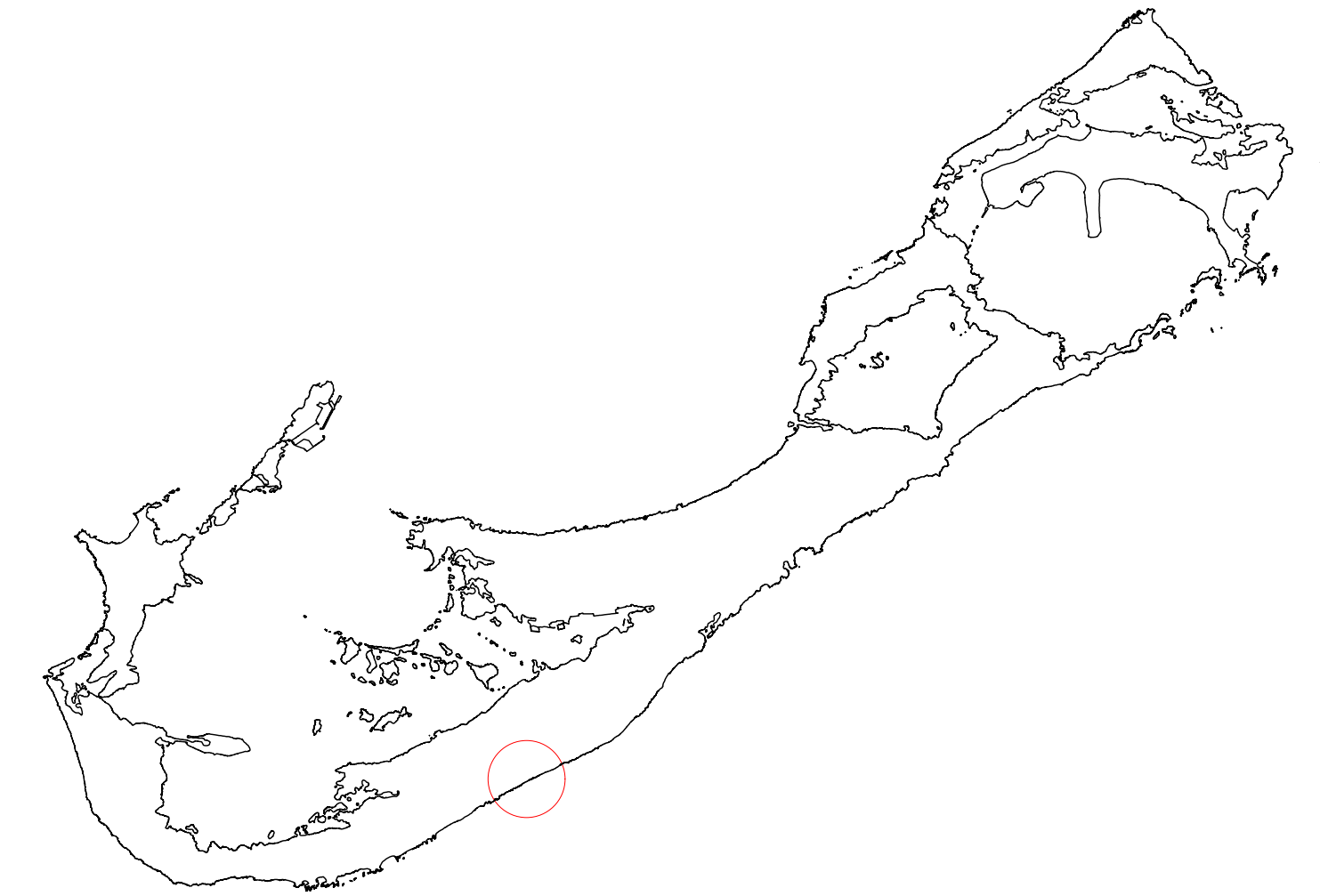


SOUTHLANDS SEAWALL

PROJECT # 60-4-170



THE MINISTRY OF
PUBLIC WORKS
P.O. Box HM525
Hamilton HMCX Bermuda
Phone: (441) 295-5151

DEPARTMENT OF
WORKS AND ENGINEERING
Fax: (441) 295-5658

- GENERAL NOTES:
1. SURVEY GRID IS BNG2000
 2. LEVELS ARE IN METERS ABOVE ORDINANCE DATUM
 - 3.



SITE LOCATION
1:1000



ISSUED FOR: INFORMATION

AMENDMENTS:		
NO:	REVISION	DATE:
A	FOR INFORMATION	12/06/25
B	FOR INFORMATION	29/07/25
C	FOR TENDER	14/05/26

SCALE: AS SHOWN AT ANSI D

SURVEY	
PREPARED: --	DATE: --
DESIGN	
PREPARED: --	DATE: --
CHECKED: --	DATE: --
DRAWING	
PREPARED: A.KENNY	DATE: 29/07/2025
CHECKED: --	DATE: --

APPROVED BY:
A.KENNY

PROJECT NUMBER:
90-S-3-120

PROJECT NAME:
SOUTHLANDS SEAWALL

SOUTHLANDS
WARWICK-PARISH

SHEET TITLE:
TITLE SHEET & SITE
LOCATION

SHEET NUMBER: S001

REVISION
C

GENERAL

- ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION AND ANY OTHER WRITTEN INSTRUCTIONS ISSUED.
- WHERE APPROVAL IS REQUIRED, THIS SHALL BE OF THE SUPERINTENDENT OR HIS REPRESENTATIVE.
- ANY AMBIGUITY OR DISCREPANCY SHALL BE REFERRED FOR CLARIFICATION BEFORE WORK PROCEEDS.
- REFER TO THE DRAWING DIMENSIONS FOR SETTING OUT THE WORKS. HOWEVER, ALL EXISTING DIMENSIONS AND LEVELS ARE APPROXIMATE AND SHALL BE CONFIRMED BY THE CONTRACTOR ON SITE.
- UNLESS NOTED OTHERWISE, ALL LEVELS ARE TO OD. SET OUT IS TO BNG 2000.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF THE STRUCTURE UNTIL ITS COMPLETION AND SHALL ENSURE THAT NO PART OF THE STRUCTURE IS OVERSTRESSED DURING THE WORKS.
- WHERE STANDARDS ARE REFERRED TO, THEY SHALL BE THE LATEST EDITION.
- WHERE PROPRIETARY ITEMS ARE REQUIRED, THEY SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. WHERE NO SPECIFIC TYPE IS SPECIFIED, ANY SYSTEM SHALL BE APPROVED BEFORE USE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING WORK AREAS.
- ALL DEMOLITION SHALL BE IN AN ACCEPTABLE MANNER UNDER THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS 2009. ALL SURPLUS MATERIAL SHALL BE DISPOSED OF OFF SITE IN A LEGAL MANNER.

