

### LEGEND

ITEM	DESCRIPTION
156.6	EXISTING SURFACE CONTOURS
+ 156.60	EXISTING SURFACE SPOT LEVELS
+ RL 156.600	PROPOSED SURFACE SPOT LEVELS
	PROPOSED CONCRETE KERB AND CHANNEL
	EXISTING STORMWATER DRAIN (SURVEYED)
	EXISTING STORMWATER PIT
	EXISTING FEATURES TO BE REMOVED
	SEWER - DIAL BEFORE YOU DIG
	GAS - DIAL BEFORE YOU DIG
	WATER - DIAL BEFORE YOU DIG
	ELECTRICITY - DIAL BEFORE YOU DIG
	OVERHEAD ELECTRICITY - DIAL BEFORE YOU DIG
	TELECOM CABLE - DIAL BEFORE YOU DIG
	OPTIC CABLE - DIAL BEFORE YOU DIG
	SITE FENCE
	SEDIMENT FENCE
	TEMPORARY SHAKER RAMP FOR ENTRY AND EXIT

### SEDIMENT AND EROSION CONTROL NOTES

- IT HAS BEEN ASSUMED THAT HOARDINGS/SILT FENCING WILL BE PROVIDED TO THE STAGE BOUNDARY SUFFICIENT TO PREVENT SEDIMENT RUNOFF FROM LEAVING SITE (EXCEPT IN THE CASE OF ENTRY/EXIT LOCATIONS WHERE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP ARE PROVIDED). IF THIS IS NOT THE CASE, PROVIDE SEDIMENT FENCE TO STANDARD DETAIL BELOW AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING SITE, DIRECT RUNOFF TO SEDIMENT BASIN.
- ALL SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER "BLUE BOOK".
- MINIMISE CLEARING IN ACCORDANCE WITH THE ARBORIST REPORT: "ARBORIST IMPACT ASSESSMENT AND SPOIL PROFILE" PREPARED BY XXX, DATED XXX.
- SEDIMENT CONTROL FOR LANDSCAPED WORKS DOWNSTREAM OF THE BUILDING TO INCLUDE A SILTFENCE AND SANDBAGS AS REQUIRED. INSTALL BUND TO DIVERT UPSTREAM CATCHMENT AWAY FROM DISTURBED SOIL AREA.

### SEDIMENT CONTROL CONDITIONS

- SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
- SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS & WATERWAYS CANNOT OCCUR.
- STOCKPILES WILL BE PLACED WHERE SHOWN ON DRAWING OR ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER AND NOT WITHIN 5m OF HAZARD AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
- WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS (SEE DETAILS) UNLESS IT IS SEDIMENT FREE.
- TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
- CONTRACTOR TO DESIGN/SIZE/CONSTRUCT TEMPORARY SEDIMENT BASIN. WATER SHOULD BE ALLOWED TO SETTLE BEFORE DISCHARGE. CONTRACTOR MUST VERIFY THAT WATER QUALITY MEETS AUTHORITIES REQUIREMENTS PRIOR TO DISCHARGE. ACCUMULATED SEDIMENT SHOULD THEN BE REMOVED & DISPOSED OF IN ACCORDANCE WITH ENVIRONMENTAL MANAGEMENT PROCEDURES.

### SITE INSPECTION & MAINTENANCE CONDITIONS

- THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:
- ENSURE THAT DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS
  - REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
  - REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
  - ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
  - CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
  - MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
  - REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.

AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL.

ENTRIES WILL INCLUDE:

- THE VOLUME & INTENSITY OF ANY RAINFALL EVENTS
- THE CONDITION OF ANY SOIL & WATER MANAGEMENT WORKS
- THE CONDITION OF VEGETATION & ANY NEED TO IRRIGATE
- THE NEED FOR DUST PREVENTION STRATEGIES
- ANY REMEDIAL WORKS TO BE UNDERTAKEN

THE BOOK WILL BE KEPT ONSITE & MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS.

**TREE PROTECTION**  
REFER TO "ARBORIST IMPACT ASSESSMENT AND SPOIL PROFILE" BY XXX DATED XXX FOR THE EXTENT OF TREES PROTECTION ZONE AND THE PROTECTION MEASURES REQUIRED.

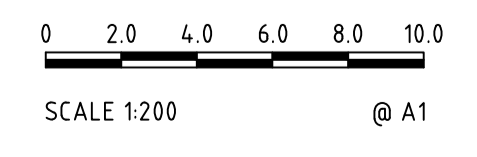
ALL EXISTING PROPERTY SERVICES' LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE VERIFIED ON SITE. THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

**WARNING**  
**BWARE OF UNDERGROUND SERVICES**  
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P4	RE-ISSUE FOR DA SUBMISSION	13.09.21	PO	GK
P3	DA SUBMISSION	05.07.21	PO	GK
P2	DA SUBMISSION	25.06.21	PO	GK
P1	DA DRAFT SUBMISSION	04.06.21	PO	GK

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Project Name: **TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE**

