

Historic landscape assessment: The East of England Experience

"One of the most challenging problems for both the experimental ecologist and the theorist is the interaction of biological populations with the time dimension" (Garsd, 1984)

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Abstract: Historic Landscape Assessment (HLA) is a new methodology being developed to assess the historic dimension of the landscape, and is based within a GIS. This will facilitate the complex analysis and representation of spatial and historical data, which will enable the 'time-depth' and complexity of the landscape to be more adequately assessed.

A new approach has been necessitated, by a combination of factors, including new legislation, land designations, and the increasing concerns about the future of our cultural landscape.

This methodology is being developed across England by English Heritage, on a county by county basis, each with a differing approach and methodology. The East of England project is unique, in that it assesses a region of political areas as a single geographic unit, with a common (and evolving) methodology.

Initial results indicate that landscape history and development is diverse and dynamic not only within political, geographic and topographic regions but between them as well, on all scales. This form of assessment is proving to have a wide range of end uses, including planning, development control, strategy, landscape and cultural resource management, research. It is currently proving to be a useful tool for landscape management.

Introduction

This paper relates the latest developments of Historic Landscape Assessment (HLA), within the project area of the East of England region. Current work has built upon the initial Historic Landscape Characterization (HLC), carried out in Suffolk, and has sought to improve the methodology in response to the diverse, complicated landscapes and methodological challenges encountered within Hertfordshire and Essex. The methodology has been improved, being more firmly based within GIS and has endeavored to make the whole process of HLA more transparent. The project plans to continue to cover the three counties of Bedfordshire, Cambridgeshire and Norfolk. Issues that will be discussed in this paper include:

- landscape
- project area
- GIS
- methodology
- interim results
- uses
- future developments

This is work in progress and until counties or topographic areas are completed, analysis, especially GIS, including spatial and 3D analysis can not be completed, neither can one fully assess

historical results or landscape patterning, at this stage. All conclusions are therefore tentative and indicative of what may be revealed by the project's completion. So far it may be stated, that initial results are unexpected, exciting and increasingly reflect the rich diversity of the historic landscape

Landscape Environmental Background

In assessing landscape, which is in this case 'landscape history', it is necessary to be aware of the forces which determine how our landscape has formed, including the prevailing and interdependent influences upon such landscape development. The model below (Fig.1), attempts to chart out some of these forces, and illustrates the complexity of landscape genesis. Some of the forces are obvious, whereas others are subtle and have not always been regarded in relation with each other. For example, it is given that that underlying geology is a prime determinant of soils, but the process of soil formation is in turn affected by climate (temperature, precipitation), height, slope, drainage, etc. The resultant soils in conjunction with these factors of slope, height and climate also largely determine land capability – in other words the activities that the resultant soils will support *i.e.* agriculturally. This in turn determines farming practices, although these constraints can be modified by activities such as additional drainage, liming, fertilizing etc. These technologies are, in turn, historically specific, and are

connected to particular property regimes, market access regulations and subsidies.

Furthermore, if natural forces are examined, additional factors such as vegetation, fauna etc - which are all interdependent upon each other - need to be taken into account. Lastly, in tandem with the natural forces are the anthropogenic forces, whereby human actions have manipulated the naturally occurring landscape. The landscape in itself is an historic record of these interactions. It is these anthropogenic forces and impacts on the landscape, which are part of the focus of this paper.

The results of this anthropogenic activity results in, what could be termed as 'semi-natural habitats' and 'human habitats', these are all inter-related and interdependent upon each other in a very complex series of relationships. It may be argued that due to human impact upon the landscape, that there are few 'natural habitats' left within the UK.

HLA seeks to map the key anthropogenic influences on the landscape. Results so far from Eastern England (and the various other HLA/C's already completed across the country) indicate that the history of the landscape is dynamic, diverse, complex and unpredictable. The only consistent result, appears to be that historic landscapes are diverse and dynamic. However, this factor when combined with the variations in approaches to HLA/C mapping, creates significant problems in comparing and contrasting between regions, and also some adjacent areas within regions.

To assess National, Regional and Local landscape types, an appropriate scale should be adopted, to recognize areas of diversity and rarity. For example, certain prehistoric or historic events may be strictly local, and therefore do not need to be preconceived in a national taxonomy, as they will fit into a broader grouping at the regional and national levels.

