



**Canal &
River Trust**

Making life better by water

Heritage Report

2017–19

September 2019



Dundas Aqueduct

Case Studies

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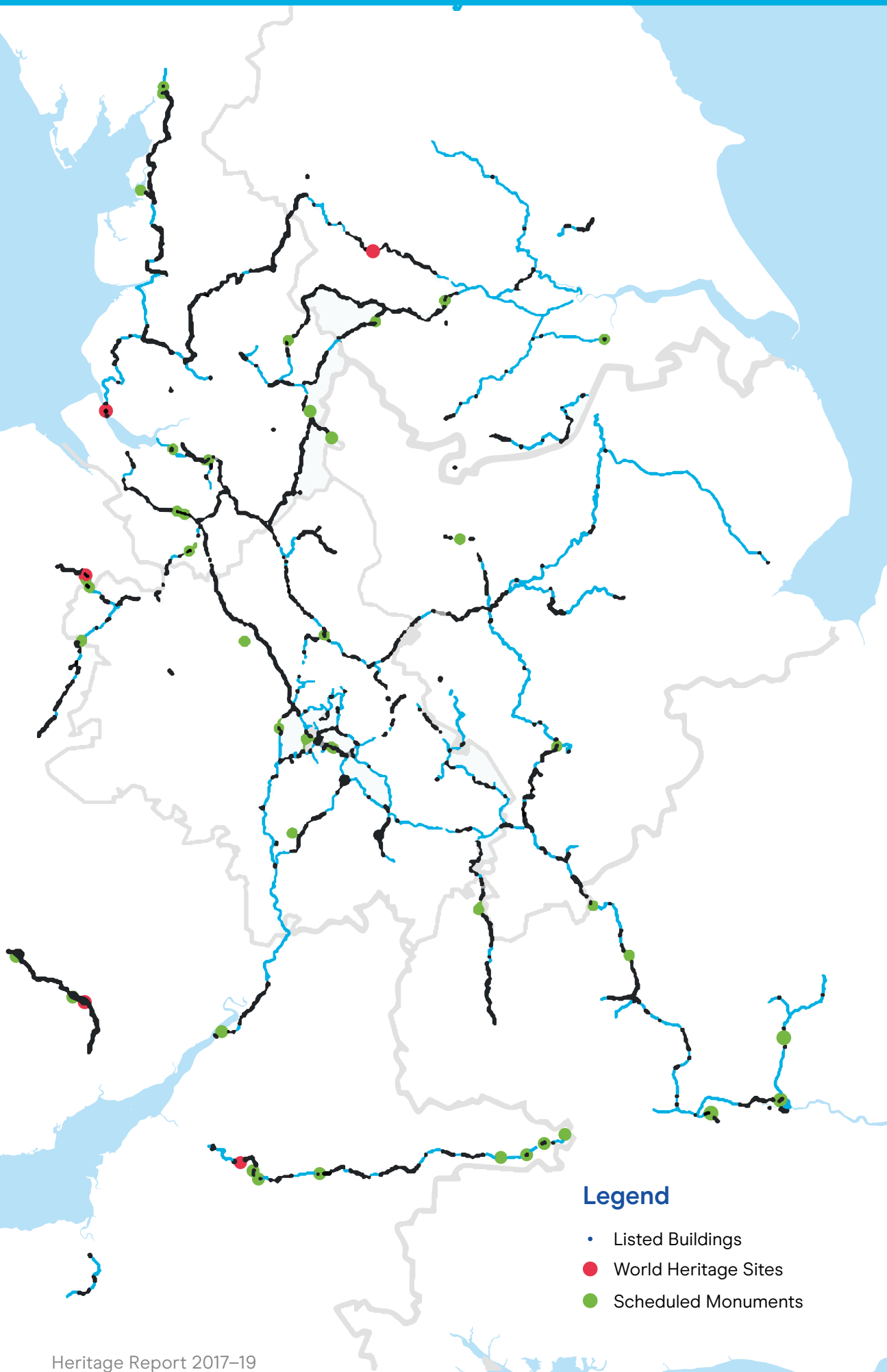
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Fig 1. Distribution of designated heritage assets owned by the Canal & River Trust

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Foreword

This is my first opportunity to thank the Canal & River Trust for offering me the chance to contribute to its outstanding work in managing one of the greatest national collections of natural and historic assets in the country. Taking on the role of the Chair of the Heritage Advisory Group is an honour but also daunting, as it means following in the footsteps of Sir Neil Cossons, who gave so much of his time and experience in support of the Trust. However, it has been made a little less formidable by the very able support offered at the outset by Nigel Crowe, along with the heritage advisors and other members of Trust staff. They have taken the time and trouble to introduce me to the variety of tasks being undertaken across not just the physical aspects of the collection but also their economic and environmental aspects. As Sir Neil rightly predicted, the professionalism and expertise of the organisation was evident very early on.

I could not hope to match the specialist expertise in industrial archaeology of my predecessor and I do not have an in-depth experience of waterways that several of my colleagues on the Heritage Advisory Group possess, but I hope to bring a wider

understanding of the heritage sector gained over 30 years or more of experience to complement the skills already available to the Trust. As the Trust looks forward to the next stage of its evolution and embarks on a major reorganisation, my task and that of the Heritage Advisory Group is to help identify how the achievements in reducing heritage at risk, improving access and understanding of the heritage of the canals and waterways and encouraging volunteering can be continued in the context of changing national guidance, challenging economic conditions and increasing competition. These are exciting times, but in the midst of all of this change delivering the day-to-day conservation of the historic structures and components of the waterways to hand on to future generations to enjoy remains a priority, and I suspect, always will.



Nigel Barker-Mills
Chair of Heritage
Advisory Group

As the Trust enters its eighth year and faces challenging times, it is heartening to look back across the period 2017–19 and reflect upon our heritage activity. This has included well-attended open days, ongoing partnerships with other charities like the Transport Trust and the National Trust, and the outstanding contribution our heritage volunteers make year-on-year. One volunteer that I would especially like to welcome is Nigel Barker-Mills, the new Chair of our Heritage Advisory Group.

A vital part of the Trust's strategy is to connect people with the nature and heritage of the waterways on their doorstep, increase community involvement and inspire young people. In this report (a special edition covering the two years 2017–19) there is much to celebrate, as we showcase our work of conserving the waterways heritage that contributes so much to the delight and wellbeing of our visitors and supporters.

It is particularly gratifying too, that just as this report was being produced, we received confirmation that Government Ministers were happy to proceed with the next step towards awarding the Trust England's first Listed Building Consent Order. This bespoke Order will help us enormously and will represent a tremendous recognition of how the Trust cares for, and actively manages, its unique heritage of historic waterways buildings and structures.



Richard Parry
Chief Executive

Managing Our Heritage

The Canal & River Trust is the custodian of a rich and diverse waterways heritage in England and Wales, much of it over 200 years old. Many of the Trust's heritage assets are designated as scheduled monuments, listed buildings and conservation areas. The Trust has its own World Heritage Site, at Pontcysyllte Aqueduct and there are many hundreds of buried archaeological sites, that lie untouched, scattered across the waterways.

The Trust has its own voluntary Heritage Advisory Group of experts to support its work and broadly aligns its approach to heritage management with the following principles, which state that the trust aims to:

- Base our policies and practice on a sound understanding and recognition of the history and significance of the waterways heritage.
- Apply the optimum conservation standards to maintain the integrity and authenticity of our heritage assets.
- Accept a presumption in favour of conservation of these heritage assets, while recognising the wider aims, objectives and resources of the Trust.
- Work with others to secure the conservation of the wider context and setting of our waterways.
- Benchmark and report on our heritage conservation performance at regular intervals.
- Maintain a Heritage Advisory Group to advise us on our policies and to monitor performance.

Managing and conserving the historic environment of the waterways is a never-ending task, as the case studies in this report amply demonstrate. The canals and river navigations cared for by the Trust were created for industry and serve very different purposes today. They are free to access and use. They contribute to the physical and mental wellbeing of communities, visitors and volunteers; adding to the quality of life of those who participate and engage with them. They run through towns and cities and across rural areas and permit a range of leisure activities and enjoyment of nature and heritage in a way that few other attractions do. The Trust's historic waterways deserve to be cherished and passed on to future generations, so that they too may benefit from and enjoy them.

Case Study

Restoring a bridge-keeper's hut, River Weaver

The Trust is a key member of the HLF funded Saltscapes Partnership launched at the start of 2015 to deliver a range of projects designed to protect, restore and celebrate mid-Cheshire's unique salt heritage.

One of the Partnership's projects involved repairs to a former bridge-keeper's hut at Newbridge on the River Weaver near Winsford. It was built in the early 1900s as a small store and shelter for staff operating the swing bridge.

Work to the hut included roof repairs, carried out via the Trust's framework contract, graffiti removal by the Trust's local team and brickwork repairs and repointing by two volunteers who received heritage skills training in the use of lime mortars.



