

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:  
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.

LEGEND:  

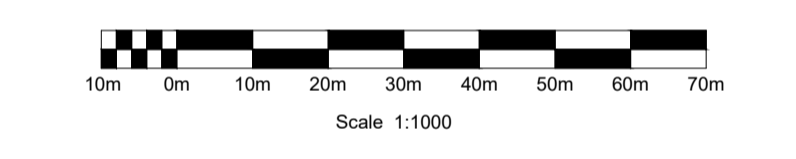
 SCHEME AREA  
 DRAWING REFERENCE  
 NEW ENGINEERED RIVERBANK  
 NEW SURFACE AMENDMENTS  
 NEW INTERTIDAL AREA  
 NEW FLOOD DEFENCE WALL ALIGNMENT  
 COMPOUND / LAYDOWN AREAS (INDICATIVE)

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:  
 IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:  
 E.4 LIMITED WORKING AREA  
 E.5 LIMITED WORKING AREA  
 E.25 RISK OF FLOODING  
 F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:  
 N/A

DECOMMISSIONING OR DEMOLITION:  
 RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



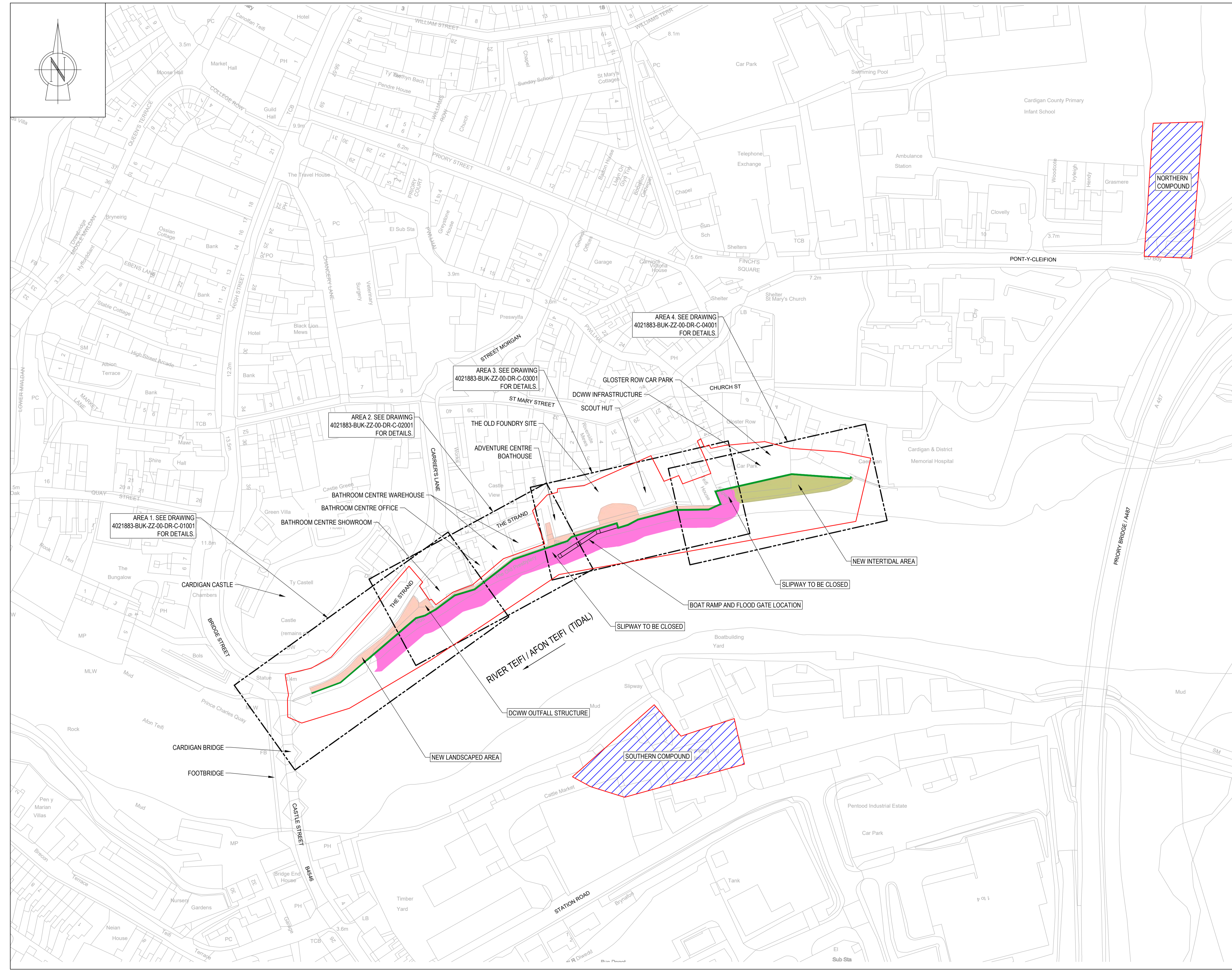
Project: **CARDIGAN TIDAL FRMS  
 DETAILED DESIGN**

Drawing title: **GENERAL ARRANGEMENT**

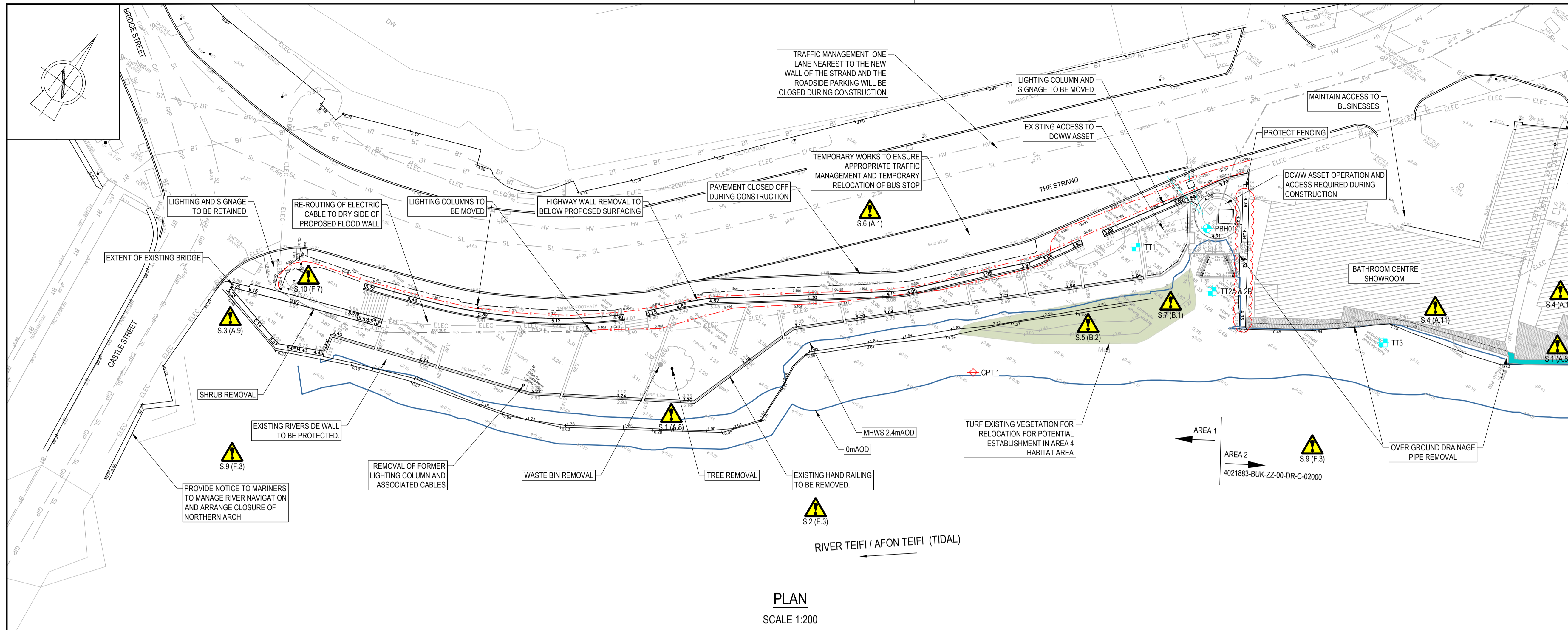
Drawing scale: 1:1000 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-00002 Revision P02

Parent Model: SHEET NAME



ON PROJECTWISE



PLAN  
SCALE 1:200

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

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**CONSTRUCTION:**

- B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES
- E.1 WATER LEVEL VARIABLE DUE TO TIDE
- E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE
- E.8 POTENTIAL FOR CONTAMINATED GROUND
- E.12 UNKNOWN CONSTRUCTION AND CONDITION OF EXISTING WALLS
- E.23 BUILD UP OF DEBRIS AND VEGETATION
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SACSSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

N/A

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

**EXISTING SERVICES LEGEND (FROM RECORD):**

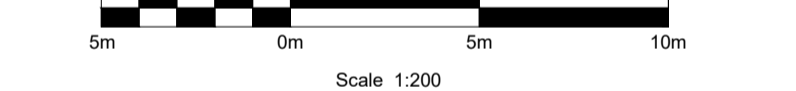
- 2015 GROUND INVESTIGATION
- 2022 GROUND INVESTIGATION

**EXISTING SERVICES LEGEND (FROM RECORD):**

- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
- SEWER - COMBINED (RISING MAIN)
- SEWER - SURFACE WATER (DCWW)
- SEWER - SURFACE WATER (CCC)
- WATER MAIN - POTABLE
- GIP - GAS MAIN - INTERMEDIATE PRESSURE
- GLP - GAS MAIN - LOW PRESSURE
- ELEC - ELECTRIC - UNSPECIFIED
- HV - ELECTRIC - HIGH VOLTAGE
- LV - ELECTRIC - LOW VOLTAGE
- LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
- SL - ELECTRIC - STREET LIGHTING
- BT - BT

**EXISTING SERVICES LEGEND (GPR):**

- ELECTRICITY
- ELECTRICITY FROM RECORDS
- OVERHEAD ELECTRICITY
- GAS FROM RECORDS
- COMBINED DRAINAGE
- COMBINED DRAINAGE FROM RECORDS
- FOUL DRAINAGE
- FOUL DRAINAGE FROM RECORDS
- SURFACE DRAINAGE
- SURFACE DRAINAGE FROM RECORDS
- WATER FROM RECORDS
- UNKNOWN ROUTE
- UNKNOWN ROUTE LOCATED BY GPR



WEST



EAST

P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE
Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment



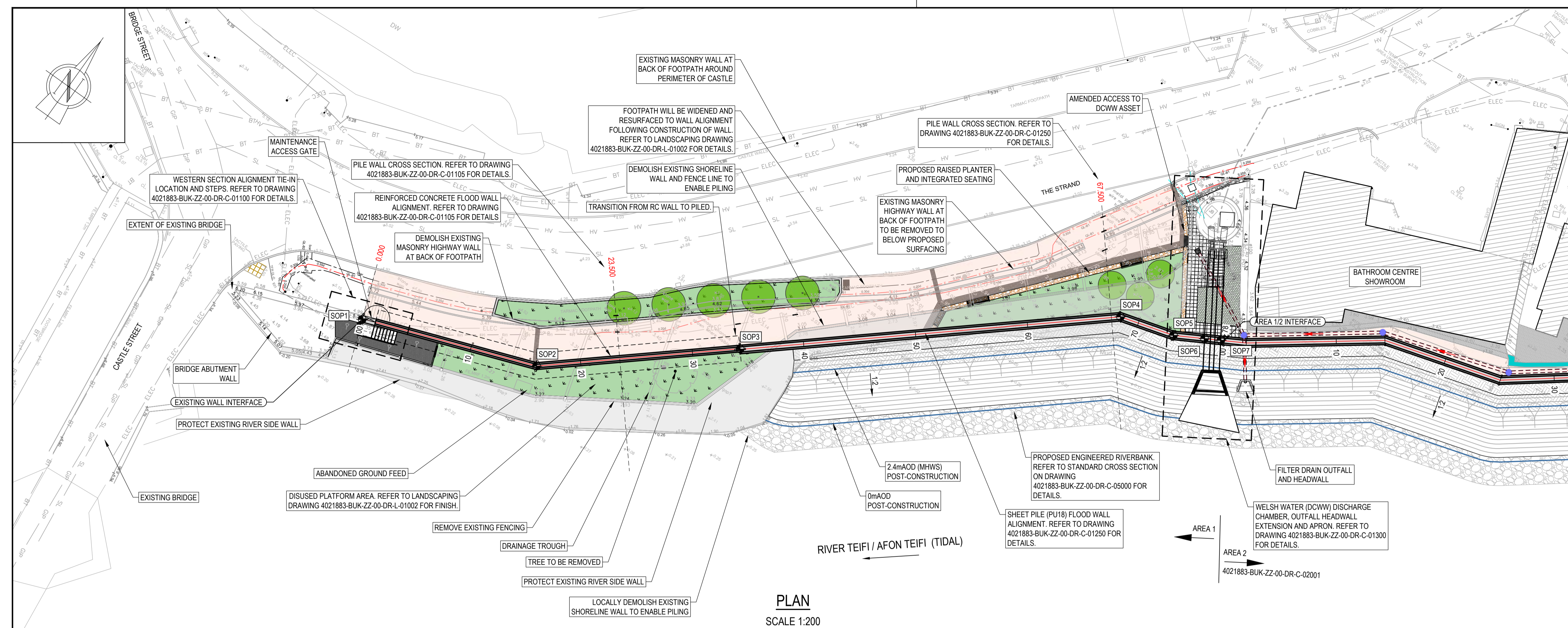
Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**  
 Drawing title: **AREA 1  
EXISTING PLAN**

Drawing scale: 1:200	Sheet size: A1
Drawing no. 4021883-BUK-ZZ-00-DR-C-01000	Revision P02

Parent Model: SHEET NAME



**PLAN**  
SCALE 1:200

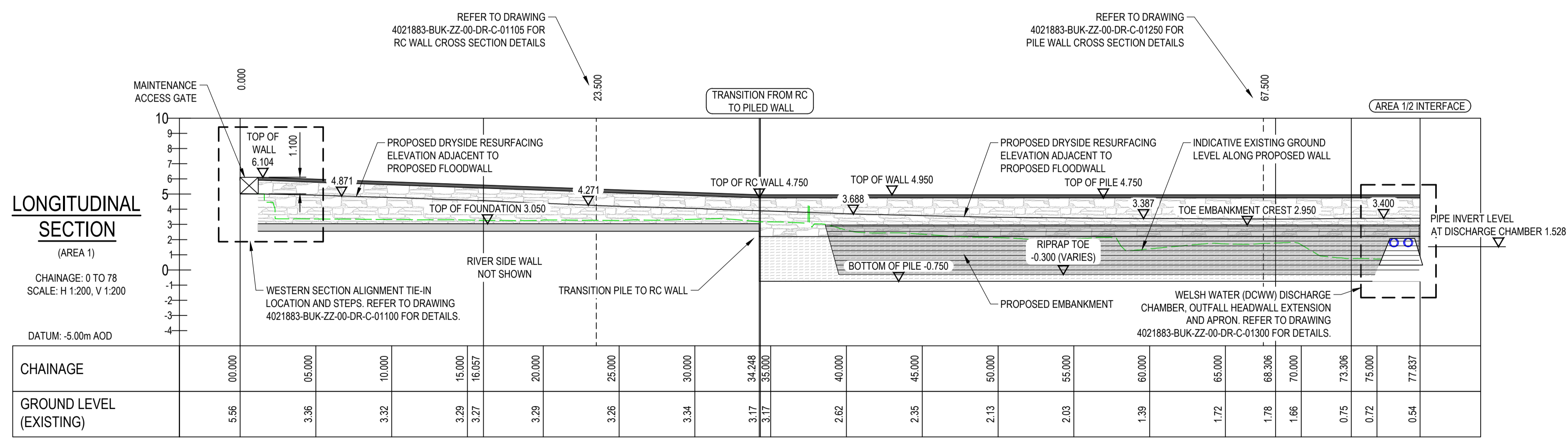
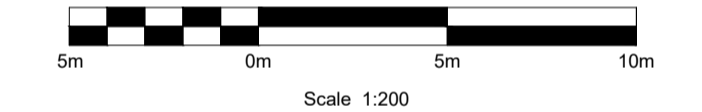
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- NOTES:**
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - VEGETATION CLEARANCE REQUIRED ACROSS AREA 1. HIGHWAY WALL NEXT TO BRIDGE WILL REQUIRE REPOINTING FOLLOWING VEGETATION CLEARANCE AND NEW WALL TIE IN.
  - REFER TO LANDSCAPING DRAWING 4021883-BUK-ZZ-00-DR-L-01002 FOR NEW SURFACE AMENDMENTS DETAILS.

- LEGEND:**
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - GROUND RAISING TO MEET NEW SURFACE LEVEL
  - COPING
  - CLADDING
  - PILE
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - EXISTING EMBANKMENT EXTENT
  - EXISTING RAINWATER PIPES
  - PROPOSED SURFACE WATER FILTER DRAIN

- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
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  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT

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- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR



**LONGITUDINAL SECTION**  
(AREA 1)  
CHAINAGE: 0 TO 78  
SCALE: H 1:200, V 1:200  
DATUM: -5.00m AOD

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

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**CONSTRUCTION:**

- B.3 POTENTIAL FOR ARCHAEOLOGICAL FINDS
- B.6 POOR GROUND CONDITIONS
- E.2 RESTRICTED ACCESS AND WORKING AREAS FOR CONSTRUCTION TRAFFIC
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

N/A

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

**AREA 1 PROPOSED WALL SETTING OUT POINTS**

POINT	EASTING	NORTHING
SOP1	217789.672	245856.328
SOP2	217804.707	245861.996
SOP3	217818.556	245873.786
SOP4	217844.415	245895.838
SOP5	217849.214	245897.242
SOP6	217851.630	245898.620
SOP7	217852.894	245899.340

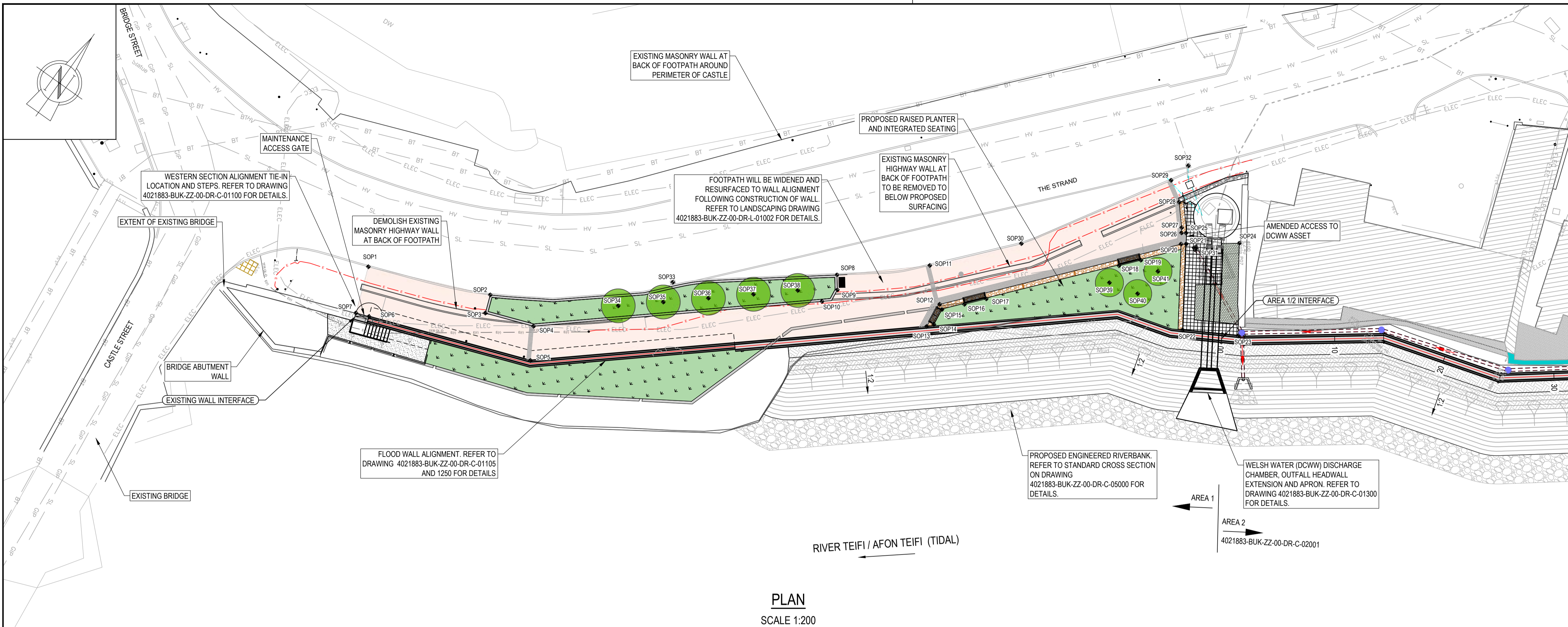
Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment  
Client: \_\_\_\_\_

**binnies**  
Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project  
**CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**  
Drawing title  
**AREA 1**  
**PROPOSED PLAN AND LONGSECTION**

Drawing scale: 1:200 Sheet size: A1  
Drawing no. 4021883-BUK-ZZ-00-DR-C-01001 Revision P02  
Parent Model: SHEET NAME



PLAN  
SCALE 1:200

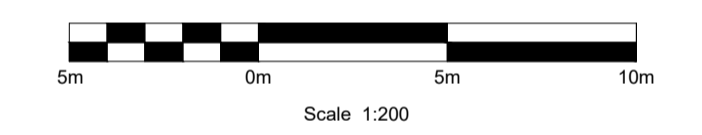
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  - VEGETATION CLEARANCE REQUIRED ACROSS AREA 1. HIGHWAY WALL NEXT TO BRIDGE WILL REQUIRE REPOINTING FOLLOWING VEGETATION CLEARANCE AND NEW WALL TIE IN.
  - REFER TO LANDSCAPING DRAWING 4021883-BUK-ZZ-00-DR-L-01002 FOR NEW SURFACE AMENDMENTS DETAILS.

- LEGEND:
- FLOOD DEFENCE WALL ALIGNMENT
  - GROUND RAISING TO MEET NEW SURFACE LEVEL
  - ENGINEERED RIVERBANK
  - PROPOSED SURFACE WATER FILTER DRAIN

- EXISTING SERVICES LEGEND (FROM RECORD):
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
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  - LV - ELECTRIC - LOW VOLTAGE
  - LV0 - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT - BT

- EXISTING SERVICES LEGEND (GPR):
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR



SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

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CONSTRUCTION:

- B.3 POTENTIAL FOR ARCHAEOLOGICAL FINDS
- B.6 POOR GROUND CONDITIONS
- E.2 RESTRICTED ACCESS AND WORKING AREAS FOR CONSTRUCTION TRAFFIC
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:

N/A

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

SETTING OUT POINTS				
POINT	EASTING	NORTHING	LEVEL	DESCRIPTION
1	217788.055	245860.649	5.059	SURFACE LEVEL
2	217798.275	245864.908	4.607	SURFACE LEVEL
3	217798.858	245863.342	4.649	SURFACE LEVEL
4	217803.006	245864.884	4.479	SURFACE LEVEL
5	217804.552	245862.258	4.561	SURFACE LEVEL
6	217790.676	245857.102	5.059	SURFACE LEVEL
7	217789.549	245856.683	5.039	SURFACE LEVEL
8	217822.192	245884.216	3.493	SURFACE LEVEL
9	217822.988	245883.151	3.578	SURFACE LEVEL
10	217822.475	245881.530	3.569	SURFACE LEVEL
11	217828.375	245889.674	3.353	SURFACE LEVEL
12	217831.091	245887.389	3.397	SURFACE LEVEL
13	217831.296	245885.121	3.458	SURFACE LEVEL
14	217831.715	245885.643	3.670	TOP OF WALL
15	217831.524	245887.131	3.670	TOP OF WALL

SETTING OUT POINTS				
POINT	EASTING	NORTHING	LEVEL	DESCRIPTION
16	217832.870	245888.660	3.670	TOP OF WALL
17	217834.161	245890.183	3.670	TOP OF WALL
18	217842.002	245899.406	3.530	TOP OF WALL
19	217843.294	245900.933	3.530	TOP OF WALL
20	217845.346	245904.163	3.194	SURFACE LEVEL
21	217845.710	245904.438	3.195	SURFACE LEVEL
22	217849.891	245898.062	3.396	SURFACE LEVEL
23	217854.187	245900.511	3.418	SURFACE LEVEL
24	217849.500	245907.228	3.202	SURFACE LEVEL
25	217845.138	245905.216	3.160	SURFACE LEVEL
26	217844.805	245904.994	3.168	SURFACE LEVEL
27	217844.550	245905.378	3.156	SURFACE LEVEL
28	217843.047	245907.083	3.096	SURFACE LEVEL
29	217841.344	245908.241	3.131	SURFACE LEVEL
30	217833.836	245895.971	3.263	SURFACE LEVEL

SETTING OUT POINTS				
POINT	EASTING	NORTHING	LEVEL	DESCRIPTION
31	217846.608	245904.603	2.527	GULLY
32	217841.832	245910.175	2.962	EXISTING GULLY
33	217810.755	245875.223	3.828	EXISTING GULLY
34	217808.046	245870.709	4.134	TREE
35	217811.092	245873.310	3.999	TREE
36	217814.135	245875.912	3.861	TREE
37	217817.179	245878.515	3.732	TREE
38	217820.171	245881.073	3.607	TREE
39	217842.184	245897.690	3.530	TREE
40	217844.781	245898.356	3.530	TREE
41	217845.094	245901.002	3.530	TREE

- LANDSCAPE FEATURE LEGEND:
- FLOOD DEFENCE
  - RAISED EXISTING SLATE WALL
  - NEW SLATE WALL
  - SLATE PAVING, RIVEN FINISH.
  - GRANITE SETTS
  - CONCRETE PAVERS
  - GRANITE UPSTAND
  - TACTILE PAVING
  - PLANTING
  - SEDUM PREPLANTED MATTING
  - INDIVIDUAL TREE/LARGE SHRUB
  - INTEGRATED BENCHES
  - BIN
  - RELOCATED ROAD SIGN
  - RELOCATED LAMP POSTS
  - MAINTENANCE GATE
  - MAINTENANCE GATE
  - FENCE
  - EXISTING SURFACING RETAINED / REINSTATED WHERE REQUIRED

Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment

Client: **Cyfoeth Naturiol Cymru Natural Resources Wales**

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

Project: **binnies**

Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Crewe, WA6 0AR, UK.  
Tel: +44(0)1773 774155

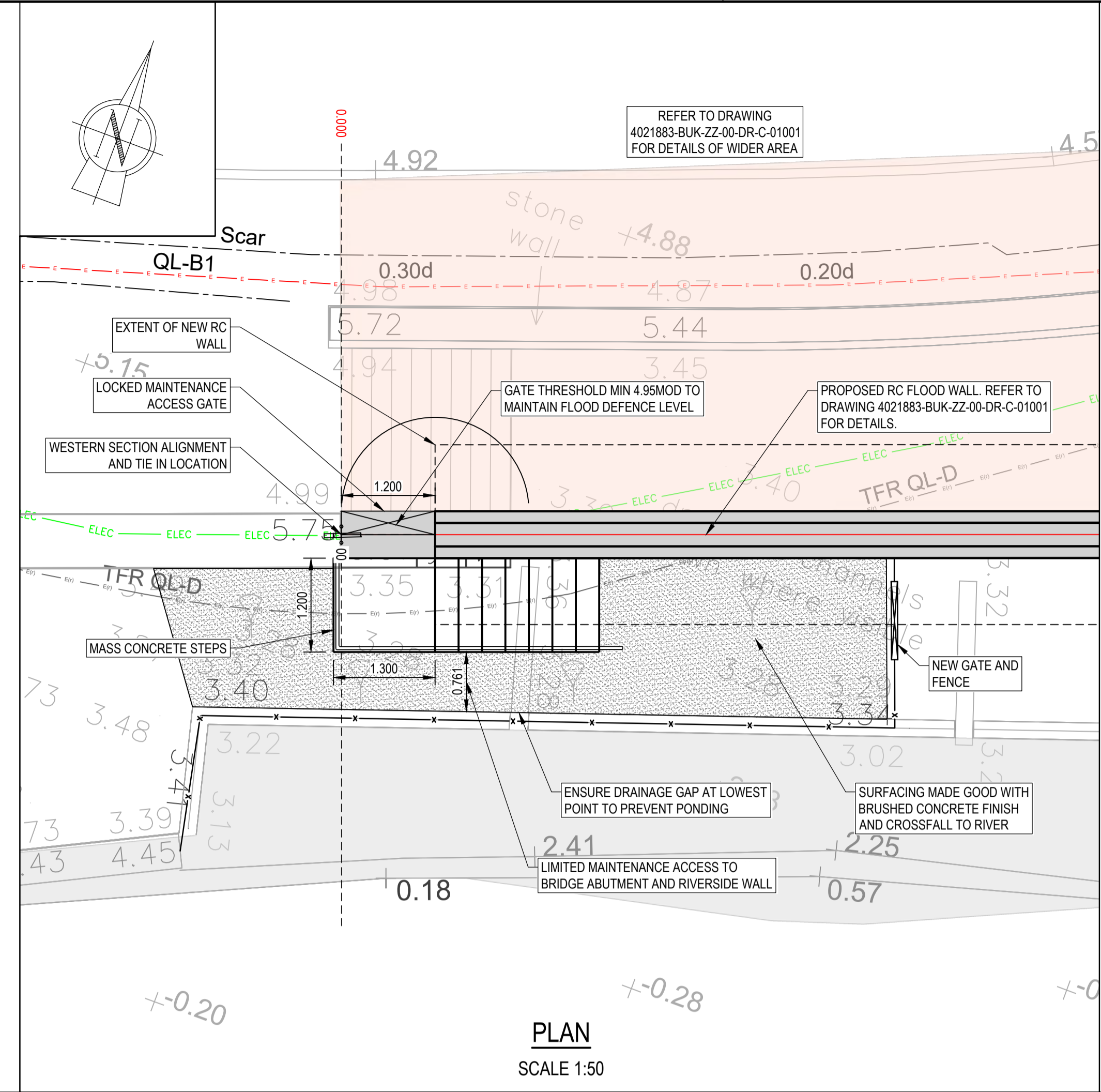
Project: **CARDIGAN TIDAL FRMS**

Drawing title: **AREA 1 SETTING OUT**

Drawing scale: 1:200 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-01003 Revision P01

Parent Model: SHEET NAME



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - VEGETATION CLEARANCE REQUIRED ACROSS AREA 1. HIGHWAY WALL NEXT TO BRIDGE WILL REQUIRE REPOINTING FOLLOWING VEGETATION CLEARANCE AND NEW WALL TIE IN.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.

