

Archaeology Wales

Pontymoel Weir, Pontymoel, Pontypool

Standing Building Recording and Desk Based Assessment



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Report No: 1181

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Summary

This report results from a Desk Based Assessment and Standing Building Record undertaken by Archaeology Wales Ltd (AW) for Torfaen County Borough Council prior to the proposed submission of a planning application for the insertion of an energy generating Archimedes screw adjacent to the fish pass and into the Pontymoel weir at Pontypool. The weir, according to the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), was a water-power supply for the early eighteenth century Tin and Iron works located to the south of the site. The map regression confirms a structure on the site of the weir on the First Edition OS dated 1882, but it is not marked as a weir until the Second Edition OS dated 1901. The single fall weir does not appear to have had any alterations until 2010 when a fish pass was constructed on its eastern side. The weir was in a good state of repair with minor faults noted at the time of the visit.

1. Introduction

1.1 Location and scope of work

In August 2013 Archaeology Wales Ltd (AW) carried out a Desk Based Assessment of documentary sources relating to Pontymoel Weir and Fish Pass at the request of Torfaen Borough Council. The site immediately around the weir, and the weir itself, is owned by British Waterways.

A site visit also took place for a Standing Building Record. The work was undertaken prior to the proposed submission of a planning application for the insertion of an energy generating Archimedes screw into the weir and adaptation to the fish pass.

The site is located on the intersection of the Afon Lwyd and the Monmouth and Brecon Canal in Pontymoel, Pontypool (NGR: SO 29414 00298; Fig 1).

1.2 Geology and topography

The underlying solid geology of the area is comprised of Sandstone and interbedded Argillaceous rocks of the Maughans Formation (Geological Survey Map, 2001)

The site is located abreast the Afon Llwyd, 500m east of the centre of Pontymoel, at approximately 109m above ordnance datum. Hills rise steeply to the north and to the west of the site, to heights of 415m and 460m respectively. The valley floor flattens to the east and south of the site, where the conurbations of New Inn and Griffithstown are located.

The Afon Llwyd flows from its source in the hills above Blaenavon to the north of the site, flowing in a southerly direction through Abersychan, Pontypool and Cwmbran before entering the River Usk at Caerleon. The stretch of the river near the site is characterised by shallow rapids and gentle meandering sections.

1.3 Archaeological and Historical Background

The area immediately surrounding the site is shaped by the Iron and Tin Industry. Pontymoel and the town of Pontypool were already an industrial centre for Wales by the late 17th century. The Afon Lwyd valley was abundant in charcoal, coal and Iron and provided water to power the Iron and Tin Industries that began to develop there. As early as the 16th century Pontymoel shows evidence of having several blast furnaces and forges as did nearby in Pontypool. The industry continued to develop and

the first commercial scale tin plated steel sheets produced in Britain were from the tin works at Pontymoel. In 1706 tinplating mills were established probably on the Old Estate Yard where a single industrial building listed by the RCAHMW(410894) still stands. Later tinning mills opened at Lower Mill in 1806, later known as the Pontymoel Tinworks. These two sites were joined by a tramway and feed channel which crossed under the canal via tunnels which are still present and listed by the RCAHMW(410899).

In 1792 an Act of Parliament commissioned the Monmouthshire and Brecon Canal. Originally two separate canals which were later joined at Pontymoel. The newly established river ways allowed the Iron and Tin industries of Pontymoel to grow. The site of Pontymoel was the meeting point of the Monmouth canal and the Abergavenny and Brecknock canal. This junction point was also a major crossroads for tramways in the late eighteenth century, joining Cwymynyscoy and Blaendw to Pontymoel. However these modes of transport were short lived and in 1853 sections of the Pontnewynydd to Pontymoel were converted into railway tracks. The ownership of the canals eventually passed onto the Great Western Railway in 1880 and saw further decline of the Monmouth and Brecon Canal as a viable transport network. The eventual and official closure of the canal took place in 1962, with a resurgence occurring under the British Waterways Act of 1983.

2. Aims and Objectives

2.1 Desk Based Assessment

The Desk Based Assessment was undertaken to:

- Gain an understanding of the weir within its historic context.
- Assess any changes made to the weir since construction.
- To place the results of the work in their historic context.

2.2 Site Visit

The site visit was undertaken to:

- Examine the surviving fabric of the weir and record the structure as it stands now.

