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**A1 (M) MOTORWAY WIDENING JUNCTIONS 1-6
ARCHAEOLOGICAL ASSESSMENT**

STAGE 1 DESK STUDY AND FIELD SCAN

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EXECUTIVE SUMMARY

A desk-based study was carried out in order to collate existing information on the archaeological resource within a 500m study corridor some 16km long along the route of the A1 (M) , Junctions 1 to 6, in Hertfordshire. An initial field scan of land adjacent to the current road was undertaken to enhance that knowledge and identify areas in which different fieldwork methods may be undertaken in future fieldwork

A total of 71 archaeological sites or findspots of varying date and quality lies within, or very close, to the study corridor. The best represented periods are the Iron Age and Romano-British ones (c. 800 BC - AD 420). Nine areas have been identified by Hertfordshire County Council Planning Department as being of high archaeological significance. Two of these Areas are, or include, Scheduled Ancient Monuments which are afforded statutory protection.

In general the route passes through areas of high archaeological potential. The desk-based study has defined to some extent areas where archaeological deposits are likely to occur, but it has not been able to establish the precise nature or extent of these sites nor, in the absence of detailed construction proposals, to propose a detailed mitigation strategy.

Consequently a Field Evaluation is proposed so that the archaeological considerations be given due weight in reaching a decision as to the preferred option. The conclusions of the report on the Field Evaluation are recommended to include mitigation measures for any sites on the preferred route option.

ACKNOWLEDGMENTS

Wessex Archaeology were commissioned by Acer Consultants Limited to undertake the project, and are grateful to Acer for their assistance. Wessex Archaeology also gratefully acknowledges the assistance of the officers and staff of the following organisations consulted during the study ;

The Hertfordshire County Planning and Environment Department
The Royal Commission on Historic Monuments (England)
Hertfordshire County Record Office
Hertfordshire Local Studies Service
National Library of Air Photographs (Swindon and Acton)
Mill Green Museum
Hertford Museum
East Hertfordshire Archaeological Society
Welwyn Archaeological Society

The preliminary site visits were undertaken by W A Boismier and the data collection by K E Walker. This report was compiled by W A Boismier, A P Fitzpatrick and K E Walker , the figures were prepared by L J Coleman. The project was managed by A P Fitzpatrick.

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TIME LINE

<i>Dates</i>	<i>Name of period</i>	<i>Common name (if different)</i>
c. 250,000-8,000 BC	Palaeolithic	(Old Stone Age)
c. 8,000-4,000 BC	Mesolithic	(Middle Stone Age)
c. 4,000-2000 BC	Neolithic	(New Stone Age)
c. 2,000-800 BC	Bronze Age	
c. 800 BC -AD 43	Iron Age	
AD 43 - c.420	Romano-British	
c. AD 420 - c.1066	early medieval	
c. AD 1066 - c.1500	medieval	
c. AD 1500 >	post-medieval to modern	
present day		

ABBREVIATIONS

AAS	Area of Archaeological Significance
DMV	Deserted Medieval Village
IA	Iron Age
IA/RB	Iron Age/Romano-British
Med	medieval
Mes	Mesolithic
Neo	Neolithic
NGR	National Grid Reference
Pal	Palaeolithic
P-Med	post-medieval
PU	Prehistoric, period unknown
RB	Romano-British
SAM	Scheduled Ancient Monument
SMR	Hertfordshire County Council Sites and Monuments Record
U	Unknown

1 INTRODUCTION

1.1 The Project

Wessex Archaeology were commissioned by Acer Consultants Ltd on behalf of the Department of Transport to prepare an archaeological assessment report for a corridor of southern Hertfordshire potentially affected by the proposed widening of the A1(M) motorway, Junctions 1-6 (Potters Bar-Welwyn).

The study was to consider a broad corridor extending 2km either side of the existing motorway, with detailed analysis of the 500m either side of the road. This work consisted of two elements; a desk based study and an initial field scan.

1.2 The Study Area

The study area is centred on the line of the existing A1 (M) motorway, but extends east and west of the line of the current road in order to provide a broader contextual framework within which the impact of the proposed improvement scheme can be assessed. It is approximately 16km in length, extending from Junction 1 which lies to the west of Potters Bar (TL 22/00) in the south up to (but not including) Junction 6 at Welwyn in the north (TL 23/15).

2 GEOLOGICAL AND ARCHAEOLOGICAL BACKGROUND

2.1 Topography, Geology and Soils

Geology, relief and soils along the route are highly variable and reflect the underlying solid geology as it changes from the Cretaceous Chalk of the southern Chilterns around Welwyn Garden City in the north, to the Tertiary deposits of the London Basin to the south of the study area. Quaternary deposits along the route include clay-with-flints, plateau, aeolian and glaciofluvial drift deposits and alluvium. Soils are likewise as variable and are described in Appendix 1. The relief is most pronounced in the north around Welwyn Garden City, changing to relatively flat or gently rolling around Hatfield, and then to undulating further to the south.

2.2 Current Land Use

Present landuse along the corridor is highly variable, but for the purposes of this report it may be divided into nine broad groups;

- woodland
- pasture
- recreation
- arable
- road verges
- landfill
- depots
- allotments
- unutilised/unidentified.

The number of hectares within these categories are summarised in Table 4.1 below, (p 16).

2.3 Archaeological Background

2.3.1 Summary

The current A1 (M) motorway passes through an area of high archaeological interest. Archaeological evidence suggests a long and progressively more intensive use of the area from the Palaeolithic period (c. 250,000-8,000 BC) onwards and this is discussed by period below.

Sites within the detailed study corridor are referenced with their unique route Site Number (a National Grid Reference for sites within this corridor is given both in Section 4.4.2 *Known sites*, and in Appendix 2, the Gazetteer).

If protected by statutory legislation the Scheduled Ancient Monument Number (SAM) is also given. If a site has been incorporated within an Area of Archaeological Significance (AAS) as defined by Hertfordshire County Council this is also indicated. For example South Mimms Castle is site number 10 in Appendix 2, its SAM number is 83, it is part of Hertsmere AAS 29, thus: South Mimms Castle (No 10, SAM 83, AAS H29).

Details of Areas of Archaeological Observations made in the course of the Rapid Field Scan are followed by an x (= Extra), for example (Brockett Wood Estate 68x). None of these observations are considered suitable to merit incorporation within maps 1-3. Grid references for nearby sites or Areas of Archaeological Significance outside the study area but of direct relevance to the report are given when mentioned for the first time.

2.3.2 Palaeolithic (c. 250,000-8,000BC)

The archaeological record for the earliest period of human occupation in Britain as elsewhere, is affected by the paucity of preservation of environmental remains and is therefore heavily reliant on the discovery (often by chance), of stone implements. Such tools have been recovered from North Mymms (No 18), Ayot St Peter (No 52), and Welwyn (No 58, AAS W7).

2.3.3 Mesolithic (c. 8,000-4,000BC)

Evidence for the Mesolithic period is also largely in the form of stone tools. Mesolithic flints have been found near South Mimms Castle (No 12, AAS H29) and were apparently also recovered in 'Stream Woods', Hatfield just outside the study area (1).

2.3.4 Neolithic (c.4,000-2,000 BC)

Small numbers of Neolithic implements such as polished stone axes, have been recovered in the Welwyn area. These indicate the presence of Neolithic peoples in an area which may originally have been heavily wooded. Find spots include Welwyn Garden City (No 34), Danesbury Park Welwyn, Lemsford Lane, Sharrards Wood (east side), and the site of the Stanborough Lakes (2). There is also a report of what was interpreted as a small Neolithic flint mine at the south end of the Welwyn viaduct which was destroyed during sewer trenching operations in the 1950's (3).

2.3.5 Bronze Age (c. 2,000-800 BC)

Although Bronze Age material does not figure in the SMR for the immediate study corridor, occupation nearby is indicated. Bronze Age (Beaker) burials were apparently recovered at Digswell Water gravel pit and between Digswell and Tewin (4).

2.3.6 Iron Age/Romano-British (c. 800BC-c. AD 420)

The Iron Age and Romano-British periods are strongly represented in the area and a variety of types of site have been located. The plateau between the Lea and the Mimram rivers is particularly rich in sites of these periods. This may be due the clearance of the slopes along the Lea and Mimram valleys (5), or to a more general extensification and intensification of settlement during the later part of the Iron Age (c. 125 BC onwards).

Large fortified sites of Iron Age date are known in the area. These include an earlier Iron Age hillfort at Wilbury Hill near Letchworth, and the substantial (c. 40ha) later Iron Age defended site of Wheathampstead (between St Albans and Welwyn).

Evidence for Iron Age settlements other than large fortified sites in the area has been recovered from a number of locations, and particularly in the Welwyn and Welwyn Garden City areas (6). A sizeable farm was found on the slopes of the Lea Valley at Stanborough School (No 32, AAS W11) and; in the Mimram Valley (east of Welwyn), settlements are known at Crookhams (TL 253 141) and Grubs Barn - Black Fan Road (TL 253 132). In the Welwyn Garden City area known sites include ditched enclosures, burial sites and isolated finds. Examples include; Newfields (No 36), Attimore Road (No 39, AAS W25), Free Church Hall (TL 237 128), Bessemer Road (TL 244 132), Digswell Water Gravel Pit (TL 251 146), Shortlands Green (TL 250 124), Woodhall Lane (TL 243 117), Heronswood School (TL 256 119), Nutfield (TL 256 138), and Brickwall Hill (No 42, AAS W24-5). Prospect Place, Welwyn (No 61-2; AAS W7) is the type site for well furnished 'Welwyn' type burials of late Iron Age date (7).

The Roman city of St Albans (*Verulamium*) is c. 8km to the west and roads in the area include those from London to the north, via Welwyn and Baldock, from *Verulamium* to the regional capital at Colchester and from Cheshunt to the Icknield way just north of Dunstable (8). Evidence for Romano-British occupation includes four major sites in and around Welwyn (9). The large 3rd to 4th century villa with

four buildings at Dicket Mead (No 64, **SAM 87a-b**, AAS W7) and Lockleys 1st-late 4th century villa (which has Iron Age origins (No 63, AAS W7)), both lie in the Mimram valley. Remains of substantial buildings were found at Manor House (No 67, AAS W7). At The Grange cemetery site (No 65, AAS W7) an unspecified number of inhumation burials have been recorded (TL 231 163), whilst many cremations (possibly thousands) have been removed from behind The Grange (TL 231 164). There is other scattered evidence to confirm the Romano-British settlement in the Welwyn area. For example, building materials and other finds indicate possible buildings at Rollswood (c. TL 228 174) and at Prospect Place burials (the earliest of which date to the late Iron Age) continued to be made into the Roman-British period. Romano-British cremations have also been found at The Hall (No 66, AAS W7). There are a few isolated findspots of Romano-British material in the Hatfield area (10).

2.3.7 Post-Roman to c. AD 1066 (5th to 11th century)

Evidence for occupation in the area during the 5th to 11th centuries is less abundant. Evidence of Anglo-Saxon settlement in the area is largely restricted to modern place names which derive from the period. Examples are *Tewin*, meaning 'worshippers of Tew or Tiew', (11) or *Haethfed* (Hatfield) which means heath covered, open, land (12).

By the 8th century AD, central northern and eastern Hertfordshire may have been part of the kingdom of Mercia of which the River Lea may have been its southern boundary (13).

2.3.8 Medieval (AD 1066 - c.1500)

A number medieval sites have been found in the area. These include a motte and bailey castle and moated sites. Moats are believed to have a variety of uses, principally as settlements, but they may also have had uses as stock enclosures, fishponds and orchards.

Moated sites have been noted at Blanche Farm, Potters Bar (No1), Mimms Hall (No 5, AAS H28) and Pancake Hall, Welham Green (No 16). At South Mimms Castle the remains of a motte and bailey made of earth and timber whose construction is thought to have started in AD 1141 survives as an earthwork despite quarrying activities on its northern edge, and it is a Scheduled Ancient Monument (No 10, **SAM 83**, AAS H29).

