An Archaeological Watching Brief During Site Investigation Works for the Northwich, Cheshire, Flood Risk Management Scheme. Site Code 162
Final Report

Prepared for the Environment Agency

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July 2014

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Non-Technical Summary

This report describes the results of an archaeological watching brief conducted during site investigation works for a new flood defence scheme in Northwich, Cheshire. The project involved the monitoring of selected test-pits and an archaeological review of borehole and test-pit data supplied by the client.

The results suggest that the survey area has seen extensive subsidence as a result of salt mining and brine extraction during the 18th, 19th and 20th centuries with up to 20 m of made ground, though some of this may also be present as a result of changes to the alignment of the river banks. Part of the line of the defences crosses the location of a weir depicted on 19th and early 20th century mapping. The test-pit aimed at locating this feature although it could not be excavated to a sufficient depth to prove its presence or absence.

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Final Report

1. Introduction

This report describes the results of an archaeological watching brief conducted by National Museums Liverpool Field Archaeology Unit (NMLFAU) during site investigation works for proposed flood risk management scheme in Northwich, Cheshire.

The report describes the results of fieldwork undertaken between 25 June and 07 July 2014 by Steven Price (Archaeologist) and Mark Adams (Senior Archaeological Project Officer NMLFAU).

The project was conducted on behalf of the Environment Agency (hereafter the Client).

The watching brief areas described in this report were widely distributed in the centre if Northwich along the banks of the rivers Weaver and Dane. NGR's are given for individual test pits in the main text as required.

2. Methodology

The watching brief monitored the excavation of trial pits excavated by the main contractor (WYG Environment) and the interpretation of borehole logs supplied by the client. The locations of test-pits, boreholes and window samples are given in Fig. 1.

All excavation and recording was undertaken as specified in the Written Scheme of Investigation (Adams 2014). However, access to deep test-pits was restricted and deposits in others were clearly modern, these were recorded as measured sketch sections.

3. Archaeological and Historical Background

There is little direct evidence for Palaeolithic and Mesolithic settlement from the area, other than stray flint finds, though this is likely to be in large part due to the historic lack of fieldwork in the area and the likely nature of the sites which renders site location difficult. Prehistoric sites tend to show a bias towards areas under lain by Shirdley Hill Sand, though these are known only from chance finds and fieldwalked evidence.

There is no evidence for Iron Age activity within the area of works, though this is likely to be at least in part due to the relative difficulty in detecting sites of this period in lowland North-West England. There is extensive evidence for Iron Age trade in salt (e.g. Morris 1985) and it seems unlikely that such a significant source of salt would remain unexploited.

The establishment of a timber auxiliary fort at Northwich (or Roman Condate) during the AD 70 marked the beginning of Roman occupation in the area. It is believed that the name Condate 'derived from the Celtic word for a confluence of rivers, in this instance the Weaver and Dane' (Petch 1987, 202). Northwich, Middlewich and Wilderspool all served as a military supply centres, lying on routes to the north. 'Watling Street', the road between Chester and York ran through Northwich. A second phase of military occupation finished around AD 140 during which time the fort had been reduced in size. A further rampart and ditch was discovered to the north-east of the auxiliary fort in 1970, which led to the assumption of there being two forts (Jones 1971, 30). Recent reassessment suggested that both sites were similar in date and the rampart found in 1970, rather than being a separate fort, actually belonged to a military annexe of the main fort (Shaw & Clark 2003).

It was not until the mid 19th century that Northwich became known for its Roman heritage when finds and foundations from this period began to emerge as chance discoveries (Petch 1987, 198). The archive of Roman sites is extensive and is only described in summary here. It includes finds of pottery, coins, glass, metalwork and cremations made both as chance finds during 19th century development and 20th century excavation. There is extensive evidence of Roman salt extraction including brine pans.

