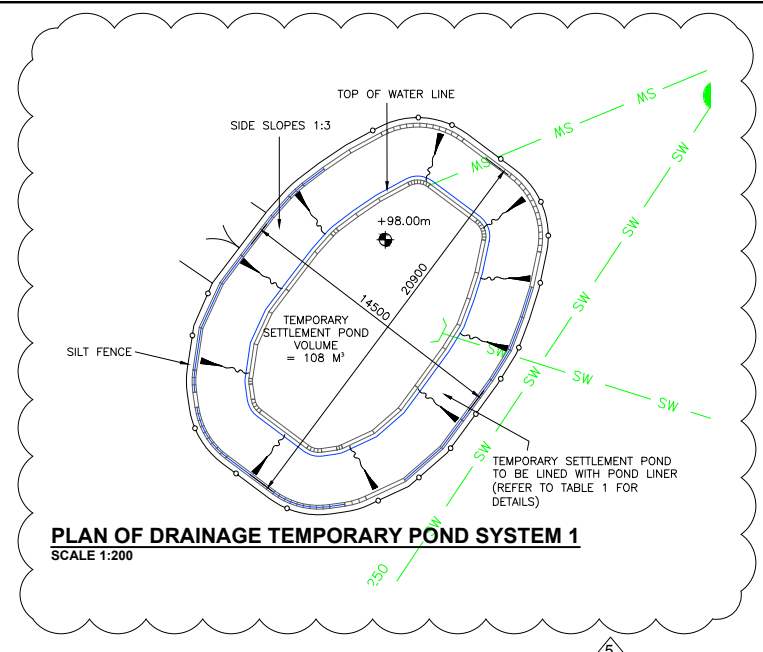
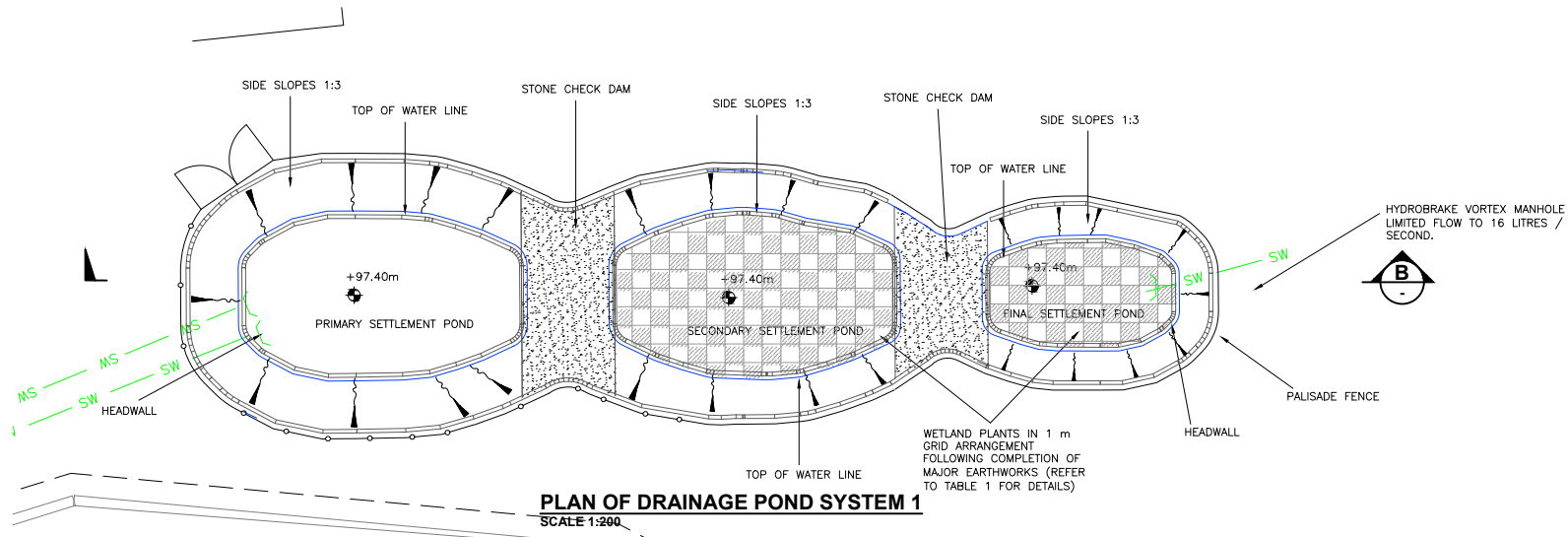


**Appendix 06 ESB Drainage Drawings and Details**





LEGEND	
EXISTING SURFACE WATER	
PROPOSED SURFACE WATER	
CONCRETE ENCASED SURFACE WATER	
SURFACE WATER MANHOLE	
LAND DRAIN	
CATCH PIT	
POND/LAKE/SURFACE WATER RETENTION	
POND LINER	
EXISTING LEVELS	+ 100.000
PROPOSED LEVELS	
TOP OF WATER LEVELS	TOW 100.00
SILT FENCE	
BERM AREA	

