

**Archaeological watching brief at
Crickheath Wharf
Montgomery Canal**

Martin Cook BA MCIfA
Suzanne MacLeod BA

30th August 2018
Revised 12th October 2018
Revised 22nd October 2018

Oasis ref martinco1-326681

Sundowner
Circus Field Basin
Stocklake
Aylesbury
HP20 1AP

07850 918755

Archaeological watching brief at Crickheath Wharf, Montgomery Canal, Shropshire

Introduction

An archaeological watching brief was undertaken at Crickheath Wharf, Montgomery Canal (Fig 1; SJ 29231 23543) at the request of Kate Lynch, Heritage Advisor, Canal & River Trust. The project was undertaken during restoration of a short length of the canal between Bridge 85 and a point a little to the north of a winding hole on the offside of the canal. The project was undertaken to record a sample of a length of drystone walling supporting the towpath, the bridge forebay walls and a maintenance punt recovered from the vicinity of the winding hole.

Summary

The project recorded a length of towpath support walling, the adjacent bridge forebay walling, a maintenance punt and various ceramic finds from the silts of the canal and winding point. A length of tramway rail was also found.

The documentary material

Only minimal documentary research was undertaken. Sources were the author's personal collections, other C&RT reports and the internet.

General

The Montgomeryshire Canal was devised with a different purpose from most other canals of the time. Whereas other canals could generate sufficient revenue from cargo carrying to be financially viable, the Montgomeryshire was planned to serve a more rural area, which would not offer such opportunities. Instead the primary purpose of the canal was to transport lime for agricultural purposes, which would allow the Upper Severn Valley to become better agricultural land. As a result, the promoters of the canal included local landowners who hoped to achieve a return on their investment through greater crop yields, rather than relying upon share dividends

Although conceived as a means to serve agricultural communities, trade on the canal developed steadily. There were a number of quarries in the Llanymynech area, which delivered limestone to the canal, for transport to kilns at Belan and elsewhere. Grain prices rose from 1800 onwards, and there was a large demand for lime as a fertiliser, so that the Welsh hill-lands could be enclosed and developed for agriculture. Once the Chirk and Pontcysyllte aqueducts were opened on the Ellesmere branch to Llangollen, there was an easy route for the transport of coal, used in the lime kilns to produce fertiliser. Other cargoes included stone for building, roofing slates, timber and bark.

The geological background: coal

The coal measures in the extreme north-west of the county in the area of Oswestry form the southern-most part of the Denbighshire coalfield. The vicinity of Llyncllys is within the area of the 'visible' coalfield where coal can be obtained at a depth of 1000 to 2000 feet (Hull 1905).

The geological background: limestone

Carboniferous limestone in the north-west of the county near Oswestry is a thick (>300m) sequence of limestones which is irregularly dolomitised in southern parts of the outcrop (Bloodworth et al 1998). The limestones are predominantly pale grey, massive or well-bedded. The lower part of the sequence are mostly high in calcium carbonate although variable degrees of dolomitisation and iron staining affect the quality of deposits.

Regional industrial archaeology

General

The area around Oswestry has seen the development of local coal mines, canal systems, railways, tram lines and mills (www.oswestry-borderland-heritage). These industrial sites run from Llanyblodwel, south-west of Oswestry itself, through to Queens Head. From the early 1800s onwards, this area of great industrial activity encompassed communities such as Nantmawr, Porthywaen, Llyncllys, Dolgoch, Sweeney, Weston and Maesbury.

As early as the 1870's, the area around Porthywaen saw the quarrying of lime in about ten quarries which between them employed several hundred people. On the quarry sites, tramways of various gauges took the lime to both the Cambrian Railways network and to Crickheath, which itself joined the Montgomery Canal system. On Sweeney Mountain, an upland area in Oswestry Rural parish, numerous coal workings were opened and probably employed in the region of 300 men. These early mines - really just bell pits - were also connected to the canal system by tramway or standard-gauge railway. When some of the mines became flooded, their owners turned instead to brick making. In the Morda valley, on the outskirts of Oswestry, mills were established to take advantage of the River Morda, which flows south to join the Vyrnwy near Haughton. These mills were used to grind corn for flour, and to manufacture textiles, paper and animal products.

