

- 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	— EXS — EXS —
PROPOSED SURFACE WATER	— SW — SW —
CONCRETE ENCASED SURFACE WATER	— SW — SW —
SURFACE WATER MANHOLE	● SW 1 C.L. = 0.000 I.L. = 0.000
GULLY	□ GY-A
ACCESS JUNCTION (SURFACE)	◇ AJ
PROPOSED OIL SEPERATOR	○
LAND DRAIN	— — — —
CATCH PIT	○ CP
EXISTING FOUL WATER	— EXF — EXF —
PROPOSED FOUL WATER	— FOUL — FOUL —
CONCRETE ENCASED FOUL WATER	— FOUL — FOUL —
FOUL WATER MANHOLE	● FW 1 C.L. = 0.000 I.L. = 0.000
ACCESS JUNCTION (FOUL)	◇ AJ
OIL SENSITIVE PUMP	○
RIISING MAIN	— EXW — EXW —
EXISTING WATER SUPPLY	— EXW — EXW —
PROPOSED WATER SUPPLY	— W — W — W —
SLUICE VALVE	SV
SCOUR VALVE	SC
WATER METER	M
POND/LAKE/SURFACE WATER RETENTION	○
EXISTING LEVELS	+ 100.000
PROPOSED LEVELS	■ 100.000
TOP OF WATER LEVELS	TOW 100.00
ROAD/SURFACES	■
HARDSTANDING AREAS	■
SILT FENCE	■
BERM AREA	■
uPVC DUCT	— — — —
FOUL HOLDING TANK	■

NOTE:

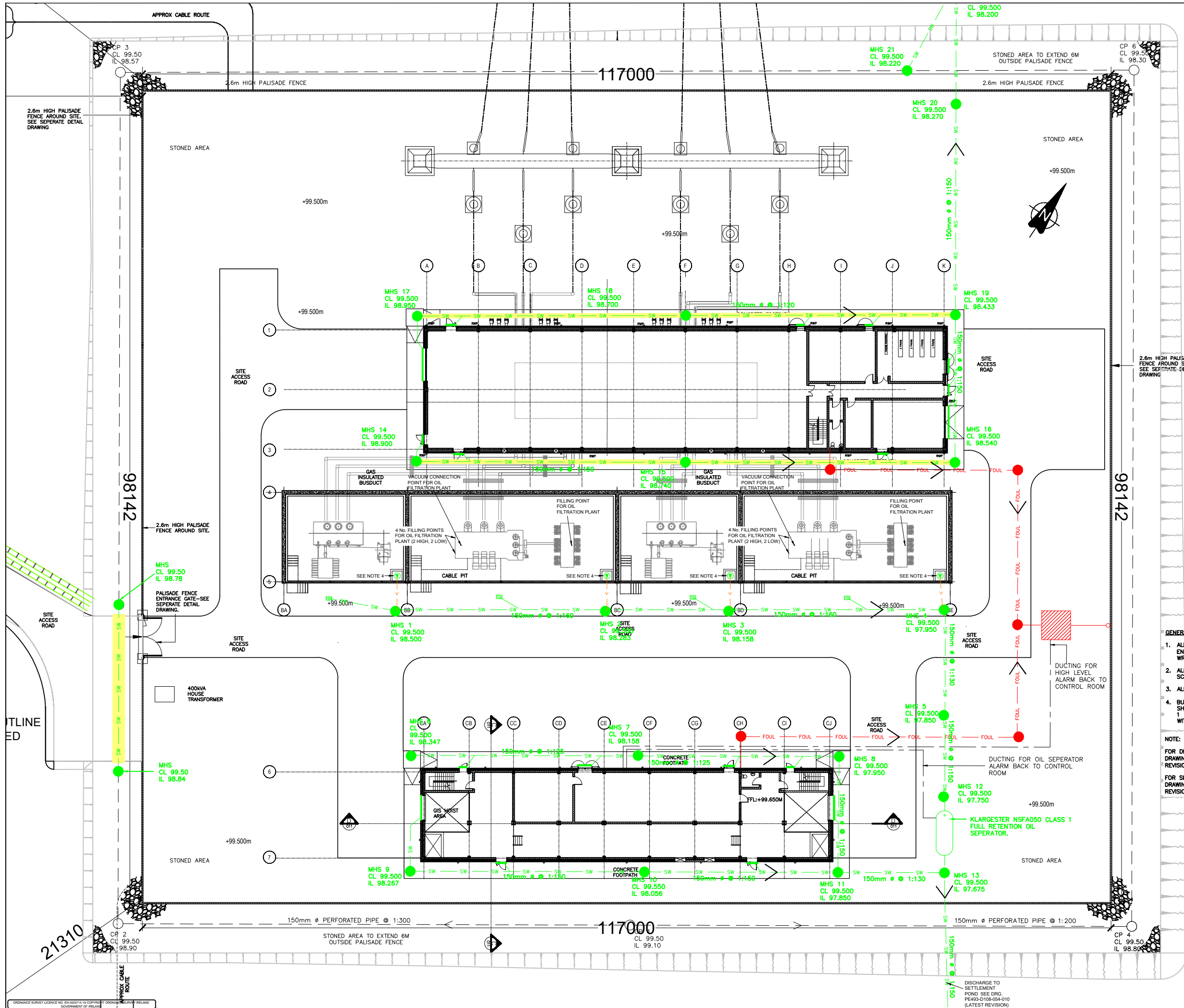
FOR DRAINAGE POND DETAILS REFER TO DRAWING PE493-D108-054-010 (LATEST REVISION)

FOR COMPOUND DRAINAGE LAYOUT REFER TO DRAWING PE493-D108-125-002 (LATEST REVISION)

MONITORING POINTS LEGEND

- EXISTING BOREHOLE TO BE DECOMMISSIONED BH00
- EXISTING BOREHOLE TO BE RETAINED BH00
- PROPOSED BOREHOLE BH04 (B)
- SURFACE WATER MONITORING POINTS SW 00

1									
0	28.08.20	ISSUED FOR INFORMATION							
REV	DATE	REVISION DESCRIPTION	DRN	PROJ	VER	VERS	APP		
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<small>PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED</small>									
CLIENT	ESB NETWORKS								
PROJECT	Coolinabacky 400 kV Station								
CONTRACT	CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT								
DRAWING TITLE	COOLINABACKY 400 kV STATION CIVIL								
	PLANNING SITE DRAINAGE PLAN								
PRODUCTION UNIT	Transmission and Distribution Delivery								
<small>Engineering and Water Projects, One Dublin Airport Centre, Dublin Airport, Clongrath, Co. Dublin, W8B 3F2, Ireland. Tel: +353 (0) 1 234 5678 Fax: +353 (0) 1 234 5678 Engineering and Water Projects a division of ESB</small>									
DRAWN	PRODUCED	VERIFIED 1	VERIFIED 2	APPROVED	APPROVAL DATE				
CLIENT REF	NO. OF SHEETS	SHEET NO.	SCALE						
TC220651	1	AD	1:400						
DRAWING NUMBER	SHEET			REV					
PE493-D108-125-001-001									



