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INDEX DATA	RPS INFORMATION
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Road Number	Date June 1990
Contractor Avon CC	
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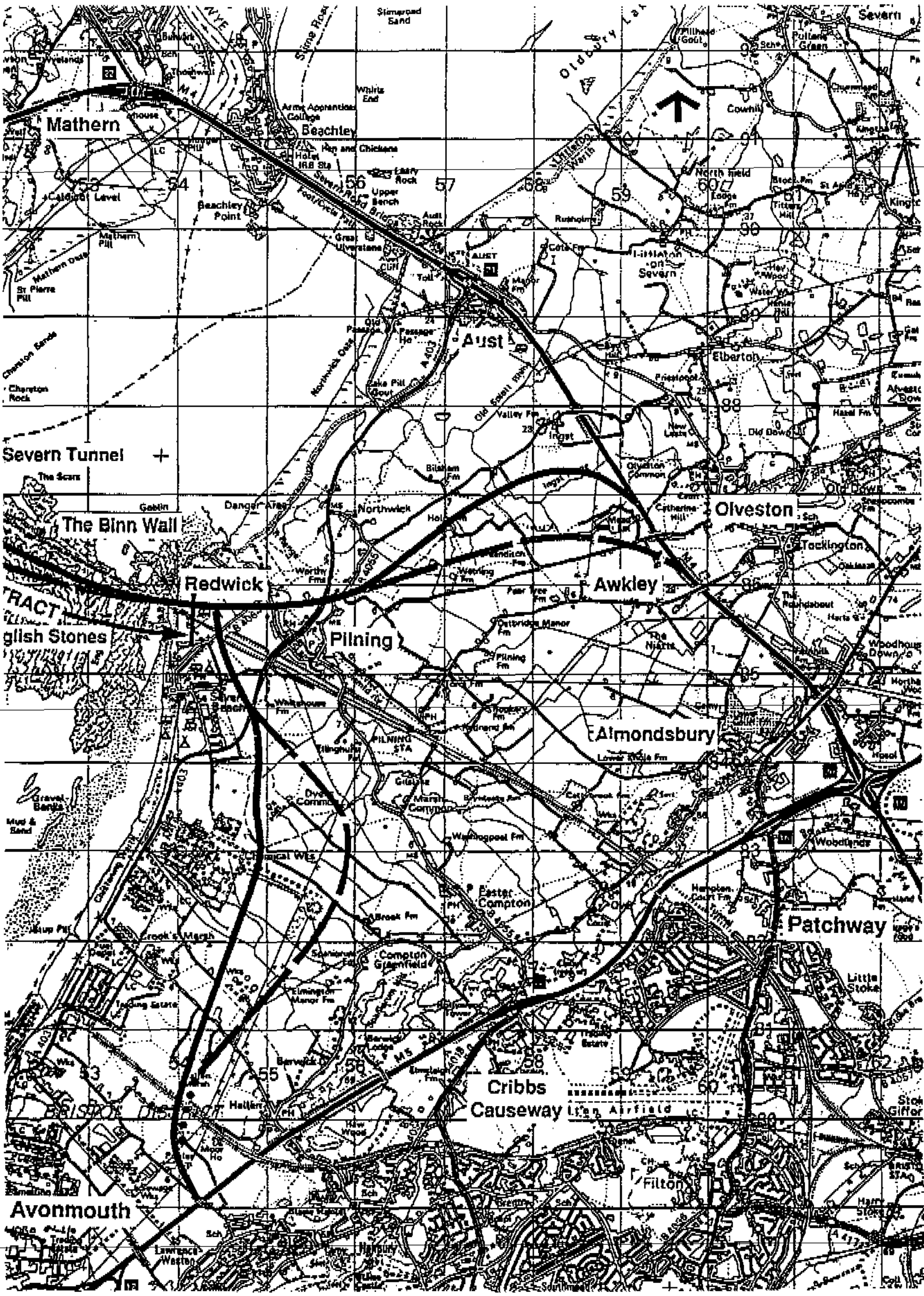
Single sided ✓ Double sided A3 0 Colour 0	



THE ARCHAEOLOGY OF THE SECOND SEVERN CROSSING

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THE ARCHAEOLOGY OF THE SECOND SEVERN CROSSING

Observation of geotechnical trial pits on the routes of the eastern approach roads to the proposed second crossing of the river Severn

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2 INTRODUCTION

2.1 This project was undertaken by the writer during the months of May and June 1990. It forms the second part of stage 1 of the investigation of the archaeology of the approach roads to the eastern end of the second Severn crossing bridge.

2.2 The aim of the project was to establish the presence or otherwise of archaeological deposits by observation and recording of the geotechnical investigations in an area where the current landuse restricts the available information concerning premedieval activity.

2.3 It should be seen as an addition to, and enhancement of, the information in Porter 1990, which made use of the available observable evidence from air photographs, data from the county Sites and Monuments Record and documentary sources.

2.4 The site-specific evaluations resulting from the recommendations in this study (sections 6 and 7 below), and those made by Porter (1990, section 11) will enable a programme (Porter 1990, paragraph 9.1) for appropriate recording, analysis and reporting of the archaeology and palaeoenvironment of the route of the second Severn crossing approach roads to be drawn up and undertaken before (stage iii) and during the early stages (stage iv) of road construction.

2.5 Geotechnical investigation of the proposed approach routes to the second Severn crossing bridge were undertaken by Soil Mechanics Ltd, for the Second Severn Crossing Group.

2.6 Trial pits were cut during this study to observe and sample the drift geology along the routes, and at sites of service constructions and bridges for the realignment of existing carriageways.

2.7 The pits were cut with a Fiat Hitachi FH130 tracked mechanical digger, and sampled by hand. Each pit was 3.5 by 1.0m, and up to 4.0m . The brief for the study indicated that the pits should be dug to 3.5m, or until solid geology was reached, whichever was the less, but in practice it was necessary in many cases to sample deeper layers. California Bearing Ratio tests were also carried out in approximately half the locations. On completion of recording, the pits were immediately refilled.

2.8 Archaeological features and finds were recorded in 56 of the 106 pits observed, the large majority of these being exposures of the buried peats.

2.9 In addition, four sites within the road corridor but not sampled by pitting were also recorded.

2.10 Records made during the course of this study and other documents relating it have been deposited in the Avon County Sites and Monuments Record. All finds will eventually be deposited in Bristol City Museum and Art Gallery.

3 ACKNOWLEDGEMENTS

3.1 Thanks are due to Aiden Davy and Audrey Caulder, of W S Atkins Consultants Ltd, and Alan Britton of the Department of Transport for their support of this project, to my colleagues Jan Roberts, Deborah Porter, Vanessa Straker and Richard MacDonnell for discussion of the archaeological results and implications of this study, and to Dave Bichan and Paul Anderson, the Trial Pit Crew.

4 SITE OBSERVATIONS

4.1 In the site observations detailed below, the first line of each description lists the number of the trial pit (eg 4431), followed by the number assigned to the site in the Avon County Sites and Monuments Record where applicable (eg ASMR 6389), the National Grid Reference of the trench, the height of the ground level of the trench site above Ordnance Datum (eg 5.8m AOD), and the OS land parcel number of the land on which the pit was dug.

4.2 All dimensions given are, unless otherwise stated, the depth below 1990 ground surface.

4.3 Sites recorded during the fieldwork for this project, but not subject to trial pitting, are listed in the approximate geographical order in the survey in which they occur.

4.4 4446 (ASMR 6390) ST54298041 6.4m AOD OS 3048
The trial pit was dug into the side of the rhyne at the southwestern end of the field. At 0.90m-1.20m, below a layer of alluvial clay, a thick black layer contained charcoal, quantities of animal bones, sherds of late Iron Age pottery (including the upright rim of a small jar) and many stones. The layer (not seen by the writer) was sampled by the trial pit team, and the levelled sample passed to the writer. The layer was observed to continue beyond the confines of the trial pit in all directions.

4.5 4436 ST55108152 6.3m AOD OS 2052
At 3.60-3.70m, a very blocky, unfibrous dark brown peat layer occurred, with clearly preserved Phragmites rhizomes and other macrofossils.

4.6 4435 ST55208171 5.9m AOD OS 1371
A thin but recognisable peat layer c0.05m thick, was recorded at 2.00m, with some preserved plant material. A lower peat layer lay at 3.30m-3.50m, with interleaved layers of fine grey alluvium.

4.7 4432 ST55408187 6.1m AOD OS 3774
This pit revealed an upper peat (clearly the same horizon as a carbonaceous layer recorded further southwest towards Avonmouth) at 1.70-1.80m . This layer was black, soft and did not seem well-preserved. A lower peat layer, at 3.20-3.50m was dryish and blocky, but contained well-preserved Phragmites macrofossils.

4.8 4431 ST55578207 5.8m AOD OS 5213
This pit revealed a thin layer of dryish peat interleaved with layers of grey alluvial deposits, at 1.60-1.65m. This was almost an organic clay rather than

a peat. No lower peat band, as seen in previous trial pits, was recorded.