EXCAVATION AND EARTHWORKS

- FOUNDATIONS ARE TO BEAR ON UNDISTURBED AND SOUND GROUND/ROCK. BEARING MATERIAL IS TO REMAIN UNDISTURBED AND BE REVIEWED BY THE ENGINEER PRIOR TO POURING FOOTING.
- ALL SHORING, SHEETING AND DE-WATERING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL EXISTING AND SURROUNDING INFRASTRUCTURE
- ANY SOFT AREAS IN BEARING MATERIAL ARE TO BE REMOVED AND FILLED WITH MASS CONCRETE OF MINIMUM STRENGTH 25 MPa.
- A MINIMUM 50mm (2") CONCRETE BLINDING LAYER TO BE POURED UNDER THE FULL EXTEND OF THE RETAINING WALL FOOTING.
- NO BACKFILLING UNTIL 7 DAYS AFTER LAST CONCRETE POUR
- BACKFILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER, CONSTRUCTION DEBRIS AND LARGE ROCKS.
- BACKFILL MATERIAL SHALL BE WELL GRADED AND PLACED IN LAYERS NOT EXCEEDING 150mm (6")
- BACKFILL MATERIAL TO BE COMPACTED EVERY 600mm (2')
- EXISTING VEGETATION ROOTS WITHIN THE EXTENTS OF THE NEW RETAINING WALL TO BE CUT/REMOVED AND TREATED WITH ROOT KILLER
- IF UNEXPECTED MECHANICAL, ELECTRICAL OR STRUCTURAL ELEMENTS ARE ENCOUNTERED, THE CONTRACTOR SHALL SUBMIT DETAILS OF SUCH TO THE ENGINEER.
- THE CONTRACTOR SHALL LOCATE AND IDENTIFY EXISTING UNDERGROUND UTILITIES WITHIN THE SITE EXTENTS. IF UTILITIES ARE TO REMAIN, THE CONTRACTOR SHALL ENSURE THAT THE UTILITIES ARE SUPPORTED AND PROTECTED THROUGHOUT THE WORKS.

CONCRETE

- CONCRETE SHALL COMPLY WITH THE FOLLOWING SPECIFICATION:
 - MINIMUM CONCRETE COVER TO REINFORCEMENT

WALLS	
EXTERNAL FACES	= 40mm.
BURIED FACES	= 50mm.
FOOTINGS	
TOP	= 50mm.
BOTTOM	= 75mm
 - MINIMUM CONCRETE STRENGTH AT SERVICE $f'_c = 25 \text{ MPa}$
 - MINIMUM CEMENT CONTENT = 440 Kg/m^3
 - MAXIMUM WATER/CEMENT RATIO = 0.4
- CONCRETE MIX DESIGNS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- NO ADDITIVES TO BE USED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- CAST IN ITEMS WITH LESS THAN 25mm COVER TO ATMOSPHERE SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH ASTM A153.
- ALL FORMWORK, SHORING AND RESHORING SHALL BE THE RESPONSIBILITY OF AND DESIGNED BY THE CONTRACTOR
- CONCRETE SHALL BE TESTED FOR SLUMP ON SITE. THE TEST CYLINDERS SHALL BE TAKEN FOR 3, 7 AND 28 DAY STRENGTHS. COMPRESSION TESTING SHALL BE CONDUCTED AT THE MINISTRY'S QUARRY TEST FACILITY.
- CONCRETE STRENGTH AND SLUMP TO BE AS FOLLOWS

