

RENAISSANCE RESIDENTIAL TOWER – PLANNING CONDITION 4

Project:		Renaissance Project, Manchester		Project No:	L20081		
To:	Copy:	Name:	Organisation:				
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From:		Luke Kelly (BG&E)		Date:	2022 02 23	Total Pages:	6 (Plus Appendices)

Subject:	Renaissance Project – Residential Tower – Planning Condition 4 Response		
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If you do not receive all pages, or some are unclear, please advise immediately

1 INTRODUCTION

The purpose of this memorandum is to provide Manchester City Council (MCC) and the Lead Local Flood Authority (LLFA) with a response to the following planning condition for the Planning Application (132088) for the Residential Tower of the Renaissance Project.

The planning condition text is as follows:

4) Condition 4: Prior to the commencement of the development, details of the "Hanging Ditch" indicative culvert investigation, and any required embedded design to protect the culvert and development (if a culvert is located by the investigation), shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include:

**Results of investigation including survey locations, depths, and results.*

** If the culverted watercourse is identified, details of how the development will be designed to ensure no damage to the building or culvert for the lifetime of the development.*

** Any works within or adjacent to the culverted watercourse that would affect it would require prior consent from the City Council as Lead Local Flood Authority.*

The approved details shall be implemented as part of the development.

Reason: To prevent the risk to life and property caused by inappropriate development around culverted watercourses pursuant to policy EN14 of the Manchester Core Strategy (2012).

2 DESCRIPTION OF HANGING DITCH

This planning condition relates to the (potential) “Hanging Ditch” as defined on the LLFA Data Screen 130049-DEM-2021. Refer to Appendix A.