3. Methodology

As part of the Desk Based Assessment, the following repositories were searched for readily available information:

- British Waterways database.
- The Royal Commission for Ancient and Historical Monuments (Wales).
- The Gwent Archives.
- Cadw database of all listed buildings and scheduled ancient monuments.
- The Historic Environment Record held by GGAT.

All works were undertaken in accordance with the IfA's Standards and Guidance: for an archaeological desk based assessment (2008).

4. Desk Based Assessment Results

4.1 Standing Building Record

A search of the Cadw Listed Building and Scheduled Ancient Monument database revealed eleven listed buildings within a 500m radius of the weir (Fig 2). These are:

1. LB 18845 - Warehouse of R J Bullen. Pontymoel. E328910 N200465. Grade II listing, listed in 1997.
2. LB 18833 - Tramroad and leat tunnels, Monmouthshire and Brecon Canal. 4 Fountain Road, Pontymoel. E329278, N200216. Grade II listing, listed 1997.
3. LB 3146 - The Old Truck House. Fountain Road, Pontymoel. E328971 N200413. Grade II listing, listed 1981.
4. LB 3136 - Bridge 53 at Pontymoel Basin, Monmouthshire and Brecon Canal. Pontymoel. E329199 N200161. Grade II listing, listed 1980.
5. LB 18840 - Coach-house (Pontypool Park estate yard). Pontymoel. E328964 N200293. Grade II listing, listed in 1997.
6. LB 18838 - Maesderwen and Maesderwen-bach. 16 Maesderwen Road, Pontymoel. E328995 N200256. Grade II listing, listed in 1997.
7. LB 18839 - Maesderwen Lodge (Pontypool Park estate office). 16 Maesderwen Road, Pontymoel. E328979 N200274. Grade II listing, listed in 1997.
8. LB 18837 - 1 Vicar's Cottages. Pontymoel. E328993 N200111. Grade II listing, listed in 1997.
9. LB 18851 - 2 Vicar's Cottages. Pontymoel. E328993 N200112. Grade II listing, listed in 1997.
10. LB 18850 - 3 Vicar's Cottages. Pontymoel. E328993 N200095. Grade II listing, listed in 1997.
11. LB 3135 - Junction House at Pontymoel Canal Basin, Monmouthshire and Brecon Canal. E329220 N200162. Grade II listing, listed in 1980.

4.2 RCHAMW Listing

The RCAHMW describes the site as:

‘A water-power supply weir, below the Monmouthshire and Brecon Canal aqueduct (nprn 34549), serving a former tinplate works downstream.’ (RCAHMW 2013)

4.3 Map Regression

The following historic maps (Figs 3-7) were consulted as part of the desk based assessment:

- 1839 Panteg Parish Tithe Map
- 1839 Lanfihangel Pontymoel Parish Tithe Map
- 1844 Trevethin Parish Tithe Map
- 1882 1:2500 1st Ed OS Map
- 1901 1:2500 2nd Ed OS Map

- 1920 1:2500 3rd Ed OS Map
- 1964 1:2500 Ed OS Map

1839 Panteg Parish Tithe Map (Fig 3)

The weir is not shown on the tithe map for the parish of Panteg or on that of the adjacent parishes of Trevethin (dated 1844) or Llanfihangel Pontymoel (dated 1839). This could possibly be due to the weir being located across the Afon Lwyd, the banks of which formed the parish boundaries. The Panteg tithe map however marked water features clearly and shows no characteristic widening of the river at the location of the weir which now accommodates the apron and the scour pool. The absence of the weir on this map could be an omission or indicate that a different structure was in place to that shown in later maps.

1882 1:25000 1st Ed OS Map (Fig 4)

This map shows a line across at the location of the weir but it is not marked as a weir unlike other weirs located up stream on the same map. The characteristic widening of the channel to accommodate the weir apron and the further widening down stream is clearly shown. Two small square structures aligned north south in close proximity of each other are shown adjacent to the weir on the western bank.

1901 1:25000 2nd Ed OS Map (Fig 5)

This map clearly shows the assessment area in its entirety. The weir crest and apron are clearly shown in plan. The small northern square structure on the western bank adjacent to the weir, shown on the previous studied OS map has, by this point, been removed.

