

THE A465  
ABERDULAIS ~ GLYNNEATH  
IMPROVEMENT

An Archaeological Assessment

P. F. WILKINSON AND H. S. OWEN-JOHN, AUGUST 1989

# THE A465 ABERDULAIS-GLYNNEATH IMPROVEMENT

An Archaeological Assessment

2860W

## 1. INTRODUCTION

- 1.1 After preliminary consultations the Glamorgan-Gwent Archaeological Trust was commissioned by the Welsh Office Highways Directorate to carry out an assessment of the impact on the cultural heritage of the Neath Valley of the proposed improvement of the A465 trunk road between Aberdulais and Glynneath. This assessment is one of a number that have been commissioned which will form the basis of the environmental statement that will examine what measures should be taken 'in order to avoid, reduce or remedy . . . significant adverse effects' that are identified in the various studies. (Statutory Instrument 1988, No 1199: Town and Country Planning (Assessment of Environmental Effects) Regulations 1988, Schedule 3).
- 1.2 The geographical area covered by this report conforms to the proposed route of the road as described in 'The Neath-Abergavenny Trunk Road (A465) (Improvement from Aberdulais to Glynneath and Slip Road, Side Roads) Order 19'. The area to be affected was surveyed in the field in late June 1989 and extensive documentary research was undertaken.
- 1.3 The Trust gratefully acknowledges the assistance of the staff of West Glamorgan County Council and Neath Borough Council, the Glamorgan Archive Service, the Vale of Neath Railway Society, the Neath and Tennant Canals Preservation Society, the National Trust and the owners of the land affected by the proposals, particularly Mrs E Maybery. The finance for the assessment was provided by the Highways Directorate through the good offices of Cadw: Welsh Historic Monuments.

## 2. TOPOGRAPHICAL/MORPHOLOGICAL BACKGROUND

- 2.1 For most of its length the course of the proposed road runs along the floor of the Vale of Neath. In historic times most of this area has been prone to flooding. This has clearly limited the amount of human activity, particularly in the form of settlement, along the route. The River Neath has changed its course many times throughout history. There is a record as early as 1249 of a dispute between Lord Leison ap Margam ap Caradoc and Neath Abbey caused by the river, which marked the boundary between their estates, having changed its course. 5293W
- 2.2 The frequent movements of the river have caused the periodic destruction of many of the former ground surfaces of the valley bottom and their replacement with new sediments. The frequent flooding of the area will also have caused the deposition of considerable quantities of silt. This has been borne out by the evidence from boreholes.

## 3. EVIDENCE FOR PREHISTORIC ACTIVITY

- 3.1 The transient nature of the sediments which make up the floor of the valley makes it likely that much archaeological evidence for prehistoric activity which might once have existed in the valley bottom will have been destroyed by the

river's movements or buried under considerable depth of silt. Nevertheless river bank locations often acted as foci for settlements of varying degrees of permanence and it is to be expected that, where palaeo-channels have not been destroyed by subsequent fluvial erosion, some evidence may survive of adjacent post glacial human activity. It is likely that any such evidence would be of high quality as the anaerobic conditions resulting from waterlogging will have preserved important organic evidence which does not survive to anything like such an extent on 'dry' sites.

- 3.2 Within the area to be affected by the proposed road there are no recorded prehistoric sites and no evidence has been found of any reported antiquities of the period in the area. The present survey strongly suggested that all surface undulation is attributable to either natural processes or later human activity.

#### 4. EVIDENCE FOR HISTORIC ACTIVITY

- 4.1 The present survey has identified a number of features which are of historical interest and are likely to be affected by the construction of the new road. Two features which extend the entire length of the valley are the course of the Vale of Neath Railway and the Neath and Tennant Canals.

##### Canals

- 4.2 The Neath and Tennant Canals provided twenty one miles of waterway from Aberdulais to Swansea and from Glynneath to Briton Ferry. The two canals were built separately, the Neath under Acts of Parliament of 1791 and 1795. The Tennant Canal, which was completed in 1824, was the second longest privately built canal in Britain. These waterways were vital to the industrial development of the Vale of Neath in the days before the railways. With their locks, bridges and associated buildings, the canals, which are currently being restored by the Neath and Tennant Canals Preservation Society, form both an important tourist attraction and major educational resource.

- 4.3 The proposed road scheme will affect the canals at several points. At Aberdulais it appears that the Neath and Tennant Canals themselves will not be directly affected by the new roads. The canal link between the Aberdulais Works, which is owned by the National Trust, and the Tennant Canal will be blocked by the new road. Although this canal is not open at present it may be seen as desirable to restore it in the future in order to more clearly display to visitors the importance of communications to the industrial development of the area.