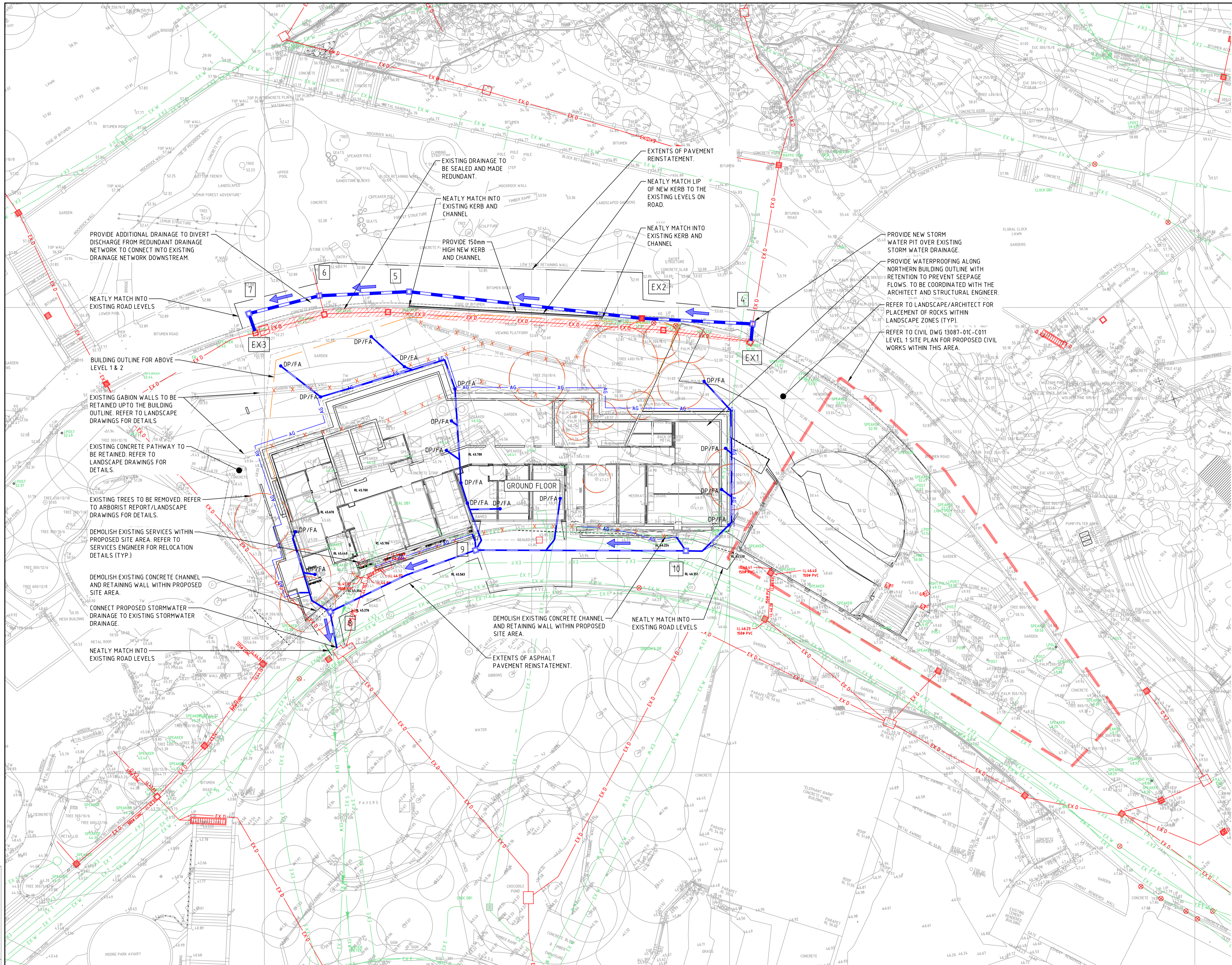
Drawing Title: **SEDIMENT AND EROSION CONTROL PLAN**

**DA SUBMISSION**

Designed	PO	Approved	Date	North
Drawn	DP			
Scale	1:200	Project Ref	13087 01	Drawing No
Date	2 of 9			Rev
Sheet				<b>P4</b>

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ITEM	DESCRIPTION
156.6	EXISTING SURFACE CONTOURS
156.6	PROPOSED SURFACE CONTOURS
+ 156.600	EXISTING SURFACE SPOT LEVELS
+ RL156.600	PROPOSED SURFACE SPOT LEVELS
	PROPOSED CONCRETE KERB AND CHANNEL
EX D	EXISTING STORMWATER DRAIN (SURVEYED)
225Φ	PROPOSED STORMWATER DRAIN
	SYPHONIC CONNECTION (REFER HYDRAULIC ENGINEERS DRG'S)
AG	90 DIAMETER UPVC AGRICULTURAL DRAIN
	EXISTING STORMWATER PIT
	EXISTING STORMWATER PIT TO BE MODIFIED
	PROPOSED (JUNCTION/SIDE ENTRY) STORMWATER PIT
	PROPOSED GRATED STORMWATER PIT
GI	100Φ GRATED INLET UNLESS NOTED OTHERWISE
DP	DOWNPIPE (PLAN LOCATION)
X-X	EXISTING FEATURES TO BE REMOVED
	300mm SPOON DRAIN UNLESS NOTED OTHERWISE
EX S	SEWER - DIAL BEFORE YOU DIG
EX G	GAS - DIAL BEFORE YOU DIG
EX W	WATER - DIAL BEFORE YOU DIG
EX E	ELECTRICITY - DIAL BEFORE YOU DIG
EX EO/H	OVERHEAD ELECTRICITY - DIAL BEFORE YOU DIG
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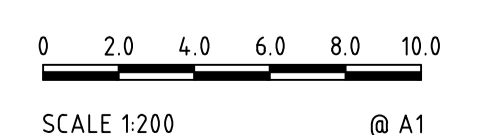
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P4	RE-ISSUE FOR DA SUBMISSION	13.09.21	PO	GK
P3	DESIGN DEVELOPMENT	19.08.21	DP	GK
P2	DA SUBMISSION	26.06.21	PO	GK
P1	DA DRAFT SUBMISSION	04.06.21	PO	GK

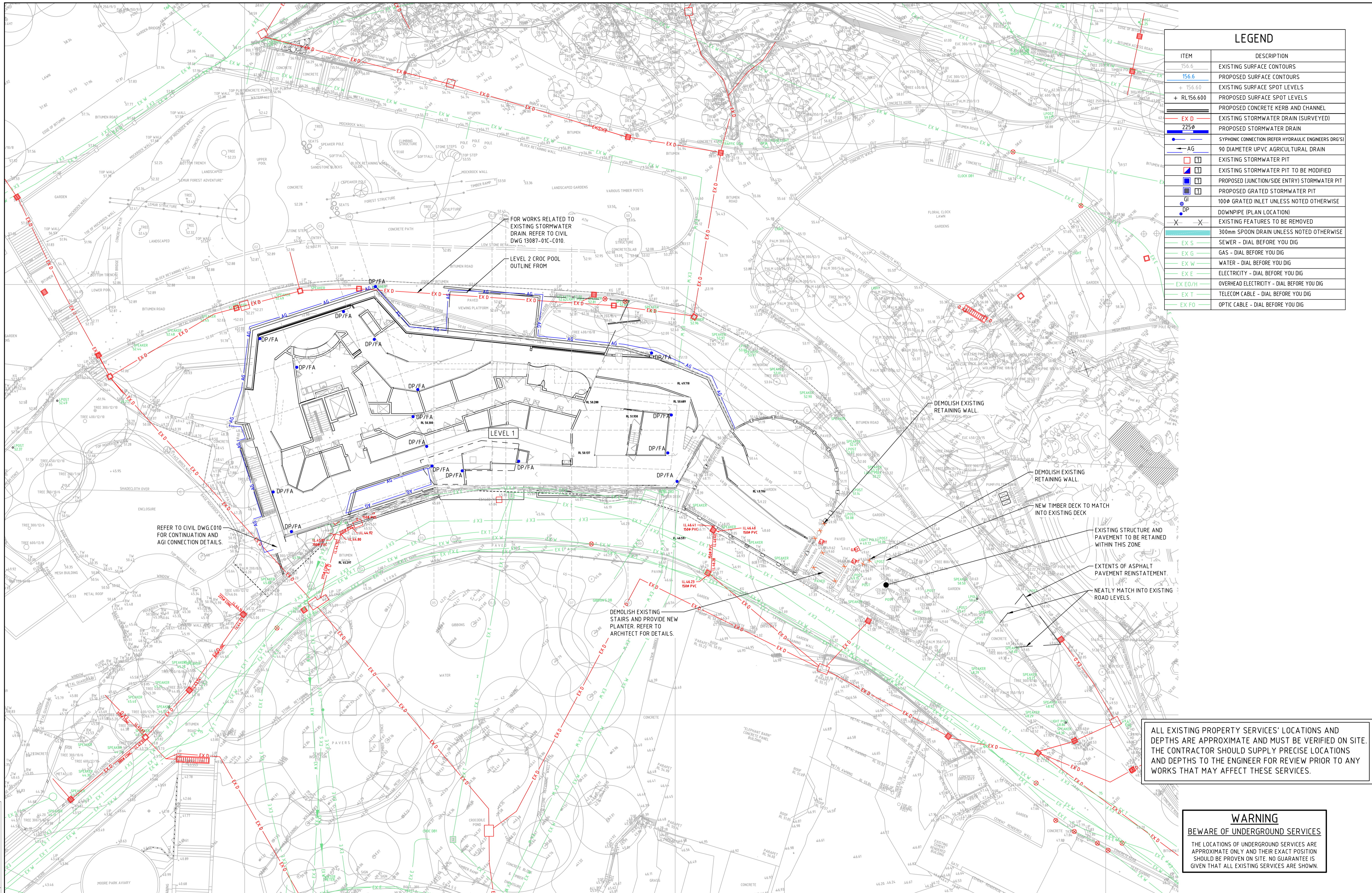
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Project Name  
**TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE**