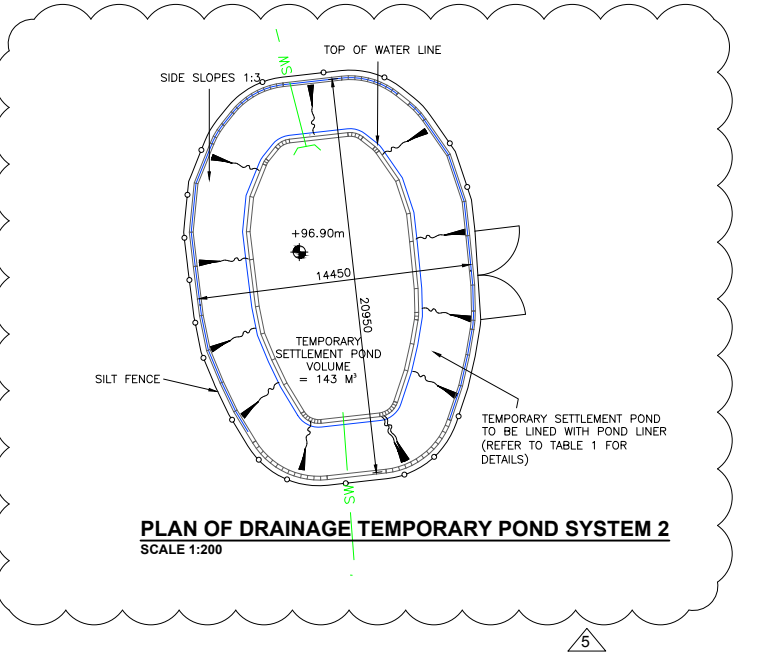
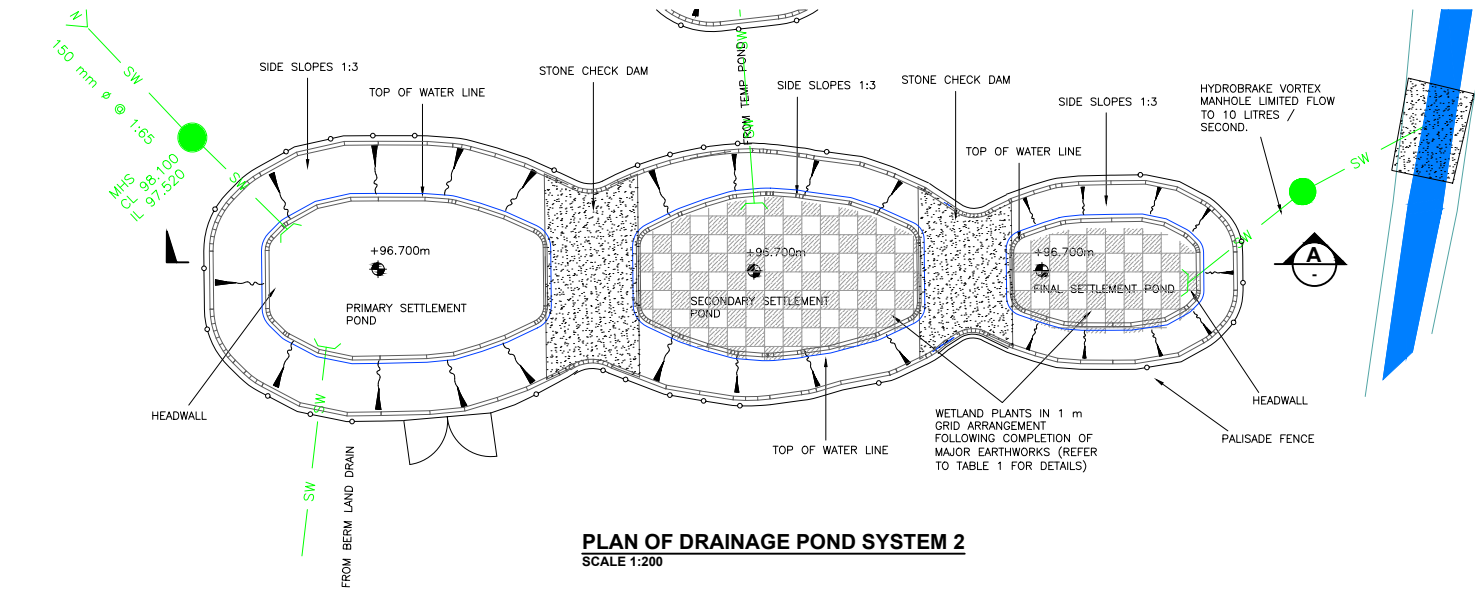
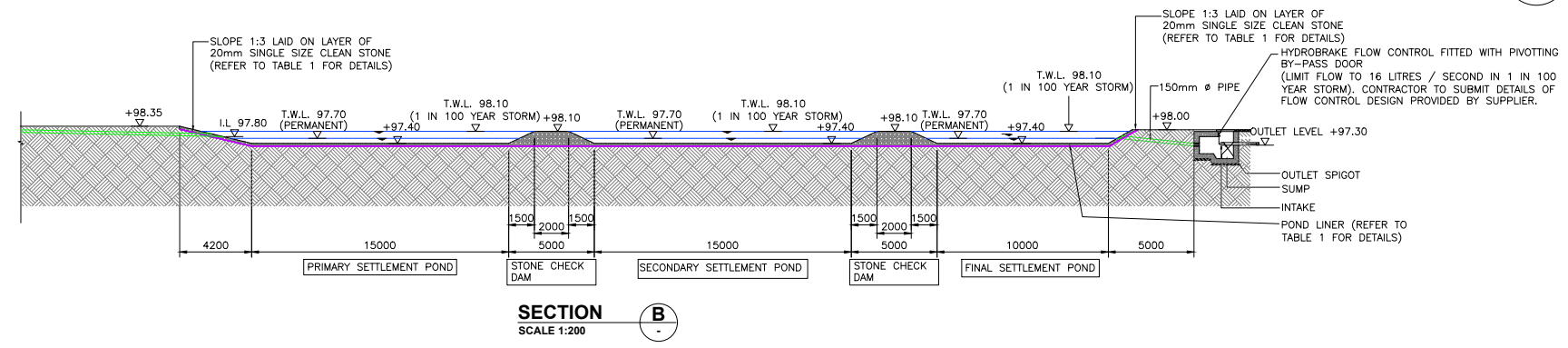
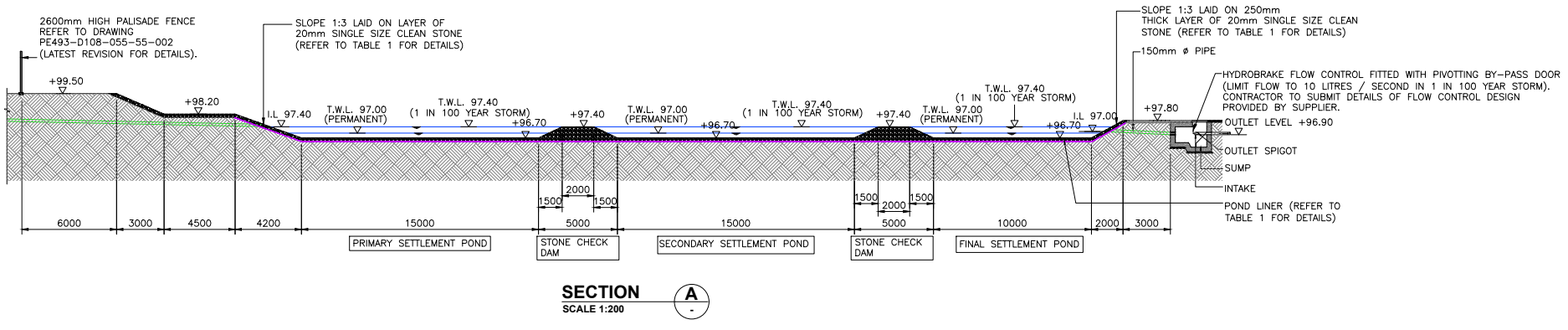