The vast majority of Roman activity appears to have been concentrated to the west of the development area in close proximity of the fort upon the elevated ground west of the Weaver. Around 1862 large quantities of Roman pottery and cremations were found at Castle Northwich. There is scattered evidence of occupation elsewhere to the south-west of the study area such as part of a lead salt pan found during a house building at Castle Northwich in 1978, bearing the inscribed Romanised Celtic name 'Veluvius'. Three Roman coins have also been located through the Portable Antiquities Scheme just north-west of the proposed development and another to the south-east.

The road from Chester to Manchester follows Witton Street along the southern fringe of the site, though this has not been proved by excavation. It is listed in the Antonine Inter II and known locally as Watling Street. The road led from the fortress at Chester to the forts at Northwich and Manchester and then over the Pennines to York.

There is presently no evidence for Anglo-Saxon activity from the study area, though this has similar problems of site visibility to the Iron Age and it is unlikely that the area was completely abandoned.

Direct evidence for the Medieval period is similarly underrepresented in Northwich, most evidence being derived from place-name, documentary and cartographic evidence. By this time salt working dominated the area and was a major contributor to its prosperity. The place-name element –wic derives from the Latin vicus, or place. By the time of Domesday, wich had developed a specialist meaning relating to salt-working. The Domesday Survey listed Middlewich, Nantwich and Northwich in Cheshire, and Droitwich in Worcestershire, as major salt-working towns of the eleventh century. There were many early variants of the spelling between 1119 and 1280 including Nort(he)-, Nord-, Northt-, -wy-, -wich(e)us, -wic(us), -wiz, -wyhh, -wyk, -wi(c)ke, -wys, -wics (Dodgson 1970). Northwich (or Norvvich) is listed as part of the Northwich Hundred in the survey of 1086.

Later map evidence suggests that the core of the medieval settlement lay along Witton Street, north of the present site. St Helens Church lies south east of the area and dates back to the Medieval period. The Grade I listed church is a mix of 14th,

15th and 16th century styles, with some 19th century alterations. Also close to the study area is the site of a Medieval bridge mentioned as being in the Northwich area around 1353. No accurate location is known for the medieval bridge, but it is likely to have been on the site of Town Bridge as it lies on the route of the Roman Road from Chester to Manchester. A possible deserted medieval village 'Le Cros' lies in the district of Vale Royal, but is not accurately located and is very unlikely to lie within the proposed development. A Medieval carved stone head was also located through the Portable Antiquities Scheme to the south-west of the study area.

During the Post-Medieval period Northwich continued to thrive as a town and was described by William Webb in the early 16th century as '...a market town well-frequented' (Ormerod 1882). During the Civil War Northwich was fortified and garrisoned by Parliamentary troops under Sir William Brereton in 1642-3 (Ormerod 1882). No traces of these defences remain and they cannot be traced from surviving map or placename evidence. This suggests that they consisted of earthworks removed at the end of the conflict. It is possible that they extended across the study area, but are likely to have been extensively disturbed by later industrial activity.

The combined impacts of 18th, 19th and 20th century development and subsidence resulting from mining and brine extraction suggests that little survives below ground of earlier periods, though pockets of undisturbed material may survive, particularly along the banks of the River Dane.

4. Results of the Watching Brief

Deposits are described in the order of excavation. All were excavated by machine unless specified otherwise. The descriptions have been cross-referenced with WYG's descriptions. Sketch Sections are presented in Fig. 2.

TP 101

This test-pit measured 1.0 x 3.1 m.

Top soil (context 7) 0.1 m thick overlay a mid-brown soft clayey loam sub-soil (context 8) 0.2 m thick. Beneath context 8 was a soft reddish brown sandy clay which became firmer and clayier with depth (context 9). At a depth of 2.6 m this graded into context 10, a grey silty clay. Both context 9 and 10 were of geological origin.

TP 102

This was a hand-dug test pit measuring c. 0.2 x 0.2 m.

Top soil (context 11) overlay 0.7 m of loose, gritty loam with up to 20% crushed red-brick and stone. Beneath this deposit were 20th century brick and concrete structures (contexts 13, 14 and 15). No further excavation was undertaken.