Drawing Title  
**CIVIL SITE WORKS PLAN GROUND FLOOR**

Designed		PO	Approved		Date	North
Drawn	DP					
Scale	NOTED					
Date		Project Ref	Drawing No	Rev		
Sheet	4 OF 9	13087 01	C010	P4		



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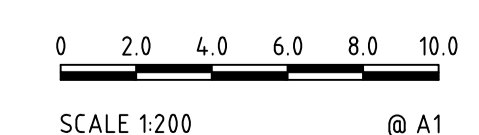
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P4	RE-ISSUE DESIGN DEVELOPMENT	13.09.21	PO	GK
P3	DESIGN DEVELOPMENT	19.08.21	DP	GK
P2	DA SUBMISSION	25.06.21	PO	GK
P1	DA DRAFT SUBMISSION	04.06.21	PO	GK

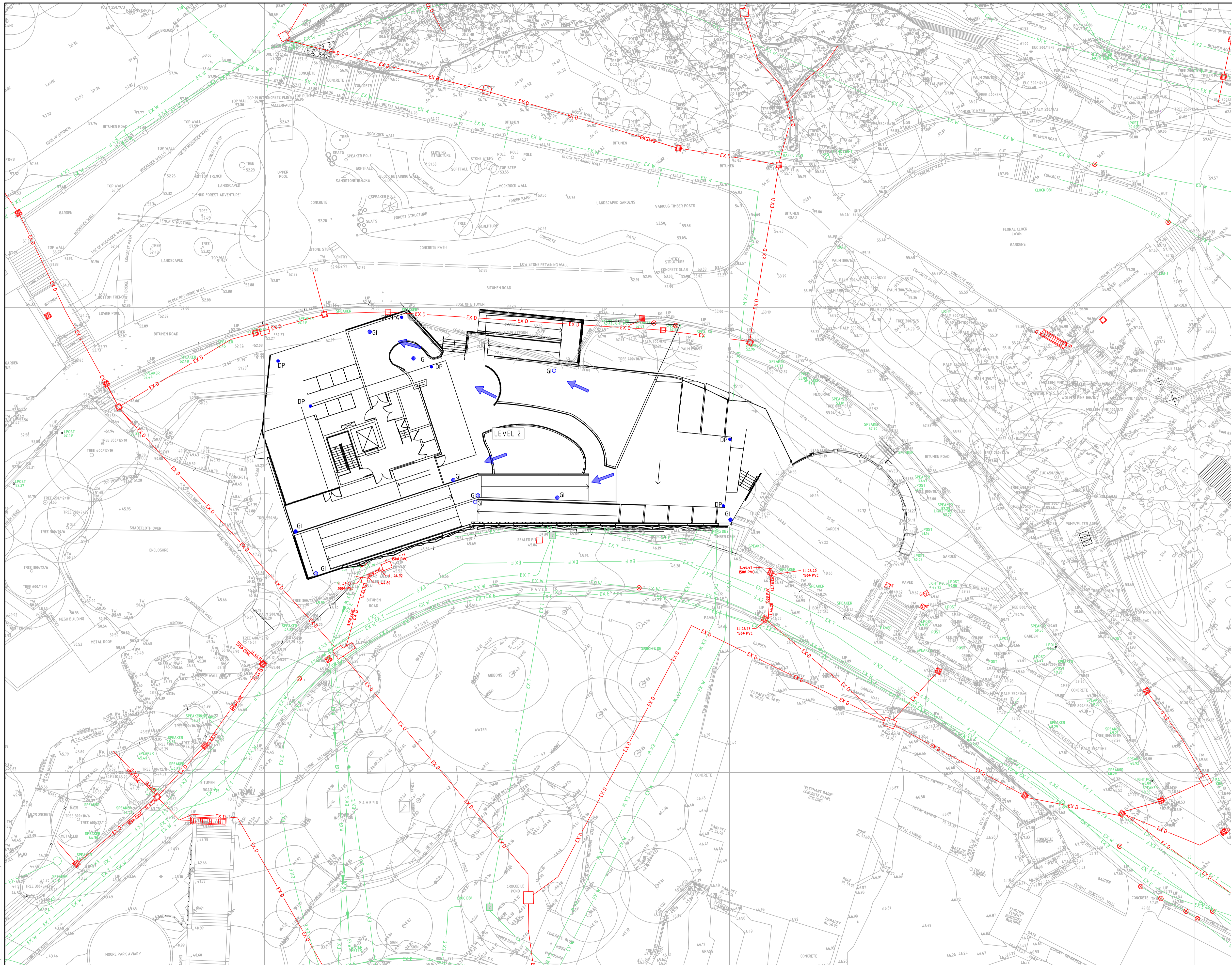
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Project Name		DA SUBMISSION	
TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE		Designed	PO
CIVIL SITE WORKS PLAN LEVEL 1		Drawn	DP
		Scale	NOTED
		Date	
		Sheet	5 OF 9
		Approved	Date
		Project Ref	13087 01
		Drawing No	C011
		Rev	P4