A number of settlements in the area have been identified as existing during the medieval period. These include Ridge, Welwyn, Hatfield and South Mimms where a possible Deserted Medieval Village (DMV) has been identified (No 3). North Mymms may also fall into this category, a possible DMV is noted, and it has a 14th century church (No 15, AAS W15). In the *Domesday* book Hatfield is mentioned as 'Hetfelle' (14), Welwyn as 'Wilye', and South Mimms as 'Mimmine'. Scattered finds of medieval material, and evidence for occupation in the form of pits, probably rubbish pits, for example at Potters Bar (No 9) have been noted in the area.

2.3.9 Post-medieval

The *Domesday* Book of 1086 shows the ownership of land in Welwyn and the surrounding areas to be largely concentrated in the hands of a privileged few. The rural economy was already developing during this period, with assets such as watermills being recorded at Welwyn, Digswell Tewin and Lemsford and this is probably representative of the situation in the rest of the area. The church came to own substantial lands such as the monastery at Hatfield (15).

A number of large houses were built and their estates consolidated during the Tudor period. Examples include the redbrick Hatfield House built for Robert Cecil, first Earl of Salisbury between 1607 and 1612 and North Mymms Park with its adjoining garden built for Henry or Sir Ralph Coningsby about 1600.

It has been suggested that the enclosure of land during the 18th and early 19th centuries 'seems to have been the result, rather than the cause of a process by which the larger land owners consolidated their position.' Whereas in the 17th century the self sufficient proprietor was fairly common

'at the end of the 18th century most of Hertfordshire's farm land belonged to substantial landowners and cultivation was carried out by tenant farmers who themselves operated on a substantial scale and employed labour' (Jones-Baker 1991, 247)(16).

Hertfordshire has a history as a farming county and even the industrial revolution had relatively little impact. Such industries as existed, were largely based on agriculture, for example brewing, malting and straw plaiting (17). The County Edition 6" OS maps do, however, show a number of chalk pits, and there is a least one area identified as 'brick kiln wood', suggesting the existence of a brickworks.

Agricultural products for the London markets including hay and timber appear to have been important. The management of woodlands produced a significant proportion of the income of some large estates and management practices such as the frequency of felling or coppicing were legislated by parliamentary Act. A survey of the county in 1794 noted that 'nearly the whole County is interspread with small woods and copses' (18).

The most significant recent changes in settlement have come after the Second World War with the building of the New Town of Welwyn Garden City, the expansion of Welwyn and the development of their associated infrastructure. Many of the modern sites recorded in the present report are located in the historic core of Hatfield (No 22-7). The increased mechanisation of agriculture has also profoundly altered the rural landscape.

3 METHODOLOGY

3.1 Field Scan

As specified in the Archaeological Assessment Brief prepared by Wessex Archaeology (Reference No:T1328, 4-5) a rapid field scan of the route from Junction 1 to Junction 6 in southern Hertfordshire was undertaken to complement the Desk Study of known archaeological resources. The length of the route was examined over the period from the 29th of October to the 6th of November in two stages: 1) Welwyn Garden City to Hatfield (29-30 October) and, 2) Hatfield to South Mimms (5-6 November).

All fields and areas delimited on the 1:10,000 maps supplied by Acer were visited and a series of observations concerning present landuse, surface conditions and any visible archaeological features or materials were recorded. With the exception of areas where access had been denied or the landowner is unknown, all areas were examined on foot. For areas not crossed on foot, examinations were made by walking around their perimeters. The results of the field scan are summarised below and in Tables 1 and 2, and are detailed on a field/area basis in Appendix 1.

3.2 Desk Study

The principal aim of the desk-top study was to document the archaeological resources of the A1 (M) corridor. In accordance with the *Brief for Archaeological Assessment Report*, a number of different sources were consulted, and although only those directly relating to the road corridor (500m either side of the existing motorway) were examined in detail, evidence for a wider study area (2km either side of the existing motorway) was also considered.

The following sources were consulted and the details of their resources are presented below:

- The Hertfordshire Sites and Monuments Record
- Royal Commission on Historical Monuments (England), RCHM(E)
- Hertfordshire County Record Office
- National Library of Air Photographs, Swindon
- Hertfordshire Local Studies Service
- Hertford Museum
- Mill Green Museum
- East Hertfordshire Archaeological Society
- St Albans & Hertfordshire Architectural & Archaeological Society
- Welwyn Archaeological Society

3.2.1 County Sites and Monuments Record

The Hertfordshire County Sites and Monuments Record is compiled, maintained and held by the Hertfordshire County Planning and Environment Department, Hertford. A computerised printout of records in the study area was provided by the Hertfordshire County Archaeological Officer, who also identified designated areas of archaeological interest.

3.2.2 National Monuments Record-Excavation Index

The Royal Commission on Historic Monuments (England) compiles and maintains a computerised index of archaeological excavations. A computerised cover search for the study area was undertaken.

3.2.3 Cartographic search

Maps surviving in the public domain were examined in the Hertfordshire County Record Office, County Hall, Hertford. These maps include Tithe maps and Awards, County Edition OS maps and estate maps.

3.2.4 The Hertfordshire Local Studies Service

A local studies reference library held at the Register Office Block, County Hall, Hertford was also consulted.

3.2.5 Aerial photograph study

The National Library of Air Photographs is held by the RCHM(E) in Swindon, Wiltshire, and Acton, West London. A computerised cover search for the study area was undertaken, identifying vertical photographs covering the period from 1942 to 1987 (Appendix 3).

3.3 Grading Systems Used

Following data collection, the archaeological sites recorded were allocated a letter grade A-C. They are defined as follows:

- **Grade A:** Scheduled Sites (SAM) and Grade 1 Listed Buildings (protected by legislation)
- **Grade B:** Sites of known extent, nature and date
- **Grade C:** Sites of unconfirmed potential (e.g. isolated finds, sites not fully investigated, early investigations)

It should be noted that these grades reflect the current state of archaeological knowledge. They cannot, *and do not*, reflect the relative potential importance or significance of the archaeological resource, in local, regional or national terms.

The impact of the present proposal on each site is graded, with 1 being detrimental to the archaeological resource and 3 being beneficial. The category 'No impact' is reserved for sites which have been destroyed or removed in their entirety, for example a coin hoard (No 20) which was completely excavated.

- **Grade 1** Negative
- **Grade 2** Uncertain, but at risk
- **Grade 3** Positive
- **Grade 4** No impact

4 RESULTS

4.1 Initial Field Scan

4.1.1 Landuse

Landuse along the corridor is highly variable, but for the purposes of this report it has been divided into nine general landuse groups (p 8; Section 2.2 above). The number of hectares within these categories are summarised in Table 4.1.

Deciduous woodland and mixed deciduous and conifer woodland cover approximately 125.63ha of the areas examined and comprise the single largest landuse category along the length of the corridor. Within this category a number of major variations were observed: 4.20ha are located in alluvial interchannel areas or along stream banks, 2.10ha occur in a former quarry; 2.03ha are linear strips alongside roads, and 1.55ha are mixed woodland and pasture. The edge of a further 5.35 ha has been utilised as a farm tip.

Landuse	hectares	%
Woodland	125.63	38.41
Road verges	24.50	7.49
Recreation	45.32	13.85
Arable	26.86	8.21
Pasture	66.42	20.30
Allotments	0.73	0.22
Landfill	5.75	1.76
Depots	5.29	1.62
Unutilised/unidentified	26.61	8.13
Total	327.11	

Table 4.1: Landuse within the corridor

Pasture comprises approximately 66.42ha of land along the route. Major variations within this general category of landuse include 16.19ha located in alluvial interchannel areas or along streams, 9.18ha of mixed pasture and woodland or arable with pasture as the dominant landuse, and 6.13ha comprising linear strips alongside roads.

Recreational landuse for formal and informal outdoor activities total 45.32ha. Areas within this category comprise 33.2ha of Stanborough Park, 10.95ha of marsh and associated deciduous woodland at Water End, and 1.17ha of the grounds of a public house at Ayot Green.

Arable farmland covers approximately 26.86ha of the areas examined along the corridor. Within this landuse category 8.38ha are under Set-aside or are unploughed, 4.54ha are mature hedgerows between arable fields, 2.33ha are linear strips alongside

roads, and 2.08ha are either arable or cultivated ley pasture. A further 2.57ha comprise mixed arable (Set-Aside/unploughed), deciduous wood and mature hedgerow.

Road verges consisting of linear strips of largely landscaped banks and footpaths comprise a total of 24.50ha along the corridor. Some 1.96ha within this category are areas between two or more roads.

Other landuses observed along the route include a 5.75ha landfill site south of the Hatfield A414-A1(M) junction, 5.29ha of depots including a caravan site, and 0.73ha of allotment gardens. Landuse for the remaining 26.61ha was not clearly identified, but in most instances the land appeared to be unutilised or waste land.

4.1.2 Surface Conditions

Surface conditions along the corridor reflect the current landuses and have been subdivided into seven general categories on the basis of observations made at the time of fieldwork;

- wood
- grass
- scrub/other
- arable
- landscaped
- marsh
- tarmac/yards.

Surface conditions are summarised in Table 4.2.

Surface Condition	Hectares	%
Wood	125.63	38.41
Grass	50.18	15.34
Scrub/other	66.68	20.38
Arable: Bare surface	6.33	1.93
Straw/grass	15.42	4.71
Crop emerging	5.11	1.56
Landscaped	37.17	11.36
Marsh	15.30	4.68
Tarmac/yards	5.29	1.62
Total	327.11	

Table 4.2: Surface conditions within the corridor

As the previous section has documented, woodland covers approximately 125.63ha of land along the route and includes alluvial interchannel/stream bank areas (4.70ha), mixed wood and pasture (1.55ha), a disused quarry (2.10ha), and 5.35ha where the edge of the wood has been utilised as a farm tip. Visibility within the wooded areas is

variable, ranging from less than 5m to around 100m depending upon understory height and density.

Grass surfaces cover 50.18ha and occur in areas of managed pasture. Variations within this category include 1.94ha of mixed grass and scrub vegetation, 2.73ha of mixed grass and a small area of arable under Set-aside (straw/grass covered surface) and 0.84ha of mature hedgerow bordered by managed pasture.

Scrub and other forms of rough surface vegetation occur on 66.68 ha and comprise the second largest category of surface cover along the route. Within this diverse category some 0.76ha are under bracken, 4.21ha have been utilised for rubbish, including soil, tipping, and 14.32 ha contain a mixture of surface conditions (wood, grass, etc.). A further 5.75ha cover the surface of the landfill site.

Arable surface conditions observed at the time of fieldwork include 6.33ha of exposed ploughed, cultivated or drilled surfaces, 15.42ha covered with straw/grass and 5.11ha where winter cereals are emerging (tiller height: 50-100mm). Variations with these three categories include 2.40ha of mature hedgerow and ditch/stream bordered by a ploughed surface on one side and a cultivated/drilled surface on the other, and 4.71ha of mature hedgerow and wood bordered by arable under Set-Aside (straw/grass surface).

Landscaped surfaces comprising trees, bushes, grass and footpaths constitute 37.17ha of land along the route and include 14.47ha of Stanborough Park. Other surface conditions observed along the route include 15.30ha of marsh and associated wood at Stanborough Park and Water End, and 5.29ha of tarmac or yard surfaces.

4.1.3 Archaeological Resources

Surface conditions and access restrictions at the time of fieldwork made it impossible to scan arable areas to identify either artefact concentrations or potentially anthropogenically derived soils. Similarly the density of woodland understory did not allow the identification of any unrecorded earthwork features.

Known archaeological sites examined within the areas delimited on the 1:10,000 maps supplied by Acer were restricted to the one medieval Motte and Bailey castle site (No 10, SAM 83). The locations of known archaeological findspots were not examined in detail due to the surface conditions and access restrictions previously noted. Some minor observations concerning the presence of archaeological materials were also made at the Bocket Estate Wood and from areas along the River Mimram. The present condition of the Motte and Bailey site and these observations are summarised below.