TP 103

This was a hand-dug test pit measuring c. 0.2 x 0.2 m.

Top soil (context 16) 0.05 m thick overlay 20th century brick and crushed concrete deposits (contexts 17 and 18) to a total depth of 0.60 m when excavation was terminated.

TP 104

This test-pit was hand-dug and measured 1.0 x 0.38 m.

Modern (uncontexted) tarmac and hardcore was excavated to a surface constructed using unfrogged hand-made red bricks laid on bed (Context 20). This surface sealed a deposit of loose black ashy material (Context 22) which in turn sealed a concrete surface (context 20) at 1 m below ground level which was left in situ.

TP110

This test-pit measured c. 0.3 x 1 m.

0.5 m of top soil and modern builder's rubble was excavated to a concrete footing for the present wall. No further excavation was undertaken.

TP115

This test-pit measured c. 0.3 x 6 m and was excavated in two halves.

It was aimed at locating the weir depicted on historic mapping.

Top soil c. 0.15 m thick (context 32) was excavated to context 29, a compact, mid-brown clayey silt with occasional fragments of hand-made unfrogged brick which was up to 0.70m thick. This overlay context 30, 0.15 m thick deposit of very compacted ash and clinker with crushed brick and 20th century ceramics. Below this deposit was context 31, a layer of concrete paving slabs which could not be penetrated by the excavator bucket. Excavation was abandoned at this point.

TP 116

This test-pit measured 1.6 x 2.5 m.

The uppermost deposit was a layer of mid-reddish brown top soil (Context 1) which was 0.20 m thick and overlay a reddish brown soft clayey loam (context 2) which was 0.40 m thick (Plate). Underlying these deposits was a surface constructed using concrete flags. Beneath the flag stones were deposits of very loose gritty sand with fragments of broken brick, rounded pebbles and occasional fragments of unworked wood (Contexts 4 and 5) to a depth of 2.5 m. Both deposits contained late 19th and 20th century ceramics.

Geological deposits (Context 6) were encountered at a depth of 2.8 m and consisted of pale brown sands.

5. Finds Evidence

Small fragments of 19th and 20th century ceramics were recovered but not retained. These are noted in the test-pit descriptions above.

6. Conclusions

No evidence for *in situ* archaeological deposits was found and many areas showed evidence of 19th and 20th century make-up up to 20 m deep in places. This is consistent with the evidence seen elsewhere in Northwich where subsidence as a result of mining and brine extraction since the 18th century has resulted in a considerable depth of in-fill in most areas of the town centre (Shaw & Clark 2003).

For ease of reference the site has been broken down in to sections numbered NH1 to NH5 (Fig. 1)

Geological deposits where they were encountered consisted of silts, sands, gravels and clays.

Zone NH1 extends from Weaver Way to the Swing Bridge. Although it lies at the core of the medieval settlement where it met the Weaver (Shaw & Clark 2003, Fig. 2) this area appears to have seen severe disturbance with evidence of 19th and 20th century make-up to a depth of at least 8.60 m along most of its length. The extent to which this is due to in-filling after subsidence as opposed to realignment of the river bank has not been determined but suggests that there is little or no archaeological potential in this area.

Zone NH2 runs from the Swing Bridge to Dane Street Bridge appears equally disturbed with evidence of in-filling up to 12.50 m in depth. This area broadly coincides with the known area of medieval saltworking and the in-filling is likely to be a result of the subsidence created by that and later salt extraction. This are too is likely to have little or no archaeological potential.

