

**Broadland Flood Alleviation Project:
Planning Application for Crest Raising and Piling Removal Works in
Compartments 5 & 6 (River Ant, River Thurne and Womack Water)**
Report by Senior Waterways and Recreation Officer

Summary: This report provides members with a summary of Broadland Environmental Services Ltd (BESLs) planning application proposals for crest raising and piling removal in Compartments 5 and 6 on the true left bank of the Rivers Ant and Bure and the true right bank of the River Thurne and Womack Water and the north bank of Womack Water. The report also outlines officers' comment on the planning application upon which members' comments are welcomed.

1 Background

- 1.1 Earthbank flood defence works were completed in Compartment 5 on the true left banks of the Rivers Ant and Bure and the true right bank of the River Thurne between How Hill and Womack Water and Compartment 6 on the true left bank of Womack water in 2006 and 2011 respectively.
- 1.2 Monitoring carried out by BESL has shown that the newly constructed floodbanks have now established and are providing main line flood defence for the compartments. As in other compartments, now that the new banks have established, BESL is proposing to remove piling that provided the erosion protection for the old floodbanks and has submitted a planning application for the proposed works which is the subject of this report.

2 BESL's Planning Application for Compartments 5 and 6

- 3.1 BESL's proposals for Compartments 5 and 6 involve crest raising on the new floodbanks and piling removal. The location of these works is shown on the plans at Appendix 1.
- 3.2 The crest raising works are proposed for four areas:
 - River Ant adjacent to Little Reedham
 - River Bure on the setback bank behind 24-hour moorings at St Benets
 - River Thurne upstream of Thurne mouth
 - Womack Water south bank

These works will have no impact on the navigation.

- 3.3 Piling removal is proposed for three areas:
 - River Ant immediately north of Ludham Bridge at the former Broads Authority 24-hour mooring;

- River Thurne at Coldharbour Farm;
- Womack Water mainly on the south bank but a small area is also identified for removal on the north bank near the mouth.