Nearby industrial sites

Limestone has been quarried at Llyncllys for over 150 years. In past years the quarry operations were widely spread and included limekilns with a rail link (www.slideshare.net). A bank of three kilns, known as the Llyncllys Hill limekilns (SJ 269 238), are hidden away in trees and in poor condition with the face partly collapsed (<http://www.brocross.com>). These kilns served the output of the nearby Upper and Lower Butchers quarries. The quality of the rock from these quarries was not as good as that at Llanymynech or the Whitehaven Quarry across the A495 and consequently closure came early. Some output may have been sent to the canal *via* the Crickheath Tramway.

Crickheath Tramway (originally known as the Porthywaen Iron Railway)

The Montgomeryshire Canal eastern section and the Ellesmere Canal met at 'Porthywaen Lime Rocks', both being opened in 1797. To develop traffic, the Montgomeryshire Canal Company Act of 1794 authorised 'That in case the Proprietor...of any Manor...containing...any quarries of Limestone or other stone...lying within a distance of Three Miles from the said Canal...shall find it expedient or necessary to make any Rail Way or Road for the purpose of conveying his...Limestone ..then it shall be lawful for him to make such Rail Way, Road, or Bridges, and Wharf. This tramway was one built under this clause by the Earl of Powys, from Crickheath Wharf generally westwards to the limestone quarries at Whitehaven. The opening date is unknown, Baxter has *c* 1794, but this was before the canal was opened. W.Davies 'General View of the Agriculture of North Wales', published in 1810 refers to the tramway and Christiansen & Miller have 1820 from Crickheath Wharf to Llyncllys and on to Porthywaen about 1826.

The line is shown on the 2 inch to the mile Ordnance Surveyors drawings of 1827, east of the Oswestry to Welshpool turnpike and the 1830-1831 surveyed section west of the turnpike. Beginning at 'Crick Heath Wharf' on the Ellesmere Canal the route ran generally westwards to cross the Oswestry to Welshpool turnpike (A483) on the level and then the Llyncllys to Porthywaen road (B4396) also on the level, continuing west to the Limestone Quarries where it split into two short branches. The line is next shown on the 1 inch to the mile Ordnance Survey map published on the 14th June 1837 following the same route to terminate at 'White Haven' about one and a half miles from Crickheath.

The Oswestry & Newtown Railway received its Act on the 26th June 1855 and was opened from Oswestry to Pool Quay on the 1st May 1860. As the line crossed the tramway at Llyncllys, a bridge was built to carry the tramway across under a clause in the Act ordering the company not to interfere with the gradient of the tramway. The O & N R received a further Act for a short branch from Llyncllys Junction to the quarries at Porthywaen adjacent to Whitehaven on the 3rd July 1860 and the Act prohibited the company from altering or interfering with the line or level of the tramway. The line opened on the 1st May 1861, removing some traffic from the tramway which however remained in use to carry stone and lime for distribution by canal. The Porthywaen branch ran alongside but to the north of the western part of the tramway.

In 1862 at the suggestion of the O & N R, two public sidings were to be provided on their Porthywaen branch for use by the quarries lessees in substitution for the existing siding on the line at Llyncllys, where a short tramway branch ran to an exchange siding, was accepted on the 25th June. The implication of this is that the branch was initially used exclusively by Thomas Savin and other lessees had to move stone and lime down the tramway for transshipment to the O & N R. It is unclear if the interchange siding at Llyncllys was built, the earthworks are shown on the 1875 Ordnance Survey map, so perhaps it was, but its life would have been very short, one or two years.

The 1875 Ordnance Survey map shows the same basic tramway route as 1837, detailing the single siding that reversed to reach the wharf at Crickheath, the bridge across the Cambrian, and the unused earthworks of the short interchange siding at Llyncllys. At Whitehaven the tramway served a timber yard and then curved to run beneath the Porthywaen Branch before running through a loop to terminate further north than earlier at the end of an enlarged Whitehaven Quarry. Leases located in Powysland Reference Library, Welshpool, by Davies filed under 'Savin & Co, leases' indicate that Thomas Savin leased Porthywaen Quarry in 1881 and 1887 and the tramway is described in the leases.