Zone NH3 covers the northern and southern banks of the Dane between Dane Street Bridge to Victoria Bridge. On the northern bank CP 108 found made ground with fragments of concrete to a depth of 7 m below ground level, though the underlying sands contained bone fragments to a depth of 10m. CP 109 on the south bank found made ground to a depth of 20 m and it is likely that the area to the north is similar. This area broadly corresponds with the known area of medieval and post medieval brine extraction and the made-ground is likely to be a result of make-up after subsidence. The test-pit and window sample data seem to confirm this conclusion, though the depth of made ground was shallower (e.g. 3.0 m in WS 111) possibly a result of the varied impacts of subsidence. However, the test-pits on the north bank were relatively shallow.

Zone NH4 covers the northern and southern banks of the Dane. The western end of the north bank coincides with the quayside, canal and weir shown o0n 19th and early 20th century mapping of the area. CP 107 found made ground to a depth of 5.70m, though the origin of this is not clear. It could be 19th century in fill behind the quays shown on historic mapping of the area or material deposited after the demolition of the saltworks. TP 115 could not be excavated to a sufficient depth to determine the presence/absence of the weir, though TP 116 situated c. 20 m to its east found made-ground to a depth of least 2 m. TP 101 and TP 110 found no archaeological evidence.

Zone NH 5 covers a short section of the Weaver south of its confluence with the Dane and lies to the east of the known Roman settlement. TP 114 and TP 113 were each excavated into made ground to a depth of 1.0 m, window sample WS108 found

similar material with clinker, glass, slate and brick to a depth of at least 5.45 m. Data from WS 106 was not available at the time of writing.

In general the archaeological potential of the area would appear to be low, the general area covered by the Site Investigation works lies well outside the known area of Roman settlement (which lies to the west of the Weaver Navigation) and on the fringes of the medieval town. Any deposits of these dates in the area which may once have existed are likely to have been severely impacted by subsidence resulting from later brine extraction and later infilling.

There is some potential for remains relating to 18th and 19th century industrial activity, in particular the canal, weir and quays of Baron's Quay Salt Works along the north bank of the River Dane in Zone NH4. However, it has not been possible to determine the survival of these features.

8. Recommendations for Further Mitigation

Detailed recommendations can only be given once proposals for construction are available. However, in general the borehole and test-pit evidence suggests that most areas have seen significant subsidence since the early 19th century and that this has been ameliorated by dumping of up to 20 m of in-fill. This pattern is consistent with that seen in other areas of Northwich and suggests that most of the line of the flood defences is of low archaeological potential and it is likely that at most these areas would require a watching brief during the excavation of groundworks, other intrusive operations, for example the insertion of sheet piles would not normally require monitoring.

However, it was not possible to prove the line of the weir depicted on historic mapping of the River Dane (Fig. 3.) and it is possible that remains of the northern end of the weir and of quayside structures associated with the 18th century Baron's Croft saltworks survive below the excavation depth.

If any remains of these structures survive they are likely to be deeply buried and accessible only with the use of heavy plant. These may be monitored as a watching brief during construction, though a programme of field evaluation would provide more evidence upon which to base a proper conclusion.

9. Acknowledgements

The role of Zarina Karmali of the Environment Agency as project sponsor is gratefully acknowledged, as is the assistance of the main contractor, WYG Environmental. The text was read and checked by Dr. Rob Philpott, National Museums Liverpool.