Therefore, it is proposed there should be a 'national type series' of landscape types into which these areas of study could feed, (See Fig:2). This should not deflect from other approaches and developments within an area or region, nor each area's individuality. Such a type-series should act as an 'umbrella' of generic types into which each region's diversity and uniqueness could contribute. This would result in 'national', 'regional' and 'local' sets and sub-sets reflecting an appropriate scale of landscape diversity. This is fundamental to the understanding and appreciation of our diverse and rich landscape, and to enable appropriate management of this finite cultural resource, at an appropriate scale.

Application

The East of England Project; is so far unique in being a regional project, as other counties within England are being - or have been - assessed, independently. The East of England Project is a co-ordinated approach between English Heritage (EH) and the relevant local authorities in the region. The work on this project area is in progress and includes the historic counties of: Suffolk, Hertfordshire, Essex, Bedfordshire, Cambridgeshire and Norfolk, (See Fig: 3, 4 & 5).

The experience of the project so far has shown there are distinct advantages of a single methodology being applied to a group of counties, which are being assessed as a single geographic region, even if (as is the case of East of England), it is a very recent political creation. Initial assessment and results have shown that each county has its distinctive historic landscape character and historic development, with subtle and at times dramatic variations. Broad historic landscape patterns have been identified which run across county boundaries. However there are also small pockets of unique landscapes, reflecting the diversity from one geographic/topographic region to another, and within regions, (see Fig 6).

Initial results show that HLA has proven to be a valuable management tool, by identifying and informing various issues in the East of England region, for example:

- Local, regional, historic landscape patterns
- Chronological patterns, through time and space - landscape 'time depth' and palimpsests
- Landscape management and Landscape Character Assessment
- Management of the archaeological and historical resource
- Archaeological survey
- Research objectives
- Development control in planning
- Regional and Local Planning issues and strategies

This information has already proven of use to a wide audience e.g. landscape architects and managers, archaeologists, historians, geographers, planners, etc. In the case of the East of England Project the HLA has already provided landscape managers and planners with the necessary information to make informed assessments about the impact of large development proposals on the historic landscape.

Methodology/Approach

Background

The HLA methodology originated from the seminal work carried out in Cornwall (Herring 1998), which mapped landscapes according to 'Historic Character Types' as a 'paper-based' exercise. Work in Scotland further developed the approach developing 'Historic Landuse Assessment' using a Geographic Information System (GIS), (Dyson-Bruce 1998: Dyson-Bruce *et al* 1999). Wales defined a 'Register of Landscapes' of specific or outstanding interest, (Cadw 1998). English Heritage (EH), has used a variety of paper and GIS based methodologies, to determine 'Historic Landscape Character' in the different counties, across England (Fairclough 1999).

HLA is a relatively new approach to assessing landscapes and is still under development, especially as a GIS application. However, it is the advent of GIS itself as an affordable tool within local government that has been a key driver for HLA. One of the reasons for the importance of GIS is the nature of the HLA information itself, which is spatial in four dimensions:

- horizontal space N/S – E/W
- vertical depth
- time-depth or palimpsests

The horizontal dimension forms the backdrop of this mapping project, while the elevation axis is less critical at the outset. Eventually, the topographic element should be coordinated as a part of the analytical application of the inventory. The key of HLA is the treatment of time. This together with the large quantity of complex spatial information that has to be dealt with in HLA, is ideally suited to the GIS platform.. In addition, the GIS can provide support to extend the representation of the data to include documentation concerning how the data was derived. This metadata is the core of a self-documenting reflective resource in place of the traditional simple printed map. Earlier approaches to HLA were largely based on established Landscape Character Assessment (LCA) techniques and methodology (Countryside Commission, 1997). These were paper-based, and as such resulted in a single paper map or series of simplistic maps, achieved by the aggregation of data to create thematic historic landscape types. Compared with GIS, the methodology of paper-based HLA is also relatively non-transparent. Paper-based HLA is therefore difficult to be reliably and consistently replicated. Detailed analysis or changes in the representation or update of the data are very difficult to achieve efficiently on paper maps.

However, until recently GIS has only been used as an enhanced version of the original paper-based approach to HLA, resulting in simple digital maps. Such maps may solve some of the problems of replication and representation of data, but they are lacking in inherent intelligence and metadata, that are key features of true GIS applications:

It was therefore decided that the methodology for the East of England HLA needed to be refined in response to other HLC projects, to represent the diversity of the region and also harness the capabilities of GIS. This has been achieved by creating a suite of historic ‘attributes’, representing historic landscape types, which may then be aggregated as required for different objectives, remits and end uses (Dyson-Bruce *et al* 1999; Fairclough 1999). HLA as a methodology has necessitated a flexible and responsive approach to record, not only the subtleties and dynamics within the landscape in an appropriate manner, but to also act as a rigorous analytical tool relating to academia, data entry, analysis and metadata.

