED.
b) ALL TREES TO BE LEFT UNDISTURBED AND TO BE CORDONED OFF.
18. NO TREES SHALL BE REMOVED WITHOUT COUNCIL'S CLEARANCE.
19. MANAGEMENT DEVICES TO REMAIN UNTIL THE END OF THE MAINTENANCE PERIOD.

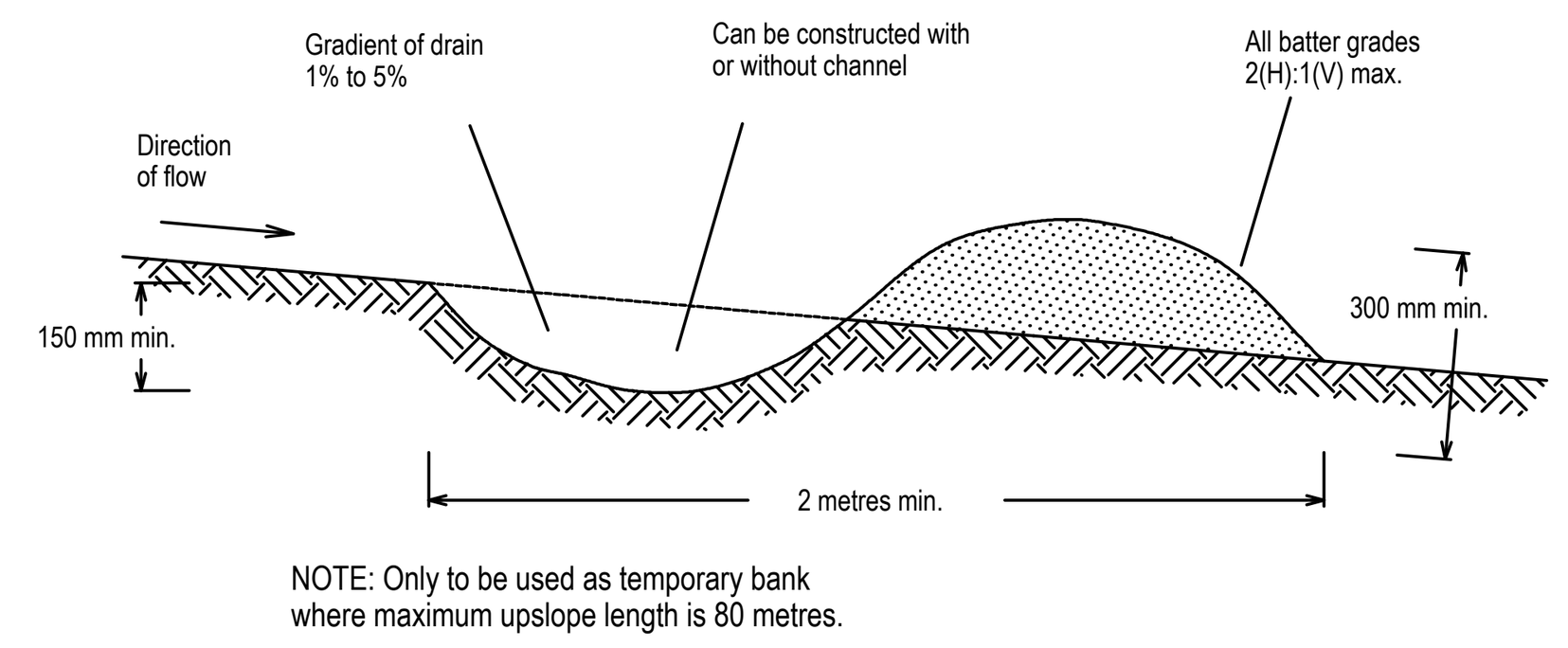
SEDIMENTATION CONTROL DEVICES:

20. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE BALE CENTRE LINE.
21. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m (3m MAX) CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.



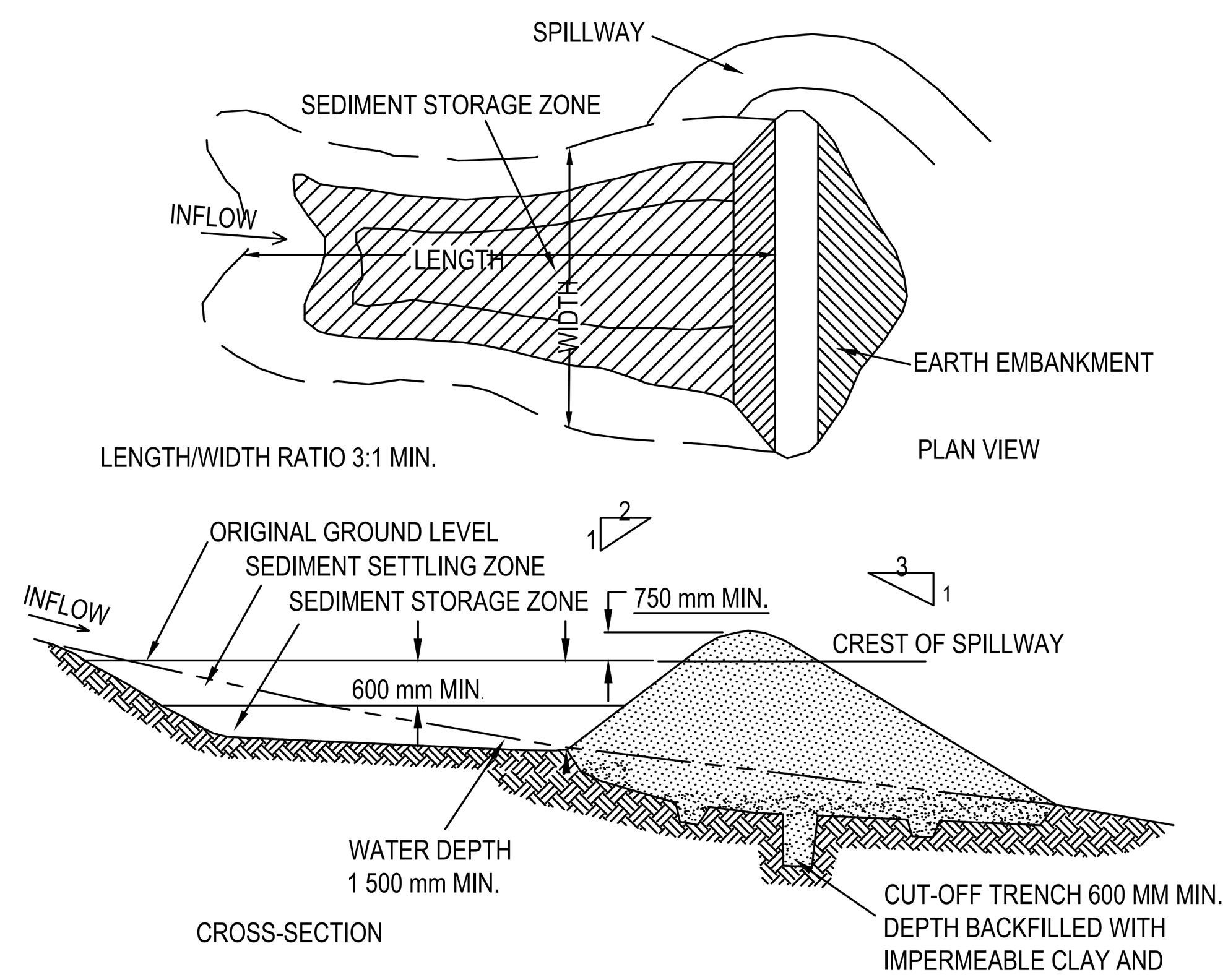
CONSTRUCTION NOTES:
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. ALL STOCKPILES ARE TO BE LOCATED AND PLACED IN ACCORDANCE WITH THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
5. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) NO STABILISATION IS REQUIRED. REVIEW THE ADEQUACY OF SEDIMENT CONTROLS IF RAINFALL IS PREDICTED.
6. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) THE FOLLOWING ADDITIONAL CONTROLS ARE REQUIRED:
-MAXIMUM BATTER SLOPE REDUCED TO 1:4
-CONSTRUCT A CONTOUR DRAIN ON THE LOW SIDE OF THE STOCKPILE, AND DISCHARGING THROUGH A STRAW BALE OR 200mm HIGH GRAVEL DAM
-ESTABLISH GRASS COVER TO SURFACE OF STOCKPILE WITHIN 14 DAYS, USING HYDROMULCH WITH A 75:25 MIX OF SEASONAL AND PERMANENT GRASS SEEDS, AND A STRAW MULCH THICKNESS OF NO LESS THAN 5mm.
7. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILES — SD 4-1



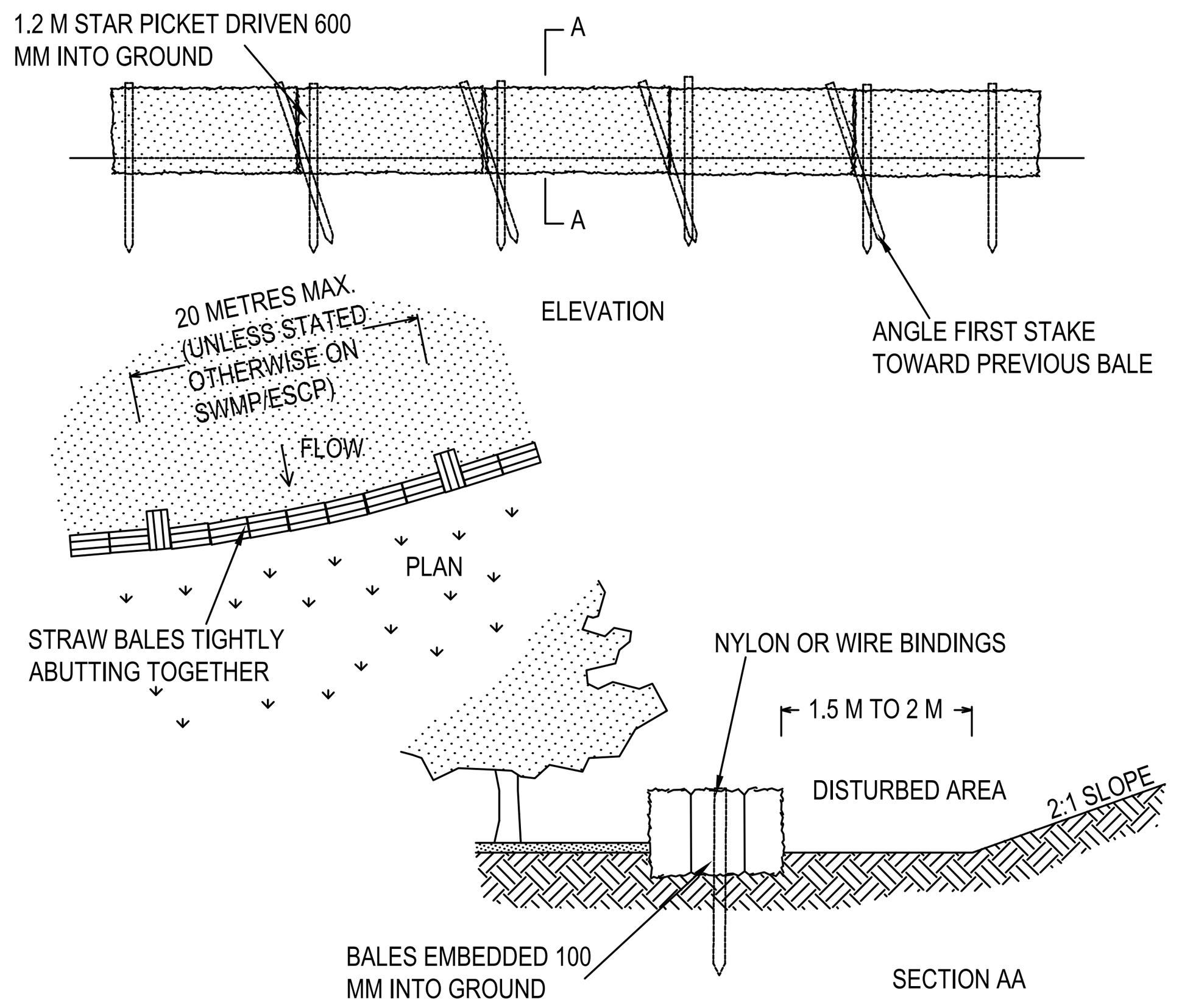
Construction Notes
1. Build with gradients between 1 percent and 5 percent.
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V shaped.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction.

EARTH BANK (LOW FLOW) — SD 5-5



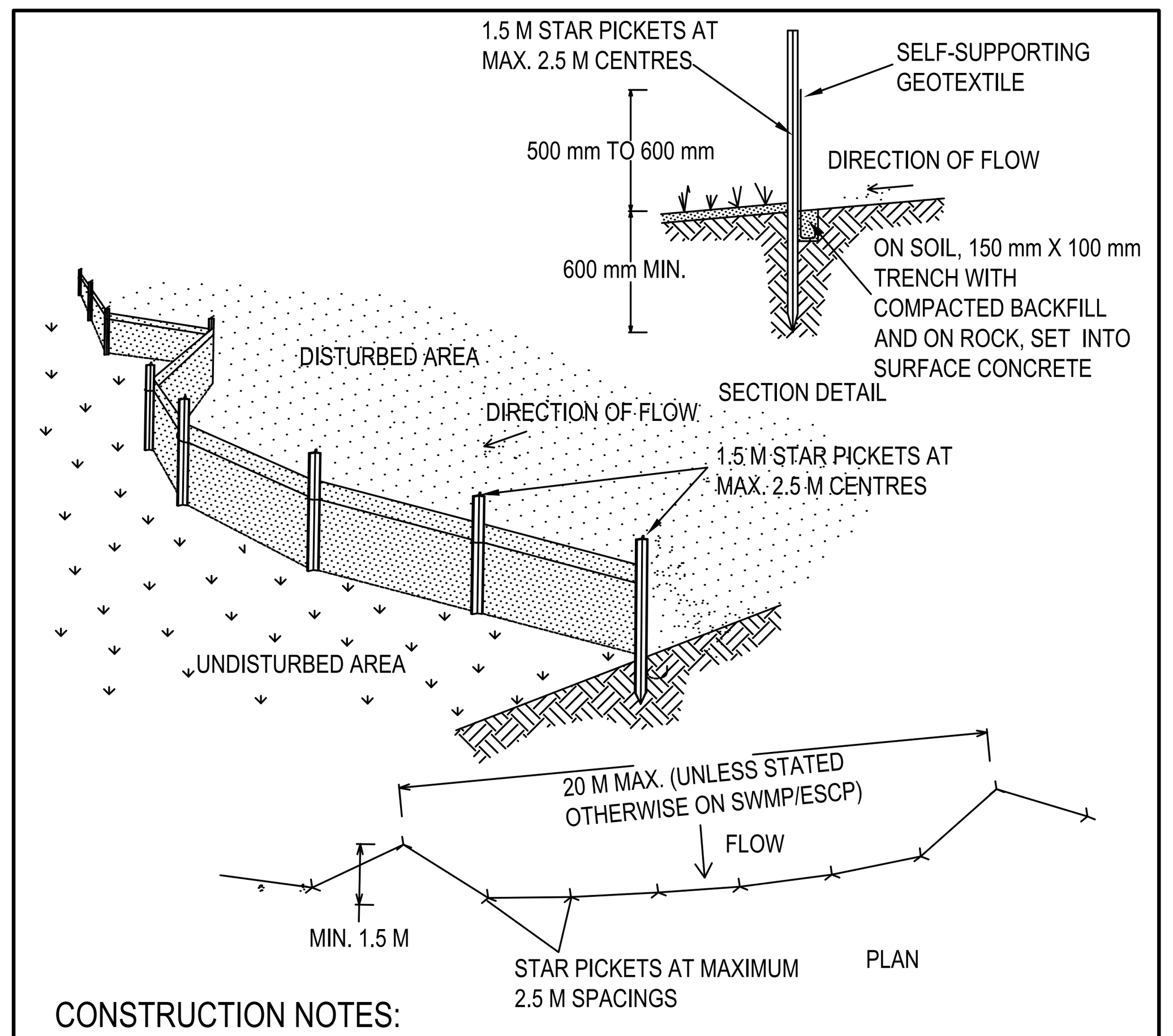
CONSTRUCTION NOTES:
1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500 MM DEEP AND 1,200 MM WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 PER CENT 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 100 MM TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100 MM TO 150 MM LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
7. CONSTRUCT THE EMERGENCY SPILLWAY. 8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.

EARTH BASIN - WET
(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY) — SD 6-4



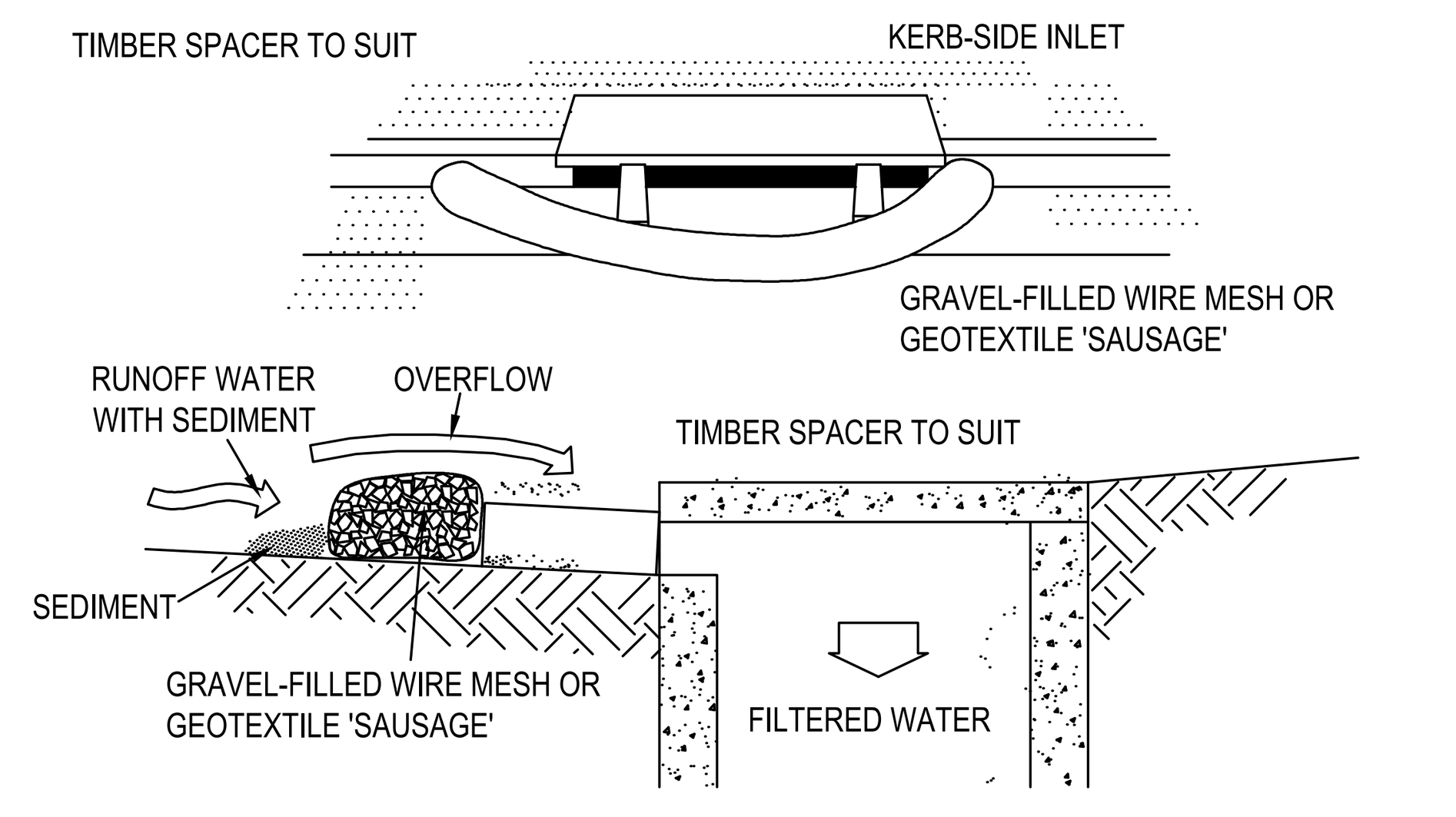
CONSTRUCTION NOTES:
1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75 mm TO 100 mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE.DRIVE THEM 600 mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

STRAW BALE FILTER — SD 6-7



CONSTRUCTION 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 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX 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.

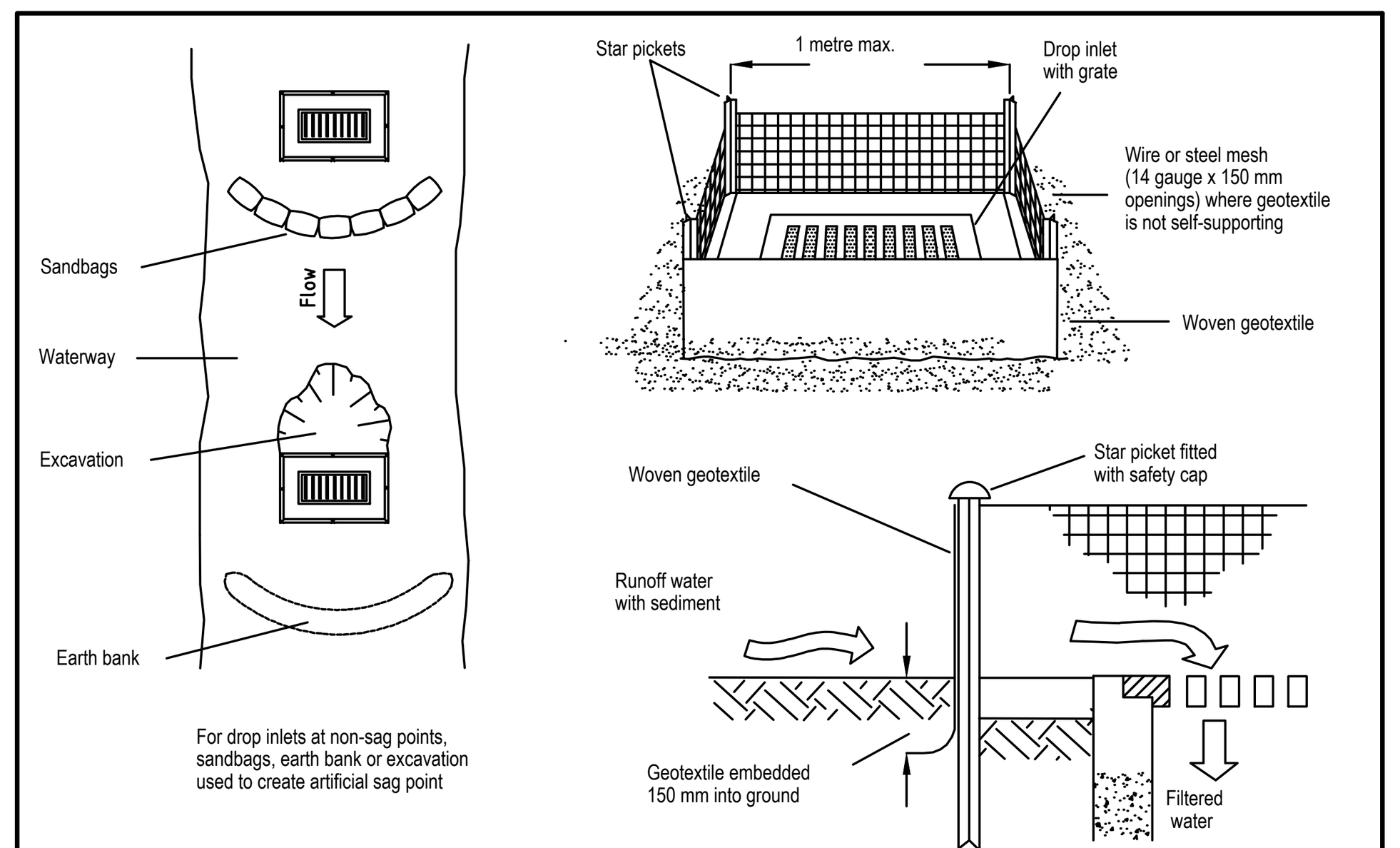
SEDIMENT FENCE — SD 6-8



NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

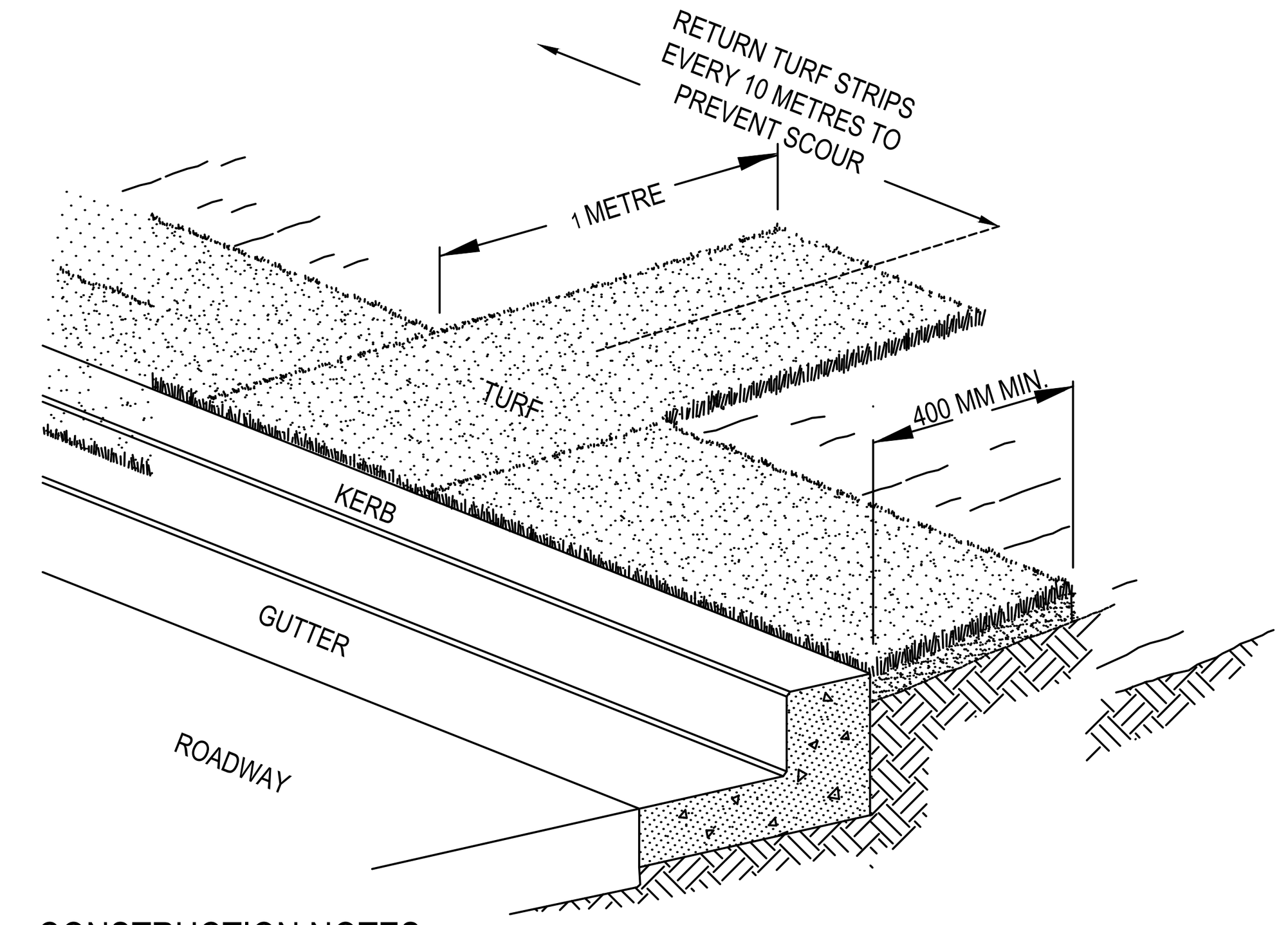
CONSTRUCTION NOTES:
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER — SD 6-11



