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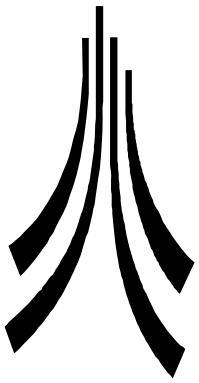

July 1997

POTTAL POOL

SAND AND GRAVEL QUARRY EXTENSION

Staffordshire

Archaeological Assessment Report

Commissioned by:

ARC Central Ltd

POTTAL POOL SAND AND GRAVEL QUARRY EXTENSION

STAFFORDSHIRE

ARCHAEOLOGICAL ASSESSMENT

Checked by Project Manager. ..... Date
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JULY 1997

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ACKNOWLEDGEMENTS

Thanks are due to the staff of the Staffordshire Record Office and the William Salt Library in Stafford, and to Chris Welch of Staffordshire County Council for background information. Thanks are also due to Ian Briggs of ARC Central Ltd for enabling access to the site.

The documentary research was undertaken by Caron Newman and the field survey by Chris Wild. The report was written by Caron Newman and Chris Wild, and edited by Jamie Quartermaine (Project Manager) and Rachel Newman (Deputy Director). The project was managed by Jamie Quartermaine.

EXECUTIVE SUMMARY

An archaeological assessment was carried out for an Environmental Impact Assessment and planning application for an extension to the Pottal Pool sand and gravel quarry in Staffordshire (centred on NGR SJ 976 152). The assessment area comprises woodland to the north of the quarry, within the parish of Teddesley Hay. The work was carried out by the Lancaster University Archaeological Unit (LUAU) on behalf of ARC Central Ltd, and comprised a desk-based study, compiling data from the Staffordshire Sites and Monuments Record and the Staffordshire Record Office in Stafford. This was undertaken alongside a rapid identification survey.

There are no sites recorded within the survey area on the Sites and Monuments Record, although there is an earthwork enclosure of unknown date immediately to the south (Site 01). The assessment area formed part of the royal forest of Cannock in the Middle Ages, but by the end of the sixteenth century it was part of the landed estate of the Littleton family. At least from the eighteenth century, the assessment area was part of a warren, and place name evidence indicates the former presence of keepers' lodges in the vicinity. It appears to have been an area of traditional woodland, although much of this seems to have been cleared by the post-medieval period, and by the nineteenth century deliberate planting had again covered much of the area. Most of the current tree cover dates from the 1920s onwards.

The field survey identified several large banks within the study area, which were presumably related to early phases of commercial forestry. The survey also identified two areas of modern disturbance and a disused quarry (Site 07).

It is recommended that the large banks be recorded prior to their destruction by the proposed quarry extension.

1. INTRODUCTION

1.1 An archaeological assessment was undertaken by the Lancaster University Archaeological Unit (LUAU) on behalf of ARC Central Ltd, who are submitting an Environmental Impact Assessment together with a planning application for an extension to the Pottal Pool sand and gravel quarry, near Cannock, Staffordshire (centred on NGR SJ 976152). The assessment area comprises woodland to the north of the quarry, within the parish of Teddesley Hay.

1.2 The purpose of the assessment was to provide an accurate archaeological assessment of the designated area, within its broader context. The survey was to collate existing information on the archaeology of the site and to determine the significance of the archaeological resource.

1.3 The desk-based study consisted of an appraisal of existing records held by the Staffordshire Sites and Monuments Record (SMR) as well as available secondary sources. Both published and unpublished sources were examined. Due to time constraints, the field survey was carried out in parallel with the desk-based study, therefore both were undertaken between the 2nd June and the 12th June 1997.

1.4 This report sets out the results of the work as a gazetteer in conjunction with a methodology statement, a brief text description of desk-based and field results, an assessment of the archaeological potential within the study area, and an evaluation of the impact that the development proposals will have upon the archaeological resource, with recommendations for any further archaeological investigation.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 2*) was submitted by LUAU in response to a request from ARC Central, for an archaeological assessment of the proposed extension to the Pottal Pool sand and gravel quarry, near Cannock, Staffordshire (centred on NGR SJ 976152). This was designed to meet the requirements of a Project Brief provided by the Staffordshire County Archaeologist (*Appendix 1*).

2.1.2 The project design provided for an initial archaeological assessment involving a desk-based study and an identification survey, the results being presented in this report. The work has been carried out entirely in accordance with the Project Design.

2.2 DESK-BASED STUDY

2.2.1 The Staffordshire Sites and Monuments Record (SMR) was examined for possible sites within the study area or in its vicinity. Manuscript maps and selected other documents were studied in the Staffordshire Record Office (SRO) in Stafford, along with published antiquarian sources. The availability of manuscript maps in the SRO related mainly to those contained in the Littleton papers (SRO D260), but also included an enclosure map of 1827 (SRO Q/RDc 22a). However, there was no tithe map available for the area. There are a large number of other documents relating to the parish of Teddesley Hay, contained in the Littleton Papers (SRO D260), such as deeds, rentals, accounts, etc, as well as a letter book of Sir Edward Littleton, dated 1757-1759, detailing a list of improvements at Teddesley Hay (SRO D1413/1). These also include documents once kept at the William Salt Library, but now transferred to the Record Office. A list of the relevant documents is given at the end of this report (*Section 8*).

2.3 IDENTIFICATION SURVEY

2.3.1 A systematic site inspection was undertaken to investigate the survival of surface archaeological features within the area of the proposed quarry extension, apart from those areas covered in dense forest. Traverses were adjusted to take account of the level of ground cover and included visual inspection of all paths and fire-breaks within the more densely forested parts of the study area. The whole of the area subjected to field walking was either recently felled, or thinned forest and was walked on 20m transects to identify earthworks. The identification survey specifically excluded areas of forestry that were shown as planted in 1979 on the Forest Enterprise Felling plan, as these areas were too densely wooded to enable examination. In practice, some linear features were identified in these areas from tracks and firebreaks. This left an area of 11 hectares of mature woodland. In areas where the topsoil had been disturbed by tree felling artefact survey was also carried out. Areas of anomalous vegetation were investigated by the selective manual excavation of topsoil to investigate the underlying deposits and identify the cause of the anomaly. Excavation of the topsoil was to a maximum depth of 100mm at two of the sites (5 and 6).

2.3.2 The archaeological detail was mapped by using a Global Positioning System (GPS) in areas where the tree cover was not too dense. This system uses electronic distance measurement

along radio frequencies to satellites to enable a positional fix in latitude and longitude which can be converted mathematically to Ordnance Survey national grid. The accuracy of the method is +- 1.0m and is adequate for the general location of sites. In the more densely forested areas sites were located by pacing with respect to the network of tracks within the study area.

2.4 GAZETTEER OF SITES

2.4.1 The collated information on the site and its immediate environs has been presented in the form of a gazetteer in conjunction with an annotated map at 1:10,000 scale showing the positions of the sites. Locations are given as eight-figure National Grid References where possible. A summary description of each site is provided in conjunction with a reference to the source of the information (SMR, cartographic, documentary, field survey) with references as appropriate. An assessment has been given of the interpretation and archaeological potential of each site. Other sites within and around the study area, which were considered to be of background relevance, are mentioned in the text with appropriate SMR references.

2.5 ARCHIVE

2.5.1 A full archive of the desk-based study and field survey has been produced to a professional standard in accordance with the current English Heritage guidelines (English Heritage 1991). The archive will be deposited with the County Record Office and a copy of the report given to the SMR. A copy of the archive will also be available for deposition with the National Monuments Record in Swindon.