The said Earl (of Powys) was the owner of an Iron Tramway which for many years past had been used for conveying limestone from the Porthywaen Lime Rocks to the Ellesmere Canal at a place called Crickheath Wharf... the said Tramway was not wholly carried over lands of the said Earl but passed in part over lands belonging to other persons and a yearly payment was made by the said Earl to each of them in respect of the loss of land and trespass occasioned thereby...'. A letter dated the 23rd January 1897 from Powys Castle Estate Office to H. Le Neve Foster (a director of the Porthywaen Lime Co Ltd, then working the quarries) headed Crickheath Tramway states 'I am as anxious as you are to get this matter settled. I hope to see Lord Powys's Solicitor on Monday...'. A second letter dated 16th February 1897 from H. Le Neve Foster to E.D Nicholson, the secretary and general manager of the Porthywaen Lime Co Ltd who was then working the Porthywaen quarries includes 'How is the Crickheath Railway doing? I presume you are working this now and by this means will be able to clear more stone at Pear Tree (Quarry) and at the same time push on with Nut Tree (presumably another quarry)'. The implication is that the 'matter' was the purchase or lease of the Crickheath Tramway from the Estate but this is not yet confirmed.

The 1901 Ordnance Survey map shows the siding at Crickheath Wharf had been converted into a loop whilst at Whitehaven the line crossed a standard gauge siding on the level before continuing beneath the Porthywaen Branch to a crusher in Whitehaven Quarry. The Tanat Valley Light Railway, authorised on the 4th June 1899 and opened on the 5th January 1904, branched from the Porthywaen Branch and the initial portion of the branch was then upgraded for passenger use. Signals were provided to protect the tramway crossing under the control of the signalman at Porthywaen Signal Box with an additional signal to control the mixed gauge track to Whitehaven crusher. The 1926 Ordnance Survey map shows these changes at Whitehaven with the tramway crossing the Tanat Valley line on the level before running as a three rail line behind Porthywaen Signal Box, beneath the Porthywaen line and terminating at a modified crusher in Whitehaven Quarry.

The line later closed, probably following the bursting of a canal culvert over the Morda Brook about 1932, following which the canal was not restored. The track was lifted in 1939. In 1932 the Steetley Lime & Basic Co took over the quarry and the Porthywaen signal box was reduced to a ground frame probably in the early 1930s, both perhaps indicating the demise of the tramway. A photograph of Whitehaven quarry dated the 31st July 1934 certainly appears to show the tramway in the quarry, out of use and overgrown. The Davies paper read in 1945 notes 'has been disused for some years, but the embankment across the field from the Oswestry -Welshpool road to the railway near Llyncllys Station can be plainly seen'. Today (2015) the wharf at Crickheath alongside the partially filled canal lies on private land, the stone abutments of the bridge over the O & N R at Llyncllys plus a short length of the tramway embankment westwards and the girder bridge (cast Brymbo 1861) carrying the road over the tramway as it approached Whitehaven, constructed by the Oswestry & Newtown Railway, remain. what may be the remains of the crossing gate guarding the tramway crossing the access road to Llyncllys goods yard are buried in the hedge.

Historic mapping

The earliest available map was the 1838 tithe map of Crickheath. Taken from the internet, this was at too low a resolution for reproduction. It shows Bridge 85, the canal and the road immediately to its west, apparently in their current configuration. It is difficult to be certain as the image is a transcription but the area of the watching brief to the north of Bridge 85 appears to be wooded.

The Ordnance Survey map of 1875 (Fig 2.1) shows Bridge 85, the canal and the winding point. The parcel of land which comprises the current site is shown divided into three, the northern-most element of which (Parcel 3736) has no hard boundary with the adjacent road. A tramway is shown

crossing the field to the west from Crick Wharf, on the southern side of Bridge 85. The only significant difference between the Ordnance Survey map of 1875 and those of 1901 and 1926 (Figs 2.1 and 2.2) is that the boundary between Parcel 3736, on these maps shown as Parcels 3343 and 3342 respectively, and the adjacent road is now a formal one.

The fieldwork

General

Fieldwork took place on the 15th August 2018. It comprised photographic recording of the canal side structure and equipment listed in the **Introduction**. Measurements and notes were taken as necessary.