4.9 ASMR 6450 ST55608212
The nearby site of a sheepwash, recorded in Porter 1990, lies on top of earlier walls, and mid-19th century pottery and glass occur in the sides of the adjacent ditch.

4.10 4430 ST55788226 5.9m AOD OS 7736
At 1.60-1.65m, a dark grey clay with organic material and many watersnail shells occurred, presumably replacing the upper peat/carbonaceous layer found in previous pits. A lower peat occurred at 3.35-3.75m. Its upper surface was loose and friable, with little identifiable plant material, but in the lower levels, the usual Phragmites peat was evident.

4.11 4429 ST55798224 5.8m AOD OS 8543
This pit revealed no trace of the upper peat layer recorded in previous pits. At 2.40-2.50m, a peat band occurred, much more fibrous and less blocky than in previous exposures. This was the only peat band exposed in the total depth (3.50m) of the pit.

4.12 4428 ST55858250 5.8m AOD OS 0042
This trial pit revealed a 0.05m thick dark layer of alluvium at 1.40m, with grey alluvial clay containing lumps of peat. At 2.35m, a peat band c0.1m thick occurred, having little visible macrofossil evidence, and very dry.

4.13 4427 ST55868277 5.7m AOD OS 8588
This trial pit was dug alongside the parish boundary ditch at the southeastern side of the field. The ditch is much broader than others in the vicinity, possibly a reflection of its status as a boundary ditch. A band of peaty organic clay was recorded at 1.65-1.70m, with a further lower peat at 2.45-2.60m. The lower layer was very fibrous and dry, without well-preserved macrofossils.

4.14 4426 ST55928287 5.7m AOD OS 8588
This pit was dug alongside the same ditch as pit 4427. A clayey peat layer occurred at 2.10-2.15m. Some macrofossils were preserved in this layer. Below this, a dark grey organic clay layer, smelling very strongly of hydrogen sulphide, lay above a lower peat between 2.55-2.80m. This lower peat was the typical wet Phragmites peat seen elsewhere with preserved macrofossils.

4.15 4425 ST56058284 5.7m AOD OS 0080
There was no trace of a dark band in the higher parts of this section, and a lower peat was recorded at 3.90-

4.00m. It was thin, with interleaved lenses of grey alluvium, and without the macrofossils of some of the other peat exposures.

4.16 4424 ST55888299 5.6m AOD OS 8700
A peat band occurred at 2.20-2.25m. This contained lenses of grey clay, and was a black to dark brown colour, with a very strong smell of hydrogen sulphide. It contained some macrofossils. A lower peat band occurred at 2.65-2.75m. This was firm, light brown and wet, and contained abundant macrofossils, especially of Phragmites.

4.17 4423 ST55778305 5.6m AOD OS 8700
At 2.20m, a 0.05m thick peat, dark brown and fibrous in composition, occurred. Below this, at 3.00-3.15m, a laminated and fairly light brown wet peat occurred, with abundant Phragmites and other macrofossils, and roots penetrating the alluvial clay below this to the limits of the pit at 3.50m.

4.18 4422 ST55908314 5.5m AOD OS 8700
At 1.85m, a 0.05m thick band of peat occurred, lying over a slimy dark clay and the lower peat band at 2.60-2.70m. This was a dryish and friable peat, without many macrofossils. A third organic clay layer, with small fragments of organic matter (possibly derived from peat) occurred at 3.80-3.90m, with a very strong hydrogen sulphide smell.

4.19 4421 ST55838328 5.5m AOD OS 7127
Three peat bands were revealed in this pit, at depths of 2.35-2.40m, 2.65-2.80m, and at 3.90-4.00m, the lowest of which lay on a sand deposit. This third band was very clayey.

4.20 4420 ST55818343 5.4m AOD OS 0027
At 2.00m, a mottled clayey peat, c0.05m thick, lay on a grey alluvial layer also approximately 0.05m thick, over a true brown and fibrous peat at 2.10-2.15m. Under this was a layer of grey alluvium, then a further peat at 2.40-2.50m.

4.21 4419 ST55708356 5.6m AOD OS 6951
A zone of peats occurred in this pit, from 1.90m to 2.35m. The upper layer consisted of a band of dark brown peat, with a thin skin of grey alluvium between it and a lighter, more organic peat. At 2.10, a layer of dark grey organic clay with root macrofossils occurred, overlying at 2.20m the lower layer of dark brown peat.

4.23 4418 ST55638373 5.7m AOD OS 6666
This pit revealed a thin topsoil over grey alluvial deposits, with an organic layer at c1.90-2.30m. No

details were recorded.

4.24 4417 ST55728388 5.9m AOD OS 6700
A thin organic clay with abundant watersnail shells occurred at 2.20m. Below 2.30m, the organic clay became a peat with well-preserved macrofossils, and continued down to c2.45m.

4.25 4416 ST55458365 5.5m AOD OS 4664
The section in this pit revealed a peaty organic layer at 2.00-2.25m. No further details were recorded.

4.26 4415 ST55428390 5.8m AOD OS 5700
The section revealed a peat layer at 2.00-2.25m. No further details were recorded.

4.27 4414 ST55288415 5.8m AOD OS 2017
An organic clay layer occurred at 2.15-2.20m, with a further dark clay layer, organic and with small fragments of peat, at 2.20-2.40m.

4.28 4413 ST55108428 5.7m AOD OS 9816
The pit revealed basically the same section as in 4414, except that the peat layer had completely given way to a dark clay with some slight organic content, at c2.30-2.40m.

4.29 ~~ASMR 6451 ST550846~~
Close to the line of the road, and to the eastern side of Whitehouse Farm, the 1:2500 Ordnance Survey plan (1966) shows a series of ponds. These enclose two small rectangular areas to the west of the island of higher ground on which Whitehouse farm was built, and they may have originally functioned as fishponds or a moat (more probably, the latter). Whitehouse Farm itself is a ASMR 6412 grade II listed 17th century building (DoE 1984), and examination of various soil disturbances around the house due to building work revealed a small quantity of late 17th century and 18th century pottery (mostly yellow trailed slipwares and sgraffito-decorated Somerset earthenwares). These were small weathered sherds and were not kept.

4.30 4411 ST54688433 5.6m AOD OS 6737
At 2.30-2.45m, this section revealed a dark brown peat, fairly friable and brown, with little visible macrofossil evidence.

4.31 4410 ST54978498 5.9m AOD OS 9700
A thin dark black fibrous layer revealed at 1.9-1.95m ~~appeared to be a heavily compressed peat, with some~~ small amount of Phragmites macrofossils recognisable.

4.32 4409 ST54768476 5.7m AOD OS 7871
At 2.40m, a black, blocky peat layer, with few visible

macrofossils extended down to 2.60m.

4.33 4408 ST54708490 5.9m AOD OS 6981
At 1.90m, a thin (0.03m) layer of organic clay, with no recognisable peat, occurred. A 0.05m thick layer of very dessicated peat at 2.40m contained no visible macrofossils.

4.34 4407 ST54588504 6.0m AOD OS 5500
At 2.40, the top of a peat laminated with grey alluvium lay in a band 0.05m thick over very hard black and compressed peat down to 2.60m.

4.35 4406 ST54548522 6.1m AOD OS 4624
At 2.45m, this trial pit revealed a dark and solid peat with fragments of alder and ?birch wood, with patches of Sphagnum peats on its upper surface, and the usual Phragmites macrofossils below. The base of this peat was at c2.60m.

4.36 4405 ST54438538 6.2m AOD OS 4132
This pit was not observed, but the records from Soil Mechanics indicate the existence of a brown fibrous peat between 2.90 and 3.55m depth.

4.37 4404 ST54308544 6.3m AOD OS 3343
At 3.05m, a peat layer was clearly divided into zones with Sphagnum above and Phragmites below. This layer is c0.25m thick.

4.38 4403 ST54318537 6.6m AOD OS 1945
This trial pit was dug very close to a modern road, and was flooded in its later stages by very strong inflows of water, in complete contrast to the rest of the area around it, where the holes were exceptionally dry. From 0.30m to c3.00m were orange mottled, slightly silty alluvial deposits, from which a single tooth of Bos sp. was recovered. Between 3.00m and 3.30m, a peat band occurred. This band was black, hard and very dry, except for fissures in the peat through which an active flow of water was occurring.

4.39 4402 ST54448557 6.4m AOD OS 4058
At 2.80m, a light brown fibrous Sphagnum peat lay over a thicker and darker Phragmites peat, with preserved leaves and other macrofossils.

4.40 4401 ST54628572 6.4m AOD OS 6777
A very dry peat occurred at 3.20-3.50m, with fragments of ?birch wood. It was compressed and laminar in the break.

4.41 3401 ST54258578 6.8m AOD OS 2777
This trial pit revealed at 0.10- 1.60m a dessicated grey alluvial clay, including a single long bone of

immature Bos sp., and at c2.60-2.80m a clayey dark brown peat, with clay lenses and well-preserved macrofossils.