Above: Bridge-keeper's hut restored

Below: Bridge-keeper's hut repairs team





Case Study

Derwent Mouth Lock repairs, Trent & Mersey Canal

Derwent Mouth is the first lock on the Trent & Mersey Canal. It is Grade II listed and in a conservation area. In December 2017, extensive repairs to the lock chamber were carried out by the Trust's direct services, working closely with a conservation stonemason and the local conservation officer.

Repairs to the lock chamber were carried out in matching brick and lime mortar. Worn copings were replaced with a matching sandstone. The stone was cut and delivered to site, then dressed in situ to ensure that the profile of the new stones matched the existing.

Once the lock was dewatered it was found that one anchor stone had delaminated over time and was preventing the gates from sealing when closed. This was replaced with a new piece of sandstone.

Above: Derwent Mouth Lock after repairs

Case Study

Foxton Locks re-gating, Grand Union Leicester Line

In 1993 Lock 16 on the lower staircase of the Foxton Locks flight, was re-gated with a composite steel and wood set of bottom gates (manufactured in 1992). The locks were listed Grade II at the time and the work was unauthorised. All the other gates on the flight were of wooden construction and this work was not like-for-like. It was reported to the local authority and a solution was negotiated. This required the then British Waterways to agree to return the gates to their traditional wooden appearance when they next needed replacing. At the same time, the historic significance of the locks was re-assessed and led to the whole flight of two staircases having its listed status upgraded to Grade II*.

Twenty-five years later in the winter of 2018, as part of other repairs to the lock flight, the composite gates of Lock 16 were removed and replaced with an authentic wooden set by the Canal & River Trust.

Left: Lock 16, Foxton Locks, 1992 composite gates

Right: Lock 16, new wooden gates being installed, 2018





New traffic lights at Golden Nook Bridge

Case Study

Traffic lights at Golden Nook Bridge, Shropshire Union Canal

The Trust makes regular pleas to drivers to slow down when crossing historic canal bridges, but in 2017/18 it spent over £1 million repairing bridges hit by vehicles. These repairs are an additional, unexpected burden on the Trust's finite resources.

Cheshire West & Chester Council and the Trust have been working together to address the issue of frequent vehicle damage to Golden Nook Bridge near the village of Huxley, south of Chester. Since 2011, at least five vehicle strikes have been recorded, incurring costs of £125,000. The bridge is unlisted but was constructed in the late 18th century and is an important feature on this part of the former Chester Canal.

After careful consideration and planning, traffic lights have now been installed at the bridge, with costs shared between the Council and the Trust. This will help to reduce the risk of further incidents and safeguard the historic bridge for the future.



Above: Golden Nook Bridge vehicle damage



Case Study

Safety railings at Marple Aqueduct, Peak Forest Canal

Marple Aqueduct, which was designed by Benjamin Outram and completed in 1800, carries the Peak Forest Canal over the River Goyt. It is the tallest masonry arched aqueduct in Britain.

Above: New safety railings, Marple Aqueduct

In April 2017, the Trust submitted a scheduled monument consent application for the installation of safety railings on the offside of the aqueduct. This was the culmination of many months of consultation and collaboration with customers, local interest groups, Stockport Council and Historic England.

The offside of the aqueduct has never been protected, but increased visitors and occasional evidence of dangerous behaviour led to the decision to improve safety on the site.

The new parapet railings were designed so as not to harm the historic significance of the aqueduct. The design is based on the loop pattern of cotton weaving, which acknowledges the local historic Mellor cotton mill in Marple and the use of the Peak Forest Canal for transporting materials associated with the cotton industry. This contemporary design was well received, consent granted, and the railings installed in January 2018.

Case Study

Cookley Forge Basin Bridge, Staffordshire & Worcestershire Canal

This towpath bridge spans a now disused canal branch into the former Cookley Forge Basin. Although unlisted, it is an excellent example of a cast iron decked basin bridge built in 1871. Over time its parapets had fallen into serious disrepair, posing a risk to towpath users and to the structure itself. In 2017/18 the bridge was repaired by the combined efforts of the Trust's direct services, customer services and volunteers. The repairs were carried out using traditional materials, including lime mortar and locally sourced reclaimed bricks for patch repairs.

Below: Cookley Forge Basin Bridge





Chirk Aqueduct, general view

Case Study

Repairs to Chirk Aqueduct, Llangollen Canal

In February 2018 minor repairs were carried out to the historic iron parapet railing that runs along the towpath side of Chirk Aqueduct, which is listed Grade II* and also lies within the boundary of the Pontcysyllte Aqueduct World Heritage Site. The aqueduct spans the River Ceiriog Valley and crosses the England-Wales border.

The work included repairs to missing, loose and cracked parapet uprights, casting defects in handrails and missing or failed rivet connections between the handrails and parapet uprights.

Large holes in the handrails were filled with molten lead. Replacement uprights were discreetly date marked and loose uprights were re-caulked into the surrounding masonry. Failed rivets were replaced with new wrought iron fixings. Defective rails were repaired and retained rather than renewed, and where uprights were missing, they were recast to match the originals.

The aqueduct, which was painted by the English watercolourist John Sell Cotman, was a key structure on the former Ellesmere Canal which was constructed between 1795-1805 to designs by William Jessop and Thomas Telford. The Ellesmere later became known as the Welsh Arm of the Shropshire Union Canal (and is now the Llangollen Canal) and retains much of its original appearance and infrastructure.



Above: Repairs to ironwork, Chirk Aqueduct



Right: Chirk Aqueduct, view from below

Case Study

Marple cottages refurbished, Macclesfield Canal

As part of the Trust's rolling heritage properties refurbishment programme, works to the two Top Lock Cottages and the adjoining toll office at Marple were completed in late 2017.

The properties are sited at the junction of the Peak Forest and Macclesfield canals and are Grade II listed and lie within the Macclesfield Canal Conservation Area.

A key principle for the refurbishment works was that of retention of as much original fabric as possible. However, where historic features had been lost but evidence existed of their former presence, the opportunity to reinstate traditional fittings was taken, as well as removing unsightly later additions and improving thermal performance.

Works included re-roofing the properties, including repairs with matching Welsh slate, replacing areas of gypsum plaster with a natural lime plaster and undertaking conservation repairs to sliding sash windows. Loft spaces were given natural sheep's wool insulation to reduce heat loss and in Cottage 1 a timber stud wall was removed from one of the bedrooms to return it to its original plan form. The modern lean-to porch was also removed from Cottage 2. New kitchens and bathrooms were installed, along with extract ventilation, to improve tenant comfort and reduce the build-up of condensation internally.

Sound and thermal insulation of both the wall and floor between the toll office and the adjacent cottage was installed to isolate the differing uses and to ensure the toll office could find a new sustainable use as a Trust welcome station.

Left: Marple Cottages before refurbishment

Right: After refurbishment





Case Study

Carpenter's Road Lock restoration, Bow Back Rivers

Carpenter's Road Lock in East London was completed in 1934 to preserve safe river levels and allow passage for boats in what is now Queen Elizabeth Olympic Park. After decades of disuse, the twin vertical lift radial lock gates were restored by the Trust as part of a £1.8 million project. They are the only lock gates of their kind in the country and are now back in use by commercial and leisure craft for the first time since the 1960s. The lock is now a significant attraction, providing access to the water space of the Bow Back Rivers.

The re-opening of the lock at the East London Waterways Festival in August 2017 was designed to showcase it as a destination and promote the natural amphitheatre and surrounding waterways as sites for cultural and water-based activity.

Gates and gantries for Carpenter's Road Lock were restored using original drawings, with modern materials and contemporary architecture to bring the lock into the 21st century. The gate counterweights are housed behind glass doors, so visitors can see their mechanisms and the modern nylon bushes and wearing strips that have replaced the original phosphor bronze bearings. The gantry steelwork is made from CorTen weathering steel that eliminates the need for painting, forming a stable rust-like appearance after several years exposure to weather.

Above: Carpenter's Road Lock, East London Waterways Festival

Below: Carpenter's Road Lock, completed works



Case Study

Parapet repairs to Bedford Street Bridge, Caldon Canal

Bedford Street Bridge is a road bridge in Stoke-on-Trent that once formed part of a typical Potteries landscape and carried a footpath to a gas works and a bone and flint mill. The bridge displays three distinct phases of construction history. It has some original stonework dating from the 18th century, followed by blue brickwork from the mid-19th century and cast iron parapets from the 20th century. A disfiguring modern utilities pipe crosses the bridge on its south side.

T. Shore and Sons, who owned the Albion Foundry in Etruria made the iron plate parapets and although they were once fairly common on railways, their inclusion on a canal bridge is more unusual.

Essential repairs were carried out to the bridge in 2018/19 when the parapets were replaced with modern steel replicas. The original plates were cracked, fragile and unsafe. Two were carefully removed however and will be incorporated into interpretation that will tell the story of the bridge.