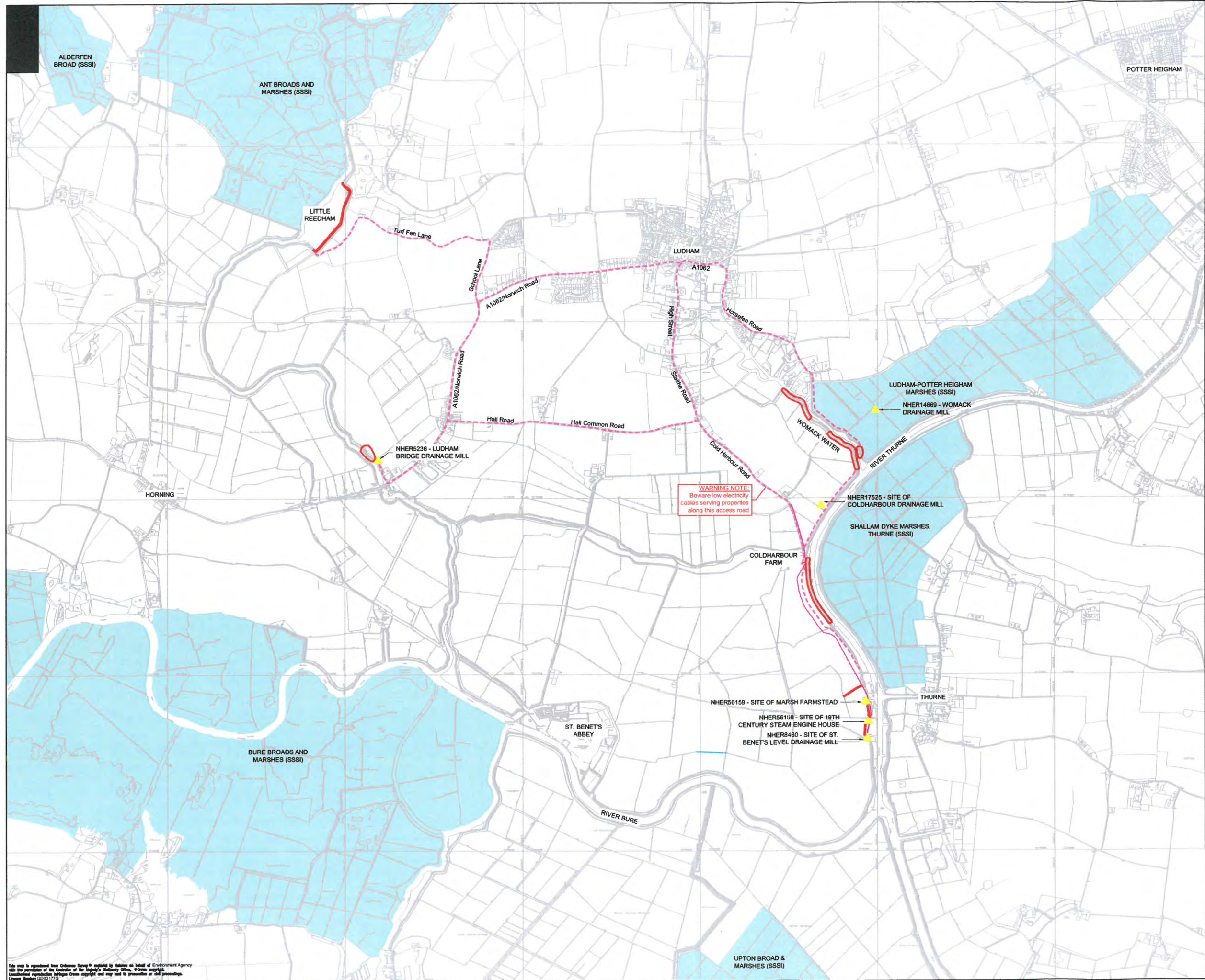
4 Summary of Officers' Comments

- 4.1 Apart from the former 24-hour mooring at Ludham Bridge none of the piling identified for removal in this application is used for formal or informal mooring. The owner of the Ludham Bridge site is not prepared to take on liability for the piling and has therefore agreed to BESL removing it. As other mooring is available on both banks at Ludham Bridge this is not a major concern. Much of the piling in Womack Dyke is in poor condition and has been hazard marked accordingly so its removal is welcomed.
- 4.2 The planning application indicates that BESLs proposed work methodology accords with the standard procedures used successfully in other piling removal works elsewhere in the in the BFAP project area. The application also confirms that BESL will use the standard erosion monitoring protocol which has been conditioned on other planning permissions granted by the Authority for piling removal work. The proposals therefore present officers with no concerns provided that appropriate conditions are placed on any planning permission granted requiring adherence to standard methodology, timing of works, channel marking and removal of channel marking, and erosion monitoring.
- 4.3 Officers therefore propose to raise no objections to the works set out in the planning application but to recommend that the relevant planning conditions are attached to any permission granted for the works.

5 Conclusions

- 5.1 Members' comments on the report and officers' comments on the planning application are welcomed.

Background papers:	Nil
Author:	Adrian Clarke
Date of report:	10 February 2015
Broads Plan Objectives:	CC3.4
Appendices:	APPENDIX 1 – Compartments 5 & 6 detailed maps.



- Key:
- PLANNING BOUNDARIES
 - SSSI
 - MAIN ACCESS ROUTES
 - OVERHEAD ELECTRICITY CABLES
 - UNDERGROUND ELECTRICITY CABLES
 - ARCHAEOLOGICAL FEATURES

- List of drawings:
- 001 - LOCATION PLAN AND ACCESS ROUTES
 - 002 - KEY PLAN
 - 003 - CREST RAISING DETAILED PLAN SHEET 1 OF 6
 - 003 - PILING REMOVAL DETAILED PLAN SHEET 1 OF 6
 - 004 - PILING REMOVAL DETAILED PLAN SHEET 2 OF 6
 - 005 - PILING REMOVAL DETAILED PLAN SHEET 3 OF 6
 - 006 - PILING REMOVAL DETAILED PLAN SHEET 4 OF 6
 - 007 - CREST RAISING DETAILED PLAN SHEET 5 OF 6
 - 008 - CREST RAISING DETAILED PLAN SHEET 6 OF 6

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Rev	By	Chd	Appd	Date	Description
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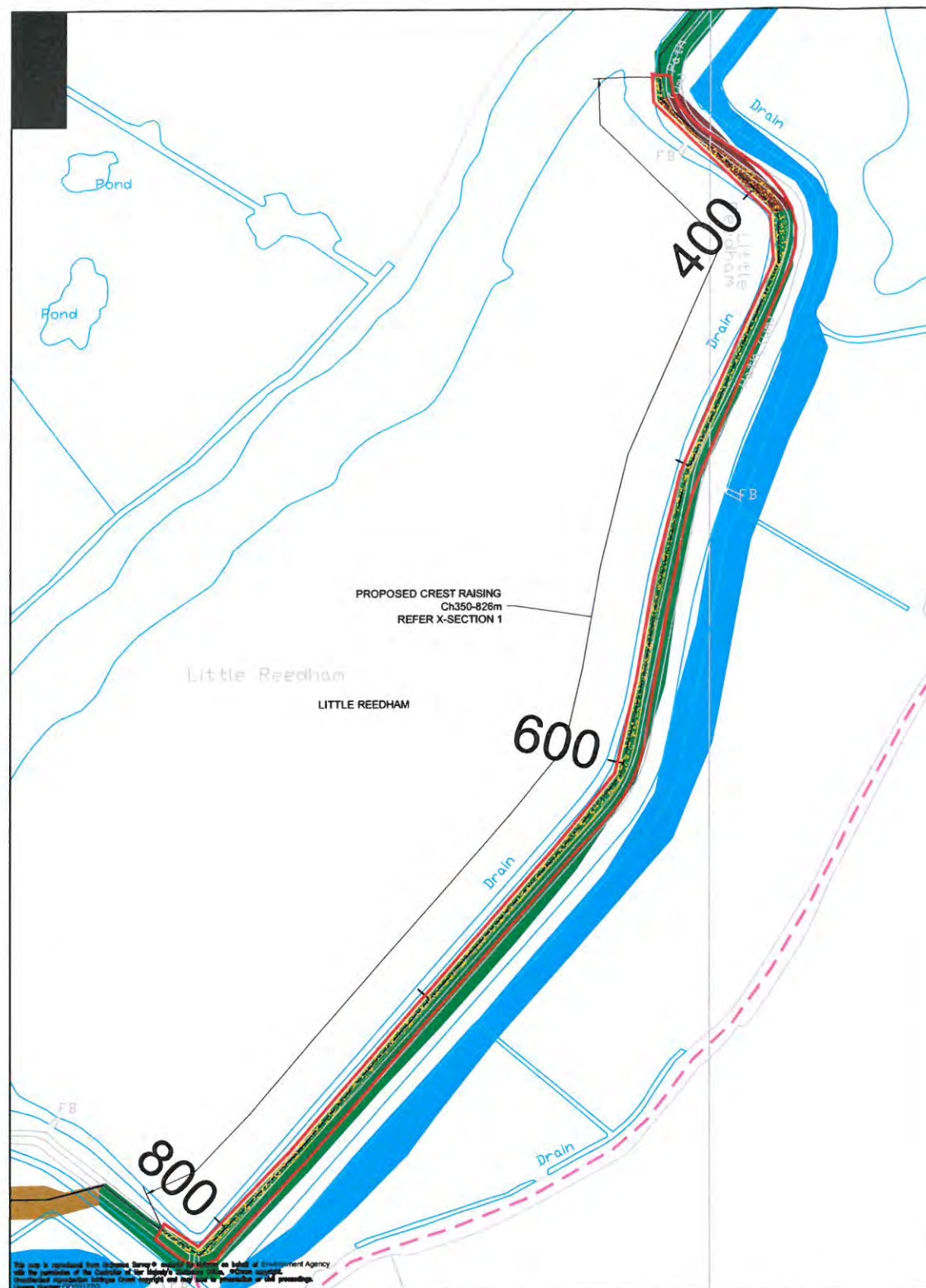
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BROADLAND FLOOD ALLEVIATION PROJECT

