WEST SUSSEX COUNTY COUNCIL

A27 ARUNDEL BYPASS

STAGE 2 ARCHAEOLOGICAL ASSESSMENT

HO2620/v1/11-94

SGS Environment

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1.0 INTRODUCTION

1.1 Background

Following the submission of the "Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection" carried out in April 1993, SGS Environment was commissioned by the design agents, West Sussex County Council, to undertake a Stage 2 Archaeology Assessment. Discussions concerning the focus of the studies, prior to their commencement, resulted in the decision to consider only the preferred route and not the other various route alternatives. Further consideration of the archaeological impact of the alternative routes was only to be undertaken in the event that a significant archaeological discovery was made along the preferred route.

1.2 Objectives

The principal objectives of the commission were to:

a) acquire information through detailed desk-study and field survey in order to identify archaeological constraints along the route and make preliminary recommendations for mitigation and impact reduction,

b) make recommendations concerning the requirements for further field investigations such as trial pits and geophysical survey in order to fully define the impact of the preferred route.

1.3 Scope of the study

The main elements of the desk-study and field investigation to be undertaken were:

a) checks with the appropriate bodies to ensure that there had been no additions to the lists of Scheduled Ancient Monuments, Listed Buildings or the County Sites and Monuments Record since the Part 1 study was undertaken,

b) review of documentary sources not already consulted during the Part 1 study, principally the maps held in Arundel Castle Archives,

c) a walk-over survey of the route to locate and describe archaeological and historic landscape features,

d) structured field-walking and the collection of artifacts along all of the arable sections of the route,

e) examination of test-pits and bore-holes, excavated by Exploration Geology as part of their sampling programme, for environmental and anthropogenic remains.

1.4 Reporting

This Stage 2 report has been prepared broadly in line with guidelines in Volume 11 of the Design Manual for Roads and Bridges. It contains details of findings, an assessment of the archaeological significance of the area affected by the preferred route, a preliminary assessment of the likely impact together with recommendations for impact reduction and mitigation. Recommendations concerning the need for further surveys e.g. geophysical have also been included.

2.0 METHODOLOGY

2.1 The preferred route

The preferred route is located between a point on the present A27 approximately 2.5km west of Arundel and the Cross Bush roundabout on the A284 Lyminster Road, about 2km south-east of Arundel. The alignment of the preferred route is shown in Figure 1.

2.2 Consultation

The following individuals were consulted for archaeological information during the course of the desk-study, fieldwork and the preparation of the report:

Mr J. Barham, County Architect, Planning Department, West Sussex County Council, County Hall, Chichester.
Mr P. Gawne, RSA Geotechnics Ltd., Stowmarket, Suffolk.
Mr J. Lucas, Cluttons Chartered Estate Agents,
1 London Road, Arundel.
Mr T. Luckin, Manor Farm, Tortington, Arundel.
Mr J. Mills, Assistant County Archaeologist, Planning Department, West Sussex County Council, County Hall, Chichester.
Mrs S. Rodger, Assistant Librarian, Arundel Castle.

2.3 Documentary sources in the Arundel Castle Archive

The Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993) included the survey of a wide range of documentary sources mostly housed in the West Sussex Record Office at Chichester.

This survey was extended, as part of the Stage 2 study, to include the Duke of Norfolk's archives held at Arundel Castle. This was deemed appropriate as much of the land in the study area had at some time formed part of the Duke's estates. The work was carried out between 3rd and 6th of January 1994. Full details of this documentary review are provided in Appendix I.

2.4 Walk-over survey of the preferred route

A walk-over survey was carried out along the line of the preferred route between the 1st and 7th of January and the 31st of July and 4th of August 1994. The survey recorded archaeological and historic landscape features along the line of the route. Other features, immediately adjacent to the route, which assisted in defining the archaeological character of the area were also recorded. Full descriptions of the survey method employed and finds are provided in Appendix II.

A comparison was made between the findings in the field, the modern maps provided for the purpose of the survey by the design agents and both the first edition six inch Ordnance Survey map of 1879 and the second edition map of 1899 (see Appendix II). Where possible reference was made to appropriate documents held in the West Sussex Record Office and in Arundel Castle.

Note: All archaeological and historic landscape features surveyed are numbered and recorded in Figures 2-4. The numbers are shown in brackets when referred to in the report.

2.5 Structured field-walking and collection of artifacts

Three areas of arable land were located directly on the preferred route (Figure 3, Areas A, B and C). A structured field-walking programme was carried out on these three areas between the 4th and 7th of January 1994 in order to collect artifactual evidence of any possible archaeological sites which might lie below the plough-soil. Artifacts were collected systematically from 20m by 20m square quadrats in Areas A and B (Figures 5 and 6). In view of the small size and unusual shape of Area C it was examined as a single unit.

Full details of the survey method and finds recovered during this survey are given in Appendix III.

2.6 Examination of the geological test-pits and borehole samples

Given the unknown nature of the below-ground archaeology of a majority of the preferred route it was decided to attempt to examine geological test-pits and bore-holes samples excavated by Exploration Geology Ltd for archaeological information.

The topsoil and sub-soil element of 19 of the 21 test-pits excavated were examined in the field for archaeological information between July the 31st and August the 4th 1994. A full account of the test-pit examination is provided in Appendix IV.

Samples from the upper levels of the 12 bore-holes were examined for archaeological information and palaeo-environmental evidence at Stowmarket on the 17th August 1994. Appendix V provides a full account of the bore-hole examination.

3.0 CONSULTATION

Further consultation with the appropriate bodies has established that there have been no additions to the lists of Scheduled Ancient Monuments, Listed Buildings or the County Sites and Monuments Record, since the Part 1 study was carried out cf (Environmental Studies Report - Part 1: Survey of Existing Conditions (Kelsey Associates Ltd and Environmental Advisory Unit, October 1992) and (Part One Report: Archaeological Assessment: Desk-top Study and preliminary Area Inspection, April 1993, 2.2.1).

4.0 REVIEW OF DOCUMENTARY SOURCES

A total of 28 original maps and plans were studied in the Arundel Castle Archives (Appendix I). These provide further evidence that the detailed disposition of the three major structural elements in the landscape along the route - woodland, flood plain and enclosed farmland - derives from the at least mediaeval period.

The boundaries and land-use within the woodland areas have remained the same since earliest records - the early 17th century - albeit the area is now given over largely to coniferous plantations. The farmland on either side of the river valley was enclosed from open strip fields in a piecemeal fashion - the process having been begun by the 16th century and completed in the 19th.

The valley floor was transformed, probably in the later 17th century, by the establishment of water-meadow systems throughout its length and width.

The main route systems traversed by the preferred route are almost certainly of mediaeval date and may be older.

5.0 THE WALK-OVER SURVEY OF THE PREFERRED ROUTE

5.1 Summary of feature recorded

Field records were made of 117 features of possible archaeological interest (see Appendix II for full details). These fall into the following categories:-

Fields	27 Records (see Section 5.2)
Routes	21 Records (see Section 5.3)
Quarries	4 Records (see Section 5.4)
Ditches and drains	25 Records (see Section 5.5)
Boundaries	17 Records (see Section 5.6)
Woodland	14 Records (see Section 5.7)
Miscellaneous features	9 Records (see Section 5.8)

5.2 Fields

With the exception of an area to the south and west of Tortington Priory, all of the fields observed were under permanent or improved pasture. The depressed ridges typical of earlier water-meadow management systems survive at a number of points in the Arun Valley on both sides of the river (63, 70, 72, 75, 78, 82 and 84). These features are likely to be of 18th century date.

No ridge and furrow was observed along the preferred route.

5.3 Routes

These mostly consist of tracks and paths, many of them in the woodland areas (4, 18, 22, 25, 30, 33, 35, 36, 54, 56, 76, 92, 107, 111). With the exception of the agger (a flat-topped linear feature) just east of the River Arun (76), none of these paths and tracks displays any significant earthwork features.

A number of roads are traversed by the preferred route. These include Old Scotland Lane (20), Binsted Lane (26), Tortington Lane (49), Ford Road (59) and the 'green-lane' to Broomhurst Farm (113). These route-ways were normally defined by banks and/or ditches.

Apart from Ford Road, which was built between 1842 and 1846 in order to connect Arundel with the new railway station at Ford, all of these routes appear on the 19th century Ordnance maps and are probably considerably older - Old Scotland Lane, for example can be inferred from the 1715 map of enclosures in Binsted. The footpath which now leads westwards from the Old Priory Farm at Tortington (54) appears to have existed in 1606 as the 'viam antiquam diam' (Part One Report: Archaeological Assessment: Desk-top Study and Preliminary Area Inspection, April 1993, Figs 4 and 7). The implication is that this road is at least mediaeval in date.

In addition, two causeway-like features were observed. One, on the east of the Arun valley, is clearly modern (76), the other is likely to be the remains of the southern precinct boundary wall of Tortington Priory (62, 64). This is clearly shown on the 1606 plan of the Priory, together with its northern counterpart.

5.4 Quarries

Five quarries were observed. Two of these were small and appeared to be of recent origin (6, 7). The remaining three features consisted of two 'chalk pits' which were marked on the 19th century Ordnance maps (10, 12) and a gravel pit at the south-eastern edge of the woodland (38) which had gone out of use by the 1899 map. The two chalk pits are now buried under the extensive tipping associated with the construction of the A27 dual-carriageway nearby.

5.5 Ditches and drains

Apart from the road boundaries, ditches and drains were observed throughout the length of the route. The majority of these formed either the boundaries of arable land and improved pasture on the flanks of the Arun valley (53, 108, 109, 112, 115) or sub-divisions within the water-meadow system (61, 68, 69, 77, 79, 81, 83, 86, 88, 90, 91, 93, 96, 98). These ditches and drains are common features throughout the landscape and are unlikely to be early than 16th-century in date. Most of them relate to the enclosure of the common land into separate fields. The early maps of the area suggest that the change from communal farming to the enclosure of separate fields was already well advanced by the 17th century (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Figs 4-7).

Where the parish boundary (83) between Lyminster and Arundel crosses the valley floor, it is demarcated by a large ditch which is a primary feature within the ditched network of the water-meadows system. It may well represent an earlier course of the Arun itself and almost certainly pre-dates the water-meadows which are probably of 17th or 18th century origin.

A group of drains (15, 19, 24, 28, 32) run within the woodland to the west of Arundel and are used to separate blocks of plantations. Four of them appear to correspond to sub-divisions within the woodland which are extant on both of the 19th century Ordnance maps. None of them is a significant landscape feature.

5.6 Boundaries

The sites of boundaries which are marked on the 19th century maps were inspected. The majority of these are represented by a bank and ditch feature (1, 9, 39, 40, 41, 44). Some of the earlier boundaries have not survived (46, 51, 58, 71, 100). Two still function but have no upstanding features (11, 42). Two of the boundaries recorded are modern and date from the A27 dual carriageway west of Arundel (2, 5).

Whilst the majority of the banks and ditches are modest in size, two are historically important as the southern limits of Arundel park and Municipal Boundary (1) and the old parish boundary between Binsted and Tortington (5). A third (39), which represents an easterly extension of the wood-bank identified in the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, (Fig 2a, No 4), is a much more significant landscape feature. Each of these three features is likely to be of mediaeval date.

5.7 Woodland

To the west and south-west of Arundel the preferred route runs through woodland. The majority of this is coniferous plantation (16, 17, 21, 23, 29, 31, 34), with more restricted areas of deciduous plantation (3, 27, 37). In addition, there is a modern tree nursery close to the present A27 (8, 13) and an area of scrub, including a number of mature trees, which

has developed on top of the spoil from drainage operations on the east side of the Arun valley (94).

Both the external boundaries and the internal sub-divisions of the woodland on Tortington Common appear to be largely unchanged from those shown on the 19th century maps.

5.8 Miscellaneous features and observations

A further 12 sites were noted. An altered pond in arable land west of Old Priory Farm, Tortington (47), an Ordnance Survey triangulation point at the east end of the causeway marked on the 1606 map as the 'south wall' of the Tortington Priory (65), a brick bridge across a drain in the centre of the water-meadows east of the Arun (80) and the site of an excavation and neighbouring spoil heap (94, and 95) all appear to be of 19th century date. The railway dates from 1863.

Two more enigmatic features were investigated. A raised, dry area just above the floor of the river valley appears to be the product of an earlier water-course (101). It is of unknown date.

At the south-eastern edge of the woodland on Tortington Common is a large curvilinear earthwork, together with a number of small features and hollows (38). This appears to be related in some way to the woodland boundary bank (39) and to an access point to the woodland from the arable land around. It is of uncertain date, but may be mediaeval or earlier.

It proved possible to examine four areas east of the Arun where construction work was taking place for a mains sewer scheme across the valley (85, 89, 103, 105).

A descriptive catalogue of all sites of possible interest is contained in Appendix II and in Figures 2-4. A list of photographs is included in Appendix VI.

6.0 STRUCTURED FIELD-WALKING SURVEY

Area A produced a thin scatter of post-mediaeval and modern pottery and building materials spread fairly evenly over its whole surface. Four sherds of probable mediaeval pottery were recovered from two of the quadrats. These finds are compatible with the spreading of 'night soil' and related rubbish over the fields from the 16th to the 19th centuries. They are insufficiently concentrated in date or location to suggest a buried archaeological site.

Area B produced a scatter of post-mediaeval and modern material in rather larger quantities than Area A. Some 88 sherds of mediaeval pottery, including ten fragments of inlaid floor tile were found. Of these, 58 sherds were derived from the easterly section of Area B, including the two part quadrats at the extreme east end. This concentration may be the result of increased proximity to Priory Farm, but the sudden increase in gradient of the frequency of mediaeval finds suggests the possibility of a site in the immediate area. Owing to crop cover it was not possible to carry out any field-walking along the preferred route between this concentration of finds and Ford Road.

Area C which had been recently ploughed for the first time in many years produced a small collection of almost wholly modern finds, many of which had probably been introduced by the farmer with rubble to assist with land drainage.

7.0 EXAMINATION OF THE GEOLOGICAL TEST-PITS

Examination of nineteen of the twenty-one test-pits excavated by Exploration Geology Ltd revealed only a single small discoid scraper of probable Neolithic date from the topsoil of Test-pit 307. This discovery was not considered significant and did not suggest evidence of buried archaeological sites or deposits.

Four fragments of Roman material were found in Test-pit 321 by Exploration Geology Ltd. This pit was not examined during the SGS Environment survey because it was filled-in and re-turfed immediately after excavation. The material consisted of 1 base sherd of 'Whiteware', 1 rim sherd of coarse greyware probably dating from the 1st century, 1 fragment of probable building material and 1 spherical fragment of probable glass. The material is currently being held by the County Archaeologist. These discoveries suggest the possible existence of a Roman site in the vicinity.

No evidence of palaeo-environmental deposits was found.

8.0 EXAMINATION OF SAMPLES FROM THE GEOLOGICAL BORE-HOLES

Examination of the upper two samples from each of the twelve bore-holes carried out by Exploration Geology Ltd. produced four small fragments of flint, a possible waste flake from both Bore-hole 302 and 306 and two possible pieces of worked flint from Bore-hole 312. No other evidence for buried archaeological sites was noted and no palaeo-environmental evidence was observed.

9.0 SUMMARY OF FINDINGS

For the purposes of this summary the route may be divided into four topographical zones: the woodland to the west of Arundel, arable land located between the southern edge of Binsted Wood and Ford Road, the River Arun floodplain and the pasture area in Lyminster up to the Cross Bush Roundabout.

9.1 The woodland

The present woodlands consist of coniferous and deciduous plantations mainly of recent date. The majority of their external and internal boundaries, drains, footpaths and tracks, on the other hand, appear on the 19th century maps. There is some evidence of an ancient woodland flora surviving in parts of the deciduous plantations. Documentary sources strongly suggest that this area was already woodland by the end of the 16th century and is probably mediaeval in origin.

A complex of enigmatic earthworks, which may be prehistoric or mediaeval boundary features, was observed at the south-eastern corner of the woodland (38, 39). Further investigation will be required to determine the significance of these features. None of the remaining upstanding features within the woodland is of more than local interest.

The test-pit and bore-hole evidence did not give a clear picture of the below-ground archaeology of the area. Despite the presence of prehistoric and later earthworks close by, to the north of the A27, only two prehistoric flints were discovered. One, a discoidal scraper of neolithic date, was recovered from the surface of Test-pit 307, the other a broken microlithic blade of mesolithic type was found in dumped material in Bore-hole sample 312. Both of these finds were unstratified. The geological work has provided useful evidence of the general nature and depth of the soils and sub-soils within the woodland, but no clear idea of its below-ground archaeological potential.

9.2 Arable land in Tortington

The preferred route would pass some 120m south of the Scheduled Ancient Monument of Tortington Priory and crosses its southern precinct wall, which appears to survive as a causeway, at its eastern end (62, 64).

The 1606 plan of the priory also shows enclosures and route systems (54) which suggest that some elements of the landscape in this area date from the mediaeval period. The elucidation of the full layout and structure of this monastic site is of regional importance.

The remaining features traversed by the route, such as Tortington Lane and the field boundaries to the west of it, are also likely to be of mediaeval date and are of local interest. Ford Road was constructed between 1842 and 1846.

The concentration of mediaeval pottery recovered from field-walking in Area B (Figure 3 and Appendix III) may indicate the presence of an archaeological site in the vicinity.

9.3 The River Arun floodplain

The documentary, air-photograph and field evidence taken together shows that the whole of the floodplain of the Arun where it is crossed by the preferred route was occupied by water-meadows. The age of these is uncertain, but they are likely to be of 17th or 18th century date. Local farmers remember some of them still in use earlier this century. On the ground this evidence is in poor condition. Much more extensive and better preserved systems survive further north and in other South Coast valleys.

The excavation of a mains sewer trench in August 1994 produced further evidence for peat deposits near the surface on the line of the route to add to the earlier bore-hole data recorded in 1991 (West Sussex County Council Proposed Bypass at Arundel, West Sussex - Factual Report on Site Investigation, Foundation and Exploration Services, Basingstoke; eg Bore-hole 126). Such deposits are likely to contain significant evidence of the landscape history of the area and the human impact upon it during the last few millennia.

9.4 The Lyminster pastures

The area between the eastern edge of the water-meadows and Cross Bush roundabout was under improved pasture at the time of the survey.

The preferred route crosses a series of ditched and hedged boundaries which the documentary evidence suggest must date from at least the eighteenth century. Many of these boundaries are now in poor condition. The green-lane which leads to Broomhurst farm (113), was present as Minceing Lane on the 1736 Estate map (Appendix I, H1/180) and was also shown on the Calcetto farm map of 1779 (Appendix I, PM7). These features are of local interest only. No other significant upstanding remains were noted on the route.

The discovery by the geologists of Roman pottery in Test-pit 321 (Appendix IV; Extracts from log of RSA Geotechnics Ltd), suggests the possible existence of a Roman site in the near vicinity. The below-ground archaeology of this area and the rest of this section of the route remains to be assessed.

10.0 ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

The archaeological potential along the preferred route can be summarised as follows:

* There are no Scheduled Ancient Monuments or listed buildings on or immediately adjacent to the preferred route. Tortington Priory, a Scheduled Ancient Monument, is located approximately 120m to the north of the route.

* There are no archaeological sites listed in the County Sites and Monuments Record on the route.

* There are no buildings on the preferred route.

* The sequences of boundaries and route systems which are traversed by the preferred route are of local interest.

* A complex of earthworks at the south-eastern edge of the woodland in Tortington may be of prehistoric or mediaeval date and further work is required to assess its significance (38, 39).

* A causeway which lies on the apparent site of the southern precinct wall of Tortington Priory is of importance as an ancient landscape feature and in the understanding of the mediaeval history of the area (62, 64).

* Surface finds of mediaeval pottery south-west of Tortington Priory (55; Appendix III, Area B) and Roman pottery near Cross Bush (Appendix IV, Extracts from log of RSA Geotechnics Ltd, [Test pit 321]) may indicate buried archaeological structures or deposits in these areas.

* The below-ground archaeology of most of the route is an unknown quantity and cannot be determine without further investigation.

11.0 SIGNIFICANT FEATURES OF THE ROAD SCHEME

The new road would consist of a dual carriageway with an average width of approximately 20m from verge to verge and 40-50m overall.

In addition to the road surface itself, considerably larger areas would be affected by the cuttings, embankments and road junctions proposed along its route. At the north end, the junction with the present Chichester to Arundel road (A27) and at the eastern end, the junction with the Cross Bush roundabout, would both take in areas of land in excess of 200m wide. Similarly, at the Ford Road junction, the width of the land taken would be approximately 175m.

12.0 IMPACTS OF THE PREFERRED ROUTE

The principal impacts of the construction of the road would be the loss of all archaeological evidence in the path of the road and associated works and truncation of the historic landscape. The significance of the impact would depend on the extent to which features are lost or damaged and their inherent importance.

Although it has not so far been possible to provide a satisfactory assessment of the below-ground archaeology for much of the route, it is already clear that a number of above-ground sites and features would be directly affected by the proposed road:-

* Approximately 35 boundaries, routeways (paths and tracks) and ditches would be crossed by the proposed road. There is no evidence that any of these boundary features are of more than local significance, with the possible exception of those described below. The construction of the road would result in the loss of a proportion of each boundary (path, track or ditch). Taken in isolation these impacts would be of very limited significance. However, the cumulative impact of losing sections of all these boundaries, coupled with the "break-up" of the pattern of routeways and ditches along the length of the route, would be of local significance.

* A large proportion of the earthwork feature at the south-eastern edge of the woodland in Tortington (38) would be lost. The site is of potential importance, because of its apparent relationship with the early wood bank (39), but the area requires further assessment in order to establish if it is of local, regional or national significance.

* Only the extreme eastern end of the low causeway (62 and 64) would be completely lost as a result of the proposed development. The line of the south wall of Tortington Priory appears to coincide with this raised causeway (Part One Report: Archaeological Assessment: Desk-top Study and preliminary Area Inspection, April 1993, Fig 7), but further investigation is necessary to confirm this observation and to assess its importance.

* The water-meadow system lying to the east and west of the River Arun would be damaged by the proposed road. The system is already in poor condition and is of no more than local significance. Only a small proportion of the area would be directly lost, but the remaining system would be truncated, disrupting its continuity. It is the continuity of the system which is important to understanding how it functioned. In view of this, the impact of the road is considered to be of some local significance.

