

LISTED BUILDING CONSENT APPLICATION

Lock 85, (the Undercroft) Rochdale Canal Manchester

**Addition of oak fendering to new oak
top/head lock gates
Remedial works to 'bywash' arm wall to
stem leakage**



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Canal & River Trust

Submission by Judy Jones BA(Hons) MA IHBC, Heritage Advisor

OVERVIEW

This statement has been prepared to support a Listed Building application by the Canal & River Trust in relation to the proposed installation of oak fendering to the new top or head gates at Lock 85, in the tunnel between Piccadilly and Dale Street, Rochdale Canal.

Lock 85 is a broad beam lock and is situated in the Undercroft, which takes the canal under a multistorey block in the Piccadilly area of Manchester city centre.

Also remedial works to the 'bywash' arm will also be undertaken during the stoppage to stem increased leakage onto the towpath. The special 'rope' design brick setts on the towpath in this area will be repaired and reinstated like for like.

This statement aims to provide supporting information about the historic character of the lock, the methodology of the proposal and to address the relevant impact of the development on this designated asset.

Lock 85, is a Grade II Listed structure.

LOCATION OF THE DEVELOPMENT

The lock is located on the Rochdale Canal in Manchester, under London Road.

Easting 384637

Northing 398072

DESCRIPTION OF PROPOSED DEVELOPMENT

The Listed Building application concerns the following –

- **Addition of oak fendering to top/head lock gate**
- **Bywash culvert investigation/remedial works to stem leakage**

APPLICANT

Canal & River Trust

STATEMENT PREPARED BY

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Background history of the Rochdale Canal

Lock 85 is situated on the Rochdale Canal. The Rochdale Canal is a trans-Pennine waterway, opened in sections between 1799 and 1804, with several eminent canal engineers involved in the design and construction process including William Crosley (Snr), John Rennie, and William Jessop, and numerous assistants.

In 1766, a group of businessmen met in the Union Flag Inn in Rochdale to propose a shorter route between Manchester and Leeds via Rochdale. James Brindley was commissioned to survey two routes: one via Bury and one more directly via Heywood. However, nothing came from this original exploration. It wasn't until 1790 that a meeting was called in Hebden Bridge to discuss extending the Calder and Hebble Navigation westwards that momentum started to gather again. The Duke of Bridgewater agreed for a junction between the Rochdale and the Bridgewater at Castlefield in order to compete with other trans-Pennine traffic. A revised Rochdale Canal Bill was passed in 1794 and construction began. By 1799 the canal was open between Sowerby Bridge and Todmorden and from Manchester to Rochdale. A proposed 1.6 mile tunnel between Walsden and Sladen was replaced by more locks and a higher summit level at 600 feet. The resulting shorter summit level meant that many reservoirs were required to prevent the summit level drying up and to maintain an available supply of water for the 92 locks.

The canal opened through to Manchester in 1804. This made it the first trans-Pennine canal route, as the Huddersfield, experiencing much difficulty in the Standedge Tunnel construction, did not open until 1811. The Leeds and Liverpool, with a much longer route, was not fully opened until 1816. In 1830 a railway surveyed by George Stephenson was proposed, following closely the route of the canal. When the Manchester and Leeds Railway opened in 1841, the canal company had to reduce tolls to retain business. The company resisted take-over bids from railway companies but leased the canal to a consortium of railway companies in 1855. The canal remained profitable for some time but by the twentieth century the tonnage being carried was in sharp decline. In 1937 the last boat made the through journey across the Pennines on the Rochdale Canal.

In 1952, the canal was closed apart from the short section between Castlefield and the Ashton Canal junction at Piccadilly. The Ashton was abandoned in 1962 and by 1965 the nine locks on the Rochdale ('Rochdale Nine') through Manchester city centre were almost unusable. Enthusiastic supporters re-opened the Ashton in 1974 and the Rochdale Canal in Manchester was made good. The Rochdale Canal Society was formed to promote the restoration of the canal and in the 1980s and 1990s small scale work began to re-open stretches of the canal between Todmorden and Sowerby Bridge. This involved restoring bridges and locks to navigable condition.