Drawing
COMPARTMENT 5
RIVER THURNE/WOMACK WATER
PILING REMOVAL
LOCATION PLAN AND ACCESS

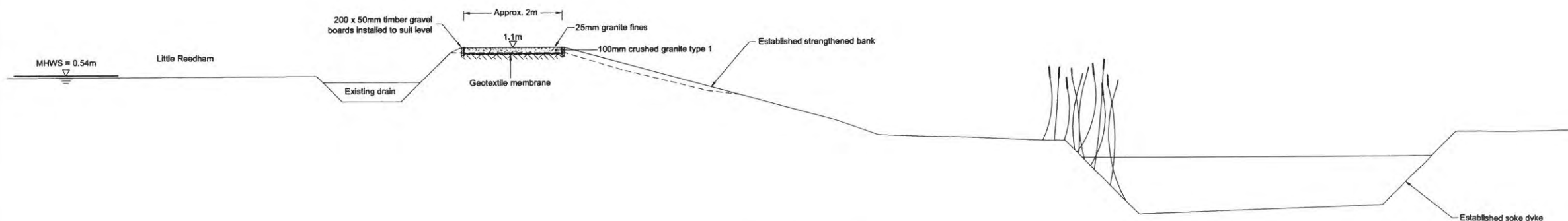
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Checked by: A RICHARDSON Date: 25/11/14
Approved by: K MARSH Date: 25/11/14

Drawing No.
WNBLUD/410/001
Revision
0

Drawing Scale: 1:10,000 AT A1



PLAN OF WORKS
SCALE 1:1000



TYPICAL X-SECTION 1
PROPOSED CREST RAISING Ch350 - 826m
SCALE 1:50

Key:

- PLANNING BOUNDARY
- ESTABLISHED STRENGTHENED BANK
- ESTABLISHED ROLLBACK BANK
- SOKE DYKE
- ACCESS ROUTE
- EXTENT OF CREST RAISING

Notes:

- ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
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- NO DIMENSIONS TO BE SCALED FROM THIS DRAWING.