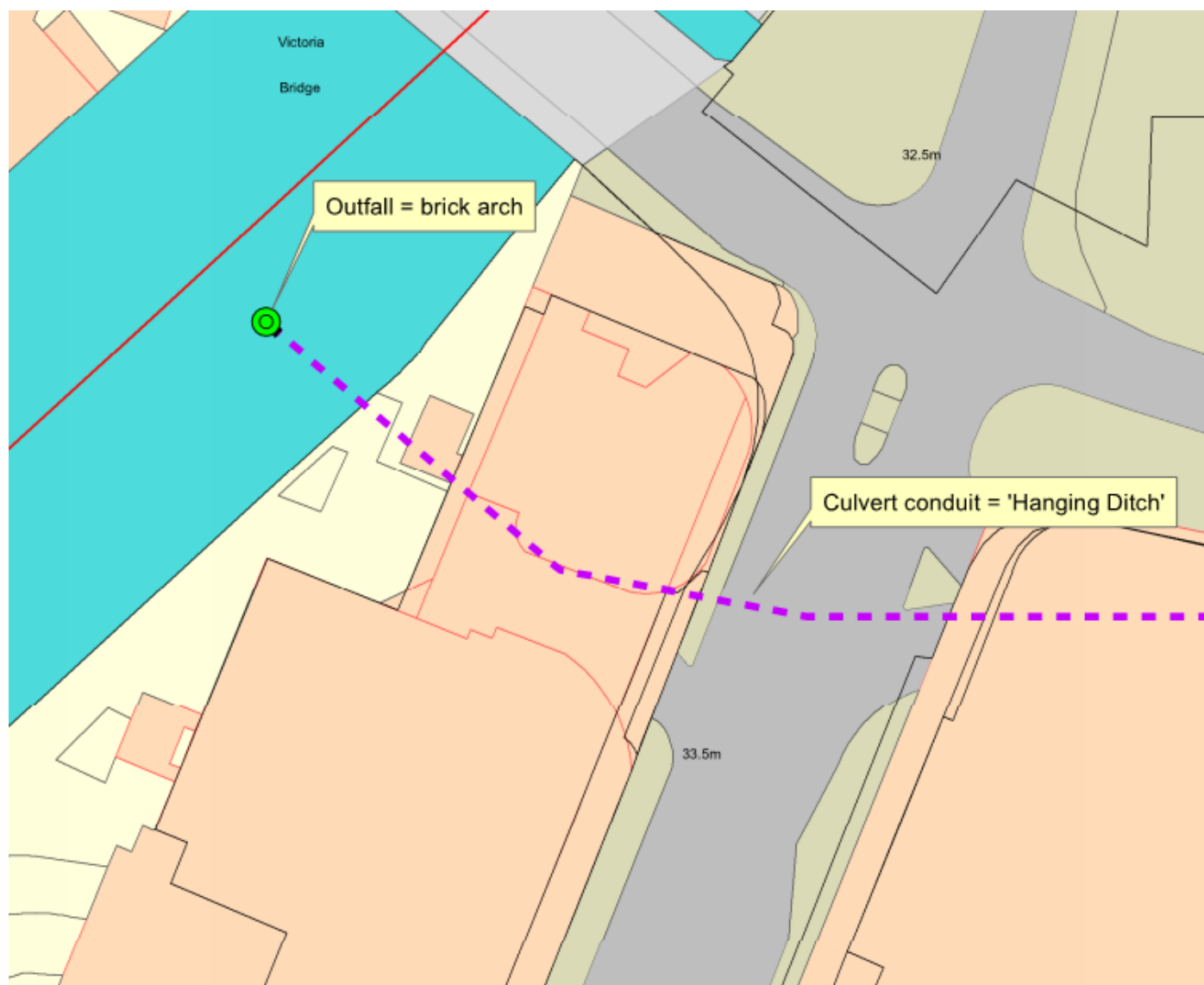


Figure 1: Position of Hanging Ditch from LLFA Data Screen

Note this is **not** the identified United Utilities (UU) combined sewer culvert overrun. The UU culvert has been identified and surveyed (Spatial and CCTV), UU have confirmed they are responsible for the culvert, and a build over application has been initiated with UU regarding modification of the culvert for construction of the new Residential Tower above.

3 CURRENT HANGING DITCH INVESTIGATION (RIVER WALL)

The following investigations have been conducted:

- All Manholes inside of the Existing LG3 Carpark level have been opened and CCTV surveyed with all connections either to the river, or the UU Sewer system confirmed.
 - No “Hanging Ditch” has been identified. There are Stormwater pipes to the river wall and the already identified northern UU Sewer overrun.
- A survey of the river wall has been undertaken by Northern Divers, refer to Appendix B. This identifies all the outlets along the river wall.
- The Northern Divers survey has been overlaid with the CCTV survey.
 - Within the vicinity of the “Hanging Ditch”, all outlets in the river have been accounted for by corresponding pipes identified in the CCTV manhole surveys.

Based on the above investigations, at this stage, it is not clear where the “Hanging Ditch” is or whether it exists.