Description

The canal side walls

These lay in the vicinity of the bridge forebay. They took two forms: the bridge forebay itself and the towpath supporting wall.

The bridge forebay

This was constructed in brick, in English bond (Figs 3.2 and 3.3). On the towpath side this was surmounted by a stone coping. On the offside a similar wall was surmounted by a concrete coping (Figs 3.3 and 3.4). The concrete coping was protected by a steel plate secured to its face. Although the two brick walls appear similar, the depth of the bricks on the towpath side is less than those on the offside.

The towpath supporting wall

This was constructed of large, dry, irregular, uncoursed rubble stone (Fig 3.2). This was surmounted by a single stone coping adjacent to the brick construction of the forebay. It is unknown if these copings continued along the length of the towpath wall.

The maintenance punt

This had been abandoned in the winding hole. It was a simple craft, taking the form of a shallow rectangular box, being 6.17m long, 1.7m wide and 0.37m deep overall (Fig 3.1.3). Four, square posts formed its corners (Fig 3.1.1) and the sides and ends were secured to these with screw bolts (Fig 3.1.2). Right-angle brackets secured the sides to the floor and reinforced the structure. The floor comprised a double layer of wooden planks (Fig 3.1.4). Double cleats were provided near each end (Fig 3.1.1). A rubbing strake was provided all around the gunwale and at the corners (Fig 3.1.3).

The finds

A small number of finds came from the excavation of the canal bed.

There were four bottles (Fig 3.6), a green, cylindrical one embossed with

LASSELL & SHARMAN Ld CAERGWRLE

on its body, a small, brown octagonal one with

MILTON

embossed on its base, a square, clear one with no markings and the base of a wine bottle.

There were nine bullets or their cases and two clay pipe bowls (Fig 3.6). The pipe bowls were reported on by Laura Griffin:

The assemblage recovered from the site totalled two unstratified clay pipe bowls weighing 23g (see Appendix 1, Table 1). Level of preservation was good, with both bowls displaying low levels of surface abrasion, suggesting relatively little disturbance since deposition.

There was also a small iron hoop, possibly a tyre for a wheel barrow (Fig 3.6) and the fragments of two cast signs (Fig 3.5). These were of typical canal design and read:

COMPANYS TOWING
PROHIBITED
BY ORDER

SHROPSHIRE U... WAY
AND CANAL C
TH.. BRIDGE IS INSUFFICIE..
WEIGHTS BEYOND THE
TRAFFIC OF THE DIST....

Finally, there was a short length of tramway rail. It is likely that this came from the nearby Crickheath Wharf tramway. Such tramways were common in association with canals and a few short lengths still survive, such as the example near Leighton Buzzard on the Grand Union Canal (Figs 5 and 6).

Commentary

The bottles

At one time Caergwrle Ales were renowned (Richmond and Turton 1990). Lassell and Sharman established the brewery in 1861, realising that the local spring water was ideal for brewing beer. The brewery prospered, supplying many local pubs with pale, mild and bitter ales and an invalid stout. Barrels were sent by rail to Shotton for distribution and there was an off-licence at the brewery. In 1937, it was one of the first breweries to offer canned beer.

The brewery closed in 1945 soon after it was taken over by Burtonwood Breweries. The old brewery site was used by a paint manufacturer until the 1970s. No trace of the brewery remains as the buildings were demolished and housing built on the site.

The brown, glass, octagonal bottle once held Milton sterilizing fluid. Examples from the 1950s have plastic screw caps. This example, which has provision for a cork, probably dates to the 1910s.

The clay pipes

One bowl had distinctive moulded decoration in the form of the 'Harp and Erin', accompanied by a shamrock on the obverse. This example can be dated to the 19th century. Examples of 'Irish' decoration like this are thought to have been aimed at the navvy population (Oswald 1975, 110) and therefore this example is consistent with its find spot on the canal.

The second bowl is plain but distinctive, having a rounded profile with no base or spur and a distinctive moulded ridge running around the centre of the bowl. There also appears to be some crude moulding where the stem has broken away. The shape of the bowl would indicate it to be of late 18th-19th century date.