10. Figures

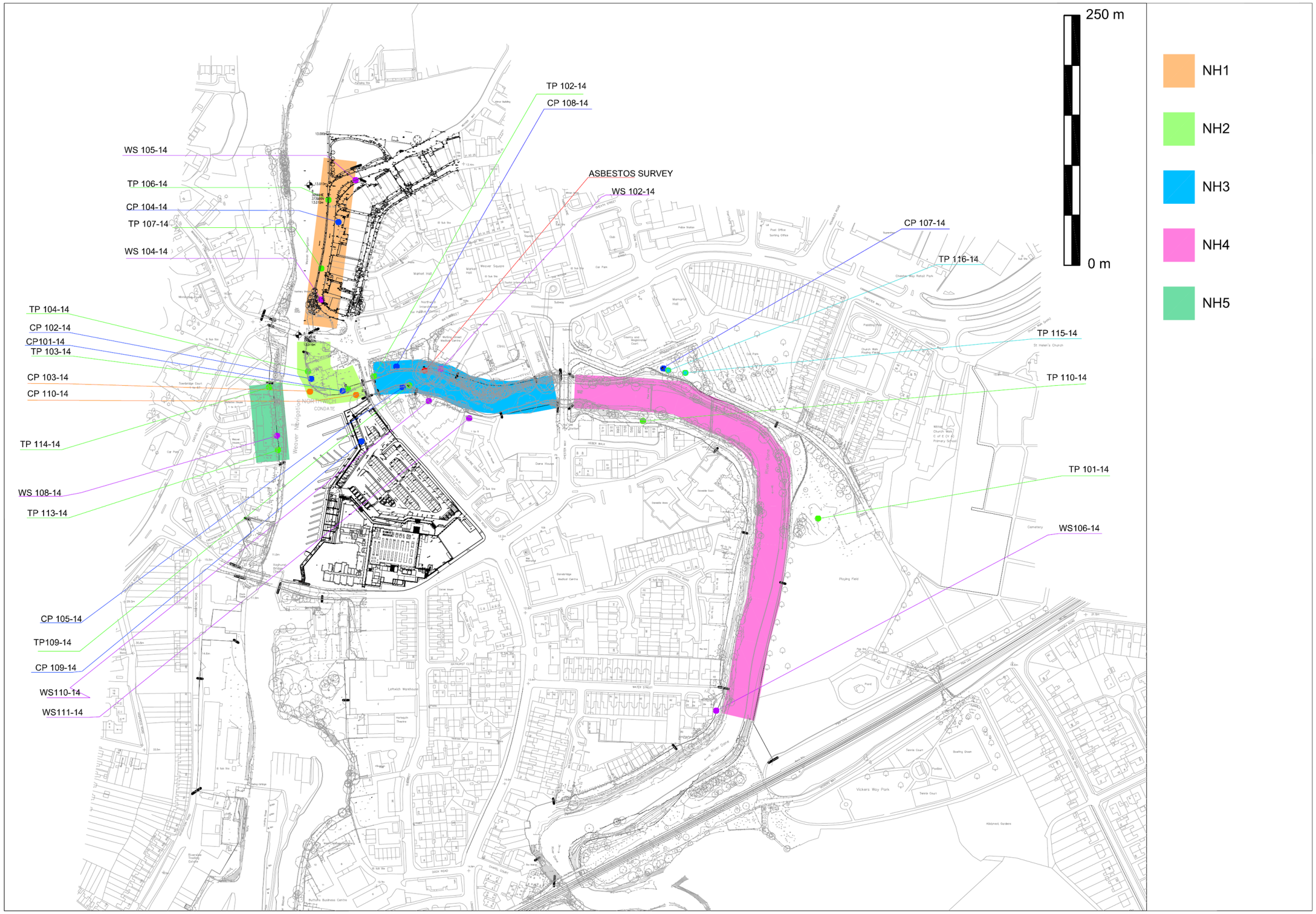

Fig. 1. Location of test-pits and boreholes