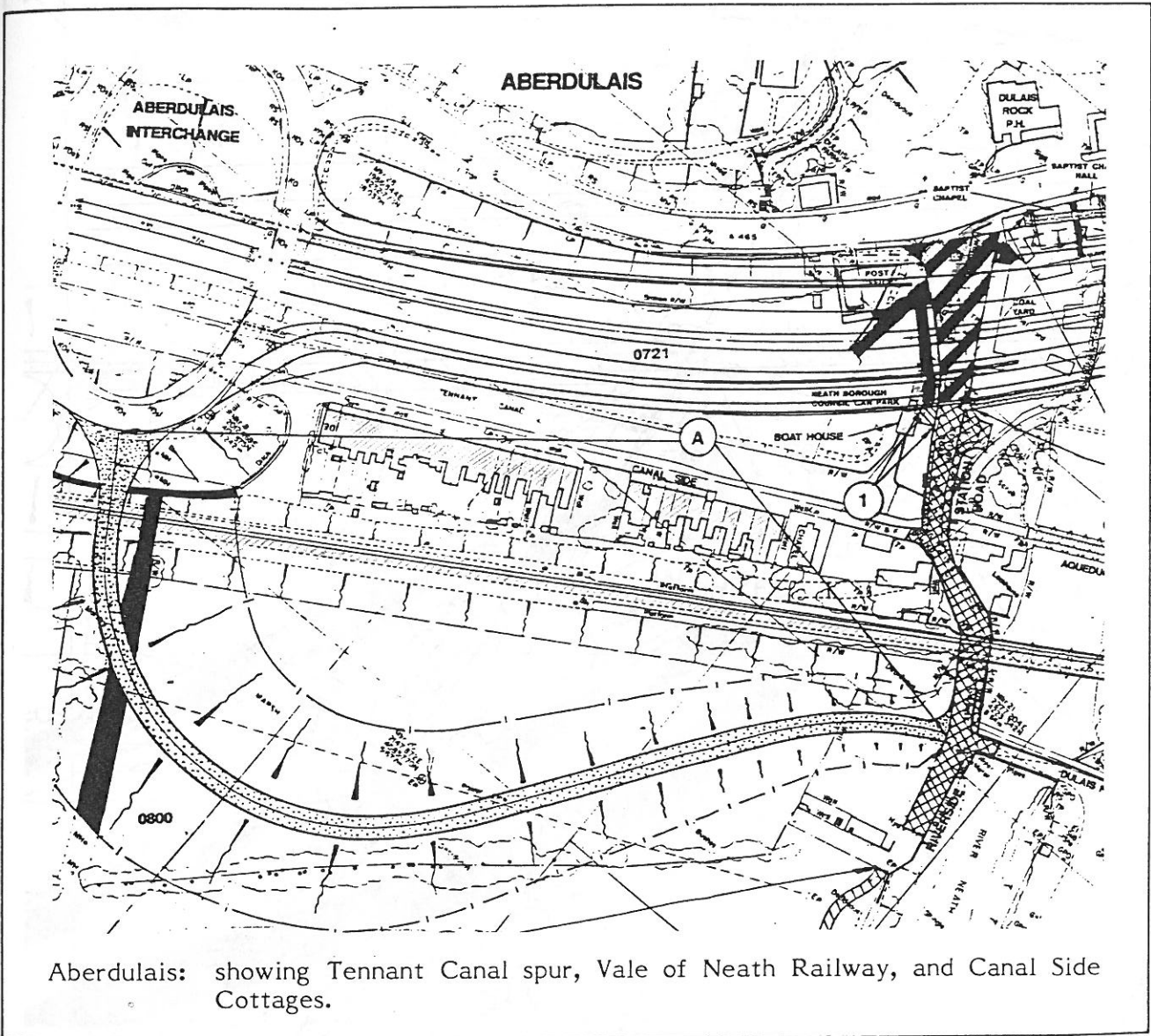
- 4.4 At Ynys-yr-Allor, National Grid Reference SN 854046, the proposed road will cross the branch of the Neath Canal known as Cnel Bach. This canal is, at present, partially filled in but it would seem wise to re-open it as part of the restoration of the rest of the Neath Canal. If it is to be blocked by the embankment for the new road such restoration will not be feasible.

- 4.5 The course of the Neath Canal will be diverted at Ynysbwlllog, NGR SN 803012. While it is unfortunate that the canal will no longer follow its original course the continuity of this stretch will, at least, be maintained. The new road will affect a small, now derelict, feed-store building on the canalside.