1920 1:25000 3rd Ed OS Map (Fig 6)

This map shows no notable changes to the weir structure with the crest and apron still clearly marked in plan. The single small structure located on the western bank, has at this point, been removed. Notably above the eastern bank adjacent to the weir running up to the Monmouth and Brecon Canal, a new development marked as the 'Admiralty Siding', consisting of four railway tracks aligned parallel and approximately 65m perpendicular from the Afon Lwyd.

1964 1:25000 Ed OS Map (Fig 7)

This map shows no changes to the weir, with the crest and apron still clearly marked in plan. The western bank slightly down stream of the weir now shows the river widened at the point where the Monmouth and Brecon canal overflow outlet is situated. The Admiralty siding now shows several alterations and the previous four railway tracks which terminated next to the canal, have by this point, been taken up and form an oval circuit for industrial works.

Map Regression Summary

None of the historic maps consulted between 1901 and 1964 show any significant changes to the weir. The earlier maps do not show the site in enough detail to allow an understanding of whether the weir was present or not. The only change to the weir from 1964 to present was the insertion of the fish pass in 2010. Several other maps were consulted but only the 1:25000 scale maps were included within this report, as the 1:10500 scale did not allow any detail of the weir to be observed.

4.4 Aerial Photography

An aerial photograph taken from Google earth pre 2010 shows the weir unchanged from the 1901 1st Ed OS map, however the resolution and the trees obscure the detail. This photo was taken before the installation of the 2010 fish pass into the weir (Fig 8).

4.5 Site Visit

The original design of the weir is of a straight un-contracted narrow crested weir. The later insertion of the 2010 fish pass, reclassified the weir as a contracted weir.

According to the recent Engineers Survey Report, the upstream bed was constructed using concrete, however the construction material was not visible below the silt and stones. The left abutment was constructed of rough faced random coursed stone, with some later mortar pointing noted. The later fish pass forms the right abutment which is constructed from modern concrete. The apron is constructed from concrete, but was largely hidden from view by the cascading water; where visible it had notable later repairs. The crest was constructed of timber baulks approx 0.4m by 0.4m, split into 3 sections longitudinally across the weir, held in place with wooden dowels. The drop from the crest to the apron was approximately 2.7m.

The site visit found the weir to be in a reasonable state of repair with notable minor faults to the structure itself. The crest showed minor faults, the pointing had been eroded from the left abutment and the apron showing signs of freeze thaw. Plates 1 to 15 show the site as it appeared during the site visit. Fig 9 shows red arrows overlaid on a site plan indicating the direction of the numerically corresponding plate.

5. Interpretation and Discussion

The overall interpretation gained from the work carried is that the weir has seen very little change since its first depiction on the 1901 OS Map. The absence of the original plans however and the omission of the weir on the tithe maps and 1st Edition OS map does not allow a definitive construction date for the weir. The 1839 Panteg parish tithe map shows no signs of widening of the river or the weir and could possibly place the construction of the current weir between this date and the 1882 1st Ed OS map. The weir that is on site now could have possibly replaced an earlier weir that was of a cruder design and did not warrant marking on the parish tithe map.

The tinplate works downstream at Lower Mill were first set up in 1720. However the structure on site is abutting the Monmouth and Brecon canal aqueduct so must post-date 1792, when the canal started construction.

The only definitive change to the weir was in 2010 when the new fish pass was constructed to allow the passage of salmon and sea trout upstream to boost the dwindling numbers.

6. Acknowledgements

Thanks to Torfaen County Borough Council, Gwent Archives and the River and Canal Trust for the resources supplied.

7. Bibliography and References

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RCAHMW 2103

<http://www.coflein.gov.uk/en/site/34547/details/AFON+LWYD+WEIR%2C+PONT+YMOILE/> (accessed 17th September 2013)

GGAT 2013 www.archwilio.org.uk (accessed 17th September 2013)

Cadw Listed Buildings www.britishlistedbuildings.co.uk (accessed 17th September 2013)