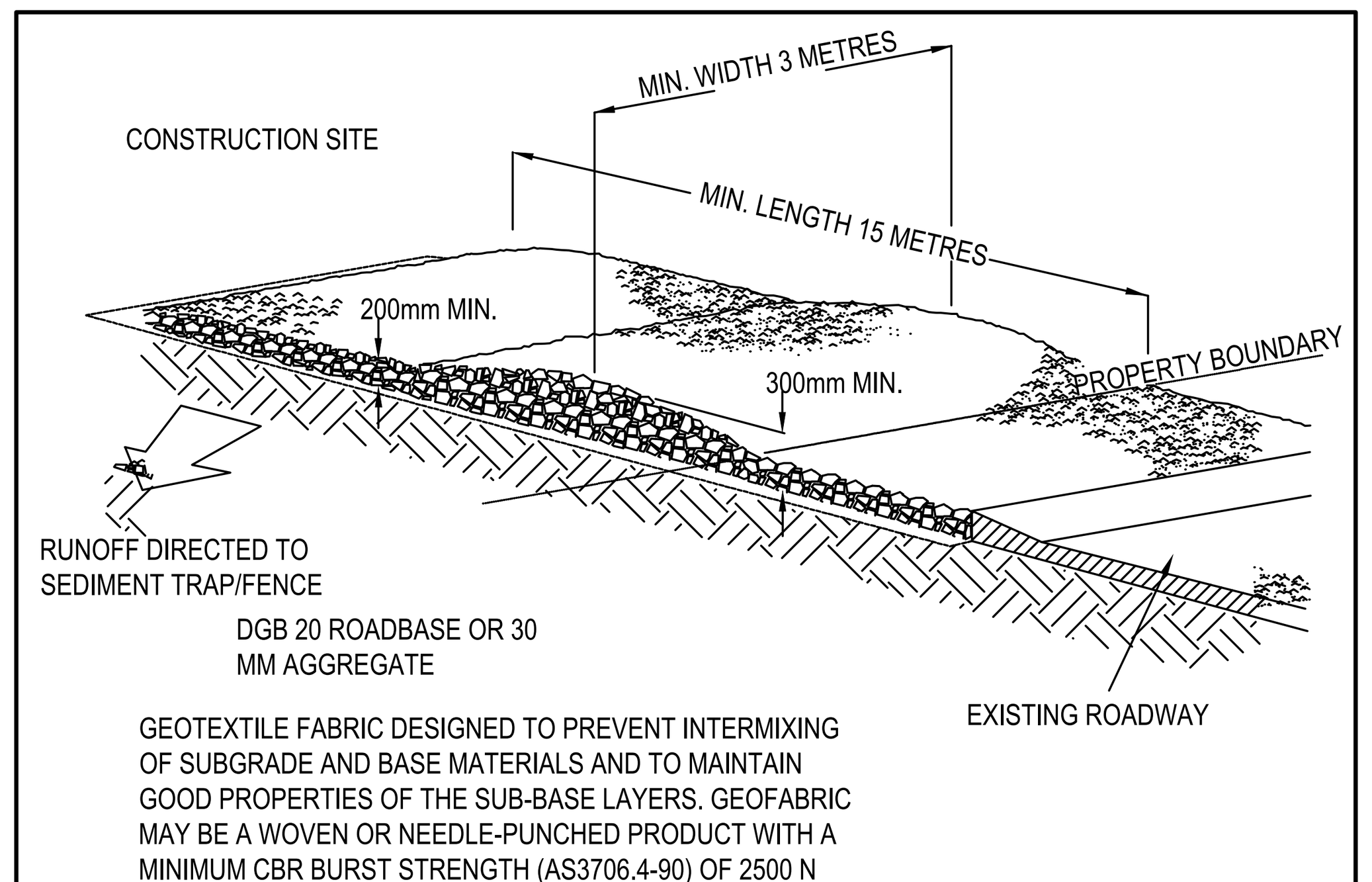
Construction Notes
1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-8 for installation procedures for geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

GEOTEXTILE INLET FILTER — SD 6-12



CONSTRUCTION NOTES:
1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.4 METRE LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m.
3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCP/SWMP.

KERBSIDE TURF STRIP — SD 6-13



CONSTRUCTION NOTES:
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS — SD 6-14

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
SEDIMENT & EROSION CONTROL NOTES & DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	101	A

Plotted: File Name:D:\12dS\data\ORION-SYN01\02-DA Development Application_20297\DWGS\20-0127-02-DA-101.dwg

NORTH

ASTORIA STREET

STREET

TRENCH GRATE

TOW RL 40.56
BOW RL 40.52

PROVIDE STACKED ROCK HEADWALL WITH RIPRAP SCOUR PROTECTION UNTIL RAINGARDEN CONSTRUCTED

PIPE INVERT I.L. 38.8

SEALED PIT

3m WIDE ACCESS TRACK MAXIMUM GRADE OF 10% AS PER COUNCIL

PIT TO BE CONNECTED TO RAINGARDEN PIPE SYSTEM. SUBJECT TO FINAL DESIGN LEVELS BY OTHERS.

FUTURE DRAINAGE NETWORK BY OTHERS

LOW FLOW PIPE TO RAINGARDEN

LOT 4
D.P. 1210172

PIT SURFACE LEVEL R.L. 37.2
PIT SURFACE LEVEL R.L. 38.5

BASIN A

OCEANGUARD CHAMBER TO CONTAIN 16 DEVICES

RAINWATER TANK 271kL. FINAL LOCATION SUBJECT TO DOWNPIPE DESIGN.

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

TOW RL 41.81
BOW RL 40.31

SEALED PIT

PROVIDE STACKED ROCK HEADWALL WITH RIPRAP SCOUR PROTECTION

STORMFILTER TANK. FOR DETAILS REFER TO DRAWING No.405.

SEALED PIT

BOW RL 40.12
TOW RL 41.77

LOT 36
D.P. 262886

WAREHOUSE 1
F.F.L. 43.00
(±500mm)

BATTER 1V:4H

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

SEALED PIT

ELECTRICAL EASEMENT 60.96m WIDE

FOR CONTINUATION REFER TO DRAWING No.201

FOR CONTINUATION REFER TO DRAWING No.202

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

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DIAL BEFORE YOU DIG www.1100.com.au

NOTE:

COUNCIL REQUIREMENTS:
- ON LOT TREATMENT FOR WAREHOUSE, NO OSD
- OSD FOR LOTS IN BASIN A
- OSD FOR ROADS IN BASIN A
- WATER QUALITY TREATMENT FOR ROADS ULTIMATELY IN BASIN A
- INTERIM WATER QUALITY TREATMENT FOR ROADS TO BE OCEAN GUARD PIT INSERTS OR APPROVED EQUIVALENT

NOTE:
- BASIN A TO BE USED AS A SEDIMENT BASIN FOR BULK EARTHWORKS CONSTRUCTION
- BASIN A TO BE USED AS A DETENTION BASIN IN THE INTERIM AND ULTIMATE.
- ON LOT TREATMENT DEVICES USED FOR WATER QUALITY
- ROADS TO BE TREATED BY OCEAN GUARD PIT INSERTS IN THE INTERIM UNTIL ULTIMATE RAINGARDEN AND GPT IS CONSTRUCTED FOR BASIN A.

LEGEND

DENOTES 2.5m WIDE DRAINAGE EASEMENT	(A)
INDICATIVE DOWNPIPE LOCATION	DP
RETAINING WALL	
TOP OF RETAINING WALL LEVEL	TOW RL 44.00
BOTTOM OF RETAINING WALL LEVEL	BOW RL 43.00
LIMIT OF WORKS	
BASIN A NOT PART OF THIS APPLICATION. APPROVAL BY BLACKTOWN CITY COUNCIL UNDER SEPERATE S7.11 PROCESS. FINAL APPROVAL EXPECTED PRIOR TO CONSTRUCTION OF STAGE 3.	
WAREHOUSE ROOF / AWNING EXTENT	
TYPE 1 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 2 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 3 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	

D
- DRAINAGE NETWORK UPDATED
- DESIGN SURFACE UPDATED
- SITE SECTIONS ALIGNMENTS ALONG BOUNDARY ADDED

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
D	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
C	MG	DH			
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 01 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	200	D

Plotted: File Name:I:\125\Sol\dwg\ORION-SYN\0102-DA Development Application - 2020\TO\WS\S20-0127-S0-DA-200.dwg

FOR CONTINUATION REFER TO DRAWING No.200

NORTH

BASIN A

SEALED PIT

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

BATTER 1V:4H

INDICATIVE FUTURE F.F.L. 43.50 (±500mm)

INDICATIVE FUTURE F.F.L. 45.00 (±500mm)

OVERLAND FLOW PATH FOR MAJOR FLOWS TO BASIN

PROVIDE STACKED ROCK HEADWALL FOR RAINGARDEN TREATMENT FLOWS

PROVIDE RIP RAP SCOUR PROTECTION

TEMPORARY GRASS LINED OPEN CHANNEL REFER TO DRAWING CC-450 FOR LONG SECTION

HOLLINSWORTH ROAD

INDICATIVE FUTURE SOUTH STREET UPGRADE

FUTURE CULVERTS AS PER COUNCIL DESIGN

FUTURE HOLLINSWORTH ROAD ALIGNMENT

ELECTRICAL EASEMENT 60.96m WIDE

FOR CONTINUATION REFER TO DRAWING No.203

NOTE:

- BASIN A TO BE USED AS A SEDIMENT BASIN FOR BULK EARTHWORKS CONSTRUCTION
- BASIN A TO BE USED AS A DETENTION BASIN IN THE INTERIM AND ULTIMATE.
- ON LOT TREATMENT DEVICES USED FOR WATER QUALITY
- ROADS TO BE TREATED BY OCEAN GUARD PIT INSERTS IN THE INTERIM UNTIL ULTIMATE RAINGARDEN AND GPT IS CONSTRUCTED FOR BASIN A.

LEGEND

DENOTES 2.5m WIDE DRAINAGE EASEMENT	(A)
INDICATIVE DOWNPIPE LOCATION	DP
RETAINING WALL	
TOP OF RETAINING WALL LEVEL	TOW RL 44.00
BOTTOM OF RETAINING WALL LEVEL	BOW RL 43.00
LIMIT OF WORKS	
BASIN A NOT PART OF THIS APPLICATION. APPROVAL BY BLACKTOWN CITY COUNCIL UNDER SEPERATE S7.11 PROCESS. FINAL APPROVAL EXPECTED PRIOR TO CONSTRUCTION OF STAGE 3.	
WAREHOUSE ROOF / AWNING EXTENT	
TYPE 1 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 2 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 3 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	

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- DRAINAGE NETWORK UPDATED
- DESIGN SURFACE UPDATED
- SITE SECTIONS ALIGNMENTS ALONG BOUNDARY ADDED

D

UTILITIES SHOWN ARE DIAGRAMMATIC ONLY AND MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH UTILITIES EXCAVATION GUIDE LINES/STANDARDS.

NOTE:

COUNCIL REQUIREMENTS:
- ON LOT TREATMENT FOR WAREHOUSE, NO OSD
- OSD FOR LOTS IN BASIN A
- OSD FOR ROADS IN BASIN A
- WATER QUALITY TREATMENT FOR ROADS ULTIMATELY IN BASIN A
- INTERIM WATER QUALITY TREATMENT FOR ROADS TO BE OCEAN GUARD PIT INSERTS OR APPROVED EQUIVALENT

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
D	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
C	MG	DH			
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

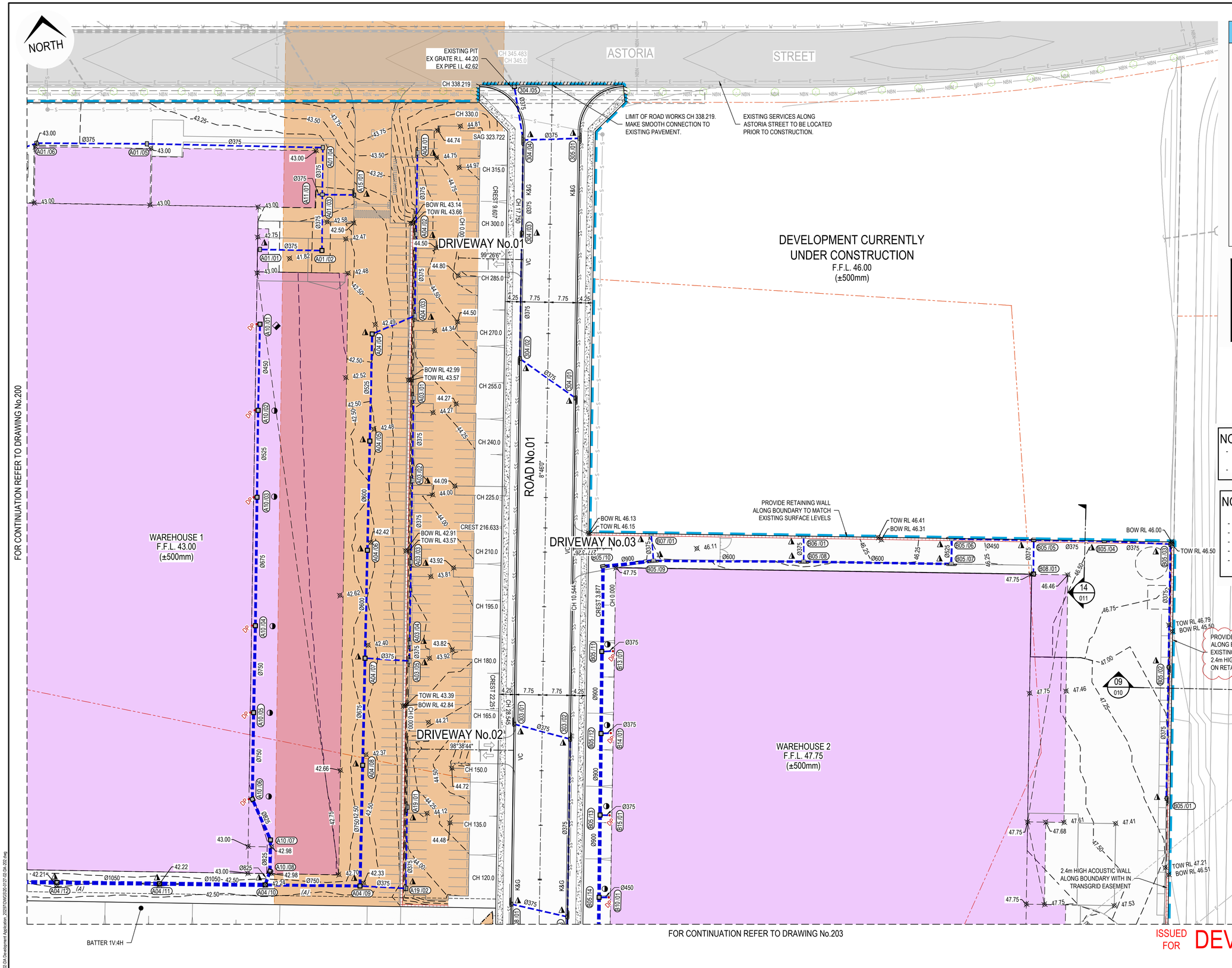
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN SHEET 02 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	201	D

Plotted: File Name:R:\12Excel\ORION_SYN\0127-DA Development Application - 2020\DWGS\20-0127-02-DA-201.dwg



LEGEND

DENOTES 2.5m WIDE DRAINAGE EASEMENT	(A)
INDICATIVE DOWNPIPE LOCATION	DP
RETAINING WALL	
TOP OF RETAINING WALL LEVEL	TOW RL 44.00
BOTTOM OF RETAINING WALL LEVEL	BOW RL 43.00
LIMIT OF WORKS	
INDICATIVE FUTURE METRO CORRIDOR	
WAREHOUSE ROOF / AWNING EXTENT	
TYPE 1 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 2 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 3 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	

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NOTE:
- HOLLINSWORTH AND ROAD No.01 ROADS ARE TO BE TREATED TEMPORARILY WITH OCEAN GUARD PIT INSERTS UNITL GPT AT BASIN A CONSTRUCTED
- REFER TO DRAWING CC-205 FOR DRIVEWAY SECTIONS

NOTE:
COUNCIL REQUIREMENTS:
- ON LOT TREATMENT FOR WAREHOUSE, NO OSD
- OSD FOR LOTS IN BASIN A
- OSD FOR ROADS IN BASIN A
- WATER QUALITY TREATMENT FOR ROADS ULTIMATELY IN BASIN A
- INTERIM WATER QUALITY TREATMENT FOR ROADS TO BE OCEAN GUARD PIT INSERTS OR APPROVED EQUIVALENT

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
E	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
D	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
C	MG	DH			
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN
SHEET 03 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	202	E

Plotted: File Name:D:\1125\data\ORION-SYN01\02-DA Development Application_20297\DWGS\20-0127-02-DA-202.dwg

FOR CONTINUATION REFER TO DRAWING No.202

NORTH

WAREHOUSE 2
F.F.L. 47.75
(±500mm)

WAREHOUSE 3
F.F.L. 50.50
(±500mm)

INDICATIVE FUTURE
F.F.L. 45.00
(±500mm)

LOT 36
D.P. 262886

ROAD No.01

ROAD No.02

DRIVEWAY No.04

DRIVEWAY No.05

DRIVEWAY No.06

HOLLINSWORTH ROAD

BATTER 1V:4H

TEMPORARY GRASS LINED OPEN CHANNEL

LIMIT OF ROAD WORKS CH 298.558.

LIMIT OF ROAD WORKS CH 74.21. MAKE SMOOTH CONNECTION TO EXISTING PAVEMENT.

2.4m HIGH ACOUSTIC WALL ALONG BOUNDARY WITH IN TRANSGRID EASEMENT

2.4m HIGH ACOUSTIC WALL ALONG BOUNDARY

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

RAINWATER TANK 235kL. FINAL LOCATION SUBJECT TO DOWNPIPE DESIGN.

OCEANGUARD CHAMBER TO CONTAIN 6 DEVICES

SPLITTER PIT

STORMFILTER TANK. FOR DETAILS REFER TO DRAWING No.406.

RAINGARDEN No.01. REFER TO DRAWING No.500 FOR DETAILS.

RAINGARDEN No.02. REFER TO DRAWING No.500 FOR DETAILS.

STORMFILTER TANK. FOR DETAILS REFER TO DRAWING No.407.

RAINWATER TANK 48kL. FINAL LOCATION SUBJECT TO DOWNPIPE DESIGN.

OCEANGUARD CHAMBER TO CONTAIN 2 DEVICES

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

OCEANGUARD CHAMBER TO CONTAIN 9 DEVICES

INDICATIVE ROOF CONNECTION POINT. SUBJECT TO DETAILED DESIGN OF DOWNPIPE LOCATIONS.

RAINWATER TANK 147kL. FINAL LOCATION SUBJECT TO DOWNPIPE DESIGN.

LOT BOUNDARY

TRENCH GRATE

BOW RL 49.20
TOW RL 49.45

BOW RL 46.51
TOW RL 47.15

BOW RL 50.01
TOW RL 50.38

TOW RL 50.27
BOW RL 49.48

BOW RL 49.98
TOW RL 50.67

TOW RL 50.87
BOW RL 50.75

EXISTING RETAINING WALL

EXISTING BUILDING

ELECTRICAL EASEMENT 80.96m WIDE

LOT 36
D.P. 262886

LOT 24
D.P. 262886

1V:4H MAX

LEGEND

DENOTES 2.5m WIDE DRAINAGE EASEMENT	/A/
INDICATIVE DOWNPIPE LOCATION	DP
RETAINING WALL	
TOP OF RETAINING WALL LEVEL	TOW RL 44.00
BOTTOM OF RETAINING WALL LEVEL	BOW RL 43.00
LIMIT OF WORKS	
WAREHOUSE ROOF / AWNING EXTENT	
TYPE 1 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 2 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
TYPE 3 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	

NOTES:

- HOLLINSWORTH AND ROAD No.01 ROADS ARE TO BE TREATED TEMPORARILY WITH OCEAN GUARD PIT INSERTS
- WAREHOUSE 3 DRAINS VIA HOLLINSWORTH ROAD TO TC04. HOLLINSWORTH ROAD PORTION OF THIS CATCHMENT WILL BE TREATED WATER QUALITY AND QUANTITY (OSD) BY THE INFRASTRUCTURE LOCATED IN BASIN E AS PER PLANS PREPARED BY CALIBRE. PLAN REF: 18-000050 STAGE 1 & 2, DATED 19/5/20
- REFER TO DRAWING CC-205 FOR DRIVEWAY SECTIONS

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FOR CONTINUATION REFER TO DRAWING No.201

FOR CONTINUATION REFER TO DRAWING No.204

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
E	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
D	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
C	MG	DH			
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE CERTIFICATION ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

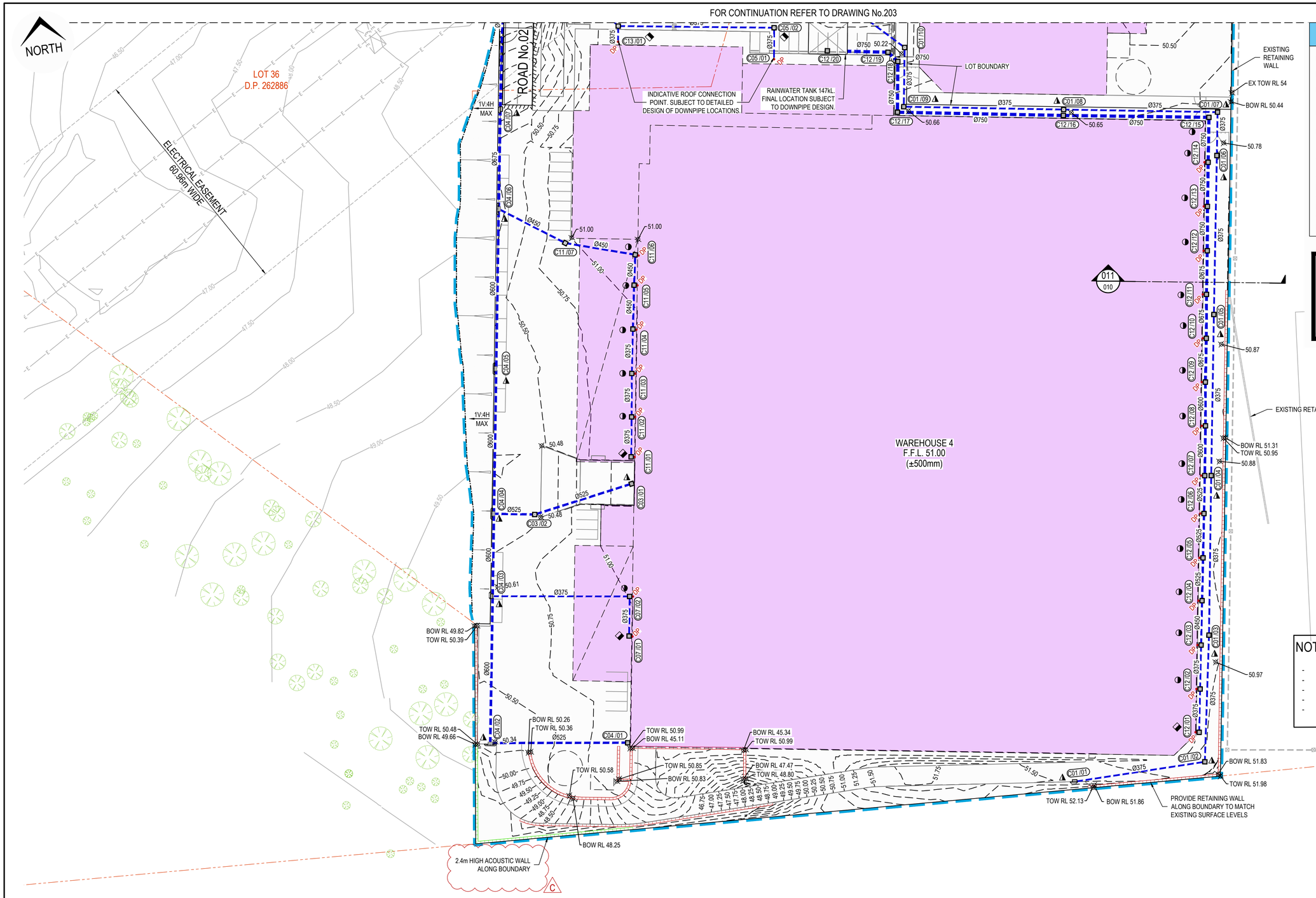
Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: ENGINEERING PLAN
SHEET 04 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	203	E

Plotted: File Name:D:\12\Estate\DWGN\20-0127-SYN01100-DA Development Application_220917.DWG;S20-0127-02-DA-203.dwg

FOR CONTINUATION REFER TO DRAWING No.203



LEGEND

DENOTES 2.5m WIDE DRAINAGE EASEMENT	(A)
INDICATIVE DOWNPIPE LOCATION	DP
RETAINING WALL	
TOP OF RETAINING WALL LEVEL	TOW RL 44.00
BOTTOM OF RETAINING WALL LEVEL	BOW RL 43.00
LIMIT OF WORKS	
WAREHOUSE ROOF / AWNING EXTENT	
TYPE 1 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	
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TYPE 3 OCEANGUARD. REFER TO DRAWING No.406 FOR DETAILS	

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NOTE:

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ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	30/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

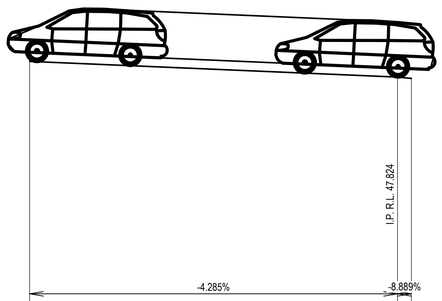
Title: ENGINEERING PLAN SHEET 05 OF 05

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	204	C

Plotted: File Name:D:\12dSolata\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-204.dwg