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Project

BROADLAND FLOOD ALLEVIATION PROJECT

Drawing

COMPARTMENT 5
LITTLE REEDHAM
PROPOSED CREST RAISING
DETAILED PLAN 1 OF 6

Drawn by: L MERSEY Date: 25/11/14

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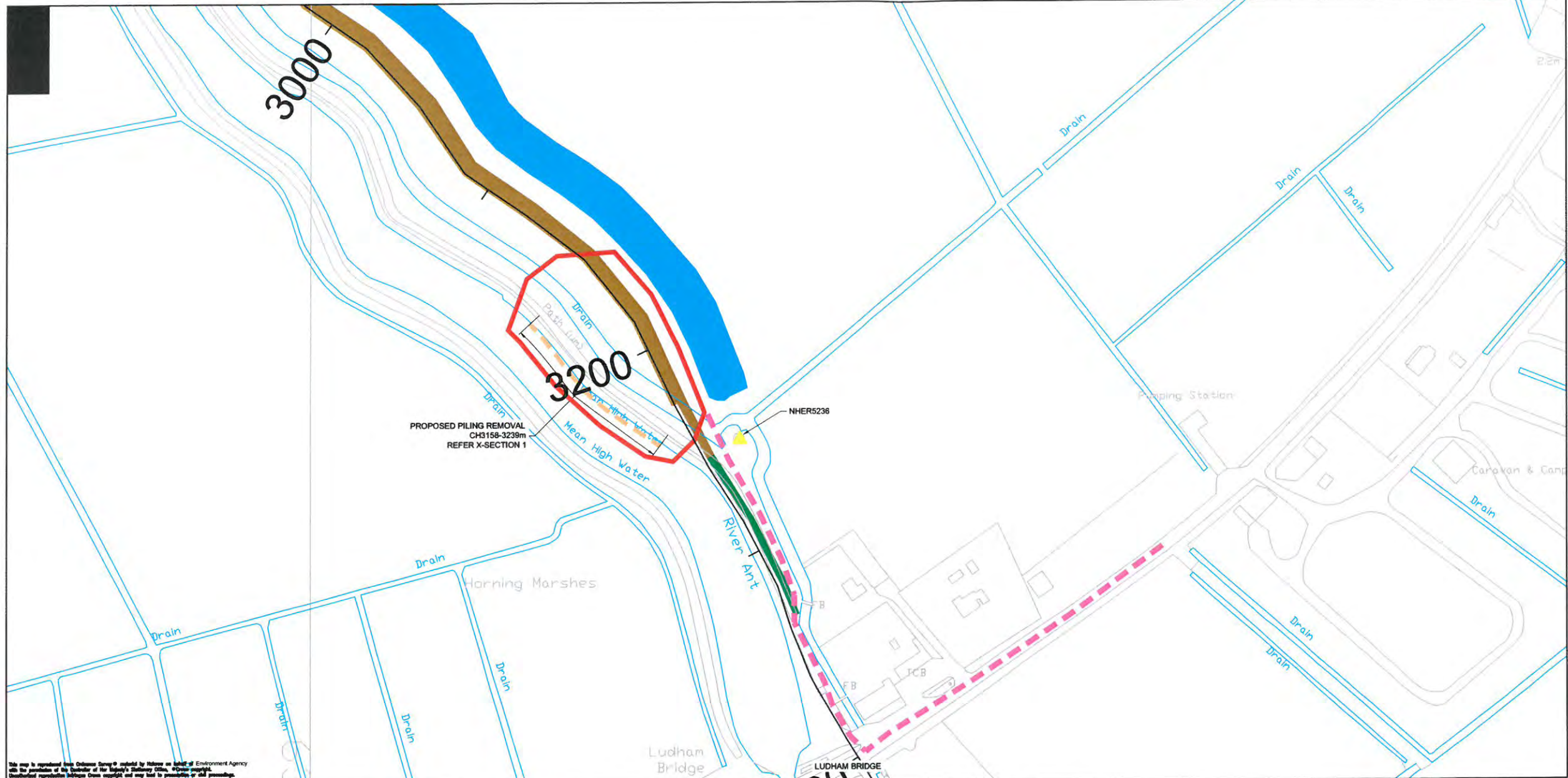
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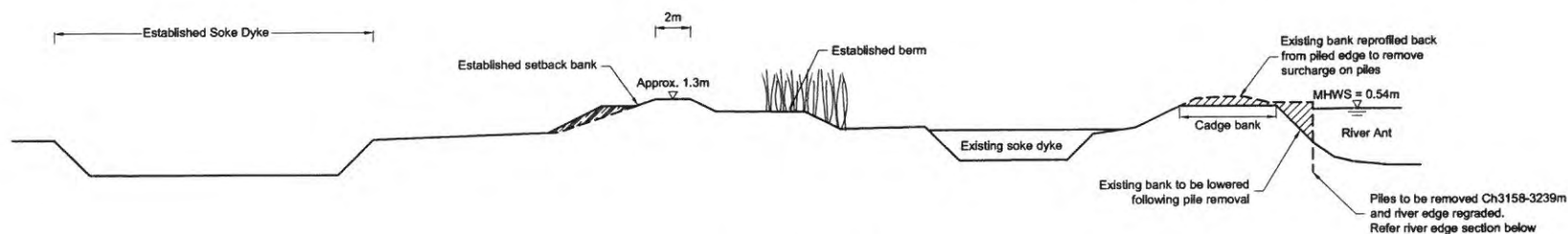
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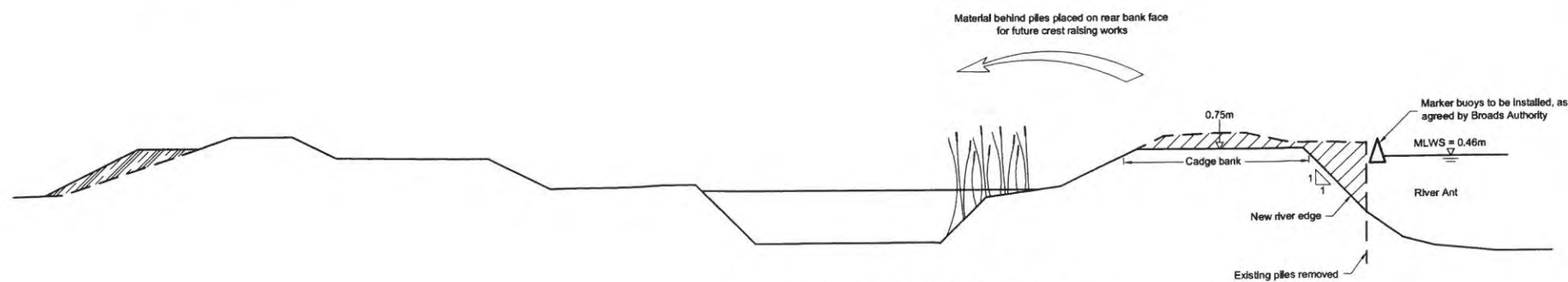
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PLAN OF WORKS
SCALE 1:1000



TYPICAL X-SECTION 1
PILING REMOVAL Ch8993 - 9336m
SCALE 1:200



TYPICAL RIVER EDGE DETAILED SECTION
SCALE 1:100

- Key:
- ACCESS ROUTE
 - WORKS BOUNDARY
 - ESTABLISHED SETBACK BANK
 - ESTABLISHED STRENGTHENED BANK
 - ESTABLISHED SOKE DYKE
 - PILES TO BE REMOVED
 - ARCHAEOLOGICAL FEATURE - NHER5236. SITE OF LUDHAM BRIDGE DRAINAGE MILL, PILL BOX & SPIGOT MORTAR EMPLACEMENT

- Notes:
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Project
BROADLAND FLOOD ALLEVIATION PROJECT