* Palaeo-environmental evidence, such as that which would be found in the peat horizons which are known to exist beneath the River Arun flood plain would be lost. These deposits were found close to the present ground surface and would be very unlikely survive road construction. The significance of these deposits will not be known until such time as they are excavated and analysed. However, experience suggests that they are likely to provide important evidence of the environmental history of the locality.

13.0 RECOMMENDATIONS FOR FURTHER ASSESSMENT

The above-ground archaeology has been assessed over the entire route. With regard to the below-ground archaeology, with the exception of those areas in which field-walking has been carried out, "the location, type and significance of any important archaeological remains and how they might be affected by a preferred route are not known with reasonable certainty", (Design Manual for Roads and Bridges, Volume 11 Section 3 Part 2 Cultural Heritage 8.36). It is therefore necessary to consider undertaking a Stage 3 assessment.

The work to be carried out should include geophysical survey, instrument survey, test-pitting and trial excavation as follows:

* Geophysical survey should be carried out in the two areas of the route which have archaeological potential and are suitable for such methods. The non-arable land west of the Arun and the pastures on the terraces above the valley floor to the east should be surveyed using magnetic anomaly techniques on a 40m wide strip along the line of the proposed route (cf 10.7 and 10.8 above).

* Instrument survey (Theodolyte/EDM), should be carried on the earthworks (38, 39) at the south eastern edge of the woodland in Tortington, (cf 10.5 above), in order to determine their three-dimensional nature and to define suitable locations for trial trenching, if necessary.

* A test pitting programme to assess the archaeological potential of the woodland and pasture areas of the route should be carried out and be particularly concentrated on the terraces on either side of the river valley (cf 10.8 above).

* A programme of trial excavations should be proposed following the completion of the above. These should include the assessment of any artifact concentrations of structures located in the test pits or anomalies identified by the geophysical survey. A section across the line of the south wall of the Priory precinct (62, 64) (cf 10.6 above) would also be cut.

A detailed project design for a Stage 3 assessment is provided in Appendix VII.

14.0 PROVISIONAL RECOMMENDATIONS FOR MITIGATION

At the present stage of assessment only provisional recommendations for mitigation can be made:

* Excavation of the peat horizons in the River Arun flood plain and analysis for palaeo-environmental evidence should be carried out in advance of road construction.

* A field archaeologist should be appointed on a watching brief during the construction stages of the scheme.

* Subsequent to Public Inquiry, articles should be submitted to national and local journals which will present to the public the new information which has been derived in the course of carrying out the archaeological assessments.

* Information on all new sites and finds should be submitted to the County Archaeologist for inclusion in the County Sites and Monuments Record in Chichester and the National Archaeological Record

* These recommendations may be added to and/or significantly modified as a result of the Stage 3 assessment.

APPENDICES

APPENDIX I

REVIEW OF DOCUMENTARY SOURCES IN THE ARUNDEL CASTLE ARCHIVE

A total of some 28 maps and plans, together with a number of deeds, were studied in the Arundel Castle Archives together with a further group of more modern maps and plans at Cluttons Chartered Estate Agents in Arundel. The work was carried out between the 3rd and the 6th of January, 1994.

The listing which follows distinguishes between those maps which have a direct bearing upon features on the preferred route (A) and those which illuminate the background of the area, but are not directly relevant to the route assessment (B). (C) deals with the examination of a number of Arundel Castle deeds.

Where specific information about features on the preferred route is included, it is noted in a "comment" section at the end of the relevant entry. A brief discussion (D) follows the lists.

A. Maps consulted at Arundel Castle which contained information relevant to the archaeological assessment of the preferred route

Early 17th century

A map covering the area from North Marden through to Arundel [PM193]. This map is hanging on the wall in the muniment room of Arundel Castle. It was not possible to trace or photocopy it. A sketch was made of the part of the map from Arundel to Walberton. The map is stylised, it shows certain details such as woods, gates and palings but it is not to scale. Palings are shown around the parks, including 'Greate Parke Arundel'. There is a table which explains the significance of the colours (now much faded) used to denote boundaries of certain properties. The map was drawn by J. Spelman who was described in 1654 as accountant to the Duke of Norfolk and in 1663 as steward to the Duke of Norfolk. Arable land is marked as regular oblong strips. These apparently do not relate to actual field boundaries or to open field parcels as the pattern is far too regular.

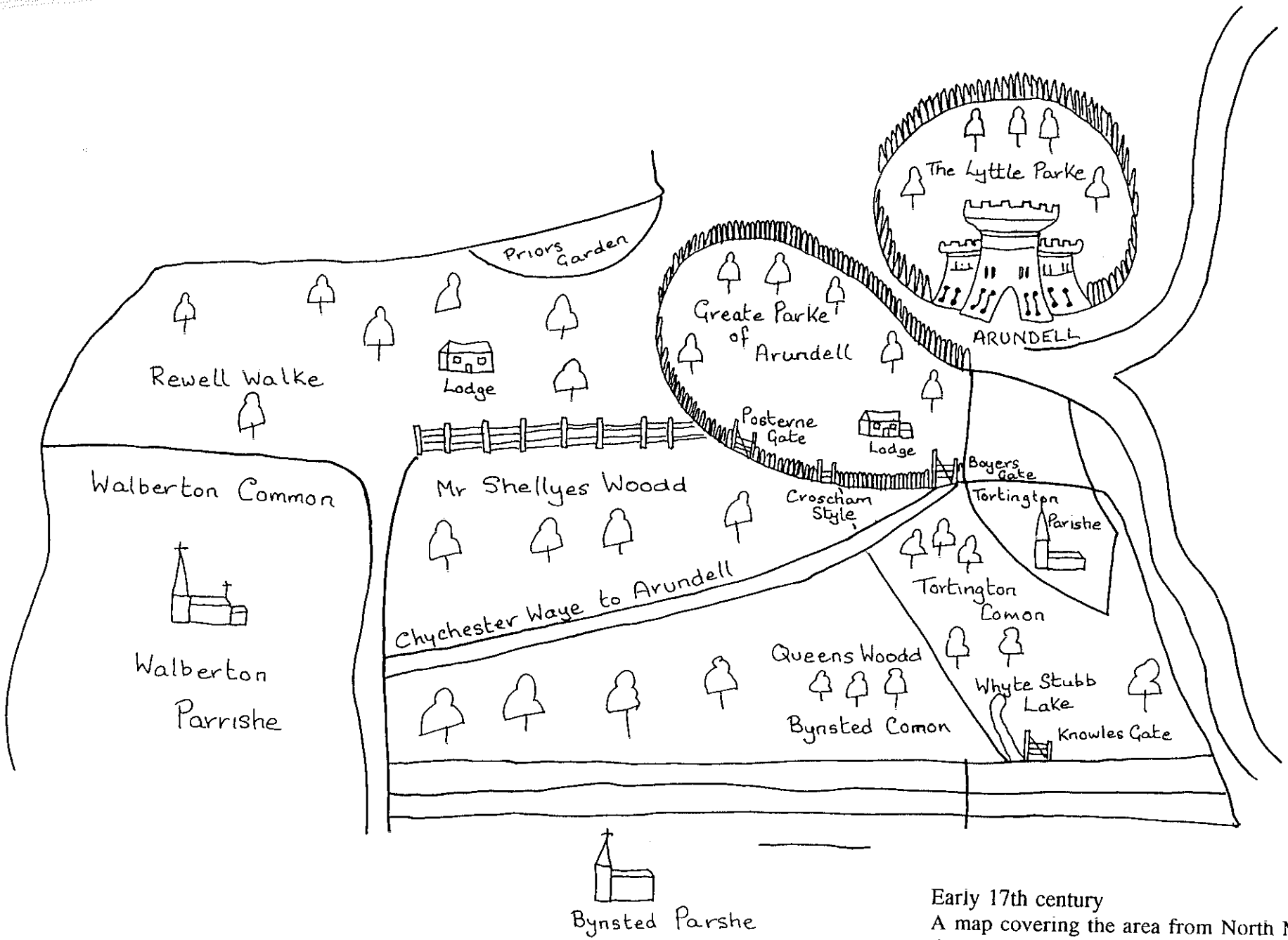
Comment

Due to the stylised nature of this map it is not possible to make very detailed comment upon it. What is clear, however, is that Tortington Common was wooded and that the external boundary of the woodland was probably as it is at present. The 'Knowles Gate' which is marked as the exit to the woodland on its southern side corresponds to the detached area of land shown on the 1606 map of Tortington Priory in which all the five fields depicted have 'Knowles' names. The inference is that the preferred route passes here through areas of woodland and arable which almost certainly reflect its medieval economic structure.

1736

Land in Leominster belonging to the Honorable Dame Elizabeth Knight [H1/18]. This map covers the eastern half of the parish and includes field names and acreages, together with some indication of the nature of field boundaries. A number of field names are given to the south of the present A27:

R Tough Croft 20 acres
Q Furz Field 16.3.33 (new measure 17.1.3)
O Long Field 15.3.22 (new measure 14.2.25)



Early 17th century
A map covering the area from North Marden through to Arundel [PM193].

P Common Piece 0.3.36
N Lime Kiln Field 14.2.17 (new measure 13.1.9)
L The Lag Mead 6.0.27
M3 The Brooks beyond the sewer
V Low Eight Acres 7.2.10
S Up Eight Acres 9.0.08

The size of the fields is given in acres, roods and perches in 'Statute Measure'. A later hand has added 'new measure' values in some cases.

The map shows a number of interesting individual features such as a postmill on Badworth Mead, strips in the open fields to the south, a brick kiln, sluices and drains in the meadows and areas of unenclosed land adjacent to the roads. It also indicates the site of Calcetto Farm as 'Calceata als Hell-House' and other buildings such as Causey House. Minceing Lane is clearly shown as a route south from Causey House.

Comment

In terms of the preferred route, this map established that the water-meadow system to the east of the Arun was almost certainly in existence by the early 18th century. It also shows that the land through which the route passes was already enclosed by that date, with the exception of small areas either side of the roads. The pattern of fields has changed little up to present. The north-south stretch of the green lane which leads to Broomhurst Farm is shown. Its present connection east to Crossbush is marked as a hedged field boundary.

1771

'Plan of Arundel Park and Rewel. Property of His Grace the D of Norfolk' [H1/3]. Almost the whole of Arundel is shown, except the town and adjacent water-meadows. The map shows Pains Wood, brick kilns on either side of the road, 'the Mile House', the 'Green Man', the poor house, vineyard, glass-house gate field, chalk pits and shows cultivated areas in three colours.

Comment

The boundaries of Pains Wood are shown in their present position.

1776

A 'survey of two farms and Newlands Meads situate at Arundel in the County of Sussex' by William Rowe [H1/30].

This survey includes three plans. The larger one shows the land between Steward's Copse and Arundel. The second included three meadows called Newlands Meads just to the east of the Arun, on the Lyminster boundary. The other group of three meadows lies just south of the river at Arundel itself.

On the larger plan the fields are named and there is some indication of land use. On the plan of Newlands Meads, a strip of woodland is marked parallel to the parish boundary.

Comment

This survey provides further confirmation of the conservatism of the enclosure pattern to the west of the River Arun and of the water-meadow systems to the east. The preferred route actually crosses Newlands Meads.

DEMESN.

house Yards &c.	1		37
	1		15
	1	3	20
	5	3	08
	8		36
	3		18
	1		
	20	1	02
four Acres	18	2	25
	2	1	32
	1		
	8	1	
	6		27
Meads	10		18
lm Field	14	2	17
ld	15	3	22
		3	36
Feeld	10	3	33
	20		
Acres	9		08
lve Acres	12	2	18
ght Acres	7	2	10
lve Acres	12	1	33
Acres	9		36
copice	10		20
Field	22	2	38
	240		09
lls's Message			
rchard		3	25
Orchard Crost	2	3	16
Brooks beyond y Sower	3	3	
ks beith y Sower	11	2	11
nall Brook	3	1	24
ith Crost	2		08
	20	2	01
reans Message			
se Orchard &c			
ck Ditch Brook			
nall Brook	5	1	28
ing in Common Field	2		08
	1	1	12
Total of the above meadow	280	3	15
Badworth Meads	33	3	23
Highways and Waste	34	1	13
Tot:	337		11

The Capital Letters in y adjoyning Table have reference to those of y like names in y middle of each Field, or Parcel in y body of y Map.

In y next Col: is y common accepted name of each Parcel remarkd by its Letter.

The other three Cols: shew the Content of each Parcel in Roods and Perches, Statute Measure.

Where y out side is a hatch'd line it denotes y fence do not belong to y Premisses, as in y fence against Broomhurst.

Note in Black Ditch Brooks, where Moody has two parts & y part of Demesn called Greens has one, ye Rest on y other side lies

Calcutta als Tuell House

the Spinc

Fagg Esqr

Powell Esq

Fagg Esqr

Fagg Esqr

Broom Hurst

Q

P

O

N

R

S

V

1736 Land in Leominster belonging to the Honorable Dame Elizabeth Knight [H1/18]

1778

The Book of Maps and Lists [RL5]. This includes a number of small maps relevant to the preferred route. The map on page 11 shows Steward Coppice as in the 1st edition 6" Ordnance map. The fields to the south-east of the Coppice are much less divided than in 1879. On page 19 there is a plan of water-meadows between the Lyminster boundary and Arundel.

Comment

These plans confirm the antiquity of the water-meadow system in the Arun valley, east of the river. They also provide further evidence of the nature of the woodland management on Tortington Common.

1779

A plan of 'certain lands called Calcetto Farm in the parish of Lyminster', surveyed by John and Charles Tapner [PM7].

In addition to the farm buildings, this map shows field boundaries, acreages, gates and roads. The names of the neighbouring owners are marked. Hedged, fenced and ditched boundaries are distinguished. Wooded areas are shown. Field names are included in the rubric:

I	The Little Tar Field 2.1.21
II	The Middle Tar Field 3.0.24
III	The Great Tar Field 4.3.35
IV	The Twenty Acres or The Lower Great Field 18.3.25
V	The Hanger Three Acres 3.1.13
VI	The Hanger Four Acres 3.3.29
VII	The Upper Great Field 11.0.17
VIII	The Little Upper Field 4.3.20
IX	Calcetto Place or Hanger Great Field 11.0.3
X	The Hanger Two Acres 2.0.31

Recently planted (?with trees) areas of Fields IV (1.1.1), VII (3.0.25) and VIII (1.1.12) are also indicated.

Comment

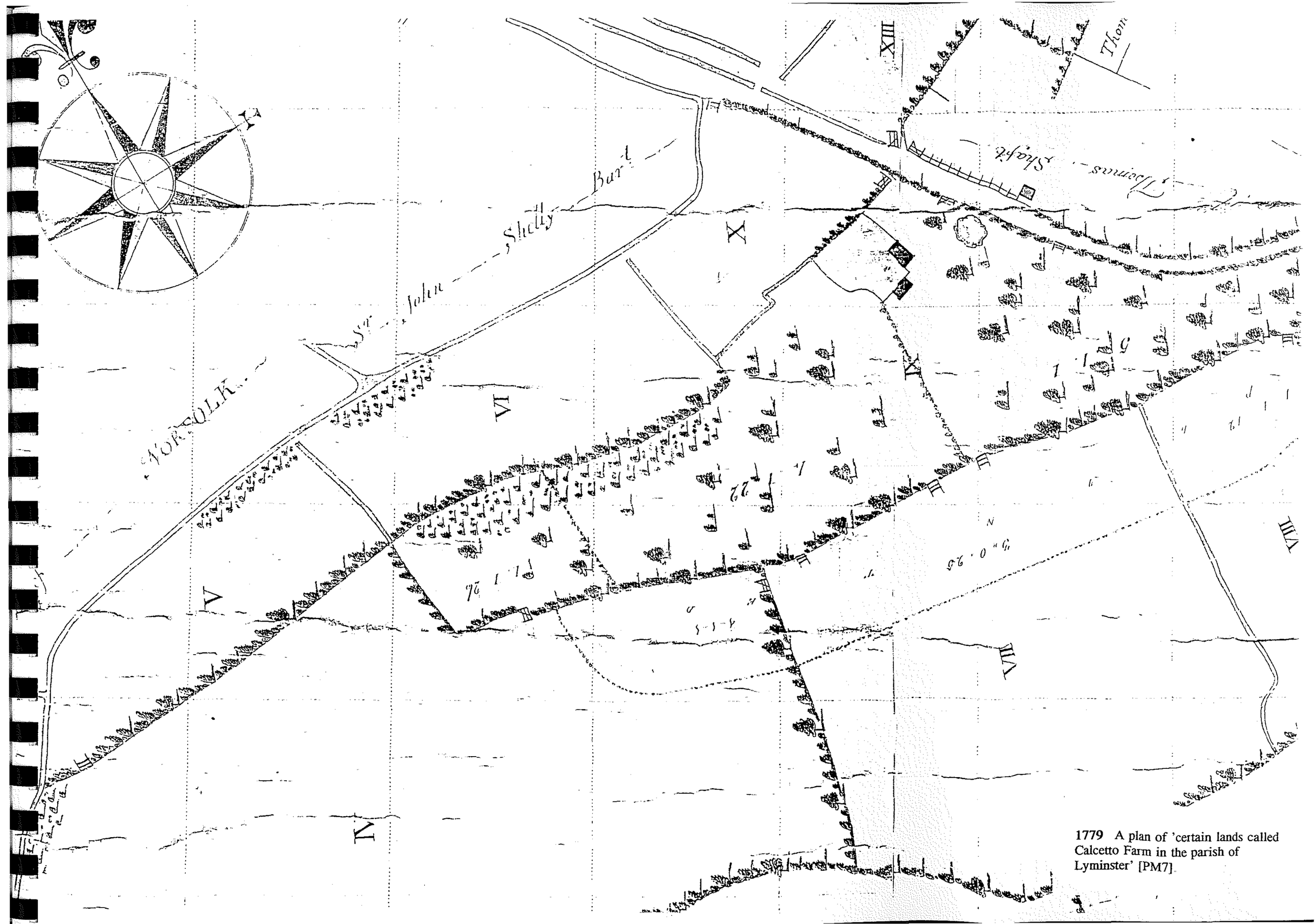
This map shows that the land belonging to Calcetto Farm had already been enclosed, in broadly the present pattern, by 1779. A track from the farm south to Lyminster survives today as a public footpath. Mincing Lane is shown running its full length northwards, but is not named; it was already, apparently, hedged on both sides.

1779

A map of water-meadows on the 'Estate of Right Hon. Lord Viscount Montague' [H2/25]. No internal feature are shown, but field names, main drains and sluices are marked.

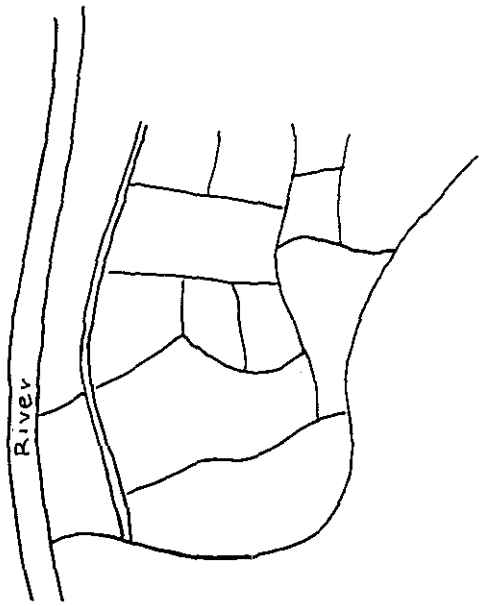
Comment

The meadows shown on this map are to the south-west of Lyminster and well to the south of the preferred route. The number of sluices present on the map strongly suggests the presence of a water-meadow system in the area. The other 18th century maps clearly show water management systems in place, but less clearly their actual nature.

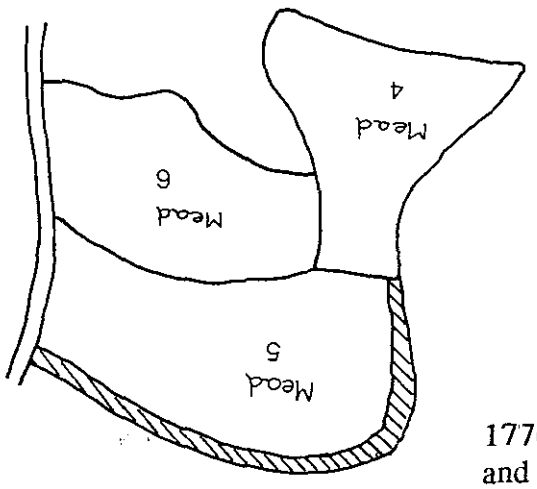


1779 A plan of 'certain lands called Calcetto Farm in the parish of Lyminster' [PM7]

1778 *The Book of Maps and Lists* [RL5].



1839 A sketch plan of meadows east of the Arun [H2/21]. (not to scale).



1776 A 'survey of two farms and Newlands Meads situate at Arundel in the County of Sussex' by William Rowe [H1/30].

1824

A map of the estate of C. Goring, March 1824 [PM2]. This survey includes field names and acreages and is accompanied by a list of tenants.

Comment

It covers the same area as the 1812 'Map of the Manor of Lyminster' (West Sussex Record Office, Par.131/7/12; Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 5) and is useful in documenting change within a twelve year period in the early 19th century. The remaining open field has been enclosed, as have most of the narrow areas of common by the side of the roads. Mincing Lane still exists to its full length, but the easterly arm has been created to Lyminster Lane. Broomhurst Farm is shown, although lying outside the estate.

1839

A sketch plan, not to scale, of meadows east of the Arun (H2/21).

Comment

The meadows shown on this plan include the three named 'Newlands Meads' on the 1776 map (H1/30).

1842

A plan of the property of Abel Smith in Tortington and Arundel [LM 15]. It is based on the 1840 Tithe map, has the same cartographer and uses the tithe plot numbers. It shows the whole of the eastern part of Tortington with a small area of Arundel. There are no field names or acreages given. Cultivated areas are indicated with a colour key. The line of a proposed new road (Ford Road) cutting through the eastern edge of the Priory precinct is marked as is the railway at Ford. Woodland tracks are shown as well as Manor Farm, Ford Quay, brick kilns, waterhole and footpaths. It is a finely drawn and coloured map.

Comment

This map confirms the conservatism of the woodland routes and sub-divisions which are also shown on the 19th century Ordnance maps.

B. The following maps were consulted and were relevant to a consideration of the overall landscape development of the area, but had no specific information to assist the assessment of the preferred route or adjacent areas

1661

Map of Arundle and Tortington, mostly to the north of the preferred route. 'A description of Arundel Park, the Ruells, the Rooks Wood and Meades belonging to the Right Hon Thomas Duke of Norfolk'. It includes the names of individual and marks `Shirw:' Glastis, Slindon, `hermatidg', Betts gates and 'Ruell Old Lodge'. Woods to be felled in 1661 are also shown. The map has a nice cartouche but is seriously damaged [PM 87].