LEGEND

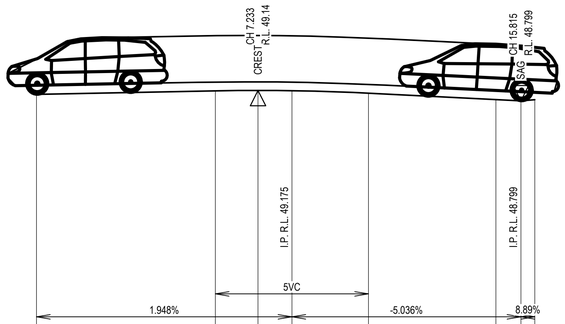
- FINISHED DESIGN SURFACE LEVEL
- EXISTING SURFACE
- FUTURE SURFACE LEVEL



V.C.			
GRADE		-4.285%	-8.889%
HORIZ. GEOMETRY			
DATUM R.L. 39			
DESIGN LEVEL	48.339	47.824	47.784
CHAINAGE	0	12.012	12.462

LONGITUDINAL SECTION - DRIVEWAY No.04

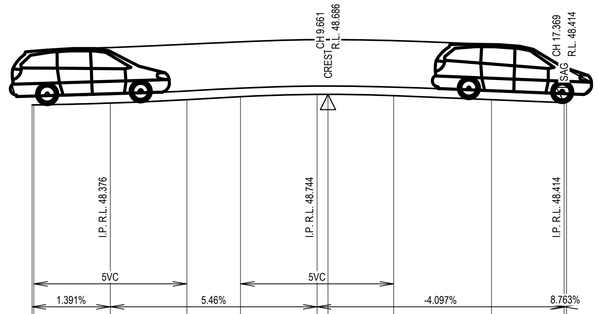
SCALE 1:100 (H)
SCALE 1:100 (V)



V.C.						
GRADE		1.948%		-5.036%	8.89%	
HORIZ. GEOMETRY						
DATUM R.L. 40						
DESIGN LEVEL	49.013	49.127	49.14	49.132	49.05	48.84	48.799	48.839
CHAINAGE	0	5.839	7.233	8.339	10.839	15	15.815	16.27

LONGITUDINAL SECTION - DRIVEWAY No.05

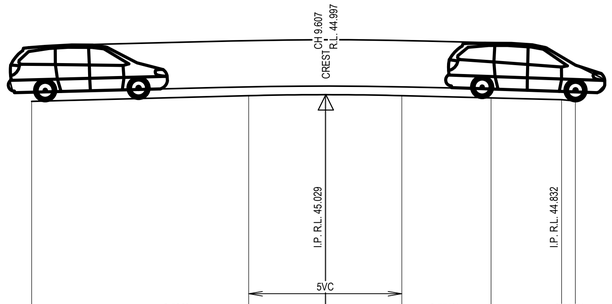
SCALE 1:100 (H)
SCALE 1:100 (V)



V.C.							
GRADE		1.391%	5.46%		-4.097%	8.763%	
HORIZ. GEOMETRY							
DATUM R.L. 40							
DESIGN LEVEL	48.34	48.341	48.401	48.512	48.608	48.685	48.686	48.642	48.511	48.414	48.421
CHAINAGE	0	0.053	2.553	5.053	6.805	9.305	9.661	11.805	15	17.369	17.449

LONGITUDINAL SECTION - DRIVEWAY No.06

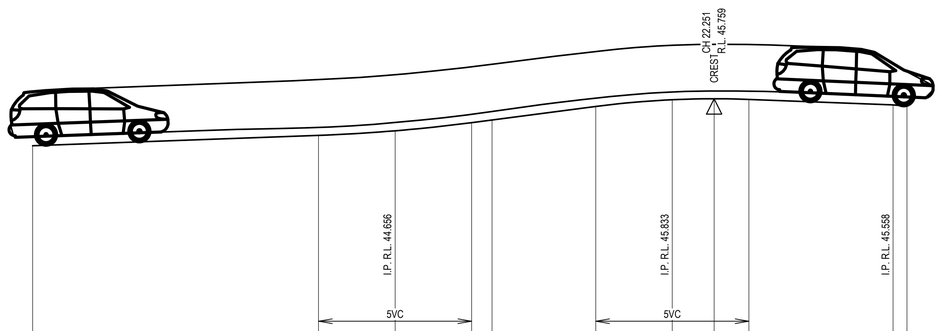
SCALE 1:100 (H)
SCALE 1:100 (V)



V.C.						
GRADE		2.596%		-2.551%	-8.889%	
HORIZ. GEOMETRY						
DATUM R.L. 36						
DESIGN LEVEL	44.78	44.964	44.997	44.997	44.965	44.891	44.832	44.792
CHAINAGE	0	7.066	9.586	9.607	12.086	15	17.3	17.75

LONGITUDINAL SECTION - DRIVEWAY No.01

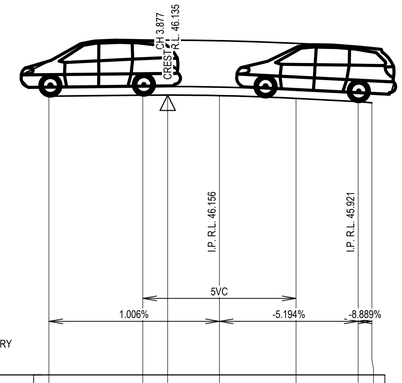
SCALE 1:100 (H)
SCALE 1:100 (V)



V.C.							
GRADE		3.635%		13.005%	-3.819%	-8.889%	
HORIZ. GEOMETRY							
DATUM R.L. 36							
DESIGN LEVEL	44.226	44.565	44.715	44.981	45.068	45.508	45.728	45.759	45.738	45.558	45.518
CHAINAGE	0	9.336	11.836	14.336	15	18.386	20.886	22.251	23.386	28.095	28.545

LONGITUDINAL SECTION - DRIVEWAY No.02

SCALE 1:100 (H)
SCALE 1:100 (V)



V.C.					
GRADE		1.006%		-5.194%	-8.889%
HORIZ. GEOMETRY					
DATUM R.L. 37					
DESIGN LEVEL	46.1	46.131	46.135	46.117	46.026	45.921	45.881
CHAINAGE	0	3.066	3.877	5.566	8.066	10.094	10.544

LONGITUDINAL SECTION - DRIVEWAY No.03

SCALE 1:100 (H)
SCALE 1:100 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

JAS-ANZ SUSTAINABLE ISO 9001 WWW.JAS-ANZ.ORG/REGISTER

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: DRIVEWAY LONG SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	205	A

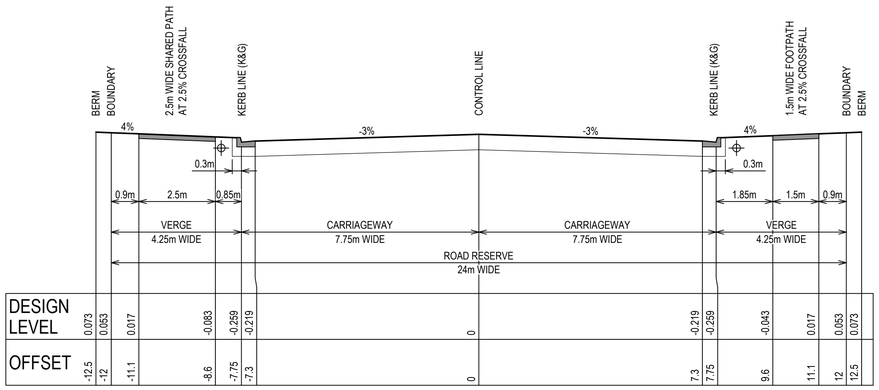
Plotted: File Name:D:\12\05\data\ORION-SYN\20\102.0A Development Application_2020\10\WDS\520-0127-02-0A-205.dwg

LEGEND

SUBSOIL DRAIN TO BE LAID BELOW ALL KERBS WHERE NO STORMWATER PIPE IS SHOWN

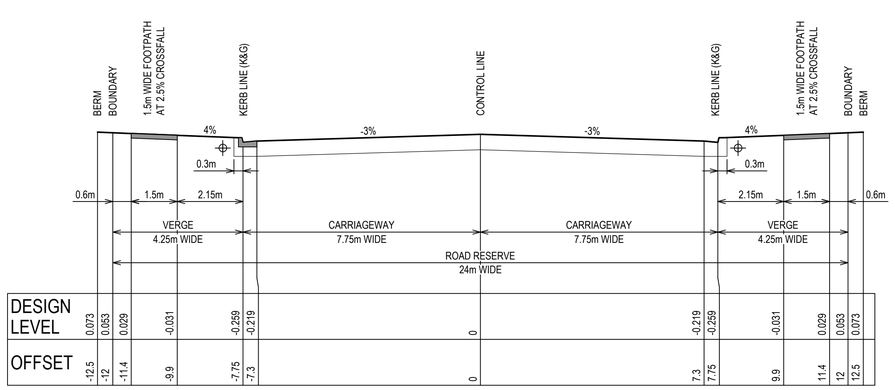
NOTE:

- FOOTPATH AND KERBS TO BE CONSTRUCTED TO BLACKTOWN CITY COUNCIL STANDARDS



TYPICAL CROSS SECTION - HOLLINSWORTH ROAD

SCALE 1:100



TYPICAL CROSS SECTION - ROAD No.01 & 02

SCALE 1:100

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

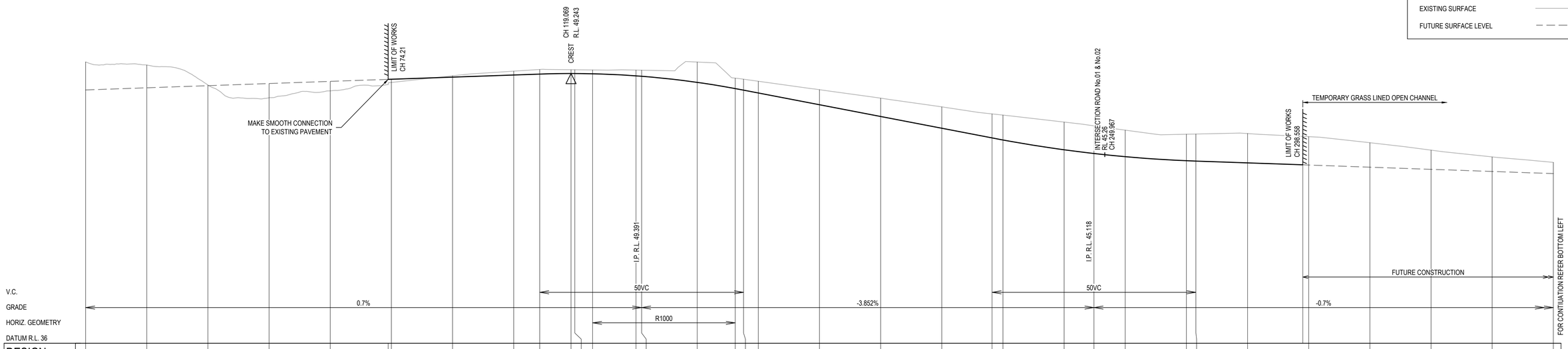
Title: TYPICAL ROAD CROSS SECTIONS & DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	300	A

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-300.dwg

LEGEND

- FINISHED DESIGN SURFACE LEVEL
- EXISTING SURFACE
- FUTURE SURFACE LEVEL



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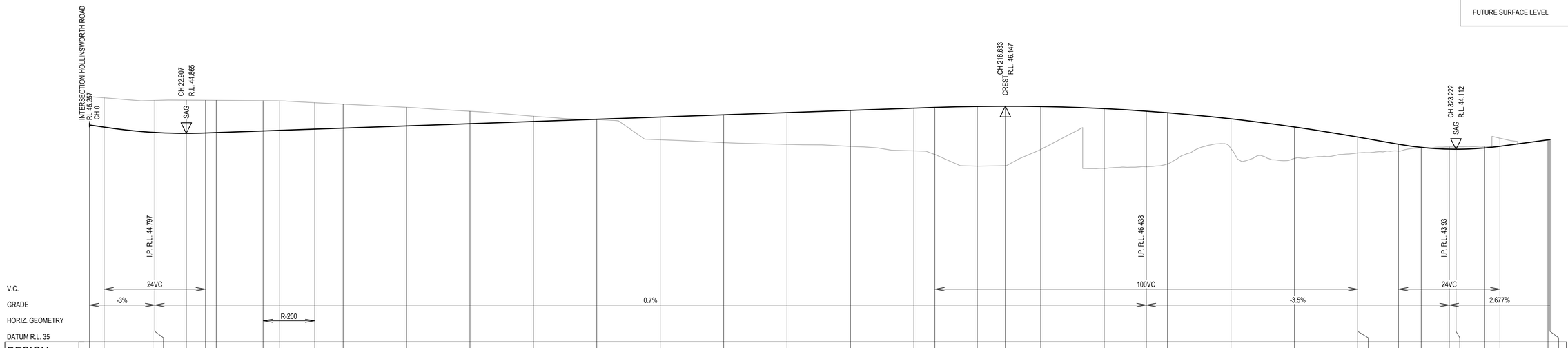
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CH 0
CH 22.907
R.L. 44.865
SAG
CH 216.633
R.L. 46.147
CREST
CH 323.222
R.L. 44.112
SAG
I.P. R.L. 44.797
I.P. R.L. 46.438
I.P. R.L. 43.93
V.C.
24VC
100VC
24VC
GRADE
-3%
0.7%
-3.5%
2.677%
HORIZ. GEOMETRY
R-200
DATUM R.L. 35

| | | |

NORTH

ASTORIA STREET

SOUTH STREET

BASIN A

LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	1/1 0.1760ha
CONTOURS (EXISTING & DESIGN)	10.0 — -20.0-
DRAINAGE (EXISTING, FUTURE & DESIGN)	
PROPOSED / DESIGN CATCHMENT AND BOUNDARY	
BASIN A NOT PART OF THIS APPLICATION. APPROVAL BY BLACKTOWN CITY COUNCIL UNDER SEPERATE S7.11 PROCESS. FINAL APPROVAL EXPECTED PRIOR TO CONSTRUCTION OF STAGE 3.	

A01\I12 0.0361ha
A01\I15 0.0202ha
A01\I14 0.0414ha
A01\I13 0.0372ha
A01\I12 0.0423ha
A01\I11 0.0424ha
A01\I10 0.0429ha
A01\I09 0.0426ha
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A01\I04 0.0841ha
A11\I01 0.0686ha
A15\I01 0.0056ha
A01\I01 0.0450ha
A04\I04 0.2066ha
A04\I01 0.0134ha
A04\I02 0.0387ha
A04\I03 0.0310ha
A03\I01 0.0824ha
A04\I05 0.1341ha
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A04\I07 0.1324ha
A03\I05 0.0559ha
A04\I08 0.1306ha
A19\I01 0.0545ha
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A09\I01 0.0695ha
A02\I01 0.2639ha
A14\I01 0.1289ha
A08\I01 0.1134ha
A07\I01 9.0036ha
A10\I01 0.3772ha
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A10\I04 0.4070ha
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A04\I18 0.0218ha
A04\I17 0.0253ha
A04\I16 0.0233ha
A04\I15 0.0238ha
A04\I14 0.0236ha
A04\I13 0.0249ha
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305\I01 0.1237ha
304\I03 0.0449ha
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303\I02 0.1060ha
308\I01 0.0600ha
303\I03 0.0948ha
306\I01 0.0943ha
303\I04 0.1632ha
B07\I01 0.0083ha
B05\I10 0.0030ha
B05\I09 0.0235ha
B06\I01 0.0103ha
B05\I08 0.0286ha
B05\I06 0.0104ha
B05\I07 0.0322ha
B05\I04 0.0191ha
B05\I05 0.0419ha
B13\I01 0.1928ha
B14\I01 0.1294ha
B15\I01 0.1282ha
B10\I01 0.1286ha
B16\I01 0.1293ha
B18\I01 0.2159ha
B09\I01 0.7441ha
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B19\I02 0.0189ha
B19\I01 0.0318ha
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B05\I21 0.0609ha
302\I01 0.0975ha
307\I03 0.0266ha
307\I02 0.0491ha
307\I01 0.1037ha
C02\I12 0.0453ha
C19\I01 0.0431ha
C14\I06 0.0165ha
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C02\I06 0.0357ha
C02\I08 0.0210ha
C06\I01 0.0515ha
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C14\I05 0.0223ha
C14\I04 0.0046ha
C14\I03 0.0174ha
C14\I02 0.0620ha
C08\I01 0.0284ha
C02\I02 0.0220ha
C06\I04 0.1853ha
C05\I10 0.2043ha
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301\I02 0.1551ha
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C02\I01 0.0287ha
C10\I01 0.1708ha
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C05\I01 0.0496ha
C04\I08 0.0587ha
C01\I09 0.0319ha
C12\I14 0.1187ha
C12\I13 0.0907ha
C01\I06 0.0274ha
C11\I06 0.3224ha
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C03\I01 0.0303ha
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C12\I10 0.0953ha
C12\I09 0.0951ha
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C12\I03 0.0864ha
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C12\I01 0.0886ha
C11\I06 0.3224ha
C11\I05 0.0638ha
C11\I04 0.0690ha
C11\I03 0.0742ha
C11\I02 0.0663ha
C11\I01 0.1362ha
C07\I02 0.1218ha
C07\I01 0.1451ha

ROAD No.01

ROAD No.02

HOLLINSWORTH ROAD

HOLLINSWORTH ROAD

LOT 36
D.P. 262886

FOR CONTINUATION REFER BOTTOM RIGHT

FOR CONTINUATION REFER INSET A

INSET A

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

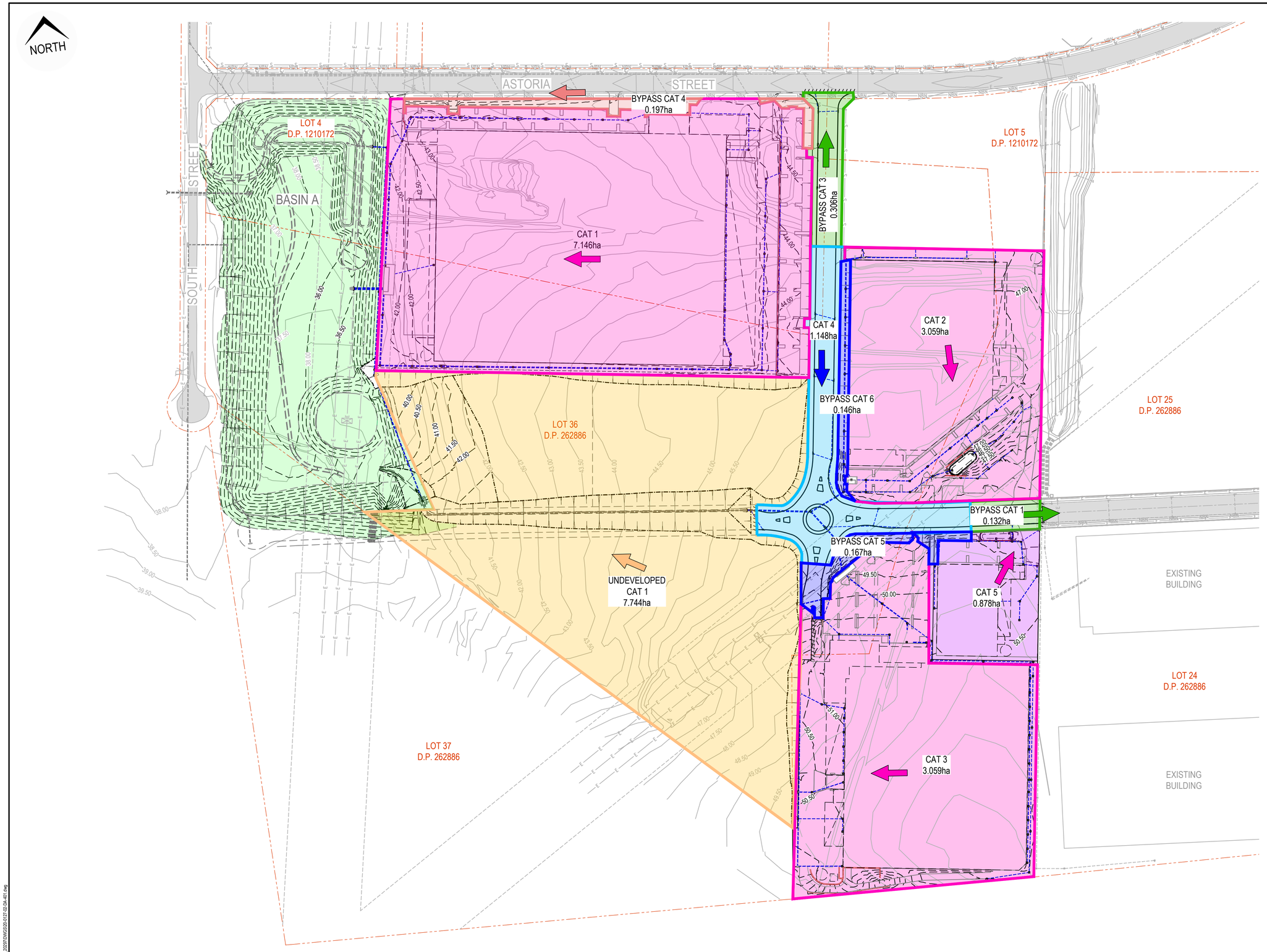
JAS-ANZ SUSTAINABLE CERTIFICATION ISO 9001 WWW.IAS-ANZ.ORG/REGISTER

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: STORMWATER CATCHMENT PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	400	C

Plotted: File Name:D:\12dSolutia\ORION-SYN\0102-DA Development Application_2020\7DWGS\20-0127-02-DA-400.dwg



LEGEND

CATCHMENT NAME, DIRECTION OF FALL & AREA	DESIGN 0.0001ha
CONTOURS (EXISTING & DESIGN)	10.0 — -20.0-
DRAINAGE (EXISTING, FUTURE & DESIGN)	
EXTENT OF UNDEVELOPED CATCHMENT AND BOUNDARY	
EXTENT OF ROAD DRAINAGE CATCHMENT AND BOUNDARY TO BE TREATED IN BASIN A	
EXTENT OF ROAD CATCHMENT BYPASSING ALL TREATMENT DEVICES	
EXTENT OF CATCHMENT DRAINING TO ON LOT TREATMENT DEVICES (TANKS OR RAINGARDENS)	
EXTENT OF LOT CATCHMENT BYPASSING ALL TREATMENT DEVICES	
EXTENT OF CATCHMENT BYPASSING ON LOT TREATMENT DEVICES TO BE TREATED IN BASIN A	
BASIN A NOT PART OF THIS APPLICATION. APPROVAL BY BLACKTOWN CITY COUNCIL UNDER SEPERATE S7.11 PROCESS. FINAL APPROVAL EXPECTED PRIOR TO CONSTRUCTION OF STAGE 3.	

C - CATCHMENTS UPDATED

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
C	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
B	MG	DH	MP	10/09/2020	RETAINING WALL REMOVED
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale: 0 15 30 45 60 75 90 105 120 135 150
SCALE 1:1500 (A1) SCALE 1:3000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: OVERALL STORMWATER CATCHMENT PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	401	C

Plotted: File Name:D:\12dSolata\ORION-SYN01\02-DA Development Application_20297\DWGS\20-0127-02-DA-401.dwg

NORTH

LEGEND (WAREHOUSE 1)

CATCHMENT WAREHOUSE ROOF (WAREHOUSE 1)	AREA: 4.903ha
CATCHMENT DRIVEWAYS (WAREHOUSE 1)	AREA: 1.842ha
CATCHMENT LANDSCAPING (WAREHOUSE 1)	AREA: 0.302ha
CATCHMENT BYPASS ROAD (WAREHOUSE 1)	AREA: 0.028ha
CATCHMENT PATHWAYS (WAREHOUSE 1)	AREA: 0.055ha
CATCHMENT BYPASS LANDSCAPE (WAREHOUSE 1)	AREA: 0.229ha

LEGEND (WAREHOUSE 2)

CATCHMENT WAREHOUSE ROOF (WAREHOUSE 2)	AREA: 1.738ha
CATCHMENT DRIVEWAYS (WAREHOUSE 2)	AREA: 0.850ha
CATCHMENT LANDSCAPING (WAREHOUSE 2)	AREA: 0.368ha
CATCHMENT BYPASS ROAD (WAREHOUSE 2)	AREA: 0.011ha
CATCHMENT PATHWAYS (WAREHOUSE 2)	AREA: 0.106ha
CATCHMENT BYPASS LANDSCAPE (WAREHOUSE 2)	AREA: 0.124ha

LEGEND (WAREHOUSE 4)

CATCHMENT WAREHOUSE ROOF (WAREHOUSE 4)	AREA: 2.685ha
CATCHMENT DRIVEWAYS (WAREHOUSE 4)	AREA: 1.265ha
CATCHMENT LANDSCAPING (WAREHOUSE 4)	AREA: 0.150ha
CATCHMENT BYPASS ROAD (WAREHOUSE 4)	AREA: 0.053ha
CATCHMENT PATHWAYS (WAREHOUSE 4)	AREA: 0.031ha
CATCHMENT BYPASS LANDSCAPE (WAREHOUSE 4)	AREA: 0.215ha

LEGEND (WAREHOUSE 3)

CATCHMENT WAREHOUSE ROOF (WAREHOUSE 3)	AREA: 0.421ha
CATCHMENT DRIVEWAYS (WAREHOUSE 3)	AREA: 0.356ha
CATCHMENT LANDSCAPING (WAREHOUSE 3)	AREA: 0.004ha
CATCHMENT PATHWAYS (WAREHOUSE 3)	AREA: 0.011ha
CATCHMENT BYPASS LANDSCAPE (WAREHOUSE 3)	AREA: 0.059ha

ASTORIA STREET

WAREHOUSE 1

WAREHOUSE 2

WAREHOUSE 3

WAREHOUSE 4

ROAD No.01

ROAD No.02

HOLLINSWORTH ROAD

HOLLINSWORTH ROAD

LOT 36
D.P. 262886

FOR CONTINUATION REFER BOTTOM RIGHT

FOR CONTINUATION REFER INSET A

INSET A

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 10 20 30 40 50 60 70 80 90 100
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: MUSIC CATCHMENT PLAN

