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**Glamorgan-Gwent Archaeological Trust**  
**(Contracts Division)**

**Archaeological Watching Brief**  
**Parliament Lock, Merthyr Tydfil**

**October 1995**

Report prepared for Ove Arup & Partners

GGAT Project No: A243

GGAT Site No: 288

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## SUMMARY

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In March 1995, the site of the infilled Parliament Lock was partly-excavated during pipe-laying works. A watching brief was carried out by the Glamorgan-Gwent Archaeological Trust (Contracts) on behalf of Ove Arup (consulting engineers to Merthyr Tydfil Borough Council), and with the co-operation of Acer Wallace Evans. A survey and photographic record of the exposed portions of the lock was carried out. The lock was subsequently backfilled. This report presents the results of the recording work.

## 1.0 INTRODUCTION

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### 1.1 Development proposals and commission

- 1.1.1 In conjunction with the intended redevelopment of the Rhyd-y-Car waste tips by Merthyr Tydfil District Council, it will be necessary to reposition part of the existing trunk water main, laid through the disused Glamorganshire Canal in the 1920s. In March 1995, during the preliminary works for this operation, one of the canal locks (the Parliament Lock) was partly-excavated and part of its side wall was removed. A watching brief was carried out by the Glamorgan-Gwent Archaeological Trust (Contracts) on behalf of Ove Arup (consulting engineers to Merthyr Tydfil Borough Council), and with the co-operation of Acer Wallace Evans. A survey and photographic record of the exposed portions of the lock was carried out. The excavation was subsequently backfilled. This report presents the results of the recording work.

### 1.2 Specifications for the report

- 1.2.1 The watching brief was carried out in accordance with the specification prepared for the main archaeological recording project at Rhyd-y-Car, and in line with the *Standard in British Archaeology: Archaeological Watching Briefs*<sup>1</sup>. A copy of the full Specification for the Rhyd-y-Car project will be deposited with the survey archive.

### 1.3 Arrangement of the report

- 1.3.1 Section 2 of the report describes the circumstances of the watching brief, the nature of the site and the fieldwork undertaken. Section 3 summarises the archaeological resource of the area of the lock. The historical background to the site is presented in an appendix.

### 1.4 Copyright notice

- 1.4.1 The Glamorgan-Gwent Archaeological Trust holds the copyright of this report and has granted a licence to Ove Arup & Partners to use and reproduce the material contained within.

### 1.5 Acknowledgements

- 1.5.1 This project has been managed for GGAT (Contracts) by Andrew Marvell (Principal Archaeological Officer). The fieldwork was undertaken by Martin Lawler and Sally Mesner and the report was prepared by Martin Lawler.
- 1.5.2 The Trust is grateful to the individuals and organisations who have assisted in the preparation of this report. Particular thanks are due to Mark Essenhigh (Ove Arup & Partners) and Lyn Parsons and Jim Sanders (Acer Wallace Evans) for their ready co-operation. Thanks are also due to Ruth Curtis, Claire Dovey and Steve Richards (Merthyr Tydfil Heritage Trust) for their kind advice.

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<sup>1</sup> *Institute of Field Archaeologists (September 1993).*

## 2.0 FIELDWORK DESCRIPTION

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### 2.1 Circumstances of the excavation

- 2.1.1 In March 1995, a trench was excavated on behalf of Acer Wallace Evans at the south end of the car park in front of Merthyr Tydfil Technical College (SO 04650 06015). The trench was excavated to install a new trunk water main junction in advance of the reclamation of the Rhyd-y-Car waste tips. The substantial masonry remains of part of a canal lock were uncovered, and subsequently identified as Lock N° 3 (Parliament Lock) on the Glamorganshire Canal, which underlies the car park.
- 2.1.2 Acer Wallace Evans informed the Glamorgan-Gwent Archaeological Trust (Contracts) of the discovery, in order that the remains could be properly recorded. GGAT (Contracts) had been commissioned by Ove Arup on behalf Merthyr Tydfil Borough Council to undertake the main archaeological recording works for the Rhyd-y-Car reclamation. With the agreement of Ove Arup, it was decided that a watching brief on the Parliament Lock excavation would be carried out by GGAT (Contracts) as part of the Rhyd-y-Car recording works. A field visit by staff of GGAT (Contracts) was made on 4 April 1995. Additional recording work was also carried out separately by the RCAHM(W) and Merthyr Tydfil Heritage Trust.