1779

A Plan of the Estate belonging to the Mayor and Corporation of the Borough of Arundel Surveyed by Thos White [H2/40]. Acreages are shown, but not field names.

1824 A map of the estate of C Goring, March 1824 [PM2]

1794

Plan of Batworth Park belonging to His Grace the Duke of Norfolk [PM39]. North-west of Lyminster with a small area in eastern Arundel. Field names are given; the site of the barracks and Arundel Bridge are shown.

Late 18th century

Plan of a plot of land in north Lyminster belonging to Mr Goble and bordered by a road reserved from Batworth Park - undated [PM16].

Early 19th century

Arundel, South Stoke and Houghton. A draft of several parishes including Arundel. Shows parish boundaries, new roads proposed to be made at the expense of the Duke of Norfolk and afterwards to be kept repaired by the respective parishes and old roads proposed to be abolished and enclosed as land by the Duke of Norfolk and old roads remaining [PM114].

1808

A map of Rooks Farm; - well to the north of the study area [PM112].

1810

A map of the centre and east of the parish of Lyminster, including Calcetto Farm and the site of Arundel Barracks [PM 21].

1837

Map of the south-western part of the parish of Lyminster, including field names [PM 77].

1839

Lyminster. One of six maps showing farm names and town street names [H2/21].

1848

Plan of the borough of Arundel 1848 - street plan of Arundel [PM 3].

1850

'A plan describing by metes and bounds and admeasurements certain highways in the parishes of Arundel and South Stoke which it is proposed to turn divert and stop up and a certain new highway which it is proposed to make'. `Delivered and verified by me to Richard Prime and Thomas Shiffner Esqs two of her Majesty's J.P.'s. 28th November 1850 by me Geo. Blunden of Arundel aforsaid a competant surveyor' [H2/44]. This map deals with a proposed new road east of Arundel and south-east of South Stoke. It gives field names.

1850

Proposal for new road - map showing the South Stoke area [H1/43; H2/44].

1851

Report of the appeal tried at West Sussex Epiphany Quarter Sessions, January 3rd and 4th 1851. In north-east Arundel and south-east of South Stoke. Plans of a proposed new road and pleasure path, roads to be closed and footpath to Houghton [RL5].

1852

Plan of proposed private road from Cross Bush to the New Drive in Angmering Park passing through property of His Grace the Duke of Norfolk. Shows line of road from Cross Bush, across North Poling, with the names of coppices. [H2/45].

mid 19th century

A map which shows the area of Lyminster south of Calcetto, including the railway line [P5/4].

mid 19th century

A plan of Lyminster and Littlehampton [P5/10].

mid 19th century

A plan of Tortington and part of Binsted; the schedule is missing [P5/11].

1875

Land in Leominster bought of E.C. Holmes Esq [H2/29]. The plan shows the area adjacent to Railway Hotel.

C. Arundel Castle Deeds

A number of deeds were examined.

Lyminster

3962-3974

Deeds of i) four coppices called Ball Coppice, Wall Coppice, Pear Tree Coppice and Poling Coppice in all 48 3/4 acres in Lyminster etc. purchased 30th August 1755 by Trustees of the 8th Duke of Norfolk for £600 ii) messuage, buildings, 3 closes of land abutting north-east on Batworth Park and south-west on the road from Arundel to Angmering and 2 closes called Stubbs Croft and Causey Croft purchased 30th May 1801 by the 11th Duke of Norfolk for £1,380..... v) land, waste of the Manor of Lyminster abutting north-east on the road from Arundel to Lyminster.

716-733

Deeds of a meadow called Ball's Piece adjoining the road from Arundel to Lyminster with messuage, stable, hovel and other buildings. Land in the south marshes of Arundel adjoining on the West.

Tortington

6277

Lease for 70 yrs at an annual rent of £8 for the manor place [sic] of Tortington with all the demesne lands later held by John Stowell from Master William Busby, Clerk, Master of

Arms House of Holy Trinity Arundel and the Bretheren of the House to George Busby 23rd October, 1532.

D. Discussion

This group of documents, taken together with those already studied in the West Sussex Record Office, give a good general idea of the nature and processes of landscape change in the area from the end of the medieval period to the present. The major elements involved are the woodlands to the north of Binsted and Tortington, the arable lands mainly on raised beach deposits and terraces either side of the Arun and the Arun floodplain itself.

The woodland

The early 17th century map in Arundle Castle [PM193] shows the area of woodland on Tortington Common to be the same as it is now. The 18th and 19th century documents confirm the continuity of use of this area. The southern boundary of the woodland is a major landscape feature and is almost certainly of medieval date or earlier. Although it lies just to the west of the preferred route, the complex of earthworks at the south-eastern corner of the woodland may be related to it (Appendix II, 38, 39). Many of the routeways and internal sub-divisions are likely to be at least two centuries old. All of the present woodland is plantation, whether deciduous or coniferous. At the north-western end of the route there is some evidence of an ancient woodland flora.

The arable land

Although there are no major parliamentary enclosures within the study area, a number of the maps show the processes of enclosure from open strip-fields. On the 1606 map of Tortington Priory the lands closest to the site are already enclosed, whilst on the 1715 Binstead Estate Map parcels under one owner, including strips, are shown scattered over a wide area of landscape. Most of the arable land to the west of the Arun appears to have been enclosed by the early to mid-18th century. By contrast, in Lyminster, to the east of the River, a large common field is marked on the 1812 'Map of the Manor' in the centre of the parish. There are also numerous small areas of unenclosed land adjacent to the roads. By 1824, all of this land had been enclosed [PM2]. The 1736 estate map shows the remaining areas already enclosed in a pattern very similar to that which survives today [H1/18].

Thus, whilst the pattern of field systems has remained remarkably static since enclosure, few of the boundaries are likely to pre-date the 17th century.

The route systems, such as Tortington Lane, Binsted Lane, Scotland Old Road and Lyminster Lane are very likely to be medieval or earlier in origin.

The Arun floodplain

The maps consulted provide a great deal of evidence to show that the pattern of drains in the valley floor on both sides of the river have remained virtually unchanged for at least two centuries. The 1736 Lyminster estate map [H1/18] implies that this system was in existence at least half a century earlier. The surviving earthworks, although very depressed and silted up, suggest that the whole of the valley was managed as water-meadows probably from the late 17th to the early 20th century.

APPENDIX II

FEATURES OBSERVED ON THE PREFERRED ROUTE, SURVEYED JANUARY AND AUGUST 1994

[Note: Unless otherwise stated, all the features are shown on the 1879 and 1899 editions of the Ordnance Survey].

Introduction

The following is a list of features observed in the field, on or near the preferred route. The investigation took the form of a `walk-over' survey, along the line of the preferred route and was undertaken between the 1st and 7th January 1994, when the ground vegetation cover was at its minimum. During this period, the Arun Valley was badly flooded and access to much of the flood-plain was impossible. Therefore, at this time only the fields to the west of the Arun were inspected. The eastern area, between the Arun and the Cross Bush roundabout, was revisited between July 31st and August 4th 1994 in order to complete the survey.

The object of the survey was to record all of the human landscape variables which could be seen on the route. The features observed were numbered from a starting point on the northern edge of the present A27 Arundel to Chichester Road, initially running south through woodland and then from west to east across arable land and the floodplain of the Arun. The survey terminated at the site of the proposed Cross Bush roundabout on the A284 Lyminster Road - see Figure 1 for route alignment and Figures 2-4 for the precise locations of features recorded.

A comparison was made between the findings in the field, the modern maps provided for the purpose of the survey by the design agents, and both the first edition six inch Ordnance Survey map of 1879 and the second edition six inch Ordnance Survey map of 1899. Where appropriate, comparisons are commented upon and reference made to other relevant documents.

A photographic archive was compiled for selected features along the route and is available for reference if required. Sites for which a photographic record exists are indicated by an asterix. The full list of photographs taken during the Stage 2 Study is given in Appendix VI.

Features recorded

1. A boundary consisting of a bank with a ditch on its northern side. There are mature *Fagus sylvatica* (beech) trees on the bank which pre-dates the present A27 dual-carriageway.

   It is likely that this boundary formed the southern limit of the Medieval Park and is the northern edge of the previous Arundel to Chichester road. It is shown as `Municipal Boundary' on both the first and second editions of the six inch Ordnance Survey map. It may be the remains of the boundary shown as palings on the early 17th century map in Arundel Castle (Appendix I, PM 193).

2. A boundary consisting of a ditch with a post fence on its southern side. This boundary is modern, dating from the construction of the present A27 dual carriageway.

3. An area of managed woodland consisting largely of *Corylus avellana* (hazel) and *Castanea sativa* (chestnut), with occasional *Betula pendula* (silver birch) and *Ilex aquifolium* (holly). The plantation, which was between 17 and 30 years old, had been coppiced for posts rather than for palings and had been harvested in patches. The stools averaged about 1.5m in diameter. The under-storey was rich, and contained *Digitalis purpurea* (foxglove), *Ruscus aculeatus* (butcher`s broom), *Ligustrum vulgare* (wild privet), *Teucrium scorodonia* (woodsage) and other plants which suggested an old woodland assemblage. The area was marked as `Paine's Wood' on the early Ordnance Survey maps and on a plan of Arundel Park and Rewel Wood dated 1771 [HI/3], held in the Arundel Castle archives.

4. A track about 4m wide, which although at present grassed- over, may at one time have been surfaced.

5. A boundary marked by a line of well developed *C. avellana* and a partly destroyed post and three-strand wire fence with additional wire-netting. There was a much mutilated bank and shallow ditch on the western side. This ditch marked the easterly boundary of Paine's Wood. This line appears to coincide with the boundary between the parishes of Binsted to the west and Tortington to the east. Modern maps show that Binsted has now become incorporated into the parish of Tortington.

6. A small quarry at the easterly edge of Paine's Wood. It lies approximately 8m west of the boundary (5) and about 31m south of the dual-carriageway fence. The hollow measured about 5m by 15m and was about 2.5m deep. It is probably modern and has been used as a rubbish tip.

7. A small irregular shaped quarry at the easterly edge of Paine's Wood lying about 20m west of boundary (5), approximately 10m in diameter, which appears to be modern.

8.* The western extent of an area of tree nursery, centred upon Scotland Barn (see also 13). Many varieties of trees were present, including *Tilia sp.* (lime), *Alnus glutinosa* (alder) and *Acer sp.* (maple species). There was evidence of the lifting of mature specimen trees, leaving rectilinear cavities. Access tracks through the area were made up of rubble, including broken tarmac. The area is shown as open ground on the early editions of the Ordnance Survey map. (Photographs 1-3).

9. A boundary consisting of a post and rail fence, the northern boundary of (8) being the southern boundary of the A27. This fence dates to the construction of the modern dual-carriageway.

10. A slightly raised area shown on the 1st edition Ordnance Survey map of 1879 and marked `Chalk Pit' on the second edition 1899. The edges are delimited by mature trees, largely *Fraxinus excelsior* (ash), *Quercus robur* (oak) and *C. sativa* (sweet chestnut). The area was slightly raised and appears to have been covered with a layer of tipped soil, probably relating to the construction of the present dual-carriageway.

11. The eastern boundary of the tree nursery (8) which consisted of very mature trees, *Q. robur*, *F. excelsior* and *F. sylvatica*. There was no clear evidence of structure. There were fewer mature trees at the southern end which consisted essentially of a very dilapidated wire-mesh fence and well-established *C. avellana* and *Sambucus nigra* (elder) bushes.

12.* An extensive spread of tipped soil, probably dating from the construction of the A27 dual carriageway. The area lies within the boundaries of the tree nursery (8 and 13) on its eastern side. It was impossible to assess the archaeological potential of the area due to the depth of the tipped soil which appeared to be up to three metres in depth, tapering off into the slope on the northern and the eastern edges. (Photographs 4 and 5).

13. The eastern end of the tree nursery, see also (8). The area is shown as open ground on the early editions of the Ordnance Survey map.

14. A boundary consisting of a bank with a small, shallow ditch on the southern side. The line marks the southern boundary of (1 and 3) and northern edge of the conifer plantation (16). The bank is surmounted by a line of mature *C. avellana*, with a low incidence of *Taxus baccata* (yew) and *I. aquifolium* (holly).

15. A ditch running north into a deep pool, possibly a blocked sink-hole, lying within area (16). This feature is not marked on any of the Ordnance Survey maps.

16. An extensive area of conifer plantation, the trees being approximately 25 years old. The plantation is fringed with coppiced and some naturally seeded *C. avellana* and *B. pendula* (silver birch) on the eastern edge, along the line of the path (18)

17. As (16). The areas are shown as woodland on the early editions of the Ordnance Survey map.

18. A track lying within an open swathe, at present overgrown with *Pteridium aquilinum* (bracken) and *Ulex europeus* (gorse), intended to form a fire-break and to accommodate a line of overhead cables, between (16) and (17). The path which is shown on the early editions of the Ordnance Survey maps is fringed on the east side by naturally regenerating *Q. robur*, *B. pendula*, *I. aquifolium* and some *T. baccata*. The track appears to divide the old area of Paine's Wood from the northern part of Tortington Common.

19. A drainage ditch, approximately half a metre wide from crest to crest. The entire plantation area was criss-crossed by a series of similar drainage ditches most of which are marked 'drain' on the maps provided, but which appear to be shown on the early Ordnance Survey maps as straight boundaries. The majority of such features encountered contained surface water.

20. Old Scotland Lane. This is now a track which appears to run parallel with (19) and approximately at right angles to path (18). It is approximately 10m wide, the southern two-thirds of its width were very waterlogged with *Juncus* growing and present access was confined to the drier northern edge. There is a low bank with a ditch on its south side, separating the track from (17) to the north and a further bank with a ditch on its north side, separating the track from (21) to the south. In places a double bank could be detected on the north side of the lane.

This site is marked No 8, on Fig 2a of the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993).

21. A further area of conifer plantation, lying south of Old Scotland Lane. The plantation appears to be of the same date as areas (16) and (17). There were a number of fallen trees which had opened up the canopy and *Rhododendron ponticum* (rhododendron) was beginning to encroach on the open areas. The water-table appeared to be high in this part of the study area and many of the cavities left by fallen trees were full of standing water.

22. A track running approximately west-east through (21 and 23). It was approximately three metres wide with no defining features.

23. As area (21).

24. A drain crossing (23), approximately one metre deep and about two metres from crest to crest. It contained standing water.

25. A track running south-west to north-east through the conifer plantation (23).

26. Binsted Lane (E), the southern boundary of (23). The line of this road, which is at present six metres wide and surfaced with tarmac. Itapparently divides the old area of Binsted Wood from Tortington Common. To the north of the line of Binsted Lane, these areas of woodland were divided north to south by a continuation of the line of track (18). On both sides of Binsted Lane it is delimited from (23) to the north and (27) to the south, by low banks each surmounted with *C. avellana*, *B. pendula* and *C. sativa* (coppiced).

27. An area of open deciduous woodland, with *C. avellana* (coppiced) and *C. sativa*, *B. pendula*, mature *Q. robur* and areas of invading *R. ponticum*. There is an area of *Larix sp.* (larch) plantation towards the east side of this plot, beyond the area likely to be affected by the preferred route.

28. A drain marked on the map provided and on the early editions of the Ordnance Survey map. It was not located immediately adjacent to Binsted Lane, but was identified from the point at which it crossed the public footpath (30) a little to the east of the preferred route.

29. An open area, possibly at one time either coniferous plantation or similar to area (27). The plot may have suffered from the hurricane damage of a few years ago, or had been deliberately felled. There had apparently been two attempts at re-planting and there was approximately five years growth of regenerated *B. pendula*, *I. aquifolium* and *C. sativa*, with invading *R. ponticum* and *P. aquilinum*.

30. A public footpath from the north of the area, which crosses Binsted Lane just south-west of the preferred route, running south-east towards Tortington Lane. There was a defining boundary on the north-eastern edge of the path, with (29), consisting of coppiced *C. sativa* and *C. avellana*. On its south-western edge, there was no recognisable boundary between the footpath and the adjacent plantation (31). The path was running with surface water on the day of the study.

31. An extensive coniferous plantation, about 25 years old. There were a few gaps in the planting which had been invaded by occasional examples of *C. sativa*, *I. aquifolium* and well-developed *B. pendula*. The opening up of the canopy had encouraged a growth of understorey plants such as *R. aculeatus* and *Rubus sp.* Towards the southern edge of the plantation along the line of the path (33) there was increasing evidence of hurricane damage.

32. A drain running obliquely from north-west to south-east within the plantation (31). There was no running or standing water visible within this feature.

33. A path dividing two blocks of woodland (31) from (34). It was delimited on its northern edge by a dilapidated post and wire fence, but there was no functioning boundary on its southern side. The surface of the path was grassed over and water was flowing freely along its length.

34. A large, comparatively open area of felled coniferous woodland. The vegetation consisted of regenerating *C. avellana*, *B. sp.* and *Q. robur* with *U. europeus* and *P. aquilinum*. The area did not appear to be under management at the present time.

35. A path running parallel to (33), through (34). Although marked on the map provided, it was not shown on the 1st or 2nd editions of the Ordnance Survey maps. Its line was defined by a series of mature *Q. robur*, without which it would have been difficult to locate in the undergrowth.

36. A path running more or less parallel to (33 and 35) separating two blocks of woodland (34 and 37). It was defined by a ditch with a low bank on its northern side with mature *C. avellana* growing on the crest of the bank. There were no delimiting features along its southern edge, although some mature *C. avellana* was noted.

37. An area of deciduous woodland, south of (36), consisting of mature *Q. robur* and coppiced *C. avellana* with an understorey of *Rubus sp.*, *R. ponticum* and *I. aquifolium*.

38. A raised area on the edge of coniferous plantation, defined by a curvilinear earthwork with some small earthworks and several large hollows. Part of the area was fenced with a high post and wire-netting fence and was in use as a pheasant pen. There appears to be some relationship between this site, the nearby boundary (39) and the wood bank shown as No 4 on Fig 2a, of the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993).

There is a marked hollow to the east of this feature which is shown on the 1st edition Ordnance Survey map and marked as 'Old Gravel Pit' on the 2nd edition of 1899. This information is not shown on the modern maps.

39. A very substantial boundary, running east-west, separating the arable land to the south from the area of woodland (37) to the north. It consisted of a ditch bounded on the south by a large bank and on its northern side by a slightly lower bank. Water was running freely in the ditch. It seems likely that this feature already existed in 1606, as the northern boundary of 'The Knowles' (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 7b).

40. A boundary running north-south, consisting of a bank with a slight ditch on its eastern side. The bank is topped with mature *C. avellana* and *S. nigra*. The level of the woodland to the west of the boundary is higher than the fields (45, 48 and 50) lying to the east.

41. A boundary running west-east, similar in type to (40) separating the woodland from (45) and consisting of a bank with a marked ditch containing standing water to the south. There was a small rabbit warren at the point where it crosses the boundary.

42. A semi-circular boundary visible between the edge of field (45) and a small cleared area (43). The boundary turns south to join (44). The boundary contained some young *Q. robur*, *Crataegus monogyna* (hawthorn) and *S. nigra*.

43. A small patch of rough ground which appeared to have been very recently cut back. The area lay between (41) and (44) and south of area (38). The surface

was irregular, waterlogged and appeared to be slightly raised above the ploughed field to the south. The parcel of land was fringed with saplings of *S. nigra* on its northern edge (part of 38), and with a *C. monogyna* hedge and open arable fields on the south. There was a single very mature *Q. robur* specimen on the western boundary bank.

44. A boundary with a slight bank and a shallow ditch containing some standing water, lying between (43) and the open arable land to the south.

45. A large undulating field extending up to Tortington Lane in the east. It was originally divided into smaller parcels (48 and 50) as shown on the early editions of the Ordnance Survey maps. A golf course was, apparently, under construction; there were several mounds of tipped sands and gravel intended as landscaping features. A small pond had been formed at a point almost exactly central to the preferred route. The central section of this field was examined in detail by field-walking (Figure 3, Area A - shown hatched).

46. A boundary, marked on all versions of the map, between (45) and (50) but no longer present. The boundary may have been eliminated preparatory to the construction of the golf course and a mound had been placed across the line of the land division.

47. A pond, shown on the maps supplied for the survey project, but not visible on the 1st and 2nd editions of the Ordnance Survey maps. It measured approximately 40m by 10m and appeared to have been enlarged or altered in shape recently, possibly with a view to becoming a feature within the proposed golf course. The pond was fed by a newly inserted land drain which commenced about 35m north of the pond.

48. An area of arable land, now part of (45). There was surface water lying on the field.

49. Tortington Lane. A small metalled roadway about 3m wide. Its western boundary consisted of a very slight bank topped with a *C. monogyna* hedge; on the eastern side there was a narrow grass verge and a deep ditch (53), containing running water.

50. An area of stubble, the eastern part of (45). It was examined in detail by field-walking (Figure 3, Area A - shown hatched).

51.* A boundary shown on the map across the present field (55), but no longer present. Where the line of the boundary met Tortington Lane, there was a small causeway across ditch (53). (Photograph 21).

52. A narrow stretch of waste ground, lying between Tortington Lane, a ditch (53) and the field to the east (55). This elongated stretch of verge is probably common land, which has never been enclosed because of its proximity to the crossing point of Tortington Lane and the line of the footpath (54). It contained some mature *Q. robur* of mixed age, a patch of *Prunus spinosa* thicket and an area of open grass, used as a parking spot.

53.* A ditch, about 3m deep and 5m wide from crest to crest, forms the boundary between Tortington Lane together with the area (52) and the arable field (55). The water in the ditch flows from north to south. (Photograph 19).

54.* A boundary between the field (55) and fields to the north. It consists of a footpath, with a ditch on its southern side. The ditch was about 3m deep and about 5m from crest to crest, with water draining to the east. The footpath runs about 1m above the level of (55) and passes close to Priory Farm and the site of the Augustinian Priory founded in 1180. This feature is shown as a road 'via antiquam diam' on the 1606 map of Tortington Priory (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 7). (Photograph 20).

55.* A large open field, ploughed at its western end and under grass at the eastern end, originally sub-divided by the boundary (51). It extended from Tortington Lane to Ford Road and from the boundary (54) in the north to the boundary of Tortington College in the south. The central section of this field was examined in detail by field-walking (Figure 3, Area B - shown hatched). (Photographs 21-24).