4.42 3402 ST54578578 6.5m AOD OS 6777 ASMR 6388

The complete stratigraphy of this site is listed below, due to the finding of the RB pottery in the gravel spread revealed

Existing ground level-0.2 Rooty topsoil
0.2- 0.60m Dessicated grey alluvial clay
0.60-1.00m Pinkish-grey alluvial clay, slightly damper and stiffer
1.00-2.00m Grey clay with sharp sand and gravel of rounded pebbles up to 0.1m long. A bone of ?Bos sp and four joining RB sherds of a 4th century North Wiltshire bowl occurred in this layer
2.00-3.20m Stiff, sticky pinkish-grey alluvial clay
3.20-3.50m Grey silty and sticky alluvial clay.

The gravel is an unusual feature in this area, although there are 'Chestles' field names close by (Porter 1990). In this case, the existence of RB pottery within the layer (see sketch in the archive in the County Sites and Monuments Record) may well imply that the gravel spread was artificially deposited.

4.43 3403 ST54738583 6.5m AOD OS 6777

At c0.60-1.60 was a slightly laminated grey clay, with watersnail shells. Small fragments of animal bone, probably of Bos sp., occurred in this layer, while a fine, thin peaty layer, with no visible macrofossils, at c3.45-3.47m depth may have been the edge of a peat layer.

4.44 3404 ST54758575 6.5m AOD OS 6777

This section revealed, at 2.75-2.85m a brown to dark brown peat, wet and well-preserved, with fragments of wood (mostly birch and/or alder).

4.45 3405 ST54928574 6.7m AOD OS 9270

In the thin rooty topsoil was a sherd of the base of an unglazed medieval jug, in a soft orange-red fabric. This was probably late medieval (15th century?), and in view of the lack of other evidence nearby, almost certainly a stray find. A thin black peaty layer, with no visible macrofossils, occurred at 2.60m depth.

4.46 ASMR 6453 ST54908592 (centre)

Opposite trial pit 3407 and between the Zion chapel and Myrtle Cottage is a low mound c60.0m across and c1.0m high. The field in which it stands is called 'Chestles' (Porter 1990) which may indicate that this is a mound of natural gravel, or possibly a stone structure of early date.

4.47 3407 ST54948596 6.8m AOD OS 9465
In view of the finds in this section, the entire stratigraphy of the pit is given below.

Existing ground level -0.40	Black powdery soil, with dumped brick, stone and asbestos fragments.
0.40-1.20m	Pinkish-brown soft clay, with small amounts of gravel
1.20-1.40m	Gravel layer, with matrix of reddish clay. This layer included the remains of two clay pipe bowls (one stamped) of 1720-50.
1.40-1.80m	Reddish, slightly softer clay
1.80-2.30m	Laminated , silty pinkish-grey alluvial clay
2.30-2.35m	Dark blue clay layer, with a thin black organic peaty layer below
2.35-3.00m	Laminated slightly sandy grey alluvial clay
3.00m-	Greenish-grey alluvial clay, fairly stiff.

The layer of gravel containing claypipes could conceivably be the remains of a field drain or similar, although the fact that the pipes were found on the surface of the gravel may suggest that they were deposited during gravel digging or normal cultivation. If the mound across the road is a gravel outcrop, then this layer may be the natural outwash from it.

4.48 3408 ST55058562 6.8m AOD Redwick Road
The only archaeological layer revealed in this pit was at 2.35-2.37m, where a very thin layer of peat-like material, similar to the carbonaceous layer seen in the trial pits at the western end of the study area close to Avonmouth, was recorded.

4.49 ASMR 6452 ST55028562
Close to the west of trial pit 3408, an old farmhouse has recently been demolished. According to the farmer, this was a Georgian house, but had to be demolished due to settling. The walls still exist on the western edge of the farmyard, and as a foundation at the entrance to a modern farm building.

4.50 3409 ST55188581 5.6m AOD OS 1982
At 0.20-1.40m was a silty dessicated pinkish-grey alluvial clay, fairly laminar in structure. A few bones and a fragment of medieval pottery were found at the top of a silty desscicated pinkish-grey alluvial clay at c0.20-1.40m. These were almost certainly the result of casual losses, probably due to the use of household debris in medieval manuring operations.

4.51 3410 ST55228577 7.2m AOD OS 1700
The stratigraphy of this trial pit is of great

importance, as it clearly indicates that up to two metres of sediment may have accumulated since the 18th century in areas where continuous cleaning of drainage ditches has occurred. The adjacent stream, The Pill, is today up to 4.00m lower than the surrounding land in places, and from its name has clearly been an important landscape feature since the medieval period. It was almost certainly the Pill that gave its name to Pilning (a name recorded from 1529-Smith 1964) and Pillhead.

Existing ground level-0.20m Rooty topsoil and turf, brownish-grey and clayey

0.2-2.50m Brown clay (presumably the result of continuous dredging of the adjacent Pill). Fragments of brick and yellow limestone occur throughout, and two clay pipes of 1720-50 were found at c 2.00m depth

2.50-3.60m Grey alluvial clay, soft and mottled with black patches of organic material with visible root remains.

4.52 3420 ST56418585 7.0m AOD OS 4490

At 1.80-1.83m, a black organic layer, over a thin layer of dark blue clay, may be the edge of a peat layer.

4.53 3421 ST56548607 6.6m AOD OS 4914 (AS-R 6291)

The trial pit stratigraphy is given in full below.

Existing ground level-0.30m Rooty clay topsoil

0.30-1.00m Brownish-grey alluvial clay. Cut into this layer was one side of a ditch feature, c0.75m deep. Although its southwestern side was clear, the opposite was only just traceable, and was presumably backfilled by the clay deposit from which it had been cut. The clear bank was visible due to a dumped deposit of a soft grey clayey material, with frequent flecks of charcoal, bone, burnt bone and Roman pottery. The fragments dated on site include a sherd of a 4th century bowl, fragments of other Roman red wares, and two fragments of earlier, late Iron Age pottery. This feature is presumably a ditch of Romano-British date.

1.00-2.60m Brownish-grey silty alluvial clay

2.60-2.63m Dark grey organic clay with flecks of brown material, prob peat

2.63m- Grey alluvial clay.

4.54 3422 ST56568601 6.9m AOD OS 5900

A grey mottled and dessicated clay, extended from immediately below the topsoil to 2.40m depth with long bones of Bos at c0.40m. At this depth was a very thin black organic layer, not quite thick enough to be a

peat.

4.55 3424 ST56938619 7.0m AOD OS 8919
In this section, at 3.10-3.50m peat layers ocurred, with Sphagnum layers at the top, giving way to blocky Phragmites peat in the lower edge.

4.56 3425 ST57118631 6.9m AOD OS 2233
This trench contains a wide band of organic layers at 3.25-3.60m. The layers were

3.15-3.25m	Dark, blocky peat band, with some recognisable Phragmites macrofossils
3.25-3.40m	Dark blue-grey rooty clay, foul-smelling and organic
3.40-3.50m	Blue-grey alluvial clay
3.50-3.60m	Layer of interleaved peat and grey alluvial clay.

4.57 3426 ST57328633 6.9m AOD OS 2233
Peat layers were recorded in the lowest part of this trial pit. Their stratigraphy was as follows;

3.20-3.35m	Dark blue-grey clay layer, organic and smelly
3.35-3.40m	Dark brown peat layer, with lenses of grey-blue clay at its upper and lower surfaces
3.40-3.60m	Layer of thick blue-grey organic clay
3.60m-	Peat layer, with a light brown Sphagnum peat at its surface, and developing into a blocky Phragmites peat lower down. The base of this layer was not reached at 3.85m.

4.58 3427 ST57528643 6.6m AOD OS 5141
A pond was recorded at this Grid Reference on the 1973 Ordnance Survey 1:2500 plan, and the soft brown clay fill of this feature was recorded in the top 0.70m of the section.

4.59 3429 ST57958632 6.6m AOD OS 8543
At 3.70-3.90m was a peat layer, with dry crumbly Sphagnum peats giving way to a blocky wet Phragmites peat with well-preserved leaf and rhizome macrofossils.

4.60 3431 ST58028652 6.6m AOD OS 0051
At 0.10-0.80m, a dessicated brownish-grey clay layer was cut into by a grey clay-filled feature in the eastern corner of the trench. This was a recently infilled field ditch, clearly depicted on the 1969 Ordnance Survey 1:2500 plan.

4.61 3433 ST58548654 6.6m AOD OS 5045
The top 1.20m of this section are brown clays, probably the remains of upcast from the ditch to the north, the Olveston Mill Rhyne, a drainage ditch running from the

outlet of the mill-race at Olveston.

4.62 3439 ST59298638 6.8m AOD OS 254

Peat layers in this trial pit lay below 3.00m, where the stratigraphy was:

3.10-3.15m	Organic grey clay with fragments of preserved wood
3.15-3.60m	Light grey silt
3.60-4.40m	Dark brown peat, with some clay bands. This had large chunks of preserved wood, some recognisable as branches from ?birch trees. The thickness of the band of peat at this point near the rising ground of the mudstone hills is typical of lag sites.