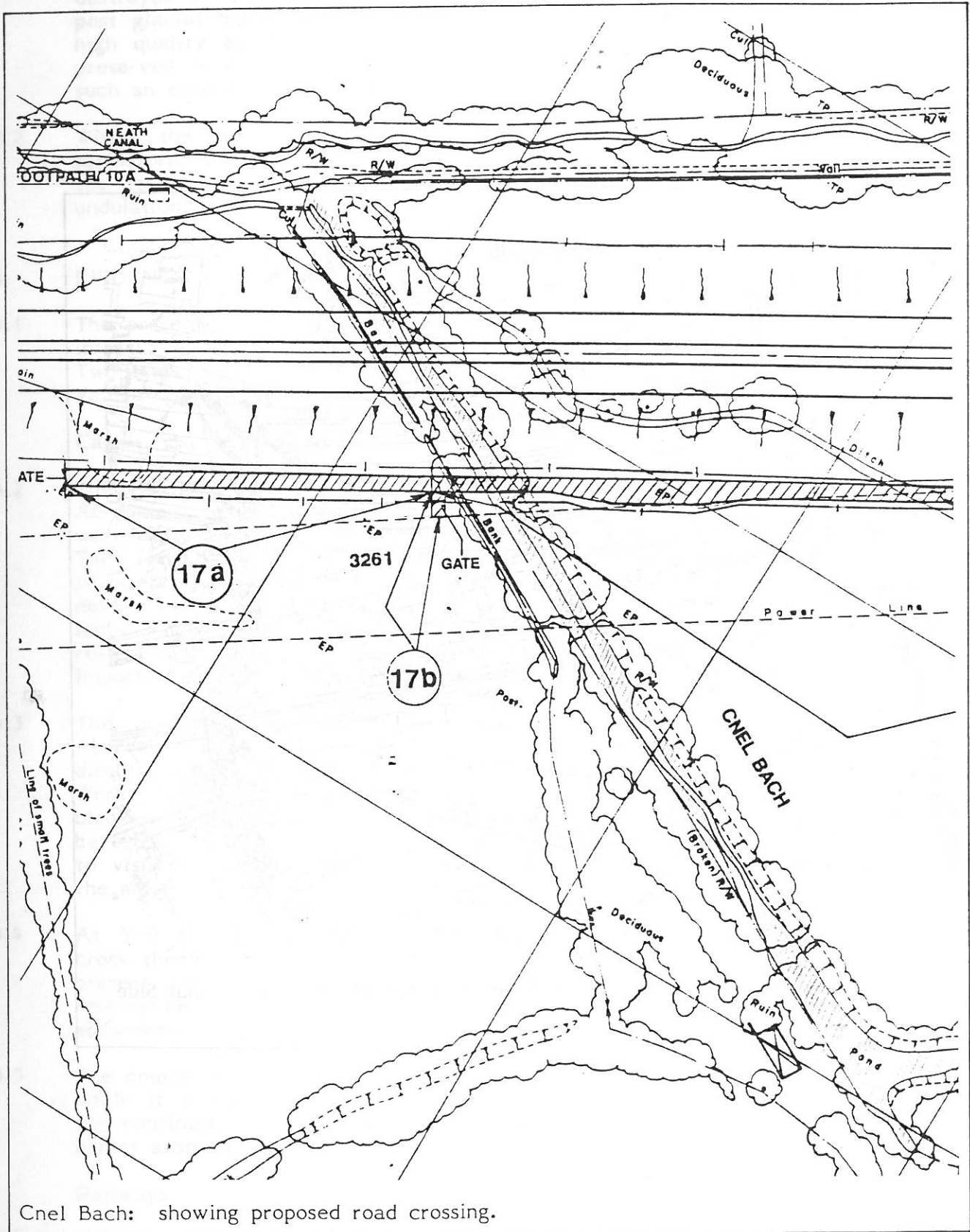
##### Railways

- 4.6 The construction of the Vale of Neath Railway was authorised by Act of Parliament in 1846. The first trains ran between Neath and Pontypool in 1865 and in the same year the Vale of Neath Railway amalgamated with the Great

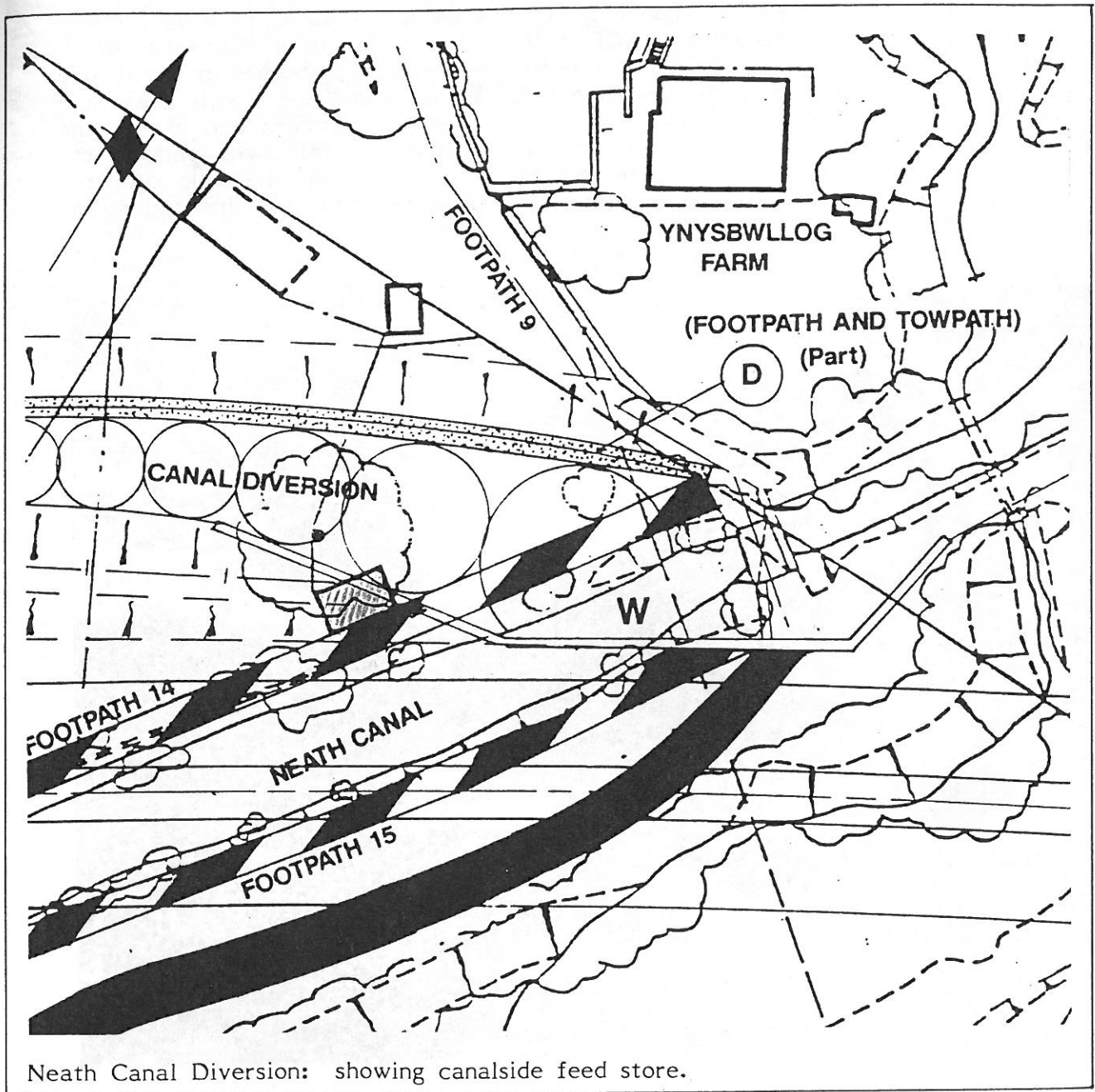




Aberdulais: showing Tennant Canal spur, Vale of Neath Railway, and Canal Side Cottages.



Cnel Bach: showing proposed road crossing.



Western Railway. The line played an important part in the later development of industry and mining in the Vale of Neath carrying coal, iron and chemicals as well as passengers.

4.7 In 1967 the section of line from Glynneath to Aberdare was closed. The rest of the line was closed in 1985. The line between Neath and Glynneath is now being restored by the Vale of Neath Railway Society as a potentially very important tourist attraction.