### 2.2 The excavation

- 2.2.1 The trench was excavated at the south end of the car park, close to the existing public footpath. The area opened was approximately 5.3m (NS) by 8.2m (EW), excavated to a depth of 4.5m; its sides being supported by steel shuttering. The canal lock occupied the western half of the trench, which was approximately in alignment with the canal; the west wall of the lock itself forming the west side of the trench. Excavation thus comprised the removal of backfill from a 5m-long section of the lock, and the excavation of an equivalent volume of material to east of the lock side wall. Two pipes had been laid through the site on the alignment of the canal; a 31" main which extended through the lock and a 27" main to east of the lock.
- 2.2.2 By the time of the field visit on 4 April, a 3.2m section of the lock's east side wall (including the gate recess on that side) had been demolished to allow a pipe junction to be inserted. The bed of the lock had also been overlain by a concrete floor (possibly during the original pipe-laying ?). It is understood that part of the lower frame of the gate was uncovered during the excavation, and that this is now in the safekeeping of the Heritage Trust.

### 2.3 Description of the lock

- 2.3.1 The remains uncovered were the side walls of the south (tail) gate of the lock, including a short section of the lock chamber to north of this and the revetted tail to the south. The surviving fabric of the lock showed a high standard of construction, consistent with the Dadfords' work elsewhere. The masonry had generally survived well, and it is likely that the rest of the lock is well-preserved beneath the car park. The waterlogged condition of the base of the lock suggests, interestingly, that the lower parts of the timberwork may also survive.
- 2.3.2 The exposed portion of the lock chamber, north of the gate recesses, was 2.82m (c 9' 3") in width at its base (at 166.39m OD, just above the concrete floor), widening to 3.05m (c 10') at the top of the walls (at 170.30m OD; 0.75m below the present car park surface). A sump hole cut by the contractors through the concrete floor extended to a depth of 166.40m OD, suggesting that the original depth of the lock was about

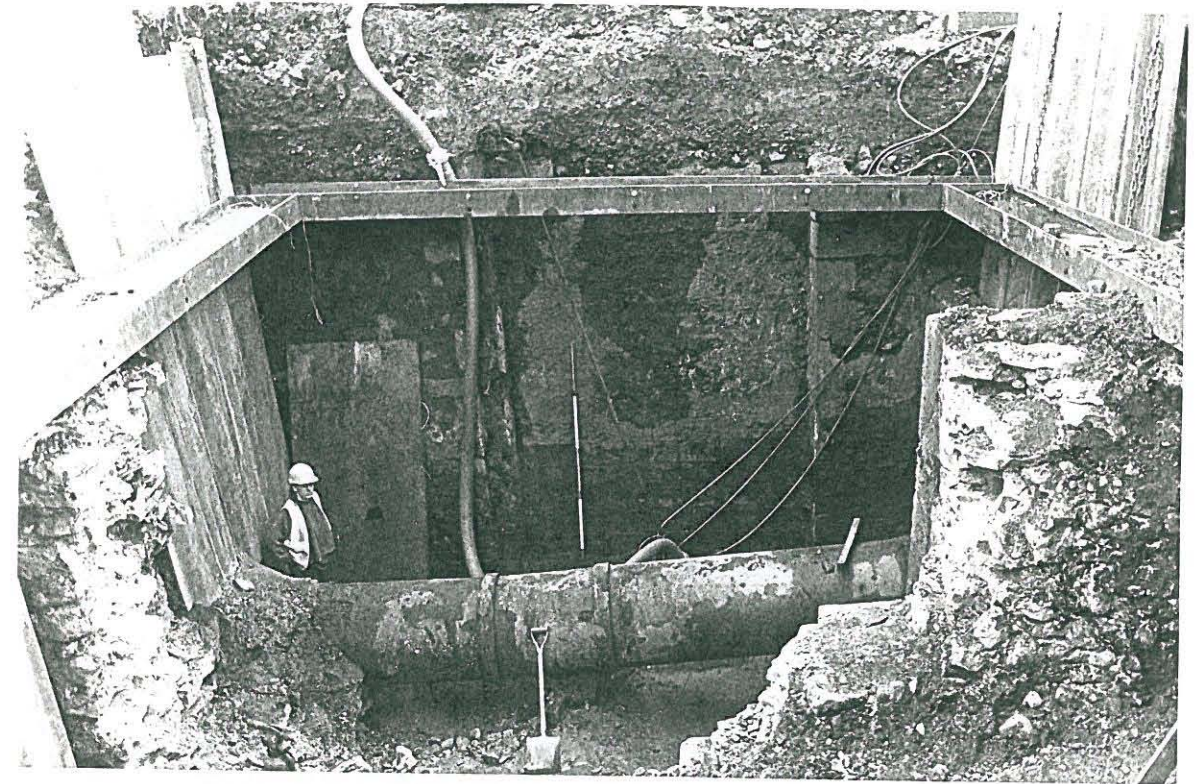
4.26m (c 14'). Like the rest of the lock, the side-walls of the chamber were built of fine ashlar limestone masonry.