4.63 3449 ST60158607 10.2m AOD OS 0001

One utilised flint flake was found in the topsoil of this trial pit.

4.64 6417 ST61528441 >16m AOD OS 6237

A thin dark crumbly topsoil (0.10m) contained modern and at least 1 sherd of Roman pottery, and overlay alternate layers of thinly bedded oolitic limestone and clay.

5 DISCUSSION

5.1 As Figure 1 shows, the peats exposed in the trial pitting study were largely from a single bed present over a large area of the alluvial levels. This peat varied slightly in depth, but lies between 1.60m and 3.50m below the surface (between 2.50m and 4.50m OD), although individual exposures were seldom more than 0.30m thick.

5.2 The figure also shows that the layer has a number of subcomponents, notably an upper thin (c0.10-0.20m thick) layer recorded between trial pits 4436 and 4419, and a lower and thicker (0.20-0.30m) between pits 4429 and 4401. A smaller upper layer also occurred in pits 4411 to 4408.

5.3 The peats in the trial pits 3401 - 3449 were not so clearly stratified, although the layer recorded in pits 3423 to 3429 was reasonably well-defined.

5.4 Some of the pits revealed more than one band of peat, usually separated by up to 1m of grey alluvium, although in many cases this alluvium also had an organic component and preserved macrofossils.

5.5 The condition of the peat varied greatly over the study area. The exceptionally dry conditions of the two years before the study may mean that the conditions encountered were not typical, but in general, the peats were damp to wet, although some exposures were very dry, and no evidence of fibrous structure remained. In several cases, however, the peats contained clearly visible macrofossils, with Sphagnum and Phragmites remains clearly distinguishable, and beetle elytra recorded in some samples.

5.6 These peats clearly form a very important potential source of palaeoenvironmental evidence.

5.7 In addition, the finding of wood fragments in at least three of the peat exposures indicates that there may well be tree fragments of sufficient size to permit dendrochronological dating.

5.8 Figure 1 also reveals the varying depths of the alluvium above the peat layer. Islands of alluvium rising to above 6.00m were largely occupied by buildings.

5.9 Other aspects of the drift geology of archaeological interest were also recorded. In a number of pits, sand beds and silt deposits probably indicate palaeochannels of streams draining the immediately post-glacial landscape, while close to Redwick, gravel deposits were

recorded in two pits, both of which are described in section 4.

5.10 The alluvium revealed all appears to fall within the Wentlooge series (Allen 1987), and to correlate well with the drift geolgy revealed in similar studies elsewhere in the Severn basin.

5.11 Many of the trial pits from 3450 upwards and 6401 - 6417 did not reach the full depth of 3.50m, as solid geologies occurred close to the surface.

5.12 The Iron Age and Romano-British sites revealed in the trial pitting (see section 4 above) indicate settlement on the alluvial levels at those dates, with occupation, the digging of drainage features, and presumably agricultural use of the landscape. These sites have been subsequently covered by 0.80 to 0.90m of alluvium, with the present landscape being largely of medieval origin.

5.13 The earliest recorded placenames of the immediate area date from the mid-10th century. Redwick (955: **hreodwican** - 'the farm amongst the reeds'), Bilsham Farm (955: **billes hamme** - 'Bil's watermeadow') and Worthy Farm (1241: **la Wrthie** - 'the enclosed farm') are examples of the early names in the area (Smith 1964). They imply, as do other 10th and 11th century records, that a (sparsely) settled and farmed wet landscape was in existence by that time. This in turn implies that the post-Roman flooding episode(s) responsible for the deposition of the alluvium over the sites revealed in this study and at Crooks Marsh Farm (Everton 1981) and Hills Flats (Copeland 1981) was probably of relatively short duration in geological terms.

5.14 The depth of the alluvial overburden on the sites observed in the 1990 study is very similar to the Crooks Marsh Farm and Hills Flats sites (c0.80-0.90m), implying that the Roman landscape in the Severn estuary almost certainly lies at this level, as does the Roman landscape in the similar Lower Axe Valley in Somerset (Russett 1989).

5.15 This has very important implications for the monitoring and recording of major soil disturbance on the alluvial levels (see section 6).

5.16 It is clear that throughout the medieval and subsequent periods, major drainage works were necessary, with accompanying maintenance of waterways and rhynes. It is not clear if the maintained natural watercourses like the Pill at Pilning were of pre-Roman origin.

5.17 The quality and quantity of archaeological data recorded during this study once again confirms the value of archaeological observation on geotechnical and similar studies in advance of major development.

6 SITE SPECIFIC RECOMMENDATIONS

6.1 The recommendations below are in addition to those made in the previous study by Deborah Porter (Porter 1990), which study also covered the general recommendations for stage ii of the archaeological response to the construction of the Second Severn Crossing.

6.2 4446 (ASMR 6390) ST54298041.
It is recommended that trial excavation be undertaken to determine the extent, nature and dating of this occupation layer.

6.3 ASMR 6450 ST 55608212.
This site, in the event that it is to be threatened by road construction, should be subject to trial excavation to establish the existence and nature of any buildings pre-dating the Victorian agricultural building.

6.4 ASMR 6451 ST550846.
The earthworks at this site should be surveyed, and the possible moat subject to trial excavation to determine the nature and date of the construction.

6.5 3402 (ASMR 6388) ST54578578.
This site should be subject to trial excavation to determine the extent and nature of the occupation, and to investigate the gravel spread.

6.6 ASMR 6452 ST55028562.
The site of the reportedly Georgian farmhouse should be surveyed, and the standing walls recorded. The historical documents relating to the site should be examined, and in the event of the site being threatened by the road realignment, it should be subject to trial excavation to determine the nature and date of the occupation of the site, which may have predated the known buildings.

6.7 ASMR 6453 ST 54908592.
This earthwork should be surveyed, and in the event of its being threatened by road development or realignment, it should be subject to trial excavation to determine its nature and the occurrence of any early occupation on its surface.

6.8 3407 ST54948596.
This site should be subject to trial excavation to determine the nature of the gravel spread, and to determine the nature of the activity at the site.

6.9 3410 ST55228577.
This site should be subject to trial excavation to determine the nature, extent and dating of the course

of the Pill.

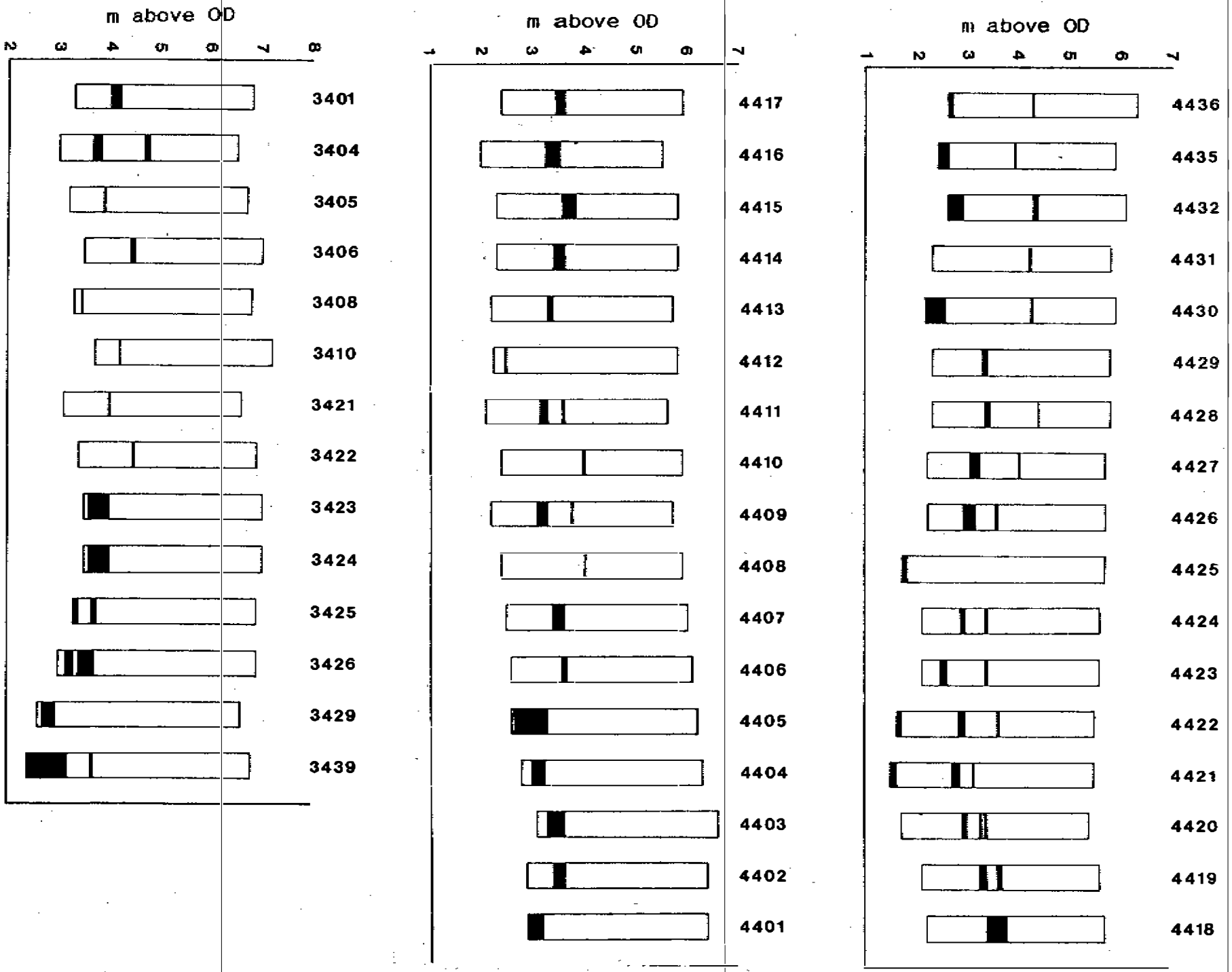
6.10 3421 (ASMR 6389) ST56548607.
This site should be subject to trial excavation to determine the nature, extent and date of the early occupation at the site.