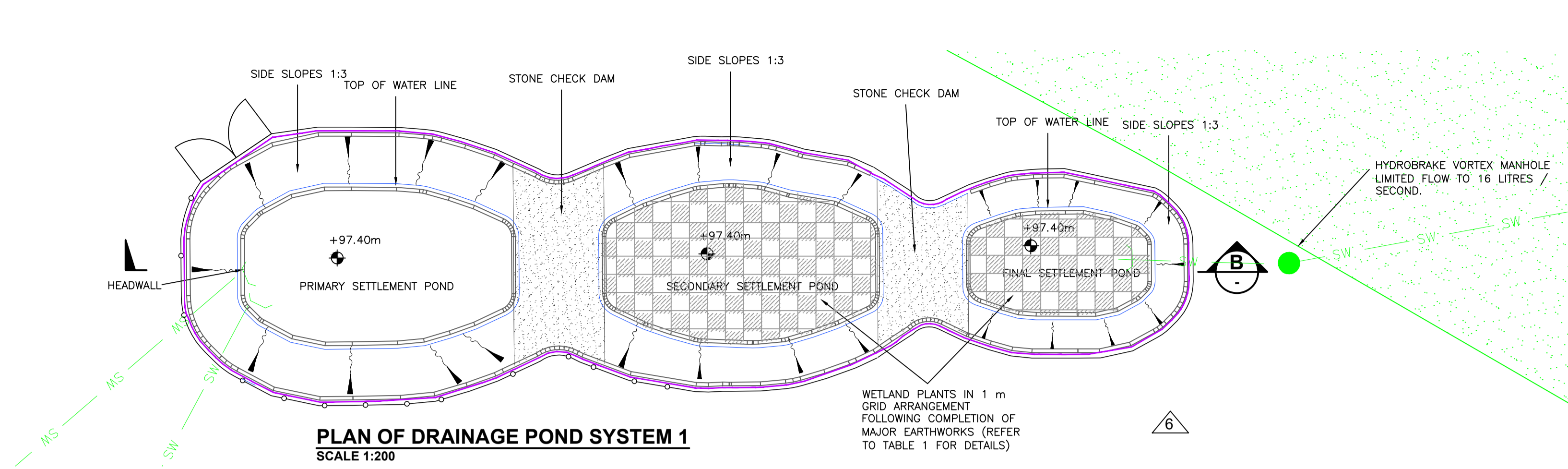
LEGEND

EXISTING SURFACE WATER	EXS	EXS
PROPOSED SURFACE WATER	SW	SW
CONCRETE ENCASED SURFACE WATER	SW	SW
SURFACE WATER MANHOLE	SW 1	C.L. = 0.000 I.L. = 0.000
GULLY	GY-A	AJ
ACCESS JUNCTION (SURFACE)	AJ	
PROPOSED OIL SEPARATOR		
LAND DRAIN		
CATCH PIT	CP	
EXISTING FOUL WATER	EXF	EXF
PROPOSED FOUL WATER	FOUL	FOUL
CONCRETE ENCASED FOUL WATER	FOUL	FOUL
FOUL WATER MANHOLE	FW 1	C.L. = 0.000 I.L. = 0.000
ACCESS JUNCTION (FOUL)	AJ	
OIL SENSITIVE PUMP		
RIISING MAIN	EXW	EXW
EXISTING WATER SUPPLY	W	W
PROPOSED WATER SUPPLY	W	W
SLUICE VALVE	SV	
SCOUR VALVE	SC	
WATER METER	M	
POND/LAKE/SURFACE WATER RETENTION		
EXISTING LEVELS	+ 100.000	
PROPOSED LEVELS	+ 100.000	
TOP OF WATER LEVELS	TOW 100.00	
ROAD/SURFACES		
HARDSTANDING AREAS		
SILT FENCE		
BERM AREA		
UPVC DUCT		
FOUL HOLDING TANK		

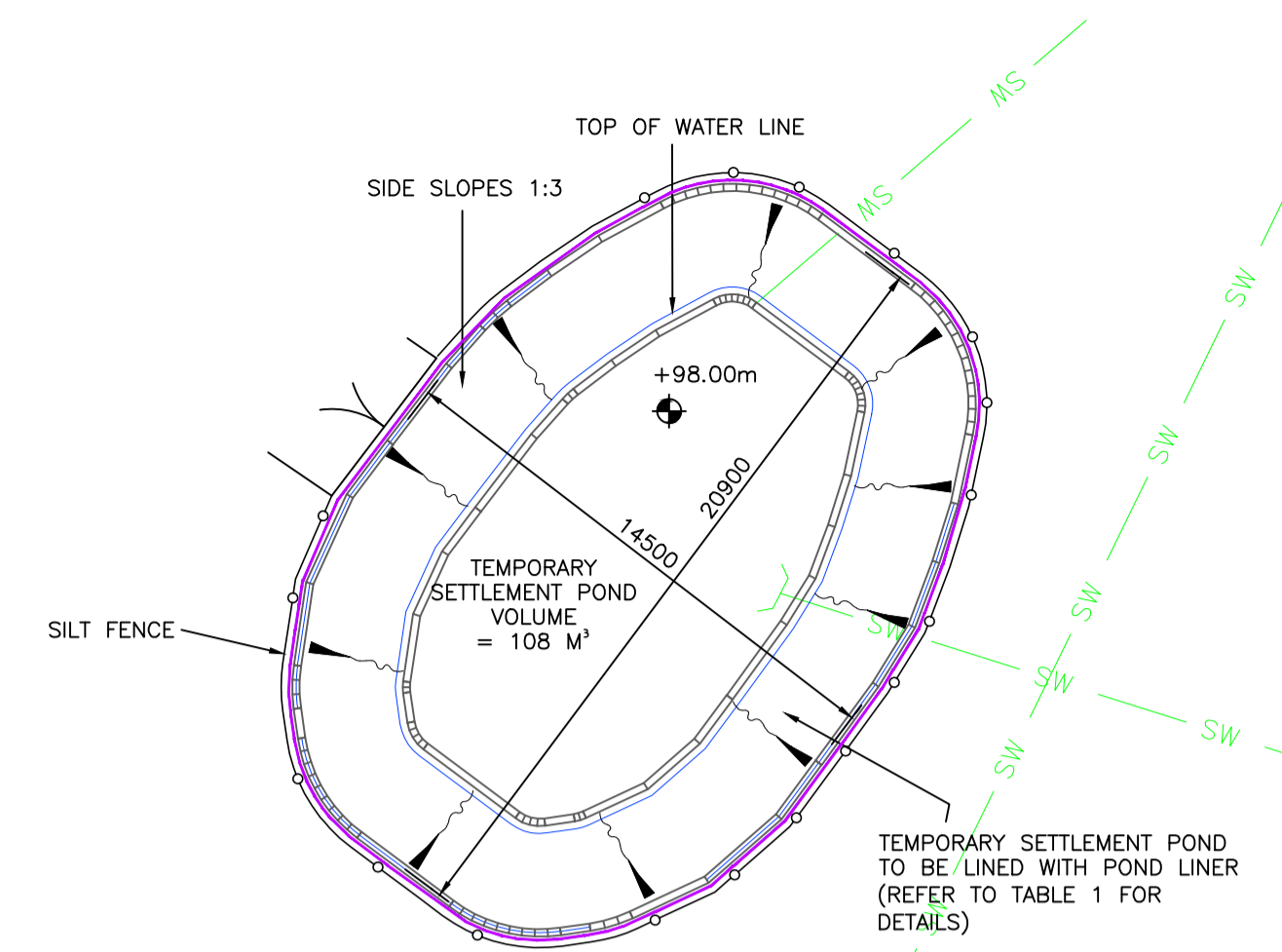
- GENERAL NOTES:**
1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ALL ENGINEER'S AND ARCHITECT'S DRAWINGS. ANY DISCREPANCIES ARE TO BE NOTED IN WRITING TO THIS OFFICE IMMEDIATELY PRIOR TO COMMENCING THE WORK.
 2. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED. NO DIMENSIONS SHALL BE SCALED FROM THE DRAWINGS. ALL DIMENSIONS SHALL BE CHECKED ON SITE.
 3. ALL LEVELS TO OSI DATUM MALIN HEAD.
 4. BUNDS FITTED WITH AN OIL SENSITIVE BUND DEWATERING SYSTEM WITH A 1 L/S LOW SHEAR VORTEX PUMP WITH OIL SEPARATION DETECTION AND A BUND-INTEGRATED CLASS 1 FULL RETENTION OIL SEPARATOR WITH INDEPENDENT CERTIFICATION OF COMPLIANCE WITH EN 858