The canal side walling

The towpath walling

Dry stone walling of this kind is common across the canal network where stone is available. A similar example has been recorded at Hillmorton on the Grand Union Canal where it is also unknown if there was a coping (Cook 2017; Fig 4). Rubble stone walling on the towpath side is also a feature of the Oxford Canal.

Bridge 85 forebay

It is clear that the two forebay walls are of different construction. It is uncertain which is the earlier but it is thought that it is the towpath side. This wall seems to be the more deeply founded, the offside apparently being of more shallow construction.

The maintenance punt

A punt is a flat-bottomed boat with a square-cut bow, designed for use in small rivers or other shallow water. The punter generally propels the punt by pushing against the river bed with a pole. Punts were originally built as cargo boats or platforms for fowling and angling, it has no keel, stem or stern post. Instead, it is built rather like a latter with the main structure being two side panels connected by a series of 4in (10cm) cross planks, known as 'treads', spaced about 1 foot (30cm) apart. In the case of the example at Crickheath Wharf this construction was modified to provide a continuous flat surface, more convenient for the trans-shipment of materials.

The first punts are traditionally associated with the River Thames and were built as small cargo boats or platforms for fishermen. Since a punt has no keel, it draws only a few inches even when fully laden; this makes it very manoeuvrable and suitable for shallow water. A punt can be punted with equal facility in either direction; this is handy in narrow streams where turning round may be difficult. The square-cut bow gives greater carrying capacity for a given length than a boat of the same beam with a narrow or pointed bow. It also makes the boat very stable.

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Acknowledgements

The author would particularly like to thank Tom Puttock of Land & Water and his team and Kate Lynch, Canal & River Trust Heritage Advisor for their kind co-operation.

Archive

The physical archive consists of:

8 x A4 pages	The text of the report
9 x illustrations of various sizes	Illustrations for the report

It has been deposited at The Waterways Archive, Ellesmere Port.

The digital archive consists of:

8 x A4 pages	The text of the report (.doc format)
9 x illustrations of various sizes	Illustrations for the report (.bmp format)

1 x copy of the combined report (.pdf format)