7 THE PEAT DEPOSITS

7.1 As reported above, a widespread peat deposit, and part of a second, were recorded during the study.

7.2 In view of the potential importance of these peats for palaeoenvironmental studies, and for dating of events in the formation of the alluvium of the Severn valley, it is recommended that a sampling programme for the peat layers be devised, for environmental analysis (macrofossil, pollen, beetle and other environmental indicators), and that multiple samples also be obtained for radiocarbon dating.

7.3 Sites with the highest potential for these studies are pits 4432 and 4430 (the only two pits recorded where the lower peat band appears to have well-preserved macrofossil evidence); pits 4426, 4424, 4417, 4406 (which contained fragments of preserved wood), 4402, 3426, 3429, and 3439. All of these pits contained peats that retained moisture and had a fibrous consistency, with clearly visible macrofossils.



PEAT STRATIGRAPHY

8 LOCATION PLANS

8.1 All location plans are at a scale of 1:10,000, with the exception of the cover (at 1:50,000), and based on the appropriate OS plans. Numbers refer to the individual number of the trial pit (square symbols), or to entries on the Avon County Sites and Monuments Record (round symbols).

8.2 Filled symbols indicate sites with archaeological features or finds (including peat exposures), while empty symbols indicate no archaeological information was discovered.

9 BIBLIOGRAPHY

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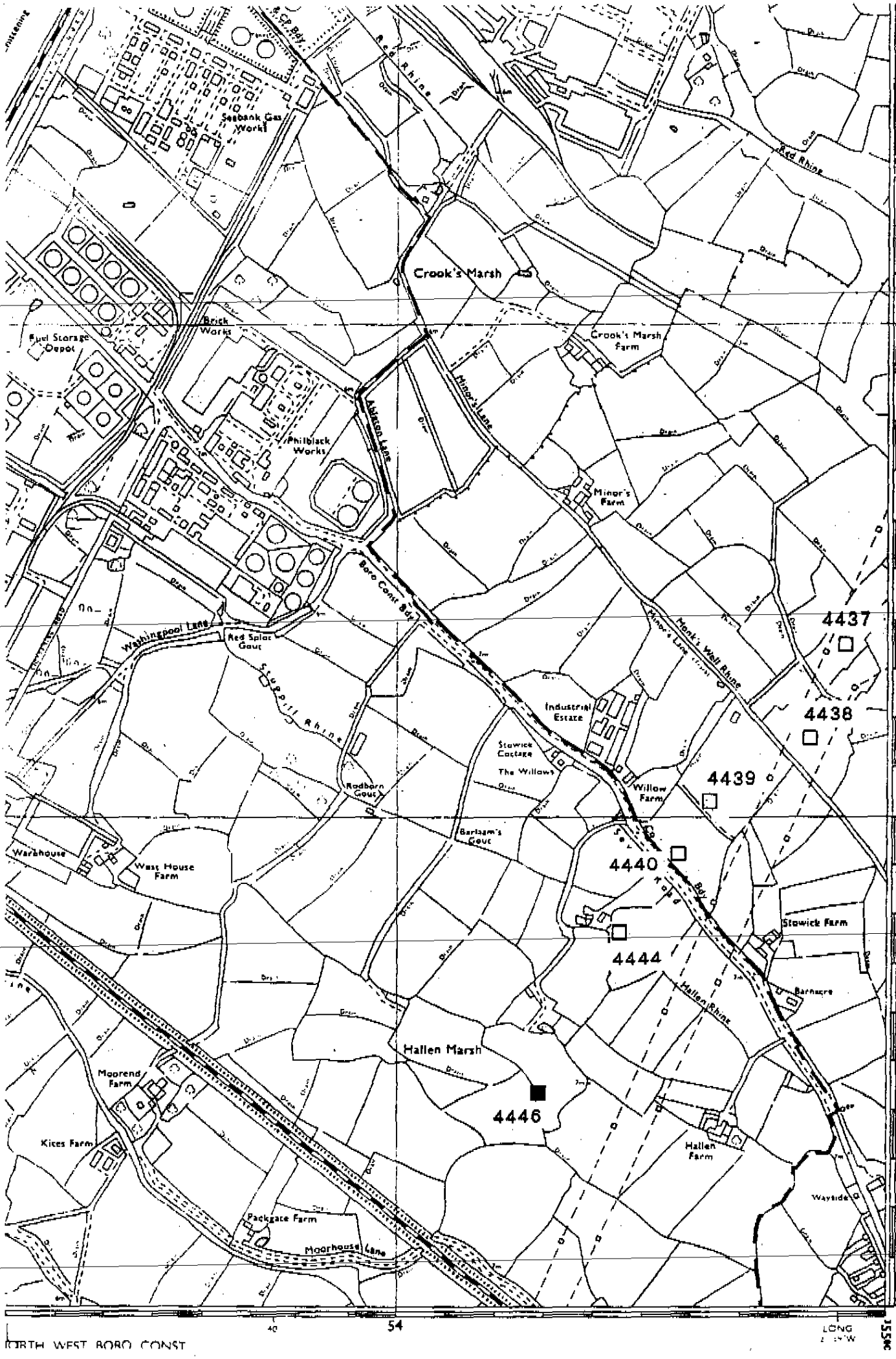
Smith 1964 — J Smith (ed) The Place-names of Gloucestershire London 1964

10 ERRATUM

10.1 Porter 1990 lists (paragraph 11.12) ASMR 3221 as a site of concern on the line of the approach roads to the second Severn crossing.

10.2 The reference should be to ASMR 5221 and read as below:

11.12 ASMR 5221 (ST538790C). A rectangular enclosure, aligned with ridge and furrow in the field to the north of Mere Bank Rhyne. This may be an agricultural or occupation enclosure. Evaluation by detailed field survey, geophysical survey, and trial trenching.