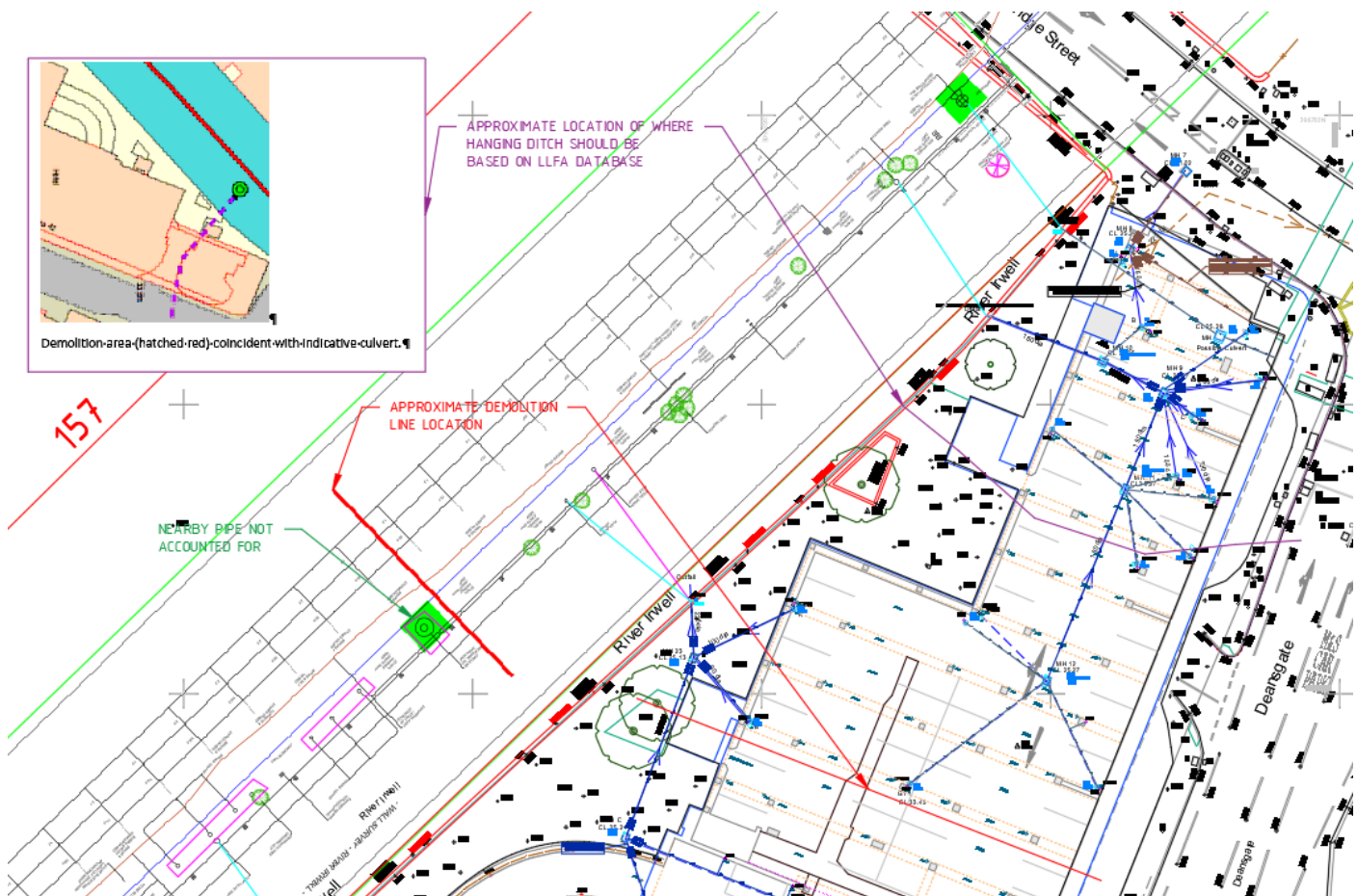


Figure 2: Overlay of CCTV and River Wall in Vicinity of Hanging Ditch

4 PROPOSED FURTHER INVESTIGATION DURING DEMOLITION

As part of Planning Application 130049 the existing structure to the North will be demolished. The extent of the initial demolition phase is shown below, this will involve excavation down to and removal of the existing concrete pad footings on the sandstone.

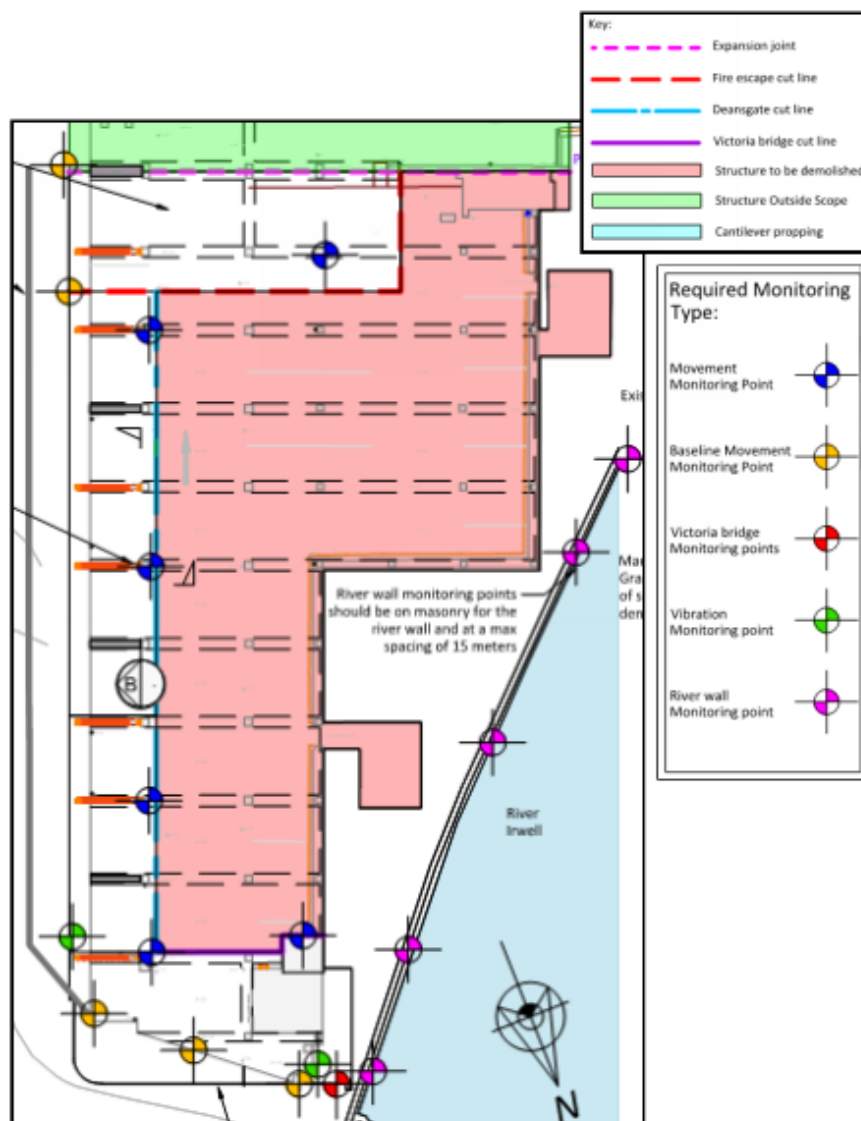


Figure 3: Extent of Initial Demolition

During the demolition phase, once sufficient demolition has occurred to allow this, a minimum 500mm wide trench strip, parallel to the river wall, will be made through the made fill subgrade level down to the top of the sandstone level. Refer to the Figure below.