MIN. SPECIFIED 28 DAY STRENGTH	SLUMP
25 MPa	75mm ± 25mm

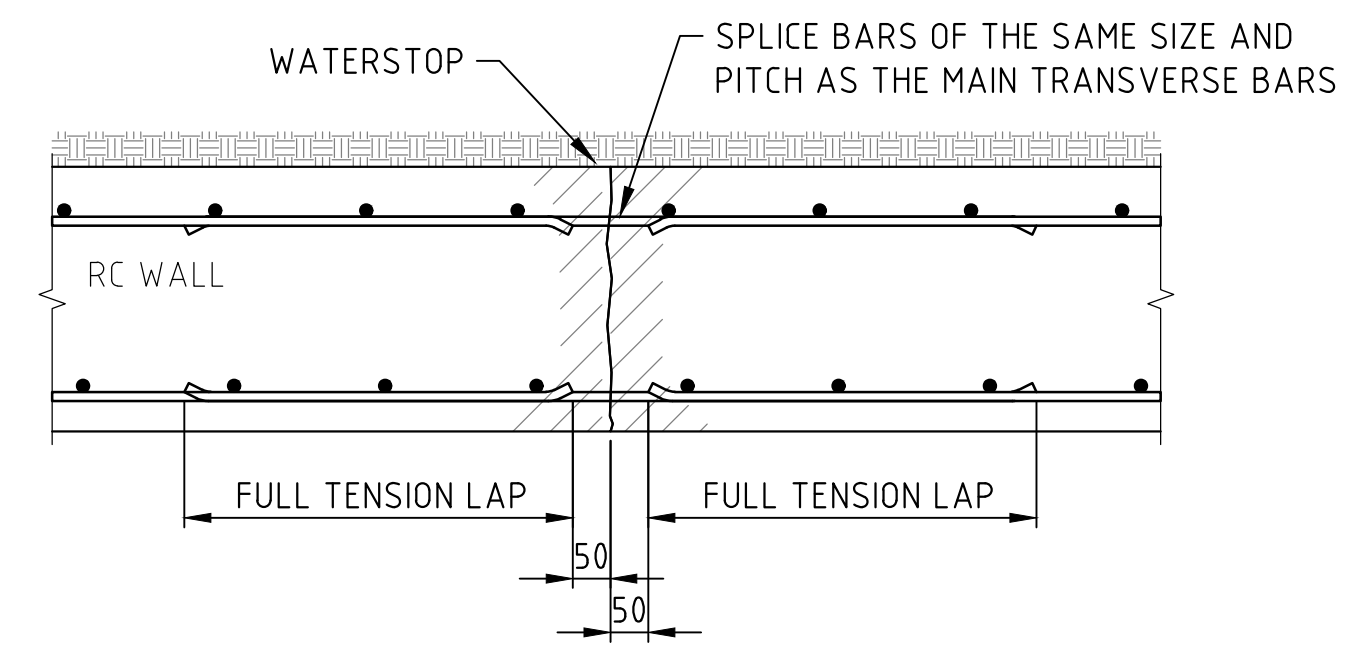
REINFORCEMENT

- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS. IF SHOWN/PERMITTED, WELDS SHALL DEVELOP THE FULL STRENGTH OF THE REINFORCING ELEMENT.
- ALL REINFORCING STEEL TO HAVE A MINIMUM YIELD STRENGTH OF 410 MPa AND SHALL BE TYPE 2 DEFORMED BARS
- ALL REINFORCING STEEL SHALL BE CLASS II GALVANISED IN ACCORDANCE WITH ASTM A767. TIE WIRE SHALL ALSO BE GALVANISED.
- REINFORCEMENT SPACING NOT SHOWN SHALL BE TAKEN AS EQUAL.
- REINFORCING CHAIRS ARE TO BE CONCRETE AND AS SMALL AS PRACTICABLE. PROPRIETARY PLASTIC COVER SUPPORTS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- REINFORCING BARS SHOWN ON THESE DRAWINGS ARE DIAGRAMMATIC ONLY.
- BARS SHOWN MAY REPRESENT MORE THAN ONE LENGTH AND/OR PROFILE.
- BARS MAY NOT BE SHOWN IN TRUE POSITION FOR CLARITY. ALL HOOKS, BENDS AND COGS ARE STANDARD AND SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS NOTED OTHERWISE.
- LAP SPLICES TO ALTERNATE AND NO MORE THAN 50% OF SPLICES SHALL BE IN ANY ONE SECTION.
- BARS SHALL NOT BE CUT NOR BENT ON SITE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- BARS SHALL BE BENT COLD BY MACHINE OR OTHER APPROVED MEANS PRODUCING A GRADUAL AND EVEN MOTION. BARS INCORRECTLY BENT SHALL NOT BE RE-BENT AND INCORPORATED IN THE WORKS AND NO REINFORCEMENT SHALL BE BENT WHEN IN POSITION IN THE WORKS, WHETHER OR NOT IT IS PARTIALLY EMBEDDED IN HARDENED CONCRETE.
- CONTRACTOR TO PROVIDE 24 HOURS NOTICE FOR THE INSPECTION OF ALL REINFORCING PRIOR TO POURING CONCRETE.
- LAP LENGTHS SHALL BE AS TABULATED (SHOWN BELOW) UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

BAR DIAMETER	MIN LAP LENGTH
12	450
16	550
20	700
24	900

VERTICAL WALL BARS PLACED ON OUTSIDE FOR EARTH FACES
HORIZONTAL WALL BARS PLACED ON OUTSIDE FOR EXPOSED FACES

THIS DETAIL APPLIES TO CONCRETE BLOCK OR REINFORCED CONCRETE WALLS BUT NOT REINFORCED CONCRETE BASES.

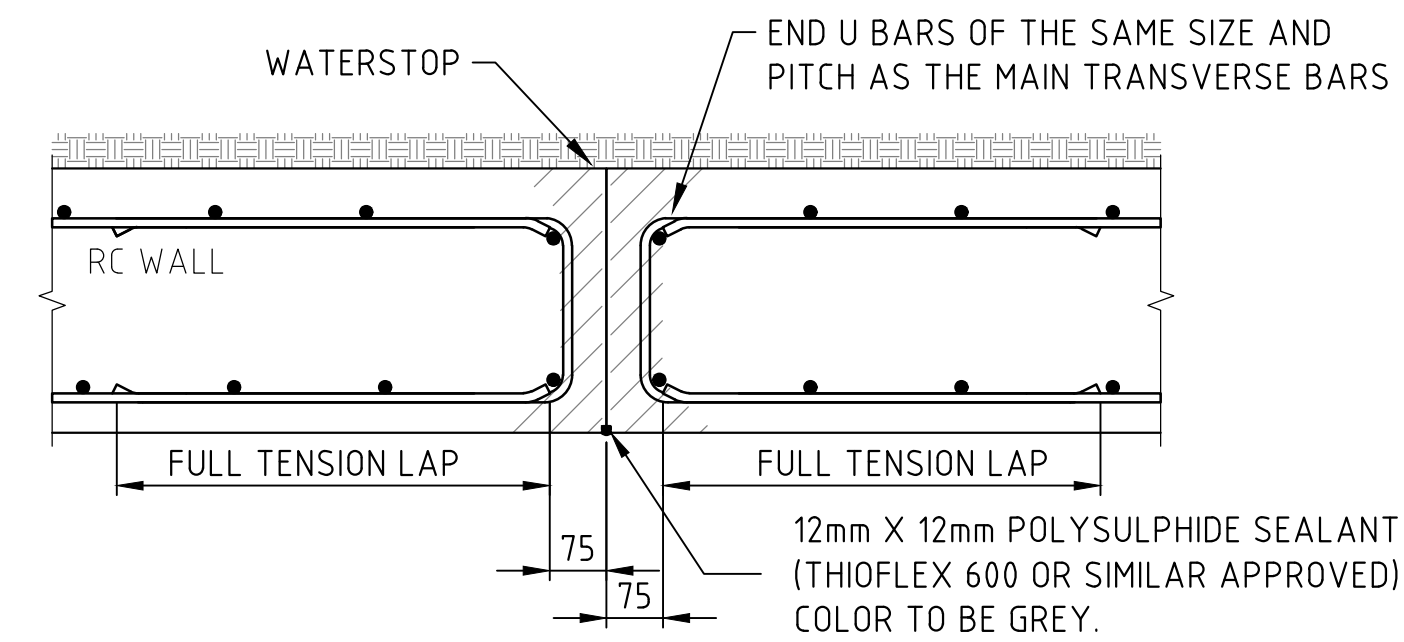


CONSTRUCTION JOINT DETAIL

1:10

CONTRACTION JOINTS TO BE LOCATED VERTICALLY TO THE FULL HEIGHT OF THE WALL, INCLUDING COPING, AT 9m (30') MAX. CENTRES & SUCH THAT ALL THE PANELS ARE OF A SIMILAR SIZE THROUGHOUT THE TOTAL LENGTH OF THE WALL.

THIS DETAIL APPLIES TO CONCRETE BLOCK OR REINFORCED CONCRETE WALLS BUT NOT REINFORCED CONCRETE BASES.

