Cellars Clough Boundary Retaining Wall & Footbridge

Visual Survey Report

AUGUST 2025

PREPARED FOR

CITU

Visual Survey Report

Prepared By	Isaac Bass, Beng, MSc *Project Engineer*
Reviewed By	Thomas Audsley, Meng (Hons), CEng, MIStructE *Associate*
Report Reference	3884-CIV-XX-XX-R-S-00001
Issued	P01 – 11/08/2025
Revised	

CONTENTS

CONTENTS 1
1. Executive Summary 1
1.1. Considerations and Constraints 1
2. Introduction 2
2.1. The Brief 2
2.2. Scope and limitations 2
3. Site Information 3
3.1. Location 3
4. Structural Form 4
4.1. Retaining Wall 4
4.2. Footbridge 10
5. Condition 14
5.1. Retaining Wall 14
5.2. Footbridge 26
6. Recommendations 31
Appendix A 32
Appendix B 33

1. Executive Summary

The appraisal has been informed by a non-intrusive visual survey of the retaining wall and footbridge undertaken by Civic Engineers on 22nd July 2025.

Further investigations and surveys are to take place to fully assess areas that were not accessible at the time of the survey. This includes sections of the wall obscured by dense shrubbery and the southern span of the footbridge, where access is not permitted due to the structure being unstable and partially collapsed.

1.1. Considerations and Constraints

Canal/river

The retaining wall is located adjacent to the Huddersfield Narrow Canal, with the footbridge crossing it from the southern access located within 5m of the River Colne, which is classed as a Main River by the EA. A permit may be required for the proposed site activities.

- Erecting scaffolding or other temporary structure which extends over the culvert
- Any activity within 8 metres of any flood defence structure or culvert on a main river

2. Introduction

2.1. The Brief

Civic Engineers has been appointed by Citu to undertake a structural appraisal of the existing retaining wall comprising the northern site boundary along the Huddersfield Narrow Canal, and Footbridge No. 53, situated on the western boundary of the site of the former Cellars Clough Mill, Marsden, Yorkshire.

The following report summarises the visual structural defects recorded by Civic Engineers.

The report provides a series of recommendations for further surveys and testing and outlines the likely repairs and remediations required. These should be regarded as minimum necessary recommendations by the reader.

2.2. Scope and limitations

Civic Engineers has been appointed by Citu to carry out an initial site visit and non-intrusive inspection of Footbridge No. 53 and the retaining wall. The scope of this report is limited to the primary structure of the structures that could reasonably be inspected during the site visit.

Intrusive investigations have not yet been carried out, and this report does not include any composition or materials testing. Other elements that may influence renovation work, such as architectural or landscaping finishes, have not been reviewed or commented on within this report.

It is the nature of existing structures that they contain defects, some of which are hidden or may not be obvious. It is not possible to fully check and appraise every element of an existing structure, so some defects may remain hidden. Our approach aims to mitigate structural problems and defects which we encounter during the course of work with a view to extending the useful life expectancy of the structure. This approach cannot be judged by comparing the works undertaken with current standards of new construction and its success will also depend on proper future maintenance and repair of the structure.

This report is not exhaustive and aims to provide an initial overall description of the structure and its current condition based on visual assessment of safely accessible areas. Whilst all reasonable care has been exercised in identifying any faults or defects, the appraisal is confined to the areas accessible at the time of visit. Further surveys and investigations will be required to inform designs and repair details.

3. Site Information

3.1. Location

The development site, known as Marsden Island, is located on the site of the demolished Cellars Clough Mill. The site entrance, what 3 words 'runner.shrub.nozzle', is accessed via an unnamed access road off the A62 between Marsden and Slaithwaite.

Figure 1 – Site location.

The footbridge is located on the west boundary, orientated north to south. It is split into 2No. spans, the southern section spans the former overflow pond, and the northern section spans the Huddersfield Narrow Canal, with the northern access leading to Sand Hill Cottages. The section of retaining wall to be surveyed is defined by the entire northern edge of the boundary, starting at Footbridge No. 53 at the western point and concluding at the position indicated in Figure 1.

Running across the southern boundary of the development site is the River Colne, which is indicated on the EA's Statutory Main River Map.

Figure 2 – EA Statutory Main River Map

4. Structural Form

4.1. Retaining Wall

Due to the length and age of the retaining wall, there is considerable variation in the structural form, and was subdivided for commenting on observations Refer to Appendix A for reference plan.