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	402	A

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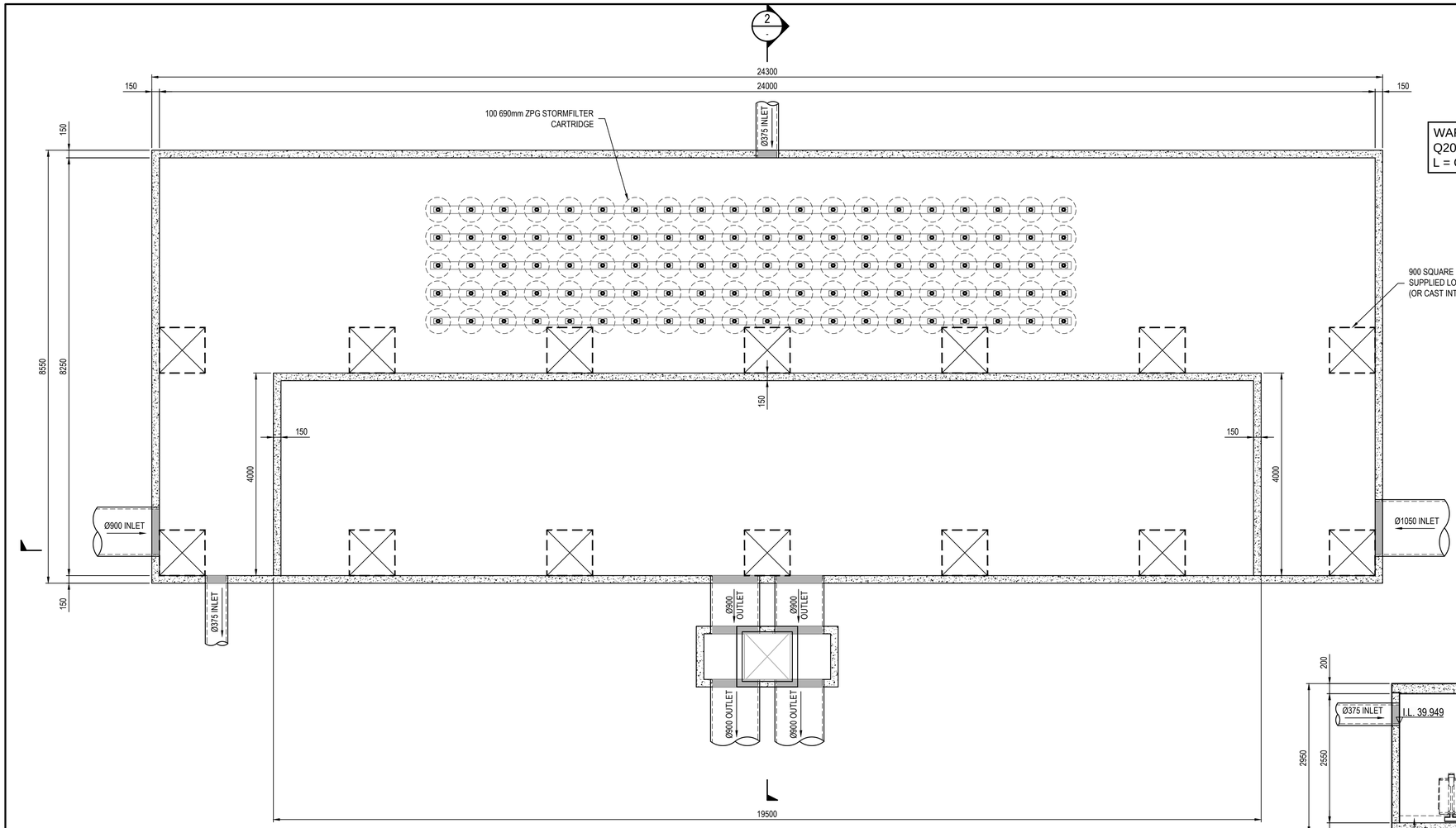
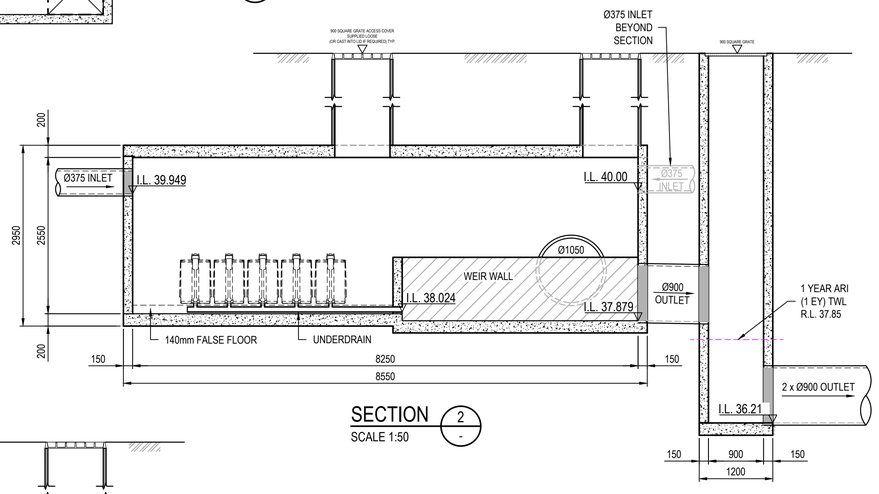
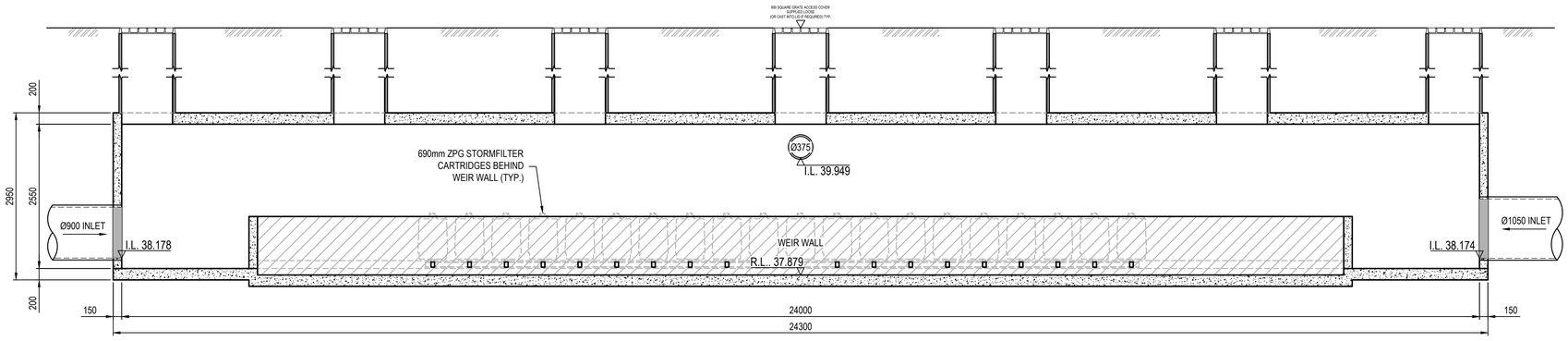


WAREHOUSE 1 WEIR CALCULATION
Q20 = 2.75m^3/s
L = Q x 10 = 2.75 x 10 = 27.5m

STORMFILTER CARTRIDGE (CAST IN-SITU VAULT 100 690mm ZPG CARTRIDGE) PLAN - WAREHOUSE 1
SCALE 1:50



SECTION 2
SCALE 1:50



SECTION 1
SCALE 1:50

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For: sydney business park

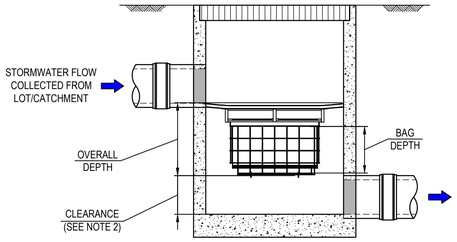
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: WATER QUALITY DETAILS SHEET 01 OF 03

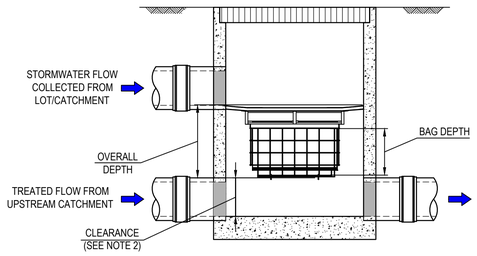
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	405	B

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-405.dwg



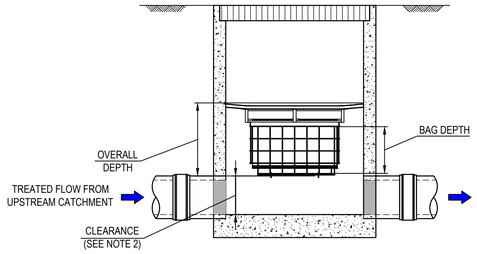
TYPE 1 OCEANGUARD CONFIGURATION

SCALE 1:20



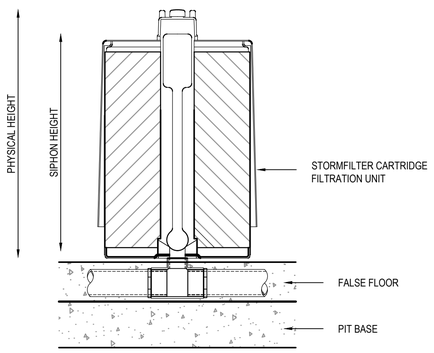
TYPE 2 OCEANGUARD CONFIGURATION

SCALE 1:20



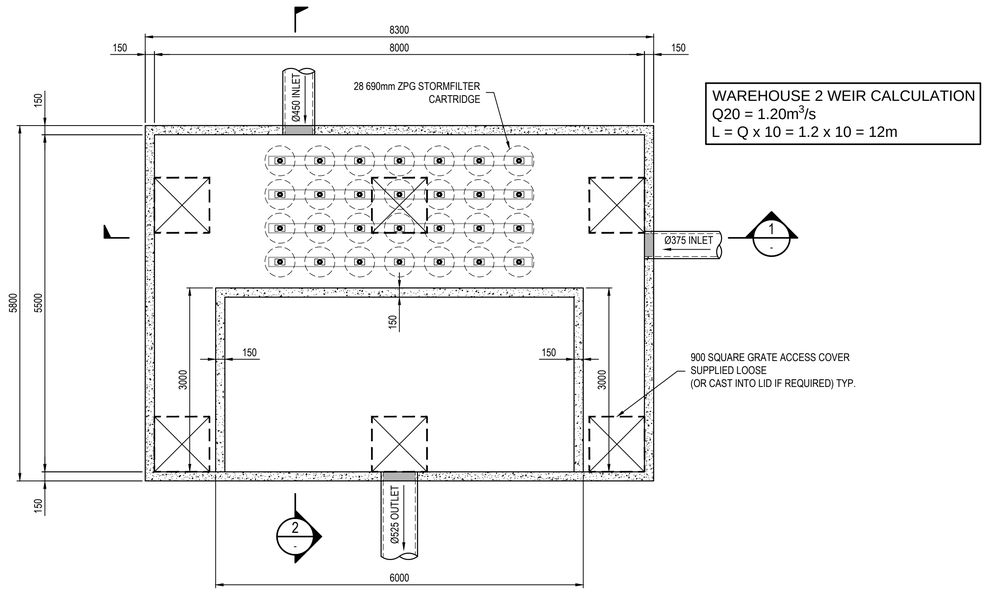
TYPE 3 OCEANGUARD CONFIGURATION

SCALE 1:20



STORMFILTER CARTRIDGE DETAIL

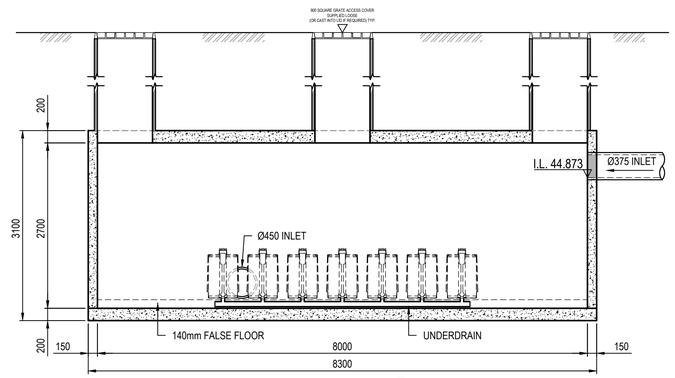
SCALE: N.T.S.



WAREHOUSE 2 WEIR CALCULATION
Q20 = 1.20m^3/s
L = Q x 10 = 1.2 x 10 = 12m

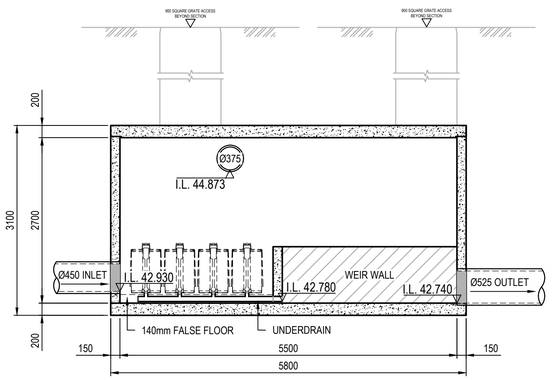
STORMFILTER CARTRIDGE (CAST IN-SITU VAULT 28 690mm ZPG CARTRIDGE) PLAN - WAREHOUSE 2

SCALE 1:50



SECTION 1 / -

SCALE 1:50



SECTION 2 / -

SCALE 1:50

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)

For: sydney business park

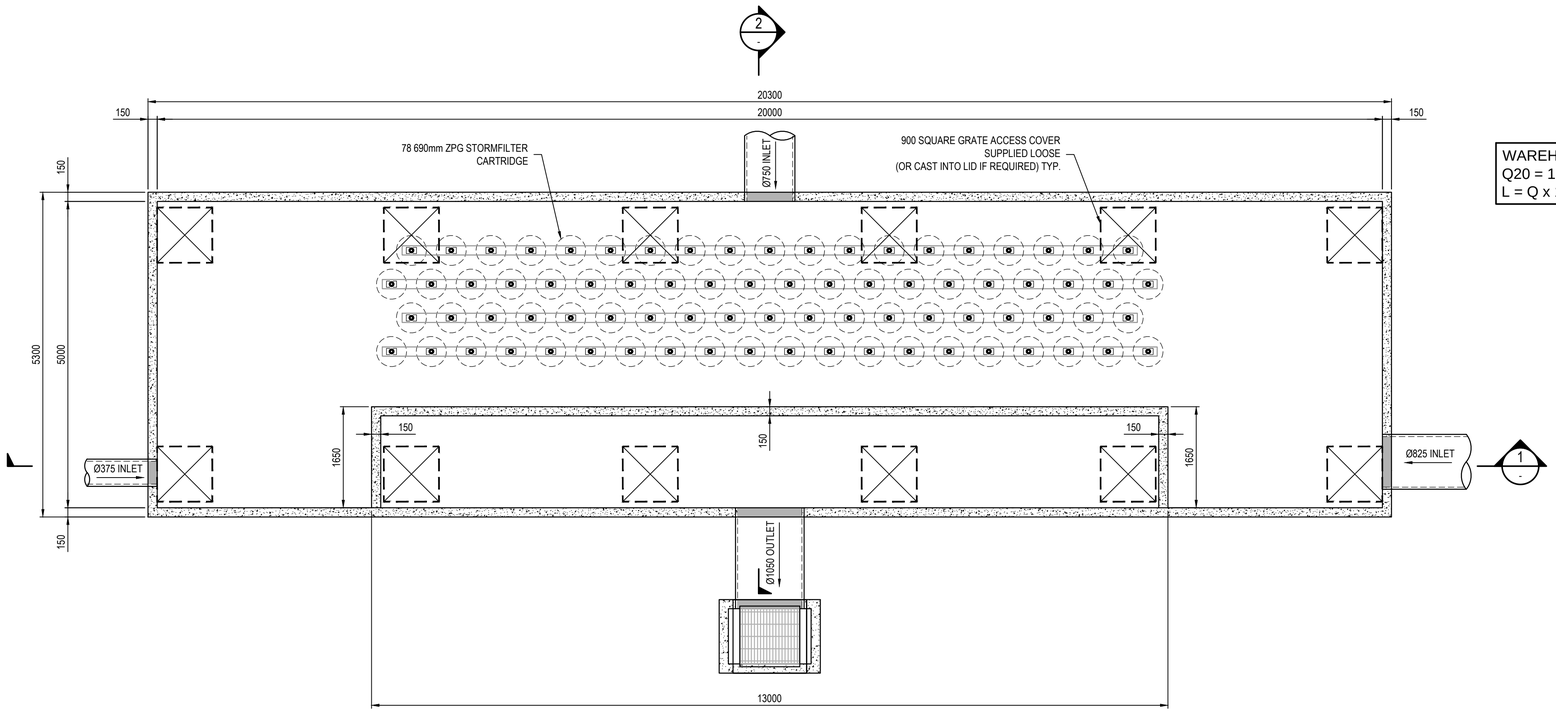
By: Orion Consulting
JAS-ANZ SUSTAINABLE CERTIFICATION ISO 9001 WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: WATER QUALITY DETAILS
SHEET 02 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	406	B

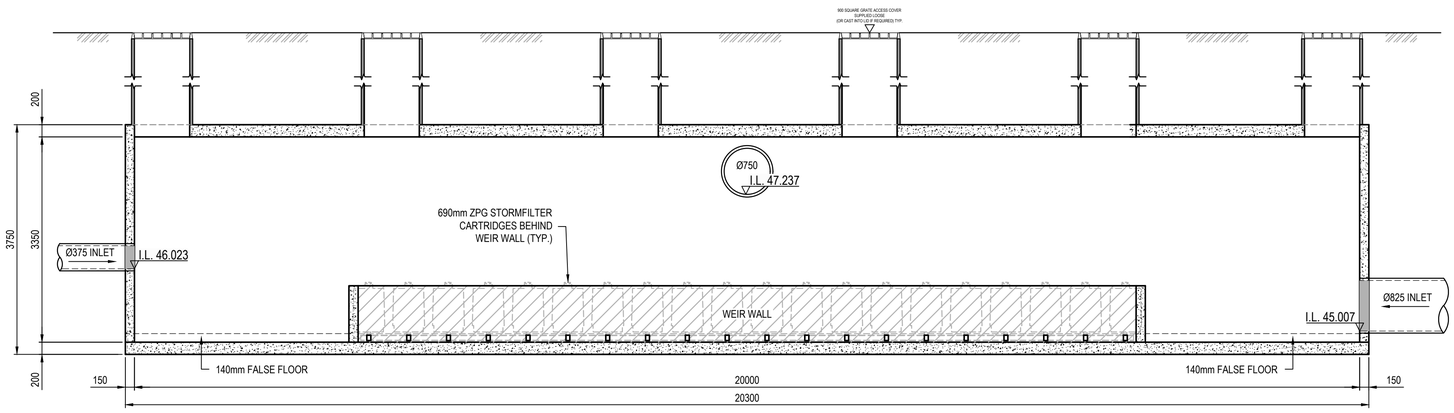
Plotted: File Name:D:\12c85\data\ORION-SYN\20102.0A Development Application_2020\10\WS\S20_0127_02_0A_406.dwg



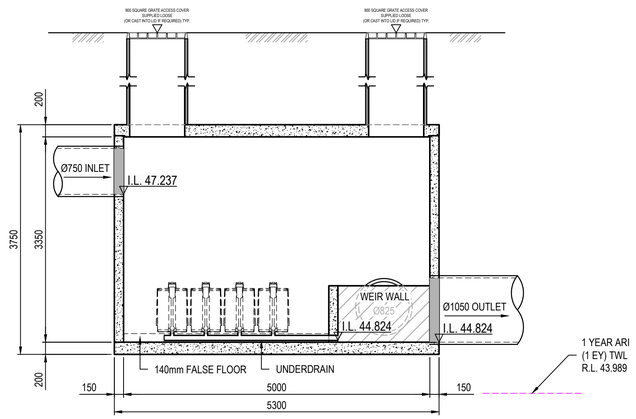
WAREHOUSE 4 WEIR CALCULATION
Q20 = 1.61m^3/s
L = Q x 10 = 1.61 x 10 = 16.1m

STORMFILTER CARTRIDGE (CAST IN-SITU VAULT 78 690mm ZPG CARTRIDGE) PLAN - WAREHOUSE 4

SCALE 1:50



SECTION 1
SCALE 1:50



SECTION 2
SCALE 1:50

ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0
SCALE 1:50 (A1) SCALE 1:100 (A3)

For: sydney business park

By: Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
WATER QUALITY DETAILS
SHEET 03 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	407	B

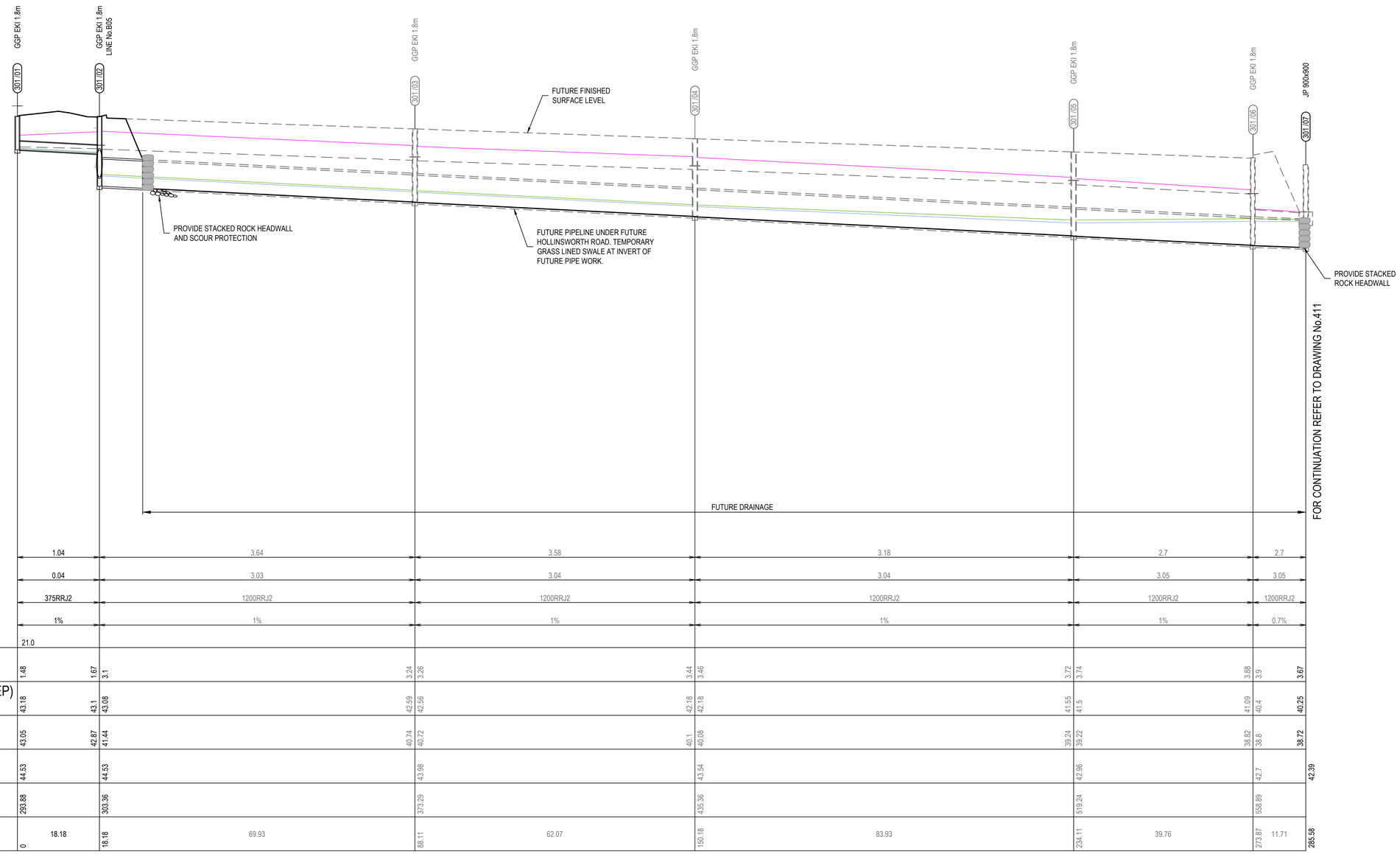
Plotted: File Name:D:\12dS\data\ORION-SYN01\02-DA Development Application_20297\DWGS\20-0127-02-DA-407.dwg

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

PROPOSED PIPE	
FINISHED DESIGN SURFACE LEVEL	
FUTURE PIT & PIPES	
6 MONTH HGL LEVEL	
1 YEAR HGL LEVEL	
100 YEAR HGL LEVEL	
1:20 YR ARI YEAR HGL LEVEL	