NOTE:
 FOR DRAINAGE POND DETAILS REFER TO DRAWING PE493-D108-054-010 (LATEST REVISION)
 FOR SITE DRAINAGE LAYOUT REFER TO DRAWING PE493-D108-125-001 (LATEST REVISION)

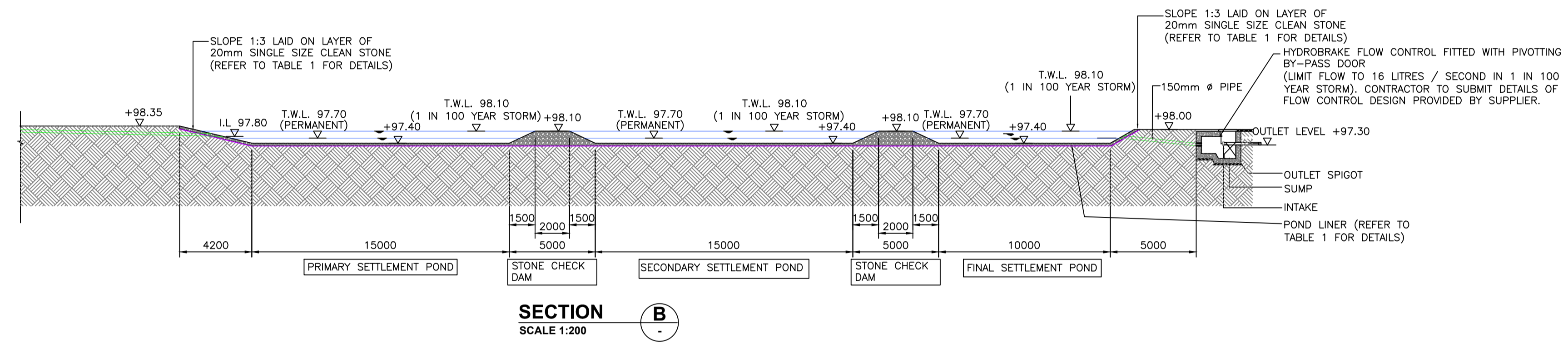
REV	DATE	REVISION DESCRIPTION	DRN	PROJ	VER	VERS	APP
0	31.08.20	ISSUED FOR INFORMATION					
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PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED							
ISSUED FOR:	<input type="checkbox"/> PLANNING <input type="checkbox"/> TENDER <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> AS-BUILT						
CLIENT:	ESB NETWORKS						
PROJECT:	Coolinabackey 400 kV Station						
CONTRACT:	CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT						
DRAWING TITLE:	COOLINABACKEY 400 kV STATION CIVIL PLANNING COMPOUND DRAINAGE PLAN						
PRODUCTION UNIT:	Transmission and Distribution Delivery						
Engineering and Water Projects, One Dublin Airport Centre, Dublin Airport, Clonbrae, Co. Dublin, K15 XFP, Ireland. Tel: +353 (0) 1 904 6000 Fax: +353 (0) 1 904 6001 Engineering and Water Projects is a division of ESB							
DRAWN:	PRODUCED:	VERIFIED:	APPROVED:	APPROVAL DATE:			
Client Ref:	Project Ref:	No. of Sheets:	Scale:	Date:			
TC029651	1	AD	1:150	04/09/2020			
DRAWING NUMBER:	SHEET:	REV:	PE493-D108-125-002-001				