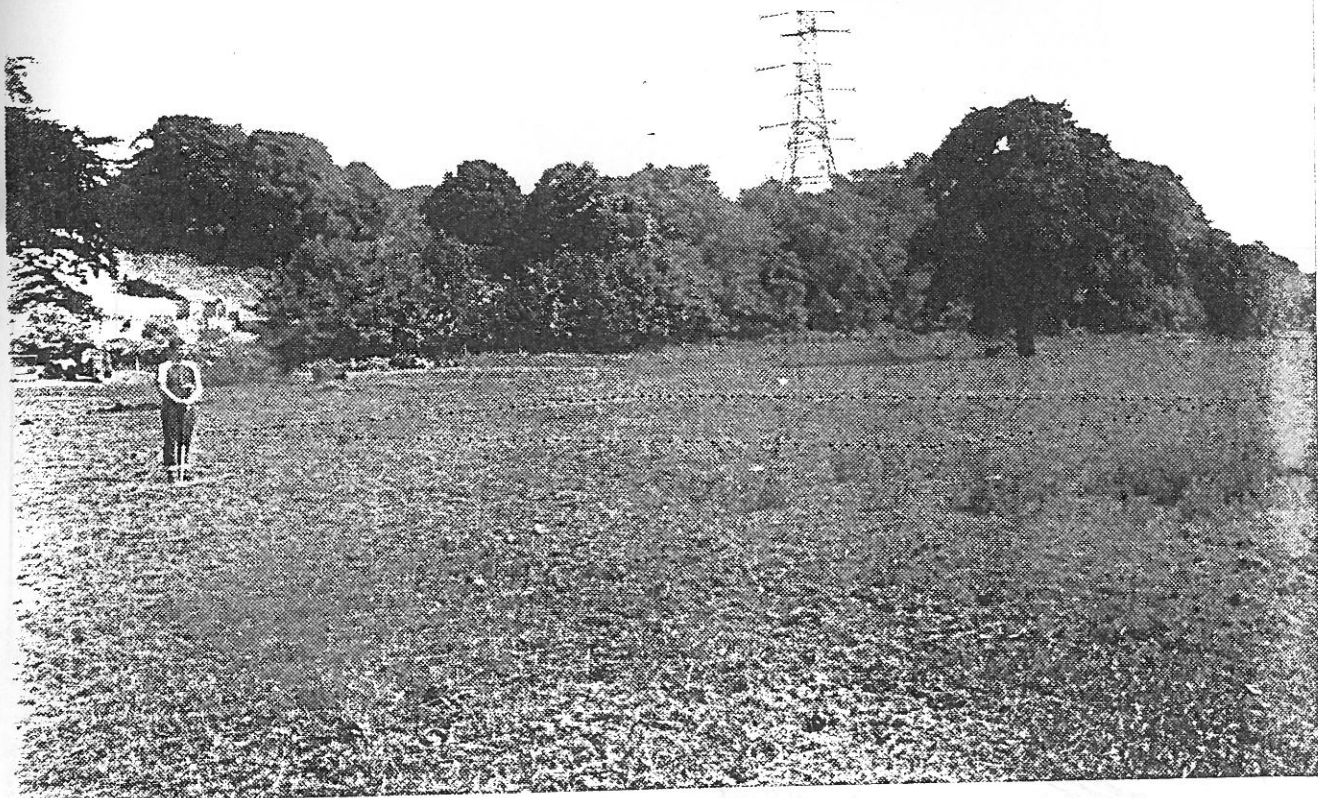
4.8 The proposed road scheme will affect the remains of the Vale of Neath Railway at two points. At Aberdulais, NGR SS 771992, the proposed slip road, which will run from the roundabout and curve to the east of the houses in Canal Side to join the crossroads with Riverside and Dulais Fach Road, will cross the railway line on an embankment. This will cut off the southern end of the line which connects the rest of the line with Neath. This will reduce the attractiveness of the line for tourism. It will also sever the link with the British Rail network which may hinder the work of restoring the line and rolling stock.



Course of Vale of Neath Railway: remains of footbridge near Blaengwrach, looking south.

4.9 To the north of Cwmgwrach the road will follow exactly the course of the railway line. Whilst it is understood that the Vale of Neath Railway Society has no immediate plans to restore this section of the line, it should be recognised that the proposed road scheme will render any future restoration impossible.