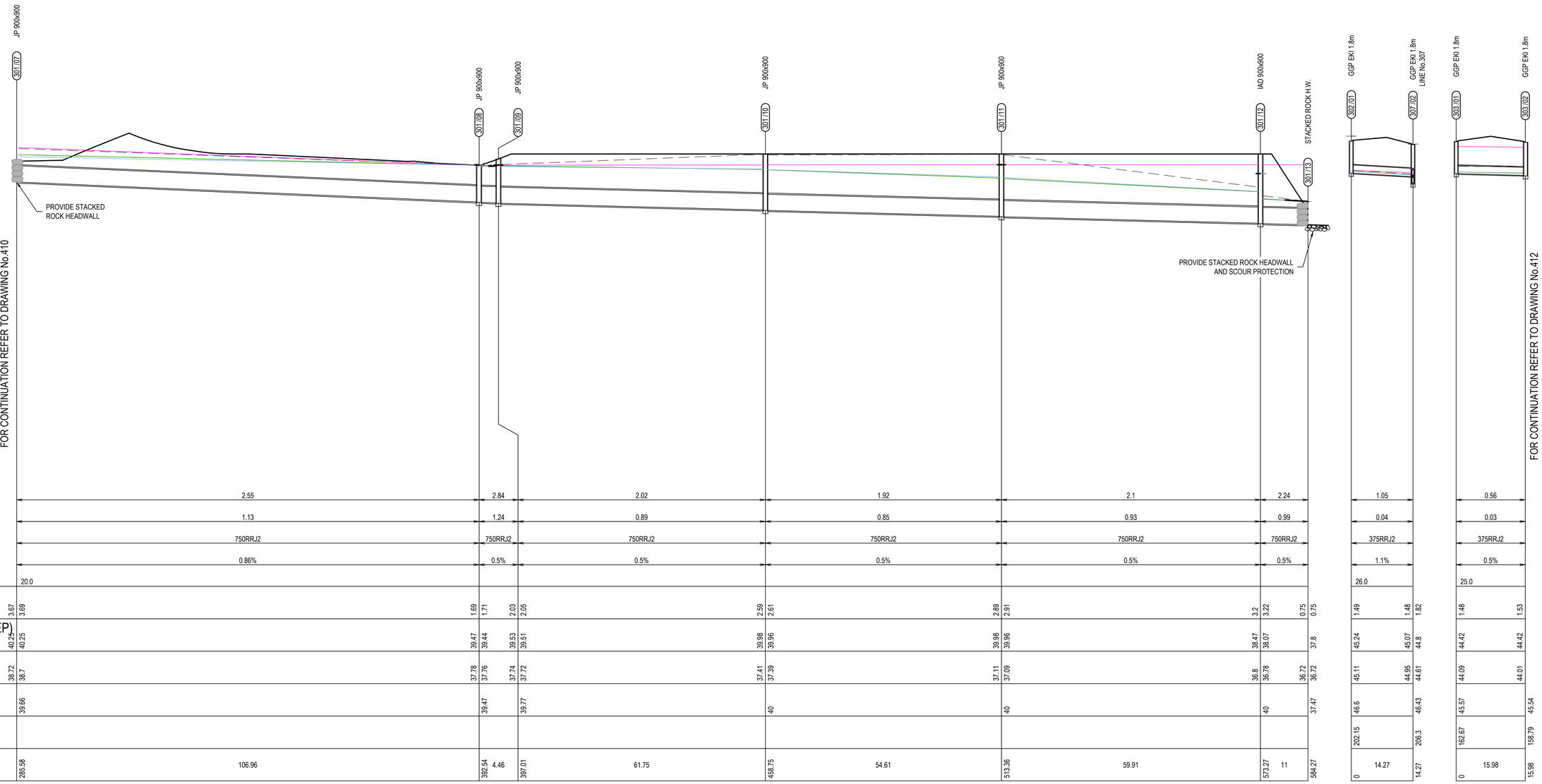


| | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



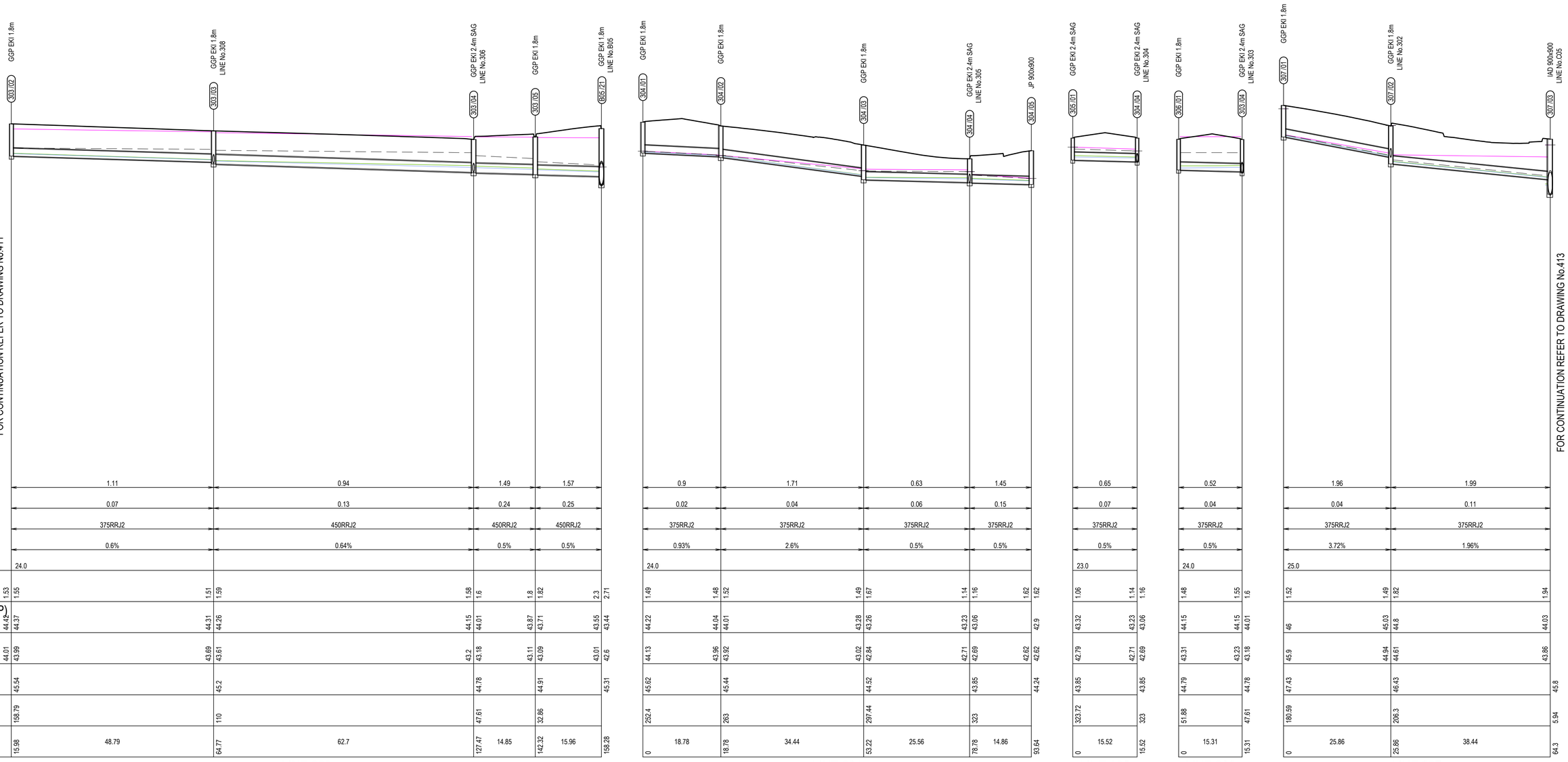
| | | |

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL

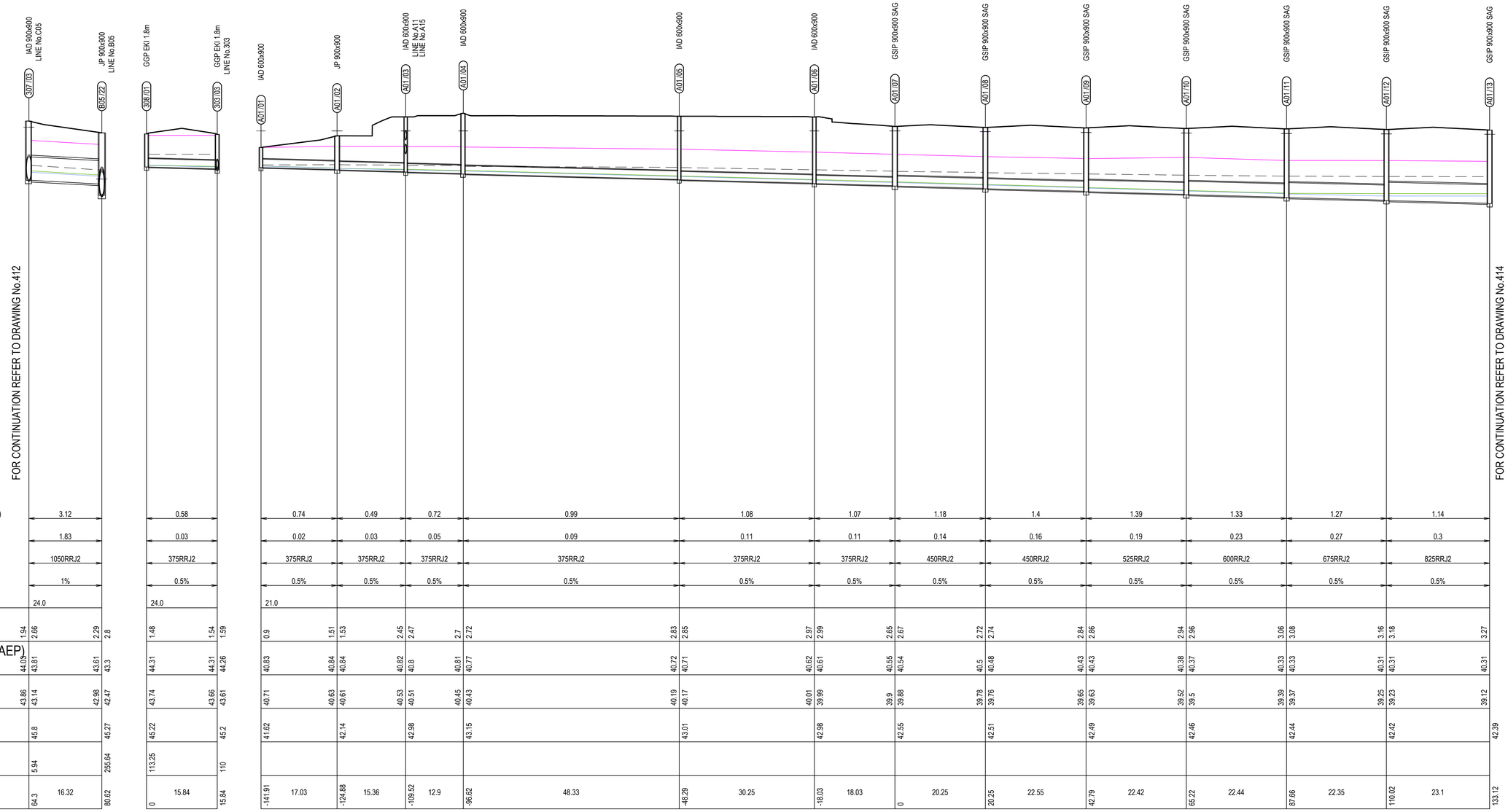


| | LINE 303 | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL

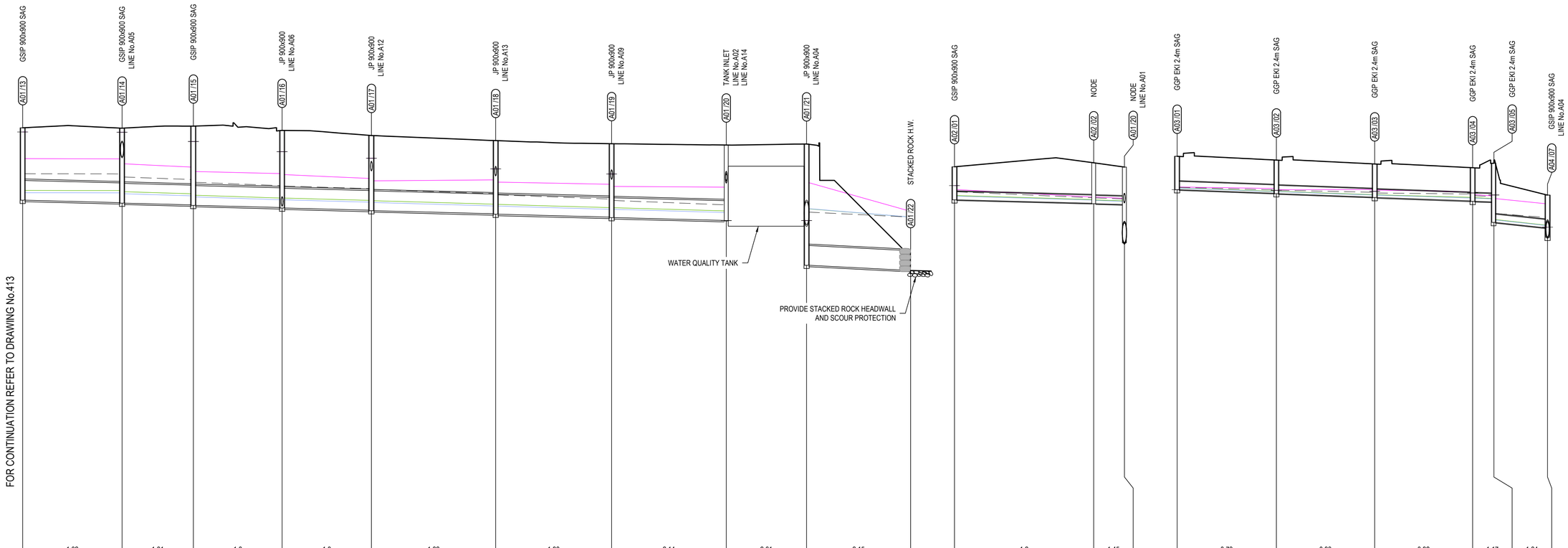


| | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



LINE A01

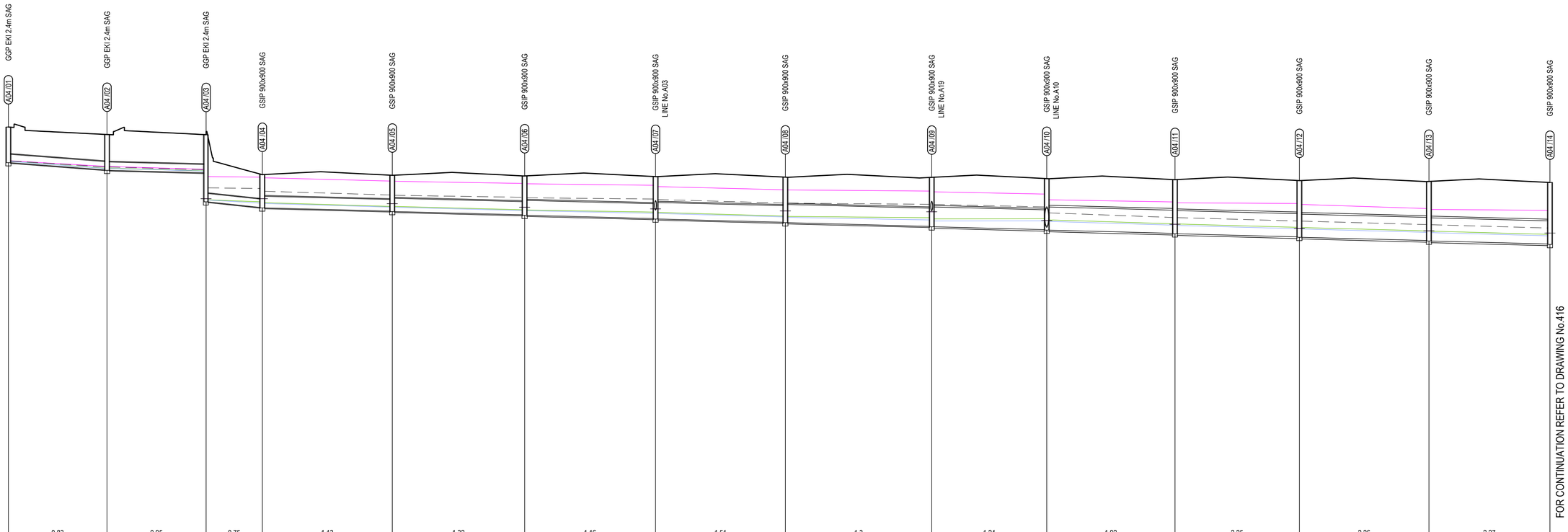
| | | |

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

PROPOSED PIPE	———
FINISHED DESIGN SURFACE LEVEL	———
FUTURE PIT & PIPES	– – – –
6 MONTH HGL LEVEL	———
1 YEAR HGL LEVEL	———
100 YEAR HGL LEVEL	———
1:20 YR ARI YEAR HGL LEVEL	– – – –

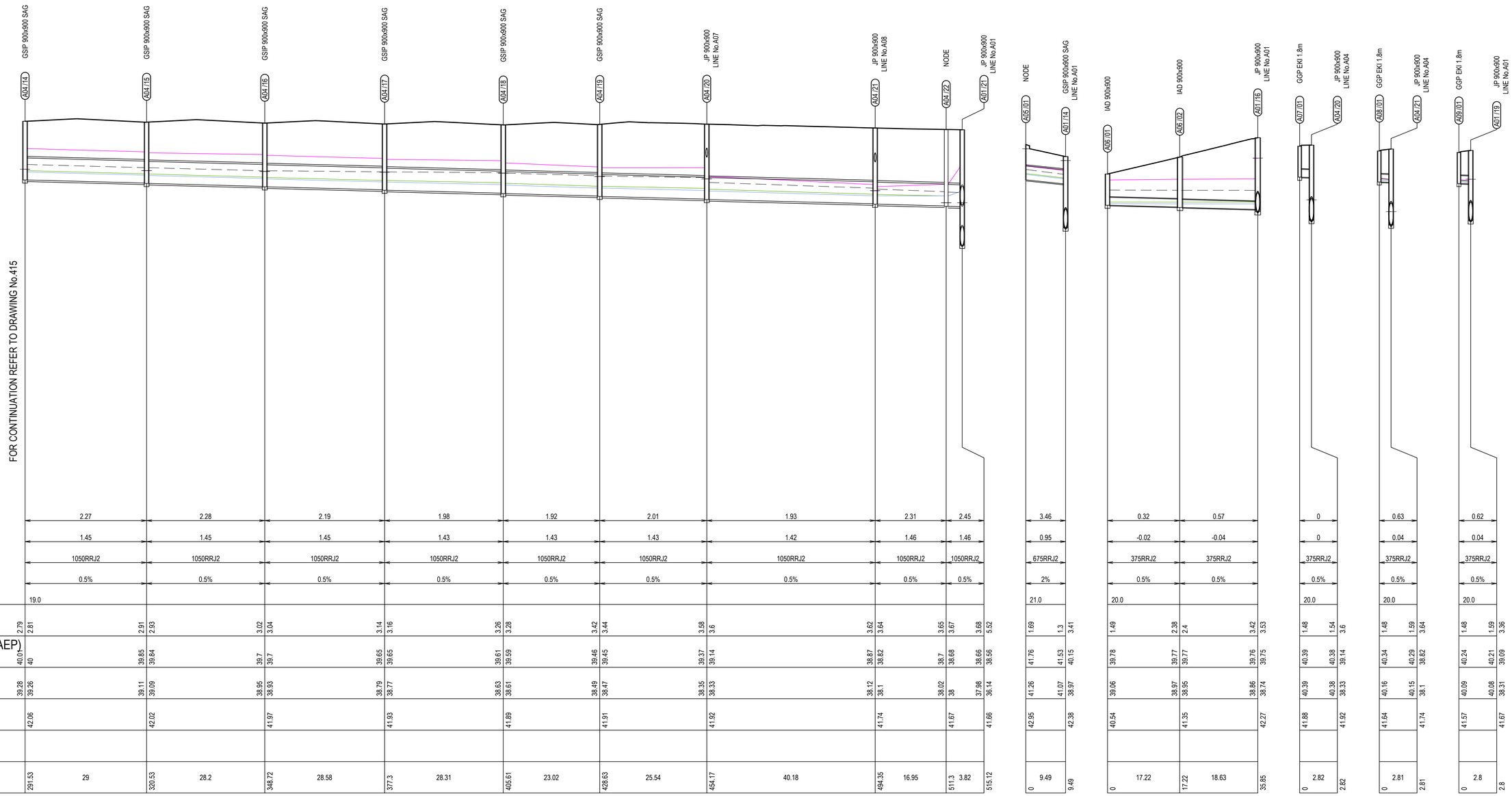


| | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

JAS-ANZ SUSTAINABLE ASSESSMENT ISO 9001 WWW.JAS-ANZ.ORG/REGISTER

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTIONS SHEET 07 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	416	B

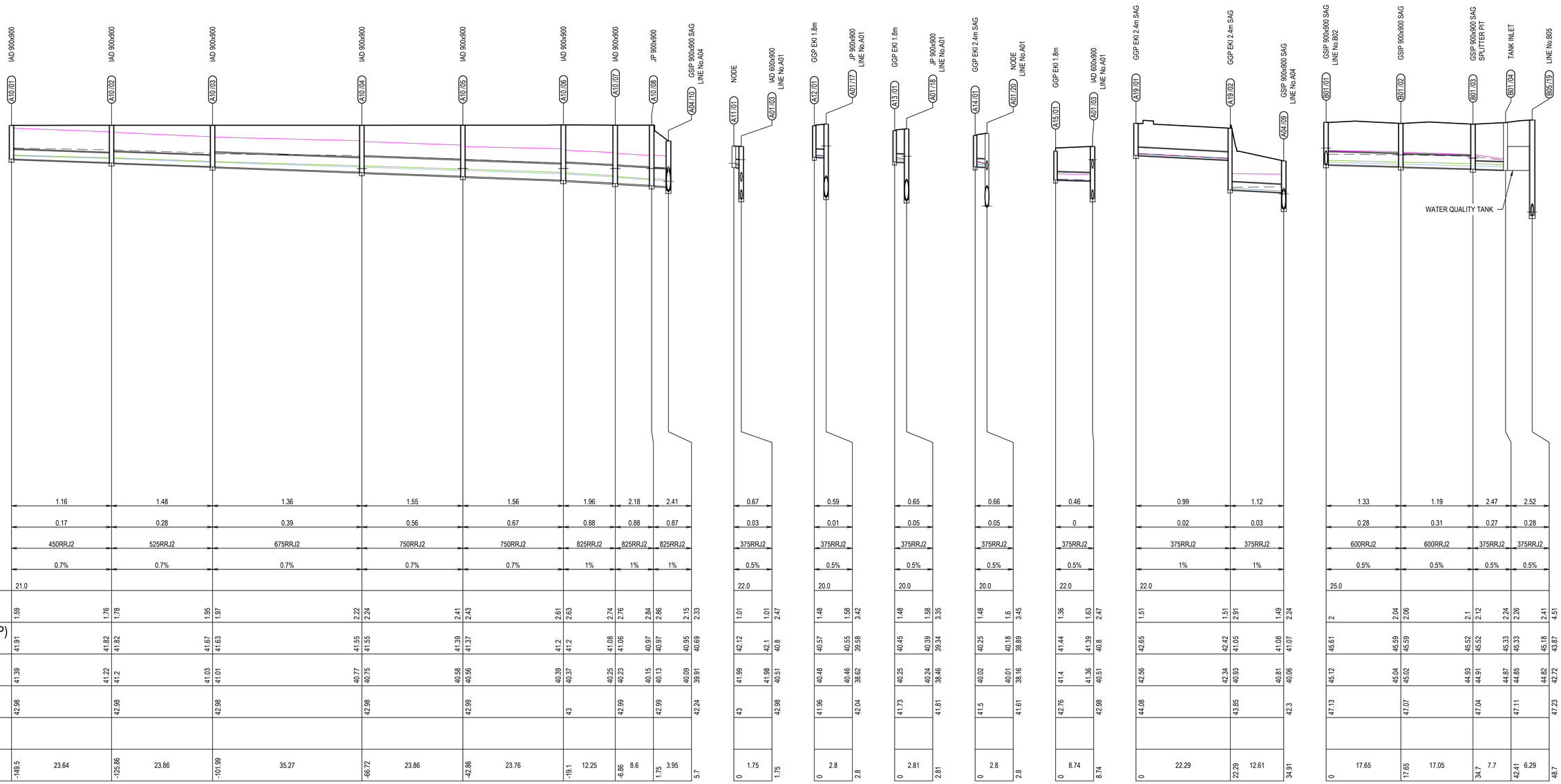
Plotted: File Name:D:\12xSData\ORION-SYN01\02-DA Development Application_2020\70WGS20-0127-02-DA-416.dwg

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

PROPOSED PIPE	———
FINISHED DESIGN SURFACE LEVEL	———
FUTURE PIT & PIPES	- - - - -
6 MONTH HGL LEVEL	———
1 YEAR HGL LEVEL	———
100 YEAR HGL LEVEL	———
1:20 YR ARI YEAR HGL LEVEL	- - - - -

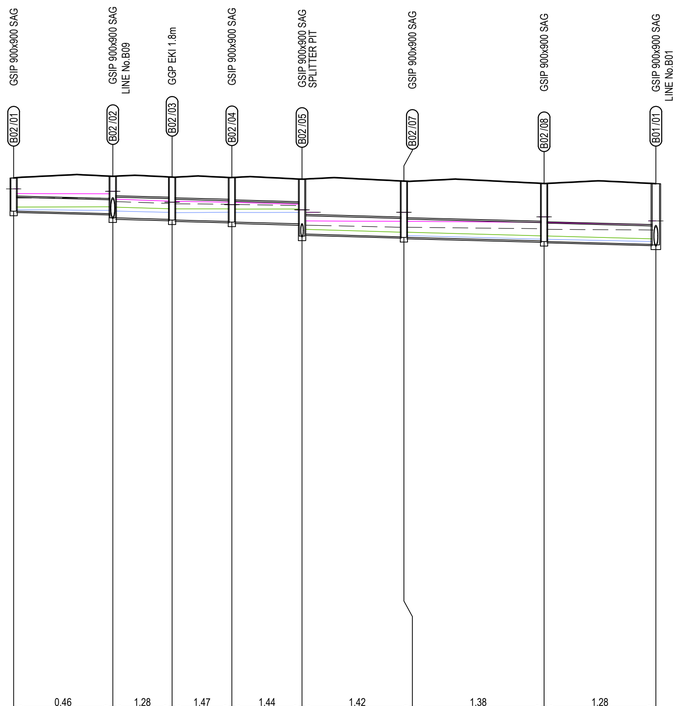


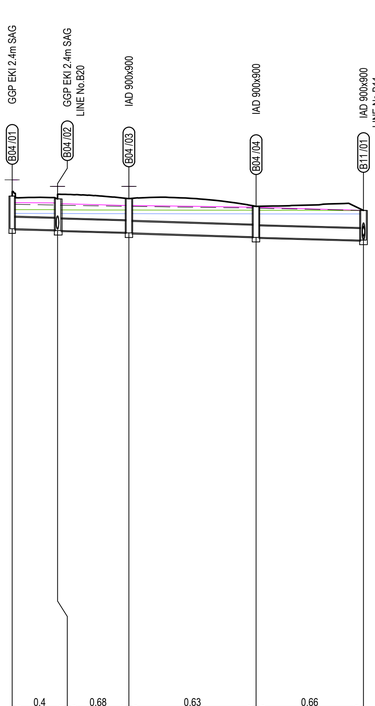
| | LINE A10 | | |

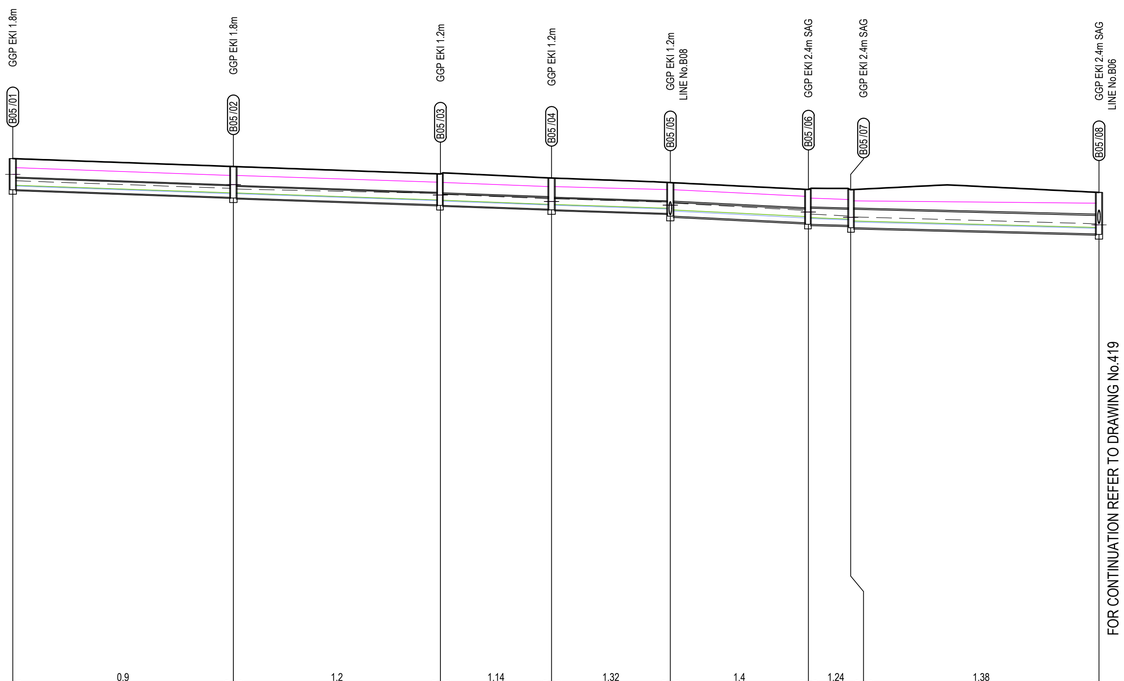
B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL







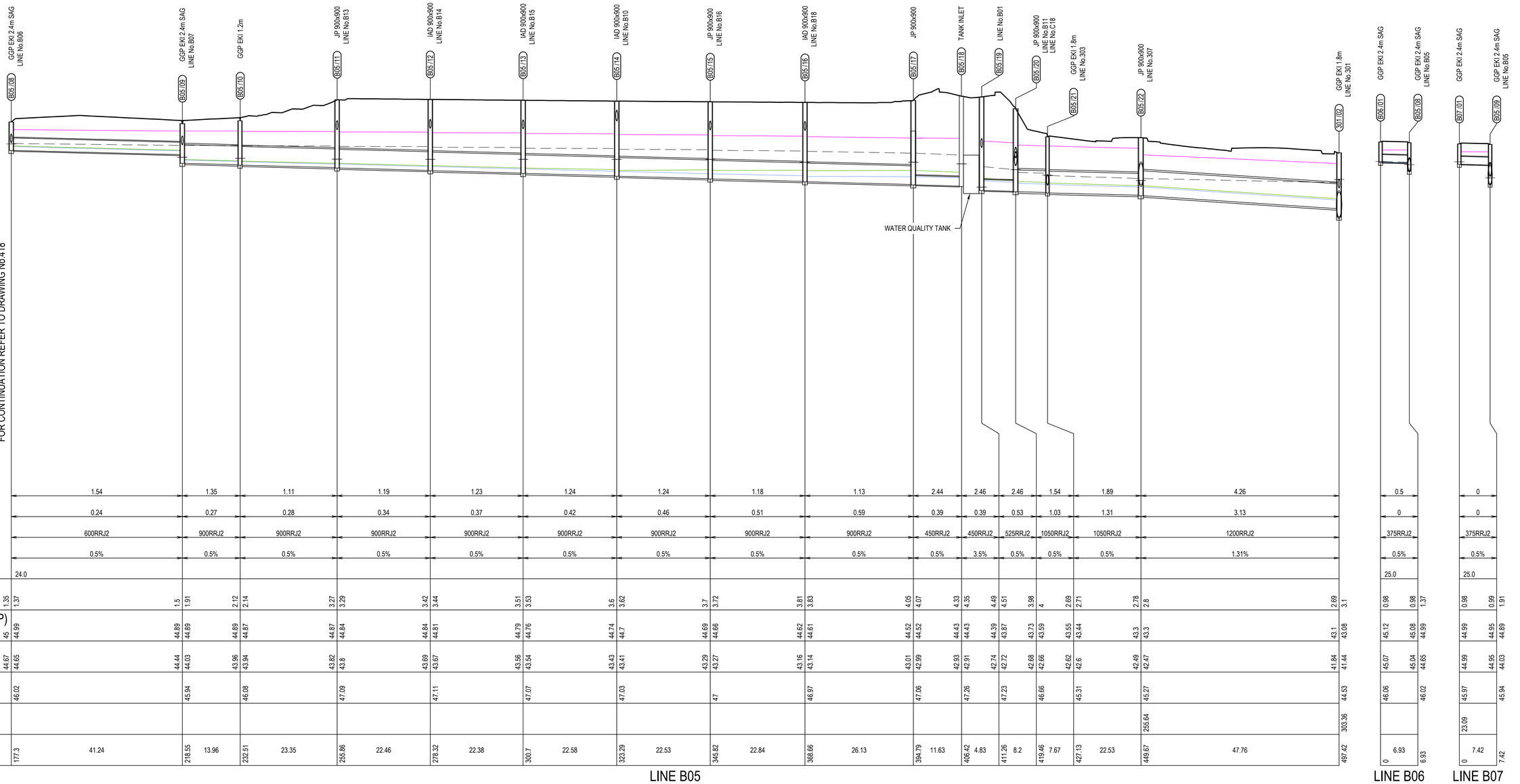
| | | |

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



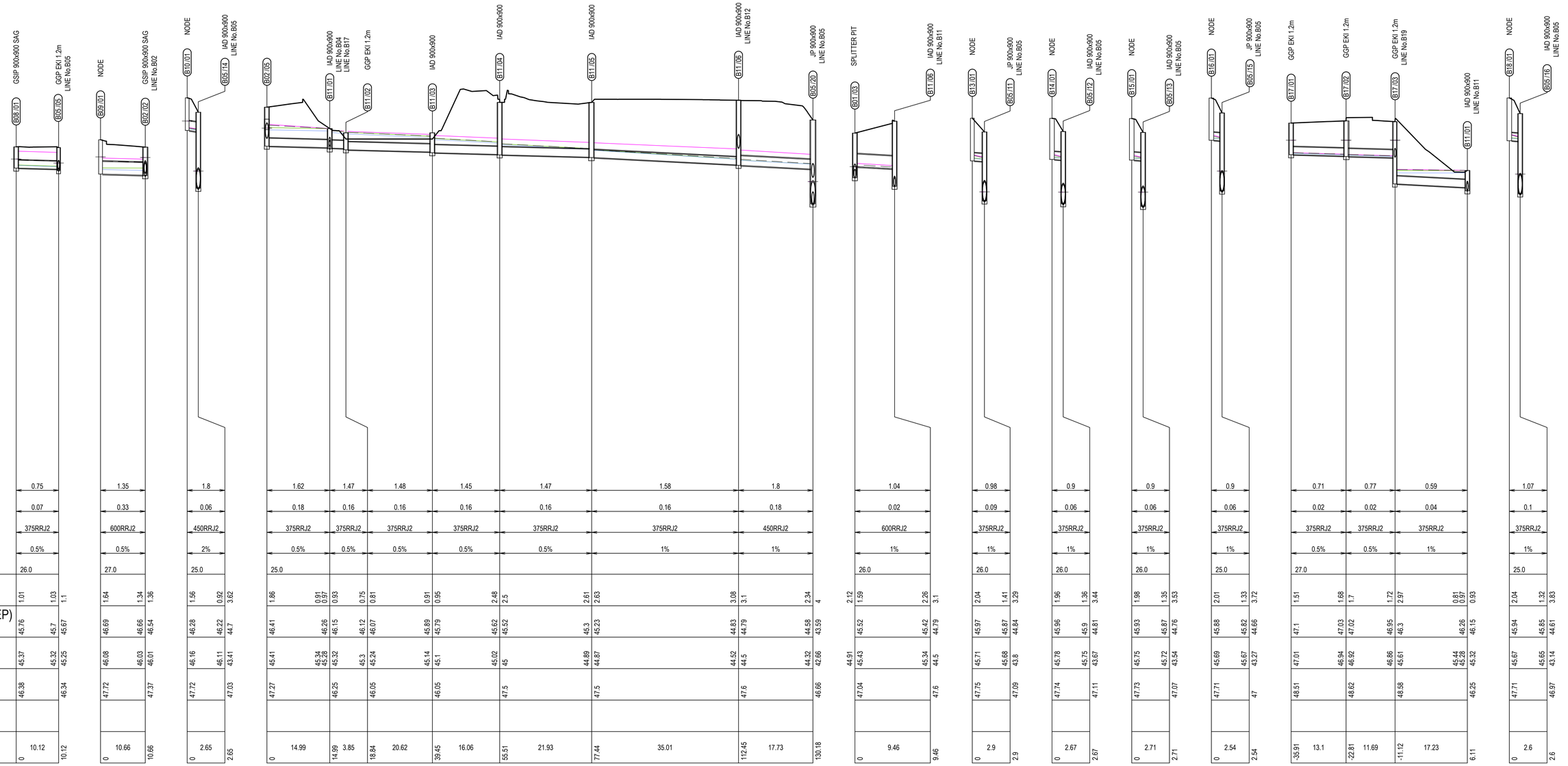
| | | |

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



| | LINE B08 | | | LINE B09 | | | LINE B10 | | | LINE B11 | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL

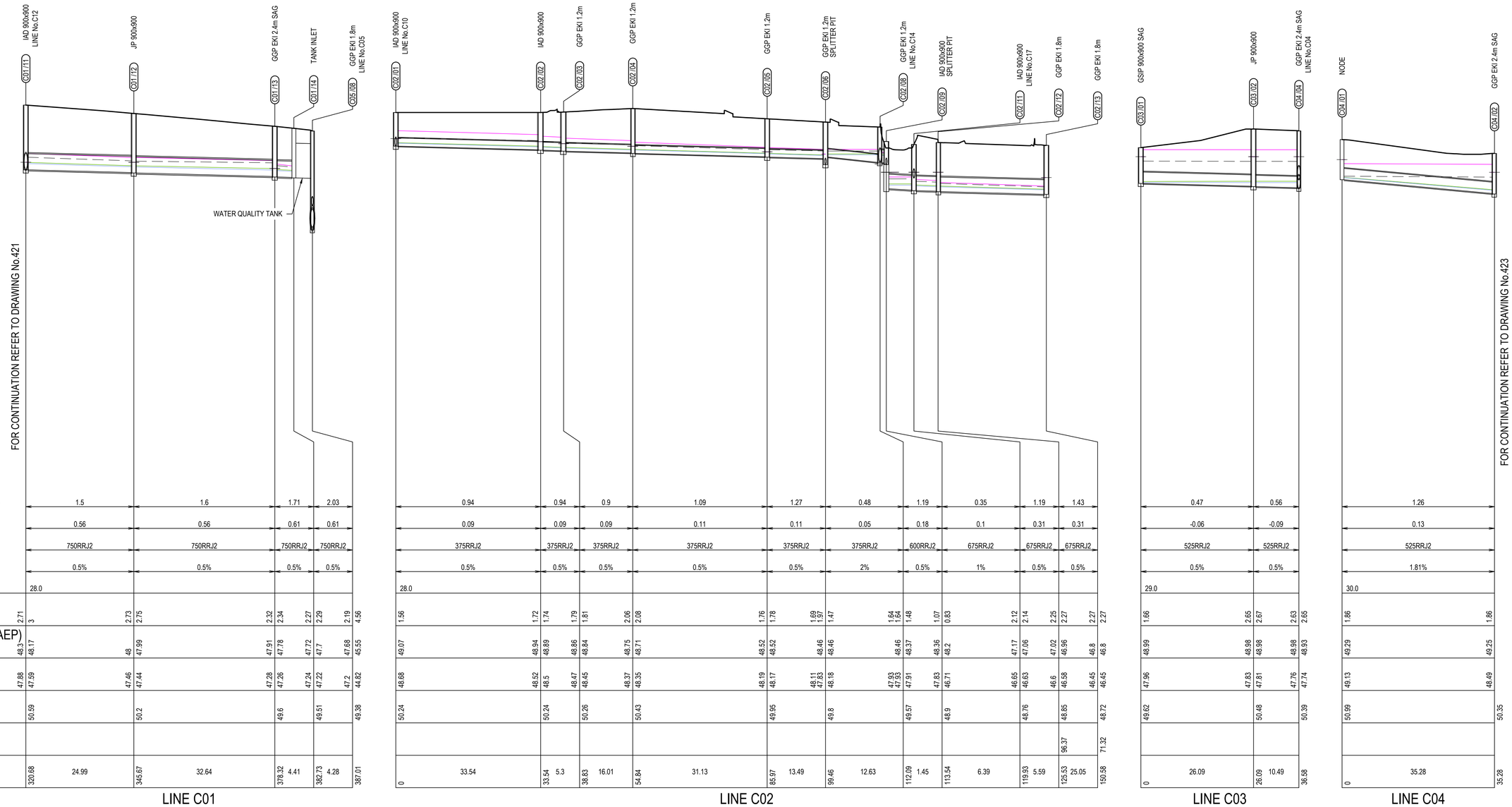


| | | |

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



	LINE C01					LINE C02										LINE C03		LINE C04	
PIPE MAX. VELOCITY (m/s)		1.5	1.6	1.71	2.03	0.94	0.94	0.9	1.09	1.27	0.48	1.19	0.35	1.19	1.43	0.47	0.56	1.26	
DISCHARGE (cu.m/s)		0.56	0.56	0.61	0.61	0.09	0.09	0.09	0.11	0.11	0.05	0.18	0.1	0.31	0.31	-0.06	-0.09	0.13	
PIPE SIZE (mm) & CLASS		750RRJ2	750RRJ2	750RRJ2	750RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2	600RRJ2	675RRJ2	675RRJ2	675RRJ2	525RRJ2	525RRJ2	525RRJ2	
DESIGN GRADE		0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	2%	0.5%	1%	0.5%	0.5%	0.5%	0.5%	1.81%	
DATUM R.L		28.0				28.0										29.0		30.0	
DEPTH TO INVERT	2.71	3	2.73	2.75	2.32	2.34	2.27	2.29	2.19	4.56	1.56	1.72	1.74	1.79	1.81	2.06	2.08	1.76	1.78	1.69 1.69	1.47	1.64 1.64	1.48	1.07	0.83	2.12	2.14	2.25	2.27	2.27	2.27	1.66	2.65	2.67	2.63	2.65	1.66	1.86	1.86	
20YR ARI (5% AEP) H.G.L. LEVEL	48.3	48.17	48	47.99	47.91	47.78	47.72	47.7	47.68	45.55	49.07	48.94	48.89	48.86	48.84	48.75	48.71	48.52	48.52	48.46	48.46	48.46	48.37	48.36	48.2	47.17	47.06	47.02	46.96	46.8	46.8	48.99	48.98	48.98	48.95	48.93	49.29	49.25	
INVERT LEVEL	47.88	47.59	47.46	47.44	47.28	47.26	47.24	47.22	47.2	44.82	48.68	48.52	48.5	48.47	48.45	48.37	48.35	48.19	48.17	48.11 47.93	48.18	47.83 47.93	47.91	47.83	46.71	46.65	46.63	46.6	46.58	46.45	46.45	47.96	47.83	47.81	47.76	47.74	49.13	48.49		
SURFACE LEVEL		50.59	50.2	49.6	49.51	50.24	50.24	50.26	50.43	49.95	49.8	49.57	48.9	48.76	48.85	48.72	49.62	48.48	50.39	50.99	50.35		
ROAD CHAINAGE															96.37	71.32													
PIPE CHAINAGE		320.68	24.99	345.67	32.64	378.32	4.41	382.73	4.28	387.01	0	33.54	33.54	5.3	38.83	16.01	54.84	31.13	85.97	13.49	99.46	12.63	112.09	1.45	113.54	6.39	119.93	5.59	125.53	25.05	150.58	0	26.09	26.09	10.49	36.58	0	35.28	35.28	

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

SUSTAINABLE AUSTRALIA ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTIONS SHEET 13 OF 17

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	422	B

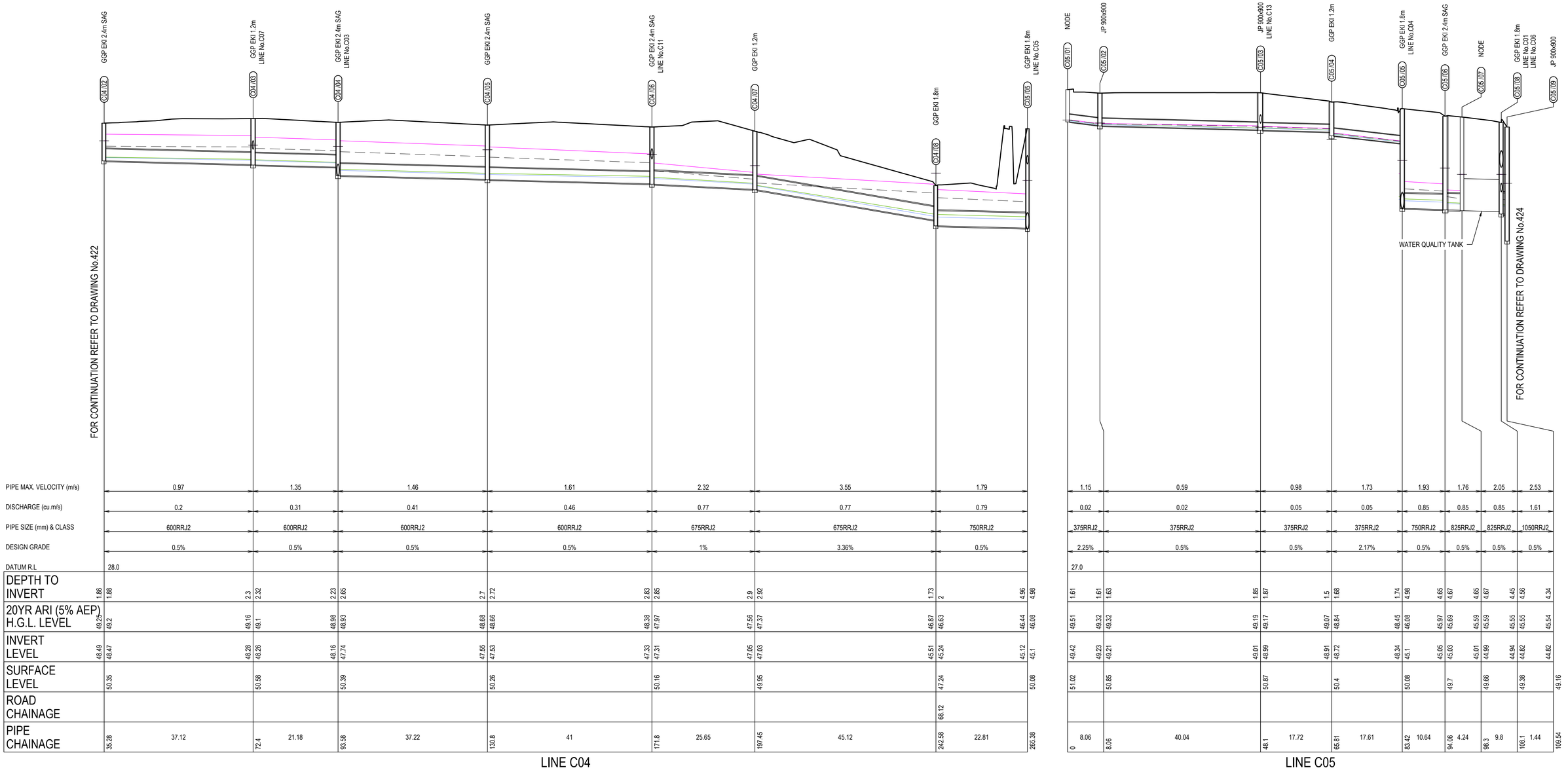
Plotted: File Name:D:\12d\Data\ORION SYN\0102-DA Development Application, 2029\DWGS\20-0127-02-DA-422.dwg

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



LINE C04

LINE C05

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTIONS SHEET 14 OF 17

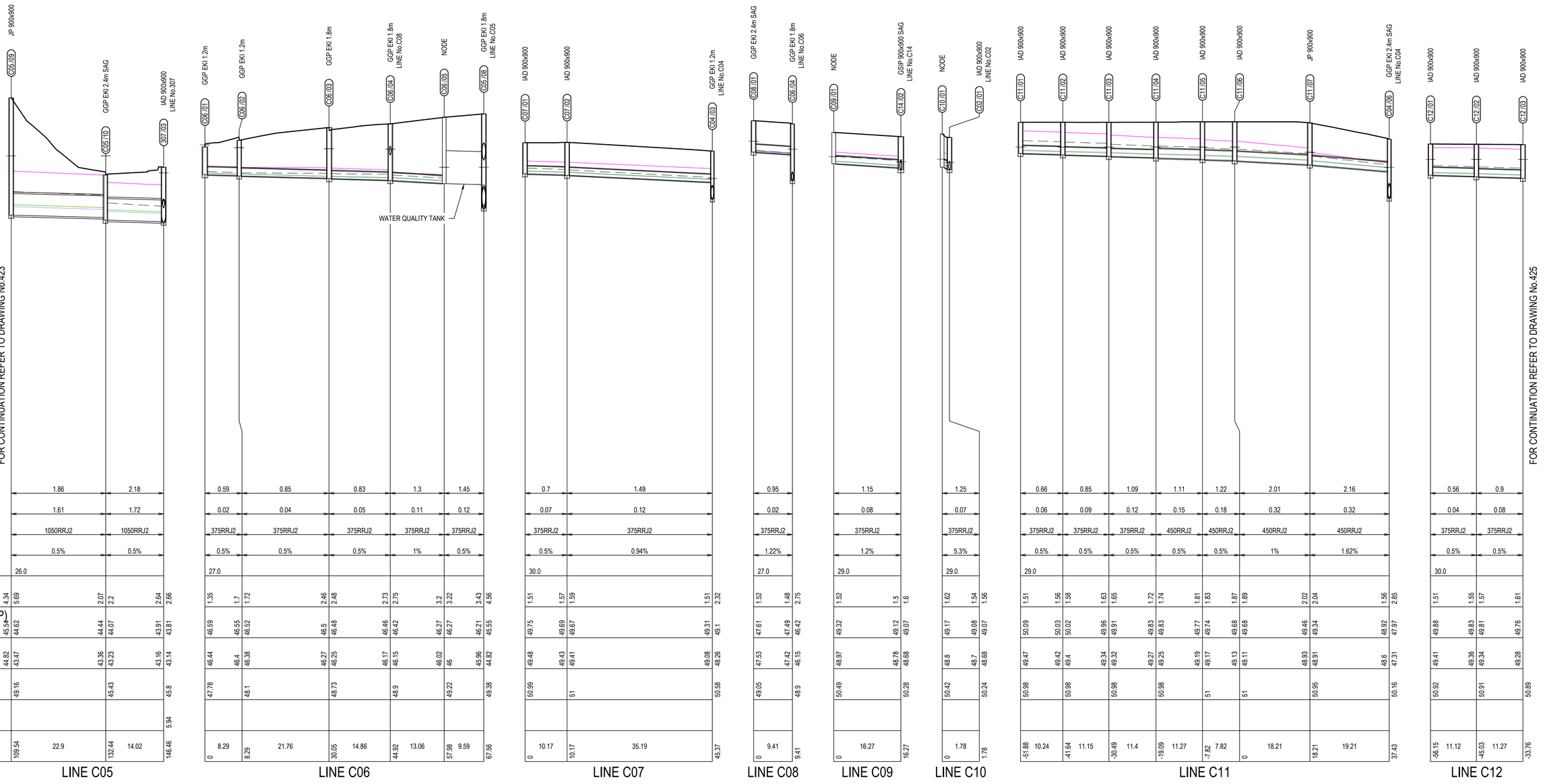
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	423	B

Plotted: File Name:D:\12d\Data\ORION-SYN\0102-DA Development Application_2020\DWGS\20-0127-02-DA-423.dwg

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



	LINE C05					LINE C06										LINE C07					LINE C08			LINE C09			LINE C10			LINE C11												LINE C12			
PIPE MAX. VELOCITY (m/s)		1.86		2.18			0.59	0.85	0.83	1.3	1.45					0.7	1.49				0.95			1.15			1.25			0.66	0.85	1.09	1.11	1.22	2.01	2.16					0.56	0.9			
DISCHARGE (cu.m/s)		1.61		1.72			0.02	0.04	0.05	0.11	0.12					0.07	0.12				0.02			0.08			0.07			0.06	0.09	0.12	0.15	0.18	0.32	0.32					0.04	0.08			
PIPE SIZE (mm) & CLASS		1050RRJ2		1050RRJ2			375RRJ2	375RRJ2	375RRJ2	375RRJ2	375RRJ2					375RRJ2	375RRJ2				375RRJ2			375RRJ2			375RRJ2			375RRJ2	375RRJ2	375RRJ2	450RRJ2	450RRJ2	450RRJ2	450RRJ2					375RRJ2	375RRJ2			
DESIGN GRADE		0.5%		0.5%			0.5%	0.5%	0.5%	1%	0.5%					0.5%	0.94%				1.22%			1.2%			5.3%			0.5%	0.5%	0.5%	0.5%	0.5%	1%	1.62%					0.5%	0.5%			
DATUM R.L		26.0					27.0									30.0					27.0			29.0			29.0			29.0											30.0				
DEPTH TO INVERT	4.34	5.69		2.2	2.64	2.66	1.35	1.7	1.72	2.46	2.48	2.73	2.75	3.2	3.22	3.43	4.56	1.51	1.57	1.59	1.51	2.32	1.52	1.48	2.75	1.52	1.5	1.6	1.62	1.54	1.56	1.51	1.56	1.58	1.63	1.65	1.72	1.74	1.81	1.83	1.87	1.89	2.02	2.04	1.56	2.85	1.51	1.55	1.57	1.61	
20YR ARI (5% AEP) H.G.L. LEVEL	45.54	44.62		44.07	43.91	43.81	46.59	46.55	46.52	46.5	46.48	46.46	46.42	46.27	46.27	46.21	45.55	49.75	49.69	49.67	49.31	49.1	47.61	47.49	46.42	49.32	49.12	49.07	49.17	49.08	49.07	50.09	50.03	50.02	49.96	49.91	49.83	49.83	49.77	49.74	49.68	49.68	49.46	49.34	48.92	47.97	49.88	49.83	49.81	49.76	
INVERT LEVEL	44.82	43.47		43.23	43.16	43.14	46.44	46.4	46.38	46.27	46.25	46.17	46.15	46.02	46	45.96	44.82	49.48	49.43	49.41	49.08	48.26	47.53	47.42	46.15	48.97	48.78	48.68	48.8	48.7	48.68	49.47	49.42	49.4	49.34	49.32	49.27	49.25	49.19	49.17	49.13	49.11	48.93	48.91	48.6	47.31	49.41	49.36	49.34	49.28	
SURFACE LEVEL	49.16			45.43		45.8	47.78		48.1		48.73		48.9		49.22	49.38		50.99		51		50.58	49.05		48.9	50.49		50.28	50.42		50.24	50.98		50.98		50.98		50.98		51		51		50.95		50.16		50.92		50.91		50.89	
ROAD CHAINAGE						5.94																																												
PIPE CHAINAGE	109.54	22.9		132.44	14.02	146.46	0	8.29	8.29	21.76	30.05	14.86	44.92	13.06	57.98	9.59	67.56	0	10.17	10.17	35.19	45.37	0	9.41	9.41	0	16.27	16.27	0	1.78	1.78	-51.88	10.24	-41.64	11.15	-30.49	11.4	-19.09	11.27	-7.82	7.82	0	18.21	18.21	19.21	37.43	-56.15	11.12	-45.03	11.27	-33.76	