TABLE 1	
SEQUENCE OF DRAINAGE POND WORKS	
PHASE 1 - TO BE COMPLETED PRIOR TO ANY OTHER EXCAVATION	
1.	EXTENTS OF 3 NO. PONDS SHALL BE EXCAVATED AS ONE DIG. THE SIDES OF THE EXCAVATION SHALL BE MAXIMUM 1:3 SLOPE.
2.	GEOTEXTILE LINER SHALL BE LAID ACROSS EXCAVATION, WITH A MINIMUM LAP LENGTH OF 300 MM.
3.	50 MM DEEP LAYER OF 20 MM SINGLE SIZED CLEAN STONE SHALL BE PLACED ACROSS BASE OF EXCAVATION.
4.	STONE CHECK DAMS SHALL BE CONSTRUCTED WITH 20 MM SINGLE SIZED CLEAN STONE.
PHASE 2 - FOLLOWING COMPLETION OF MAJOR EARTHWORKS	
1.	POND INLET SHALL BE TEMPORARILY BUNGED AND PONDS DRAINED TO PERMIT POND WORKS. ANY PUMPED WATER TO DISCHARGE VIA A SILT BAG - NO DISCHARGE DIRECT TO WATERCOURSE PERMITTED.
2.	STONE CHECK DAMS, STONE BEDDING AND GEOTEXTILE LINER SHALL BE REMOVED AND DISPOSED OF IN A LICENCED WASTE FACILITY.
3.	2 MM HDPE IMPERMEABLE LINER WITH WELDED JOINTS SHALL BE LAID ACROSS EXCAVATION, WITH A MINIMUM LAP LENGTH OF 300 MM.
4.	NEW 250 MM DEEP LAYER OF 20 MM SINGLE SIZED CLEAN STONE SHALL BE PLACED ACROSS BASE AND SIDES OF THE EXCAVATION.
5.	NEW STONE CHECK DAMS SHALL BE CONSTRUCTED WITH 20 MM SINGLE SIZED CLEAN STONE.
6.	WETLAND PLANTING TO BE PLANTED IN 1 M GRID ARRANGEMENT IN SECONDARY SETTLEMENT POND, CONSISTING OF: YELLOW IRIS (40%), RED CANARY GRASS (40%), PURPLE LOOSESTRIPE (10%), MARSH THISTLE (5%) AND WATERMINT (5%), UNLESS OTHERWISE AGREED DURING CONSTRUCTION.
7.	WETLAND PLANTING TO BE PLANTED IN 1 M GRID ARRANGEMENT IN FINAL SETTLEMENT POND, CONSISTING OF: GREAT POND SEDGE (40%), BOTTLE SEDGE (30%), MARSH MARIGOLD (10%), COMMON WATER PLAINSTAIN (10%) AND WATER-ME-NOT (10%), UNLESS OTHERWISE AGREED DURING CONSTRUCTION.



