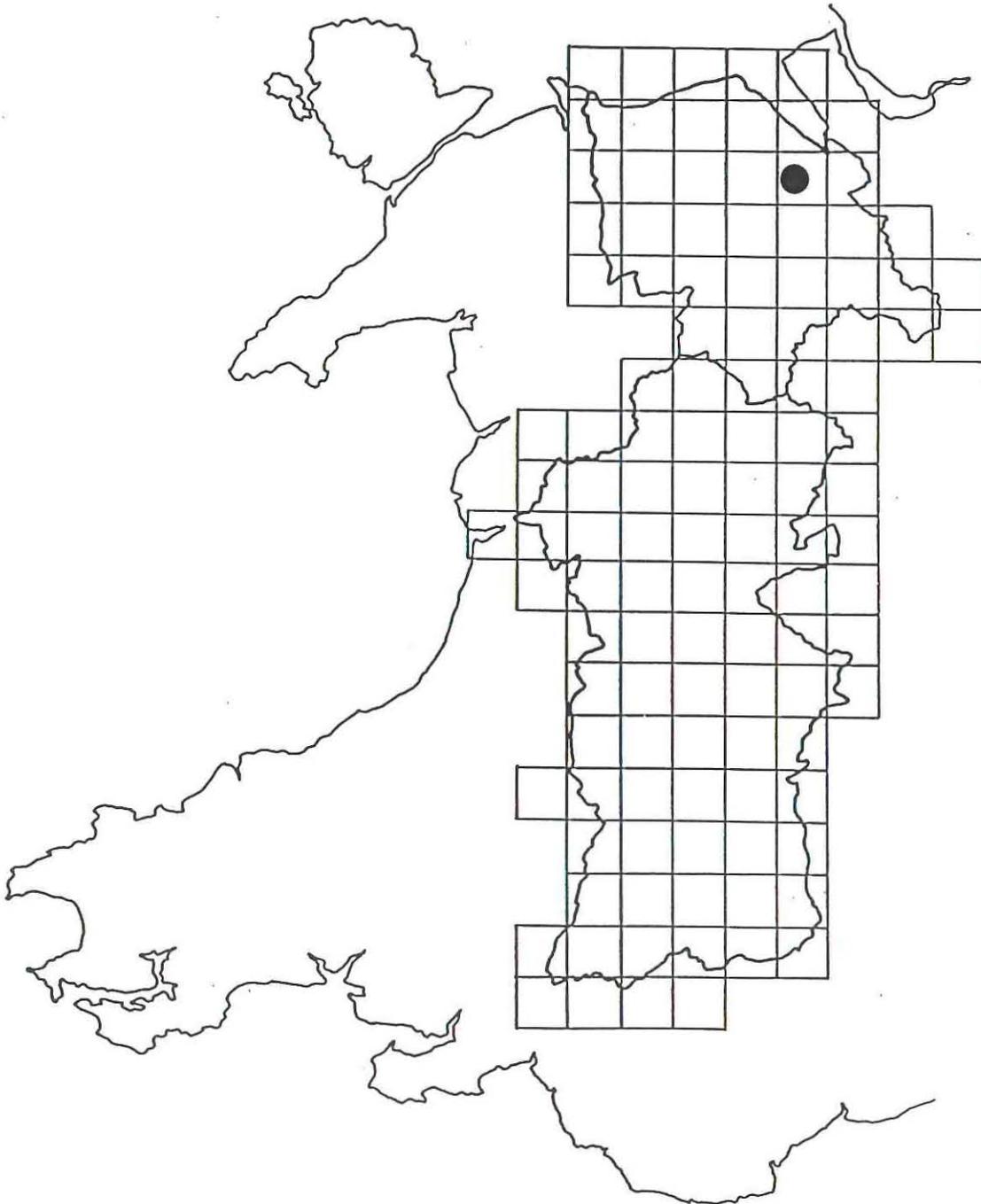


THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

*Sychdyn Sewage Treatment Works, Clwyd:
Route of Pumping Main*

ARCHAEOLOGICAL REPORT



CPAT Report No 76

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Route of Pumping Main*

ARCHAEOLOGICAL REPORT

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September 1993

Report prepared for Welsh Water plc

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1 Introduction

1.1 In December 1992, as a result of the consultative procedure in place between Dwr Cymru/Welsh Water and the curatorial section of the Clwyd-Powys Archaeological Trust (CPAT), the latter was informed of the details of a proposal to construct a pumping main for the Sychdyn Sewage Treatment Works, near Mold in Clwyd.