Drawing
COMPARTMENT 5
RIVER ANT
PILING REMOVAL
DETAILED PLAN 2 OF 6

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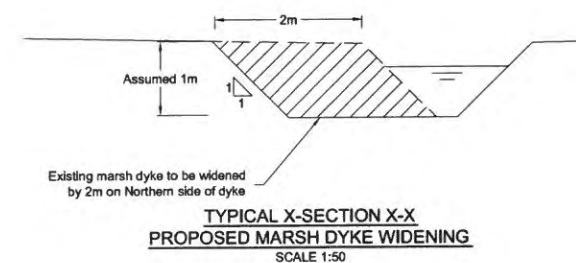
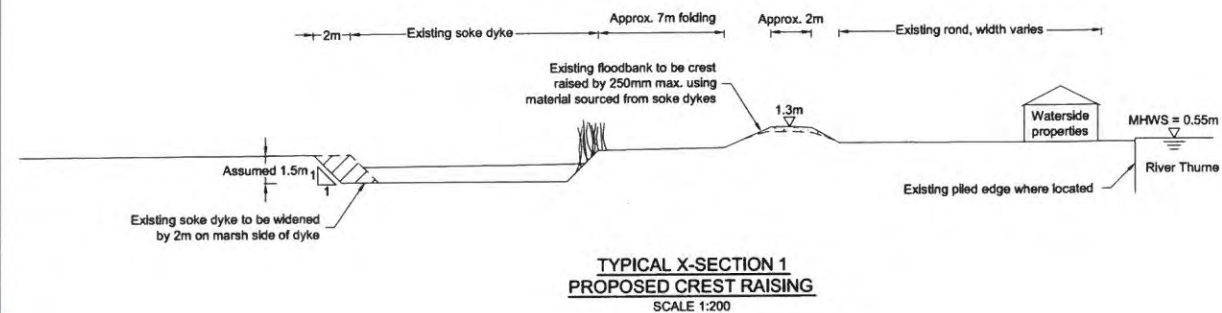
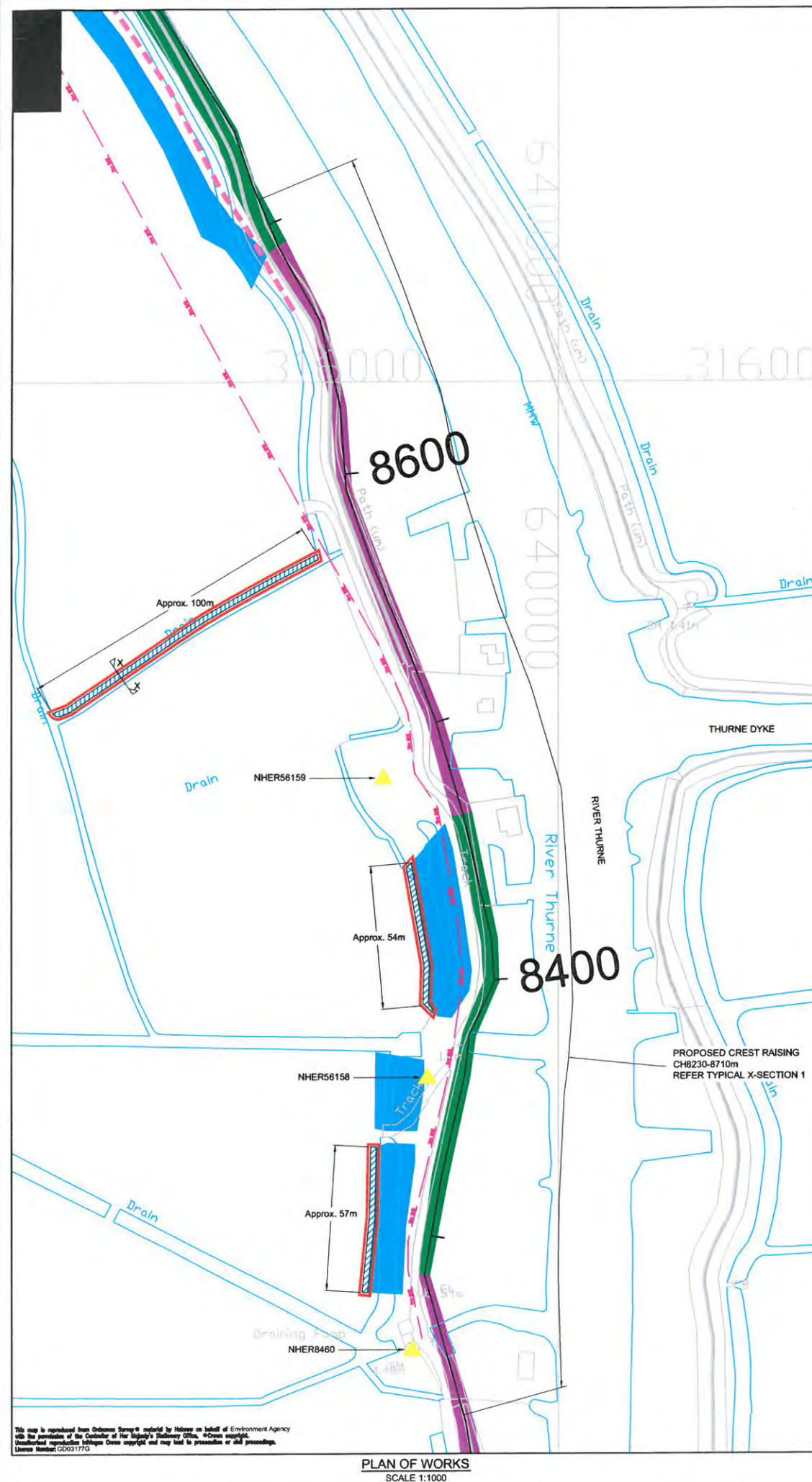
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- Key:**
- | | |
|---|--|
|  | PLANNING BOUNDARY |
|  | ESTABLISHED STRENGTHENED BANK |
|  | MAINTAINED BANK |
|  | ESTABLISHED SOKE DYKE |
|  | UNDERGROUND ELECTRICITY CABLES |
|  | ACCESS ROUTE |
|  | ARCHAEOLOGICAL FEATURES -
NHER8460 - ST. BENET'S LEVEL
DRAINAGE MILL |
|  | NHER56158 - (MONUMENT) SITE OF
19TH CENTURY STEAM ENGINE
HOUSE |
|  | NHER56159 - (MONUMENT) SITE OF
MARSH FARMSTEAD |