NOTE:  
FOR DRAINAGE LAYOUT AND NOTES REFER TO DRAWING PE493-D108-053-002 (LATEST REVISION)

REV	DATE	REVISION DESCRIPTION	DRN	PROD	VER	APP
5	FEB. 23	TEMPORARY POND DETAILS ADDED				
4	FEB. 23	POND DRAINAGE SYSTEM 1 REVISED	JB	JB	RMcG	BM
3	JAN. 23	ISSUED FOR CONSTRUCTION	JB	JB	DOM	BM
2	FEB. 22	ISSUED FOR TENDER	JB	JB	DOM	BM
1	OCT 19	ISSUED FOR TENDER	LK	RC	DW	GH
0	JULY17	ISSUED FOR CLIENT APPROVAL	LK	LK	DW	DS

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PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED  
 CLIENT APPROVAL  PLANNING  TENDER  CONSTRUCTION  AS-BUILT

CLIENT: ESB NETWORKS

PROJECT: Coolnabacky 400 kV Station

CONTRACT:

DRAWING TITLE: COOLNABACKY 400 kV STATION CIVIL DRAINAGE PONDS DETAILS

PRODUCTION UNIT: Civil & Environmental Engineering

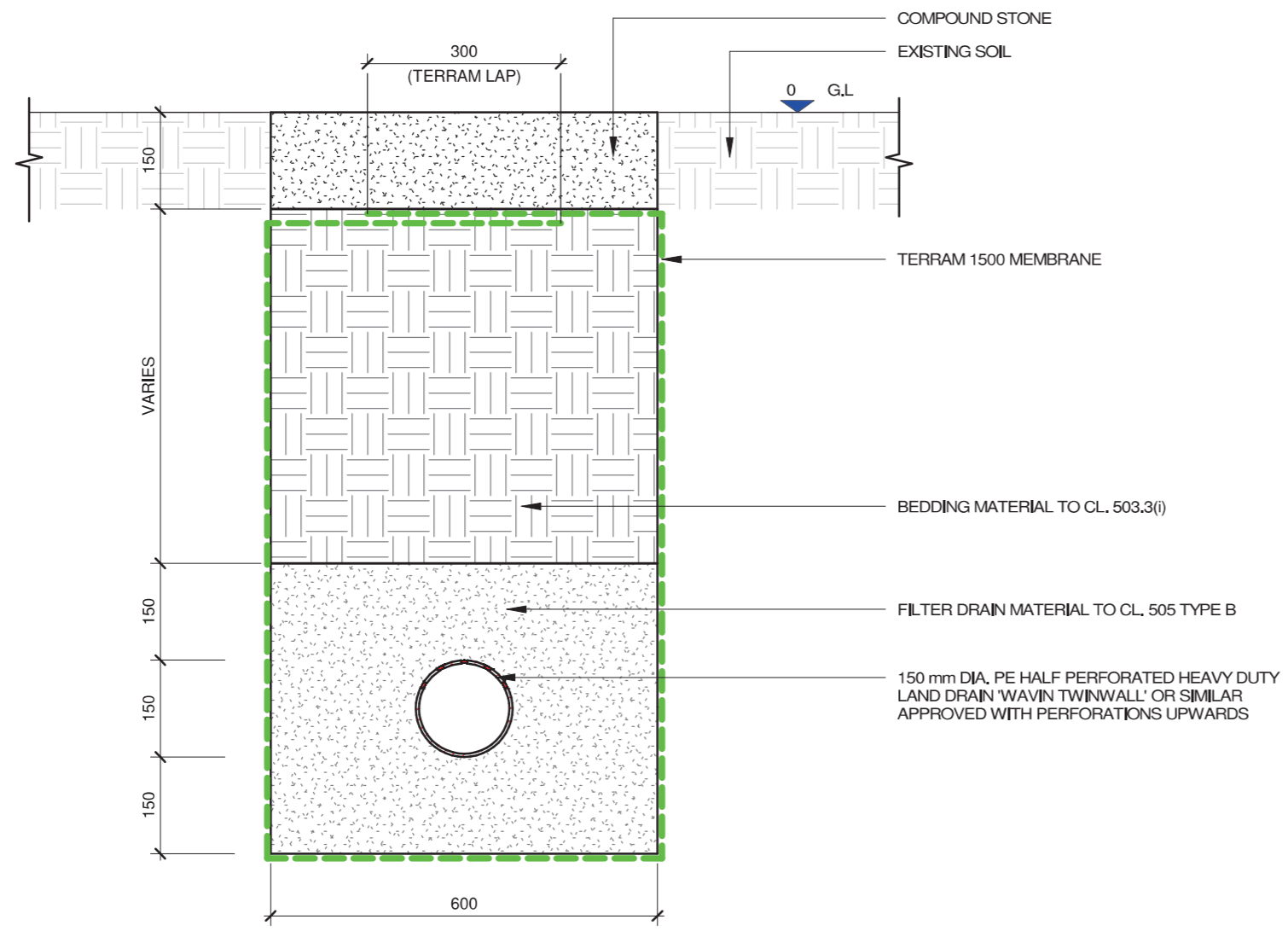
DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
J.Byrne	J.Byrne	R. McGowan	B. Murphy	08/03/2023
CLIENT REF	NO. OF SHTS	SIZE	SCALE	
TC218248	1	A1	1:25	