- *Motte and Bailey castle site* (No 10, SAM 83, AAS H29) (TL 2300 0258).
Approximately 1.38ha in extent, the site survives a series of substantial earthworks that in places are 3m or more in height. The character and condition of the site is difficult to determine as it is covered by deciduous woodland with a dense understory that obscures much of the surface and any associated low relief earthwork features.

A recently backfilled archaeological section excavated through the highest internal earthwork feature was observed during the examination of the site. At present the site is being utilised as a pheasant run/shoot with its eastern perimeter used as a farm rubbish tip.

- *Brockett Wood Estate*: A single piece of worked flint, perhaps of prehistoric date, was observed along a footpath at approximately TL 2190 1325 (No 68x).
- *River Mimram*: several pieces of burnt flint were noted in the cultivated field adjacent to the River Mimram at TL 2330 1045 (No 69x).
- *River Mimram*: a single post-medieval tile in the inter-channel area at TL 2370 1025 (No 70x).
- *Brock's Wood-Ayot Green*: A former railway cutting was observed crossing Brock's Wood and Ayot Green at the side of the motorway (No 71x).

4.2 Desk Study

4.2.1 Summary of results

Archaeological evidence dating to the prehistoric, later Iron Age/Romano-British and medieval periods has been found along the length of the study corridor of the A1(M). The evidence varies from scattered findspots to evidence for substantial occupation. The northern section of the route is particularly rich in archaeological evidence. A summary table of known sites is given below (Table 4.3).

Period	Sites within or very close to the route corridor
Palaeolithic (c.250,000 BC)	18;52;58
Mesolithic (c. 8,000-4,000 BC)	12
Neolithic (c. 4,000-2,000 BC)	34
Bronze Age (c.2,000-800 BC)	-
Prehistoric Unknown	7;38;68x;69x
Iron Age/Romano-British (c.800 BC-AD 420)	20;29;32;35;36;37;39;41;42;47;56;59;60;61;62;63;64;65;66;67
Post Roman to c. AD 1066 (5th to 11th centuries)	-
medieval (AD 1066-c.1500)	1;3;5;8;9;10;13;15;16;48;
post-medieval-modern (c. AD 1500 >)	2;4;6;11;14;19;22;23;24;25;26;27;28;33;40;43;44;45;46;49;50;51;53;54;55;57;70x;71x
Unknown	17;21;30;31

Table 4.3: Summary of Sites by Period

4.2.2 Scheduled Ancient Monuments

One Scheduled Ancient Monument (SAM) lies within the study corridor. This is SAM 83, South Mimms motte and bailey castle (Map 1; TL 230 026). A second SAM lies just north of the corridor, this being number SAM 87a-b, Dicket Mead Roman Villa and Bath House (Map 3; TL 235-6 160).

4.2.3 Areas of Archaeological Significance

Areas of Archaeological Significance (AAS) have been defined by the County Council. Nine of these lie within or close to the route of the A1(M). The areas are briefly described below based on the information provided by Hertfordshire County Council Planning Department. Each Local Authority Area has an individual numbering sequence and in the present instance this results in two number 28's. For the sake of clarity the numbers are prefixed by an abbreviation indicating the District;

- H = Hertsmere
- W = Welwyn Hatfield

Thus AAS W7 is Welwyn Hatfield District Area of Archaeological Significance Number 7.

- Area AAS W7, Welwyn (= no 59-67, SAM 87a-b)
Substantial evidence for late Iron Age and Romano-British settlement has been found at a number of sites in Welwyn. The Village is also recorded in *Domesday* (Map 3).
- Area AAS W10, Stanborough (= No 30-1)
Probable field systems, perhaps of prehistoric or Romano-British date identified from aerial photographs (Map 3).
- Area AAS W11, Stanborough (= No 32)
Late Iron Age/Romano-British occupation evidence was discovered in advance of building work at the school. It is probable the settlement extends beyond the excavated area. (Map 3)
- Area AAS W22, North Mymms (= No 15)
There is documentary evidence for a deserted medieval village (DMV) at North Mymms. The parish church of St. Mary dates from the 13th century (Map 1).
- Area AAS W24, Lemsford (= No 41)
Excavations carried out during the construction of the A1(M) revealed evidence of Late Iron Age and Romano-British occupation (Brickwall Hill). It is likely that the occupation area extend beyond the area excavated (Map 1). Area W24-5 are continuations of the same site either side of the present motorway.

- Area AAS W25 (= No 39, 42)
Excavations on the site of the A1(M) revealed evidence of Late Iron Age and Romano-British occupation (Brickwall Hill). It is likely that the occupation extends beyond the excavated area. The Areas W24-5 are continuations of the same site either side of the motorway with the exception that W25 also incorporates the site of four late Iron Age or early Romano-British cremation burials at Attimore Road (No 39) (Map 1).
- Area AAS W28 (Outside the study corridor but immediately adjacent)
Finds of late Iron Age pottery at Melbourne Stud indicate that an occupation site probably lies within the area (Map 1).
- Area AAS H28 (= No 5-6)
There is a medieval moated site at Mymms Hall (Map 1).
- Area AAS H29 South Mimms Castle (= 8, 10, 12, **SAM 83**)
A medieval motte and bailey Castle of 12th century date (**SAM 83**) lies within this area (Map 1).

4.2.4 Known sites

The known sites of archaeological interest resulting from the archaeological desk based study are briefly described from south-north below. The emboldened letter within brackets is the grading of the current state of archaeological knowledge of the site (p 14, Section 3.3 above). Details, including chainages, are given in Appendix 2.

(MAP 1)

1 Blanche Farm, Potters Bar (TL 2205 0012, SMR 2944). The site of a former medieval moat; the two visible branches of which were filled in c. 1963. There are now no remains. (C)

2 Blanche Farm, Ridge (TL 2205 0012, SMR 2943). Post-medieval farmhouse site. (C)

3 South Mimms (TL 232 002, SMR 1027). Deserted Medieval Village. (C)
[Note : St Giles Church, South Mimms (TL 2223 0120) is a Grade 1 listed building].

4 Cecil Road, Bridge, South Mimms (TL 2286 0152, SMR 5119). Post-medieval road bridge built in 1880, carrying the road to Oxlease. (B)

5 Mimms Hall, Potters Bar (TL 2326 0196, SMR 4266, AAS H28). Medieval moated site, which although dry and fragmentary, can be traced on all but the north side. (B)

6 Mimms Hall, Potters Bar (TL 230 020, SMR 2036, AAS H28). Post-medieval house, probably dating to the early 16th century. (B)

7 Potters Bar (TL 230 024, SMR 4834). Findspot, flint core of uncertain prehistoric date. (C)

8 Potters Bar (TL 230 025, SMR 4836, AAS H29). Findspot, medieval pottery sherd. (C)

9 Potters Bar (TL 231 025, SMR 4835). Medieval, small pit containing pottery etc. (C)

10 South Mimms Castle, South Mimms (TL 2300 0258, SMR 0095, SAM 83, AAS H29). Medieval castle comprising a 9m high motte in the Northwest corner of a kidney-shaped bailey. There are traces of an outer bailey to the south now ploughed. Excavation and historical research indicated the castle was built by Geoffrey de Mandeville in 1141 with a licence from Matilda, and was possibly destroyed in 1143. Earlier buildings may have existed on the site. (A)

11 Potters Bar (TL 229 026, SMR 4837). Findspot, historic (period uncertain but likely to be post-medieval), a possible iron cannon ball. (C)

12 South Mimms Castle (TL 230 026, SMR 6264, AAS H29). Findspot, Mesolithic material comprising three flakes, two blades and five worked flints found in 1979. (C)

13 East of South Mimms Castle, South Mimms (TL 230 027, SMR 6233). Findspot, medieval pottery and sherds found during construction of the current A1(M). (C)

14, South end of Water lane, North Mymms (TL 230 031, SMR 5730). Post-medieval City of London coal duty marker (type D). This is a square cast iron column with the arms of the City of London and the date of the Act under which it was erected. Dated between 1851 when the first Act set up such markers alongside railways, rivers, canals and turnpike roads, and 1889 when duties were abolished. (C)

15 North Mymms (TL 222 045, SMR 1013, AAS W22). A possible Deserted Medieval Village centred on TL 222 045. Nothing is visible of a site on the available aerial photographs for this area. Although the 14th century church St Mary's stands in ornamental and pasture land in North Mymms Park there is no trace of a medieval settlement. (C)

(MAP 2)

16 Pancake Hall, Welham Green (TL 228 051, SMR 2219). Former medieval moat. A moated settlement dating to c. AD 1300, comprising three water filled arms (none to NE) and c. 50 by 60m in overall size. Excavated in 1950 and the western arm infilled. (B)

17 Between southern link road and Dellsome Lane, Bishops Lane Hatfield (TL 221 059, SMR 0926). A wide trackway of unknown date, including a layer of pebbles set on clay soil and a ditch on either side; now used as a footpath. (C)

18 North Mymms (TL 222 061, SMR 1876). Findspot, a Palaeolithic hand axe, other worked flints and much scattered bone was found to the west of Bunchley's Pond. Field investigation revealed no significant finds. (C)

19 Roestock Green, Colney Heath (TL 214 064, SMR 5277). Brick pillar wall box AD 1871-1881. (B)

20 'Vixendell', Lane End, Roestock, North Mymms (TL 2162 0670, SMR 2934). Findspot, a box containing seven coins of Diocletian (AD 284-305) is recorded as having found here in 1927, but there is a suggestion that they may not have come from the site. (C)

21 Chantry Wood, Chantry Lane Hatfield (TL 2160 0800, SMR 0465). Three Deneholes (shafts dug for chalk) of unknown date. As of 22/1/90 there is a proposal for the central Denehole to be capped and grilled in consideration of bats. (C)

22 West of Comet roundabout, Ellenbrook, Hatfield (TL 2123 0833, SMR 5018). Post-medieval milepost probably dating to c. AD 1822. (B)

23 Roe Green Lane, Hatfield (TL 2180 0850, SMR 6629). Site of a concrete pillbox, now destroyed. In an area of suburban housing so exact location unknown. (C)

24 Fiddle Bridge, Hatfield (TL 218 085, SMR 5615). A post-medieval railway bridge of brick and iron. (B)

25, Former Maltings, Waters Garage, Hatfield (TL 216 087, SMR 5371). Former brick built maltings of uncertain date, used partly as garage, partly a store. (C)

26 Hatfield Station, Hatfield (TL 221 088, SMR 5525). Nineteenth century station buildings. (B)

27 Railway bridge, Hatfield (TL 223 090, SMR 5613). A post-medieval railway bridge of brick and iron. (B)

28 Old Stanborough Lane, Stanborough, Welwyn Garden City (henceforth WGC) (TL 227 111, SMR 5218). A post-medieval road bridge carrying the A405 over the railway. Built in 1850 of brick, and possibly reconstructed in 1966/7. (B)

(MAP 3)

29 Stanborough Boating Lake, Stanborough, WGC (TL 226 112, SMR 2799). Findspot, Roman pottery sherd (Samian). (C)

30 Stanborough, Hatfield (TL 2225 1153, SMR 2516, AAS W10). Cropmark of unknown date; a single linear ditch aligned NE-SW. Further linears on the same alignment are found to the north-west, (see No 31 below): (C)

31, Stanborough, Hatfield (TL 2210 1165, SMR 6125, AAS W10). Cropmarks of Unknown date; four roughly parallel linear ditches aligned NE-SW. (See No 30 above). (C)

32 Stanborough School, WGC (TL 2288 1166, SMR 0161, AAS W11). Late Iron Age and Romano-British enclosure and cemetery. Excavated in 1938 and 1953, producing a boundary ditch, cremations, other finds and possible occupation evidence (19). (C)

33 'Lockleys Old Bridge' Welwyn (TL 236 157, SMR 5111). Post-medieval road bridge over River Mimram, possibly dating from 1834, 'abandoned' in 1906 for new bridge. (B)

