

Hope STW to Bradwell STW, Derbyshire

An Archaeological Desktop Assessment
for Severn Trent Water

Daryl Garton, Jenny Brown & Graeme Guilbert

May 2002



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SUMMARY

Severn Trent Water are planning to relocate sewage treatment from Hope STW to Bradwell UWWTD, entailing construction of a new pipeline within the Peak District National Park, and within a highly sensitive area archaeologically.

An approximately triangular study-area was identified between the villages of Hope, Bradwell and Brough. The current land-use is mostly pasture within a landscape dominated by gritstone and shale plateaus, with steeply incised valleys.

Since the route of the pipeline will be determined after consideration of the various engineering and environmental constraints identified in the initial planning stage, land-access was not available bar that from public footpaths. This severely constrained the quality of the archaeological assessment.

Sources were consulted at the Derbyshire Sites & Monuments Record, Local Studies Library & Record Office, the National Monuments Record, Swindon, and the University of Nottingham Library.

Prehistoric artefacts have been found within the study-area, but thus far, none have been recorded in well-defined archaeological context.

The Roman archaeological remains are dominated by the fort of *Navio*, together with ancillary military structures, the network of roads focused upon the fort, and the cemeteries and civilian settlements that developed alongside those roads.

In the early-medieval period, the principal interest arises out of 'Eccles' name that occurs widely within the study-area, signifying an ill-defined ecclesiastical connection, which is also perhaps reflected in the former siting of the later-medieval crosses.

Some of the terrace/hollow-ways within the study-area may have Roman origins and are likely to have seen use during the medieval and early-post-medieval centuries.

In the post-medieval period the landscape was enclosed by stone-walls and hedges. Other notable features of this period include mills and the extractive industries.

Initially, three routes are being considered:

The **eastern route** is best avoided because it passes through areas around *Navio* Roman fort that are known to be rich in Roman and other remains.

The **western route** is also best avoided, because it would disrupt several ancient roads and runs through the area of a potential church.

It appears that the least-damaging route is the **central** one, as long as it crosses the lines of Batham Gate Roman Road and other ancient trackways, perpendicular to their respective alignments.

Whichever route is eventually selected, there will be a need for more-detailed field-inspection and literature-search, followed by archaeological evaluation, and perhaps more extensive excavation at particular locations, prior to pipeline construction.

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Fig. 1. The Hope, Bradwell, Brough study-area (outlined in red), showing the field-names recorded from the Bradwell and Hope Tithe Maps of 1819 and 1848 respectively. Tithe information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. © Crown Copyright. Licence No. AL 100020618. Scale 1: 5000.

Fig. 2. The Derbyshire Sites & Monuments data (circles) and additional archaeological information (lettered) for the study-area. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. © Crown Copyright. Licence No. AL 100020618. Scale 1:5000.

Fig. 3. Boundary-types observed from the footpaths and roads walked for this report. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. © Crown Copyright. Licence No. AL 100020618. Scale 1:5000.

Fig. 4. Preliminary route options suggested by Severn Trent Water (solid line), with alternative path for central route dashed. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. © Crown Copyright. Licence No. AL 100020618. Scale 1:5000.

1 INTRODUCTION

1.1 Background

Severn Trent Water are planning to relocate their sewage treatment from Hope STW to Bradwell STW. This will entail construction of a new pumping station and pipeline running from the current Hope to Bradwell works. Both works are within the Peak District National Park, and within a highly sensitive area archaeologically. This desk-top assessment was commissioned to map the location of the known archaeological remains, and assess their importance, to enable Severn Trent Water to identify the potential archaeological issues which will require addressing during the development of the scheme. A brief written by Keith Challis of NUCL specified the contents of this assessment.

An approximately triangular area measuring some 1.3x1.7km was identified as the study-area. This ran between the outskirts of the villages of Hope and Bradwell and included the village of Brough. The northern and south-eastern sides of the study-area are within the river valleys of the Noe and Bradwell Brook; the western side runs through a massive quarry into the Edale Shales. The underlying bedrock is Namurian, with most of the northern part of the study-area being mapped as the Mam Tor beds: these formations comprise a series of gritstones to shales, creating deeply incised valleys (Geological Survey 1951). The floor of the River Noe is blanketed with terrace gravels and the south-western area blanketed with Pleistocene head; the floor of the Bradwell Brook is blanketed with more recent alluvial deposits. The current land-use is mostly pasture.

Caveat

Since the actual route of the pipeline will be determined after consideration of the various engineering and environmental constraints identified in the initial planning stage for the works, land-access was not available bar that from the public highway or public footpaths. This severely constrains the quality of the walkover survey of this assessment. The walkover is aimed primarily at identifying earthworks and land-usage not available through other means: such information can only be reliably gained from examination of the field-surface. The reader must be aware that future walkover may significantly change the commentary on any part of this landscape for which no, or very restricted, access was available (route of walk marked in Fig. 3).

Section one outlines the approach taken in the compilation of the report and the sources of information used.

Section two outlines the planning context.

Section three contains a survey of the documentary sources relating to the history and archaeology of the study-area.

Section four summarises the archaeological and historical background of the site and describes the results of the walkover survey to assess the survival of landscape and building features of historical and archaeological significance.

Section five offers broad comment on the three routes being considered at this stage.

Section six lists the principal sources consulted in the preparation of this report.

1.2 Sources of information

Information has been collated from the following sources:

Sites and Monuments Records (SMR)

The Derbyshire Sites and Monuments Record at County Hall, Matlock was consulted for information on archaeological sites and finds within and immediately around the study-area. This information has been incorporated in Sections 3-5.

Air Photographs

A cover search was made at the National Monuments Record, Swindon, for all of the oblique and vertical aerial photographs within their collection. These photographs were all examined during April 2002. The full cover search is included in Section 6.

Documentary & Cartographic Sources

A search was made for published, documentary and cartographic sources for the study-area and its environs. Local and national works were consulted. The results are incorporated into Sections 3-5.

Searches were conducted at:

Derbyshire Local Studies Library (DLSL)

University of Nottingham Library (including BIAB to the present)

Derbyshire Record Office (DRO)

At the Derbyshire Record Office, Matlock (DRO), the following indexes were checked:

Enclosure Index for Hope and Bradwell

Tithe Index for Hope and Bradwell

Place-names Index for Maps and Plans for Hope and Bradwell

A full list of all sources consulted is provided in Section 6.

Fieldwork

The study-area was inspected in the field. Earthworks and other features of archaeological significance visible from the public highway and footpaths (see caveat in section 1 above) were photographed and noted onto a 1:5000 base map. Even this necessarily selective walkover identified archaeological remains not included in the SMR, as described in Section 4.

2 THE PLANNING CONTEXT

Archaeological remains are protected by means of Statutory Instruments (including Scheduled Ancient Monument legislation) and by District and County Development Plans.

2.1 Planning and Policy Guidance 16 (PPG 16)

The Secretary of State's policy on archaeological remains, which it describes as:

'a finite and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction' is summarised in the DoE paper *Planning and Policy Guidance 16: Archaeology and Planning* (PPG 16; 1990).

PPG16 emphasises the desirability of preserving an ancient monument and its setting, and that it is a material consideration in determining planning applications, whether or not that monument is scheduled.

It states that:

The needs of archaeology and development can be reconciled, and potential conflict much reduced, if developers discuss their preliminary plans for development with the planning authority at an early stage prospective developers should in all cases include as part of their research into the development potential of a site, which they undertake before making a planning application, an initial assessment of whether the site is known or likely to contain archaeological remains. (Paragraph 19).

Among the courses of action open to planning authorities are the following:

Where early discussions with local planning authorities or the developer's own research indicate that important archaeological remains may exist, it is reasonable for the planning authority to request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken. Evaluations of this kind help to define the character and extent of the archaeological remains that exist in the area of proposed development, and thus indicate the weight that should be attached to their preservation. They also provide information useful for identifying potential options for minimising or avoiding damage. On this basis, an informed and reasonable planning decision can be taken. (Paragraph 21).