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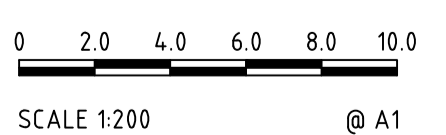
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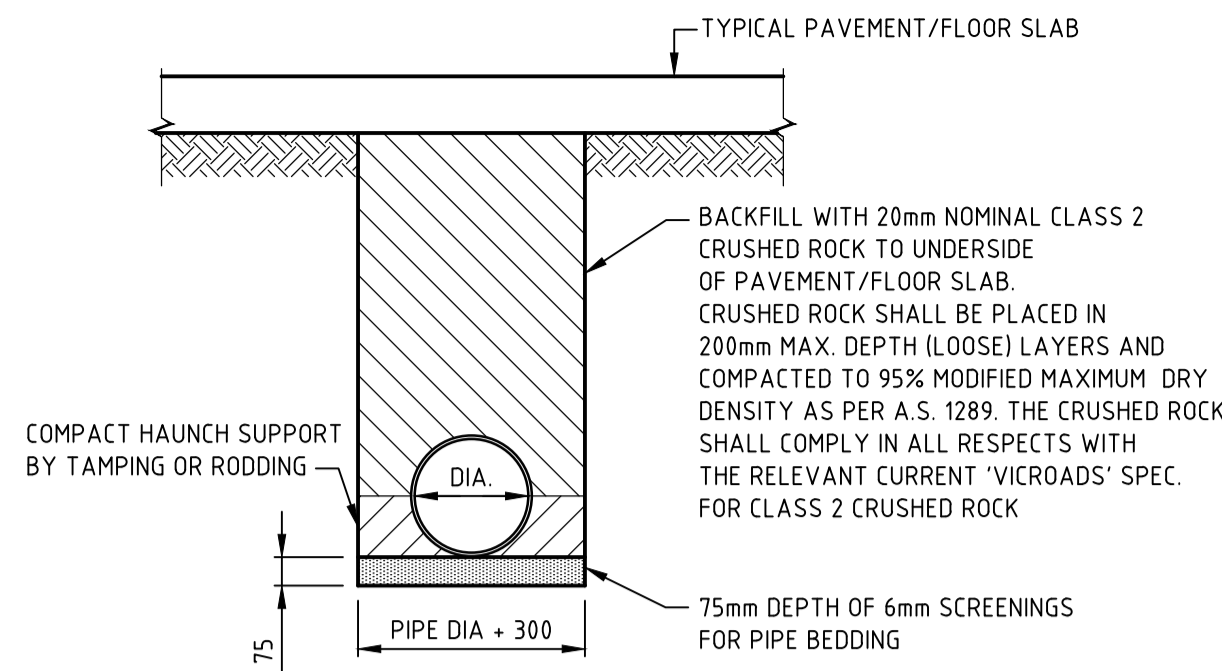
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Project Name: TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE  
Drawing Title: CIVIL SITE WORKS PLAN LEVEL 2

DA SUBMISSION		Date		North
Designed	PO	Approved		North
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Date		13087 01	C012	
Sheet	6 OF 9		P4	

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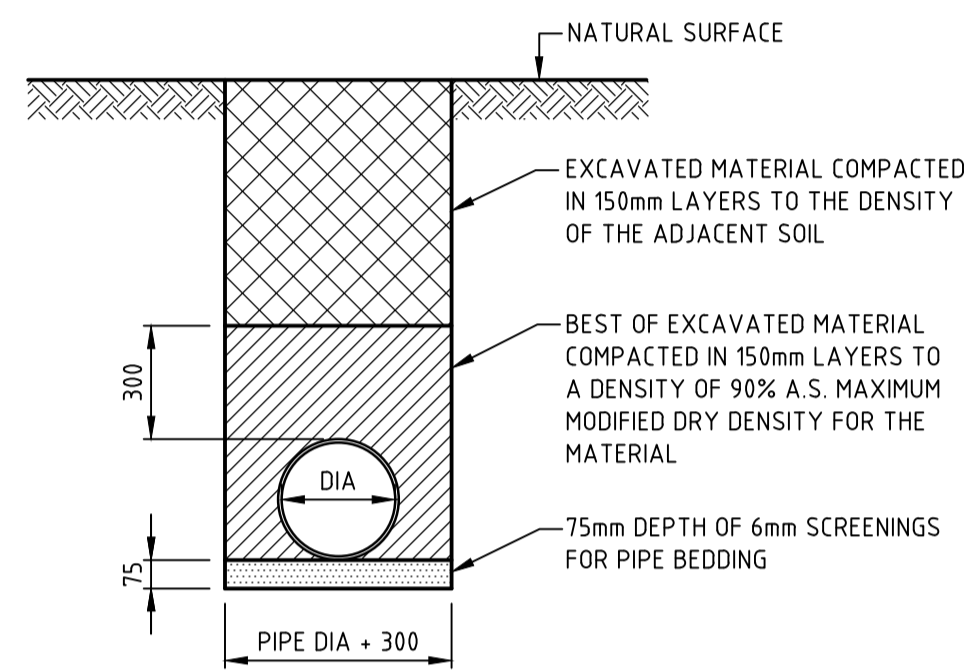


NOTE:  
AVOID RUNNING CONSTRUCTION EQUIPMENT OVER THE PIPES  
UNTIL BACKFILL MATERIAL IS 300mm MIN. ABOVE CROWN OF PIPE.

**PIPE LAYING DETAILS**

UNDER ALL PAVEMENTS/FLOORS

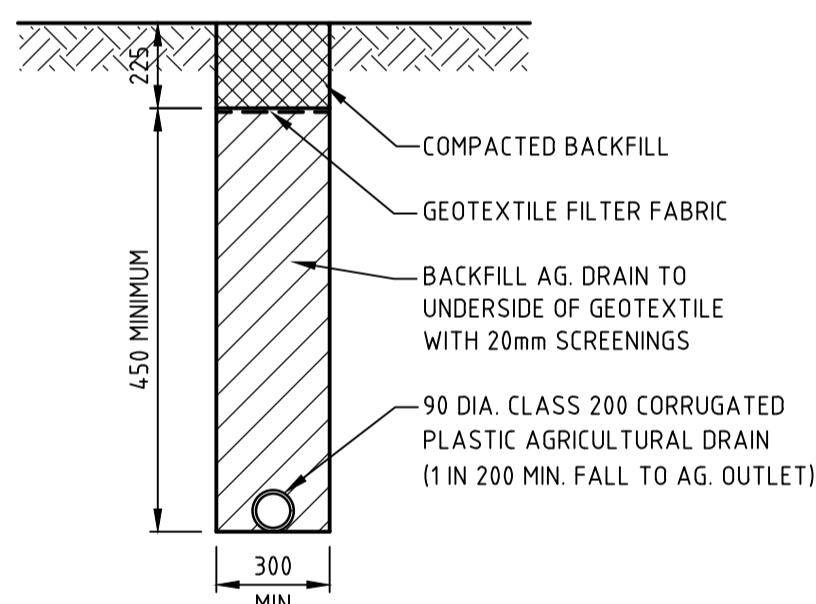
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**PIPE LAYING DETAILS (ALL PIPES)**