34 Spoilheap from new Stanborough Lakes, WGC (TL 223 118, SMR 2806). Find spot. Neolithic polished axe. (C)

35 Welwyn Garden City (TL 2272 1200, SMR 1572). Findspot. Roman pottery. (C)

36 Newfields, WGC (TL 226 121, SMR 2804). Findspot, late Iron Age pottery. (C)

37 Handside Lane, WGC (TL 2288 1220, SMR 1571). Findspot. Roman coin (Hadrian). (C)

38 Attimore Road, WGC (TL 226 123, SMR 2145). Findspot. Small pear-shaped flint arrowhead of uncertain, perhaps prehistoric, date. (C)

- 39** Attimore Road, WGC (TL 226 124, SMR 0163, AAS W25). Late Iron Age or early Romano-British cremation cemetery. Four burials included pottery and brooches. (C)
- 40** Lemsford, Hatfield (TL 2207 1245, SMR 5220). Post-medieval road bridge over the River Lea, probably built c.1812. (B)
- 41** Brickwall Hill, WGC (centred on TL 2232 1274, SMR 2291, AAS W24). Ditch containing Romano-British, early 2nd century pottery found during roadwork's on the A1. (See also No 42 below). (C)
- 42** Brickwall Hill, WGC (centred on TL 2232 1274 SMR 1788, AAS W25). Four lengths of ditch containing late Iron Age material including pottery and metalwork. (C)
- 43** Tollgate cottage, near Ayot Green, WGC (TL 2235 1300, SMR 5890). Former tollgate cottage built c. 1725. (B)
- 44** Brockswood Lane, WGC (TL 2279 1337, SMR 6630). Modern 'conical-type' anti-tank obstacles in the garden of 51 Brockswood Lane. (B)
- 45** Opposite Brockswood Lane, WGC (TL 222 135, SMR 5066). Post-medieval milestone probably erected c. 1835. (B)
- 46** Sherrardspark Bridge, WGC (TL2265 1397, SMR 6163). Former railway bridge. (B)
- 47** Welwyn Garden City (TL 234 140, SMR 2803). Findspot. Sherd of late Iron Age pottery found in 1936. (C)
- 48** Ayot Green Village, Ayot St Peter (TL 2210 1405, SMR 2631). Medieval village, shown in *Domesday* as 'Aiete.' (C)
- 49** Ayot Green (TL 2247 1423, SMR 32). Post-medieval road bridge built in 1860 of brick. (B)
- 50** Ayot St Peter (TL 222 144, SMR 5221). Post-medieval brick pillar wall box. (B)
- 51** Railway Station, Ayot Green (TL 2218 1445, SMR 5519). Post-medieval remains of railway station largely destroyed by fire c.1938 and closed 1965. (B)
- 52** Ayot St Peter (TL 221 145, SMR 1054). Findspot. Palaeolithic flint flake. (C)
- 53** Route of Great North Road, WGC (TL 228 145, SMR 6258). Post-medieval cutting, probable site of section of the 'Great North Road'. (C)

- 54** Railway bridge, Ayot Green, Ayot St Peter (TL 2204 1452, SMR 5626). A post medieval railway bridge of brick, with an open iron parapet. (B)
- 55** Brockswood, Ayot Green, WGC (TL 225 147, SMR 6203). Two Historic rectangular artificial ponds. Possibly for stock management, fish or duck decoys. Perhaps 18th century. (C)
- 56** Behind The Frythe, WGC (TL 225 149, 2807). Romano-British cremation burials with pots and a bronze plate found in 1886. (C)
- 57** Digswell Hill, Welwyn (TL 229 149, SMR 5067). Post-medieval milestone probably erected in 1835. (B)
- 58** Workhouse Pit, Welwyn (TL 23 15, SMR 4162). Findspot. Palaeolithic flint implement plus other flint finds (flakes and cores). (C)
- 59** Broomfield Road, Welwyn (TL 2316 1590, SMR 1557). Romano-British kiln or oven of uncertain use. (C)
- 60** Rectory grounds, Welwyn (TL 231 159, SMR 6087). Find spot, Roman coin (Decentius). (C)
- 61** Welwyn (TL 232 159, SMR 6509, AAS W7). A firedog from one of the Welwyn type late Iron Age burials here. Allocated a separate number here as this is done in the SMR but the find is associated with No 62 below. (B)
- 62** Welwyn (TL 2325 1598, SMR 0158, AASW7). Two late Iron Age 'Welwyn' type cremations burials found in 1906. (A)
- 63** Lockleys, Welwyn (TL 2377 1620, SMR 1566, AAS W7). Iron Age and Romano-British occupation site including a Roman villa and a hut circle, excavated in 1937. (B)
- 64** Dicket Mead, Welwyn, (TL 235 161, SMR 1913, SAM 87a-b, AAS W7). A Romano-British villa (87b), bath house (87a), (putative canal and kiln) excavated by A G Rook. The villa was built in the mid 3rd century and demolished by the early 4th century. Partly excavated in advance of the construction of the A1(M), the remainder of the site lying under playing field. The bath house site is well-consolidated and now lies *under* the A1(M) protected by a corrugated steel vault, entered by a passageway from the west. (A)
- 65**, The Grange, Welwyn (TL 2312 1640, SMR 1554, AAS W7). A large Roman-British cremation cemetery. The number of burials has been calculated to run into several thousands. (C)
- 66** The Hall, Welwyn (TL 2321 1643, SMR 6522, AAS W7). Roman mausoleum, enclosure, graves, excavated 1976-7. Rescue excavation during the construction of a new road and car park revealed traces of Roman building material. Trenching

produced parts of, an enclosure ditch containing three burials and a building interpreted as a mausoleum. (B)

67 Manor House, Welwyn (TL 229 162, *not in SMR*, AAS W7), Remains of substantial Roman buildings were found here in 1906-8 and further finds were recorded later. Excavation in 1986 close to the river (TL 229 162) exposed a further (flimsy) structure. A number of pits were observed in the Manor House Orchard by A G Rook (TL 228 162). These have now been built over. (C)

Additional archaeological observations resulting from the field scan

68x, Brockett Wood Estate: A single piece of worked flint was observed along a footpath at approximately TL 2190 1325.

69x Several pieces of burnt flint were noted in the cultivated field adjacent to the River Mimram at TL 2330 1045.

70x, A single post-medieval tile was observed in the interchannel area at TL 2370 1025.

71x, A former railway cutting was observed adjacent to the motorway at approximately TL 2235 1435.

5 IMPACT ASSESSMENT

5.1 Introduction

Archaeological remains constitute a finite and non-renewable resource and the preferred option is preservation *in situ*. The impact on any road scheme on such data is usually direct and deleterious, both in the long- and short-term and this is reflected in the impact assessment presented below (Table 5.1).

The nearer a site or group of sites to the proposed scheme the more direct the impact. Grade 1 is detrimental and 3 is beneficial. Grade 4 is only used where a site or find has been excavated in its entirety or otherwise destroyed.

- **Grade 1** Negative
- **Grade 2** Uncertain, but at risk
- **Grade 3** Positive
- **Grade 4** No impact

Site No	SMR No	NGR	Period	Description	Code A-C	Impact 1-4
1	2944	TL 2205 0012	Med	Moat	C	2
2	2943	TL 2205 0012	P-Med	Farmhouse site	C	2
3	1027	TL 232 002	Med	DMV	C	2
4	5119	TL 2286 0152	P-Med	Bridge	B	1
5	4266	TL 2326 0196	Med	Moated site	B	2
6	2036	TL 230 020	P-Med	House probably 16th cent	B	2
7	4831	TL 230 024	PU	Flint core	C	2
8	4836	TL 230 025	Med	Pottery	C	1
9	4835	TL 231 025	Med	Pit & finds	C	1
10	0095	TL 2300 0258	Med	Motte & Bailey castle SAM 83	A	1
11	4837	TL 229 026	P-Med (U)	Cannonball	C	1
12	6264	TL 230 026	Mes	Worked flints	C	2
13	6233	TL 230 027	Med	Pottery found during A1(M) construction	C	1
14	5730	TL 230 031	P-Med	City of London Coal Duty Marker	B	2
15	1013	TL 222 045	Med	? DMV	C	3
16	2219	TL 228 051	Med	Moat	B	3
17	0926	TL 221 059	U	Trackway	C	3
18	1876	TL 222 061	Pal	Handaxe & other worked flints	C	3
19	5277	TL 214 064	P-Med	Brick Pillar Wall Box	B	2
20	2934	TL 2162 0670	RB	Coin hoard	C	4
21	0465	TL 2160 0800	U	3 Deneholes	C	3
22	5018	TL 2123 0833	P-Med	Milepost	B	2
23	6229	TL 2180 0850	Modern	Pillbox site	B	4
24	5615	TL 218 085	P-Med	Railway bridge	B	2
25	5371	TL 216 087	P-Med	Former maltings	C	2
26	5525	TL 221 088	P-Med	Station	B	3

27	5613	TL 223 090	P-Med	Railway bridge	B	3
28	5218	TL 227 111	P-Med	Road bridge	B	1
29	2799	TL 226 112	RB	Pottery sherd	C	2
30	2516	TL 2225 1153	U	Cropmark of linear ditch	C	2
31	6125	TL 2210 1165	U	Cropmarks of linear ditches	C	2
32	0161	TL 2288 1166	IA	Enclosure and cemetery	C	2
33	5219	TL 223 118	P-Med	Road bridge over R. Lea	B	2
34	2806	TL 225 118	Neo	Polished axe	C	2
35	1572	TL 2272 1200	RB	Pottery	C	3
36	2804	TL 226 121	IA	Pottery	C	2
37	1571	TL 2288 1220	RB	Coin	C	3
38	2145	TL 226 123	Prehistoric U	Flints	C	2
39	0163	TL 226 124	IA	Cremation cemetery	C	2
40	5220	TL 2207 1245	P-Med	Road bridge	D	1
41	2291	TL 2232 1274	RB	Ditch & finds	C	1
42	1788	TL 2232 1274	RB	Ditch & finds	C	1
43	5890	TL 2235 1300	P-Med	Former tollgate cottage	B	1
44	6630	TL 2279 1337	Modern	Anti-tank obstacles	B	3
45	5066	TL 222 135	P-Med	Milestone	B	1
46	6613	TL 2265 1397	P-Med	Railway bridge	B	2
47	2803	TL 234 140	IA	Pottery	C	2
48	2631	TL 2210 1405	Med origin	Village	C	2
49	5110	TL 2247 1423	P-Med	Road bridge	B	1
50	5221	TL 222 144	P-Med	Pillar wall box	B	1
51	5519	TL 2218 1445	P-Med	Railway station	B	2
52	1054	TL 221 145	Pal	Flint flake	C	2
53	6258	TL 228 145	P-Med	Probable section of Great North Road	C	2
54	5626	TL 2204 1452	P-Med	Railway bridge	B	1
55	6203	TL 225 147	Historic?	Line of ponds	C	2
56	2807	TL 225 149	RB	Cremation burials	C	2
57	5067	TL 229 149	P-Med	Milestone	B	1
58	4162	TL 23 15	Pal	Flint implement	C	1
59	1557	TL 2316 1590	RB	Kiln	C	3
60	6087	TL 231 159	RB	Coin	C	3
61	6509	TL 232 159	IA	Iron firedog	B	2
62	0158	TL 2325 1598	IA	Cremation burials	A	2
63	1566	TL 2377 1620	IA/RB	Lockleys Roman Villa (Settlement, hut circle/ house), villa	B	2
64	1913	TL 235 161	RB	Villa, canal, baths, kiln SAM 87a-b	A	1
65	1554	TL 2312 1640	RB	Cremation cemetery	B	3
66	6522	TL 2321 1643	RB	Enclosure/mausoleum graves	B	3
67	-	TL 229162	RB	Substantial buildings, pits etc.	C	3
68x	-	TL 21901325	PU	Worked flint	C	2
69x	-	TL 22301045	PU	Burnt Flint	C	2
70x	-	TL 23701025	PM	Tile (CBM)	C	2
71x	-	TL 22351435	PM	Railway cutting	C	1

Table 5.1 Impact assessment

5.2 Commentary

The Desk Study has demonstrated the existence of a considerable number of sites. These sites are principally concentrated between Welwyn and Welwyn Garden City (No 28-67) with another group of sites within Hatfield, which is largely comprised of sites of post-medieval date (No 22-7). A number of the presently known sites lie adjacent to the present A1(M), some having been discovered in earlier work on it. These sites will almost certainly be damaged or destroyed by any further widening of the road. Many of these discoveries have been made in building programmes, either for housing or for roads, and they imply that further archaeological sites and finds will be revealed in any widening of the A1(M).