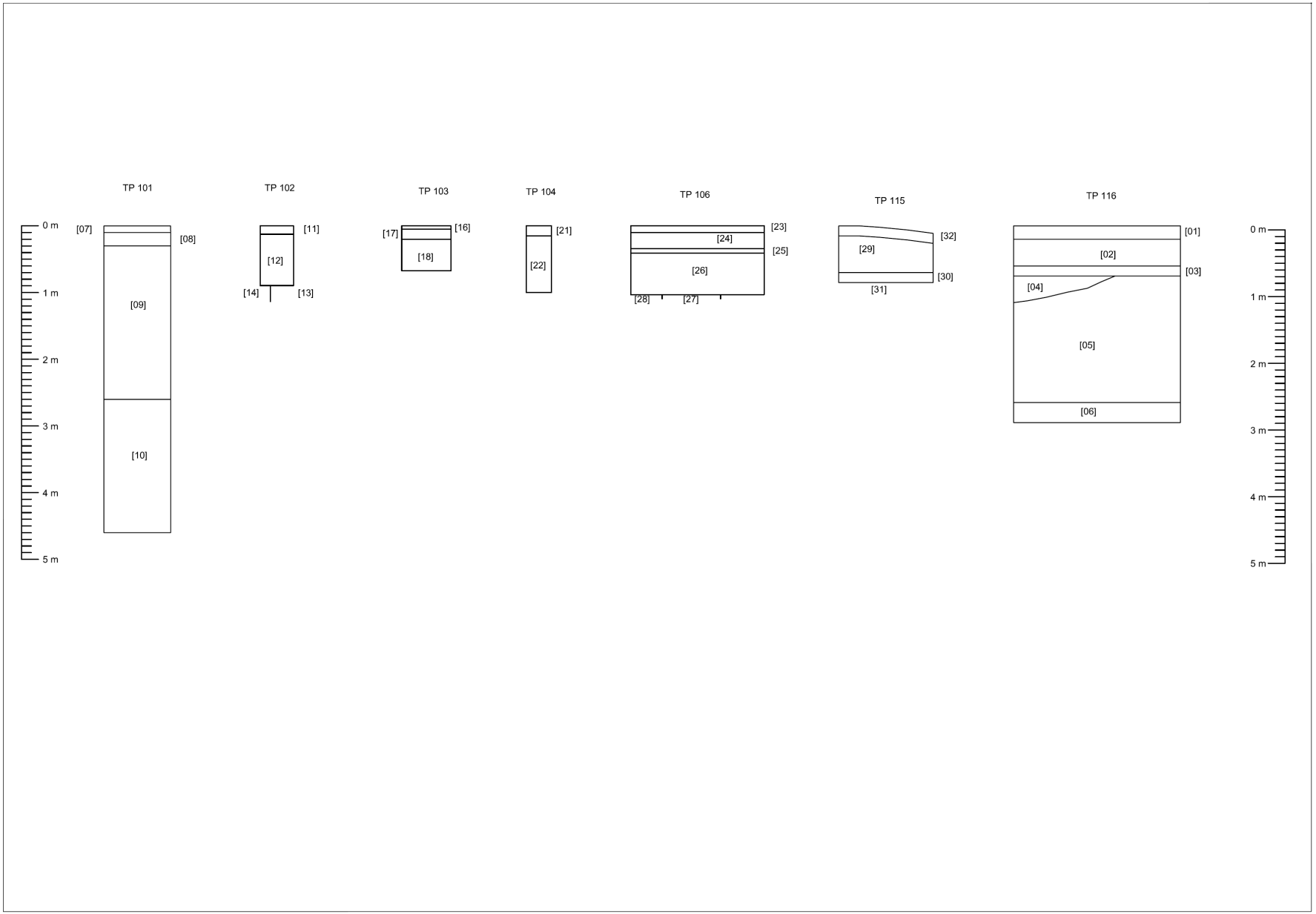

Fig. 2. Measured sketch profiles.