- 2.3.3 The surviving western gate recess was 2.67m (c 8' 9") in length at its base, recessed by 0.4m (1' 4") from the line of the chamber wall. At the south end of the recess was a rebate, 0.20m by 0.29m (c 8" by 12") to receive a vertical timber baulk, the lower 0.8m of which had survived. The baulk (of oak) was bolted to the masonry at approximate 0.71m (c 2' 4") intervals. It projected slightly beyond the edge of the rebate to cushion the gate heel-post. A moulded capping stone was built into the top of the rebate. A second convex-moulded block with an iron ring to hold the heel-post was set into the inner corner of the recess, immediately to north of the rebated timber. The OS 25" plans suggest that the closed position of both sets of lock gates was at 90° to the line of the side walls (rather than as a 'v'-shaped angle), implying that single gates were provided at both head and tail of the lock..
- 2.3.4 The tail of the lock, to south of the gates, was 2.6m (5' 6") in width, and its side walls were also finished in ashlar stone. A bridge was located slightly to south of the excavated area, and the revetted stone sides presumably continued beneath the bridge.
- 2.3.5 Demolition of part of the east side wall provided a section through the masonry. The wall was 1.3m (c 4' 3") in width, with a core of limestone rubble. The outer (ie east) face of the wall had been roughly finished, and the construction trench behind it may have been infilled in stages as the wall was being built. A narrow section through the construction trench was also exposed between the steel sheeting. It suggested that the trench extended behind the wall by at least 2m, and had been backfilled with mixed clays and rubble, providing a base for the tow path. It was not possible, however, to distinguish the original surface horizon of the tow path in the section; this had been overlain by 0.75m - 0.95m of hard core for the present car park.

## **2.4 Recording**

- 2.4.1 A total station survey was undertaken of the exposed remains, relating these to known points in the vicinity. The remains were also photographed in detail, both in B&W print and colour transparency film
- 2.4.2 The survey archive will be deposited at the National Monuments Record, Aberystwyth, under the GGAT (Contracts) site number 287. A copy of the present report will be deposited with the County Sites and Monuments Record.



