Hertfordshire Minerals Areas Historic Environment Characterisation Project

By

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Acknowledgements

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1.0 Introduction and Policy Background to the Report

1.1 Introduction

This report has been produced by the Historic Environment Unit of Hertfordshire County Council. Funding was provided by English Heritage under the Aggregates Levy Sustainability Fund. Its is to inform the review of the Hertfordshire Minerals Local Plan and is presented as supporting documentation for the Public Inquiry into the Local Plan.

The report provides detailed study of the historic environment (archaeology, historic buildings and historic landscape features) of the key areas that will be considered in the review. However, it should be emphasised that the study is based largely upon existing knowledge and this is not a substitute for the necessary assessment and mitigation that will be required for any minerals areas that are put forward for extraction.

The objective of the project is to carry out a detailed desk-based exercise of the key minerals areas to provide a uniform and reasonably comprehensive information base from which it will be much easier to consider the relative impact of proposals on the historic environment. As the report will make clear, the pre-existing information on the historic environment was both heavily biased towards specific geographical areas and was restricted to only limited aspects of the historic environment. This would have made it difficult to properly consider the relative merits of the proposed areas in terms of their impact on the historic environment. The project has aimed to make it easier to do this and also to provide a consideration of the wider hinterland beyond the proposal areas in order to provide a more comprehensive assessment of the impact. In addition, it has attempted to bring together the various aspects of the historic environment t provide a 'historic environment characterisation'. This is summary of the key features that make the historic environment of the area distinctive together with a summary of why and how they have developed and their value in terms of rarity and quality. Lastly, the use of new technology such as geographical information systems (GIS) and sophisticated electronic databases to record the information will provide an accessible tool for all those interested in the historic environment of the areas to use, including local communities.

1.2 The Policy Background

1.2.1 Historic Environment: National Policy

National policy on the historic environment with respect to minerals development is provided by Government Planning Policy Guidance Notes (PPGs) 15 (Historic Environment) and 16 (Archaeology and Planning). PPG 16 provides guidance on dealing with archaeological

remains, both designated (Scheduled Monuments) and undesignated. The key principals of PPG 16 are:

- It is the responsibility of developers to provide for the archaeological implications of development which affects archaeological remains, on the 'polluter pays' principal,

- The preservation of archaeological remains *in situ* is a material consideration in the planning process. This means that planning applications may need to be amended or even could be refused if archaeological remains worthy of preservation will be affected by a proposal,

- Because preservation *in situ* is a material consideration, PPG 16 recommends that – if there is a risk that significant archaeological remains are present - archaeological assessment of development proposals is undertaken before their determination and preferably before the application is submitted.

PPG 15 provides guidance on dealing with other historic environment designations, principally Listed Buildings, but also Registered Parks and Gardens, Registered Battlefields and World Heritage Sites.

1.2.2 Historic Environment: Local Policy

Local policy on the historic environment with respect to minerals development provides much of the background and context for this project. It also provides the policy context for work undertaken on the historic environment of the mineral proposal areas so far, especially archaeological assessment.

1.2.2.1 The Adopted Minerals Local Plan 1991-2006, Adopted 1998

The Hertfordshire Minerals Local Plan contains a specific policy on archaeology.

- *MINERALS POLICY 24 (Archaeology)*
  applications for mineral extraction will normally be refused when proposals would adversely affect any important archaeological remains. where the county council considers that archaeological remains of importance may exist, an archaeological evaluation will be required, to a specification approved by the county council, before any planning application is determined. On sites where remains of archaeological importance have been identified, but where permanent preservation in situ is not considered to be warranted, a scheme of investigation approved by the county council will be required, which may include provision for archaeological excavation in advance of mineral working, for observation of the operations and for contingency provision for the adequate investigation of any remains discovered

during such operations. a condition may be attached to a planning permission requiring an amendment to the scheme of working to be agreed to facilitate the emergency recording of archaeological remains discovered during operations.

This policy follows the principals of PPG 16 in terms of the presumption in favour of preservation, assessment of impact before a decision is made and appropriate archaeological mitigation once a decision to grant planning permission is made. However, the policy in many respects simply repeats and amplifies these policy issues covered in PPG and does not cover the wider historic environment, especially historic landscapes.

Historic buildings are covered by policy 13, which includes Listed Buildings and other historic buildings.

MINERALS POLICY 13 (Historic Building)

General Considerations

Buildings of Architectural or Historical Interest

Proposals for mineral workings, by their very nature, normally affect open land rather than buildings. Nevertheless there may be proposals which affect the setting of important buildings, particularly the parkland around a house of architectural or historic interest. The Structure Plan limits permission for development to situations where it is necessary to ensure the continued use and maintenance of the building. Approved Structure Plan policy 56 states that, “in order to protect buildings of architectural or historic interest and to ensure their continued existence:

The County Council will support district councils in the protection of buildings of architectural or historic interest and their settings and in particular, those buildings on the statutory lists. Where a development proposal involves a building of special architectural or historic interest, permission will normally only be granted where its continued use and maintenance can be ensured.

The following policy amplifies the Structure Plan policy in relation to mineral workings:

Minerals policy 13 (historic buildings)
Planning permission for mineral working will normally be refused where this would involved the demolition or adversely affect the setting of statutorily listed buildings. Mineral working that would affect the setting of other historic buildings of merit will be permitted only on condition that the most important landscape features are conserved wherever possible, and that the restoration of the landscape after working recreates the original quality, with the replacement and maintenance of landscape features.

Planning applications which would adversely affect parks and gardens listed in the 'register of parks and gardens' prepared by english heritage will be subject to most rigorous examination.

Where a scheme of mineral working is being proposed which would potentially have a detrimental effect on the restoration and/or maintenance of a Listed Building, the applicant should consider whether there are steps that he/she could take to secure restoration and/or maintenance through, for example, temporary or permanent re-siting of the Building.

1.2.2.2 The County Structure Plan

Protection for the Hertfordshire environment is provided in policy 38 of the Proposed Hertfordshire Structure Plan. This is a generic policy which includes within it all aspects of the historic environment. This policy has also been proposed for the Minerals Local Plan Review.

1.2.2.3 Mineral Local Plan Review 2002-2016: Second Deposit Draft 2003

Following policy 38 of the proposed Hertfordshire Structure Plan the Minerals Local Plan Review has a high-level strategic policy 17 to protect 'Critical Capital and other environmental assets'. These now include within them all significant aspects of the historic environment.

Historic environment categories of 'critical capital and other environmental assets are:

iv) Identified landscapes of high historic value, including Registered Parks and Gardens of Special Historic Interest

vii) Hedgerows of ecological or historic importance

viii) SAMs and other archaeological remains of both national and more local importance, and their setting;

ix) Listed buildings and their settlings and other buildings of architectural, archaeological or historic merit

x) Conservation areas

xi) Unregistered historic parks and gardens and their setting

xii) Sites with historic associations

The Minerals Policy 17 – Criteria for the control of Mineral Development to protect Critical Capital and other Environmental Assets

The relevant paragraphs for the historic environment are:

i) shall not be permitted where they would result in the permanent loss or damage or significant and irreversible change to those particular characteristics and features that define the special quality of critical capital or other environmental assets as defined in the Structure Plan. .

ii) shall include proposals for mitigation, where appropriate, that will provide for the maintenance and enhancement of critical capital or other environmental assets as defined in the Structure Plan including where temporary loss would occur.

This policy therefore provides strategic and generic guidance for minerals development on the conservation of historic environment assets. Its advantage over the current mineral local plan polices on archaeology and historic building is that it covers all aspects of the historic environment and provides a strategic framework for the development of local guidance and policies, especially those detailed in the SPG (see below).

In addition the proposed changes to Minerals policy 11 – Landscape, include a reference to historic landscape:

Revised 2nd deposit draft: 'All mineral extraction and related development proposals will be required to take account of existing and where appropriate historic landscape'

1.2.2.4 Supplementary Planning Guidance (SPG) for Mineral Extraction in Hertfordshire: First Deposit Draft September 2002

In simple terms for the historic environment, the minerals SPG provides the detailed guidance and policy which reflects the specialist interests of the different aspects of the historic environment, and the specific criteria which reflect the particular aspects of Hertfordshire and its minerals areas.

Paragraphs 1.1-9 provides the background to the Minerals SPG:

1. Introduction

1.1. The Minerals Local Plan sets out the County Council's strategic policies against which proposals for mineral extraction and related development will be judged. It takes into account the balance between raw materials extracted from land and those supplied from alternative sources such as material recycling facilities. The Plan also contains policies to help the Council assess the merits of the operational details of a development proposal, such as landscape impact or noise intrusion.

1.2 Local Plans go through a lengthy process of adoption, which means that parts can become out of date, particularly in relation to advice on the more detailed aspects to be taken into account when considering planning application, which is continually evolving. If included, this information would also result in a cumbersome Plan that appeared to focus upon detail, rather than its primary role, which is determining the important strategic issues for mineral extraction. This planning guidance intends to be more flexible and more open to more frequent reviews than is possible with the Minerals Local Plan.

1.3 The purpose of this supplementary planning guidance is to develop or supplement where appropriate the policies of the Minerals Local Plan. It provides planning guidance against which the County Council will assess the operational elements of applications for planning permission. Much of the guidance is provided by other organisations, such as the British Standards Institute and the Government's Planning Guidance notes series. There are also standards that are based on the experience of day to day operations at the County's active mineral extraction sites. The objective is to move forward from just re-stating phrases used in the policies, such as 'minimise' or, 'acceptable levels', towards more specific means of assessment.

1.4 This guidance provides advice to all of those involved in the planning application process. It will set applicants very clear standards for new development and it will give communities local to development proposals more information to assess the impact the development could have on their living environment. For the decision-maker, it gives clear guidance on how to assess the merits of development proposals. This guidance is always to be considered in conjunction with the relevant policies of the Minerals Local Plan.

1.5 The Government's advice is that supplementary planning guidance will be given more weight in decision making where it has been subject to public consultation and has involved the affected sectors of the business community during its preparation. Therefore, this guidance is published in the first instance in parallel with the review of the Minerals Local Plan to facilitate that consultation. Comment should be made in exactly the same way as for the main Plan using the supplied response form. When the Minerals Local Plan Review is adopted, the Council proposes to review this guidance annually. Consultation in this review process will include, amongst others, local operators, their trade bodies and the community through the parish, town and district councils within the County, together with local liaison groups.

1.6 The guidance does not replicate or replace the existing notes for applicants that are supplied with the County Council's planning

applications forms. Those guidance notes give applicants a list of information they typically need to submit with their applications; from the need to assess whether an Environmental Impact Assessment is required, through to the scale of the plan drawings.

1.7 The format for this guidance is as follows:

- *in the order it appears in the Plan, the policy and the relevant sub-sections are each repeated;*
- *following each subsection is more information about the policy and its implementation;*
- *clear sign posts to additional reference sources that will taken into account when assessing development proposals and should be addressed in any application. Where these reference sources have been published by other bodies and are publicly available, they are not appended to this guidance. However, where the County Council has commissioned advice and the report is not otherwise published separately, it is appended to this guidance.*

Historic Environment Policy and Guidance in the SPG

The SPG therefore contains operational policies concerning the way in which aspects of the historic environment is dealt with for minerals developments. The following extracts are taken from the SPG:

8.2 Historic Environment

8.2.1 Historic environment assets (archaeological remains, historic buildings and other historic sites, and historic landscapes) are identified on the Hertfordshire Historic Environment Record (HHER) maintained by the County Council. Prospective applicants are strongly advised to consult the HHER and the appropriate local authority historic environment advisors at the earliest opportunity in order to identify the historic environment implications of their proposals.

8.2.2 Of particular relevance to mineral operations is the need to assess and, where appropriate, protect palaeo-environmental deposits of archaeological value. Deposits with high palaeo-environmental potential are only rarely discovered in Hertfordshire and it is likely that where they do exist they should be considered as critical environmental assets.

8.2.3 Palaeo-environmental data provides information on past environments from flora, fauna, and artefacts that are preserved in soils and geological deposits. Such data can include, pollen, seeds, charcoal, animal bone and occasionally wood. The structure of the soil itself can also provide information about past land-use. Palaeo-environmental data can be used to provide information on past climates, land use, and the history of human impact on the environment.

8.2.4 In addition, palaeo-environmental data is an essential component of the analysis and understanding of archaeological sites. The results of a specialist assessment of such data should, therefore, be included in any archaeological field evaluation report submitted in support of proposals for mineral extraction.

In addition, paragraph 8.4.3 deals with planning mitigation in respect of the historic environment:

8.4.3 Historic Environment - Mitigation

Proposals should include details of mitigation for historic environment assets (archaeological remains, palaeo-environmental deposits, historic buildings and historic landscape features). Such proposals should be included within and Environmental Statement (as defined in the Environmental Impact Assessment Regulations 1999). They should include details of assets where preservation is proposed, those where conservation by record is proposed and those for which enhancement measures are proposed. Where preservation of historic environment assists is proposed, details should be provided of any necessary long-term measures needed to secure such preservation.

8.4.4 Proposals for archaeological mitigation should include details of contingency arrangements for the conservation by record of remains discovered unexpectedly during development.

8.5 Water Environment – impact on historic environment

8.5.1 More comprehensive details about the protection of controlled waters is provided in this Guidance in relation to Minerals Policy 18 proviso (ix). In addition, the water environment, including ground water, can have an impact on the historic environment of a locality.

8.5.2 Waterlogging caused by the continued presence of water over hundreds or thousands of years enhances the potential of historic environment assets, especially archaeological and palaeo-environmental deposits. In particular, organic deposits and artefacts such as wood, leather and other biological remains, can be preserved in such conditions. Where waterlogged deposits of high historic environmental potential have been identified and it is considered by the Mineral Planning Authority that development proposals may have an adverse impact on the water environment of such deposits,

arrangements for the long-term maintenance of water environment conditions should be made as part of the Environmental Statement. These should include regular monitoring of the environmental conditions within identified deposits.

Section 11.3 Importance of ancient woodland

11.4 Impact on Historic Environment

11.4.8 The impact on the historic environment of any new tree planting should be assessed before any proposals are made to the MPA. Such assessment should include a consideration of the impact of planting proposals on historic environment character and any adverse affects on historic environment assets. Where potentially adverse affects on historic environment assets or areas of identified high historic environment potential are considered likely, proposals for mitigating any adverse affects should me made as part of the proposal.

Section 14.2 restoration landform: historic environment

14.2 Historic Environment:

14.2.1The final landform should take into account historic landscape character as identified in the Hertfordshire Historic Landscape Characterisation.

24. Annual reports

24.4 Archaeological Issues

24.4.1The annual report should provide details of progress on archaeological mitigation secured by planning conditions or agreements. The report should include:

1. a summary of any archaeological investigations carried out in the preceding 12 months;

2. details of any works undertaken in the past 12 months to secure preservation in situ of archaeological remains;

3. a condition report – with details of any monitoring arrangements - on archaeological remains for which preservation in situ has previously been secured by planning conditions or agreements;

4. a programme of archaeological investigation, and any measures to secure preservation in situ of archaeological remains, over the ensuing 24 months.

24.4.2 The report on archaeological mitigation should conform to the appropriate standards of The Institute of Field Archaeologists

1.3 Summary of the Minerals Local Plan and SPG

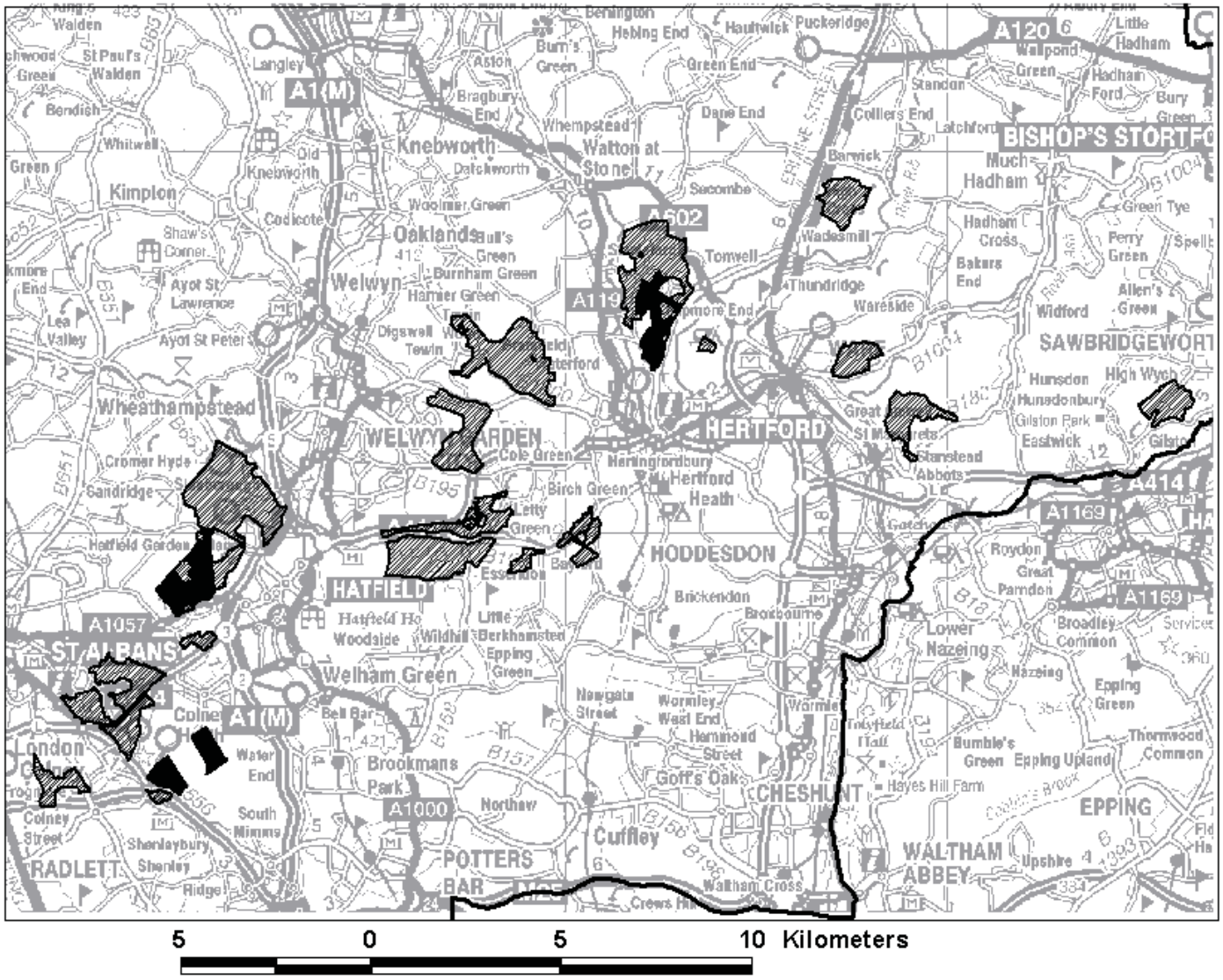
The polices and guidance contained within the Mineral Local Plan Review and the draft SPG provide for the conservation and – enhancement where appropriate of the whole historic environment within the context of national government legislation and policy. However, as the following report will detail, there are aspects of the implications of minerals development which are v desirable to understand, but will fall outside of current policy and legislation. These are:

1. the impact on the wider historic environment in the hinterland of the areas chosen for development,

2. the provision of sufficient information on the historic environment of the proposed development areas to enable the Secretary of State to make an informed decision on the Minerals Local Plan as current guidance is geared to providing such information once the areas have been chosen and/or are the subject of a specific development proposal.

Pre-consultation archaeological asessment

Figure 1



preferred areas

pre-consultation 'long list' areas

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2.0 The Background to the Hertfordshire Minerals Historic Environment Characterisation Project

2.1 The Context for the Historic Environment Assessment of Key Minerals sites

2.1.1 The Pre- deposit draft stage assessment of the historic environment (Figure 1)

In October 2001, the pre-deposit consultation report on Key Issues was produced. It included 21 potential locations (the long list) for mineral extraction for the period 2004-16 (see figure1). As part of the site selection exercise, the Council also produced a 'medium list' of eight sites – referred to as 'Category One Sites'. These sites were all identified as having the most potential for sand and gravel extraction.

Following public response and an environmental appraisal of the proposed sites, the Hertfordshire County Council Aggregates Panel recommended that Council should identify two sites for the plan period (2004-16). The Panel also recommended the identification of one further site which could meet the County's land bank obligations for 2016-23) (the short list). Not all the Category one sites have been recommended to go forward to the plan because, firstly, not all were needed to meet the County's supply obligations. Secondly, a number of detailed site specific issues leads to only these three sites as having immediate and best potential.

2.1.2 The pre-deposit SMR/HER appraisal of the long list of minerals sites

As part of the October 2001 pre-deposit consultation for the Mineral Local Plan Review, a brief and rapid appraisal of the 'long list' of 21 areas was undertaken by the Hertfordshire County Council Historic Environment Unit. This comprised a rapid search of the Hertfordshire Historic Environment Record (HER) - formally SMR - and a brief description of the historic environment potential of the areas. In summary of the 21 areas:

- Rickneys; (preferred area 1) had been previously been assessed in relation to a previous unsuccessful planning application which included some archaeological field evaluation,

- Hatfield; (preferred areas 2) adjacent areas had been archaeologically investigated and some of the area had been

archaeologically assessed,

- Courses farm; (preferred area 3) an adjacent area had been archaeologically investigated.

  Some assessment of the historic environment potential of these areas could therefore be undertaken as part of the review, although the quantity and quality of information varied greatly between the areas.

- for another eight areas, some information was known of the historic environment potential, but this was limited to archaeological cropmark data of unknown date and type or stray finds,

- for the remaining areas, no archaeological or other historic environment information was present on the Hertfordshire Historic Environment Record (HER)and the historic environment potential was assessed by rudimentary predictive modelling. For this, factors such as geology, soils, location (height and aspect) and the nature of any archaeological remains near to the site, are all considered to make an assessment of what archaeological remains that may be present.

It is important to recognise that the Category One list of eight areas and the 'short list' of three preferred areas that is included in the 2nd Deposit Draft of the Minerals Local Plan was partially based in this appraisal of the Hertfordshire HER. .

2.1.2.1 Key Issues Arising From The Appraisal Of The Long List Of Minerals Areas

The following is a summary of the issues which arose from the assessment of the long list of 21 areas:

1. Existing information from the Hertfordshire Historic Environment Record (HER) only covered archaeological remains and a few historic buildings known from the areas,

2. Almost no information was available concerning other aspects of the historic environment especially the built environment and historic landscape features such as historic boundaries,

3. The archaeological information was not distributed evenly between the minerals areas in terms of quality and quantity, due to their different histories,

4. The wider historic and archaeological context of the hinterland beyond the boundaries of the areas was not considered for the appraisal. Although these wider areas will not be directly affected by proposed

extraction, there will be an impact on the historic environment of them. IInformation on the historic environment of these wider areas is also important to understand the development of the historic environment of the minerals areas themselves,

5. National and local policy as described above in Government Planning Policy Guidance notes (PPGs) 15 and 16 and the 2nd Deposit Draft of the Minerals Local Plan, will provide for a thorough assessment of the historic environment once a proposal for extraction is submitted, following the Public Inquiry. However, taking into account the factors mentioned in points 1-4 above, meant that information about the historic environment of the 21 areas was not considered to be adequate for the purposes of assessing the impact of mineral extraction on them for the Public Inquiry into the Mineral Local Plan.

2.1.2.2 The Rational and Objectives of the Historic Environment Characterisation Project

The overall aim of project which is the subject of this report, was intended to provide more detailed and comprehensive information on the historic environment of the three preferred areas and one other area (Stanborough). This, it was hoped, would enable a much more informed assessment of the historic environment of the areas to take place

The study had the following specific objectives:

1. to consider all aspects of the historic environment by building on the newly created Hertfordshire historic landscape characterisation (HLC) data and data currently within the Hertfordshire Historic Environment record (HER),

2. to consider the wider historic environment of the environs of the identified areas, in addition to the areas themselves. (any historic environment appraisal based on a development proposal, following the submission of a planning application, would only be obliged to consider the impact on the area of the planning application),

3. to provide information of a type and in a format that might not normally be provided as part of an historic environment appraisal following the submission of a planning application, but which could be added and augmented as part of any further work, should the area be the subject of a planning application,

4. to create a digital database of information to defined standards which can form the baseline for further assessments and other studies of the historic environment,

5. to use the above information to create a tool which would enable the historic environment of the minerals areas and their hinterland to be managed in the most sustainable manor. This would mean that:

- the potential impact of the development of the sites on the historic environment would be better informed and the information would be more equitable between the sites,

- decisions concerning the assessment/evaluation of the historic environment of those sites proposed for development would be better informed and any new in formation could easily be 'bolted on' to an existing database structure,

- it would enable consideration of the management and mitigation of the historic environment for the hinterland of the proposal sites,

6. it would provide a basis for monitoring and measuring change in the historic environment in the hinterland of the minerals areas.