56. The line of a public footpath running approximately north-south across fields (55 and 57). It is shown as a boundary on the 1st edition Ordnance Survey map and as a footpath on the second edition.

57.* An area of pasture at the eastern end of (55), extending to Ford Road (59). (Photographs 10 and 18).

Mr T. Luckin and his father, farm all the arable land west of the Arun in the area of the preferred route. He visited the field-walking team on the 6th of January 1994 and expressed an interest in the surface finds from Area B. He expressed the opinion that the majority of the fragments of unglazed red roofing-tile, found in the field (55), had originated from the barns and cow-houses around the farms, all of which had at one time, been roofed with clay tiles of this type. Manure from these sites was spread of the surrounding fields.

Mr Luckin also mentioned that field (57) the eastern end of field (55) at present under grass, had been ploughed regularly in the past. He reported a scatter of bottles and clay tobacco pipes, lying approximately on the line of the preferred route, had been revealed on each occasion. It was thought locally, that this marked the site of an old public house. No evidence of any structure was shown on the early editions of the Ordnance Survey maps.

58. A north-south trending boundary, shown on all editions of the Ordnance Survey maps, but no longer present. The line of the boundary crosses the pasture (57).

59.* Ford Road - a busy road from Ford to Arundel. It is separated from the field (57) by a large ditch, 3m deep and 8m across from crest to crest and a hedge of *P. spinosa* growing along the verge. On its eastern side there is a further hedge of *P. spinosa* and a shallow ditch containing a little standing water. The road was constructed between 1842 and 1846 in order to link Arundel with the new railway station at Ford. (Photograph 26).

60. An undulating field of permanent pasture. Surface water was visible lying in patches and shallow, linear, west-east trending hollows, suggestive of long-deserted water meadows.

61. A wide ditch, with a hedge of *P. spinosa* on its western side. It contained deep standing water.

62.* A slightly raised causeway and track running eastward from Ford Road towards the Arun. The surface was metalled and dipped gradually away into the meadows to the north. There was a ditch, some 2m deep on its southern edge. The causeway appears to coincide with the line of the 'South Wall' of the Augustinian Priory shown on a map of 1606, (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 7). It is not shown on either of the early Ordnance Survey maps. (Photograph 17).

63. A meadow with surface water lying in parallel, linear, west-east trending hollows. There was a marked linear bank about 20m in length running parallel to the raised causeway (64) on the southern edge of this field. The field lies within an area of possible water-meadows, visible on the 1963 aerial photographs (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 2b).

64. A grass covered raised causeway, the eastern extension of (62). The path which ran along the crest at the western end, was terminated at a point about half way along by a three-strand barbed wire fence. The boundary ditch between the causeway and the field (66) to the south, contained about 1.5m of standing water and measured approximately 4m from crest to crest. The causeway is not shown on any of the Ordnance Survey maps.

65. An Ordnance Survey triangulation point and bench mark. This point marks the eastern end of the causeway (62, 64) beyond which there is a boundary (68) and the embankment (67) running sharply up to the Arun. The site is not shown on the early editions of the Ordnance Survey map. This area is marked No 9, on Fig 2b of the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993).

66.* A comparatively level pasture. There was a shallow, linear feature about half a metre across, running north-south across the centre of the field. If this were to be projected to the south, it would align with a narrow ditch which is marked on the modern map, crossing the field (70). It could no longer be located. There was no visible evidence of any water-meadows, though there was a little surface water lying in the central hollow. The level of this field was raised above the fields to the south. (Photograph 25).

67.* The westerly embankment (levée) of the Arun. There were no features, such as sluices, apparent in the immediate area. (Photograph 25).

68.* A north-south trending boundary consisting of a barbed wire fence partially obscured by *Rubus sp.* and a ditch, approximately 6m wide. Beyond this there was a flat grassy pathway about 6m wide running at the foot of the western embankment (levée) of the Arun. There was a wooden sluice across the ditch/drain at this point. (Photographs 9 and 25).

69. A west-east trending ditch, fringed by tall reeds, separating fields (60 and 66) from the water-meadows (70 and 72) to the south. At the time of the survey this feature measured in excess of 4m in width, due to flooding.

70.* A recently ploughed water-meadow. The surface of the field was very sticky and damp. A small area on the north side of the field, lying within a loop of the drain (69) was examined in detail by field-walking, (Figure 3, Area C - shown hatched). Some rubble consisting of broken brick and tile had been dumped in this area, possibly in an attempt to make it more manageable. The field lies within an area of

possible water-meadows, visible on the 1963 aerial photographs (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 2b). It is clearly marked as 'water meadow' on all editions of the Ordnance Survey maps. (Photograph 27).

71. A boundary shown between fields (70 and 72), but no longer evident.

72. An area originally shown as a separate field, but now the western end of field (70).

73. The north-western corner of field (70/72), with the western end of drain (69), close to the preferred route. No features of archaeological interest were identified.

74. The easterly embankment (levée) of the Arun, approximately 2.5m high, 20m wide at the base and 3m wide at the top. It was completely grassed and is not being used as a route at present.

75.* An undulating meadow of permanent pasture. Some sinuous ridges were noted, possibly relics of previous watercourses, but there were no really regular undulations. About 50m north of the preferred route, there was an old drain running parallel to the levée and a series of ridges running perpendicular to it which may be the remains of a water meadow system. (Photograph 29).

76.* The agger of a road, now an overgrown track, approximately 7m or 8m wide and 0.5m high. It is built of rammed chalk and flint and supports a lime-loving flora including *Plantago media*. (Photograph 30).

77.* A sinuous drain with unmanaged *C. monogyna* hedges on either or both sides. In places the hedges arch to form a tunnel over the drain. It is approximately 4m wide from crest to crest and about 2m deep, from the general level of the field. The *C. monogyna* hedge shows signs of having originally been layed. The thickness of the boles suggest an age of approximately 100 years. There are a few invasive species, *S. nigra* and a single specimen of *P. spinosa*. This drain, together with 79, 81, 83 forms an internal boundary in 'Newlands Meads' shown on the 1776 survey. (Photograph 31).

78. Meadow, north of the boundary drain (77). Although it appears to be permanent pasture, it is rich in *Lolium* and *Trifolium repens* (white clover), which suggests that it must have been improved. Other grass species are present including *Hordeum murinum* and *Phleum pratense*, unexpected in a wet meadow. There are a range of sinuous depressions within the meadow which are difficult to interpret. There is sufficient evidence, however, together with the 1965 aerial photographs (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 2b), to suggest this is a long-abandoned water-meadow system.

79. The eastern boundary of the meadow (78) consisting of a water-filled drain. From crest to crest it measures 5m and it is about 2m deep. A vestigial *C. monogyna* hedge survives on the east side. It has not been well managed and does not appear to be as old as the hedges on the boundary (77).

80. An arched brick bridge with modern concrete slabs crossing the drain (79). The brickwork suggests a 19th-century date and it is shown on the Ordnance Survey map of 1899. It lies a little to the north of the preferred route.

81. An easterly extension of the drain (77), lacking a hedge. It is a wide ditch, measuring some 12m from crest to crest and about 3m across at the bottom. It is approximately 2.5m deep and has *Phragmites australis* growing in the bottom. The plants in the ditch have been extensively chewed by animals from either side. It runs into the drain which forms the Parish boundary (83).

82. A meadow to the west of the Parish boundary (83). It has been recently grazed and it is difficult therefore, to identify species. It has probably been improved, but is normally meadow. There are a number of deep sinuous ridges visible, which appear to be the lines of an old water-meadow system. This is confirmed by the 1965 aerial photographs (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 2b).

83.* The Parish boundary drain. There are extensive Phragmites beds on either side. It appears to be at least 15m from crest to crest and of indeterminate depth. The water in it flows slowly in a southerly direction and is mostly open apart from the reeds. This drain gives the impression of being a stabilisation of an old water-course, possibly an earlier course of the Arun across the valley. (Photograph 32).

84. A field to the east of the Parish boundary (83). This has very marked sinuous depressions along it, parallel to the Parish boundary, which are possibly the lines of an earlier watercourse. At a higher level, further to the south and east there are slight linear depressions in the field and these may be the remains of a water-meadow system. This suggestion is confirmed by the 1965 aerial photographs (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 2b).

85.* A new causeway across the Parish boundary drain (83), created during the laying of a sewer pipe-line. The excavation for which has produced quite considerable deposits of peat. Borings carried out in 1991 by Foundation and Exploration Services Ltd also produced peat in the area between this point and the Arun. The present findings confirm that there are superficial peat deposits extending some way across this valley. (Photograph 33).

86. A further sinuous drain, running approximately north-south to intersect with the Parish boundary drain (83). It is difficult to estimate its proportions because it is full of *Phragmites*. It is probably about 6m from crest to crest.

87. A field of permanent pasture with sufficient *Lolium* and *T. repens* to suggest that it has been improved from time to time. It lies east of the drain (86) and has several undulations on its western edge which may have resulted from dredging operations.

88. A sinuous drain, completely clogged with *Phragmites*. It was approximately 3m wide from side to side and quite shallow.

89. The modern sewer trench under construction at the time of the survey. The excavation was producing deep fen-type clay deposits below a layer of peat. It was not possible to measure the depth of the peat but it appeared to be no more than one to two feet deep.

90. A sinuous depression, probably a silted-up drain. The map suggests that it may, at one time, have formed a field boundary. It no longer fulfils this function, although the present electric fencing follows the depression for some distance.

91. An impressive drain about 7m across from edge to edge. It was not particularly depressed from the general level of the field. The drain was very clogged with *Juncus sp.* and *Carex sp.* and patches of *Phragmites* at some points, but still contains some water. It continues to function as a boundary.

92. A low causewayed track, made up of rammed chalk and flint. This feature was a little south of the preferred route.

93. A drain which has now silted up and survives only as a very shallow depression.

94.* A raised wooded area, consisting of scrub *C. monogyna* and mature *Q. robur*. It is defined by a silted drain on the north side and still functioning drains to the south and east. The southern part of the area of scrub is rather platform-like and linear, similar to the agger of a road, but the remainder is rather hummocky and irregular. It may be the product of the excavation of the depression (95). (Photograph 15).

95. An irregular depression, some 15m wide and 40m long, running parallel to and to the east of drain (96). The northern and eastern edge of the feature appears to be an artificial cut in the general surface of the field (97). The whole area is the nexus of a series of complex curvilinear drains; the depression (95) and irregular raised area (94) may be the product of an excavation undertaken to improve drainage.

96. An open and fully functioning drain on the western side of the southern part of the field (97). It contained *Phragmites*.

97. An area of pasture, recently heavily grazed and trampled by cattle. The vegetation suggests that it may have been improved from time to time. The surface is very level and there is no evidence of older watercourses or water-meadow systems.

98.* A ditch at the eastern boundary of the field (97) which has recently been cleaned out, with the resulting upcast lying on the western side. It is about 5m from crest to crest and perhaps 1m deep. There is some standing water and it contains *Ranunculus flammula* and *Juncus spp.*. It presumably acts as a catchwater drain at the base of the slope of the field (99). (Photograph 16).

99. A sloping, undulating field, the first up from the river valley floor. It contains a large amount of Trifolium repens and is bounded on the southern side by a ditch with a few examples of old Q. robur. Within the field itself, there are a number strange drier and rather depressed areas. These patches are difficult to interpret.

100.* The eastern boundary of (99). The line of an old boundary consisting of a shallow ditch about 3m across and 0.5m deep, on the east side of which there appears to have been a line of *Q. robur*. The only surviving example, a burnt-out, lightning struck specimen, stands at approximately the central point of the preferred route. (Photograph 14).

101.* A drier, slightly raised area in the north-west corner of the field (99). It appears to be the result of a water-course flowing in an uncontrolled and shallow fashion down and across the slope. There is a markedly boggy area with increased cattle trampling on either side of the raised area. The wetter parts contain *Cirsium vulgare* (Marsh Thistle). The drier bluff, appears to be a small river cliff, only 1m or so high and there seems to be a tree hole on it. There is a pond further up the slope, against the boundary with the field to the north, the overflow from which may be the source of the rather sinuous, depressed water-course. (Photograph 34).

102. An area of improved pasture, east of the field (99). There is no sign of any earthworks within this field. The original enclosure has been truncated by the construction of the railway line (104).

103. A 2m x 2m excavation containing the sewer pipe. It is approximately 2m deep. It lies at the approach to the bridge across the railway line (104). The section shows an extremely shallow topsoil, probably no more than 200mm. Below this there is clay with flints for the whole of the 2m that has been exposed. The clay appears to be rather iron-rich towards the top and then becomes greyer as it goes down.

104. The preferred route crosses the main railway line at this point. The line consists of three tracks within a cutting averaging 4 to 5m deep. Although the railway is marked on the 1st edition of the Ordnance Survey map, it is unclear if there was a footbridge close to this point. The railway was constructed in 1863.

105. The line of the sewer trench, which had turned to the south-east of the railway track, crosses the preferred route at this point. The pipe had not been laid, but the surface had been stripped of turf at the time of the survey. No sub-soil features were seen. A 50m stretch of the area stripped down to the plough soil was examined for surface finds.

Report: A few possible worked flints and sherds of pottery were collected. The conditions were good. It was drizzling and the natural flint nodules, which occupied between 10 and 15% of the surface, were clearly visible in the wet conditions.

Another 2m x 2m square, 2m deep pit had been dug on the line of the new sewer across the field (106). The profile showed that the topsoil was about 300mm deep. Below this there was a friable, pale orange yellow sub-soil, basically clay, but not waterlogged and then an increasingly orange clay followed by a very grey clay towards the bottom. The sequence was that of a topsoil, a leaching horizon and below that the grey clay. There was water lying in the bottom of the hole and the clay lying 340 to 400mm above the bottom was fairly waterlogged.

There were no obvious features at the base of the plough soil.

106. A field of improved pasture crossed by the line of the new sewer trench (105). It was not being grazed at present. No particular features could be identified within it.

107. A causeway track which crosses the railway line to the west, lying on the northern side of the field (106). This raised area is about 0.5m above the rest of the field but clearly lies within it. A ditch boundary (108) survives on its north-eastern side.

108. A boundary ditch, wettish, but not containing flowing water separating the causeway (107) and the field (106) from the fields to the north. It is 3m wide from crest to crest and about 1.5m wide at bottom. It has a post and wire fence on its north-east side.

109. A shallow ditch with a dense hedge of *C. monogyna* and *P. spinosa* principally on its eastern side. It has been managed in relatively recent times. The ditch is only a slight feature, 1m to 2m across and about 1m deep.

110. A field of improved pasture, being grazed at the present time. At the point where it is crossed by the line of the public footpath (111), there is a depression, suggesting that the field was originally subdivided into two or more fields along the line of the footpath.

111. The line of the public footpath. This track is marked No 12, on Fig 2b of the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993) - 'a possible road south from the Priory to Lyminster' The 1779 map of lands belonging to Calcetto Farm shows this path as a track (Appendix I, PM7).

112.* The ditch forming the boundary between the field (110) and the field to the north. It is virtually dry, about 2.5m wide at the top but narrower at the base and less than 1m deep. There are traces of bushes and decayed trees and tree holes along its length, suggesting that it was originally hedged with *C. monogyna* and *Q. robur*. The field to the north of this boundary, contained some ridge and furrow. (Photograph 12).

113.* A 'green lane' leading to Broomhurst Cottage/Farm and consisting of a central carriageway, now a dirt track, with a ditch on either side. The ditches are virtually silted up - the hedge on the west side consists almost entirely of *P. spinosa*, but there are a number of examples of *Acer campestre* (field maple) on the east side with an abundance of *Urtica dioica* (nettle). Beyond the ditch on either side of the green lane there are mature trees. On the west, behind a wire fence, there is a line of mature *Q. robur*, and on the east side there are fairly large and apparently diseased specimens of *F. excelsior*, together with some mature *A. campestre*. The hedges along the track includes *Cornus sanguinea* (dogwood). The general diversity of the woody species suggests a route of some antiquity. This road is clearly shown as 'Mincing Lane' on the 1736 estate map (Appendix I, H1/18) and as a hedged routeway on the Calcetto farm map of 1779 (Appendix I, PM7). On these two maps the road extends northwards to the main Arundel to Cross Bush road. It is also show in this way on the 1812 map of Lyminster (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 5). By 1824, however, a new short cut to Lyminster Lane had been created (Appendix I, PM2), although the northerly section still survived. By the first edition of the Ordnance Survey, this latter section appears to have gone out of use. (Photograph 35).

114.* A field of pasture, now running up to the Cross Bush roundabout. There are no negative or positive features apparent. The fence on the southern edge of this field is modern and forms a boundary with the newly constructed branch of McDonalds.

The fencing for the last phase of the road building truncates the east end of this field. (Photographs 36 and 37).

115. Marked as a drain on the maps provided. This now has a single *Q. robur* on its crest and stumps of other trees on the south side. This is a somewhat enigmatic feature which runs in a westerly direction towards the farm from the present main road. It is quite a significant landscape feature with a gentle slope up to the east. It no longer contains any flowing water and there is rather paler grass growing in the bottom. It will eventually form a lynchet, which may be difficult to explain. Part of the rise on the south-west side may be due to cleaning, although it would have been easier to place spoil on the north side.

This boundary is shown on the 1736 estate map and on the Calcetto Farm map of 1779 and on the 1812 map of the Manor of Lyminster (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Fig 5). By 1824, it had disappeared. It appears to mark the limit of a small area of common land at the junction of the main road and Lyminster Lane, which was enclosed between 1812 and 1824.

116. A field of pasture south-west of the boundary (115). It lies approximately 1.5m higher than the field (117) to the north. No significant features could be seen.

117. A field of pasture north-east of the boundary (115). No significant features could be seen.

APPENDIX III

FIELD-WALKING AND SURFACE FINDS

In the north of the survey area, the preferred route runs through coniferous plantations and deciduous woodland where the surface of the ground is obscured by undergrowth, and is therefore not suitable for systematic surface collection of finds. South of the woodland, the route turns to run in a west to east direction through open farmland consisting essentially of permanent or improved pasture but with three arable fields (Figure 3, Areas A, B and C).

At the time of inspection Areas B and C had both recently been ploughed, but had been well weathered. Area A, which had been under cultivation in 1993, had not been ploughed and appeared to be in the process of being landscaped as a golf course.

Collecting Policy

The evidence for all periods of human occupation from prehistoric to modern was collected.

Due to the extremely large quantities of roofing tile found on the surface in Area B, however, it was decided to collect only a representative sample of tile from all but four, randomly selected 20 metre quadrats within this area. Each field-worker was therefore requested to make a judgement and to collect only a few examples of each apparent variation in type and colour of roofing tile from all but the randomly selected quadrats - 5, 10, 24 and 29 (Figure 6), although all other types of surface finds were collected.

Methodology

The arable areas available for field-walking along the line of the preferred route, were identified on the ground following the initial 'walk-over' survey. The three areas, A, B and C were marked on the detailed maps provided by the design agents, West Sussex County Council (Figures 2-4). In each instance, an area was defined to enclose the maximum extent of the roadway across the field in question. Each area was further subdivided, as far as possible, into 20 x 20 metre quadrats. Each quadrat was allocated a simple identifying number (Figures 5 and 6). In Area A, a note was made of the percentage of surface visible and the surface conditions within each quadrat.

The finds collected from each of the three areas were washed and recorded. For the most part, modern materials, such as plastic and tinfoil, were discarded. The finds for further study were placed in bags marked with the appropriate area code (A - C) and a number to indicate from which quadrat they were collected. A full list of finds from each of the three areas is appended below.

The Three Field-Walking Areas

The following sections give details of the three areas examined and the surface conditions at the time of the exercise. Weather conditions have also been noted since this can affect the recovery rate of artifacts.

Area A. (centred on TQ 0001 0585) A corridor 60 metres wide and approximately 230 metres long was laid out across the fields shown on Figure 3 (45, 50) on the west side of Tortington Lane, in order to establish an area enclosing the preferred route. The area was further subdivided into 33 20 x 20 metre quadrats, the remaining three units at the

extreme west end of Area A measured approximately 20m by 10m (Figure 5). Each quadrat was systematically sampled, the first 15 units by four field-workers and the last 21 units by two field-workers. Each walker traversed a series of parallel transects, north-south, in both directions, for the first half of the exercise, walking positions were varied in order to minimise collecting bias. The finds from each quadrat were collected and placed in an individual numbered bag.

The weather at the time of the field-walking exercise, the 4th and 5th January 1994, was essentially dry, though windy, with periods of hazy sunshine interspersed with short rain showers. Although cold, the surface of the ground was not frozen.

Surface conditions

At the time of the survey, the east side of the field had been used for growing brassicas, the stumps of which were still upstanding. The surface of the field was considerably obscured by a heavy growth of weeds and grass and there was also a great deal of standing water which contributed to the difficulties in visualising the ground surface. In some quadrats, no more than between 5 and 10 percent of the surface was readily visible at the time of the exercise. A patch of burning was noted at the centre point of the preferred route, but this appeared to be very modern in origin. The western half of the field had been used for a grain crop the previous year, but the surface of the area marked out for inspection was equally obscured by a growth of weeds and grass and was considerably waterlogged. Landscaping for the proposed golf course had created several mounds which totally or partly obscured the surface of the field in those areas.

A total of 36 quadrats were examined and all surface objects of any period were collected.

Field-workers: A. Scott, A. Rees, P. Davey and J. Woodcock.

Area B (centred on TQ 0025 0580). A similar corridor, 60 metres wide and 200 metres long, was laid out to enclose the line of the preferred route through the ploughed field (55) which lay on the opposite side of Tortington Lane to Area A. The area was subdivided into 30 20 x 20 metre quadrats, each unit being allocated an identifying number (Figure 6). A triangular strip remained between the western end of the study corridor and the ditch (53) which marked the boundary between the field and Tortington Lane; this area was treated as a single unit for the purpose of surface artifact collection. A similar narrow, triangular strip remained at the eastern end of the study corridor, this was sub-divided into two units (Figure 6).

Each quadrat was systematically sampled by four field-workers walking parallel transects in both directions, north-south, alternating positions in order to minimise collecting bias. The finds from each quadrat were collected into an individual marked bag.

Surface conditions

The field had been recently ploughed and the surface was damp and sticky following heavy rain.

On the 6th of January, 1994, when the first 60 by 100 metre area (the western half) was walked, the surface was clearly visible and surface objects stood out starkly from the background. The weather was damp with a constant fine drizzle. The surface of the ground was not frozen.