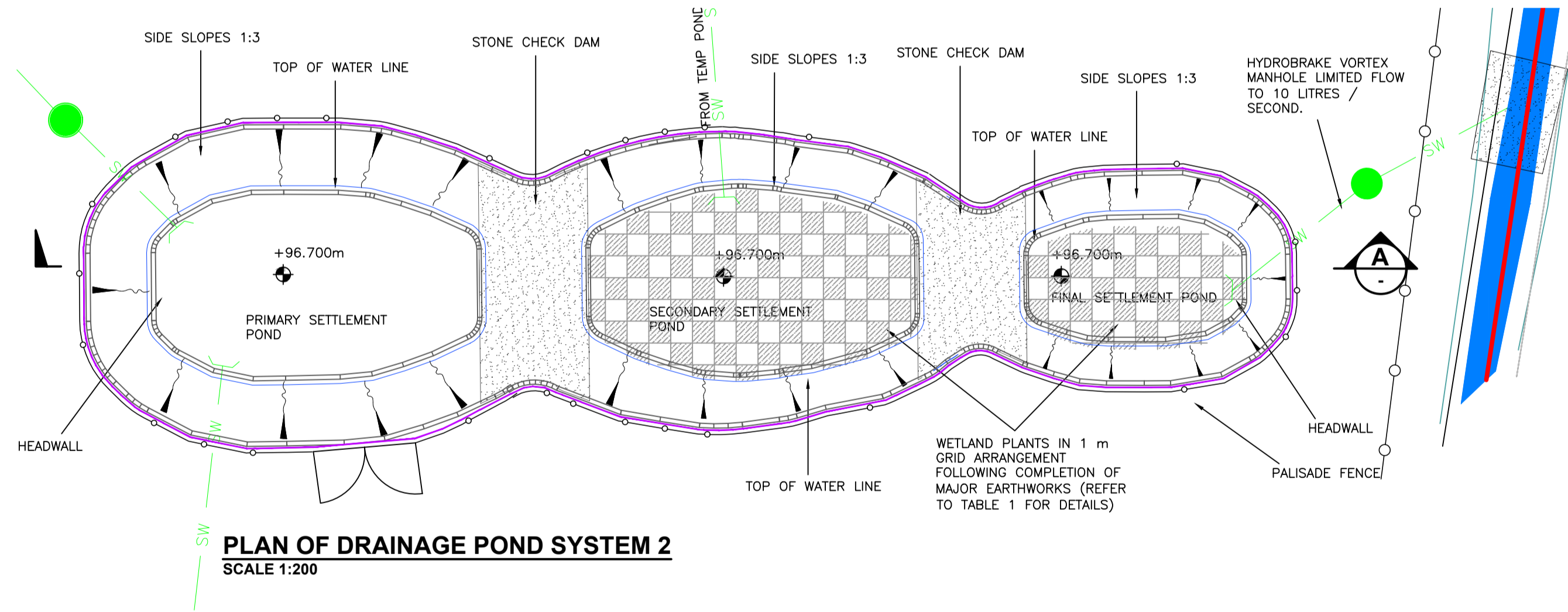
PLAN OF DRAINAGE POND SYSTEM 1
SCALE 1:200



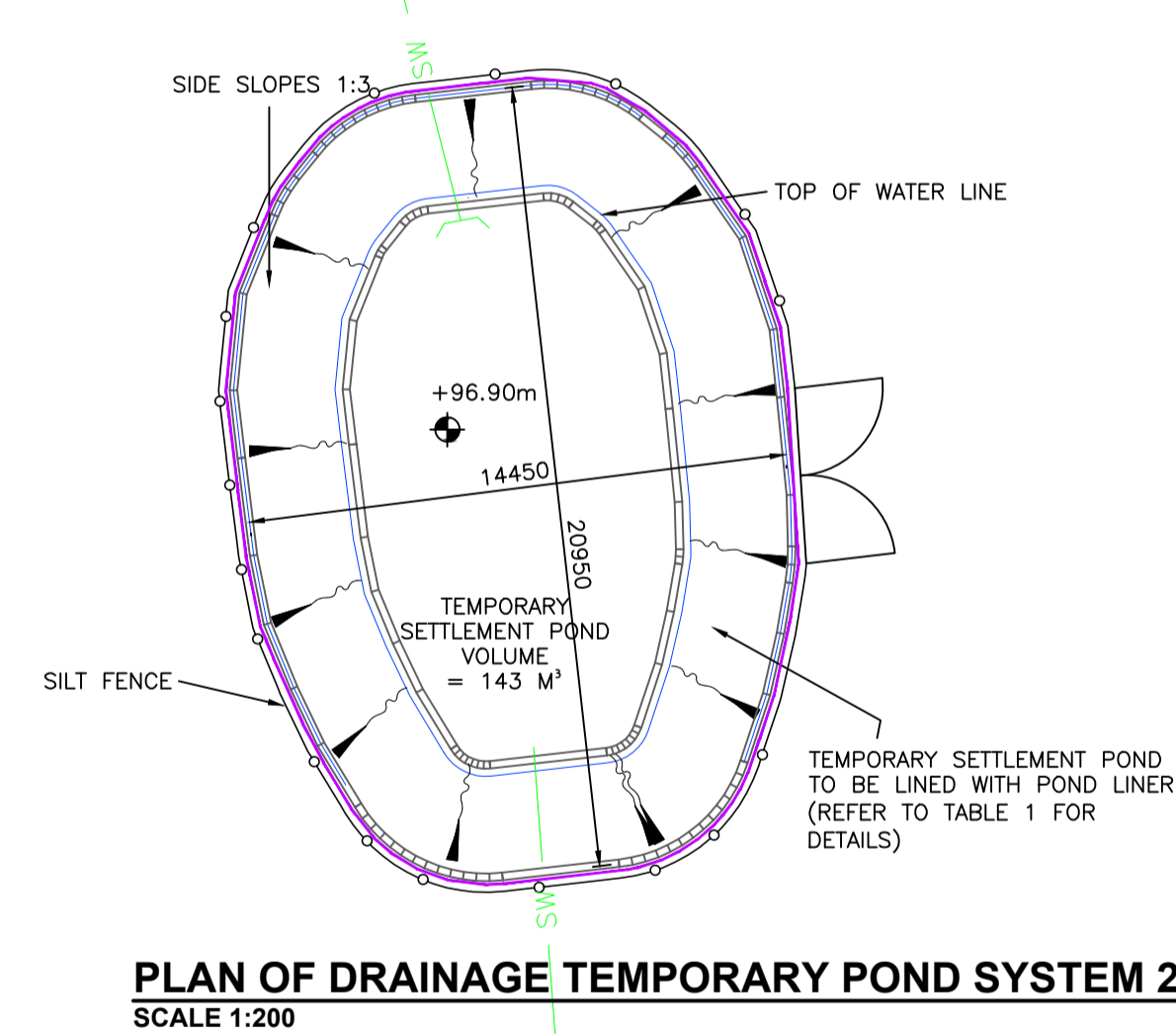
PLAN OF DRAINAGE TEMPORARY POND SYSTEM 1
SCALE 1:200



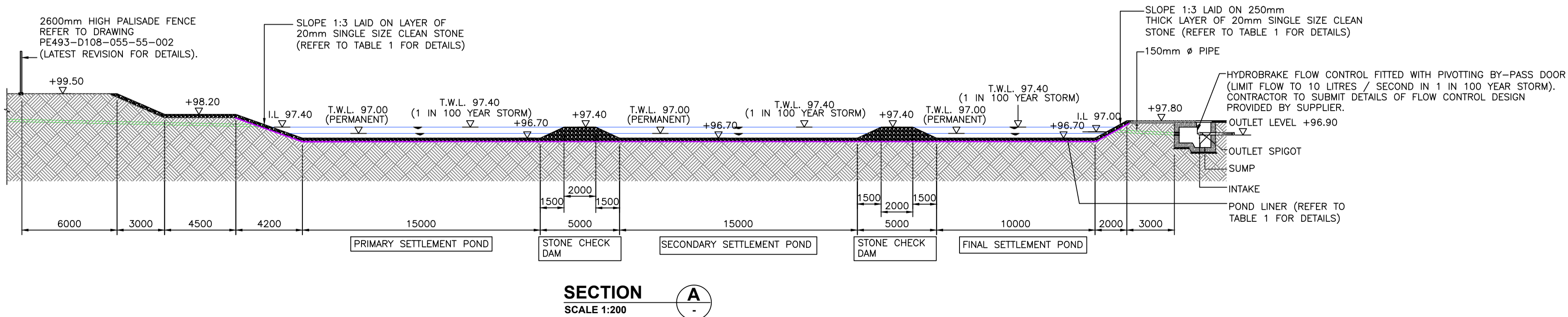
SECTION B
SCALE 1:200



PLAN OF DRAINAGE POND SYSTEM 2
SCALE 1:200



PLAN OF DRAINAGE TEMPORARY POND SYSTEM 2
SCALE 1:200



SECTION A
SCALE 1:200

LEGEND	
EXISTING SURFACE WATER	EXS
PROPOSED SURFACE WATER	SW
CONCRETE ENCASED SURFACE WATER	SW
SURFACE WATER MANHOLE	SW 1 C.L. = 0.000 I.L. = 0.000
LAND DRAIN	LD
CATCH PIT	CP
POND/LAKE/SURFACE WATER RETENTION	○
POND LINER	—
EXISTING LEVELS	+ 100.000
PROPOSED LEVELS	± 100.000
TOP OF WATER LEVELS	TOW 100.00
SILT FENCE	—
BERM AREA	—
WETLAND PLANTING	—