1.2 Following interrogation of the Sites and Monuments Record for Clwyd, the curatorial section of CPAT decided that disturbance to some archaeologically significant sites was likely during the programme of pipeline construction. This led to the preparation of outline recommendations for on-site archaeological recording which were accepted by Dwr Cymru/Welsh Water. CPAT's field section was commissioned to implement these recommendations in March 1993 and work was carried out during the period between early May and mid-July 1993.

2 Location (Fig 1)

2.1 Sychdyn Sewage Treatment Works (SJ 2533 6670) is situated just to the north of the village of the same name which itself lies approximately 2km north-north-east of Mold. The route of the pipeline follows a generally southerly direction from the works, initially to the east of Sychdyn, and then towards the village of New Brighton. From there it heads towards the eastern outskirts of Mold and runs adjacent to them. It reaches its terminus at the sewage works (SJ 2455 6330) adjacent to Bromfield Industrial Estate at the south-east end of Mold.

3 Topography and Land-Use

3.1 The northern portion of the pipeline follows the low ridge which extends south-east from Halkyn Mountain in the direction of Buckley. On reaching New Brighton it descends to the north-east bank of the River Alyn, crosses the river at SJ 244 642, and remains near the floor of the valley throughout the rest of its length.

3.2 Land-use on the route is mostly agricultural pasture although some arable fields are crossed. The northern part of the route adopts an existing road corridor through the built-up area at New Brighton.

4. The Archaeological Requirement

4.1 Four areas were considered by the curatorial section of CPAT to be of sufficient archaeological interest to merit a watching brief, namely:-

Area A (Fig 2; SJ 2470 6360). A field containing a previously detected cropmark, perhaps of an enclosure (PRN 100088). The possibility existed that deposits associated with the cropmark site might be disturbed.

Area B (Fig 2; SJ 2474 6381). Part of the presumed former tail race channel from Pentre Mill.

Area C (Fig 3; SJ 2444 6427). A probable tramway for the nearby Pentre Coal Mine.

Area D (Fig 4; SJ 2542 6560). A short length of minor road at New Brighton which is built across the line of Wat's Dyke.

4.2 All archaeological features observed were drawn and photographed as the circumstances dictated.

5 The Archaeology

5.1.1 The pipeline corridor in Area A was examined for the presence of archaeological features after topsoil stripping and some ground levelling had taken place. In the area adjacent to the cropmark, the orange gravelly subsoil was overlain by a layer, generally 0.30cm in depth, of dark brown/black ploughsoil containing sherds of modern and post-medieval pottery together with some naturally occurring chert. No features that could be interpreted as enclosure defences were noted. To the west, a large hollow running in a north-west/south-east direction within the field contained a greater thickness of ploughsoil which was not removed to its full depth, although a small test showed that the soil profile was similar to that found in the rest of the field. Again, no features of archaeological interest were observed.

5.1.2 One interpretation of this hollow based on the opinion of local inhabitants is that it represents local subsidence caused by underground mine workings. This remains to be confirmed.

5.2 In area B, the pipeline was re-routed on a line to the south-west of the possible tail race from the former Pentre Mill. Consequently there was no disturbance of the tail-race and no observations were made.

5.3.1 Topsoil removal and levelling prior to pipeline trenching in Area C revealed the tramway from the disused Pentre coal mine. The section cut through the tramway embankment contained evidence of three different tramlines (Fig 5), possibly representing efforts to counteract subsidence and potential flooding problems caused by the waterlogged nature of the locality.