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Project

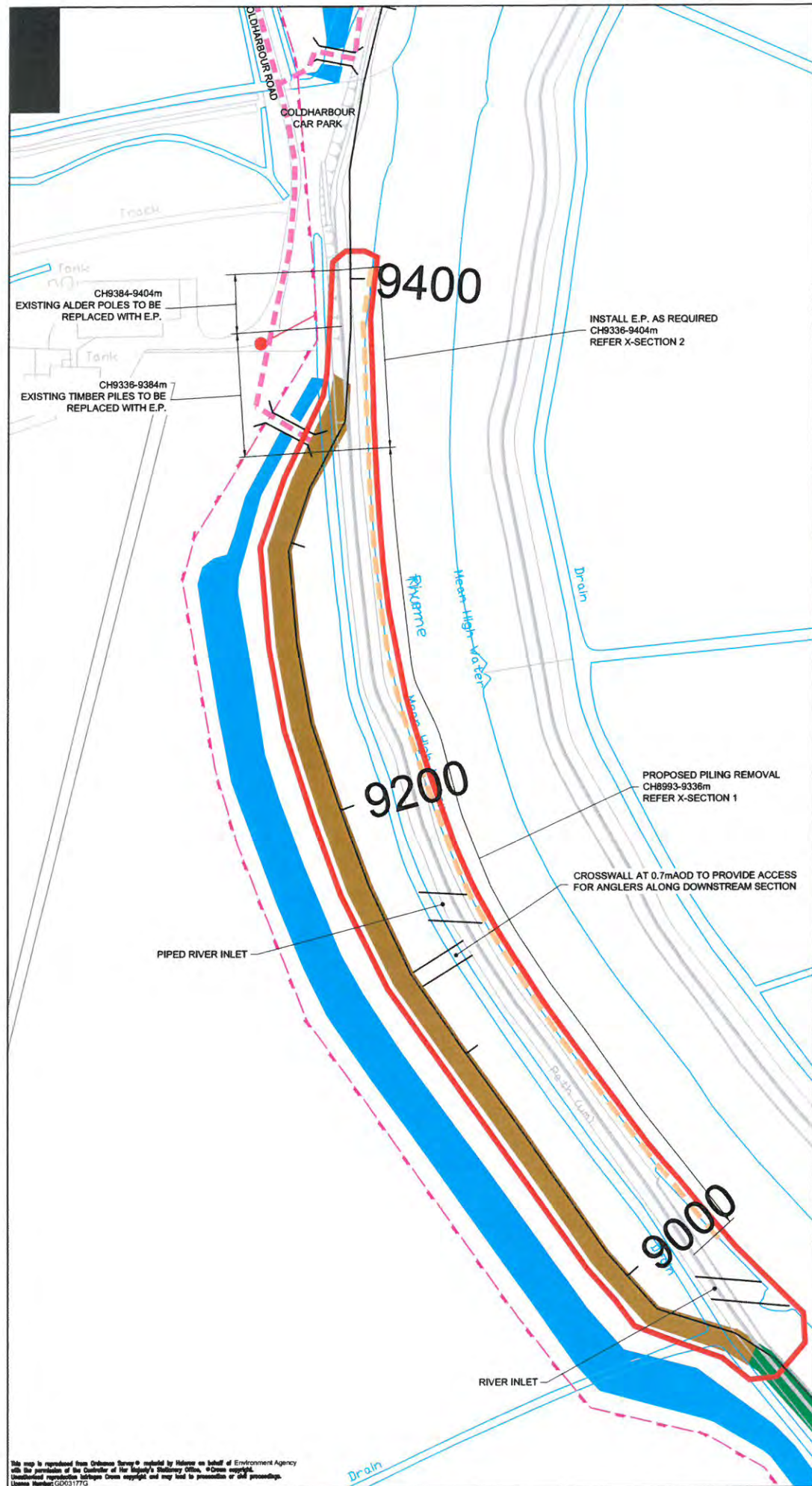
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COMPARTMENT 5
THURNE MOUTH
PROPOSED CREST RAISING
DETAILED PLAN 3 OF 6