Hertfordshire Historic Landscape Characterisation

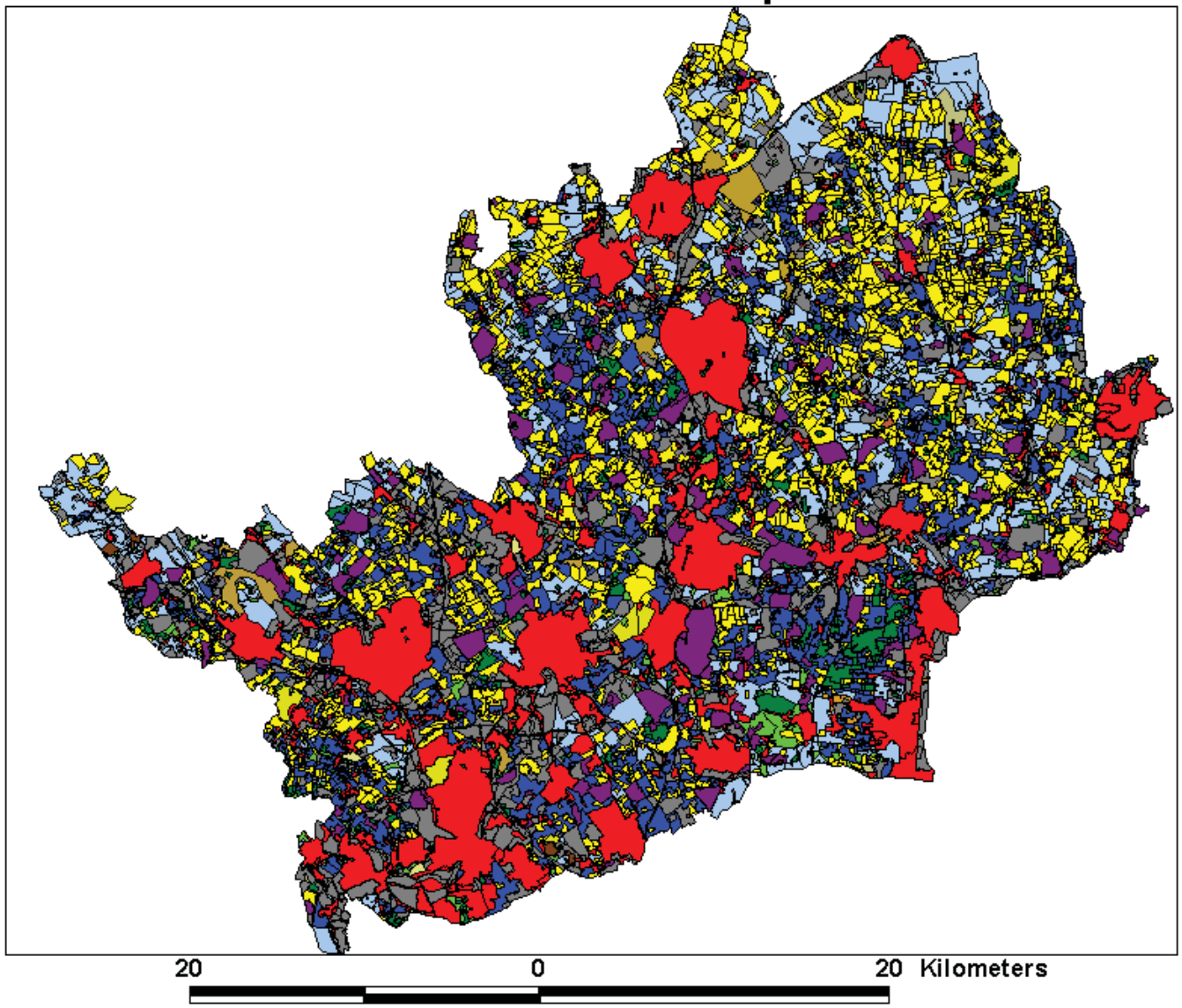

Figure 2

- ancient woodland
- built up area
- ancient enclosed fields
- histoirc parks
- later enclosed fields
- 20th century created landscapes
- prairie fields

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2.1.3 The Hertfordshire Historic Landscape Characterisation (Figure 2)

2.1.3.1Introduction

Historic Landscape Characterisation (HLC) is a new type of desk-based analysis of the countryside which has been pioneered by English Heritage and County Council archaeology services. It uses a combination of new digital map technology and the evidence from old maps to create a new digital map of the landscape that shows historic landscape 'character' This is achieved by analysing landuse and historical influences of the many thousands of fields and other land units which make up a county or region. The Hertfordshire HLC is a joint project between English Heritage and Herts County Council.

2.1.3.2How HLC is created

The process of producing a HLC map for a county involves a series of simple processes that have become established as the national programme of HLC has developed over the past 10 years. Firstly, a draft list is produced of the main historic landuse types for the study area. These are the categories of landuse that make up the historic 'character' of the area and will range from easily identified types such as woodlands, meadows and old mineral workings, to the more complex and sometimes nebulous, patterns of fields and field systems. Historic sites and features themselves, including archaeological sites, are not usually included in HLC unless they actually be identified as defining the historic character of an area. In terms of research and analysis of HLC, it is also preferable if archaeological sites and other historic sites are compared with HLC rather than being part of it. Some categories of historic sites can also be added to HLC at a later date as part of the enhancement and 'deepening' process, for which the Minerals Historic Landscape Characterisation project is an example.

2.1.3.3Historic landscape character types

Table I shows a selection of the HLC types from the Herts HLC and a brief description of them. It can be seen that the list includes a range of ancient and more recent types that together makes up 100% of the landscape. Experience of HLC has shown that, as might be expected, the list of HLC types varies across regions as the character of the historic landscape changes. The list in table 1 is designed for Hertfordshire. Figure 2 shows one particular way of presenting the Hertfordshire HLC data. It shows the extent of 20th century change in the historic landscape of the county, with grey representing landscapes which have been created in the 20th century red are built-up areas and, yellow are prairie fields in which their hedged boundaries have been destroyed. The remaining blue and brown areas represent the surviving pre 19th century landscapes.

Field Patterns
Ancient Enclosure (Pre 18th Century 'Co-axial'): Morphologically this category of enclosure has a sinuous pattern with small, elongated fields. The enclosure layout can be dictated by topography but still indicative of older field systems.
Ancient Enclosure (Pre 18th Century Irregular): Piecemeal enclosure is applied where enclosures appear to have been established on a field-by-field basis. Morphologically they can vary considerably in shape and size. The origins of this type are unclear and probably represent more than one period. However, most are likely to be medieval or earlier in date with some being Roman or prehistoric.
Later enclosure: Parliamentary Enclosure: Planned, generally large-scale enclosure, of open field and sometimes wastes occurring through Buckinghamshire from *c.* 1780- *c.* 1860. Parliamentary enclosure normally possesses a distinctive, organised layout with ruler straight boundaries and often with contemporaneous roads or trackways.
Later Enclosure (19th Century): Morphologically similar to parliamentary enclosure, although not always laid out with quite the same precision. Planned private enclosure of wastes and open field will be identifiable particularly in areas where the extents of parliamentary enclosure are already known.
Prairie Fields: Characterised by widespread boundary removal and/or rationalisation, resulting in large (sometimes irregular) enclosures. Modern improvements occur largely post- 1950.
Other Enclosure
Commons & Greens: Village greens are a visible element of many villages in Buckinghamshire but have not always survived due to encroachment of settlement and enclosure. They were important communally used areas that often formed the point of departure for driftways or outgang along which stock was taken to summer pastures. Former wastes and commons frequently retain the physical evidence of past industrial activities such as mining, quarrying and peat cutting.
Historic Parkland (16th 19th Century) This category applies to areas of landscape that have a noticeable ornamental element. Often associated with Manor houses ornamental parklands date from the 16th century, although most examples in Buckinghamshire are of 18th or 19th century date.
Woodland
Woodland Plantation: Used where there are clear indications of woodland for commercial forestry.
Ancient Woodland: Ancient woodland sites that have retained the native tree and shrub cover that has not been planted, although it may have been managed by coppicing or felling and allowed to regenerate naturally.
20th Century Created Landscapes
Later Enclosure 20th Century: Can vary but are usual regular in morphology, but are defined here as parcels of enclosures that represent an expansion of agricultural land into wastes and common pasture and alterations of older enclosures.
Water Reservoir: Self Explanatory
Flooded Restored Mineral Extraction: Gravel Pits
Industrial (disused)
Industrial (post 1885)
Disused Mineral Extraction: Some areas of present agricultural or recreational land have previously been subject to intense industrial activity between the O.S. 1st edition and present O.S. coverage (e.g. open casting, gravel extraction, landfill sites etc). The category provides a

method of indicating this activity whilst retaining the definition of present status.
Mineral Extraction
Nursery with Glasshouses: 20th century market gardening
Allotments
Hospitals, Schools, Universities: Self Explanatory
Utilities: Power Stations, Water Works etc.
Recreation: 20th century leisure, golf courses, playing fields etc.
Urban Expansion
Military (post Medieval): Barracks, training grounds
Motorways

Table 1: selected historic landscape characterisation types

Western Study Area

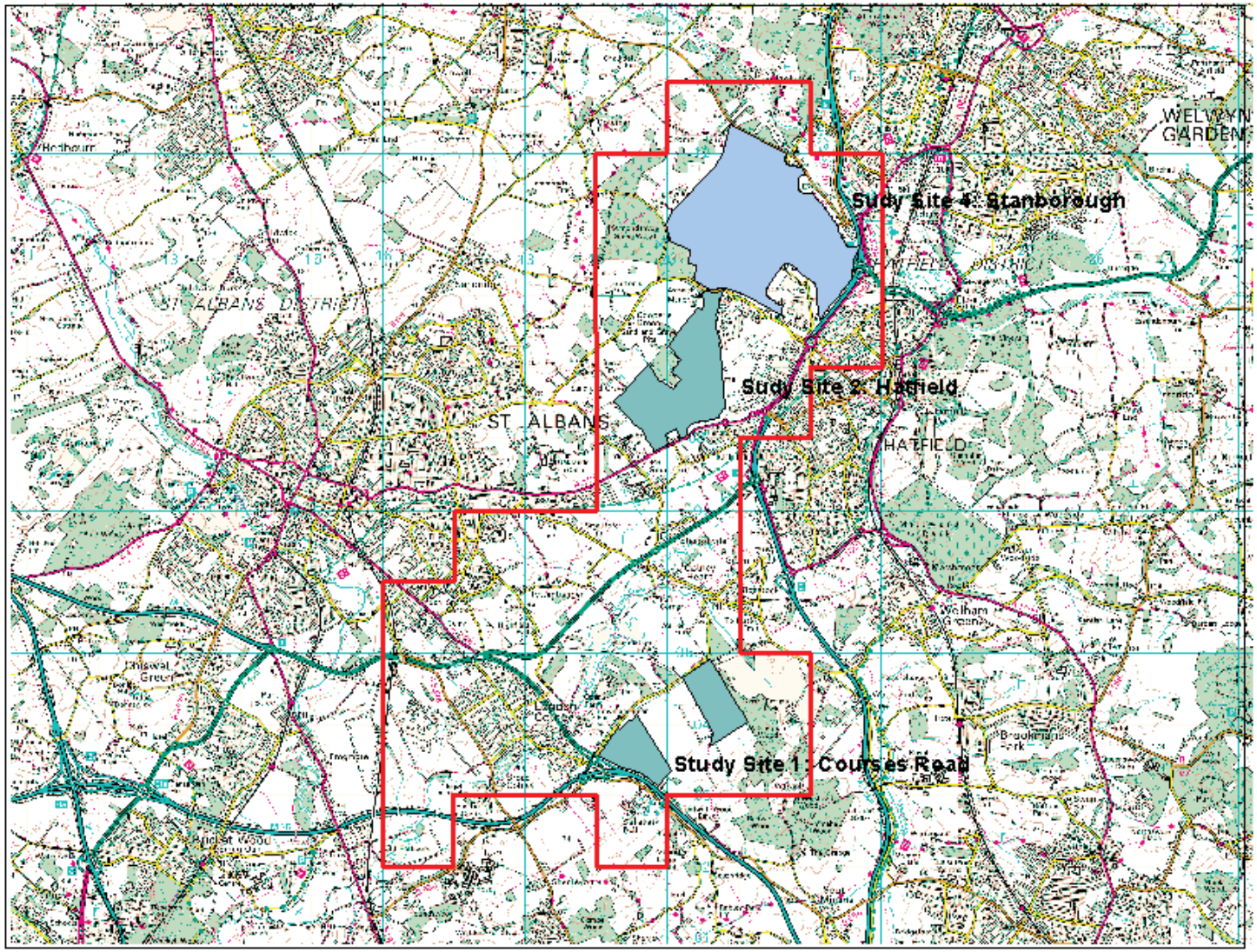

Figure 3

Study Area boundary

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3.0 The Hertfordshire Mineral Areas Characterisation Project

3.1 Summary of the Project Methodology

The methodology for this project has been developed from the Herts Historic Landscape Characterisation (HLC) project, and is viewed as one way of deepening or enhancing the basic HLC, which covers the whole county of Hertfordshire at a broad scale. The Herts HLC is proving to be a very useful tool for characterising historic landscapes and for assessing change over time. However, it is a relatively simple, county-based tool that is at its most useful at parish, district county or even regional scale. It was also intended only as a 1st stage project, which could be added to with time.

The Minerals Aggregate Levy Sustainability Fund is a national levy on the minerals industry which is directed by government via national agencies to environmental projects associated with minerals sites. This project was seen as an ideal opportunity to enhance the pre-existing HLC to among other things, offer greater Insight into landscape genesis and development and to include additional aspects of the historic environment such as the historic built environment and historic routeways.

3.2 Phase 1: The Enhanced Historic Landscape Characterisation Desk-Based Study

3.2.1 Selection of Study Areas (Figures 3 and 4)

The three preferred areas for mineral extraction identified in the Mineral Local Plan Review 2002: First Deposit Draft September 2002 were selected for study. (Courses Road, Hatfield and North of Hertford). However, in order to address the issue of consideration of the impact of extraction on the wider historic environment beyond the preferred areas, larger Study Areas (east and west) were selected for analysis (see figures 3 and 4). These areas selected were bounded by OS grids to create defined edges. However, it should be recognised that the geographical extent of these larger, wider Study Areas that has been examined is variable, dependant upon the evidence class used. For example, all of the Study Areas have been considered for Historic Landscape Characterisation, but parts of the Study Areas have been omitted for detailed analysis of field boundaries where early map evidence is lacking.

The western Study Area also included the sites of other areas originally considered in the 'long list'. One of these, Study Site 4: Stanborough, a

major site which has been put forward by industry, has also been considered in detail as part of the enhanced HLC (see below, 4.4).

Eastern study area

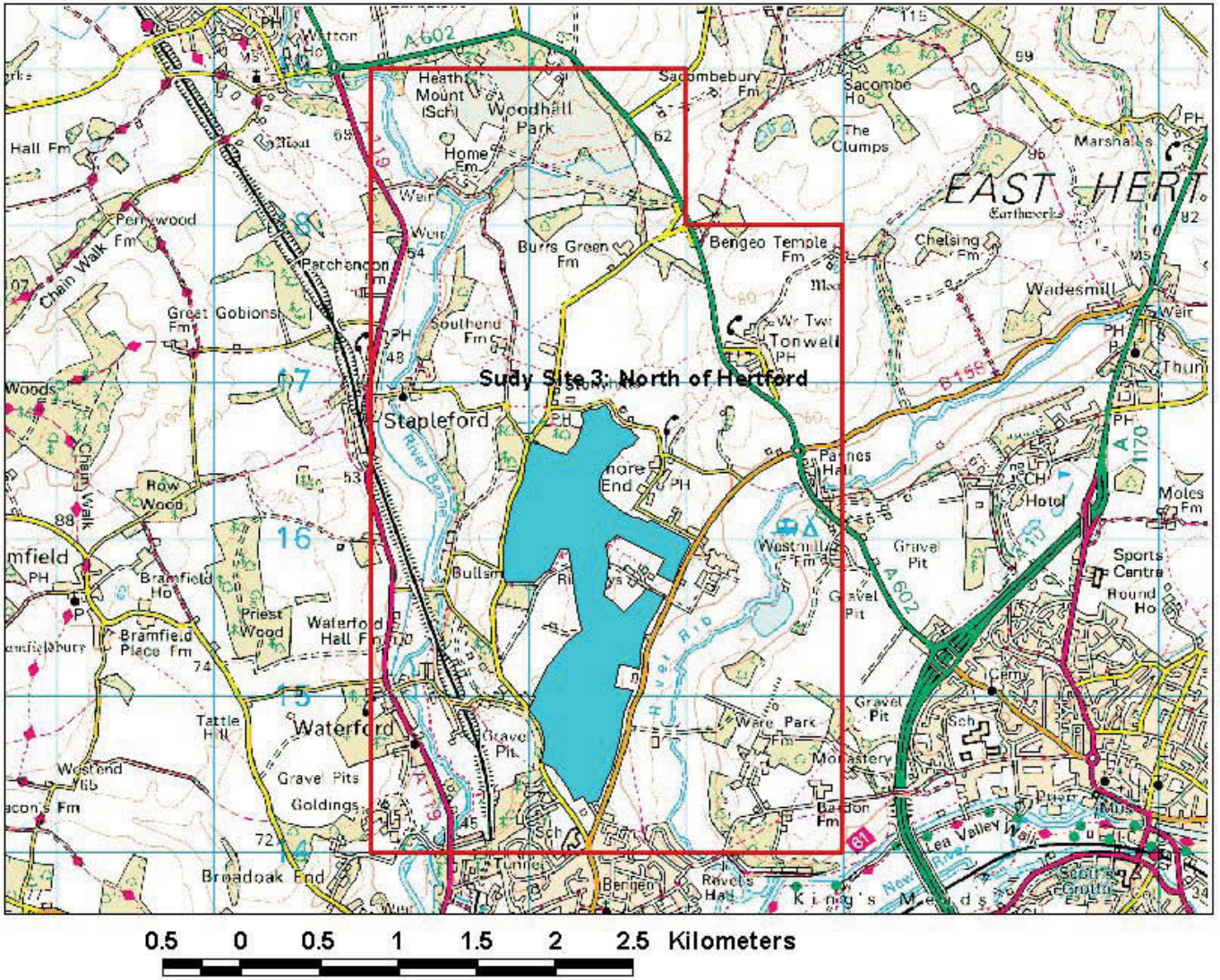

Figure 4

Study Area boundary

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In addition, other potential extraction areas suggested as from the 1st deposit consultation for the Minerals Local Plan were included in the enhanced desk-based study. Data on these areas has been digitised from old maps and the Hertfordshire Historic Environment Record, but no analysis has been undertaken and they have not been presented in this report. However, such analysis and reporting can be undertaken of these areas at short notice if they are to be considered at the Public Inquiry.

3.2.2. Digitisation of Old maps

3.2.2.1 The first stage of the project was to select key sets of historic environment data from the study areas for digitisation onto GIS from.

The First Edition Ordnance Survey 6" maps (1880s).
The 1st edition OS maps are held in digital raster form on GIS and the digitisation process involved the creation of a new layer of these selected heritage features, which were:

- Field boundaries,
- Trackway and other routeways,
- Buildings.

Each feature was separately identified with a range of attributes which were recorded in a database attached to the GIS image. These attributes included:

- Field boundary morphology (the shape and type of boundary),
- Field boundary - dating specific field edges,
- Field use,
- Field ownership,
- Field names,
- Boundary edges – condition, form, changes.

3.2.2.2 The digitised OS first edition data was used as a basis upon which to create digital versions of the same data classes (boundaries etc) from the earlier historic maps using historic paper maps e.g. Enclosure, Tithe & Estate maps. These maps were held in the county record office at Hertford. The digitising of boundaries from old map sources was done to consider earlier evidence of the boundaries and to compare this evidence with the later first edition OS evidence. A list of the maps used is given in Appendix 2.

To record details of features from these early maps accurately onto GIS mapping it is necessary to have first digitised the relevant details from the first edition OS, which is available as a scanned, 'raster' image. The first edition OS therefore serves as the vital 'bridge

between the modern mapping and the old Tithe and estate maps. Without the digital OS, mapping these earlier maps onto GIS would be prohibitively time consuming.

3.2.2.3 The GIS Databases were also constructed to reflect boundary change through time as represented by the various mapped sources – from early estate maps to modern coverage and field survey. Recent evidence for the boundaries and other features was represented by the millennium vertical aerial photograph coverage of Hertfordshire.

Edge Type	Digital Source	Boundary Type	Does the Boundary Survive?	Boundary Change	Boundary Text	No
Boundary	aerial photo	ditch	yes			559
Boundary	O.S. 1st edition 1883	hedge with standards	no			582
Boundary	O.S. 1st edition 1883	unknown/ uncertain	yes		Bowmans Green Farm	382
Boundary	aerial photo	wood	yes			447
Boundary	Freehand	hedge	no			0
Boundary	O.S. 1:10000	ditch	yes			443

Table 2: selected fields from GIS database of the Tithe Map for Ridge parish

Tables 1-4 show simplified versions of the databases which have been created for the project. Each of the rows on Tables 1-4 represents an historic feature that has been identified from an old map or field survey and which has been digitised on the GIS. A GIS table has been produced for each of the sources used – from old maps to modern field survey. Each of the fields in the row is an aspect of the feature that has been recorded on the GIS and which sites behind the graphical representation of the feature on the map. The information recorded on the database also can be analysed in a wide variety of ways on the GIS.

Tables 1 and 2 show that database for part of the historic maps. A simple summary of the keys fields – from left to right:

Edge Type	This is to show the generic type of feature (boundary, communications, water etc)
Digital Source	The digital map source onto which the feature is located to digitised (see above 3.2.2.1)

Edge Type	Digital Source	Does the Route Survive?	Current Use 2003	Map Source Use	Route Change	No
Communication	O.S. 1st edition	no	Track	Track	the track has been realigned	98
Communication	aerial photo	yes	Track (runs along the edge of a wood)	Track (runs along the edge of a wood)		99

Table 3: selected fields from GIS database of the 1st Edition OS at Courses Farm

Edge Type	Digital Source	Type of Boundary	Route Current Use 2003	Political Boundary	Length Surveyed	Boundary Width	Boundary Height
communication	Aerial photo	wire fence, ditch, single hedge, hedge well managed, hedge occasional gaps	Track		30 metres	1.3 metres	1.5 metres
boundary	Aerial photo	Ditch, single hedge			30	1.3	1.5
boundary	Aerial photo	Bank and ditch, Hedge overgrown		parish, ward, district, county electoral division, westminster constituency	30	/	/

Hedgerow Species	Standard Trees Present	Additional Comments	Name of Field Surveyor	Date of Fieldwork	Boundary Number	Number of Species present	
fieldmaple, blackthorn, hazel. hawthorn	Cherry	modern replanted hedge	Jonathan R Hunn	29.07.03	1	4	211
hazel, fieldmaple, hawthorn, dodrose, dogwood, hornbeam	Oak	possible modern replanting, beside a trackway, 1 oak present,	Jonathan Hunn	29.07.03	3	6	206

Table 4: selected fields from GIS database of Courses Farm for 2003

Table 3 shows the GIS table for the field survey of the boundaries at Courses Farm. All of the boundaries identified from the old map evidence were checked in the field in 2003 to determine what had survived and to record key aspects of any surviving evidence.

Modern (2003) use of Building	Modern (2003) name of Building	Digital Source	Building name on source being mapped	Does the Building Survive?	Building Designation	Any additional information
		Freehand	Bowmans Green Farm	No		

Building use during period being mapped	Name of owner of building	Sites and Monuments Record Number	Listed Building Reference
farm building (not clear of which type)	Honourable Charles Yorke		

Table 5: selected fields from GIS database of historic buildings information form Courses Farm estate map of 1767

Evidence of historic buildings on the old maps was recorded on separate GIS databases and Table 4 shows one of these for an old map of Courses Farm.

