

Hazlehurst Bridge – Heritage Impact Assessment



History of the Site

The Caldon Canal was built as a branch of the cross-country Trent & Mersey Canal. It runs from Stoke-on-Trent to Froghall in Staffordshire. The Canal opened in 1779 and runs for 18 miles with 17 locks.

The impetus to build the Caldon Canal came from John and Thomas Gilbert on taking lease of the Caudon Limestone Quarries; a canal was envisaged to serve these quarries and link into the Potteries and the Trent & Mersey Canal.

Eminent canal engineer James Brindley surveyed the route in 1772, shortly before his death later that year (Shill, 2011). The Act of Parliament was granted in May 1776 with construction work beginning in June 1776 (Shill, 2011).

The Act enabled the proprietors to borrow £25,000 to fund the construction, which was completed in 1779. Initially, there were 15 locks, eight rising from Etruria to the start of the summit at Stockton, and 7 falling, although the number was later increased to 17 (Lindsay, 1979). 1.5 miles (2.4 km) of the canal followed the bed of the river Churnet near Consall. A second Act of Parliament was obtained in 1783 to authorise a new tramway and to extend the canal by 530 yards, which included the Froghall tunnel (Hadfield, 1985).

Traffic on the Trent & Mersey main line was such that it suffered from water shortage in dry periods, and water levels on the Caldon branch were often too low at such times, as the water was used to

keep the main line moving. In 1796, the company wanted to build a reservoir at Rudyard, to improve the situation, and a branch to Leek was included in the Bill, as it was the only way to obtain the consent of the Leek authorities and landowners for the reservoir. The Bill was defeated in Parliament, after which the Peak Forest Canal Company proposed to build a branch of their canal from Marple to Leek, and on to join the Caldon branch. It would also have included a reservoir at Rudyard, but the plan was short-lived, as the Trent & Mersey succeeded in getting their bill passed when they submitted it to Parliament for a second time in 1797.

In order to ensure that the water from Rudyard could be used to supply the main line, the Leek branch had to join the top level of the Caldon branch, and so the original route with the Park Lane locks was closed and a new route built in the early 1800s, which included a three-lock staircase between the junction and the old line of the canal. Bridge 37 dates from this time, as John Rennie designed the bridge and he died in 1821, so it dates from when the locks were constructed initially (Shill, 2011).

Between 1841-1842 the section Endon to Hazlehurst on the Caldon Canal was altered for the second time when The Trent & Mersey Committee decided to replace the triple staircase locks due to congestion. A new flight of three locks with side ponds were constructed from a new junction east of Bridge 34 (Shill, 2011).

With the coming of the railways, the Trent & Mersey Company's canals were sold to the North Staffordshire Railway, with the formal takeover occurring on 15 January 1845. They were keen to promote the canals and railways as mutual feeders, and so maintained the canals, with the exception of the Uttoxeter branch, which was closed by an Act of Parliament obtained in July 1847, so that the Churnet Valley Railway could be built along its course. The tramway from Froghall to the Cauldon Quarries was replaced by a new cable-operated railway in 1849. It included inclined planes at Froghall, Oldridge and Cotton. Trains consisted of up to nine wagons, each capable of holding 6 tons of limestone and around 1000 tons a day were moved from the quarries to the canal (Hadfield, 1985).

Traffic gradually moved away from the canal to the railways. In 1904, Endon basin was built, where limestone brought from the quarries by the railway could be transferred to boats. One of the major users of the limestone, based at Sandbach, closed in 1920, and the cable railway to Froghall closed in the same year. Limestone was no longer transhipped at Endon from 1930, and the canal saw virtually no traffic. Responsibility for the canal passed to the London, Midland and Scottish Railway in 1940, who closed the Leek branch under an Act of Parliament obtained in 1944. The last commercial traffic was the transfer of coal from Endon to Cheddleton, which ceased in 1952 (Dean, 1997).



Figure 1: The underside of Bridge 37 looking towards Hazlehurst Lock 12 circa 1962 (Canal & River Trust Archives). This demonstrates the close relationship to Lock 12 and how Bridge 37 has an impact on the setting of Lock 12.