TABLE 1	
SEQUENCE OF DRAINAGE POND WORKS 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. 2 MM HDPE IMPERMEABLE LINER WITH WELDED JOINTS WRAPPED IN A GEOTEXILE FLEECE 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.	
FOLLOWING COMPLETION OF MAJOR EARTHWORKS	
1. POND INLET SHALL BE TEMPORARILY BLUNGED AND PONDS DRAINED TO PERMIT POND WORKS. ANY PUMPED WATER TO DISCHARGE VIA A SILT BAG - NO DISCHARGE DIRECT TO WATERCOURSE PERMITTED.	
2. SEDIMENT, SILT, STONE CHECK DAMS, STONE BEDDING AND LINER SHALL BE REMOVED AND DISPOSED OF IN A LICENCED WASTE FACILITY.	
3. NEW 2 MM HDPE IMPERMEABLE LINER WITH WELDED JOINTS WRAPPED IN A GEOTEXILE FLEECE 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 TO BE PLANTED IN 1 M GRID ARRANGEMENT IN SECONDARY SETTLEMENT POND, CONSISTING OF: YELLOW IRIS (40%), RED CANARY GRASS (40%), PURPLE LOOSESTRIFE (10%), MARSH THISTLE (5%) AND WATERMINT (5%), UNLESS OTHERWISE AGREED DURING CONSTRUCTION.	
7. WETLAND PLANTING TO BE TO BE PLANTED IN 1 M GRID WETLAND PLANTING TO BE 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 PLANTAIN (10%) AND WATER-ME-NOT (10%), UNLESS OTHERWISE AGREED DURING CONSTRUCTION.	

REV	DATE	REVISION DESCRIPTION	DRN	PROD	VER	APP
7	AUG. '23	NOTES REVISED				
6	APR. '23	DRAINAGE POND SYSTEM 1 MOVED	JB	JB	RMcG	BM
5	FEB. '23	TEMPORARY POND DETAILS ADDED	JB	JB	RMcG	BM
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

Engineering and Major Projects,
One Dublin Airport Central, Dublin Airport,
Cloughran, Co. Dublin, K67 XF72, Ireland.
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DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
J.Byrne	H.Griffin	R. McGowan	B. Murphy	28/08/2023
CLIENT REF	NO. OF SHTS	SIZE	SCALE	
TC218248	1	A1	1:25	

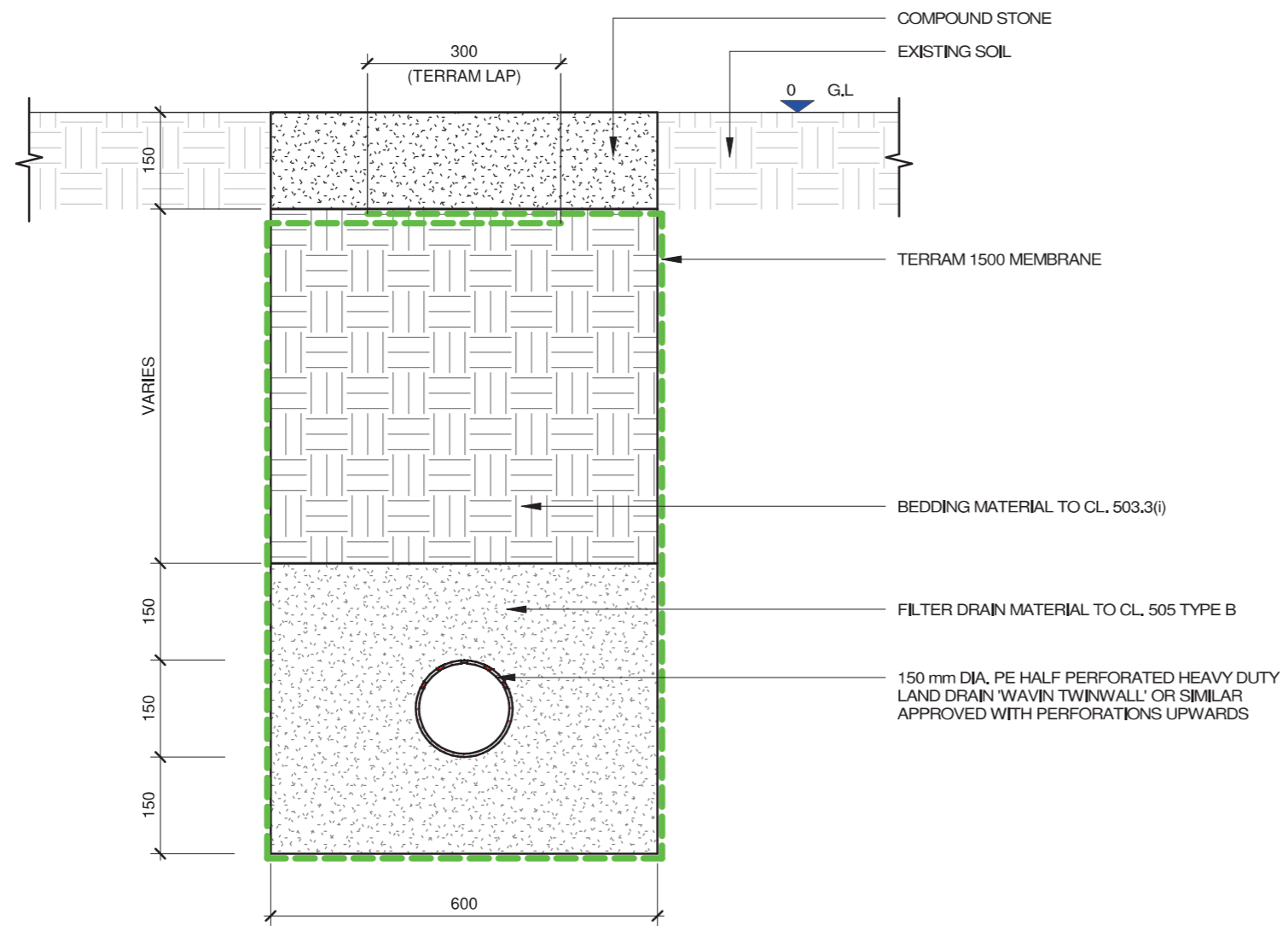
DRAWING NUMBER: PE493-D108-054-010-007

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

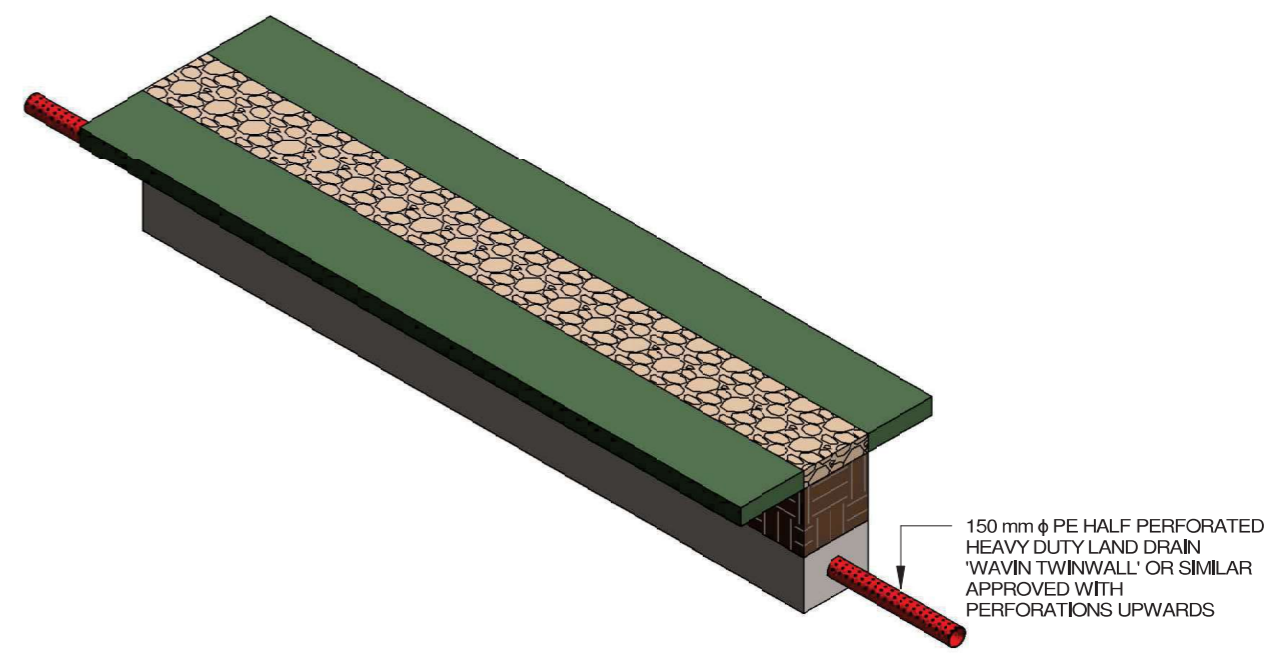
NOTE:

1. FOR DRAINAGE LAYOUT AND NOTES, REFER TO DRAWING PE493-D108-053-002-(LATEST REVISION) AND PE493-D108-053-003-(LATEST REVISION)
2. A RISK ASSESSMENT, CARRIED OUT BY AN APPROPRIATELY QUALIFIED ENGINEER, IS TO BE CARRIED OUT ON EACH EXCAVATION PRIOR TO ANY CIVIL WORKS COMMENCING.
3. 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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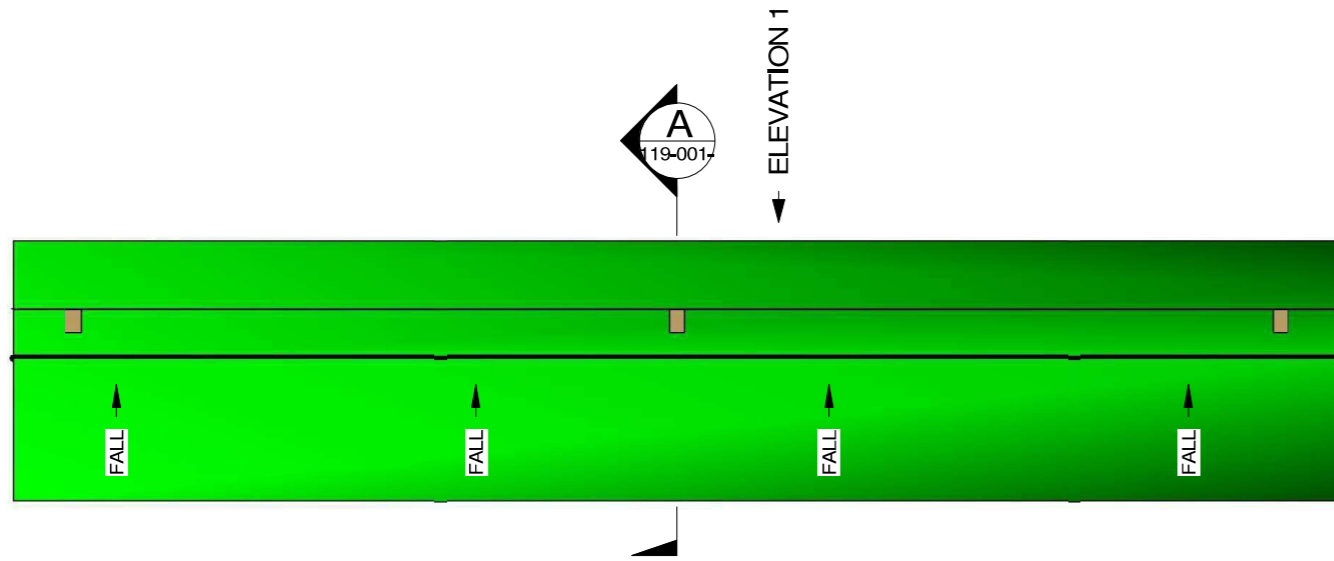
Client ESB NETWORKS
Project COOLNABACKY 400 kV STATION
Contract CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT

Drawing Title COOLNABACKY 400 kV STATION CIVIL LAND DRAIN
Production Unit Civil & Environmental Engineering

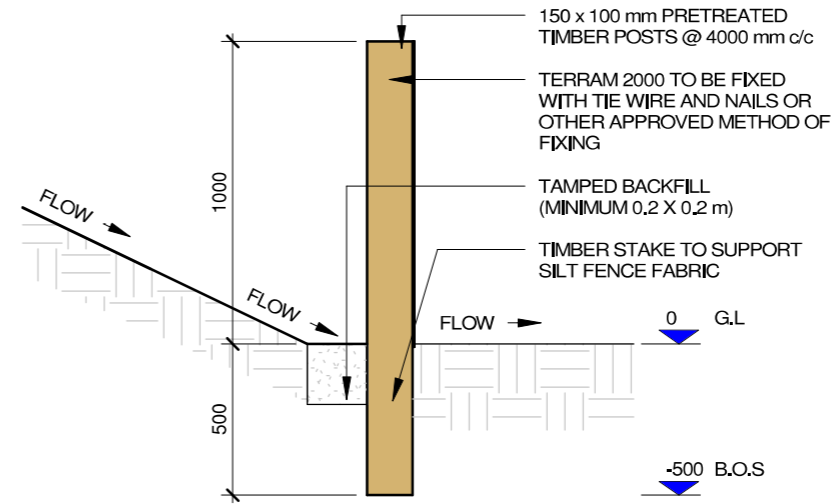
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DRAWN J.Byrne	PRODUCED J.Byrne	VERIFIED 1 R.McGowan	VERIFIED 2 N/A	APPROVED B.Murphy	APPD DATE JAN. 2023
Client Ref TC218031			No. of Sheets	Size A3	Scale 1 : 10
Drawing Number PE493-D108-054-012-003				Sheet	Rev