Planning authorities should seek to ensure that potential conflicts are resolved and agreements with developers concluded before permission is granted. Where the use of planning conditions is necessary, authorities should ensure that, in accordance with DoE Circular 1/85, they are fair, reasonable and practicable. (Paragraph 29)

In cases where planning authorities have decided that planning permission may be granted but wish to secure the provision of archaeological excavation and the subsequent recording of remains, it is open to them to do so by the use of a negative condition, *i.e.* a condition prohibiting their carrying out of development until such time as works or other action, *e.g.* an excavation, have been carried out by a third party. (Paragraph 30)

In considering any planning application for development, the local planning authority is bound by the policy framework set by Government Guidance, in this instance PPG16, and by current Structure and Local Plan policy and by other material considerations.

2.2 Structure Plan

The Peak District National Park Structure Plan (1994) contains the following policy statements relevant to archaeology and cultural heritage.

Conservation Policy 8:

Evaluating Sites and Features of Special Importance C8

In all cases involving statutory designation or an international, national or regional interest, and wherever otherwise appropriate, an evaluation of the development proposals' impact on these interests will be required, to specifications approved by the Board, before any relevant planning application is determined.

Conservation Policy 9:

Listed Buildings and other Buildings of Historic or Vernacular Merit C9

- (a) The effective conservation of all buildings of historic or vernacular merit will be pursued by ensuring that they continue to be used for purposes suited to the conservation of the buildings themselves and to their locations. Development which adversely affects the particular merits of such a building will not normally be permitted.
- (b) Other than in exceptional circumstances, development, demolition or other work requiring listed building consent will not be permitted where it does not preserve and, where possible, enhance the listed building's features of special architectural or historic interest or its setting. Conversion of listed agricultural buildings to residential use (including accommodation other than a camping barn) will not normally be permitted.

Conservation Policy 10:

Sites of Historic, Archaeological or Cultural Importance C10

- (a) Other than in exceptional circumstances development will not be permitted if it would adversely affect a site or feature (or its setting) which has statutory designation as a Scheduled Ancient Monument or which is of international, national or regional importance.

- (b) In addition, development will not normally be permitted where it would result in loss of or damage to any other site or feature of historic, archaeological or cultural importance or its setting.
- (c) Where development is permitted, the developer will be required to minimise its impact and, as appropriate, to record, safeguard and enhance the sites or features of special importance.

3 DOCUMENTARY SURVEY

A search was made by Jenny Brown for maps, primary manuscript material and published sources for information relating to the site of the Eccles cross (SMR 8115) and any early church (as denoted by the 'Eccles' place-name). In addition, the field-names on Tithe maps were collected to indicate the spread of the 'Eccles' names and to provide clues to former land-use.

3.1 'Eccles' Place-Name and Hope Crosses

At the western edge of the study-area lies Eccles House Farm which first appears in the documentary record in 1306 as "Ekelis" (Cameron 1959, 120). Cameron (1968) has summarised current place-name study and suggested that 'eccles' place-names derive from the Primitive Welsh 'egles' meaning 'church'. He says that Eccles House, Hope, is therefore one of a number of examples in Britain of place-names indicating the survival of native British settlements, with organised Christian worship, in the midst of Anglo-Saxon sub-Roman Britain. Hart (1981, 117) supports this supposition for 'Eccles' place-names in Derbyshire and also confirms for Derbyshire Cameron's observation (1959, 89) that all are located "on fairly steep hillsides", "on or near estate or township boundaries", and "near to Romano-British settlements, springs and possible highways". Sidebottom (1997, 43) asserts that "since Christianity in Britain was a Roman legacy it seems unlikely that its worship would not have been accompanied by some form of structure as part of the essence of *Romanitas*." However, Thomas (1981, 147) points out that we use the word 'church' today to refer both to a building and also to a body of people, and he suggests that this could have been equally true of the use of 'eccles' in the past.

'Eccles' as a field-name element was recorded widely around Eccles House on the Hope Tithe Award and Plan (DRO: D1828A/PI209) suggesting that these field-names derive from their place within the estate or farm of Eccles House. If this use of 'eccles' does indicate a building, then it is possible that an early British church stood somewhere within the lands of Eccles House Farm, and that the farm perpetuated the use of the name. However, it is equally possible that any early British church was sited within Hope village, perhaps where the present church is, and owned land around the site of the present Eccles House Farm, thus transferring the name. Domesday Book records that there was at Hope "a priest and a church to which belongs 1 carucate of land" (Stenton 1905, 332).

The fabric of the church at Hope is mostly 14th century and later (SMR 8112), although Sidebottom says that it has "pre-Conquest origins" (1999, 216). There is a 10th century Saxon Cross (SMR8114) in the churchyard which was found in pieces in the fabric of an old building, reassembled and re-erected. Although its original provenance is unknown it seems unlikely that it has moved far as it is made of local sandstone (Sidebottom, 1999, 216). The present churchyard is ovoid, a possible indicator of an ancient foundation, although it appears on the Hope Enclosure and Tithe Plans to have been more uniformly rectangular in the past. It is perhaps beneath the present church site that an ancient British church should be sought from which the 'eccles' place-name originated, although a location around Eccles House Farm is also possible.

Until 1966 the remains of a cross stood to the north-east of Eccles House; it is now in Hope churchyard (SMR 8115,8152: Section 4.1). In 1904 this cross was seen by J C Cox, who confidently ascribed it to the 13th century (Cox, 1904, 57). It was believed to have marked the intersection of medieval trackways leading to the church from Bradwell in the south and Brough in the east. It is possible that this cross was erected in the 13th century on a site which had ancient Christian significance.

3.2 Cartographic sources

The only maps listed in the DRO indexes for Bradwell and Hope which pre-date statutory enclosure are DRO: D920Z/Z1 and 2. These two maps show an area of Bradwell to the west of the study-area.

The Enclosure Award for Hope of 1819 (DRO: D1828A/PZ3/1) encompasses Hope, Aston, Bradwell and Thornhill. The plans cover the whole of the study-area and much of it seems to have been already enclosed. Being a large award, a contemporary index (DRO: D1828A/PZ3/2) was provided. From this we learn that the Bradwell parts of the study-area fell in "Mesne Inclosure" and "Commons", and the parts within Hope were in "Edge Common", this suggests that some land was still not enclosed by this date. Unusually the Bradwell entries in the Award give enclosure names.

The Bradwell Tithe Award and Plan of 1819 (DRO: D1828A/PI203) and the Hope Tithe Award and Plan (DRO: D1828A/PI209a and b) of 1848 again cover the complete study-area. The field-names from these Awards are given in Fig. 1. Besides the 'Eccles' name commented on above, others are also worthy of note (all interpretations below after Cameron 1959: OE – Old English, ODan – Old Danish, ON - Old Norse). 'Hallsteads' and 'Hall Head', refer to the site of a hall (OE), perhaps indicating knowledge of some buildings at the Roman fort at *Navio* (Section 4.1). 'Stretfield' and 'Stretfield Side', refer to the street (OE), or Roman Road, known as Batham Gate, running south from the fort (Section 4.1). The 'Salt' names at the southern end of the study-area are indicative of springs, a commonly used feature of Roman occupation, and perhaps a likely location for baths at that time. A 'Cupola', just to the south-west of the study-area, is a furnace or a bowl-shaped hollow (Section 4.4). 'Causeway Meadow' perhaps refers to the road between Bradwell and Hope (Section 4.1), though Cameron (1959, 49) attributes the causeway element to Batham Gate which is built up to the south between Bradwell and Brough. The 'Marsh Moors' on the shale ridge presumably indicate boggy heath. 'Peas Bongs', to the south of Hope STW, probably refers to the steep bank (ODan) just to the south of the River Noe floodplain. At the confluence of the Noe and Peakshole Water the field is called 'Mill Holme', indicating the site of a mill (Section 4.1). The latter part of 'Bird Gates' refers to the road (ON) which formerly passed through it (Section 4.2 G). Finally, the village name of Brough is from 'burh', meaning a fortification (OE).

The study-area includes small parts of the parishes of Brough & Shatton (east of the Bradwell Brook) and Aston (north-east of the River Noe). Time restrictions did not allow the collection of the Tithe/Enclosure map information in these areas, which mostly lie outside of the most probable pipe-routes.