3. TOPOGRAPHY

3.1 LOCATION AND GEOLOGY

3.1.1 The assessment area is heavily wooded, and lies on the eastern edge of Teddesley Hay parish. It is situated to the east of the A34 (T), Hednesford to Stafford road, and north of the Rugeley to Penkridge road. The existing Pottal Pool Quarry is to the south of the assessment area, which is known as Badger Slade Wood.

3.1.2 The underlying solid geology of the area is Lower Triassic Sandstone, with Kidderminster/Chester Pebble Bed formations (OS Solid Geology 1990). The overlying drift deposits comprise Boulder Clay and Moraine drift deposits (OS Geological Survey 1977) of sand and gravel.

3.2 VEGETATION COVERAGE OF STUDY AREA

3.2.1 The study area comprises eight different areas of vegetation, and are shown on Figure 4. A brief description of each is given below:

3.2.2 ***Area A*** is situated on the eastern edge of the study area, and was clear-felled several years ago, leaving moderate amounts of dead brush covering about 20% of the ground surface. Removal of the trees in this area has turned the topsoil which allowed artefact survey along the furrows.

3.2.3 ***Area B*** is located in the north-east part of the study area and has been clear-felled more recently, leaving large amounts of green brush which obscured almost 50% of the surface; the brush formed a cover up to 0.5m in height, and possibly obscured smaller topographic features.

3.2.4 ***Area C*** is a narrow strip between Areas B and D. This has recently been clear-felled with large amounts of green brush covering large areas of the surface (over 50%). The northern and western edges had also been replanted with young trees.

3.2.5 ***Area D*** is immediately to the west of Area C. This area had been clear-felled in a similar way leaving green brush which covers *c* 40% of the ground.

3.2.6 ***Area E*** is separated from Area D by a firebreak and comprises thinned pine trees, with a grass and needle-litter understory. This was ideal for topographic inspection, but artefact survey was not possible.

3.2.7 ***Area F*** was located in the north-west corner of the study area and was very similar to Area E, although there were more fallen tree stumps which allowed localised artefact survey.

3.2.8 ***Area G*** was a small wedge of clear-felled forest in the south-west corner of the proposed extension area; up to *c*80% of the ground was covered by dead brush.

3.2.9 ***Area H*** comprises all other parts of the study area and was covered in dense forest. Field inspection was not practical for most of these areas, although it was possible to see *c*10m into the forest on either side of the tracks and fire-breaks which bisected such areas.

4. ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

4.1 HISTORICAL BACKGROUND

4.1.1 The study area lies entirely within the modern civil parish of Teddesley Hay the name of which is probably derived from 'Teddes-' a personal name and the Old English *leah*, which means wood or woodland clearing or glade, and later came to mean pasture or meadow land (Mills 1991, 382). The Hay element also comes from Old English, *hæg,* meaning an enclosed, or hedged piece of land (Cameron 1977, 218). Hays were often found within royal forests as large areas of woodland enclosed by fences or hedges (*Section 4.1.5*) often for the encouragement or entrapment of deer. Historically, Teddesley Hay was included with the parish of Penkridge for the purposes of tithe in the medieval period but, by 1817, it was described as extra-parochial (Midgley 1959, 182).

4.1.2 Little is known about the history of the area before the medieval period. Within Teddesley Hay there are small earthwork enclosures, the dates of which are not known, but which have been postulated as Roman (Page 1968, 185). A short sword or dagger of iron, thought to be of Roman date, was found within the bank of one of these enclosures in 1780 (Midgley 1959, 182; Page 1968, 193). A plan of this enclosure, known as King Dick's Entrenchment, was made in 1921 (SRO D260/M/E/351). Another enclosure, recorded in 1754 as the Old Encampment (SRO D260/M/E/353a 11), lies just to the south of the assessment area, and was archaeologically evaluated in March 1997 (Jones 1997; see below *Section 4.2*). It is possible that these enclosures may be associated with management of animals in the forest hay rather than being features of a pre-medieval period.

4.1.3 Teddesley Hay was part of the royal forest of Cannock in the medieval period. The royal forests were a legal system first imposed on parts of England by the Norman kings (Grant 1991, 3). Forests were generally placed in more sparsely populated areas where poorer land did not encourage cultivation and where often there were existing large tracts of woodland. They were subject to a comprehensive body of laws, operating separately from the common law, and which were designed to protect the hunting rights of the Crown, implemented by specially appointed officials through their own assemblies and courts (Grant 1991, 7). The Crown's hunting rights were defined through the 'venison', that is animals for the hunt, including roe, red and fallow deer as well as wild boar, and through the 'vert', trees and other vegetation required for shelter and food for the game (Grant 1991, 6).

4.1.4 Cannock Forest was in existence by the reign of William I (1066-1087), although the first documentary reference to it dates to the 1140s (Greenslade and Jenkins 1967, 338). In 1290, Cannock Chase was formed within the forest when the area around Cannock and Rugeley was granted to the bishop of Lichfield. A chase was usually a district where the right to 'venison' was granted to a subject (Grant 1991, 30).

4.1.5 Cannock Forest contained a number of hays, or heys. Although the name 'Hay' usually refers to a hedged or fenced enclosure, in Cannock the hays were so large, comprising extensive areas of woodland, that this traditional explanation does not hold true. In this instance, the hays were administrative divisions of the Forest usually known elsewhere as bailiwicks (Grant 1991, 30). Teddesley Hay appears to have been in existence by the reign of Henry I (1100-1135), and it is mentioned by name in 1235 (Greenslade and Jenkins 1967, 338). It remained a division of the royal forest until 1550, when it was granted by the Crown, with all

but one of the other hays, to John Dudley, Earl of Warwick (Midgley 1959, 183; Greenslade and Jenkins 1967, 343).

4.1.6 Although some royal forests were created mainly to provide hunting for the monarch, Cannock Forest seems to have been used more 'as a source of supplies and revenue than of sport' (Greenslade and Jenkins 1967, 342). There are many documentary references in the thirteenth century to huntsmen being sent to take venison for the king. The forest was also a source of revenue from sales of wood and fines paid by the foresters to be allowed to graze animals, and much income was gained from assarts, or woodland clearance for cultivation, and purprestures, or illegal encroachment (Greenslade and Jenkins 1967, 342). This was true of many of the forests by the sixteenth century, when many were more valuable as sources of timber, particularly for ship building, than for hunting (Grant 1991, 184).

4.1.7 By the time the hays had been granted to the Earl of Warwick, they were treated more as landed estates than as royal forests, and by the end of the sixteenth century Cannock Forest had probably ceased to exist (Greenslade and Jenkins 1967, 343). Following the death of the Earl of Warwick in 1554, Teddesley Hay, with the other hays, passed to his widow. She died the following year and the estate subsequently passed into the hands of the Littleton family, who held it of the king (Midgley 1959, 183). The estate remained in the family's hands, and Teddesley Hay became the principal seat soon after 1742 (Midgley 1959, 183).

4.1.8 Following the possession of Teddesley Hay by Sir Edward Littleton in 1558, he undertook to enclose much of the land. This was opposed by Lord Stafford and the Earl of Oxford, whose tenants had a common way through the Hay for driving their cattle to Cannock Wood and Heath (Midgley 1959, 182). Sir Edward turned much of Teddesley Hay into a park, documented in 1589, and his son held *le coppy* (coppice) of the king in 1610 (Midgley 1959, 182). Both park and coppice enclosures were opposed by the inhabitants of neighbouring Penkridge and Bednall (Midgley 1959, 182), as they resulted in fencing off land. The common land was enclosed in 1827 (SRO Q/RDc 22a).