- LEGEND:**
- FINISHED GROUND PROFILE (FGL)
  - NEW SURFACE AMENDMENTS
  - COPING
  - CLADDING
  - EXISTING GROUND PROFILE (EGL)
  - EXISTING EMBANKMENT EXTENT

**EXISTING SERVICES LEGEND (FROM RECORD):**

- ELEC ELECTRIC - UNSPECIFIED

**EXISTING SERVICES LEGEND (GPR):**

- ELECTRICITY
- ELECTRICITY FROM RECORDS

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

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**CONSTRUCTION:**

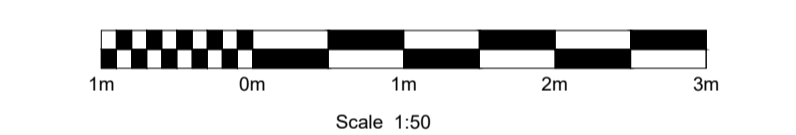
- B.6 POOR GROUND CONDITIONS
- E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

N/A

**DECOMMISSIONING OR DEMOLITION:**

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Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



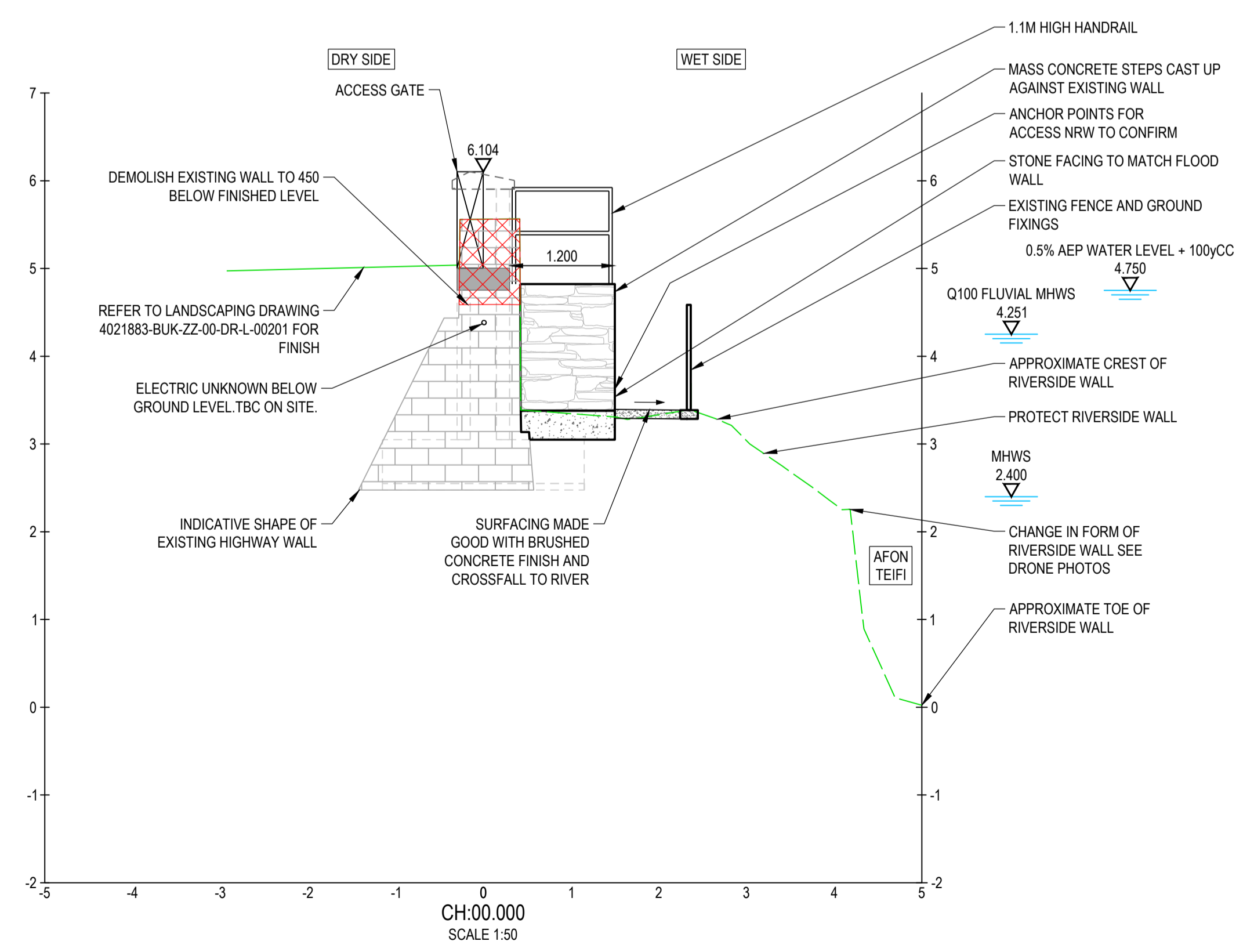
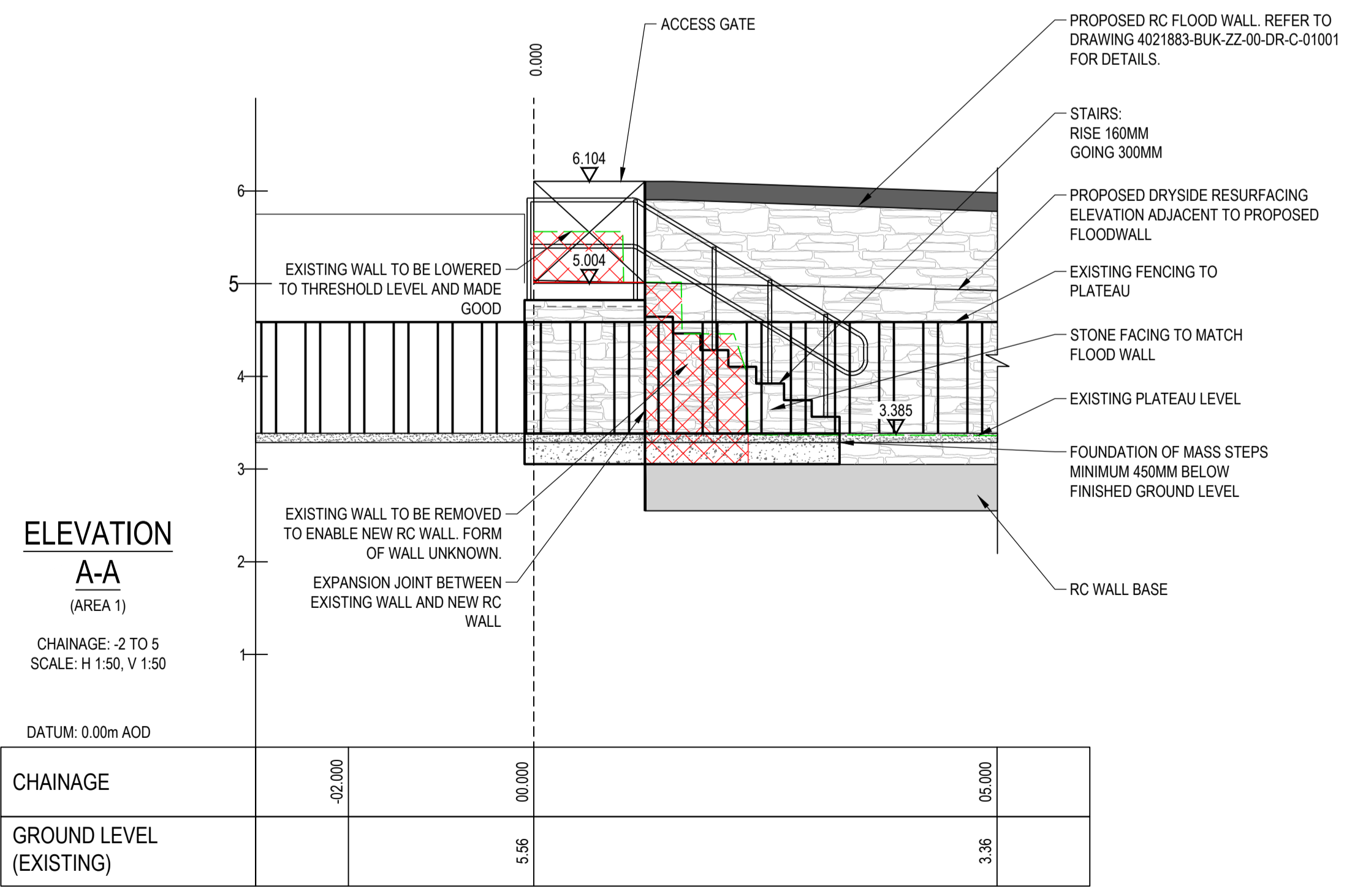
Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **AREA 1  
WALL TIE-IN WEST  
AND PLATEAU STEPS**

Drawing scale: 1:50 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-01100 Revision P02

Parent Model: SHEET NAME



DATUM: 0.00m AOD

CHAINAGE	-02.000	00.000	05.000
GROUND LEVEL (EXISTING)		5.56	3.36

ON PROJECTWISE

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- NOTES:
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - NON FROST SUSCEPTIBLE TYPE C FILTER MATERIAL TO SHW CLAUSE 505 OR GRANULAR MATERIAL TO SHW CLAUSE 503.3 (i)

- LEGEND:
- FINISHED GROUND PROFILE (FGL)
  - EXISTING GROUND PROFILE (EGL)
  - NEW SURFACE AMENDMENTS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:

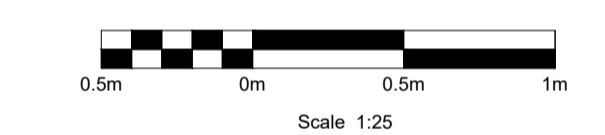
- B.6 POOR GROUND CONDITIONS
- E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
- E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:

N/A

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



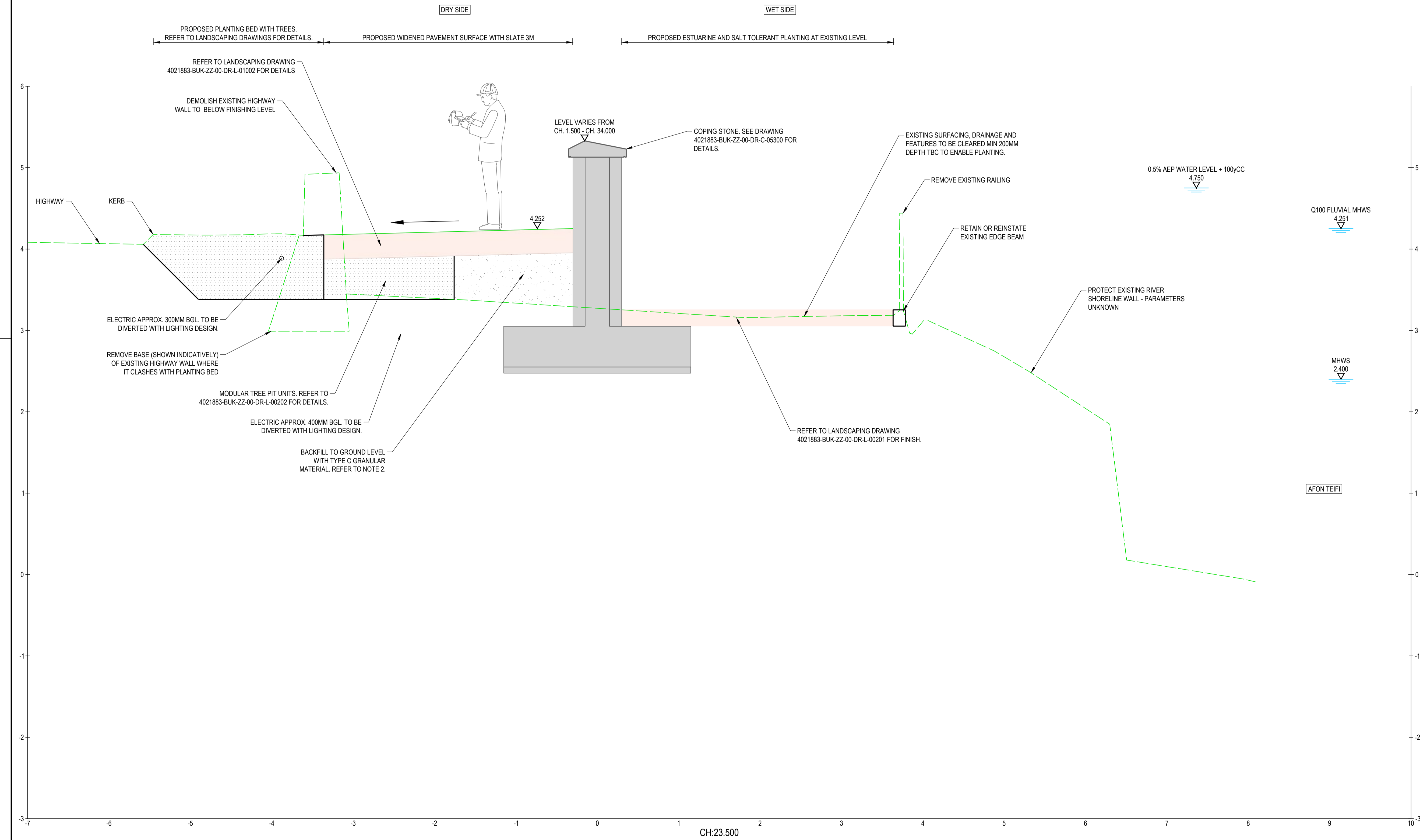
Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

Drawing title: **AREA 1**  
**RC WALL CROSS SECTION**

Drawing scale: 1:25 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-01105 Revision P02

Parent Model: SHEET NAME



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - NON FROST SUSCEPTIBLE TYPE C FILTER MATERIAL TO SHW CLAUSE 505 OR GRANULAR MATERIAL TO SHW CLAUSE 503.3 (i)

LEGEND:

- FINISHED GROUND PROFILE (FGL)
- EXISTING GROUND PROFILE (EGL)
- NEW SURFACE AMENDMENTS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:

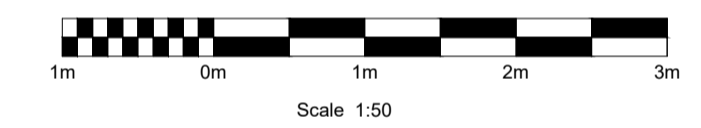
- B.6 POOR GROUND CONDITIONS
- E.5 LIMITED WORKING AREA
- E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
- E.25 RISK OF FLOODING
- E.27 LISTED STRUCTURE(S)
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:

N/A

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project

CARDIGAN TIDAL FRMS  
DETAILED DESIGN

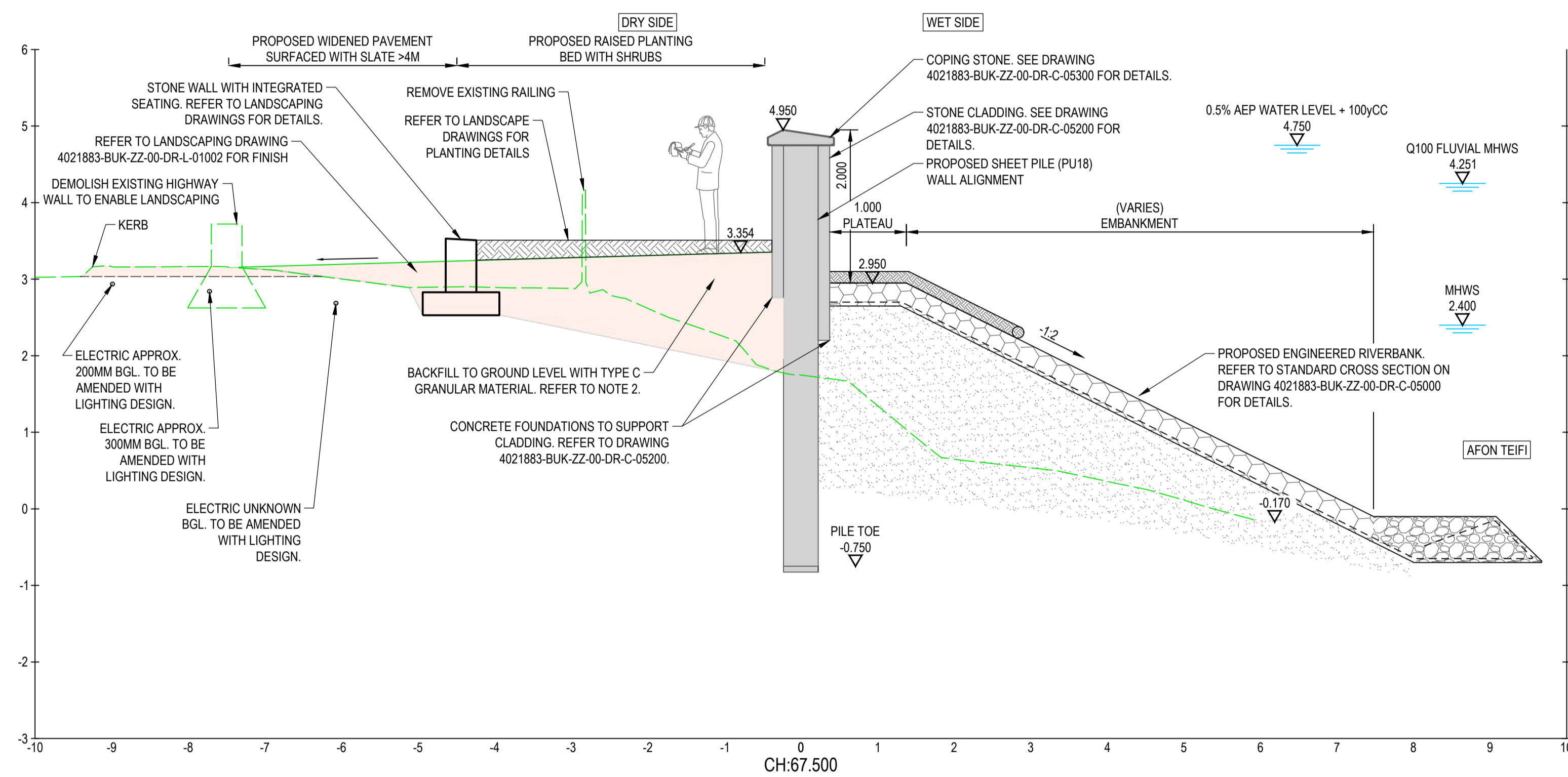
Drawing title

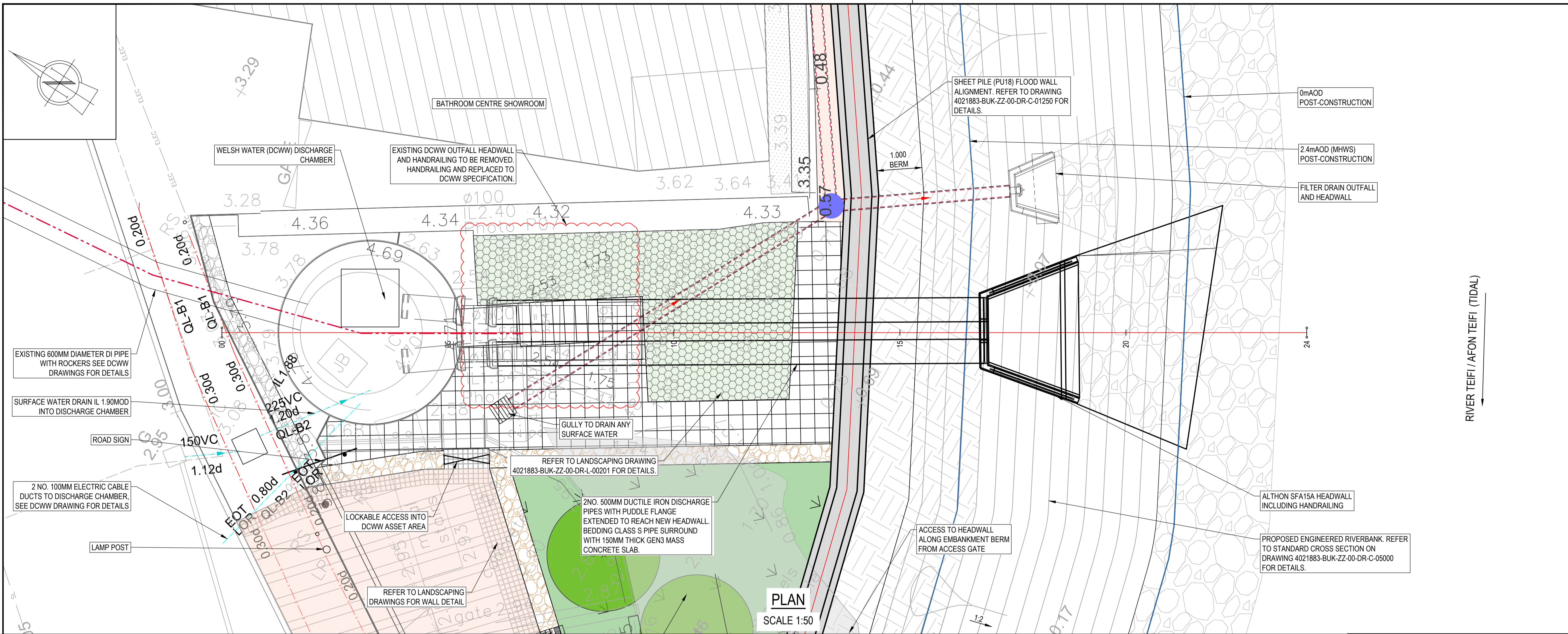
AREA 1  
PILE WALL CROSS SECTION

Drawing scale: 1:50 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-01250 Revision P02

Parent Model: SHEET NAME





Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - VEGETATION CLEARANCE REQUIRED ACROSS AREA 1. HIGHWAY WALL NEXT TO BRIDGE WILL REQUIRE REPOINTING FOLLOWING VEGETATION CLEARANCE AND NEW WALL TIE IN.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.
  - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DISCHARGE CHAMBER PLAN AND SECTION ISSUED FOR CONSTRUCTION 4392\_S\_216-ARP-01-BG-DR-CX-05006. NO AS BUILT DRAWINGS HAVE BEEN PROVIDED AND IT IS ASSUMED THAT THE DRAWING ISSUED FOR CONSTRUCTION REPRESENTS THE EXISTING OUTFALL STRUCTURE.