UNDER LANDSCAPED AREAS

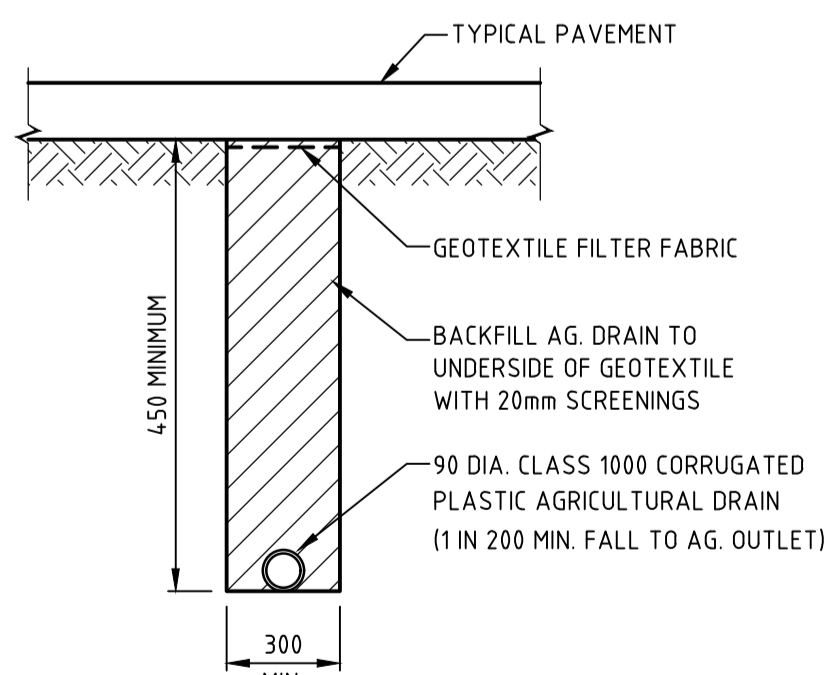
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**AG. PIPE LAYING DETAILS**

UNDER LANDSCAPED AREAS

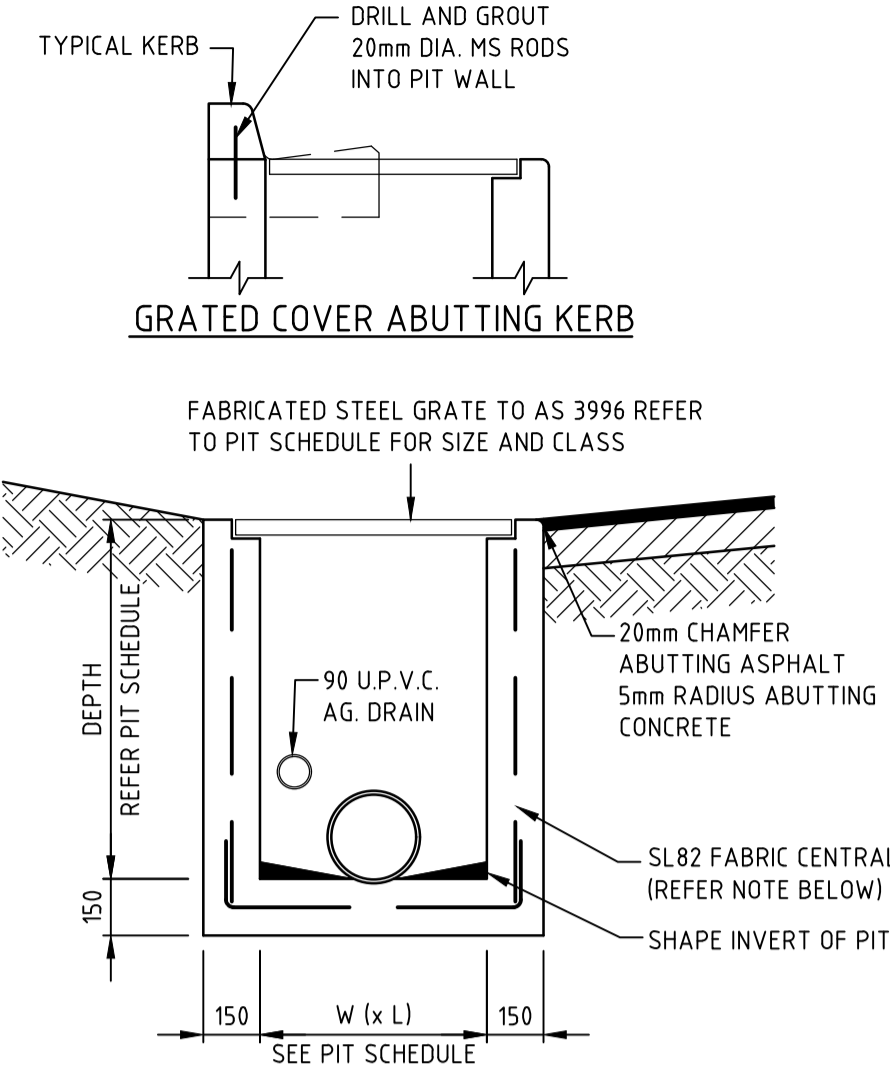
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**AG. PIPE LAYING DETAILS**