The most major project was the construction of the new Tuel Lane lock and tunnel in Sowerby Bridge. The lock replaced two locks in an infilled section and, with a fall of almost 20 feet, is the deepest lock on the inland waterways system. In 1996 the canal was opened to navigation once again between Sowerby Bridge and the summit level. In 2000, the canal was transferred from the Rochdale Canal Company to the Waterways Trust. Funding of £23m was announced, mostly from the Millennium Commission and English Partnerships that would enable the remaining obstacles to be removed. In July 2002, the whole canal became navigable once again, almost 200 years after its original opening.

Significance of the Heritage Asset

The National Planning Policy Framework (NPPF) 2012 provides the Government's national planning policy of the conservation of the historic environment, in respect of information requirements it sets out that:

'In determining applications, local planning authorities should require an applicant to describe the significance of any assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance'

It is therefore accepted that in order for the LPA to consider this application it is necessary for the applicant to provide a detailed description and justification of the works.

Assessment of significance

The April 2008 'Conservation Principles Policies and Guidance', published by English Heritage (now Historic England), states that 'understanding the significance of places is vital' and that 'articulating the values and significance ... is necessary to inform decisions about the future '

The English Heritage/Historic England guidance describes a range of inter-related 'heritage values' that may be attached to historic places, arranged in four groups:

- Evidential value: the potential of a place to yield evidence about past human activity;
- Historical value: the ways in which past people, events and aspects of life can be connected through a place to the present – it tends to be illustrative or associative;
- Aesthetic value: the ways in which people draw sensory and intellectual stimulation from a place; and
- Communal value: the meanings of a place for the people who relate to it, or for whom it figures in their collective experience of memory.

The lock has **Historical value**, as it forms part of the historic national canal network.

It is one of the locks forming part of what is known as the Cheshire Ring. It is a busy cruising waterway and therefore must feature in the memory of those who live, work and not least cruise in the locality. Therefore the lock is of both **Evidential and Communal value**.

Statutory List Description

The lock is a Grade 2 listed asset. The list description reads –

SJ8498SE ROCHDALE CANAL 698-1/29/356 Lock No.85, in tunnel between Piccadilly and Dale Street

GV II

Canal lock. 1804-5, for Rochdale Canal Company; restored. Coursed squared sandstone, wooden gates. Chamber of 14-foot width with pairs of gates at both ends, ladder in centre of south side. Second in series of 9 locks on extension linking former Rochdale Canal basin at Dale Street with Bridgewater Canal basin at Castlefield, all in working order.

Listing NGR: SJ8466698090v

Reasoning for the proposed works

- **Replacement gate with fenders**

The existing top or head gate was damaged by boat impact in 2021. The LPA supported the installation of a steel brace to be inserted as a temporary measure with the assurance that the gates would be replaced with new gates, including associated fittings, at the earliest opportunity.



Whilst installing these new oak gates, the Trust would like to take the opportunity to add a simple oak fender as has been done elsewhere on the Rochdale canal locks.

Horizontal timber gate fenders are required to both gates between the top beam & balance beam. The horizontal type has been selected to minimise the risk of causing flooding due to restricting the weirage capacity over the top beam.

Canal & River Trust Minimum Safety Standards require that: *“lock chambers and gates are free of protrusions / indentations that could snag boats. Gates to be fendered”*.

Fendering is fitted to lock gates for two purposes:

- to reduce the risk of craft becoming entangled on gates
- to reduce the risk of damage to gates caused by boats

Key areas where boats become caught on gates:

- **Top** and Bottom Gates - Between the balance beam and the top bar of the gate

Since incidents recorded in 2008, Canal & River Trust has reduced the numbers by installing fendering to lock gates across the network. Lock 85 requires fendering to the top gate to bring them in line with others on the Rochdale Canal and elsewhere.