Seabank Gas Works
Red Rhine
Crook's Marsh
Brick Works
Fuel Storage Depot
Crook's Marsh Farm
Minor's Lane
Abbots Lane
Philblack Works
Minor's Farm
Boro Const Bdy
Washingpool Lane
Red Spiar Gout
Slimpits Rhine
Monk's Wall Rhine
Industrial Estate
Stowick Cottage
The Willows
Willow Farm
Radborn Gout
Barlsam's Gout
Warehouse
West House Farm
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Hallen Marsh
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Packgate Farm
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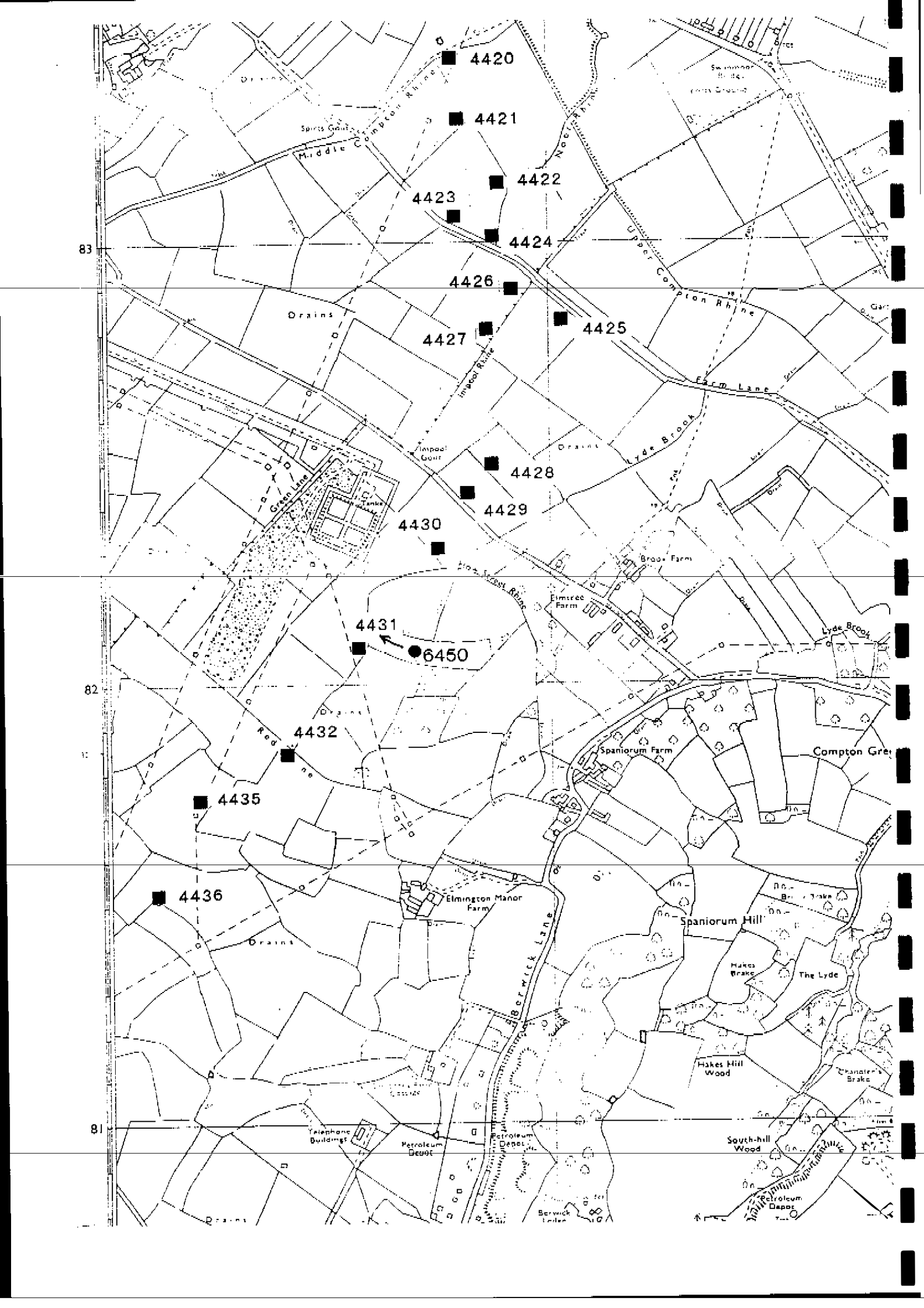
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Upper Compton Rhine
Drains
Impool Rhine
Impool Gout
Green Lane
Farm Lane
Lyde Brook
Broom Farm
Elmtree Farm
Spaniorum Farm
Compton Grey
Elmington Manor Farm
Berwick Lane
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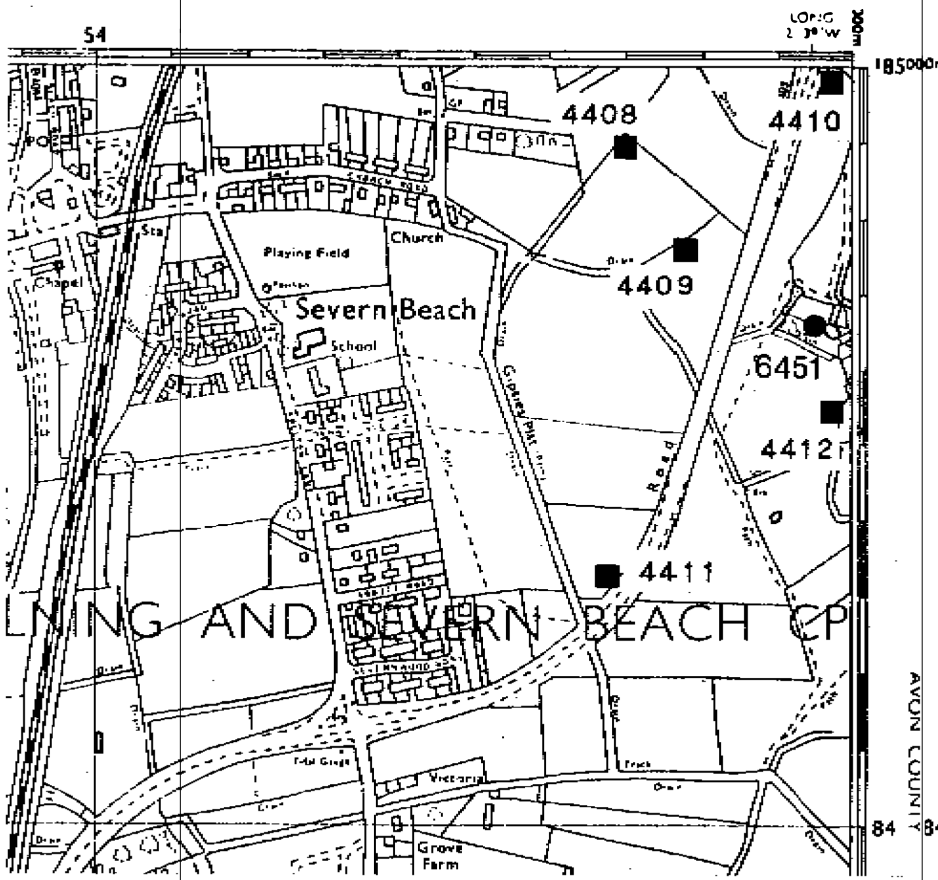
Hakes Brake
The Lyde
Hakes Hill Wood
Chandler's Brake
South-hill Wood
Petroleum Depot
Telephone Buildings
Berwick Lodge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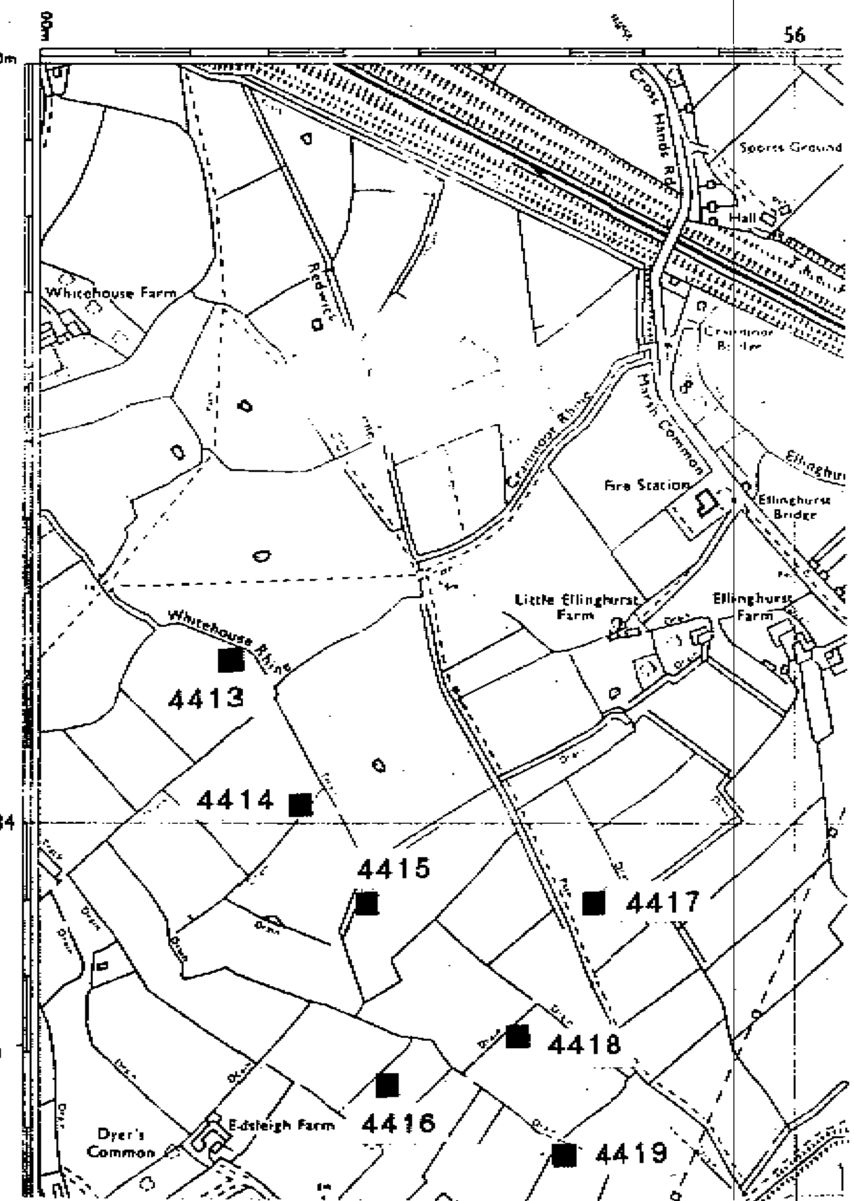
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Sports Ground
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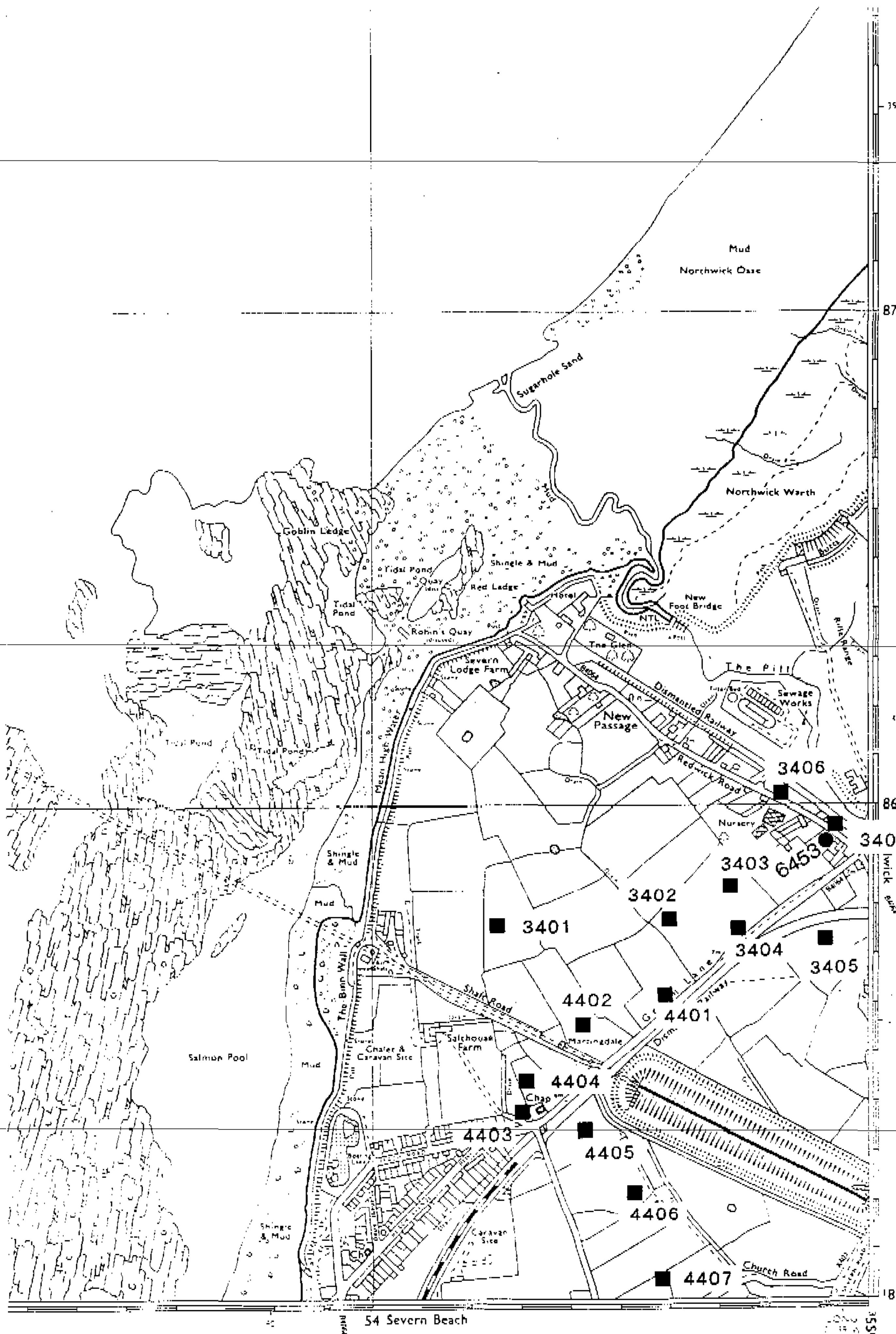
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Quay
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Northwick Warth
Robin's Quay
The Glen
Severn Lodge Farm
Dismantled Railway
The Pill
Sewage Works
New Passage
Tidal Pond
Mean High Water
Redwick Road
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Salmon Pool
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Salthouse Farm
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54 Severn Beach