DRAWING NUMBER: PE493-D108-053-002-010-005

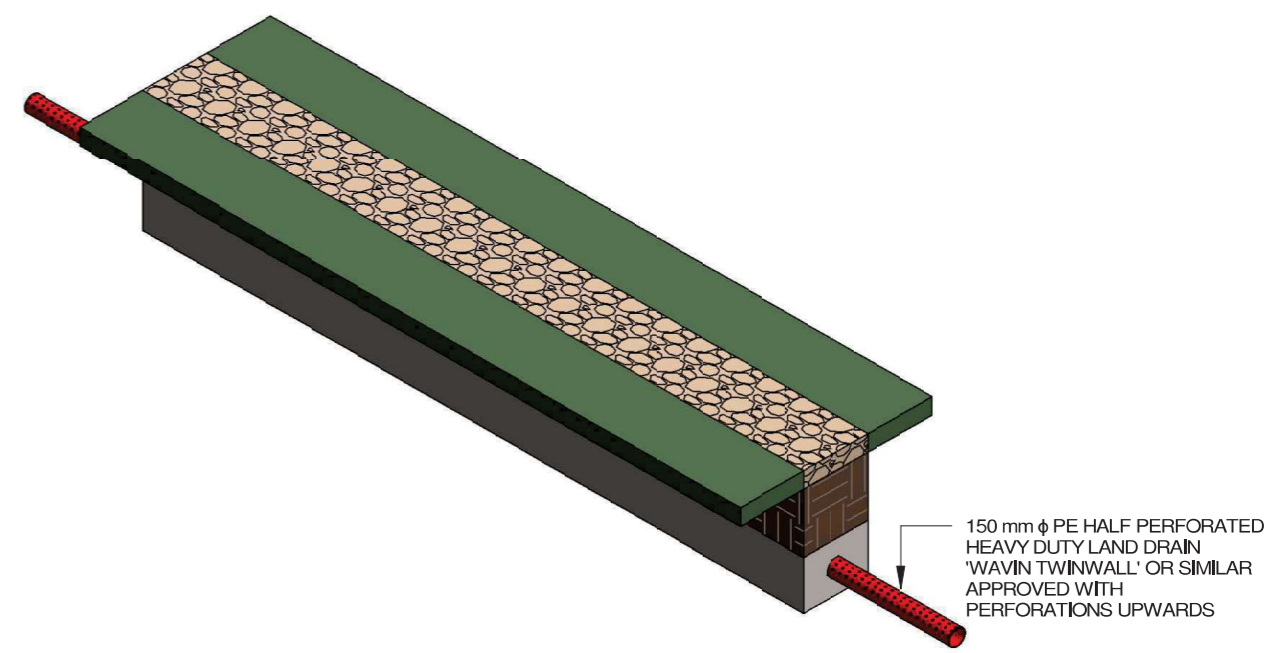
NOTE:

- FOR DRAINAGE LAYOUT AND NOTES, REFER TO DRAWING PE493-D108-053-002-(LATEST REVISION) AND PE493-D108-053-003-(LATEST REVISION)
- A RISK ASSESSMENT, CARRIED OUT BY AN APPROPRIATELY QUALIFIED ENGINEER, IS TO BE CARRIED OUT ON EACH EXCAVATION PRIOR TO ANY CIVIL WORKS COMMENCING.
- MATERIAL SPECIFICATION IN ACCORDANCE WITH TII SPECIFICATION FOR ROAD WORKS.

ACRONYMS  
G.L. = GROUND LEVEL



**TYPICAL SECTION THROUGH LAND DRAIN**  
SCALE: 1 : 10



**ISOMETRIC VIEW**

REV.	DATE	REVISION DESCRIPTION	Dm	Prod	Ver1	Ver2	App
3	JAN, '23	ISSUED FOR CONSTRUCTION					
2	FEB, '22	ISSUED FOR TENDER	JB	JB	DOM	N/A	BM
1	OCT 19	ISSUED FOR TENDER	RC	RC	DW	N/A	GH
0	04/08/17	ISSUED FOR TENDER	LK	LK	DC	N/A	DW

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division of ESB.