- LEGEND:**
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - NEW SURFACE AMENDMENTS
  - COPING
  - CLADDING
  - PILE
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - EXISTING EMBANKMENT EXTENT
  - EXISTING RAINWATER PIPES
  - PROPOSED SURFACE WATER SEWER NETWORK

- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - GIP - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT

- EXISTING SERVICES LEGEND (GPR):**
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**

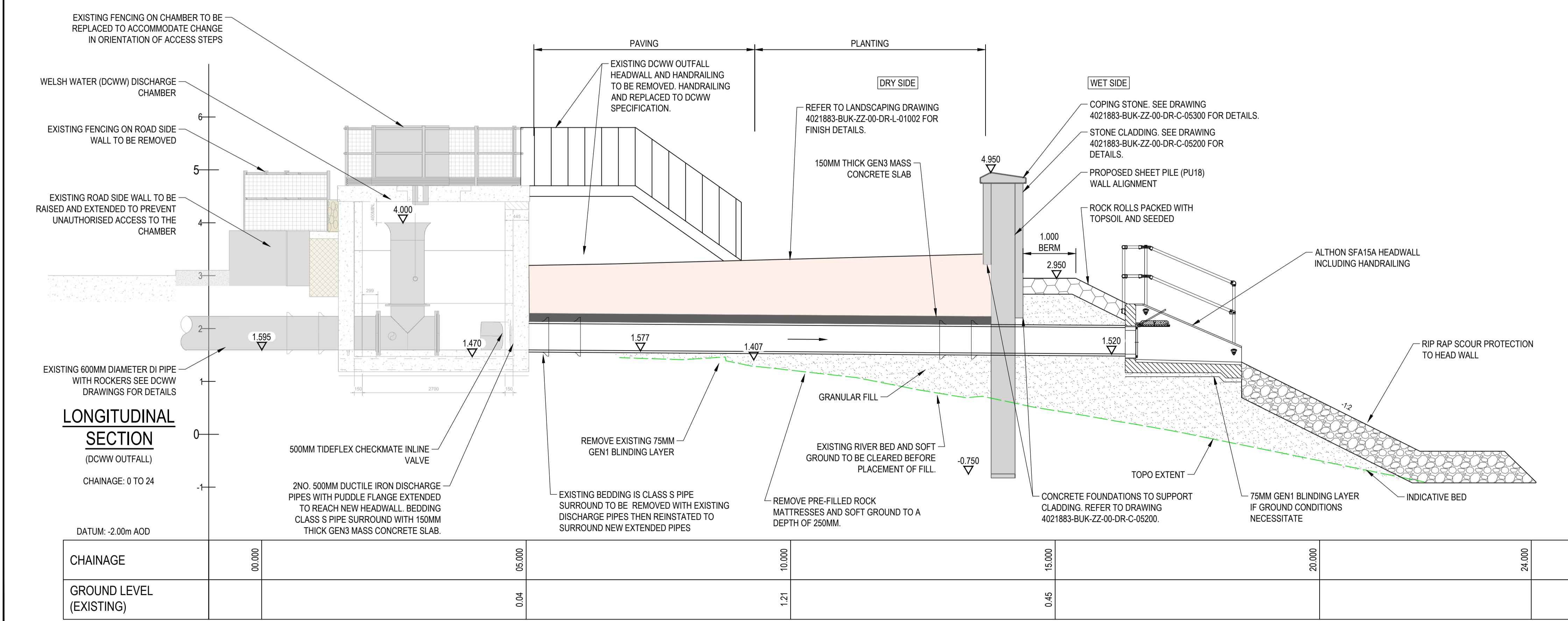
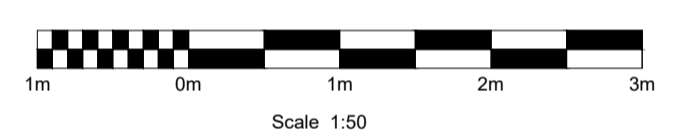
- B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES
- B.10 CONFINED SPACE
- C.5 LIFTING OPERATIONS
- E.23 BUILD UP OF DEBRIS AND VEGETATION
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

N/A

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment

Client: **Cyfoeth Naturiol Cymru Natural Resources Wales**

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

**binnies**  
Binnies UK Limited  
Spring Lodge, 172 Chester Road, Bebbly, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

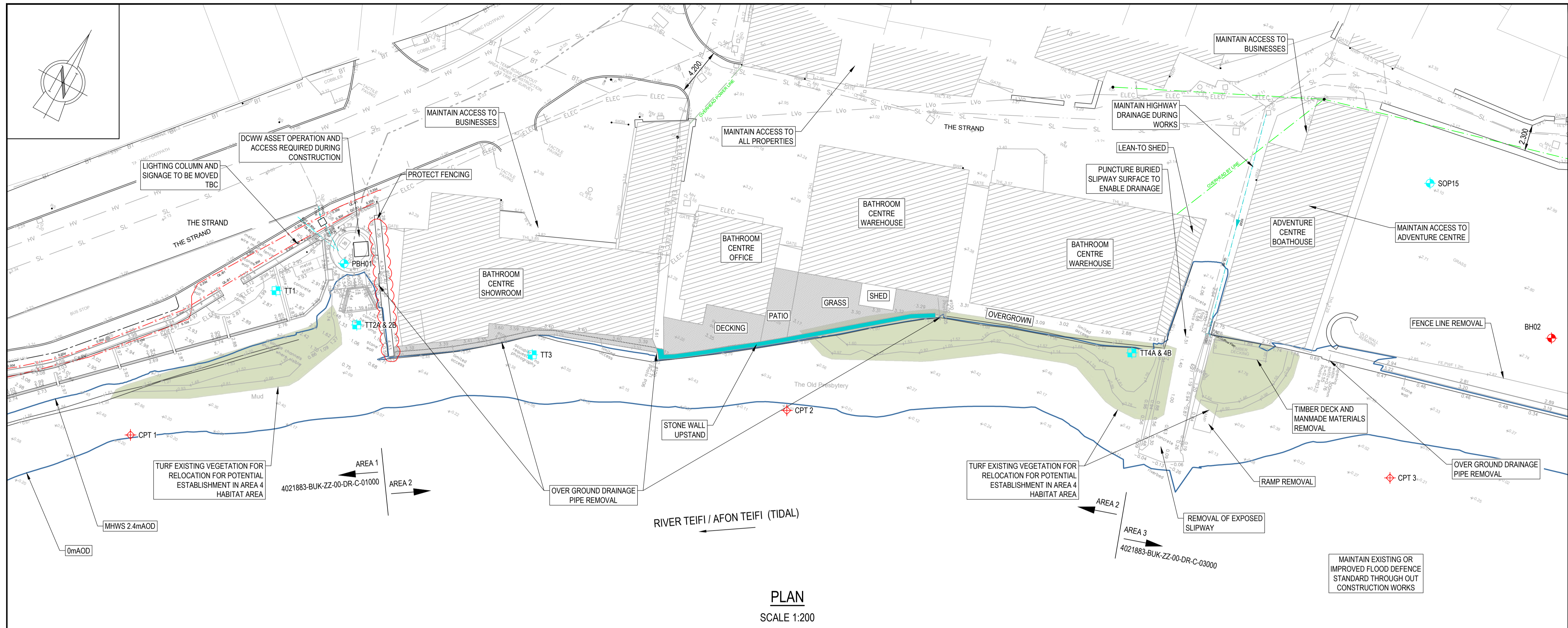
Drawing title: **AREA 1**  
**DCWW OUTFALL**

Drawing scale: 1:200 Sheet size: A1

Drawing no.	Revision
4021883-BUK-ZZ-00-DR-C-01300	P02

Parent Model: SHEET NAME

ON PROJECTWISE



PLAN  
SCALE 1:200

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**  
IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**  
B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES  
E.1 WATER LEVEL VARIABLE DUE TO TIDE  
E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION  
E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE  
E.8 POTENTIAL FOR CONTAMINATED GROUND  
E.23 BUILD UP OF DEBRIS AND VEGETATION  
E.25 RISK OF FLOODING  
E.27 LISTED STRUCTURE(S)  
F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

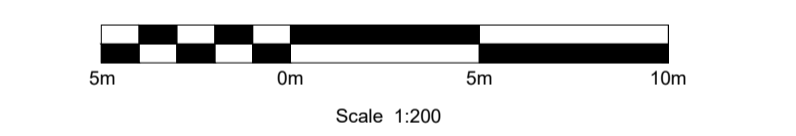
**MAINTENANCE, CLEANING AND OPERATION:**  
N/A

**DECOMMISSIONING OR DEMOLITION:**  
RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

**EXISTING SERVICES LEGEND (FROM RECORD):**  
2015 GROUND INVESTIGATION  
2022 GROUND INVESTIGATION

**EXISTING SERVICES LEGEND (FROM RECORD):**  
SEWER - COMBINED (NEWLY BUILT RISING MAIN)  
SEWER - COMBINED (RISING MAIN)  
SEWER - SURFACE WATER (DCWW)  
SEWER - SURFACE WATER (CCC)  
WATER MAIN - POTABLE  
GAS MAIN - INTERMEDIATE PRESSURE  
GLP - GAS MAIN - LOW PRESSURE  
ELEC - ELECTRIC - UNSPECIFIED  
HV - ELECTRIC - HIGH VOLTAGE  
LV - ELECTRIC - LOW VOLTAGE  
LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)  
SL - ELECTRIC - STREET LIGHTING  
BT - BT

**EXISTING SERVICES LEGEND (GPR):**  
ELECTRICITY  
ELECTRICITY FROM RECORDS  
OVERHEAD ELECTRICITY  
GAS FROM RECORDS  
COMBINED DRAINAGE  
COMBINED DRAINAGE FROM RECORDS  
FOUL DRAINAGE  
FOUL DRAINAGE FROM RECORDS  
SURFACE DRAINAGE  
SURFACE DRAINAGE FROM RECORDS  
WATER FROM RECORDS  
UNKNOWN ROUTE  
UNKNOWN ROUTE LOCATED BY GPR



P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE
Rev	Drawn	Chkd	Rwd	Apprvd	Date	Description

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **AREA 2  
EXISTING PLAN**

Drawing scale: 1:200 Sheet size: A1  
Drawing no. 4021883-BUK-ZZ-00-DR-C-02000 Revision P02

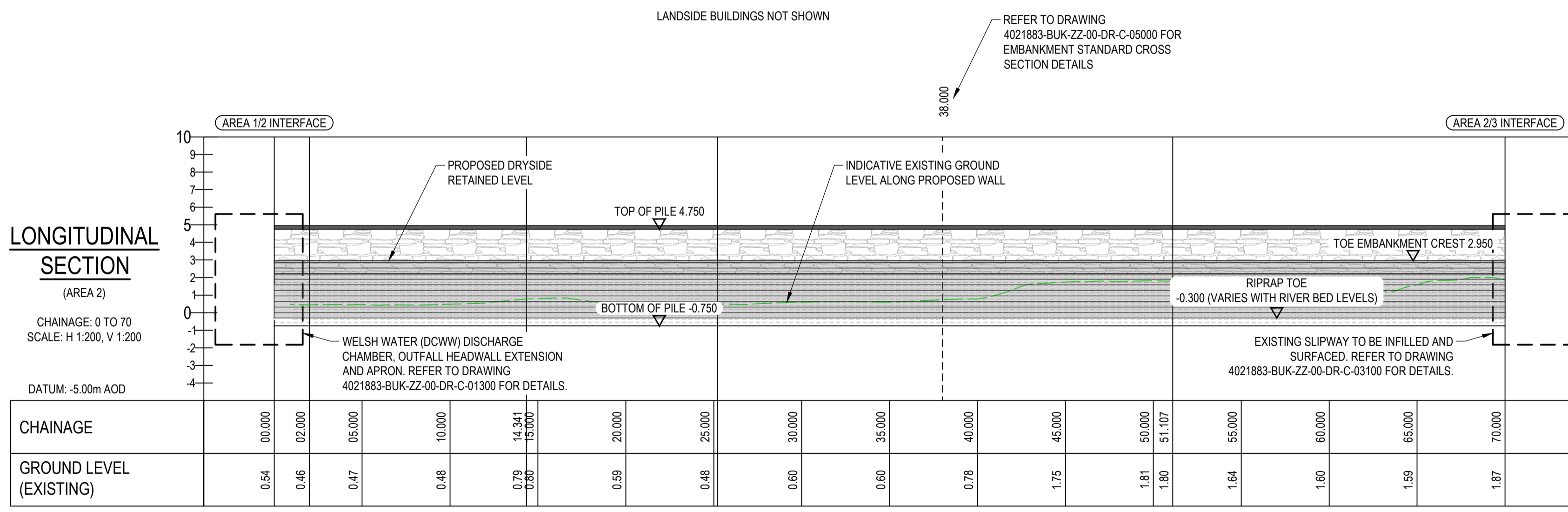
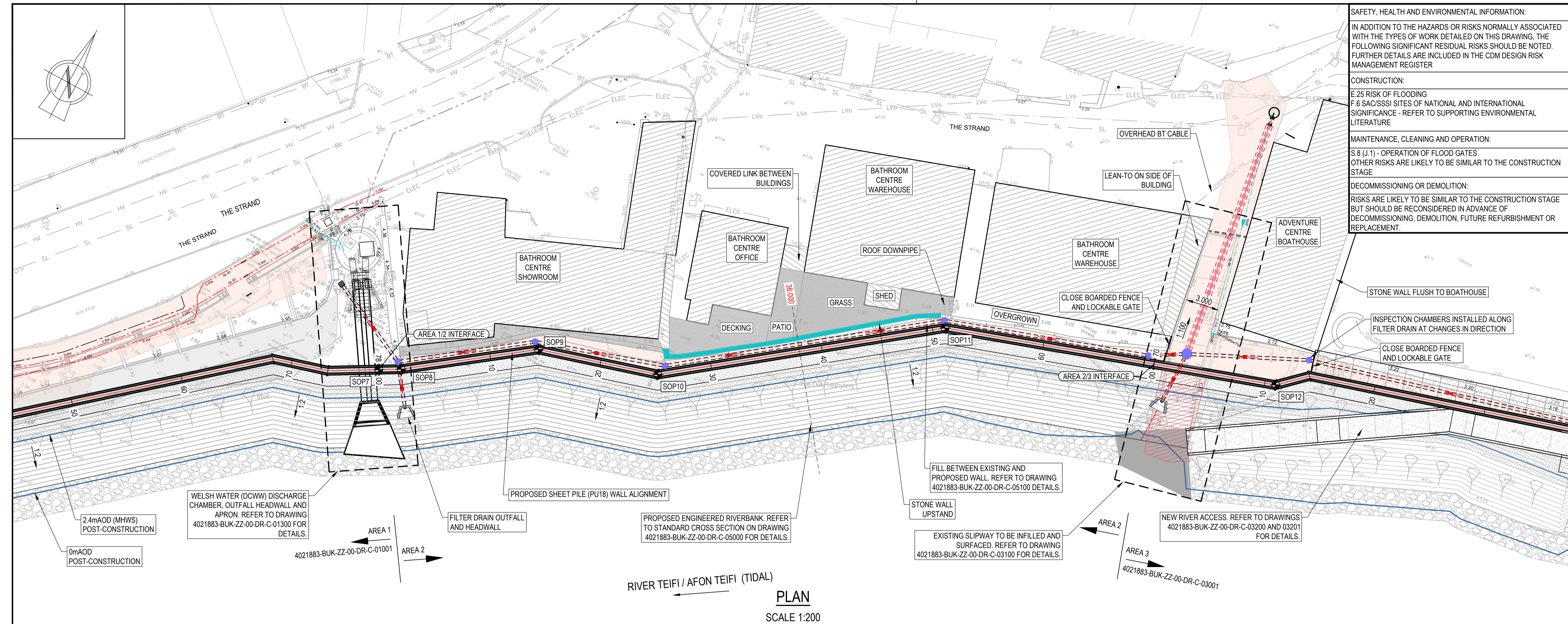
Parent Model: SHEET NAME



WEST



EAST

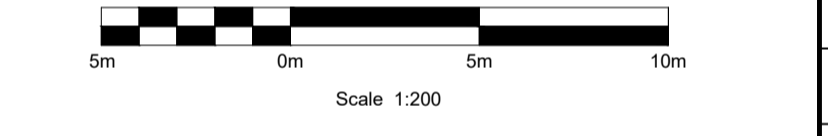
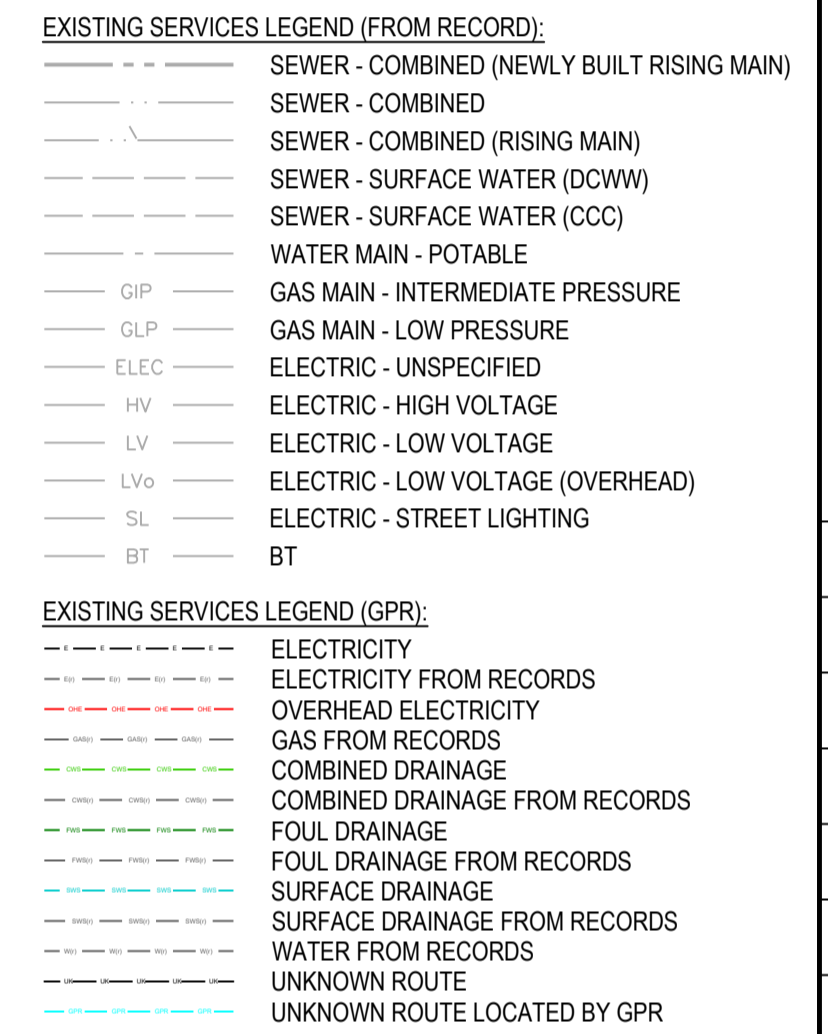
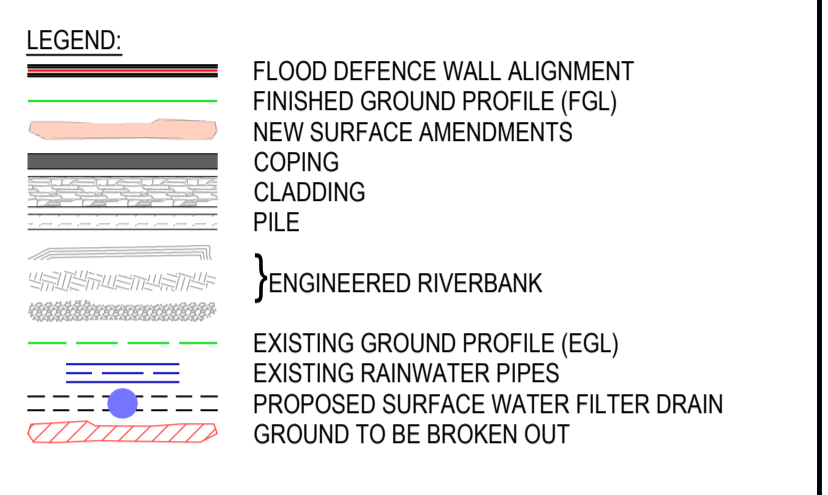


**AREA 2 PROPOSED WALL SETTING OUT POINTS**

POINT	EASTING	NORTHING
SOP7	217853.151	245899.486
SOP8	217854.888	245900.477
SOP9	217864.785	245907.848
SOP10	217875.188	245910.952
SOP11	217895.695	245926.790
SOP12	217923.989	245936.370

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - EXACT LOCATION AND DEPTH OF EXISTING UTILITIES UNKNOWN. THESE SHALL BE CONFIRMED THROUGH SURVEY AND TRIAL PITS.
  - GROUND LEVELS SHOWN IN SECTIONS ARE BASED ON TOPOGRAPHIC SURVEY.
  - DCWW TO PROVIDE GUIDANCE IN ASSET DESIGN REQUIREMENTS. INPUT FROM ECI CONTRACTOR REQUIRED IN ORDER TO CONFIRM PILING OFF SET FROM BOAT HOUSE STRUCTURE.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment



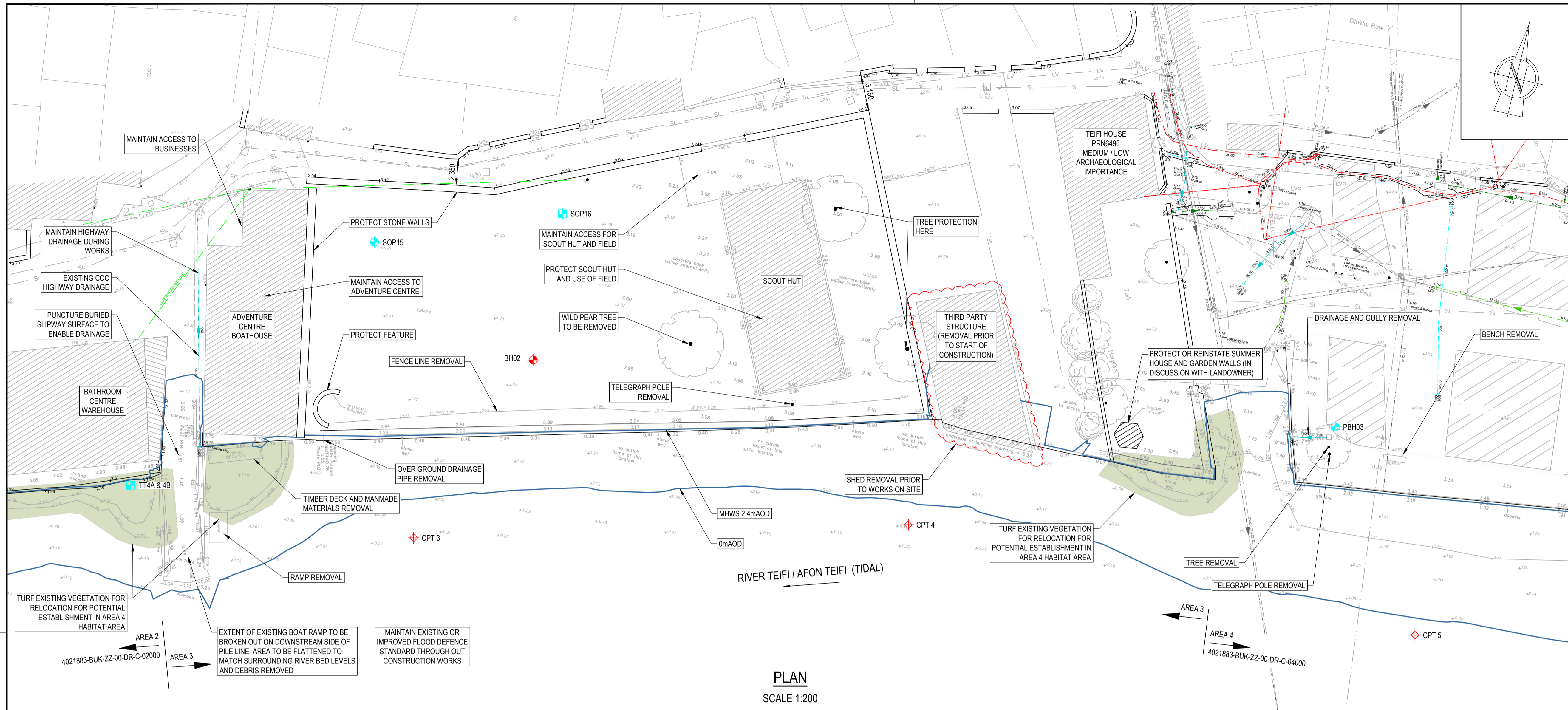
Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

Drawing title: **AREA 2**  
**PROPOSED PLAN AND LONGSECTION**

Drawing scale:	1:200	Sheet size:	A1
Drawing no.	4021883-BUK-ZZ-00-DR-C-02001	Revision	P02
Parent Model:	SHEET NAME		

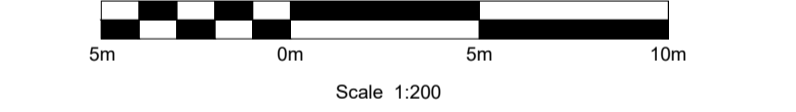


PLAN  
SCALE 1:200

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**
- IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER
- CONSTRUCTION:**
- B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES
  - E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
  - E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE
  - E.8 POTENTIAL FOR CONTAMINATED GROUND
  - E.12 UNKNOWN CONSTRUCTION AND CONDITION OF EXISTING WALLS
  - E.23 BUILD UP OF DEBRIS AND VEGETATION
  - E.25 RISK OF FLOODING
  - E.27 LISTED STRUCTURE(S)
  - F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE
- MAINTENANCE, CLEANING AND OPERATION:**
- N/A
- DECOMMISSIONING OR DEMOLITION:**
- RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

- EXISTING SERVICES LEGEND (FROM RECORD):**
- 2015 GROUND INVESTIGATION
  - 2022 GROUND INVESTIGATION
- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - GIP - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT - BT
- EXISTING SERVICES LEGEND (GPR):**
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR



WEST



EAST

P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE
Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment



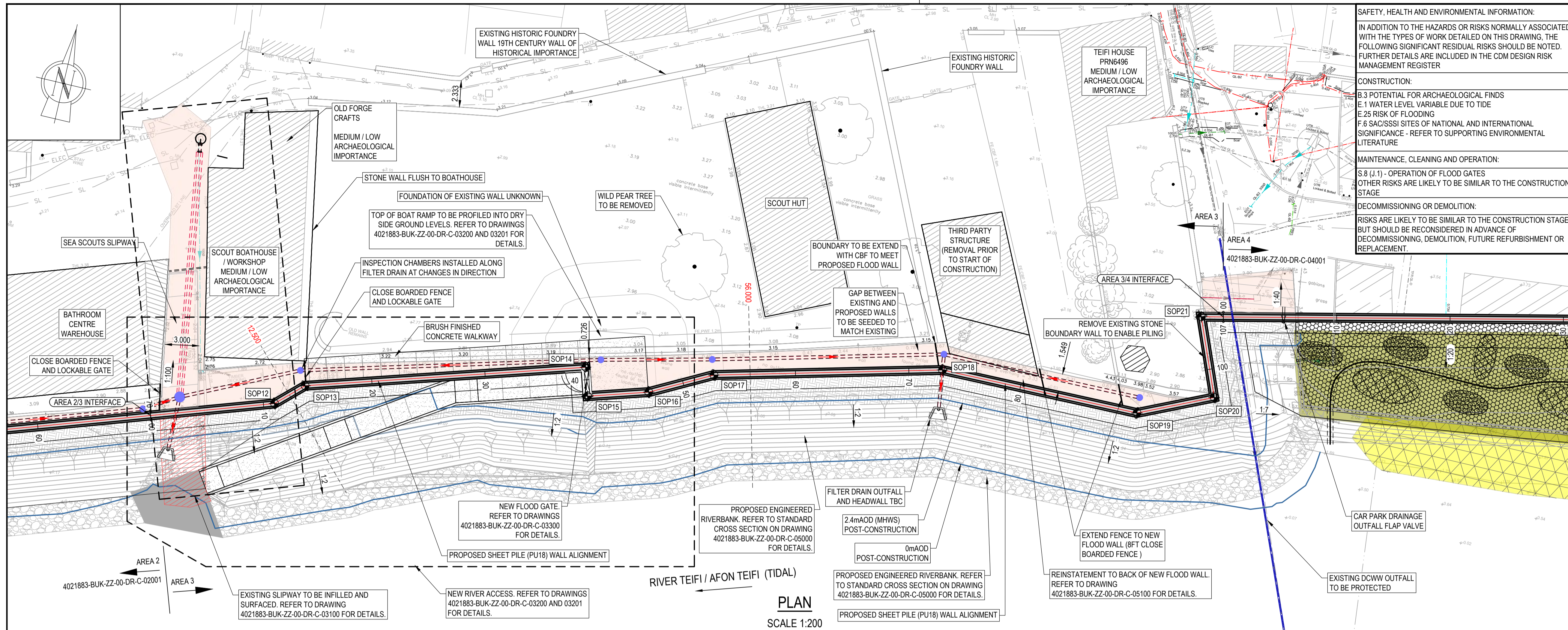
Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **AREA 3  
EXISTING PLAN**

Drawing scale: 1:200 Sheet size: A1  
 Drawing no. 4021883-BUK-ZZ-00-DR-C-03000 Revision P02  
 Parent Model: SHEET NAME



**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**

- B.3 POTENTIAL FOR ARCHAEOLOGICAL FINDS
- E.1 WATER LEVEL VARIABLE DUE TO TIDE
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

- S.8 (J.1) - OPERATION OF FLOOD GATES

OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - EXACT LOCATION AND DEPTH OF EXISTING UTILITIES UNKNOWN. THESE SHALL BE CONFIRMED THROUGH SURVEY AND TRIAL PITS.
  - GROUND LEVELS SHOWN IN SECTIONS ARE BASED ON TOPOGRAPHIC SURVEY.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.