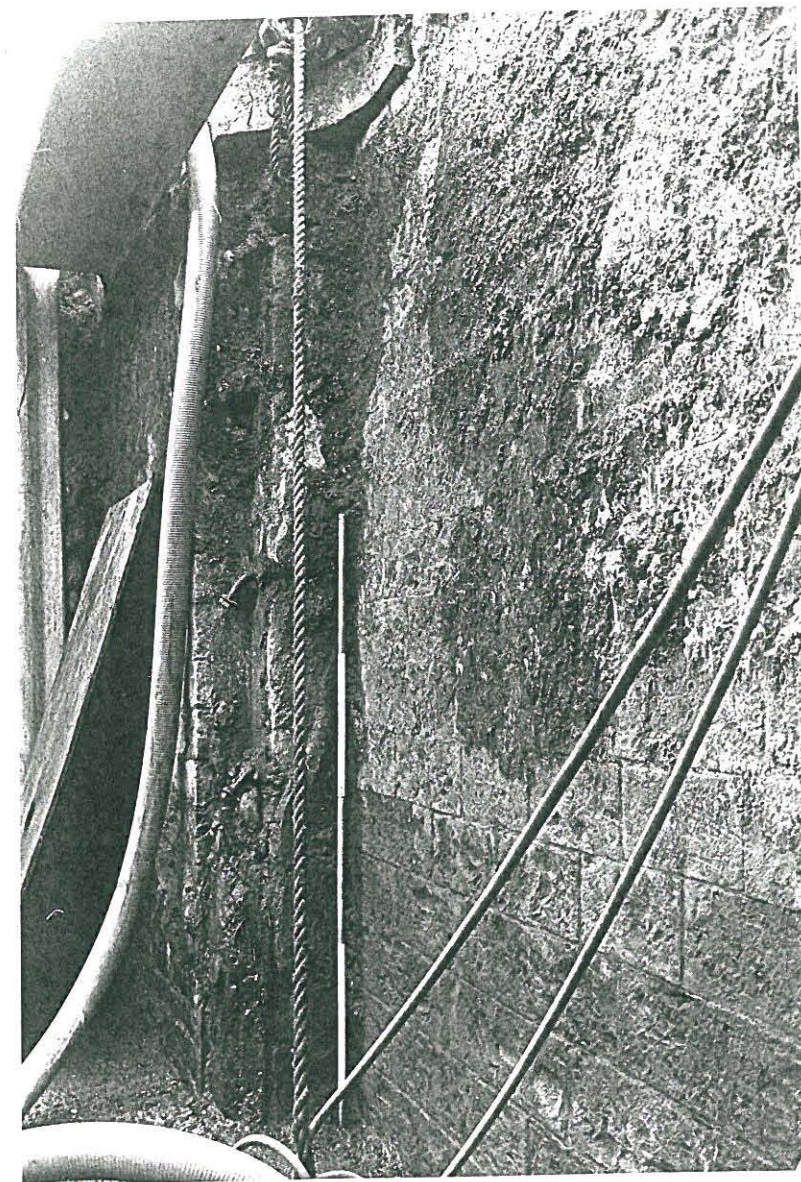


*Plate One: General view of excavated lock gate site looking west. Note the surviving western gate recess; the gate pivot position is on the left side. The demolished section of the east side wall is in the foreground*



*Plate Two: View looking north, towards the lock chamber, with the gate recesses to right and left.*





*Plate Three: Detail of the western gate recess, looking southwest. Note the surviving length of vertical timber at the base of the rebate, and moulded block at the top of the recess. The ranging rod marks the approximate position of the gate heel post.*



### 3.0 SUMMARY OF ARCHAEOLOGICAL RESOURCE

#### 3.1 Parliament Lock

- 3.1.1 Throughout the first half of the 19th century, water was diverted from the Taff in the vicinity of Ynysgau to supply both the Glamorganshire Canal and the feeder to Plymouth Ironworks. Richard Hill of Plymouth Ironworks had complained that, in dry conditions, the quantities of water diverted to the canal would greatly reduce the supply to the ironworks feeder. The matter was eventually referred to the House of Lords for arbitration. Pedler records that part of the solution was to lay a series of iron pipes, 3' in diameter, to carry surplus water from Lock N° 3, over the lower weir across the Taff, to the Plymouth Feeder<sup>1</sup>. The new works undertaken at the lock, resulting from the parliamentary decision, gave it the name *Parliament Lock*.
- 3.1.2 Surrounding the lock was a group of associated features. Some of these, such as the canal bridge, toll house and basin, were part of the original construction of the early 1790s. The feeder system, linking the canal with the Taff, was probably also built at this time, but it was modified early in the 19th century, after the action with the Plymouth Iron Company. A dock with a small warehouse was constructed a little way above the lock some time after 1830. During the later 19th century, a range of secondary industrial works were established along the tow path towards Canal Square, including a saw-mill and laundry. A tramroad was laid across the lock bridge, taking slag from the Ynysfach furnaces to the extensive cinder tips between the canal and the river. Parliament Lock itself, and the sites of its surrounding features, are now covered by the car park in front of the technical college. The depth of levelling deposits revealed by the excavation suggests that there may be substantial buried remains of many of the canal-side features. This should be taken into consideration if any future development in the car park area is carried out. It is not expected, however, that any further disturbance to these remains will be caused by the intended Rhyd-y-Car reclamation.

#### 3.2 Site catalogue

##### 3.2.1 *Parliament Lock (SO 04646 06025)*

A description of the excavated remains of the south (tail) gate position is contained in subsection 2.3. The original length of the lock can be determined, with some margin of error, from the 2nd and 3rd ed OS 25" plans (Glam XII.5), which show the gates at a little over 19m apart. This suggests that the lock chamber was intended to be about 63' or 64' in length. The first three editions of the OS 25" map (covering the last fifty years or so of the working life of the canal) show both sets of gates laid at 90° to the side walls, rather than at an angle. This suggests that single gates may have been provided at both the head and tail of the lock, though the twin locks at Glyndyrys have double bottom gates.

##### 3.2.2 *Tow path (SO 04650 06010)*

The standard width of the tow path on this section of the canal seems to have been 3m-4m (perhaps intended to be 12' [c 3.65m]). The path was widened in the vicinity of the lock to 5m, though haulage could only be recommenced south of the bridge.

##### 3.2.3 *Toll House (SO 04656 06021)*

This is one of two buildings on the tow path opposite the lock, shown in Harris' 1830 survey. The toll house, on the south side, was about 8m by 10m in plan. The second, smaller, building lay to the north at SO 04655 06036. By 1915, the smaller building

<sup>1</sup> Pedler F 1930 *History of the hamlet of Gellideg (Joseph Williams, Merthyr Tydfil)*, pp 21-2.

laundry), fronting the tow path. The Toll House itself was subsequently also demolished and replaced by a building or buildings described as 'works'; part of the ribbon of industrial buildings which became established along the tow path in the late 19th and early 20th centuries.

3.2.4 *Canal Basin (SO 04635 06050)*

The basin for waiting boats, measuring some 24m by 15m, lay on the west side of the canal, immediately above the lock (centred at the grid reference given). The basin is shown on Harris' 1830 survey<sup>1</sup>.