The adapted HLA methodology used in the East of England Project is now GIS based, and may be described by the following three interactive aspects:

- **HLA** - creates ‘historic landscape types’, attributes which may be aggregated to form ‘historic character areas’ - *the academic, or archaeological and historical aspect.*
- **GIS** - which handles the data-capture process and input - *the practical aspect.*
- **Metadata** – this is the data concerning both of the above. It informs the complete process of data collation, ownership and map creation. This could be regarded as the *fulcrum* between academic research, and the mechanical process of that spatial data’s rendition.

In assessing the historic landscape of a large region, the HLA methodology has to be, by necessity, relatively ‘broad-brush’ in its approach, and also largely desk based, due to restricted resources of staff and time. Only a few key and readily available sources of historical information have been used, primarily current and historic OS and 1” maps, and aerial photographs. The criteria used needed to be robust, definitive, replicable and meaningful to the data creator, the final product users and a variety of objectives. In addition the landscape types and data used, needed to be carefully selected to reflect landscape composition, in terms of its diversity, continuity and discontinuity, thereby enabling the complex concepts of ‘time-depth’ and ‘palimpsests’ within the landscape to be assessed.

The East of England HLA data has been collated at 1:25,000 (data-capture), checked and digitized at 1:10,000, using a defined series of landscape types (attributes). At the generic level, these types distinguish: field systems, woodlands, parklands, grazing, urban, industrial, extractive, military etc. (both current and relict for each type). To be recorded on the HLA, these types must still be visible within the current landscape. Finally, these types may be connected to a period or a political or economic movement, such as Parliamentary Enclosure Acts. Recording the data in this way enables it to be used flexibly in response to a variety of objectives.

The metadata has been incorporated directly within the database, using appropriate fields (See fig: 7 below). These include:

- *historic landscape type* e.g. code_c, relict_1 or Hla_code
- *data source* - the maps from which the data derived, whether current or relict e.g. date_c, date_r1
- *creator* – the person responsible for digitizing the polygons, assessing and assigning data
- *date of creation* – date data digitized
- *data owner* - Essex CC, Herts CC, Suffolk CC etc.
- *scale of data accuracy* – scale of digitizing
- *glossary of terms* e.g. code_c, code_r2.

In addition to the metadata there are databases linked to the data source that informed each polygon’s creation. Their purpose is to correlate data, especially to the data sources such as the maps used to create the HLA dataset. This is to take account of the variability of the data sources. For example, the map sources:

- some are consistent across counties e.g. Ordnance Survey Landline 2000, 1st Edition
- some are consistent within a county, historic county maps e.g. Dury 1760 map for Hertfordshire; Andre & Chapman 1766 map for Essex
- and some are inconsistent within counties
- Parish based e.g. historic Tithe maps, Enclosure Maps
- Estate maps, some dating back to the 16th century

There are also links to tables of:

- definitions of the codes used in the data capture process
- a full glossary of attribute types
- counties with different but linked methodologies, i.e. Suffolk in this instance
- hyper-links to photographs, scanned images, documents,

texts, videos etc.

These databases in conjunction with the embedded metadata, will help render the methodology transparent and self-documenting for future researchers

In addition, GIS has many useful utilities and functions, which facilitate the display and analysis of this complex spatial data. In practical terms this enables a flexibility of approach. This data may then be easily analyzed, statistically and spatially, within its own dataset and in combination with others within the GIS platform. Varied outputs are easily possible e.g. maps, graphs, tables, histograms, presentations etc. In addition as an archive, the data may be 'static', providing time horizons or 'organic' allowing constant revision. This allows a far greater flexibility than any paper based methodology could achieve.

The East of England HLA: Results so far

The provisional results obtained so far are briefly discussed below.

Suffolk

Suffolk is a large rural county, and benefits from being well documented regarding its landscape development. The methodology used has been based on field morphology, with a single tier of information within the database. The types have been aggregated to form basic landscape character types, which illustrate in broad patterns the historical development of the county, e.g. pre-18th century field types, 18th century and later field types, forestry etc. (Ford, 1999).

In summary, the county has a diverse history, with a central band of 'anciently enclosed' landscape, including co-axial, sinuous, and irregular field-systems, a western area of later Parliamentary Enclosure and forestry plantations on former heaths and grazing commons, and an eastern area of sandlings and fen-lands, (see Fig: 8).