The objective is to reduce the risk of boats catching in between the timbers forming the gate.

There have been examples in the past of boats getting caught in the gap between the top of the gate and the upper bar of the gate leaf. The addition of fendering prevents this happening, and is designed to be simple, allowing vision through to avoid damage to the aesthetic of the gate. The design also allows water to weir over the gates at times of high water levels as outlined below.

Weirage



The top bar of the gate frame is often used as a weir and this is the case on the Rochdale Canal. Usually, this is only needed in flood conditions, but occasionally the gates provide the only water level control system on the pound.

Considering the flooding in 2012 and 2015 in this region, and the impact on the Rochdale Canal, it is deemed sensible to install a horizontal style timber fender on all of the gates.

This will maximise weirage during flood conditions at all points on the canal. It is proposed that this design should also bring continuity to all gates, with horizontal fendering being proposed for all fendering on this waterway.

- **Bywash culvert investigation/remedial works to stem leakage**

There is extensive leakage from the redundant 'by-wash culvert', through the wall and onto the brick setted towpath.



Historic maps show some former wharfage in this area –



1890

A wall has been constructed at an unknown date across what appears to be a former loading bay/wharfage. This wall is leaking and water is appearing on the towpath, and the specially designed brick setts have sunk and puddling is occurring which is causing the towpath to become slippery and uneven.



Proposed design

- **Replacement gate with fenders**

New fendering is proposed for installation on the lock head gates. Our decision has been taken with heritage considerations in mind using oak as the traditional material.

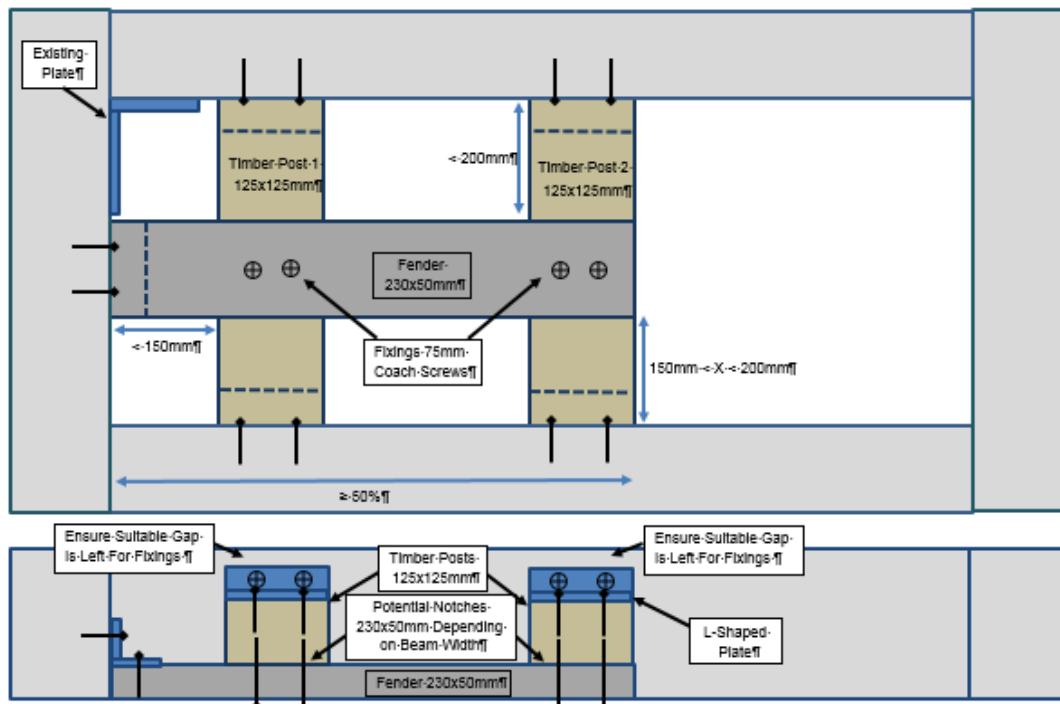
The fender is to be installed so it lies flush with the front of the balance beam.