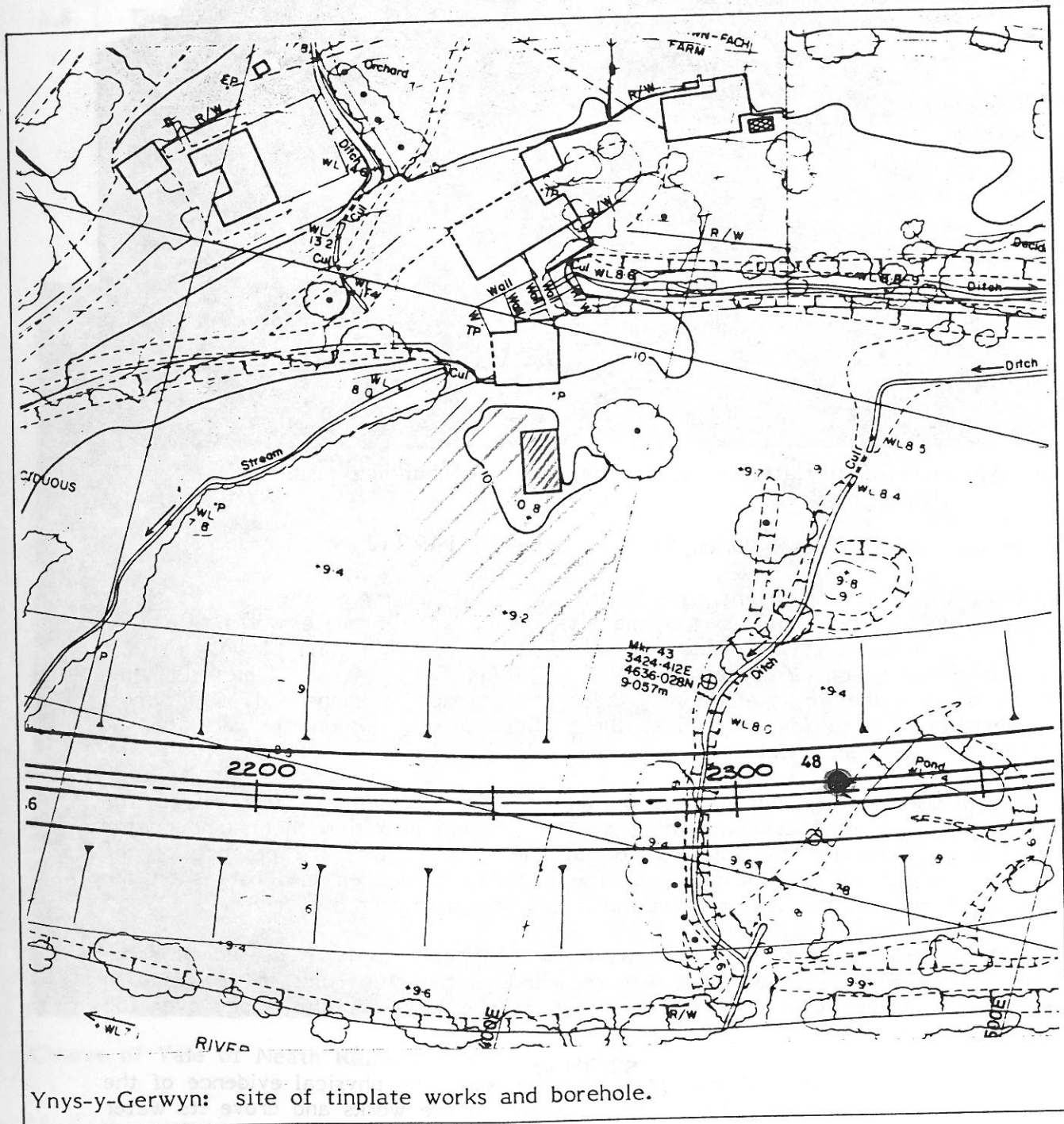


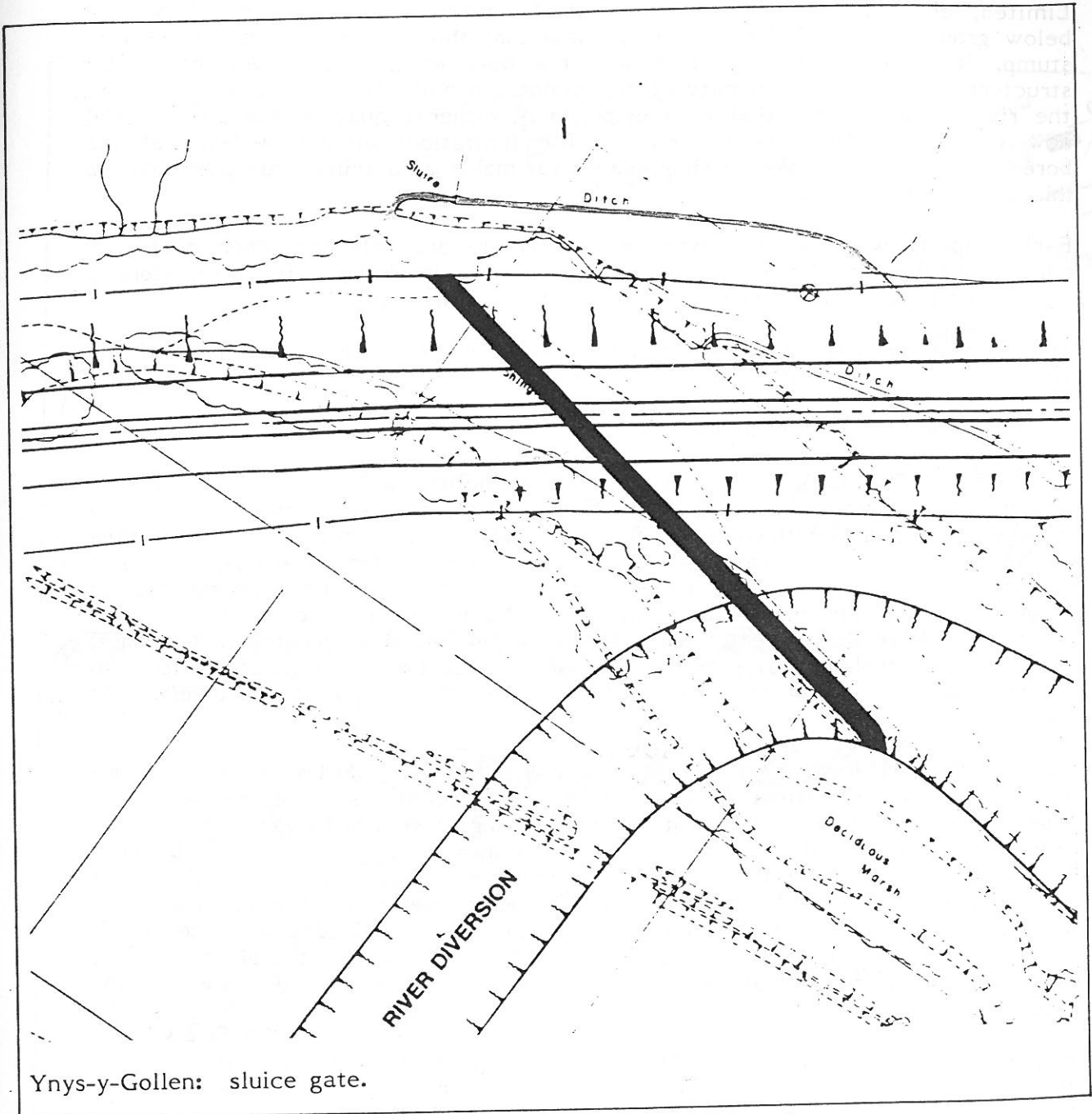
Ynys-y-Gerwyn: site of tinplate works showing outline of building visible as a 'parch mark'.

Ynys-y-Gerwyn Tinplate Works, NGR SS 784997 1982w

- 4.10 One of the most significant sites in the industrial history of the Vale of Neath is at Ynys-y-Gerwyn. This was the site of an early tinplate works. In 1750 Messrs. Rowland Pitt and Thomas Lewis leased, from Mr John Llewellyn, ". . . the land on which Ynisygerwn Rolling Mill is Built . . ." There is some evidence that the works might have been in existence as early as 1730 but most authorities seem to favour 1750 as the earliest date by which the works can be shown to have been established.
- 4.11 The processes carried out at this works are well documented. It received iron from the forge at Aberdulais which was then rolled into thin sheets and coated with tin. Following the construction of the Neath Canal the produce of the works was carried on a bridge over the river to be loaded into barges on the canal. It appears that before this the metal was transported by river.
- 4.12 The production of tinplate at Ynys-y-Gerwyn appears to have ceased at some time in the 1820s. The works was recorded as being in ruins in 1856 and in 1928 D R Phillips wrote that no evidence of the works or the bridge over the river survived.
- 4.13 The present survey showed that there is some surviving physical evidence of the tinplate works. The leat which supplied water to the works and drove its water wheel may still be seen. It carries water from the river at Ynys-y-Gollen and rejoins the river below Ynys-y-Gerwyn Fach. The base of the wheel is said to survive but at the time of the present survey it was too overgrown by vegetation to be visible. One of the present farm buildings on the site has the appearance of having an industrial, rather than an agricultural, origin. The owner of the farm stated that this building was thought to be part of the old tinplate works.