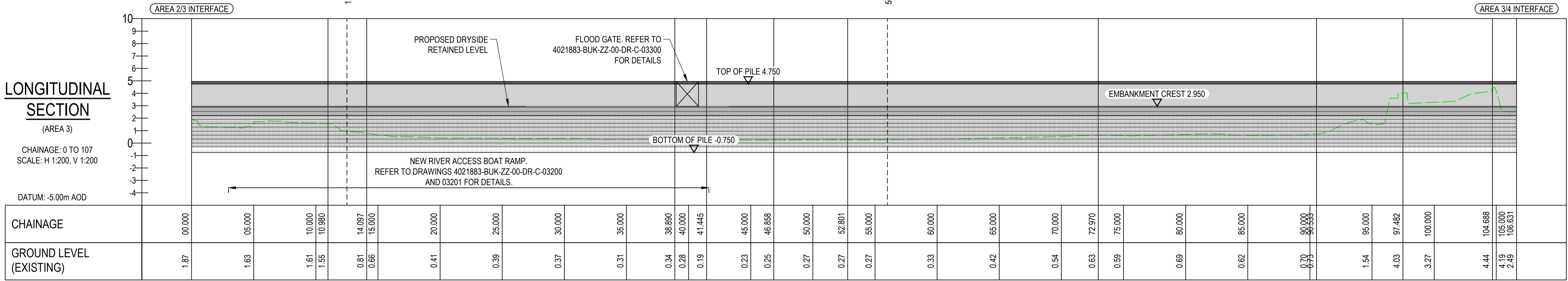
- LEGEND:**
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - NEW INTERDICAL AREA
  - RAISED HUMPS APPROX. 2X3M X 0.5M HIGH
  - DIPS AND SCRAPES APPROX. 1X2M X 0.3M DEEP
  - ROCK ROLLS
  - SWALE - APPROX 0.5M WIDE, 0.5M DEEP, 1 IN 2 SIDES WITH NOMINAL FALL TO MAIN CHANNEL
  - NEW SURFACE AMENDMENTS
  - COPING
  - CLADDING
  - PILE
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - EXISTING RAINWATER PIPES
  - PROPOSED SURFACE WATER FILTER DRAIN
  - PROTECT EXISTING HABITAT
  - GROUND TO BE BROKEN OUT
- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - GIP - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT
- EXISTING SERVICES LEGEND (GPR):**
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR

**PLAN**  
SCALE 1:200

ADVENTURE CENTRE      SCOUT FIELD      3RD PARTY STRUCTURE      UNDEVELOPED PLOT      TEIFI HOUSE      FORMER GLOSTER ROW SLIPWAY

**LONGITUDINAL SECTION**  
(AREA 3)

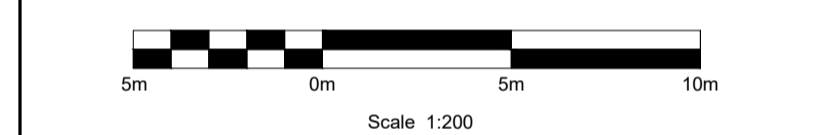
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SCALE: H 1:200, V 1:200  
DATUM: -5.00m AOD



CHAINAGE	00.000	05.000	10.000	10.900	14.097	15.000	20.000	25.000	30.000	35.000	38.800	40.000	41.445	45.000	46.858	50.000	52.801	55.000	60.000	65.000	70.000	72.970	75.000	80.000	85.000	90.000	90.000	95.000	97.482	100.000	104.688	105.000	106.631
GROUND LEVEL (EXISTING)	1.87	1.63	1.61	1.55	0.81	0.66	0.41	0.39	0.37	0.31	0.34	0.28	0.19	0.23	0.25	0.27	0.27	0.27	0.33	0.42	0.54	0.63	0.59	0.69	0.62	0.70	0.70	1.54	4.03	3.27	4.44	4.19	2.19

**AREA 3 PROPOSED WALL SETTING OUT POINTS**

POINT	EASTING	NORTHING
SOP12	217923.989	245936.372
SOP13	217926.255	245938.512
SOP14	217949.967	245945.754
SOP15	217950.714	245943.310
SOP16	217955.891	245944.891
SOP17	217961.144	245947.668
SOP18	217980.674	245952.708
SOP19	217998.235	245952.936
SOP20	218004.556	245955.822
SOP21	218001.824	245962.489



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment

Client: **Cyfoeth Naturiol Cymru Natural Resources Wales**

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

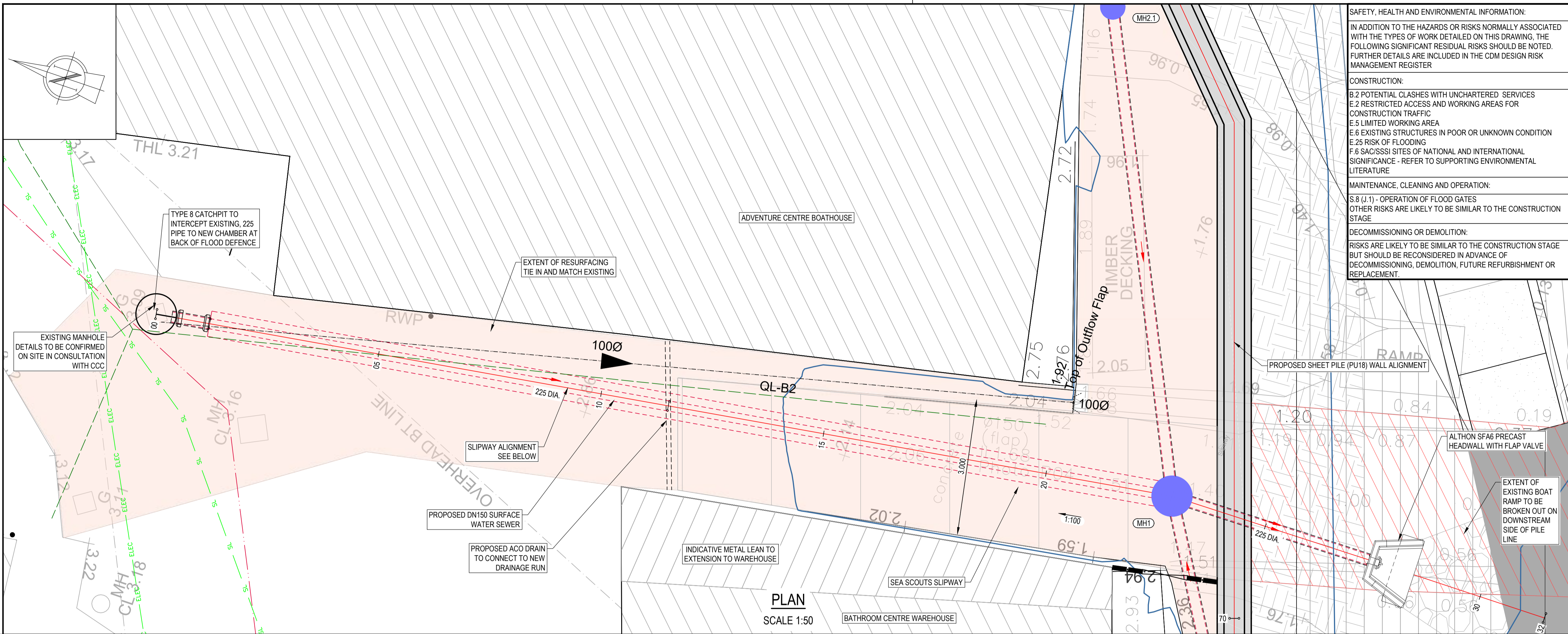
**binnies**  
Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

**CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**  
**AREA 3**  
**PROPOSED PLAN AND LONGSECTION**

Drawing scale: 1:200      Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-03001      Revision P02

Parent Model: SHEET NAME



**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**

- B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES
- E.2 RESTRICTED ACCESS AND WORKING AREAS FOR CONSTRUCTION TRAFFIC
- E.5 LIMITED WORKING AREA
- E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

- S.8 (J.1) - OPERATION OF FLOOD GATES

OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

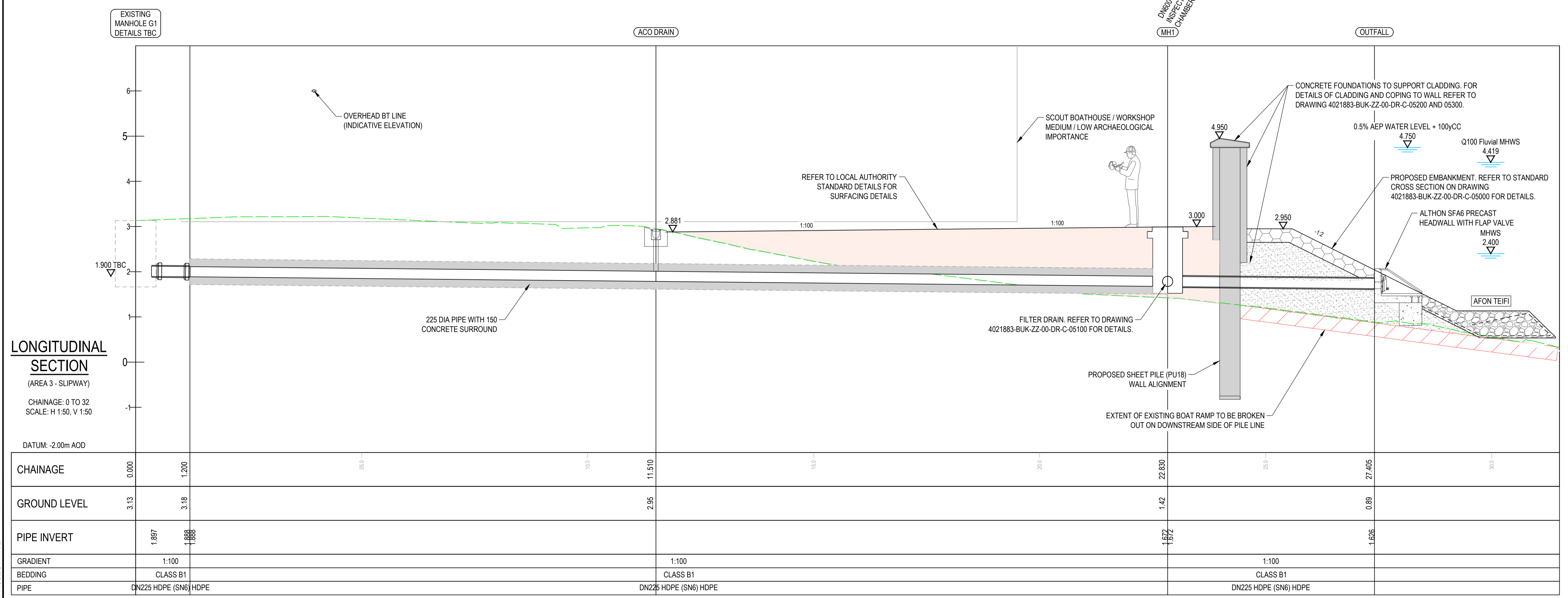
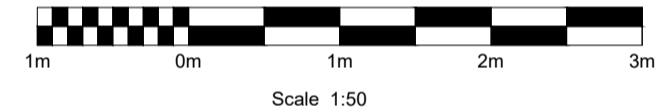
Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - VEGETATION CLEARANCE REQUIRED ACROSS AREA 1. HIGHWAY WALL NEXT TO BRIDGE WILL REQUIRE REPOINTING FOLLOWING VEGETATION CLEARANCE AND NEW WALL TIE IN.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.

- LEGEND:**
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - NEW SURFACE AMENDMENTS
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - GROUND TO BE BROKEN OUT
  - PROPOSED SURFACE WATER FILTER DRAIN

- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - G/P - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVo - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT - BT

- EXISTING SERVICES LEGEND (GPR):**
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

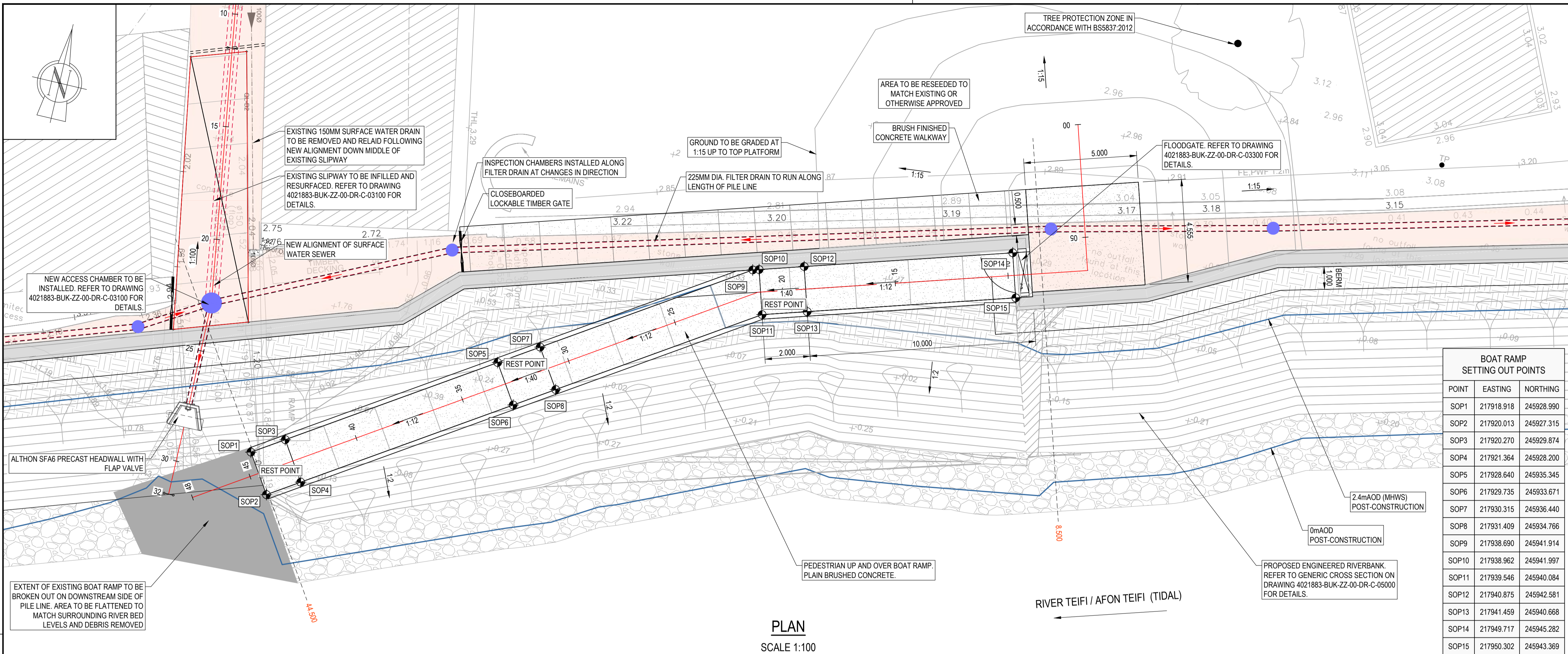


Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

Drawing title: **AREA 3**  
**ADVENTURE CENTER SLIPWAY**  
**PLAN AND LONGSECTION**

Drawing scale: 1:50 Sheet size: A1  
Drawing no. 4021883-BUK-ZZ-00-DR-C-03100 Revision P02  
Parent Model: SHEET NAME

ON PROJECTWISE



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
- ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.

**LEGEND:**

- FLOOD DEFENCE WALL ALIGNMENT
- FINISHED GROUND PROFILE (FGL)
- NEW SURFACE AMENDMENTS
- BRUSHED CONCRETE FINISH
- ENGINEERED RIVERBANK
- EXISTING GROUND PROFILE (EGL)
- EXISTING EMBANKMENT EXTENT
- EXISTING RAINWATER PIPES
- PROPOSED SURFACE WATER FILTER DRAIN
- SURFACE DRAINAGE

**BOAT RAMP SETTING OUT POINTS**

POINT	EASTING	NORTHING
SOP1	217918.918	245928.990
SOP2	217920.013	245927.315
SOP3	217920.270	245929.874
SOP4	217921.364	245928.200
SOP5	217928.640	245935.345
SOP6	217929.735	245933.671
SOP7	217930.315	245936.440
SOP8	217931.409	245934.766
SOP9	217938.690	245941.914
SOP10	217938.962	245941.997
SOP11	217939.546	245940.084
SOP12	217940.875	245942.581
SOP13	217941.459	245940.668
SOP14	217949.717	245945.282
SOP15	217950.302	245943.369

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**

- B.3 POTENTIAL FOR ARCHAEOLOGICAL FINDS
- B.6 POOR GROUND CONDITIONS
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

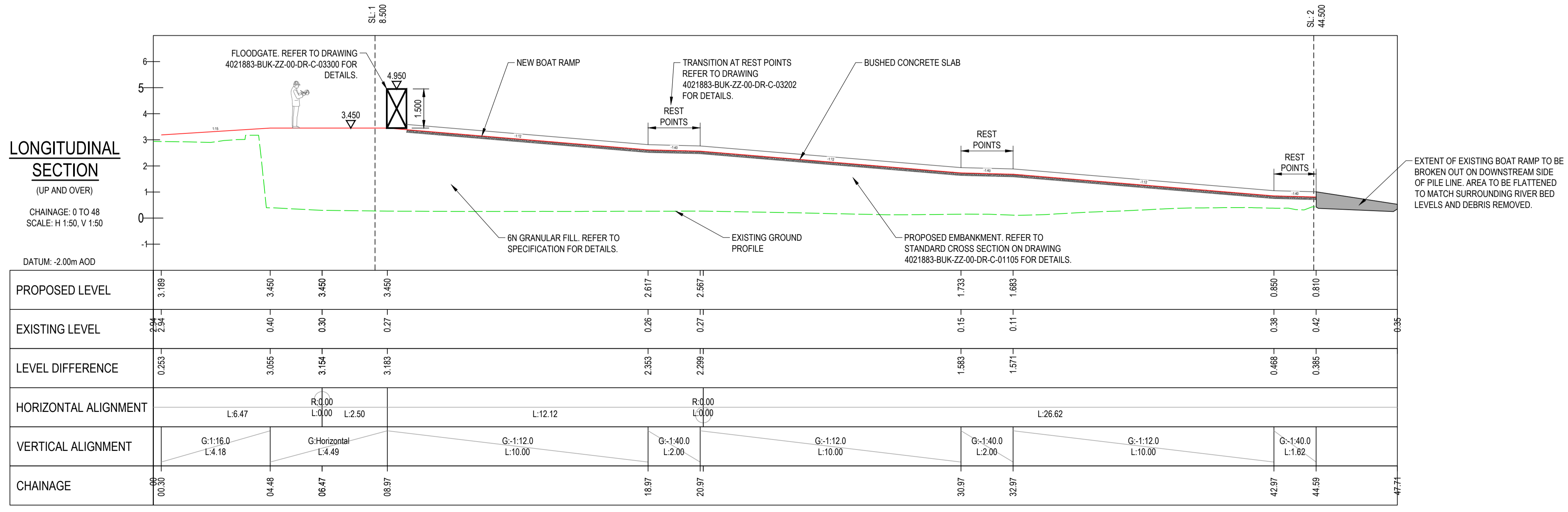
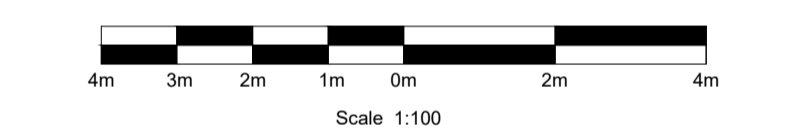
**MAINTENANCE, CLEANING AND OPERATION:**

- S.8 (J.1) - OPERATION OF FLOOD GATES

OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



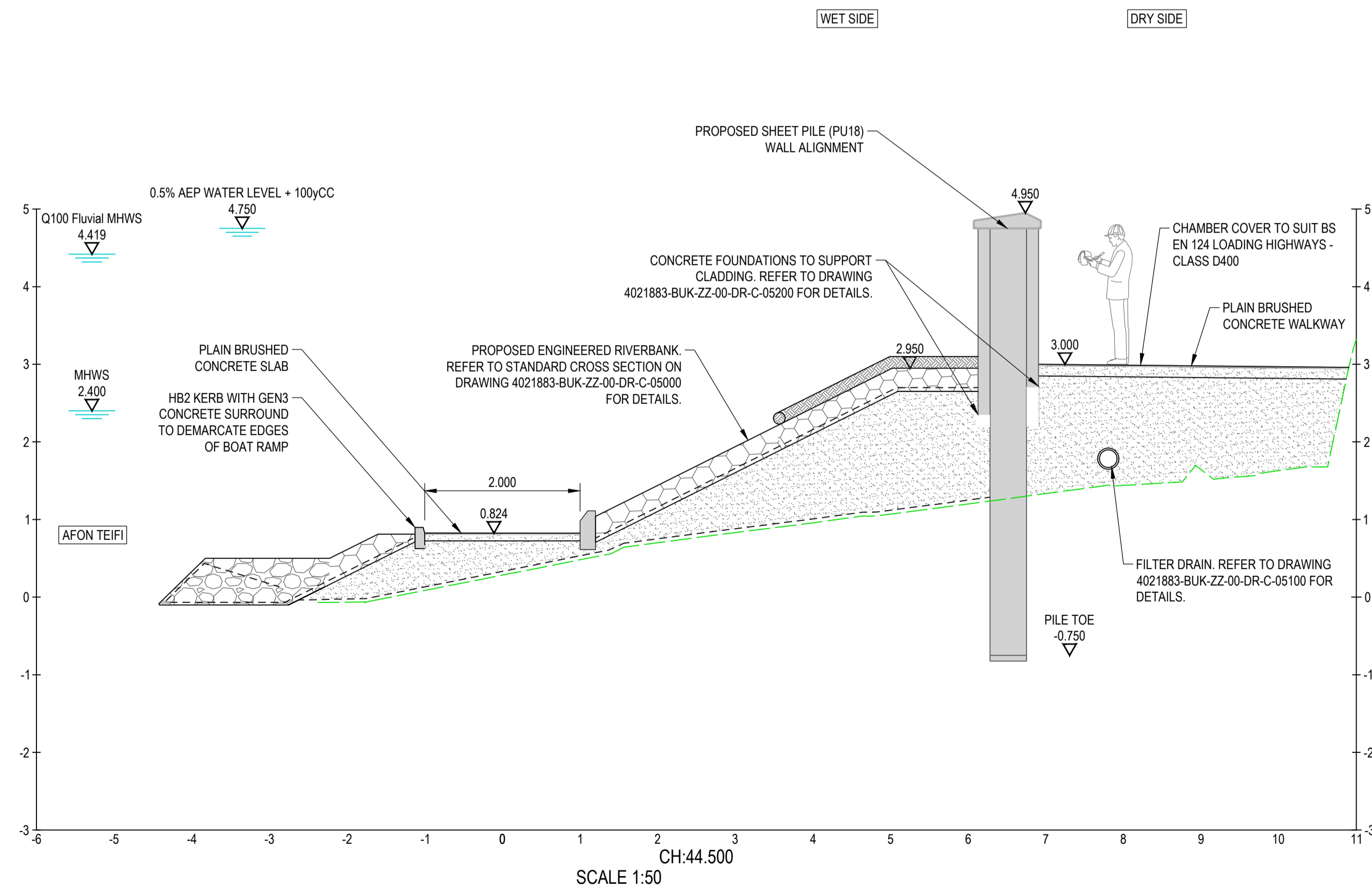
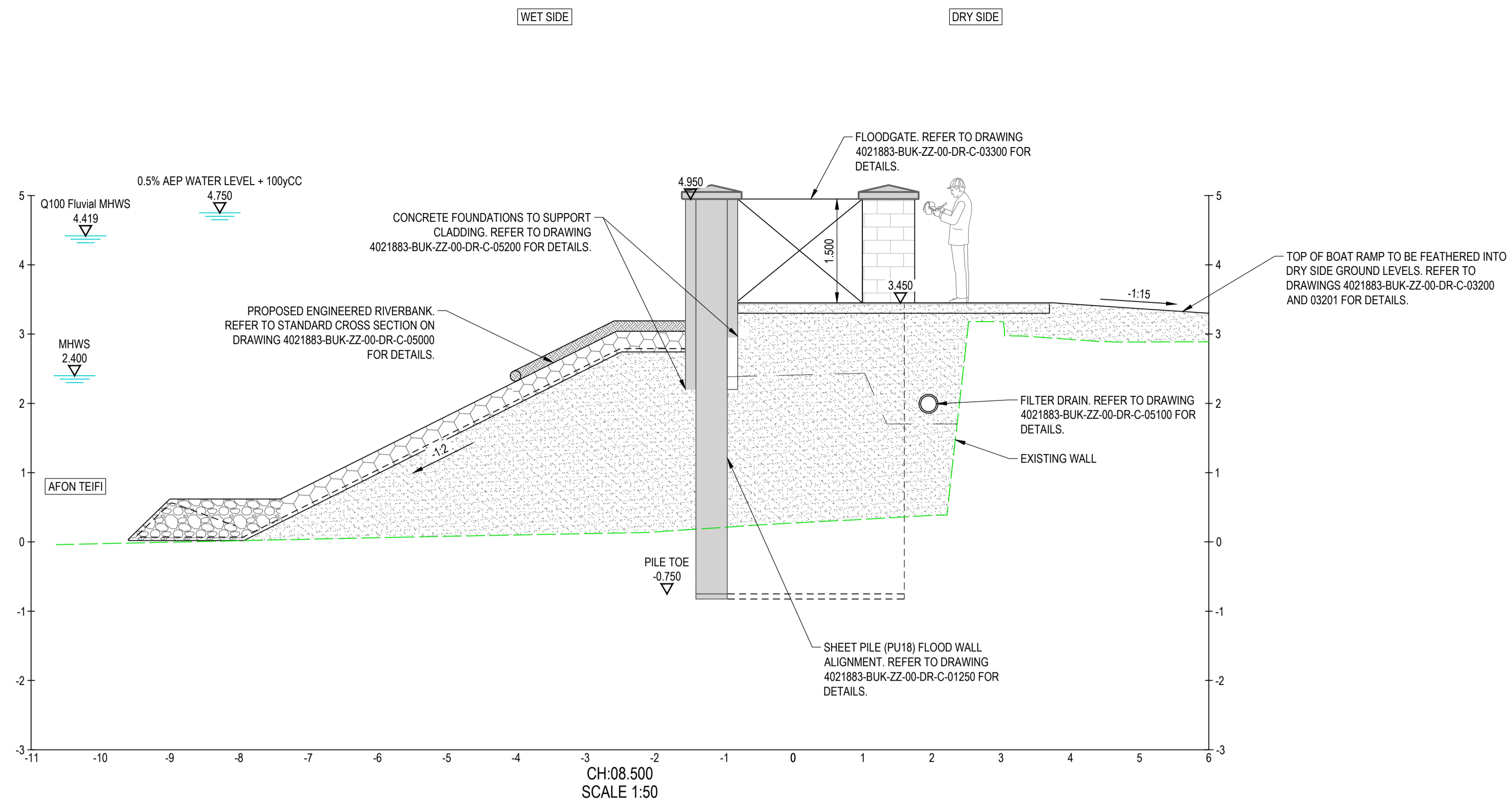
Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

Drawing title: **AREA 3**  
**BOAT RAMP PLAN AND LONGSECTION**

Drawing scale: 1:100	Sheet size: A1
Drawing no. 4021883-BUK-ZZ-00-DR-C-03200	Revision P02

Parent Model: SHEET NAME

ON PROJECTWISE



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:

1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
2. LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.
3. RIP RAP FILER LAYER TO CONSIST OF TERRAM 2000 OR SIMILAR SUITABLE ALTERNATIVE.
4. RIP RAP TO HAVE A MEDIAN NOMINAL DIAMETER OF 300mm AND A MEDIAN MASS OF 62kg.