3.2.3 Research and analysis

The Digitisation of heritage information from a variety of historic map sources onto GIS enables a range of questions to be asked of the data which can be important in terms of understanding the development of the historic environment as well as making more informed decisions about its long-term conservation. The type of questions include:

- Patterns in the creation and destruction of boundaries from for example the enclosure of fields in the 18th and 19th century and latterly from removal of hedgerows,
- The history of Individual boundaries or groups of boundaries can be tracked in terms of which survived, changed, lost, or was added between each period,
- Likewise the development of settlements can be tracked in terms of the building of new structures and the abandonment of others,
- Changes in land-use,
- Changes in buildings and their survival,
- Land ownership,
- Place name change,
- The relationship of trackways and other routes to fields and field boundaries. This could include for instance, the ways in which people, livestock and produce were move around the landscape as part of the agricultural economy.

3.2.4 Characterisation

Recording field boundaries and other map-based heritage information on GIS makes it possible to consider patterns in the historic environment which include field systems, settlements and other routes and boundaries. These can be considered as individually, as for

example patterns of field enclosure; or together with settlements and other features. From such analysis, description of the 'character' of the historic environment can be produced. Two examples of historic environment character in Hertfordshire are the unenclosed open fields and settlements in parts of north Hertfordshire and the co-axial fields of south east Hertfordshire. In parts of north Hertfordshire, the medieval 'open fields' were cultivated until the 19th century in many small strips and had few boundaries or hedges. However, unlike many similar areas in the midlands of England, these open fields were not enlaced by field boundaries in the 19th century and still retain their distinctive open 'character'. Another area of historic landscape character are the ancient co-axial fields of the Cheshunt/Wormley area in south east Hertfordshire. In contrast to north Hertfordshire, this area was enclosed from a very early date (sometime between 1000 BC and 1000 AD) by large regular fields known as 'co-axial' and most of the ancient fields survive in the modern landscape.

The importance of historic environment character is that it helps to understand the relationship of the individual features with each other, whether they be archaeological settlements, buildings or ancient boundaries, and also to identify those aspects of the historic environment which don't contribute or even detract from its character. These could include later changes or additions such as new settlements or fields which have had their boundaries removed. Also, if preserving the character of the historic environment is thought to be desirable, any changes which are needed can be made so that they minimise change to character or even contribute to it.

The concept of historic environment character is especially important for the consideration of the proposed mineral extraction areas as it can be used to inform the conservation of wider area whist the selected areas being extracted and can in due inform the restoration of the extracted area in order that the historic environment character is maintained or even enhanced.

3.3 Phase 2: The Field survey

A field survey was undertaken in the summer of 2003 of the four Study Sites to consider the evidence for the features identified from the GIS enhanced HLC study.

Field survey was carried out as a form of validation – to establish if the boundaries existed, their condition, & if the boundary form was consistent with its period. This has enabled a comparison to be made between the mapped data – including the millennium aerial photographic data, and the real evidence on the ground of these features.

The field survey data for each boundary observed has also been entered onto the GIS database, enabling comparison and analysis with all of the old map data for the feature:

- The field boundary line data is then to be transformed in polygonal data so that additional information that is appropriate for the enclosed area may be entered e.g.,
- Field name,
- Ownership,
- Use,
- Tithes & duties paid,
- The buildings – as to there placement, origin, period, construction
- The data may then be compared to the HLC & the broader attribution of that dataset to inform greater detail.

Boundary Record Sheet

Project Name:		Project Code:	Sheet No:
Location:		NGR:	County:
Recorded by:		Date:	Length sampled (m):
Average hedge width (m):		Average hedge height (m):	
Soil type(s):		Underlying geology:	
BOUNDARY TYPE (tick all appropriate)			
Wire fence:	Wooden fence:	Iron fence:	Other fence (describe):
Brick wall:	Stone wall:	Other wall (describe):	Bank:
Ditch:	Bank & ditch:	Double ditch:	Bank & double ditch:
Single hedge:	Double hedge:	Hedge/well-managed:	Hedge/layered:
Hedge/occasional gaps:	Hedge/frequent gaps:	Hedge/overgrown:	Hedge + standard trees:
Hedge/other type (describe):			
HEDGEROW SPECIES PRESENT (list)			
1		**8**	
2		**9**	
3		**10**	
4		**11**	
5		**12**	

6	**13**
7	**14**
STANDARD TREES PRESENT (list)	
1	4
2	5
3	6
DATING	
No. hedge species present:	Probable date of hedge:
OTHER COMMENTS	

Table 6: field boundary record sheet

Study Site 1, Land at Courses Road: HER sites

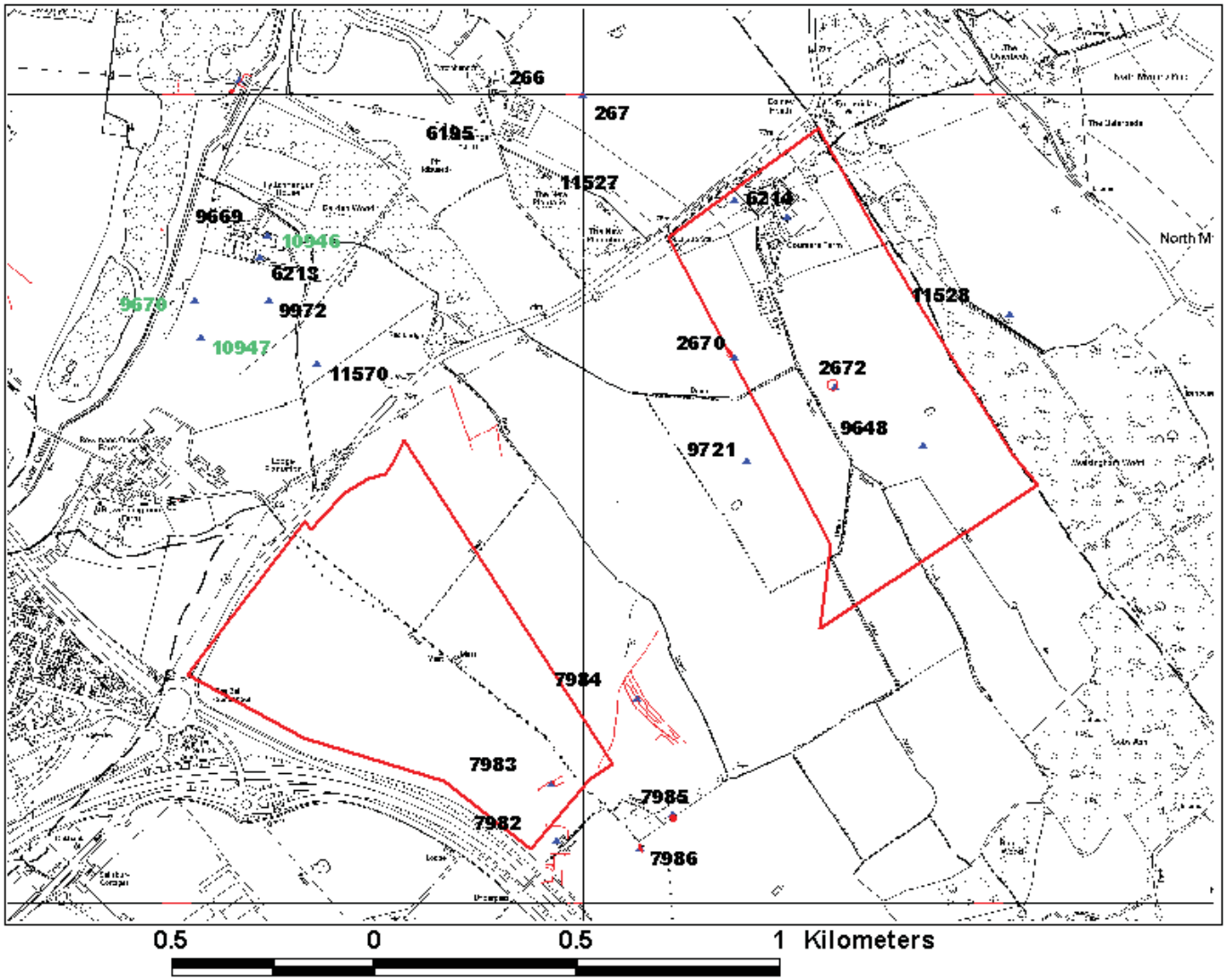

Figure 5

HER sites

Preferred Areas

Cropmark sites

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4.0 Historic Environment Characterisation of the Preferred Areas

4.1 Study Site 1: Coursers Farm

4.1.1 Summary Description Of Known Archaeology (Figure 5)

The Historic Environment Record (HER) records the location of eight discrete sites within or adjacent to the application area (figure 5). Seven of these sites comprise cropmarks of archaeological sites, of which five may belong to ploughed-down funerary monuments in the form of ring ditches belonging to the Late Neolithic or Earlier Bronze Age (c2500-1000 BC). The cropmarks of a linear ditch and 'macula' are of unknown date. The eighth site is Coursers Farm itself which appears to have some irregular archaeological earthworks of unknown function associated with it.

To what extent the HER data is a true reflection of the surviving archaeological evidence is uncertain. The archaeological evaluation of the cropmark sites during the archaeological investigation of the site (see HER records) showed that there was a poor correlation between the cropmark evidence and proven archaeology. One of the crop marks proved to be that of a heavily truncated ring-ditch (with a width of 1.5m x c.0.5m and diameter of 19m). The finds from the ditch consisted of only a few late Iron Age sherds and there was no evidence for any burials or funerary rites.

Although neither of the application areas has been surveyed by field walking technique, the area dividing the two zones has been examined. Here the discard pattern of artefacts varied from low to almost non-existent. This pattern may or nor may not be replicated in the present Study Site. However, based on the available data a heathland /pastoral land use model may be postulated for the area. To the north of the application an extensive area of Mesolithic activity (c6000 BC) in the form of flint artefacts and debris was identified. This evidence came from the inter-face between the plough soil and sub-soils, though to date this material has not been identified to the south of Coursers Road.

Courses Road Historic Landscape Characterisation: Current Landuse

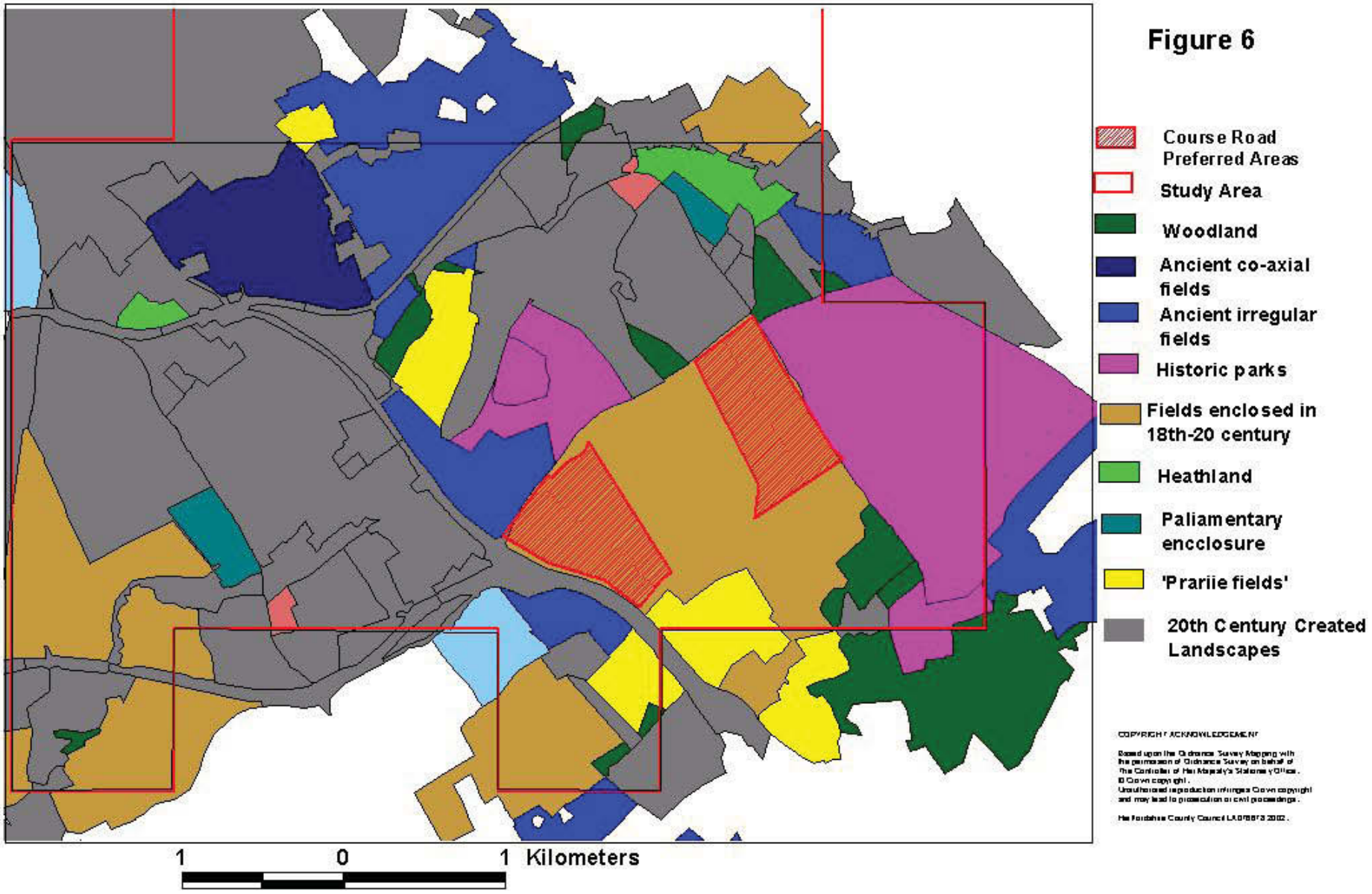

Figure 6

- Course Road Preferred Areas
- Study Area
- Woodland
- Ancient co-axial fields
- Ancient irregular fields
- Historic parks
- Fields enclosed in 18th-20 century
- Heathland
- Paliamentary encclosure
- 'Prariie fields'
- 20th Century Created Landscapes

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HER No	Summary
239	Dovecote
267	Flint implements
2670	Cropmark of a ring ditch
2672	Cropmark of a ring ditch
7982	Cropmark of a rectangular enclosure
7983	Cropmark of a linear ditch
7984	Cropmarks of field boundaries
7985	Cropmark of a round barrow
7986	Cropmark of maculae
9648	Possible round barrow
9670	Remains of Homstall Farm
9721	Roman pottery
11528	Cropmarks of enclosure

Table 7 HER sites from Study Site 1, Courses Road

4.1.2 Summary Of Tenurial /Estate History

The majority of the preferred areas (75%) lies within the manor of Tyttenhanger which was held by the abbot of St Albans. The remaining portion on the west side (25%) was held by the manor of Shenley. Both these manors were derived from Anglo-Saxon estates and at the time of the Domesday Book survey (1086) were included in the entry for Shenley. In the medieval period different ownership meant that the respective manor's developed into separate units of government in the form of the 'hundred' and parochial arrangements. Land appears to have been divided up into a series of freeholdings known as 'hides' and owed 'knight service' to the abbey of St Albans. One of these was 'Black Hide' which became 'Corsers'. After the Dissolution of the monasteries most of the area was acquired by the Pope family and Sir Richard Lee. In time the entire area was part of the Pope-Blount estate and passed through a series families until became part of the Caledon estate. The area has been farmed by a series of substantial tenants to the present day.

4.1.3 Historic Landscape Characterisation (Figures 6 & 7)

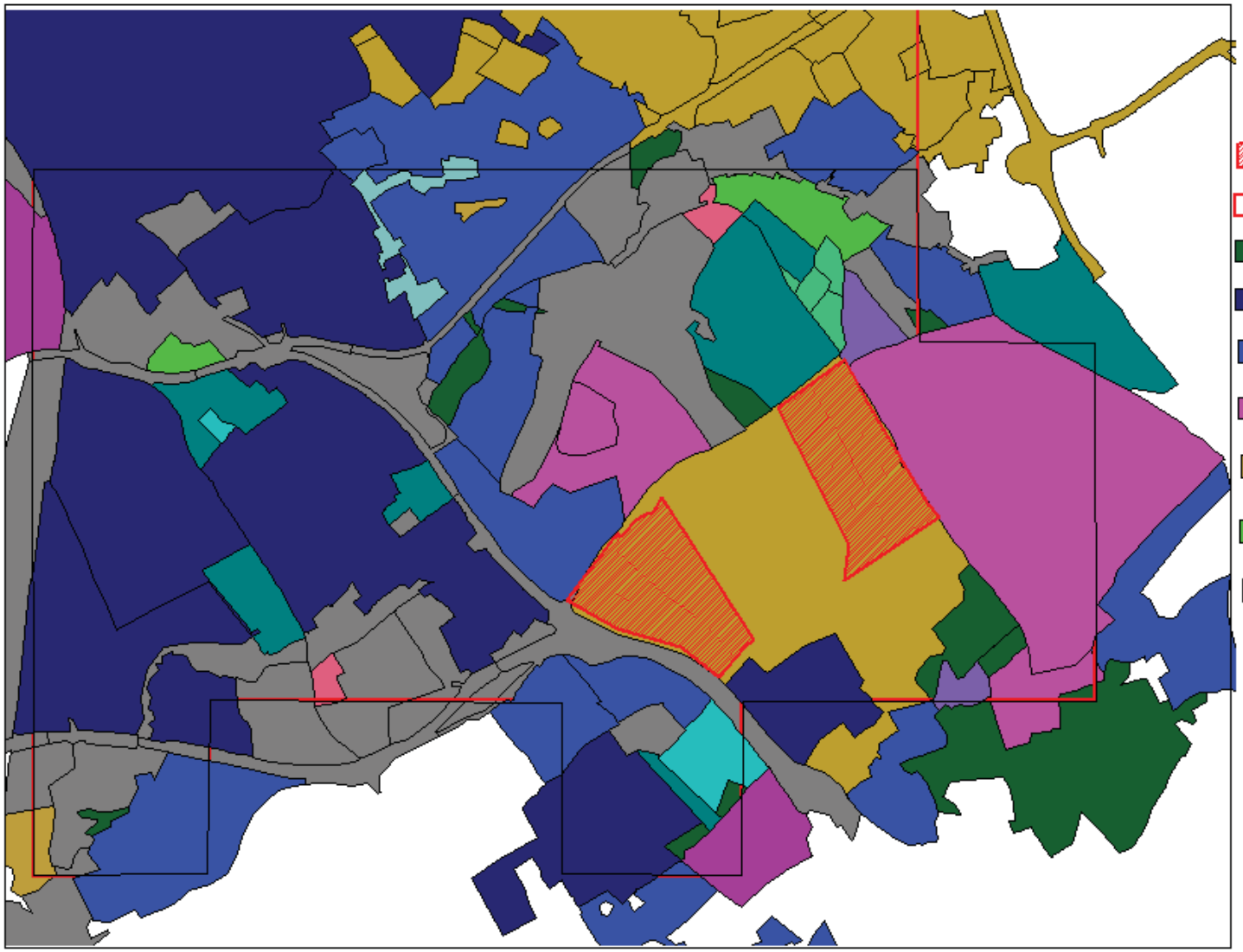
Figure 6 shows the Hertfordshire Historic landscape Charactisation mapping for current land-use of the Courses Farm/Tyttenhanger study area. The map has been simplified from the 20 + landuse types (see Table 1) to a generic list which identifies the following types:

1. all 20th century land-use types in grey,
2. fields which have had their boundaries removed since 1950 as yellow,
3. historic parks (purple),

4. ancient fields are blue (irregular mid blue and co-axial fields dark blue)
5. woodland (dark green),
6. field enclosures between the 18th and 20th centuries (light brown),
7. Other ancient (heath) landscapes (mid green).

It is clear from figure 6 map that the study area that 20th century landscapes are the most extensive. These comprise a mixture of new residential development, disused mineral workings, newly created fields and roads. When taken with 'prairie fields' (yellow) it is clear that

Courses Road Historic Landscape Characterisation: Pre-1950 Landuse



1 0 1 Kilometers

Figure 7

- Courses Road Preferred Areas
- Study Area
- Woodland
- Ancient co-axial fields
- Ancient irregular fields
- Historic parks
- Fields enclosed in 18th-20 century
- Heathland
- Paliamentary encclosure
- 'Prariie fields'
- 20th Century Created Landscapes

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most of the area has been affected by historic landscape change in the 20th century. Field encloses dating between the 18th and 20th centuries (characterised by very straight regular boundaries) are also extensive. Ancient (pre 18th century) landscapes are (blue, purple and green) are a significant element of the eastern half of the study area – around the preferred extraction areas – but are still dominated by later landscapes. Therefore, the character of the modern, early 21st century historic landscape (based upon the HLC mapping) is one of islands (some quite large) of surviving ancient landscape situated within landscape of a variety of 20th century land-use types.

Figure 7 shows the same study area from map evidence as it was before 1950. It can be seen at once that ancient fields (blue) were much more extensive, especially the rare and unusual type of 'co-axial' fields – including are preferred areas. The pre 1950 landscape of the study area can therefore be reasonably characterised as one of 'ancient' enclosed fields and parkland.

Settlements and historic buildings (Figure 8)
The buildings identified on the 18th and 19th century maps are shown on figure 8. This reveals a dispersed pattern of farms and manors including, Tyttenhanger manor. All are farms or settlements which still exist apart from Homestall Farm, indicating very little change in the settlement pattern from that of the 19th century. Homestall Farm has been destroyed in the 20th century although archaeological evidence of the farm was revealed in 1995 (HER record 9670).

4.1.4 Summary Of Results From Detailed Enhanced HLC Map Analysis/Field Survey Of The Preferred Areas (Figure 8)

The terrain varies from flat to gently sloping and is defined by Coursers Rd to the north and the rising ground of the South Hertfordshire Plateau to the south. There is not much more than 10m of elevation between the lowest and highest points in the preferred areas Most of the area is classified as 'glacial gravels' though there is also an extensive area of brickearth which means that in the latter, the soils are deep and relatively stonefree. On the gravels, the soils are shallower, stonier and slightly sandier.

According to medieval documentary sources much of the area was made up of large open arable fields which were sub-divided into much smaller, individual strip holdings. Only a small proportion of the fields (2%) are recorded as being enclosed by a hedge. The area was comparatively lightly wooded and heathland appears to have accounted for over 14% of Tyttenhanger's holding. The land use of the smallest land parcels tends to be for meadow and pasture. Between 1331 and 1500 it would appear that there are some radical changes to land management. The three field system, composed of a random grouping different sized fields which would have been rotated from

Study Site 1, Courses Road: Old Field Boundaries and Settlements

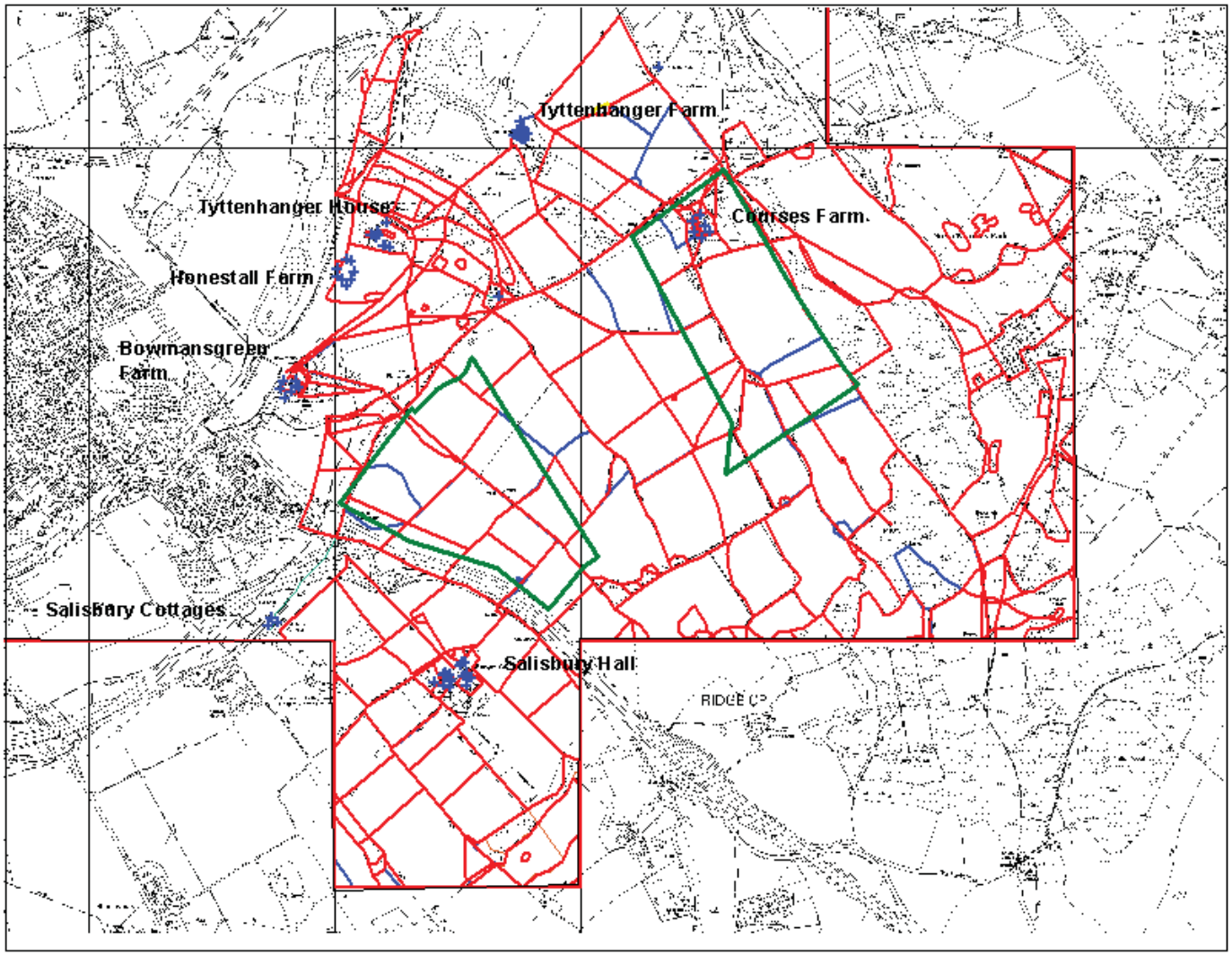

Figure 8

Courses Road Preferred Areas

Buildings shown on tithe and OS maps

Western Study Area Boundary

Boundaries on OS 1st edition 6"

Addition boundaries shown in tithe map

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arable to pasture, went out of use and there was a concentration of landholding by a smaller number of tenants. By 1500, four of largest fields had been subsumed within the later pattern of new enclosures which were sub-divisions of the larger old fields.