Below: Bedford Street Bridge, before repairs

Middle: Bedford Street Bridge, repairs in progress



Bedford Street Bridge, after repairs



Case Study

Repairs to Saint Thomas Bridge, Staffordshire & Worcestershire Canal

Saint Thomas Bridge was designed by James Brindley and constructed in the 1770s. It is Grade II listed and lies within the canal conservation area. It is a good, little-altered example of a bridge type that is very characteristic of the Staffordshire & Worcestershire Canal.

The bridge carries modern traffic loads and following inspection its brickwork was found to be heavily saturated. Saturated brickwork has typically 40% less strength than dry brickwork, and freeze/thaw cycles leads to further degradation and loss of material. The state of the bridge had reduced its load capacity and it had become a potential safety risk.

Proposed repairs were invasive but necessary and listed building consent was applied for and granted by the local authority. Works began in autumn 2018 and involved removing the backfill of the arch and constructing a new reinforced concrete saddle to improve load capacity and safety. The original brick soffit remained in place.

Localised brickwork repair and repointing were also carried out using conservation-led methods and materials and preserving as much historic fabric as possible. Visually, the bridge is barely altered and it is now equipped to take the traffic of the day.

Above: Saint Thomas Bridge after repairs

Curdworth Bridge repairs, Birmingham & Fazeley Canal

Curdworth Bridge is an historic brick road bridge in Warwickshire on the Birmingham & Fazeley Canal and dates from the late 18th century. In August 2018 the bridge was struck by a vehicle, causing damage to its parapet and requiring works to repair it.

Below: Curdworth Bridge after repairs

Although the vehicle strike resulted in the loss of some historic brickwork, as many bricks as possible were salvaged and re-used in the repairs. New bricks were carefully matched in colour and size against old. The stone parapet copings were all saved. At some point in its history the bridge was given a cementitious render but this was not replaced, due to its harmful nature especially when applied to soft bricks. Bedding and repointing was completed using a lime-based mortar and the repairs were carried out to a high standard.





Case Study

Towpath widening, Edgbaston Tunnel, Worcester & Birmingham Canal

Edgbaston Tunnel dates from the mid-1790s and bores through a small hill on what was then Lord Calthorpe's estate. The Worcester & Birmingham was planned as a broad canal with five tunnels. Three tunnels, including Edgbaston, were built broad gauge, before rising costs and the need for numerous locks led to the rest of the canal being constructed to a narrow gauge. Edgbaston is 95 metres long and the only tunnel on the canal to have a towpath running through it.

The canal towpath through Edgbaston is heavily used by cyclists and pedestrians and in order to improve public safety and accommodate users it was decided to widen the towpath inside the tunnel, whilst not impeding navigation.

Works took place in 2018 and involved suspending a steel-framed deck above the existing towpath, anchored into a concrete beam set at the back of the towpath but causing no harm to historic fabric. No original stone or brickwork was drilled or cut through and the works are entirely reversible. The project was supported with funding from Birmingham Cycle Revolution and demonstrates how historic waterways can be carefully adapted to modern needs.

Above: Towpath widening works in progress, Edgbaston Tunnel

Maintaining high standards

The Trust undertakes a range of regular inspection activities to identify defects in its structures, to help prioritise maintenance programmes and provide a safe and secure network for visitors and customers. All principal assets undergo detailed inspection every ten years. This is followed by an annual inspection to identify changes to their condition that might occur between principal inspections. All principal assets are assigned a condition grade.

At the end of the 2017-19 period, 86% of the Trust's listed structures were assessed to be in Fair condition (minor defects may develop into structurally significant defects in long term (generally >10 years)) or better, an improvement of 1% on the previous year. Of scheduled monuments that receive a principal inspection, 92% were assessed to be in a Fair condition or better in 2017/18, but this dropped slightly to 91% in 2018/19.

As part of the asset inspection regime, each section of canal is visited once every two months by length inspectors and any changes in the condition of structures, defects or hazards are noted. In 2017/18 the Trust's length inspectors identified 626 separate incidents of damage to historic structures (e.g. bridges, aqueducts, locks etc.). This represents a reduction of 27% on the previous year. In 2018/19 however, there were 635 recorded incidents affecting designated historic structures.

As usual, most incidents (42% in 2017/18 and 41% in 2018/19) were the result of vandalism with half of these incidents being attributed to graffiti. Whilst this remains a high number, it is nevertheless a 34% reduction in the number of incidents recorded in 2016/17. Vandalism is most common in urban areas with the north west and west midlands geographical regions accounting for the bulk of the incidents.

Less frequent, but often more significant, are incidents of damage caused by boat or vehicle impact. 40% of all incidents of such damage in 2017/18 were caused by boat impact, but this reduced to 19% in 2018/19.

In 2017/18 there were 63 reported incidents of damage to historic canal bridges caused by road vehicles. This increased to 85 incidents in 2018/19. Vehicle impact usually results in damage to part of the bridge parapet and can sometimes require a road closure until the damage can be repaired.

In the period 2017–19 there were no reported incidents of unauthorised works to designated heritage structures by the Trust, its contractors or volunteers and the Trust remains justifiably proud of its record for legal compliance.

Heritage at Risk

Heritage at Risk assets include scheduled monuments, listed buildings and conservation areas (although these generally include third party assets which are beyond the Trust's control). Historic England and some (but not all) local authorities maintain Heritage at Risk registers of assets and sites that are most at risk of neglect, decay, or inappropriate development.

Since 2004/05 the Trust, and its predecessor British Waterways, has systematically reduced its Heritage at Risk numbers and in 2017–19 there were just three sites on the Historic England register (Birmingham Roundhouse, the Whaley Bridge Transhipment Warehouse and the Hanwell Flight of Locks in London). Not including conservation areas, a further 15 heritage assets remained on local authority registers.

New additions made during the 2017–19 period included the Grade II listed Newtown Lock on the Bridgwater & Taunton Canal and Aberbechan Aqueduct, Richards Bridge No 4 and Bridge No 2, Tanat feeder; all on the Montgomery Canal in Wales.

Works of repair to Heritage at Risk assets in 2017–19 on the Historic England register included the ongoing Birmingham Roundhouse project (in partnership with the National Trust) the Whaley Bridge Transhipment Warehouse and Engine Arm Aqueduct, which has been removed from the register. In addition, works to Frodsham Lock, River Weaver, Roundthorn Bridge and Greaves Bridge, both on the Llangollen Canal, and Fox's Malthouse in Gloucester Docks, ensured that all these were removed from local authority Heritage at Risk registers.

Case Study

Drone survey, Engine Arm Aqueduct, Birmingham New Main Line Canal

Starting in 2016 and continuing in 2017/18, the Trust carried out phased repairs on the scheduled and Grade II* listed aqueduct that was designed by Thomas Telford in a rare Gothic Revival style and completed in 1825.