4 ARCHAEOLOGICAL SURVEY

4.1 Summary entries from Derbyshire County Council Sites & Monuments Record

(for fuller details and bibliographic references, consult SMR in Matlock). This listing maybe incomplete due to incomplete mapping at the north-west supplied by DCC SMR.

SMR numbers, in bold type, correspond with numbers shown in Fig. 2; National Grid references are as copied from SMR (except for 2210, 2621, 8115, and where otherwise stated).

- 612** (SK 1856/8283) two stone ballista-shots, presumed Roman.
- 613** (SK 1825/8283) stone ballista-shot, presumed Roman.
- 2203** (SK 1768/8194) stone axe, Neolithic, found in 1959.
- 2204** (SK 1763/8189) stone axe, Neolithic, found in 1959.
- 2210** (SK 1743/8182 – 1810/8268) Batham Gate Roman road; in study-area, runs between *Navio* fort and New Bath Hotel.
- 2213** - same as 2210.
- 2222** (SK 1741/8187) Eden Tree House, said to be named from Edwin's Tree, where King Edwin was allegedly captured and hanged; human bones found in c. 1850.
- 2227** (SK 1740/8214) field-name 'Causeway Meadow', perhaps referring to medieval road between Bradwell and Hope.
- 2228** (SK 1748/8223) bridge said to be named 'Causeway Bridge' (see 2227).
- 2233** (SK 1812/8254) Beaker pottery from garden, Neolithic.
- 2602** (SK 1802/8211) fragment of tile, possibly Roman.
- 2603** (SK 1802/8211) pottery, post-medieval.
- 2604** (SK 1834/8250) stone capital, thought to be Roman and from *Navio*, now built into wall by corn-mill.
- 2605** (SK 1842/8263) fragmentary quernstones and 'round stone sections', possibly Roman and from *Navio*, now in gardens.
- 2606** (SK 1818/8253) fragmentary quernstone, possibly Roman, now built into fireplace in house.
- 2607** (SK 18--/82--) bronze, socketed axe, Late Bronze Age, found in 1807, exact provenance unknown.

- 2608 (SK 1815/8242) inscribed Roman urns containing cremated bone, found in 1747.
- 2610 (SK 18--/82--) flint arrowhead, presumed prehistoric, exact provenance unknown.
- 2612 (SK 183-/826-) pottery of 2nd-3rd centuries.
- 2613 (SK 1852/8256) hollow-way of road believed to be 17th century, perhaps on line of Roman road (but see paragraph F below).
- 2614 (SK 1858/8254) terrace-way believed to be 18th-19th century, perhaps on line of Roman road (may be effectively same as 2613, and see paragraph F below).
- 2615 (SK 182-/825-) mill-buildings, once for lace, converted to lead-smelter.
- 2616 (SK 183-/826-) mill-buildings believed to have medieval origins.
- 2621 (SK 1847/8245) 'ancient trackway', supposedly of prehistoric origin, running south along ridge from this point.
- 2627 (SK ----/----) presumed Roman road between *Navio* and Carsington, but no evidence for its location within the study-area.
- 8103 (SK 17--/83--) stone axe, Neolithic, found before 1877, exact provenance unknown.
- 8106 (SK 1724/8337) flint core or scraper, found in 1955.
- 8107 (SK 1724/8337) point on supposed Roman road.
- 8108 (SK 1814/8272) Roman fort called *Navio*, 1st-4th centuries (**Scheduled Monument**), and related features, including extra-mural, civilian settlement (i.e. vicus) and ?bridge-foundation.
- 8109 (SK 182-/826-) Roman bath-house.
- 8110 (SK 18--/82--) bronze bridle-bit, presumed Roman, found in 1780, exact provenance unknown.
- 8115 (SK 1738/8302) 13th-century cross formerly situated atop ridge, to east of Hope-Bradwell road; removed to Hope churchyard in 1966, and now situated at 1725/8345, to south of the church; see also section 3.1.
- 8123 (SK 1745/8322) site of water-mill in field named 'Mill Holmes' in tithe-award.
- 8124 (SK 1738/8256) supposed site of barrow, but no trace on the ground.

8126 (SK 1755/8242) 'ancient walls' revealed during demolition of field-barn, and suggested to indicate the 'presence of a town in the locality'!!!

8129 (SK 173-/827-) 'Eccles House', mentioned in 1306.

8130 (SK 1800/8330 – 1820/8300) cropmark of 'two parallel earthen banks', suggested to belong to Roman road.

8134 (SK 181-/827-) site of Roman vicus (i.e. civilian settlement).

8136 (SK 1751/8338) cast-iron mile-post relating to turnpike-road of 1758.

8145 (SK 182-/825-) footpath sign of 1909.

8151 (crosses northern part of study-area) turnpike, or toll, road established 1758.

8152 (SK 1723/8347) stump and socket-stone of 'Eccles Cross', believed to be medieval, now situated to north of the church but said to have once stood at the intersection of medieval roads leading to Hope from Bradwell and Brough [so at c.1722/8317, though SMR implies at 1725/8345]; said to have been removed to Hope churchyard in 1966 [but is there confusion with 8115?]; see also Section 3.1.

4.2 Published sources in addition to the SMR

Surprisingly, several significant archaeological finds and features that figure in published sources do not appear in the SMR for the study-area. These include items A-H, outlined in the following paragraphs (and their locations are marked approximately in Fig. 2 by matching letters). It should be stressed that these notes do not arise from an in-depth or systematic search of the literature (though this should perhaps be done at the next stage of this project, once the approximate route of the proposed pipeline has been decided by STW), but merely from publications that happen to be familiar to GG through an intermittent interest in the area around *Navio*. There may well be other items of equal significance missing from Fig. 2.

A. A stone ball was recovered by pipeline-contractors in the 1970s, close to the south-east side of the Roman fort of *Navio*, at SK 1818/8268, and this is said to be too large for a ballista-shot, perhaps rather serving some decorative or defensive purpose in relation to the fort's gateway (Hart in Dearne 1993, 133).

B. In a field immediately to the east of both the recognized fort of *Navio* and the River Noe, a 'rectangular enclosure with rounded corners...consistent with a Roman military context' has been identified from an air-photograph taken in 1988, centred at SK 1832/8277 (Dearne 1993, 131-2).

C. Close to the west, south and east of *Navio*, a series of geophysical surveys, supplemented by trial-trenches, was undertaken during the 1980s, and these are suggested to have demonstrated the survival of evidence for roads, timber buildings, etc, believed to be contemporary with the Roman fort, and presumed to have been elements of an extensive *vicus*, or civilian settlement (Dearne 1993).

D. Archaeological fieldwork in 1992, relating to the construction of an STW water-pipeline from Bamford to Buxton, which passes just to the south-east of the present study-area, led to the recording of Romano-British artefacts as much as 500m from the recognized limit of the area of contemporary occupation around *Navio* (Guilbert *et alii* 1995). In tandem with the wealth of material found in this general vicinity in earlier decades, these discoveries provided the conclusion that there should be 'archaeological evaluation and monitoring whenever any form of land-disturbance is proposed on either side of Batham Gate or the Bradwell Brook', for 'it is only thus that our knowledge of the Roman period around *Navio* is likely to be improved'.

E. Almost 400m to the east of *Navio*, at SK 1259/8267, close to the A625 road, is a pronounced mound, surely artificial, but apparently given exaggerated prominence due to its siting on a natural rounded rise in the river-terrace (though a trench dug into it in 1875 left the excavator supposing it to be entirely natural – Pennington 1877, 49-50 – while recent opinion sees it as a possible barrow – Barnatt & Collis 1996, 238).

F. At a similar distance south-east of *Navio*, at SK 184/824, a terrace/hollow-way marks a former line of the road, Brough Lane, heading east from Brough, and this has sometimes been mooted as a Roman road, though it seems likely to be post-medieval in its recorded form (Guilbert *et alii* 1995, 76-8, Fig. 1, with earlier reff). (Note that this may be the same as 2613 & 2614 in the SMR, where they seem to have incorrect NGRs.)