On the 7th of January, 1994, when the second half of the survey area was walked, there had been a light fall of snow overnight which had been driven by a westerly wind.

Accordingly it was found necessary to walk the quadrats in one direction only, from east to west, as only the lee side of the plough ridges were clear of snow leaving the surface visible. The weather was clear, though dull and the surface of the ground was frozen until mid-day. This did not prevent the collection of surface artifacts.

A total of 33 units was examined, a full collection was made from quadrats 5, 10 24 and 29. A representative selection only of roofing tile was made from all the other quadrats.

Field-workers: A. Scott, A. Rees, S. White and J. Woodcock.

Area C. (centred on TQ 0075 0565). This small area on the northern edge of field (70), at present bounded on the north by a loop of drain (69) lies directly on the southern edge of the preferred route, immediately east of Ford Road. In view of its unusual shape, it was decided to examine this small `promontory' area as a single unit. A line, measuring 135 metres, was accordingly stretched from west to east across the southern side of the loop formed by the drain (69) cutting the area off from the remainder of the field. Area C was methodically sampled by four field-workers each walking two metres apart, in parallel transects west-east in both directions across the area. The field-workers alternated their walking positions in order to minimise collection bias. The finds were collected into a single, marked bag.

Surface conditions

This area, marked `water-meadows' on all editions of the Ordnance Survey maps, had only very recently been ploughed, apparently for the first time. The soil was dark, damp and very sticky, making progress across the surface exceedingly difficult. Rain had fallen and items such as stones and artifacts had been washed clean and were clearly visible. It was noted that a considerable number of broken bricks had recently been dumped at the extreme eastern end of the area.

At the time the exercise was undertaken, the weather was dry and bright though the sun was low in the western sky.

A full collection of surface artifacts was made.

Field-workers: A. Scott, A. Rees, S. White and J. Woodcock.

List of Field-walking Finds

This section of Appendix III contains the lists of finds recovered during the course of the field-walking exercise. A description of the find types and the codes used to describe the different classes of artifact is given below. In Area A, the numbering of the 20 x 20 metre quadrats commenced with "1" in the south-east corner (Figure 5). In Area B, the numbering commenced with "1" in the north-west corner (Figure 6). Area C was treated as a single unit.

Codes used in the Finds List

ANI Animal bone

ASB Asbestos sheeting

BGE Brown glazed red earthenware (16th-19th century)

BGS	Bottle glass
BFD	Field drain (unglazed, ridged, buff earthenware)
CAO	Coal
CRE	Creamware (late 18th century)
CTP	Clay tobacco pipe (stem or bowl)
FER	Iron object (specified where possible)
FLT	Flint
GBE	Green glazed buff earthenware (well fired) (Late medieval -early post-medieval)
GGE	Green glazed red earthenware (early post-medieval)
GFT	Glazed floor tile, inlaid (medieval - 14th century)
GRT	Glazed roofing tile. A fairly sandy, red-bodied roofing tile with a dark green glaze. (late medieval to early post-medieval)
HSB	House-brick
IBE	Industrial blue earthenware (19th-20th century)
IBT	Indeterminate brick or tile
IYE	Industrial yellow earthenware (19th-20th century)
LGE	Lead-glazed red earthenware (self-coloured) (17th-19th century)
MOL	Mollusc (any species)
MOR	Mortar
NFO	Non-ferrous object
PBC	Porcelain/Bone china (19th century)
PMS	Press-moulded slipware (Staffordshire type) (19th century)
RFD	Field drain (unglazed red earthenware)
SFD	Field drain (stoneware)
SLG	Slag
SLT	Slate
STW	Stoneware (all colours) (19th century)
UBE	Unglazed earthenware (buff-pink bodied, sandy) (late medieval)

UNC Unclassified

UFT Unglazed floor tile (post medieval)

UME Unglazed earthenware (coarse, miscellaneous fabric colours) (probable medieval)

UOE Unglazed earthenware (pale-orange bodied, soft) (late medieval)

UPE Unglazed earthenware (pink bodied, white gritted) (medieval)

URE Unglazed earthenware (bright orange-red, flower pot type) (19th-20th century)

URT Unglazed roofing tile. This was sub-divided into six types:-

1. A pale pinkish-orange coloured tile with a coarse sandy body containing a large quantity of haematite fragments. Thickness 12-14 mm (probably medieval, possibly 14th or 15th century).

2. A light-buff coloured tile with a fine body containing rolled sand grains. Thickness 12-14 mm (probably late medieval or early post-medieval, 15th or 16th century).

3. An orange-red coloured tile with a fine body. Thickness 13-14 mm (18th or 19th century).

4. A pale orange coloured tile with fine body and some inclusions of haematite. Some examples of this tile type were oxidised on the surface with a much reduced core (sandwich). Thickness 11-12 mm (18th or 19th century).

5. Tiles with surface colour varying between orange, buff, dull pinkish-red and dark grey. The body was composed of poorly mixed clay and many tiles were highly fired. Thickness 11-14 mm (post-medieval, 17th and 18th century).

6. A highly fired, modern, purplish-red moulded tile. Thickness 9-10mm (20th century).

A representative selection of each type of tile was retained. Most of the unglazed roofing tile was markedly abraded.

WBA Wedgewood Basalt ware (19th century)

WBE White bodied earthenware (transfer printed and plain) (19th-20th century)

WGS Window glass

WSE White-slipped red earthenware (19th century)

WSS White salt-glazed stoneware (18th century)

List 1 - Field-walking Finds from Area A

Plot No	Find Code	Number	Description
A 1	IBT	4	
A 1	URT	5	
A 1	HSB	2	
A 1	RFD	3	
A 1	STW	1	
A 1	WBE	1	
A 2	URT	4	
A 2	GFT	3	
A 2	FLT	1	Natural
A 2	BGS	1	
A 4	WBE	1	
A 4	CTP	2	Stems
A 4	FLT	2	Natural
A 4	HSB	3	
A 4	URT	8	
A 5	WBE	1	
A 5	URT	5	
A 6	FLT	2	1 trimming flake, 1 natural
A 7	IBT	4	
A 7	HSB	4	
A 7	FLT	1	Burnt
A 7	URT	6	
A 7	WBE	2	
A 8	HSB	1	
A 8	URT	6	
A 8	STW	1	
A 8	SFD	1	
A 8	WBE	1	
A 8	FLT	1	Natural
A 9	FER	1	Nail
A 9	FLT	1	Natural
A 9	IBT	1	
A 9	URT	4	
A 10	URT	6	
A 10	WBE	1	
A 10	FLT	1	Burnt
A 11	BGS	1	
A 11	WBE	2	
A 11	FLT	2	1 burnt
A 11	URT	9	
A 11	GGE	1	
A 11	IBT	5	
A 11	HSB	2	
A 12	URT	1	
A 12	WBE	1	
A 12	FLT	1	Natural
A 12	IBT	1	
A 12	LGE	1	
A 13	FLT	1	
A 13	URT	5	
A 14	IBT	1	

A 14	UNC	1	?black plastic blade
A 14	FER	1	Pipe fragment
A 14	URT	4	
A 14	SLT	1	
A 14	WBE	1	
A 15	URT	3	
A 15	SLT	1	
A 15	FLT	1	Worked (chunky blade)
A 16	STW	1	
A 16	URT	1	Fragment
A 17	UBE	1	
A 18	WBE	1	
A 18	RFD	5	
A 20	RFD	3	
A 21	RFD	1	
A 22	RFD	3	
A 23	RFD	2	
A 24	SLT	1	
A 24	WBE	1	
A 25	RFD	2	
A 26	URT	1	
A 26	COA	1	
A 26	SLT	1	
A 27	FLT	2	1 burnt
A 27	BGS	1	
A 27	URT	2	
A 28	URT	1	
A 29	WBE	1	
A 29	URT	3	
A 30	MOL	1	
A 30	URT	3	Fragments
A 31	STW	1	
A 31	URT	1	Modern, moulded
A 31	IBT	1	
A 31	FLT	1	Burnt
A 32	URT	5	
A 33	IBT	1	
A 34	HSB	1	
A 34	UNC	1	? cork
A 35	RFD	1	
A 35	GGE	1	
A 35	URT	1	
A 35	HSB	1	
A 36	URT	4	
A 36	IBT	1	

List 2 - Field-walking Finds from Area B

Plot No	Find Code	Number	Description
B 1	STW	1	
B 1	HSB	2	
B 1	MOL	9	
B 1	UPE	1	
B 1	FLT	3	Natural
B 1	WBE	2	
B 1	SLT	1	
B 1	ANI	1	
B 1	WSE	1	
B 2	COA	1	
B 2	LGE	1	
B 2	FLT	1	Natural
B 2	WBE	2	
B 2	URE	2	
B 2	ANI	1	
B 2	SLT	2	
B 2	MOL	5	
B 3	MOL	5	
B 3	URE	1	
B 3	BGS	1	
B 3	UPE	1	
B 3	CTP	1	Stem
B 3	RFD	1	
B 3	LGE	1	
B 3	SLT	2	
B 3	FLT	3	1 burnt
B 3	HSB	2	
B 3	ASB	1	
B 3	FER	2	
B 3	GGE	1	
B 3	WBE	1	
B 3	ANI	1	
B 4	STW	1	
B 4	FLT	3	Natural
B 4	MOL	18	
B 4	SLT	3	
B 4	HSB	1	
B 4	ANI	1	
B 4	CTP	1	Stem
B 4	COA	3	Burnt
B 4	WBE	6	
B 4	PBC	2	
B 4	BGS	1	
B 4	GBE	1	
B 4	WGS	1	
B 5	FLT	2	1 flake
B 5	GGE	1	
B 5	RFD	1	
B 5	ANI	1	
B 5	CTP	1	Stem
B 5	BGS	4	

B 5	URE	1	
B 5	MOL	15	
B 5	IYE	2	
B 5	COA	4	
B 5	HSB	3	
B 5	LGE	5	
B 5	UOE	1	
B 5	GFT	2	
B 5	WSE	1	
B 6	WBE	2	
B 6	UBE	1	
B 6	HSB	2	
B 6	MOL	13	
B 6	SLT	2	1 small rod
B 6	URE	1	
B 6	GRT	1	
B 6	FER	1	Agricultural ?blade
B 6	BGS	2	
B 6	LGE	1	
B 7	PBC	1	
B 7	MOL	18	
B 7	CTP	1	Stem
B 7	BGS	2	
B 7	WBE	2	
B 7	BGE	1	
B 7	ANI	1	
B 7	UOE	1	
B 7	COA	2	1 burnt
B 7	FLT	2	Natural
B 7	SLT	1	
B 7	LGE	1	
B 7	WSE	1	
B 8	MOL	7	
B 8	IBT	1	
B 8	IBE	1	
B 8	GGE	1	
B 8	WBE	4	
B 8	FER	1	
B 8	PMS	1	
B 8	SFD	1	
B 8	ANI	1	
B 8	STW	1	
B 8	COA	1	
B 9	WBE	2	
B 9	COA	2	Burnt
B 9	SLT	2	
B 9	BGE	3	
B 9	CTP	1	Stem
B 9	FER	1	Nail
B 9	MOL	5	
B 9	ANI	1	
B 9	WSE	1	
B 10	BGS	1	
B 10	GGE	2	
B 10	URE	1	

B 10	BGE	1	
B 10	WBE	4	
B 10	ANI	1	
B 10	GFT	3	
B 10	UOE	1	
B 10	HSB	2	
B 10	COA	1	Burnt
B 10	SLT	2	
B 10	MOL	18	Fragments
B 10	FLT	1	Nodule
B 10	LGE	2	
B 10	FER	2	1 nail
B 11	MOL	13	
B 11	SLG	2	
B 11	WBE	2	
B 11	SLT	2	
B 11	URE	1	
B 11	COA	1	
B 11	BGE	2	1 fine, dark-bodied, well fired
B 12	MOL	11	Fragments
B 12	MOR	1	Brick attached
B 12	URE	1	
B 12	SLT	4	1 piece burnt
B 12	GFT	3	
B 12	CTP	1	Stem
B 12	FER	1	Machine part
B 12	FLT	1	Natural
B 12	WSE	3	
B 13	MOL	12	
B 13	HSB	1	
B 13	SLT	4	
B 13	SLG	3	White/Pale blue, glassy
B 13	BGE	2	
B 13	URE	1	
B 13	WBE	2	
B 13	BGS	2	
B 13	STW	2	
B 13	LGE	2	
B 13	FLT	2	Natural
B 13	WSE	1	
B 14	FLT	1	?Gun flint
B 14	BGE	1	
B 14	MOL	9	
B 14	UNC	1	Spherical, red ?bead
B 14	WBE	5	
B 14	FER	1	Nail
B 14	CTP	1	Stem
B 14	COA	1	Burnt
B 14	HSB	2	
B 14	URE	1	
B 14	GRT	1	
B 15	UME	1	
B 15	SLT	3	
B 15	WBE	5	

B 15	COA	1	
B 15	MOL	8	
B 15	HSB	1	
B 15	RFD	2	
B 16	MOL	13	
B 16	ASB	1	
B 16	WBE	5	
B 16	SLT	5	
B 16	STW	1	
B 16	HSB	2	
B 16	BGS	1	
B 17	MOL	9	
B 17	FLT	1	Natural
B 17	FER	1	
B 17	STW	2	
B 17	SLT	1	
B 17	CTP	2	Stems
B 17	WBE	3	
B 18	URE	1	
B 18	UBE	1	
B 18	FER	2	1 iron peg - 42cms, 1 link
B 18	STW	2	
B 18	RFD	2	
B 18	SLT	2	
B 18	BGE	1	
B 18	BGS	1	Decaying
B 18	MOL	9	
B 18	LGE	1	
B 18	HSB	1	
B 18	IBE	1	
B 18	WBE	7	
B 19	MOL	3	
B 19	COA	1	
B 19	IBT	4	
B 19	SLT	1	
B 19	CTP	1	Stem
B 19	WBE	5	
B 19	IYE	1	
B 19	UOE	1	
B 19	UFT	1	
B 19	FLT	1	Burnt
B 20	LGE	1	
B 20	MOL	5	
B 20	ANI	1	Tooth
B 20	BGS	2	
B 20	CTP	1	Stem-bowl junction
B 20	WBE	5	
B 20	STW	1	
B 20	WSE	2	
B 21	BGE	2	
B 21	UOE	1	
B 21	SLT	4	
B 21	HSB	1	
B 21	WBE	1	
B 21	COA	1	

B 21	LGE	1	
B 21	BGS	1	
B 22	CTP	1	Part bowl
B 22	BGE	1	
B 22	COA	1	
B 22	WBE	1	
B 22	HSB	1	
B 22	SFD	1	
B 22	STW	1	
B 23	RFD	1	
B 23	BGS	1	
B 23	COA	2	
B 23	GBE	1	
B 23	WBE	2	
B 23	LGE	1	
B 23	MOL	1	
B 23	IBT	1	
B 23	SLT	1	
B 23	CTP	1	Stem
B 24	STW	1	
B 24	UBE	3	
B 24	GGE	1	
B 24	SLT	3	
B 24	UOE	1	
B 24	WBE	4	
B 24	HSB	16	
B 24	COA	3	
B 24	CTP	1	Stem
B 24	MOL	1	
B 24	FLT	1	Natural
B 24	LGE	2	
B 24	WSE	1	
B 25	STW	1	
B 25	NFO	1	
B 25	BGE	1	
B 25	SLT	1	
B 25	HSB	1	
B 25	BGS	3	
B 25	MOL	1	
B 25	WSE	2	
B 26	FLT	1	Burnt
B 26	MOL	3	
B 26	IYE	1	
B 26	BGS	1	
B 26	HSB	3	
B 26	UBE	3	
B 26	GGE	1	
B 26	GBE	1	
B 26	LGE	1	
B 26	SLT	2	
B 26	WBE	2	
B 28	WBE	11	
B 28	FER	1	Machine part
B 28	BGS	1	
B 28	MOL	6	

B 28	UOE	1	
B 28	IBE	1	
B 28	HSB	1	
B 28	BGE	2	
B 28	COA	3	
B 28	SLT	2	
B 29	WBE	3	
B 29	UPE	4	
B 29	UME	2	
B 29	BGE	4	1 surface over-fired glaze
B 29	URE	3	
B 29	UOE	1	
B 29	ANI	1	Cattle tooth
B 29	CRE	2	
B 29	GBE	2	
B 29	HSB	1	
B 29	PBC	2	
B 29	FLT	2	Natural
B 29	RTG	2	
B 29	MOL	20	
B 29	CTP	3	Stems
B 29	LGE	4	
B 29	IBT	9	
B 29	IBE	2	
B 29	FER	5	3 agricultural implements, 1 ?nail, 1 bolt
B 29	GFT	1	
B 29	RFD	1	
B 29	UBE	14	
B 29	BGS	6	
B 29	SLT	6	
B 29	STW	3	
B 29	GGE	8	
B 29	WSE	3	
B 30	LGE	3	
B 30	WBE	3	
B 30	BAS	1	
B 30	FER	2	1 nail, 1 ?
B 30	URE	1	
B 30	UBE	10	
B 30	MOL	6	Fragments
B 30	GFT	1	
B 30	SLT	3	1 rod
B 30	HSB	1	
B 30	GGE	6	
B 30	GBE	2	
B 30	BGS	1	
B 30	BGE	2	
B 31	GBE	1	
B 31	HSB	2	
B 31	GGE	1	
B 31	WBE	2	
B 31	MOL	5	
B 31	URE	1	
B 31	UME	1	

B 31	UBE	4	
B 31	COA	2	
B 31	SLT	2	
B 31	WGS	1	
B 32	GGE	1	
B 32	FLT	1	Flake
B 32	COA	1	
B 32	GRT	1	Dark green glaze
B 32	UBE	12	
B 32	HSB	1	
B 32	MOL	1	
B 32	FER	1	?nail
B 33	FLT	7	Natural
B 33	FER	1	Agricultural implement
B 33	BGS	1	
B 33	URE	1	
B 33	UOE	1	
B 33	HSB	2	
B 33	MOL	2	
B 33	SLT	1	
B 33	WSE	2	
B 33	WBE	3	

List 3 - Field-walking Finds from Area C

Plot No	Find Code	Number	Description
C 1	RFD	23	
C 1	UBE	1	
C 1	MOL	1	
C 1	IBT	15	Small fragments, probably URT
C 1	WSS	1	
C 1	URT	9	1 decorative ridge tile
C 1	URE	1	
C 1	ANI	3	
C 1	BFD	6	
C 1	ASB	5	Fragments, oil saturated
C 1	BGS	1	
C 1	FER	1	Agricultural implement
C 1	GGE	1	
C 1	FLT	1	Burnt
C 1	HSB	12	Fragments

Results of the field-walking survey

Area A Most of the finds from this heavily obscured field surface could be classed as building material. 14 fragments of house-brick, 19 pieces of indeterminate brick or tile, a small amount of slate and approximately 90 pieces of the unglazed roofing tile which was widespread on the fields in the vicinity. There was some domestic rubbish in the form of three sherds of bottle glass, 14 sherds of modern white bodied earthenware, four pieces of miscellaneous stoneware, a piece of coal, some fragments of oxidised iron and a single clay tobacco pipe stem. There was one sherd of late medieval unglazed earthenware, two

pieces of green-glazed red-bodied earthenware of probable early post-medieval date and

three pieces of inlaid, glazed medieval floor tile.

Area B Throughout this area, a fairly dense scatter of unglazed, red roofing tile was noted. All examples of tile were collected from four randomly selected 20m x 20m quadrats, nos 5, 10, 24 and 29.

The total weight of roofing tile from each unit was calculated as follows:

Number 5 - 11kg 550g
Number 10 - 8kg 350g
Number 24 - 3kg 800g
Number 29 - 7kg 750g

The most frequently occurring class of find was building material, consisting of a large quantity of unglazed roofing tile and many fragments of house-brick or indeterminate brick/tile fragments. There were also 60 pieces of slate, most of which were very small, two pieces of window glass, some asbestos roofing, 31 fragments of coal and a few pieces of slag.

Medieval and late medieval ceramic finds were also made.
Pottery was subdivided by matrix and fabric colour and consistency. A total of 66 fragments of unglazed buff, pink, orange and more reduced bodied wares were noted from many different vessels. In addition, 10 small pieces of inlaid, glazed floor tile of medieval date were collected. This medieval ceramic assemblage exhibited a definite concentration towards the eastern end of the Area. The totals of medieval sherds by quadrat in Area B are as follows:-

B 1	1
B 3	1
B 4	1
B 5	3
B 6	2
B 7	1
B 10	4
B 12	3
B 14	1
B 15	1
B 18	1
B 19	1
B 21	1
B 23	1
B 24	4
B 26	4
B 28	1
B 29	24
B 30	13
B 31	6
B 32	13
B 33	1

Total 88 sherds

Metal was represented by one small fragment of lead waste, and a number of highly oxidised pieces of broken agricultural machinery, such as plough tips and the occasional nail.

There were 11 pieces of animal bone, including cattle teeth and about 230 pieces of shell, mostly ostrea edulis. Despite the apparently large numbers, these consisted in most instances of very small and friable fragments of shell and probably no more than a dozen individuals were represented in all.

Some flint was found, but of the 33 pieces collected, only two small flakes may have been produced by man. There was one example of a probable gun flint.

19th and 20th-century pottery and bottle glass was represented by a few fragments of industrially produced blue and yellow ware, and 17 fragments of unglazed orange bodied flower-pot type ware. There were 5 small pieces of bone china/porcelain and 96 fragments of modern white bodied earthenware. There were 17 fragments of miscellaneous stoneware, most of which were modern and 18 pieces of a white-slipped red-bodied earthenware of probable 19th-century date.

There were also some examples of glazed earthenware: self-coloured or lead-glazed earthenware - 27 pieces (17th - 19th century), brown glazed earthenware - 23 pieces (16th -19th century), green-glazed red-bodied earthenware - 23 pieces (early post-medieval) and a well-fired, green glazed buff-bodied earthenware - 8 pieces (late medieval to early post medieval).

17 stems from clay tobacco pipes were collected.

Area C A number of whole or half modern bricks, some large pieces of broken field drain and some modern roof tiles had been dumped along the eastern edge of this area where the ground was particularly damp. These were not collected.

There were three pieces of animal bone and a single fragment of ostrea edulis. There were some fragments of house-brick and/or tile and nine identifiable pieces of roof tile, including one example of a decorative ridge tile. In addition, there were 23 pieces of unglazed red earthenware field drain and 6 large pieces of buff bodied, ridged, unglazed field drain. One piece of modern white salt-glazed stoneware was found, two pieces of unglazed earthenware and one piece of green-glazed red-bodied earthenware. There was also one small piece of natural flint and a highly oxidised piece of farm machinery.