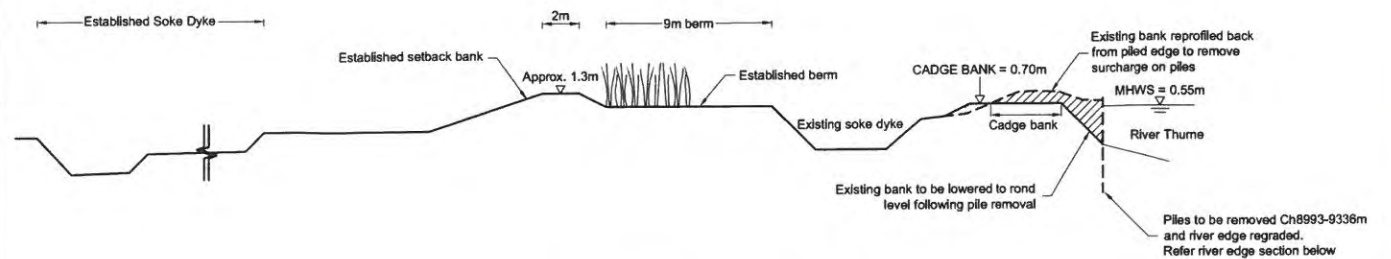
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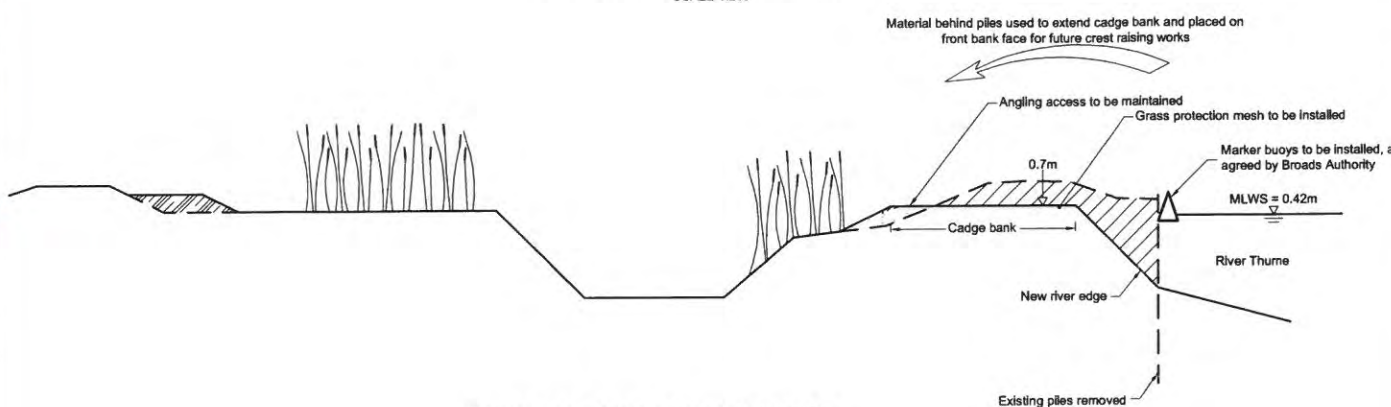
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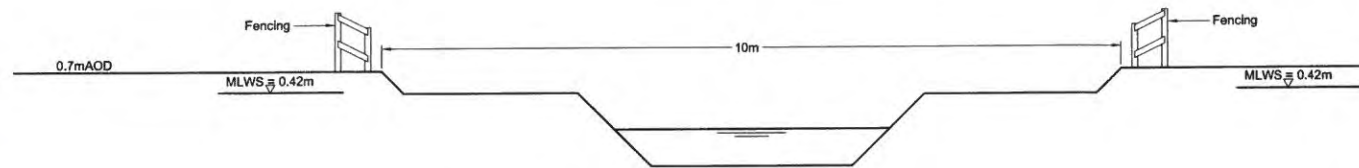
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SCALE 1:1000



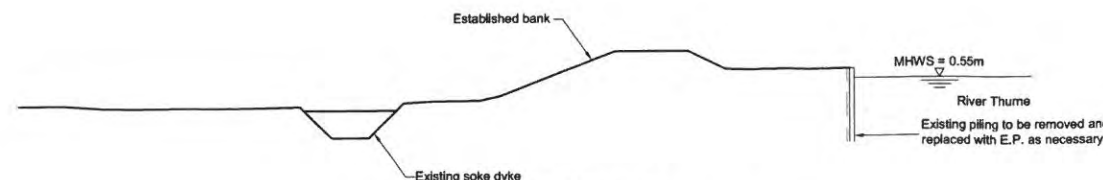
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PILING REMOVAL Ch8993 - 9336m
SCALE 1:200



TYPICAL RIVER EDGE DETAILED SECTION
SCALE 1:100



TYPICAL X-SECTION THROUGH RIVER INLET
SCALE 1:50



TYPICAL X-SECTION 2
PROPOSED E.P. REPLACEMENT CH9336 - 9404m
SCALE 1:100

Key:

- ACCESS ROUTE
- WORKS BOUNDARY
- ESTABLISHED SETBACK BANK
- ESTABLISHED STRENGTHENED BANK
- ESTABLISHED SOKE DYKE
- UNDERGROUND ELECTRICITY CABLES
- OVERHEAD ELECTRICITY CABLES
- PILES TO BE REMOVED
- CULVERTED CROSSING