Suffolk has relatively little 20th century development compared with many counties of southern England. Urban development has primarily focused around Ipswich and Bury St. Edmunds and the county still exhibits a predominantly rural character. There is some 20th century field boundary loss, but has not been as devastating on the earlier field systems as is the case in Essex and Hertfordshire (see below). This requires further analysis, to establish if this may reflect, for example that the landscape is on a larger scale, or due to a change of landuse, (from grazing to agrarian), or CAP reforms.

Hertfordshire

Hertfordshire is in comparison a small semi-urban county (it has the highest population density of all the 'shire' counties in England) with intensive twentieth century impacts upon the landscape. Unfortunately, there has been little documentary research to facilitate the assessment of the landscape, especially with regard to field systems. The landscape is also varied with a complex sequence of landscape development, which has

resulted in 'hybrids' of historic landscape types. The broad historic landscape zones seen in Suffolk do not appear to be replicated within Hertfordshire, which in comparison has a highly fragmented landscape. These factors necessitated a more analytical approach for the HLA of Hertfordshire, with more detailed research undertaken within selected parishes to inform this complex process of landscape development. In addition greater fragmentation, within the landscape required a greater emphasis on metadata. Therefore, the methodology was revised to create an 'intelligent' GIS map with multiple tiers of information, incorporating metadata.

The landscape patterns within the county are complex and show great diversity of form and function, (see Fig: 9) and are less easy to summarize than is the case with Suffolk, (see Fig. 8). The county field systems also appears to have a long 'time-depth' with the dominant types (co-axial, sinuous, irregular) often exhibiting a complex developmental morphology. A distinctive pattern is emerging, in that the distribution of certain field types appears to be mutually exclusive. For example, the co-axial and sinuous systems occur exclusively in the south of the county and the common arable fields are dominant in the north. However, the substantial but amorphous category, 'irregular' fields are distributed throughout the county. These require further analysis as to type, origin and genesis, as some may have a very different history and use.

Several other general patterns in the historic landscape of Hertfordshire (Fig: 9) are apparent:

1. The areas of Parliamentary enclosure (where the field systems have been redefined) are primarily restricted to former medieval 'common arable' fields on the Chiltern Ridge, or smaller areas of former 'common grazing' elsewhere. Otherwise, Hertfordshire has been lately enclosed by agreement, on a piecemeal basis through time, retaining most of the original infrastructure.
2. There are many survivals of 'Ancient Woodlands' (as defined by English Nature) mostly as small pockets within the matrix of the field systems. However there are, notably, no ancient woodlands remaining on the Chiltern Ridge.
3. The co-axial field systems in the south-east of the county within the Wormley Woods area, have been dated by pollen analysis to the Bronze Age, thus pushing back that part of the current landscape to a prehistoric origin. The similar co-axial areas to the west of the county may be of a similar date, thus indicating that certain areas of the southern part of Hertfordshire are prehistoric in origin, in contrast to the area to the north which appears to be mainly mediaeval in origin.
4. The county has many Parklands (with origins from the medieval period to the 20th century) of which many are now being, or have been converted, or re-used as primarily golf courses, schools, hospitals and recreational areas.
5. There have been significant impacts by 20th century developments especially in the southern half of the county, these include:
 - New Towns and 'Garden Cities' e.g. Stevenage,

- Welwyn Garden City,
- gravel extraction, e.g. Lea Valley,
- modern field enclosure (associated with urban fringes),
- motorways,
- field boundary loss leading to 'prairie-style fields' i.e. large fields created from post-war field boundary removal,
- horse stud farms.

Essex

Preliminary work has shown that in some respects the historic landscape of Essex (see Fig: 10), is transitional between that of Hertfordshire and Suffolk. The broad landscape types seen in Suffolk cross over in the north and east of Essex and the fragmented landscape recorded in Hertfordshire continues across in the south and west of the county.

The field systems in Essex are, as in Hertfordshire and Suffolk of an 'anciently enclosed' landscape. Field types include irregular, co-axial and sinuous. A distinctive and extensive, rectilinear or possibly co-axial system is present in the Dengie peninsula. As in Hertfordshire, Parliamentary enclosure is not common and tends to be piecemeal, apart from the Saffron Walden area on the chalk ridge in the north east of the county.