G. The former line of a road running along the ridge of Edale shales between Hope and Brough, still followed by a public footpath, is clearly discernible as a terrace/hollow-way where it leaves the crest of the ridge to drop towards Hope, from some 600m to the north-west of *Navio*, i.e. approximately between SK 1767/8301 and 1770/8315 (sketched in Preston 1957, Fig. 1).

H. A further terrace/hollow-way, also still used as a public footpath, marks a former line of the Hope-Bradwell route where it traverses the steep northern escarpment of the ridge of shales, approximately between SK 1736/8303 and 1730/8313, lying close to the western side of the present road, which is itself sunken (Preston 1957, 270). This now passes through an area of scrubby vegetation, so that it is not obvious on the ground without careful inspection.

4.3 Aerial photography

Much of the land in the Hope Valley is pasture, and, as far as can be discerned, has rarely been ploughed, at least in the recent past. This means that earthworks from past archaeological activities are more likely to be preserved here than in arable environments. These earthworks can be best spotted on walkover (access denied for many areas) or on aerial photographs (which may also identify those areas which had earthworks until very recently). Earthworks show best when the sun is at a low angle, and may not show at all in some lights, therefore photographs taken in a variety of circumstances are required to try to ensure that there is full coverage. Hence, a visit was made (by GG) to the National Monuments Record at Swindon, to examine this set of publicly available aerial photography.

Sets of both vertical and oblique aerial photographs (listed in section 6.2), were examined. Aside from the enclosure noted in section 4.2 B (observed on obliques taken in 1988), surprisingly these photographs reveal little that is not known either from entries in the SMR (see above) or from field-inspection (see below). Verticals taken in 1971 are good for the terrace/hollow-way of the former Hope-Brough road (section 4.2 G above) and that running east from Brough (section 4.2 F). Obliques taken in 1984, 1986, 1987 and 1998 are good for the extent of ridge-and-furrow earthworks, indicating medieval and/or early-post-medieval cultivation, over and around *Navio* fort, as sketched in Fig. 2 (some of this ridge-and-furrow can be seen in colour plate 7 of Barnatt & Smith 1997).

4.4 Walkover survey, but only from footpaths

As instructed, inspection on the ground was restricted to walking along all public footpaths that lie within the study-area, and these are as indicated in Fig. 3. This has proved to be of mixed value. On the one hand, the visit was made on 18 April 2002, before vegetation became too verdant, giving a reasonable chance of identifying low earthworks. On the other hand, the limitations imposed by viewing only from footpaths are bound to mean that there are gaps in the available information, above all in the east-central part of the roughly-triangular study-area.

A massive quarry has removed Edale shales from much of the west-central part of the study-area (Fig. 3). Most of the remainder of the study-area can be described as improved grassland, and it appears to have been so for some time, though a few parcels of land look likely to have been 'improved', which probably involved ploughing, in the last few years, and there are occasional patches of scrubby vegetation indicative of poor maintenance and/or under-grazing.

Certain features detectable on the ground, but which make no appearance in either the SMR or in published references known to GG, are worthy of individual notice here, as outlined briefly in the following paragraphs, I-M (locations marked in Fig. 2 by matching letters). It should be reiterated that this list may be far from complete, and must remain so until such time as more thorough inspection can be undertaken in the field.

I. It is possible that, where it crosses the study-area, the line of Batham Gate (2210 in SMR) does not match that of the causewayed Stretfield Road, but perhaps runs roughly parallel at a short distance to the north-west, following a line marked until very recently by a succession of later field-boundaries (hedges and walls), which formed an almost-continuous line for c.550m, where some part of the Roman metalling and/or roadside-ditches might survive below ploughsoil.

J. At SK 181/822, a stone-arched culvert or flue runs along the contour for over 100m beside a hedged field-boundary; it comes within 200m of the mill-cum-leadworks (SMR 2615) and may have had some industrial purpose.

K. At SK 174/820, a substantial mound is approached from the east by a ridge which may well cover another stone-arched flue, similar to that noted in paragraph J and perhaps also relating to some industrial activity of the post-medieval centuries. Note proximity to 'Cupola' field-name to the north (section 3.2).

L. On the shale ridge to the west of *Navio*, low ridge-and-furrow earthworks can be seen at SK 180/829, while air-photos remarked above show the pattern of this former cultivation to have been far more extensive than it has been possible to observe from the footpaths (in due course, the extent of surviving ridge-and-furrow should be recordable through more thorough surface inspection).

M. Extending westwards along the crest of the shale ridge from the feature described in the preceding paragraph to the Bradwell-Hope road, some elements of the post-medieval field-pattern remain visible as low earthworks where the hedgerows have been removed or died back. When the gently-sloping southern side of the ridge can be inspected on the ground, it may well be that this pattern of earthworks will be found to extend southwards.

4.5 Hedgerow & wall survey

Under the Environment Act (1995) a hedgerow is defined as important if it has existed for 30 years or more and satisfies various historic and environmental criteria. The historical criteria from the 1977 Hedgerow Regulations are reproduced in Section 7. In addition to any boundary existing prior to 1850 (Item 1, Section 7), or part of a field-system prior to Enclosure (Item 5), hedgerows which overlie or are adjacent to All Scheduled Ancient Monuments and sites recorded on the Sites & Monuments Record are considered historically significant (Items 2, 3 in Section 7). Only the historical and archaeological elements of hedgerow survey, as defined by the 1977 Regulations, are covered in this report.

The improved fields are enclosed within a patchwork of walls and hedges. Where these boundary-types could be viewed closely, walls and hedges are distinguished in Fig. 3, with walls further divided in accordance with their composition, sandstone or limestone, reflecting the relative proximity of particular walls to sources of the related geological beds. To the untutored eye, none of the hedgerows appear to be especially aged; most that could be seen close up are entirely of hawthorn, while a few include occasional mature trees of other species.

All boundaries visible during the walkover survey which also appear on the Bradwell or Hope Tithe maps are marked in Fig. 1. The only area where earthwork-features (banks) on the lines of the hedgerow-boundaries are visible from the public-footpaths is marked as M-M in Fig. 2.

4.6 Chronological summary

From the information provided above, it will be evident that there is potential for archaeological discoveries of various dates in the study-area.

Prehistoric artefacts could occur at any point, as witness the stone axes, flint arrowhead and core/scrapper, Beaker pottery, and socketed bronze axe included in the SMR, none of which have a well-defined archaeological context. There is obvious potential for further such material to provide insight into prehistoric usages of the shale ridge, which seems likely to be crossed at some point by the new pipeline.

The Roman and Romano-British interest of the area is, of course, dominated by the fort of *Navio*, together with ancillary military structures, the network of roads focused upon the fort, and the cemeteries and civilian settlements that developed alongside those roads. Evidence for such settlement is noted in Section 4.2 C above, just as a bath-house and a cemetery (with cremation-urns, and it need not be the only one) is attested by entries in the SMR. Several possible routes of Roman roads are mentioned above, but many details of the pattern hereabouts remain to be determined. The new pipeline is bound to cross the line of Batham Gate at some point (see Section 4.4 I above), and may cross other Roman routes, depending upon the course that is eventually chosen for the pipe. For instance, it is not certain whether a Roman road ran north-west from *Navio* along the shale ridge, though it is not impossible that the terrace/hollow-way (section 4.2 G above) is of Roman origin (Preston 1957). The scatter of various artefacts of Roman or Romano-British character included in the SMR and other items listed above (e.g. ballista-balls, tile, potsherds, quernstones, masonry, bridle-bit) can be taken to illustrate the potential for further discoveries, of artefacts and/or structures, at any point within the present study-area.

In the early-medieval, i.e. pre-Conquest, period, the principal interest arises out of the 'Eccles' name that occurs widely within the study-area, particularly towards the north and west, signifying an ill-defined ecclesiastical connection, which is also perhaps reflected in the records of the former siting of the later-medieval crosses on the ridge and adjacent to thoroughfares (*cf.* section 3.1). Whether there was ever a church on the ridge, or whether the 'Eccles' element refers to land in the ownership of the church in Hope, is impossible to say on the evidence currently available; but the former possibility should be borne in mind in devising an archaeological strategy for the proposed pipeline. In addition to the medieval crosses believed to have been moved to Hope churchyard from locations within the study-area, an Anglo-Saxon cross is currently to be seen in that churchyard; this is considered to have been carved in the early-10th century (Sidebottom 1999, 218), and there is known to have been a Saxon settlement at Hope, lying a short distance outside the study-area. Some of the terrace/hollow-ways are likely to have seen use during, perhaps even continued in use into, the medieval and early-post-medieval centuries, probably passing between fields cultivated by the ridge-and-furrow technique.