From the current geotechnical borehole and trial pit investigations the sandstone is at maximum 1500mm deep from the existing paving/carpark level.

If the “Hanging Ditch” is present we would expect to find a deeper trench within the sandstone, running perpendicular to the 500mm wide strip that the culvert is inside of. If identified this trench would be further investigated along its length.

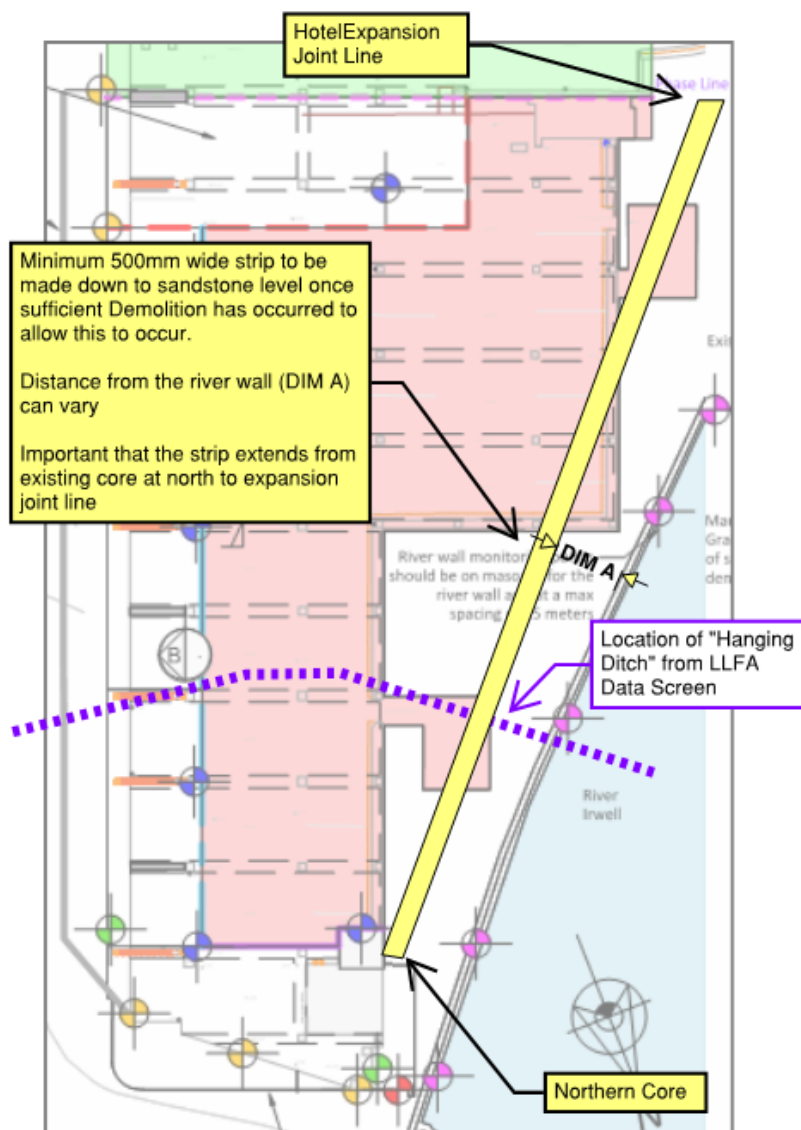


Figure 3: Extent of Initial Demolition

The results of this strip investigation will be recorded and provided to MCC and the LLFA.

If no unidentified culvert is found from this strip survey then we would propose take the above record as evidence of that, in order to discharge this planning condition.

5 IF THE HANGING DITCH IS IDENTIFIED

If an unidentified culvert is found, then MCC and the LLFA would be notified. Further investigation of that culvert would occur, this is likely to include:

- Further exposure of the top of the culvert along its length as part of the demolition;
- Spatial survey of the exposed sewer
- Identify outlets/manholes to allow CCTV along the sewer length;

Following the above further investigation, the design of the foundations of the Residential Structure would be modified to accommodate the culvert, similar to what has occurred for the identified UU combined sewer overrun.

This modified design would be submitted to MCC and the LLFA for consent, as stated in the planning condition, prior to construction.