Figure 2: Hazlehurst Junction circa 1962 (Canal & River Trust archives).

Statement of Significance: Caldon Canal

A branch of the Trent & Mersey (from summit at Etruria to Froghall Basin), which was mainly built as an agricultural lime carrying canal. Later branches to Uttoxeter (now derelict) and Leek with the reservoir at Rudyard feeding canal via a 2.5-mile feeder were added.

A good collection of structures, especially stone formations on Leek Branch. Excellent, high value groups of canal/industrial buildings at Froghall, Cheddleton and Hazlehurst, where the Leek Branch crosses the main line on the 1841 aqueduct. The junction between the canals has been altered on several occasions. Locks, bridges and cottages complete the scene. Bridge 37 is part of this group.

Landscapes range from industrial/post-industrial Stoke on Trent to rugged upland scenery around Hazlehurst and Cheddleton. There are numbers of former agricultural/industrial rural buildings and dwellings alongside the canal, including lime works.

From Froghall Basin a tramroad ran to the limestone quarries at Cauldon Low: four different tramroad routes have existed historically.

Bridge 37

Bridge 37 is on the Caldon Canal and it is located east of Hazlehurst Junction at the bottom of the Hazlehurst Lock flight in the village of Denford.

This bridge is a 'blue' brick masonry arched structure with a 175mm sandstone string course and a nominal arch barrel thickness of 250mm. Both elevations have been repointed in the past with cement and lime mortar.

The bridge is an accommodation bridge for farmers/residents to access fields and long-term moorings. Vehicular access can only be gained via a track off Leek Old Road (off A53) which is 500m north of the bridge.

The towpath side canal wall under the bridge is constructed of large copings stones and brickwork. The approaches are also constructed from large copings stones and brickwork.

It is a Grade II designated heritage asset located within the Caldon Canal Conservation Area.

List Description

CHEDDLETON C.P. CALDON CANAL SJ 95 SE SJ 950 537 5/42 Bridge at SJ 950 537 -

GV II

Accommodation bridge. Early C19. Brick with stone string at carriage-way level and copings; wide elliptical arch (including towpath); parapets and carriageway cambered over span and finished by piers set out diagonally. This section of the Caldon Canal was opened circa 1779 to take limestone from Cauldon Low, Henshaw and John Rennie engineers.

Listing NGR: SJ9507553708

Statement of Significance

The 'Conservation Principles Policies and Guidance', published by 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' (2008, 21).

The Historic England guidance describes a range of inter-related 'heritage values' that may be attached to historic places:

- 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.
- 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.

Historic value

Bridge 37 is part of the early canal network, and as such has historic value. The route of the Caldon Canal was surveyed by James Brindley, but John Rennie, another prominent canal engineer, designed Bridge 37 and that of nearby Bridge 36, which is similar in style. The bridge is a well preserved example of Rennie's work, having only had minor repairs and retaining all of its original stone copers. Rennie designed many structures along the canal network and surveyed the route of the Lancaster Canal, he was also pioneer in the use of structural cast iron. This gives the bridge associative value.

The layout of the locks and canal at Hazlehurst has changed and this provides illustrative value showing re-modelling on the canal network, this desire for improvements, so typical of the pioneering attitudes which fuelled the construction of canals. Therefore, the collection of structures at Hazlehurst are an important surviving testimony to the innovative spirit of canal engineers.

The design and form of Bridge 37 provides illustrative value showcasing the engineering and construction techniques of the early nineteenth century. Even minor utilitarian structures in rural locations were embellished with careful architectural design.

Evidential value

The bridge demonstrates construction techniques and materials available in the early-nineteenth century. The bridge is solid brick construction, with larger and less uniformed bricks being used in the fill. Lichen and spots of pollution are visible on the bricks, which are dark with russet tones. Similar bricks were used in the construction of Bridge 36, Bridge 1 (on the Leek branch) and Hazlehurst Aqueduct. Lime mortar was used during the construction but much of the bridge had since been re-pointed in cement.

Figure 3: The bricks at bridge 37.