4.2 SITES AND MONUMENTS RECORD

4.2.1 There are no sites recorded on the SMR within the area of the proposed extension to the quarry. However, to the south, within an area already granted permission for extraction, is a large earthwork enclosure (SMR PRN 40326) of about 2000m². The function of the enclosure is not known, and an archaeological evaluation was carried out by the Birmingham University Field Archaeology Unit in March 1997 (Jones 1997). A geophysical survey was carried out, followed by the excavation of five trial trenches. No artefacts were recovered during the evaluation (Jones 1997, 6), and the date and function could not be ascertained. It appears likely that the enclosure relates either to the royal forest or to the early post-medieval park, and may have been used as a small enclosure for deer.

4.3 CARTOGRAPHIC AND DOCUMENTARY EVIDENCE

4.3.1 The earliest available map of the assessment area dates to 1754 (SRO D260/M/E/353a 11). This map, together with three others (SRO D260/M/E/353a 10, 12 and 13), shows the entire area of Teddesley Park, including the Coppice, in the mid-eighteenth century. The map shows the area now occupied by Pottal Pool Quarry, the area with permission to extend the

quarry, as well as the study area (Fig 2). Local place names are given, including the Old Encampment mentioned above (*Section 4.2*). The names appear to be mainly topographical: Fair Slade, Dark Slade, Benty Slade, Benty Hill, Teddesley Head and Plain Field. 'Slade' comes from the Old English *slæde*, meaning land in a (marshy) valley (Field 1972, 206), 'Benty' is from the Old English *beonet*, a type of poor grazing grass (Field 1972, 19), 'Head' means land at the top (Field 1972, 100), and 'Plain' means flat (Field 1972, 169).

4.3.2 In addition to the topographical field names, the map depicts Warren House, Old Coney Lodge Banks and Old Cote Slade. Both 'Warren' and 'Coney' relate to the keeping of rabbits for meat and fur, a practice which had taken place from medieval times (Field 1972, 52). In many places, warrens or coney garths had been deliberately built to house rabbits and encourage them to breed. Old Cote Slade may also relate to the rabbit warren, as 'cote' meant cottage or animal house (Field 1972, 268), and in this instance was probably the name of a valley near to Old Coney Lodge. Although the documentary evidence for the warren is post-medieval, it is possibly significant that warrens were also a feature of medieval royal forests (Grant 1991, 31); warrens were areas where the king reserved the right to hunt animals other than those deemed to be 'venison'. Such animals included hare, fox, wild cat and game birds as well as rabbits.

4.3.3 As well as the place names shown on the 1754 map, there are also two mounds shown on the parish boundary, and marked as round banks (SRO D260/M/E/353a 10); these mounds are also shown on the 1827 Enclosure Map (SRO Q/RDc 22a). They are probably parish boundary markers, but their proximity to the Warren may also suggest that they were disused pillow mounds (artificial rabbit warrens).

4.3.4 The warren, which covered the entire area of the present Pottal Pool Quarry north to Springslade Wood, still appeared to be in use in the eighteenth century, although the area was also common land. A note on a map of Teddesley Warren and 'Copy' (coppice) of 1790 marks it as common land (SRO D260/M/E/423). In the post-medieval period, rabbit warrens were still used to provide fur for the hatting industry (Richard Newman pers comm).

4.3.5 In the eighteenth century, most of the assessment area appears to have been open, with little woodland. Most of the woodland would, presumably, have been cleared and sold for profit by the Crown, although some would also have been used to provide fuel for the iron works by the Springslade Pool (founded 1576) (Midgley 1959, 183). However, Sir Edward Littleton had already replanted considerable areas in the park with oak, ash and other timber (Pitt 1794, 114). Teddesley Park was mainly used for grazing and fern was collected from the common (the Warren) which was mown every year for that purpose (Pitt 1794, 114).

4.3.6 The plantations of trees were increased in the nineteenth century, particularly in the area of the Warren, although by the time the common was enclosed in 1827 (SRO Q/RDc 22a) most of the area called the Warren was still open pasture. The warren still appears to have been in use, as the rights of the warren are mentioned in the enclosure award.

4.3.7 By 1866, woodland had been planted over large areas of the Warren (SRO D1121/M/29), including all of the eastern half and the southern side, as well as discrete plantations at Warren House, Benty Hill and elsewhere. The names of the fields (SRO D1121/M/30), created at enclosure, reflect the topographical names shown on the 1754 map (SRO D260/M/E/353a 10). An undated map, probably of the early twentieth century (SRO D260/M/E/355), shows that the woodland extended even further, leaving only the western fields unwooded.

4.3.8 Some of the broad leaved woodland at Teddesley Hay was felled during the Second World War (Midgley 1959, 183) and considerable replanting took place in the late 1970's by the Forestry Commission (Forest Enterprise 1995).

4.4 IDENTIFICATION SURVEY

4.4.1 The identification survey revealed a total of 10 archaeological sites within the area surveyed. Seven of these are very similar being linear banks, *c* 2.5m wide and 0.5 - 1.0m high (Sites 8-14). They contained many tree stumps, up to 0.4m in diameter, and appear mainly to be silver birch. Many of the banks also have silver birch trees growing on top, of differing maturity up to a maximum of *c*15m in height. Several of the banks mark a boundary between different plantation areas, whereas others have trees of similar maturity and density on either side. For this reason it is thought that these banks do not relate to the present forestry planting of this area, but instead relate to an earlier forestry layout. It was also observed that they do not always run parallel to the present boundaries, which suggests that there has been a reorientation of the planting scheme.

4.4.2 Site 5 contained the only patch of nettles within the study area. The presence of nettles is a distinctive sign of disturbance, particularly on Cannock Chase, where excavation of the topsoil alters the acidity of the soil, allowing nettles to flourish. The site consisted of a small elongated bank *c*10m long, 4m wide and up to 1.2m high. To the immediate west was a sub-rectangular depression aligned east/west, cut into the upslope of the hill to a maximum depth of 1.3m. This appears to be a machine-cut trench, the excavated material probably being used to create the bank to the east. Test excavation revealed modern ceramic, brick, asbestos and plastic debris. Much of the structure of the bank appeared to be constructed from timber, probably felling waste, which was badly decayed.

4.4.3 Site 6 also comprised a bank and associated depression. The bank was of a similar size, but up to 1.5m high at the northern end; there were no nettles and the bank was grassed over. The depression immediately to the east was *c*10m long and was machine-cut, with straight sides, to a depth of 0.4m; the base of this was water-filled. It is possible that the bank was part of the linear feature (Site 13) to the east of the new track, which may have truncated it. To the west of this site is an area of new planting and a western section of Site 6 may have been removed during this planting. Small-scale excavation revealed the bank to be of earth construction and no artefacts were recovered.

4.4.4 A shallow sub-circular depression (Site 7) was identified in the north-western corner of the study area, which now contains a stagnant and overgrown pond. It was *c*5m in diameter and 1.0m deep, with a small upcast bank *c*0.3m high along the western side. This feature was probably a local extraction site, but it was not possible to establish its date.

5. CONCLUSIONS

5.1 DESK-BASED STUDY

5.1.1 There is very little evidence to show any archaeological activity in the locality before the medieval period. The enclosure to the south of the assessment area is likely to have been associated with the medieval Hay, rather than being a feature of an earlier period.