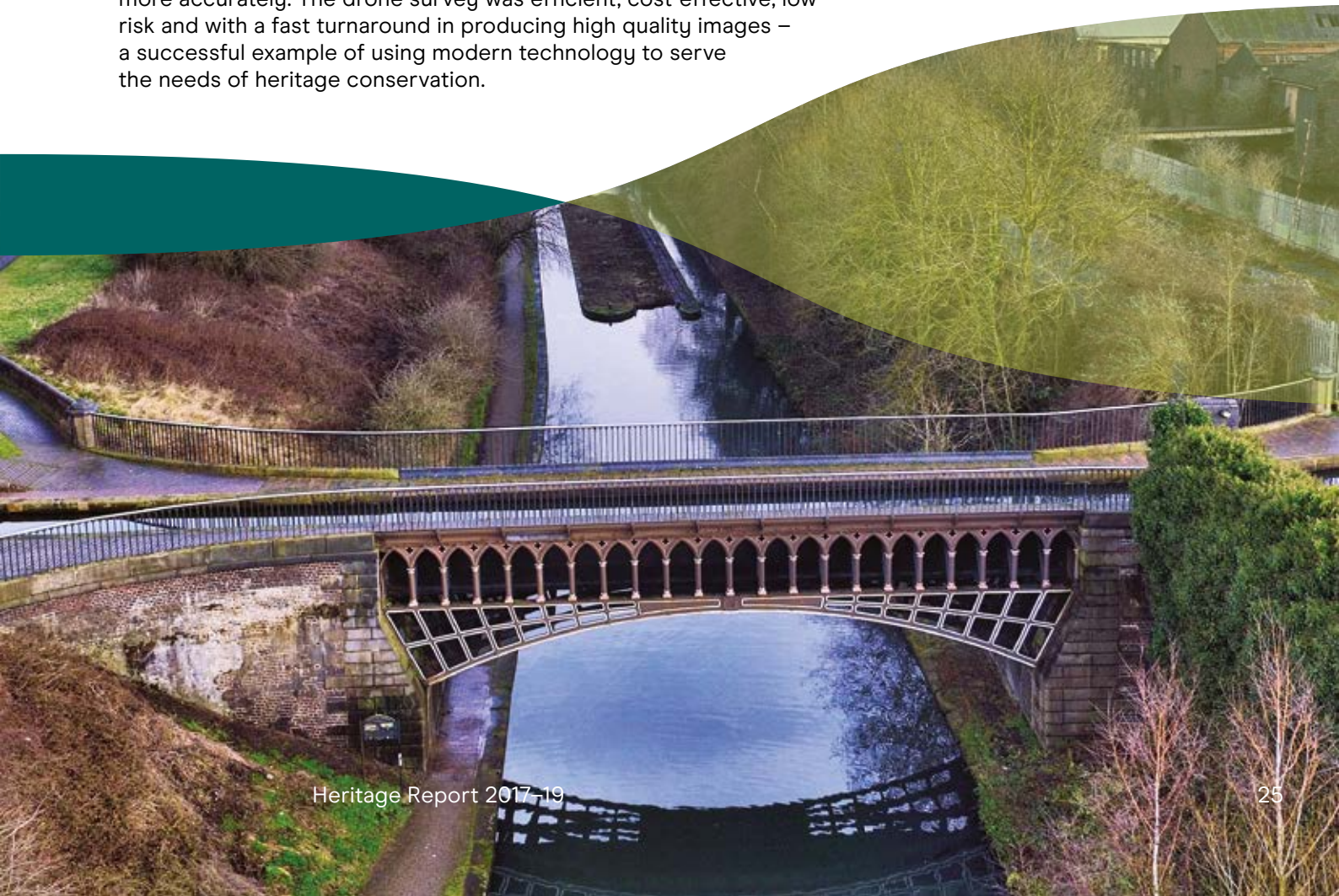
Below: Engine Arm Aqueduct aerial view

The works were necessary to prevent leaks and included repairs to the cast iron trough and brick abutments. The Trust worked with Historic England which funded the repairs.

As the second phase of works was coming to an end the project team wanted to get a better idea of the condition of the ironwork tracery and columns that made up the aqueduct arch. This would mean either inspection from a boat or abseiling from the top of the aqueduct. Both these methods are costly, so instead it was decided to carry out a drone survey using a specialist contractor.

The drone survey allowed for safe close-up photography of the ironwork arch. It produced detailed and clear images and it was possible to identify areas of corrosion and damage to the ironwork which would have been invisible from the ground.

With the survey complete the next stage was to map the damage and corrosion onto elevation drawings, which will help plan future repairs more accurately. The drone survey was efficient, cost-effective, low risk and with a fast turnaround in producing high quality images – a successful example of using modern technology to serve the needs of heritage conservation.



Case Study

Repairs to Roundthorn Bridge, Llangollen Canal

Following a vehicle strike, works including vegetation removal, brickwork repairs and reinstatement of missing copings were carried out to the Grade II listed Roundthorn Bridge.

The bridge is a single span elliptical arch accommodation bridge that carries an unclassified road over the canal. This section of canal was formerly the Ellesmere Canal and was completed in 1801. In 1846 it became part of the Shropshire Union and is now named the Llangollen Canal.

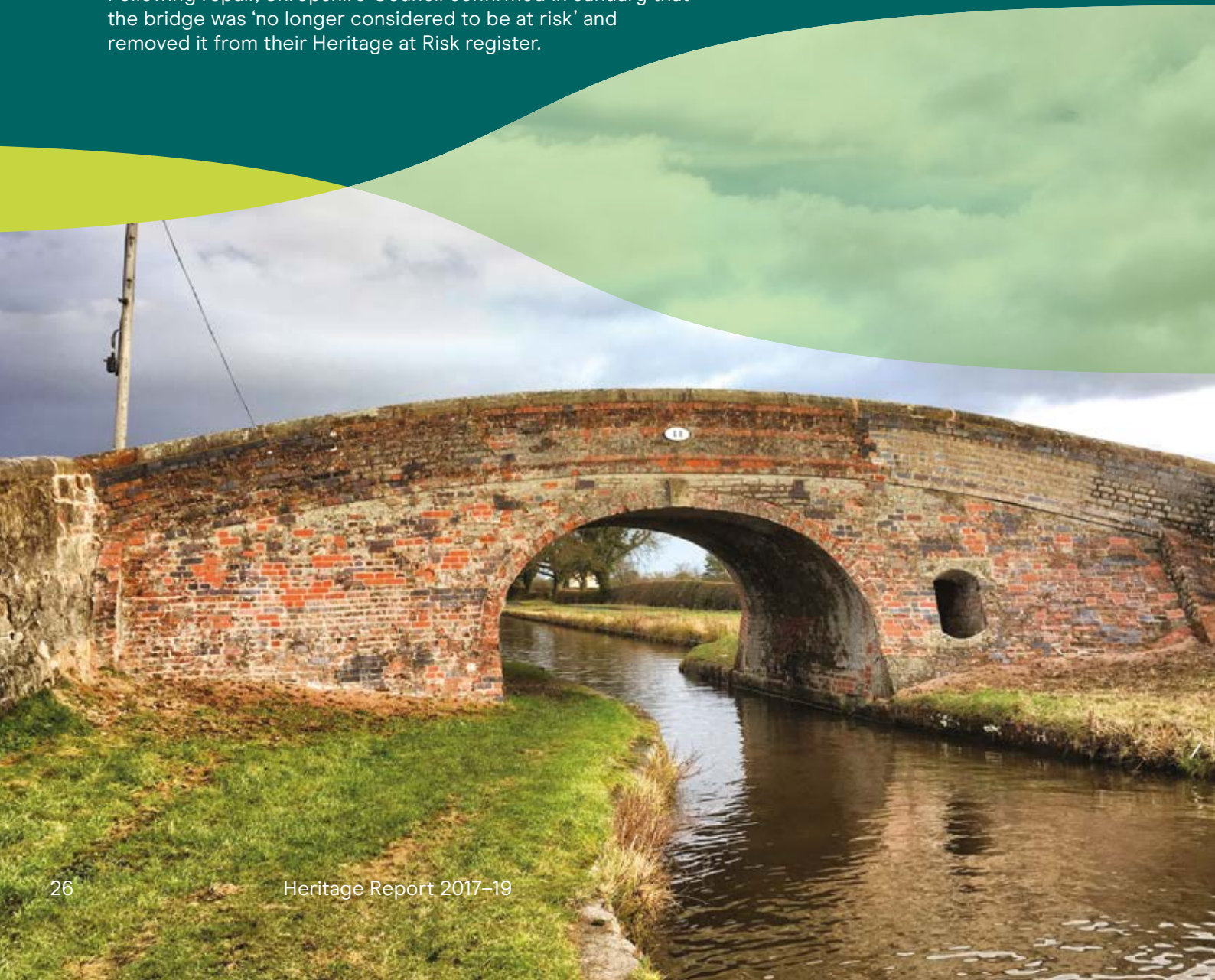
The main span of the bridge is of typical construction found on the Llangollen. An unusual feature is the attachment to its wings of side walls which are constructed in random ashlar masonry. There is a stop plank chamber recess on the offside side of the bridge which extends the full width of the structure.

Following repair, Shropshire Council confirmed in January that the bridge was 'no longer considered to be at risk' and removed it from their Heritage at Risk register.



Above: Roundthorn Bridge before repairs

Below: Roundthorn Bridge after repairs





Case Study

Parapet alterations to Beeston Iron Lock footbridge, Shropshire Union Canal

Beeston Iron Lock is a unique scheduled monument and a Grade II* listed structure. It was designed by the great Thomas Telford and constructed in 1828 for the original Chester Canal that linked Nantwich to Chester in the 1770s.

A footbridge, constructed in wrought and cast iron with timber decking, crosses the tail end of the lock. Historically, the bridge had a railed parapet on one side only and this had been modified over time. In recent years, for safety reasons, the bridge was given a temporary scaffold parapet to guard against the risk of a fall from height at the open side of the bridge.

In 2018/19 work was carried out to remove the temporary scaffold arrangement, repair the existing railings and provide the footbridge with two elegantly designed iron parapets with curving rope guides. Following scheduled monument consent, this work was completed to the highest standard by an ironwork conservation specialist and the bridge deck was renewed in timber by the Trust's in-house carpenters.

Above: Beeston Iron Lock footbridge after alterations

Below: Beeston Iron Lock footbridge before alterations





Case Study

Fox's Malthouse revived, Gloucester Docks

Fox's Malthouse was one of the last large warehouses to be built in Gloucester Docks during its great mercantile expansion in the 19th century. Constructed in 1888 to serve the burgeoning beer-making industry in the city, it was used for storage of grain and later sugar until about 1930 before being converted for other uses. For the rest of the 20th century the building was occupied by a joinery firm, but after their business closed the vacant building fell into disrepair.

By 2016 this Grade II listed structure was in very poor condition and on the local authority's Heritage at Risk register. Although its timber upper floors were very unsafe, its ground and first floors were still intact due to their brick coffered ceilings; a 19th century fire safety measure.

An opportunity to turn things around arose when a craft brewery business applied to lease the building. A condition of the lease required essential repairs to be undertaken for the whole building. One of the attractions of this arrangement was that the unrestored warehouse interior would require minimal alteration to its historic fabric and open plan appearance. The brewery has flourished and with all the repairs to the malthouse completed in 2018, Gloucester City Council removed it from their Heritage at Risk register.