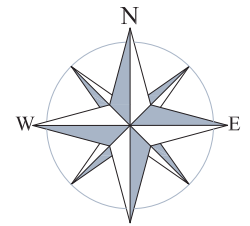


Fig 1: Site Location

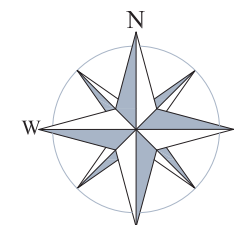


Fig 2: Location of Cadw Listed Buildings

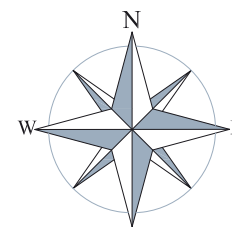


Fig 3: 1839 Panteg Parish Tithe Map

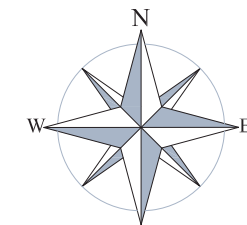
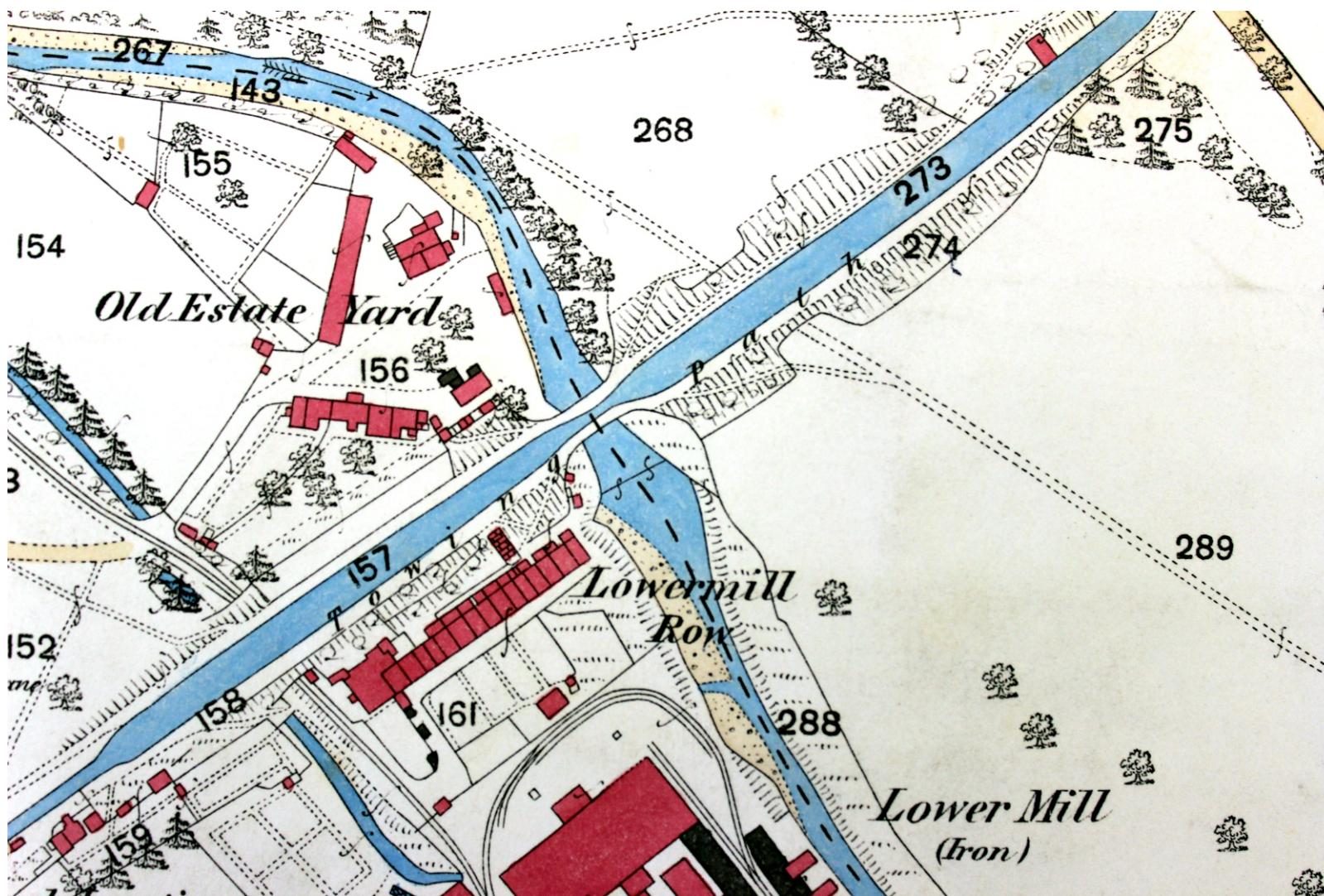