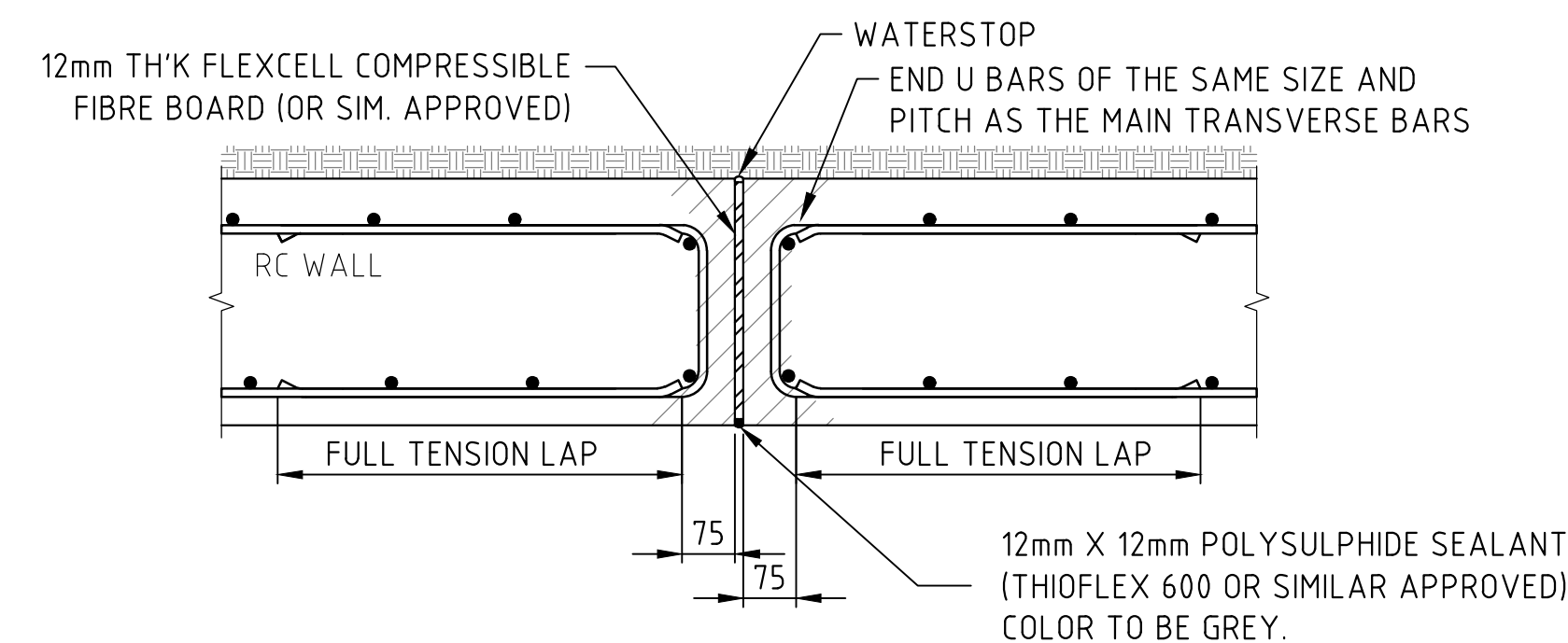


TYPICAL WALL CONTRACTION JOINT DETAIL

1:10

MOVEMENT JOINTS TO BE LOCATED VERTICALLY TO THE FULL HEIGHT OF THE WALL, INCLUDING COPING, AT 27.5m (90') MAX. CENTRES

THIS DETAIL APPLIES TO CONCRETE BLOCK OR REINFORCED CONCRETE WALLS BUT NOT REINFORCED CONCRETE BASES.



TYPICAL WALL MOVEMENT JOINT DETAIL

1:10

THE MINISTRY OF PUBLIC WORKS

P.O. Box HM525
Hamilton HMCX Bermuda
Phone: (441) 295-5151

DEPARTMENT OF WORKS AND ENGINEERING

Fax: (441) 295-5658

GENERAL NOTES:

- SURVEY GRID IS BNG2000
- LEVELS ARE IN METERS ABOVE ORDINANCE DATUM
-



ISSUED FOR: INFORMATION

AMENDMENTS:		
NO:	REVISION	DATE:
A	FOR TENDER	14/05/26

SCALE: AS SHOWN AT ANSI D

SURVEY	
PREPARED: -	DATE: -
DESIGN	
PREPARED: -	DATE: -
CHECKED: -	DATE: -
DRAWING	
PREPARED: A.KENNY	DATE: XX/XX/2024
CHECKED: -	DATE: -

APPROVED BY: A.KENNY

PROJECT NUMBER: XX-XX-XX

PROJECT NAME: SOUTHLANDS SEAWALL

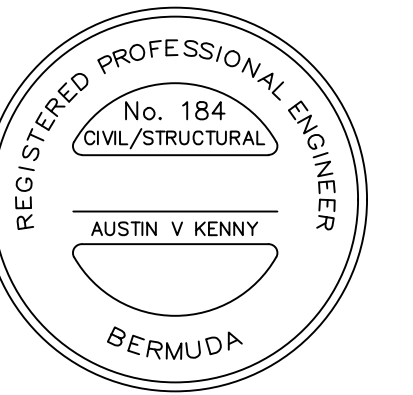
WARWICK

SHEET TITLE:

GENERAL NOTES & JOINT DETAILS

SHEET NUMBER:	REVISION
S000	A

- GENERAL NOTES:
1. SURVEY GRID IS BNG2000
2. LEVELS ARE IN METERS
ABOVE ORDINANCE DATUM
3.



SOP 1
E 545 911 702
N 129 446 781

SOP 2
E 545 900 987
N 129 440 759

SOP 3
E 545 887 975
N 129 422 127

SET OUT POINTS ARE TO BE USED AS A GUIDE. THERE MUST BE AN ELEMENT OF "FIELD FIT" TO ALIGN WITH EXISTING WALL AND TIE INTO STABLE ROCK HEAD

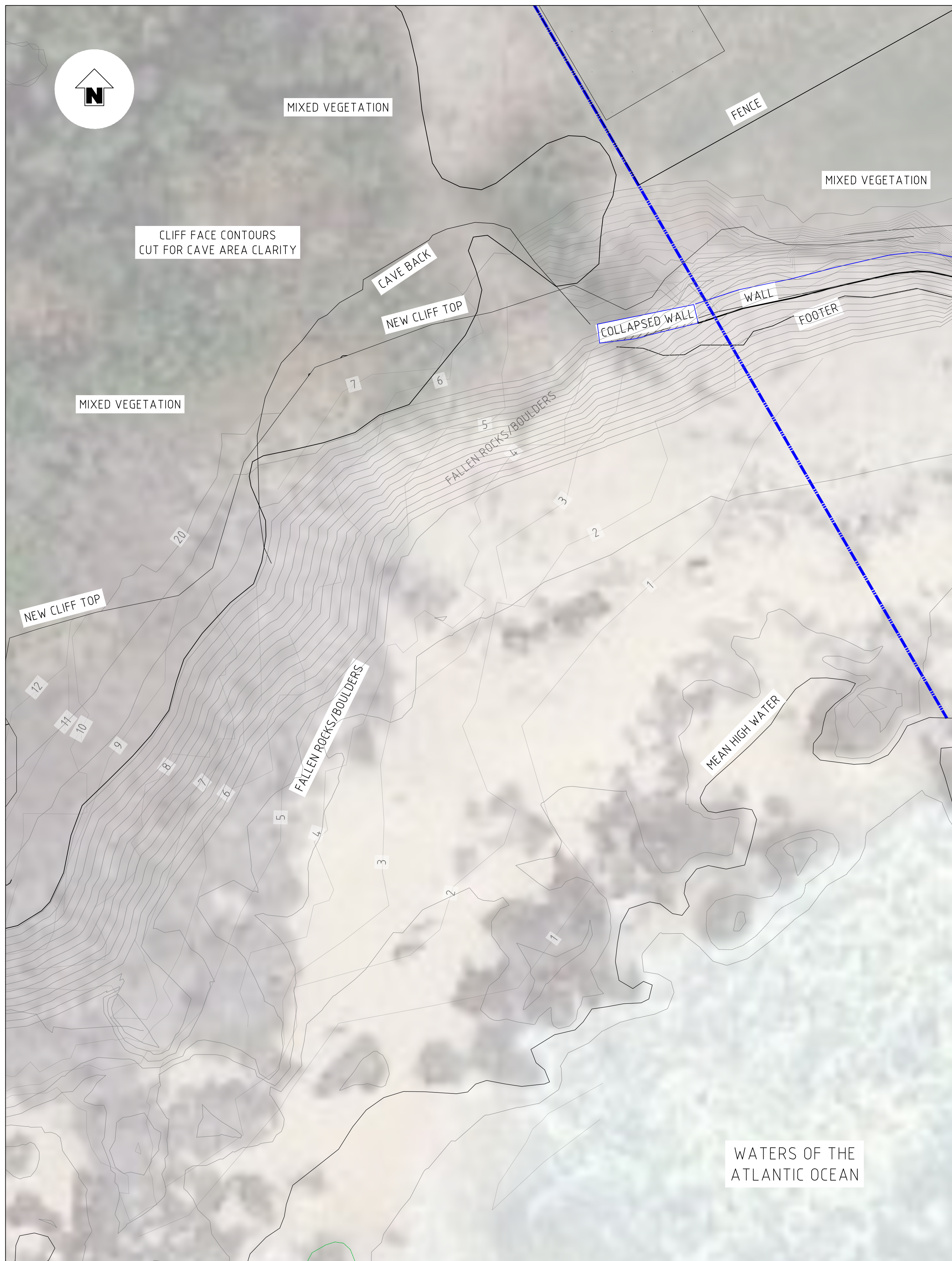
ISSUED FOR: TENDER		
AMENDMENTS:		
NO:	REVISION	DATE:
A	FOR INFORMATION	XX/XX/24
B	FOR INFORMATION	12/06/25
C	FOR TENDER	14/05/26