Above: Brewery bar inside Fox's Malthouse

Below: Fox's Malthouse exterior



Case Study

Soulbury Pump House restored, Grand Union Canal

Water supply was a constant problem for the old canal companies. In the 1830s the Grand Junction Canal Company installed nine steam pumps - the Northern Engines - along the Buckinghamshire section of what is now the Grand Union Canal, to reduce the loss of water from Tring summit to the level at Wolverton.

The pump at Soulbury Three Locks lifted water up two of the three narrow locks. In the 1850s these were replaced by wide locks and a new engine was installed to handle the extra volume of water. By the late 19th century the steam pumps at Soulbury appear to have fallen out of use and the pump house chimney was demolished and its boilers removed. The building found a new use, firstly as a smithy and then as stabling and finally as a workshop.

The pump house was listed Grade II in 1984, but by the early 21st century it had fallen into disrepair and was placed on the local authority Heritage at Risk register. The Trust began planning to restore the building in 2014 and as part of this work, archaeological excavations were carried out by the Buckinghamshire Archaeological Society. The excavations exposed the pits for the pump house's original two boilers. The first pit had three stepped edges and was built with fire bricks from Stourport. The second, slightly longer pit, had oval ends and only one step at the edge and was built with fire bricks from Church Gresley in Derbyshire.

Restoration of the pump house was completed in 2019 with the support of a grant from the National Lottery Heritage Fund. Working as part of a direct services construction team, the Trust's Heritage Apprentices restored the roof and brick walls and fitted new doors and windows in keeping with the original character of this historic building.

Below: Soulbury Pump House after restoration



Case Study

Heritage Apprentices, Monmouthshire & Brecon Canal, Wales

Heritage apprentices working with the Trust's delivery team on the Monmouthshire & Brecon in Wales have demonstrated their craft skills with impressive results. This canal, with its wealth of stone-built structures is an ideal environment for apprentices to practice traditional methods of construction as part of their training for an NVQ Level 3 qualification.

The outstanding project completed in 2017/18 was rebuilding the parapet wall of the scheduled Brynich Aqueduct, which crosses the River Usk at one of the canal's most scenic locations. The wall was collapsing in several places and had lost most of its original coping stones, hence a rebuild of the entire length was required. The work was undertaken as an apprentice-led project and resulted in two of the apprentices being entered for a Heritage Angels in Wales award where they were finalists in the best craftsperson category.

Another challenging project testing the apprentices' skills was the repair of the masonry arch Bridge 130 at Llangynidr during the early part of 2018. After a thorough cleaning to reveal substantial voids and damaged stonework, it was clear there was little holding the bridge together. This work was completed successfully despite the 'Beast from the East' weather in mid-March.

An example of entirely new work by the apprentices was the installation of lock beam quadrants, specifically designed for the Monmouthshire & Brecon. Originally the canal did not have quadrants and a range of unsympathetic materials to provide firm surfacing had been introduced after its restoration. The programme of building new quadrants at six locks commenced in 2016 and provided an excellent opportunity for apprentice masons to demonstrate their abilities. The new design, consisting of rows of thin stone to provide the quarter circle walkway, requires considerable attention to detail when setting out. It is time-consuming to install, but the finished result is a spectacular enhancement to the lock-side.

Right: Rebuilt parapet, Brynich Aqueduct

Below Right: Bridge 130, after repairs

Below: Repairing Bridge 130



Above: Apprentices laying a new lock quadrant, Monmouthshire & Brecon Canal



Archaeology

Case Study

Surveying the Old Line of the Oxford Canal

An archaeological survey of an abandoned loop of Brindley's Oxford Canal at Hillmorton, near Rugby was carried out in August and November 2017.

The archaeological survey recorded and extended excavations previously carried out by the Old Mortonians local volunteer group and informed assessment of the survival and significance of the site. Work included a cross-section of the canal, recording a length of towpath retaining wall, a sluice and the remains of a boat, and topographical survey of the immediate environs. Two substantial pieces of architectural stonework inscribed with a variety of graffiti were recovered.

Documentary study, survey and sample excavation of this abandoned length of canal demonstrated its local importance and that it had the potential to be sensitively brought back into use for moorings.



Left: Graffiti-covered stone, abandoned Oxford Canal loop, Hillmorton

Case Study

Recording Beeston and Bunbury locks, Shropshire Union Canal

During winter 2017, works were carried out by the Trust's local team to reinstate damaged cill buffers at Beeston Stone Lock (listed Grade II) and Bunbury Lower Lock (scheduled monument and listed Grade II*) on the Shropshire Union Canal. The locks are located on the former Chester Canal, which was completed in 1779, although the present Beeston Stone Lock is a rebuilding of 1827.

Archaeological recording was carried out at both locks in advance of repairs. This included illustrative drawings and a photographic record of the lock cills, cill buffers and lock gates.

The recording work allowed accurate drawings to be produced and helped the Trust's engineers to understand the historic significance and construction of the locks. Further archaeological recording was carried out during the reinstatement works, which took place in January 2018.

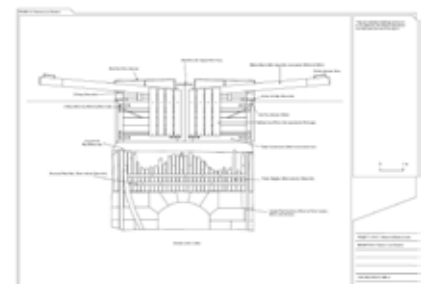


Above: Beeston Stone Lock, historic cill area



Left: Bunbury Locks, lower chamber

Below: Beeston Stone Lock record drawing, LP Archaeology





Case Study

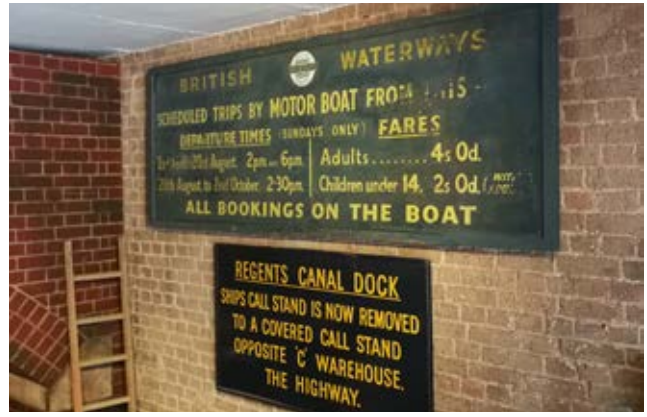
Metal detectorists, Grand Union Aylesbury Arm

Between October 2017 and January 2018, a metal detecting survey was undertaken as part of a towpath improvement project on the Aylesbury Arm. Its aim was to investigate the history of construction, repair and use of the towpath through the recovery and analysis of metal items lost or discarded during the life of the waterway. The Aylesbury Arm, which runs 6.2 miles (10km) from Marsworth Junction to the centre of Aylesbury was completed in 1815.

In consultation with the national Portable Antiquities Scheme, the Trust's heritage adviser and three experienced local detectorists searched the towpath. Finds included several coins dating back to the reigns of George III and Victoria, fishing hooks and weights, boat fittings and tools, bicycle valves, a toy lead-alloy miniature trumpet, an 1860s finger-ring, and an anodised aluminium cap badge of the Royal Green Jackets dated 1966-1991.

Top: Metal detectorists, Aylesbury Arm towpath

Right: Royal Green Jackets cap badge recovered from Aylesbury Arm towpath



Case Study

British Transport Commission sign conserved

Following nationalisation on 1 January 1948, canals came under the jurisdiction of the Docks & Inland Waterways Executive of the British Transport Commission. On 1 January 1955 docks and canals were separated and British Transport Waterways came into being. In turn, this was replaced by the British Waterways Board on 1 January 1963.

In October 2017, the London heritage adviser secured the future of a British Waterways trip boat sign that had been found in the Trust's stores at Adelaide Yard, Southall, on the Grand Union Canal. Made of ply, framed with a wooden moulding and painted blue with cream lettering, the sign bears the distinctive British Transport Waterways badge which dates it to between 1 January 1955 and 1 January 1963.

In May 1959 a waterbus service was instituted from Paddington along a two-mile section of the Regent's Canal to London Zoo in Regent's Park. Water Buck, a converted narrow boat that could carry 50 passengers was used from the outset. Water Wagtail and Water Nymph were commissioned in the following year. In recognition of the sign's local significance, the Trust donated it to the London Canal Museum, where following conservation, it is on show to the public.

Top: British Transport Commission sign on display, London Canal Museum

Engagement

Engagement is a vital part of the Trust's work of managing the waterways for the benefit of the nation and future generations. The Trust recognises that the full potential of its historic waterways can only be realised if it engages with its partners and the wider community in the public, private and voluntary sectors.