Standard L- shaped plates should be produced to fix the additional sections onto the existing gate.

Two 125x125mm posts are to be measured, cut, and installed onsite, ensuring the horizontal fender can span across a minimum of 50% of the gate. The posts should be set back 50mm from the front of the beam to allow the fender to run flush.

The gaps between the proposed fender and the top and bottom beams must not exceed 200mm, gaps exceeding 200mm pose a risk of boat hang ups.

The gap between the balance beam and the horizontal fender must be equal or greater than 150mm to allow for weirage.



Example of fendering installed to top gates.

We feel that the measures proposed are the least visually disruptive, and the impact will be minimal in the context of the lock.

The fixing of the horizontal timbers will be visible in part but the overall design principle is preserved and the intervention is honest. This proposal will not result in any loss of fabric, and as the gates are regularly replaced there is no loss of 'original fabric'.

The measures will prevent further accidents that could result in damages and loss of original fabric in the lock chamber.

- **Bywash culvert investigation/remedial works to stem leakage onto the towpath**

This wharf area upstream of Lock 85 head gates is to be fully de-watered to enable the underwater condition of the; (i) former loading bays, (ii) concrete blockwork cut-off wall, and (iii) upstream, towpath side lock approach walls to be inspected by the Design Engineer.

As part of the de-watered inspection the Design Engineer is to establish the source of the leakage and is to identify whether there are any other contributory factors.

Once de-watered the concrete blockwork cut-off wall is to be cleaned and prepared in accordance with the Waterproofing Render System Specification provided below.

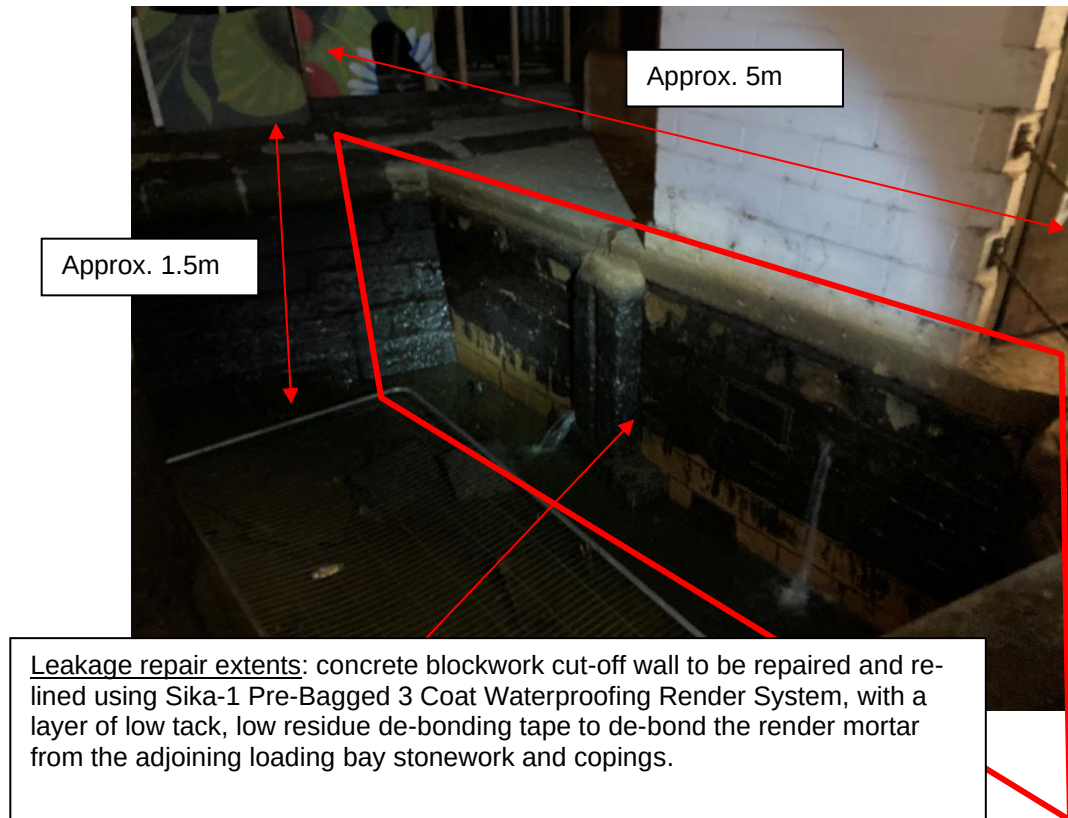
Any areas of perished concrete blockwork and/or previous timber repairs are to be removed and replaced with new concrete blockwork as agreed with the Design Engineer. Any defective mortar joints are to be raked out to a depth of 12.0mm and repointed using Sika Finishing Mortar.