UNDER PAVED AREAS

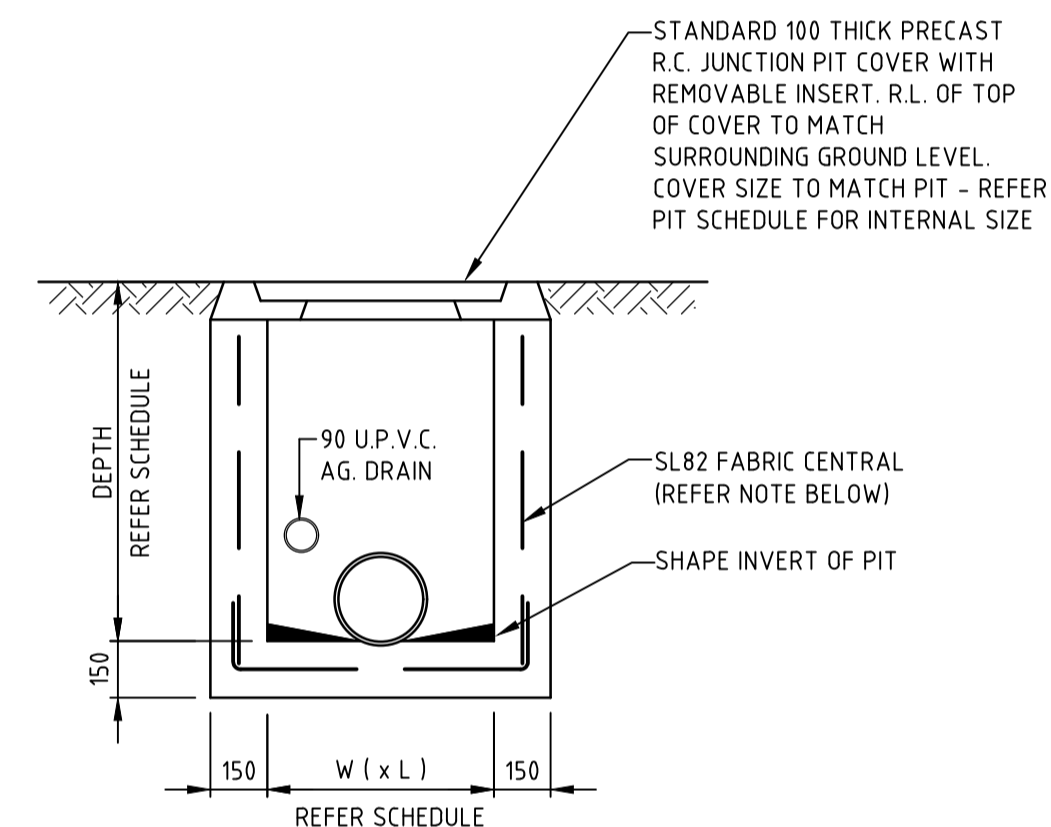
N.T.S.



- NOTES:
1. PROVIDE 600mm LENGTH OF 90mm DIA. AGRICULTURAL PIPE CAST THROUGH UPSTREAM WALL OF PIT WITH GEOTEXTILE OR SIMILAR FILTER OVER.
  2. REINFORCEMENT NOT REQUIRED IF DEPTH OF PIT IS LESS THAN 1000mm.
  3. PROVIDE STEP IRONS AT 300mm MAX. CTS. IF DEPTH OF PIT EXCEEDS 1000mm
  4. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.

**GRATED PIT DETAIL**

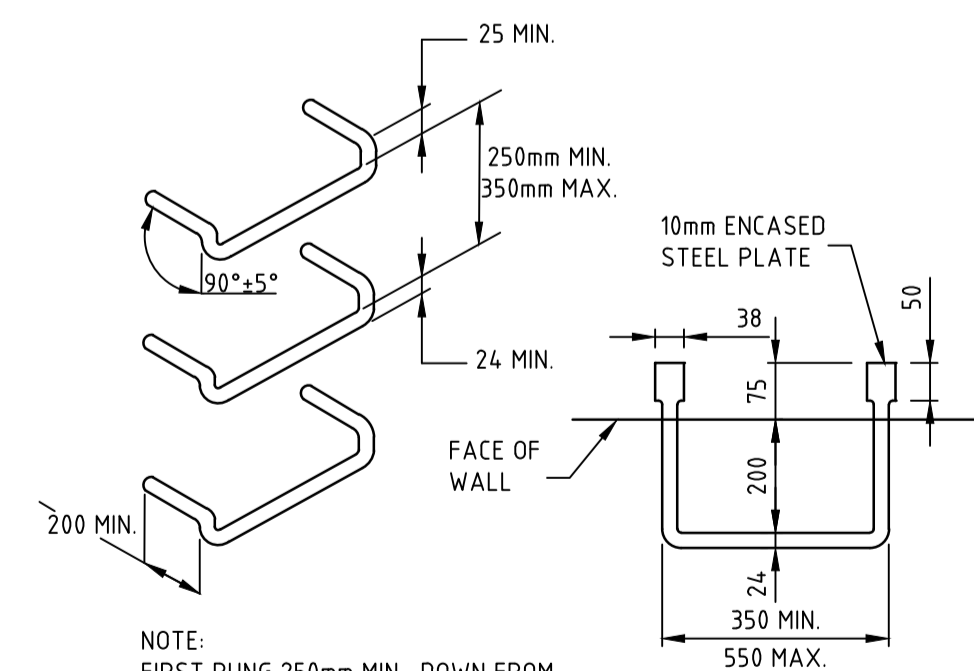
N.T.S.



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  4. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.

**JUNCTION PIT (R.C. COVER)**

N.T.S.

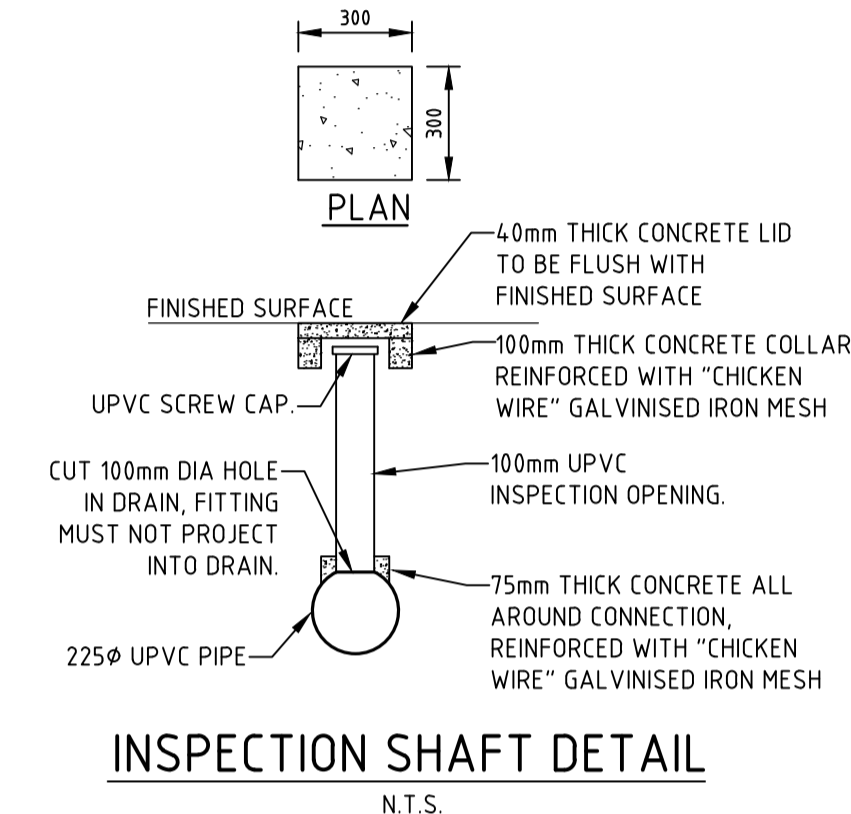
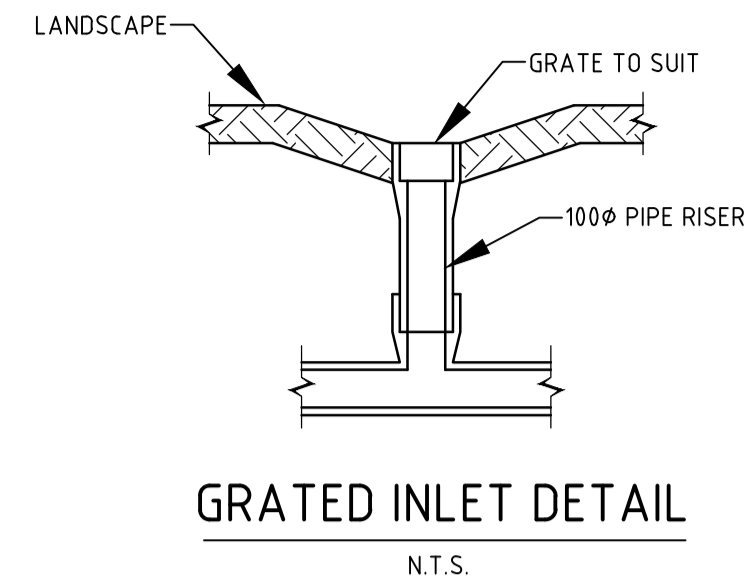