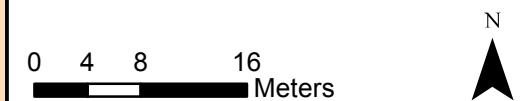
APPENDIX A – LLFA 130049-DEM-2021



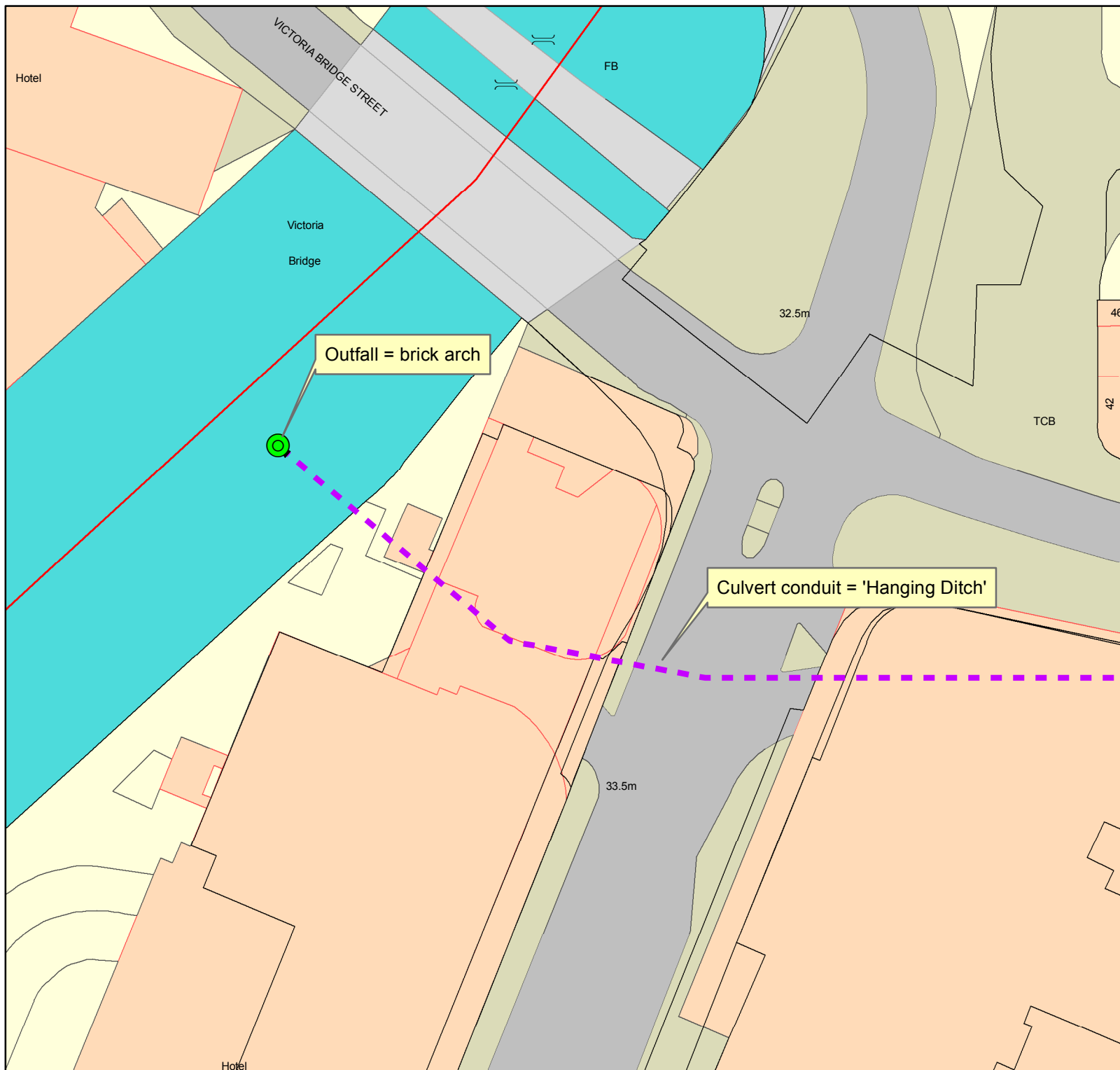
Address/Site Ref:
130049-DEM-2021

Author: Manchester City Council LLFA
Date: 14/05/2021
Scale: 1:569

The position of features shown on this plan is approximate only and is given in accordance with the best information currently available. Manchester City Council will not accept liability for any loss or damage caused by the actual position being different from those shown.