5.3.2 The earliest tramline (A), was built on a foundation of large shaly stone and was seen as two hollows in the top of 9 with the adjacent coal rich areas probably representing spillage during transport. The width of the foundation suggests that there may have been an adjacent line to the south-west, but it appears that any evidence apart from the presence of a further coal-rich area has been lost during later rebuilds. Underlying the foundations at this point, but unrecorded due to the flooding which occurred during excavation, was a mottled and possibly redeposited orange-grey subsoil, the fairly soft nature of which would have made the original tramline susceptible to subsidence. This may well explain the need for the rebuilds seen in the section.

5.3.3 Tramline B which succeeded the original line was situated on the highest part of the visible embankment and had a foundation constructed of yellow-brown clay loam containing rounded stones and occasional brick fragments (8). It was built slightly to the south-west of the original line which had been sealed by a layer of reddish brick waste (7). It therefore seems likely that there was an intention to re-use the position of the original line in some way, and this was most probably represented by the stone surface (4), which may have been used for either wheeled traffic or as the base for another tramline.

5.3.4 The present appearance of the tramway embankment is due to the construction of a foundation for tramline C against the highest part of the visible embankment. This foundation is composed of dark brown/black coal waste and slag (2), which preserves evidence of tramline C as two compacted areas underlying the stone concentration in 1. It is therefore probable that the stone at this point originally formed the base on which the tramline was laid.

5.4 Area D was examined during the course of pipeline trench-cutting at a time when, due to problems caused by the excessive thickness of the tarmac encountered, the time schedule for the area had overrun. This resulted in the line of Wat's Dyke being cut and backfilled on Saturday, 19th June when CPAT staff were not on site. The ditch associated with Wat's Dyke was identified in section by Mr Paul Rush of Wallace Evans, who noted its location and dimensions and made a photographic record of its exposure in the pipeline trench prior to backfilling. These details are currently held by Mr Rush and it is anticipated that a copy will be forwarded to the SMR in due course.

6 Additional Work

6.1 During the course of the watching brief at Sychdyn, CPAT were asked at very short notice to maintain a watching brief for Dwr Cymru/Welsh Water and Wallace Evans at Holywell High School in Clwyd. A report on this is given in Annex 1.

7 Acknowledgements

CPAT wishes to thank Mr N. Woodward, Mr P. Rush, Mr E. Hamilton and Mr J. Maudsley of Wallace Evans for their assistance during the course of this watching brief.

ANNEX 1

Site of proposed erection of two 2m-high Ventilation stacks to Vent Storm Tanks, Holywell High School, Strand Walk, Holywell, Clwyd.

1 Introduction

1.1 The site of the above works at Strand Walk, Holywell was immediately to the east of what is thought to be the line of the Dark Age linear earthwork known as Wat's Dyke. For much of its length this dyke has been scheduled as a monument of national importance and the closest section of scheduled dyke (SAM F79), centred at SJ 1914 7696, is approximately 500m to the north of the site.

1.2 On November 4th 1992, a Planning Application for the erection of two ventilation stacks to vent storm tanks was submitted by Dwr Cymru/Welsh Water to Delyn Borough Council (Application No 0798/92). Permission was subsequently granted on December 17th 1992.

1.3 In accordance with a condition imposed on the Planning Permission, the site was visited on May 11th 1993 by a member of the field staff team of CPAT to record any archaeological deposits that might be revealed during the course of the works.

2 Observations (Fig 6)

2.1 The area to be excavated for the construction of the ventilation stacks was located approximately 0.80m to the east of the boundary hedge which itself was on an earth bank 0.90m high.