LEGEND:

EXISTING GROUND PROFILE

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:

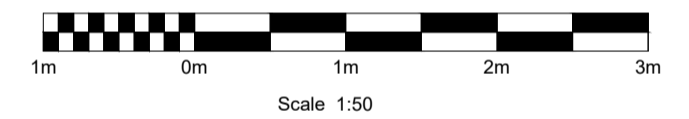
B.6 POOR GROUND CONDITIONS  
E.5 LIMITED WORKING AREA  
E.25 RISK OF FLOODING  
F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:

S.8 (J.1) - OPERATION OF FLOOD GATES  
OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment

Client: **Cyfoeth Naturiol Cymru Natural Resources Wales**

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

**binnies**  
Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

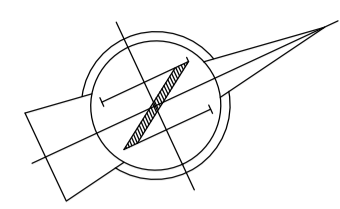
Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **AREA 3  
BOAT RAMP SECTIONS**

Drawing scale: 1:50 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-03201 Revision P02

Parent Model: SHEET NAME



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  2. EXACT LOCATION AND DEPTH OF EXISTING UTILITIES UNKNOWN. THESE SHALL BE CONFIRMED THROUGH SURVEY AND TRIAL PITS.
  3. GROUND LEVELS SHOWN IN SECTIONS ARE BASED ON TOPOGRAPHIC SURVEY.

- LEGEND:
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - GROUND RAISING TO MEET NEW SURFACE LEVEL
  - COPING
  - CLADDING
  - PILE
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - PROPOSED SURFACE WATER FILTER DRAIN

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:

- C.5 LIFTING - RISK OF COLLISION, CRUSHING AND OVERTURNING
- E.4 LIMITED WORKING AREA
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

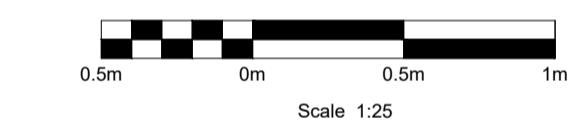
MAINTENANCE, CLEANING AND OPERATION:

- S.8 (J.1) - OPERATION OF FLOOD GATES

OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



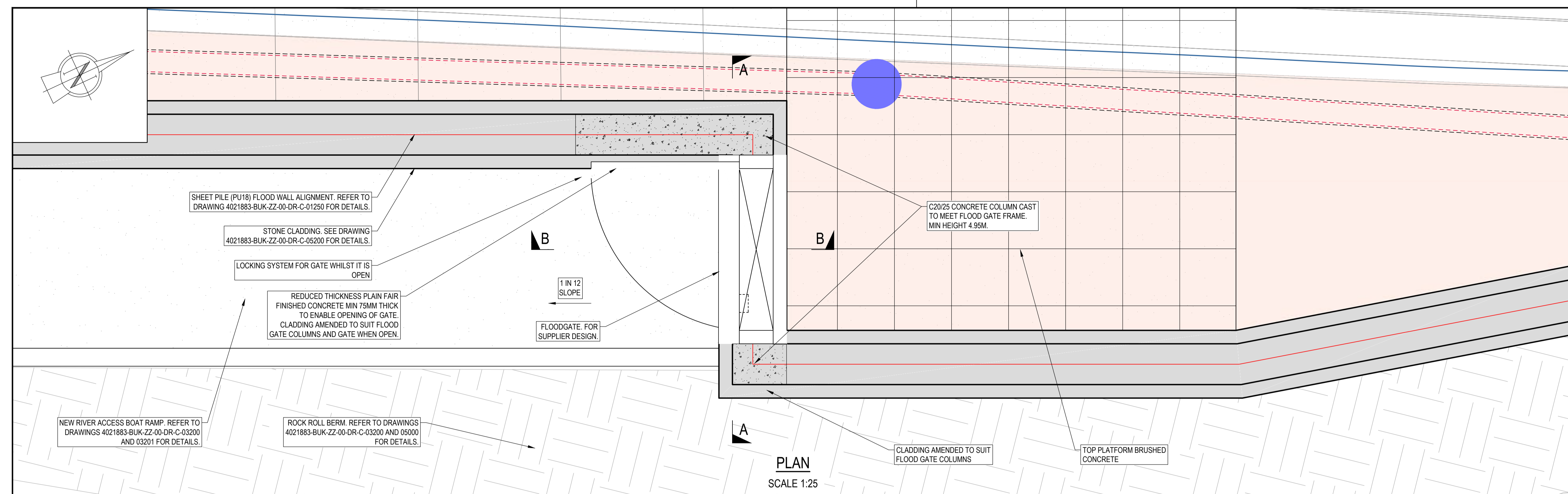
Project: **CARDIGAN TIDAL FRMS**  
**DETAILED DESIGN**

Drawing title: **AREA 3**  
**BOAT RAMP FLOOD GATE DETAILS**

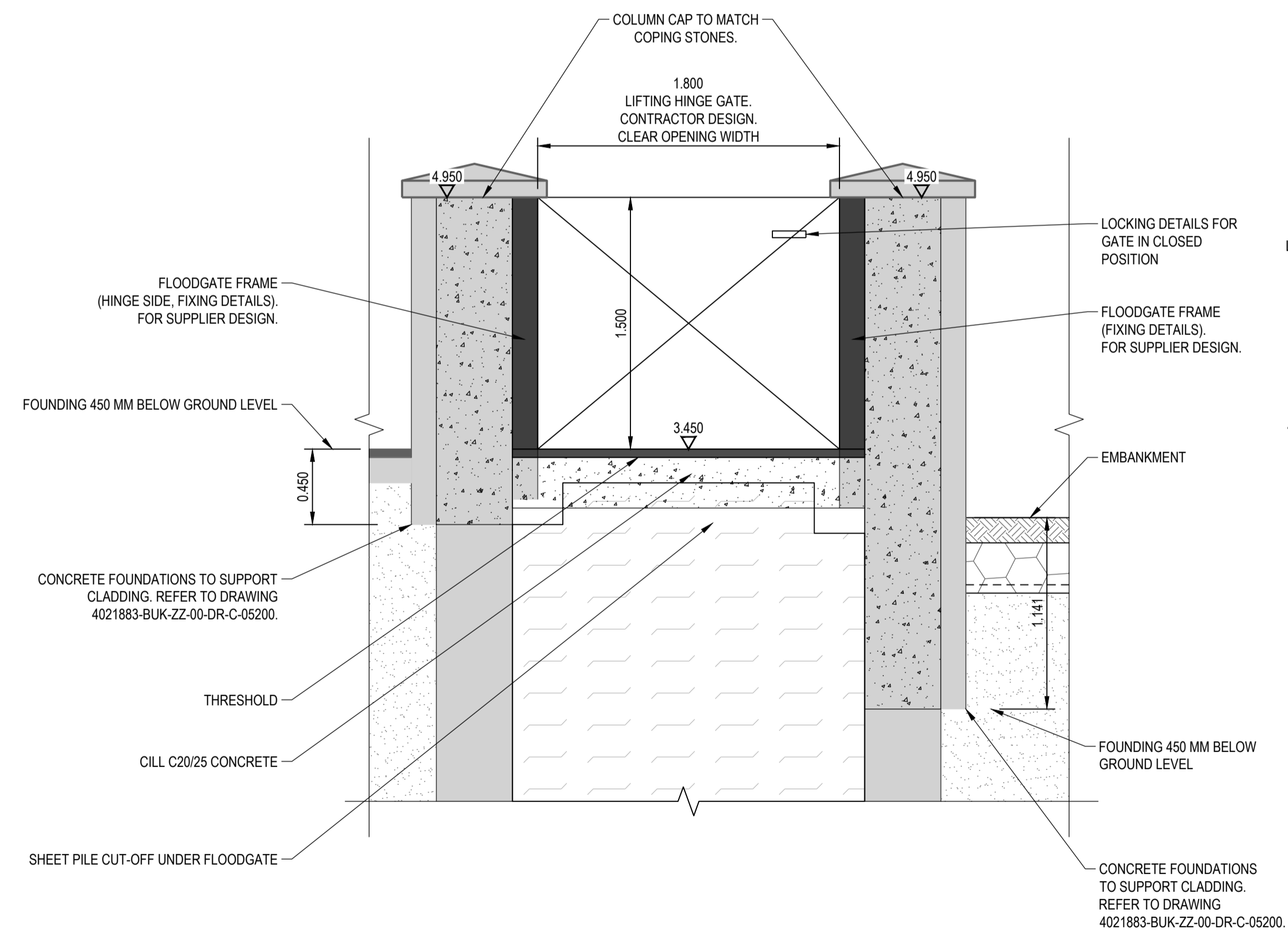
Drawing scale: 1:25 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-03300 Revision P02

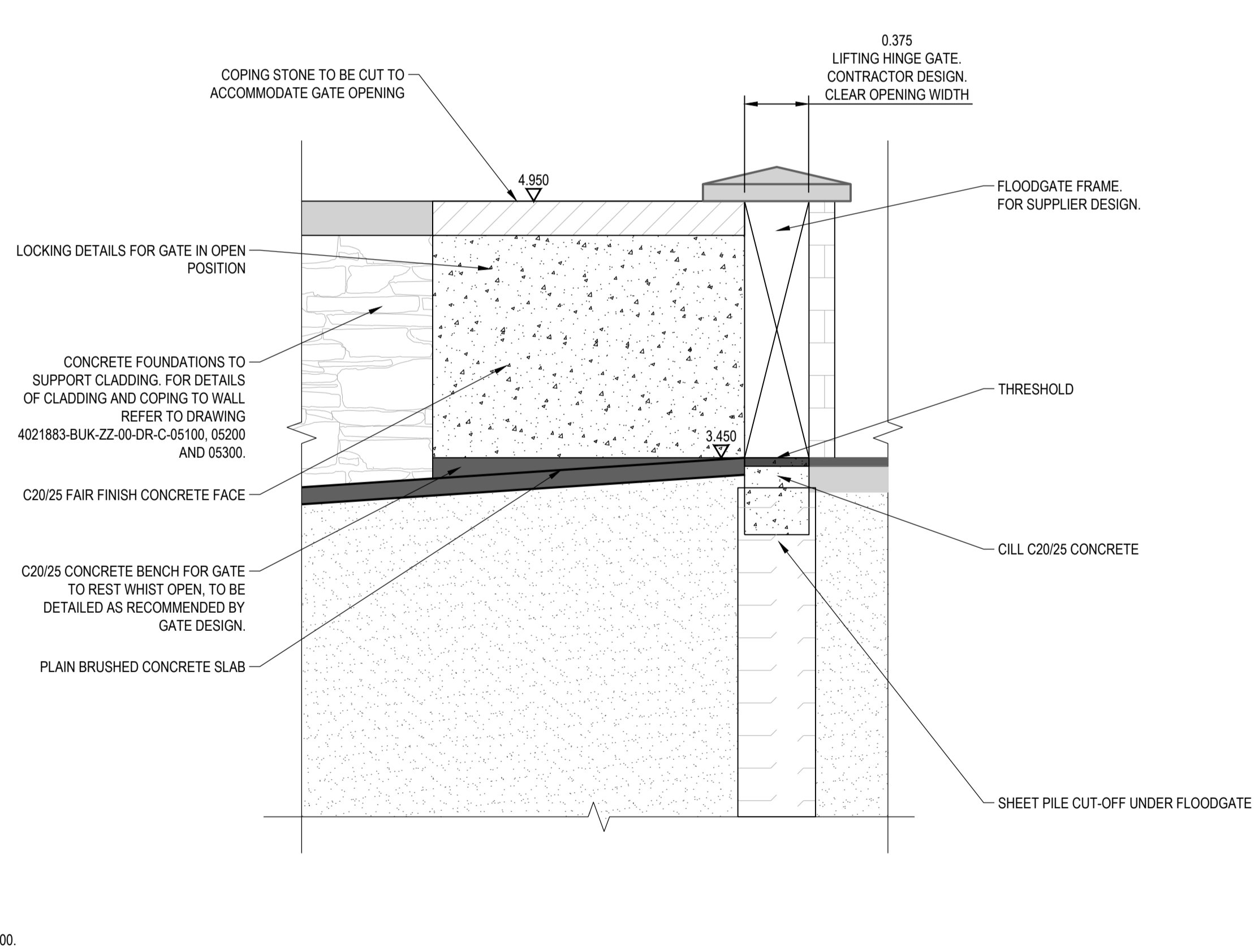
Parent Model: SHEET NAME



PLAN  
SCALE 1:25

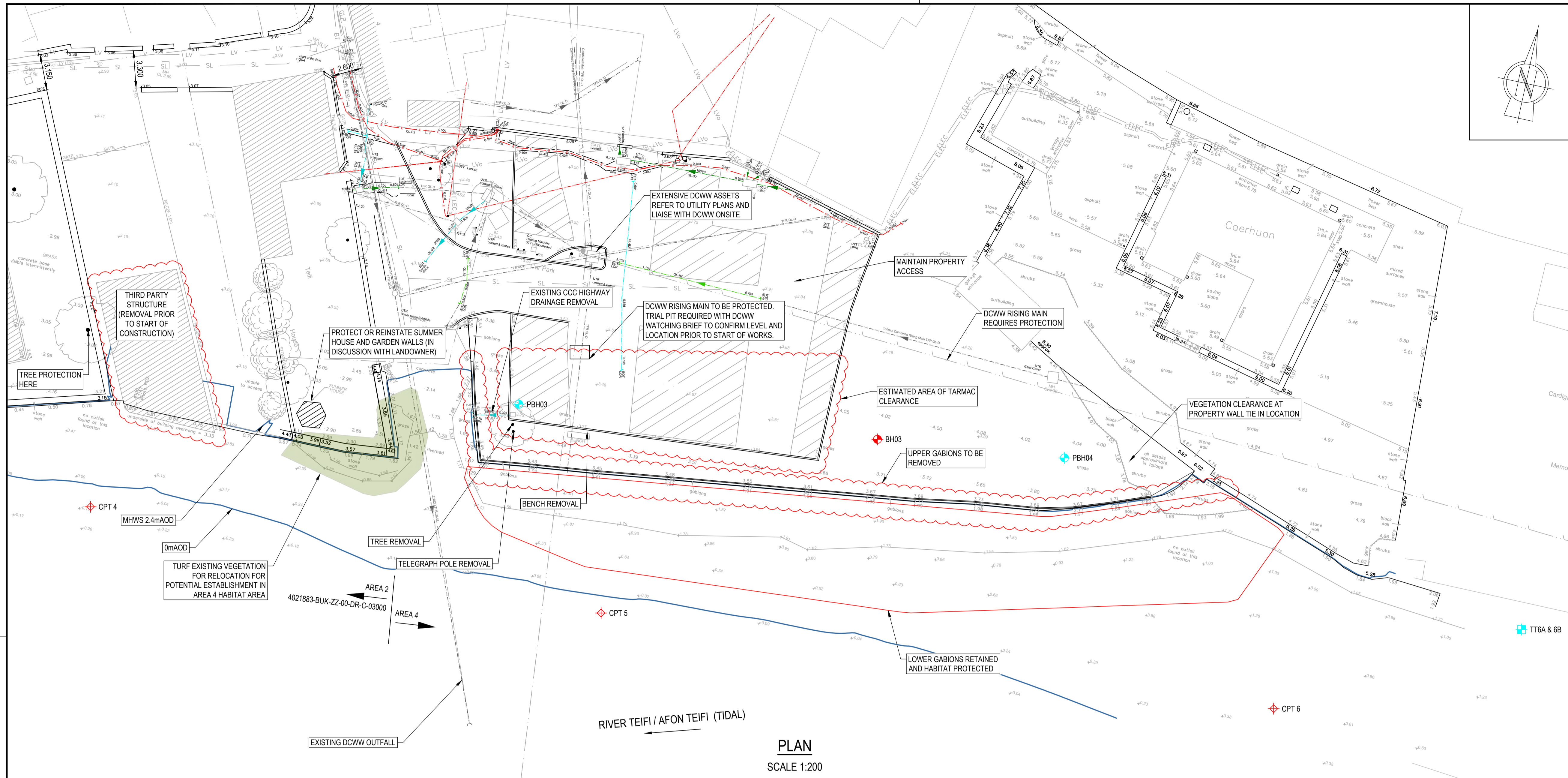


SECTION A-A  
SCALE 1:25



SECTION B-B  
SCALE 1:25

ON PROJECTWISE



**PLAN**  
SCALE 1:200

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**  
IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**  
B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES  
E.1 WATER LEVEL VARIABLE DUE TO TIDE  
E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION  
E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE  
E.8 POTENTIAL FOR CONTAMINATED GROUND  
E.12 UNKNOWN CONSTRUCTION AND CONDITION OF EXISTING WALLS  
E.23 BUILD UP OF DEBRIS AND VEGETATION  
E.25 RISK OF FLOODING  
E.27 LISTED STRUCTURE(S)  
F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**  
N/A

**DECOMMISSIONING OR DEMOLITION:**  
RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

**EXISTING SERVICES LEGEND (FROM RECORD):**  
 2015 GROUND INVESTIGATION  
 2022 GROUND INVESTIGATION

**EXISTING SERVICES LEGEND (FROM RECORD):**  
 SEWER - COMBINED (NEWLY BUILT RISING MAIN)  
 SEWER - COMBINED (RISING MAIN)  
 SEWER - SURFACE WATER (DCWW)  
 SEWER - SURFACE WATER (COC)  
 WATER MAIN - POTABLE  
 GAS MAIN - INTERMEDIATE PRESSURE  
 GLP  
 GAS MAIN - LOW PRESSURE  
 ELEC - UNSPECIFIED  
 HV  
 LV  
 LVo  
 SL  
 BT  
 BT

**EXISTING SERVICES LEGEND (GPR):**  
 ELECTRICITY  
 ELECTRICITY FROM RECORDS  
 OVERHEAD ELECTRICITY  
 GAS FROM RECORDS  
 COMBINED DRAINAGE  
 COMBINED DRAINAGE FROM RECORDS  
 FOUL DRAINAGE  
 FOUL DRAINAGE FROM RECORDS  
 SURFACE DRAINAGE  
 SURFACE DRAINAGE FROM RECORDS  
 WATER FROM RECORDS  
 UNKNOWN ROUTE  
 UNKNOWN ROUTE LOCATED BY GPR

Scale 1:200  
5m 0m 5m 10m

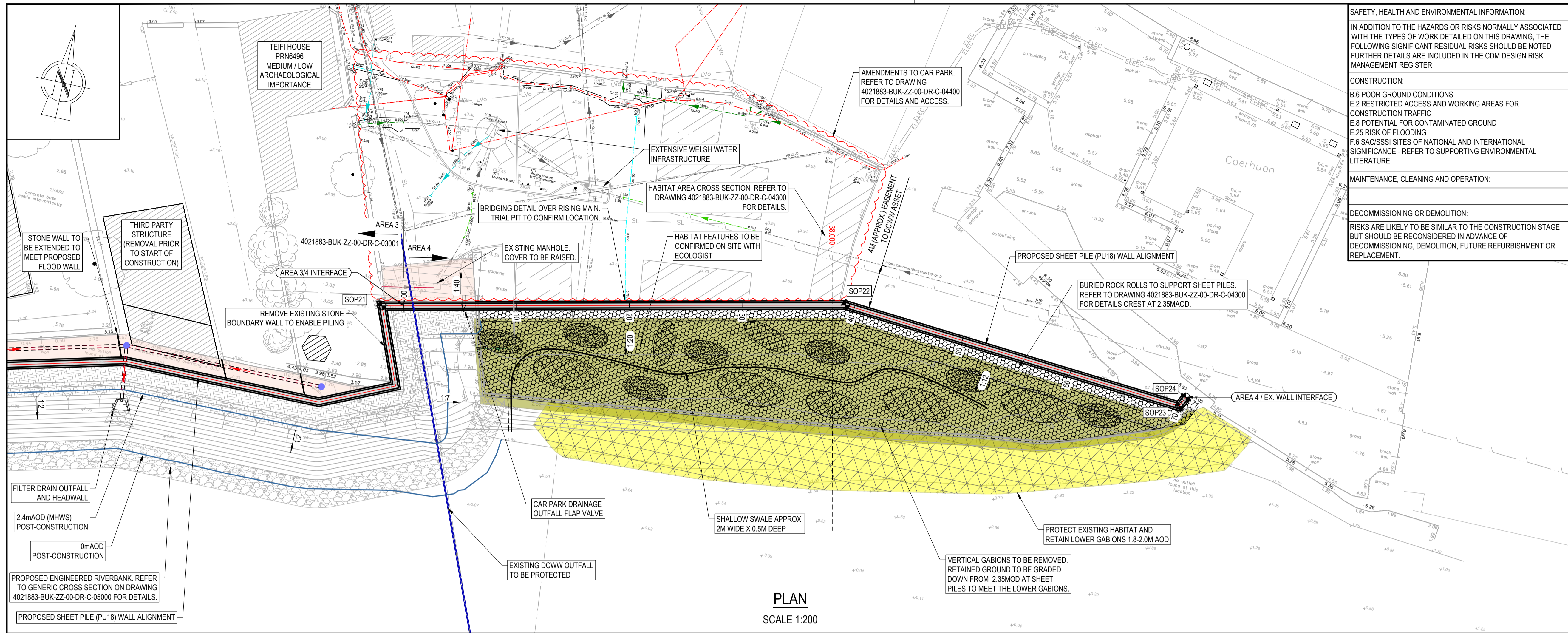


**WEST**



**EAST**

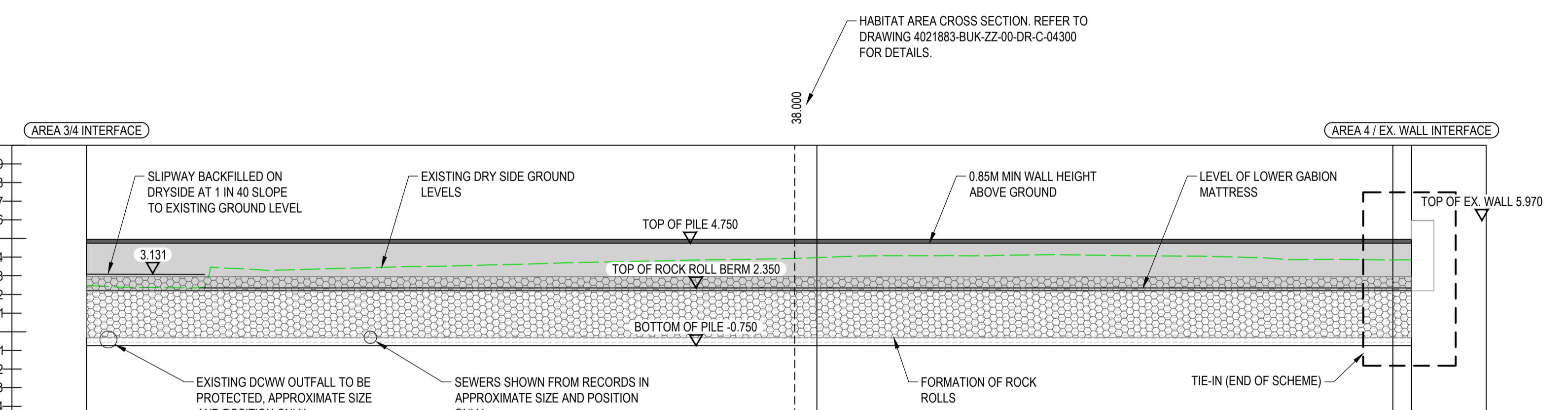
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE
Rev	Drawn	Chkd	Rwd	Apprvd	Date	Description
Designed by:						Date:
Status						S3 Suitable for Review and Comment
Client						
Client Project No.						Revision
						<b>Binnies UK Limited</b> Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK. Tel: +44(0)1737 774155
Project						<b>CARDIGAN TIDAL FRMS</b> <b>DETAILED DESIGN</b>
Drawing title						<b>AREA 4</b> <b>EXISTING PLAN</b>
Drawing scale: 1:200			Sheet size: A1			
Drawing no.						Revision
4021883-BUK-ZZ-00-DR-C-04000						P02
Parent Model: SHEET NAME						



PLAN  
SCALE 1:200

LONGITUDINAL SECTION  
(AREA 4)  
CHAINAGE: 0 TO 71  
SCALE: H 1:200, V 1:200  
DATUM: -5.00m AOD

CHAINAGE	00.000	05.000	10.000	15.000	20.000	25.000	30.000	35.000	39.193 40.000	45.000	50.000	55.000	60.000	65.000	70.000	71.000
GROUND LEVEL (EXISTING)	2.49	2.36	3.30	3.43	3.54	3.67	3.79	3.88	3.87 2.01	4.08	4.11	4.09	4.05	3.87	3.85	3.86



AREA 4 PROPOSED WALL SETTING OUT POINTS

POINT	EASTING	NORTHING
SOP21	218001.824	245962.489
SOP22	218041.935	245971.574
SOP23	218072.759	245969.311
SOP24	218073.182	245970.218

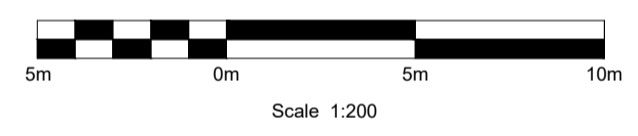
SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:  
IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:  
B.6 POOR GROUND CONDITIONS  
E.2 RESTRICTED ACCESS AND WORKING AREAS FOR CONSTRUCTION TRAFFIC  
E.8 POTENTIAL FOR CONTAMINATED GROUND  
E.25 RISK OF FLOODING  
F.6 SAC/ISSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:  
RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

DECOMMISSIONING OR DEMOLITION:  
RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

- Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.
- NOTES:  
1. ALL DIMENSIONS IN MILLIMETRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.  
2. EXACT LOCATION AND DEPTH OF EXISTING UTILITIES UNKNOWN. THESE SHALL BE CONFIRMED THROUGH SURVEY AND TRIAL PITS.  
3. GROUND LEVELS SHOWN IN SECTIONS ARE BASED ON TOPOGRAPHIC SURVEY.  
4. LOCAL GROUND LEVEL CHANGES BUT WALL HEIGHT REMAINS CONSISTENT ACROSS ALL AREAS.
- LEGEND:
- FLOOD DEFENCE WALL ALIGNMENT
  - FINISHED GROUND PROFILE (FGL)
  - NEW INTERTIDAL AREA
  - RAISED HUMPS APPROX. 2X3M X 0.5M HIGH
  - DIPS AND SCRAPES APPROX. 1X2M X 0.3M DEEP
  - ROCK ROLLS
  - SWALE - APPROX 0.5M WIDE, 0.5M DEEP, 1 IN 2 SIDES WITH NOMINAL FALL TO MAIN CHANNEL
  - NEW SURFACE AMENDMENTS
  - COPING
  - CLADDING
  - PILE
  - ENGINEERED RIVERBANK
  - EXISTING GROUND PROFILE (EGL)
  - EXISTING RAINWATER PIPES
  - PROPOSED SURFACE WATER FILTER DRAIN
  - PROTECT EXISTING HABITAT
- EXISTING SERVICES LEGEND (FROM RECORD):
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - GIP - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP - GAS MAIN - LOW PRESSURE
  - ELEC - ELECTRIC - UNSPECIFIED
  - HV - ELECTRIC - HIGH VOLTAGE
  - LV - ELECTRIC - LOW VOLTAGE
  - LVO - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL - ELECTRIC - STREET LIGHTING
  - BT
- EXISTING SERVICES LEGEND (GPR):
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment  
Client: **Cyfoeth Naturiol Cymru Natural Resources Wales**

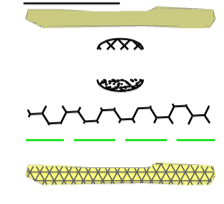
Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_  
**binnies**  
Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project: **CARDIGAN TIDAL FRMS**  
Drawing title: **DETAILED DESIGN**  
**AREA 4**  
**PROPOSED PLAN AND LONGSECTION**

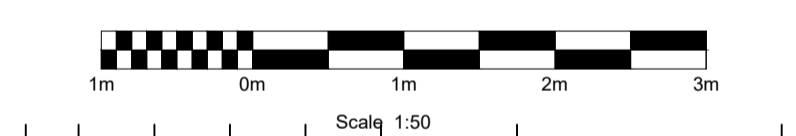
Drawing scale: 1:200 Sheet size: A1  
Drawing no. 4021883-BUK-ZZ-00-DR-C-04001 Revision P02  
Parent Model: SHEET NAME

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:  
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.