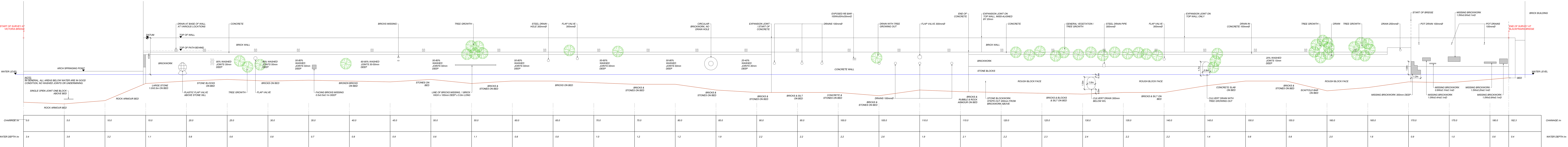


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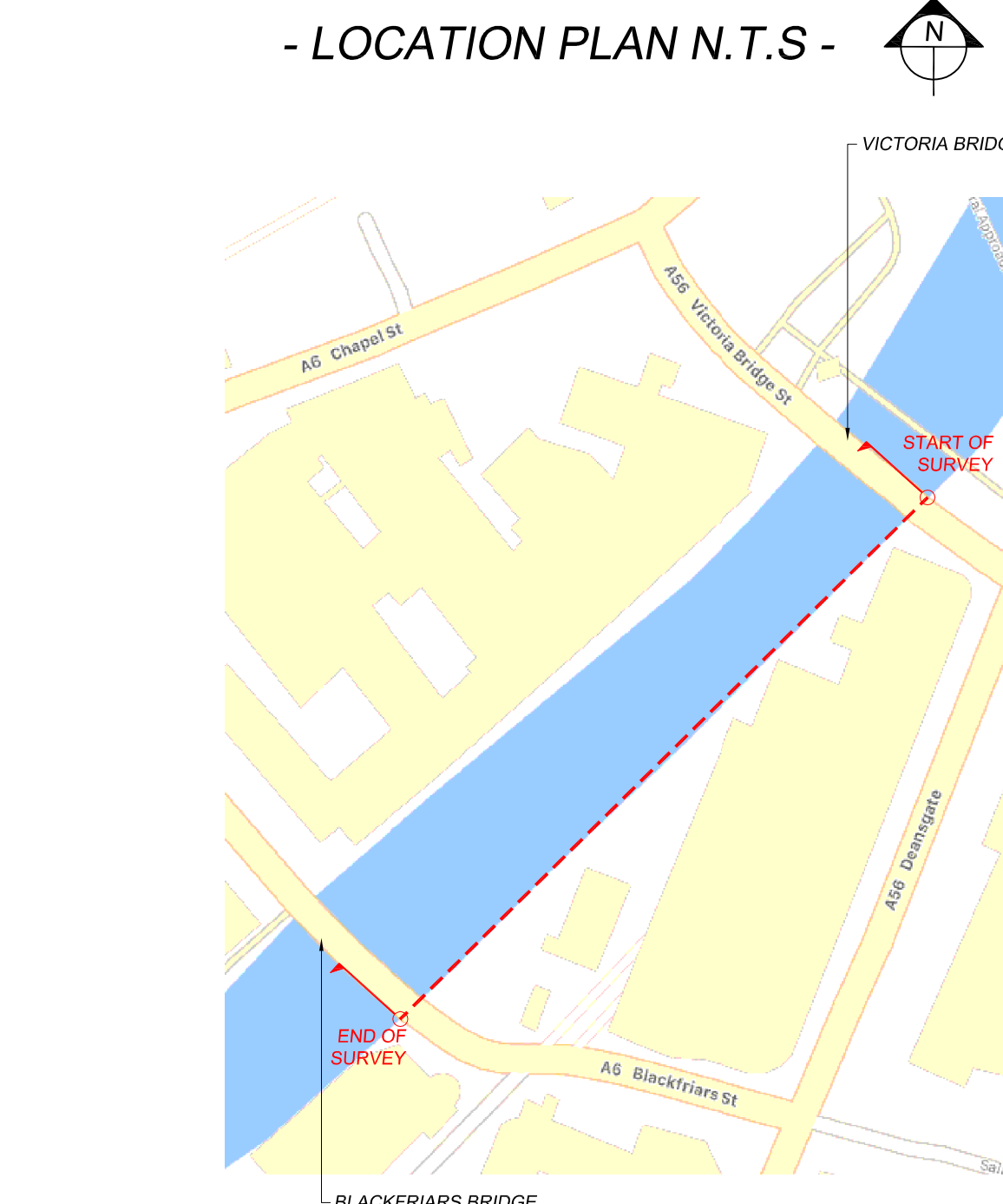
APPENDIX B – RIVER WALL SURVEY

- WALL SURVEY - RIVER IRWELL -



NOTES:
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
- DO NOT SCALE
- CONFIRM ALL DIMENSIONS ON SITE

KEY:
- PHOTO LOCATION
- TREE GROWTH



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Title: AA PROJECTS - RIVER IRWELL - ND9999
RENAISSANCE HOTEL RIVER WALL INSPECTION

Drawn by: R.R.	Date: 25.08.20	Scale: 1:100	Drawing No: AAP / 20 / 001	Rev:
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Report

Our Ref: ND9999

**Renaissance Hotel
Deansgate
Manchester**

**Inspection Date
20 / 21 August 2020**

**Job Description
Inspection to river wall**





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1 INTRODUCTION

CLIENT: **aaprojects.**

PROJECT: Condition assessment to the wall of the River Irwell fronting the True right hand bank of The Renaissance Hotel, Deansgate, Manchester.