SCALE: AS SHOWN AT ANSI D		
SURVEY		
PREPARED: -		DATE: -
DESIGN		
PREPARED: -		DATE: -
CHECKED: -		DATE: -
DRAWING		
PREPARED: A.KENNY		DATE: 12/06/2025
CHECKED: -		DATE: -
APPROVED BY:		
A.KENNY		
PROJECT NUMBER:		
XX-XX-XX		

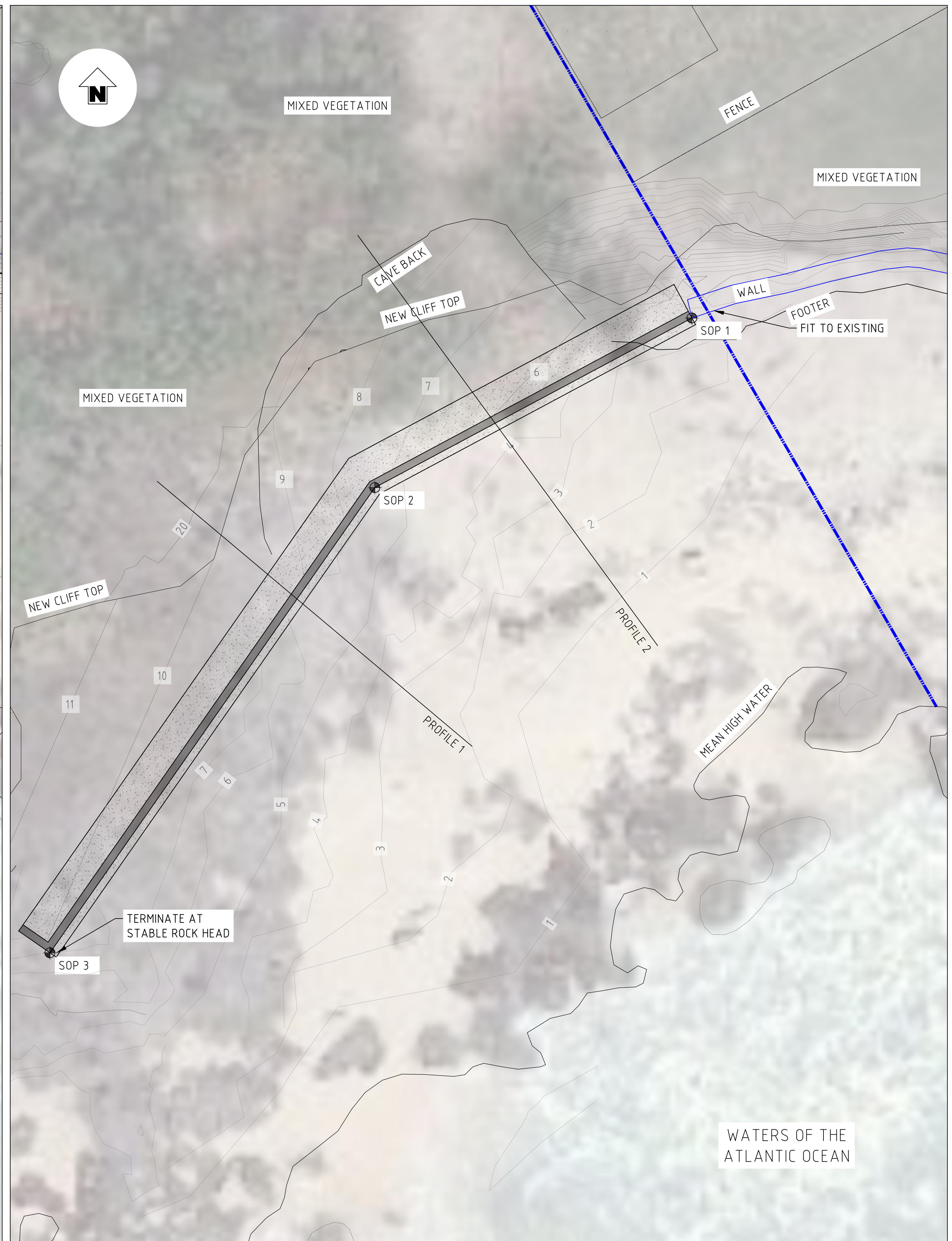
PROJECT NAME:
SOUTHLANDS SEAWALL

WARWICK
SHEET TITLE:
GENERAL ARRANGEMENT

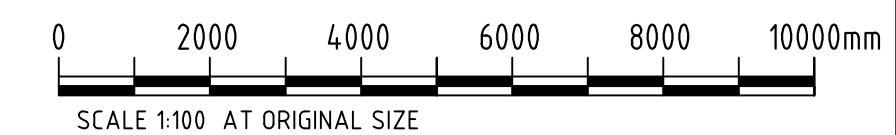
SHEET NUMBER: **S101** REVISION: **C**