By attracting visitors, local groups and volunteers, the Trust encourages active participation in conserving waterways heritage which in turn contributes to learning and skills development and helps individuals and places to prosper. The Trust seeks to empower local communities, foster a sense of ownership and pride and develop greater appreciation of the need to protect the heritage assets in its care. In so doing it adds positively to the quality of life and wellbeing of all who participate.

Volunteers

Case Study

Cataloguing wooden patterns at Ellesmere Yard, Llangollen Canal

In December 2017, work started on photographing, numbering and cataloguing the huge collection of wooden patterns stored in the pattern shop at the Trust's Ellesmere Yard.

With assistance from the collections team at the National Waterways Museum, Ellesmere Port, three volunteers started the challenging task of recording the patterns. Once completed, the records will be held on the Museum's database.

The carefully crafted wooden patterns were used for sand-casting iron components such as handrails, paddle gearing, cast iron quoins for locks, crane parts, mileposts and boundary markers mainly on the Shropshire Union, Montgomery and Llangollen canals. These historic patterns represent an invaluable collection and some are still used today when the Trust needs to carry out repairs to its cast iron structures.



Top: Volunteers recording patterns, Ellesmere Yard

Above: Volunteers and Trust staff, Ellesmere Yard

Left: Wooden patterns, Ellesmere Yard



Case Study

Brentford archive project

The Brentford archive project has its origins in the rescue and review of waterways-related archive material from warehouses under development in various parts of the Trust's estate. From this modest starting point in 2015, the scope of work has grown. Currently there are 12 volunteers actively engaged on the project for two days a week at the harbourmaster's office in Brentford.

For volunteers, the delight of this activity is reviewing a broad range of mainly estates deeds and associated legal/ historic documents that may otherwise have been lost. The oldest document to emerge so far is from 1610, when James I was on the throne.

Work already completed covers the Grand Union Main Line from the Thames at Brentford to Rickmansworth, the Paddington Arm, Regent's, and Hertford Union canals. Overall, the number of packets of material reviewed to date stands at around 4,500, containing around 6,000 individual documents.

Below: Brentford archive project volunteers at work



Case Study

Drystone wall rebuilt, Bradford on Avon, Kennet & Avon Canal

In October 2017 a group of volunteers completed rebuilding a section of towpath walling near Bradford on Avon wharf, where the canal adjoins the famous Tithe Barn. The canal bank retaining wall is made of Cotswold stone and had partially collapsed due to tree growth and general decay.

The three-year project involved dismantling the old masonry, salvaging as much of it as possible and rebuilding the wall with carefully selected matching stone. Repairs were entirely undertaken by the dedicated team of volunteers, led by a specialist trainer and involved learning traditional masonry and lime mortar skills.

The workmanship in the finished wall is outstanding and has significantly enhanced the historic canal setting. It is an excellent demonstration of what can be achieved with skilled volunteers.



Above: Volunteers rebuilding drystone wall, Bradford on Avon

Partnerships

Case Study

Skew bridge restored by Heritage Heroes, Kennet & Avon Canal

New Crown Estate Bridge 99 has a famous history. It was here that the canal crossed the Savernake estate, owned by the Earl of Ailesbury, and bisected a ride forming part of a formal landscape originally designed by Capability Brown.

Canal engineer John Rennie had to build the bridge skew on the exact line of the ride at an oblique angle to the canal. Reputedly it was his first attempt at such a construction. In World War II large concrete cylinders were installed on top of the bridge to prevent vehicles crossing. After the war access to the bridge was cut off by the railway line running alongside the canal and it fell into disrepair. Its parapets were removed in the 1960s and for over 60 years the bridge was a forlorn sight.

A recent Heritage Heroes partnership between the Trust and the Help for Heroes charity (which helps Armed Forces veterans and their families) supported by the People's Postcode Lottery Dream Fund, has led to restoration of the bridge and its missing parapets.

During restoration, the original design was largely replicated by studying photographs from the early 1960s when the parapets were still extant. The restoration required some 16,000 new Furness bricks, sourced to make a good match with those found in the arch and abutments. Enough of the original masonry copings were recovered from the undergrowth to cover one of the parapets with the other side receiving new matching limestone copings. An interpretation board on top tells the story.



Top: Bridge 99, before the remains of its parapets were removed. Photograph: Kennet & Avon Canal Trust

Above: Heritage Heroes repairing Bridge 99



Case Study

Reclaiming Parbold Dry Dock, Leeds & Liverpool Canal

In the North West of England, the Trust's volunteers have been restoring a non-designated but historic dry dock at Parbold. The dock was used for boat repair until the 1960s when commercial use of the canal ended. It was re-opened briefly in the early 1980s to allow the Rose of Parbold Association to refit their boat, which still provides day trips for visitors with special needs. In recent years however, the dry dock has become overgrown with invasive Japanese knotweed and Himalayan balsam proliferating. As a place to meet and an important local heritage asset, the dry dock was lost to the community.

Throughout 2018/19 volunteers working with Trust staff set about reclaiming the dry dock from nature. They included Parbold residents, members of Burscough Heritage Group and the Rose of Parbold Association, students of West Lancashire College, the Trust's volunteer lock keepers and students engaged with the Trust's Desmond Family Canoe Trail project.

Their enthusiasm and hard work has led to the removal of self-sown vegetation and a considerable quantity of soil that had built up within the dock and on its perimeter footpath. Further work included repointing stonework around the dock entrance, with Trust staff delivering training on lime-based mortars and repointing techniques. It is expected that the skills learned by the volunteers can soon be deployed to another disused dry dock, which is a Grade II listed structure at Lathom, on the Rufford Branch of the Leeds & Liverpool Canal.

Above: Volunteers at Parbold Dry Dock

Case Study

Thornton Lock Open Day, Pocklington Canal

The Pocklington Canal is an early 19th century broad canal stretching 9.3 miles (15 km) through idyllic rural countryside from the River Derwent at East Cottingwith to the outskirts of Pocklington on the western edge of the Yorkshire Wolds.

Following the canal's gradual decline into disrepair its future has been saved over the past 40 years by the work of energetic local volunteers and the conservation aspirations of the Trust.

By 2017, Thornton Lock's gates (which were installed some years ago) had started to fail and needed replacing. New gates were made at the

Trust's Stanley Ferry Workshop, near Wakefield. The new gates have oak balance beams, replacing 1980s steel rails, and elm gate paddles, replicating the original 1818 design.

The site was prepared by Help for Heroes volunteers and the repair work was carried out by Trust staff and volunteers from the Pocklington Canal Amenity Society.

To showcase the work, celebrate the collaborative project and mark the anniversary of the canal, an open day was held in summer 2018.

Below: Thornton Lock Open Day





Case Study

Three Red Wheels

Above: Red Wheel at Froghall Canal Basin

As part of the ongoing partnership between the Trust and the Transport Trust, a further three Red Wheels (elegantly designed circular plaques that celebrate sites important to British transport history) were unveiled in 2017/18.

The first was at Dundas Wharf on the Kennet & Avon Canal. This site has an historic collection of restored heritage structures, including the Grade I listed Dundas Aqueduct, a wharf crane, canal warehouse, roving bridge and unique Georgian toll house. It is also the junction with the now abandoned Somersetshire Coal Canal.

The second Red Wheel, at Hawkesbury Junction, marks the joining of two of Britain's oldest canals; the Oxford and the Coventry. Each canal was run by separate companies and the junction,

with its shallow gauging lock, was the scene of fierce disputes over who collected tolls. In its heyday it was a busy rendezvous for working boats awaiting orders for their next cargo of coal from the many pits in the area. Today the junction is rather more peaceful and includes a soaring iron bridge, a pumping station, the famous gauging lock and the Greyhound Inn.

The third site to receive a Red Wheel was Froghall Canal Basin on the Caldun Canal. Historically, Froghall was an important transport hub, with warehousing, lime kilns and a canal/railway interchange. The Grade II listed warehouse at Froghall has been restored and now houses a café, gift shop and holiday accommodation. The Red Wheel is a fitting celebration of the entrepreneurial past of the site.



Case Study

Ellesmere Yard Open Day, Llangollen Canal

In August 2017, the Trust's fascinating historic canal yard at Ellesmere was opened as part of the small town's annual festival. The event provided the opportunity for a behind-the-scenes view of a site which is not normally accessible to the public.

The site is a very well-preserved example of a canal maintenance yard dating from the early 1800s. The range of Grade II* listed buildings, which has a claustural quality, includes blacksmith and joiner's shops, dry dock, a yard manager's house and Beech House the former head office of the Ellesmere Canal Company. Today the yard is the operating base for the waterway teams that look after the Llangollen and Montgomery canals.

The event included guided tours of the yard and practical demonstrations of forge-work by an expert conservation blacksmith. Saturn, the last surviving Shropshire Union Canal fly boat (built in Chester in 1906 and originally used for speeding cheese from the dairy lands of Cheshire and Shropshire to Manchester) was moored up next to the yard and was a popular attraction for the more than 1,000 visitors who attended the open day.