LOCATION: Renaissance Hotel, Deansgate, Manchester. M3 2EQ.
Grid Ref: E383776 N398705 – E383663 N398590

DIVE TEAM:	Kevin Garrett	Diving Supervisor
	Adam Pockley	Diver
	James Bryan	Diver
	Alex Baker	Diver
	Richard Wilkins	Diver

DATE: 20 /21 August 2020

COMPILED BY: K Dunn

1.1 Project Description

A condition assessment to approximately 185.0m of the retaining fronting The Renaissance Hotel on the River Irwell has been carried out by Northern Divers (Eng.) Ltd in support of a development report commissioned by **aaprojects** at the above location.

The assessment is based on a tactile diving inspection of the wall comprising of both above and below water elements of the structure from the top of wall to bed level. The inspection does not include any foundations or construction details of elements below bed level.

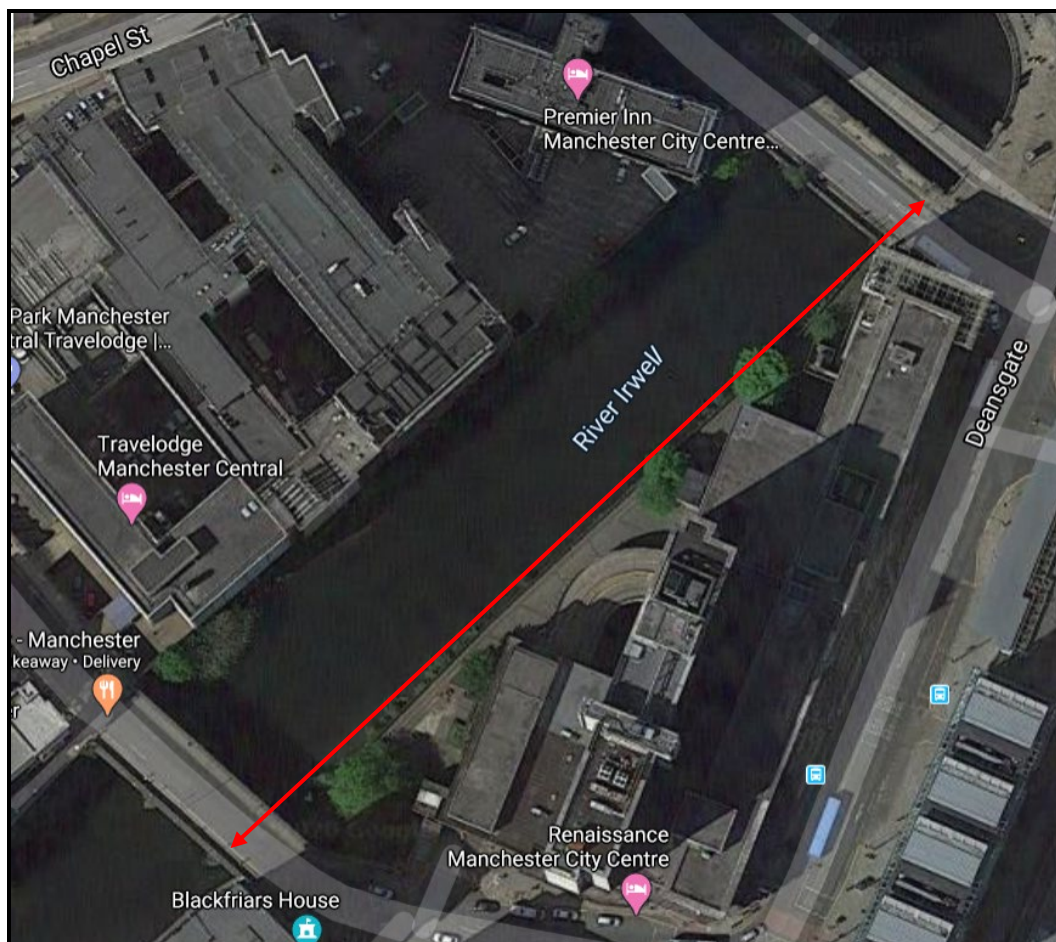
There has been no opening up or excavation behind the wall to confirm the extent of construction or dredging below existing bed level to the wall front to reveal wall condition below current siltation levels.

The diver's inspection has established water depths along the wall varying between 3.6m and 0.4m and a maximum depth in the river of 3.6m at the mid-point of Victoria Bridge, North of the hotel. The designed dredged depth of the river is unknown, and this assessment assumes that current depths are maintained.