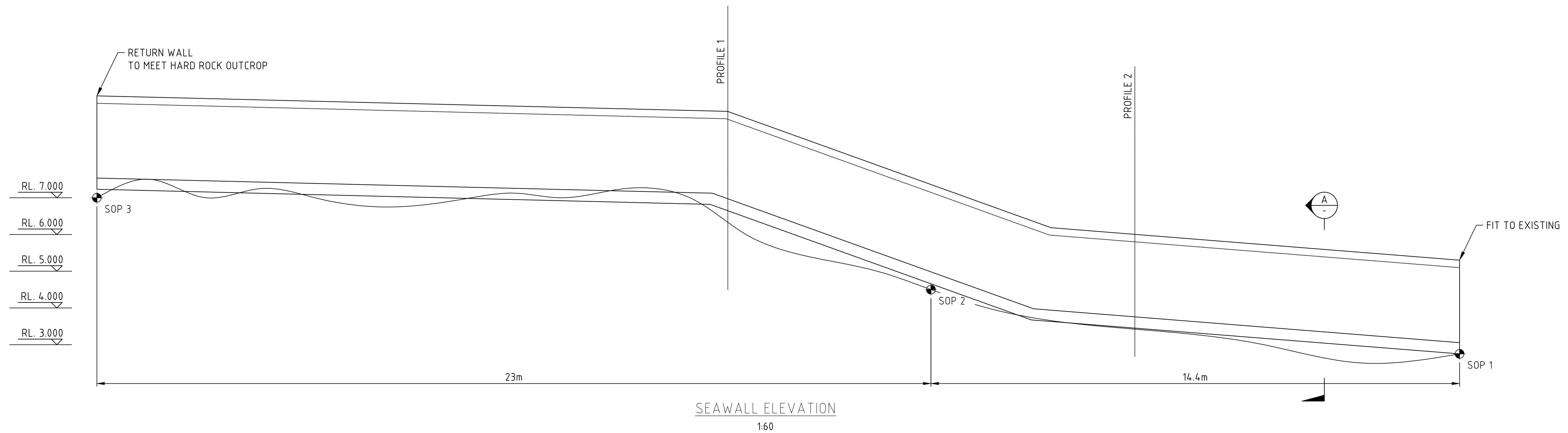
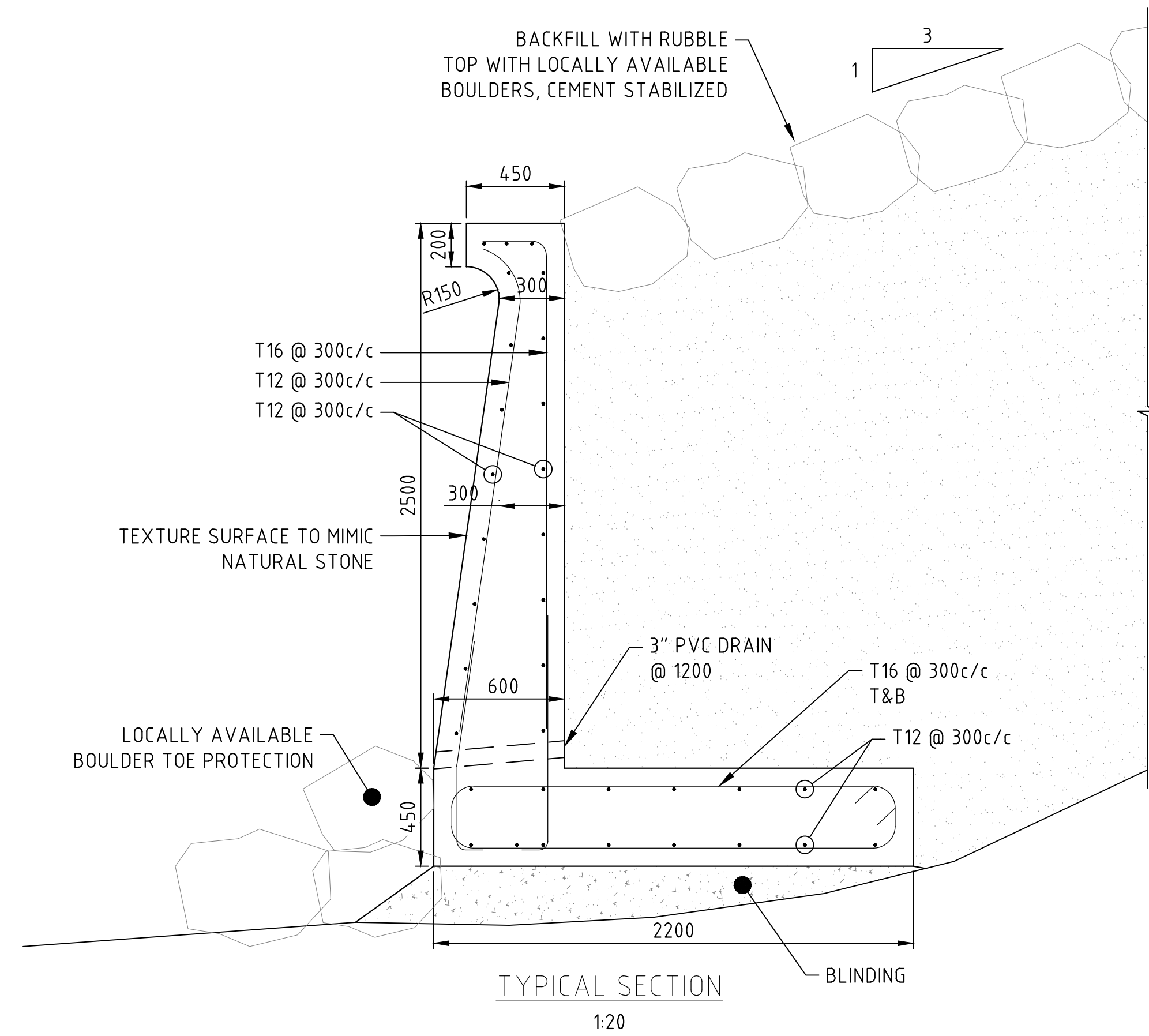
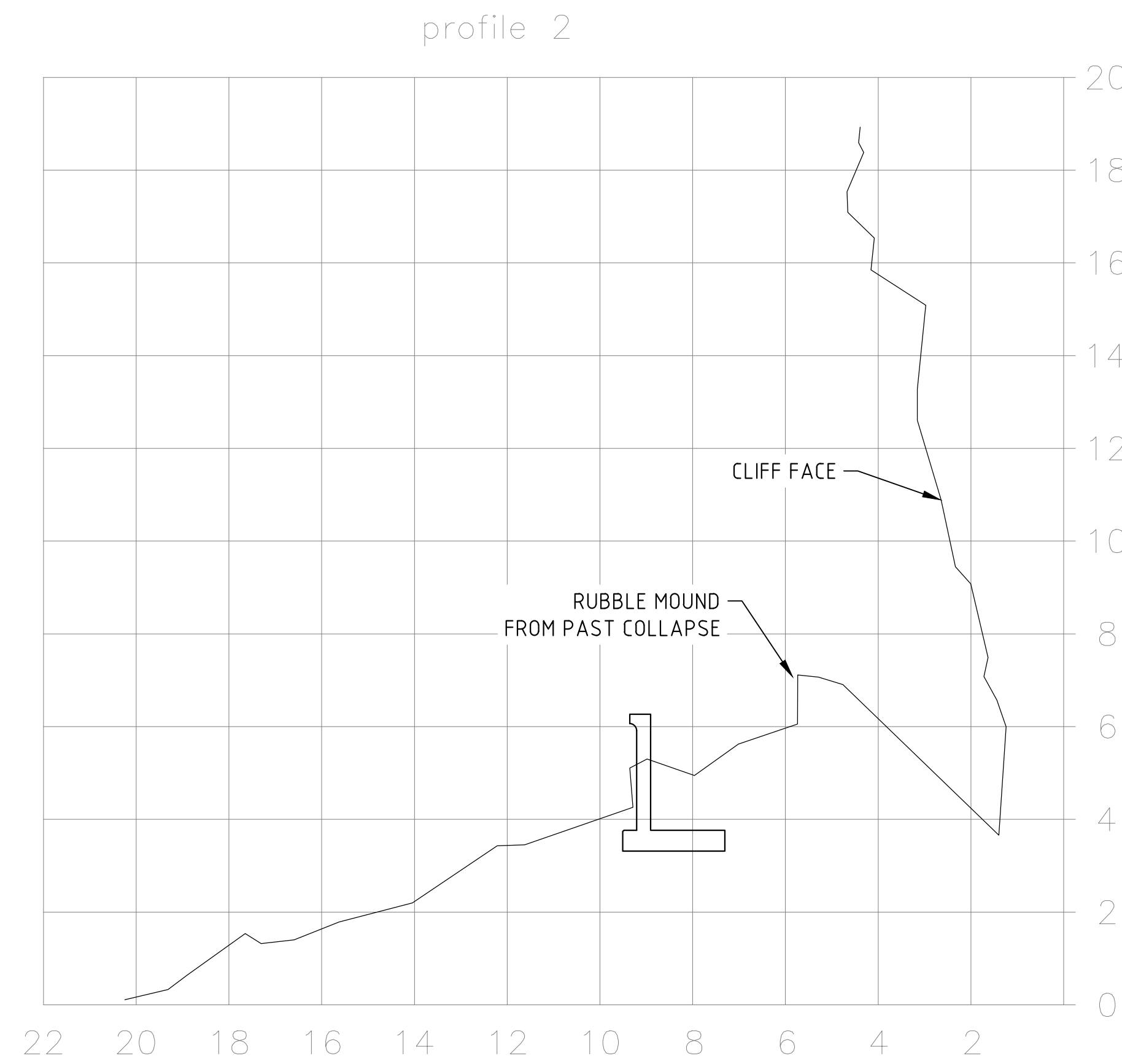
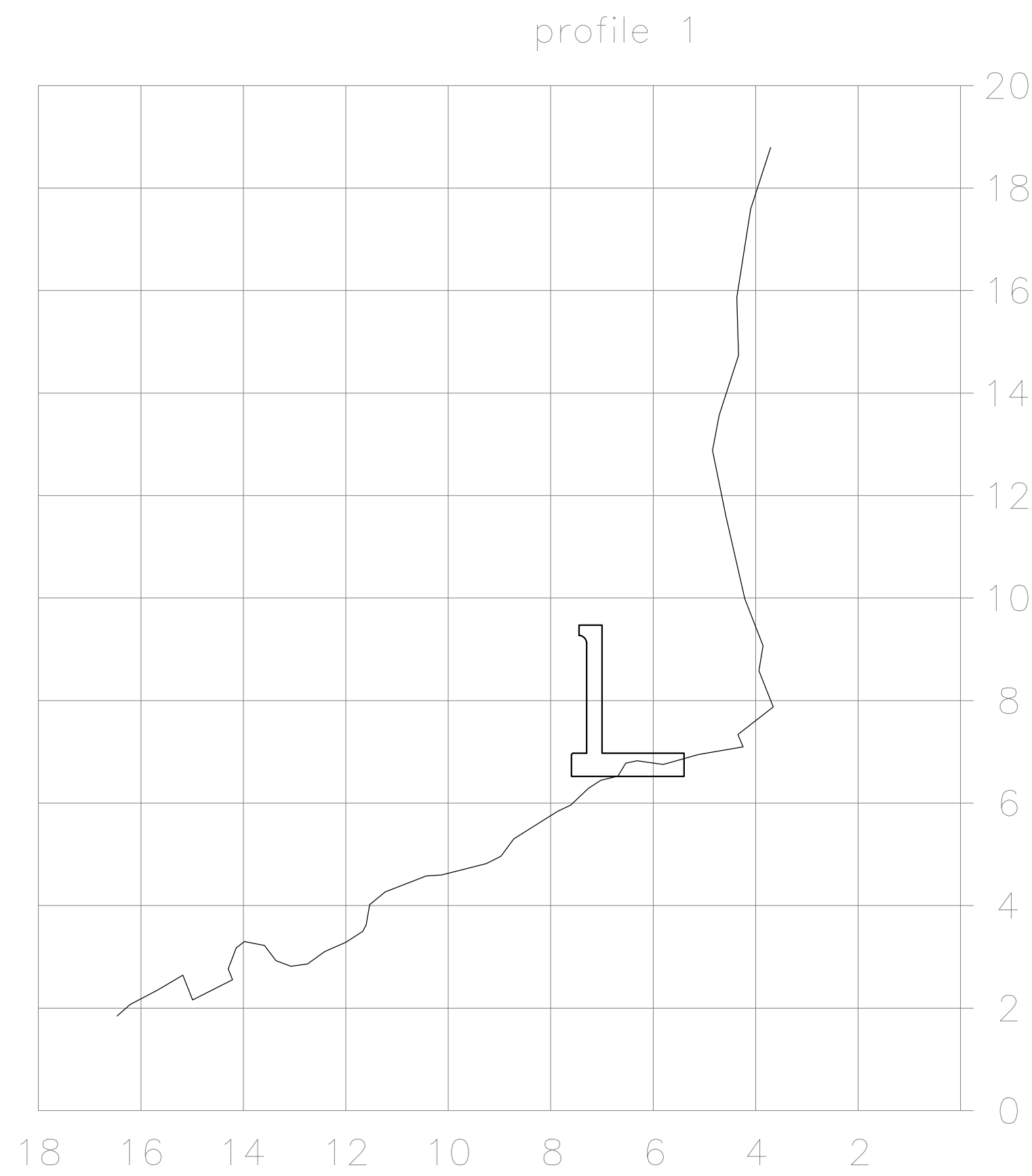
SITE PLAN - EXISTING
1:100