4.1.1. Wall length A

From the western extremity, at the southern pier of the northern section of the footbridge, to marker 2200 (see key sketch), the wall retains the footbridge access path and stairs, which are generally at a level 1 m to 2 m higher than the level of the footpath adjacent to the canal.

Stone units are typically 150 mm DP, 350-600 mm L x 250 mm W, although there is considerable variation. Discrete zones of the wall have been historically filled with standard-sized brick units. Generally, joints between masonry units are filled with cementitious mortar, although there are considerable zones where mortar has spalled and fallen away.

The access footpath is supported by the retaining wall. It consists of large stone flags that occupy the full width of the footpath, approximately 600 mm wide, and over time have settled, which has resulted in an uneven surface.

The retaining wall supports a balustrade consisting of 1.1 m tall cast-iron posts and 2 No. cast-iron rods which comprise the railing. The posts are generally fixed to the top of the wall with cast-iron bolts fixed into large stone pads (approx. 300 mm DP x 400 mm L), although the provision of bolts and padstones was not observed at the base of every post.

On the opposite (south) side of the raised footpath, the top of the retaining wall is approximately 1 m above the footpath level. It is approximately 2.3 m wide at the top and faced with fabric consistent with the lower (north) side wall, while the cavity is filled with earth. Access was not possible for a large proportion of the south side of the access stair wall due to dense shrubbery that had been established in the former overflow pond.

A large bund of material consisting of soil and stone masonry units, consistent with the south stair wall, protrudes southward. Considering the bund's composition and proximity to the overflow pond, it stands to reason that it previously formed part of the external mill wall, retaining the pressures subjected to it by the build-up of water therein.

Beyond the foot of the access stair, to marker 2200, the wall is approx. 3.2 m tall from the footpath level. The build-up of this section of wall consists of an external (north) skin of uniform stone units with a 100 mm cavity and an internal (south) skin of standard-sized brick units (evidence of the former industrial building). The two skins are joined across the cavity with wire ties.

4.1.2. Wall length B

From marker 2200 to marker 2270 + 7m, the stone retaining wall is formed by the wall of the former mill building, which has been demolished to a height of 800 mm above the footpath level, although there is some slight variation.

The external (north) skin consists of uniform stone units, typically 150 mm DP x 400 mm L x 200 mm W, with a cementitious mortar in the gaps between units. Between markers 2210 & 2220, the wall is obscured by dense shrubbery and cannot be commented on; however, the fabric on either side of this section is consistent, so it can be reasonably assumed to have the same makeup. There is a 50-75 mm wide cavity between the external and internal skins, which is filled with soil and demolition debris, which likely originates from the previous demolition of the wall down to its current level.

Similar to the external skin, the internal (south) skin consists of stone units; however, they were observed to have a considerable degree of variation in both size and aspect ratio. There are localised areas of the internal skin that consist of standard-sized brick units and large stone sills, which are evidence of former windows and door openings.

Along the internal leaf, there is a defining separation in the provision of mortar from existing site level to approximately 2m height, which coincides with the level of the footpath on the external (north) side of the wall. There are also locations which show clear evidence of former internal walls which have been demolished, which are consistent with the build-up of the retaining wall.

4.1.3. Wall length C

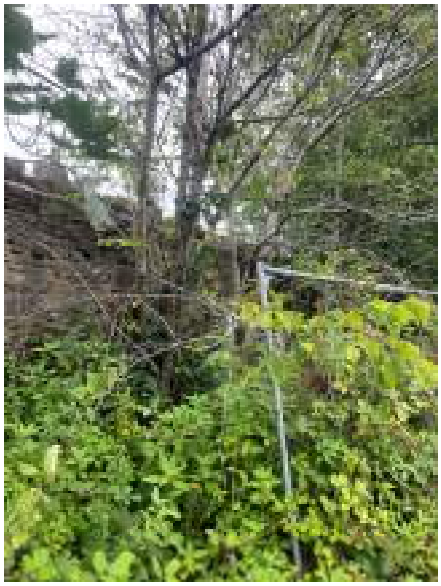
At marker 2270 + 7m, the wall returns, signifying the extent of the former mill building. At this position, the retaining wall continues with an obvious distinction in composition, which continues to the eastern extremity at marker 2330.