LEGEND:  

 NEW INTERTIDAL AREA  
 RAISED HUMPS APPROX. 2X3M X 0.5M HIGH  
 DIPS AND SCRAPES APPROX. 1X2M X 0.3M DEEP  
 ROCK ROLLS  
 EXISTING GROUND PROFILE (EGL)  
 PROTECT EXISTING

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:  
 IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER  
 CONSTRUCTION:  
 E.25 RISK OF FLOODING  
 F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE  
 MAINTENANCE, CLEANING AND OPERATION:  
 E.8 POTENTIAL FOR CONTAMINATED GROUND  
 DECOMMISSIONING OR DEMOLITION:  
 RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment

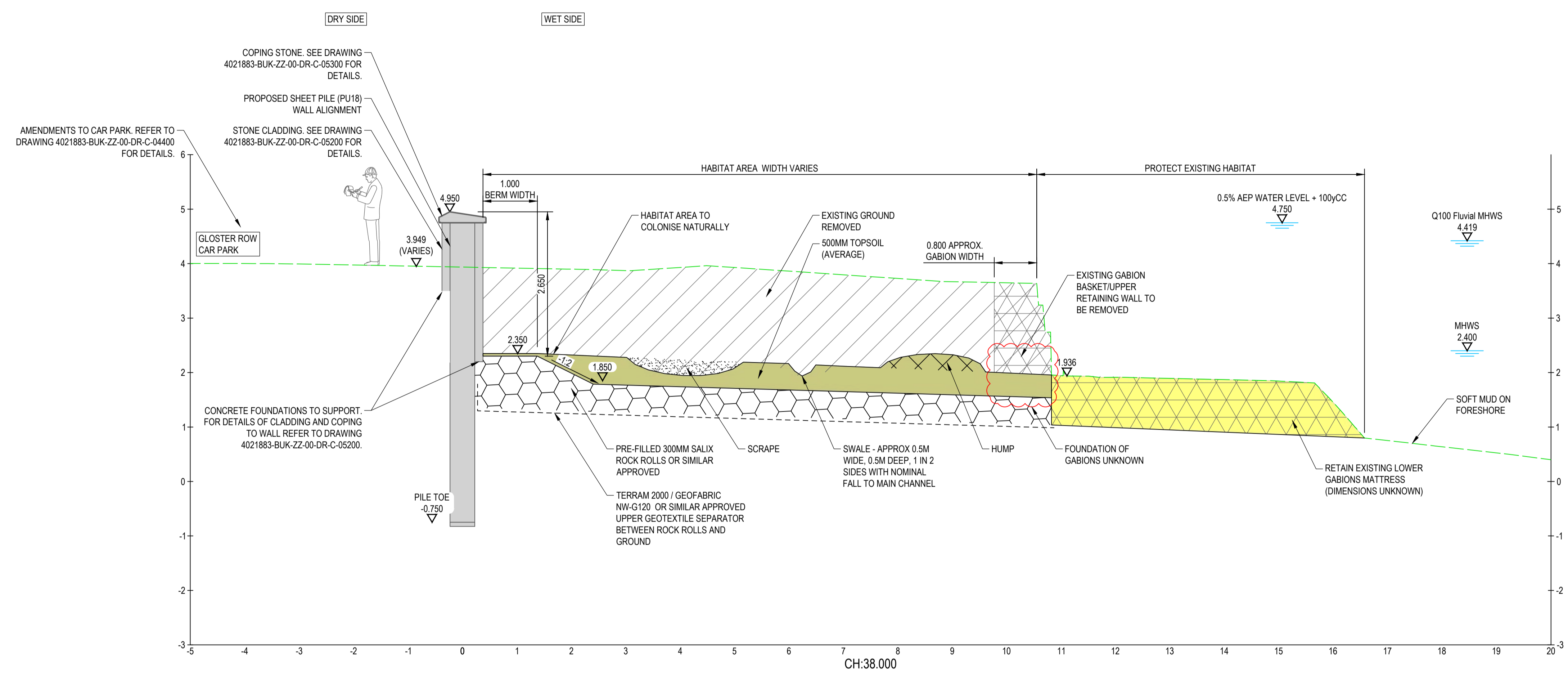


Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

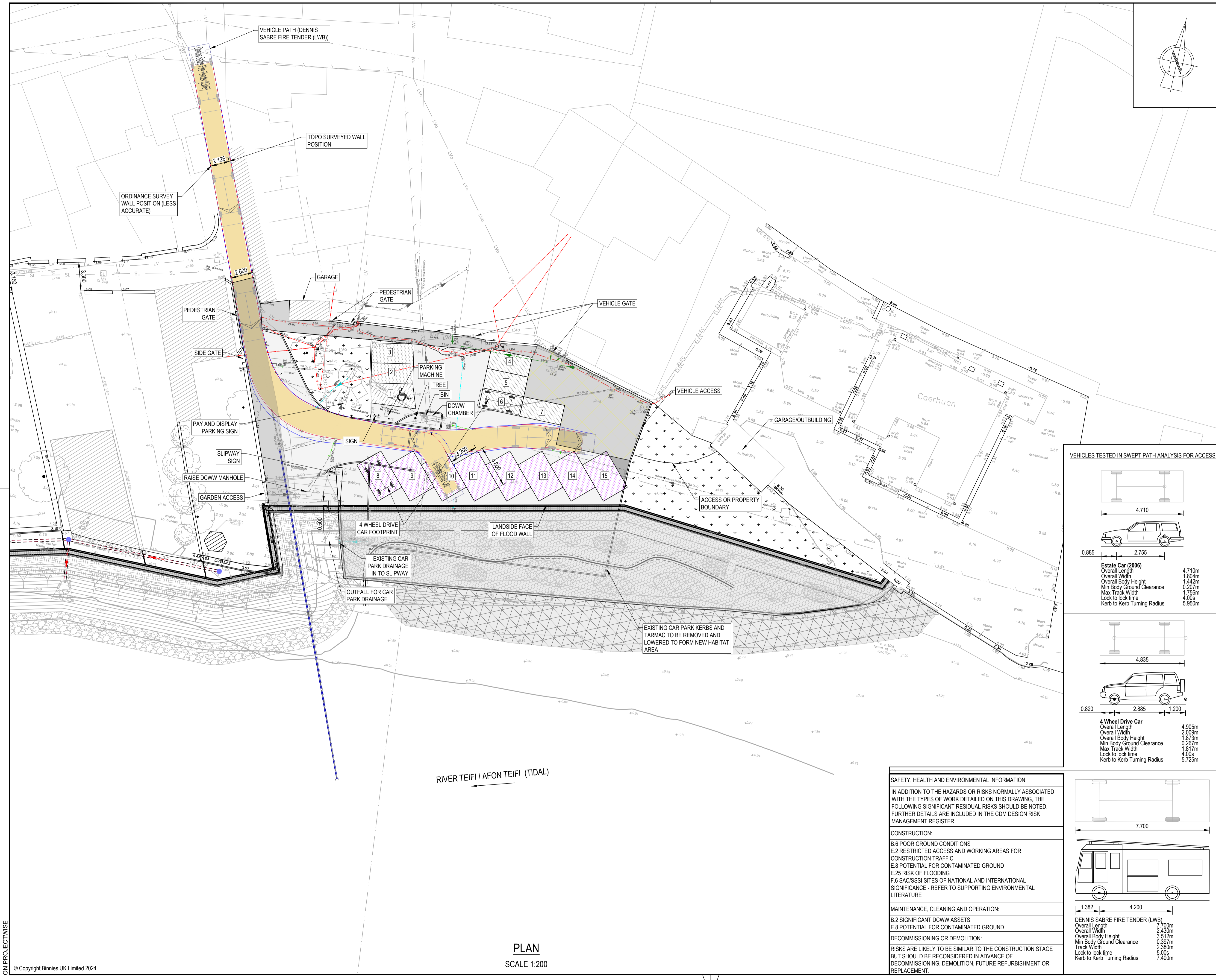


Project: **CARDIGAN TIDAL FRMS  
 DETAILED DESIGN**  
 Drawing title: **AREA 4  
 HABITAT AREA CROSS SECTION**

Drawing scale: 1:50 Sheet size: A1  
 Drawing no. 4021883-BUK-ZZ-00-DR-C-04300 Revision P02  
 Parent Model: SHEET NAME



ON PROJECTWISE



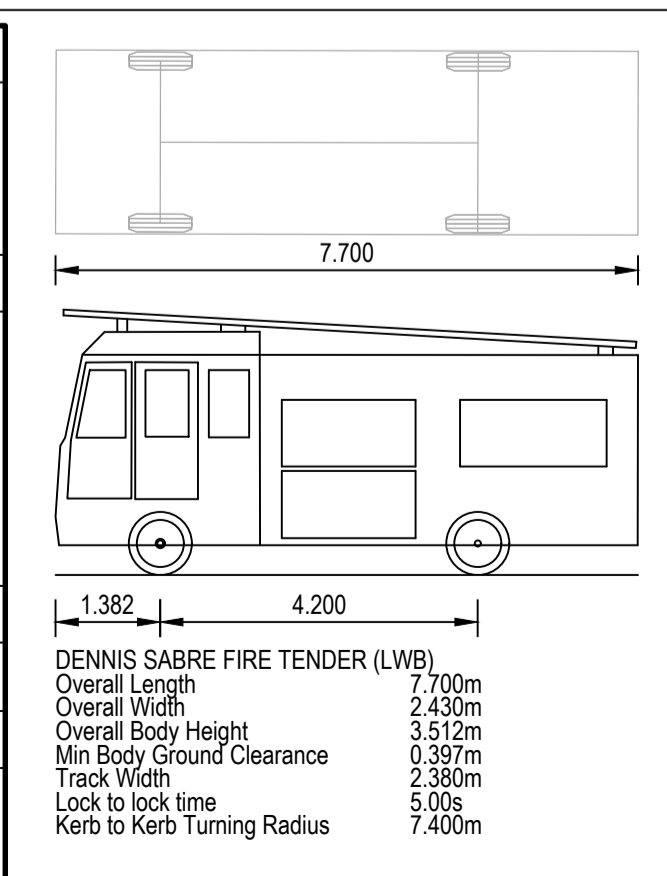
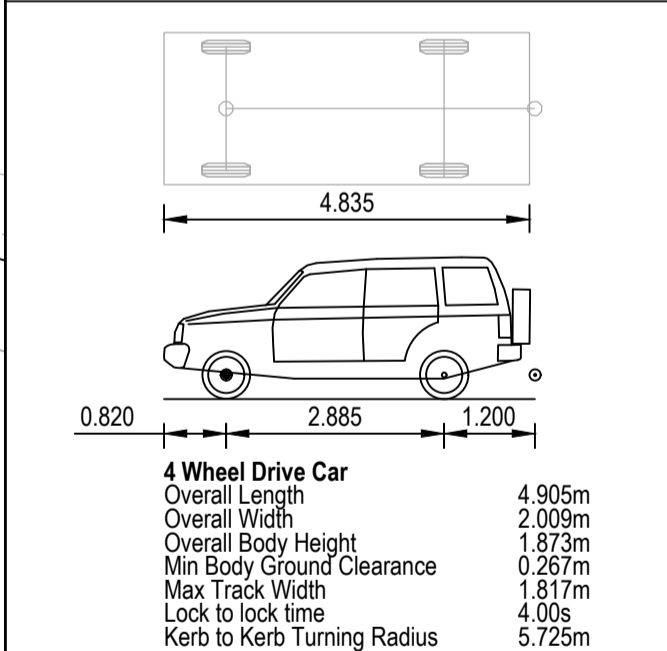
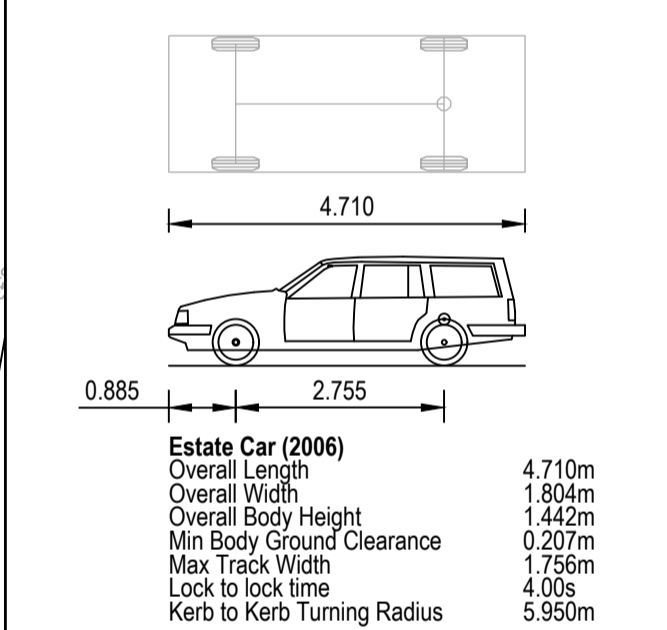
Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:**
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  2. THERE IS LIMITED ACCESS ON APPROACH TO CAR PARK WHICH HAS NOT CHANGED OR BEEN ASSESSED.
  3. CAR PARKING SPACES 1-7 ARE UNCHANGED ALONG WITH ACCESS TO SURROUNDING PROPERTIES.
  4. CAR PARKING SPACES 8-16 ARE 3.2M WIDE AND 4.8M LONG. THE EXTRA WIDTH IMPROVES THE MANOEUVRING WITH LIMITED SPACE BETWEEN GRASS AREA, ISLAND AND SPACES 9-11.
  5. THE SWEEP PATH ANALYSIS HAS BEEN UNDERTAKEN FOR THE VEHICLES DETAILED BELOW.
  6. THE GRASS AREA IS RETAINED FOR AMENITY AND HABITAT.

- LEGEND:**
- VEHICLE TRACK
  - NEW PARKING SPACES
  - EXISTING PARKING SPACES
  - WET SIDE HABITAT
  - GRASS
  - FLOOD DEFENCE WALL ALIGNMENT
  - BOX JUNCTION
- EXISTING SERVICES LEGEND (FROM RECORD):**
- SEWER - COMBINED (NEWLY BUILT RISING MAIN)
  - SEWER - COMBINED
  - SEWER - COMBINED (RISING MAIN)
  - SEWER - SURFACE WATER (DCWW)
  - SEWER - SURFACE WATER (CCC)
  - WATER MAIN - POTABLE
  - GIP
  - GAS MAIN - INTERMEDIATE PRESSURE
  - GLP
  - GAS MAIN - LOW PRESSURE
  - ELEC
  - ELECTRIC - UNSPECIFIED
  - HV
  - ELECTRIC - HIGH VOLTAGE
  - LV
  - ELECTRIC - LOW VOLTAGE
  - LVo
  - ELECTRIC - LOW VOLTAGE (OVERHEAD)
  - SL
  - ELECTRIC - STREET LIGHTING
  - BT
  - BT

- EXISTING SERVICES LEGEND (GPR):**
- ELECTRICITY
  - ELECTRICITY FROM RECORDS
  - OVERHEAD ELECTRICITY
  - GAS FROM RECORDS
  - COMBINED DRAINAGE
  - COMBINED DRAINAGE FROM RECORDS
  - FOUL DRAINAGE
  - FOUL DRAINAGE FROM RECORDS
  - SURFACE DRAINAGE
  - SURFACE DRAINAGE FROM RECORDS
  - WATER FROM RECORDS
  - UNKNOWN ROUTE
  - UNKNOWN ROUTE LOCATED BY GPR

**VEHICLES TESTED IN SWEEP PATH ANALYSIS FOR ACCESS**



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	AJ	AH	AH	03/03/26	FOR INFORMATION
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE
P03	CF	LJM	AH	AH	25/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS**

**DETAILED DESIGN**

**AREA 4  
CAR PARK LAYOUT**

Drawing scale: 1:200 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-0440 Revision P03

Parent Model: SHEET NAME

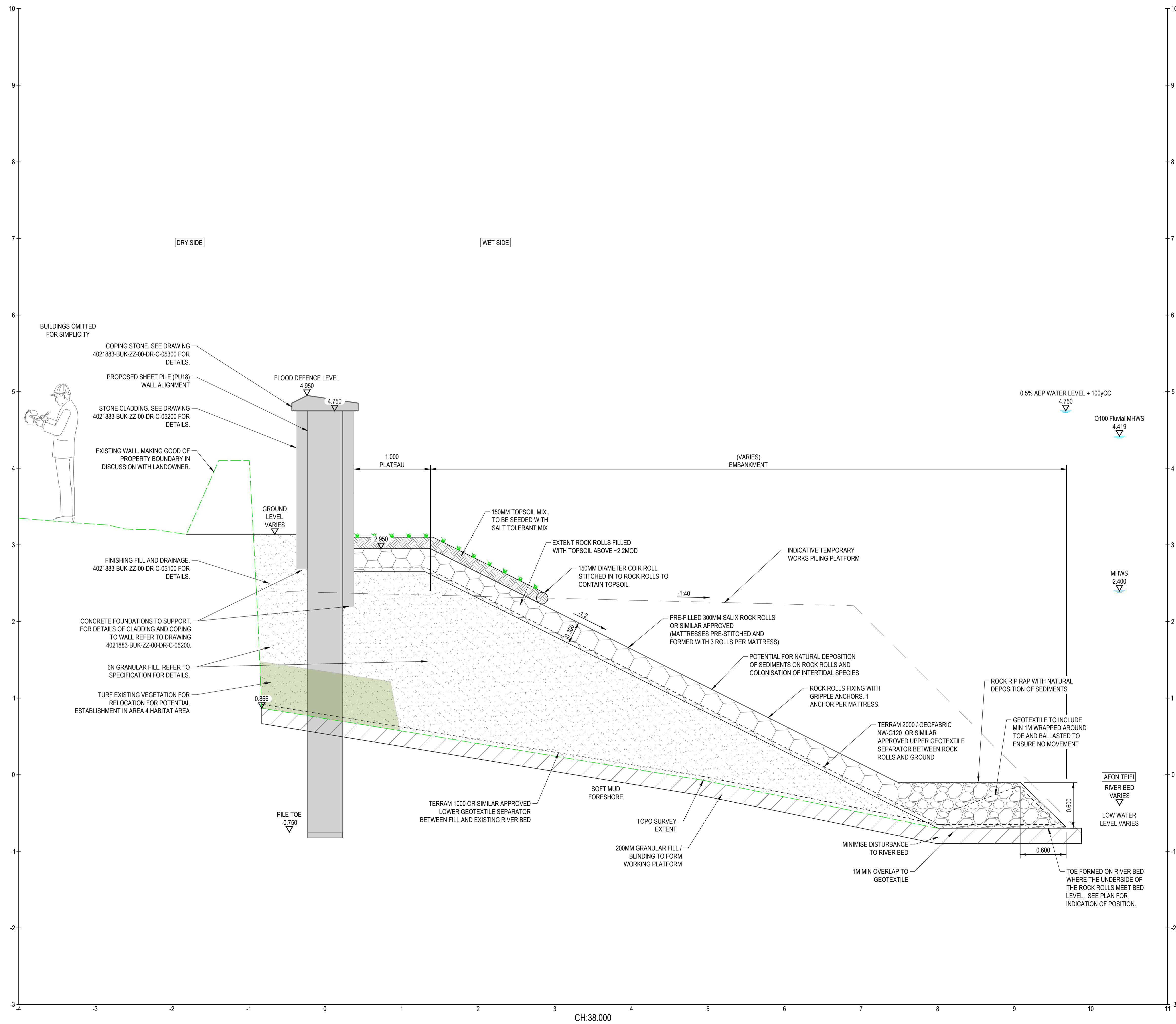
**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**  
 IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**  
 B.6 POOR GROUND CONDITIONS  
 E.2 RESTRICTED ACCESS AND WORKING AREAS FOR CONSTRUCTION TRAFFIC  
 E.8 POTENTIAL FOR CONTAMINATED GROUND  
 E.25 RISK OF FLOODING  
 F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**  
 B.2 SIGNIFICANT DCWW ASSETS  
 E.8 POTENTIAL FOR CONTAMINATED GROUND

**DECOMMISSIONING OR DEMOLITION:**  
 RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.

**PLAN**  
SCALE 1:200



Notes: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:  
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.

**LEGEND:**

	GRANULAR FILL
	SOIL
	ROCK ROLLS
	RIP RAP
	BLINDING
	GEOTEXTILE
	INDICATIVE WORKS PLATFORM
	EXISTING VEGETATION

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION:**

- B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES
- E.1 WATER LEVEL VARIABLE DUE TO TIDE
- E.6 EXISTING STRUCTURES IN POOR OR UNKNOWN CONDITION
- E.7 ASBESTOS CONTAINING MATERIALS ON FORESHORE
- E.8 POTENTIAL FOR CONTAMINATED GROUND
- E.12 UNKNOWN CONSTRUCTION AND CONDITION OF EXISTING WALLS
- E.23 BUILD UP OF DEBRIS AND VEGETATION
- E.25 RISK OF FLOODING
- F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

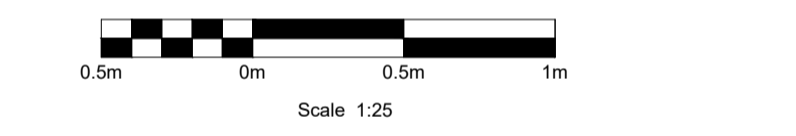
**MAINTENANCE, CLEANING AND OPERATION:**

- S.8 (J.1) - OPERATION OF FLOOD GATES

OTHER RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvrd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **EMBANKMENT  
STANDARD CROSS SECTION**

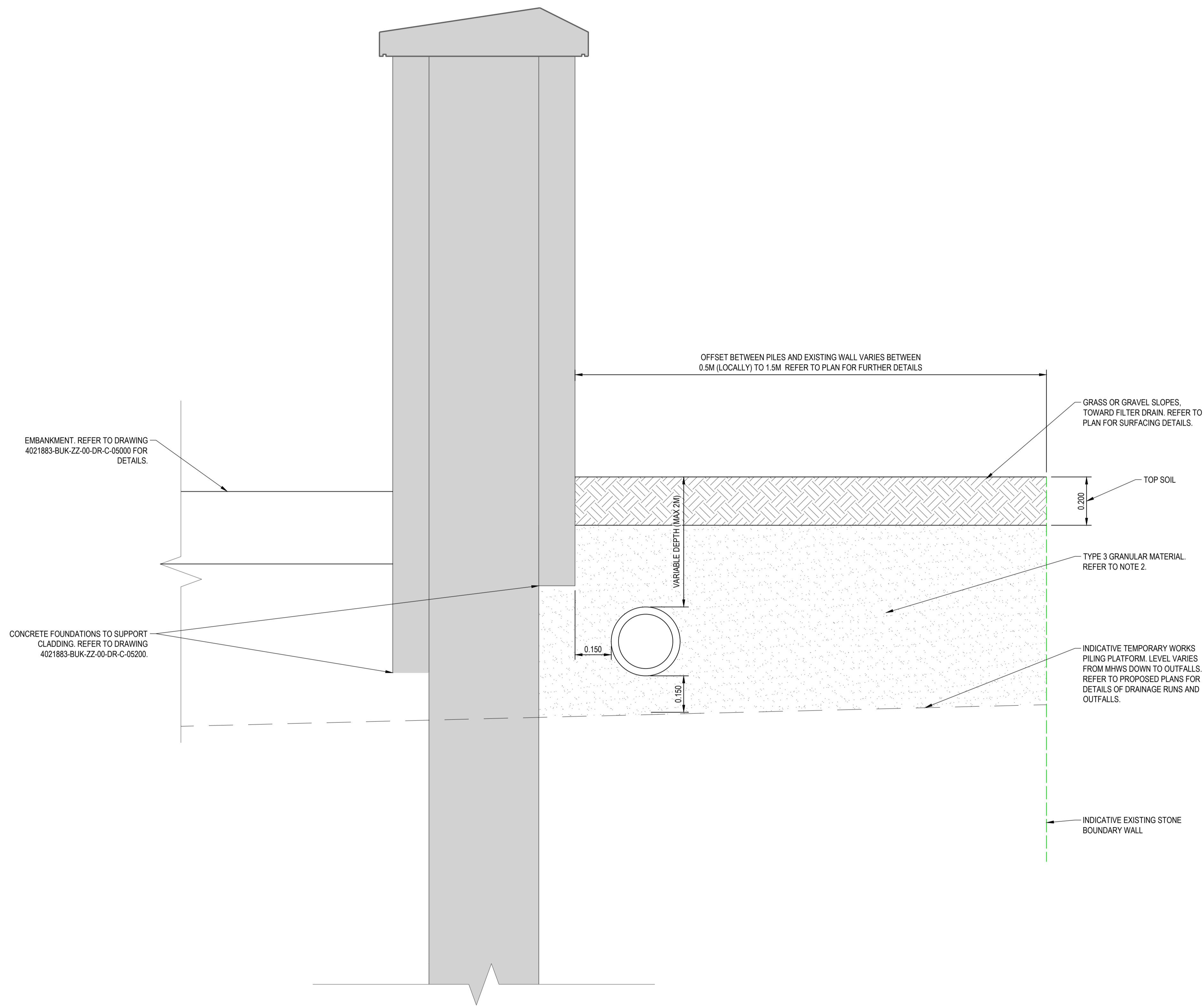
Drawing scale: 1:25	Sheet size: A1
Drawing no. 4021883-BUK-ZZ-00-DR-C-05000	Revision P02

Parent Model: SHEET NAME

ON PROJECTWISE

WET SIDE

DRY SIDE



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

- NOTES:
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  2. NON-FROST SUSCEPTIBLE TYPE C FILTER MATERIAL TO SHW CLAUSE 505 OR GRANULAR MATERIAL TO SHW CLAUSE 503 3(i).