2.2 A rectangular area approximately 2.0 x 2.5m and 1.70m deep was excavated mechanically into the base of the hedge bank. Much of the excavated material was a redeposited brown humic soil containing fragments of plastic and modern pottery sherds and within which no structural tip-lines or other features were observed. Apparently undisturbed material consisting of a relatively stone-free buff to light brown clay within which were isolated grey patches of clay was, however, exposed at the western end of the excavated area. This extended for a distance of 0.5m to the east of the limit of excavation at its base. Again, after manual cleaning, no features were observed within it which could be interpreted as tip-lines or other structural features relating to an earthwork. At the base of the excavated area, there was no evidence of a ditch that might have been associated with the dyke.

2.3 A 1:20 annotated plan of the north section was drawn and a colour-slide and black and white photographic record was made of the site.

3 Conclusions

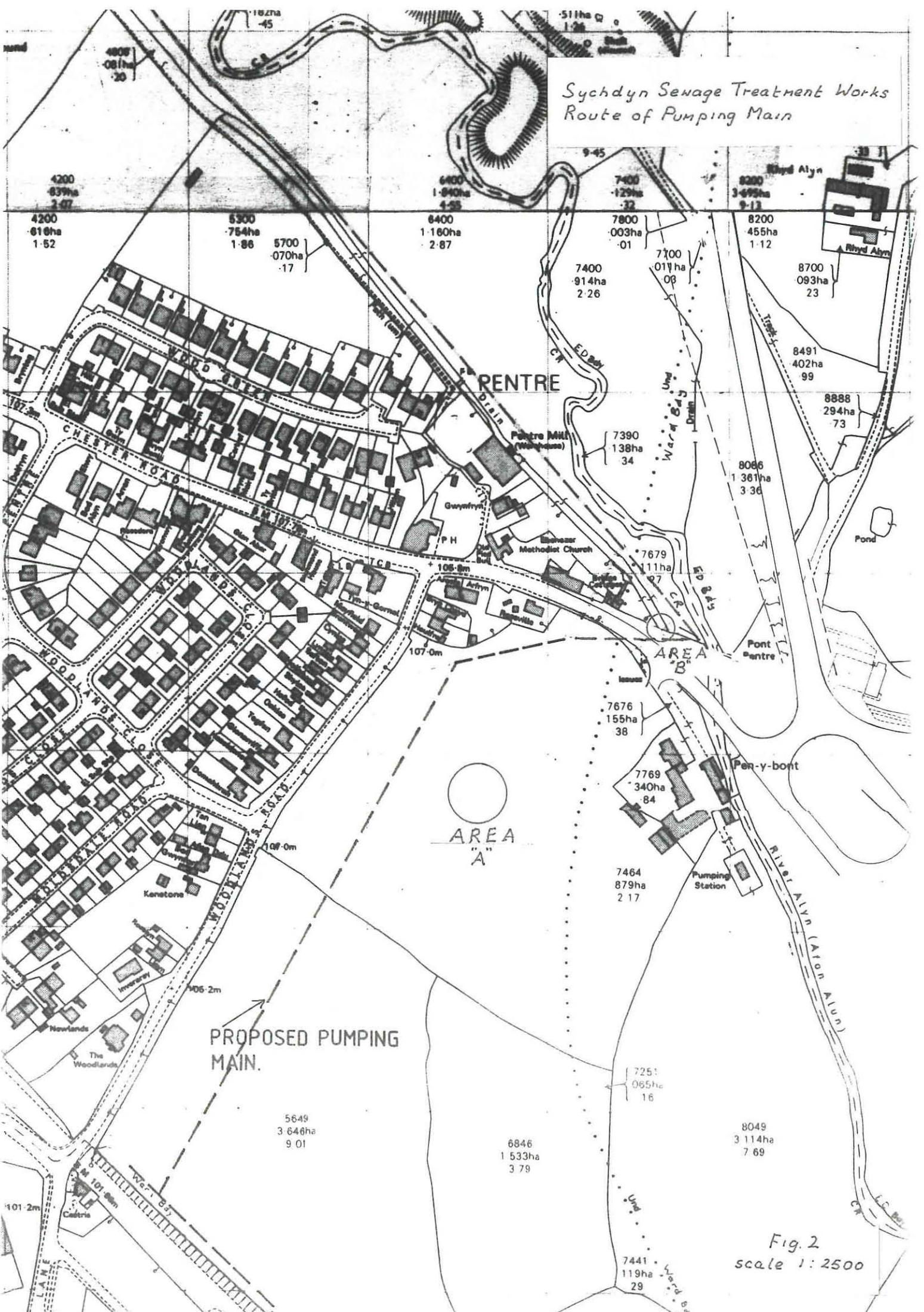
3.1 The excavated area had been largely disturbed and material had been redeposited there. Consequently, it was not possible to confirm the presence or absence of earthwork features relating to Wat's Dyke.