Fig 4: 1882 1st Ed OS Map

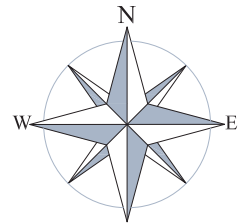
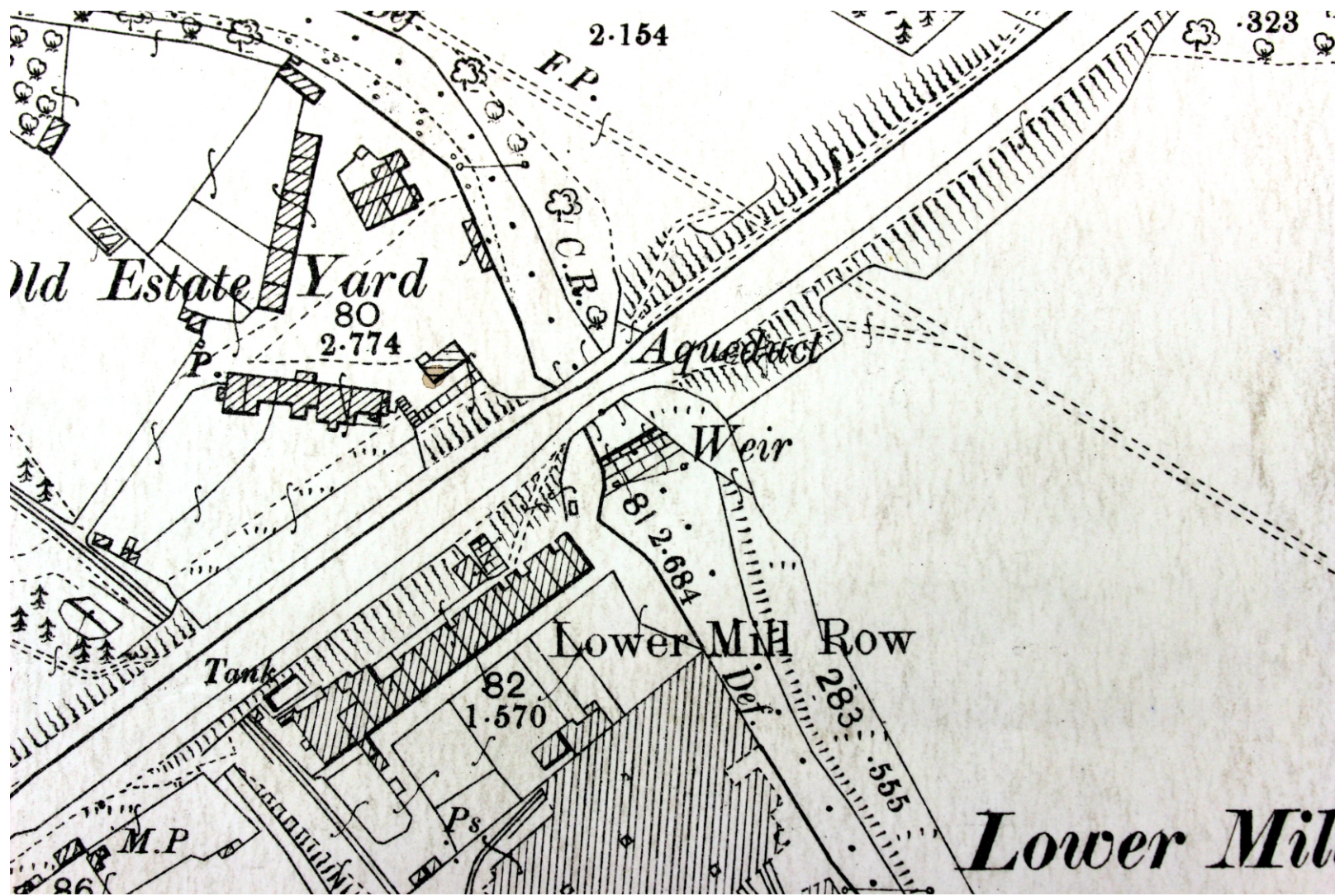