In the case of the present proposal, particular attention is drawn to the extensive works necessary at junctions which will be required by any widening of the carriageways and the temporary takes of land which will be required for compounds. Compounds will also entail considerable ground works and the passage of heavy plant.

5.3 Statutory protection

Statutory protection is afforded to the medieval South Mimms Castle (No 10) and the Romano-British villa and bath house at Dicket Mead under the Ancient Monuments Act. Both of these Scheduled Ancient Monuments are well-preserved and lie adjacent to the present route. The bath house at Dicket Mead villa is displayed to the public (Section 5.5 below).

It is not only the sites themselves which are important but also their settings (*Planning Policy Guidelines* 16, 1990, para. 8) and this consideration applies particularly to the two Scheduled Ancient Monuments. Scheduled Ancient Monument Consent will be required for any works which affect the monuments.

5.4 Other protection

Nine Areas have been defined as being of Archaeological Significance by Hertfordshire County Council (pp 20-1, Section 4.2.3). Of these Areas, one incorporates South Mimms Castle (AAS H29), and the Dicket Mead villa and bath house is incorporated within a larger Area containing the Iron Age and Roman-British settlements at Welwyn (AAS W7).

In general the association and group value of these sites as outlined in DOE Circular 15/88 is high. This is particularly the case for the groups AAS W7 and AAS H29 for the Iron Age/Romano-British periods and the medieval periods respectively.

5.5 Educational and recreational

One site, the Dicket Mead villa and bath house has an added significance. The bath house is protected and displayed beneath the current A1(M). Welwyn Hatfield Museum Service, part of Welwyn Hatfield Council is responsible for the site which

currently attracts 8,000 paying visitors a year, including 2,000 school children. Capital works are intended to maintain the preservation of the monument and to enhance and upgrade visitor facilities and access.

In addition to the strictly archaeological significance of the site which is recognised in its inclusion in the Schedule of Ancient Monuments (SAM 87a-b), it is clearly also an important local leisure and recreational facility and educational resource. The schools are principally drawn from Welwyn Garden City and Hatfield. Work on the widening of the carriageways could necessitate the partial or complete closure of the site, loss of revenue and disruption to school curricula.

6 RECOMMENDATIONS FOR FURTHER WORK

6.1 Introduction

The Desk Study and the Field Scan have provided an outline of the archaeological resource potentially affected by the proposed scheme. A consideration of the ways in which many of the known sites were discovered (Section 5.2 above) indicates that this phase of work has not, *and cannot*, define all the archaeological sites or remains likely to exist within the route corridor. Further work is required.

As set out in the Department of the Environment's *Guide to the procedures for Environmental Assessments*, all route options should be assessed by 'systematic analysis, using the best practicable techniques and available sources of information' (DOE 1989, 7) so 'that the merits of practicable alternatives can be considered' (DOE 1989, 9). It is recommended that future work take the form of a *Field Evaluation*.

6.2 Outline recommendations for Field Evaluation

Once a limited number of alternative schemes have been selected any available areas should be assessed by appropriate surface or non-invasive techniques. These should include:

6.2.1 Detailed Field Survey

Detailed analytical field survey using a theodolite and/or an electro-magnetic measurement device (EDM) of upstanding sites and monuments or groups of sites, potentially affected either on their own or as part of a group. Following the standard practice of the Royal Commission on the Historical Monuments of England (RCHM(E)), sites to be surveyed at 1:1,000.

In view of the high proportion of woodland in the Study Area (Tables 4.1-2), and the difficulties caused by this in the Field Scan, this technique is likely to be particularly important in the present proposal.

6.2.2 Surface Artefact Collection (fieldwalking)

In areas suitable for this method (ploughed and preferably weathered), all artefacts should be collected (except obviously modern building and agricultural debris) using timed collection units established on a 25m grid.

6.2.3 Test Pits

Where conditions make it appropriate 1m² test pits should be excavated by hand across the route corridor in order to assess the distribution of artefacts within the topsoil. This technique may be particularly appropriate in areas of woodland where machine trenching would be both difficult and environmentally inappropriate.

6.2.4 Geophysical Surveying

An appropriate series of techniques such as magnetic susceptibility or resistivity should be systematically employed using standard methods to assess the presence and character of archaeological features or deposits.

6.2.5 Machine-cut Trenches

A series of approximately 2m wide trenches of varying length should be excavated at regular intervals along the length and across the width of the route corridor. Trenches should be c. 50m long, those across the route corridor should be the width of the corridor. The trenches should be excavated at 40m intervals alternating along and across the route. A toothless ditching bucket should be used.

A sufficient sample of any archaeological features should be excavated by hand to allow the assessment of the nature, date and preservation of the deposits. Samples for environmental analysis should be taken.

Where sites are already known to exist, site specific targeted sampling strategies should be prepared and employed.

6.3 Report Preparation

All artefacts and environmental samples should be catalogued and scanned and reports prepared on all components of the evaluation (*Evaluation Report*). On the basis of the *Evaluation Report*, a *Final Report* should be prepared.

6.4 Mitigation Measures

The *Final Report* should contain mitigation strategies for any sites then known to lie on the final preferred route. As the incorporation of any site within a road corridor almost invariably leads to its total destruction, it is in principle likely that preservation by record (that is to say excavation) will be proposed. A watching brief during parts of construction works may also be appropriate.

7 LIST OF SOURCES

Hertfordshire Record Office

Ordnance Survey Maps

County Series 6" Maps

- First Edition (1881), Sheets 28,35 and 40
- Second Edition (1898), Sheets 28, 35 and 40
- Third Edition (1926), Sheets 28,35 and 40

Tithe Maps

- Ayot St Peter Parish 1838, DSA4/10/2
- Bishops Hatfield Parish 1838, DSA4/47/2
- Welwyn Parish 1837, DSA4/113/2

Other Maps

- 1983: 1:250,000 Soil Map of England and Wales.

8 REFERENCES

8.1 Secondary sources cited in the report

- 1 R Richardson *The Book of Hatfield* Barracuda, 1978, p 13
- 2 R J Busby *The Book of Welwyn* Barracuda, 1976, p 13
- 3 *op cit* n 2, p 14
- 4 *op cit* n 2, p 13
- 5 *op cit* n 2, p 14
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- 19 B J Arnold 'A Belgic settlement at Welwyn Garden City', *East Hertfordshire Archaeological Society Transactions* **43** (2), 1955, 128-37
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8.3 Relevant Statutory Protection and local legislation

Ancient Monuments and Areas Act 1979 (Revised to 1st June 1983)

Areas of Archaeological Significance (as defined by Hertfordshire County Council)

8.4 Relevant Environmental Assessment legislation and regulations

Council Directive of 27 June 1985 on the assessment of certain public and private projects on the environment (85/337/ECC)

Highway (Assessment of Environmental Effects) Regulations 1988 (Statutory Instrument No 1241)

Town and Country Planning (Assessment of Environmental Effects) Regulation 1988 (Statutory Instrument No 1199)

Appendix 1

Description of the Areas Examined by the Field Scan

Note:

- 1 Soil associations and parent materials derived from the 1983 1:250,000 Soil Map of England and Wales.
- 2 Hectares have been calculated on the basis of measurements taken from the 1:10,000 map and as such are approximate.

Area no.	Hectares	Soil	Parent Material	NGR (centred)	Site	Landuse	Surface Conditions
1	3.43	Windsor	Tertiary Clay	TQ 230 998		Unutilised/unidentified	Scrub/other
2	0.84	Windsor	Tertiary Clay	TQ 228 997		Pasture	Grass
3	1.23	Windsor	Tertiary Clay	TQ 226 999		Depot	Tarmac
4	5.11	Windsor	Tertiary Clay	TQ 225 997		Arable	Drilled, crop emerging
5	4.09	Windsor	Tertiary Clay	TQ 223 998		Arable	Straw/grass
6	1.30	Windsor	Tertiary Clay	TL 223 001		Pasture	Grass
7	2.08	Windsor	Tertiary Clay	TL 222 003		Arable/ley pasture (?)	Cultivated
8	0.45	Windsor	Tertiary Clay	TL 221 004		Pasture	Grass
9	0.96	Windsor	Tertiary Clay	TL 218 006		Pasture	Grass
10	2.15	Windsor	Tertiary Clay	TL 224 003		Arable	Grass/straw
11	9.28	Windsor	Tertiary Clay	TL 223 004		Unutilised/unidentified	Scrub/other
12	2.76	Windsor	Tertiary Clay	TL 231 003	3 lies to the East	Unutilised/unidentified	Scrub/other
13	18.31	Windsor	Tertiary Clay	TL 233 015		Pasture	Grass
14	2.33	Windsor, Bursledon	Tertiary Clay, Eocene & Jurassic Clay	TL 228 011		Arable	Straw/grass
15	2.40	Bursledon	Eocene & Jurassic Clay	TL 226 016		Arable	Ploughed, cultivated/drilled
16	4.73	Windsor	Tertiary Clay	TL 230 020	5 lies to the East	Pasture	Grass
17	0.63	Windsor	Tertiary Clay	TL 232 023		Verge	Scrub/other
18	0.32	Windsor	Tertiary Clay	TL 232 024		Arable	Ploughed
19	5.35	Bursledon	Eocene & Jurassic Clay	TL 230 026	(7),8,10,12	Deciduous Woodland	Wood
20	1.33	Windsor	Tertiary Clay	TL 231 027		Verge	Scrub/ other
21	2.57	Bursledon	Eocene & Jurassic Clay	TL 228 032		Arable	Straw/ grass
22	2.14	Bursledon	Eocene & Jurassic Clay	TL 226 036		Arable	Straw/ grass
23	1.27	Windsor	Tertiary Clay	TL 2285 0400		Pasture	Grass
24	1.53	Windsor	Tertiary Clay	TL 230 042		Arable	Cultivated/drilled

25	10.95	Windsor	Tertiary Clay	TL 230 044		Recreation	Marsh, Wood
26	2.73	Hamble 2	Aeolian Silty Drift	TL 226 044	15 lies to the west	Pasture, Small Arable Area	Grass, Straw/ grass
27	2.10	Hamble 2	Aeolian Silty Drift	TL 222 048		Woodland, Disused Quarry	Wood
28	18.21	Hamble 2	Aeolian Silty Drift	TL 225 055		Decidious Woodland	Wood
29	4.35	Hamble 2	Aeolian Silty Drift	TL 217 056		Decidious Woodland	Wood
30	1.52	Hamble	Aeolian Silty Drift	TL 2175 0595		Verge	Landscaped
31	3.20	Hamble 2	Aeolian Silty Drift	TL 216 060		Verge	Landscaped
32	14.32	Hamble 2	Aeolian Silty Drift	TL 2288 1166		Recreation	Scrub/ other
33	7.63	Hamble 2	Aeolian Silty Drift	TL 206 065		Unutilised/ unidentified	Scrub/ other
34	5.77	Unknown	Unknown	TL 216 071		Decidious Woodland	Wood
35	3.05	Unknown	Unknown	TL 215 067		Verge	Landscaped
36	0.57	Hamble 2	Aeolian Silty Drift	TL 208 070		Verge	Landscaped
37	2.24	Hamble 2	Aeolian Silty Drift	TL 211 068		Unutilised/ unidentified	Scrub/ other
38	3.81	Hamble 2	Aeolian Silty Drift	TL 212 070		Decidious & Conifer Woodland	Wood
39	5.75	Redeposited	-	TL 210 070		Landfill	Scrub/ other
40	4.06	Hamble 2	Aeolian Silty Drift	TL 211 072		Depot	Tarmac/ yard
41	1.02	Hamble 2	Aeolian Silty Drift	TL 206 070		Arable	Straw/Grass
42	1.60	Hamble 2	Aeolian Silty Drift	TL 208 072		Pasture	Grass
43	1.55	Hamble 2	Aeolian Silty Drift	TL 210 073		Decidious Woodland, Pasture	Wood, Grass
44	2.16	Unknown	Unknown	TL 213 078		Verge	Landscaped
45	1.17	Unknown	Unknown	TL 2125 080		Verge	Landscaped, Scrub/ other
46	0.73	Hamble 2	Aeolian Silty Drift	TL 221 096		Allotments	Scrub/ other
47	16.19	Thames	Alluvium	TL 236 103		Pasture	Scrub/ other
48	0.91	Ludford	Glaciofluvial Drift	TL 227 102		Verge	Landscaped
49	1.12	Ludford	Glaciofluvial Drift	TL 226 106		Arable	Straw/ grass
50	0.78	Ludford	Glaciofluvial Drift	TL 226 108		Unutilised/ unidentified	Scrub/ other
51	2.10	Ludford	Glaciofluvial Drift	TL 227 107		Verge	Landscaped
52	0.76	Thames	Alluvium	TL 228 107		Unutilised/ unidentified	Scrub/ other