Sychdyn Sewage Treatment Works
Route of Pumping Main



Fig. 1
scale 1:25000

Sychdyn Sewage Treatment Works
Route of Pumping Main



PROPOSED PUMPING MAIN.

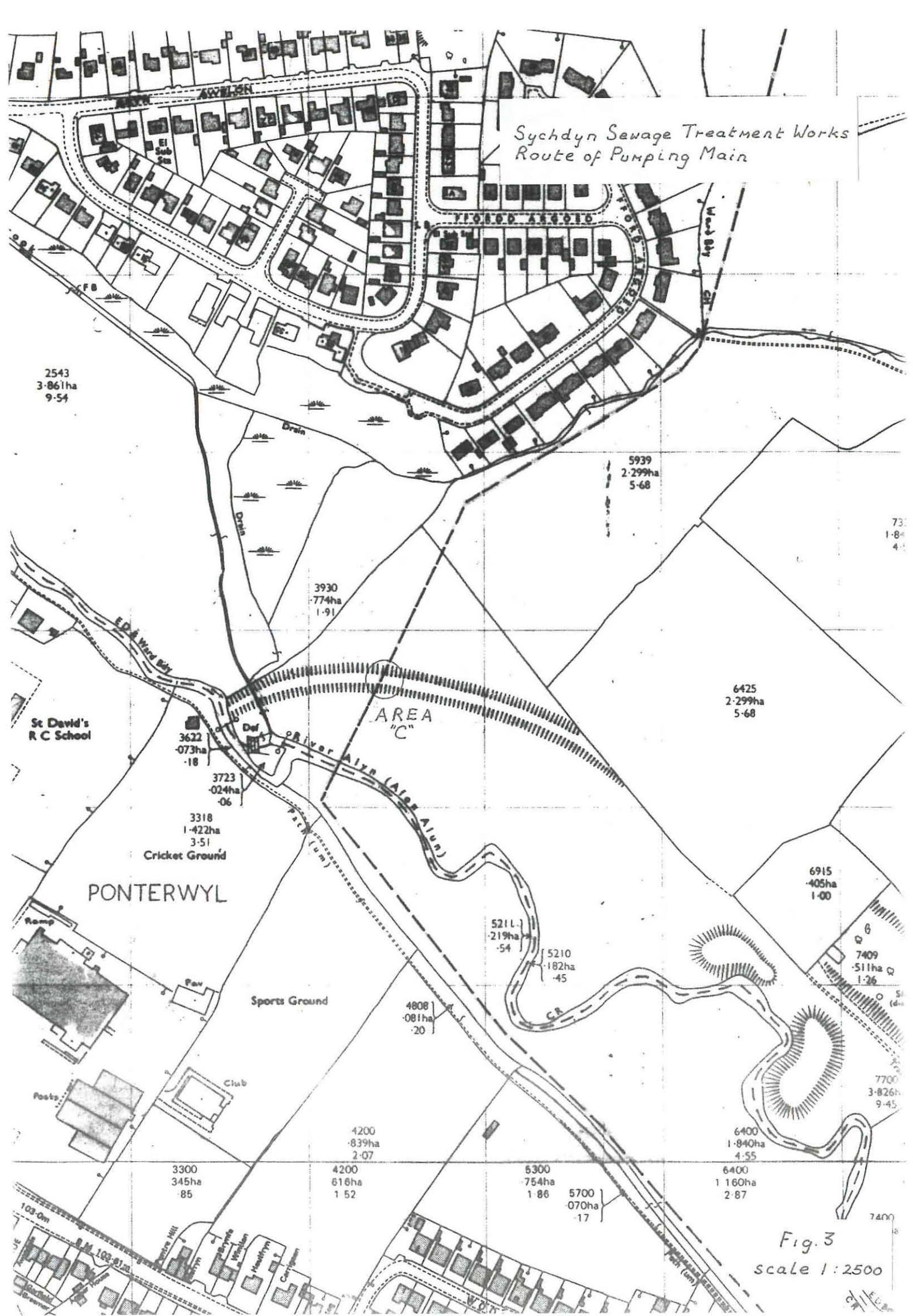
AREA
"A"