Upon completion of the above, Sika-1 Pre-Bagged 3 Coat Waterproofing Render System (or similar approved) is to be applied to the concrete blockwork cut-off wall, with a layer of low tack, low residue de-bonding tape to de-bond the render mortar from the adjoining historic loading bay stonework and copings to ensure reversibility.

The mortar is to be applied in 3 coats as follows:

- 1st coat Sika Spritz Mortar @ 6mm
 - 2nd coat Sika Render Mortar @ 6mm
 - 3rd coat Sika Finishing Mortar @ 6mm
- Total System Thickness – minimum 18mm.**

View from Top of Towpath Ramp Looking at Former Loading Bays/Concrete Blockwork Cut-off Wall:



- **Reinstatement of Towpath Ramp Paving**

Upon completion of locating and repairing the leakage to the wall, the special rope designed brick setts will be carefully lifted where settlement has occurred and set aside for re-use.

Install new Aco Raindrain (Load Class A15) adjacent to tail quadrant wall to intercept any future leakage from the lock chamber (*see photos provided below*). Aco Raindrain to be laid on 100x100mm C12/15 concrete bed and haunch (*see Detail 5*).

Aco drainage system to be fully cleaned and tested to prove that inflows discharge back into the canal downstream of the tail gates and that the Aco drains can cope with peak flows.

Restore towpath ramp to it's former condition using new/reclaimed special rope design brick paving setts (approx. 7.2m²/300no. paving setts to be re-laid). Paving setts are to be matched in terms of size, colour, type and pattern.

Approximate extents of sett reinstatement works outlined in red below:



New Aco drain (Load Class A15 with galvanised steel gratings to match existing)

Approx. 6m



Approx. 1.2m



PHILOSOPHY AND APPROACH TO CREATING AN ACCESSIBLE DEVELOPMENT

The principle behind the scheme is to remove the risk to users of the lock and towpath, and therefore improve public safety.

KEY ACCESS ISSUES

The incorporation of the fendering and the stemming of the leaks will improve access for canal users as it should increase the reliability and safety of the lock and this section of the canal.

VEHICULAR AND TRANSPORT LINKS

The works will allow safer access for customers along this section of the Rochdale Canal.

COMMITMENT TO MAINTAINING A RELEVANT DESIGN AND ACCESS STATEMENT

It is confirmed that the issue of access will be considered throughout the development and constructional phases of this project.

CONCLUSION

It is considered that the alterations proposed to the lock gates has a neutral effect upon the character of the lock, meeting identified concerns and improving safety in a low key and unobtrusive form in materials and a design that match the form of the gates. The new gates will also address the temporary works required in 2021.

The works to the bywash wall and the sensitive repairs to the towpath setts will allow the towpath to be safe to use.

In conclusion it is considered that the proposed alterations are minor in character and complement the character of the lock. It is therefore respectfully requested that they be approved.