Ynys-y-Gollen: sluice gate.

4.14 In the meadow to the south-east of this building the surface of the ground showed undulations which are consistent with the sites of building and the general disturbance of the ground surface which one might expect around an industrial site. The outline of the buried remains of a rectangular building was clearly visible as a 'parch mark' where the grass had died over the lines of the walls in the drought conditions prevailing at the time of the survey.

5295w  
4.15 A borehole, which was sunk nearby, at NGR SS 78449960, by Wimpey Laboratories Limited, encountered a 1.2 m thickness of timber at a depth of 4.5 m-5.7 m below ground level. Although it is possible that this timber was an ancient tree stump, it is more likely that it was the base of a wooden pile or similar structure. Given the proximity of this timber to both the tinplate works and to the river it is possible that it is evidence of either a quay or the piers of the now vanished bridge over the river. The limitations of the evidence of one borehole, however, make it impossible to make a definite interpretation of this information.

4.16 Early tinplate works of this type were very rare and only one other, a slightly earlier example in Kidwelly, is known to survive in Wales. It is therefore a significant part of the industrial heritage of the Principality.

4.17 The proposed course of the road will cut across the south-eastern part of the site of the works and the site of the borehole.

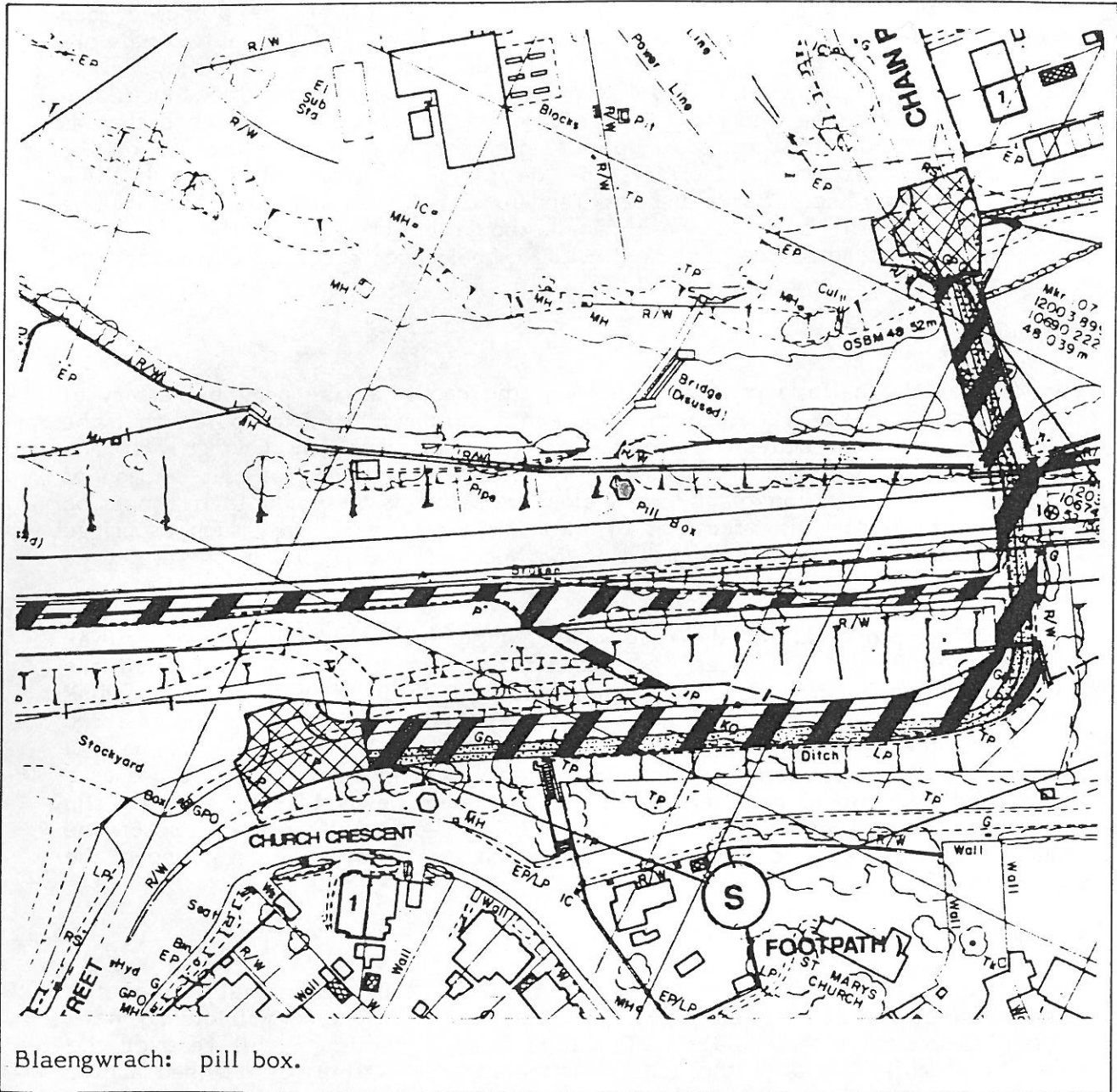
#### Other features of Historical Interest

5296w  
4.18 At NGR SN 79250025, south-west of Ynys-y-Gollen, a ditch carrying a slow running stream flows into the River Neath on its north-western bank. A few metres from their confluence the ditch, which is stone lined, was at one time controlled by a sluice gate. Although the gate no longer exists, its stone abutments do survive. The general character of this ditch suggests that it might have been constructed as a mill leat. No documentary evidence of a mill in this vicinity has been found. The origin of this construction cannot, therefore, be explained at present. The sluice gate lies just outside the area to be occupied by the new road but might be affected by the proposed diversion of the adjacent river.