By the time of the production of the Tyttenhanger estate map of 1777 the historic landscape had, more or less, assumed much of the characteristics which were to survive until the mid 20th century. This pre-mid 20th century landscape is shown on figure which has the field boundaries from the OS first edition 6" of 1883 and the Tithe Maps for Shenley and Ridge parishes (1840 and 1838 respectively). All the medieval sub-divided open fields had disappeared and there was also a further decline in the number of tenants who farmed the land. The manor of Coursers alias Blackhide had been joined with Tyttenhanger since the mid-16 century. By the 19th century many of the larger 18th century fields still survived together with some notably long boundaries. These can be observed in figure 8, alligned southeast/northwest and are probably relict features of track ways which connected the different zones of land use in the past. Some field names indicate condition and/or previous land use in the use of the term 'stoney' and 'heathy' or 'leaze' as in grazing land and 'moor'. During the course of the 19th century and into the 20th century there is a slow amalgamation of fields. Some amalgamation between the dates of the Tithe map (1840) and the 1st edition OS (1880) can be observed in figure 8. This gradual change quickens in the second half of 20th century until by the 1980's the divisions in the landscape had assumed its present form in which virtually no field boundaries remain.

Apart from the physical demarcation of the landscape there has been a considerable change in the communication pattern. Many of the minor track ways have gone out of use while even Coursers road has been modified. However, the biggest indirect impact has been the development of the M25 in the second half of the 20th century on the western side of the application area. With the exception of the increase in the size and number of the buildings at Coursers Farm no other buildings have appeared in the area. To judge from the archaeological data the area shows a complete absence of human occupation from the earliest period to the present day with the only evidence of activity being agriculture and a few prehistoric burial monuments .

4.1.5 Integrated Summary Of The Historic Environment Of The Area

The present character of the area may be described as a 'prairie type landscape' with only a few remaining vestiges of the pre-existing and more extensive pattern enclosure boundaries. These survive in the form of deep drainage ditches which are sometimes associated with hedgerows. The terrain is almost flat with only a very gradual increase in elevation from north to south. With the exception of the area around Coursers Farm and an un-numbered 'extraction hollow' at the northern

end of the western zone, there is an almost complete lack of surviving relict features. All physical remains have been either severely truncated, as indicated by the excavation of a ring-ditch adjacent to Coursers Rd, or obliterated altogether.

In terms of the wider 'macro landscape' beyond the Study Sites there is a strong suggestion that the prevailing NNW-SSE axis of many of the boundaries, tracks and roads indicates a land division of some antiquity. This system lies parallel with the Roman Watling Street so could post-date it. However, this is by no means certain and the co-axial character of many of the boundaries hints at a possible pre-historic date. On the more localised 'micro scale' of the Study Site, the landscape has evolved as follows: In the late Bronze Age a more open pastoral landscape prevailed; by the late Roman period, if not before, some localised cultivation was probably taking place; in the medieval period much of the area was divided into large open arable fields which were sub-divided into a series of narrow, strip holdings. By the late medieval period most of these strip holdings had been amalgamated into larger units, many of which were enclosed by hedgerows. In the post-medieval period the larger fields had a tendency to become further sub-divided into more medium sized fields. By the 18th century, if not earlier, this pattern had become stabilized. This situation prevailed in the 19th century with only a gradual increase in average field size. The second half of the 20th century saw a dramatic return to the sort of large open areas that prevailed in the medieval period, albeit managed on a more industrialized scale.

4.1.6 Conserving and Enhancing the Historic Environment

The origins and value of the surviving historic environment
The principal landscape changes to the Study Site has been derived from two stimuli. The first of these has been the field rationalisation of the second half of the 20th century; the second impact has been caused by the creation of the outer London orbital motorway (M25). Less direct but still important has been an increase in the conurbation areas of Hatfield and London Colney which has increased the impact of traffic on the local roads. Within the application areas the construction of new agricultural or equestrian related buildings has only been concentrated at Coursers Farm.

The most direct impact on the application area has been the changes brought about by field amalgamation. Analysis of the GIS maps reveals that only a relatively small proportion of the old field boundaries have survived to the present day. As might be expected, those that do survive from the later 18th century tend to be the longer NNW-SSE type boundaries. In the western area the only boundary to survive is a single trackway that is shown on the estate map of Bowmans Farm of 1767 . In the eastern area the principal boundaries shown on the Tyttenhanger Estate map of 1777 and some of the later 19th century

boundaries survive. The NNW-SSE boundaries and part of a track way are of undoubted antiquity though assigning a particular period is difficult. Nevertheless, they are certainly 'pre-modern' and if the hypothesis of the co-axial system is correct then a pre-historic or Roman date would be quite possible. It is important that these few surviving elements of a much mote extensive ancient landscape, are conserved.

The Potential Impact of Extraction on the Historic Environment of the Preferred Extraction Area

The potential for the survival of significant elements of the historic environment do not appear to be great. The most visible surviving element is unquestionably the main boundaries that cross the site from Coursers Rd in the north to the rising ground to the south. These are relatively significant in the overall context of the Preferred Area . None of the buildings within the area would appear to pre-date the 19th century. As for the sub-surface archaeology the remains will only survive as negative features which will have been truncated by the plough. The features are believed to belong to the sites of former burial mounds. This would accord with what is believed to be the 'heathy' nature of the area, located on the margins of more intensively cultivated land. However, the possibility of enclosed settlements cannot entirely be ruled out, though their presence would seem to be unlikely.

Maintaining and enhancing the historic landscape character in the Wider Landscape

The historic landscape characterisation has showed that the wider hinterland of the Preferred Area still retains much of the ancient landscape of enclosed fields. This landscape of fields and surviving boundaries is rare locally and should be conserved. Opportunities to re-establish former boundaries should also be attempted where appropriate.

Study Site2, Hatfield : HER Sites

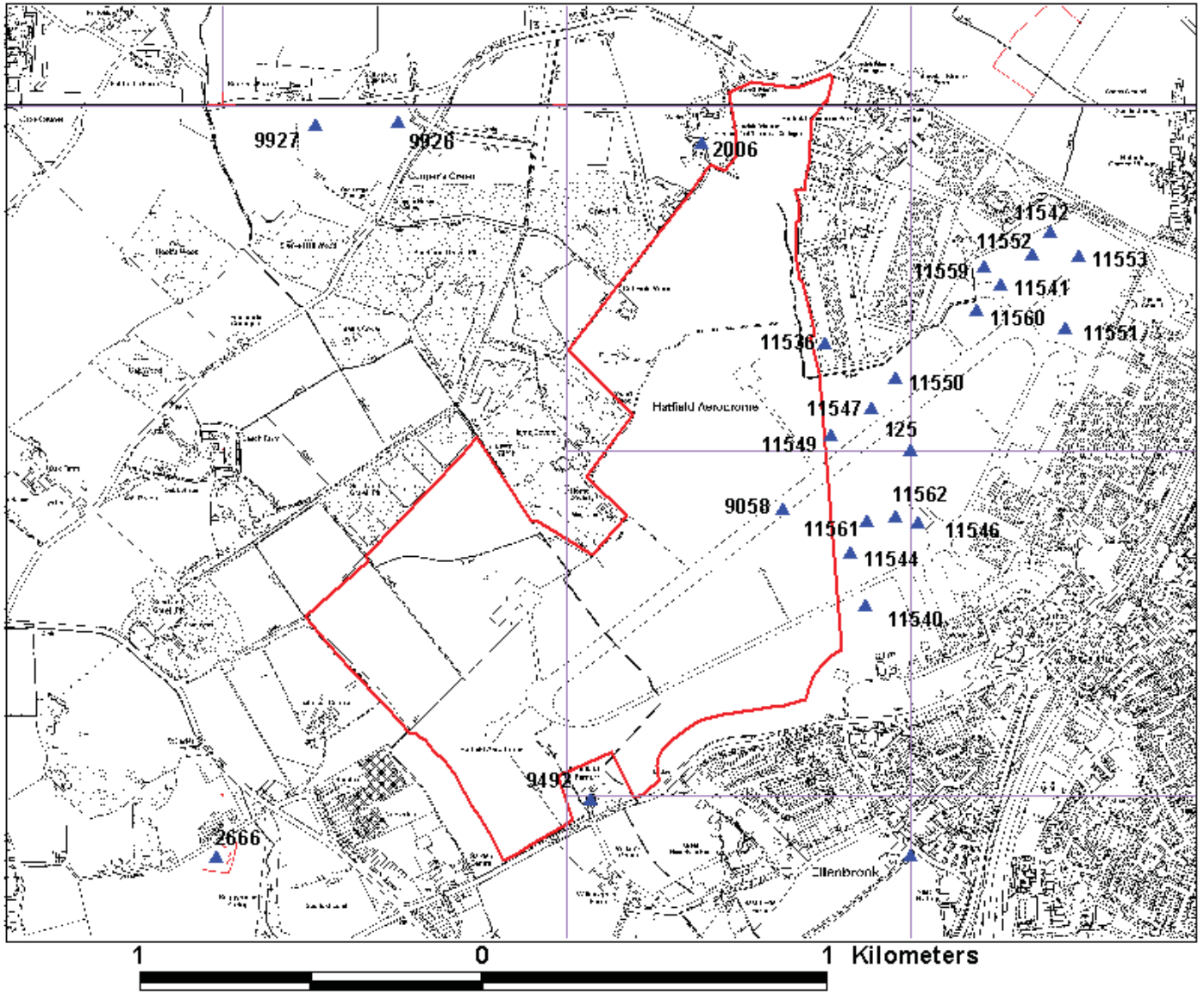

Figure 9

▲ Herts HER sites

Preferred Area

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4.2 Study Site 2: Hatfield

4.2.1 Summary Description Of Known Archaeology (Figure 9)

There is no pre-modern known archaeological information within the Hertfordshire Historic Environment Record (HER) within the limits of the Preferred Area. However, the area immediately to the east has ten HER entries (see figure 9) dating from the Palaeolithic period to the post-medieval period. Most of these are a direct result of the recent re-development of the aerodrome. An exception to this is a late pre-Roman Iron Age site (HER:125) which was recorded in the late 1930s. This would appear to have been destroyed in the construction of the aerodrome as no trace of it was found in the recent re-development of the site. Of the ten sites east of the application area the majority consisted of boundary ditches though the inclusion of datable artefacts must imply either the proximity to human settlement and/or the frequency of domestic waste being used as manure to feed the land. The archaeological profile of the ten HER entries is, in chronological order, as follows: one Palaeolithic handaxe (HER 11561); two late Bronze Age ditches associated with early Iron Age ditches (HER 11546 & 11550); four late pre-Roman Iron Age 'entries' in the form of a probable settlement (HER 125), a cremation (HER 11547), ditches (HER 11549) and two pits, which also contained Romano-British pottery (HER 11562); with the exception of an undated cremation (HER 11544) the remaining sites were of medieval/post-medieval date, comprising ditches (HER 11540) and the site of Harpsfield manor (HER 11536). There are other sites to the north of the preferred area which suggests there was a high level of settlement activity there in the late pre-Roman Iron Age and Romano-British periods (HER 9926 & 9927).

4.2.2 Summary Of Tenurial /Estate History.

The Hatfield application area lies wholly within the former ancient parish of St Peters, in the Hundred of Cashio and the Liberty of St Albans. The holding was acquired by the abbey sometime prior to the Norman Conquest though the details of the Anglo-Saxon estate are not known (HER:11536). The use of the 'hide' suffix is indicative of an ancient free holding though when the abbey received the original grant is uncertain. The earliest documentary reference to the manor of Harpsfield occurs at the end of the 12th century when it consisted of 'one hide and 43 acres of land'. In the early 14th century the manor was sub-divided into two holdings. The land reverted directly into the hands of the abbot in early 15th century. Thereafter, the two holdings were re-united, and notwithstanding the Dissolution of St Alban's abbey in 1539, passed through a succession of families into the 20th century. The physical and administrative arrangement of the medieval manor is not known. However, the frequent mention of Harpsfield in 14th century survey suggests it was more of a sub-holding within the great manor of

Hatfield HLC: Current Landuse

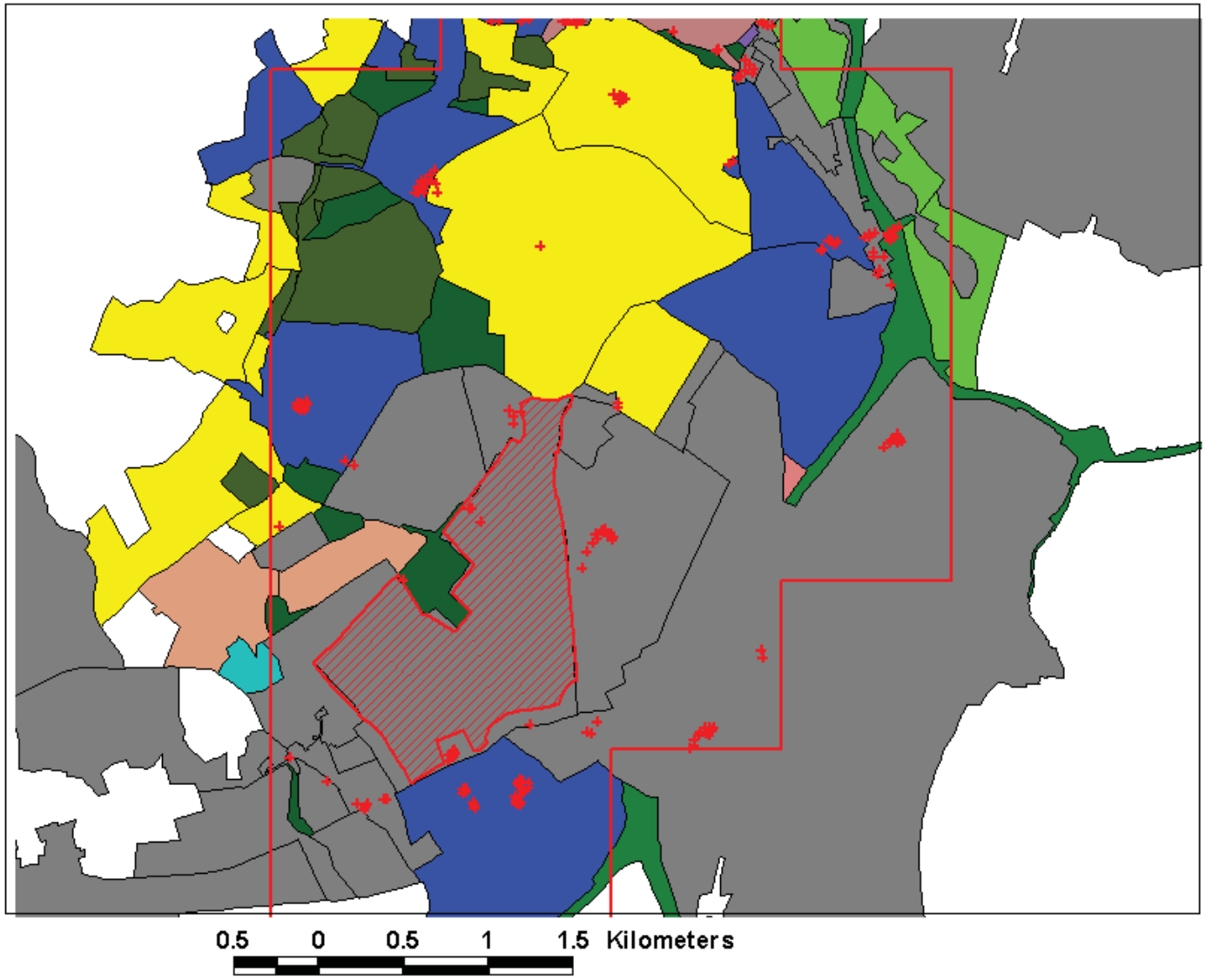

Figure 10

- Hatfield Preferred Area
- WesternStudy Area Boundary
- Woodland
- Buildings on old maps
- Ancient irregular fields
- Historic parks
- Fields enclosed in 18th-20 century
- Heathland
- Paliamentary encclosure
- 'Prairie fields'
- 20th Century Created Landscapes

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Hatfield HLC: Pre-1950 Landuse

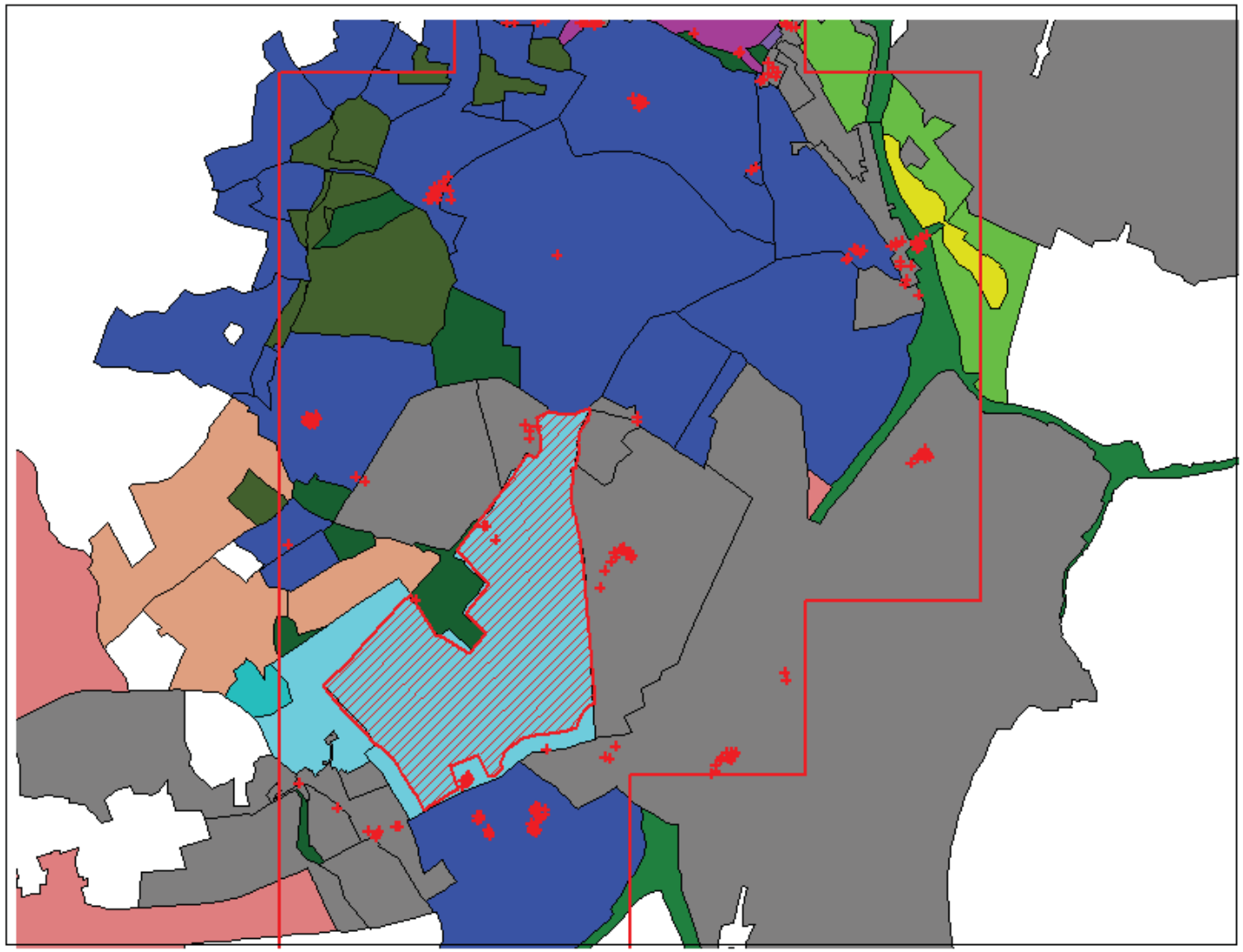

Figure 11

- Hatfield Preferred Area
- WesternStudy Area Boundary
- Woodland
- Buildings on old maps
- Ancient irregular fields
- Historic parks
- Fields enclosed in 18th-20 century
- Heathland
- Paliamentary encclosure
- 'Prairie fields'
- 20th Century Created Landscapes

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Park. There is an early 17th century map of the estate which shows that all the land was divided into closes. When this arrangement took place is not known but based on evidence from elsewhere, a 15th/16th century date would seem probable.

4.2.3 Historic Landscape Characterisation (Figures 10 and 11)

Figure 10 shows the Hertfordshire Historic landscape Characterisation (HLC) mapping for current land-use of the Hatfield study area. The map has been simplified from the 20 plus landuse types to a generic list which identifies the following generic types (see above 4.1.3).

It is apparent from the map that the current landuse of the study area is; a mixture of 20th century (mainly built up areas, airfields and mineral workings); large 'prairie' fields which have lost their boundaries since 1950 (yellow); woodland (green); and ancient enclosed fields (blue). There is also a clear split between the north of the study area which is predominately woodlands and fields and the south which is 20th century land use. This division is even more apparent in figure 11 which shows the land use before 1950. Almost all of the northern half of the study area is ancient enclosed fields or woodland. The historic landscape of the study area can therefore be characterised as 20th century dominated on the south and a mixture of woodland, surviving ancient enclosure and damaged/remnant ancient enclosure.

4.2.4 Historic Settlements And Buildings (Figure 11)

Figure 11 also shows all of the historic buildings identified from cartographic and archaeological evidence. This reveals a reasonably regular pattern of dispersed settlements, with only a single cluster of three former buildings located within the preferred area.

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4.2.5 Summary Of Results From Map Analysis/Field Survey Of The Preferred Area (Figures 12 and 13)

The area is predominantly flat with a only a small variation in relief. The soils are derived from wind borne soils which lie above deposits of gravel. The pre-aerodrome soils would be classified as Grade 2 Agricultural land. There are no prehistoric or Roman route ways in the vicinity. There are two significant medieval sites on the periphery of the application area: Popefield to the south west and Astwick manor to the north.