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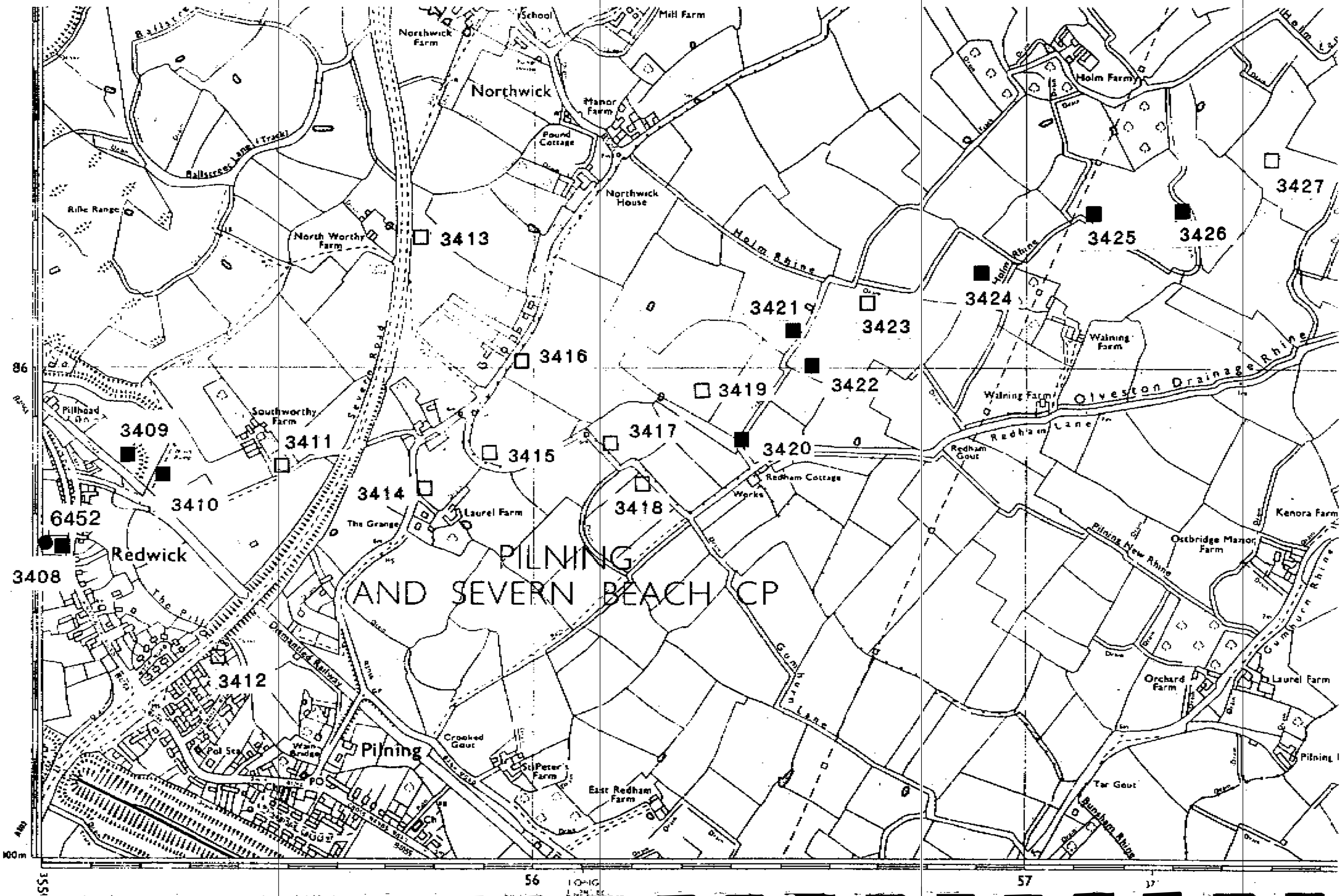
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Ostbridge Manor Farm
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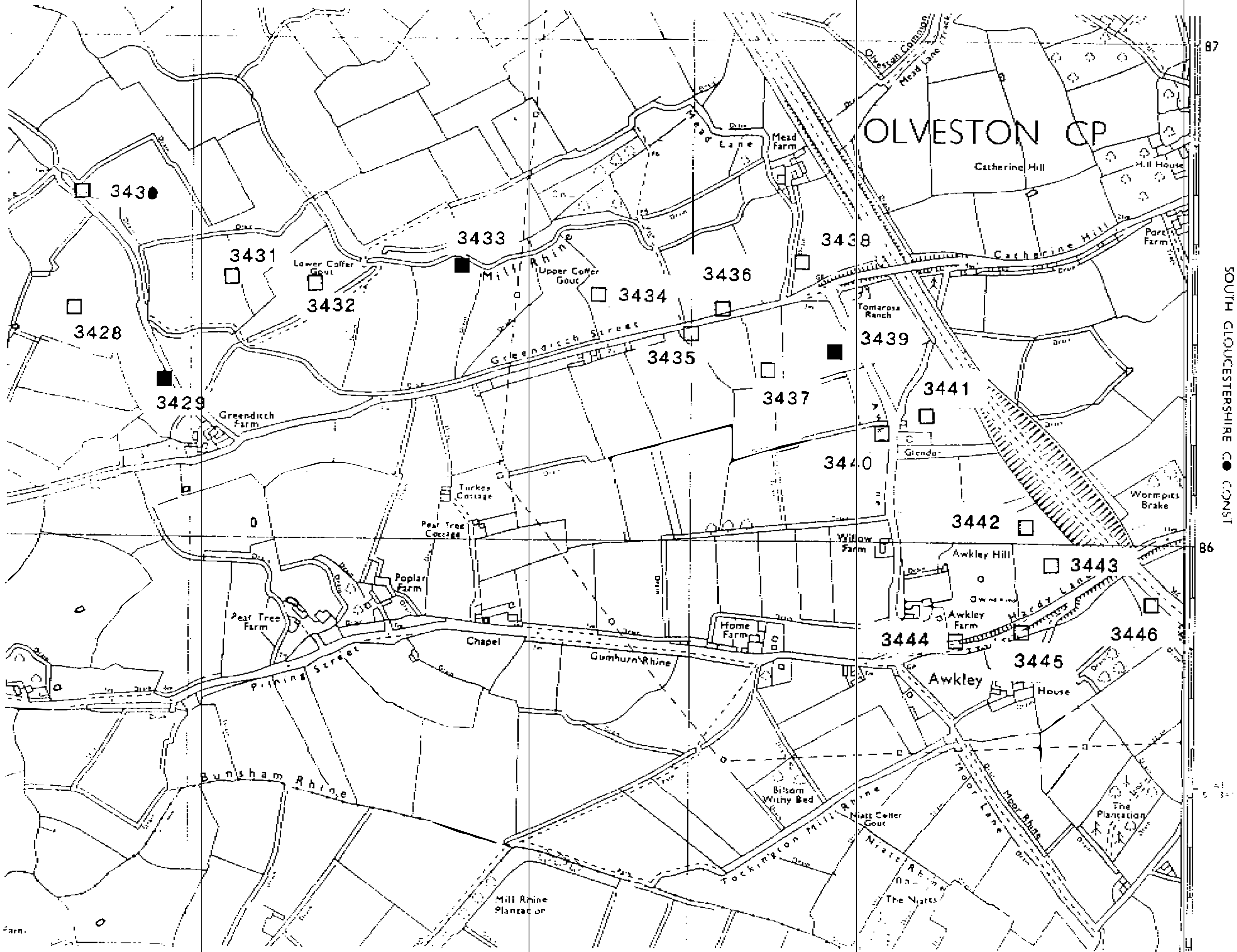