Client **ESB NETWORKS**

Project **COOLNABACKY 400 kV STATION**

Contract **CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT**

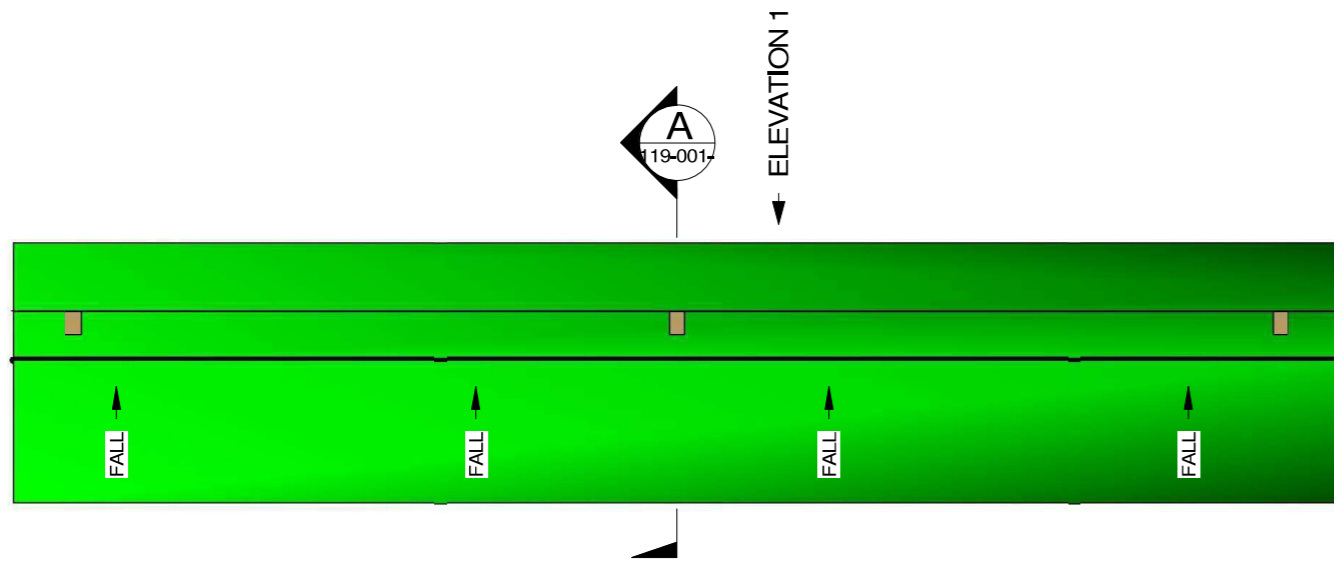
Drawing Title **COOLNABACKY 400 kV STATION CIVIL LAND DRAIN**

Production Unit **Civil & Environmental Engineering**

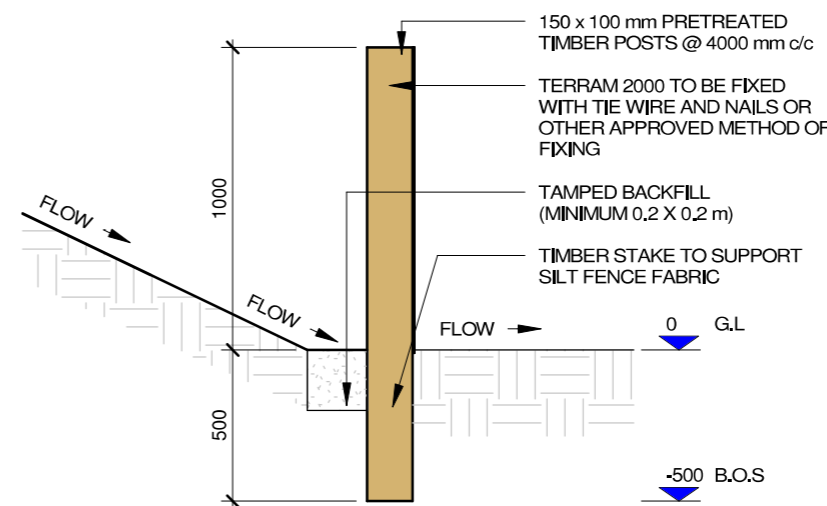
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DRAWN J.Byrne	PRODUCED J.Byrne	VERIFIED 1 R.McGowan	VERIFIED 2 N/A	APPROVED B.Murphy	APPD DATE JAN. 2023
Client Ref <b>TC218031</b>			No. of Sheets	Size A3	Scale 1 : 10
Drawing Number <b>PE493-D108-054-012-003</b>				Sheet	Rev

Purpose of Issue - Preliminary unless indicated  
Client Approval  Planning  Tender  Construction  As-Built