5.1.2 The area of highest potential would appear to relate to features associated with the Warren, either artificial mounds built to house the rabbits, or to features such as lodges for the warren keepers. Place name evidence suggests that these existed before the mid-eighteenth century. However, these are outside the area of the proposed quarry extension.

5.1.3 As most of this area was only enclosed in the nineteenth century, there are unlikely to be field boundaries of any great antiquity.

5.2 IDENTIFICATION SURVEY

5.2.1 The survey revealed evidence of forestry practices which predate the current layout, although not necessarily of any antiquity.

5.2.2 Only one site was identified by differing vegetation (Site 5), and this proved to be a modern feature. However, in Areas A to D, and Area G, which had been clear-felled, patches of nettles would have been badly disturbed by the forestry activity and, if still present, would have been very difficult to observe due to the density, and height of the brush left by the felling. In other areas of Cannock Chase, where nettles were observed, they were only in areas of thinned forest; it is unlikely that they would grow in the areas of dense forestry because of lack of light. Thus a lack of nettles in all areas other than Areas E and F is more likely caused by adverse conditions rather than a lack of sub-surface activity.

5.2.3 The pond identified in the north-west corner of the study area is probably an extraction pit, but it could not be dated on the surface evidence. It was of a size common for pre-industrial localised extraction, and probably relates to early sand/gravel, or even possibly coal mining in the area.

6. ARCHAEOLOGICAL IMPACT AND RECOMMENDATIONS

6.1 IMPACT

6.1.1 This assessment has highlighted the presence of some archaeological features within the proposed extension area, although with one possible exception (Site 7), these all appear to be modern. All these sites will be destroyed by the proposed quarry extension.

6.1.2 The assessment has also highlighted the adverse conditions for this type of field inspection, which means that it was not possible to observe, to a satisfactory standard, all parts of the study area.

6.2 RECOMMENDATIONS

6.2.1 Current policy dictates that wherever possible identified sites of archaeological importance are preserved *in-situ* as embodied in the Institute of Field Archaeologists *Code of Conduct* and the Department of Environment *Planning Policy Guidance Notes* **16**. The present preliminary assessment, being restricted in its scope, was able to establish areas of only limited archaeological potential but other sites not detectable by documentary study or surface inspection may exist.

6.2.2 Features of archaeological importance potentially remain undetected due to adverse surface conditions; however, the negative survey evidence is largely reinforced by a lack of documentary evidence for activity. It is probable that the area contained relatively few archaeological monuments or landscapes and few of these have survived the more recent forestry planting. It is, however, recommended that the banks, identified by the present programme, be recorded by mitigation survey prior to their destruction by the proposed quarry extension. Some of these banks are within dense forest and it is recommended that such work is undertaken following any woodland thinning operations.

7. GAZETTEER OF SITES

7.1 DESK-BASED SITES

Site number **01**
Site name Badger Slade
NGR SJ 978 153
Site type Earthwork enclosure
Period unknown / medieval
Source SMR PRN 40326; Jones 1997
Description
An earthwork enclosure, covering *c* 2000m². It has been evaluated but no datable artefacts were recovered.
Assessment
The site lies to the south of the assessment area.

Site number **02**
Site name Old Coney Lodge Bank
NGR SJ 982 155
Site type Rabbit warren
Period medieval/post-medieval ?
Source SRO D260/M/E/263a 10
Description
A place name indicates the presence of an old (pre-eighteenth century) rabbit warren and a possible keeper's lodge.
Assessment
The site lies close to, and just to the east of, the assessment area.

Site number **03**
Site name Old Cote Slade
NGR SJ 980 153
Site type Cottage, animal house
Period medieval /post-medieval ?
Source Documentary (SRO D260/M/E/263a 10)
Description
The site of a pre-eighteenth century cottage, which was possibly associated with the rabbit warren (Site 02).
Assessment
The site lies just to the south-east of the assessment area.

Site number **04**
Site name Warren House
NGR SJ 9725 1575
Site type Building
Period Post-medieval
Source Documentary (SRO D260/M/E/263a 10; D1121/M/29)

Description
A building shown on maps from 1754 to 1866. It was the lodge for a warren keeper.
Assessment
The site lies just outside the assessment area, to the west.

7.2 IDENTIFICATION SURVEY SITES

Site Number **05**
Site name Badger Slade Wood
NGR SJ 3978 3155
Site type Bank and depression
Period Modern
Source Identification Survey
Description
A nettle-covered elongated bank 1.2m high, 4m wide and 10m in length. It has a sub-rectangular machine-excavated depression which was 13m in length, up to 5m wide, and up to 1.3m deep at the western end where it cuts into the slope of the hill. Small scale excavation by LUAU of both areas revealed modern ceramic, brick, asbestos, and plastic debris. The bank also contains large amounts of decaying timber, probably a pile of felled brush waste. It would appear that some of the bank was made from upcast from the depression, whilst the remainder of the fill from the depression has been moved elsewhere, possibly to make up ground to the north to reduce the gradient of the track up the hill to the west.
Assessment
The site lies within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **06**
Site name Badger Slade Wood/Dark Slade Wood
NGR SJ 3978 3159
Site type Bank and depression
Period Modern
Source Identification Survey
Description
A small, oval, grass-covered bank aligned north-east/south-west and measuring 10m x 3m and 1.5m in height at the north-east end; it slopes to *c*1m at the south-west end. One young silver birch tree was observed growing on the north-west side. There was a machine-cut depression (measuring 10m x 1.6m x 0.3m in depth), aligned east/west, immediately to the east of the bank; the bottom of the ditch is water filled. This is possibly part of the linear bank (Site 13) which is located on the opposite (eastern) side of the forest track; it would appear that the bank (Site 13) has been truncated by the track, and damaged by felling/replanting to its west. Small-scale excavation of the bank revealed it to be of an earthen construction.

Assessment
The site lies within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **07**
Site name Dark Slade Wood
NGR SJ 3975 3161
Site type Quarry/Pit
Period Post-medieval
Source Identification Survey
Description
A sub-circular depression *c* 5m in diameter and *c* 1m deep. The site is a stagnant pond that has silted up and contains large quantities of reeds; it may originally have been deeper. An upcast bank, *c*3m wide and 0.3m high, is located on the western side of the depression. Although no datable evidence was observed, the site has the form of a localised quarry.
Assessment
The site lies within the study area and will be destroyed by the proposed to the sand and gravel quarry.

Site Number **08**
Site name Warren Hill
NGR SJ 3975 3158
Site type Linear bank
Period Post-medieval
Source Identification Survey
Description
A linear bank of earthen construction is *c2*.5m wide and 0.5 - 1.0m high. It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch; it also has silver birch trees growing on top, which are of differing maturity and up to a maximum of *c*15m in height. The general tree type and maturity are similar on both sides of the bank. The bank continues outside the study area to the west.
Assessment
The site lies partly within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **09**
Site name Warren Hill
NGR SJ 3976 3156
Site type Linear bank
Period Post-medieval
Source Identification Survey
Description
A linear bank of earthen construction (*c2*.5m wide and 0.5 - 1.0m high). It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch; it also had silver birch trees growing on top of varying maturity and up to a maximum of *c*15m in height. The tree type and maturity is similar on both sides of the bank. The bank continues outside the study area to the west.
Assessment
The site lies partly within the study area and will be destroyed by any extension to the sand and gravel quarry.