3.2.5 *Dock (SO 04644 06066)*

This was located opposite the basin, immediately upstream of the outfall from the canal feeder (see 3.2.8). The dock is not shown in Harris' 1830 survey, but may have been built shortly after. It consisted of an elliptical pond, 14m by 7m, connecting to the east side of the canal (at the grid reference shown) via a narrow entrance. The tow path was carried over the dock entrance by a bridge. Access to the dock was made easier by the presence of the basin opposite. A probable warehouse is shown, to northwest of the dock in the 1876 1st ed OS 25" plan; this building had been extended before the closure of the canal at the end of the 19th century (2nd ed OS 25" plan) to become a frontage along the north side of the dock.

3.2.6 *Bridge (SO 04650 06008)*<sup>2</sup>

The bridge was located on the south side of the lock, about 2m south of the lower gate position, at a slight skew to the lock. No trace of the springing of the bridge arch was detected within the excavated area, and the OS 25" maps indicate that the bridge was located slightly to south of the excavation. The maps suggest that it was about 6m in width. No photographs of the bridge seem to be available, though it presumably resembled those provided at Lock N° 2 (Penry Street Road Bridge) and Glyndyrys<sup>3</sup>. Like most of the original bridges, it probably did not span the tow path, and boats had to be hauled through by hand. The main purpose of the bridge was presumably for access to the lock gate, though it was also to become a crossing point from the south end of the adjacent Ynysfach works, established in 1801. Unlike the two canal bridges to the north, however, it did not provide access to the town via a bridge across the river. At some time after the Harris survey of 1830, a tramroad was laid across the lock bridge, taking slag from the Ynysfach furnaces (on the west) to the cinder tips which extended between the canal and the river. The double-track tramroad and cinder tip incline are shown on the 1876 OS 25" 1st ed plan. By 1915, tipping on the east side of the canal had ceased and the tramroad across the lock bridge had been removed.

3.2.7 *Mouth of culvert (SO 04640 05998)*

A short watercourse is shown issuing into the west side of the canal, at a point 4m-5m south of the bridge. This feature is depicted in the 1830 Harris survey as a narrow, square-ended channel. The 1876 1st ed OS 25" map also shows it as a short watercourse, some 8m in length, issuing from a possible culvert mouth. By 1915, when the 3rd ed OS 25" map was surveyed, it had become an elongated pool, encroached on by the adjacent railway. It is possible that the watercourse had been a natural or semi-natural stream, which had been culverted during the expansion of the Ynysfach works.

<sup>1</sup> Thomas C 1986 *Social and industrial history, in The historic Taf valleys* 3, 48-142. The basin appears in a photograph of the derelict canal (Figure 66, p 94).

<sup>2</sup> Bridge N° 300. Davies WL 1992 *Bridges of Merthyr Tydfil (Glamorgan Record Office, Cardiff)*, p 155.

<sup>3</sup> Bridge Nos 163 and 135: Davies WL 1992 *ibid.*, pp 107, 99.



### 3.2.8 *The feeder system*

The arrangement of feeders and sluices around Parliament Lock, both supplying and drawing from the canal, is rather difficult to interpret. The system appears to have consisted of three principal elements:

(a) An embanked, divided aqueduct which joined the Taff at the lower of the two weirs (SO 04709 06023) and extended southwest for some 15m, where it split into two separate channels, leading to points above and below the canal.

(b) A presumed canal-feeder channel, which led via a sluice from the main aqueduct, in a northwest direction for 40m, before joining the canal at a point opposite the basin, some 15m above the lock (SO 04649 06061).

(c) A second channel, which extended west from its junction with the main aqueduct (a) for some 5m to a point slightly west of Parliament Lock House, before returning south for 32m, where it entered a culvert beneath the road. The junction of the culvert with the canal is not shown on the OS 25" plans but it was clearly some distance below the lock. This channel presumably took water discharged from the lock to the Taff weir, over which it was conveyed by pipe to the Plymouth Feeder.

This interpretation remains rather uncertain.

## APPENDIX ONE: HISTORICAL BACKGROUND

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### Glamorganshire Canal

The following account has been abstracted from Hadfield's *Canals of South Wales and the Border* (1967) 91-117.

The Glamorganshire Canal was licensed by Act of Parliament in 1790, which permitted a navigable waterway to be constructed from Merthyr Tydfil via Pontypridd and Melingriffith to the Bank, a shipping place on the Taff below the Old Quay, Cardiff. It was to be the first major canal in Wales. The venture was led by Richard Crawshay of Cyfarthfa, and included the owners of the four Merthyr ironworks. The authorised capital was £60,000 with power to raise £30,000 more. The Crawshays, who were the majority shareholders, subscribed £13,100.