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

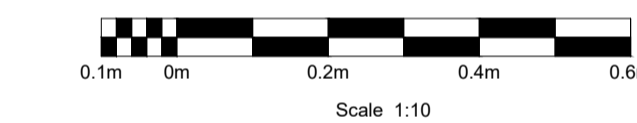
CONSTRUCTION:

B.2 POTENTIAL CLASHES WITH UNCHARTERED SERVICES  
 E.5 LIMITED WORKING AREA  
 E.25 RISK OF FLOODING  
 F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:

DECOMMISSIONING OR DEMOLITION:

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment

Client:

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

Binnies UK Limited  
 Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
 Tel: +44(0)1737 774155

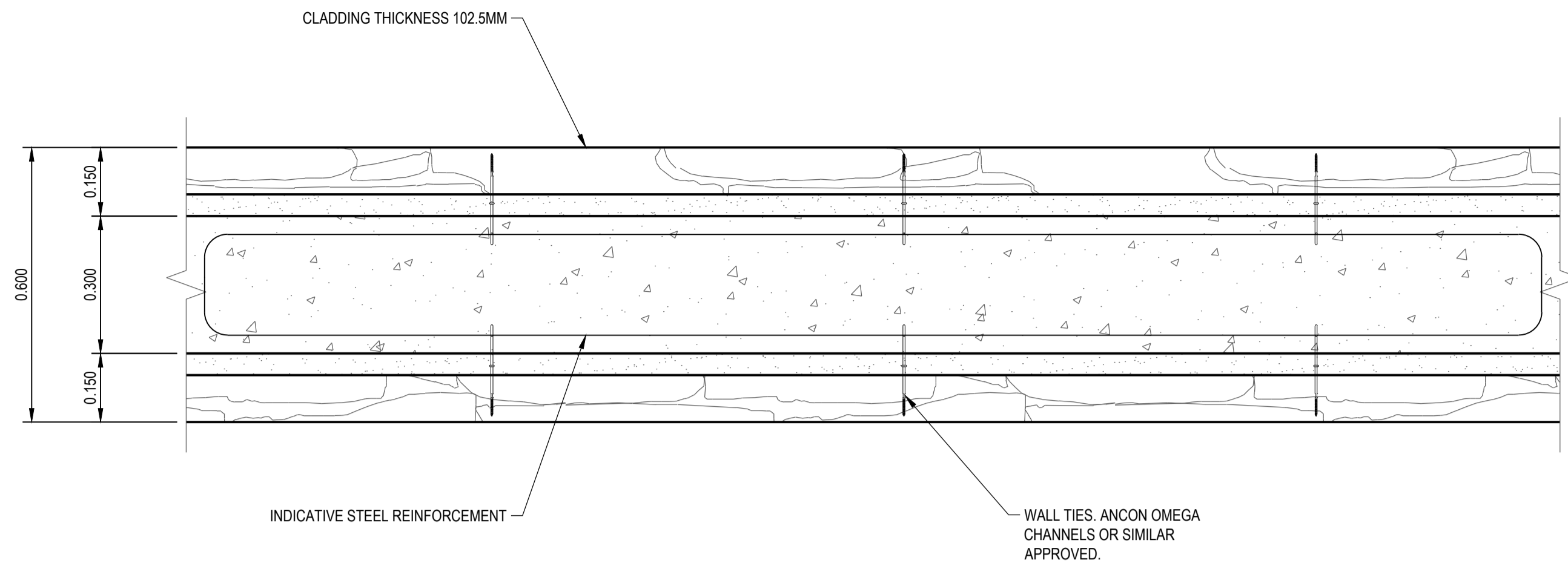
Project: **CARDIGAN TIDAL FRMS  
 DETAILED DESIGN**

Drawing title: **FILTER DRAIN DETAILS**

Drawing scale: 1:10 Sheet size: A1

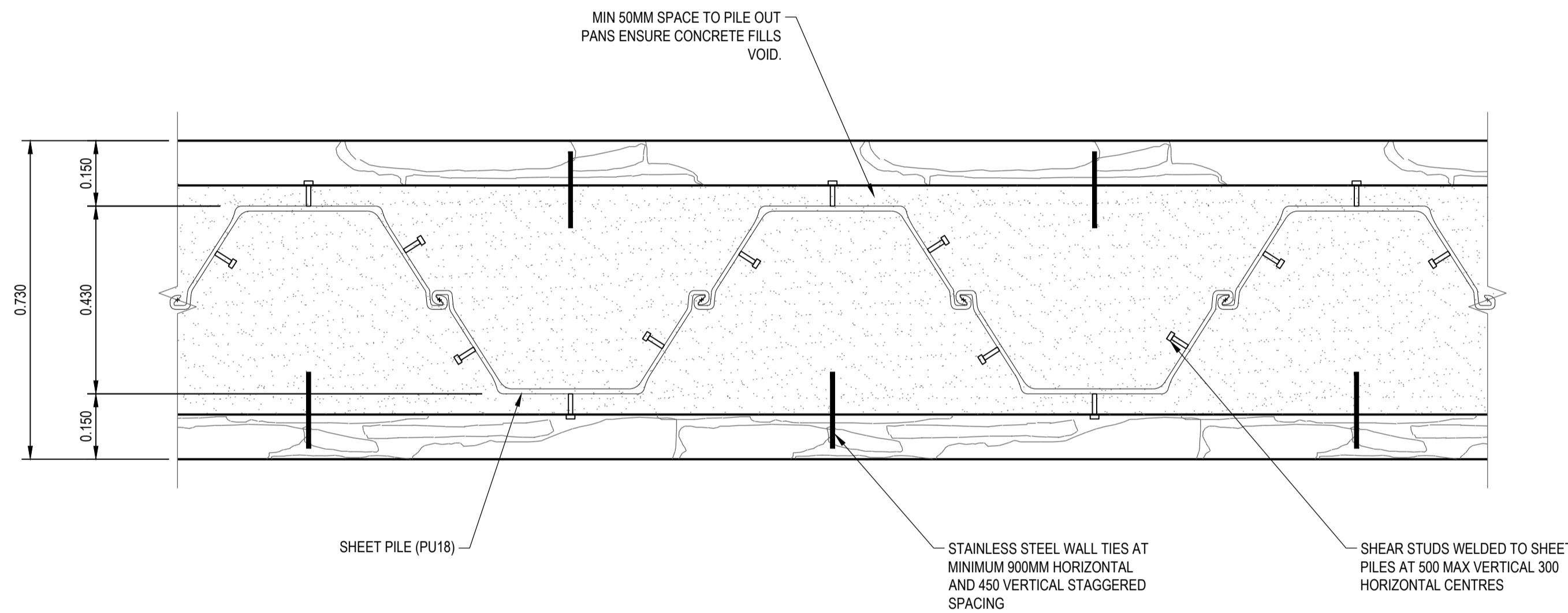
Drawing no. 4021883-BUK-ZZ-00-DR-C-05100 Revision P02

Parent Model: SHEET NAME



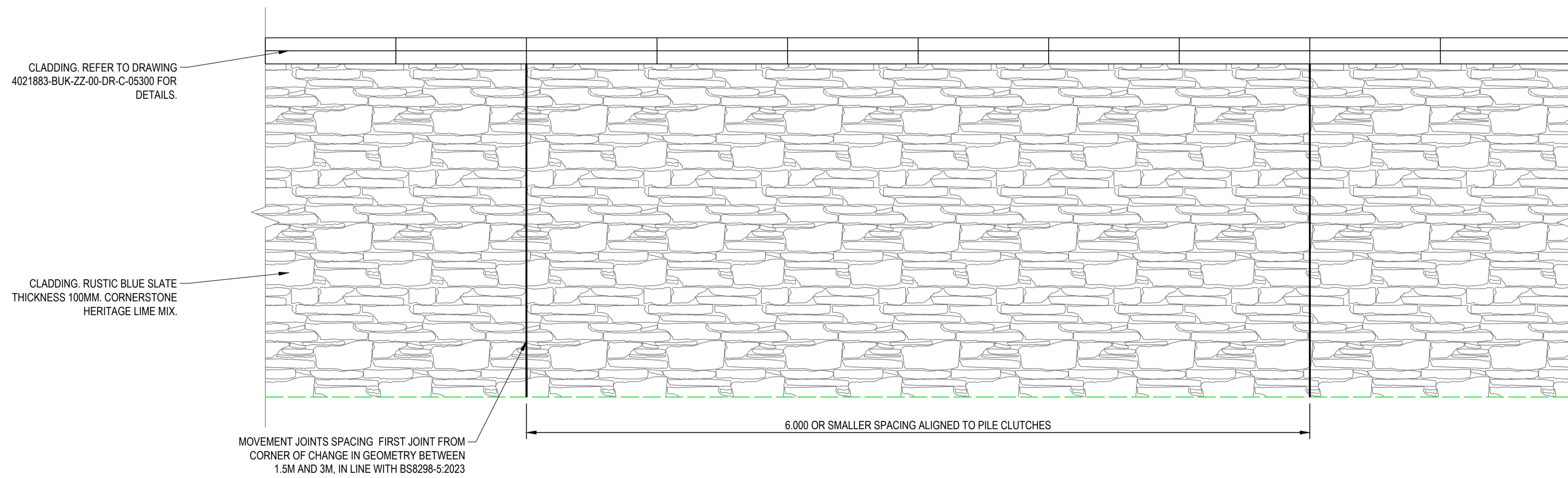
**TYPICAL REINFORCED CONCRETE WALL  
CLADDING DETAIL**

SCALE 1:10



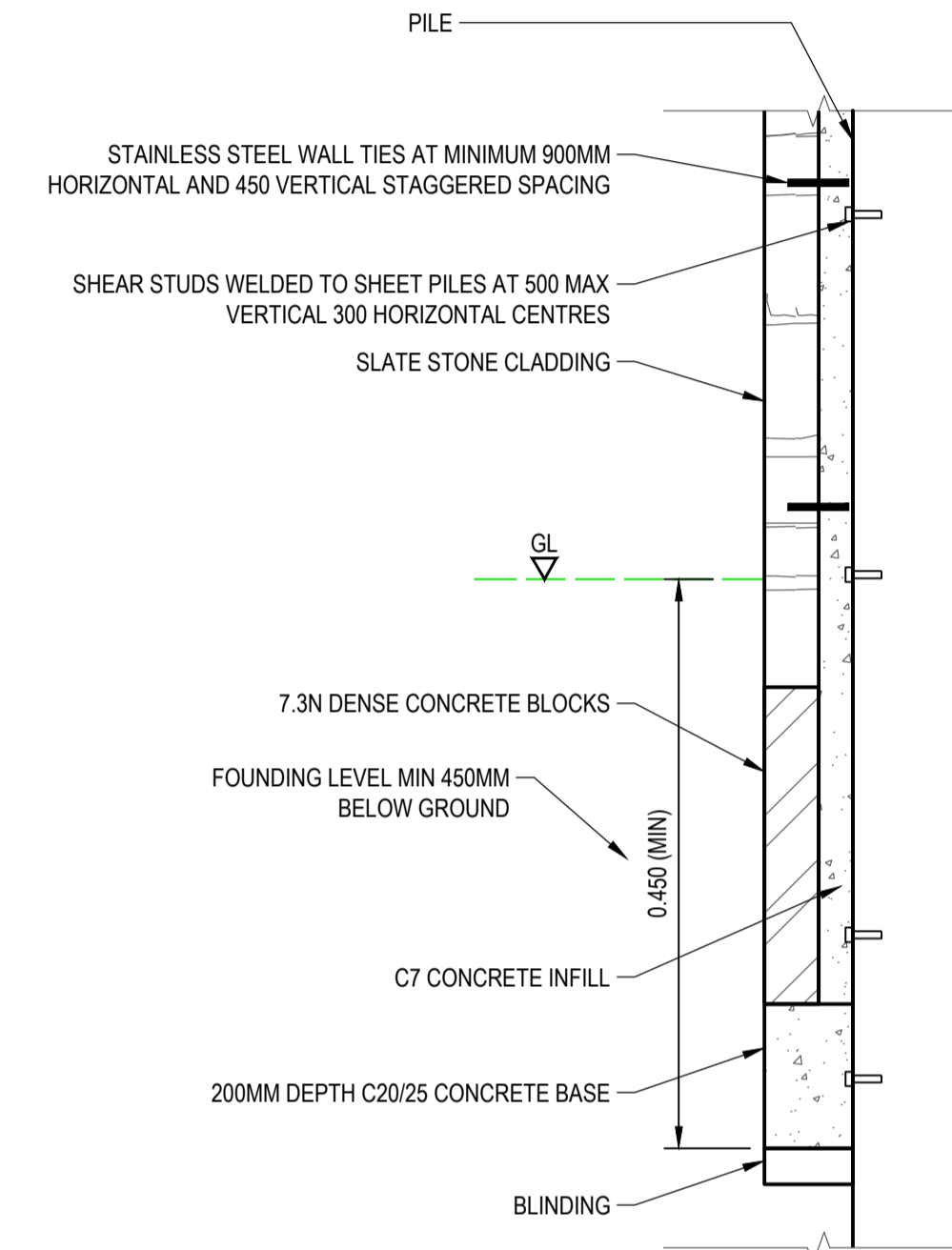
**TYPICAL SHEET PILE WALL  
CLADDING DETAIL**

SCALE 1:10



**TYPICAL CLADDING ELEVATION**

SCALE 1:25



**TYPICAL CLADDING FIXING AND SUPPORT**

SCALE 1:10

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:  
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER.

**CONSTRUCTION:**

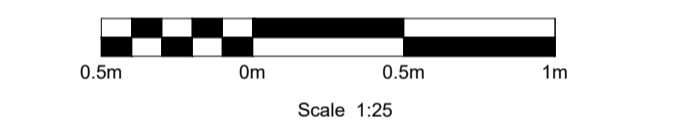
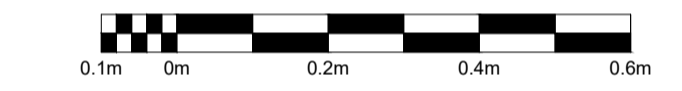
E.1 WATER LEVEL VARIABLE DUE TO TIDE  
E.5 LIMITED WORKING AREA  
E.13 RISK OF HAVS  
E.25 RISK OF FLOODING  
F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

**MAINTENANCE, CLEANING AND OPERATION:**

N/A

**DECOMMISSIONING OR DEMOLITION:**

RISKS ARE LIKELY TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



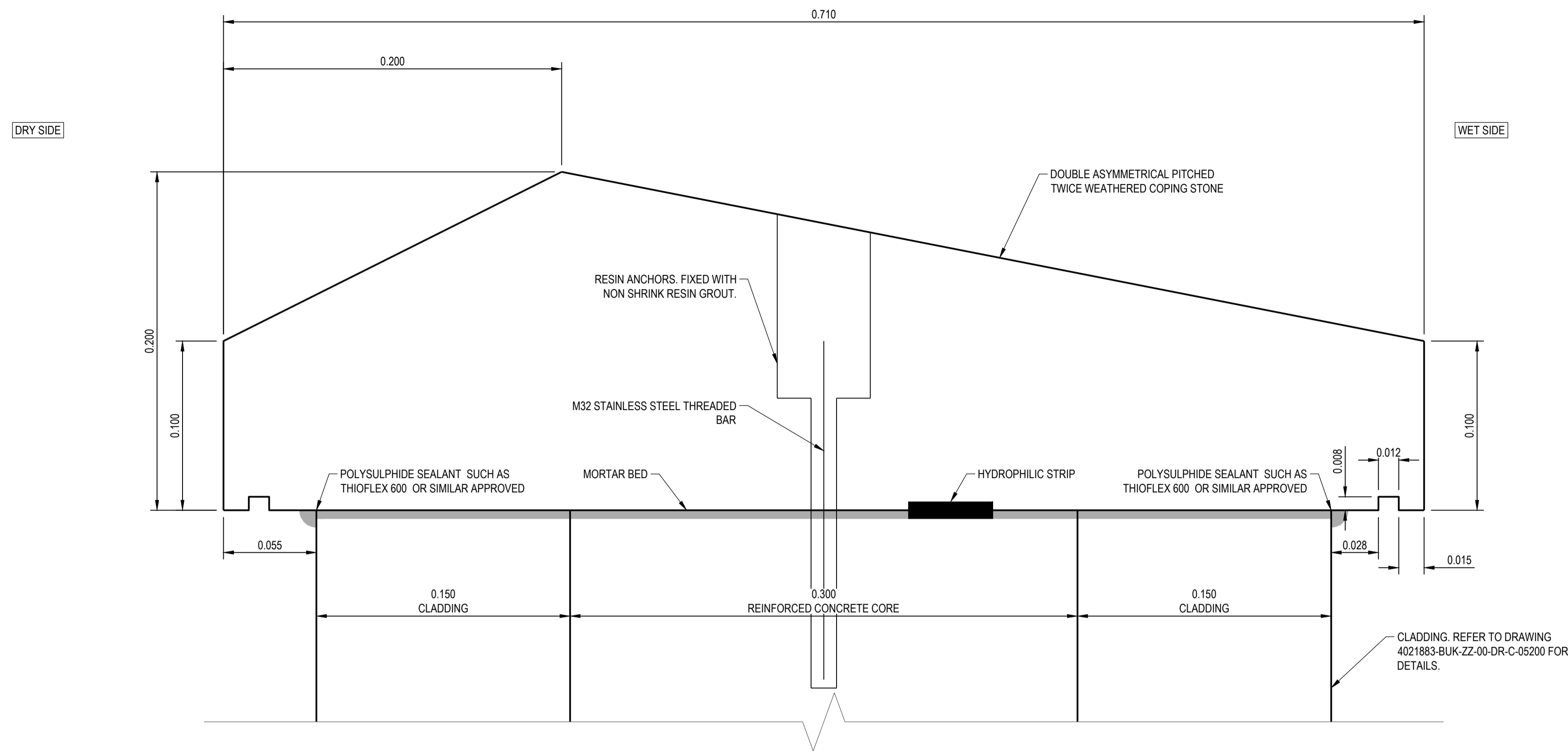
Project: **CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title: **CLADDING DETAILS**

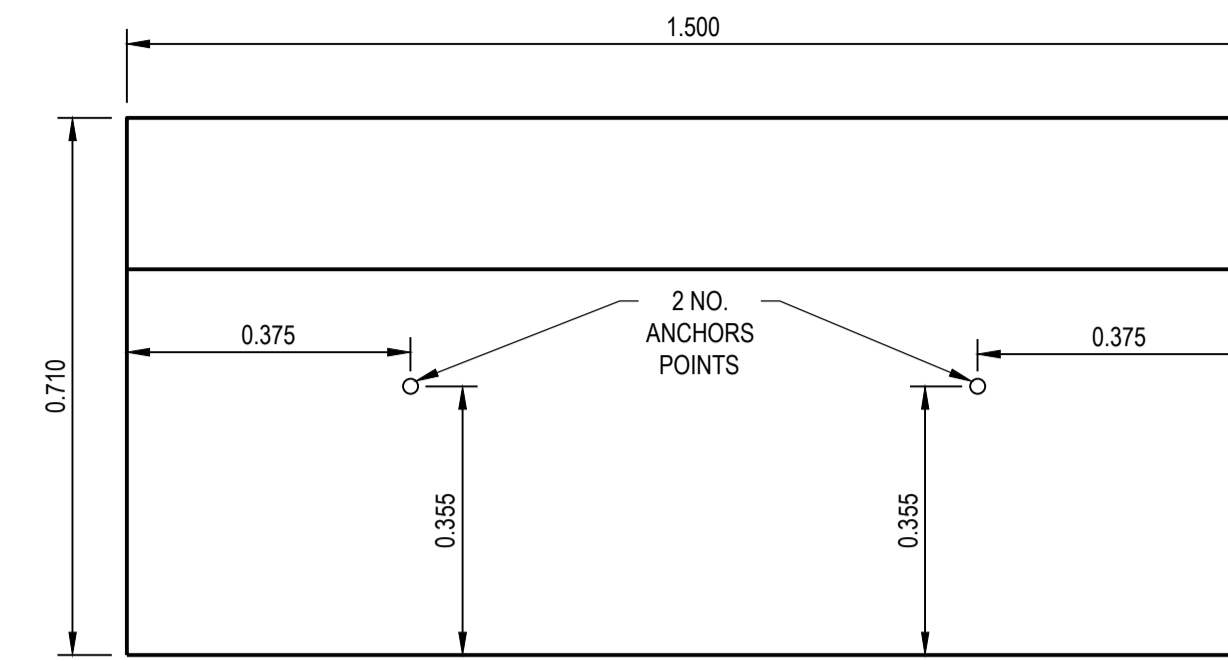
Drawing scale: AS SHOWN Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-05200 Revision P02

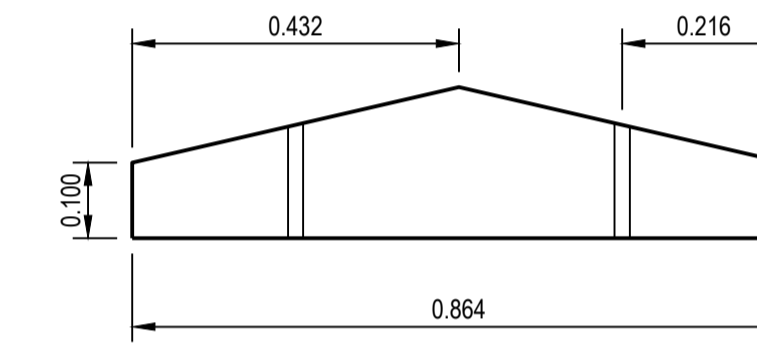
Parent Model: SHEET NAME



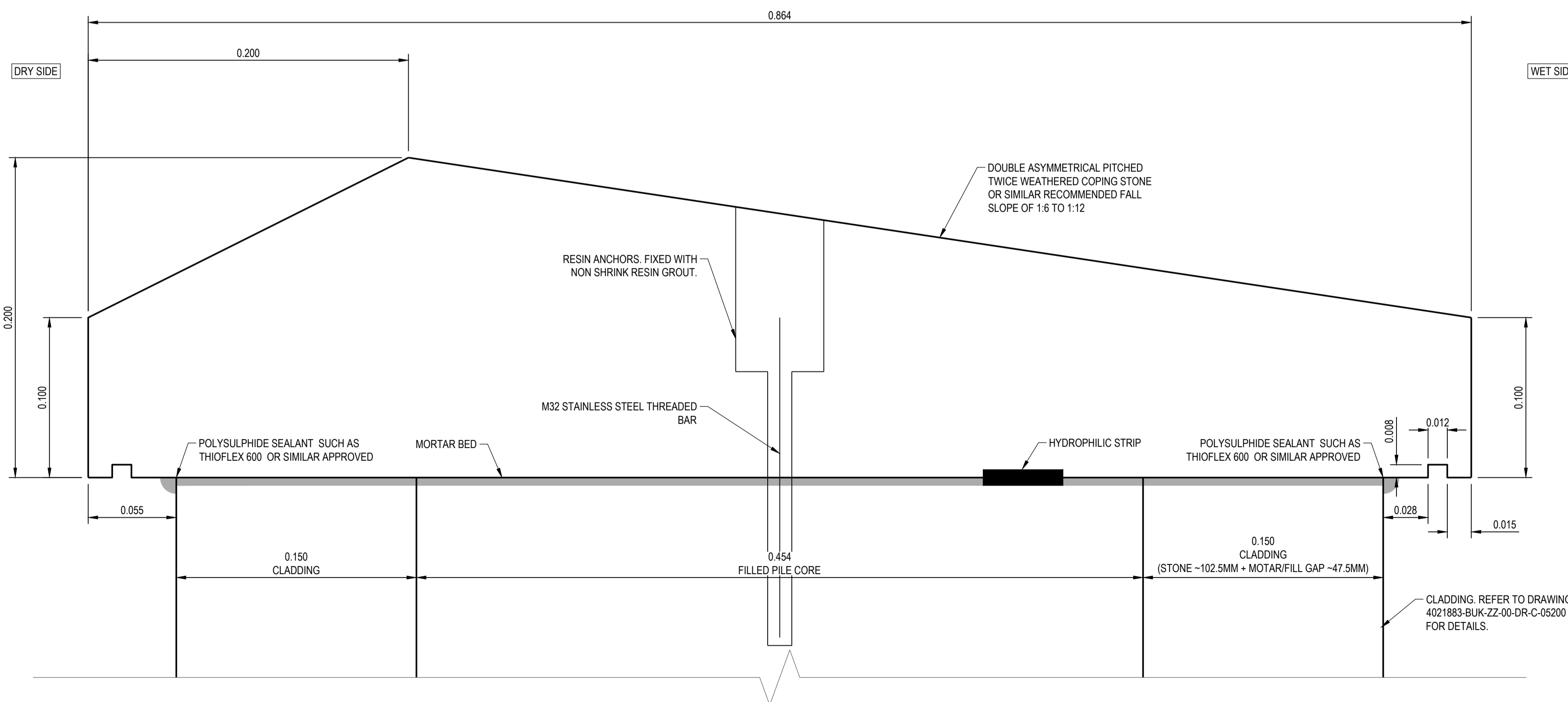
**COPING STONE - REINFORCED CONCRETE WALL**  
SCALE 1:2



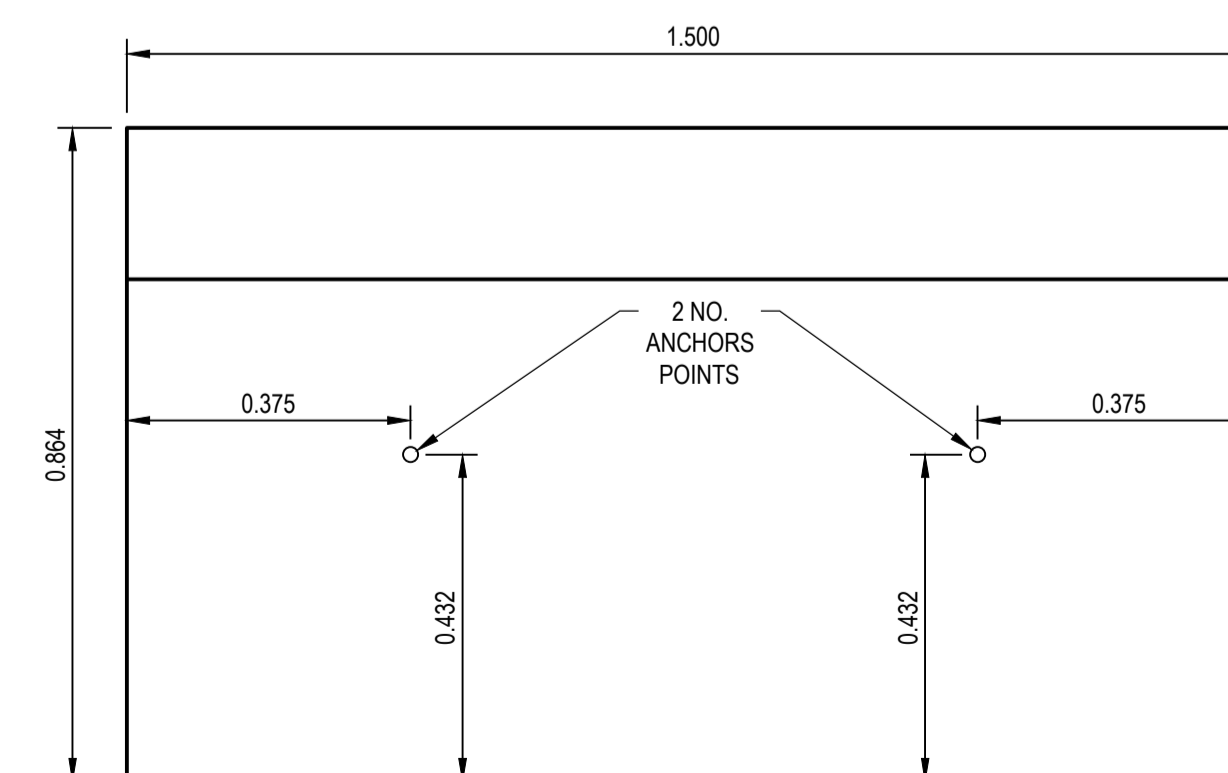
**COPING STONE - REINFORCED CONCRETE WALL - PLAN**  
SCALE 1:10



**COPING STONE - FLOOD GATE COLUMN - PLAN**  
SCALE 1:10



**COPING STONE - SHEET PILE WALL**  
SCALE 1:2



**COPING STONE - SHEET PILE WALL - PLAN**  
SCALE 1:10

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

NOTES:  
1. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.