NOTE:  
FIRST RUNG 250mm MIN. DOWN FROM TOP, THEN SPACED NO GREATER THAN 350mm MAX.  
VERTICAL RISE DOES NOT EXCEED 6m IN ACCORDANCE WITH AS1657.

MATERIAL : 24mm DIA MILD STEEL HEAVY GALVANIZED

**STEP IRONS FOR DRAINAGE PITS**

N.T.S.



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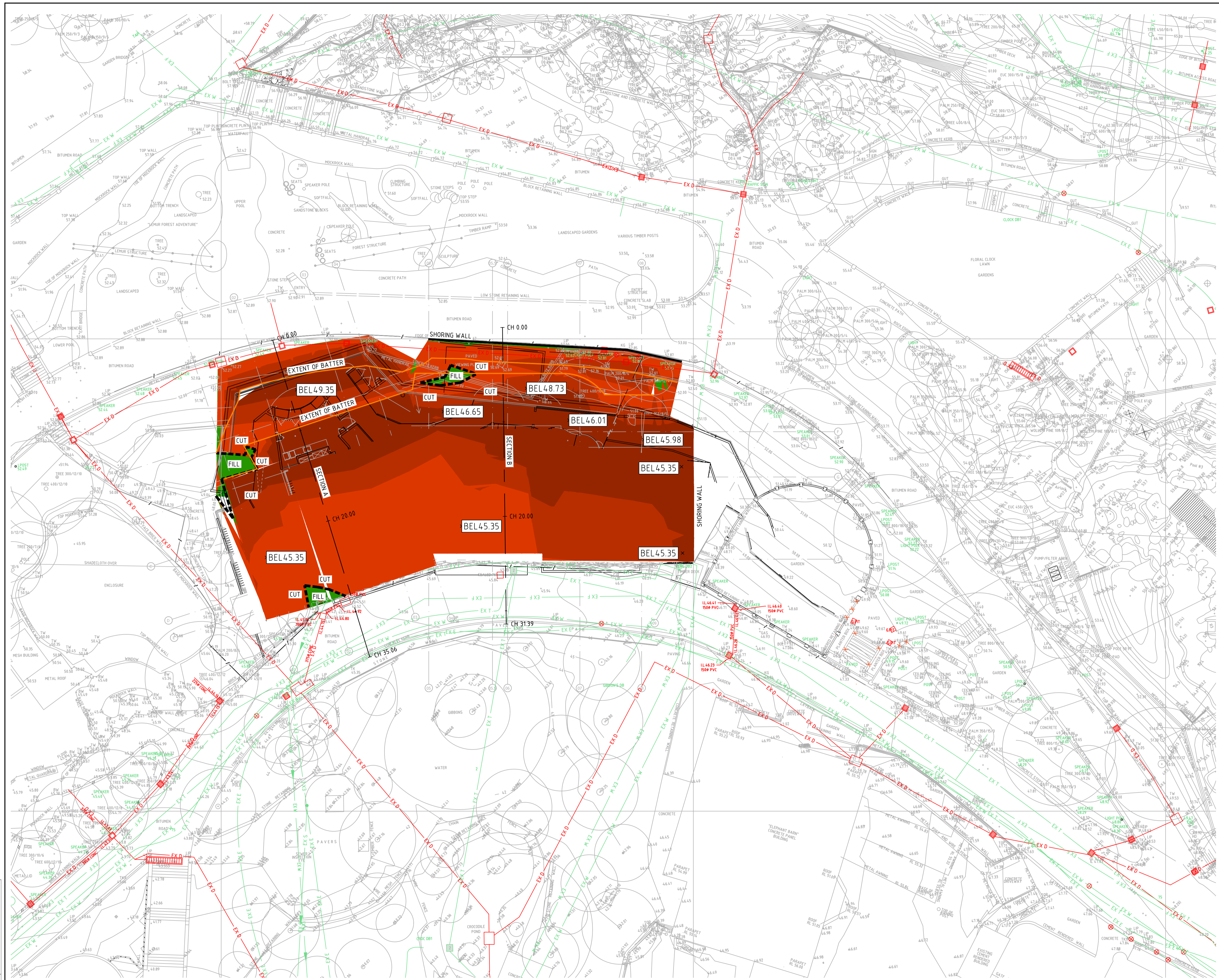
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Project Name	TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE		
Drawing Title	CIVIL DETAILS		

DA SUBMISSION			
Designed	PO	Approved	Date
Drawn	DP		
Scale	NOTED		
Date			
Sheet	7 OF 9	Project Ref	Drawing No
		13087 01	C030
			Rev
			P3