The canal was designed by Thomas Dadford Snr and Thomas Dadford Jr, who with Thomas Sheasby, were joint contractors for its construction. Work began at Merthyr in August 1790 and the first section of the canal, from Cardiff to Abercynon, was opened on 10 February 1794. Delays were caused by construction difficulties to north of Abercynon, however, and the canal was not completed until June 1798<sup>1</sup>.

By the 1830s, the Glamorganshire Canal was the most intensively used inland waterway in Wales, with an estimated 200 barges in operation, taking 20 hours for the non-stop passage to Cardiff (or three return trips in a fortnight). Lighting of the locks by gas or oil had been introduced to enable boats to continue by night. Not only was finished bar and pig iron (and an increasing tonnage of sale coal) being moved to the coast, but iron ore had begun to be imported back to the ironworks.

The peak of the canal's use came in 1851, when over half a million tons were carried. From the 1850s onwards, however, competition with the railways greatly reduced the tonnage being transported on the congested canal, with its relatively high tolls and 49 locks. The upper section of the canal from Cyfarthfa Ironworks to Merthyr ceased to be used after 1865. The section from Merthyr to Abercynon was maintained, with ever-dwindling traffic, until the 1890s, finally closing on 7 December 1898. It was purchased from Cardiff Corporation in 1920, to be used as the route for a water main. The Abercynon-Pontypridd section of the canal closed after a water-burst in 1915, and the rest of the canal was abandoned in 1942.

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<sup>1</sup> Pedler F 1930 History of the hamlet of Gellideg (*Joseph Williams, Merthyr Tydfil*), 21-2.

Willis E 1981 *The development of transport, in Merthyr Tydfil: a valley community* (Merthyr Teachers Centre Group), 361-372.