Fig 5: 1901 2nd Ed OS Map

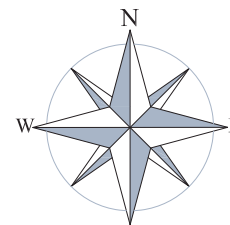
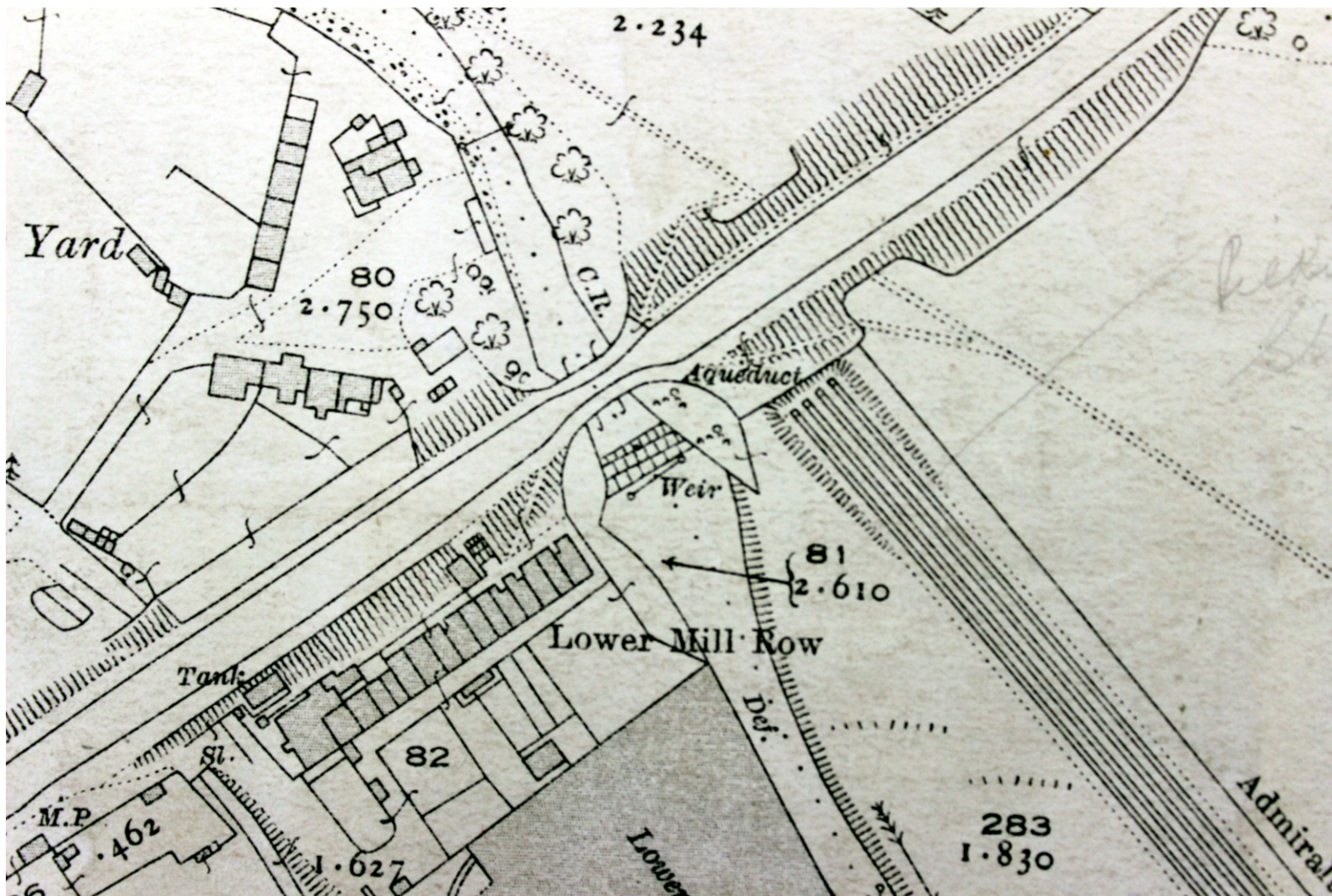