556w  
4.19 The field at NGR SN 87620608 bears the name Pwll y Felin, or Pool of the Mill, which some writers have suggested may be the site of Pergwm Mill. There is documentary evidence of the mill having existed somewhere in the area from around 1650. It is said to have fallen into decay at some time between 1680 and 1721. There is no surface evidence of the site of this mill and its precise position cannot be ascertained. The River Neath has changed its course several times in this area which might mean that the placename evidence for the site of the mill may be rather inaccurate. There is therefore a slight possibility that the actual site of the mill may lie within the area of the proposed road.

3292w  
4.20 Beside the course of the old railway line, at NGR SN 86970565, near Blaengwrach there is a well preserved example of a type 22 pill box of the Second World War. This will be affected by the construction of the new road in the path of which it lies.





Blaengwrach: pill box.

## 5. RECOMMENDATIONS

5.1 The recommendations concerning future courses of action can be divided into two categories. In some cases the archaeological and historical evidence presented above permits specific recommendations to be made, but in addition some more generalised proposals are also made.

### 5.2 Specific Recommendations

#### 5.2.1 Canals

There are two principal areas of concern in the effect of the proposed road scheme on the canals of the Vale of Neath. The Neath and Tennant Canals are not only important features in the industrial development of the valley but as they are gradually restored they will provide an increasingly valuable educational resource as well as an important leisure amenity. We would recommend that as far as possible the new road should not interfere with the restoration of the canal system. It would therefore be desirable to avoid blocking the link between the Aberdulais Works and the Tennant Canal, and also to avoid blocking Cnel Bach. Ideally both of these canals should be bridged by the new road. The canalside feed store at Ynysbwllog should be recorded prior to the construction of the new road.

#### 5.2.2 Railways

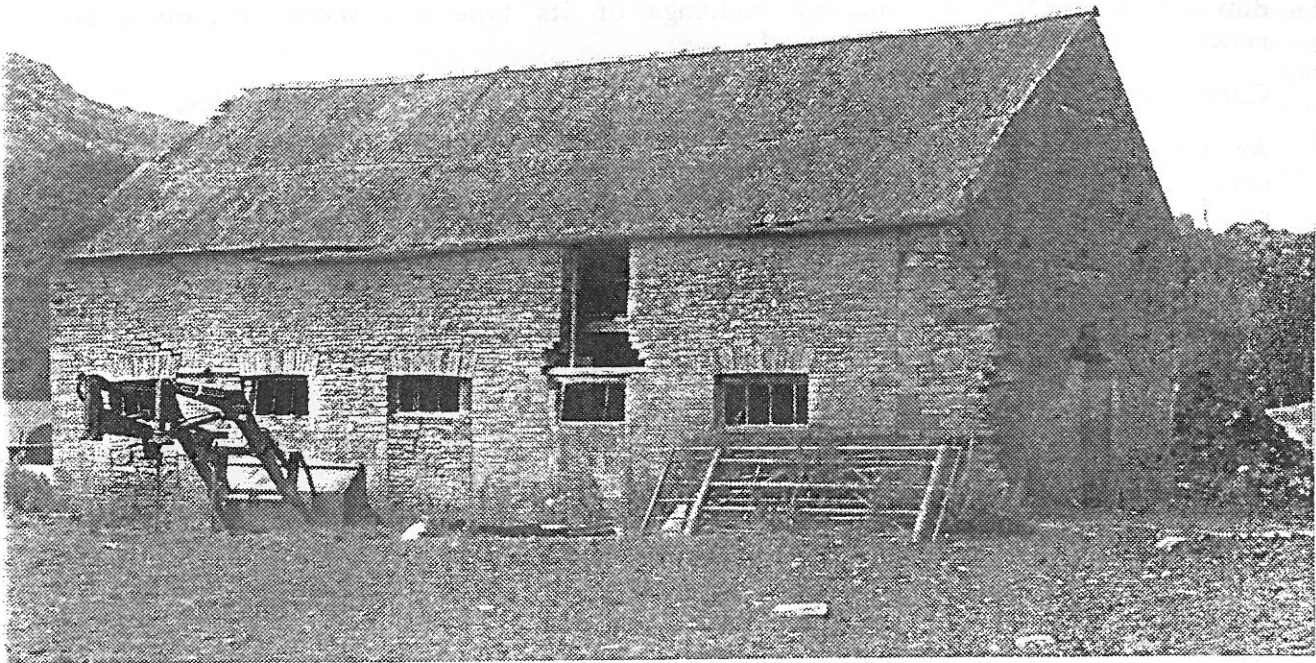
The Vale of Neath Railway largely replaced the canals as the principal artery of communication in the valley in the nineteenth century. It is proposed that the new road should occupy the course of the line between Cwmgwrach and Glynneath. This will render impossible any future restoration of this section of the line. If construction of the road along this line is unavoidable it should be ensured that all surviving features of the course of the railway, such as bridge abutments, are adequately recorded in advance of road building, or protected from damage wherever possible.

The published proposals for the road scheme include the blocking of the railway line between Tonna and Neath by the embankment of a slip road from the Aberdulais roundabout. This is clearly undesirable as it will sever the link between Neath and the rest of the Vale of Neath line and between the restored section of the track and the British Rail network. This is likely to have a detrimental effect on both the work of restoring the line and on its future as a tourist and educational amenity. This problem could be avoided by the new slip road being carried over the railway on a bridge, or by the relocation of the roundabout south-west of the point at which the railway passes under the present A465.