It is understood from plans and layouts provided that the proposed use of the site is for commercial development. The report below is provided on the basis that the existing pedestrian area remains unchanged and that any imposed loads to this area will require further investigation, including trial excavations to the rear of the wall for any alternative development comprising greater imposed live loading.

The diving inspection was undertaken during daylight hours using surface supplied diving equipment to HSE / ACoPs regulations with diver to surface hard wire communications.

Location Plan



Extent of survey Grid Ref: E383776 N398705 – E383663 N398590

2 Inspection Findings & Photographs

The assessment has been broken down into sections which reflect changes in construction detail and areas of defects.

DESCRIPTION	STRUCTURAL ASSESSMENT DESCRIPTION
<u>Section 1: Ch 0m to 15m</u> Starting at the North elevation of Victoria Bridge upstream of the Renaissance Hotel. Construction :- Vertical stone blockwork from bed level to springing point forming	Abutment wall in this section was in good general condition with no missalignment of courses and being vertical in form. There is minor weathering throughout to the face of the structure above water level.

stone arch and stone ring voussoirs. 	Joints below the waterline were found to be in good order with minor washing to a localised area at chainage +5.0m. Rock armour on river bed abutting the base of the wall. There is no evidence of undermining or potential scour development.
<u>Section 2: Ch 15m to 91m</u> Construction :- Brick with concrete capping stone to bed level. Brick fronting the perestrian area retaining wall. 	Joints above water displaying extensive mortar loss to aproximately 80% of the structure with a maximum depth of up to 50mm. Below water mortar loss was noted to be 80% with a maximum depth of 50mm. Random areas of missing and loose brickwork notably at chainage 51m – 57m over six courses in hieght. (3.6m2) Areas of vegetaion growth was viewed along wall elevation were the root growth has caused minor lateral displacement and structural degregation. Drain outlet with flap valve visable at chainge 20.5m. Brick and general river debris on river bed abutting the base of the wall. There is no evidence of undermining or potential scour development.
<u>Section 3: Ch 91m to 116m</u> Construction :- Vertical concrete wall to bed level. Brick fronting the perestrian area retaining wall.	Concrete wall in this section is in a fair general condition with no misalignment and vertical in form. There is a number of drain outlets noted along this section. Isolated area of vegetation growth at chainage 105m. Soft marine growth at waterline.



Brick and general river debris on river bed abutting the base of the wall.

There is no evidence of undermining or potential scour development.

Section 4: Ch 116m to 170m

Construction :- Brick with concrete capping stone on stone blockwork to bed level. Brick fronting the pedestrian area retaining wall.



Joints above water displaying extensive mortar loss to approximately 20% of the structure with a maximum depth of up to 15mm.

Below water to bed the blockwork was noted to be in fair general condition with no areas of missing material.

There are areas of re-pointing visible above water which cover around 40% of the total area in this section.

Areas of vegetation growth were viewed along the wall elevation where the root growth has caused lateral displacement and structural degradation. Brick and general river debris on river bed abutting the base of the wall.

There is no evidence of undermining or potential scour development.

Section 5: Ch 170m to 182m

Construction :- Brick on stone blockwork at water level. Stone blockwork to bed level.
The wall steps out by two courses.

Mortar loss displayed to 90% of this section with max depths of 100mm.

Random areas of missing and loose brickwork. Minor vegetation growth at water level.

Below water to bed the blockwork was noted to be in general fair condition with no areas of missing material.



Brick and general river debris on river bed abutting the base of the wall.

There is no evidence of undermining or potential scour development.

Photographic Section.



Above:- Ch 0m – 15m Blockwork to Victoria Bridge



Above:- General view of wall at Ch 35m. Open joints and vegetation growth



Above :- Ch 55m, displaying displacement of brick courses due to tree and vegetation growth.



Above:- General view of wall at Ch 70m. Open joints and vegetation growth



Above:- General view of Ch 95m, showing concrete wall condition.



Above:- General view around Ch102m showing vegetation growth through concrete wall



Above:- General of Ch115m showing change in construction detail



Above:- General view of Ch120m showing condition of wall



Above:- General view showing condition of wall and construction detail



Above:- Ch145m, showing vegetation growth and culvert entrance



Above:- Ch 170m, showing vegetation growth



Above:- Ch 175m, showing condition of displaced brickwork



Above:- Ch 182m, showing condition of displaced brickwork. End of survey.



Summary

Much of the wall has structural integrity however there are a number of areas where intervention is required to either reconstruct or repair the wall.

It is assumed that as part of any redevelopment of the site there is a requirement for the wall to be returned to a condition that would ensure public safety, minimise ongoing maintenance liabilities and enhance visual amenity.

It is recommended that a scheme is prepared for the remediation of the structurally unsound elements of the structure together with refurbishment works to meet the requirements of any redevelopment.

There was no evidence of undermining, scour, or areas of potential scour to the retaining wall at bed level.