<u>Conclusions from field-walking evidence</u>

Area A Little of the surface of Area A was visible due to surface vegetation and compaction - collection and identification of surface artifacts was difficult. The finds collected at the time of the investigation were entirely in keeping with the conventional farming practise of spreading manure collected from the farm rubbish heaps and cattle sheds. The area had been disturbed to a certain degree by the commencement of the construction of a golf course and the insertion of some new land drains. Although a full collection of surface finds could not be made from this area, the material that was found did not suggest that any significant archaeological sites or deposits lay beneath it.

Area B Most of the field-walking finds came from Area B. This result was largely because the field had recently been ploughed and, despite the adverse weather conditions encountered, the surface was well weathered and surface finds easy to identify. A detailed analysis of the field-walking finds from Area B showed that they appeared to be evenly distributed across the section of the field affected by the preferred route. With the exception of a group of medieval ceramic finds at the eastern end of the Area, there were no concentrations of any other class of find.

The older ceramic items were very weathered and their surface heavily abraded. The impression gained was that they had been subject to years of weathering and exposure following regular ploughing. This weathering was particularly noticeable on the unglazed roofing tile fragments. The inlaid floor tile is likely to have originated from the site of the Augustinian Priory.

The finds were also entirely in keeping with the expected low density scatter resulting from generations of manuring of the fields with domestic and farmyard debris. Mr T. Luckin of Manor Farm, Tortington, (personal communication on the 6th of January 1994.) expressed the opinion that the spreading of manure collected from the tiled barns and outhouses in the locality - many of which had at some stage suffered a degree of damage to their roofs - explained the large quantity of roofing tile to be found on the surface of the fields.

The concentration of medieval finds at the eastern end of **Area B** suggests that an archaeological site may lie beneath it or at a short distance to the east.

Area C had apparently only recently been ploughed for the first time in a considerable period, having been under grass (water-meadow). The area had therefore not been subject to the usual programme of domestic and farmyard manure spreading. It contained few finds of note. The material collected suggested a degree of very recent dumping by the farmer in order to attempt to aid surface drainage where the newly turned soil was particularly damp and sticky. The small amount of unglazed pottery and the older types of roof tile appear to have lain within the soil since it was previously cultivated but were not as abraded as those from Areas A and B which had been frequently ploughed.

No finds were made in Area C which suggested that this section contained any archaeologically significant material.

APPENDIX IV

GEOLOGICAL TEST-PIT DATA

The archaeological examination of the spoil from 19 of the 21 geological test-pits (TP 301-TP 321) was carried out between July 31st and August 4th 1994.

In the original project specification, six of the test-pits were to have been hand excavated. Given access to these pits during excavation, this method would have had the best chance of the recovery and recording of archaeological evidence.

In the event, due to lack of notice, it did not prove possible to carry out the geological and archaeological assessments simultaneously and only two of the pits were hand dug (TP 315 and TP 317). Although the geologists attempted to keep separate the top-soil and sub-soil elements from the test-pits and to backfill them last, in practice this proved difficult due to lack of space and the extent and density of clay recovered from the pits.

The spoil from 19 of the test-pits was examined archaeologically. An attempt was made to recover and record any artifacts present and to assess the possibility of earlier human occupation in the vicinity. Where possible, the top-soil was re-distributed over the site. A small archaeological test-pit was excavated at TP 315.

The locations of the test-pits, are shown in Figures 2-4. The National Grid co-ordinates for each pit were provided by East Anglian Land Surveys Ltd.

Note: The numbers given in brackets refer to sites shown in Figures 2-4 and are referred to in Appendix II. An asterix indicates those sites for which a photographic record exists.

TP 301 NGR 498872 107337

Machine excavated. The site was adjacent to a public footpath at the extreme west end of the area under investigation. The topsoil had been separated out and left in a ridge. The total area of geological disturbance was approximately 4m by 4m.

The topsoil was very fine and sandy, grey-brown in colour. It contained pieces of root and a large quantity of flint fragments. 95% of the flint consisted of angular, broken fragments, 5% were rounded nodules with little chemical weathering or cortication, though there was some patination. The flint represented approximately 20% by volume. The sub-soil was a bright orange-brown, containing about 25% flints by volume.

The topsoil was examined archaeologically. No objects of archaeological importance were noted.

The topsoil was redistributed by hand.

TP 302 NGR 499036 107386

Machine excavated. The site was close to the south side of the A27. The pit had been cut into 'made' ground resulting from the construction of the road. The total area of geological disturbance was 4m by 2.5m.

The soil had been completely redistributed and the topsoil had not been segregated. The surface was examined archaeologically and was found to contain fragments of modern rubbish including glass, plastic and tin-foil. There was about 10% by volume of broken

flint fragments and occasional pieces of broken chalk. No objects of archaeological importance were noted.

TP 303 NGR 499176 107393

Machine excavated. The site was within 10m of TP 302. The total area of geological disturbance was 3m by 3m. The findings were identical to those at TP 302.

TP 304 NGR 499262 107362

Machine excavated. The site was adjacent to an old tarmac roadway about 30m south of the A27 in (3). The total area of geological disturbance was approximately 4m by 4m. The coarse, sandy topsoil had been segregated and was found to contain fragments of coal, tarmac, concrete, lumps of very soft sandstone and some pieces of fresh chalk. The flint within the topsoil were made up almost entirely of broken pieces and was about 25% by volume. The spoil was examined archaeologically. No objects of archaeological importance were noted.

The topsoil was re-distributed by hand.

TP 305 NGR 499245 107422

Machine excavated. The site was located 8m north of the present A27. The total area of geological disturbance measured 3m by 3m. The area had been levelled and the topsoil had not been segregated.

The surface was examined archaeologically and was found to contain a large number of chalk fragments, brick, aluminium drinks cans, silver foil, polythene and twentieth-century pottery. No objects of archaeological importance were noted.

TP 306 NGR 499404 107328

Machine excavated. The site lay within the area covered by the tree nursery (8). The total area of geological disturbance was 3m by 1.5m. The topsoil had been segregated and was found to be compact, but essentially sandy. It was a bright orange-brown in colour. The incidence of flint was very low; most were rounded pebbles and less than 5% by volume.

The spoil was examined archaeologically. No objects of archaeological significance were noted.

The topsoil was redistributed by hand.

TP 307 NGR 499382 107293

Machine excavated. The site lay within the area covered by the tree nursery (8). The total area of geological disturbance was 3m by 3m. The topsoil had been segregated and differed from TP 306 in that there was more humic material and it was, therefore, less compacted. The incidence of flint was low, less than 5% by volume.

The spoil was examined archaeologically. One small discoid scraper of probable Neolithic date was recovered.

The topsoil was redistributed by hand.

TP 308 NGR 499530 107231

Machine excavated. The site was south of (10) on tipped land (12), resulting from the construction of the A27. The total area of geological disturbance was 4m by 5m. The topsoil had not been segregated and the site had been levelled.

The site was examined archaeologically and found to contain a high percentage of modern rubbish. Fragments of brick, polythene, plastic, bottle glass, tinfoil and a number of large lumps of both dark grey and rose-pink clay were identified on the surface of the area. No objects of archaeological significance were noted.

TP 309 NGR 499563 107220

Machine excavated. The site was also on the tipped land (12), south of (10). The total area of geological disturbance was 4m by 3m. The topsoil had not been segregated and the site had been levelled.

Archaeological examination of the surface of the area revealed a large amount of modern rubbish, including bottle glass, pieces of salt-glazed and earthenware land drain, polythene, concrete and pieces of polystyrene. No objects of archaeological significance were noted.

TP 310 NGR 499609 107158

Machine excavated. The site lay across the footpath (18) running through (15/16). The total area of geological disturbance was 4m by 4m. A spoil heap, supposedly the topsoil had been left as a large ridge on the east side of the path. The topsoil had not been segregated and most of the spoil consisted of the sub-soil, a bright orange-brown clay with some patches of a deep rose red colour. What topsoil could be identified, mixed with the clay appeared to consist of a fine sand. The flint content, about 15% by volume, was almost entirely composed of rounded pebbles.

Archaeological examination of the spoil was undertaken with difficulty. No objects of archaeological significance were noted.

The spoil was redistributed by hand, in order to re-instate the public footpath.

TP 311* NGR 499633 107015

Machine excavated. The site had been placed some 20m south of that indicated on Schedule C, on the edge of the area indicated for the crossing of Old Scotland Lane and adjacent to the track leading south-east towards Binsted Lane (East). The total area of geological disturbance was taken up by a ridge of spoil, 5m long, 1.5m wide and 0.5m high.

The topsoil had not been segregated and the spoil consisted entirely of sub-soil, a bright yellow clay with both grey and deep rose-red patches. The clay contained some large flint nodules.

An examination of the area was made, but the nature of the spoil was such that no archaeological assessment could be made. No objects of archaeological significance were noted.

The ridge of clay spoil was not redistributed (Photograph 38).

TP 312* NGR 499792 106878

The pit was expected to have been hand dug, but it had been machine excavated. Access had been gained for the machine from Binsted Lane. The site lay within (21/23). The total area of geological disturbance measured 11m by 9 m. The area had been levelled and the topsoil and the sub-soil had been partly integrated. It was possible to note that the top-soil was a mid-brown, fine grained material with a high humic content. The sub-soil consisted of a yellow clay with patches of deep rose-red clay.

The surface was examined, the flint content was less than 5% by volume and consisted of medium sized nodules, some pebbles and a number of broken fragments. No objects of archaeological significance were noted (Photograph 46).

TP 313* NGR 499811 106644

This pit had also been machine dug. The total area of geological disturbance was approximately 4m by 3m. The spoil lay in a ridge on the south-west of the footpath and measured 4m in length, 2m wide and some 350mm high. Some effort appeared to have been made to segregate the topsoil which consisted of a light, fine, mid-brown material high in humic content. The core of the mound consisted of sub-soil which was of the typical heavy yellow clay with patches of grey and deep rose-red clay.

The spoil was examined archaeologically. Flints made up 25% by volume and varied considerably in type, from nodules to pebbles and broken fragments. No objects of archaeological significance were noted. One corner of the test-pit was identified beneath the spoil heap.

The spoil was redistributed by hand with difficulty, the clay being particularly hard to spread (Photographs 44 and 45).

TP 314* NGR 499822 106447

This pit had also been machine rather than hand dug. The tip was adjacent to the footpath (33), running between (31) and (34). The spoil from the excavation was left in a ridge 4m long, 1m wide and about 500mm high. The site of the test-pit was not identified, but appears to have been beneath the mound. The topsoil had not been segregated and the spoil was 90% geological clay apparently too bulky to have been used to fill the cavity. There were a few flint nodules and some broken pieces within the clay.

The surface was examined, but no accurate archaeological assessment could be made. No objects of archaeological significance were noted.

The spoil was not redistributed in order to avoid contaminating the footpath (Photograph 43).

TP 315* NGR 499862 106322

The pit had been hand dug. The site lay within an area of fairly dense undergrowth. It had been dug across the abandoned path (35). The total area of geological disturbance was 2.5m by 2.5m. The topsoil had not been segregated and some attempt had been made to redistribute the spoil. The surface spread, consisting of a heavy sticky clay, varying in colour from white to yellow and deep rose-red, contained only occasional flint nodules.

A pit, approximately 800m by 800m was excavated in order to attempt to locate the geological test-pit. From the results it was possible to determine that a layer of fine-

grained, friable, light brown, humic topsoil, about 150mm deep lay over the area. The subsoil, which was found at a depth of 270mm below the surface, consisted of the clay described above, although the purest clay noted in the geological spoil was not reached

The surface and the spoil was examined archaeologically. No objects of archaeological significance were noted.

As no further archaeological evidence was anticipated at this level, the pit was backfilled, but the geological spoil was not completely redistributed (Photograph 42).

TP 316* NGR 499894 106194

Machine excavated. The geological spoil had been left as a mound 6m by 4m and the topsoil had not been segregated.

A surface examination was carried out revealing about 1% flint by volume, equally divided between un-weathered nodules and broken pieces. The spoil consisted of a heavy, fairly iron-rich, mid-brown clay, it was difficult to identify the topsoil mixed with clay, but it appeared to be a fine-grained, mid-brown friable soil with a good humic content.

It was not possible to make an accurate archaeological assessment. No objects of archaeological significance were noted.

The geological spoil was not fully redistributed (Photographs 39-41).

TP 317* NGR 499941 106081

The pit lay in the woodland adjacent to area (38). It had been hand dug and most of the spoil redistributed. The topsoil had apparently been segregated and was available for archaeological examination on the surface of the area. The topsoil was mid-brown in colour, fine-grained and friable with a high humic content

The total area of geological disturbance was 3m by 3m. The surface and the small pile of topsoil left, were examined archaeologically. The flint content was very low, less than 1% by volume. No objects of archaeological significance were noted.

The remaining topsoil was redistributed across the area (Photograph 47).

TP 318* NGR 500020 105946

Machine excavated. The pit had been cut into what appears to be 'made ground', resulting partly from the dredging of the adjacent pond (47) and partly from the landscaping process, which had been noted on the previous visit in January 1994, connected with the construction of a golf course (45). The total area of geological disturbance measured 6m by 3m and the spoil had been redistributed.

It is of note that although the field (45) was sown with Linum usitatissimum (flax), this area was one of a number of bare patches which had not been ploughed and seeded by the farmer. A surface examination revealed that there has been no topsoil segregation, in this instance suggesting that there may have been no topsoil available at this point.

The visible soil was made up of both a fine and a more coarse silty material, yellow-gold and white in colour. There was a fairly high flint content, perhaps 35% by volume and consisting of the full range of sizes and shapes. No archaeological information could be elucidated and no objects of possible archaeological interest were noted (Photograph 48).

TP 319* NGR 500306 105730

Machine excavated. The pit was located in the middle of (55), close to the defunct boundary (51). It lay within Area B which had been systematically walked in January 1994 - see Appendix II and Section 4.0.

The field contained recently harvested Brassica napus, ssp. oleifera, (oil-seed rape). The total area of geological disturbance measured 4m by 3.5 m and had been backfilled prior to harvesting. The area was completely level. The soil was fine grained and light brown in colour, with a fairly high clay content. This information was particularly apparent earlier in the year, when the surface examination of the field had taken place in wet conditions over a ploughed surface.

The surface was re-examined archaeologically, but there was a complete absence of artifactual material (Photograph 49).

TP 320 NGR 502082 105942

Not examined. The fields, east of the Arun and immediately west of the railway line, were examined during the course of the present survey and TP 320 was not located, as it had been backfilled and re-turfed. The pit (103), dug by the engineers laying the sewer pipe was examined, however, and the stratigraphy commented upon in Appendix II.

TP 321* NGR 502720 105941

Not examined. The field (110) lying between immediately to the west of the 'green-lane' (113) was inspected with care, but TP 321 was not located. As with TP 320, the pit had been backfilled and returfed by the engineers.

Extracts from the log of RSA Geotechnics Ltd

Note: Test-pits 315 and 317 were hand excavated.

TP 301 Topsoil 0.15
Coarse flint GRAVEL 0.80

TP 302 Topsoil 0.15
Made ground 2.80

TP 303 Topsoil 0.15
Made ground 1.60 [Tarmac cf BH 312]

TP 304 Topsoil 0.45
Yellow brown-orange brown slightly gravelly slightly silty fine-medium SAND; occasional coarse flint gravel

TP 305 Topsoil 0.15
Made ground 1.20
Sand and gravel below

TP 306 Topsoil 0.40
Grey brown gravelly silty fine-medium sand
Silty fine-medium SAND 0.70
Sand down to 4.10

TP 307 Topsoil 0.35
Firm orange brown-red brown very closely fissured friable slightly gravelly slightly sandy very silty clay

TP 308 Made ground 1.50
Clayey SILT 3.60

TP 309 Made ground 4.70
Much modern rubbish

TP 310 Topsoil 0.15
Light brown silty fine SAND 0.30
Firm mottle orange = light grey sandy silty CLAY 3.40

TP 311 Topsoil 0.15
Light brown sub-rounded-rounded fine-coarse flint GRAVEL 0.35
Firm, soft-firm in parts, mottled grey-brown silty CLAY
WOOLWICH-READING BEDS at 4.00 i.e. below 4m

TP 312 Topsoil 0.10
Stiff friable slightly sandy gravelly clayey SILT (Head) 0.55
Gravelly silty CLAY (Head) 2.05
WOOLWICH-READING BEDS AT 3.40

TP 313 Topsoil 0.15
Firm slightly fissured mottled orange brown-light grey slightly sandy very silty CLAY with occasional gravel-cobble size pockets of light grey very silty firm sand 0.70
Mottled red CLAY
WOOLWICH-READING BEDS 0.70 3.50

TP 314 Topsoil 0.10
Firm mottled light yellow grey and orange brown slightly sandy very silty CLAY 0.85 (Head)
Clay down to 3.50

TP 315 Topsoil with leaf litter 0.15
Mottled CLAY with occasional sub-angular flint gravel 1.20
WOOLWICH-READING BEDS 1.20 2.95

TP 316 Topsoil 0.10
Sandy silty CLAY (Head) 0.50
Finely fissured mottled light brown CLAY (WOOLWICH-READING BEDS) 4.60

TP 317 Topsoil 0.15
Probably Made Ground - slightly sandy silty clay, traces of clay tobacco pipes, angular flint and chalk gravel 0.90
Fine-medium SAND 1.35
WOOLWICH-READING BEDS 1.35 3.00

TP 318 Light grey brown very silty very sandy rounded-sub-rounded fine-coarse flint GRAVEL (Norton Farm) 0.80
Sandy very silty very gravelly CLAY mixture of flint gravel (Norton Farm) 1.65
WOOLWICH-READING BEDS SILT 1.65 2.30
SAND 2.30 3.30

TP 319 Topsoil 0.20
Slightly clayey very sandy SILT 0.5
Silts down to 3.0 including fragments of black siltstone, shells-shell fragments; sand horizons

TP 320 Topsoil 0.15
Stiff friable yellow and yellow grey gravelly clayey sandy SILT (in flint gravel) 0.50
Yellow brown and orange brown gravelly silty very sandy CLAY 0.85
CLAY 3.00

TP 321 Topsoil 0.30
Probably Made Ground 1.30
Sandy silty(clay) CLAY, black organic silt-siltstone; traces of rootlets; Roman pottery.
CLAY 1.30 3.15

Results of the Analysis

The archaeological examination of the topsoil and sub-soil elements of Test-pits 301-319, produced no evidence for archaeological sites, structures or deposits on the route. A single discoidal scraper was recovered from Test-pit 307. However, given the degree of dumping in this area, it is not likely to have derived from any in situ context.

The geologists reported traces of clay pipes in Test-pit 317. However, nothing further was found during the subsequent archaeological examination. The geologists also found Roman pottery in Test-pit 321 which is now in the possession of the County Archaeologist. The Test-pit was not examined archaeologically since it was immediately backfilled and re-turfed before an investigation could be undertaken.

Eight of the Test-pits appear to have been dug through made-ground. Six of these were situated between the woodland and the A27 where extensive dumping related to the dual-carriageway construction has obscured and confused the surface stratigraphy. A further pit may have been excavated on the edge of a back-filled nineteenth-century gravel pit (Test-pit 317; Appendix II, 38) and another appears to have been dug through spoil created during golf course construction (TP 318).

The remaining pits provide good general confirmation of the known surface geology along the route. Sands and gravel are in evidence at its western end between the woodland and the present A27 (Test-pits 301, 306, 307). These probably relate in part to the higher raised beach in this area. Further gravel deposits at lower altitudes, seen in Test-pits 317 and 318 may belong to the lower raised beach.

Whilst these well-drained terraced areas are likely to have attracted human settlement in the past, the test-pit programme, with the exception of the Roman pottery found by the geologists in Test-pit 321, produced no real evidence of this, (Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, Appendix 3).

APPENDIX V

EVIDENCE FROM THE EXPLORATORY BORE-HOLE SAMPLES PROVIDED BY RSA GEOTECHNICS LTD.

The bore-holes were sunk using light cable percussion equipment (150 mm diameter) which was cased to 11.0m and uncased between 11.0m and 15.0m. The upper two samples from each bore-hole (D1 and D2) were examined at Stowmarket by an archaeologist on August 17th 1994 in order to see whether any evidence for earlier human occupation could be recovered.

Each of the samples was removed from its bag, tipped out onto a sample tray and broken down by hand. An attempt was made to describe the nature of the soils and sub-soils encountered and possible artifacts were removed for further study. The samples were then returned to their original bags.

The list which follows includes extracts from the RSA Geotechnics Ltd log in single inverted commas. The locations of the bore-holes are shown in Figures 2-4. The National Grid co-ordinates for each bore-hole were provided by East Anglian Land Surveys Ltd.

BH 301 NGR 499277 107288

'Stiff dry brown, gravelly very sandy SILT with many roots 0.60m
Firm brown clayey very sandy SILT with occasional fine coarse angular flint gravel 1.20m'

D1 0.00 - 0.10m
Sandy (firm) loam; many roots. Small fragments of angular flint; most breaks heavily patinated, some very small natural flakes.

D2 0.60-0.70m
Orange brown clay/silt; some large angular flint nodules; no humic material i.e. below topsoil! most of the flint has brown (clay coloured) patina; but a few are black.

BH 302 NGR 499320 107324

'Topsoil 0.30m
Soft-firm brown very sandy very silty CLAY with occasional fine-medium angular flint gravel 0.60m'

D1 0.10m
Very friable well developed soil with good crumb structure and fairly high humic content; many roots. A number of small angular flint fragments mainly patinated yellow/brown. One possible artifact (waste flake) was removed for further study.

D2 0.40m
Brown silty clay; no humic content; many small, angular flint fragments.

BH 303 NGR 499326 107369

'Topsoil 0.30m
Fine brown SILT and fine SAND with some fine - coarse angular - sub-rounded flint gravel 1.20m'

D1 0.10m
Loose friable topsoil with good crumb structure; small angular flints as BH 302.

D2 0.40m
Very plastic clay, with some silt; frequent small coarse-angular flint fragments; a few pebbles (water rounded but not symmetric).

BH 304 NGR 499541 107229

'Made ground. (Stiff brown, slightly gravelly sandy silt with occasional rootlets) 0.60m'

D1 0.00-0.10m
Brown, silty soil containing many compacted soil fragments of varying sizes. i e. made ground. Small, angular flint fragments; very little evidence of organic soil as such.