Aesthetic Value

Bridge 37 also has some aesthetic value, being a single arch brick bridge with dressed copings, a stone string course at carriage level. It also has four diagonal piers at the end of each wingwall. The bridge is an attractive feature in the landscape and visible from the Leek branch making a positive contribution to views from that towpath over the Caldon Canal and as the lands raises up in fields beyond towards the A53.

Setting

The heritage significance of Bridge 37 cannot be fully appreciated without considering its wider setting due to the re-modelling of the junction it is linked to the surrounding structures and part of the fine group at Hazlehurst Junction. Bridge 37 is adjacent to Lock 12, which is also a designated structure (see figure 1).

Historic England define setting as: 'The surroundings in which a heritage asset is experienced' (2008: 2). Setting is important in the understanding of a site and can change over time.

It is important to understand the context in which Bridge 37 was experienced when passing along the canal corridor and through the conservation area (see figures 5-10). At Hazlehurst Junction there is the 'pretty' Bridge 35, with its sweeping stone walls and its cast-iron parapet. The Leek branch starts here and heads off under Bridge 1, which is of dark brick and similar in style to that of Bridges

36 and 37. Staying on the Caldon Canal and passing by the lock cottage and Lock 10, the canal descends under Bridge 36 which is also a Rennie bridge. The area is rural, with fields to the left and right and a low stone wall running along the towpath side. On reaching Lock 11 there is a lock hovel, in good condition, on the offside which would have been used by the lock keepers for shelter when operating the lock. A short walk further and Lock 12 is reached, this is adjacent to Bridge 37. Further on and Hazlehurst Aqueduct which carries the Leek Branch over the Caldon ends the Hazlehurst lock flight.

The partial demolition of the Bridge 37 has created a gap in this landscape and altered this experience, which is most notable from Lock 12. In the list description (see below) the bridge is identified as being part of the group value of the lock. Canal structures are often threatened by modern industry and are at risk of losing their special character, due in part to their linear nature. However, this group, in a secluded and rural area, had retained their historic character.

Furthermore, Crowe commented that ‘Hazlehurst locks; all purpose-made components of canals are here fitted into a rolling landscape: stone locks with footbridges, by-weirs, and short pounds between them; a standard design accommodation bridge, with the white iron parapet of a roving bridge glimpsed beyond; a lock side hut, a lock cottage’ (1994: 17). It is a relatively unaltered canal scape of the early and mid-nineteenth century (see figures 5 and 6).



Figure 4: The view from Lock 12 with the remains of Bridge 37 in the background.

Summary of Significance

Bridge 37 did have aesthetic value with care being shown in the design. It was also little altered and made an attractive contribution to the canal corridor. Perhaps most notably it retained all of its stone copers none of which were missing or replaced with concrete and, and therefore could be considered to be a well-preserved example of a nineteenth century canal bridge. That said, it is still a typical canal bridge with standard design features such as stone springers and stone copers. There are also similar bridges in design nearby, so there was nothing unique about the bridge in terms of material choice, workmanship or dimensions which made it stand out along this stretch, like Hazlehurst Aqueduct for instance.

The bridge did have associative value with John Rennie as its designer, but nearby bridges would also be considered as good examples of his work.

Impact Assessment

Following the event of the 1st March 2020 and subsequent courses of action that followed on from that event (partial demolition), it is clear that both the significance of the asset and the setting have been subject to both **harm** and **substantial harm**.

The works to Bridge 37 have had a very harmful, irreversible impact on the significance of the structure, impacting negatively on its heritage values. Other options, that could have been, considered to be potentially less harmful to the heritage significance of the bridge were discounted on grounds of safety.

The partial demolition of the Bridge 37 has created a gap in the landscape and altered the experience of the setting, which is most notable from Lock 12 (see figure 9). In the list description (see above) the bridge is identified as being part of the group value of the lock. Canal structures are often threatened by modern industry and are at risk of losing their special character, due in part to their linear nature. However, this group, in a secluded and rural area, had retained their historic character.