The height of the wall along this section consists of stone units 750 mm (4-5 courses) tall with considerable variation in size and aspect ratio with mortar. The upper course features cuboidal stone units alternating with angular stone units laid on the shorter dimension in a decorative fashion.

At marker 2270 + 8m, an opening has been formed by demolishing a 3m section of wall to permit access to the footpath from the lower-level site compound, via a compacted soil ramp with a surface

layer of hardcore stone. There is evidence that the demolition works have affected the stability of 1-2 m sections of the wall on either side of the opening.

The southern side of the wall is obscured by dense shrubbery, so the structural form of the retaining height of the wall cannot be commented on, although it can be reasonably assumed to be consistent with the fabric observed on the northern side.



4.2. Footbridge

The footbridge, located at the western site boundary, has been subdivided into the northern and southern sections for commenting on.

4.2.1. North Footbridge

The northern footbridge section spans approximately 13.5 m across the Huddersfield Narrow Canal. The primary structure consists of 2 No. steel stringers, each consisting of 3 No. PFC 300x90 sections connected via a bolted plate splice connection. The structural deck consists of 5No. 130 mm W x 30 mm D x 3000 mm L timber planks.



The handrail is formed via 1 m tall, 90 mm x 90 mm timber posts positioned at 1.5 m centres, which are fixed to the steel stringers via a 400 mm bolted steel channel. The posts support 2 No. 90 mm D x 45 mm W timber handrails fixed to posts via screw fixings.



The footbridge supports 100 mm diameter pipework, via planks which are fixed to the underside of the steel stringers at 3 m centres (every other balustrade post), which cantilever out. The in-plane stability of the structure appears to be permitted via on-plan, crossed tie rods connected to opposite ends of adjacent pipework planks.


The footbridge is supported by 1.4 m wide load-bearing stone masonry piers.

4.2.2. South Footbridge

Measured from topographical survey drawings, the southern footbridge spans approx. 30.5m across the now-filled overflow pond that formerly serviced the former mill building.

Access was not permitted to the footbridge. The footbridge was blocked at either end due to a partial collapse at the southern end, and there was very dense shrubbery established within the overflow pond below. Observations could only be permitted of the deck from either end of the footbridge, behind barriers, so a full appraisal of the structure could not be conducted.

The bridge was observed to have a concrete/bituminous surface supporting a steel railing balustrade.

No further observations were made.

5. Condition

5.1. Retaining Wall

Upon inspection of the retaining wall, a suite of condition defects was observed. For the purpose of reporting, the defects are summarised in the following section of the report with example images highlighting observations. All defects are documented in the defect key plan.

Please refer to the defects key plan, found in Appendix B.

Summary of defects:

D1 – Cracked or Damaged Masonry

D2 – Missing Masonry Units

D3 – Cracked or Damaged Mortar

D4 – Missing Mortar

D5 – Vegetation Ingress

D6 – Out-of-plumb Wall

D7 – Unstable Wall

D8 – Major Tree Root Ingress

D9 – Missing Balustrade Post Fixings

D10 – Missing or Damaged Balustrade Railing

D11 – Dense Shrubbery Obscuring Condition

5.1.1. Cracked or Damaged Masonry

5.1.2. Missing Masonry Units

5.1.3. Cracked or Damaged Mortar

5.1.4. Missing Mortar

5.1.5. Vegetation Ingress

5.1.6. Out-of-plumb Wall

5.1.7. Unstable Wall

5.1.8. Major Tree Root Ingress

5.1.9. Missing Balustrade Post Fixings

5.1.10. Missing or Damaged Balustrade Railing

5.1.11. Dense Shrubbery Obscuring Condition

5.2. Footbridge

Upon inspection of the footbridge, a suite of condition defects was observed. For the purpose of reporting, the defects are summarised in the following section of the report with example images highlighting observations. All defects are documented in the defect key plan.

Please refer to the defects key plan, found in Appendix C.