Above: Flyboat Saturn, Ellesmere Yard Open Day

Case Study

Nantwich Aqueduct interpreted, Shropshire Union Canal

Following repairs in 2015, Thomas Telford's historic iron aqueduct, known as the 'Gateway to Nantwich' was celebrated with a new interpretation panel in 2018/19.

Below: Interpretation panel, Nantwich Aqueduct

Created by a partnership between the Trust, Nantwich Museum and Nantwich Partnership, the panel tells the story of the Shropshire Union Canal and Telford's iconic aqueduct, which was constructed in 1828 and is a Grade II* listed structure.

The new interpretation panel, coupled with recent improvements to a nearby canal-side playground, are part of an initiative to promote tourism and boost investment in the picturesque Cheshire market town of Nantwich.

Nantwich Aqueduct was one of several Telford-designed cast iron aqueducts in the area. Similar cast iron trough types, with masonry arch wings, can be seen further south on the Shropshire Union Canal at Stretton and in Congleton on the Macclesfield Canal.

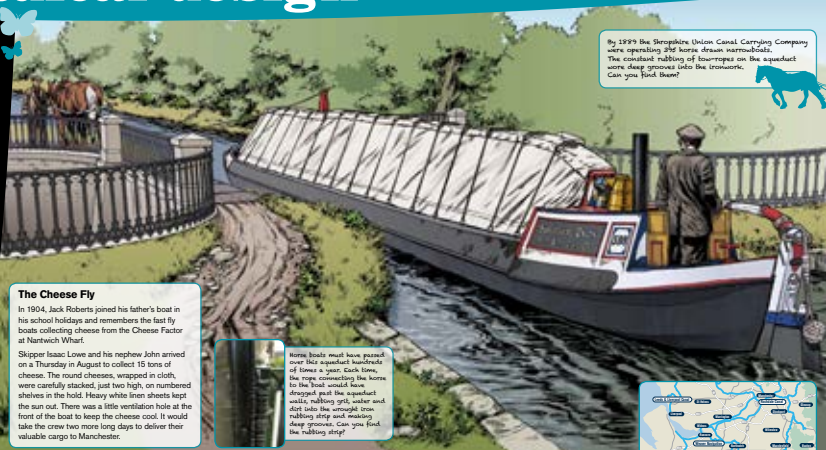
Nantwich Aqueduct

A radical design

Thomas Telford was one of the first engineers to use iron to build a structure. The plan below shows how the aqueduct was made up of a series of cast iron plates bolted together, supported by six cast iron arch ribs on stone dressed brick abutments. The towpath is supported on cast iron uprights within the trough.

The first iron aqueducts were narrow, making it difficult for boats to displace the water as they passed across, and hard work for the horses hauling the boats.

In Telford's design, he used the full width of the structure, extending the towpaths across the water and making it easier for boats to displace the water.



You're visiting the
Shropshire Union Canal

By 1839 the Shropshire Union Canal Carrying Company were operating 216 horse-drawn narrowboats. The constant rubbing of fourmtops on the aqueduct soon deep grooves into the ironwork. Can you find them?

The Cheese Fly
In 1804, Jack Roberts joined his father's boat in his school holidays and remembers the last fly boats collecting cheese from the Cheese Factor of Nantwich Wharf!

Skipper Isaac Lowe and his nephew John arrived on a Thursday in August to collect 15 tons of cheese. The round cheeses, wrapped in cloth, were carefully stacked, just two high, on numbered shelves in the hold. Heavy white linen sheets kept the sun out. There was a little ventilation hole at the front of the boat to keep the cheese cool. It would take the crew two more long days to deliver their valuable cargo to Manchester.

Horse boats must have passed over like aqueduct hundreds of times a year. Each time, the ropes connecting the horse to the boat would have dropped past the aqueduct walls, rubbing grit, water and dirt into the wrought iron railing strip and creating deep grooves. Can you find the rubbing strip?

Challenges of canal building
Local craftsmen supplied materials to build the aqueduct. John Wilson provided stone masonry and William Hazlittine probably made the ironwork. Telford was delighted with the quality of work.

However, when Telford designed the Birmingham and Liverpool Junction Canal, permission to cross the Darford estate was refused. This meant building a long embankment and an aqueduct to cross the Chester Road. At the time, little was known about the geology of the land, and the canal slipped downhill here in 1829 and 1830.

Plan of Nantwich Aqueduct from Atlas to the Life of Thomas Telford, published in 1839, showing overhanging towpaths, brickwork and iron trough.

Volunteer for the Canal & River Trust
Visit canalrivertrust.org.uk/volunteer to find out the best opportunity for you. There's never been a better time to get involved!

Show your support
Like us on [facebook.com/canalrivertrust](https://www.facebook.com/canalrivertrust)

1829 photo was taken when the water level was lowered for repair works. The broad sections and overhanging towpaths supported on cast iron uprights can be seen, either side of the canal.

Deep channel of the Chester-Parkway Canal, Nantwich.

In 1829 Telford visited Nantwich to inspect the works. He was impressed and commented on 'the most perfect workmanship'.

canalrivertrust.org.uk
Canal & River Trust charity number 1145752

In 2015 the Aqueduct underwent a comprehensive refurbishment project that brought people together to restore this important gateway to Nantwich. The project was funded with contributions from the Canal & River Trust, Cheshire East Council, Nantwich Town Council, Acton, Eddleston & Heald Parish Council, Nantwich Partnership and the Pilgrim Trust.

With acknowledgement to Nantwich Museum nantwichmuseum.org.uk [@nantwichmuseum](https://www.instagram.com/nantwichmuseum)

Find out more at canalrivertrust.org.uk
T: 0300 040 4040 www.canalrivertrust.org.uk
E: customer.services@canalrivertrust.org.uk





Case Study

Duke's Lock Open Day, Rochdale Canal

During essential lock gate repairs and repointing in February 2019, the Trust hosted an open day at Duke's Lock in Manchester and welcomed a large number of visitors. The open day was an opportunity to learn more about the Trust's work and walk through the historic lock chamber, which was partly carved out of the local pinkish rock.

Duke's Lock is named after the Duke of Bridgewater, who opened his iconic industrial Bridgewater Canal in 1761. Thirty years later, the Duke agreed to a junction between his canal and the Rochdale Canal, at Castlefield, which required the construction of nine locks. The Duke himself shrewdly paid for the last lock and had his own workers construct it. This allowed him to impose heavy tolls on boat traffic and improve water supply to the Bridgewater Canal by taking it directly from the Rochdale.

The Rochdale saw regular commercial traffic until the 1914-18 war, after which it dwindled away. Most of the canal closed in the 1950s and moves were made to close the Rochdale Nine locks in the 1960s. They were saved by the campaigning of local canal groups and a 1971 boat rally which triggered plans for the Cheshire Ring of pleasure-cruising canals.

Right: Duke's Lock viewed from above

Left: Duke's Lock, view inside lock chamber



Publicity

Throughout the 2017–19 period the Trust continued to build its heritage presence on Twitter and by the end of March 2019 had 2,264 followers who were actively engaged with on a weekly basis. Blogs and stories from the archives were shared, along with photographs from site visits and updates from Trust staff who carry out works to historic assets. The audiences reached reacted favourably and 200,600 impressions were recorded. The Trust also began placing heritage items on Instagram for the first time.

Further publicity was given to the Trust's heritage activity in 2017–19 through media campaigns relating to vehicle strikes on bridges and dealing with graffiti (which accounts for half the acts of vandalism committed on the Trust's waterways). Two informative short video films, one about small heritage buildings, the other about historic boats, were produced during the period.

The Trust's heritage team also took part in and spoke at various conferences and events throughout 2017–19. These included: an international conference on the heritage of bridges held at the Ironbridge Gorge World Heritage Site, the Institute of Historic Building Conservation (IHBC) Annual School in Manchester, a talk on the work of the Trust's Heritage Heroes at the important Heritage Alliance annual conference, and the prestigious LTC Rolt Lecture, delivered by the Trust's national heritage manager to the Association for Industrial Archaeology in August 2017. In December 2018 the Trust's North West heritage advisor presented a paper on conserving waterways heritage at a conference in Barcelona organized by the Association of Architects for the Defence and Intervention in Architectural Heritage.

Case Study

War on the Waterways campaign

Once again, in November 2017, the Trust built upon the success of its War on the Waterways social media campaign from the year before and this again attracted wide public interest.