The bridge was part of a complete canal scape of the nineteenth century, so the character and quality of this stretch of the Caldon Canal Conservation Area has been compromised. Views along this stretch have been altered by the partial removal of the bridge and will change the experience for towpath users and boaters when travelling down or up the lock flight. The authenticity has been diminished and completeness of the stretch has been lost due to a significant change in what as a relatively unaltered stretch (see figure 8 and 11).

Now that works to make the structure safe have taken place not much of the bridge remains extant. The barrel arch, parapets, towpath wingwalls (for access) and offside wingwalls have all been taken down. Parapets were knocked inwards which allowed the stonework and bricks to be scraped back by the excavator so as much of the original fabric could be saved as possible, but many of the bricks were not salvageable.

The remains do still have some historic value, dating from the 1800s and it has not lost its association with John Rennie, but it is no longer a good example of his work and the conscious design has been lost, so too has the aesthetic value.

In a very basic sense, there is evidence that a bridge did cross at this point, and the ghost of the arch is still visible on the towpath abutment, but the physical details of the bridge construction have been removed (see figure 10).

The illustrative value, which demonstrated the attention to detail, is not discernible from the remains. However, many of the dressed stones, including the impressive corner stones, have been saved.

Conservation Principles Policies and Guidance, published by Historic England (2008), states that...

‘if all or part of a significant place will be lost, whether as a result of decision or inevitable natural process, its potential to yield information about the past should be realised. This requires investigation and analysis, followed by archiving and dissemination of the results, all at a level that reflects its significance.’

In line with this guidance, Bridge 37 was recorded by Survey Operations who carried out a laser survey before the work began, documenting the bridge and capturing its evidential and historical values.

Images to demonstrate the impact on the wider setting of Bridge 37



Figure 5: Hazlehurst Junction including listed Bridge 35, Lock 10 and the lock keeper's cottage.



Figure 6: Bridge 36 is a similar design and constructed from the same materials as at Bridge 37. Bridge 36 and 37 were both designed by John Rennie.



Figure 7: Weir at Hazlehurst Junction.



Figure 8: Lock 11 with hovel part of the rich canal scape at Hazlehurst lock flight. Lock 12 and Bridge 37 are just beyond.



Figure 9: Lock 12 looking towards where Bridge 37 stood, the remains of towpath abutment can be seen.



Figure 10: The remains of the offside and towpath abutment of Bridge 37 after the partial demolition. Lock 12 is designated and had group value with the bridge.