Fig 6: 1920 3rd Ed OS Map

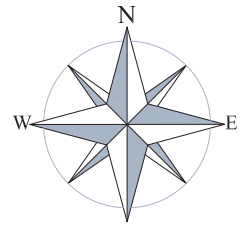
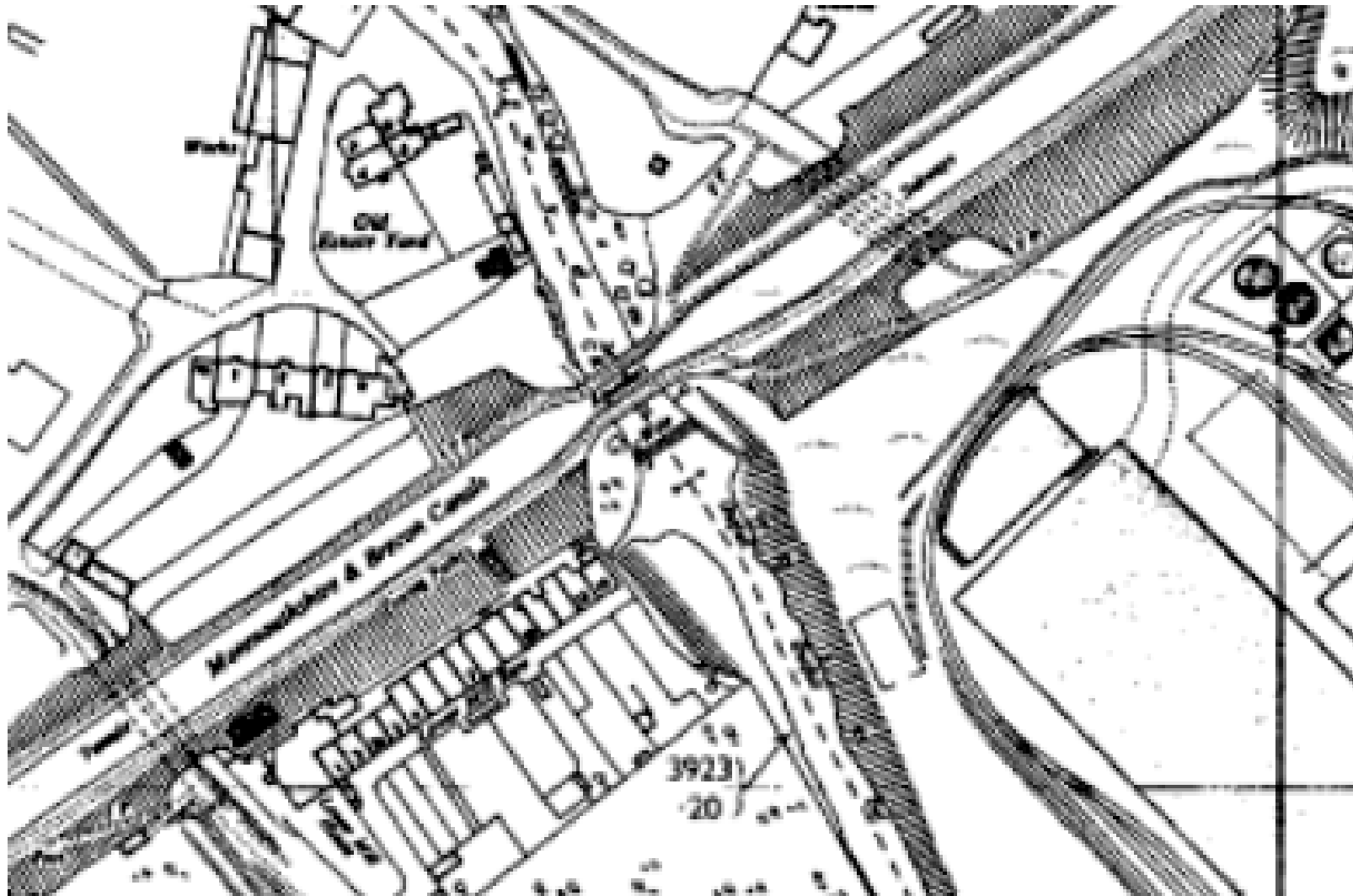