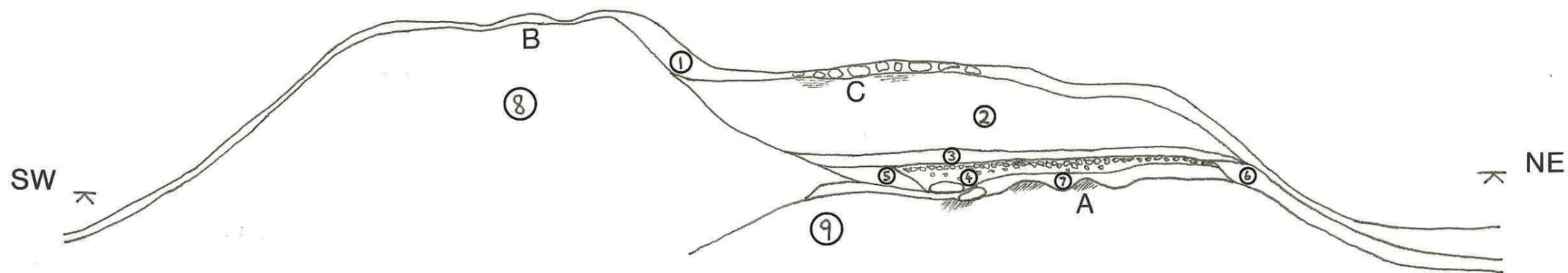
AREA
"B"

AREA
"C"

Fig. 2
scale 1:2500

Parcel ID	Area (ha)	Population
4200	839ha	2 07
4200	816ha	1 52
5300	754ha	1 86
5700	070ha	.17
6400	1 890ha	4 95
6400	1 160ha	2 87
7400	1 29ha	.32
7400	003ha	.01
7400	914ha	2 26
7700	011ha	.08
7390	138ha	.34
7679	111ha	.97
7676	155ha	.38
7769	340ha	.84
7464	879ha	2 17
7251	065ha	.16
7441	119ha	.29
8200	3 495ha	9 13
8200	455ha	1 12
8700	093ha	.23
8491	402ha	.99
8888	294ha	.73
8066	1 361ha	3 36
8049	3 114ha	7 69
5649	3 646ha	9 01
6846	1 533ha	3 79





- CONTEXT ① Dark brown top soil with stone restricted to position of tram-line C.
- " ② Compact dark brown/black coal waste and slag.
- ≡ Material has 'platy' appearance due to compaction by tram-line.
- " ③ Reddish brick waste with some coal included.
- " ④ Very compact layer of stone in a grey-brown clay matrix.
- " ⑤ Bricks and brick fragments (some mortared) with some stone included.
- " ⑥ Grey-brown clayey loam.
- " ⑦ Reddish brick waste with occasional large stones.
- " ⑧ Yellow-brown clayey loam containing rounded stones (< 0.2m in size) and occasional brick fragments.
- " ⑨ Large shaly stone in a grey clay matrix with some coal included.
- /// Concentrations of coal within ⑨
- A }
 B } Tram-Lines
 C }