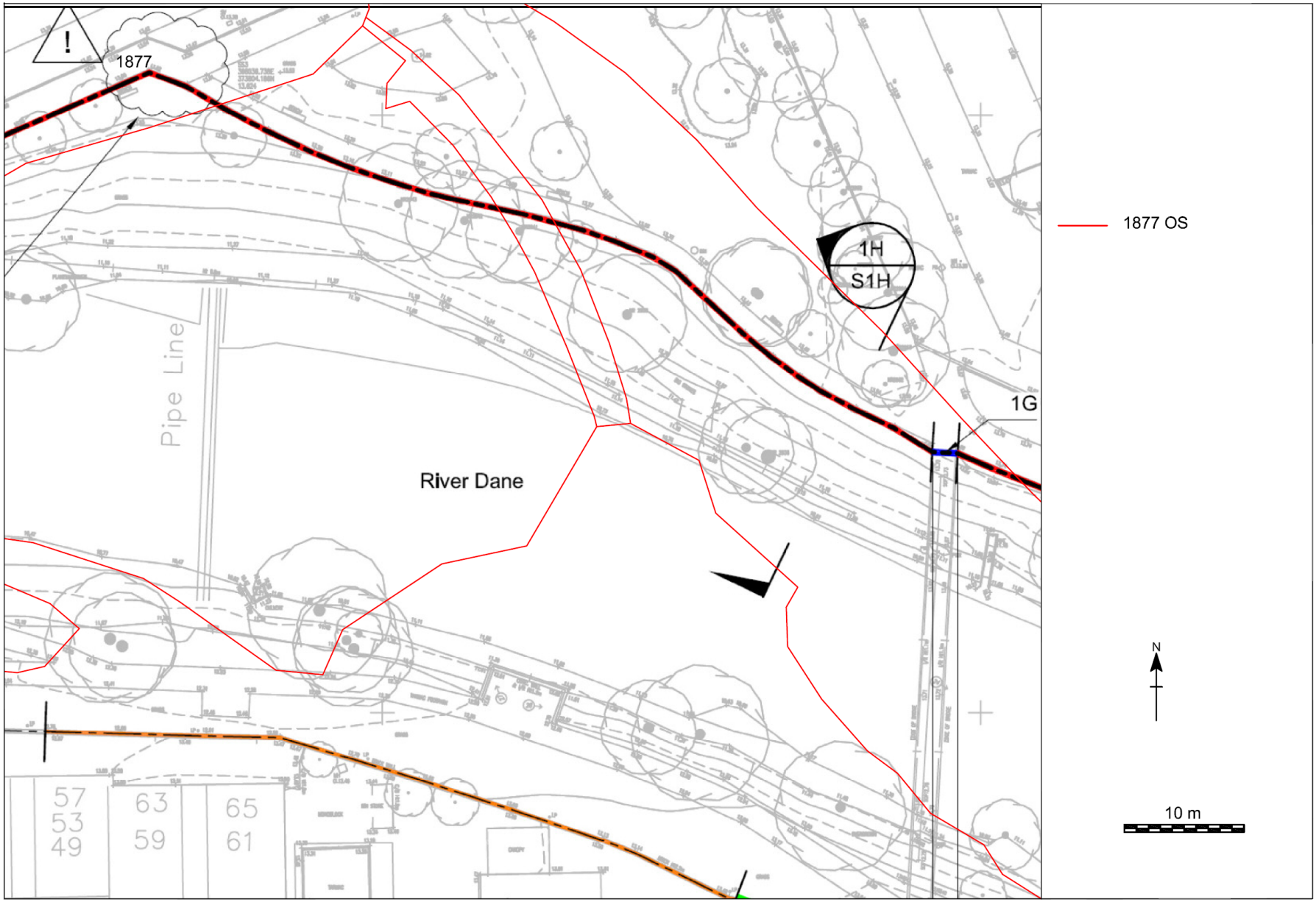

Fig. 3. The weir as shown on the 1877 edition OS (red) superimposed on to a current site plan.

11. Bibliography

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12. Archive Catalogue

The archive is retained and curated at National Museums Liverpool.