Site Number **10**
Site name Deer Slade
NGR SJ 3975 3156
Site type Linear bank
Period Post-medieval
Source Identification Survey
Description
A linear bank of earthen construction (*c2*.5m wide and 0.5 - 1.0m high). It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch, it also had silver birch trees growing on top, of differing maturity up to a maximum of *c*15m in height. The tree type and maturity is similar on both sides of the bank. The bank continues outside the study area to the west.
Assessment
The site lies partly within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **11**
Site name Badger Slade
NGR SJ 3976 3154 - 3978 3154
Site type Linear bank
Period Post-medieval
Source Identification Survey
Description
A linear bank, of earthen construction, *c2*.5m wide and 0.5 - 1.0m high. It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch, it also had silver birch trees growing on top, of differing maturity up to a maximum of *c*15m in height. The tree type and maturity is similar on both sides of the bank. The bank was not observed in the clear-felled area to the east, and may have been truncated by this process.
Assessment
The site lies within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **12**
Site name Deer Slade/Badger Slade Wood
NGR SJ 3976 3155 - 3978 3155
Site type Linear bank
Period Post-medieval
Source Identification survey

Description
A linear bank of earthen construction, *c2*.5m wide and 0.5 - 1.0m high. It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch, it also has silver birch trees growing on top, of differing maturity up to a maximum of *c*15m in height. The tree type and maturity is continuous both sides of the bank. The bank was not observed beyond the forestry track which forms its north-eastern boundary.
Assessment
The site lies within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **13**
Site name Dark Slade Wood
NGR NY 0560 2193
Site type Linear bank
Period Post-medieval
Source Identification Survey
Description
An elongated spoil heap which is *c*5m high. It is shown on current OS mapping, but not on the OS 1st edition mapping. It is grassed over, and there is some burnt rock visible on top.
Assessment
The site lies within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

Site Number **14**
Site name Dark Slade Wood
NGR SJ 3975 3161
Site type Linear bank
Period Post-medieval
Source Identification survey
Description
A linear bank of earthen construction, *c2*.5m wide and 0.5 - 1.0m high. It contains many tree stumps, up to 0.4m diameter, which appear mainly to be silver birch. It also has silver birch trees growing on top, of differing maturity up to a maximum of *c*15m in height. The tree type and maturity is similar on both sides of the bank. The bank continues outside the study area to the north-east.
Assessment
The site lies partly within the study area and will be destroyed by the proposed extension to the sand and gravel quarry.

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D260/M/E/353a 11, 1754 Teddesley Warren, scale 1 inch to 4 chains

D260/M/E/353a 12, 1754 Teddesley Coppice, scale 1 inch to 4 chains

D260/M/E/353a 13, 1754 Land to the north of Teddesley Coppice, bounded by the Coppice, Teddesley Park, the Warren, and Acton and Bednall liberty, scale 1 inch to 4 chains

D260/M/E/355, nd Teddesley Hall and grounds, scale 6 inches to 1 mile

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APPENDIX 1
PROJECT BRIEF

APPENDIX 2
PROJECT DESIGN

Lancaster University Archaeological Unit

April 1997

POTTAL POOL SAND AND GRAVEL QUARRY, PROPOSED EXTENSION

STAFFORDSHIRE

ARCHAEOLOGICAL ASSESSMENT

Proposals

The following project design is offered in response to the brief set out by Staffordshire County Council, Archaeology Department, on behalf of ARC Central, for an archaeological evaluation in advance of a sand and gravel quarry extension at Pottal Pool, Staffordshire.

1. INTRODUCTION

1.1 The proposed development at Pottal Pool, near Cannock, has the potential to contain sites of all periods but particularly from the medieval and post-medieval periods. By 1236 Cannock Chase was a part of the Cannock Royal Forest but in the 1570's much of the woodland was sold off for iron production. In the nineteenth century the area was extensively landscaped and the commons were enclosed. There are a number of sites identified from the SMR within the vicinity of the study area, which include a possible deer pound and place names referring to a rabbit warrener's house and a cottage (Welch 1997). However, there are no SMR sites identified within the study area.

1.2 A Environmental Impact Assessment is required to accompany a planning application for an extension of Pottal Pool sand and gravel quarry. This requires the implementation of an archaeological assessment to evaluate the impact of the proposals upon any archaeological resource. This assessment is aimed at evaluating the quantity, period and quality of any sites within the context of the surrounding landscape.

1.3 The Lancaster University Archaeological Unit has considerable experience of the evaluation and assessment of sites of all periods, having undertaken a great number of small and large scale projects during the past 15 years. Evaluations and assessments have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. LUAU has been involved in extensive artefact survey work in Staffordshire as part of the North West Wetlands Survey (NWWS) and LUAU has also undertaken archaeological work associated with a number of mineral extraction developments throughout the north of England, including an evaluation at Condover, Shropshire for ARC Central. LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct.

2. OBJECTIVES

2.1 The following programme has been designed, in accordance with the brief supplied by Chris Welch of Staffordshire County Council's Archaeology Department to provide an accurate initial archaeological assessment of the designated area, within its broader context. The required stages to achieve these ends are as follows:

2.2 ***Desk Top Survey:*** To accrue an organised body of data to inform the field inspection.

2.3 ***Field Inspection:*** A walk-over survey to identify the existence and extent of any surviving archaeological features from a detailed visual inspection. Included within this programme there may be a requirement for a limited investigation of surface features by sample manual excavation.

2.4 ***Assessment Report:*** A written assessment report will consider the significance of the data generated by this programme, within a local and regional context.

3. METHODS STATEMENT

3.1 The following work programme is submitted in line with the stages and objectives of the archaeological work summarised above.

3.2 **DESK TOP SURVEY**

3.2.1 The following will be undertaken as appropriate, depending on the availability of material. The level of such work will be dictated by the timescale of the project.

3.2.2 ***Documentary and Cartographic Material:*** This work will rapidly address the full range of potential sources of information within a documentary study area that will extend up to 500m beyond the limits of the quarry

extension in order to provide a broad context for the archaeological resource affected by the quarry extension. It will include an appraisal of the Staffordshire Sites and Monuments Record, as well as appropriate sections of County histories, early maps, and such primary documentation (tithe and estate plans etc.) as may be reasonably available. It will also examine the evaluation undertaken for the consented extraction area to the south. Particular attention will be paid to field and place-names recorded on early cartographic sources as these often provide important evidence of archaeological activity. Any photographic material lodged in either the County Sites and Monuments Record or the County Record Office will be studied. However, as the area has been wooded since at least the 1920's, it is not proposed to undertake a search of aerial photographic records. Published and unpublished documentary sources will also be examined and assessed. This work will involve a visit to the Staffordshire Record Office in Stafford and will consult with the National Monuments Record as appropriate.

3.2.3 ***Physical Environment:*** A rapid desk-based compilation of geological (both solid and drift), pedological, topographical and palaeoenvironmental information will be undertaken. This will not only set the archaeological features in context but also serves to provide predictive data, that will increase the efficiency of the field inspection.

3.2.4 ***Collation of Data:*** The data generated by 3.2 (above) will be collated and analysed in order to provide an evaluation of the nature and significance of the known surface and subsurface remains within the designated area. It will also serve as a guide to the archaeological potential of the area to be investigated, and the basis for the formulation of any detailed field programme and associated sampling strategy, should these be required in the future.