Summary of defects:

D12 – Worn protective coating to steelwork

D13 – Damaged Timber Treads

D14 – Moss Growth to handrail & Balustrade

D15 – Vegetation Ingress

5.2.1. Worn protective coating to steelwork

5.2.2. Damaged Timber Treads

5.2.3. Moss Growth to handrail & Balustrade

5.2.4. Vegetation Ingress

6. Recommendations

No additional specialist surveys are proposed at the time of this report. An additional visual inspection of the wall will need to be undertaken once shrubbery preventing access and review is removed. The current intention with the footbridge is unknown, with it currently not fully accessible and closed off to public access. If the intention is to keep the footbridge in place for future use, discussions will need to be undertaken to agree on how to proceed with the required following survey:

- Full visual survey – if access along the bridge is not permissible, then this might need to be undertaken by drone
- Specialist timber damp and rot survey

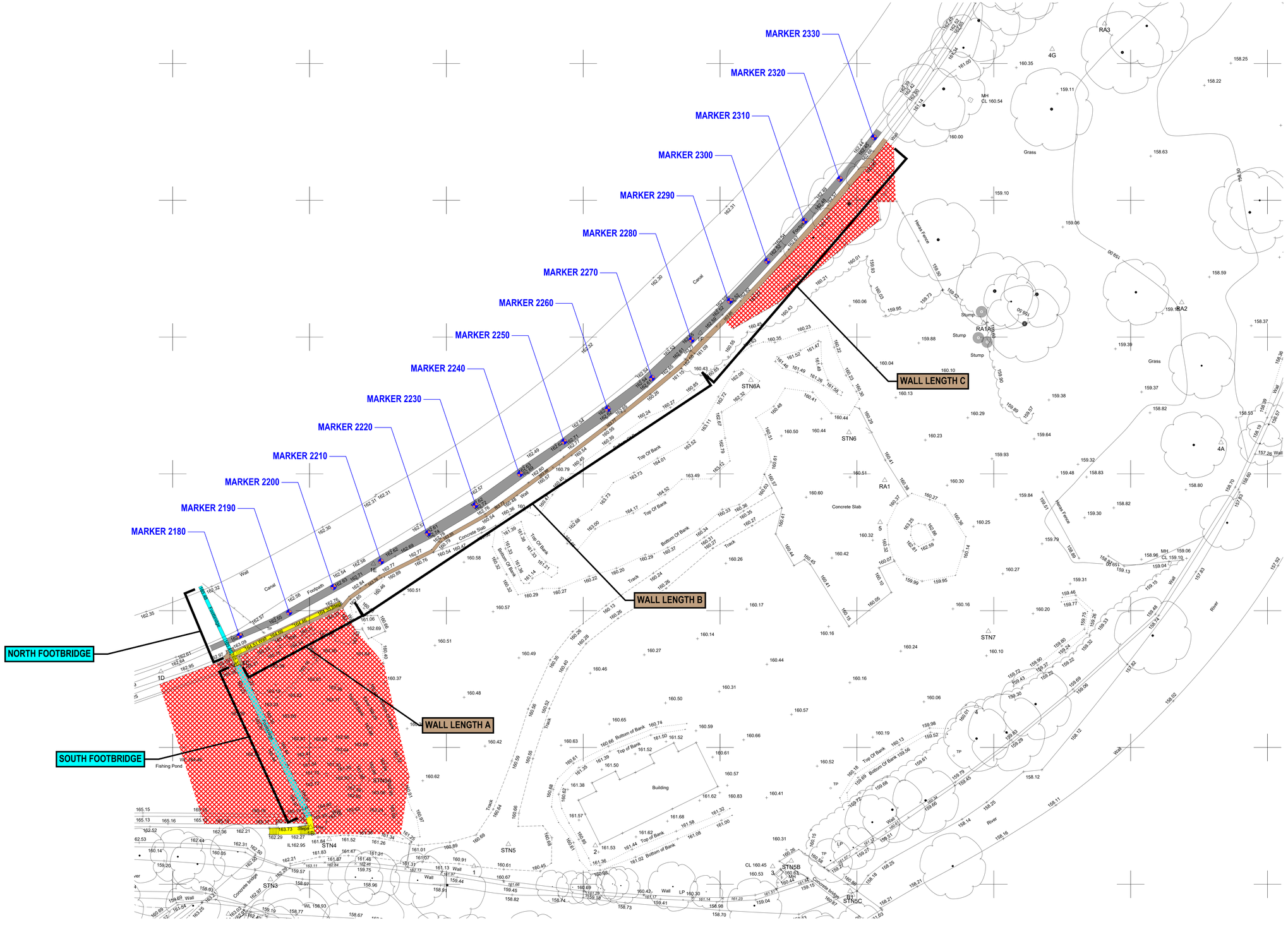
Depending on the outcome of the above, further surveys may be required to confirm the condition and lifespan of the footbridge.