This has been deposited with OASIS

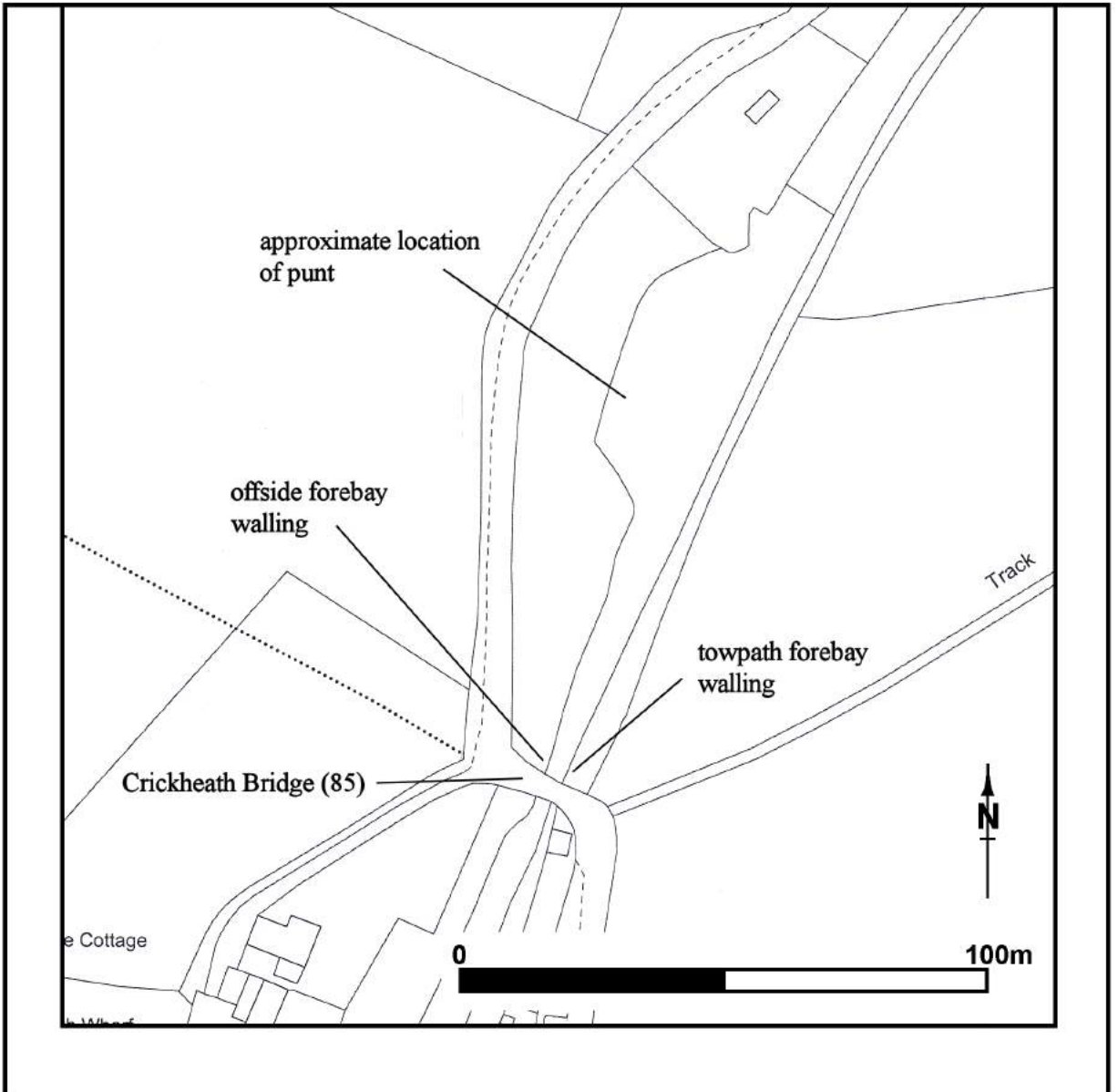
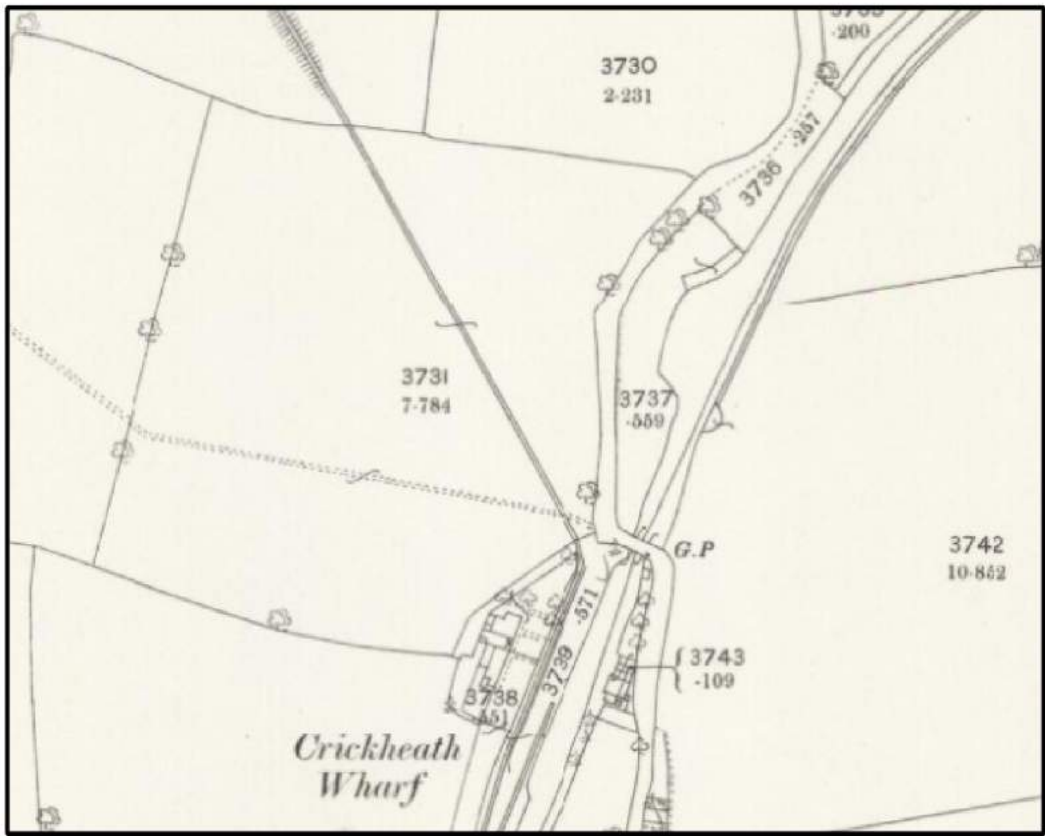