The contrast between the western portion of Hatfield aerodrome and the eastern is striking. The reason is entirely due to the dynamics of development and the consequent measures taken to manage the threat posed to potential archaeological deposits. The Preferred Area

Study Site 2, Hatfield:19th century field boundaries

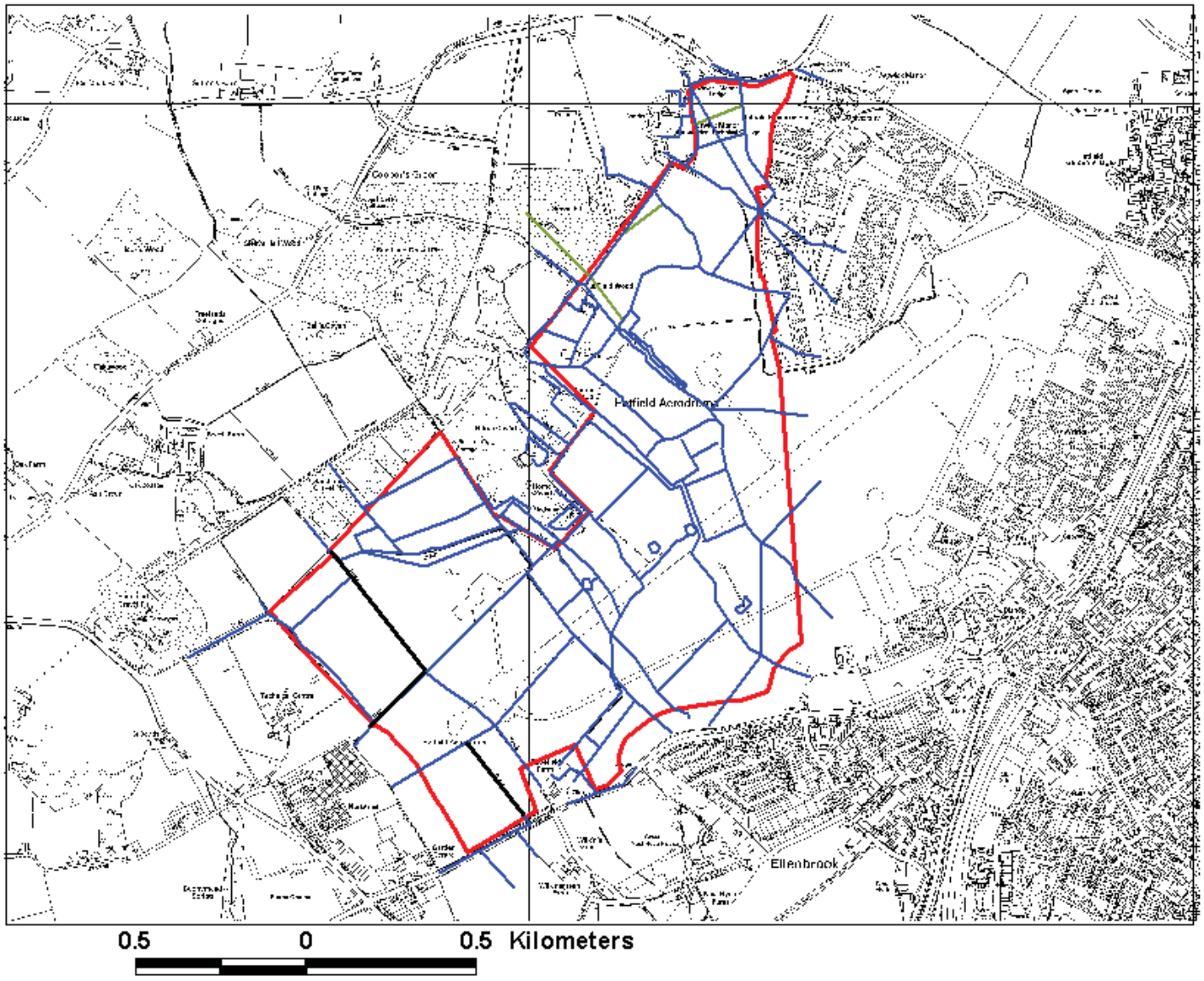

Figure 12

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Preferred Area

Boundaries on 1st edition OS 1883

Boundaries lost between 1840s -80s

Surviving boundaries

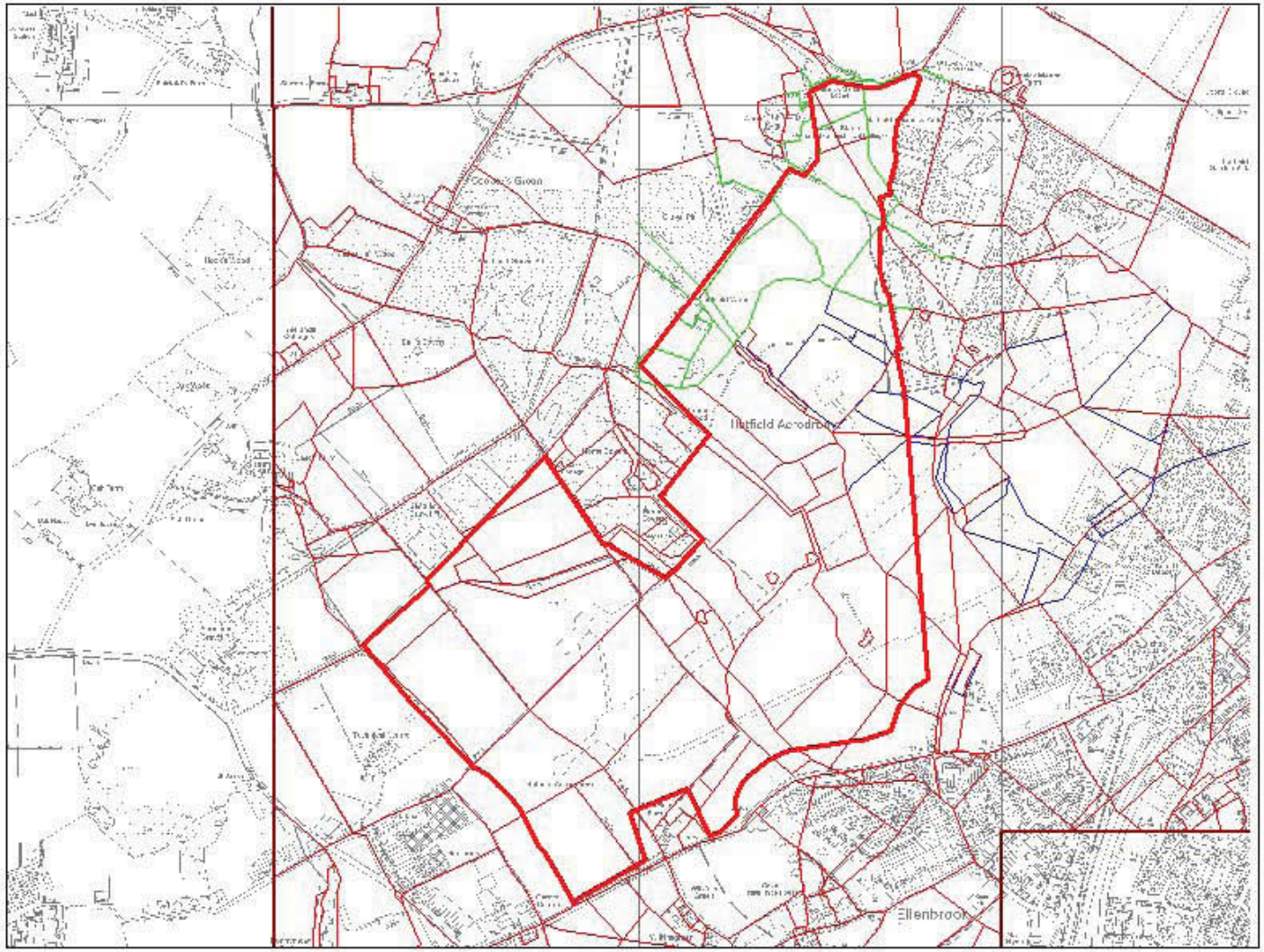
is characterised by wide, overgrown grass verges on either side of the airfield runways and uncultivated fields in a process of reverting to secondary woodland. This means that there is very little information available on the historic environment of the area from field survey (earthwork survey and fieldwalking) or from archaeological features (cropmarks) identified from aerial survey. The only elements that survive from previous patterns of land use before the airfield are a few field boundaries in the form of boundaries. However, only a small proportion of boundaries survives as hedgerows and none of these area significantly rich in specie types. There is good cartographic information for the 19th century (see figure 12) but for previous centuries the data is sparse. The results of characterising the boundaries in the Hatfield application area suggest none of the hedgerows could safely be said to pre-date the 18th century and late 17th century.

The only documentary data that exists in any meaningful sense is that derived from an analysis of boundary loss since 1630. This shows that nothing remains of the landscape recorded on an Harpersfield estate map of 1630. (see figure 13) For the area to the south west of the Harpsfield estate the situation is almost replicated for all subsequent periods. Nevertheless, analysis of the GIS map data reveals a subtle pattern of field amalgamation to the north west of the Preferred Area. This is particularly noticeable between c. 1838 (Tithe Apportionment) and 1880 (First Series 6 inch Ordnance Survey) with a slower rate of change between 1880 and 1925. The biggest impact occurs after 1925 with the development of Hatfield aerodrome. The only features which have survived this landscape change are the boundaries in the extreme west corner of the application area. Here the boundaries are of probable 17th/18th data and survive in an unmanaged state. (see figure 12)

4.2.6 Integrated Summary Of The Historic Environment Of The Area

The historic environment of the area has been determined by the quality of the soils and pattern of land use over time. Until recently there has been no major settlement in the area. As a result the landscape has always been dominated by a dispersed pattern of settlement characterised by scattered farms and dwellings. The pattern of communications has largely evolved to meets the needs of small dispersed agrarian communities. The only major trunk road is the Hatfield road which lies to the south of the application area which was not turnpiked until the mid-18th century. The field pattern has a long history of evolution. Only outside, to the south east end of the preferred area did a single open common arable field survive into the early 19th century but had been enclosed by the time of the Tithe Apportionment of *c.* 1840. The area is one of ancient enclosure, that is, pre-dating the 18th century Parliamentary Acts. It is not possible to ascribe an exact

Study Site 2, Hatfield: boundary loss 1630 to modern



0.5 0 0.5 1 Kilometers

Figure 13

Western Study Area Boundary

Boundaries on 1630 map

Preferred Area

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date when this came about since in this area, enclosure took place in a piecemeal fashion over time. Evidence from elsewhere suggests that open field arable cultivation was declining and may have ceased altogether sometime between the 15th early 17th century. This process went hand in hand with the development of individual holdings associated with a particular farm. Today, within the application area, this pattern has all but vanished and only two late post-medieval field boundaries survive.

4.2.7 Conserving and Enhancing the Historic Environment

The origins and value of the surviving historic environment

The single, greatest change to the historic environment that has occurred between the 18th and 21st centuries was the construction of de Haviland's aerodrome in the mid-1930s. This and subsequent additions to the aerodrome caused a loss of all internal boundaries within the application zone except those situated at the extreme north western end of the site. Accordingly, with the possible exception of any surviving structures from the de Haviland era, there are no conservation issues concerning the built environment.

The changes to the field pattern between the 18th and early 20th centuries is fairly typical for the region as a whole. That is, they remained broadly stable up to the Tithe Apportionment of 1838; between 1838 and 1880 there was an increase in the rate of field amalgamation, followed by a slight decline in the increase in field size between 1880 and 1925; for the period post-dating 1925, and coinciding with the development of de Havilands, there was a dramatic change to the land use of the area. Most of the surviving landscape of the 19th century and earlier periods was swept away with the exception of two fields (see figure 12).

The Potential Impact of Extraction of the Preferred Area on the Historic Environment

The field survey has shown that It terms of the botanical diversity of the surviving hedgerows, they don't appear to be unduly rich in specie types, and vary between 3 to 4 species per 30m length at best. Although it is unwise to apply a rigid formula to the dating of hedgerows the specie counts in this study are interesting in themselves. One bank and ditch boundary has black thorn, hazel, holly and an ash standard; it continues into another field as oak, field maple and blackthorn. Another hedge which abuts and divides the two previous hedges contains hawthorn, blackthorn and elder only; a fourth boundary lying parallel to the previous one contains hornbeam, field maple and blackthorn. Based on this diverse and somewhat irregular pattern it would be unwise to suggest a date any earlier than the 18th century for the fields.

The potential for the survival of buildings and historic landscape features is low to non existent. However, the potential for surviving archaeology is moderately good. There is no direct evidence for archaeology on the site but the evidence from adjacent areas suggests there is a good potential for archaeology to survive. If the available data is typical for the area then the archaeological evidence could range from the late Bronze Age to the medieval period. Only negative features are likely to survive and consists of boundary ditches, pits and the occasional cremation. The potential for the presence of occupation sites (settlement) as opposed to 'activities' is not known.

Maintaining and enhancing the historic landscape character in the Wider Landscape

The historic landscape characterisation has showed that the area to the north of the preferred area still retains much of the ancient landscape of woodlands and enclosed fields. The landscape of fields and surviving boundaries is rare locally and should be conserved. Opportunities to re-establish former boundaries should also be attempted.

Study Site 3, North of Hertford: HER sites

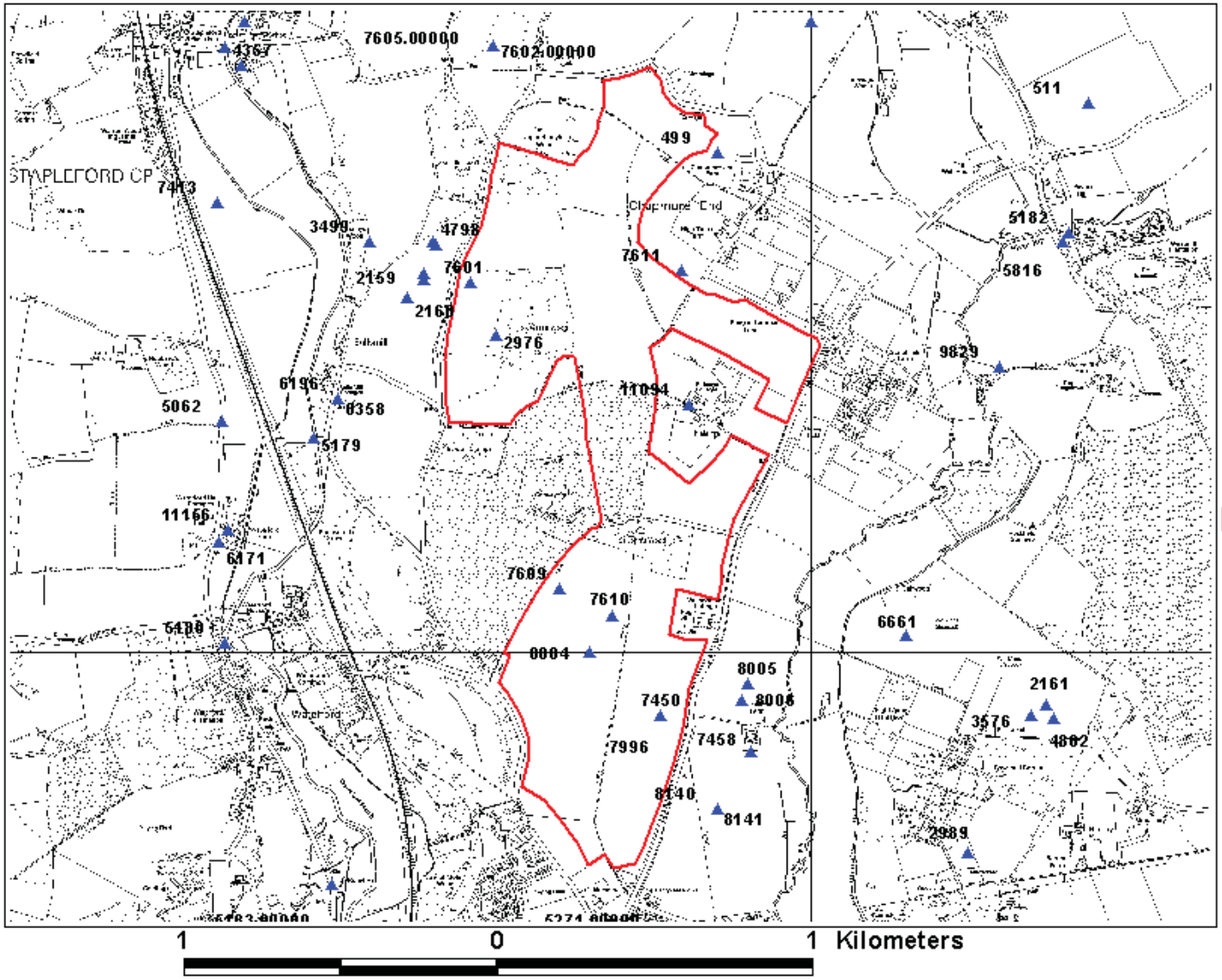

Figure 14

Preferred Area

HER sites

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4.3 Study Site 3: Rickneys (North of Hertford)

4.3.1 Summary Description Of Known Archaeology (Figure 14)

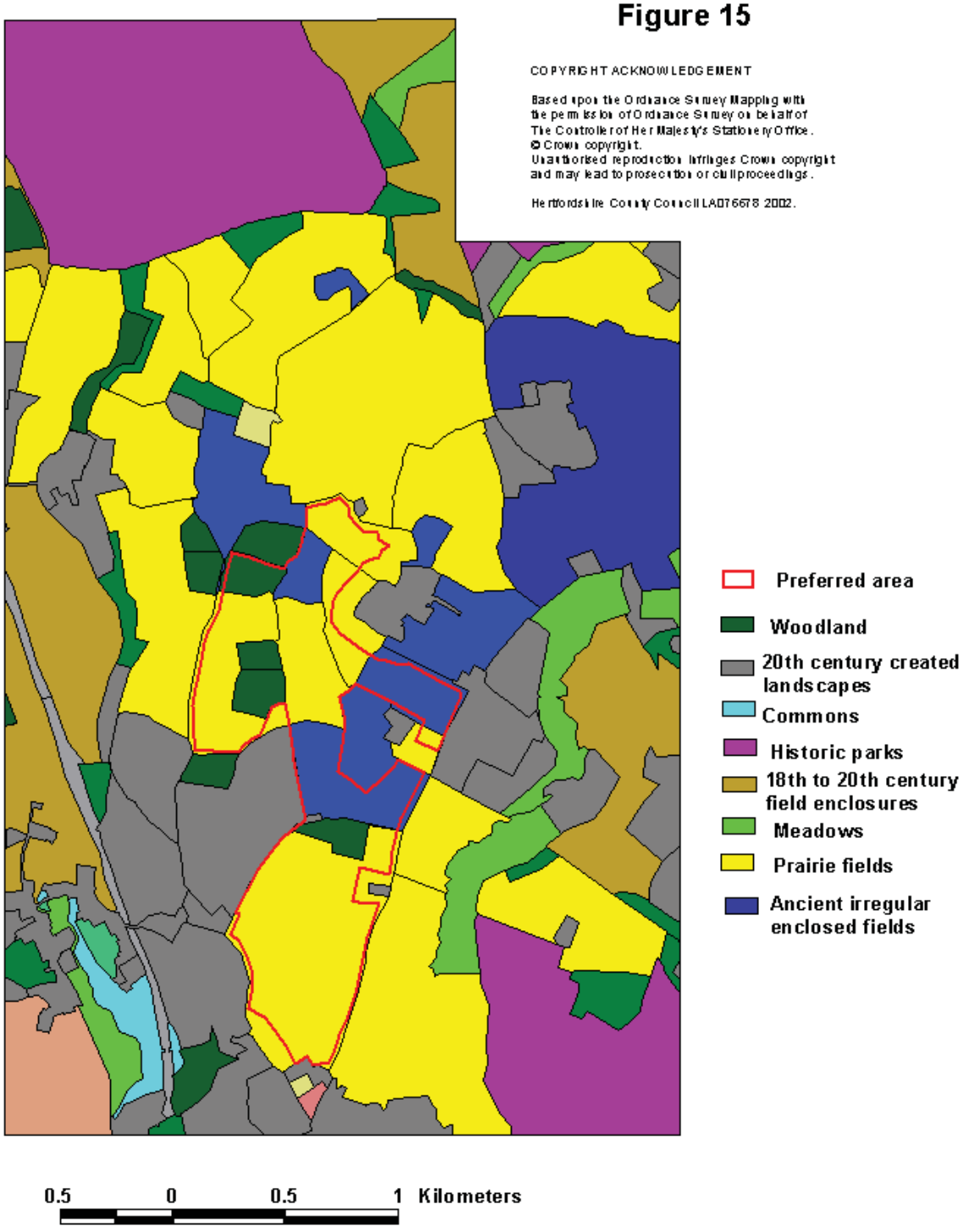
Approximately 80% of the Rickneys application area was evaluated for its archaeological potential in 1996. The areas that were excluded were several of the field's that lay adjacent to Wadesmill road. The archaeology is fairly typical for the region and reflects the usual physical constraints and potential of the locality. Of the ten 'sites' located within and immediately adjacent to the application area five (50%) consist of features that belong to the Bronze Age (2500-1000 BC). Three of these are the remains of ploughed out barrows (23-25m dia) (HER no's 2159, 2160 and 4798). The other two sites are enclosures, one of which was rectilinear (60m x 80m), the other sub-circular in shape (35m dia) (HER no's 7609 and 7610). Apart from an isolated stray Palaeolithic implement (HER 2976) the remaining features are either of late prehistoric or unknown date. These were an enclosure associated with parallel ditches (110m long) dating to between the late pre-Roman Iron Age and Romano-British periods (HER 7601); a double concentric square enclosure 30m x 50m which could be a Romano-Celtic temple (HER 7996); a probable post-Roman trackway (HER 7611) and several undated pits at Chapmore End (HER 499). The combined techniques of fieldwalking, aerial photographic re-interpretation and trial trenching has shown that the archaeology is relatively well preserved. There are also areas of deeper soils in the folds of the land which may have helped to protect underlying features. In summary, the majority of the sites may be categorised as funerary/territorial land divisions. The remaining sites were most probably the focus of agrarian settlement; one was dated to the late Bronze Age (HER 7609) while the second one was of LPRIA/ RB date (HER 7601).

4.3.2 Summary Of Tenurial /Estate History.

The application area almost certainly lay within the lands of the ancient manor of Bengeo. The name itself suggests it belonged to a Anglo-Saxon t tribal group known as the 'Beningas'. At the time of Domesday Book it was divided into eight separate holdings that varied between half a virgate and 6.5 hides (8 ploughs). Exactly who of the eight land holders was in possession of the 'Rickneys application area' is not certain. The two largest landowners were Geoffrey of Bec and Hugh of Beauchamp. According to the Victoria County History it was the latter who held the manor at the time of the Domesday survey. At the end of the 11th century the monks of Bermondsey bought the manor of Richmond in Bengeo. It seems that this manor was mortgaged or leased to the Tany family who in 1272 returned the estate to the Prior who shortly afterwards passed the manor back again, retaining only the advowson. The manor passed into the hands of Adam de Stratton

North of Hertfford HLC: Current Landscape

Figure 15



North of Hertfford HLC: Pre-1950 Landscape

Figure 16

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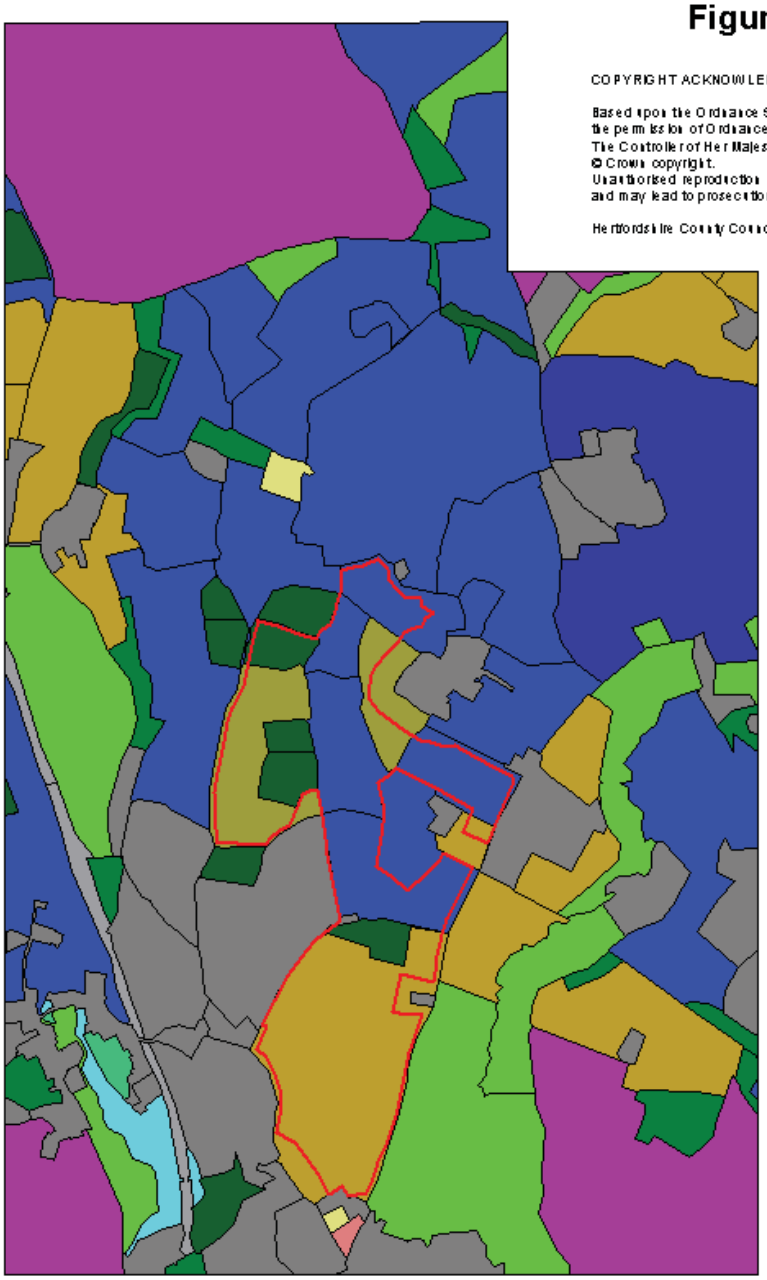

Preferred area
Woodland
20th century created landscapes
Commons
Historic parks
18th to 20th century field enclosures
Meadows
Prairie fields
Ancient irregular enclosed fields

0.5 0 0.5 1 Kilometers

whose lands were forfeit to the crown and the end of the 13th century. Thereafter, it seems that there was a distinction between the manor of Richmond and bengeo since the latter became attached to the manor of Hunsdon. To which manor Rickneys belonged is not known. The name Richmond disappears though the name 'Rykner' appears in the early 15th century and 'Ricknesse' at the end of the 16th century. From the late 18th century to the four decades of the 19th century, Rickneys was held by Thomas Hope Byde, or his Trustees, who also held the manor of Revel's Hall. At that time Rickneys comprised a dispersed holding of 420 acres of mainly arable land.