Bradwell (Stenton 1905, 346) and Hope (*ibid.* 332) are both listed as manors at Domesday, with Aston and Shatton listed as berewicks (hamlets) of Hope. The only mill listed is at Hope, though it is unclear where this was located. One possibility is at 'Mill Holmes' as recorded in the Tithe map (Fig.1, Section 4.1), or perhaps downstream at Brough (where post-medieval mills are sited on the Bradwell Brook). There is no mention of Brough in Domesday.

The principal addition to the landscape in the post-medieval period is the pattern of field-boundaries arising out of enclosure of the former open fields and 'waste'. Other notable features of this period will include mills (evidenced by both a field-name near Hope and by extant buildings at Brough), which could have originated in the medieval centuries, and industrial features, especially those relating to the extractive industries which came to dominate the landscape of the nearby limestone hills at that time.

5 PRELIMINARY OPTIONS FOR PIPELINE-ROUTE BETWEEN SEWAGE-TREATMENT WORKS AT HOPE AND BRADWELL

Three possible routes are marked on Fig. 4, two of which run largely along current highways, while the third runs largely through pasture-fields, crossing a highway at only one point. These are preliminary routes for which initial comment was requested from Severn Trent Water. Limited field-inspection suggested an alternative path for part of the central route – dashed in Fig. 4. All three routes have implications in terms of the archaeological fieldwork that should precede and accompany the construction-works, though it should be emphasized that these cannot be assessed adequately until there has been an opportunity for close inspection of the entire area on the ground. The archaeological evidence is given in section 4 above.

The **eastern route** is certainly best avoided, above all because it passes through areas around *Navio* Roman fort that are known to be rich in Roman and other remains, but also because it would cross the River Noe in the vicinity of an historic bridge and buildings, including dwellings, and because it would involve running along some part of the causewayed modern road between Brough and Bradwell, which may have been first constructed by the Romans, and is known as Batham Gate.

The **western route** is also best avoided, because it would disrupt some length of a road believed to have been the principal route between Bradwell and Hope in medieval / post-medieval times, and some would say Roman too, as well as crossing both the best-preserved stretch of the equally-old, but now disused, road running along the ridge between Brough and Hope, in addition to some part of Batham Gate. The siting of the Medieval crosses and the 'Eccles' place-names suggest the possibility of a church somewhere close to the western route, though admittedly much ground has already been disturbed by quarrying thereabouts.

From an archaeological standpoint, it appears that the least-damaging route is the **central** one (though it should be emphasized that this view has been formulated from only partial inspection on the ground). This would involve crossing the Noe close to the Hope Sewage-Treatment Works, then passing through an extensive area of pasture-fields (though evidently cultivated in historic times) to traverse the ridge of shales and the Roman/medieval Hope-Brough road, followed by fields with evidence for ridge-and-furrow cultivation, before passing downslope to cross Batham Gate and the present highway (Stretfield Road) at what must be regarded as the best line in archaeological terms (i.e. perpendicular to its route), to reach the Bradwell Sewage-Treatment Works. The potential damage that would be caused by this central route could be reduced by shifting its path westwards one field, to follow the dashed line in Fig. 4, to partly run over what is presumed to be infilled quarry and therefore already archaeologically sterile. Either way, the **central route** is considerably shorter than either of the other two, so that it may prove to be more economical in terms of construction as well as in respect of its archaeological impact, and hence cost.

All the routes cross hedges which, in terms of the 1997 Hedgerow Regulations, would be deemed historically significant.

Whichever route is eventually selected, the example set by STW in the area to the east of Brough in 1992, leading in turn to the conclusions drawn by Guilbert *et alii* (quoted

in Section 4.2 D above), should now be followed in the scheme for a pipeline to link the two sewage-treatment works. There can be no doubt that archaeological evaluation, perhaps creating a need of more extensive excavation at particular locations, should be conducted well ahead of the construction-works, which should themselves be accompanied by a full-time archaeological watching-brief during all ground-disturbance stages. Judging from previous results, there can be little doubt that this strategy will be rewarded with further advances in our appreciation of the landscape around *Navio*.

In the meantime, it is strongly recommended that a more-detailed field-inspection and literature-search should be undertaken as soon as a route has been selected in general terms and before the precise details of that route have been fixed. At that stage a full assessment of the archaeological remains, using the PPG16 Annex 4 criteria (Section 8), can be made for that route. Only thus will it be possible for there to be adequate archaeological input into decisions that must have an impact upon conservation of the wealth of historic landscape-features in this sensitive part of the National Park.

6 SOURCES CONSULTED

6.1 Maps

- 1640 Duchy of Lancaster commons and wastes. Photograph. (DRO: D920Z/Z1). [Appears to show land just to the west of the study-area.]
- 1688 "A map of the wast grounds and commons within the town of Bradwell" showing "parts laid out for the King " and "parts laid out for the Freeholders and Tenants". Duchy of Lancaster commons and wastes. Photograph. (DRO: D920Z/Z2). [Appears to show land just to the west of the study-area.]
- 1819 "Hope Bradwell Aston and Thornhill Enclosure Award 1819" bound volume with plans (DRO: D1828A/PZ3/1). Plan 1: "Map of Bradwell Referred to". Plan 2 "Hope Plan referred to".
- 1819 "Index to Hope Enclosure Award" (DRO: D1828A/PZ3/2)
- 1844 Bradwell Tithe Award and Plan (DRO: D1828A/PI203)
- 1848 Hope Tithe Award and Plan (DRO: D1828A/PI209a and b)
- 1951 Geological Survey of Great Britain: Castleton sheet SK18, 1:25000.

6.2 Aerial photographs at the NMR Swindon

A cover-search for all oblique and vertical aerial photographs in grid squares SK1581-3, SK1681-2, SK1781-2, SK1881-2 was made, with all the photographs examined (bar the few in *italic* which were not available on either of the days that the archaeologist was at the NMR in Swindon).

Oblique photographs cover-search from NMR, Swindon
 All examined by GG 4/02 bar those in *italic* which were not available.

NGR Index number	Accession number		Frame number	Original	Copyright	Repository	Film details	Date flown	Date flag	6 Fig NGR
SK1581/1	CCX	3299	68		CCX	NMR	B 35 mm Black& white	18-Jun-86	1	SK155817
SK1582/1	ALP	2792	ORACLEB12	TP95/5A	ALP	NMR	B 70mm,120,220 Black& white	30-Jun-76	1	SK150825
SK1582/2	DNR	848	20		CRW	NMR	B 35 mm Black& white	06-Jun-76	1	SK150825
SK1582/3	DNR	848	21		CRW	NMR	B 35 mm Black& white	06-Jun-76	1	SK150825
SK1582/4	CCX	3299	66		CCX	NMR	B 35 mm Black& white	18-Jun-86	1	SK155820
SK1582/5	CCX	3214	11		CCX	NMR	B 35 mm Black& white	19-Sep-86	1	SK150826
SK1582/6	NMR	17195	42		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK158824
SK1582/7	NMR	17195	43		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK158824
SK1582/8	NMR	17195	44		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK158822
SK1582/9	NMR	17195	45		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK158823
SK1582/10	NMR	17195	46		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK155820
SK1582/11	NMR	17195	47		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK155820
SK1582/12	NMR	17195	48		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK152821
SK1582/13	NMR	17195	49		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK152821
SK1582/14	NMR	17199	25		CRW	NMR	B 35 mm Colour slide	16-Nov-98	1	SK158823
SK1582/15	NMR	17199	26		CRW	NMR	B 35 mm Colour slide	16-Nov-98	1	SK154820
SK1582/16	NMR	17199	27		CRW	NMR	B 35 mm Colour slide	16-Nov-98	1	SK155820
SK1582/17	NMR	17209	42		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK159821
SK1582/18	NMR	17209	43		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK156822
SK1582/19	NMR	17209	44		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK154822
SK1582/20	NMR	17209	45		CRW	NMR	B 70mm,120,220 Black& white	16-Nov-98	1	SK151823
SK1582/21	<i>NMR</i>	<i>17405</i>	19		<i>EHC</i>	<i>NMR</i>	<i>B 35 mm Colour neg</i>	<i>19-Oct-99</i>	<i>1</i>	<i>SK150826</i>
SK1582/22	<i>NMR</i>	<i>17405</i>	20		<i>EHC</i>	<i>NMR</i>	<i>B 35 mm Colour neg</i>	<i>19-Oct-99</i>	<i>1</i>	<i>SK151828</i>
SK1583/1	DNR	1291	4		CRW	NMR	B 70mm,120,220 Black& white	14-May-79	1	SK150830
SK1681/1	CCX	3299	58		CCX	NMR	B 35 mm Black& white	18-Jun-86	1	SK160814
SK1681/2	CCX	3299	60		CCX	NMR	B 35 mm Black& white	18-Jun-86	1	SK160814
SK1681/3	CCX	3299	62		CCX	NMR	B 35 mm Black& white	18-Jun-86	1	SK160814