D2 0.60m
Consists mostly of angular fragments of flint and small soil crumbs.

'Made ground (fine brown and grey slightly sandy gravelly silty clay with mainly fine coarse gravel size and occasional cobble size, fragments of brick, metal, glass, domestic refuse, ash, polythene, cloth and newspaper' 3.20m.

BH 305 NGR 499671 107048

'Stiff mottled grey brown, brown and orange brown sandy gravelly very silty CLAY with roots and rootlets - occasional fine gravel size pockets of red silt 0.50m'

D1 0.00 0.10m
Clayey soil; very little humic material; flint fragments often angular but many with rolled surfaces; many rootlets, but not much organic soil.

D2 0.50 0.60m
Mixed grey brown to orange brown clay with rootlets, flint pebbles and angular fragments.

BH 306 NGR 499704 107062

'Stiff brown grey slightly gravelly sandy silty CLAY with many roots and pockets of orange SILT 0.20m
Firm slightly fissures mottled brown, red brown-light grey silty CLAY with decayed root traces, mainly along fissures surfaces 3.6m [NB firm-stiff from c 2.0m; predominantly grey in colour for 2.50m approximately]'

D1 0.00 - 0.10m
Very cloddy, fibrous clay with many rootlets. Angular and rolled small flint fragments; very poor quality soil. One possible waste flake was removed for further study.

D2 Very tenacious dense clay; dark root traces; very few angular flint inclusions; very variable in colour - red/yellow/brown/grey. 0.20 - 0.302m.

BH 307 NGR 499806 106809

'Top soil 0.25m
Brown clayey very silty sandy fine sub-angular sub-rounded flint GRAVEL 0.60m'

D1 0.10m
Friable topsoil; very fine silty feel, good deal of humic material and roots. Small flint pebbles and angular fragments.

D2 Brown silty clay matrix; gravel consisting of flint nodules, often "recently" fractured and not much transported.

BH 308 NGR 499781 106766

'Topsoil 0.30m
Soft mottled light grey and orange brown very sandy very silty CLAY 0.60m'

D1 0.10m
Dark, humic topsoil full of grass roots Occasional sub-rounded and small angular flint fragments.

D2 0.50m
Grey clay; orange sandy/silty material included; No flint fragments at all.

BH 309 NGR 500153 105814

'Topsoil 0.30m
Firm-stiff brown and orange brown sandy silty CLAY with occasional fine-medium gravel and pockets of topsoil with occasional rootlets 0.70m'

D1 0.20m
Friable "sandy/silty" topsoil with many roots; good crumb structure; very few angular flint fragments.

D2 0.50m
Mottled brown/orange clay; very few small angular flint fragments, some ? topsoil inclusions.

BH 310 NGR 501344 105775

'Topsoil 0.40m
Soft mottled brown, orange brown and light grey slightly sandy silty CLAY with rootlets and small pockets of silt and fine sand 1.05m'

D1 0.10m
Turf soil; very crumbly and humic; fine silt/sand matrix, no pebbles or rock fragments. Grass roots.

D2 0.50m
Mottled light grey clay and few rootlets, no rock fragments.

BH 311 NGR 501642 105834

'Topsoil 0.20m
Stiff dark grey brown slightly sandy very silty CLAY with many roots and rootlets 1.00m'

D1 0.10m
Mostly turf and turf soil - fine sandy crumby loam One tiny rounded flint fragment.

D2 0.40m
Dark fibrous, crumbly soil with small chalk fragments; very small brick fragments (Despite the bore-hole log, this sample appears to be from the topsoil).

BH 312 NGR 499176 107393

'Made ground - Fine mottled red brown gravelling silty clay: fine dark brown gravelly sand silty clay with occasional fine and brick and ash fragments' [This bore-hole was sunk at Test-pit 303]

D1 1.50 - 1.60m
Tarmac!

D2 1.70m
Crumbly brown silty soil; many angular flint and coal fragments (made ground). Two pieces of possible worked flint were removed for further study.

Results of the analysis

In the event it proved difficult to use the geological samples to assist with archaeological assessment. The main reason for this is that the geologists regarded the upper levels of the bore-holes as "disturbed" and collected two samples at varying depths in the first two metres with no regard for any sub-soil interfaces or buried soils which might have archaeological significance.

Detailed analysis of the four possible flint artifacts which were removed from the samples has established that only one of these is of human origin. This is a small, broken, microlithic blade from Bore-hole 312. This was recovered from the extensive area of tipping between the woodland and the A27 at the western end of the preferred route and, therefore, probably derives from disturbance caused in the construction of the present dual carriageway. It cannot be regarded as an indication of a site on the preferred route itself. It is unstratified and, being singular, is of no real significance.

The bore-holes were very limited in number and scope. The negative evidence which they provide is inadequate as a means of assessing whether significant buried archaeological deposits or features lie on the route.

APPENDIX VI

LIST OF PHOTOGRAPHS

A. Colour prints

The numbers given in brackets refer to the list of sites contained in Appendix II and shown in Figures 2-4. Details of the geological test-pits are given in Appendix IV and their positions are shown in Figures 2-4.

Photographs 1-28 were taken in January 1994. Photographs 29-49 were taken in August 1994.

Film: Kodacolour Gold, 200 ASA.
Print size: 150 x 100mm

Photographer: J.J. Woodcock

1 The tree nursery (8).

2 Two photographs. The tree nursery (8), to demonstrate the method of lifting mature trees and the resulting cavity.

3 The area of the tree nursery (8), showing the stumps from three uprooted poplars, possibly the result of hurricane damage.

4 A demonstration of the depth of redeposited soil, possibly originating from the construction of the present dual-carriageway (12).

5 A general view of the area of tipped soil (12), looking west.

6 A view west along the line of the preferred route, between the Arun and Ford Road, taken from the top of the west bank of the Arun. Priory Farm is shown in the distance.

7 A view north from the west side of the river bank, taken from the point at which the preferred route crosses the Arun.

8 A view east along the line of the preferred route, taken from the top of the west bank of the Arun, during flood conditions.

9 A sluice in the ditch of the boundary (68), lying just south of the preferred route.

10 The field (57), looking west from Ford Road along the preferred route.

11 A typical sluice, taken from the east bank of the Arun. Not affected by the preferred route.

12 An area of ridge and furrow in the field north of the boundary ditch (112) at the east end of the study area. This field was also crossed by Site 12 (a track) shown on Fig 2b of the Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection (April 1993).

13 A general view looking west along the line of the preferred route. Taken from the east side of the Parish Boundary. Note: The barn (centre) lies in the field north of the meadow (78).

14 The boundary line (100) lying between the two fields (99) and (102), immediately west of the railway and looking north-west towards Arundel. Note: the first tree marks the central point of the preferred route, which will pass east to west across the photograph.

15 A general view of the area crossed by the preferred route. Taken from the same position at photograph 14. The wooded area (94) is shown in the middle distance

16 The boundary (98), a drain running at right angles across the preferred route. Looking north-west towards Arundel.

17 The western end of the raised causeway (62), looking east.

18 The line of the preferred route in the field (57) looking east towards Ford Road.

19 The ditch (53) between Tortington Lane and the field (55), looking south.

20 The boundary (54) looking east. Photograph taken from corner of the field (55).

21 The site of a ploughed out boundary across the large field (55) looking east. It is viewed from the site of a small causeway across the ditch (53).

22 The southern end of the large field (55) looking south-east towards the boundary with Tortington College.

23 The north-west corner of the field (55), looking east.

24 Field-walking (Area B) in field (55). View looking west along the preferred route.

25 A view from the westerly embankment of the Arun (67), looking west along the preferred route across the boundary (68) to the field (66).

26 Ford Road (59) and the boundary ditch looking north towards Arundel, at point where it is crossed by the preferred route.

27 Field-walking (Area C), on the north side of ploughed field (70), viewed from west.

28 A general view east along the preferred route, taken from east of the Arun.

29 The view from top of the levée (74) on the east bank of the Arun, looking east along the preferred route across the field (75).

30 The track or agger of a road (76) looking north towards Arundel.

31 The drain (77) running into the Parish boundary drain (83).

32 The Parish boundary drain (83) taken from the field (82), looking north across the area crossed by the preferred route.

33 Peat being brought to the surface during the cutting of the sewer trench at the site of the new causeway (85).

34 The raised, drier area (101) lying in the north-east corner of the field (99).

35 The 'green lane' (113) looking south along its length, to show the position at which it is crossed by the preferred route.

36 The Field (114) viewed from the present Cross Bush roundabout.

37 McDonalds, lying beyond the newly established southerly boundary of the field (114). Taken from the Cross Bush roundabout.

38 The spoil left at Geological Test-Pit 311.

39 The spoil left at Geological Test-Pit 316.

40 The spoil left at Geological Test-Pit 316.

41 The spoil remaining at Geological Test-Pit 316 following archaeological examination and partial redistribution of spoil.

42 The site of Geological Test-Pit 315, following backfilling.

43 The spoil remaining at Geological Test-Pit 314.

44 The spoil at Geological Test-Pit 313 prior to redistribution.

45 Geological Test-Pit 313 following the redistribution of spoil.

46 The site of Geological Test-Pit 312 .

47 Geological Test-Pit 317 following redistribution of spoil.

48 The site of Geological Test-Pit 318.

49 The site of Geological Test-Pit 319.

B. Colour slides

A number of 35mm colour slides were taken during January 1994. These are listed below and are available for reference, should they be needed.

Photographer: P. J. Davey

1 The field (99) west of the railway line.

2 The field (99) west of the railway line, looking north-east.

3 The field (99) to show the drier area (101) in the north-east corner.

4 The middle section of the preferred route, lying east of the river and showing the flood waters close to the Parish boundary (83).

5 As 4 above, looking north towards Arundel

6 The drain/Parish boundary (83) looking east

7 A view across the fields (97 and 99), immediately west of the railway line, looking east along the preferred route. Note: the single tree in centre of the field lies on the old boundary (100) and marks the centre of the preferred route.

8 A view across the field (97) looking north-west towards Arundel.

9 A linear feature in the field (97).

10 The Parish boundary (83) under flood conditions.

11 The Parish boundary taken from (80) looking east under flood conditions.

12 A typical drain/boundary, (flooded) lying between Ford Road and the Arun.

13 The low lying pasture (75), possibly originally water-meadows, lying to the east of the Arun, under flood conditions.

14 The flooded drain/boundary (77) on east side of the Arun.

15 A typical sluice on drain/boundary between Ford Road and the Arun.

16 Woodland management (3), in the area of Paine's Wood, chestnut being coppiced for posts.

17 Woodland management (3), in the area of Paine's Wood, the chestnuts being coppiced for palings.

18 The tree nursery (8), to demonstrate the method for lifting mature trees.

19 The field-walking Area A (45) looking west, along the preferred route.

20 The tree nursery (8)

21 The tree nursery (8) to demonstrate the lifting of mature trees.

22 An area of the tree nursery (8), showing the stumps of uprooted poplars, possibly the result of hurricane damage.

23 As 22 above

24 A demonstration of the depth of redeposited soil in the area (12)

25 As 24 above

26 An area of ridge and furrow in the field north of boundary (112) at the east end of the study area

27 A view west across field (66) from West bank of Arun at (67). The locality of field-walking Area C may be seen in the distance.

28 The Parish boundary (83) under extreme flood conditions.

Photographer: S. D. White

1 Field-walking in Area B, field 55.

2 Field 55, field-walking Area B, looking east along the line of the proposed road line.

3 Field-walking in Area B, field 55.

4 Field-walking in Area B, field 55.

5 Field 55, field-walking Area B, looking east along the line of the proposed road line.

6 Field-walking in Area B, field 55.

7 to 12 Laying-out Area C preparatory to field-walking - field 70.

13 West end of causeway (62), looking east.

14 Pond and sluice in drain/ditch (68) on west of embankment of Arun.

APPENDIX VII

PROJECT DESIGN FOR STAGE 3 ASSESSMENT

This project design sets out proposals for a Stage 3 assessment of the A 27 Arundel Bypass according to the principles given in Design Manual for Roads and Bridges, Volume 11 Section 3 Part 2 Cultural Heritage, (8.26 - 8.42).

1.0 Introduction

To date, only an above ground survey has been undertaken along the line of the preferred route. Limited examination of the spoil from the geological test-pits (Appendix IV) and evidence from field-walking (Appendix III) provide the only evidence of the below ground archaeology. Examination of the woodland has revealed a number of earthworks of varying types and periods and evidence from the Arundel area in general, shows that it is rich in archaeological sites and finds of many periods and suggests that the terraces on either side of the River Arun, just above its flood plain and at present under pasture, have a high potential for the recovery of sites of later prehistoric and subsequent periods (cf Part One Report: Archaeological Assessment: Desk-Top Study and Preliminary Area Inspection, April 1993, 6.0).

In undertaking the survey, the principles set out in PPG 16 regarding the need to safeguard archaeological remains should be recognised:

'Archaeological remains should be seen as a finite and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not **needlessly** or **thoughtlessly** destroyed.' (paragraph A6)

2.0 Objectives of the Archaeological Evaluation

a) The objectives of the archaeological evaluation are to identify any below-ground archaeological features within the study area and, as far as is reasonably possible, to define their location, extent, date, character, condition, significance and quality.

b) The evaluation will also seek to assess the significance of the impact of any proposed or possible works on any sites, features or archaeological evidence located during the course of the investigation in order that care may be taken to ensure that they are neither needlessly nor thoughtlessly destroyed by the proposed route (cf PPG 16, paragraph A6).

3.0 Methodology

Due to the presence of pasture or woodland over much of the route which has made it impossible to assess the below-ground archaeology, it will be necessary to use a range of techniques in order to carry out a more detailed evaluation of the below-ground archaeology. The work may need to be carried out in two stages. The first stage will include geophysical survey, instrument survey and test pitting. Following the completion of this stage of the work and depending on the results, it is likely that a programme of trial excavations will be necessary to clarify and augment the data.

3.1 Geophysical survey (cf 13.1)

Geophysical survey is a non-destructive remote sensing survey technique, particularly useful in identifying and recording the presence of demolished structures, significant earth-cut features and other archaeological remains. It is an efficient sampling tool that helps to characterise the archaeological potential of an area.

A gradiometry survey will be undertaken to measure deflections in the earth's magnetic field caused by below-ground features such as pits, ditches or other archaeological remains.

The survey, undertaken on a grid system, using a Fluxgate gradiometer will be carried out in two areas. West of the Arun it is proposed that a strip 40m wide and 200m long centred on the middle line of the proposed route will be examined; to the east of the river, a strip of 40m wide and approximately 800m long, again centred on the medial line of the proposed route, will be examined. The areas proposed for investigation are indicated on the attached plan. Additional geophysical survey, using alternative techniques, may be undertaken depending on the results of the gradiometry survey.

Recording: The data will be electronically logged by instrument.

The position of the plots and summary plots of data and interpretation will be provided at a scale of 1:2500.

Reporting: The geophysical data will be displayed using the most appropriate method depending upon the nature of the results (dot density, X-Y traces, grey-scale images, contours, 3D terrains).

Displays of the raw data will be provided together with modified data after each smoothing or filtering algorithm, although as little processing as possible will be undertaken. Separate interpretative diagrams which can be understood by a non-technical reader will be also be provided.

The data and interpretative diagrams will be reproduced at a scale from which exact measurement can be taken, normally at 1:500.

3.2 Instrument Survey (c 13.2)

Instrument survey is a non-destructive technique used to produced detailed plans together with three-dimensional records of complex earthwork features

The instrument survey will attempt to record the complexity of the existing earthworks at the south-eastern edge of the woodland in Tortington and, if appropriate, to define suitable locations for trial trenching. The information will be linked to existing features already contained on the large scale maps of the area.

An area, approximately 500 metres square, will be surveyed using either a theodolyte or a data logging total station (EDM).

Recording: Data will be electronically recorded by EDM or logged manually into a Geoscan programme.

Reporting: The data will be displayed in terms of two-dimensional contour plans at an appropriate scale from which detailed measurement can be made. It will be tied accurately into the national grid and located on the 1:2500 map of the area.

Reporting: The data will be displayed in terms of two-dimensional contour plans at an appropriate scale from which detailed measurement can be made It will be tied accurately into the national grid and located on the 1:2500 map of the area.

3.3 Test-Pitting (c 13.3)

A programme of test-pitting will be undertaken on areas of the preferred route, in particular within the woodland, where the surface is unsuitable for geophysical survey and other methods of assessment such as field-walking. Some test-pits will also be located on the valley floor where geophysical anomalies are likely to be due to geomorphological features. Approximate locations for the test-pits are shown on the attached plan. The precise positions will be subject to local conditions such as the drainage and vegetation cover prevailing at the time of the investigation. Initially, approximately 26 test-pits are proposed.

Following the completion of the geophysical survey, areas which lack geophysical anomalies may require further investigation by test-pitting.

The test-pits will measure 1.5m x 1.5m. Excavation will be undertaken by hand All contexts will be sieved through a 10mm mesh sieve to check the density and nature of finds.

Recording: All structures, deposits and finds will be recorded according to accepted professional standards. Plans will be made of each area during the course of excavation and one or more plans or sections from each test-pit, as appropriate, will be drawn at a scale of 1:20. All artifacts located within the test-pits will be recorded.

Reporting: A full report will be produced. All information resulting from the programme of test-pitting will be summarised on maps contained within the general report at an appropriate scale.

Note: The results of this limited assessment may not provide a complete picture of the below-ground archaeology and it may be necessary for the woodland section of the route to be carefully monitored during the construction stages of the scheme (c 14.2).

3.4 Trial Excavation (c 13.4)

Trial excavation is undertaken to ascertain the extent, depth below-ground surface, character and quality of any known or suspected archaeological remains.

The programme of trial excavation is contingent upon the results of 2.1 to 2.3 above. Trial trenching will be directed towards any areas of geophysical anomaly located, features already identified and investigated by instrument survey and to any known artifact concentrations.

In addition, it is proposed that a section be cut across the line of the southern boundary of the Priory precinct, see attached plan, in order to attempt to assess its importance as an ancient landscape feature and to understand its position in the medieval history of the area

Any excavation will be undertaken under the supervision of a professional archaeologist. Excavation will be by hand and will be taken down to the top of 'natural' or to the top of any significant archaeological level, whichever is the higher. In the event of significant archaeological deposits being encountered, further excavation may be required to clarify the nature, character and date of the archaeological deposits, but the primary objective will be to establish the presence or absence of archaeological deposits and their depth and

extent. While the surface of any exposed archaeological horizon will be cleaned for the purpose of clarifying the remains, archaeological features will generally only be sampled sufficiently to characterise and date them. Full excavation of features will not be undertaken at this stage.

Recording: All structures, deposits and finds will be recorded according to accepted professional standards. The stratigraphy of all trial trenches will be recorded.

All plans and sections will be drawn on polyester-based drafting film and will be clearly labelled. All archaeological contexts will be individually recorded on standard context sheets.

The site grid will be accurately tied into the National Grid using a theodolite and located on to the 1:2500 map of the area.

Plans indicating the location of the excavated trenches and the locations of all archaeological features will be drawn at an appropriate scale.

Reporting: A full excavation report will be produced and will include a consideration of the methodology used, a descriptive summary and interpretation of the archaeology of the site and a copy of the trench location plans together with a plan of the main archaeological features. More detailed plans and sections will be included as appropriate.

4.0 Recording

Detailed recording methodology is dealt with above under the individual sections 2.1 to 2.4. General records will include:

* All source material studied

* Fieldwork - locations, dates and times, soil types and surface conditions, landowner and present landuse.

* A full photographic record of work will be kept and will include both black and white and colour photographs and 25mm transparencies. This will be considered to be part of the site archive.

5.0 The Archive

The archive will include:

* All basic computerised data resulting from the geophysical survey and the raw data resulting from the instrument survey.

* All maps and plans resulting from geophysical or instrument survey. All original site drawings and plans resulting from the programme of test-pitting and trial excavation. The photographic record and all other written records, resulting from the Stage 3 assessment.

* Artifacts. SGS Environment, in liaison with the Highways Agency, will seek to ensure through discussion with the landowners that all artifacts recovered as a result of the assessment, remain as part of the site archive.

SGS Environment will undertake to store any archive material and artifacts resulting from the assessment, under suitable conditions, for the duration of the scheme.

On completion of the scheme, discussion will take place with the Highways Agency, English Heritage, any relevant landowners and the County Archaeologist for West Sussex, in order to decide where the site archive and any finds might be most suitably deposited.

6.0 Monitoring

In advance of the commencement of the assessment, a timetable for the work will be submitted to English Heritage in order that the study may be suitably monitored. Any variation to the programme will be notified to English Heritage and the Highways Agency

The project records will be available for inspection at any reasonable time, during or after the assessment, by English Heritage or the County Archaeologist for West Sussex, or any designated representative of the Highways Agency.

7.0 Staff Qualifications

Project Team

P. J. Davey, Ph.D., M.I.F.A.
D. A. Higgins, Ph.D.,
N. C. Johnson, M.A.
S. D. White, B.A.
J. J. Woodcock, B.A.

Curricula vitae are available if required.

8.0 Reporting

The objectives of the assessment are to identify the significant below-ground archaeological features likely to be affected by the preferred route and to assess how significant the route's impact upon them would be (c 1.1, 1.2 above and Design Manual for Roads and Bridges, Volume 11 Section 3 Part 2 Cultural Heritage, 8.26). The importance of any archaeological remains identified will be assessed according to the non-statutory criteria of the Secretary of State for the National Heritage.

Individual elements of the scheme will be reported on as described above (c 2.1 to 2.4) and will be included in the final report. The Report will also include a statement of the objectives and methods of the assessment and a critical review of the effectiveness of the methodology employed. It will also contain information relating to the identification of areas of known and possible archaeological or historical landscape interest, together with a justification for such identification, and preliminary indication of their likely importance. A note will be included with reference to the anticipated degree of survival of any such site or area identified.

The Report will contain a 1:2500 base map or maps on which all archaeological features identified by way of the different methodologies indicated above will be plotted.

In addition, a consideration of the evidence assembled during the course of the assessment will be made with reference to its wider landscape setting.