Fig 7: 1964 Ed OS
Map

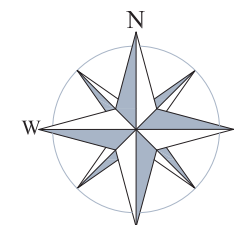


Fig 8: Aerial
Photograph Pre 2010
Fish Pass Installation

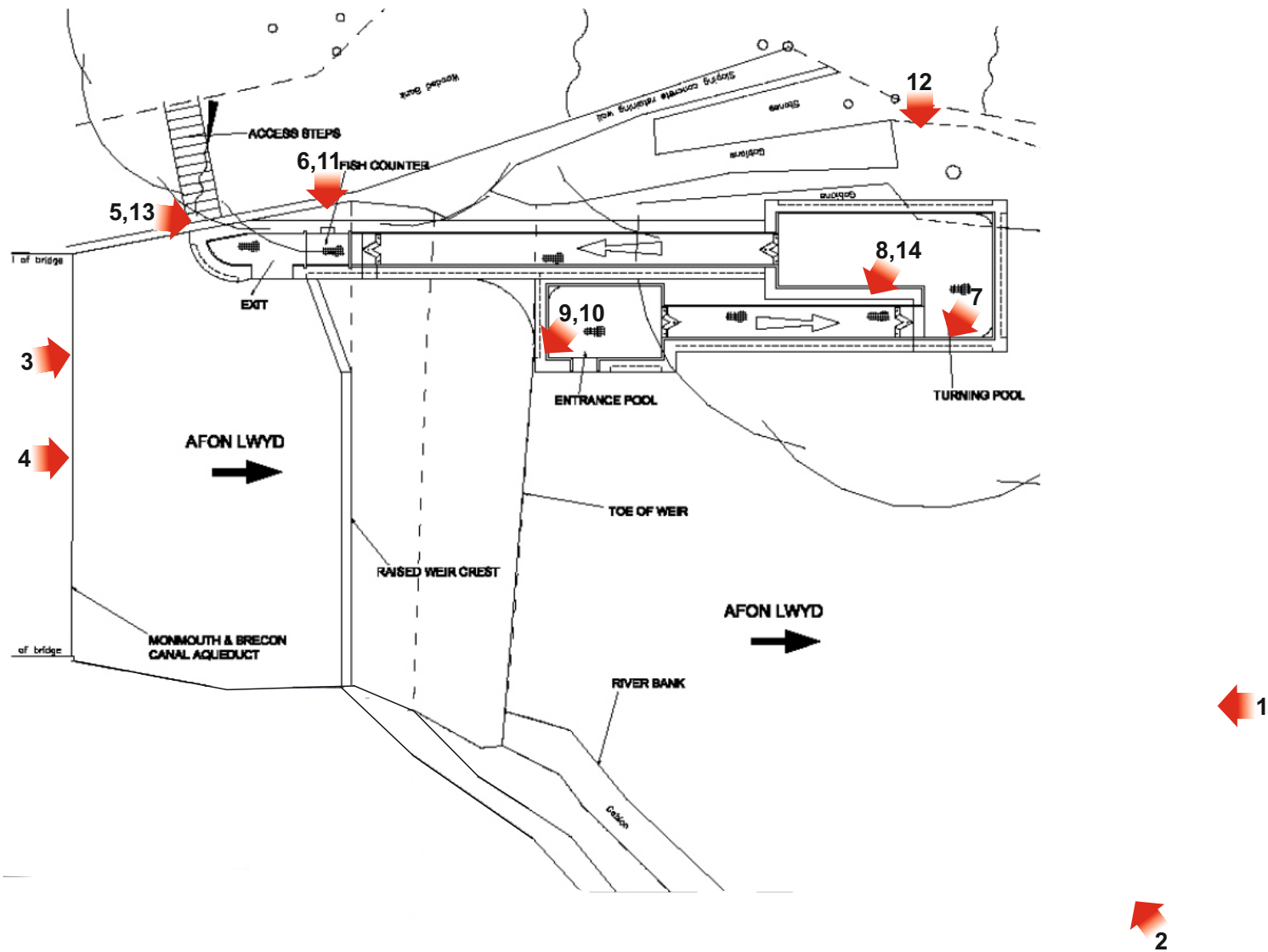


Fig 9: Location and Direction of Photographs



Plate 1: View looking up stream



Plate 2: View of fish pass western elevation



Plate 3: View from above of upstream bed



Plate 4: View of from above of fish pass



Plate 5: View looking down stream of new eastern abutment



Plate 6: View looking west at weir apron



Plate 7: View of western abutment



Plate 8: View of apron and scour pad



Plate 9: View of timber crest



Plate 10: View of weir face and additional concrete repairs



Plate 11: View of timber crest



Plate 12: View looking west
from weir at 1980's canal
overflow



Plate 13: View of fish pass looking downstream



Plate 14: View looking upstream at western bank