SK1681/4	CCX	3299	70		CCX	NMR	B 35 mm	Black& white	18-Jun-86	1	SK160814
SK1681/5	CCX	3299	72		CCX	NMR	B 35 mm	Black& white	18-Jun-86	1	SK160814
SK1681/6	NMR	17209	1		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK169813
SK1681/7	NMR	17209	2		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK167812
SK1681/8	NMR	17209	3		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK164812
SK1681/9	NMR	17209	4		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK162811
SK1682/10	NMR	17209	40		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK164820
SK1781/1	DNR	2410	11		CRW	NMR	B 35 mm	Black& white	28-Oct-88	1	SK176815
SK1781/2	DNR	2410	13		CRW	NMR	B 35 mm	Black& white	28-Oct-88	1	SK177815
SK1782/1	DNR	2352	14		CRW	NMR	B 35 mm	Black& white	02-Jun-84	1	SK173827
SK1782/2	DNR	2352	15		CRW	NMR	B 35 mm	Black& white	02-Jun-84	1	SK171826
SK1782/3	DNR	2352	16		CRW	NMR	B 35 mm	Black& white	02-Jun-84	1	SK171826
SK1881/1	DNR	2408	8		CRW	NMR	B 35 mm	Black& white	27-Nov-87	1	SK181812
SK1882/1	DNR	2399	24-30		CRW	NMR	B 35 mm	Black& white	25-Jan-86	1	SK181827
SK1882/2	DNR	2408	1		CRW	NMR	B 35 mm	Black& white	27-Nov-87	1	SK181827
SK1882/3	DNR	2408	46		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/4	DNR	2408	50		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/5	DNR	2408	52		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/6	DNR	2408	58		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/7	DNR	2408	62		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/8	DNR	2408	64		CRW	NMR	B 35 mm	Black& white	13-Nov-87	1	SK181827
SK1882/9	DNR	2411	21		CRW	NMR	B 35 mm	B&W copy clr	13-Apr-88	1	SK182827
SK1882/10	DNR	2411	22		CRW	NMR	B 35 mm	B&W copy clr	13-Apr-88	1	SK182827
SK1882/11	DNR	2411	23		CRW	NMR	B 35 mm	B&W copy clr	13-Apr-88	1	SK182827
SK1882/12	NMR	17209	66		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK181827
SK1882/13	NMR	17209	67		CRW	NMR	B 70mm,120,220	Black& white	16-Nov-98	1	SK181827
SK1882/14	NMR	17200	16		CRW	NMR	B 35 mm	Colour slide	16-Nov-98	1	SK181827
SK1882/15	NMR	17200	17		CRW	NMR	B 35 mm	Colour slide	16-Nov-98	1	SK181827
				Total 55 Records							
				© English Heritage. NMR.							

6.3 Published sources consulted and references additional to those relating to items in SMR

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7 APPENDIX: THE HEDGEROW REGULATIONS 1997, SCHEDULE 1, PART II

A hedgerow is defined as archaeologically and historically significant if:

- 1 The hedgerow marks the boundary, or part of the boundary, of at least one historic parish or township; and for this purpose "historic" means existing before 1850.
- 2 The hedgerow incorporates an archaeological feature which is -
 - (a) included in the schedule of monuments compiled by the Secretary of State under section 1 (schedule of monuments) of the Ancient Monuments and Archaeological Areas Act 1979[35]; or
 - (b) recorded at the relevant date in a Sites and Monuments Record.
- 3 The hedgerow -
 - (a) is situated wholly or partly within an archaeological site included as mentioned in paragraph 2 or on land adjacent to an associated with such a site; and
 - (b) is associated with any monument or feature on that site.
- 4 The hedgerow -
 - (a) marks the boundary of a pre-1600AD estate or manor recorded at the relevant date in a Sites and Monuments record or in a document held at that date at a Record Office; or
 - (b) is visibly related to any building or other feature of such an estate or manor.
- 5 The hedgerow -
 - (a) is recorded in a document held at the relevant date in a Record Office as an integral part of a field system pre-dating the Inclosure Acts; or
 - (b) is part of, or visibly related to, any building or other feature associated with such a system, and that system
 - (i) is substantially complete; or
 - (ii) is of a pattern, which is recorded in a document prepared before the relevant date by a local planning authority, within the meaning of the 1990 Act, for the purposes of development control within the authority's area, as a key landscape characteristic.

8 APPENDIX: ASSESSMENT OF ARCHAEOLOGICAL REMAINS (PPG16 annex 4)

Period

All types of monument that characterise a category or period should be considered for preservation, in order that a representative sample be preserved for posterity.

Rarity

There are some monument categories which in certain periods are so scarce that all surviving examples which still retain some archaeological potential should be preserved. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. This process should take account of all aspects of the distribution of a particular class of a monument, both in a national and a regional context.

Documentation

The significance of a monument may be enhanced by the existence of records of previous investigations or, in the case of more recent monuments, by the supporting evidence of contemporary written records.

Group value

The value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement or cemetery) or with monuments of different periods. In some cases, it is preferable to protect the complete group of monuments, including associated and adjacent land, rather than to protect isolated monuments within the group.

Survival/condition

The survival of a monument's archaeological potential both above and below ground is a particularly important consideration, and should be assessed in relation to its present condition and surviving features.

Fragility/vulnerability

Highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or by other unsympathetic treatment, and such monuments would particularly benefit from the protection which scheduling confers. There exist also standing structures of particular form or complexity whose value can again be severely reduced by neglect or careless treatment, and which are similarly well suited for scheduled monument protection (even if these structures are already listed historic buildings).

Diversity

Example, a Roman town with associated field-systems.

Potential

The nature of the evidence cannot always be specified precisely, but it may be possible to demonstrate the potential value of a monument as a result of evaluation work.

Additional Criteria

In addition to the Secretary of State's criteria, a general account of the sites and their environs, is provided in Section 4.

An indication of the **importance** of a site and the **degree of threat** posed by the development is provided in the assessments.

Importance is judged in three categories:

Nationally Important Sites: Scheduled Ancient Monuments of all types or sites considered to be worthy of scheduling though not as yet scheduled.

Regionally Important Sites: Sites listed by the County Sites and Monuments Record, or other reliable sources, which contribute in a significant manner to the archaeology of the region.

Locally Important Sites: Sites listed by the County Sites and Monuments Record, or other reliable sources, which, either through their intrinsic character or their degree or state of preservation are not of greater importance.

9 ACKNOWLEDGMENTS

Thanks are due to Severn Trent Water for commissioning the project, and to Dave Heap for supply of maps and information. The Brief was prepared by Keith Challis for NUCL. The walkover, aerial photographic examination, period summaries and recommendations were drafted by Graeme Guilbert, the documentary survey by Jenny Brown and the maps prepared by Daryl Garton with assistance from Cilla Wild. DG prepared the final document.