3.3 FIELD INSPECTION

3.3.1 ***Field Survey:*** It is proposed to undertake a level 1a archaeological survey (Appendix 1) of the study area at the earliest opportunity before bracken growth restricts examination of the area. Such a rapid surface inspection will record the location, extent, and nature of any visible surviving archaeological remains within the accessible extent of the proposed quarry extension. This will exclude areas of dense, young tree growth where access will be severely restricted and where there is likely to have been severe disturbance of the ground surface by deep forestry ploughing. By contrast earlier plantings are likely to have been hand planted and the maturity of the trees will be such that access by field workers will not be adversely affected. The field inspection will exclude areas shown as planted in 1979 on the Forest Enterprise Felling Plan and therefore survey will investigate *c* 11 hectares of mature woodland. The reconnaissance will be undertaken in a systematic fashion, walking on approximately 20m wide transects.

3.3.2 Any identified sites will be located by Electronic Distance Measuring (EDM) trilateration with respect to OS detail as appropriate and will be recorded to an accuracy of +- 10m.

3.3.3 All archaeological information collected in the course of field inspection will be recorded in standardised form, and will include accurate national grid references. This will form the basis of a gazetteer, to be submitted as part of the report. A photographic record will be undertaken simultaneously. An early surface inspection such as this is highly recommended, as such work can frequently double the amount of archaeological information for an area. This fieldwork will result in the production of plans at a scale of 1:2500 or 1:1250 as appropriate, recording the location of each of the sites listed in the gazetteer.

3.3.4 ***Subsurface Investigation:*** If the form and function of sites, identified by the walkover survey, are not evident from surface inspection, a limited sub-surface exploration will be undertaken by manual excavation. This will be limited to the selective removal of topsoil (max. 100mm depth) and will be intended to identify the make up and any finds from a surface feature. Even if the sample examination does not inform the function of the feature or monument, there is no requirement to undertake further, more intrusive investigation at this stage.

3.3.5 ***Recording:*** All information identified in the course of the site works will be recorded stratigraphically, if appropriate, with sufficient pictorial record (plans and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.

3.3.6 Results of the field investigation will be recorded using a system, adapted from that used by Central Archaeology Service of English Heritage, for both artefacts and objects. The archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). All artefacts and ecofacts will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Samples will be collected for technological, pedological, palaeoenvironmental and chronological analysis as appropriate, but it is only intended to process such material for assessment at this stage. If necessary, access to conservation advice and facilities can be made available.

3.4 EVALUATION REPORT

3.4.1 ***Archive:*** The results of **3.1-3.2** above will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition, 1991*). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include summary processing and analysis of any features or surface collection finds recovered during fieldwork. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. The expense of preparing such an archive is part of the project cost, but only represents a very small proportion of the total.

3.4.2 This archive can be provided in the English Heritage Central Archaeology Service format, both as a printed document and on computer disks as ASCII files, and a synthesis (in the form of the index to the archive and the report) will be deposited with the Staffordshire Sites and Monuments Record. A copy of the archive will also be available for deposition in the National Archaeological Record in London. LUAU practice is to deposit the original record archive of projects (paper, magnetic, and plastic media) with the appropriate County Record Office, and a full copy of the record archive, should any material be recovered, with the material archive (artefacts, ecofacts, and samples, at this stage from surface collections) with an appropriate museum.

3.4.3 ***Evaluation Report:*** Two bound and one unbound copies of a written synthetic report will be submitted to the client, a copy to Staffordshire County Archaeologist, Staffordshire County Council. The report will include a copy of the brief and the accepted project design, and indications of any agreed departure from that design. It will also contain a summary statement of the findings which can be used as a separate document, if required. It will present, summarise, and interpret the results of the programme detailed in 3.1 - 3.2 above, and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including a map and gazetteer of known or suspected sites identified within or immediately adjacent to the study area. It will also include a complete bibliography of sources from which the data has been derived, and a list of further sources identified during the programme of work, but not examined in detail. This report will identify areas of defined archaeology and an assessment and statement of the actual and potential archaeological significance of each site within the broader context of regional and national archaeological priorities will be made. The report will make a clear statement of the likely archaeological implications of the proposed quarry extension and will make recommendations for any further phases of archaeological work. The report will be in the same basic format as this project design; the illustrative material can be tailored to the specific requests of the client (e.g. particular scales etc.), subject to discussion. A copy of the report can be provided on 3.5" disk (IBM compatible format).

3.4.3 ***Confidentiality:*** The evaluation report is designed as a document for the specific use of the client, for the particular purpose as defined in the project brief and this project design, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose, can be fulfilled, but will require separate discussion and funding.

3.5 OTHER MATTERS

3.5.1 ***Access:*** It is assumed that the access agreements will be obtained by ARC Central.

3.5.2 ***Health and Safety:*** LUAU provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1991) and risk assessments are implemented for all projects.

4. PROJECT MONITORING

4.1 ARC CENTRAL

4.1.1 LUAU will consult with ARC Central regarding access to land within the study area. This consultation will include, if required, the attendance of a representative of that company at any meetings convened with the Head of Archaeology of Staffordshire County Council or his representative to discuss progress or the report.

4.2 STAFFORDSHIRE COUNTY COUNCIL

4.2.1 Any proposed changes to the project brief or the project design will be agreed with the head of Archaeology of Staffordshire County Council in coordination with the client. LUAU will arrange with the County Archaeologist for a preliminary meeting at the commencement of the contract, if required and also a site meeting to discuss the requirements for the contingency trenching, following completion of stages 3.1-3.2.

5. WORK TIMETABLE

The phases of work would comprise:

5.1 ***Desk Top Survey***
A three day period is required to collate all the available data.

5.2 ***Field Inspection***
Rapid fieldwalking for two days will be required and will need to be at the earliest opportunity before bracken growth obscures the sites. This includes any testing of features of uncertain function.

5.3 ***Prepare Assessment Report***
To be completed within three weeks of completion of fieldwork

LUAU can execute projects at very short notice once an agreement has been signed with the client. LUAU would be able to submit the report to the client within four weeks from the commencement of the project.

6. OUTLINE RESOURCES

The following resource base will be necessary to achieve the proposals detailed above.

6.1 ***Desk Top Survey***
3 man-days Project Officer

6.2 ***Field Inspection***
2 man-day Project Supervisor
2 man-day Project Assistant

6.3 ***Assessment Report***
2 man-days Project Supervisor
1 man-days Draughtsperson

The project will be under the direct line management of **James Quartermaine BA Surv Dip MIFA** (Unit Project Manager) to whom all correspondence should be addressed. All Unit staff are experienced, qualified archaeologists, each with several years professional expertise.