4.3.3. Historic Landscape Characterisation (Figures 15 and 16)

Figure 15 shows the land-use for the study area in 2000 and figure 16 shows the land-use taken from 1880 first edition ordnance survey 6" maps. The striking difference between the two maps is the predominance of ancient, irregular fields in 1880, covering over 50% of the area, compared with less than 20% in 2000. Most of the Loss of field boundaries occurred after 1950 and has transformed the study area from an enclosed to a largely open landscape. However, in contract to the other two Preferred Areas, there has been relatively little impact from other 20th landscape change. It is almost certainly a reflection of the more rural nature of the study area when compared to the other two areas.

Buildings and Settlements and routeways (Figure 17)

Figure 17 shows a plot all of the building identified from old map sources. This evidence together with the archaeology (figure 14) and other documentary sources (see below) indicates a pattern of dispersed settlements, mainly isolated farms and manors. There also appears to be stability in the settlement pattern in the post medieval period, with few new or abandoned settlements or farms.

The closest settlement to the preferred area is Chapmore End which is probably early post-medieval in date though it's omission from Dury & Andrew's survey of 1766 is puzzling. To the east is Rickneys which may be some antiquity, though this has yet to be demonstrated. To the west, outside the application area the hamlet at Bulls Mill (Benwick Hall) is of probable post-medieval date. To the south of Bulls Mill lies the ancient hamlet of Waterford, while to the north lies the medieval village of Stapleford.

The area is bounded by an ancient thoroughfare to the east (Wadesmill Rd) and to the west (Saccombe Rd). There is a track way/footpath which passes from south to north linking the ancient settlement of Bengeo with Chapmore End, which as it's name implies is a later, secondary settlement. There was another route between Chapmore End and Bulls Mill leading to Waterford.

Study Site 3, North of Hertford: historic buildings on old maps

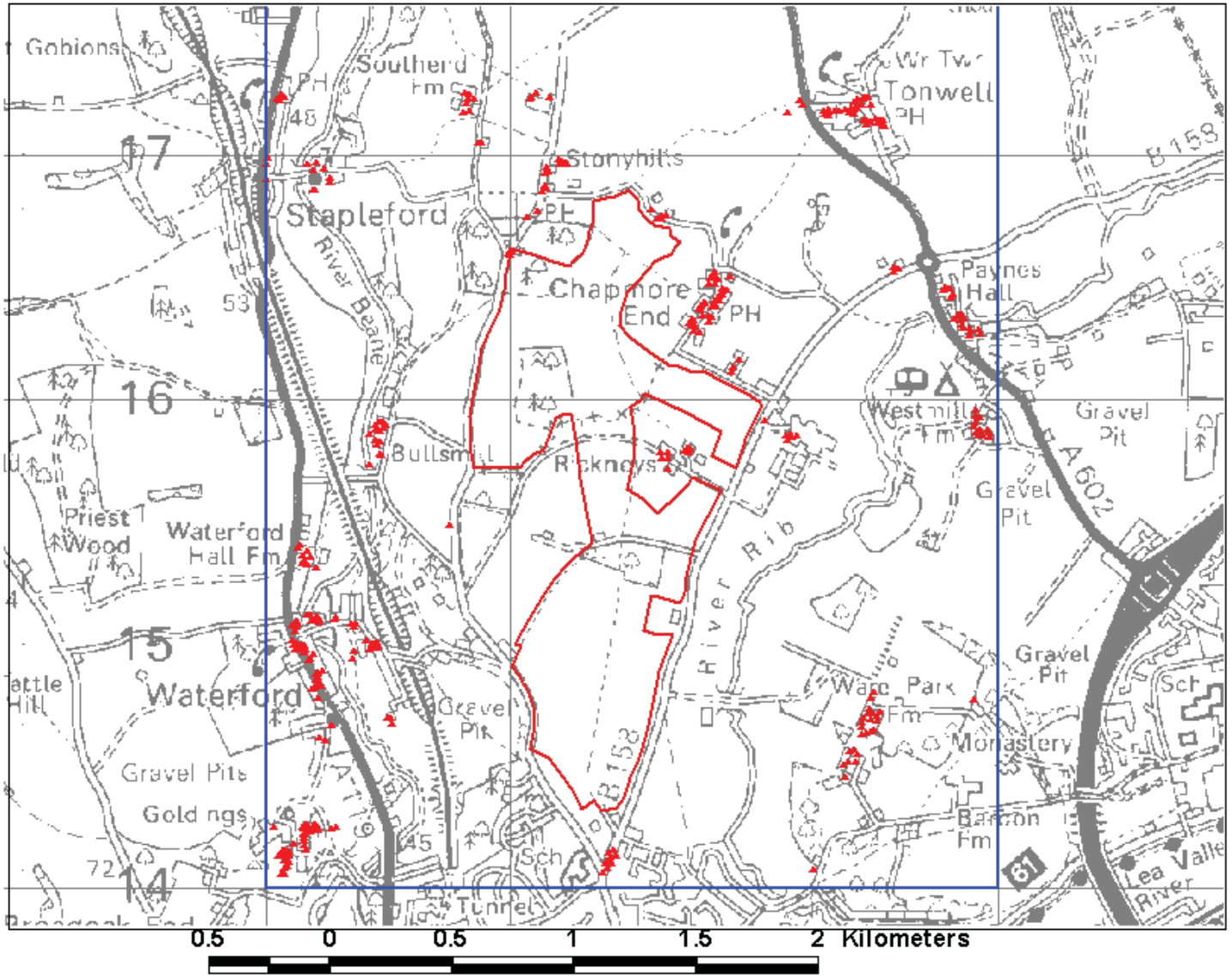

Figure 17

Eastern Study Area Boundary

Builldings shown on old maps

Preferred Area

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4.3.4 Summary Of Results From Map Analysis/Field Survey (Figures 18-19)

Up until the mid-19th century much of Rickneys, particularly the northern half of the Preferred Area still retained many of the physical characteristics of open field farming. That is, much of the agricultural land was divided into comparatively long, thin units of husbandry (see figure 18). This does not necessarily imply the survival of traditional open field management; by the mid-19th, if not earlier, many of these relict land divisions were cultivated as though they were enclosed; the only difference was that they lacked physical boundaries. After the General Enclosure Act of 1845 it became financially advantageous to complete the process of inclosure, which had already been undertaken in the southern half of the application area. The contrasts between the south of the area, with large regular fields with straight boundaries, and the northern part with many narrow strip fields, can be seen on figure 18. The historic landscape of the northern part of the preferred area in the 19th century is striking and contrasts with the complete absence of evidence for such strip fields in the other two Preferred Areas.

Why the inclosure of the landscape should have taken so long to complete is an interesting historical question but beyond the scope of the present summary. Nevertheless, whatever the real reason for this apparent agricultural conservatism in the northern area, it resulted in a considerable change to the pattern of land division at the time of the Inclosure Award in 1852. It is perhaps not insignificant that the 'Lammas lands' owned by the parish to the north of Rickneys Farm not only retained it's strip fields but sub-divided these into even small land units between 1852 and 1880. Rather strangely, some of these strips appear to be on a different alignment to the earlier 19th century boundaries, indicating some re-ordering of the landscape (Figure 19).

The physical characteristics of the mid-19th field pattern are the result of post medieval piece meal inclosure in tandem with the retention of the more traditional land divisions. This has resulted in an irregular field pattern at the northern end of the application area where the survival of woodland and trackways has emphasized this aspect; to the south the fields are noticeably larger and are bounded by ancient public thoroughfares. Despite the continuing process of field amalgamation in the 20th century the area has still retained much of the characteristics of the 19th century inclosure movement. The oldest elements to survive are, in descending order of importance are: the public roads, farmsteads, track ways / footpaths, woodlands and the smaller closes adjacent to Rickneys.

North of Hertford :19th Century Field Boundaries

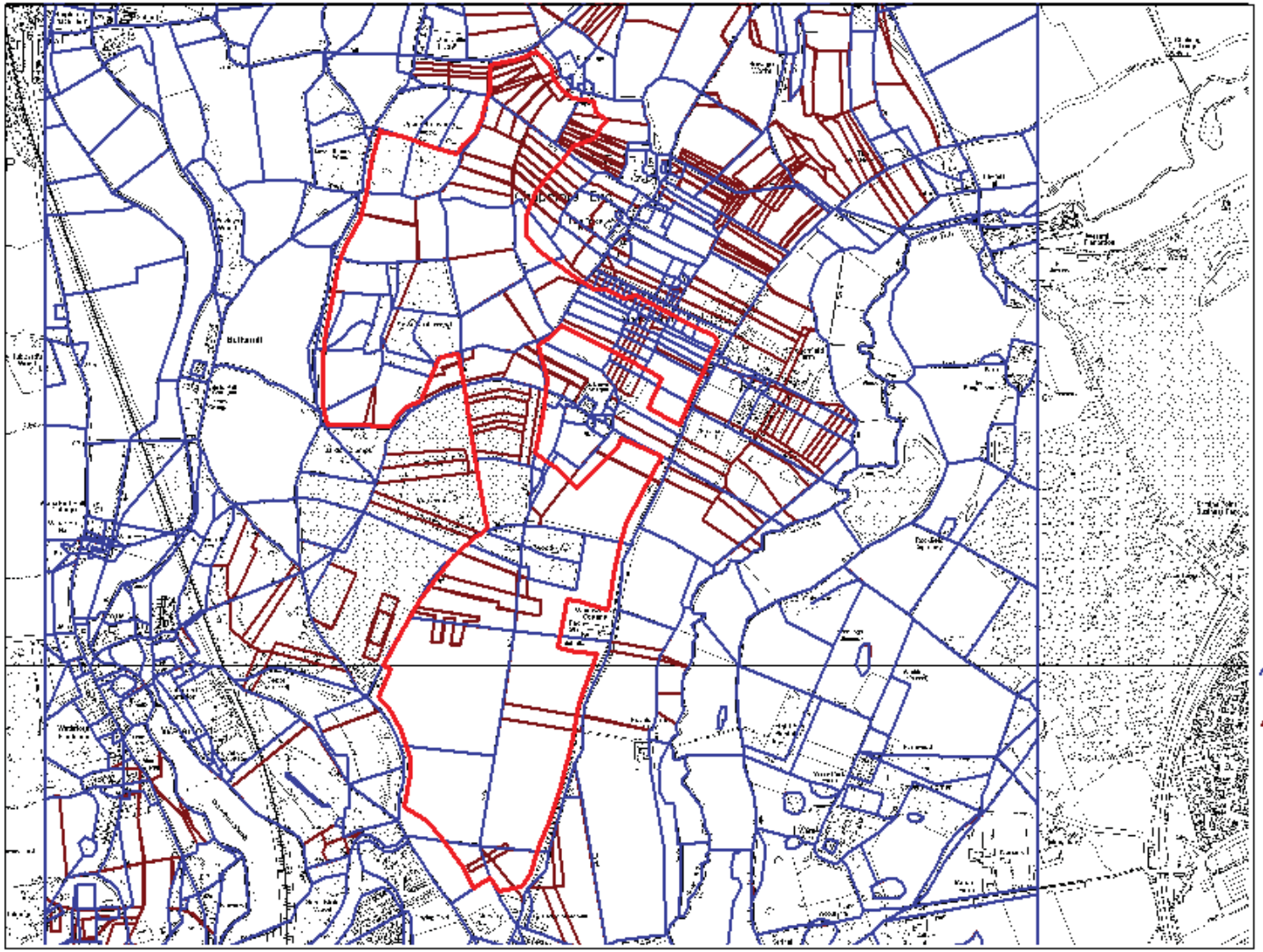

Figure 18

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Rickneys Farm lammas fields in 19th Century

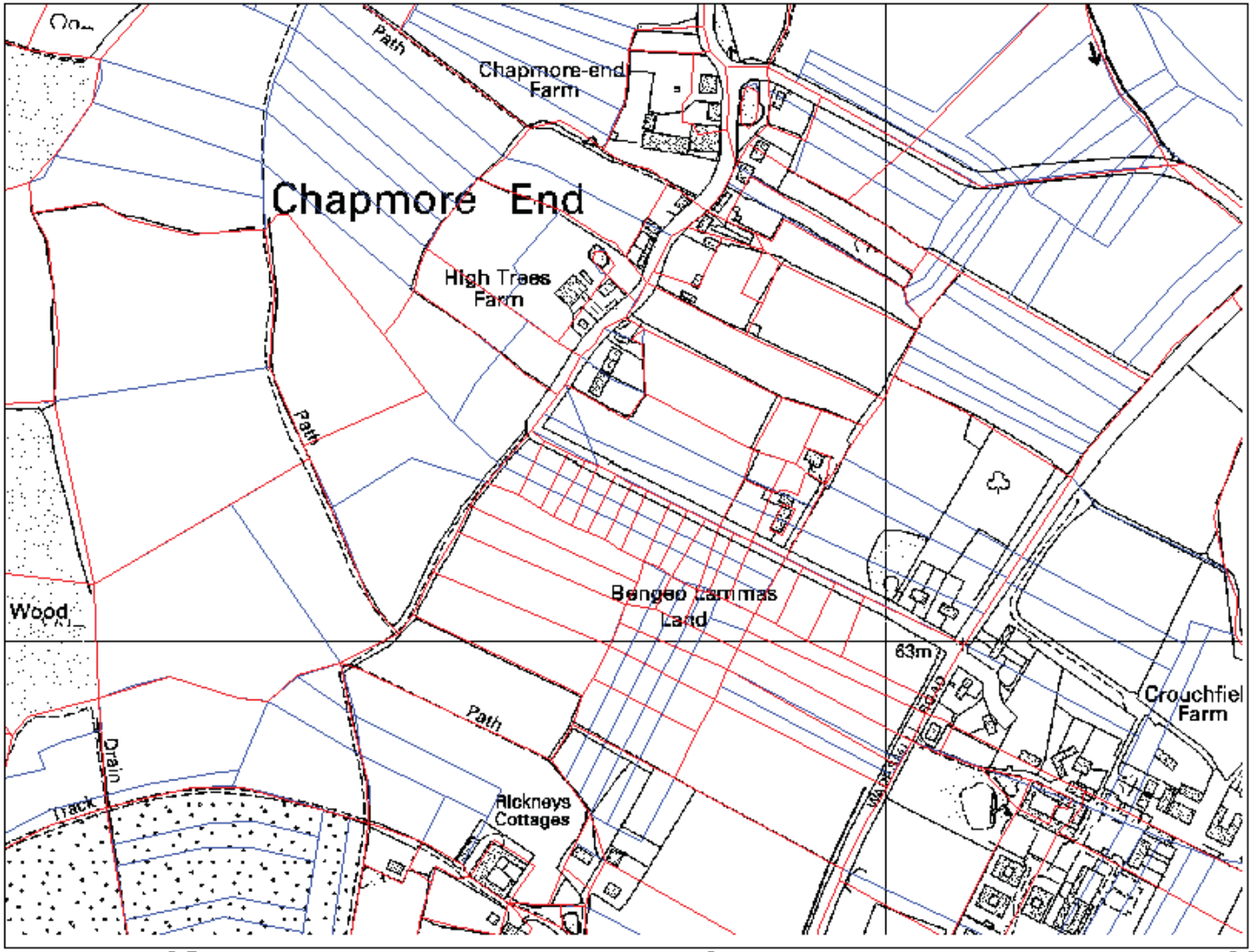

Figure 19

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Boundaries on OS 1st Ed

Boundaries on Tithe Map

The Preferred Area lies between the river Rib to the east and river Beane to the west and is technically known as an 'interfluve'. As such, the terrain 'slopes' from east to west while the central area around Rickneys is flat to 'gently sloping'. The soils are derived from chalky till and there are deposits of fluvio-glacial gravels along the margins of the valleys. The soil provides good corn growing land though its susceptibility to drying means that it is classified as Grade 3.

4.3.5 Integrated Summary Of The Historic Environment Of The Preferred Area

The historic environment has been influenced by the physical constraints of the terrain, drainage, soils and local resources. The study area is characterised by rive side settlements, usually villages; with hamlets situated on the drier, higher ground and farmsteads dispersed throughout both areas. Within the application area, the archaeological and historical evidence suggests that from much of the greater part of the post-glacial period, human activity has mostly been either transient or fairly light. There is some evidence for settlement in the late Bronze Age and late pre-Roman Iron Age but this was no more than single family occupation. There is no evidence for all but the most dispersed character of small scale, episodic settlement. This pattern has persisted up until the post-medieval period with the land being cultivated from isolated farmsteads mostly outside of the Preferred Area. What relict features that do survive are only visible as crop marks though arguably the track ways are of considerable, though unproven antiquity. Many of the boundaries are rich in hedgerow species. This is particularly noticeable in the northern half of the application area where most boundaries consist of a bank and ditch with an average specie count of between 5-6 per 30m sample length. Those boundaries that flank track ways tend to have a richer, more diverse pattern of hedgerow species. Those that enclose the old parish land (Lammas field), excluding the aforesaid track ways, only have an average of two hedgerow species present per 30 m length.

4.3.6 Conserving and Enhancing the Historic Environment

The origins and value of the surviving historic environment
The settlement pattern/built environment of the Study Siter has changed between the 18th and 21st centuries though it has retained, for the most part, the same spatial patterning of dispersed farms and hamlets. The chief exceptions to this has been the spread of Bengeo to the south which now adjoins Saccombe Rd and Waterford to the west. Much of the change around Waterford may be attributed to 'ribbon development' of the inter war years. This is also exhibited on the Saccombe road just opposite Vicarage lane. The building of the railway line in the mid 19th century and exploitation of aggregate reserves in the 20th century has also left their mark on the landscape. Elsewhere,

change has been characterised by the expansion of existing farm facilities, a pumping station and further to the east, a sewage farm. Within the application area there has been no change apart from a single building associated with sand and gravel extraction.

The principal change to the field pattern between the 18th and 21st centuries has been the removal of the last vestiges of the open arable field system of the medieval period. The immediate effect was that all the strip fields disappeared except those that were held by the parish between Chapmore end and Rickneys between the Tithe map of 1841 and the First Edition Ordnance Survey 6 inch scale of 1880. (

Between 1880 and the present day there has been a loss of over 50% of the boundaries. The surviving boundaries are shown in figure 20. The loss is fairly evenly spread throughout the application area though north of Rickneys in Lammas field all the internal land divisions have been removed. It is probable that this process post-dates the mid 20th century The current state of the field boundaries is one of neglect, with all hedges being overgrown and becoming dominated by tree standards.

The Potential Impact of Extraction of the Preferred Area on the Historic Environment

The potential for survival of archaeological features is, according to the results of the archaeological field evaluation undertaken in 1996 is surprisingly good. This has shown that there is a Late Iron Age (c100BC-AD50) enclosure (HER 7601) associated with a droveway lying to the west of Flowerash Wood (c. 47m wide x at least 70m in length). To the south of St John's Wood there is a late Bronze Age (c1000-700 BC) enclosure (HER 7609) 60m x 80m with ditches 1m wide and 0.6m deep (below plough soil). There is a second late Bronze Age sub-circular enclosure (HER 7610) about c. 42m diameter and with ditches 0.8m wide and 0.5m deep. The third features is a double concentric square enclosure (HER 7996) which may be a Romano-British (AD 50-410) temple. To what extent these sites are isolated within the landscape is not known but it is quite possible that field boundaries may survive in certain areas. The discovery of a relatively wide range of features in the form of post-holes, pits and gullies suggests that it should be possible to recover more than just territorial land divisions. Despite denudadtion by ploughing there is good potential for recovering significant archaeological remains.

Study Site 3: North of Hertford, Surviving Boundaries

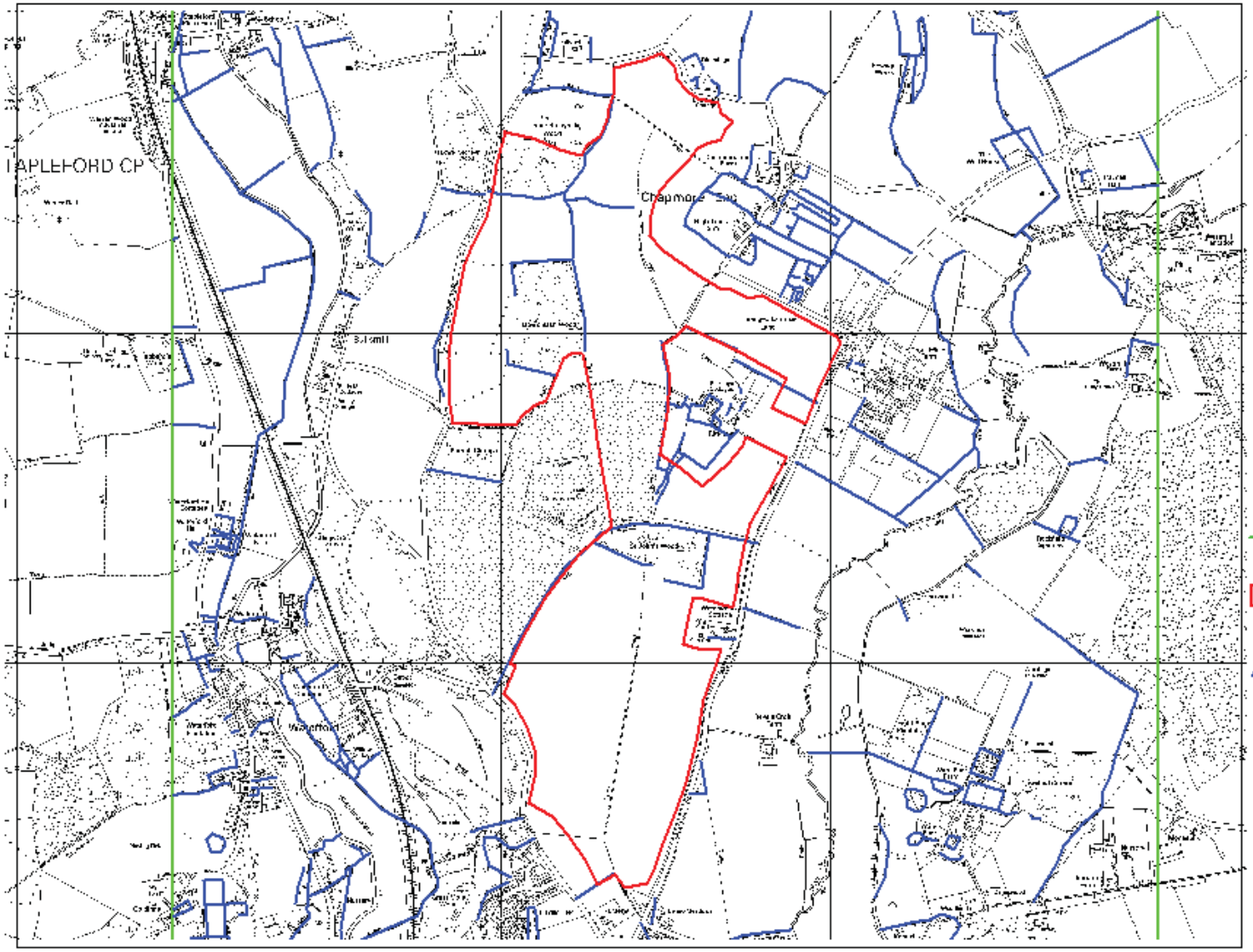

Figure 20

Eestern Study Area Boundary

Preferred Extraction Area Boundary

Surviving Boundaries

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Within the application area there are no significant buildings surviving. The historic landscape features consists primarily of track ways, some of which are only defined by a footpath, and bank and ditches of uncertain date. Some may be of medieval date, particularly those on the original route between Chapmore End and Bulls Mill. Otherwise, apart from the occasional undated extraction hollow there are no historical landscape features.