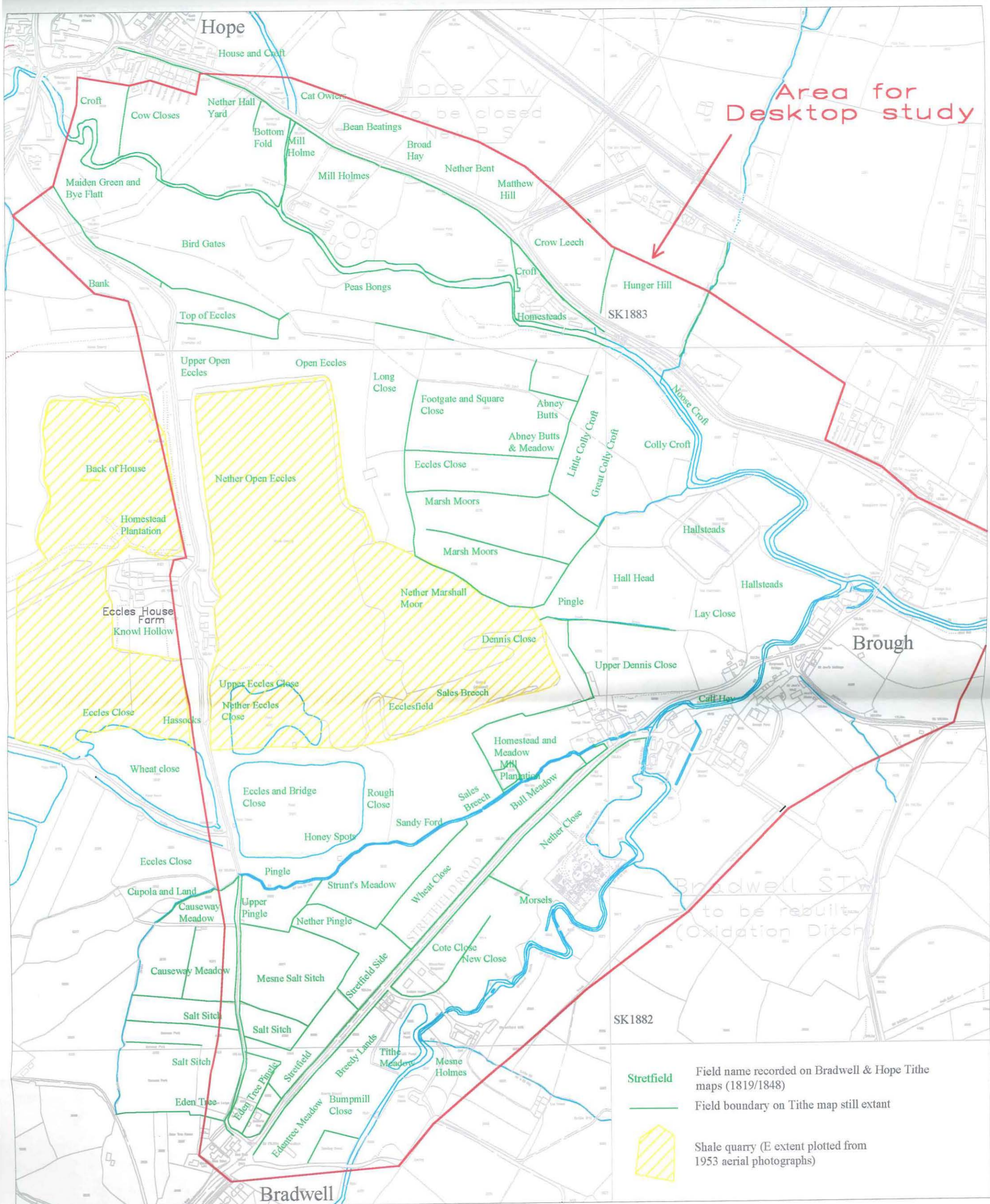


Fig. 1. The Hope, Bradwell, Brough study-area (outlined in red), showing the field-names recorded from the Bradwell and Hope Tithe Maps of 1819 and 1848 respectively. Tithe information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. (c) Crown Copyright. Licence No. AL 100020618. Scale 1: 5000.

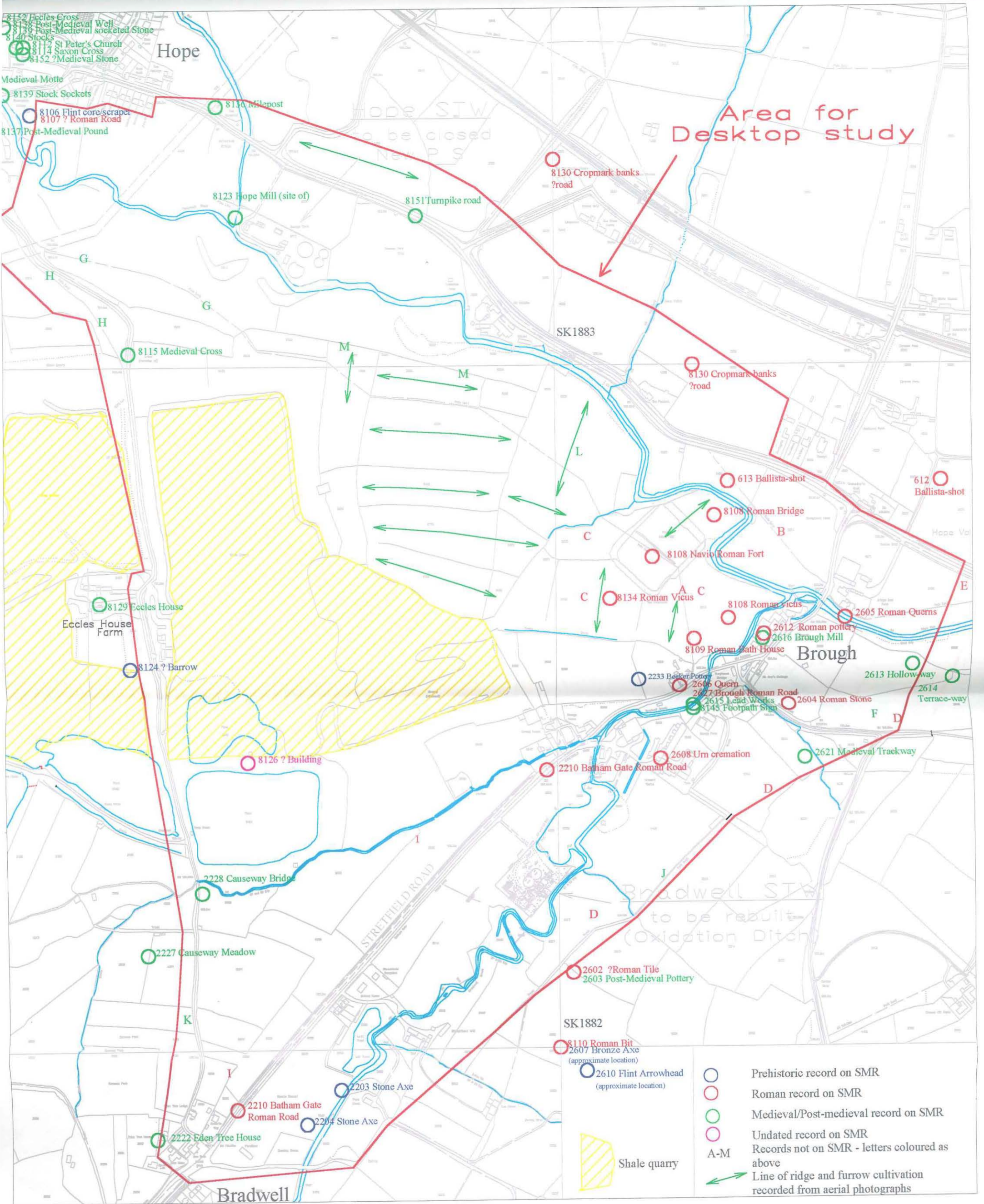


Fig. 2. The Derbyshire Sites & Monuments data (circles) and additional archaeological information (lettered) for the study-area. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. (c) Crown Copyright. Licence No. AL 100020618. Scale 1:5000.