Fig. 5
 Sectional Drawing of
 TramLines A and B
 Scale 1:50

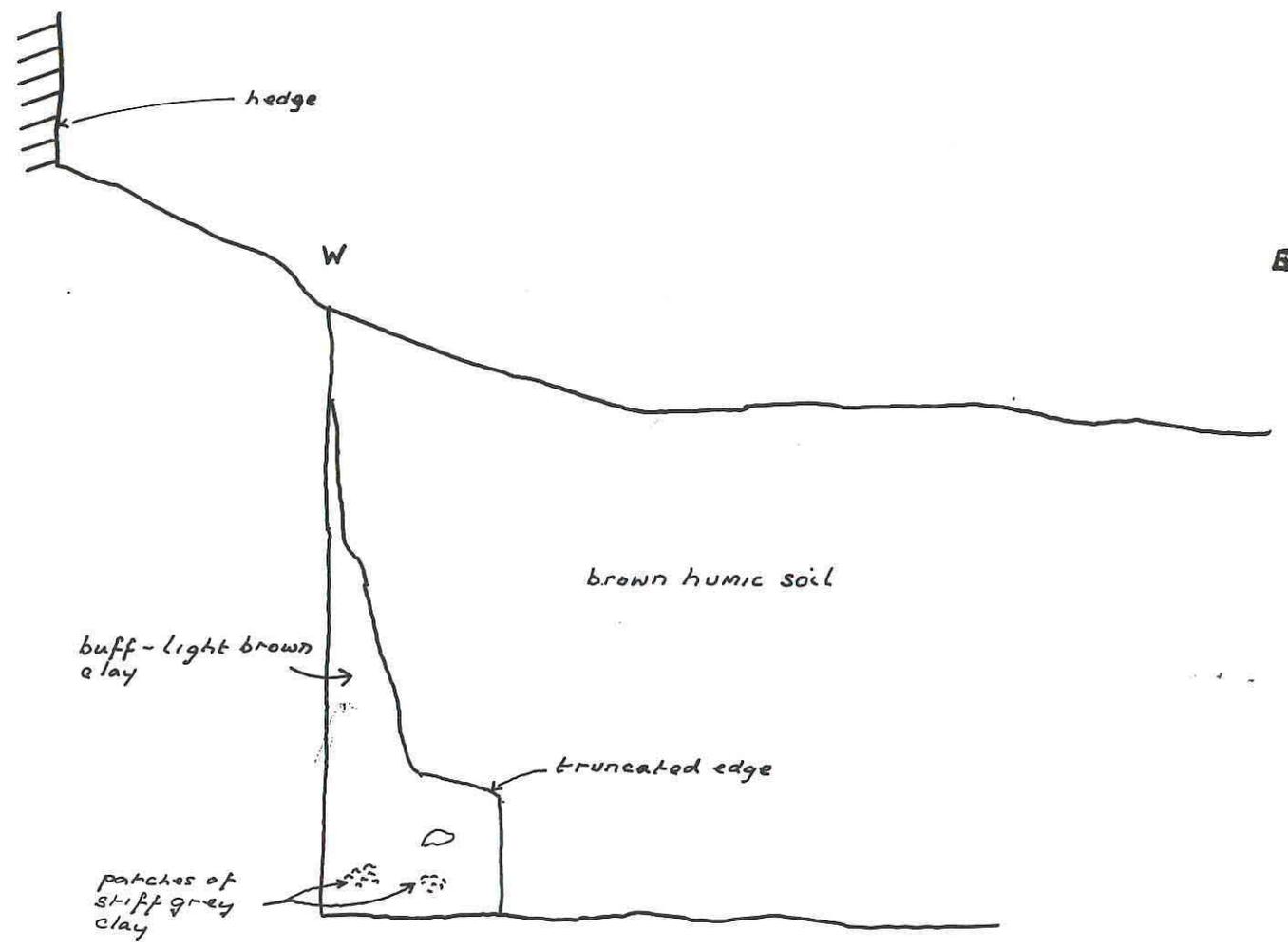


Fig. 6
 Holywell High School, Strand Walk
 Sectional drawing
 on Line of Wat's Dyke
 scale 1:20