Maintaining and enhancing the historic landscape character in the Wider Landscape

The historic landscape characterisation has showed that a combination of previous mineral extraction and the removal of field boundaries has meant that the survival of ancient landscape is very fragmented. Those surviving ancient landscapes therefore have a high conservation priority. Opportunities to re-establish former boundaries should also be attempted.

Study Site 4: Symondshyde/Stanborough HER Sites

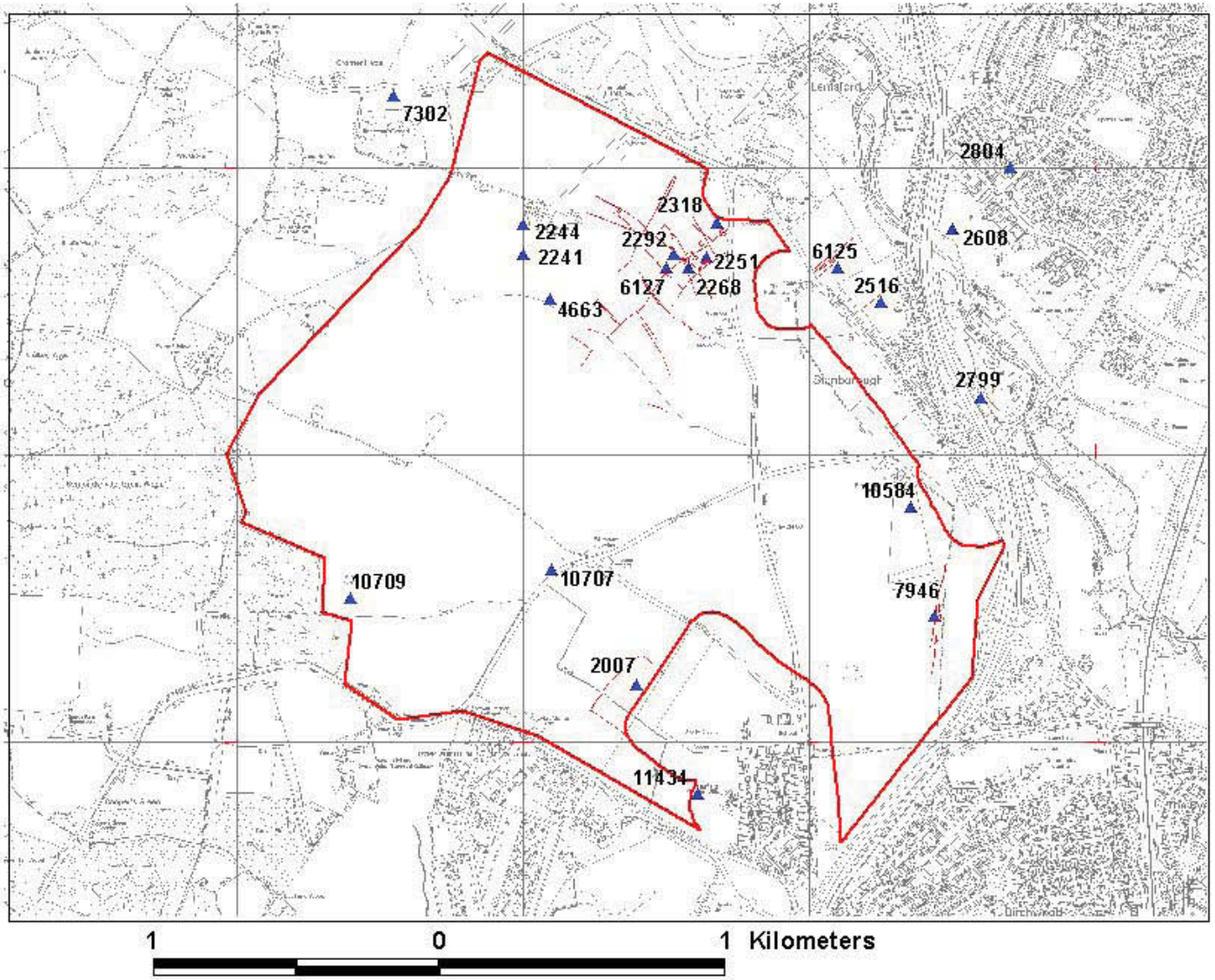

Figure 21

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4.4 Study Area 4: Stanborough

4.4.1 Summary Description Of Known Archaeology (Figure 21)

The Historic Environment Record for Stanborough shows a notable concentration of sites at the northern end of the application area with a secondary concentration on the eastern side and an even thinner scatter to the south. The earliest relic of human activity is a Neolithic axe (2806) which was found 350m to the east from the Lea valley. The earliest features date from the Bronze Age and are the remains of ditches that surrounded burial mounds (2241, 2244, 10584). There are two other circular features which from their size suggest they were probably early to middle Iron Age in date (2251 & 2268). Most of the Iron Age evidence comes from just outside the application area. There was a gold coin recovered from near Cromer Hyde (7302) and late Iron Age pottery to the east of the river Lea (2804). There are crop marks of a sub-rectangular enclosure near Cooper's Green lane (10707). Evidence for Romano-British occupation is very slight with only a single sherd of Samian coming from the valley bottom (2799); a Roman road (4663) is suspected to cross the application area but this remains unproven. A majority of the linear and rectilinear crop marks remain undated (i.e. 8 out of a total of 20 sites). Five sites might belong to either the Iron Age or Roman periods (11434, 2292, 2318, 6127, 7946 and 2007). Though the field boundaries and track ways (7946 & 10709) could be medieval, the remainder are undated (2516, 6125). The site of Stanborough Bury farm may be of medieval date but the remainder of buildings are of post-medieval date. The oldest surviving features are most probably the track ways and lanes that traverse the area.

4.4.2 Summary Of Tenurial /Estate History

In the late Anglo-Saxon period the Stanborough area formed part of the Hatfield estate. Hatfield was granted to the Abbey of Ely by a lay lord via the crown. It had an extensive area of woodland at the time of the Domesday Book survey. The data from Domesday Book shows that Hatfield alongside Knebworth and Aldbury had the highest ratio of swine to ploughland in the county (2000 swine to 30 ploughlands). Stanborough appears to have lain within the territory of Cromer Hide, one of the many sub-manors of Hatfield. There is no mention of Cromer Hide earlier than the 16th century when it belonged to Brocket Hall. Nevertheless, the suffix 'hide' almost certainly indicates an ancient free-hold property that owed service to the chief manor in the form of knight service. As part of Cromer Hide, Stanborough would have passed through the hands of a succession of lay lords from the Brockets in the 15th century to the Read's in the 17th and thereafter, the Westingtons to the Kerr's in the 19th century.

Stanborough/Symondshyde HLC: Current Landuse

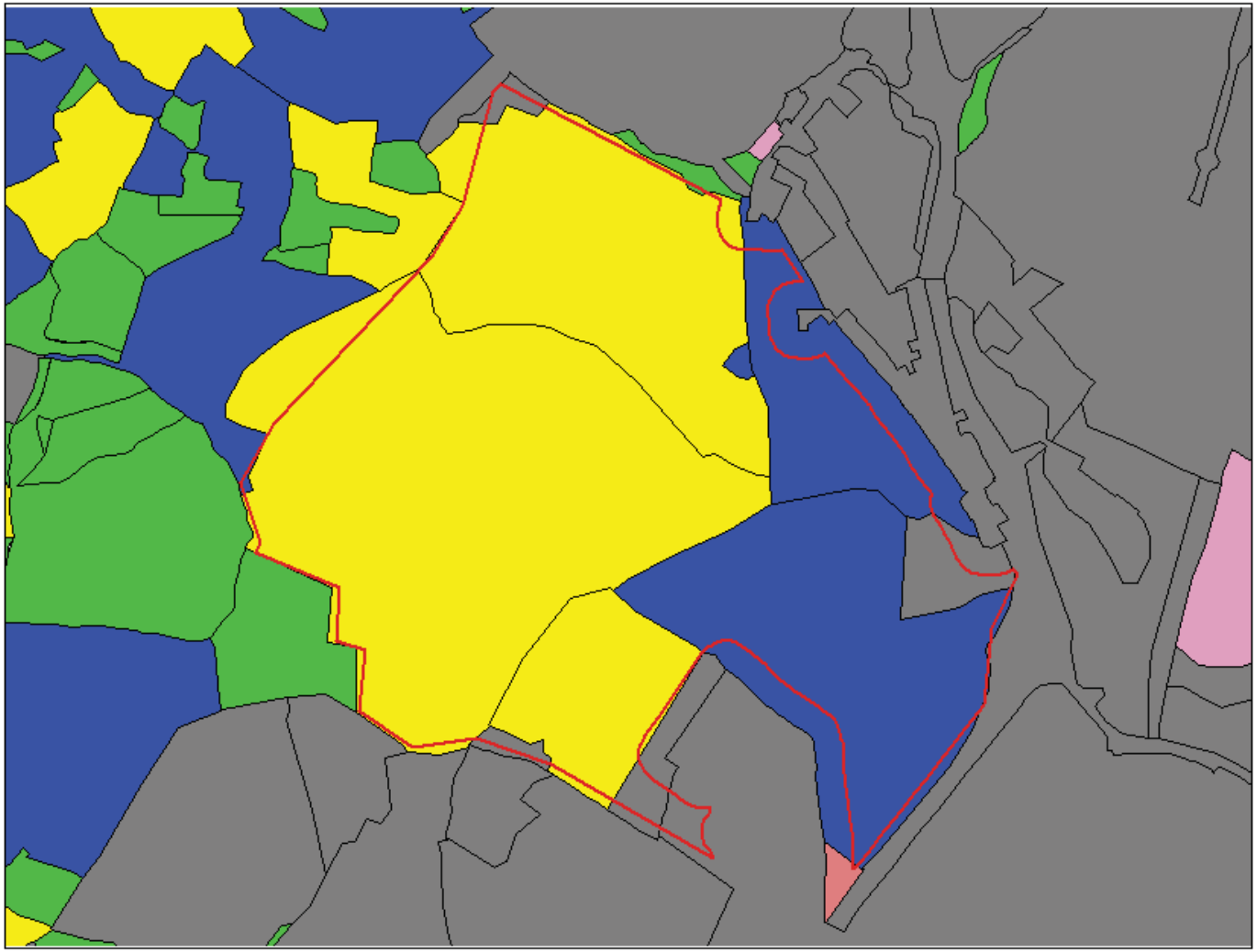

Figure 22

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- Preferred area
- Woodland
- 20th Century Created Landscapes
- Commons
- Historic parks
- 18th to 20th century field enclosures
- Meadows
- Prairie fields
- Ancient irregular enclosed fields

Stanborough/Symondshyde HLC: Pre-1950 Landuse

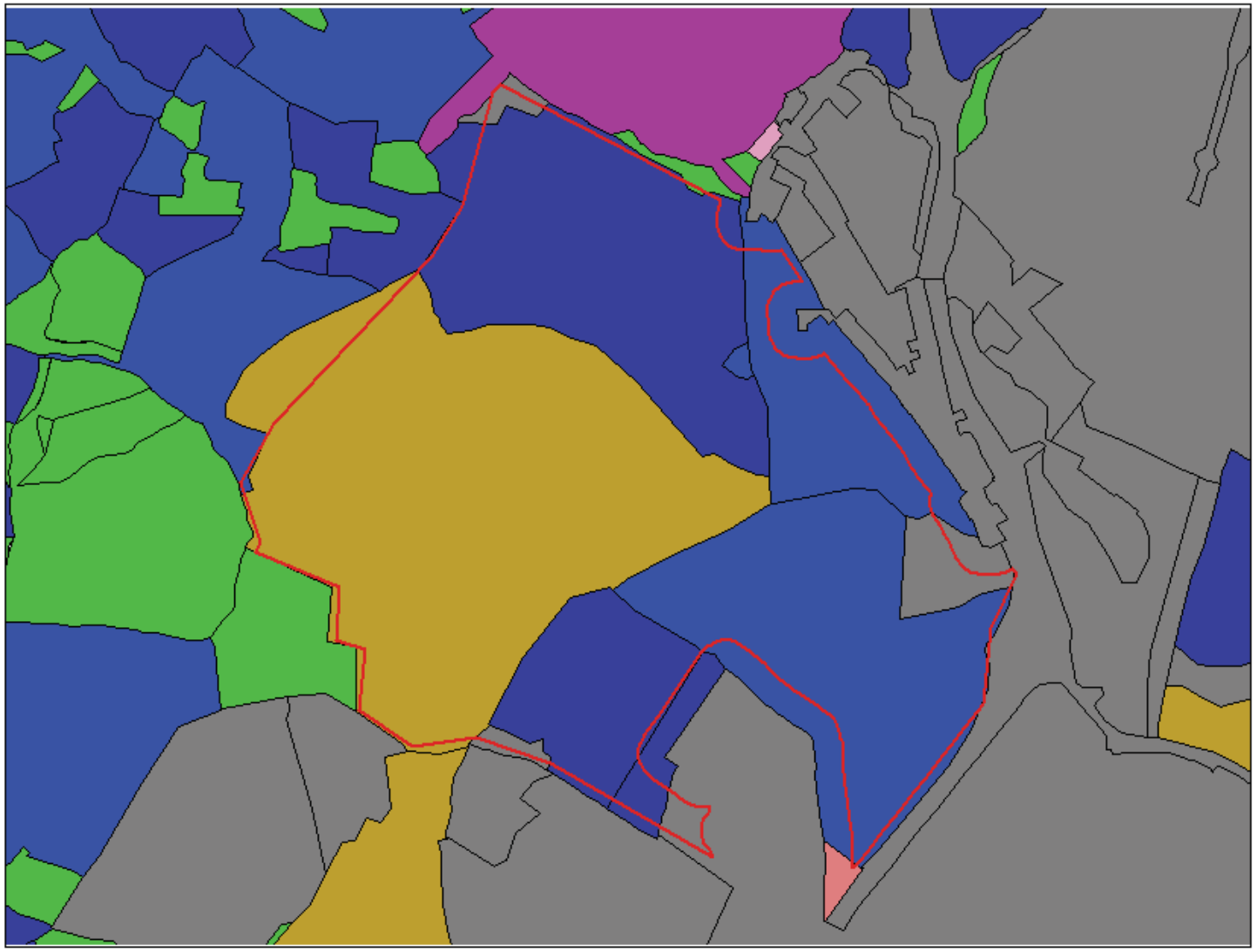

Figure 23

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- Preferred area
- Woodland
- 20th Century Created Landscapes
- Commons
- Historic parks
- 18th to 20th century field enclosures
- Meadows
- Prairie fields
- Ancient irregular enclosed fields

4.4.3 Historic Landscape Characterisation (Figures 22 and 23)

Figure 22 shows the land-use for the Study Area around the Stanborough area in 2000. The area is dominated by a mixture of 20th century landscapes including residential development, new field enclosures, leisure development and the airfield/factory complex. There is also large areas of 'prairie' fields with significant areas of woodland and ancient irregular fields in the centre and western half of the area. Figure 23 shows the land-use taken from the pre-1950 ordnance survey 6" maps. This has a similar pattern of landuse, but with a high density of ancient irregular fields and later – post 18th century – enclosure. The Stanborough Area itself was completely enclosed before 1950.

4.4.4 Summary Of Results From Map Analysis/Field Survey (Figures 24 and 25)

The only information that has been used to analyse the area of Stanborough are 19th cartographic sources and field survey data. Accordingly, it is difficult to say much about the pre-enclosure character of the landscape. Nevertheless, it is possible to observe from the 19th century cartographic evidence certain boundary characteristics which indicate pre-19th and possibly even medieval land divisions.

An examination of the earliest map (Tithe map of 1838) suggests that the boundaries follow a chronologically distinctive pattern of development (figure 24). The communication system as revealed in the pattern of lanes and track ways shows that they are the oldest element in the 19th century landscape. This is revealed in the way that the field boundaries either respect them (i.e. abut onto them) or appear to project on from their former path. In addition, some of the boundaries are obviously longer and curvilinear onto which other, presumably secondary boundaries abut. There seems to be several elements of pre-19th century landscape which point to there being much larger blocks of field units and possibly former track ways that cross the area. In addition, some of the boundaries have such pronounced curvilinear characteristics that they suggest the presence of former woodland. It is therefore possible to summarise the pre-19th century as comprising ancient enclosure combined with vestiges of assarting (piecemeal woodland clearance). This has resulted in the creation of an irregular landscape which though greatly modified, still persists into the present century.

Study Site 4: Stanborough tithe map

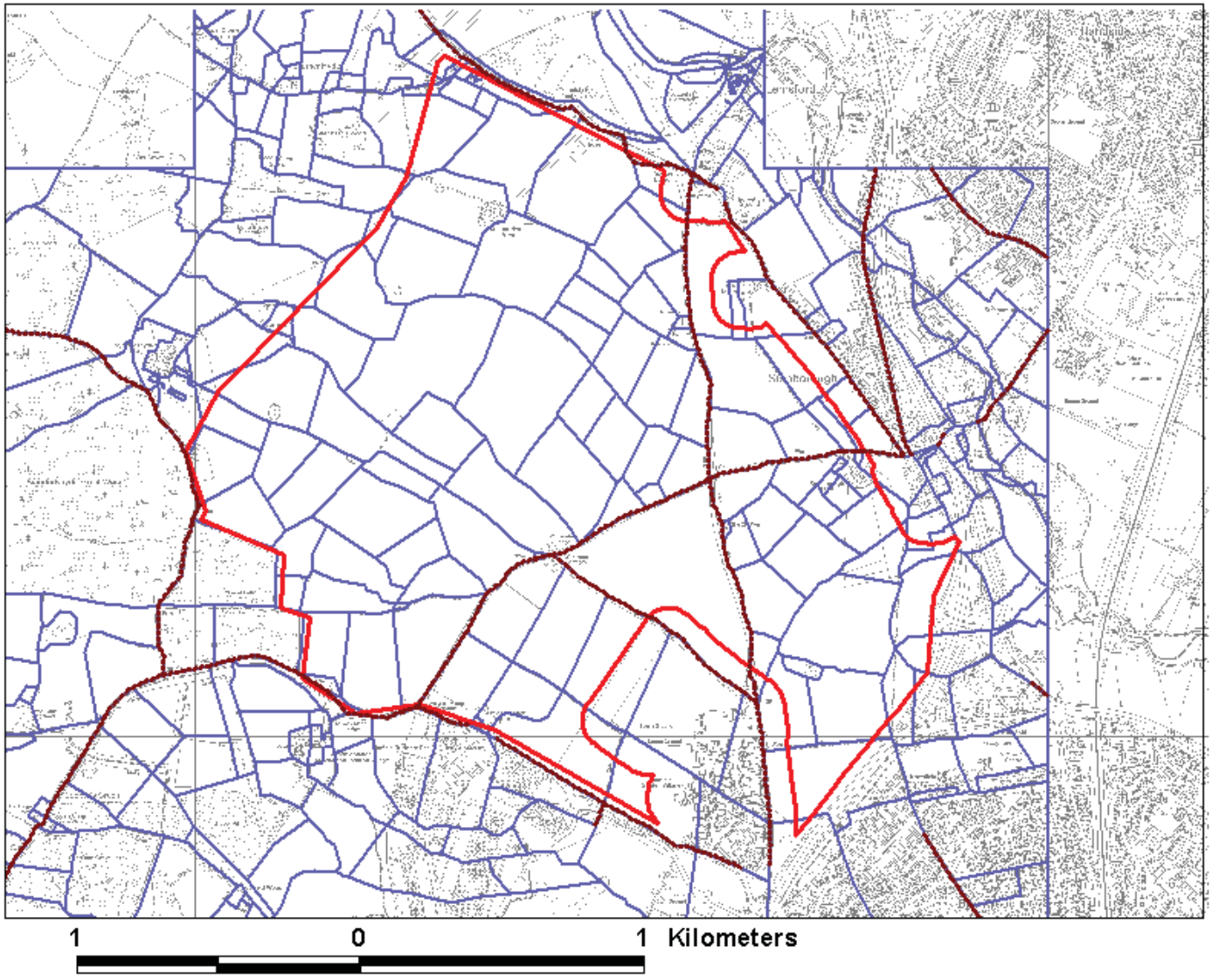

Figure 24

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Stanborough Area

Routes on Tithe Map

Boundaries on Tithe Map

Study Area 4: Stanborough field boundaries in the 19th century

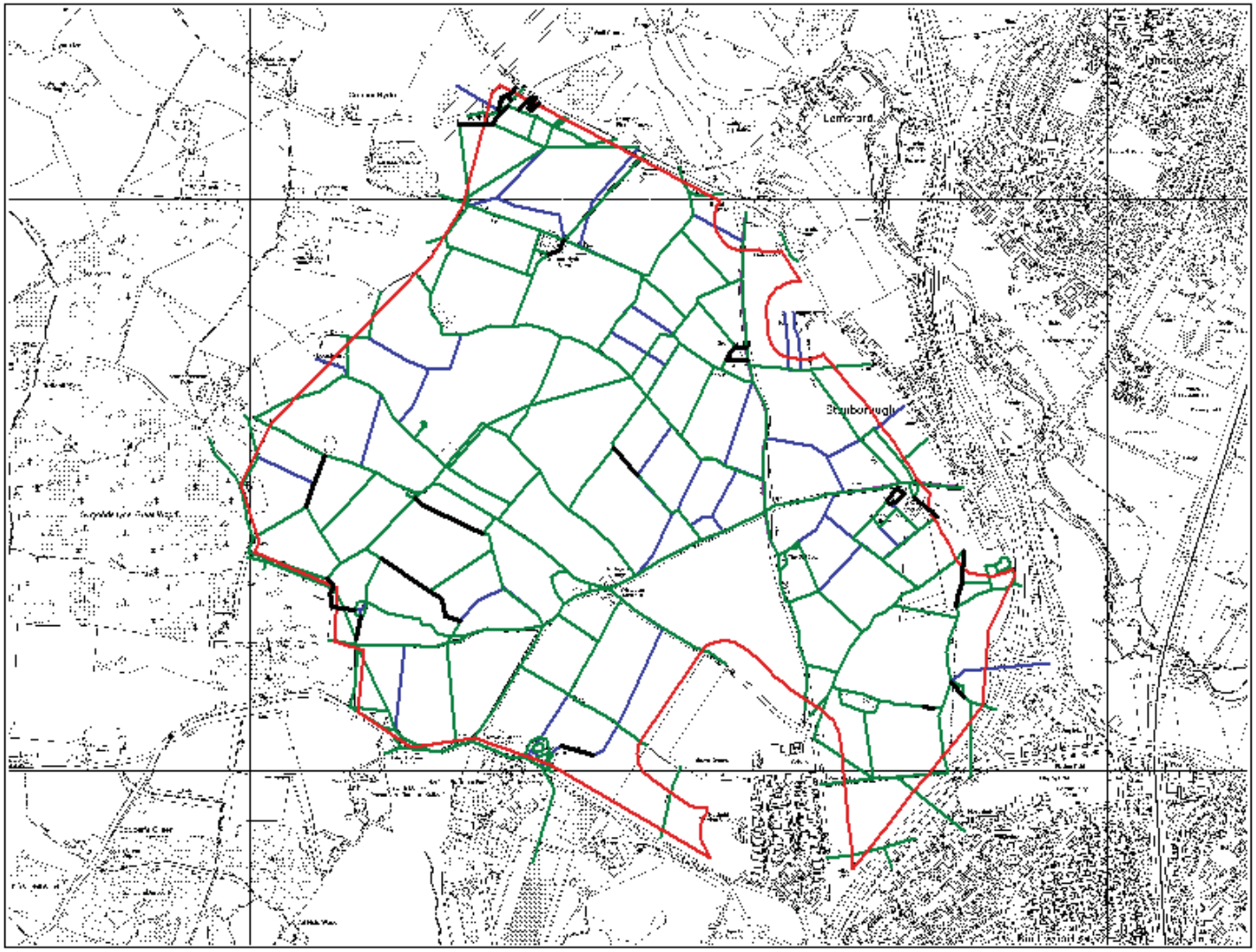

Figure 25

Stanborough Area

Suviving boundaries

OS 1st edition boundaries 1883

Tithe Map boundaries 1838

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The changes in the era of High Victorian farming as revealed in the maps of 1838 and 1883, show a fairly consistent pattern of field amalgamation throughout the application area (figure 25). Between 1880 and 1925 the average size of field increases but thereafter stabilises until after 1947. In the second half of the 20th century there is a further reduction in the number of boundaries and consequent increase in average field size. By the time the field survey was made (July 2003) only three boundaries, of which two were trackways, survived to the west of Coopers Green lane. To the east of Coopers Green lane and Green lane a few more boundaries survive but this is because they coincide with drainage ditches.