**PLAN - SILT FENCE**  
SCALE: 1 : 50

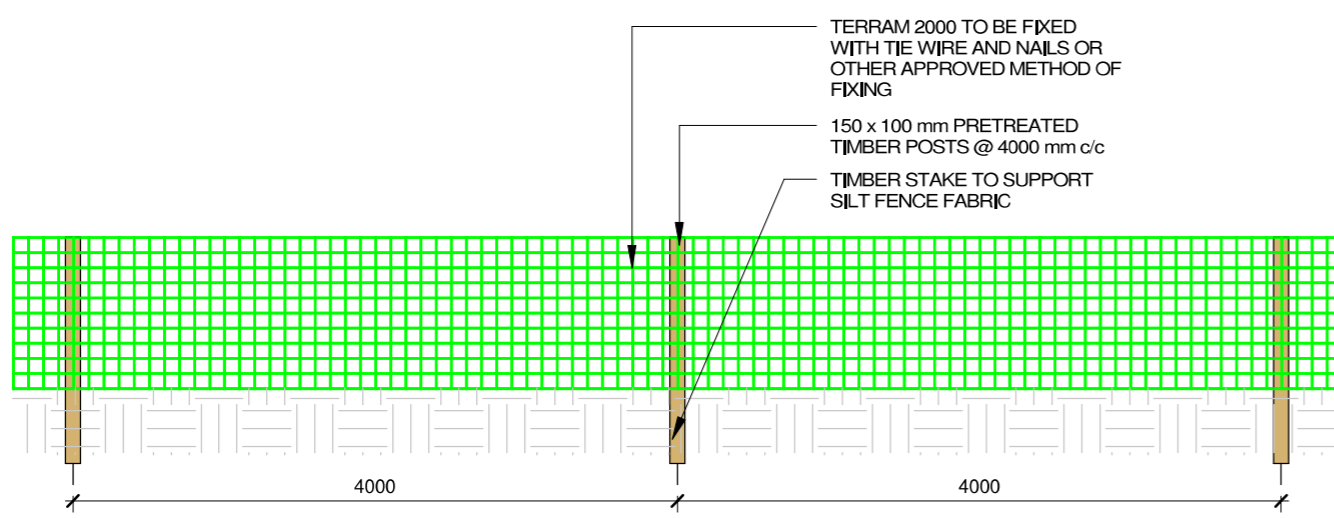


**SECTION A-A**  
SCALE: 1 : 25

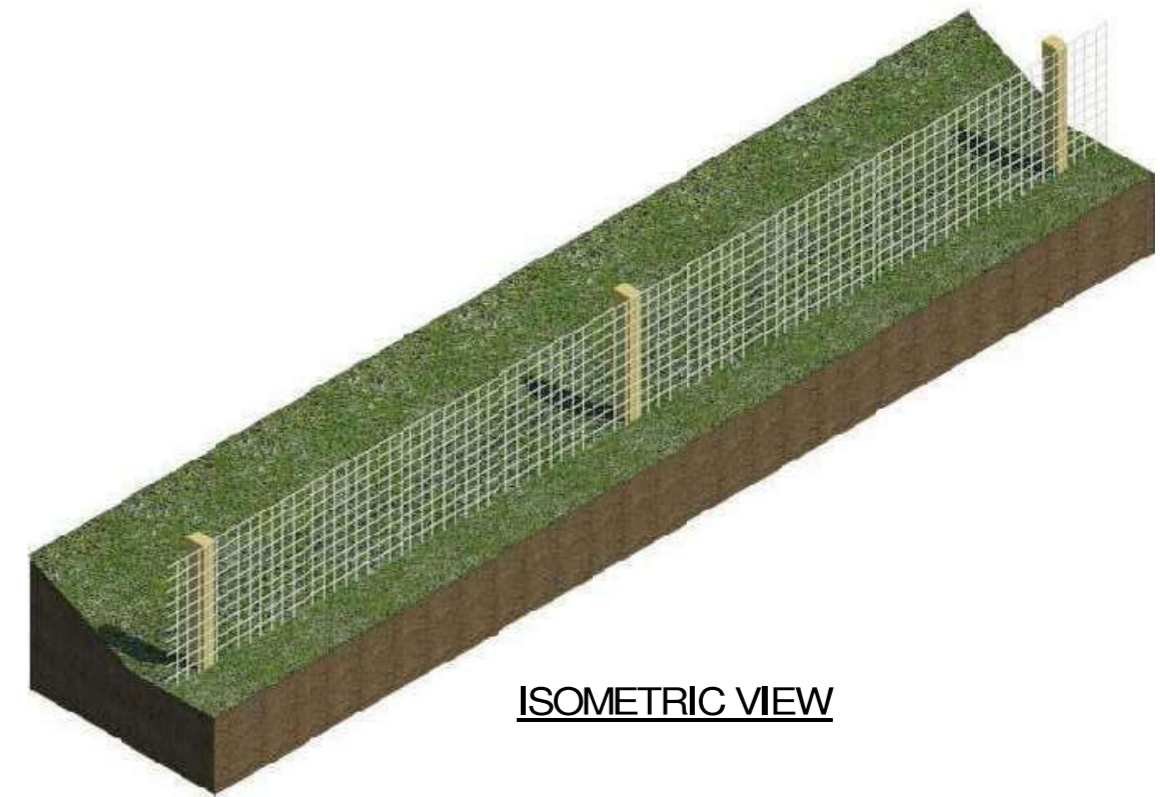
- NOTE:**
- CHECK DAMS TO BE INSTALLED USING HAND TOOLS ONLY TO AVOID GROUND DISTURBANCE BY MACHINERY.
  - CHECK DAMS TO BE INSPECTED AT LEAST DAILY (MORE FREQUENTLY DURING RAINFALL PERIODS) AND BUILD UP OF SILT TO BE REMOVED BY HAND AND DISPOSED OF APPROPRIATELY.
  - REFER TO DRAWING PG406-D100-001-002 (LATEST REVISION) FOR GENERAL CONSTRUCTION NOTES.
  - A RISK ASSESSMENT, CARRIED OUT BY AN APPROPRIATELY QUALIFIED ENGINEER, IS TO BE CARRIED OUT ON EACH EXCAVATION PRIOR TO ANY CIVIL WORKS COMMENCING.