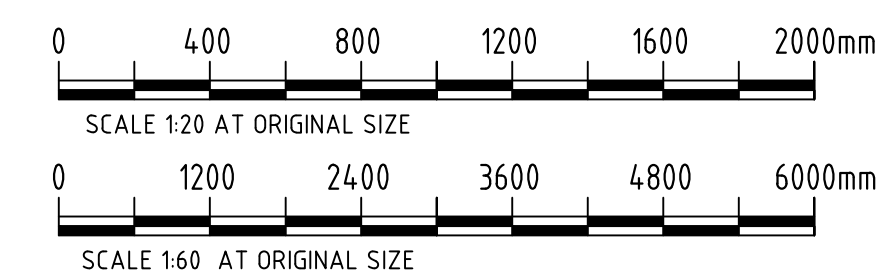
SITE PLAN - PROPOSED
1:100



- GENERAL NOTES:
1. SURVEY GRID IS BNG2000
2. LEVELS ARE IN METERS
ABOVE ORDINANCE DATUM
3.



- NOTES:
1. WALL FOOTING TO BE ESTABLISHED ON UNDISTURBED NATURAL ROCK
2. LEVELS SHOWN ARE INDICATIVE. DUE TO THE LARGE AMOUNT OF RUBBLE AND MOBILE SANDS, SEVERAL SURVEYS HAVE BEEN COMBINED TO ESTIMATE THE ROCK PROFILE.



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SCALE: AS SHOWN AT ANSI D

SURVEY	PREPARED:	DATE:
DESIGN	PREPARED: -	DATE: -
CHECKED:	-	DATE: -

DRAWING
PREPARED: A.KENNY DATE: 29/07/2025
CHECKED: - DATE: -

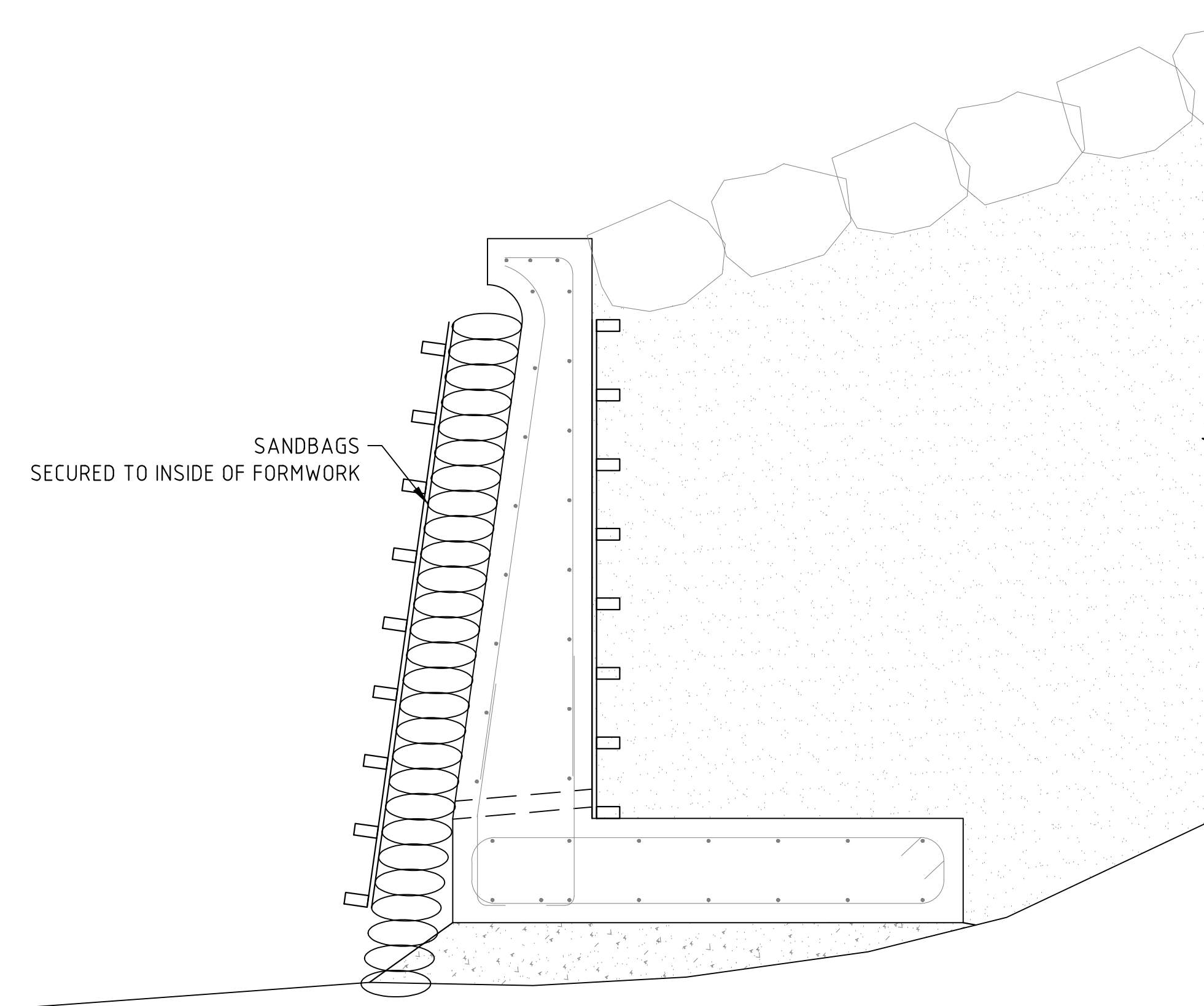
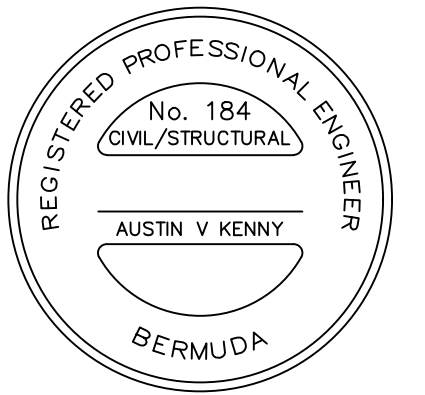
APPROVED BY:
A.KENNY

PROJECT NUMBER:
XX-XX-XX

PROJECT NAME:
SOUTHLANDS SEAWALL

WARWICK
SHEET TITLE:
ELEVATION AND TYPICAL SECTION
SHEET NUMBER: **S102** REVISION **C**

- GENERAL NOTES:
1. SURVEY GRID IS BNG2000
2. LEVELS ARE IN METERS
ABOVE ORDINANCE DATUM
3.



SANDBAGS
SECURED TO INSIDE OF FORMWORK

SUGGESTED TEXTURING METHOD

1:20

ISSUED FOR: INFORMATION

AMENDMENTS:

NO:	REVISION	DATE:
A	FOR INFORMATION	29/07/25
B	FOR TENDER	14/05/26

SCALE: AS SHOWN AT ANSI D

SURVEY
PREPARED: - DATE: -

DESIGN
PREPARED: - DATE: -
CHECKED: - DATE: -

DRAWING
PREPARED: A.KENNY DATE: 29/07/2025
CHECKED: - DATE: -

APPROVED BY:
A.KENNY

PROJECT NUMBER:
XX-XX-XX

PROJECT NAME:
**SOUTHLANDS
SEAWALL**

WARWICK

SHEET TITLE:
**SUGGESTED TEXTURING
METHOD**

SHEET NUMBER:
S103

REVISION
B