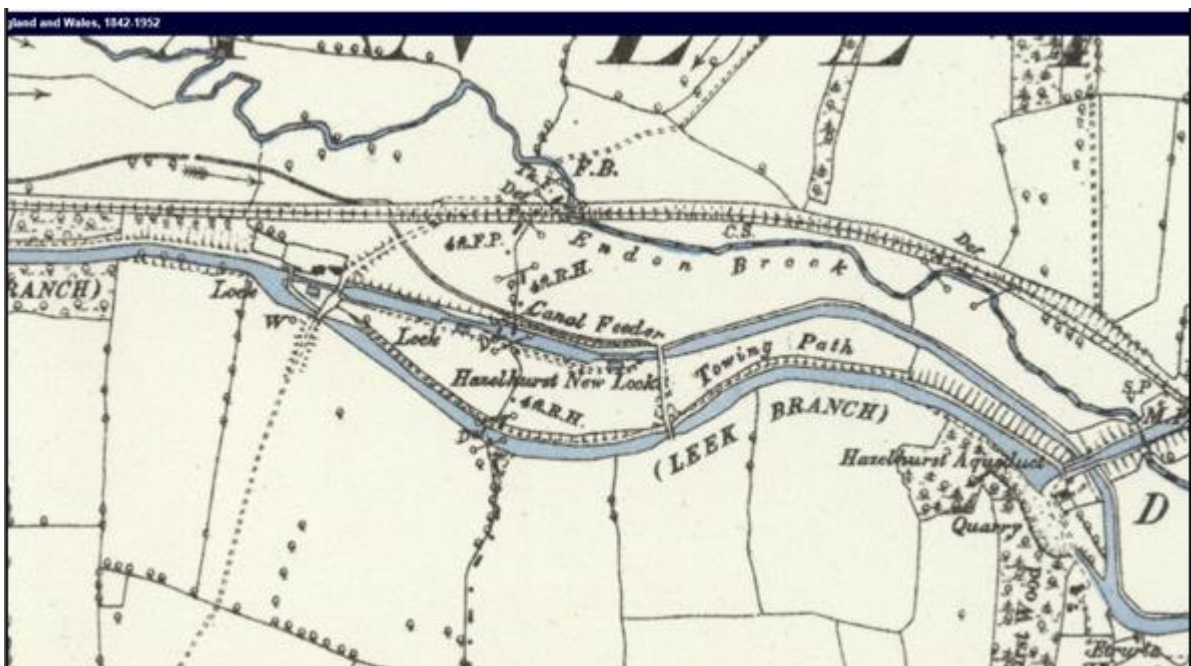


Figure 11: Map from 1880 showing Hazlehurst Junction and the stretch down to Hazlehurst Aqueduct circa 1962 (Canal & River Trust archives).

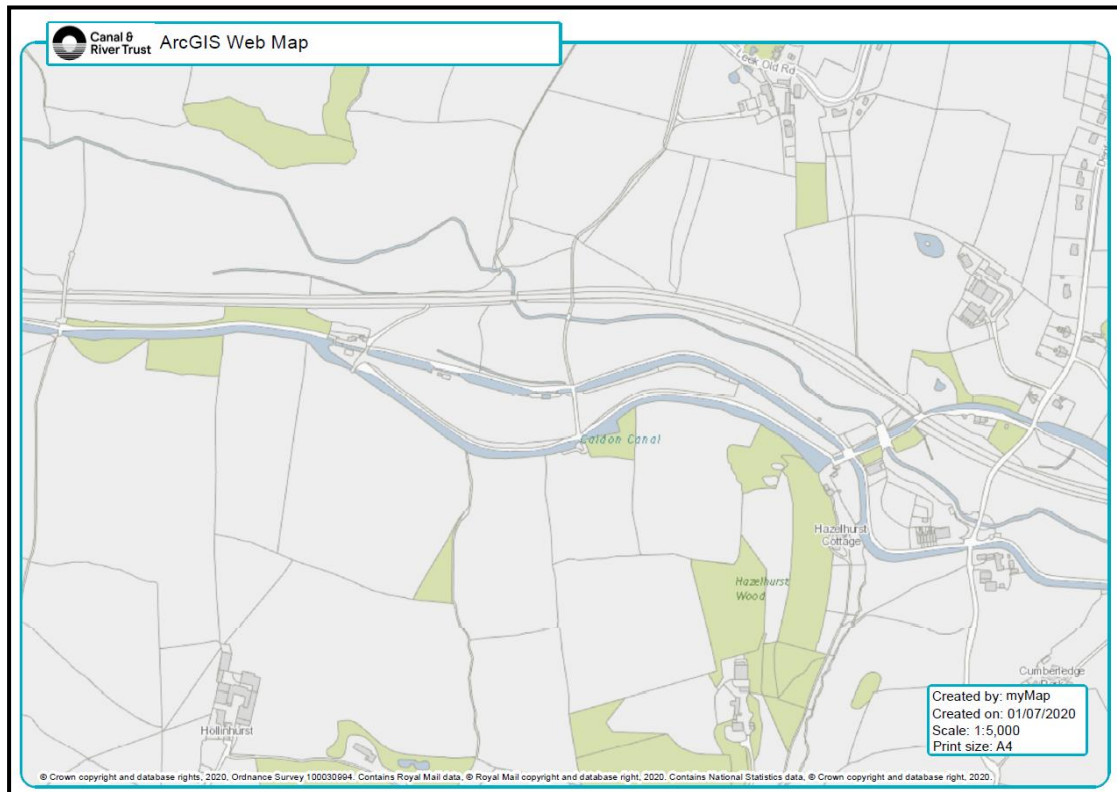


Figure 12: Hazlehurst Junction today which is little altered.

References

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- Dean, R. (1997) *Canals of North Staffordshire*.
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