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



PLAN - SILT FENCE
SCALE: 1 : 50

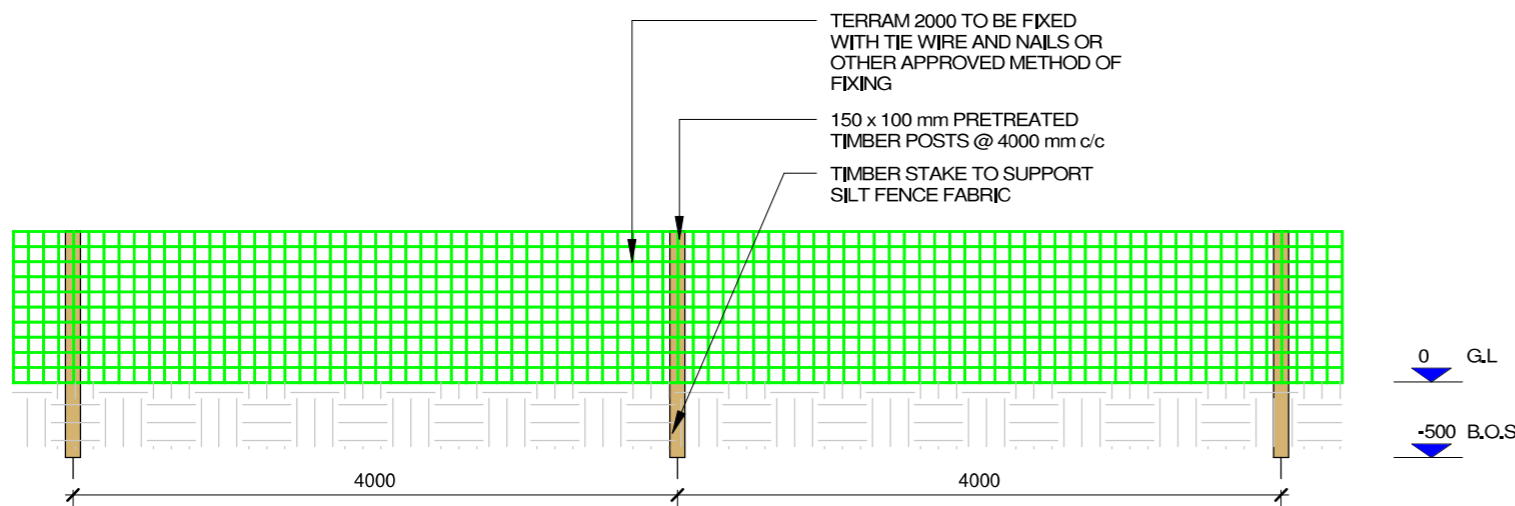


SECTION A-A
SCALE: 1 : 25

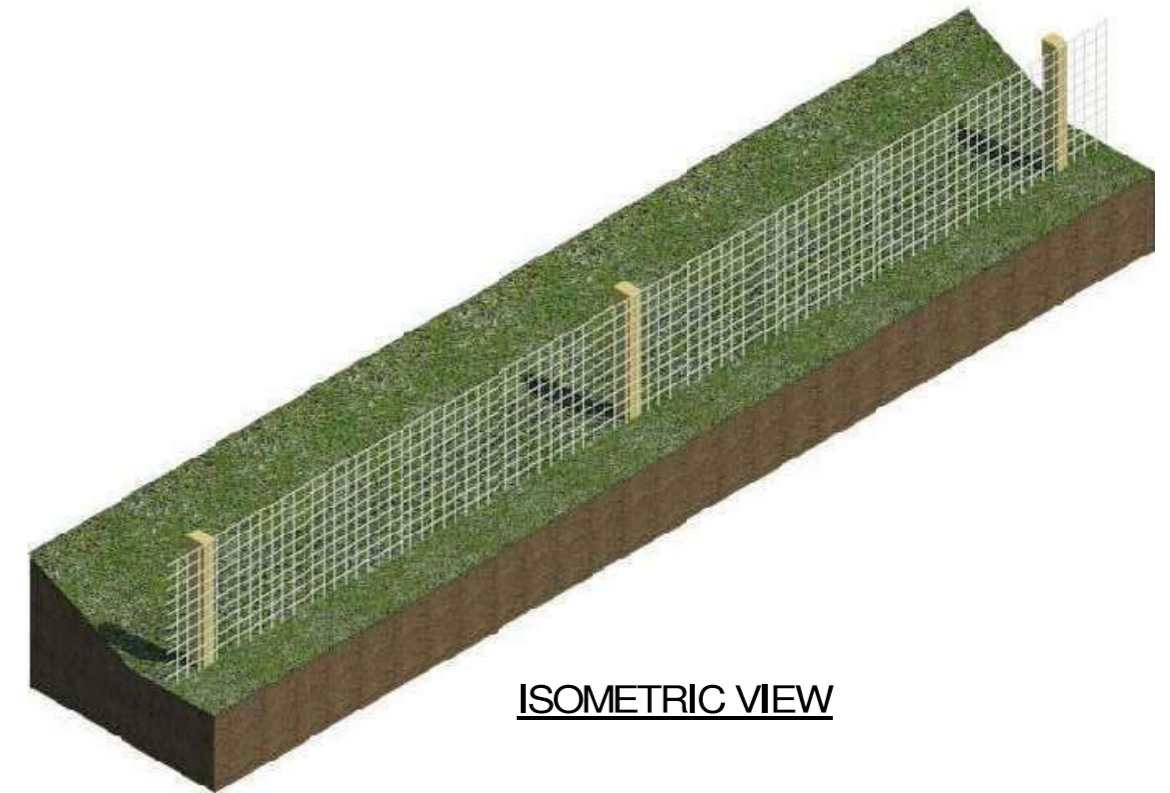
- NOTE:**
- CHECK DAMS TO BE INSTALLED USING HAND TOOLS ONLY TO AVOID GROUND DISTURBANCE BY MACHINERY.
 - CHECK DAMS TO BE INSPECTED AT LEAST DAILY (MORE FREQUENTLY DURING RAINFALL PERIODS) AND BUILD UP OF SILT TO BE REMOVED BY HAND AND DISPOSED OF APPROPRIATELY.
 - REFER TO DRAWING PG406-D100-001-002 (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	
Purpose of Issue - Preliminary unless indicated								
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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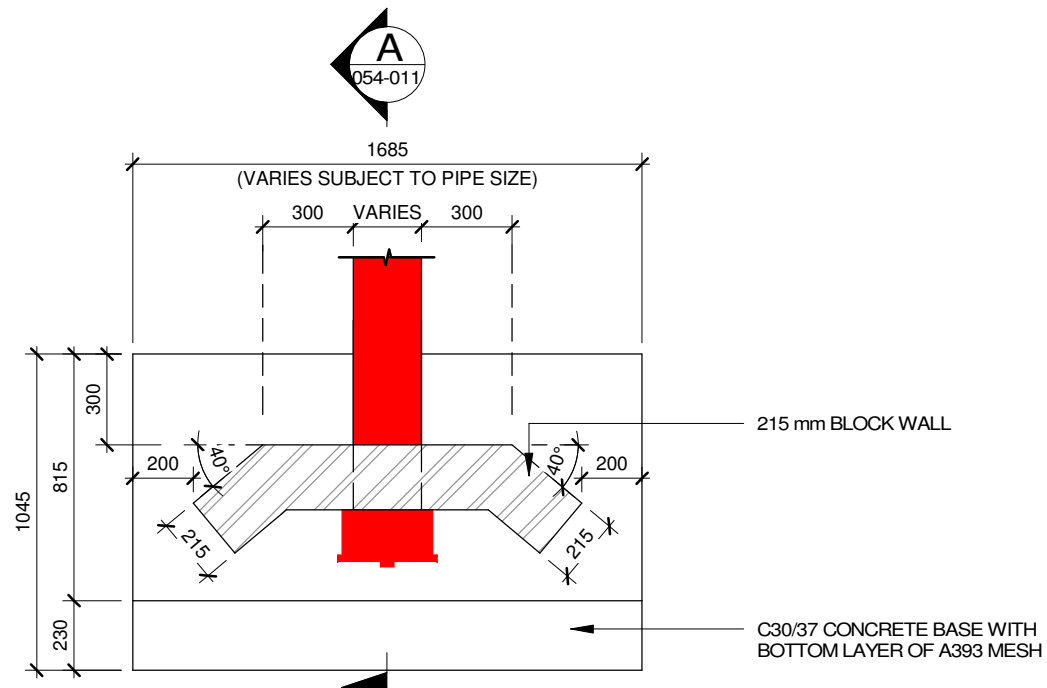
Client	ESB NETWORKS
Project	GENERAL CIVIL DRAWINGS & NOTES
Contract	