LEVELS TABLE					
No.	FROM DEPTH (m)	TO DEPTH (m)	COLOUR	3D AREA	VOLUME
1	-5.00	-4.75	■	0m <sup>2</sup>	42.86m <sup>3</sup>
2	-4.75	-4.50	■	4m <sup>2</sup>	333.01m <sup>3</sup>
3	-4.50	-4.25	■	7m <sup>2</sup>	331.93m <sup>3</sup>
4	-4.25	-4.00	■	10m <sup>2</sup>	330.23m <sup>3</sup>
5	-4.00	-3.75	■	13m <sup>2</sup>	327.95m <sup>3</sup>
6	-3.75	-3.50	■	26m <sup>2</sup>	324.27m <sup>3</sup>
7	-3.50	-3.25	■	30m <sup>2</sup>	318.76m <sup>3</sup>
8	-3.25	-3.00	■	36m <sup>2</sup>	312.95m <sup>3</sup>
9	-3.00	-2.75	■	55m <sup>2</sup>	305.36m <sup>3</sup>
10	-2.75	-2.50	■	91m <sup>2</sup>	287.73m <sup>3</sup>
11	-2.50	-2.25	■	82m <sup>2</sup>	270.23m <sup>3</sup>
12	-2.25	-2.00	■	93m <sup>2</sup>	251.86m <sup>3</sup>
13	-2.00	-1.75	■	107m <sup>2</sup>	230.44m <sup>3</sup>
14	-1.75	-1.50	■	119m <sup>2</sup>	206.74m <sup>3</sup>
15	-1.50	-1.25	■	148m <sup>2</sup>	178.96m <sup>3</sup>
16	-1.25	-1.00	■	122m <sup>2</sup>	149.97m <sup>3</sup>
17	-1.00	-0.75	■	122m <sup>2</sup>	127.01m <sup>3</sup>
18	-0.75	-0.50	■	114m <sup>2</sup>	104.47m <sup>3</sup>
19	-0.50	-0.25	■	181m <sup>2</sup>	76.75m <sup>3</sup>
20	-0.25	0.00	■	199m <sup>2</sup>	27.49m <sup>3</sup>
21	0.00	0.25	■	23m <sup>2</sup>	4.85m <sup>3</sup>
22	0.25	0.50	■	12m <sup>2</sup>	1.94m <sup>3</sup>
23	0.50	0.75	■	4m <sup>2</sup>	0.74m <sup>3</sup>
24	0.75	1.00	■	2m <sup>2</sup>	0.51m <sup>3</sup>
25	1.00	1.25	■	2m <sup>2</sup>	0.33m <sup>3</sup>
26	1.25	1.50	■	1m <sup>2</sup>	0.10m <sup>3</sup>
27	1.50	1.75	■	0m <sup>2</sup>	0.00m <sup>3</sup>

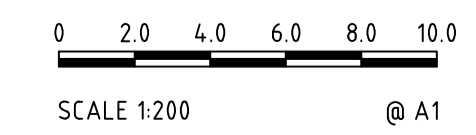
BENCHING VOLUMES	
SITE STRIP (150mm)	175m <sup>3</sup>
TOTAL CUT	1,790 <sup>3</sup>
TOTAL FILL	5 <sup>3</sup>
CUT OVER FILL (NOT INCLUDING SITE STRIP)	1,785m <sup>3</sup>

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Rev	Description	Date	By	App
P5	DA SUBMISSION	02.09.21	AP	GK
P4	DA SUBMISSION	08.07.21	AP	GK
P3	DA SUBMISSION	05.07.21	PO	GK
P2	DA DRAFT SUBMISSION	01.07.21	PO	GK
P1	DA DRAFT SUBMISSION	09.06.21	PO	GK

Rev	Description	Date	By	App
P6	RE-ISSUE FOR DA SUBMISSION	13.09.21	PO	GK

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Project Name  
**TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE**

Drawing Title  
**BULK EARTHWORKS PLAN**

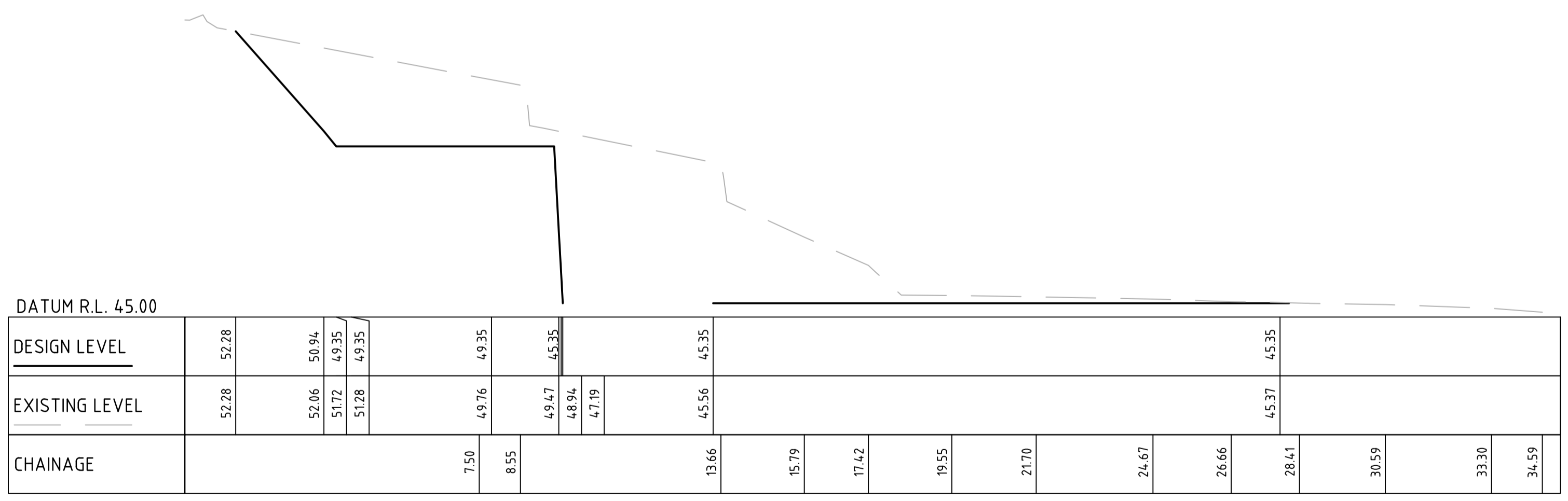
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Drawn	DP		
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Date			Rev
Sheet	8 OF 9	13087 01	C050 P6

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LONGITUDINAL SECTION SECTION B  
 SCALES: HORIZONTAL 1:200 VERTICAL 1:200



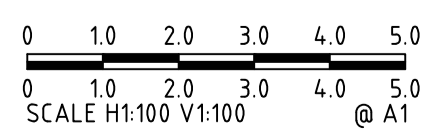
LONGITUDINAL SECTION SECTION A  
 SCALES: HORIZONTAL 1:200 VERTICAL 1:200

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Rev	Description	Date	By	App
P3	RE-ISSUE FOR DA SUBMISSION	13/09/21	PO	GK
P2	DA DRAFT SUBMISSION	02/09/21	PO	GK
P1	DA DRAFT SUBMISSION	01/07/21	PO	GK

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Project Name  
**TARONGA ZOO - REPTILE & AMPHIBIAN CONSERVATION CENTRE**

Drawing Title  
**BULK EARTHWORKS SITE SECTIONS**

DA SUBMISSION			
Designed	PO	Approved	Date
Drawn	DP		
Scale	NOTED	Project Ref	Drawing No
Date	7 OF 7	13087 01	C051
Sheet			Rev P3