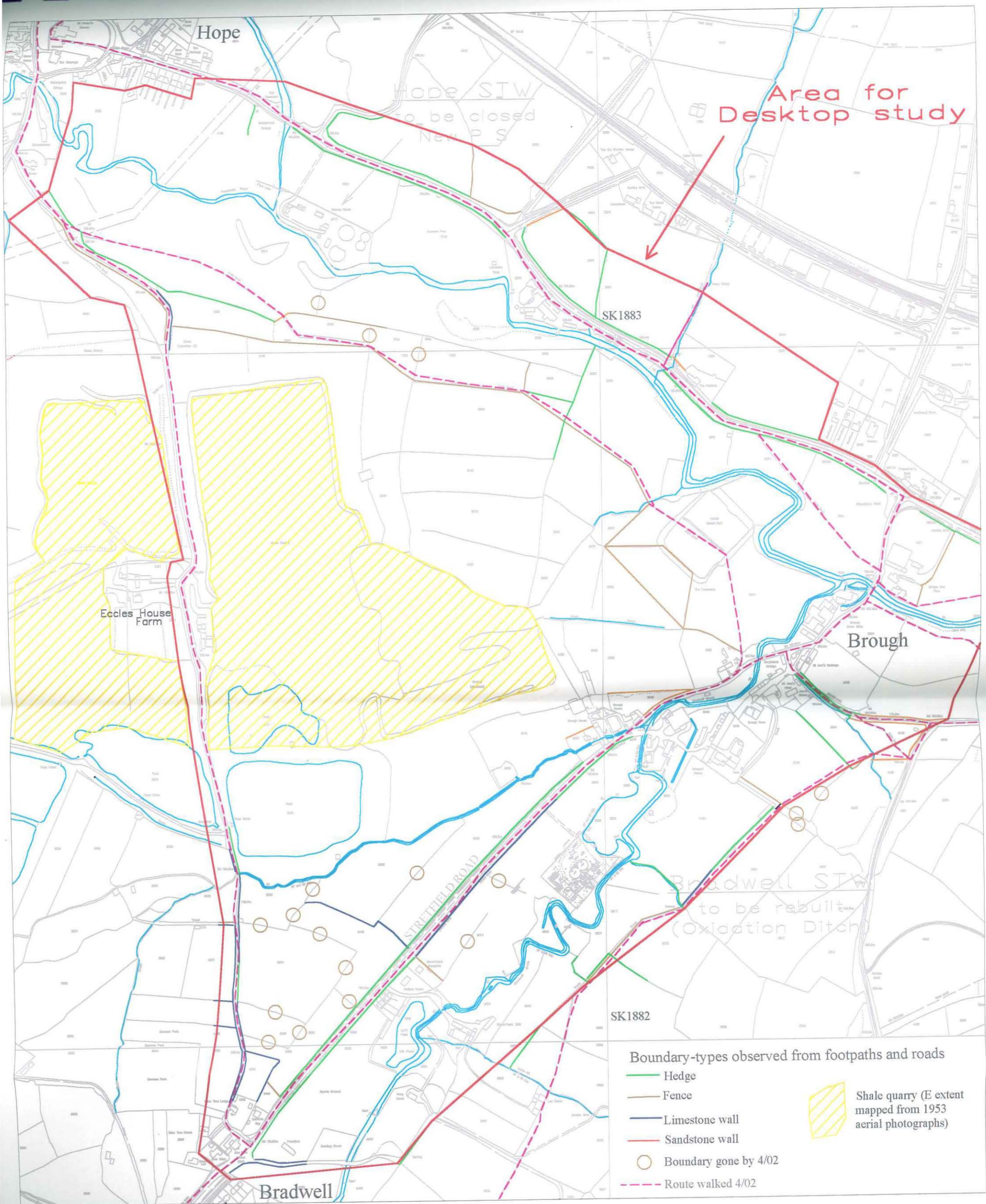


Fig. 3. Boundary-types observed from the footpaths and roads walked for this report. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. (c) Crown Copyright. Licence No. AL 100020618. Scale 1:5000.

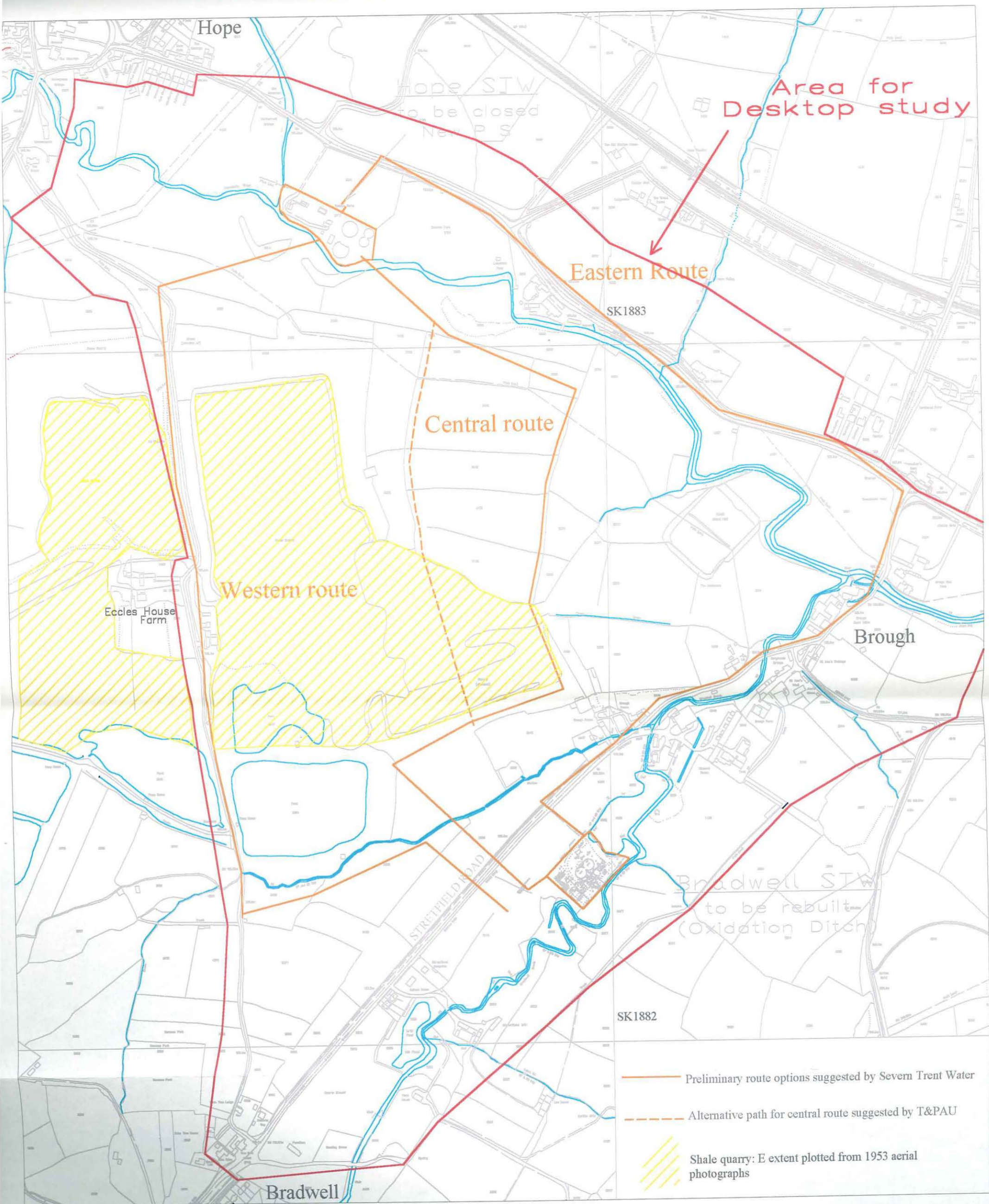


Fig. 4. Preliminary route options suggested by Severn Trent Water (solid line), with alternative path for central route dashed. Information overprinted on Ordnance Survey base map provided by Severn Trent Water, reproduced with the permission of Her Majesty's Stationery Office. (c) Crown Copyright. Licence No. AL 100020618. Scale 1:5000.