#### 5.2.3 Aberdulais

Aberdulais is the principal centre for tourism and the educational use of the historical features of the Vale of Neath. The proposed scheme will clearly have a major impact on the village. The proposals as published will restrict the further restoration of both the canal and the railway systems as outlined above. This will clearly limit the further development of the educational and leisure facilities of the area. Furthermore, the proposed high-level slip road which will pass over the Tennant Canal in front of Canal Side Cottages will have a detrimental effect on the visual amenity, which is vital to an appreciation of these cottages, which are a very fine example of their type. Many of these problems might be avoided if the present high-level roundabout were to be replaced by a new junction further south-west. The benefits of reduced traffic on the present A465 will add to the attraction of this important centre of

Wales' industrial heritage; it is, however, important that such benefits are not negated by the construction of high-level slip roads through the village.



Ynys-y-Gerwyn: farm building said to have been part of the tinplate works.

#### 5.2.4 Ynys-y-Gerwyn

The site of the early tinplate works at Ynys-y-Gerwyn is one of the most significant historical features to be affected by the proposed scheme. The proposed scheme will involve the construction of an embankment to carry the road over the southern part of the site. Preliminary assessment of the site suggests that most of the archaeological evidence lies on or close to the surface of the ground. The risk of damage from the construction of the road is therefore considerable.

In view of the significance of the site and the risk of its suffering damage, we would recommend that one of two options should be adopted:

- 1) A detailed survey of the threatened part of the site should be undertaken using both conventional, magnetic susceptibility, and soil resistance techniques. This should be followed by the formulation of an engineering specification which will ensure that no ground disturbance is occasioned by the road construction in the archaeologically sensitive areas. Protection of the ground surface with geotextile matting and overlying compacted fine aggregates is one method, the feasibility of which might be explored.
- 2) A detailed survey of the site should be undertaken as suggested above. This should be followed by a programme of trial excavation and if the results of this trial work demonstrate the need for a full excavation this too should be undertaken. All three stages suggested should be undertaken in advance of the commencement of construction work.

From an archaeological point of view option (1) is preferable and we would therefore recommend that option (2) should only be considered if (1) is not feasible, or if the relative costs demonstrate that (1) would be significantly more expensive. In view of the high cost of archaeological excavation we believe this is unlikely.



### 5.2.5 Other Features

The World War II pill box at Blaengwrach, while not unique, is one of a diminishing number of military buildings of its type and should therefore be recorded if it cannot be preserved.

Care should be taken to avoid damaging the sluice gate at Ynys-y-Gollen.

As outlined above there is a slight possibility that road construction work might uncover the site of the seventeenth-century Pergwm Mill. We therefore recommend that a financial contingency should be set aside to cover the costs of any salvage excavation that might be necessary. The amount of this contingency should be agreed in advance by the Glamorgan-Gwent Archaeological Trust, Cadw and the Highways Directorate, and should also take into account costs that might be incurred by a maximum period of two weeks being made available for archaeological investigation within the contract.

## 5.3 General Recommendations

### 5.3.1 Archaeological Monitoring of Construction Works

In view of the likelihood of previously unrecorded archaeological information being both exposed and damaged by road construction we would recommend that provision for an archaeological 'watching brief' during soil stripping and any other excavation work that may be necessary should be written into the contract documents. The costs of this operation should be agreed in advance by the Glamorgan-Gwent Archaeological Trust, Cadw and the Highways Directorate.

### 5.3.2 Contingency Arrangements

This report has identified particular archaeological problems that are posed by road construction. However, by the very nature of archaeology it is not possible to identify all such problems with full assurance. We therefore believe it would be prudent for contingency to be made for unexpected discoveries. We recommend that a financial reserve, the amount of which should be agreed in advance by the Glamorgan-Gwent Archaeological Trust, Cadw and the Highways Directorate, should be set aside to cover any such eventualities. In addition we recommend that the contract documents should specify that a period of up to two weeks should be allowed for emergency archaeological investigation. Both money and time should be in addition to the provision for the known 'risk area' of Pergwm Mill (above). By establishing contingency arrangements at the outset expensive difficulties which might occur during construction works can be avoided.

### 5.3.3 Impact on Water Table Levels

It may be that the construction of a new road will alter the existing water table levels. If there is any significant lowering of the water table at any point, previously unrecorded organic matter of archaeological significance would rapidly disintegrate. The timbers noted in some of the bore-hole logs demonstrate the existence of such material. We recommend that the impact of the new road on the water table should be accurately assessed by suitably qualified personnel, and every effort made to retain existing levels.

### 5.3.4 Alterations to the Proposed Route

This report refers only to the published route of the new road. If any amendments are envisaged the design alterations should be archaeologically assessed to ensure that their possible impact on the cultural heritage of the Neath Valley is not overlooked.

## 6. CONCLUSION

The Vale of Neath has played an important role in the industrial development of South Wales as well as providing a major routeway for communications throughout history. A significant part of the attraction of the area is derived from this heritage, which is being enhanced by the efforts of such organisations as the National Trust, the Neath and Tennant Canals Preservation Society, and the Vale of Neath Railway Society. If the recommendations in this report are implemented the impact of the proposed road improvement on the historical features of the valley can be minimised and the road may make a positive contribution to the public's access to their heritage.

## GAZETTEER OF SITES OF HISTORICAL INTEREST IN THE VALE OF NEATH

### Recorded Sites on Line of Proposed New Road

<u>Name or Location</u>	<u>NGR</u>	<u>Type</u>	<u>Period</u>
<i>C01</i> Tennant Canal		Canal and associated structures	Post-Medieval 1070.0w
<i>C02</i> Neath Canal		Canal and associated structures	Post-Medieval 1027.0w +dec.mch
<i>D29</i> Vale of Neath Railway		Course of line and associated structures	Post-Medieval 2500m <sup>100</sup>
Cnel Bach	SN 854046	Canal spur	Post-Medieval 1027.13w
Ynys-y-Gerwyn	SS 784997	Tinplate works	Post-Medieval 1982w
Ynys-Gollen	SN 79250025	Sluice gate	Post-Medieval 5296w
Blaengwrach ↘ SN 8696,0567	SN 86970565	Pill box	Modern 3292w

### Recorded Sites Close to Line of New Road

<u>Name or Location</u>	<u>NGR</u>	<u>Type</u>	<u>Period</u>
Maes Gwyn	SN 85980545	Grange	Medieval 559w?
Pwll-y-Felin, Pergam	SN 87620608	Mill	Post-Medieval 556w