The settlement pattern has changed to the south and east of the application area due to ribbon development in the inter war years and the continuing expansion of Hatfield. Within the application area only Stanborough Bury farm pre-dates the Tithe map of 1838 (figure 25). Thereafter, several isolated dwellings and Cromer Hide farm were constructed but none have been added to the area since the mid 20th century, apart from farm buildings.

The pattern of communications has remained essentially the same since the 19th century. The development of the A1(M) has not greatly altered this though it lies immediately adjacent to the application area, since it follows, more or less, the original route. The lanes that survive toady were all in use in the mid 18th century. However, it is quite clear that they represent a decline in the number of routeways that existed in the 19th century. The lanes and trackways represent the oldest surviving relict features in the landscape. Coopers Green lane is possibly the oldest while Great Braitch lane is redolent of antiquity an indicates land reclamation. Both were probably of medieval date though an earlier date cannot be ruled out.

The soils within the application area are derived from fluvio-glacial and Aeolian silty drift which produces a deep, well drained silty soil (Agricultural Land Classification: Grade 2). The terrain ranges from flat to gently sloping, with only a few drainage ditches to drain a comparatively large area. Those boundaries which lie adjacent to the lanes and road tend to have the highest number of hedgerow species present which accords with the interpretation of the boundary chronology in the area. The only exception to this is the continuation of Coopers Green lane beyond Green lane to the east. Elsewhere, the boundaries to the south of Great Braitch lane have the highest number of hedgerow species in the area (between 4 and 6). Most of the hedgerows are now unmanaged and support a vigorous growth of tree standards. Although the application area reveals signs of once having supported woodland in the medieval period, there is no surviving woodland since at least the 18th century.

Study Area 4: Stanborough/Symondshyde buildings on old maps

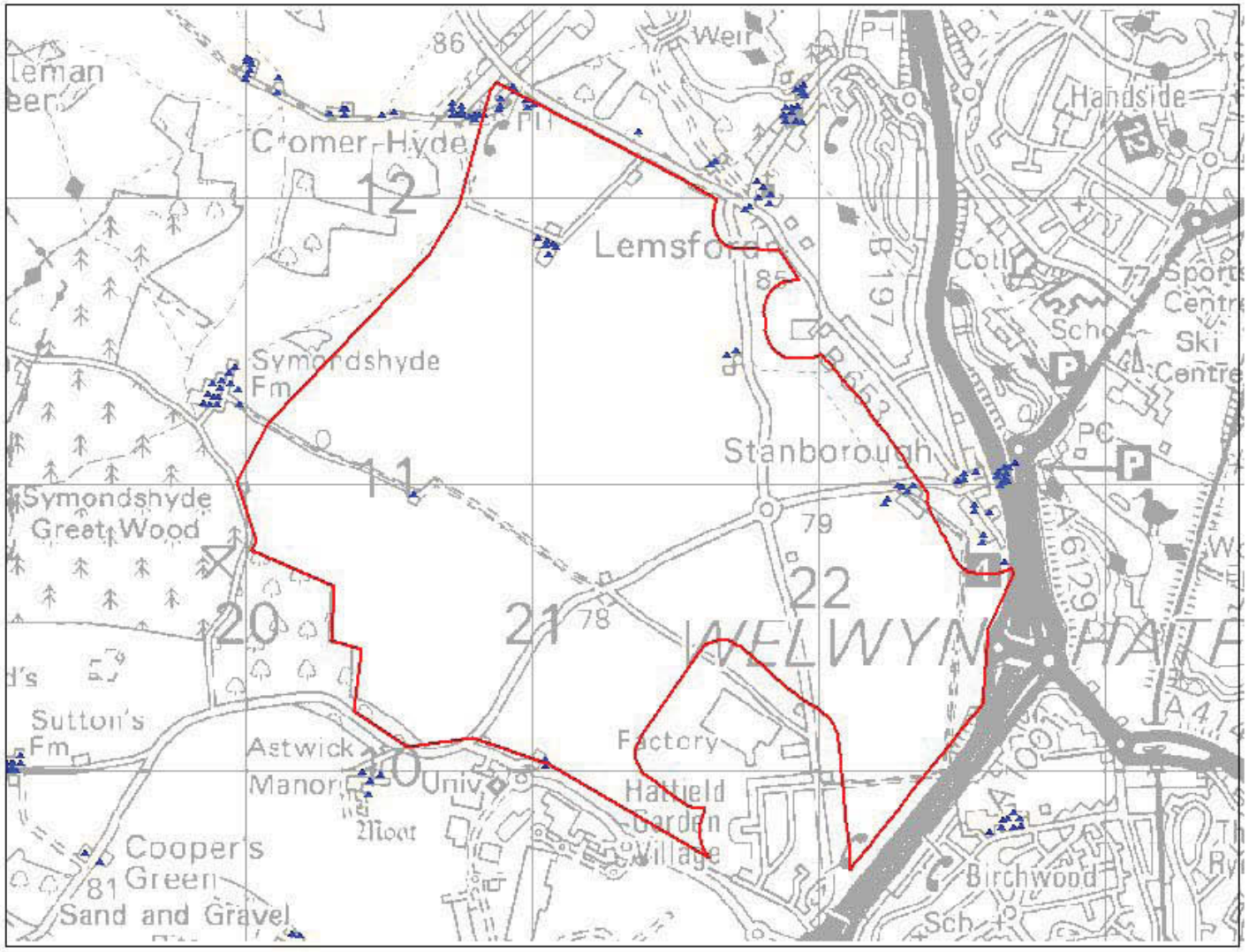

Figure 26

Stanborough Area

Buildings

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4.4.5 Integrated Summary Of The Historic Environment Of The Area

There appears to be an arc of archaeological sites on the north and eastern side of the application area which lies parallel to the river Lea. Whether this is simply coincidence is not certain but it might reflect that these sites lie on the upland plateau area above the river valley to the east. Their precise relationship to the river valley is always going to be difficult to establish due to 20th century urban expansion.

The application area is flanked by the ancient farmsteads of Symondshide, Cromer Hyde and Astwick manor to the west and south, and Durantshide (Brocket) to the north and Hatfield to the east. It is probable that all these establishments may have farmed this area at some time during the last 700 years. The morphology of the boundary system together with names like 'Great Braitch lane' point to the existence of former woodland from which a mix of large arable fields and perhaps smaller enclosures developed. This development was piecemeal and irregular which strongly influenced the character of the 19th century landscape. The evidence is there in the form of the cartographic record. However, the great majority of field boundaries disappeared between 1880 and 1925. What survives is barely representative of what has been lost. The oldest element are the routeways and their associated vegetation which contains a relatively high diversity of species and is consequently a rich habitat for wildlife. The landscape is, apart from adjacent woodland and the overgrown hedgerows, relatively sparse. There are no obvious relict features since the terrain has been ploughed flat in antiquity.

4.4.6 Conserving and Enhancing the Historic Environment

The origins and value of the surviving historic environment
Before the 20th century the built environment consisted of scattered farmsteads and manor houses. Most of these establishments can be traced to the medieval and early post-medieval periods. This picture remains true for most of the historical period until the mid-20th century. Thereafter, the development of Welwyn Garden City from the north east and Hatfield New Town from the south east has had a dramatic impact on the visual amenity of the area. At the time of the Tithe Survey of 1838 only Stanborough Bury existed within the application area. By 1880 Cromer Hyde Farm and Old Cottage had appeared. This pattern remained stable until the early 20th century when other cottages were built along Coopers Green lane; there have been further additions in the inter war year period but none since that date except for the general spread of urban development along the eastern and southern margins of the application area.

The field pattern of the early 19th century was a product of the piecemeal enclosure and reclamation of woodland. The configuration of trackways and boundaries suggests that some of the fields were

probably farmed on an open field basis. That is, a mix of narrow strip holdings set within comparatively large unenclosed fields. It must be emphasised that this evidence is based solely on the cartographic evidence and no assessment of potential manorial documents has been made. The Tithe map of 1838 probably represents the greatest extent of enclosed fields ever attained (see figure 24). Thereafter, there is a marked tendency to increase the average size of fields through boundary loss. Between 1838-1880 field amalgamation takes place throughout the application area with the exception of the area to the south of Cromer Hyde Farm. This process accelerates between 1880 and 1925 and then remains relatively stable between 1925 and 1972. However, many of these larger 'field units' were sub-divided into different crops so field size cannot necessarily be equated with cultivation practices. By the early 21st century most of the field boundaries to the west of Coopers Green lane had disappeared.

The Potential Impact of Extraction of the Preferred Area on the Historic Environment

As mentioned above, (4.4.4) it is the lanes and trackways that represent the oldest surviving relict features in the landscape and were probably of medieval date. They are also of value for their landscape and biodiversity and should be a high priority for preservation.

The field boundaries which have survived coincide- with trackways and in one case a drainage ditch. The smaller fields only survive as horse paddocks, east of Green lane, while on the south side of the application area near Astwick Manor farm they survive because they lie adjacent to substantial drainage ditches.

The survival of other elements of the historic environment is confined to the site of Stanborough Bury, a few country lanes, trackways and boundaries which happen to lie adjacent to drainage channels. Some of these features are comparatively modern such as the trackways leading to Cromer Hyde Farm and the south east end of the trackway to the north of Coopers Green lane and Green lane cross roads. The terrain slopes gently towards the Lea valley and is almost, without exception, featureless.

With regards the buried historic environment there is a notable concentration of crop marks sites on the north and eastern sides of the application area. To what extent this represents a true distribution pattern isdebatable . However, as the pattern appears to lie in a parallel arc to the river Lea it is quite probable that their location conforms to prehistoric man's preference for plateau-edge locations. That is, that Bronze Age funerary monuments and later Iron Age occupation sites were deliberately located overlooking river valleys. In this way, this maximised the resource options open to human settlement. In the case of Stanborough, the river and it's adjacent valley floor to the east, offered one set of potential resources (water, grazing, fishing, fowling

and other riverside resources such as reeds and willows for basket making) while the other area to the west offered another set of resources (woodland products such as timber, fuel, oak and beech mast for swine, upland pasture and good cultivatable soils). Therefore this pattern conforms to the ideal model of preferred settlement location. Nevertheless, such an interpretation cannot easily explain why so many late Bronze Age burial mounds were located within what later became a preferred settlement zone. If the Hertfordshire Historic Environment Record data is a true reflection of the presence of archaeology then there is a clear difference of land use between the Bronze Age and subsequent periods. This question cannot be addressed here but it is clear that one of the most significant aspects of the surviving archaeology is it's potential to shed light on how early man first exploited the landscape and adapted to his environment.

5.0 Comparisons between areas

Of the four Area being considered, only one (Rickneys) has been archaeologically evaluated. Coursers Farm and Hatfield have not been directly evaluated but both were located adjacent areas that have been evaluated. By contrast, Stanborough has not been evaluated and it's location adjacent to the Lea valley, makes it a potentially important area for requiring further work. The variation in the different type of archaeological techniques applied to each site may be summarised as follows:

Location	Area	% eval.	DBA	Field walking	AP reassessment	Geo-Phys	Trial Trench
Coursers Farm							
Hatfield Aerodrome							
Rickneys	143 ha	1.8	* (1)	* (2)	*	* (3)	
Stanborough							

Table 8 Summary of archaeological techniques applied to the four aggregate sites

Notes:

1) 10m interval; few areas of concentration
2) magnetometer across entire area. Detailed mag. Survey of 5.28 ha; at southern end 'broad scanning of 13 ha'.
3) To characterise, not to excavate in detail. Targeted trenches equating to 1608 sq. m.
4) 29 ha existing area (88 ha in all of which c. 20 ha equates to areas outside present discussion).

In terms of terrain location, two of the Areas (Coursers Farm and Hatfield) can be described as 'mid-plateau' one Area (Stanborough) as 'plateau edge' and Rickneys as an 'interfluve site'. While three of the Areas (Coursers farm, Hatfield and Rickneys) are of similar agricultural quality (Grade 3), the fourth Area (Stanborough) is Grade 2.

All Areas exhibit variations in the quantity and quality of their archaeological data. Coursers Farm and Hatield area comparatively poor in Historic Environment Record (HER) entries, while Rickneys is much richer as a result of being evaluated. By contrast, Stanborough has a concentration of HRER entries on it's northern side which are all derived from aerial photography. It is possible to tabulate this information, though it must be emphasised that this only reflects the state of current data and not it's potential.

Location	Palaeo	Neo-BA	BA	IA	IA-RB	RB	Medieval	unknown
Coursers Farm			3				1	1
Hatfield Aerodrome								
Rickneys	1	1	4		1	1		2
Stanborough			5		8 *		1	1

Table 9 Known archaeology within the application area (numbers refer to no. of sites)

* possible

Location	Ring ditch	Rectang. enclosure	Curvi/sub rectangular	pits	linears	Isolated finds	other
Coursers Farm	3	0	0	0	1	0	1
Hatfield Aerodrome	0	0	0	0	0	0	0
Rickneys	3	3	1	1	1	1	0
Stanborough	5	2	2	0	5	0	1

Table 10: Typology of archaeological features within the application areas

The variation in the data, both in terms of analytical techniques and known archaeology make it difficult to be completely objective assessing the archaeological potential of the four sites. Nevertheless, when the Areas are examined in relation to their environmental context it is possible to summarise the probable potential of those areas in tabulated form.

Location	Upstanding sites	simple	intermediate	complex	class	Score #
Coursers Farm	0	4	1	0	low	5
Hatfield Aerodrome	0	0	0	0	unknown	0
Rickneys	0	6	4	0	medium	14
Stanborough	0	10	5	0	high	20

Table 11 Summary of archaeological potential

the scores are calculated as follows: simple = x 1; intermediate = x 2; complex = x 3

It will be seen that by basing the score system on what is known about the application areas results in Hatfield attaining nil points. This simply reflects the lack of proper evaluation. By comparing Hatfield Aerodrome application area with the area immediately to the north east, it becomes apparent there is a good probability that the same level of archaeology will be present throughout the site. If this were so then the number of sites (of all periods) would be between 10 and 20. Accordingly, this would produce an overall ranking as follows:

Coursers Farm would be classified as having a low archaeological potential. Hatfield & Rickneys would be classified as having a medium archaeological potential. Stanborough would be classified as having a high archaeological potential.

It must be emphasised that the term ‘low’ is relative to the present list of four sites and this assessment is, of necessity, provisional since only Rickneys has been formally evaluated.

Appendix 1: GIS Database

Field name	Description
Edge_Type -	Each line digitised is characterised as either a boundary, a communication route, a piece of water or if it is just a political boundary (for example a road can also run along a parish boundary). The data is then entered in a range of fields particular to each type of line data.
Dig_Source –	The data used as a guide to the digitising of the maps. Aerial photos are loaded onto the G.I.S. system to scale, as are Ordnance Survey 1st edition maps from the last quarter of the nineteenth century. Any errors/consistencies can therefore be traced back to these digitised sources. For maps before the O.S. 1st edition the human digitiser uses his/her best judgement. Therefore any errors/consistencies can be traced back to the most recent map digitised for an area before the O.S. 1st edition.
B_Type –	If a line is deemed to be a boundary then it is characterised as to the type of boundary it is. For example a hedge (H), a hedge with trees (stands)HT, a ditch (D), trees (T), wooded (W) or if the primary information is unclear an X.
B_Surv –	Does the boundary survive?
B_Change –	Has the boundary been straightened or realigned? The boundary survives but on a slightly different axis.
B_Text –	Any additional or useful information.
	If a line is considered to represent water or the edge of water (for example a pond or lake) the following series of fields are filled in as appropriate:
W_Name –	Water course name.
W_Type –	Is the water natural or artificial or is it unclear which?
W_Surv –	Does the body of water survive?
W_Change –	Has the water been diverted or canalised?
W_Catch –	River catchment; the name of the water course which the feature drains into.
W_Text –	Any additional or useful information.
	If the boundary is a communication route the following fields are used:
R_Name –	The modern (2003) name of the communication route.
R_Surv –	Does the communication route survive?
R_Type –	The name of the communication route according to the source being digitised.
R_ModU-	The modern (2003) use of the communication route.

R_HistU –	The type of use of the communication route according to the source being digitised.
R_Change –	Has the communication route been straightened or realigned.
R_Text –	Any additional or useful information.
	If a boundary is political it can be entered in the following fields on its own or in addition to boundary, water or communication data:
Politic_B –	The type of boundary, for example parish, district, county or more than one type.
PB_Surv –	Does the political boundary survive?
PB_Change –	How has the political boundary been altered?
PB_Text –	Any additional or useful information.
Source –	Name of source.
Source_No –	Reference number of source at Hertfordshire Archives and Local Studies Library.
Map-Q –	Quality of source being digitised. For example is it a sketch and does it survive in good condition?

GIS Fieldwork Recording Database

Field name	Description
Edge_Type -	Each line digitised is characterised as either a boundary, a communication route, a piece of water or if it is just a political boundary (for example a road can also run along a parish boundary). The data is then entered in a range of fields particular to each type of line data.
Dig_Source –	The data used as a guide to the digitising of the maps. Aerial photos are loaded onto the G.I.S. system to scale, as are Ordnance Survey 1st edition maps from the last quarter of the nineteenth century. Any errors/consistencies can therefore be traced back to these digitised sources. For maps before the O.S. 1st edition the human digitiser uses his/her best judgement. Therefore any errors/consistencies can be traced back to the most recent map digitised for an area before the O.S. 1st edition.
B_Type –	This characterises the nature of the boundary in more detail as a result of inspection of the boundary in the field.
R_ModU –	The modern (2003) use of the communication route.
B_Length –	The length of the field boundary sampled during fieldwork.
B_Width –	The average width of the boundary in metres.

B_Height –	The average height of the boundary in metres.
H_Species & ST_Trees –	The species found within the field boundary during a field inspection. A rudimentary rule of thumb is that for every hedgerow species present one hundred years of existence is represented.
FW_Comment –	Any information which may be useful. For example the condition and management of the boundary.
FW_Name –	The author of the fieldwork.
FW_Date –	The date of the fieldwork.
FW_Sheet –	The number given to the boundary during fieldwork.
H_No_Species –	The number of species contained within the hedgerow.

APPENDIX 2: List of maps digitised

Study Site 1: Coursers Farm

G.I.S. Theme Name	*HALS reference*	*Date*	*Source Name*
Coursers_1sted	Landmark tiles TL10NE TL10SE TL20NW TL20SW	1883	O.S. 1st Edition
Build_1ste_tytt	Buildings for source above.		
Shenley_tithe_1840	DSA4/94/2 4/MR255	No date, but the Award dates to 1840.	Shenley CP tithe map.
Build_shenley_tithe	Buildings for source above.		
Ridge_tithe__1838	DSA4/81/2 7/MR2/9	1838	Ridge tithe map
Build_ridge_tithe	Buildings for source above.		
71217_1830	71217	1830	Plan of Salisbury Hall Estate in the Parish of Shenley Hertfordshire.

Build_71217	Buildings for source above.		
D_ebnp44_1829	D/EBN P44	1829	Shenley Lodge Estate
Decdpc6_1818	D/ECD PC6	1818	A map of the habitations in those parts of four parishes which parts are nearer to London Colney than to any one of their respective parish church.
Build_d_ecdpc6	Buildings for source above.		
decdp4_1802	D/ECD P4	1802	Map of Tyttenhanger Farm.
Build_decdp4_1802	Buildings for source above.		
Pc_484_1777	PC484	1777	Tyttenhanger Estate 1777
Build_pc484	Buildings for source above.		
D_ecdp1_1767	D/ECDP1	1767	A plan of Bowmans Green Farm in the parish of Ridge in the county of Hertford. The estate of the Honourable Charles Yorke. Surveyed by Joseph Cole.
Build_d_ecdp1	Buildings for source above.		
Deb2067be31_17cen	D/EB2067BE31	Early 18th century	Parish boundary/ Tittenhanger (sic) Park

Study Site 2: Hatfield

G.I.S. Theme Name	*HALS reference*	*Date*	*Source Name*	
Hataerotytt_1sted	Landmark tiles TL10NE TL11SE TL20NW TL21SW	1883	O.S. 1st Edition	*These two themes are used for both hatfield aerodrome and stanborough*
Build_1ste_hataer	Buildings for source above.			
80250_1875	80250	1875	The Hertfordshire estate of Thomas Foreman Gape Esq situate (sic) in the several parishes of St Peters, St Stephens and Hatfield in the said county.	
Build_80250	Buildings for source above.			
Hatfieldcp_tithe	DSA4/47/27/MR3/10	1838	Hatfield CP tithe map.	*These two themes are used for both hatfield aerodrome and stanborough*
Build_hatcp_tithe	Buildings for source above.			
D_ecp_p2_1821	D/ECP P2 .	1821	Plan of the Manor of Park in the hamlets of Sleap and Smallford in the parishes of St Peter and St Stephen in the County of Hertford.	
Build_d_ecp_p2	Buildings for source above.			
75165_1630	75165	1630	A topographical description and exact [use&function] of the Manor of Harpesfield Hall in the parish of St Peters in the county of Hertford taken in 1630. [unclear].	
Build_75165	Buildings for source above.			

Study Site 3: Rickneys

G.I.S. Theme Name	*HALS reference*	*Date*	*Source Name*

Rickneys_1sted	Landmark Map TL31NW TL31SW	1883-4	O.S. 1st Edition
Build_1ste_rickneys	Buildings for source above.		
Qse14_1mrs_1851	QS/E/14 1/MRS	1851	Bengeo, Sacombe and Stapleford enclosure map.
44210_1850	44210	1850	Ware Park Farm.
Build_1850_rickneys	Buildings for source above.		
Build_waretithe_1845	DSA4/98/2 4MR256	1845	Ware cp tithe map.
	Buildings for source above.		
Bengeocp_tithe_nd	DSA4/16/2 7/MR1/1/2	No date, but the award dates to 1841	Bengeo cp tithe map.
Build_bentithe_1841	Buildings for source above.		
D_el_p31_1835	D/EL/P31	1835	Map of Burrs Green Farm the property of Mr Edward Mardell.
Build_1835_rickneys	Buildings for source above.		
D_eb1396t1b3_1812	D/EB1396 T1 bundle 3	1812	Plan of Goldings and Broad Oak Farm.
Build_1812_rickneys	Buildings for source above.		

D_p22_29_1_1732	D/P22/29/1	1732/3	By W. Whittenberg, Hartford January 16th 1732/3. [Map of Waterford]
Build_1732_rickneys	Buildings for source above.		
Deas_650_c18	D/EAS650	Early 18th century	Rickmers Farm.
Build_rickmers_early17c	Buildings for source above.		

D_esap1_1690	D/ESAP 1	1690	Benwick Hall.
Build_1690_rickneys	Buildings for source above.		

Site Site 4: Stanborough

G.I.S. Theme Name	*HALS reference*	*Date*	*Source Name*	
Hataerotytt_1sted	Landmark tiles TL10NE TL11SE TL20NW TL21SW	1883	O.S. 1st Edition	*These two themes are used for both hatfield aerodrome and stanborough*
Build_1ste_hataer	Buildings for source above.			
Hatfieldcp_tithe	DSA4/47/27/MR3/10	1838	Hatfield CP tithe map.	*These two themes are used for both hatfield aerodrome and stanborough*
Build_hatcp_tithe	Buildings for source above.			
40458_1836	40458	1836	Stanboro (sic) Farm in the occupation of W. James Jenkins.	
Build_40458	Buildings for source above.			
D_ept_1844	D/EPT1844	1832	South part of a land exchange between Lord Melbourne and Earl Cowper	
D_EP-P9-1752	D/EP P9	1752	A plan of Brockett Hall Park with the Warren Farm Belonging to Matthew Lamb Baronet anno domini 1752.	

Build_d_ep_p9	Buildings for source above.