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

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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
PE493-D108-119-001-000					1 Rev

indicated

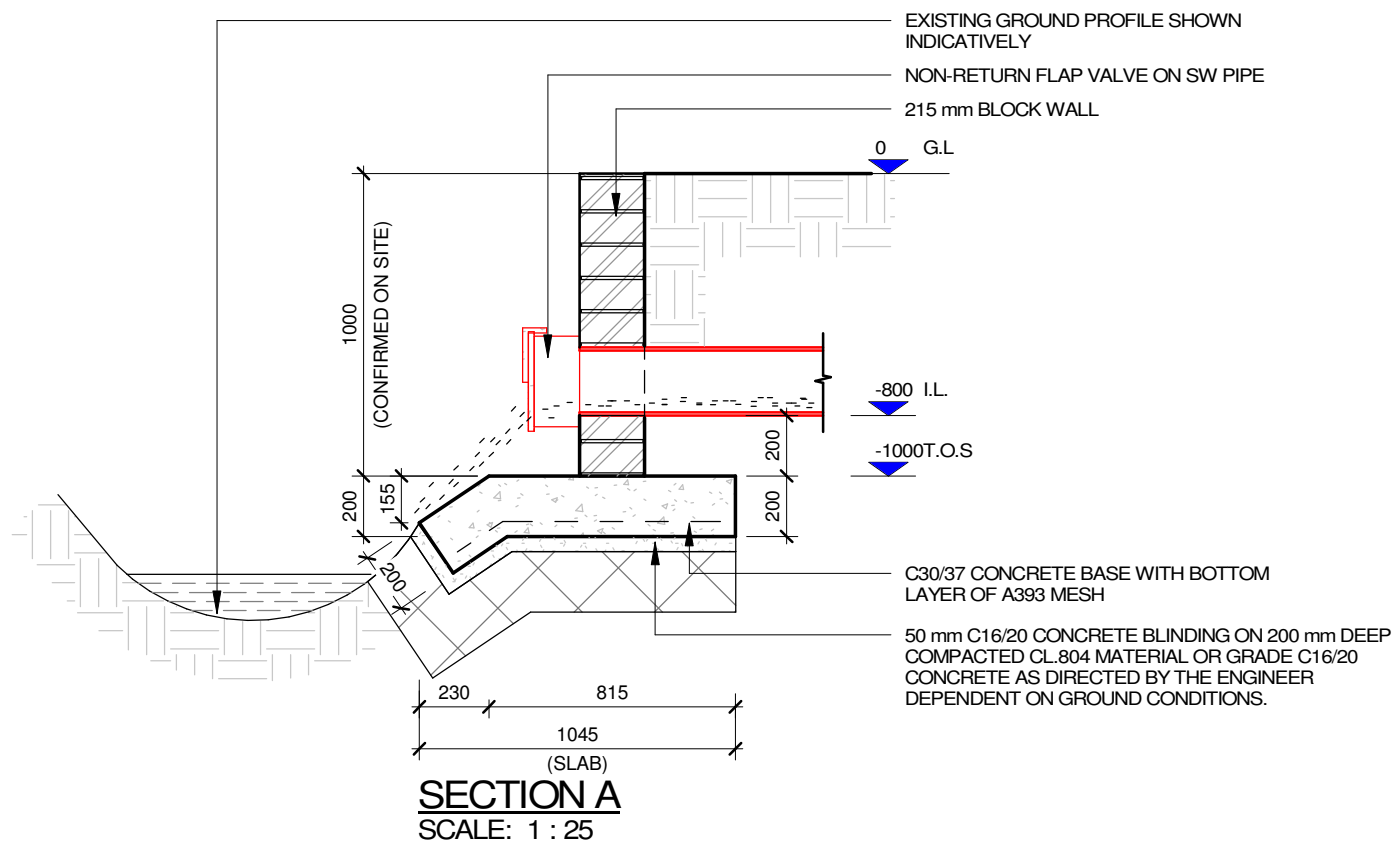


PLAN - TYPICAL HEADWALL DETAIL
SCALE: 1 : 25

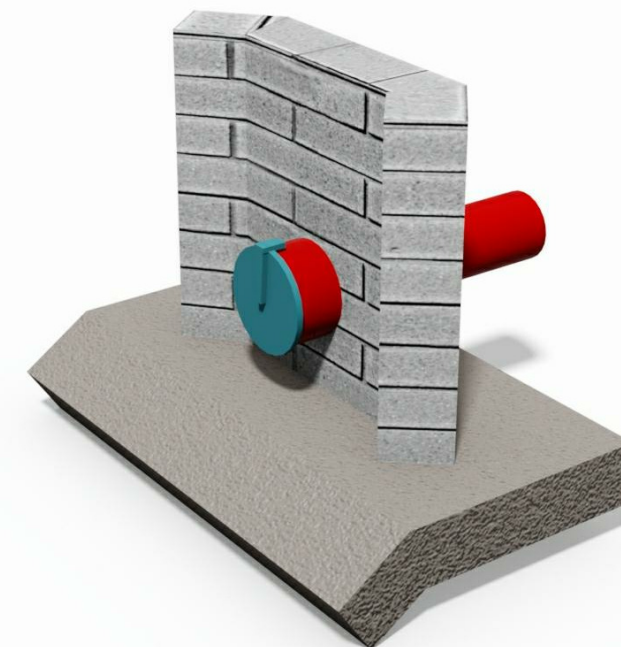
- NOTE:**
- FOR DRAINAGE LAYOUT AND NOTES, REFER TO DRAWING PE493-D108-053-002-(LATEST REVISION) AND PE493-D108-053-003-(LATEST REVISION)
 - PRIOR TO CONSTRUCTION, CONTRACTOR TO INFORM ESB INTERNATIONAL IF TOPOGRAPHICAL SURVEY DATA OF ADJACENT STREAM INDICATES THAT IT MAY AFFECT THE FEASIBILITY OF PROPOSED DESIGN
 - 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
T.O.S	=	TOP OF SLAB
I.L	=	INVERT LEVEL



SECTION A
SCALE: 1 : 25



RETAINING HEADWALL 3D 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

Purpose of Issue - Preliminary unless indicated

Client Approval Planning Tender Construction As-Built



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Client	ESB NETWORKS
Project	COOLNABACKY 400 kV STATION
Contract	CP0585 LAOIS KILKENNY REINFORCEMENT PROJECT

Drawing Title	COOLNABACKY 400 kV STATION CIVIL HEADWALL DETAIL
Production Unit	Civil & Environmental Engineering

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DRAWN	PRODUCED	VERIFIED 1	VERIFIED 2	APPROVED	APPD DATE
J.Byrne	J.Byrne	R.McGowan	N/A	B.Murphy	JAN. 2023
Client Ref			No. of Sheets	Size	Scale
TC218031				A3	As
Drawing Number					Sheet Rev
PE493-D108-054-011-003					indicated