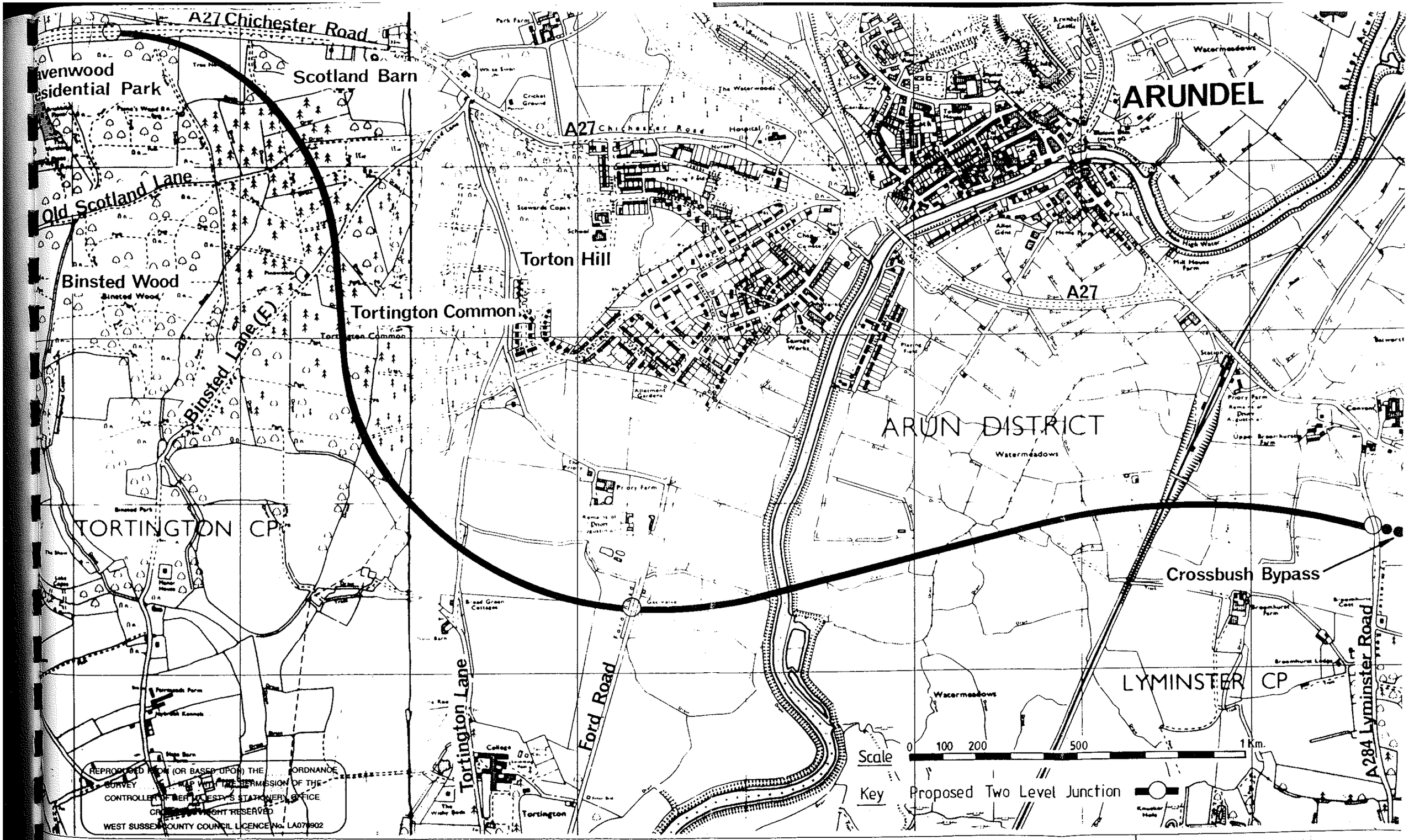
On completion of the scheme, copies of the Report will be deposited with the National Archaeological Record and the West Sussex Sites and Monuments Record. Articles will be submitted to the most appropriate national and local journals, in order to present to the public the new information which has been derived in the course of carrying out the archaeological assessment (c 14.3, 14.4).

9.0 Codes of Practice

The following statutory provisions and codes of practice will be maintained.

* All statutory provisions and by-laws relating to the work in question, in particularly the Health and Safety at Work Etc. Act 1974.
* The Code of Conduct of the Institute of Field Archaeologists.
* The Institute of Field Archaeologists' Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology.
* The Country Code.

FIGURES



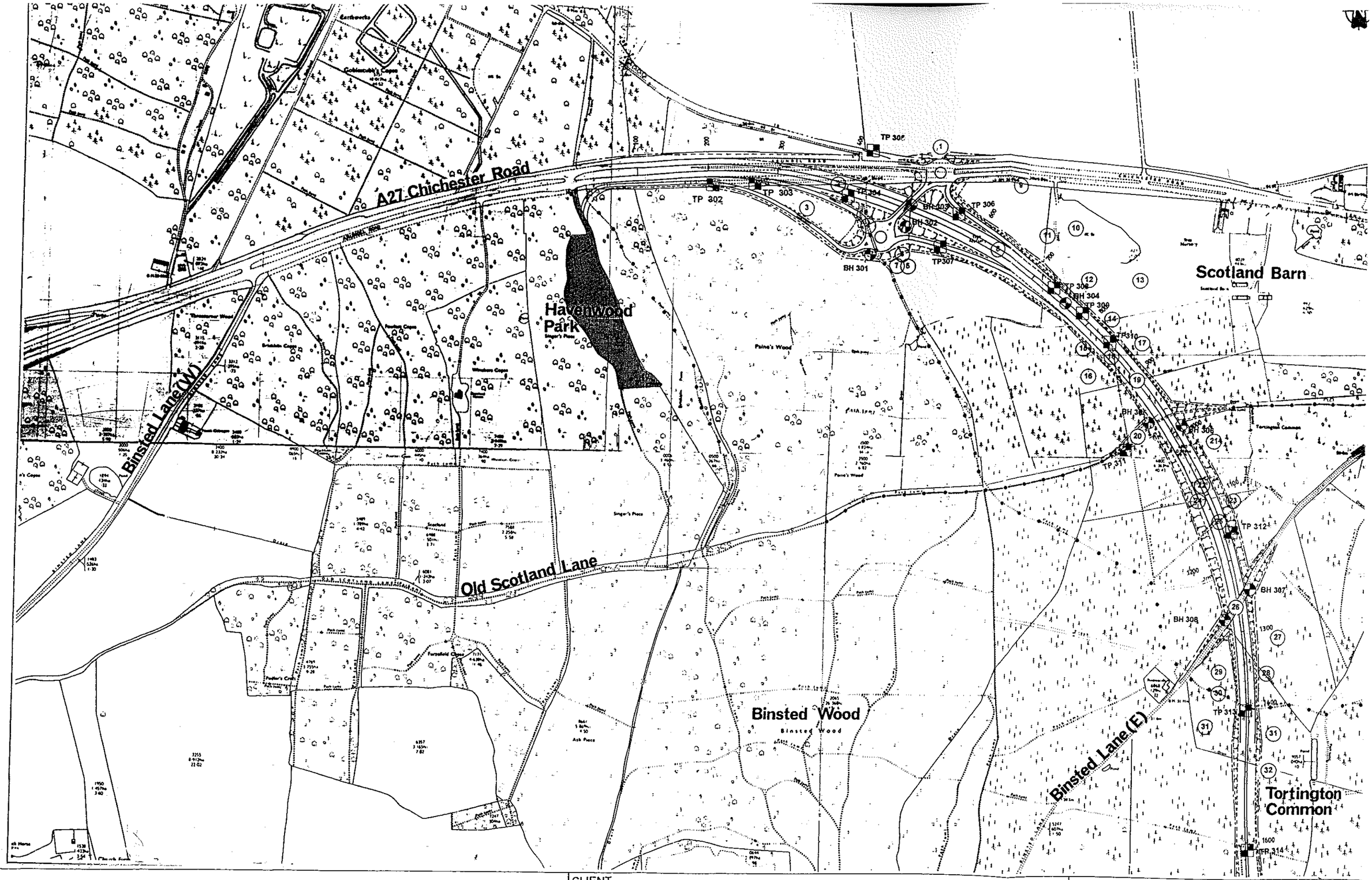
CLIENT
WEST SUSSEX COUNTY COUNCIL

PROJECT TITLE
A27 ARUNDEL BYPASS STAGE 2
ARCHAELOGICAL ASSESSMENT

DRAWING TITLE
PREFERRED ROUTE ALIGNMENT

DRAWING No	DATE	JOB No
FIGURE 1	NOV.1994	2620

SGS Environmer
Environmental Science & Landscape Architectu
Yorkshire House Chapel Street Liverpool Merseyside L3 9A(
Tel 051 255 1115 Fax 051 258 1511



KEY

SEWER TRENCH	ARCHAEOLOGICAL / HISTORICAL LANDSCAPE FEATURES (22)
SEWER PITS	TEST - PIT (TP 321)
FIELD WALKING AREAS	BORE - HOLE (BH 309)

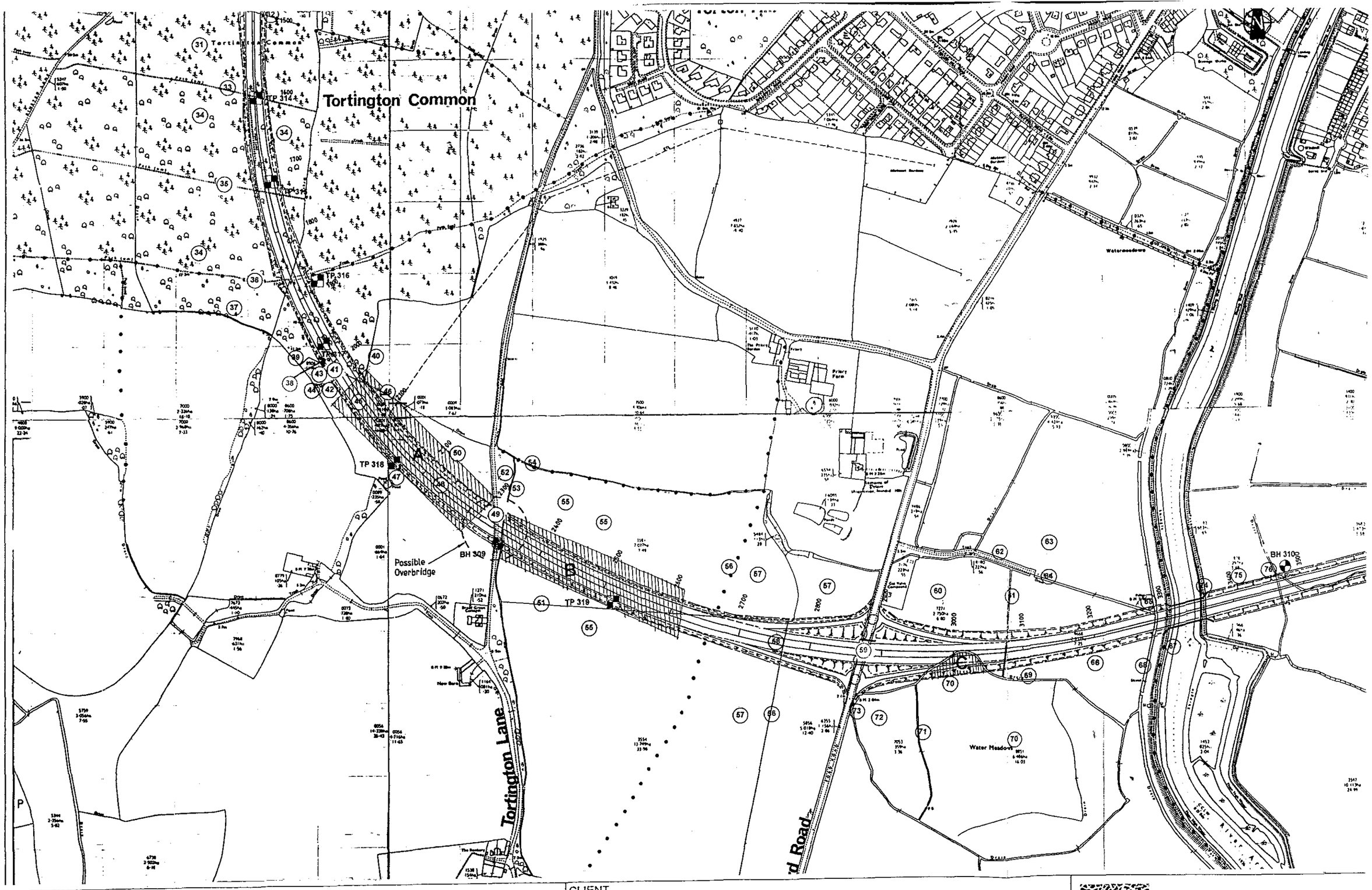
CLIENT
WEST SUSSEX COUNTY COUNCIL

PROJECT TITLE
A27 ARUNDEL BYPASS STAGE 2
ARCHAEOLOGICAL ASSESSMENT

DRAWING TITLE
LOCATION OF ARCHITECTURAL FEATURES, GEOLOGICAL TEST PITS AND BOREHOLES
SHEET 1 OF 3

DRAWING No.	DATE	JOB No.
FIGURE 2	NOV.1994	2620

SGS Environment
Environmental Science & Landscape Architecture
Yorkshire House Chapel Street Liverpool Merseyside L3 9AG
Tel 051 255 1115 Fax 051 258 1511



KEY

- SEWER TRENCH
- SEWER PITS
- FIELD WALKING AREAS
- (22) ARCHAEOLOGICAL / HISTORICAL LANDSCAPE FEATURES
- TP 321 TEST - PIT
- BH 309 BORE - HOLE

CLIENT
WEST SUSSEX COUNTY COUNCIL

PROJECT TITLE
A27 ARUNDEL BYPASS STAGE 2
ARCHAEOLOGICAL ASSESSMENT

DRAWING TITLE
LOCATION OF ARCHITECTURAL FEATURES
GEOLOGICAL TEST PITS AND BOREHOLES
SHEET 2 OF 3

DRAWING No.	DATE	JOB No.
FIGURE 3	NOV.1994	2620

SGS Environment
Environmental Science & Landscape Architecture
Yorkshire House Chapel Street Liverpool Merseyside L3 9AG
Tel 051 255 1115 Fax 051 258 1511

ARUN DISTRICT

LYMINSTER C P

Watermeadows

Water Meadows

Arundel Station

Broomhurst Farm

Upper Broomhurst Farm

Convent of Poor Clares

Sazworthpark Plantation

Crossbush

Crossbush Bypass

Lyminster Road

TP 320

TP 321

BH 311

KEY

SEWER TRENCH	ARCHAELOGICAL / HISTORICAL LANDSCAPE FEATURES
SEWER PITS	TEST - PIT
FIELD WALKING AREAS	BORE - HOLE

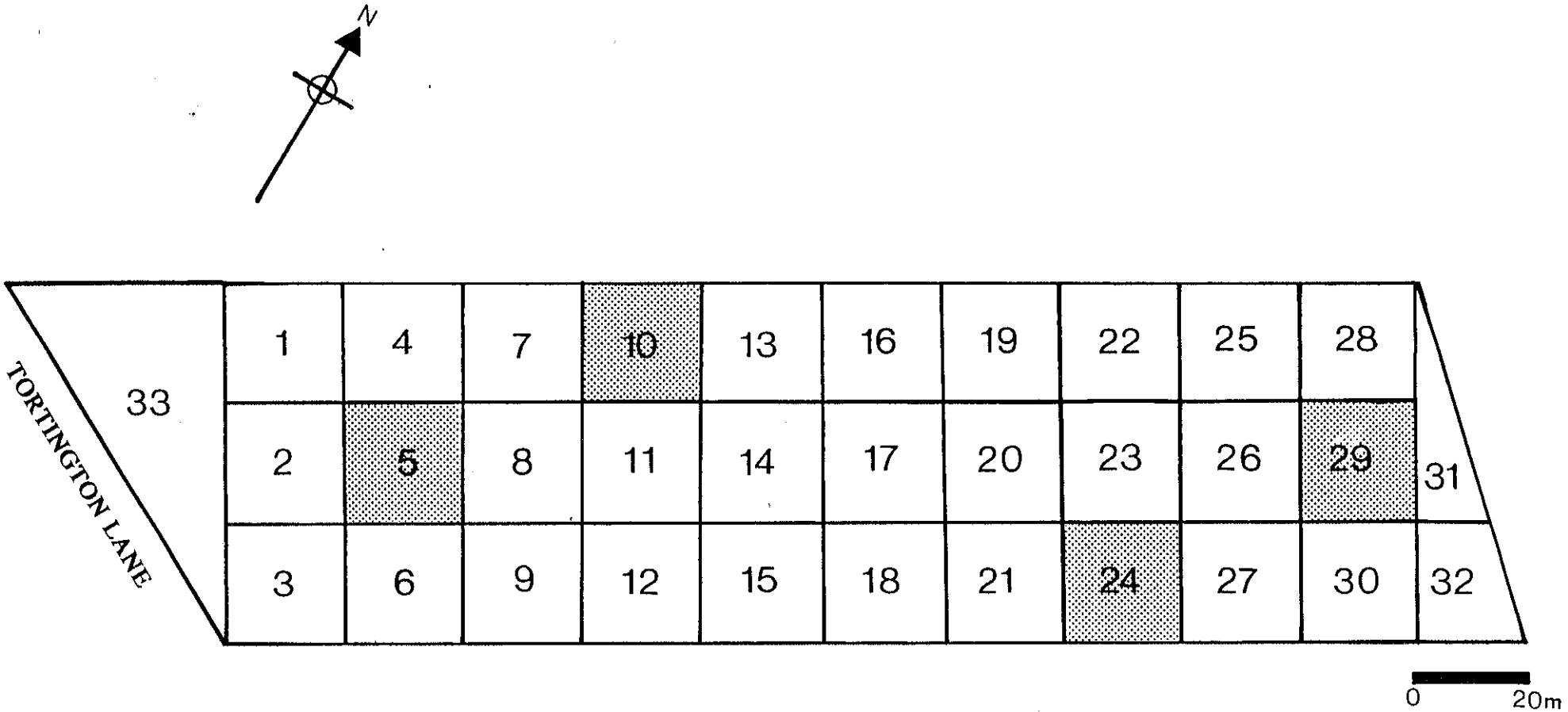
CLIENT
WEST SUSSEX COUNTY COUNCIL

PROJECT TITLE
A27 ARUNDEL BYPASS STAGE 2
ARCHAEOLOGICAL ASSESSMENT

DRAWING TITLE
LOCATION OF ARCHITECTURAL FEATURES
GEOLOGICAL TEST PITS AND BOREHOLES SHEET 3 OF 3

DRAWING No	DATE	JOB No
FIGURE 4	NOV.1994	2620

SGS Environment
Environmental Science & Landscape Architecture
Yorkshire House Chapel Street Liverpool Merseyside L3 9AG
Tel 051 255 1115 Fax 051 258 1511



Areas where all roof tile was collected.

Figure 5 Field-walking Area A

For location see Figure 3

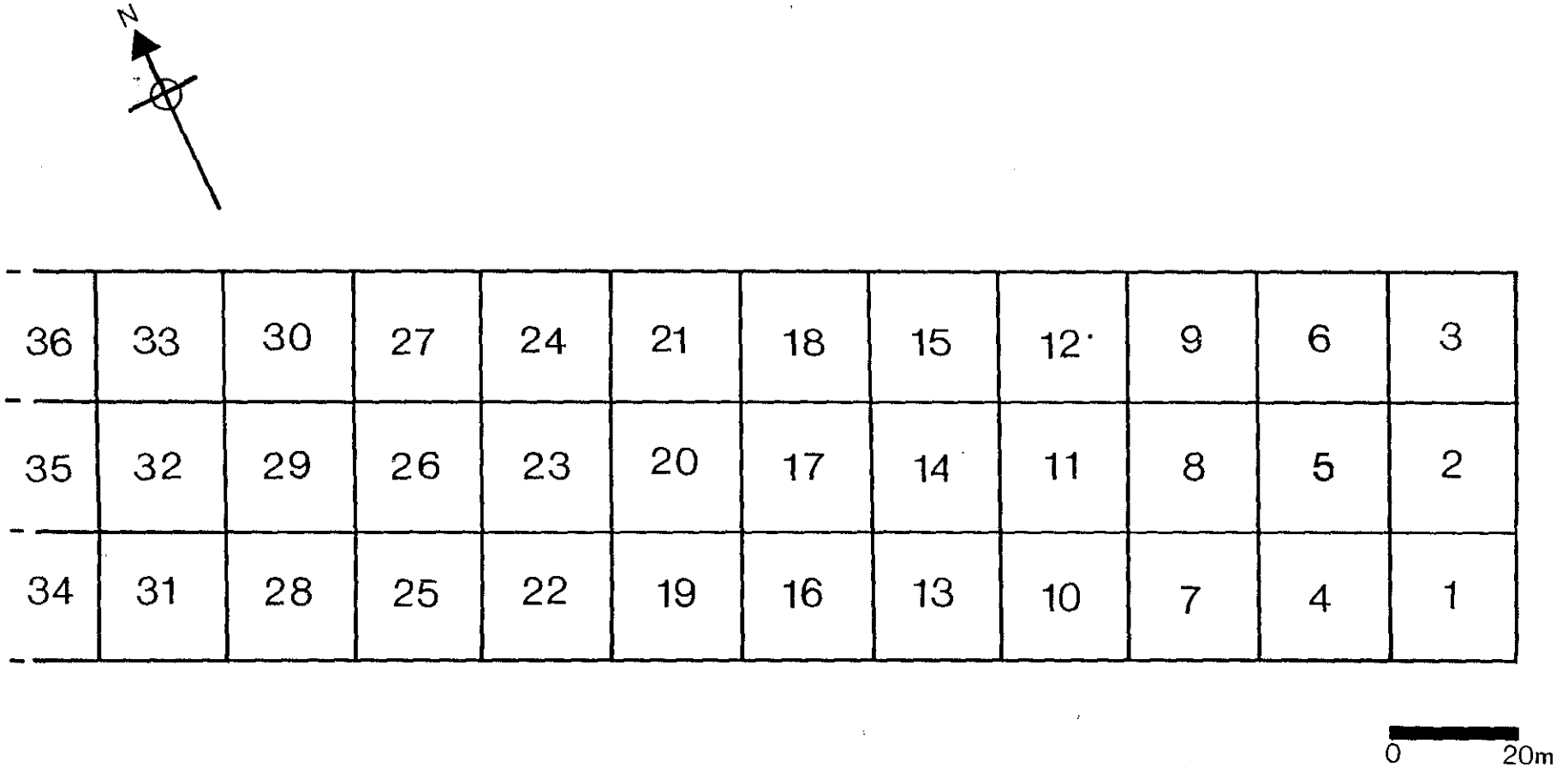


Figure 6 Field-walking Area B

For location see Figure 3