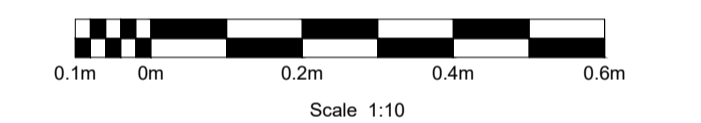
**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:  
C.5 LIFTING OPERATIONS  
E.1 WATER LEVEL VARIABLE DUE TO TIDE  
E.13 RISK OF HAVS  
E.25 RISK OF FLOODING  
F.6 SAC/SSSI SITES OF NATIONAL AND INTERNATIONAL SIGNIFICANCE - REFER TO SUPPORTING ENVIRONMENTAL LITERATURE

MAINTENANCE, CLEANING AND OPERATION:  
N/A

DECOMMISSIONING OR DEMOLITION:  
RISKS ARE LIKELY TO BE SIMILAR TO BE SIMILAR TO THE CONSTRUCTION STAGE BUT SHOULD BE RECONSIDERED IN ADVANCE OF DECOMMISSIONING, DEMOLITION, FUTURE REFURBISHMENT OR REPLACEMENT.



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	CF	ES	AJ	AH	16/01/26	80% Design Issue
P02	CF	LJM	AJ	AH	18/03/26	PLANNING PRE-APP ISSUE

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Status: S3 Suitable for Review and Comment

Client: \_\_\_\_\_



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



Binnies UK Limited  
Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project: \_\_\_\_\_

**CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

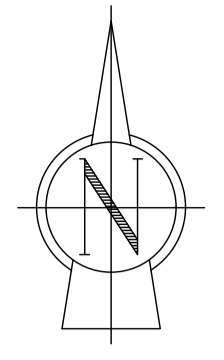
Drawing title: \_\_\_\_\_

**WALL COPING STONES**

Drawing scale: AS SHOWN Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-C-05300 Revision P02

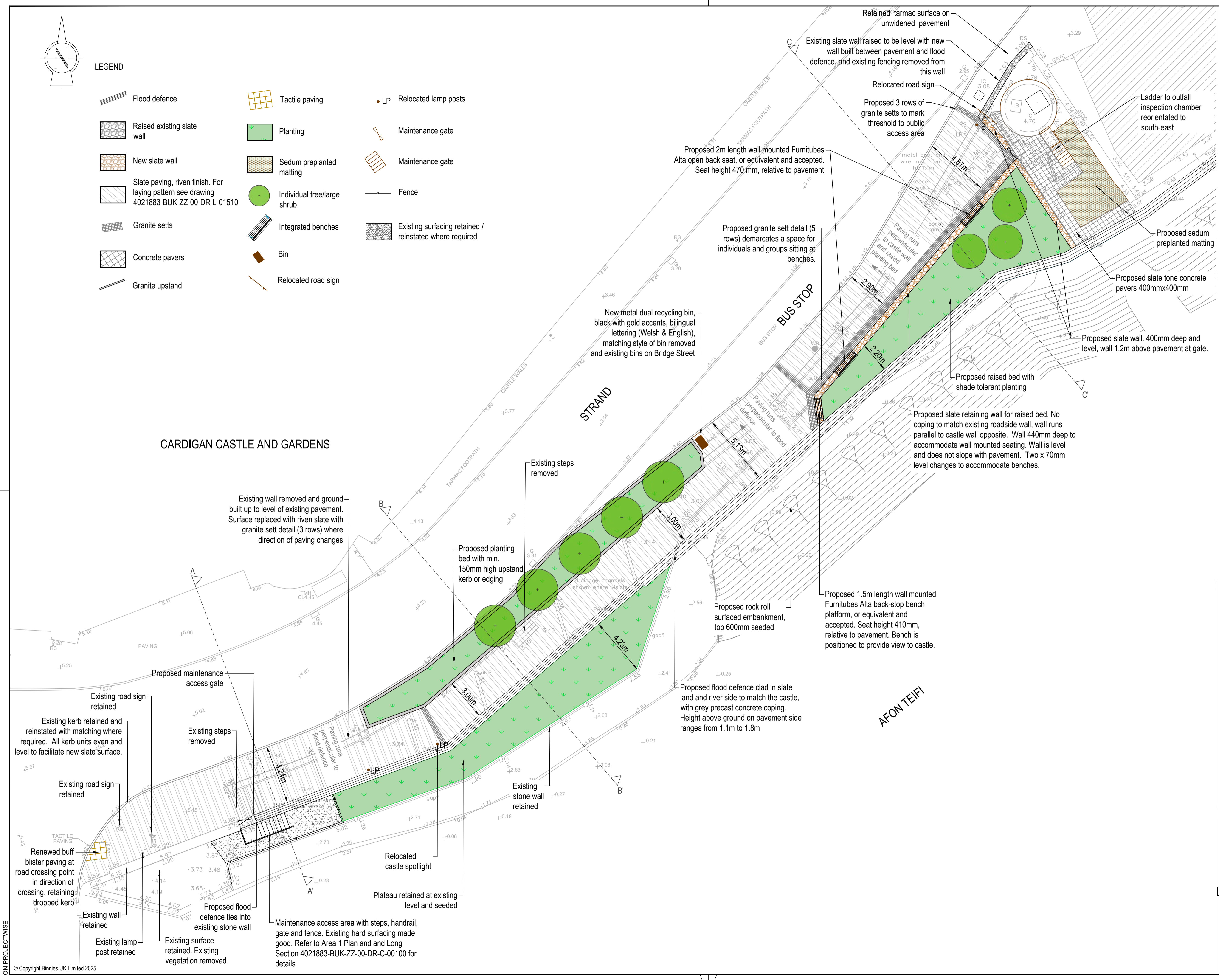
Parent Model: SHEET NAME



LEGEND

- Flood defence
- Tactile paving
- LP Relocated lamp posts
- Raised existing slate wall
- Planting
- Maintenance gate
- New slate wall
- Sedum preplanted matting
- Maintenance gate
- Slate paving, riven finish. For laying pattern see drawing 4021883-BUK-ZZ-00-DR-L-01510
- Individual tree/large shrub
- Fence
- Granite setts
- Integrated benches
- Existing surfacing retained / reinstated where required
- Concrete pavers
- Bin
- Relocated road sign
- Granite upstand
- Relocated road sign

CARDIGAN CASTLE AND GARDENS



Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

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- NOTES:
1. NOT FOR CONSTRUCTION.
  2. DO NOT SCALE FROM THIS DRAWING.
  3. ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  4. SEE FOLLOWING DRAWINGS:  
 4021883-BUK-ZZ-00-DR-C-00100 - AREA 1 PLAN AND LONG SECTION  
 4021883-BUK-ZZ-00-DR-L-01500 FOR CONSTRUCTION DETAILS (SHEET 1 OF 3)  
 4021883-BUK-ZZ-00-DR-L-01510 FOR CONSTRUCTION DETAILS (SHEET 2 OF 3)  
 4021883-BUK-ZZ-00-DR-L-01515 FOR CONSTRUCTION DETAILS (SHEET 3 OF 3)  
 4021883-BUK-ZZ-00-DR-L-01520 FOR PLANTING PLAN  
 4021883-BUK-ZZ-00-DR-L-01522 FOR LANDSCAPE SECTIONS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

CONSTRUCTION:

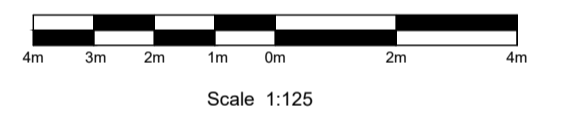
- B.2 Potential clashes with uncharted services.
- B.3 Potential for archaeological finds.
- B.6 Poor ground conditions.
- E.1 Water level variable due to tide.
- E.2 Restricted access and working areas for construction traffic.
- E.6 Existing structures in poor or unknown condition.
- E.25 Risk of flooding.

MAINTENANCE, CLEANING AND OPERATION:

As construction

DECOMMISSIONING OR DEMOLITION:

As construction



P01	TD	HR	ME	AH	18/12/25	
P02	HJR	HR	ME	AH	18/03/26	For client review, comment and/or acceptance
Rev	Drawn	Chkd	Rvwd	Appvd	Date	Description

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Status: \_\_\_\_\_

Client

Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_

Binnies UK Limited  
 Spring Lodge, 172 Chester Road, Healy, Cheshire, WA6 0AR, UK.  
 Tel: +44(0)1737 774155

Project

**CARDIGAN TIDAL FRMS  
 DETAILED DESIGN**

Drawing title

**LANDSCAPE GENERAL ARRANGEMENT  
 AREA 1**

Drawing scale:	AS SHOWN	Sheet size:	A1
Drawing no.	4021883-BUK-ZZ-00-DR-L-01002	Revision	P02
Parent Model: SHEET NAME			

ON PROJECTWISE

**BESPOKE SEED MIX FOR RIVERSIDE BED: 45m<sup>2</sup>**

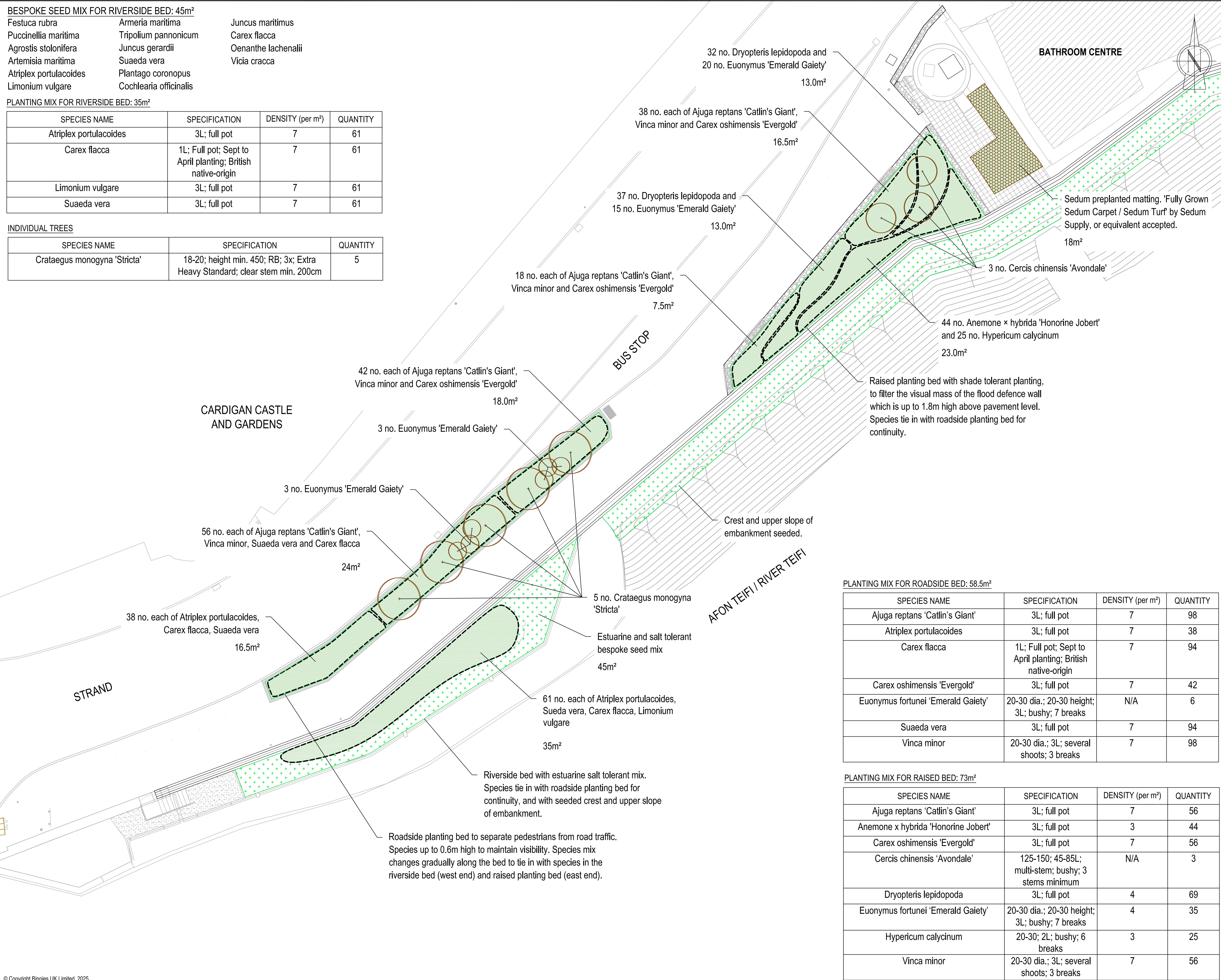
<i>Festuca rubra</i>	<i>Armeria maritima</i>	<i>Juncus maritimus</i>
<i>Puccinellia maritima</i>	<i>Tripolium pannonicum</i>	<i>Carex flacca</i>
<i>Agrostis stolonifera</i>	<i>Juncus gerardii</i>	<i>Oenanthe lachenalii</i>
<i>Artemisia maritima</i>	<i>Suaeda vera</i>	<i>Vicia cracca</i>
<i>Atriplex portulacoides</i>	<i>Plantago coronopus</i>	
<i>Limonium vulgare</i>	<i>Cochlearia officinalis</i>	

**PLANTING MIX FOR RIVERSIDE BED: 35m<sup>2</sup>**

SPECIES NAME	SPECIFICATION	DENSITY (per m <sup>2</sup> )	QUANTITY
<i>Atriplex portulacoides</i>	3L; full pot	7	61
<i>Carex flacca</i>	1L; Full pot; Sept to April planting; British native-origin	7	61
<i>Limonium vulgare</i>	3L; full pot	7	61
<i>Suaeda vera</i>	3L; full pot	7	61

**INDIVIDUAL TREES**

SPECIES NAME	SPECIFICATION	QUANTITY
<i>Crataegus monogyna</i> 'Stricta'	18-20; height min. 450; RB; 3x; Extra Heavy Standard; clear stem min. 200cm	5



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  - ALL DIMENSIONS IN METRES AND ALL LEVELS IN METRES AOD, UNLESS NOTED OTHERWISE.
  - SEE ALSO THE FOLLOWING DRAWINGS:  
4021883-BUK-ZZ-00-DR-C-00100 AREA 1 PLAN AND LONG SECTION  
4021883-BUK-ZZ-00-DR-L-01002 AREA 1 LANDSCAPE GENERAL ARRANGEMENT  
4021883-BUK-ZZ-00-DR-L-01500 FOR CONSTRUCTION DETAILS (SHEET 1 OF 3)  
4021883-BUK-ZZ-00-DR-L-01510 FOR CONSTRUCTION DETAILS (SHEET 2 OF 3)  
4021883-BUK-ZZ-00-DR-L-01515 FOR CONSTRUCTION DETAILS (SHEET 3 OF 3)  
4021883-BUK-ZZ-00-DR-L-01522 LANDSCAPE SECTIONS

**SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION**

IN ADDITION TO THE HAZARDS OR RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, THE FOLLOWING SIGNIFICANT RESIDUAL RISKS SHOULD BE NOTED. FURTHER DETAILS ARE INCLUDED IN THE CDM DESIGN RISK MANAGEMENT REGISTER

**CONSTRUCTION :**

- B.2 Potential clashes with unchartered services.
- B.3 Potential for archaeological finds.
- B.6 Poor ground conditions.
- E.1 Water level variable due to tide.
- E.2 Restricted access and working areas for construction traffic.
- E.6 Existing structures in poor or unknown condition.
- E.25 Risk of flooding.

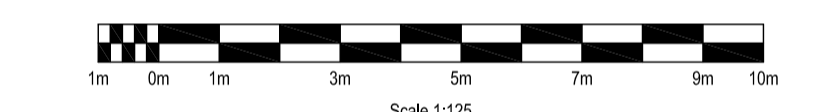
**MAINTENANCE, CLEANING AND OPERATION :**

As construction

**DECOMMISSIONING OR DEMOLITION :**

As construction

- Legend**
- Proposed flood defence
  - Ornamental planting bed
  - Ornamental planting mix
  - Individual tree or shrub
  - Estuarine and salt tolerant seed mix
  - Crest and upper slope of embankment seeding
  - Sedum preplanted matting. 'Fully grown Sedum Carpet' by Sedum Supply (or equivalent).



**PLANTING MIX FOR ROADSIDE BED: 58.5m<sup>2</sup>**

SPECIES NAME	SPECIFICATION	DENSITY (per m <sup>2</sup> )	QUANTITY
<i>Ajuga reptans</i> 'Cattlin's Giant'	3L; full pot	7	98
<i>Atriplex portulacoides</i>	3L; full pot	7	38
<i>Carex flacca</i>	1L; Full pot; Sept to April planting; British native-origin	7	94
<i>Carex oshimensis</i> 'Evergold'	3L; full pot	7	42
<i>Euonymus fortunei</i> 'Emerald Gaiety'	20-30 dia.; 20-30 height; 3L; bushy; 7 breaks	N/A	6
<i>Suaeda vera</i>	3L; full pot	7	94
<i>Vinca minor</i>	20-30 dia.; 3L; several shoots; 3 breaks	7	98

**PLANTING MIX FOR RAISED BED: 73m<sup>2</sup>**

SPECIES NAME	SPECIFICATION	DENSITY (per m <sup>2</sup> )	QUANTITY
<i>Ajuga reptans</i> 'Cattlin's Giant'	3L; full pot	7	56
<i>Anemone x hybrida</i> 'Honoreine Jobert'	3L; full pot	3	44
<i>Carex oshimensis</i> 'Evergold'	3L; full pot	7	56
<i>Cercis chinensis</i> 'Avondale'	125-150; 45-85L; multi-stem; bushy; 3 stems minimum	N/A	3
<i>Dryopteris lepidopoda</i>	3L; full pot	4	69
<i>Euonymus fortunei</i> 'Emerald Gaiety'	20-30 dia.; 20-30 height; 3L; bushy; 7 breaks	4	35
<i>Hypericum calycinum</i>	20-30; 2L; bushy; 6 breaks	3	25
<i>Vinca minor</i>	20-30 dia.; 3L; several shoots; 3 breaks	7	56

Rev	Drawn	Chkd	Rwd	Apprvd	Date	Description
P01	HR	TD	ME	AH	18/12/25	
P02	HJR	HR	ME	AH	18/03/26	For client review, comment and/or acceptance

Designed by: H Goodrick Date: 05/12/2025

Status

Client

Client Project No. Revision

**binnies UK Limited**  
Spring Lodge, 172 Chester Road, Heston, Cheshire, WA6 0AR, UK.  
Tel: +44(0)1737 774155

Project

**CARDIGAN TIDAL FRMS  
DETAILED DESIGN**

Drawing title

**PLANTING PLAN  
AREA 1**

Drawing scale: 1:125 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-L-01520 Revision P02

Note: The limits, including the height and depths of the Works, shown in this drawing are not to be taken as limiting the obligations of the contractor under Contract.

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  - REFER TO LANDSCAPE GENERAL ARRANGEMENT 4021883-BUK-ZZ-00-DR-L-01002 FOR SECTION LOCATIONS
  - SEE ALSO THE FOLLOWING DRAWINGS:  
4021883-BUK-ZZ-00-DR-C-00100 - AREA 1 PLAN AND LONG SECTION  
4021883-BUK-ZZ-00-DR-L-01500 FOR CONSTRUCTION DETAILS (SHEET 1 OF 3)  
4021883-BUK-ZZ-00-DR-L-01510 FOR CONSTRUCTION DETAILS (SHEET 2 OF 3)  
4021883-BUK-ZZ-00-DR-L-01515 FOR CONSTRUCTION DETAILS (SHEET 3 OF 3)  
4021883-BUK-ZZ-00-DR-L-01520 FOR PLANTING PLAN

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION:

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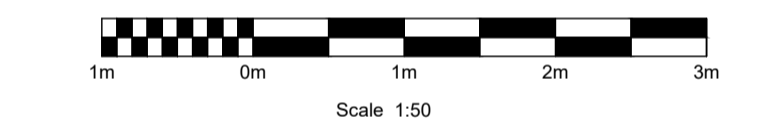
- CONSTRUCTION:
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  - B.3 Potential for archaeological finds.
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  - E.1 Water level variable due to tide.
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  - E.6 Existing structures in poor or unknown condition.
  - E.25 Risk of flooding.

MAINTENANCE, CLEANING AND OPERATION:

As construction

DECOMMISSIONING OR DEMOLITION:

As construction



Rev	Drawn	Chkd	Rvwd	Apprvd	Date	Description
P01	TD	HR	ME	AH	18/12/25	
P02	HJR	HR	ME	AH	18/03/26	For client review, comment and/or acceptance

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_  
Status: \_\_\_\_\_



Client Project No. \_\_\_\_\_ Revision \_\_\_\_\_



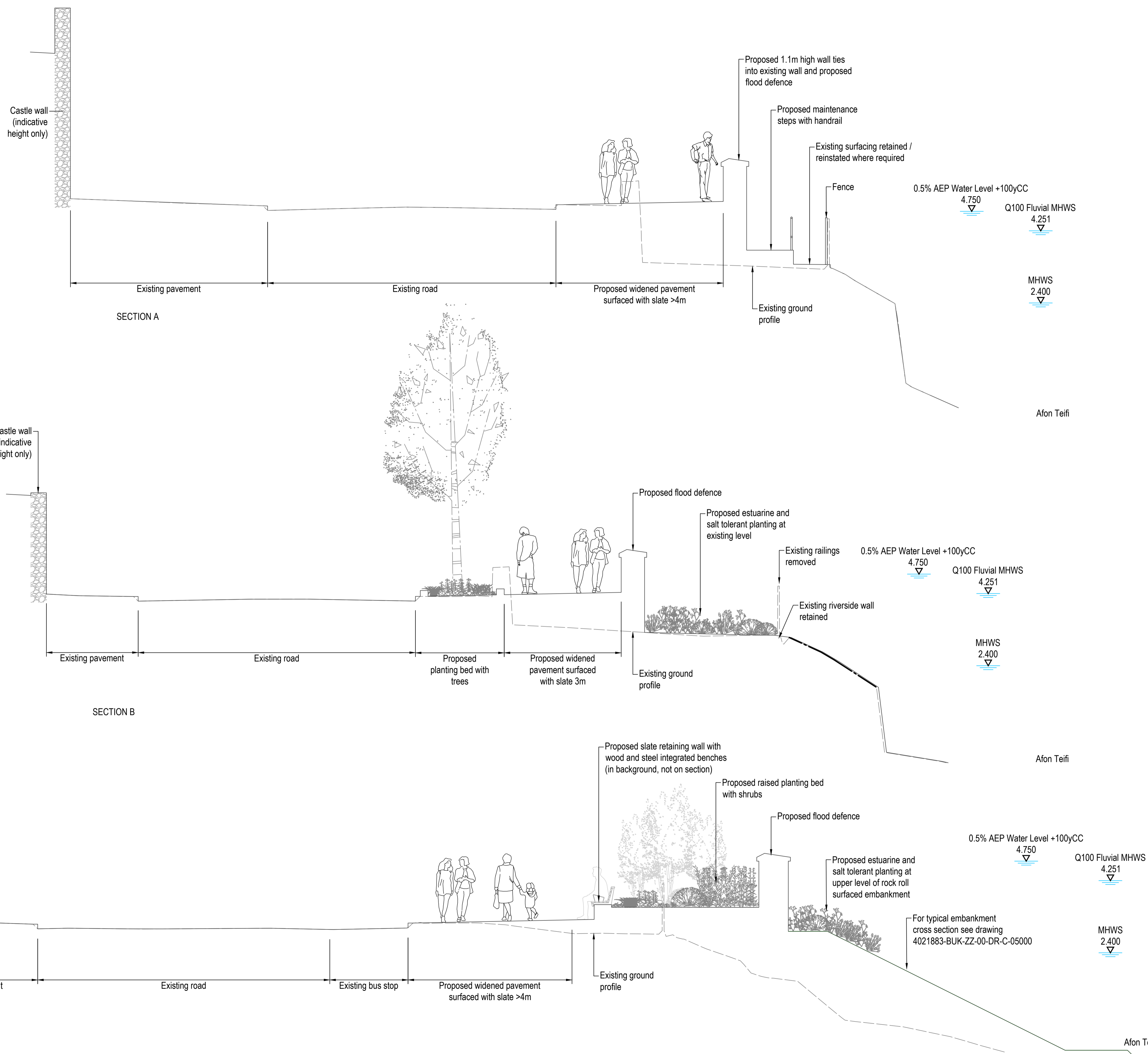
Project  
**CARDIGAN TIDAL FLOOD RISK MANAGEMENT SCHEME**

Drawing title  
**LANDSCAPE SECTIONS AREA 1**

Drawing scale: 1:50 Sheet size: A1

Drawing no. 4021883-BUK-ZZ-00-DR-L-01522 Revision P02

Parent Model: SHEET\_NAME



ON PROJECTWISE