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTIONS SHEET 15 OF 17

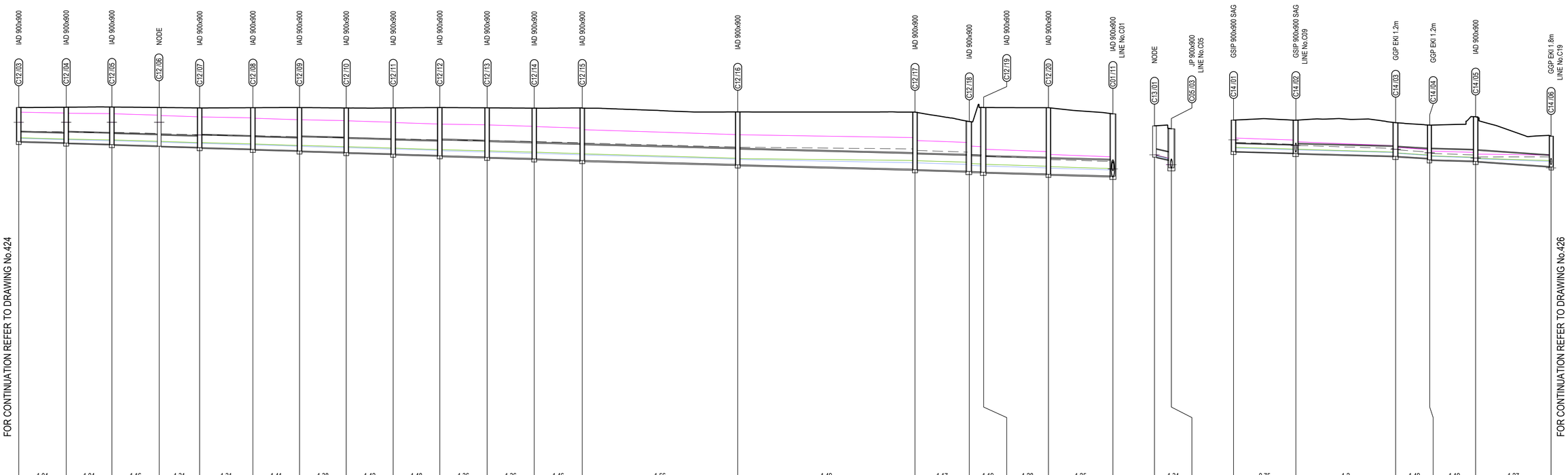
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	424	B

Plotted: File Name:D:\12\Estate\ORION_SYN\0100-DA Development Application - 2020\7\DWGS\20-0127-02-DA-424.dwg

B - DRAINAGE LONG SECTIONS UPDATED

LEGEND

- PROPOSED PIPE
- FINISHED DESIGN SURFACE LEVEL
- FUTURE PIT & PIPES
- 6 MONTH HGL LEVEL
- 1 YEAR HGL LEVEL
- 100 YEAR HGL LEVEL
- 1:20 YR ARI YEAR HGL LEVEL



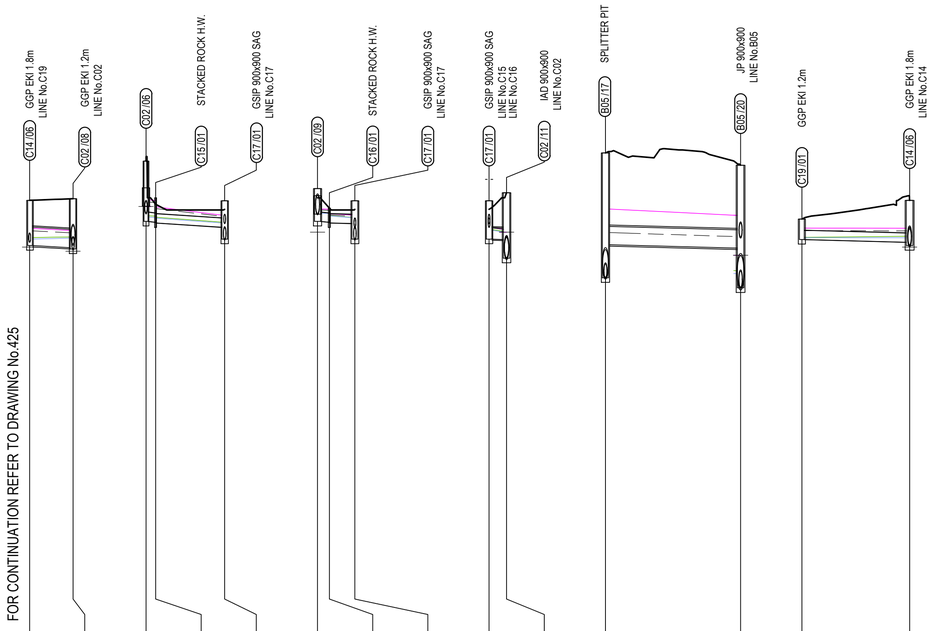
| | | |

- DRAINAGE LONG SECTIONS UPDATED

B

LEGEND

PROPOSED PIPE	
FINISHED DESIGN SURFACE LEVEL	
FUTURE PIT & PIPES	
6 MONTH HGL LEVEL	
1 YEAR HGL LEVEL	
100 YEAR HGL LEVEL	
1:20 YR ARI YEAR HGL LEVEL	



	LINE C14					LINE C15					LINE C16					LINE C17					LINE C18					LINE C19				
PIPE MAX. VELOCITY (m/s)		0.83					1.67		1.67			1.15		1.23			1.95					1.72					0.58			
DISCHARGE (cu.m/s)		0.2					0.12		0.12			0.08		0.08			0.21					0.33					0.02			
PIPE SIZE (mm) & CLASS		600RRJ2					300UPVC		300UPVC			300UPVC		300UPVC			375RRJ2					600RRJ2					300UPVC			
DESIGN GRADE		1%					1.9%		1.26%			1.55%		0.5%			0.5%					0.5%					0.5%			
DATUM R.L		29.0					28.0					28.0					28.0					25.0					29.0			
DEPTH TO INVERT	1.46	1.48	1.6	1.64	1.48		1.97	0.8	0.82	0.86	1.25	1.07	0.46	0.48	0.74	1.25	1.25	1.53	2.14	4.07	2.98		2.7	4		0.67		1.37	1.48	
20YR ARI (5% AEP) H.G.L. LEVEL	48.52	48.52		48.46	48.37		48.46	48.44	48.25	47.99	47.62	48.2	48.19	48.04	47.99	47.62	47.62	47.57	47.06		44.52		44.33	43.59		48.52		48.52	48.52	
INVERT LEVEL	48.06	48.04	47.97	47.93	48.09		47.83	47.8	47.78	47.64	47.25	47.83	47.8	47.78	47.76	47.25	47.25	47.24	46.63	42.99	44.06		43.96	42.66		48.24		48.15	48.04	
SURFACE LEVEL		49.52			49.57		49.8		48.6		48.5	48.9		48.26		48.5	48.5		48.76		47.06			46.66		48.9			49.52	
ROAD CHAINAGE																														
PIPE CHAINAGE		76.32	7.09		83.41		0	1.58	1.58	11.26	12.84	0	1.94	1.94	4.15	6.1	0	2.85	2.85		0	22.06		22.06		0	17.59		17.59	

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Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

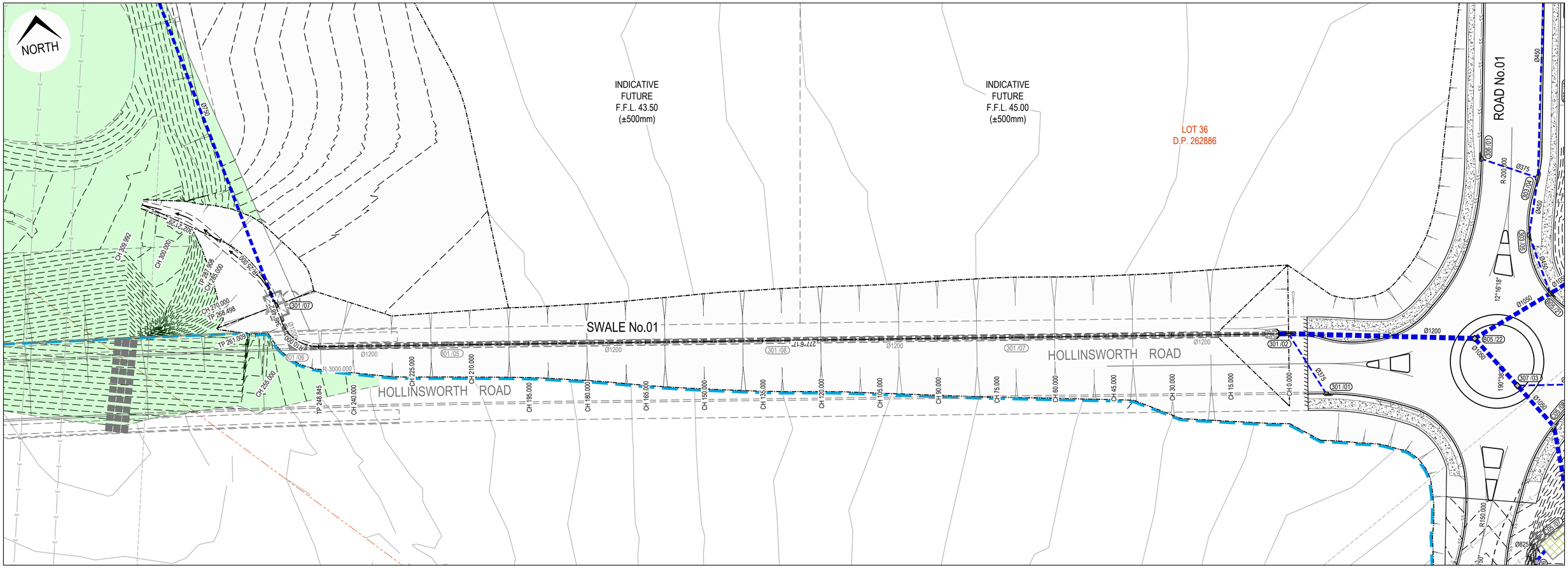
By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: DRAINAGE LONG SECTIONS SHEET 17 OF 17

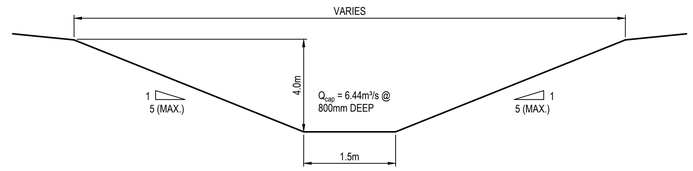
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	426	B

Plotted: File Name:D:\12dS\data\ORION-SYN\0102-DA Development Application_20297\DWGS\20-0127-02-DA-426.dwg



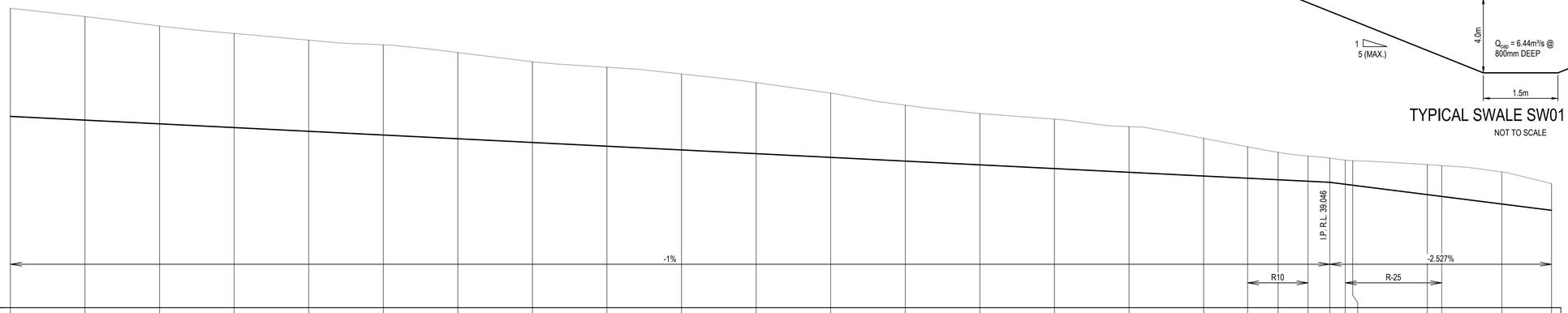
SWALE No.01 PLAN

SCALE 1:500 (H)



TYPICAL SWALE SW01 SECTION

NOT TO SCALE



DESIGN LEVEL	41.7		41.55		41.4		41.25		41.1		40.95		40.8		40.65		40.5		40.35		40.2		40.05		39.9		39.75		39.6		39.45
EXISTING LEVEL	46.054		45.72		45.336		45.04		44.771		44.583		44.27		43.898		43.678		43.41		43.058		42.641		42.154		41.815		41.593		41.288
CHAINAGE	0	15		30		45		60		75		90		105		120		135		150		165		180		195		210		225

DESIGN LEVEL	39.3		39.212		39.15		39.09		39.046		38.968		38.93		38.55		38.477		38.171		37.919										
EXISTING LEVEL	40.819		40.478		40.252		40.104		40.02		39.941		39.916		39.76		39.721		39.462		38.995										
CHAINAGE	240		248.845		255		261.009		265.388		268.498		270		285		287.908		300		309.992										

LONGITUDINAL SECTION - SWALE No.01

SCALE 1:500 (H)

SCALE 1:100 (V)

ISSUED FOR **DEVELOPMENT APPLICATION**

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

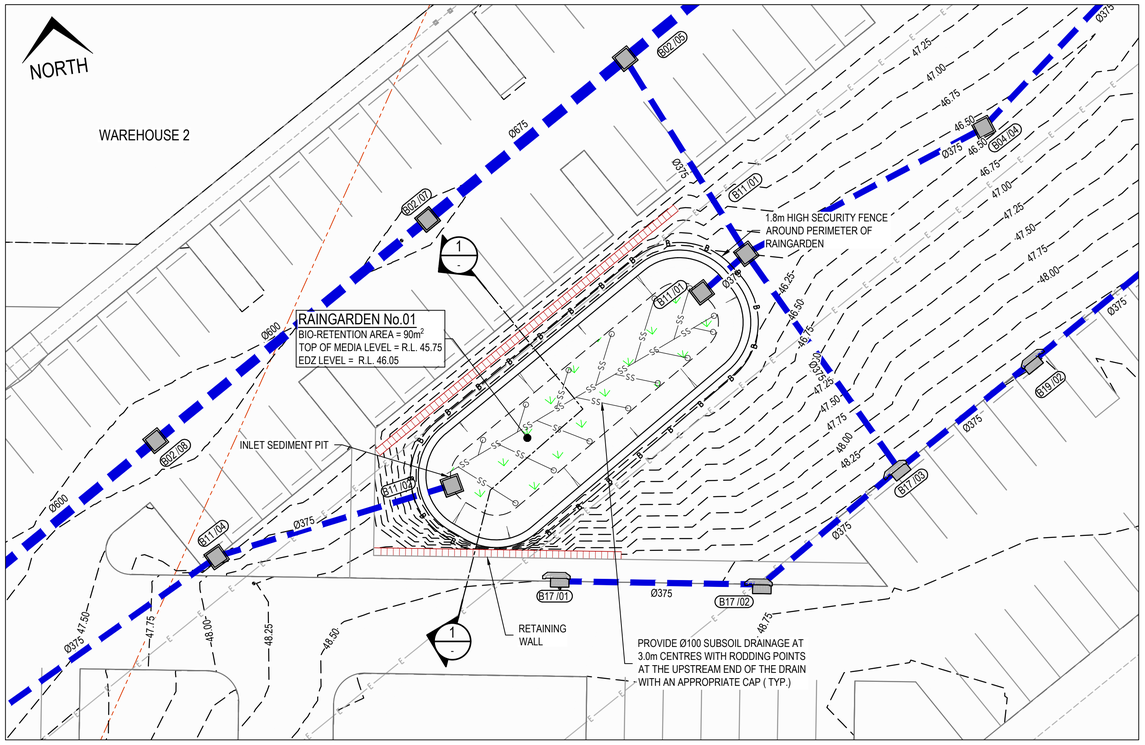
JAS-ANZ SUSTAINABLE CERTIFICATION ISO 9001 WWW.IAS-ANZ.ORG/REGISTER

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: SWALE No.01 PLAN,
SECTION & DETAILS

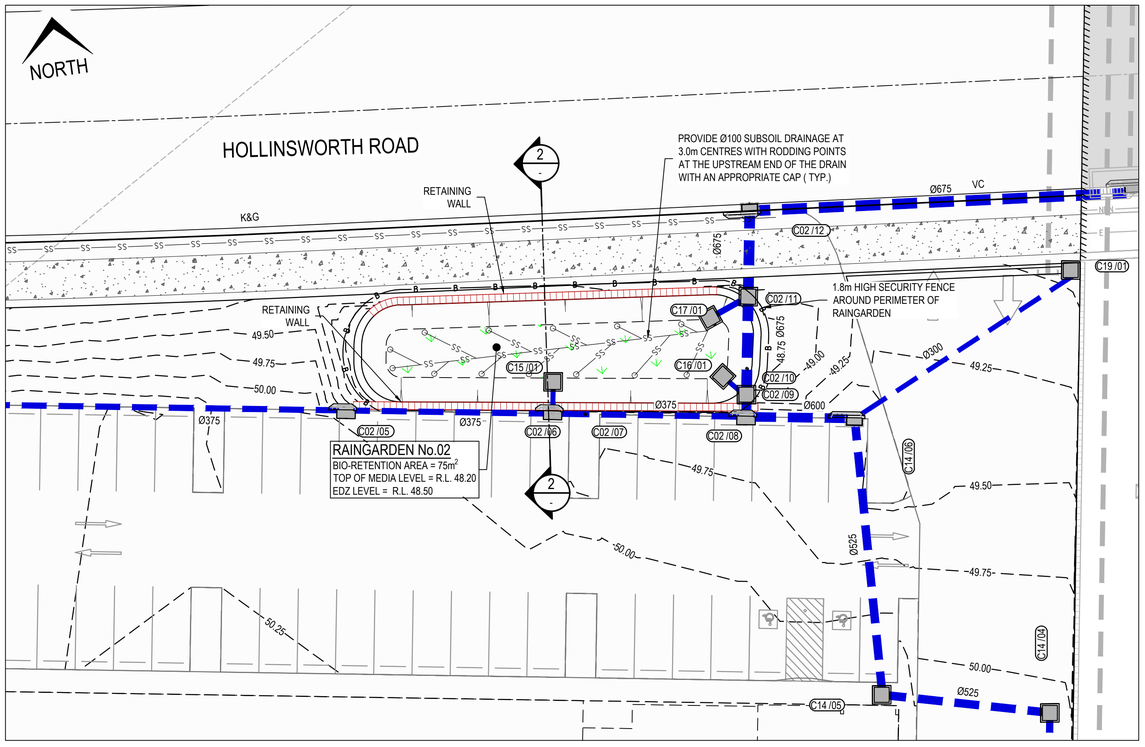
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	450	A

Plotted: File Name:D:\12xfDistal\ORION-SYN\0102-DA Development Application_2029\7DWG\20-0127-02-DA-450.dwg



RAINGARDEN No.01 PLAN

SCALE 1:200



RAINGARDEN No.02 PLAN

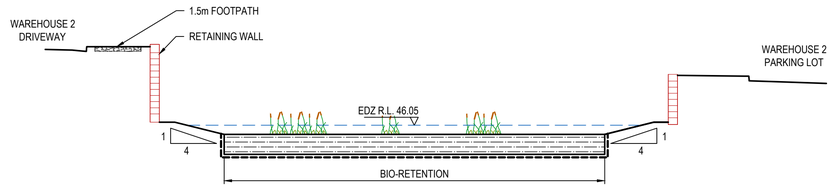
SCALE 1:200

LEGEND

PROPOSED BIO-RETENTION	
PROPOSED STORMWATER PIPE	
PROPOSED 1.8m HIGH SECURITY FENCE	—B——B—

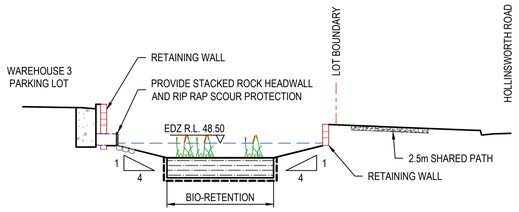
NOTE:

- RAINGARDEN TO BE IN ACCORDANCE WITH BCC STANDARD DETAIL FOR SMALL BIORETENTION SYSTEMS, STANDARD DRAWING A(BS)175M



SECTION 1

SCALE: 1:100



SECTION 2

SCALE: 1:100

ISSUED FOR **DEVELOPMENT APPLICATION**

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0
SCALE 1:200 (A1) SCALE 1:400 (A3)
0 1 2 3 4 5 6 7 8 9 10
SCALE 1:100 (A1) SCALE 1:200 (A3)

For: sydney business park

By: Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: RAINGARDEN No.01 & 02, PLAN, SECTION & DETAILS

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	500	A

Plotted: File Name:D:\12\Sidata\ORION-SYN01\02-DA Development Application_20297\DWGS\20-0127-02-DA-500.dwg

NORTH

ACCESS TRACK 3m WIDE. MAXIMUM 10% GRADE AS PER COUNCIL'S ULTIMATE DESIGN FOR BASIN A.

1200Ø PIPE AS PER COUNCIL'S ULTIMATE DESIGN FOR BASIN A

DISCHARGE CONTROL STRUCTURE, MINIMUM RL OF OUTLET TO BE 36.1m

RL 36.08
RL 34.02
RL 35.63
RL 37.36
RL 37.91

1V:5H MAX
1V:6H MAX

INTERIM BASIN A
REQUIRED STORAGE = 21,887m³
(INCLUDES DEAD STORAGE)
PROVIDED STORAGE = 22,500m²
TWL = R.L. 37.3

C 503
B 503
A 503

DIAL BEFORE YOU DIG
www.1100.com.au

LEGEND

RETAINING WALL	
LIMIT OF WORKS	
INTERIM BASIN A EXTENT OF WORKS.	

ISSUED FOR **DEVELOPMENT APPLICATION**
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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 7.5 15 22.5 30 37.5 45 52.5 60 67.5 75
SCALE 1:750 (A1) SCALE 1:1500 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

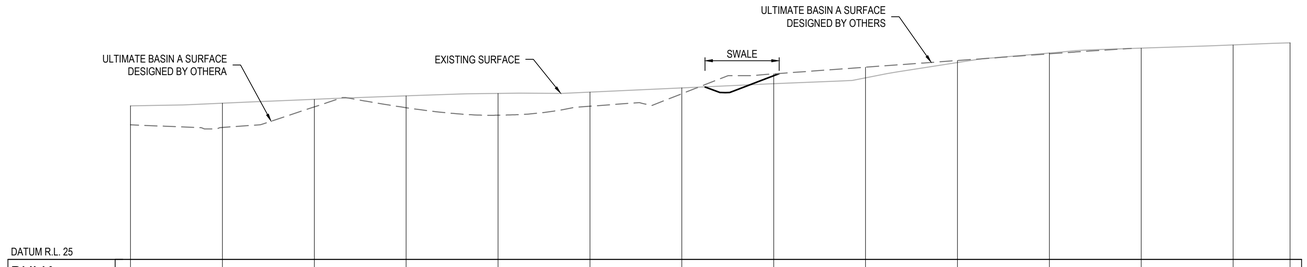
JAS-ANZ SUSTAINABLE VERIFICATION ISO 9001 WWW.JAS-ANZ.ORG/REGISTER

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: INTERIM BASIN A PLAN

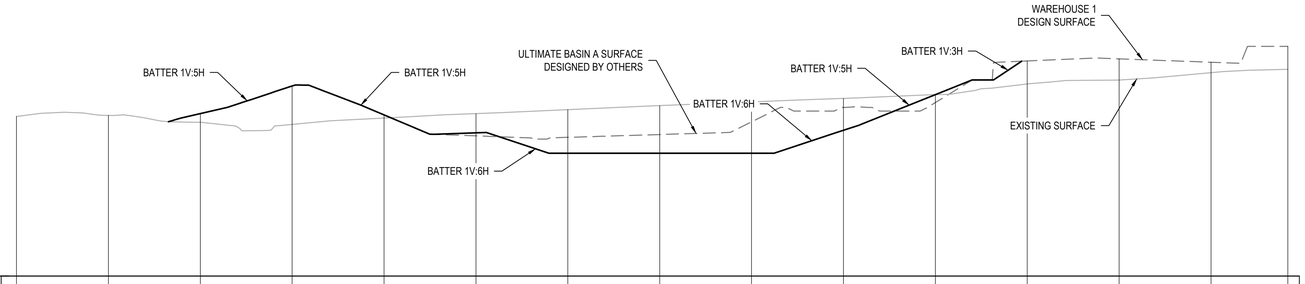
Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	501	A

Plotted: File Name:D:\12xDistiller\ORION-SYNO\102-DA-Development Application_2019\7DWGS\20-0127-02-DA-501.dwg



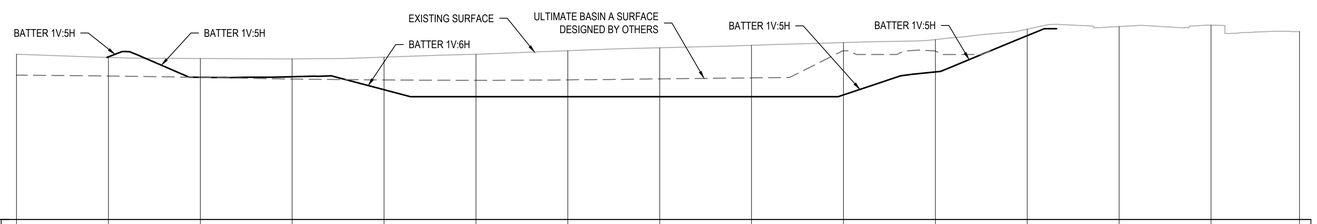
DATUM R.L. 25														
BULK LEVEL								39.99						
EXISTING LEVEL	37.53	37.75	38.06	38.35	38.55	38.65	39	39.34	39.82	41.07	41.84	42.24	42.5	42.68
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	189.289

SECTION C
SCALE:1:500(H)
SCALE:1:250(V)



DATUM R.L. 24														
BULK LEVEL			37.26	39.51	37.15	35.69	34.02	34.02	34.02	35.9	38.8			
EXISTING LEVEL	37.03	37.12	36.54	36.37	36.9	37.26	37.58	37.91	38.21	38.5	38.81	39.68	40	40.6	40.87
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	207.54

SECTION B
SCALE:1:500(H)
SCALE:1:250(V)



DATUM R.L. 24														
BULK LEVEL		37.27	35.6	35.64	34.58	34.02	34.02	34.02	34.02	34.17	36.04	39			
EXISTING LEVEL	37.48	37.22	37.13	37.11	37.24	37.48	37.77	38.01	38.22	38.43	38.68	39.53	39.74	39.85	39.34
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	209.436

SECTION A
SCALE:1:500(H)
SCALE:1:250(V)

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25
SCALE 1:250 (A1) SCALE 1:500 (A3)

For: sydney business park

By: Orion Consulting
SUSTAINABLE AUSTRALIA ISO 9001 JAS-ANZ WWW.JAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: INTERIM BASIN A
SECTIONS