ILLUSTRATIONS

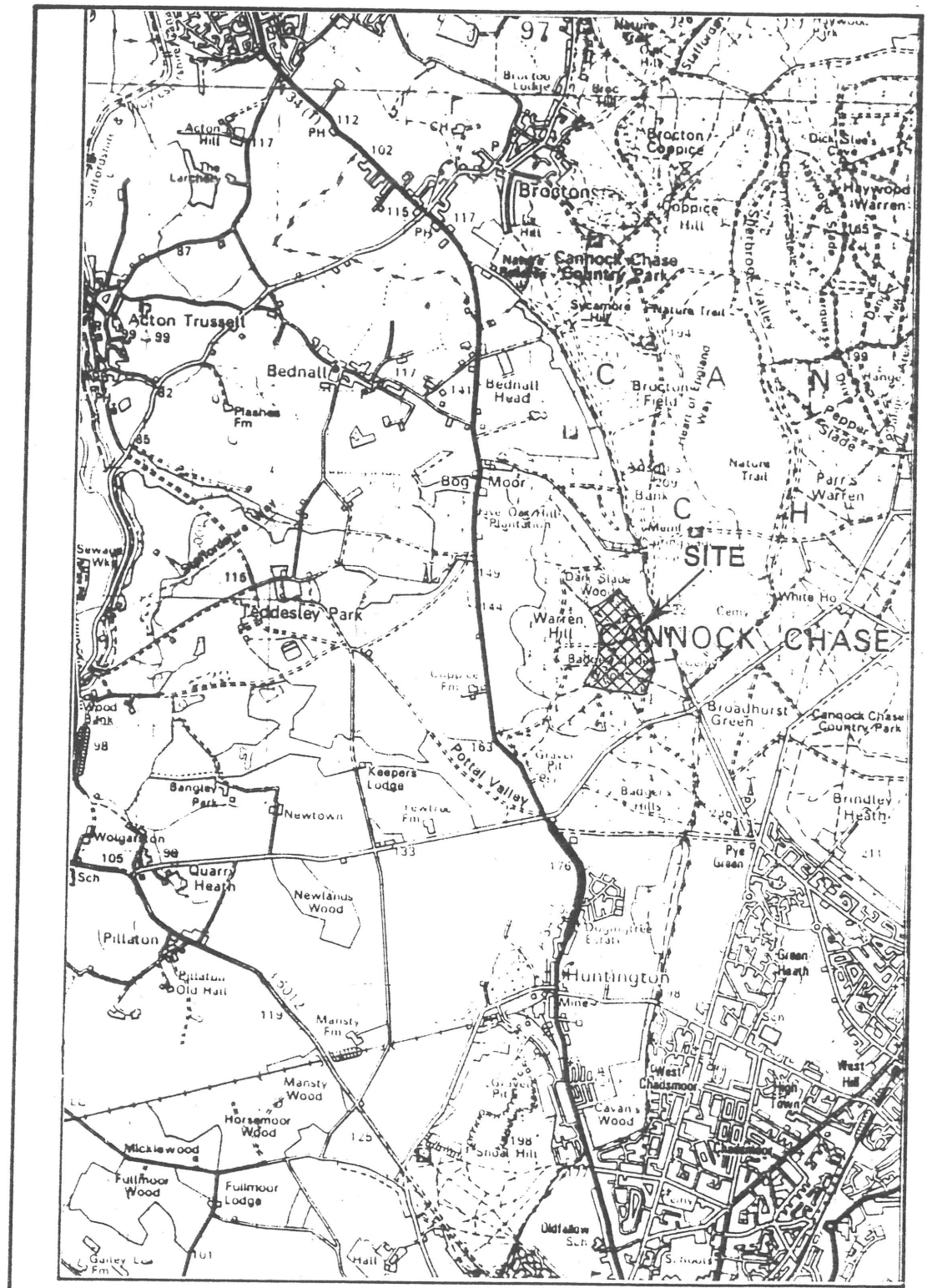

Fig 1 Site Location

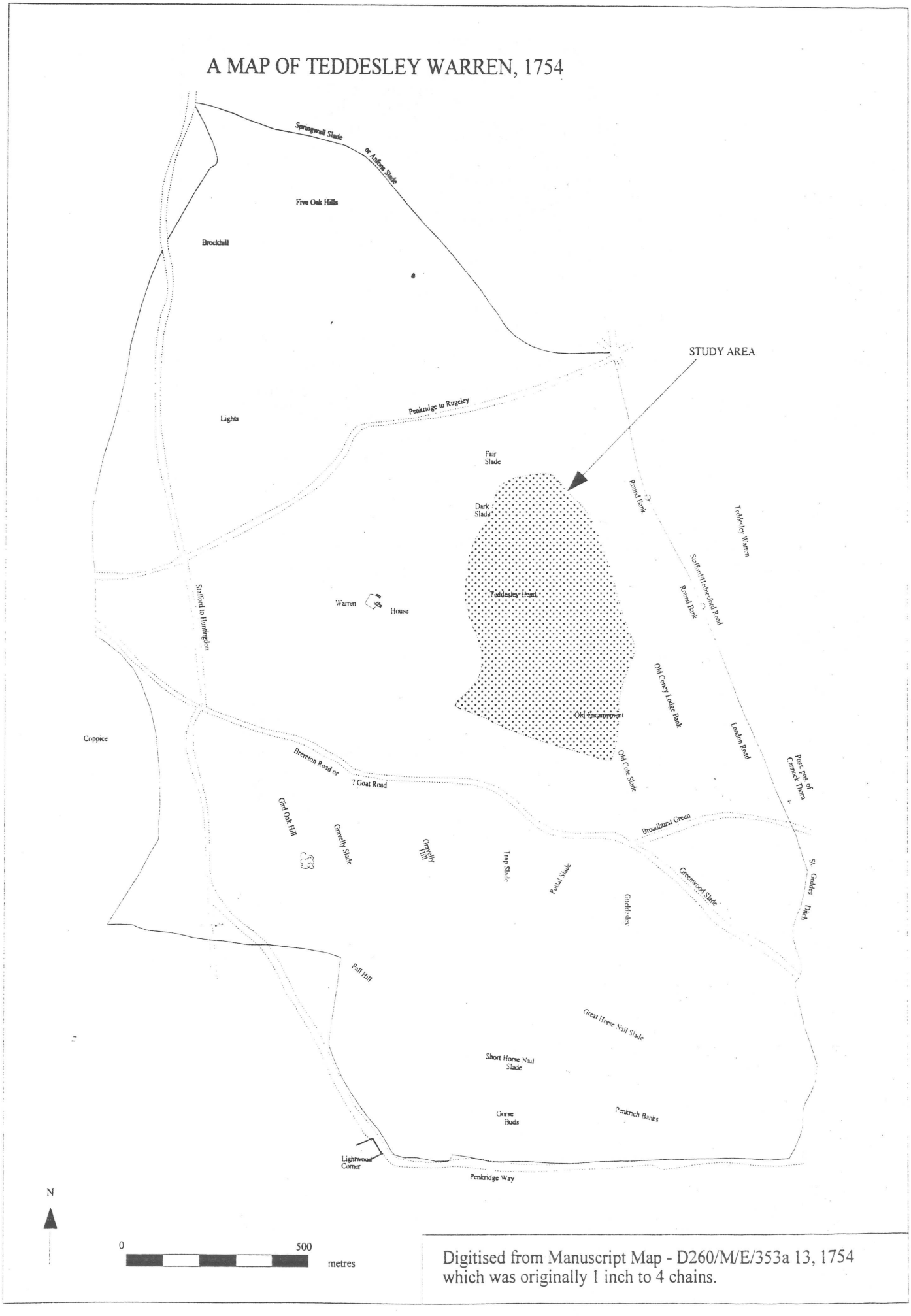

Figure 2: Land to the north of Teddesley Coppice, bounded by the Coppice, Teddesley Park, the Warren, and Acton and Bednall liberty (D/M/E/353a 13, 1754)