12.1 Photographic Catalogue

Catalogue No	AREA	DESCRIPTION	Direction viewed from	TAKEN BY	DATE
1	116	Erecting fence panels	NA	Steven Price	25/06/2014
2	116	Erecting fence panels	S	Steven Price	25/06/2014
3	116	Flagstones context 3 and upper surface context 4	S	Steven Price	25/06/2014
4	116	Flagstones context 3 and upper surface context 4	S	Steven Price	25/06/2014
5	116	Flagstones context 3 and upper surface context 4	S	Steven Price	25/06/2014
6	116	Flagstones context 3 and upper surface context 4	SE	Steven Price	25/06/2014
7	116	Ashy deposit Context 5	S	Steven Price	25/06/2014
8	116	Ashy deposit Context 5	NW	Steven Price	25/06/2014
9	116	Ashy deposit Context 5	NW	Steven Price	23/06/2014
10	116	Ashy deposit Context 5	NW	Steven Price	25/06/2014
11	116	Ashy deposit Context 5	S	Steven Price	25/06/2014
12	116	Ashy deposit Context 5	S	Steven Price	25/06/2014
13	116	Ashy deposit Context 5	S	Steven Price	25/06/2014
14	116	Ashy deposit Context 5	S	Steven Price	25/06/2014
15	116	Ashy deposit Context 5	W	Steven Price	25/06/2014
16	116	Ashy deposit Context 5	NW	Steven Price	25/06/2014
17	101	Test-pit location	SW	Steven Price	26/06/2014
18	101	Test-pit location	SW	Steven Price	25/06/2014
19	101	Test-pit location	SW	Steven Price	25/06/2014
20	101	Context 09	SW	Steven Price	23/06/2014
21	101	Context 09	W	Steven Price	25/06/2014

Catalogue No	AREA	DESCRIPTION	Direction viewed from	TAKEN BY	DATE
22	101	Context 09	NW	Steven Price	25/06/2014
23	101	Context 09	SW	Steven Price	25/06/2014
24	102	Test-pit location	NE	Steven Price	26/06/2014
25	102	Void image	NA	Steven Price	26/06/2014
26	102	Contexts 13, 14 and 15, modern brick structure	N	Steven Price	26/06/2014
27	102	Contexts 13, 14 and 15, modern brick structure	N	Steven Price	26/06/2014
28	102	Contexts 13, 14 and 15, modern brick structure	N	Steven Price	26/06/2014
29	102	Contexts 13, 14 and 15, modern brick structure	W	Steven Price	26/06/2014
30	103	Test-pit location		Steven Price	26/06/2014
31	103	Context 18		Steven Price	23/06/2014
32	103	Context 18		Steven Price	26/06/2014
33	103	Context 18		Steven Price	26/06/2014
34	103	Context 18		Steven Price	26/06/2014
35	103	Context 18		Steven Price	26/06/2014
36	103	Context 18		Steven Price	26/06/2014
37	104	Test-pit location	S	Steven Price	26/06/2014
38	104	Test-pit location	S	Steven Price	26/06/2014
39	104	Context 22		Steven Price	26/06/2014
40	104	Context 22		Steven Price	26/06/2014
41	104	Context 22		Steven Price	26/06/2014
42	104	Context 22		Steven Price	26/06/2014
43	104	Context 22	N	Steven Price	26/06/2014
44	104	Context 22	N	Steven Price	26/06/2014
45	106	Test-pit location	W	Steven Price	07/07/2014
46	106	Test-pit location	W	Steven Price	07/07/2014

Catalogue No	AREA	DESCRIPTION	Direction viewed from	TAKEN BY	DATE
47	106	Brick surface context 25	NW	Steven Price	07/07/2014
48	106	Brick surface context 25	NW	Steven Price	07/07/2014
49	106	Brick surface context 25	NW	Steven Price	07/07/2014
50	106	Brick surface context 25	NW	Steven Price	07/07/2014
51	106	Concrete context 27	NW	Steven Price	07/07/2014
52	106	Concrete context 27	NW	Steven Price	07/07/2014
53	106	Concrete context 27	NW	Steven Price	07/07/2014
54	106	Concrete context 27	NW	Steven Price	07/07/2014
55	106	Concrete context 27	NW	Steven Price	07/07/2014
56	106	Concrete context 27	NW	Steven Price	07/07/2014
57	106	Concrete context 27	NW	Steven Price	07/07/2014
58	106	Concrete context 27	NW	Steven Price	07/07/2014

12.2 Finds

No finds were retained.