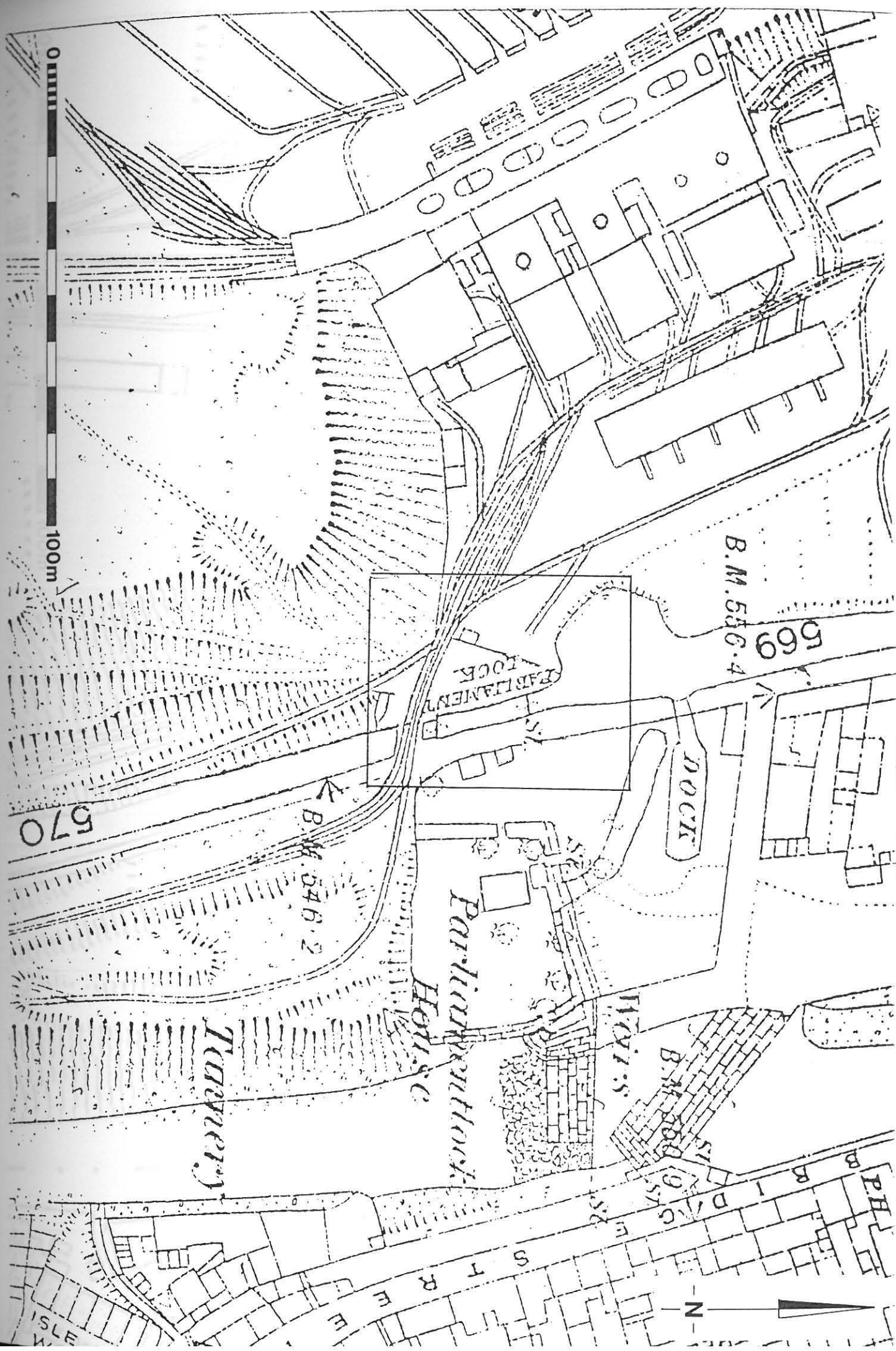


Figure One: 1876 OS 1st ed 25" map (Glam XII.V), enlarged to 1:1000. Area of detailed site plan (Figure Three) shown outlined.

# APPENDIX

## Glamorgan Canal

The following is a list of the owners of the canal from 1876 to 1920.

The Glamorgan Canal was a major canal in the Glamorgan area. It was built by the Glamorgan Canal Company in 1876. The canal was 10 miles long and had a capacity of 100,000 tons per year.

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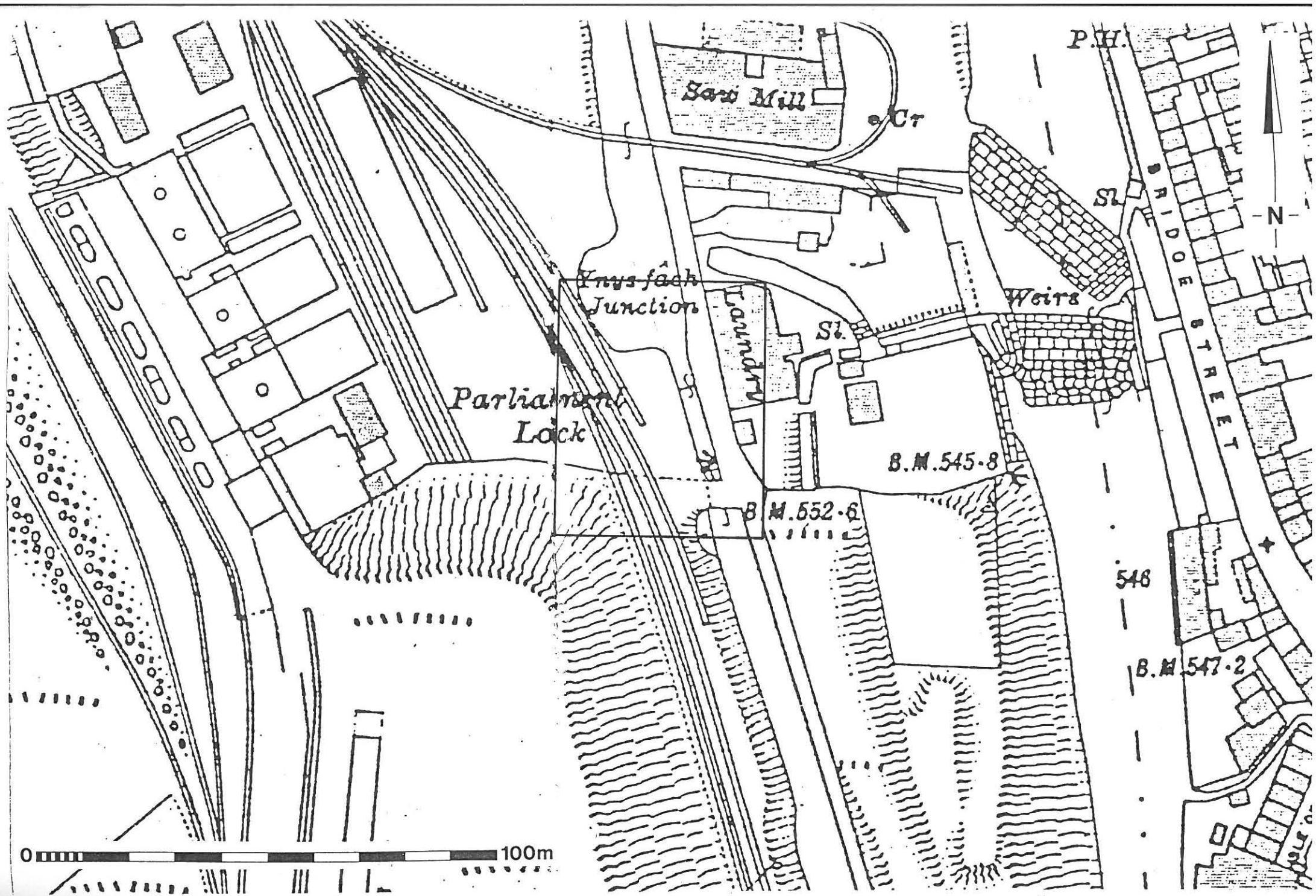


Figure Two: 1919 OS 3rd ed 25" map (Glam XII.V), enlarged to 1:1000. Area of detailed site plan (Figure Three) shown outlined.