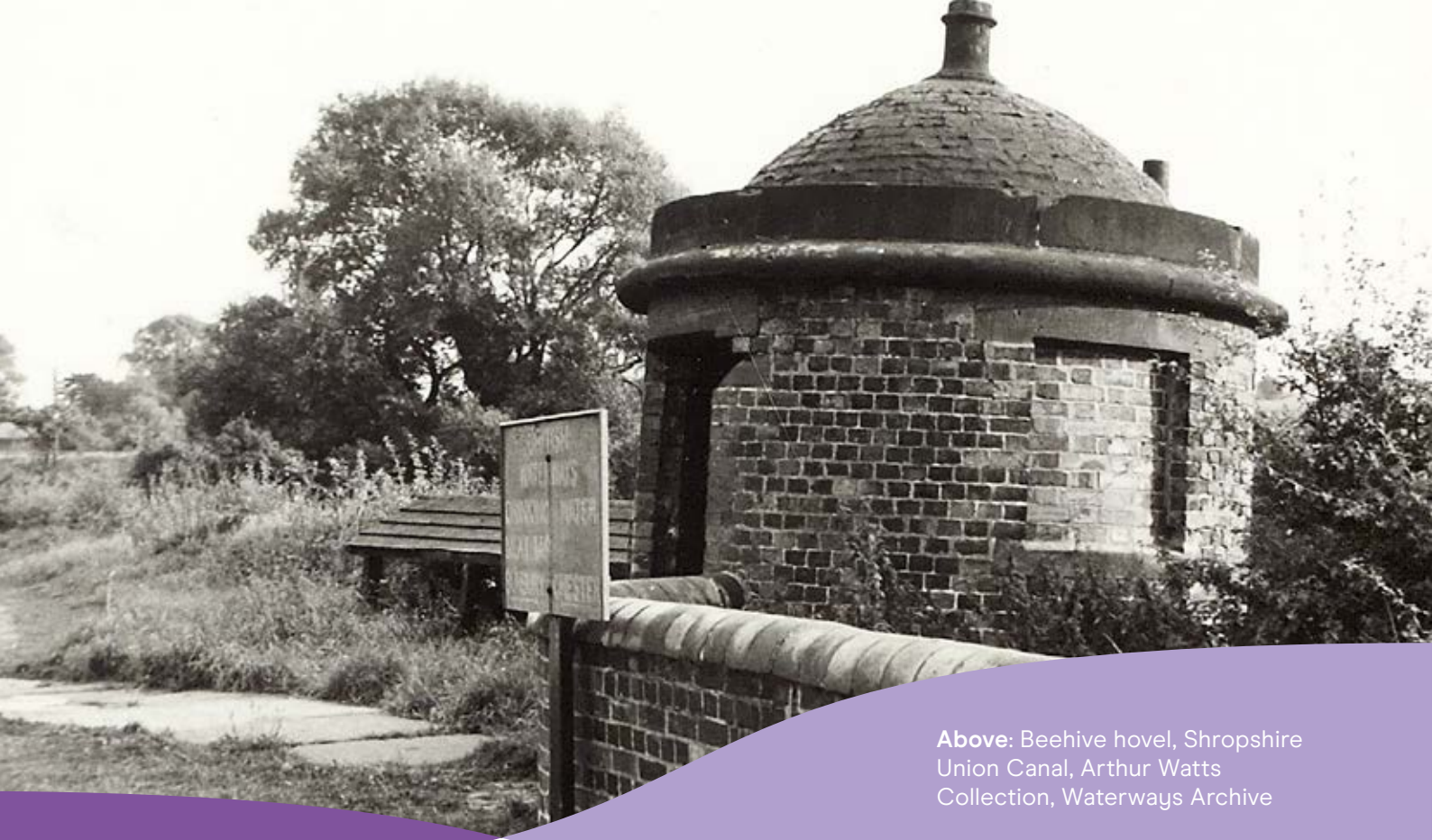
Particular highlights included the tweeting of rarely seen archive images of soldiers on boats and with their horses. One of the most popular images with the public was a photograph from the Waterways Archive of soldiers in World War I preparing to go on manoeuvres on the Kennet & Avon Canal.

Accompanied by blogs and the short film made in 2016, the campaign reached an audience of 93,800 on Twitter and over 119,600 on Facebook from the Trust's main accounts.

The dedicated heritage Twitter feed attracted over 13,000 impressions in the week leading up to Armistice Day and Remembrance Sunday 2017.

Below: Soldiers on manoeuvres, Kennet & Avon Canal, Michael Ware Collection, Waterways Archive





Above: Beehive hovel, Shropshire Union Canal, Arthur Watts Collection, Waterways Archive

Case Study

Small buildings and features film

The inland waterways heritage is as much about its small buildings and features as it is about soaring aqueducts and ingenious engineering. However, these minor heritage assets can be easily overlooked. They include hovels, blacksmiths' forges, lengthsmen's huts, mileposts and signage. These humble buildings and features animate a canal's towpath and tell the story of how the waterways functioned in the past. A number of these assets are designated through listing, but most are not, which puts them at risk from being lost or demolished. Some have found new uses through volunteer and community groups, but others need maintenance and adoption.

To raise awareness of small buildings and features, a short film was produced and shared on the Trust's YouTube channel via Facebook and Twitter and achieved positive results. 53,000 people were reached and the film was viewed over 24,000 times, receiving hundreds of comments on its initial release in December 2017. These results show there is a real appetite for canal heritage amongst the Trust's supporters, visitors and wider public.

Below: Reservoir-keeper's hovel, Grand Union Canal

Bottom: Lock-keeper's lobby, Claydon Middle Lock, Oxford Canal



Appendices

Distribution of designated heritage sites and structures by regional waterway

	Scheduled Monuments	Listed Buildings – CRT owned	Conservation Areas	Historic Parks & Gardens	Battlefields	World Heritage Sites
East Midlands	2	205	36	0	2	0
London & South East	8	188	64	4	0	0
North West	11	873	53	2	1	1
Wales & South West	10	310	28	0	2	2
West Midlands	12	780	77	0	0	1
Yorkshire & North East	3	352	46	1	1	1
Total	46	2,708	304	7	6	5

Note

The Trust cares for almost 3,000 listed structures. Only the Church of England and the National Trust have more. But with such large numbers to look after it can be difficult to pin down just how many of the Trust's individual structures are included in the statutory lists.

Our asset database contains information on more than 50,000 structures. These range from the large (Pontcysyllte Aqueduct) to the small (a lock gate) and from the old (the Old Double Lock on the Sankey Canal, 1758) to the new (the Helix footbridge, Paddington Basin, 2003).

The database includes 390 aqueducts, 2,100 accommodation bridges, 2,425 public road bridges, 1,586 locks, and so on. Most of these assets are within the ownership of the Trust whilst others, such as railway bridges, simply pass over our waterways.

Historic England's occasional practice of grouping structures together into one list entry can also make counting individual listed structures more challenging. For example, the Wigan Flight of 20 locks and six bridges on the Leeds & Liverpool Canal is spread across four list entries; whereas the list entry for Taylor's Boatyard on the Shropshire Union Canal in Chester includes a former flat shed, a narrowboat shed, a steam saw mill, forge, carpenter's workshop, paint workshop, stores, warehouse, office range and a graving dock. That means one list entry includes 10 individual buildings.

In 2017-19 we have undertaken a review of our information relating to listed structures. This has involved a comparison of each asset in our database with the Historic England database of listed structures, which contains almost 380,000 records. As a result, we now have a much more accurate understanding of how many listed structures the Trust has in its care. In turn, this will reduce the chances of inappropriate or unauthorised works taking place to our listed structures

List of assets on Historic England and local authority Heritage at Risk registers by regional waterway

East Midlands

None

London & South East

Soulbury Pumping Station, Grand Union Canal (Grade II)

Crane, Sawbridgeworth, Stort Navigation (Grade II)

Hanwell Flight of Locks and Brick Boundary Wall of St Bernard's Hospital, Grand Union Canal (Scheduled Monument, Historic England register)

North West

Eastern & Western Locks No 91, Northern by-pass channel, Appley Locks, Leeds & Liverpool Canal (Grade II)

Lydiate Hill Bridge, No.18, Leeds & Liverpool Canal (Grade II)

Blue Anchor Bridge, Leeds & Liverpool Canal (Grade II)

Stainton Aqueduct, Lancaster Canal (Grade II)

Transshipment Warehouse, Whaley Bridge, Peak Forest Canal (Grade II*, Historic England register)

Wales & South West

Bridge No 2, Tanat feeder, Montgomery Canal (Grade II)

Llangynidr Limekilns, Monmouthshire & Brecon Canal (Grade II) – Wales

Semington Aqueduct, Kennet & Avon Canal (Grade II)

Newtown Lock, Bridgwater & Taunton Canal (Grade II)

West Midlands

Aberbechan Aqueduct, Montgomery Canal (Grade II)

Richards Bridge No 4, Montgomery Canal, Guilsfield Arm (Grade II)

Roundhouse, Birmingham (Grade II*, Historic England register)

Stanks Bridge, No.60, Llangollen Canal (Grade II)

Yorkshire & North East

Morton Aqueduct, Leeds & Liverpool Canal (Grade II)

Aqueduct over Hainsworth Road & Silsden Beck, Leeds & Liverpool Canal (Grade II)

About us

We're the charity who look after and bring to life 2,000 miles of waterways, because we believe that life is better by water. One of the ways we provide wellbeing to the nation is by protecting our precious heritage so your children, and their children too, can connect with our rich history. You can play a part in supporting our work by becoming a friend, donating, volunteering, or joining a community group and adopting a stretch of canal.

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Editor: Dr Nigel Crowe

Cover image: New safety railings, Marple Aqueduct