The below table summarises the known current defects and proposed remediation works required.

Item	Defect	Remediation
D1	Cracked or Damaged Masonry	Remove and replace damaged units
D2	Missing Masonry Units	Replace missing units
D3	Cracked or Damaged Mortar	Scabble out and repoint mortar
D4	Missing Mortar	Repoint mortar
D5	Vegetation Ingress	Remove vegetation and treat joint. Repoint mortar.
D6	Out-of-plumb Wall	Dismantle and replace section of affected wall
D7	Unstable Wall	Dismantle and replace section of affected wall
D8	Major Tree Root Ingress	Remove vegetation and treat joint. Repoint mortar. Rebuild wall if root ingress has caused instability.
D9	Missing Balustrade Post Fixings	Replace
D10	Missing or Damaged Balustrade Railing	Remove and replace
D11	Dense Shrubbery Obscuring Condition	Remove for further inspection
D12	Warn protective coating to steelwork	Sand blast to remove, and recoat with bituminous based paint
D13	Damaged Timber Treads	Replace and remove treads to match existing
D14	Moss Growth to handrail & Balustrade	Remove moss and treat affected member. Remove and replace if rot is present
D15	Vegetation Ingress	Remove vegetation and treat.

Appendix A

Footbridge & Retaining Wall Key Plan



STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A.E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

NOTES:

1.XXXXX

LEGEND

- RETAINING WALL
- FOOTBRIDGE
- FOOTBRIDGE ACCESS & STAIRS
- FOOTPATH
- 10m MARKERS
- INACCESSIBLE

XX.XX.XX			XX	XX
DATE	REV	DESCRIPTION	DRAWN	CHKD

CIVIC ENGINEERS

civicengineers.com

PROJECT

CELLARS CLOUGH

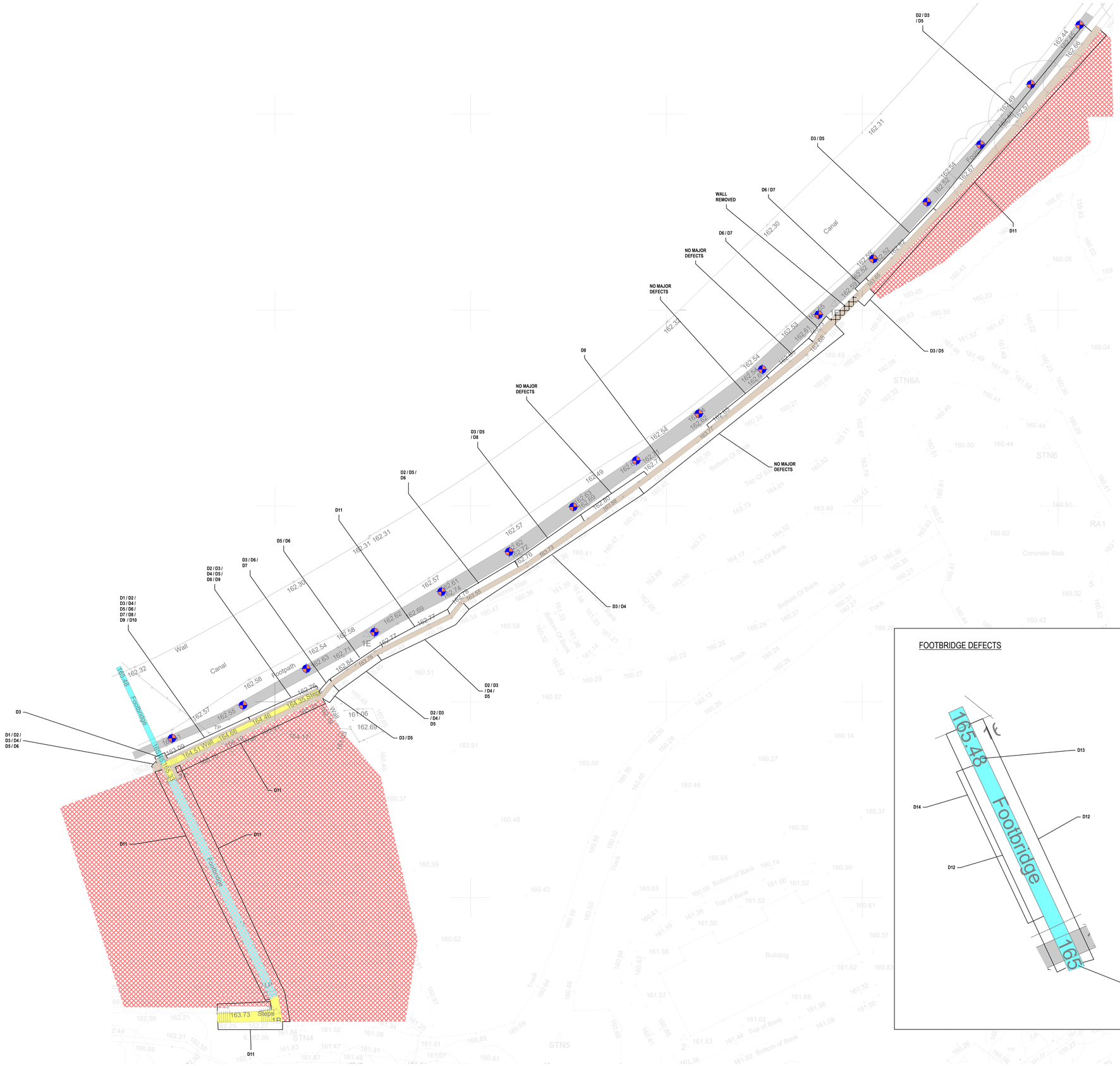
TITLE

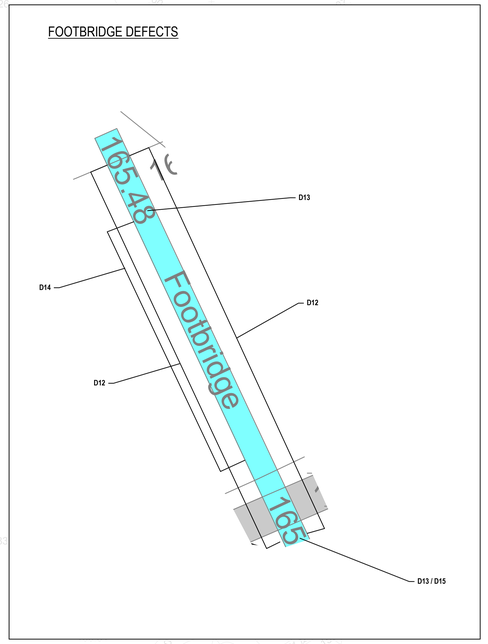
REFERENCE KEY PLAN

DRAWING STATUS				STATUS CODE
-				-
CE PROJECT No.	SCALE @ A0	DATE CREATED	DRAWN	CHECKED
-	1:250	-	-	-
DRAWING No.				REV
XXXX-CIV-XX-XX-D-X-XXXXX				-

Appendix B

Defects Key Plan





STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A.E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

NOTES:

WALL DEFECT LEGEND

D1	CRACKED / DAMAGED MASONRY UNIT
D2	MISSING MASONRY UNIT
D3	CRACKED / DAMAGED MORTAR
D4	MISSING MORTAR
D5	VEGETATION INGRESS
D6	OUT-OF-PLUMB WALL
D7	UNSTABLE WALL
D8	MAJOR TREE ROOT INGRESS
D9	MISSING BALUSTRADE POST FIXING
D10	MISSING / DAMAGED BALUSTRADE RAILING
D11	DENSE SHRUBBERY OBSCURING CONDITION

FOOTBRIDGE DEFECT LEGEND

D12	WARN PROTECTIVE COATING
D13	DAMAGED TREADS
D14	MOSS GROWTH TO HANDRAIL
D15	VEGETATION INGRESS

XX.XX.XX			XX	XX
DATE	REV	DESCRIPTION	DRAWN	CHKD

CIVIC ENGINEERS

civicengineers.com

PROJECT

CELLARS CLOUGH

TITLE

DEFECT KEY PLAN

DRAWING STATUS				STATUS CODE
-				-
CE PROJECT No.	SCALE @ A0	DATE CREATED	DRAWN	CHECKED
-	1:250	-	-	-
DRAWING No.				REV
XXXX-CIV-XX-XX-D-X-XXXXX				-

CIVIC

civicengineers.com

thriving
together