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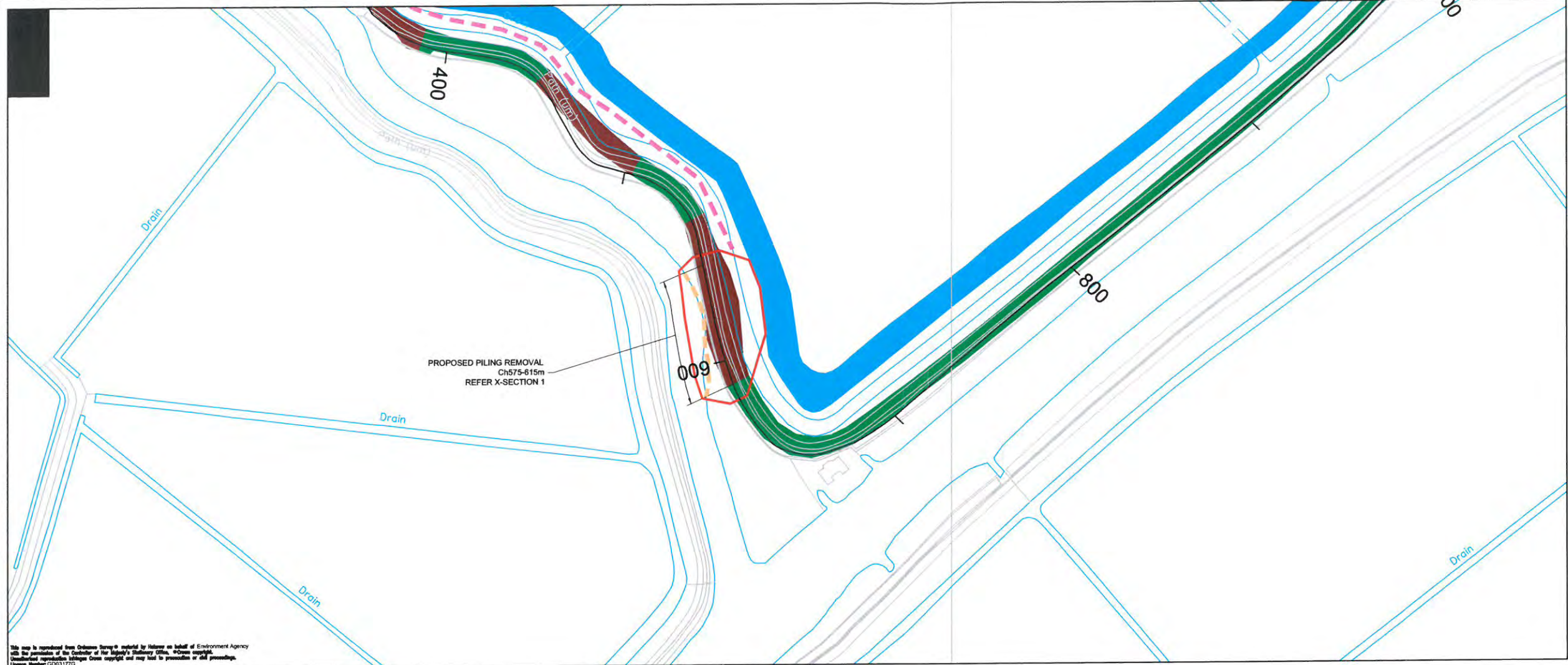
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BROADLAND FLOOD ALLEVIATION PROJECT

Drawing
COMPARTMENT 5
RIVER THURNE
PILING REMOVAL
DETAILED PLAN 4 OF 6

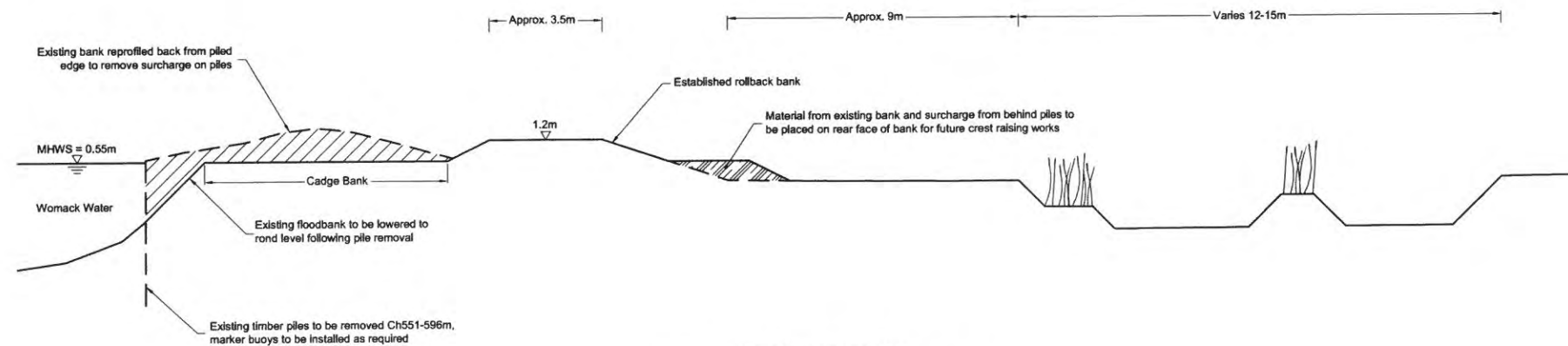
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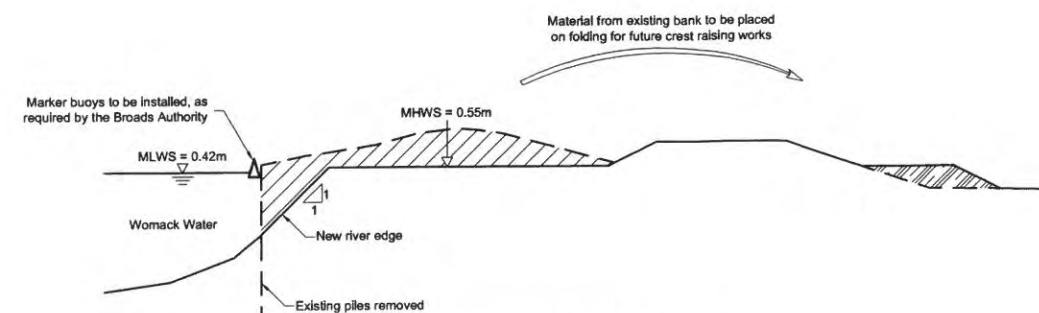
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PLAN OF WORKS
SCALE 1:1000



TYPICAL X-SECTION 1
PROPOSED PILING REMOVAL Ch551 - 596m
SCALE 1:200



TYPICAL RIVER EDGE DETAILED SECTION
SCALE 1:100

- Key:
- PLANNING BOUNDARY
 - ESTABLISHED STRENGTHENED BANK
 - ESTABLISHED ROLLBACK BANK
 - SOKE DYKE
 - ACCESS ROUTE
 - PILES TO BE REMOVED

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Project
BROADLAND FLOOD ALLEVIATION PROJECT

Drawing
COMPARTMENT 6
WOMACK WATER
PROPOSED PILING REMOVAL
DETAILED PLAN 6 OF 6

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