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Port Farm
Tomarosa Ranch
Glendor
Wormpits Brake
Willow Farm
Awkley Hill
Awkley Farm
Hardy Lane
Awkley
House
Home Farm
Chapel
Gumhurn Rhine
Turkey Cottage
Pear Tree Cottage
Poplar Farm
Pear Tree Farm
Pilning Street
Bunsham Rhine
Mill Rhine Plantation
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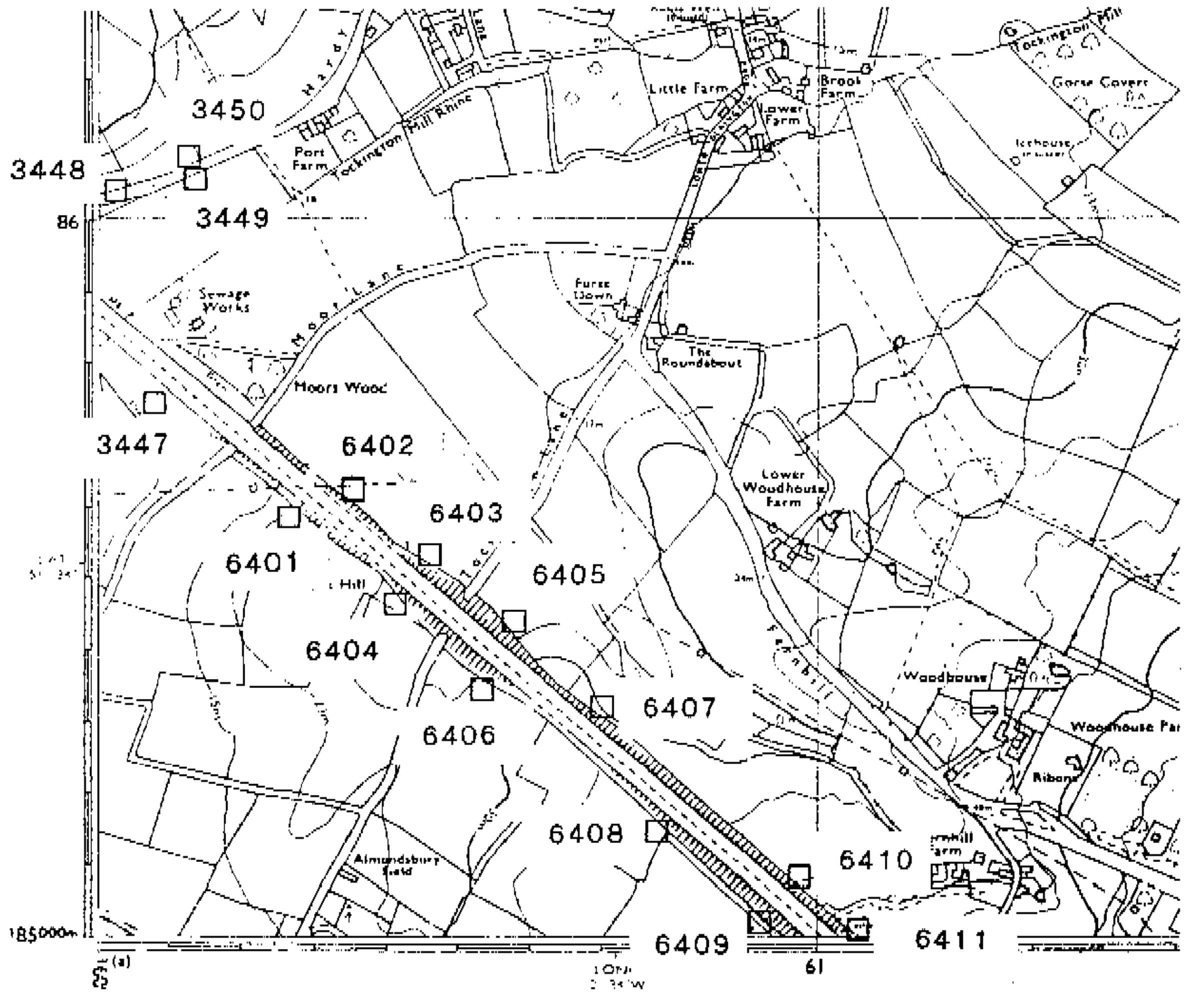
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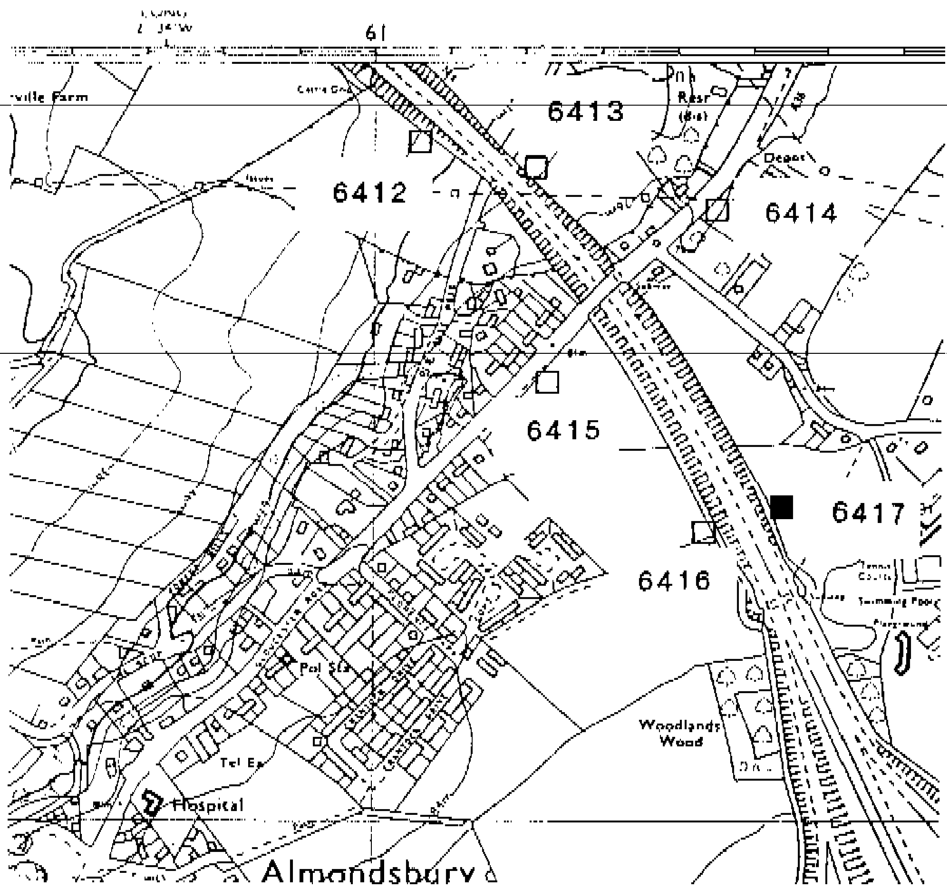
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