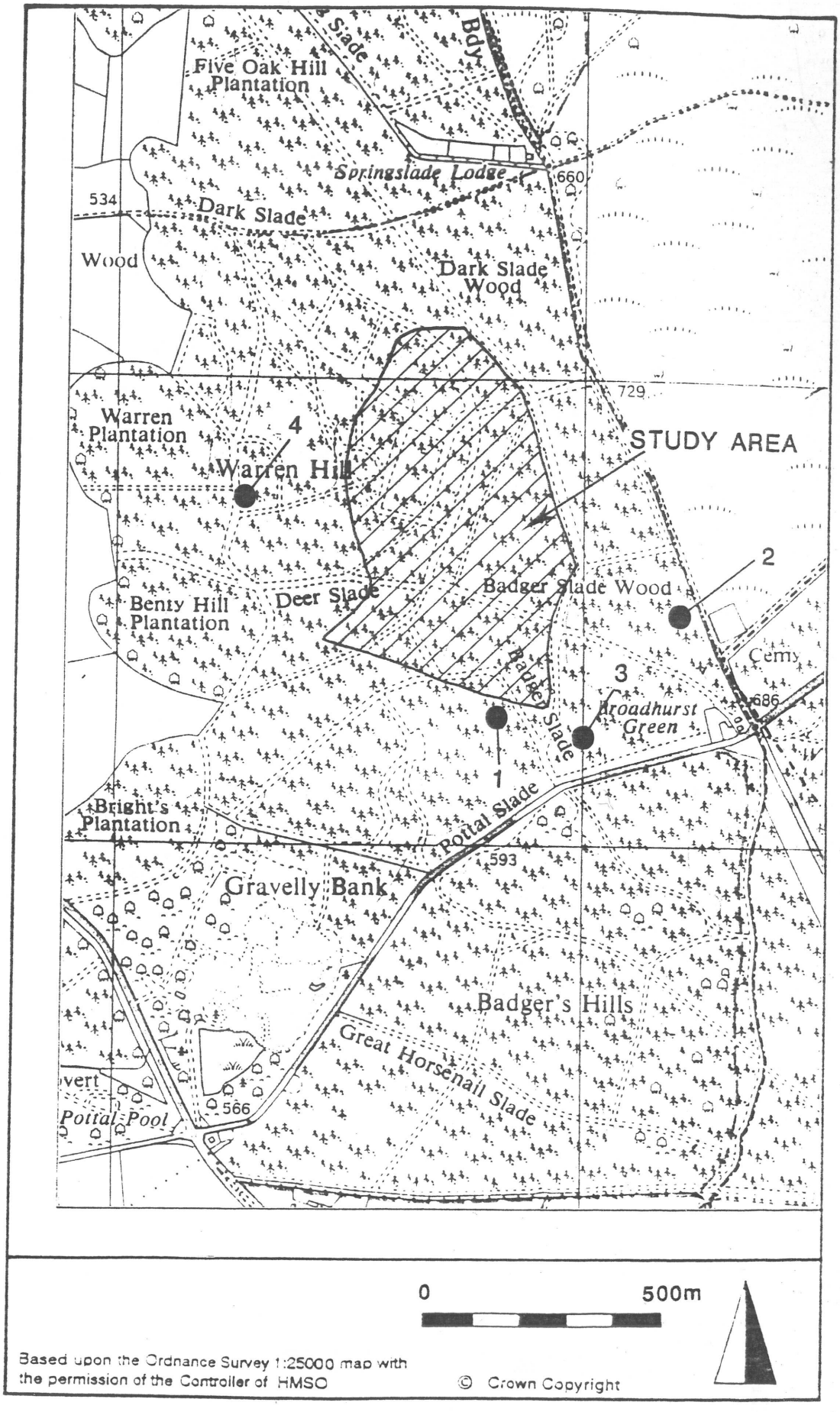

Fig 3 Documentary Survey Sites Location Plan

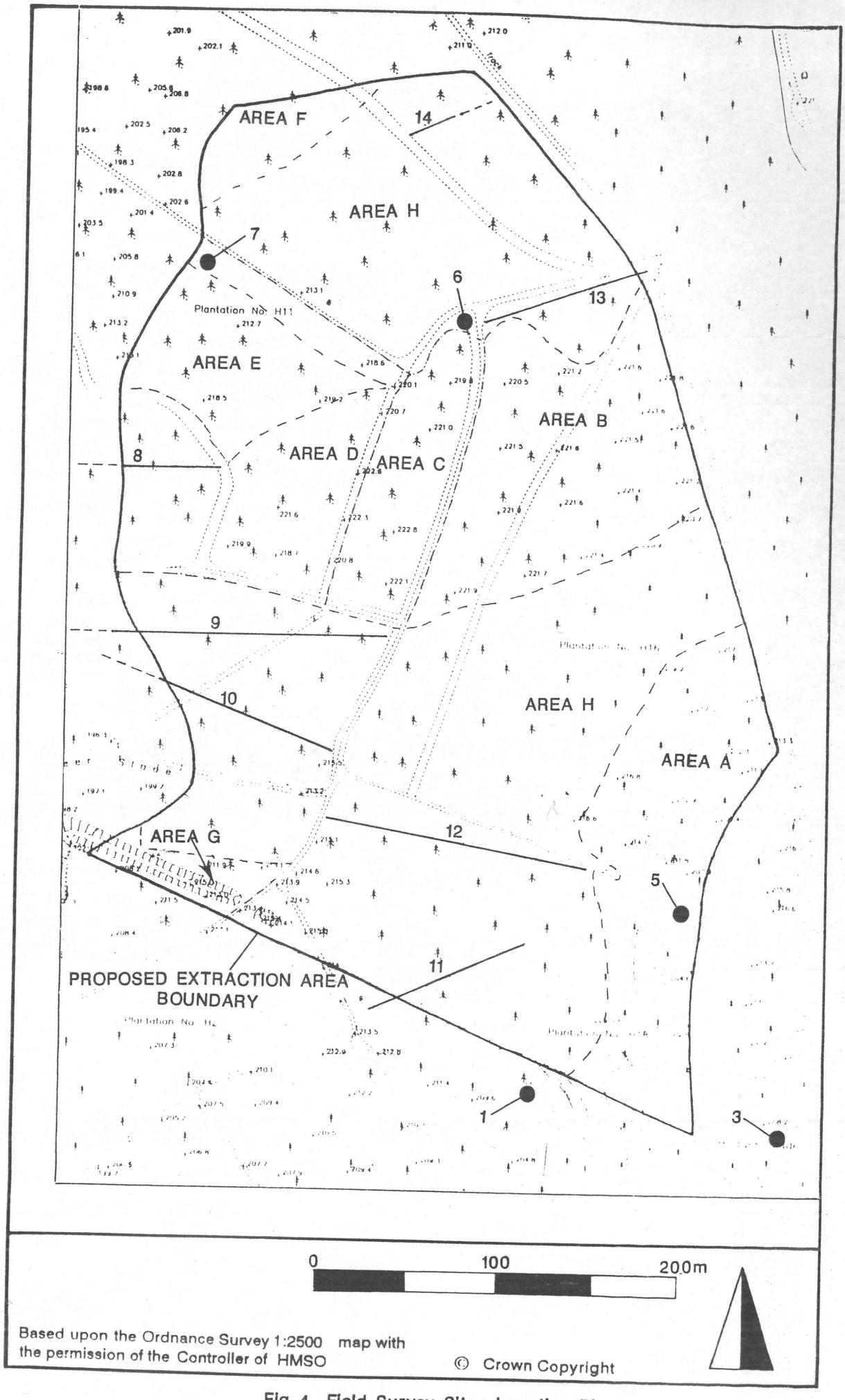

Fig 4 Field Survey Sites Location Plan