Fig 1: Location of site

1875



1901



Fig 2.1: Historic mapping

1926

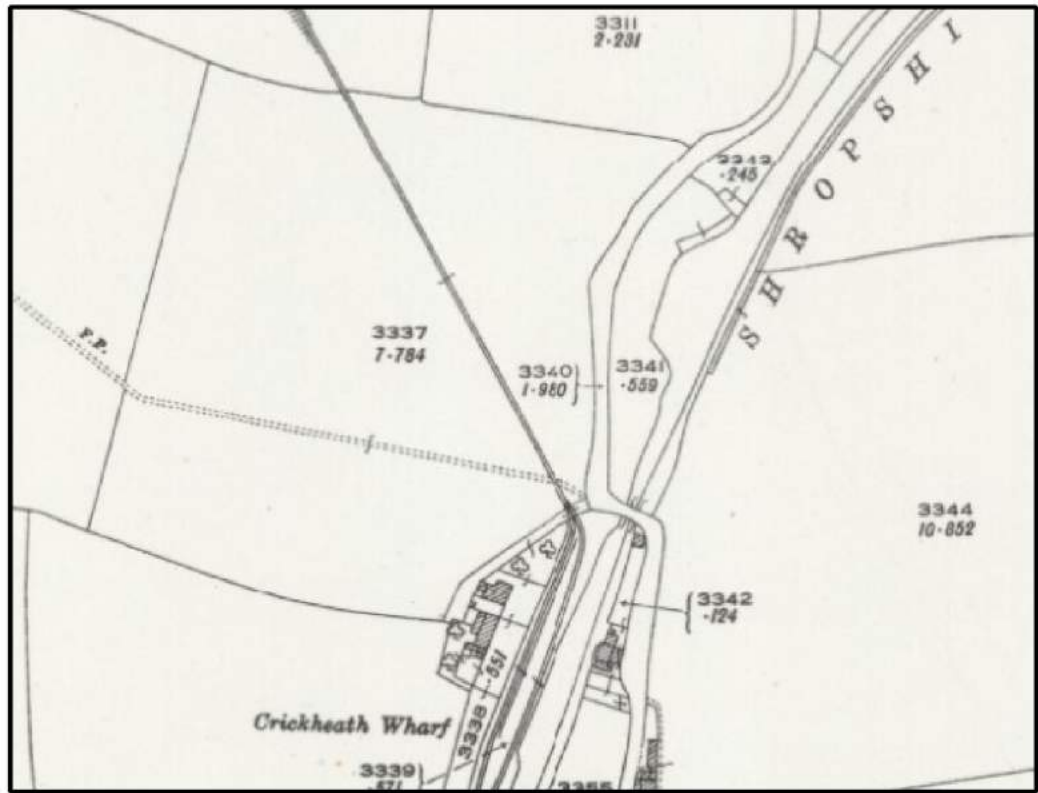


Fig 2.2: Historic mapping

0 200m

Fig 3.1.1

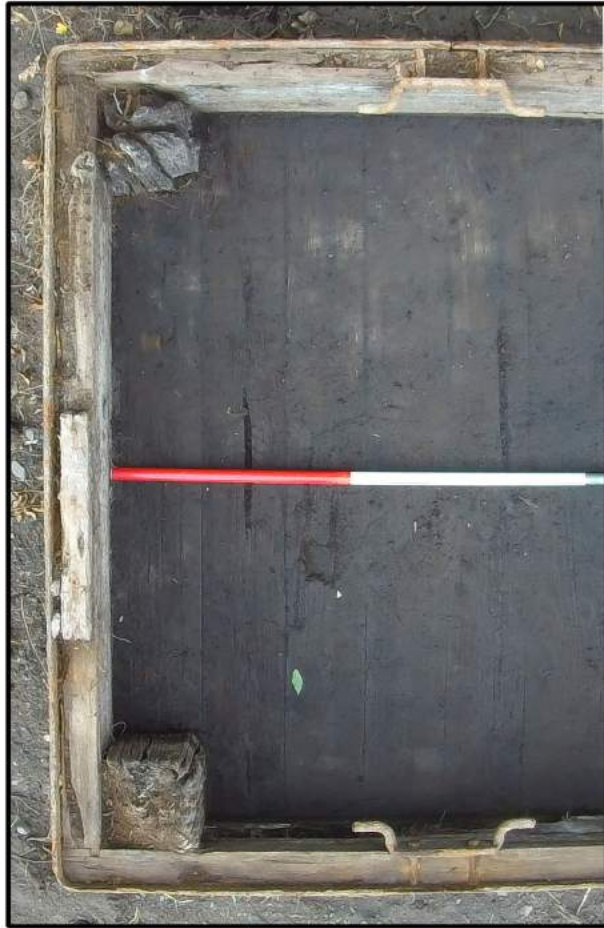


Fig 3.1.2



Fig 3.1.3



Fig 3.1.4

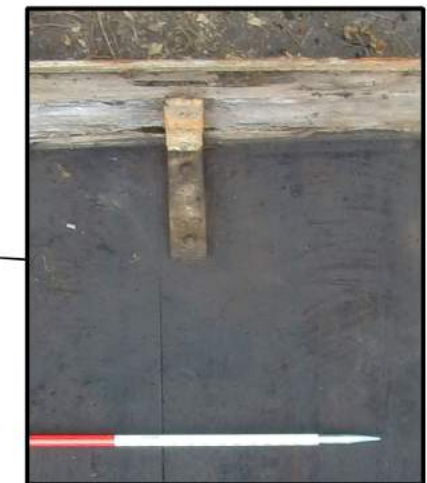


Fig 3.1: Views of the maintenance punt



Fig 3.2: View of the nearside towpath retaining wall and Bridge 85 forebay wall



Fig 3.3: View of the offside Bridge 85 forebay wall



Fig 3.4: Detail of the Bridge 85 offside forebay wall; coping



Fig 3.5: Cast signs of canal design



Fig 3.6: Small collection of finds from the excavations



Fig 4: Example of canal side towpath walling at Hillmorton, Oxford Canal (Cook 2017)



Fig 5: Wharf side tramway near Leighton Buzzard, Grand Union Canal



Fig 6: Wharf side tramway near Leighton Buzzard; Leighton Buzzard Canal Festival, showing wagon with load on tramway and adjacent narrowboat

Appendix 1: The finds

Artefactual analysis by Laura Griffin

The finds work reported here conforms to the following guidance: for finds work by ClfA (2014), for pottery analysis by PCRG/SGRP/MPRG (2016), for archive creation by AAF (2011), and for museum deposition by SMA (1993).

Aims

- To identify, sort, spot date, and quantify all artefacts;
- To describe the range of artefacts present;
- To preliminarily assess the significance of the artefacts.

Method of analysis

All hand-retrieved finds were examined. They were identified, quantified and dated to period. A *terminus post quem* date was produced for each stratified context. All information was recorded on a pro forma Microsoft Access 2007 database.

Results

The assemblage recovered from the site totalled two unstratified clay pipe bowls weighing 23g (see Table 1). Level of preservation was good, with both bowls displaying low levels of surface abrasion, suggesting relatively little disturbance since deposition.

period	material class	object specific type	count	weight (g)
modern	ceramic	pipe	2	23

Table 1: Quantification of the artefactual assemblage

Summary artefactual evidence by period

All material has been dated and quantified (see Table 1).

Modern

One bowl had distinctive moulded decoration in the form of the 'Harp and Erin', accompanied by a shamrock on the obverse. This example can be dated to the 19th century. Examples of 'Irish' decoration like this are thought to have been aimed at the navy population (Oswald 1975, 110) and therefore this example is consistent with its find spot on the canal.

The second bowl is plain but distinctive, having a rounded profile with no base or spur and a distinctive moulded ridge running around the centre of the bowl. There also appears to be some crude moulding where the stem has broken away. The shape of the bowl would indicate it to be of late 18th-19th century date.

Recommendations

No further work required.

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