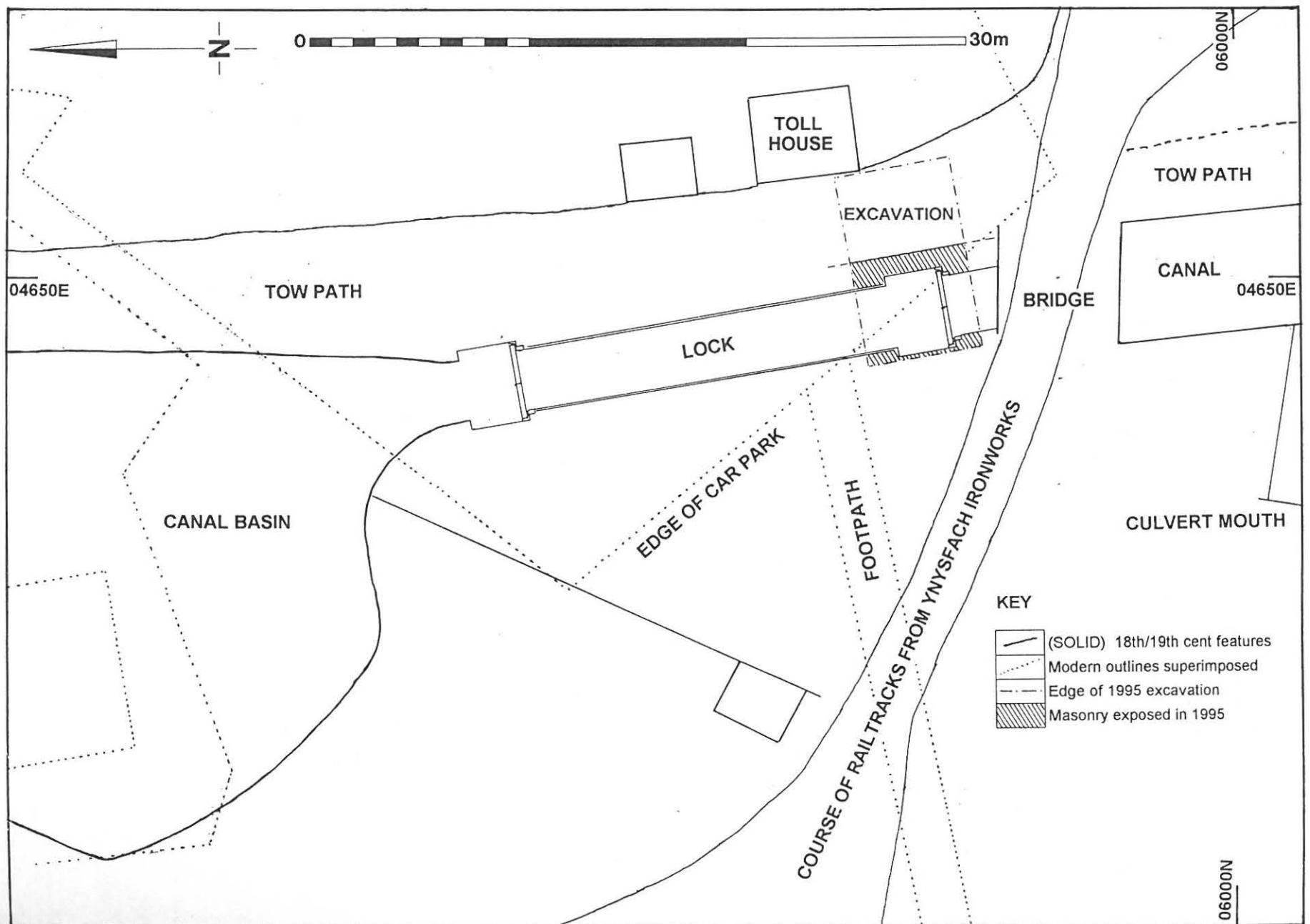


Figure Three: Parliament Lock area, taken from 1876 OS 25" 1st ed (Glam XII.5), enlarged to 1:250. Outline of 1995 excavation indicated.