53	18.88	Thames	Alluvium	TL 227 115	29	Recreation	Landscaped, Marsh
54	7.50	Ludford	Glaciofluvial Drift	TL 221 120		Pasture	Grass
55	4.70	Thames	Alluvium	TL 222 122		Decidious Woodland	Wood
56	3.40	Batcombe	Plateau Drift, Clay-with-Flints	TL 222 126		Verge	Landscaped
57	3.50	Batcombe	Plateau Drift, Clay-with-Flints	TL 2235 1250	42 lies to the East & Arch. Area 25	Verge	Landscaped
58	48.86	Batcombe	Plateau Drift, Clay-with-Flints	TL 220 133	Arch. Area 24	Decidious & Conifer Woodland	Wood
59	23.25	Batcombe	Plateau Drift, Clay-with-Flints	TL 227 140		Decidious Woodland	Wood
60	1.17	Batcombe	Plateau Drift, Clay-with-Flints	TL 224 142	47	Recreation	Landscaped
61	6.45	Batcombe	Plateau Drift, Clay-with-Flints	TL 223 145		Decidious Woodland, Pasture	Wood, Grass
62	2.88	Batcombe	Plateau Drift, Clay-with-Flints	TL 2245 1455	50,51	Decidious Woodland	Wood
63	1.51	Batcombe	Plateau Drift, Clay-with-Flints	TL 2377 1620		Decidious Woodland	Wood
64	0.87	Batcombe	Plateau Drift, Clay-with-Flints	TL 227 148	55	Pasture	Grass
65	0.65	Batcombe	Plateau Drift, Clay-with-Flints	TL 229 150		Decidious Woodland	Wood
66	1.95	Batcombe	Plateau Drift, Clay-with-Flints	TL 2285 1480		Pasture	Grass
67	1.26	Batcombe	Plateau Drift, Clay-with-Flints	TL 230 149		Decidious Woodland	Wood
68	2.24	Batcombe	Plateau Drift, Clay-with-Flints	TL 231 151		Pasture	Grass
69	1.38	Batcombe	Plateau Drift, Clay-with-Flints	TL 230 151		Decidious Woodland	Wood

Appendix 2

Gazetteer Of Sites Within The Study Corridor

Note: Chainage details are approximate, and given on a north/south basis only (not east/west).

Site No	SMR No	NAR No	Area	NGR	Chainage Point	Period	Description	Code A-C
1	2944		Potters Bar	TL 2205 0012	600m N of 2000	Med	Moat	C
2	2943		Potters Bar	TL 2205 0012	540m N of 2000	P-Med	Farmhouse site	C
3	1027		South Mimms	TL 232 002	600m N of 2000	Med	DMV	C
4	5119		South Mimms	TL 2286 0152	4000	P-Med	Bridge	B
5	4266		Potters Bar	TL 2326 0196	400m N of 4000	Med	Moated site	B
6	2036		Potters Bar	TL 230 020 (general)	500m N of 4000	P-Med	House probably 16th cent	B
7	4831		Potters Bar	TL 230 024	120m S of 5000	PU	Flint core	C
8	4836		Potters Bar	TL 230 025	5000	Med	Pottery	C
9	4835		Potters Bar	TL 231 025	5000	Med	Pit & finds	C
10	0095	14185	South Mimms	TL 2300 0258	100m N of 5000	Med	Motte & Bailey castle SAM 83	A
11	4837		Potters Bar	TL 229 026	100m N of 5000	Historic	Cannonball	C
12	6264		South Mimms	TL 230 026	200m N of 5000	Mes	Worked flints	C
13	6233		South Mimms	TL 230 027	260m N of 5000	Med	Pottery found during A1M construction	C
14	5730		North Mymms	TL 230 031	600m N of 5000	P-Med	City of London Coal Duty Marker	B
15	1013		North Mymms	TL 222 045	7000	Med	? DMV	C
16	2219	14181	Welham Green	TL 228 051	140m S of 8000	Med	Moat	B
17	0926		Hatfield	TL 221 059	640m N of 8000	U	Trackway	C
18	1876		North Mymms	TL 222 061	20m S of 9000	Pal	Hand axe & other worked flints	C
19	5277		Colney Heath	TL 214 064	300m N of 9000	P-Med	Brick Pillar Box Wall	B
20	2934		North Mymms	TL 2162 0670	620m N of 9000	RB	Coin hoard	C
21	0465		Hatfield	TL 2160 0800	11000	U	3 Dencholes	C
22	5018		Hatfield	TL 2123 0833	360m N of 11000	P-Med	Milepost	B

23	6229		Hatfield	TL 2180 0850	500m N of 11000	Modern	Pillbox site	B
24	5615		Hatfield	TL 218 085	500m N of 11000	P-Med	Railway bridge	B
25	5371		Hatfield	TL 216 087	700m N of 11000	P-Med	Former maltings	C
26	5525		Hatfield	TL 221 088	12000	P-Med	Station	B
27	5613		Hatfield	TL 223 090	200m N of 12000	P-Med	Railway bridge	B
28	5218		Welwyn G.C.	TL 227 111	500m N of 14000	P-Med	Road bridge	B
29	2799		Welwyn G.C.	TL 226 112	600m N of 14000	RB	Pottery sherd	C
30	2516		Hatfield	TL 2225 1153	15000	U	Cropmark of linear ditch	C
31	6125		Hatfield	TL 2210 1165	120m N of 15000	U	Cropmarks of linear ditches	C
32	0161	14199	Welwyn G.C.	TL 2288 1166	60m N of 15000	IA	Enclosure and cemetery	C
33	5219		Welwyn G.C.	TL 223 118	260m N of 15000	P-Med	Road bridge over R. Lea	B
34	2806		Welwyn G.C.	TL 225 118	200m N of 15000	Neo	Polished axe	C
35	1572		Welwyn G.C.	TL 2272 1200	440m N of 15000	RB	Pottery	C
36	2804		Welwyn G.C.	TL 226 121	500m N of 15000	IA	Pottery	C
37	1571		Welwyn G.C.	TL 2288 1220	600m N of 15000	RB	Coin	C
38	2145		Welwyn G.C.	TL 226 123	720m N of 15000	Prehistoric U	Flints	C
39	0163		Welwyn G.C.	TL 226 124	820m N of 15000	IA	Cremation cemetery	C
40	5220		Hatfield	TL 2207 1245	900m N of 15000	P-Med	Road bridge	B
41	2291		Welwyn G.C.	TL 2232 1274	140m N of 16000	RB	Ditch & finds	C
42	1788		Welwyn G.C.	TL 2232 1274	140m N of 16000	RB	Ditch & finds	C
43	5890		Welwyn G.C.	TL 2235 1300	440m N of 16000	P-Med	Former tollgate cottage	B
44	6630		Welwyn G.C.	TL 2279 1337	800m N of 16000	Modern	Anti-tank obstacles	B
45	5066		Welwyn G.C.	TL 222 135	17000	P-Med	Milestone	B
46	6613		Welwyn G.C.	TL 2265 1397	500m N of 17000	P-Med	Railway bridge	B
47	2803		Welwyn G.C.	TL 234 140	500m N of 17000	IA	Pottery	C
48	2631		Welwyn G.C.	TL 2210 1405	540m N of 17000	Med	Village	C
49	5110		Ayot Green	TL 2247 1423	700m N of 17000	P-Med	Road bridge	B
50	5221		Ayot St Peter	TL 222 144	18000	P-Med.	Pillar wall box	B

51	5519		Ayot Green	TL 2218 1445	60m N of 18000	P-Med	Railway station	B
52	1054		Ayot St Peter	TL 221 145	80m N of 18000	Pal	Flint flake	C
53	6258		Welwyn G.C.	TL 228 145	18000	P-Med	Probable section of Great North Road	C
54	5626		Ayot St Peter	TL 2204 1452	80m N of 18000	P-Med	Railway bridge	B
55	6203		Welwyn G.C.	TL 225 147	100m N of 18000	Historic?	Line of ponds	C
56	2807		Welwyn G.C.	TL 225 149	600m N of 18000	RB	Cinerary urns	C
57	5067		Welwyn	TL 229 149	600m N of 18000	P-Med	Milestone	B
58	4162		Welwyn	TL 23 15	800m N of 18000	Pal	Flint implement	C
59	1557		Welwyn	TL 2316 1590	700m N of 19000	RB	Kiln/oven	C
60	6087		Welwyn	TL 231 159	700m N of 19000	RB	Coin	C
61	6509		Welwyn	TL 232 159	700m N of 19000	IA	Iron firedog	B
62	0158		Welwyn	TL 2325 1598	800m N of 19000	IA	Cremations (inc. 2 chieftain burials)	A
63	1566	14190	Welwyn	TL 2377 1620	40m N of 20000	IA/RB	Lockleys Roman Villa (Settlement, hut circle/house)	B
64	1913	14195	Welwyn	TL 235 161	960m N of 19000	RB	Villa, canal baths, kiln SAM 87a/b	A
65	1554	14192	Welwyn	TL 2312 1640	1890m N of 20000	RB	Cremation cemetery	B
66	6522	14409	Welwyn	TL 2321 1643	200m N of 20000	RB	Enclosure / graves (exc. Rook)	B
67			Welwyn	TL 229 162	150m N of 20000	RB	Substantial buildings, pits etc	C
68x			Welwyn GC	TL 2190 1325	640m N of 16000	PU	Worked flint	C
69x			Welwyn GC	TL 2230 1045	200m S of 14000	PU	Burnt Flint	C
70x			Welwyn GC	TL 2370 1025	400m S of 14000	PM	Tile	C
71x			Ayot Green	TL 2235 1435	100m S of 16000	PM	Railway cutting	B

Appendix 3

Aerial Photographic Search :

The photographs listed refer to collections held both at the National Library of Air Photographs , RCHM(E), Swindon and at Acton, West London.