**ACRONYMS**

G,L	=	GROUND LEVEL
B,O,S	=	BOTTOM OF TIMBER STAKE



**ELEVATION 1**  
SCALE: 1 : 50



**ISOMETRIC VIEW**

0	FEB, '23	ISSUED FOR CONSTRUCTION						
REV.	DATE	REVISION DESCRIPTION	Dm	Prod	Ver1	Ver2	App	
<b>Purpose of Issue - Preliminary unless indicated</b>								
Client Approval <input type="checkbox"/> Planning <input type="checkbox"/> Tender <input type="checkbox"/> Construction <input checked="" type="checkbox"/> As-Built <input type="checkbox"/>								



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Client	<b>ESB NETWORKS</b>
Project	<b>GENERAL CIVIL DRAWINGS &amp; NOTES</b>
Contract	

Drawing Title	<b>COOLNABACKY 400 kV SUBSTATION CIVIL SILT FENCE DETAIL</b>
Production Unit	<b>Transmission and Distribution Delivery</b>

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DRAWN	PRODUCED	VERIFIED 1	VERIFIED 2	APPROVED	APPD DATE
J,Byrne	J,Byrne	R,McGowan	N/A	B,Murphy	Feb, 2023
Client Ref			No. of Sheets	Size	Scale
			1	A3	As
Drawing Number					Sheet
<b>PE493-D108-119-001-000</b>					1 Rev

**indicated**

- A 25m buffer zone is applied around the stream section enriched with tufa deposits to ensure protection of this feature. (Annex 1 priority Petrifying spring habitat (\* 7220))
- No construction work will occur within this buffer zone area, including re-fuelling, concrete pours or storage of fuels and soil stockpiles



### LEGEND

EXISTING SURFACE WATER: SW SW

PROPOSED SURFACE WATER: SW SW

CONCRETE ENCASED SURFACE WATER: SW SW

SURFACE WATER MANHOLE: SW 1  
C.L. = 0.000  
L.L. = 0.000

GULLY: ST-A

ACCESS JUNCTION (SURFACE): AJ

PROPOSED PETROL INTERCEPTOR: IS SW

LAND DRAIN: LD

CATCH PIT: CP

EXISTING FOUL WATER: FW FW

PROPOSED FOUL WATER: FW FW

CONCRETE ENCASED FOUL WATER: FW FW

FOUL WATER MANHOLE: FW 1  
C.L. = 0.000  
L.L. = 0.000

ACCESS JUNCTION (FOUL): AJ

OIL SENSITIVE PUMP: OSP

RISING MAIN: RM

EXISTING WATER SUPPLY: WS WS

PROPOSED WATER SUPPLY: WS WS

SLURGE VALVE: SV

SCOUR VALVE: SCV

WATER METER: M

POND/LAKE/SURFACE WATER RETENTION: POND

PROPOSED LEVELS: + 100.000

EXISTING LEVELS: + 100.000

TOP OF WATER LEVELS: TOW 100.000

ROAD/SURFACES: ROAD

HARDSTANDING AREAS: HA

SILT FENCE: SF

BERM AREA: BERM

UPVC DUCT: UPVC

ALARM DUCTING FOR FOUL HOLDING TANK & OIL SEPARATOR: AOD

HEADWALL: HW

25m ECOLOGICAL BUFFER ZONE: EBZ

BH01-BH05 BOREHOLE

SW01-SW05 WATER SAMPLING POINT

### COORDINATES

POINT	COORDINATE (M)	
	EASTING	NORTHING
BH01	653762.000	692995.000
BH02	653750.000	693080.000
BH03	653833.000	693031.000
BH04	653755.620	692876.750
SW01	653567.155	692919.644
SW02	653811.956	693072.980
SW03	653879.561	693024.824
SW04	654044.694	692904.951
SW05	653880.025	692859.447

NOTE- ALL WORKS ARE PHASE 1 UNLESS NOTED OTHERWISE

REV	DATE	REVISION DESCRIPTION	DRN	PROJ	VER	APP
10	APR'10	PODS MOVED & NOTES REVISED				
9	APR'10	ECOLOGICALLY SENSITIVE AREA REVISED				
8	FEB'10	BHS AND NOTE ADDED				
7	FEB'10	DRAINAGE PONDS AWAY FROM BHS				
6	FEB'10	DRAINAGE PONDS TO THE NORTH MOVED				
5	JAN'10	ISSUED FOR CONSTRUCTION				
4	FEB'10	ISSUED FOR TENDER				
3	MAR'10	ISSUED FOR TENDER				
2	OCT'09	ISSUED FOR TENDER				
1	18-08-07	ISSUED FOR EIR/RII REVIEW				

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PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED

CLIENT:  PLANNING  TENDER  CONSTRUCTION  AS-BUILT

CLIENT: ESB NETWORKS

PROJECT: Coolnabackey 400 kV Station

CONTRACT: CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT

DRAWING TITLE: COOLNABACKEY 400 kV STATION CIVIL SITE DRAINAGE LAYOUT

PRODUCT LINE: Civil & Environmental Engineering

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DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
J. J. J.	J. J. J.	R. M. M.	J. J. J.	18/08/09

CLIENT REF: TC218236 NO. OF SHEETS: 1 SHEET: AD SCALE: As Shown

DRAWING NUMBER: SHEET: REV

PE493-D108-053-002-009