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	502	A

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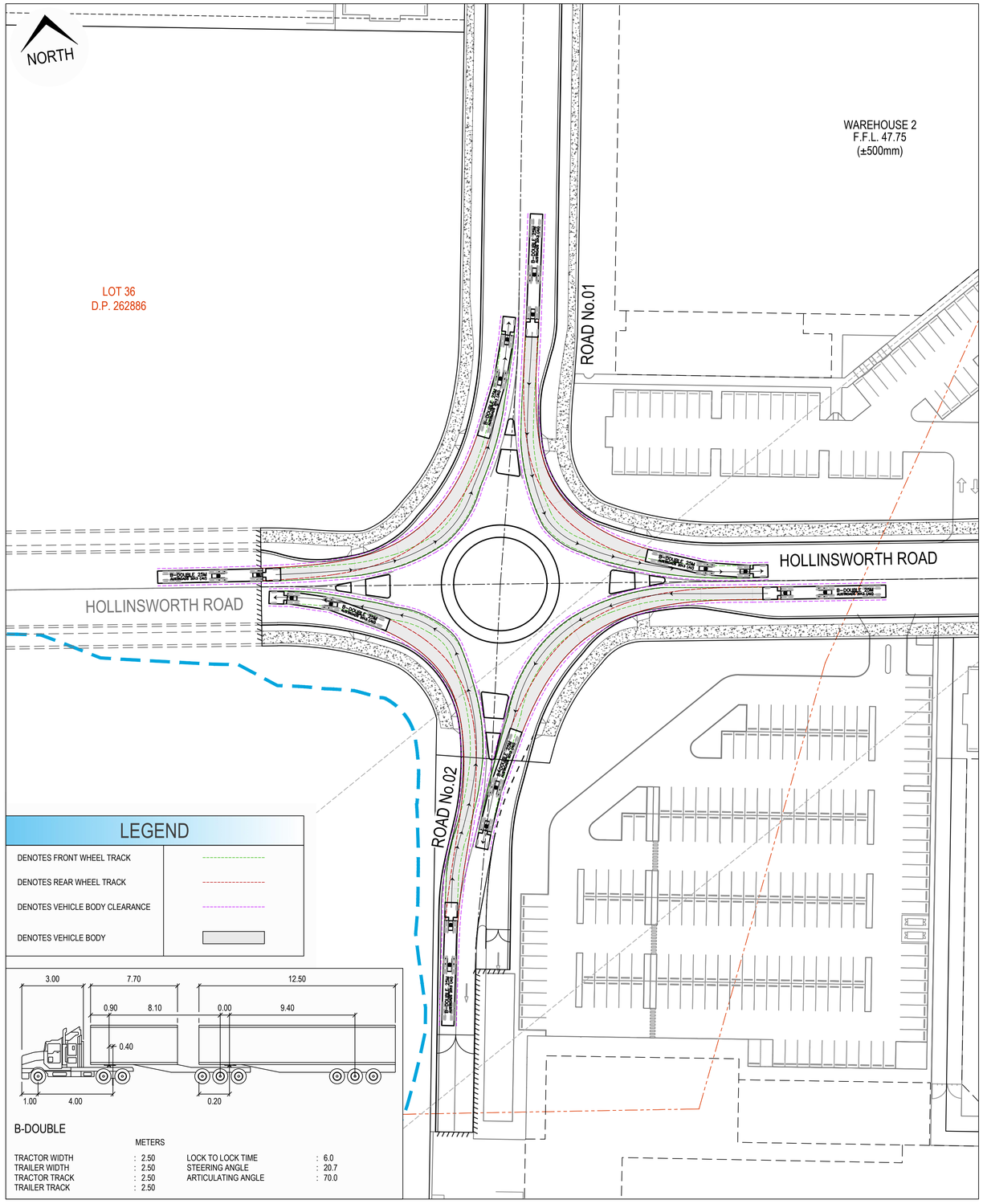

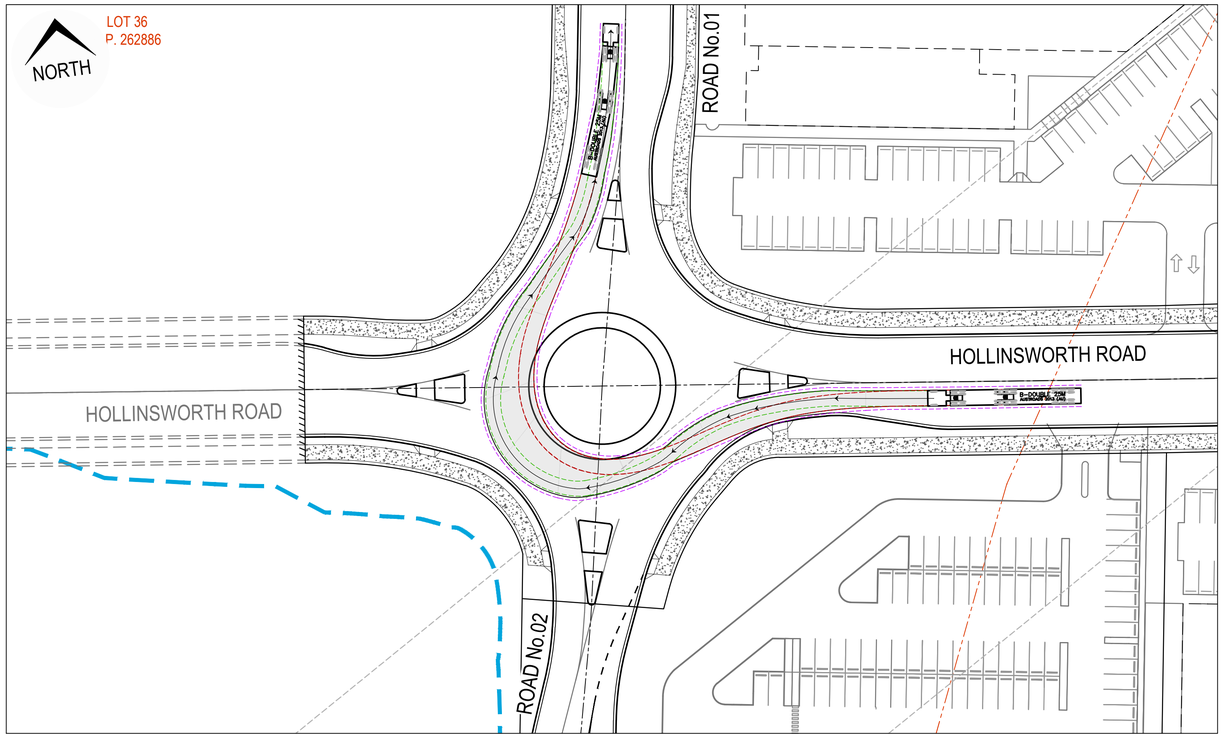

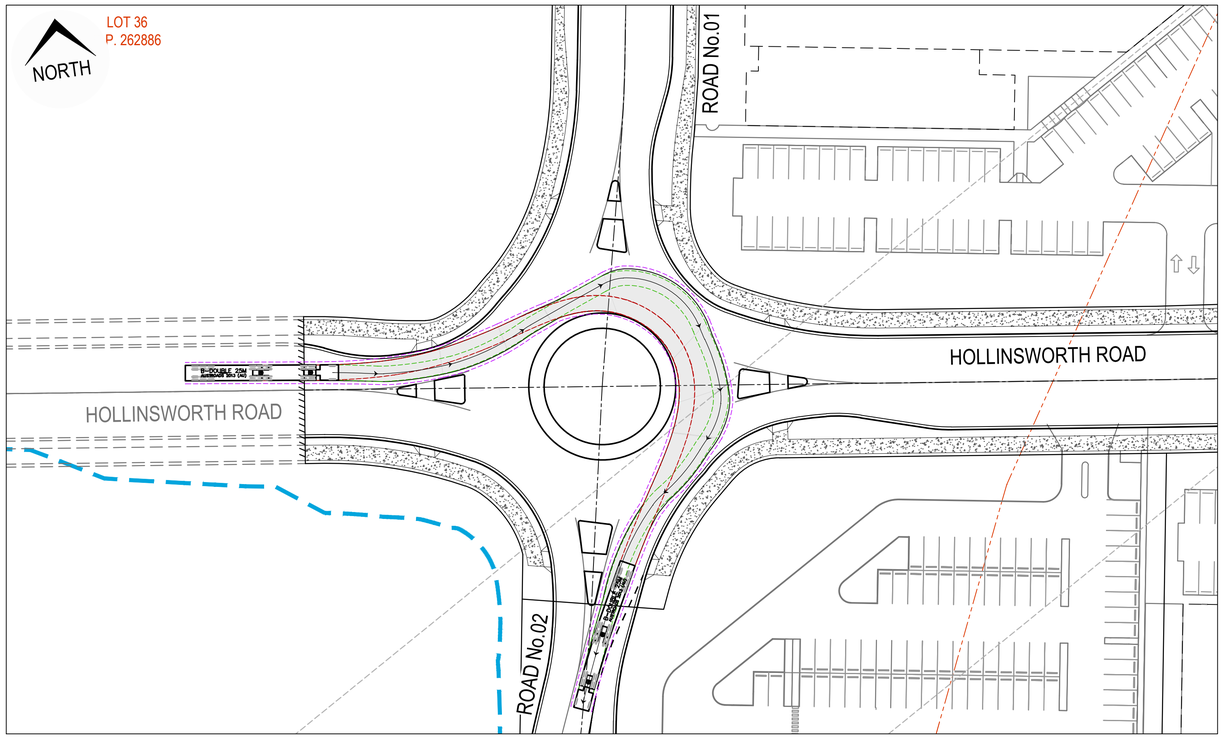

LEGEND

DENOTES FRONT WHEEL TRACK	
DENOTES REAR WHEEL TRACK	
DENOTES VEHICLE BODY CLEARANCE	
DENOTES VEHICLE BODY	

B-DOUBLE

METERS

TRACTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 20.7
TRACTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

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NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:
STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title:
ROUNDABOUT VEHICLE
TURNING PATH PLAN
SHEET 01 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	600	A

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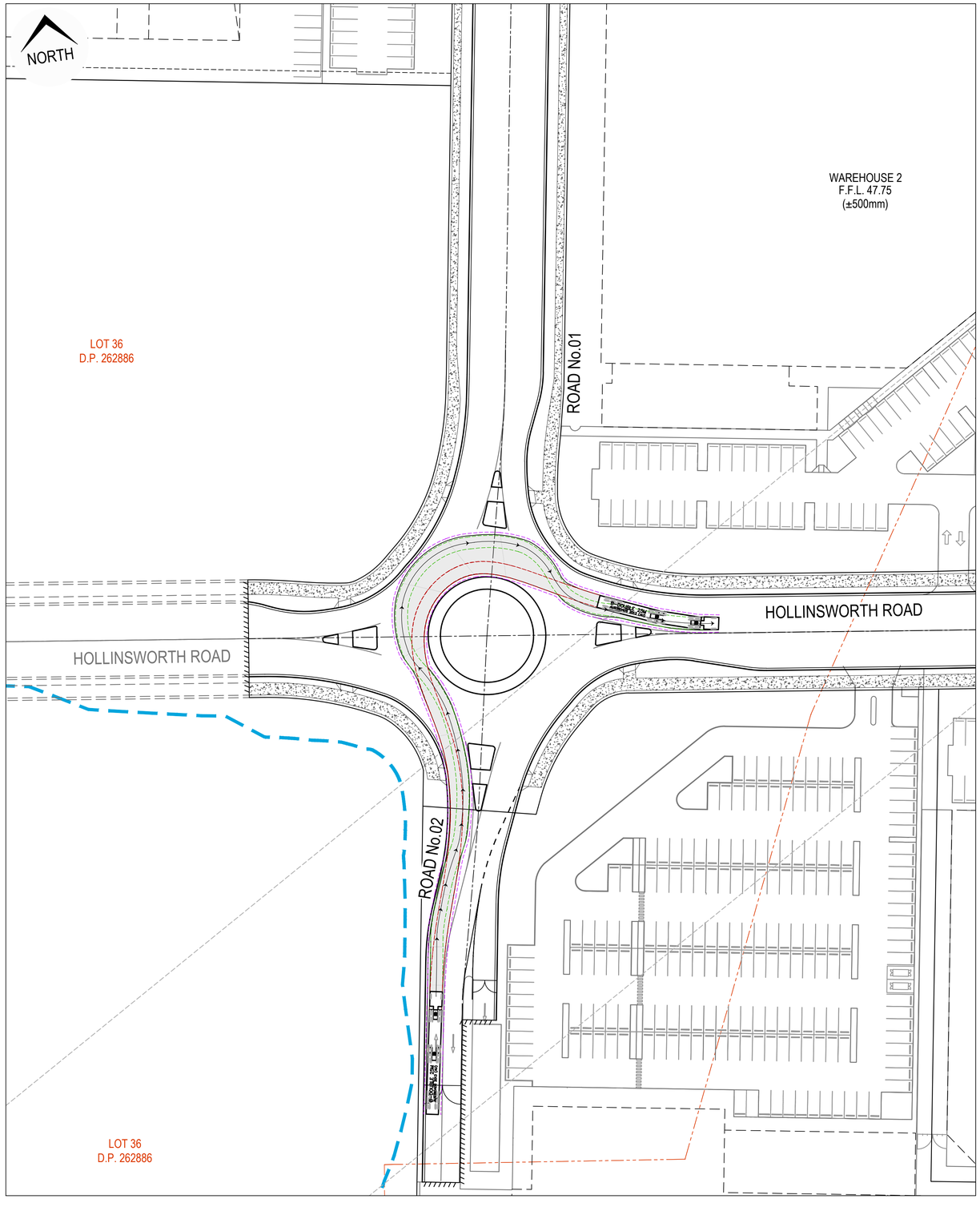

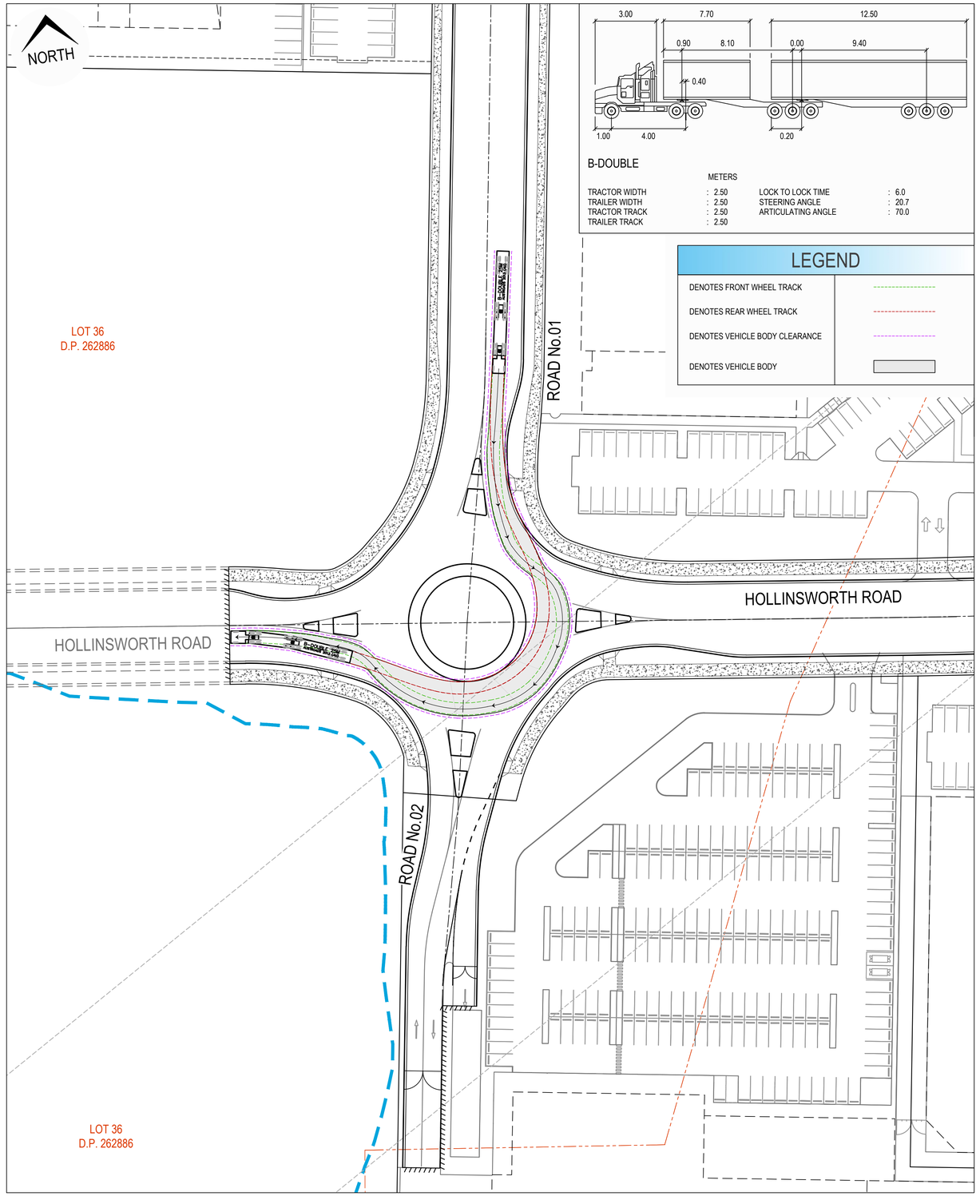

B-DOUBLE

METERS

TRACTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 20.7
TRACTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

LEGEND

DENOTES FRONT WHEEL TRACK	
DENOTES REAR WHEEL TRACK	
DENOTES VEHICLE BODY CLEARANCE	
DENOTES VEHICLE BODY	

ISSUED FOR **DEVELOPMENT APPLICATION**

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Rev	Drawn	Design	Appd.	Date	Revision Description
A	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:

0 5 10 15 20 25 30 35 40 45 50

SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
JAS-ANZ
SUSTAINABLE VERIFICATION ISO 9001
WWW.IAS-ANZ.ORG/REGISTER
ABN:25 604 069 981 **PO Box:**7936, BAULKHAM HILLS NSW 2153 **T:**(02) 8660 0035 **E:**info@orionconsulting.com.au

Project: STAGE 3
SYDNEY BUSINESS PARK,
MARSDEN PARK
ROAD & DRAINAGE DESIGN

Title: ROUNDABOUT VEHICLE TURNING PATH PLAN SHEET 02 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	601	A

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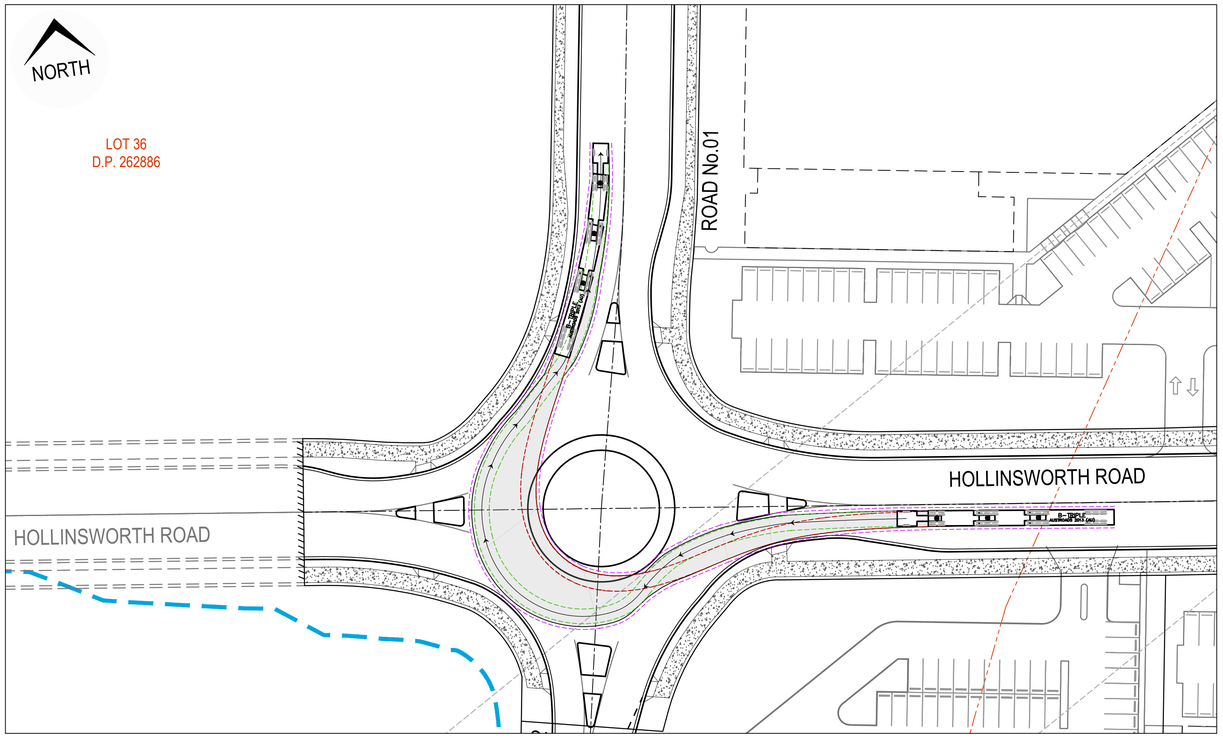

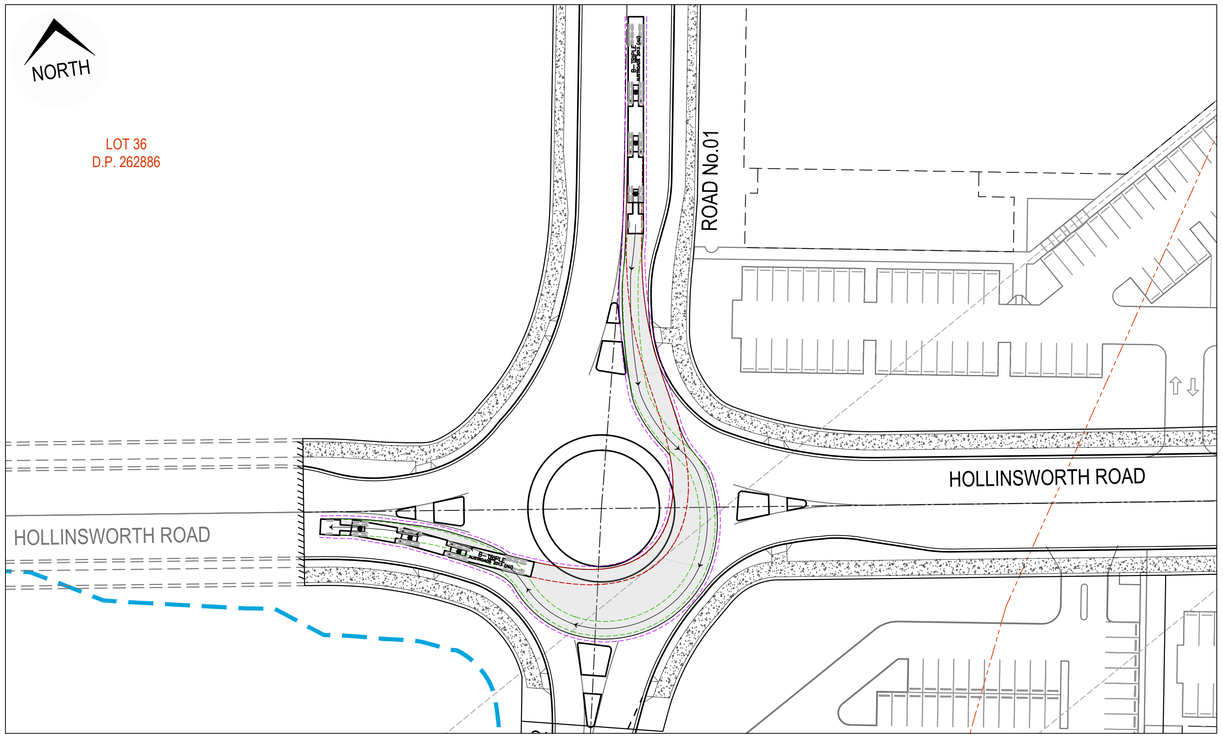

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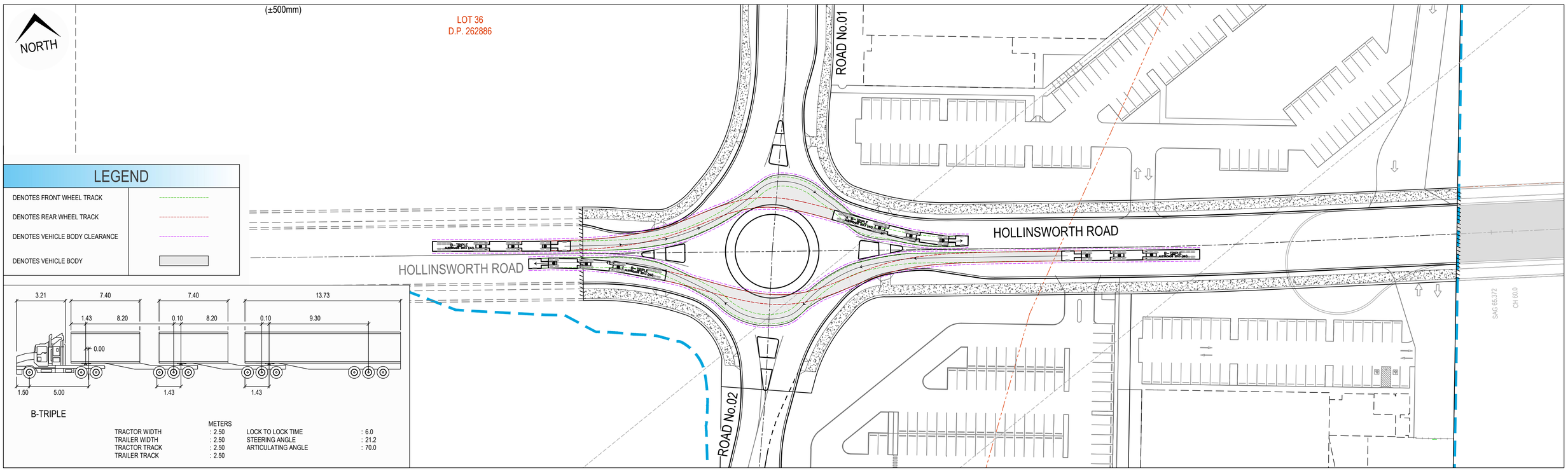

LEGEND

DENOTES FRONT WHEEL TRACK	
DENOTES REAR WHEEL TRACK	
DENOTES VEHICLE BODY CLEARANCE	
DENOTES VEHICLE BODY	

B-TRIPLE

	METERS		
TRACTOR WIDTH	: 2.50	LOCK TO LOCK TIME	: 6.0
TRAILER WIDTH	: 2.50	STEERING ANGLE	: 21.2
TRACTOR TRACK	: 2.50	ARTICULATING ANGLE	: 70.0
TRAILER TRACK	: 2.50		

ISSUED FOR **DEVELOPMENT APPLICATION**

NOT FOR CONSTRUCTION

Rev	Drawn	Design	Appd.	Date	Revision Description
B	MG	DH	MP	28/10/2020	ISSUED FOR DEVELOPMENT APPLICATION
VCZZ	MS	DH	MP	31/07/2020	ISSUED FOR DEVELOPMENT APPLICATION

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Scale:
0 5 10 15 20 25 30 35 40 45 50
SCALE 1:500 (A1) SCALE 1:1000 (A3)

For: sydney business park

By: Orion Consulting
ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: STAGE 3 SYDNEY BUSINESS PARK, MARSDEN PARK ROAD & DRAINAGE DESIGN

Title: ROUNDABOUT VEHICLE TURNING PATH PLAN SHEET 03 OF 03

Project No.	Set No.	Milestone	Plan	Revision
20-0127	02	DA	602	B

Plotted: File Name:D:\12\Estate\ORION_SYN\0102-DA Development Application - 2020\DWGS\20-0127-02-DA-602.dwg