Vertical photographs held by the National Library of Air Photographs, Swindon

NGR Index No	Accession No	Frame	Date Flown
TL 20 14 /1	NMR2682	2003-2006	15/5/86
TL 21 04 /1	CAP 8177	68	7/7/54
TL 21 04 /2	CAP 8177	69	7/7/54
TL 21 04 /3	CAP 8177	70	7/7/54
TL 21 04 /4	CAP 8177	71	7/7/54
TL 21 04 /5	CAP 8177	72	7/7/54
TL 21 04 /6	CAP 8177	73	7/7/54
TL 21 04 /7	CAP 8177	74	7/7/54
TL 21 04 /8	NMR 4006	1	4/9/87
TL 21 04 /9	NMR 4006	2	4/9/87
TL 21 04 /10	NMR 4006	3	4/9/87
TL 21 04 /11	NMR 4006	4	4/9/87
TL 21 04 /12	NMR 4006	5	4/9/87
TL 21 04 /13	NMR 4006	6	4/9/87
TL 21 04 /14	NMR 4006	7	4/9/87
TL 21 04 /15	NMR 4006	8	4/9/87
TL 21 04 /16	NMR 4006	9	4/9/87
TL 21 04 /17	NMR 4006	10	4/9/87
TL 21 04 /18	NMR 4006	11	4/9/87
TL 21 04 /19	NMR 4006	43	4/9/87
TL 21 04 /20	NMR 4006	44	4/9/87
TL 21 04 /21	NMR 4006	45	4/9/87
TL 21 04 /22	NMR 4006	46	4/9/87
TL 21 04 /23	NMR 4006	47	4/9/87
TL 21 04 /24	NMR 4006	48	4/9/87
TL 21 04 /25	NMR 4006	49	4/9/87
TL 21 04 /26	NMR 4006	50	4/9/87
TL 21 04 /27	NMR 4006	51	4/9/87
TL 21 04 /28	NMR 4006	52	4/9/87
TL 21 04 /29	NMR 4006	53	4/9/87
TL 21 04 /30	NMR 4006	54	4/9/87
TL 21 04 /31	NMR 4153	23	4/9/87
TL 21 04 /32	NMR 4153	24	4/9/87
TL 21 04 /33	NMR 4153	25	4/9/87
TL 21 04 /34	NMR 4153	26	4/9/87
TL 21 04 /35	NMR 4153	27	4/9/87
TL 21 04 /36	NMR 4153	28	4/9/87
TL 21 04 /37	NMR 4153	29	4/9/87
TL 21 04 /38	NMR 4153	30	4/9/87
TL 21 04 /39	NMR 4153	31	4/9/87
TL 21 04 /40	NMR 4153	32	4/9/87
TL 21 04 /41	NMR 4153	33	4/9/87
TL 21 04 /42	NMR 4153	34	4/9/87
TL 21 04 /43	NMR 4153	35	4/9/87
TL 21 04 /44	NMR 4153	36	4/9/87

TL 21 04/45	NMR 4154	29	4/9/87	
TL 21 04/46	NMR 4154	30	4/9/87	
TL 21 04/47	NMR 4154	31	4/9/87	
TL 21 04/48	NMR 4154	32	4/9/87	
TL 21 04/49	NMR 4154	33	4/9/87	
TL 21 04/50	NMR 4154	34	4/9/87	
TL 21 04/51	NMR 4154	35	4/9/87	
TL 21 11/1	NMR 974	235-237	27/7/76	
TL 21 11/2	NMR 974	238-239	27/7/76	
TL 21 12/1	NMR 2673	88	15/5/86	MISSING
TL 21 12/2	NMR 2673	89	15/5/86	MISSING
TL 21 12/3	NMR 2673	90	15/5/86	MISSING
TL 21 12/4	NMR 2673	91	15/5/86	MISSING
TL 21 12/5	NMR 2673	92	15/5/86	MISSING
TL 21 12/6	NMR 2673	93	15/5/86	MISSING
TL 21 12/7	NMR 2673	94	15/5/86	MISSING
TL 21 12/8	NMR 2673	95	15/5/86	MISSING
TL 21 12/9	NMR 2673	96	15/5/86	MISSING
TL 21 12/10	NMR 2673	97	15/5/86	MISSING
TL 22 04/1	NMR 4154	28	4/9/87	
TL 22 08/1	CCC 5230	F239	1/1/30	
TL 22 10/1	NMR 794	234	27/7/76	
TL 22 10/2	NMR 794	240-242	27/7/76	
TL 23 04/1	CAP 8177	64	7/7/54	
TL 23 04/2	CAP 8177	65	7/7/54	
TL 23 04/3	CAP 8177	66	7/7/54	
TL 23 04/4	CAP 8177	67	7/7/54	
TL 22 98/1	NMR 2661	47	30/4/86	
TL 22 98/2	NMR 2661	48	30/4/86	
TL 22 98/3	NMR 2661	49	30/4/86	

Vertical Cover search results (manual) (CLK/92/10/785, CLK92/92/10/785BP)

Library No	Sortie No	Print Nos	Date Flown
	0565230	44-46	23/9/65
		19-21	
	0565229	170-173	23/9/65
		148-150	
		121-125	
		96-101	
		80-83	
		51-55	
		48-49	
	0569362	40-55	22/7/69
	0569359	33-46	22/7/69
		48-55	
		117-120	
OS	56230	44-46	23/9/65
		19-22	
	65229	170-174	23/9/65
		146-150	
		122-125	
		96-102	
		80-85	
		51-56	
		48-49	
	69362	42-55, 40-41	22/7/69

	69359	33-46	22/7/69
		48-58	
		116-118	
	63197	42-45	30/7/63
		57-60	
		73-78	
		91-95	
		13-15	
	65175	1-10	13/8/65
		15-22	
	58035	76-79	23/4/58
		64-69	
		54-58	
		40-46	
		24-39	
		2-20-23	
	58034	102-119-122	23/4/58
	82-99-101		
		52-57	
OS	56230	44-46	23/9/65
		19-22	
	65229	170-174	23/9/65
		146-150	
		122-125	
		96-102	
		80-85	
		51-56	
		48-49	
	69362	42-55 40-41	22/7/69
	69359	33-46	22/7/69
		48-58	
		116-118	
	63197	42-45	30/7/63
		57-60	
		73-78	
		91-95	
		13-15	
	65175	1-10	13/8/65
		15-22	
	58035	76-79	13/4/58
		64-69	
		54-58	
		40-46	
		24-39	
		2-20-23	
	58034	102-119-122	23/4/58
	82-99-101		
	52-57		

Vertical Cover search continued (Acton)












Library No	Sortie No	Date	Start Frame	End Frame
1015	58/311	19/8/49	5002	5004
1015	58/311	19/8/49	5005	5006
1015	58/311	19/8/49	5007	5009
1015	58/311	19/8/49	5012	5019
10212	OS/71344	15/7/71	511	511

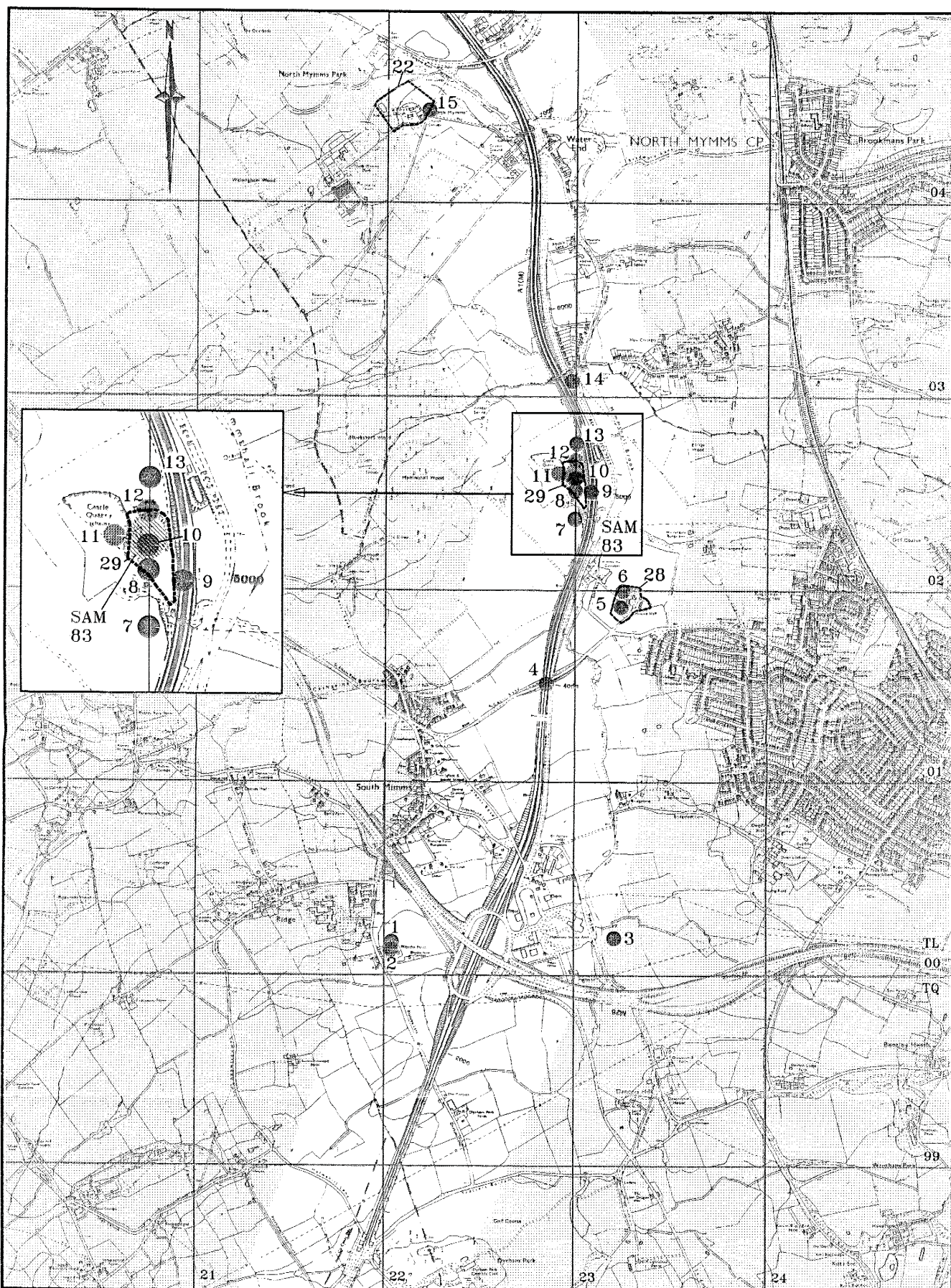
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1160	58/651	24/4/51	3089	3089
1160	58/651	24/4/51	3090	3090
1160	58/651	24/4/51	3091	3091
1160	58/651	24/4/51	4074	4077
1160	58/651	24/4/51	4089	4092
1241	540/647	12/2/52	4029	4032
1241	540/647	12/2/52	4054	4058
1241	540/647	12/2/52	4109	4114
1241	540/647	12/2/52	4140	4141
1241	540/647	12/2/52	3140	3141
1241	540/647	12/2/52	3028	3033
1241	540/647	12/2/52	3052	3055
1241	540/647	12/2/52	3111	3114
1466	58/1099/23/4/53	136	142	
1466	58/1099/23/4/53	164	167	
1466	58/1099/23/4/53	171	175	
1477	58/1213	14/8/53	249	253
1477	58/1213	14/8/53	258	261
1477	58/1213	14/8/53	249	254
1477	58/1213	14/8/53	256	262
1618	58/1690	21/3/55	60	64
1618	58/1690	21/3/55	95	101
1643	542/165	14/4/55	3	19
1643	542/165	14/4/55	25	30
1643	542/165	14/4/55	35	44
1643	542/165	14/4/55	47	63
2195	58/4627	16/8/61	80	84
2195	58/4627	16/8/61	500	502
2195	58/4627	16/8/61	82	84
2195	58/4627	16/8/61	499	501
2195	58/4627	16/8/61	80	83
2195	58/4627	16/8/61	142	144
2195	58/4627	16/8/61	497	500
2195	58/4627	16/8/61	80	84
2195	58/4627	16/8/61	142	145
2195	58/4627	16/8/61	500	502
2213	543/1426	28/8/61	91	93
2213	543/1426	28/8/61	91	94
2319	FSL/6641	17/8/66	1086	1087
2353	58/1673	4/3/55	130	136
2353	58/1673	4/3/55	139	147
2353	58/1673	4/3/55	153	161
2353	58/1673	4/3/55	163	184
2349D	HSL/UK/71/77	3/5/71	3588	3589
2531	542/235	22/8/55	3	6
2531	542/235	22/8/55	11	44
2531	542/235	22/8/55	51	59
2562	542/129	15/2/55	23	28
2562	542/129	15/2/55	114	133
2562	542/129	15/2/55	138	141
2562	542/129	15/2/55	142	142
2562	542/129	15/2/55	143	144
2562	542/129	15/2/55	156	158
2562	542/129	15/2/55	167	172
2900	540/1357	18/7/54	50	51
2900	540/1357	18/7/54	62	62
2900	540/1357	18/7/54	49	49

2900	540/1357	18/7/54	52	52
2900	540/1357	18/7/54	61	62
2900	540/1357	18/7/54	63	63
3539	58/825	29/1/52	3024	3028
3539	58/825	29/1/52	3024	3061
3539	58/825	29/1/52	3024	3122
3539	58/825	29/1/52	3024	4028
3539	58/825	29/1/52	3024	4061
3539	58/825	29/1/52	3024	4122
492	CPE/UK/1779	10/10/46	3064	3065
492	CPE/UK/1779	10/10/46	3181	3185
492	CPE/UK/1779	10/10/46	3432	3435
492	CPE/UK/1779	10/10/46	3451	3454
492	CPE/UK/1779	10/10/46	4063	4065
492	CPE/UK/1779	10/10/46	4183	4184
492	CPE/UK/1779	10/10/46	4432	4433
492	CPE/UK/1779	10/10/46	4451	4454
588	CPE/UK/1965	10/4/47	3212	3215
588	CPE/UK/1965	10/4/47	3218	3222
588	CPE/UK/1965	10/4/47	3273	3278
588	CPE/UK/1965	10/4/47	3287	3292
588	CPE/UK/1965	10/4/47	4211	4213
588	CPE/UK/1965	10/4/47	4219	4223
588	CPE/UK/1965	10/4/47	4273	4279
588	CPE/UK/1965	10/4/47	4287	4291
5902	MAL/71035	3/5/71	144	147
5902	MAL/71035	3/5/71	217	220
665	CPE/UK/2135	2/6/47	3108	3112
665	CPE/UK/2135	2/6/47	3347	3353
665	CPE/UK/2135	2/6/47	4349	4532
668	CPE/UK/2136	2/6/47	3061	3062
7531	MAL/78018	28/5/78	3	3
7531	MAL/78018	28/5/78	18	19
7531	MAL/78018	28/5/78	93	95
8112	CPE/UK/2016	17/4/47	3262	3267
8112	CPE/UK/2016	17/4/47	3269	3269
8112	CPE/UK/2016	17/4/47	4262	4267
8112	CPE/UK/2016	17/4/47	4269	4270
8134	82/983	11/8/54	12	13
8310	106G/LA22	6/7/44	4099	4105
8458	HLA/441	29/3/42	531	531
8458	HLA/441	29/3/42	534	536
8458	HLA/441	29/3/42	540	542
8458	HLA/441	29/3/42	544	544
948	541/183	19/10/48	4104	4108
948	541/183	19/10/48	4126	4130
948	541/183	19/10/48	4175	4177
948	541/183	19/10/48	4179	4181
948	541/183	19/10/48	4219	4223
948	541/183	19/10/48	3105	3108
948	541/183	19/10/48	3125	3129
948	541/183	19/10/48	3173	3177
948	541/183	19/10/48	3179	3182
953	58/149	10/11/48	5001	5002
953	58/149	10/11/48	5007	5013
953	58/149	10/11/48	5023	5026
953	58/149	10/11/48	5281	5031
953	58/149	10/11/48	5041	5044

953	58/149	10/11/48	5047	5050
953	58/149	10/11/48	5060	5062
953	58/149	10/11/48	5065	5067
955	58/152	17/11/48	5003	5006
969	58/198	28/2/49	5009	5011
969	58/198	28/2/49	5014	5017

KEY

-  Study Corridor
-  SAM-Scheduled Ancient Monument
-  Area of Archaeological Significance
(as defined by Hertfordshire County Council)
- Palaeolithic
-  Mesolithic
-  Neolithic
-  Prehistoric period uncertain
-  Late Pre-Roman Iron Age
-  Iron Age/Romano-British
-  Romano-British
-  Medieval
-  Other (post-medieval, modern, historic period uncertain, unknown)



A1(M) MOTORWAY WIDENING JUNCTIONS 1 TO 6



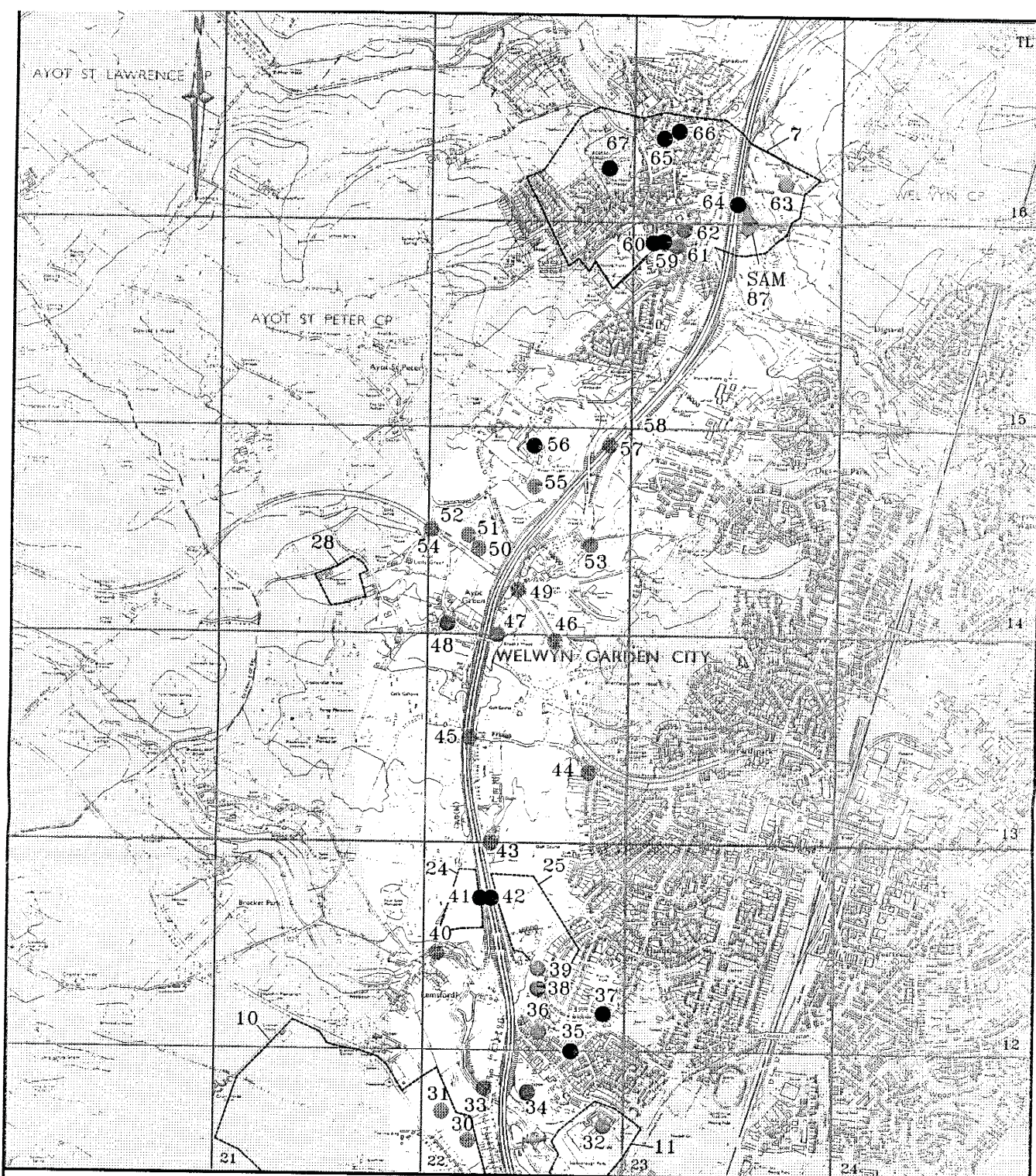
THE DEPARTMENT
OF TRANSPORT

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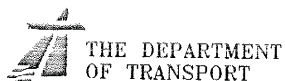
Wessex
Archaeology

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CHECKED BY	TC
APPROVED BY	HIF
DATE	6-12-98

MAP 1



A1(M) MOTORWAY WIDENING JUNCTIONS 1 TO 6

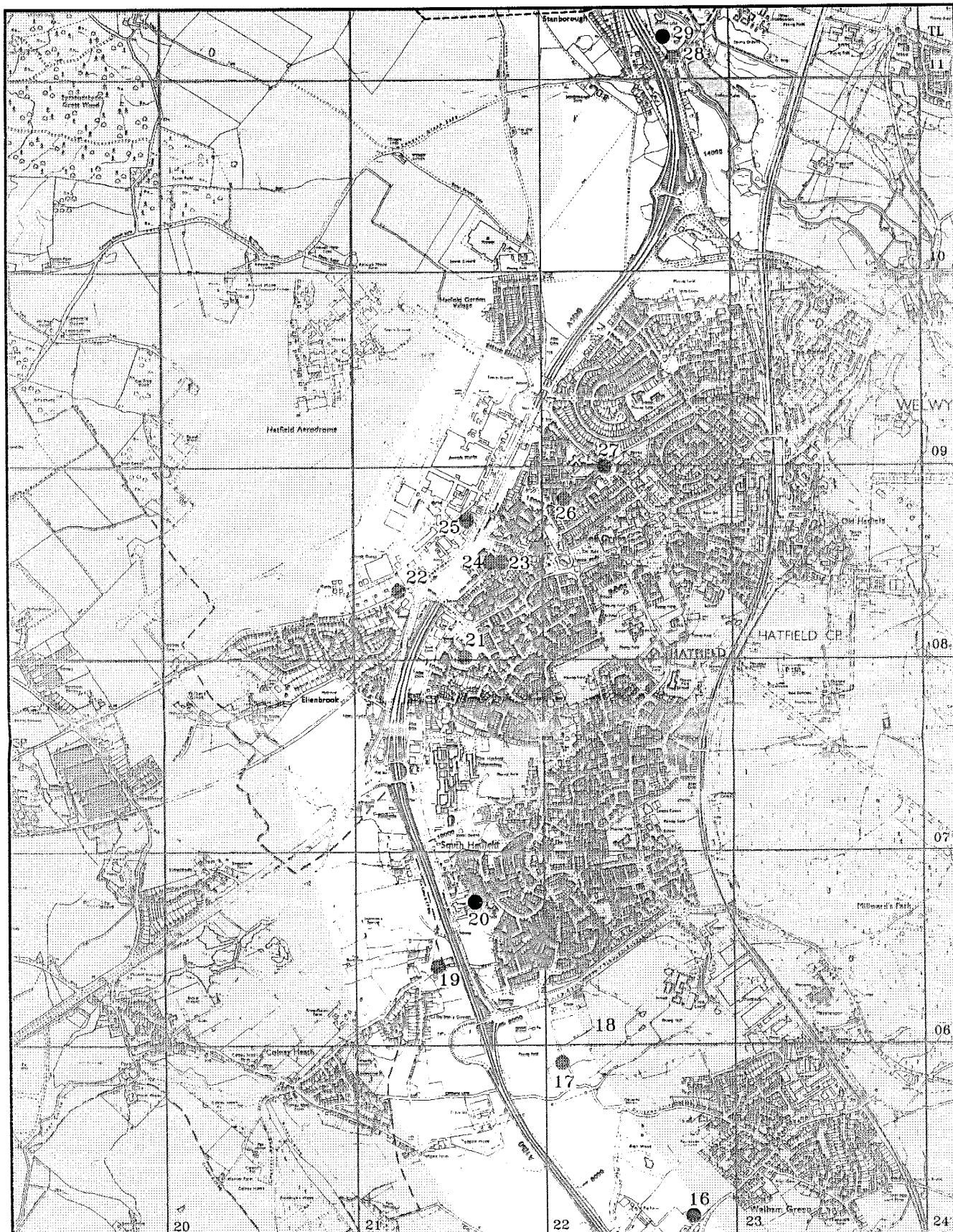


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SCALE	1:20 000
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CHECKED BY	JJC
APPROVED BY	ATF
DATE	6.12.92

MAP 3



A1 (M) MOTORWAY WIDENING JUNCTIONS 1 TO 6



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SCALE	1:20 000
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APPROVED BY	HTF
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MAP 2