Other interim conclusions about the historic landscape of Essex include:

1. Essex has a lower density of historic parklands than Hertfordshire
2. Gravel extraction is widespread across the south of the county, as in Hertfordshire.
3. The relict elements of the original 'ancient' forests of Epping and Hatfield have survived, but are gradually being encroached upon by modern development. These rare and important landscapes are currently the subject of a special survey within the overall project, with regard to their future management and conservation.
4. Urban development has been extensive within the county e.g. Harlow, Southend, Chelmsford, Colchester.
5. Airfields are a significant feature of the Essex landscape and often represent the relict elements of WW II activity. Some are visible as relict elements within the field system, (preserved as field boundaries, forestry strips, chicken farms), whilst others still function as civilian airstrips. Recent and planned airport expansion at Stanstead, exacerbated by planning constraints imposed to constrain development vertically, thereby forcing all development to be spatially invasive into the surrounding landscape, also to reduce noise, obstructions and other impacts. These will all have significant impacts on the surrounding landscape.
6. The loss of field boundaries since 1950 within the county, creating 'prairie-style' fields, has been dramatic, and in some areas so devastating, as to destroy the underlying coherence and infrastructure of the parent field-systems, i.e.

- the surrounding roads form the field boundary, all former interior field boundaries having been removed
 - in areas a contiguous landscape of 'prairie fields'. These constitute an area of modern cohesive landscape generated by the Common Agricultural Policy subsidies and incentive payments.
7. As with Hertfordshire, the Essex landscape exhibits an extremely fragmented character as a result of twentieth century impacts in the more southerly parts of the county, i.e. closer to the influence of London.

As the HLA in the East of England counties is completed, spatial and 3D analysis will be used to identify the subtleties of landscape change within and between counties. Topography plays a role as the analysis has demonstrated, but the exact form of the relationship is not clear and probably varies according to historical period. This will take HLA into the 4th dimension by modelling HLA data not only within landscape morphology and form but through time.

Applications of HLA

Within the East of England project HLA has already, despite being incomplete, been actively used to inform a variety of land management issues including:

- Landscape Character Analysis (LCA) recently undertaken in Hertfordshire and Essex as part of the Mineral Local Plan, has used the HLA as a key data source. The HLA has provided information on the historic dimension of the landscape in an accessible format. This has assisted the landscape architects in the process of understanding the complex issues relating to landscape value. It has also aided the appreciation of the historic environment by the general public via a public consultation process.
- HLA allows the placement of many of the 'spot site' data of archaeological sites within Sites and Monuments Records (SMR's), into their spatial context and landscape. The Hertfordshire County Archaeology Section uses the HLA on a daily basis to assess the impact of development proposals on the historic landscape.
- The HLA data has been successfully used in support of archaeological conservation at a Public Inquiry in Hertfordshire.
- HLA will provide an important element in the process of formulating Strategic Policy at county level.

It is hoped that a national historic landscape character map will be generated from all of the HLA's across the country, comparable to the National Character map produced by the Countryside Commission for England. The HLA would form a backdrop against which the work by Wrathmell and Roberts (2001), on settlement analysis of England would nest within its broader historic landscape character setting. Once completed all this information could be analyzed within GIS, in conjunction with academic research to produce invaluable results.

Conclusions

Initial results illustrate the diversity and dynamism of the history of landscape development and genesis. These have enabled us to recognize, chart and appreciate its complexity and rarity. For example several rare examples of unaltered landscapes of unenclosed common arable have been identified from the project, and extensive landscapes of co-axial fields possibly of Bronze Age date have also been mapped.

Certain parts of the landscape exhibit contiguity and continuity whereas others areas are discontinuous. It should be possible to place spot-site's within their landscapes, to inform the assessment of various issues, for example:-

- Contemporaneity of spot sites within their landscape setting
- Survival of landscape types
- Condition and quality of landscapes
- Value i.e. rarity of landscape types locally, regionally, and nationally.

It can now be recognized that the landscape is extremely dynamic through time, something we have not until now fully appreciated or been able to systematically chart, prior to GIS. These 'forces of change', may be represented as various 'engines of change', moving at different 'speeds' and 'times' throughout the region. Certain parts are changing at the speed of Formula 1 racing cars, whereas other areas are still in 'horse and cart' mode, however nothing is in neutral or in idle. In some areas these 'engines' are being re-invented, restored or replicated without being based on sound information.

Work in Hertfordshire and Essex has highlighted the need for an analytical approach to recognize and systematically represent landscape history and diversity, due to the fragmented nature of the landscape. For example, in analyzing field systems, one can not rely on field morphology alone, as shape does not necessarily indicate period of origin. Results are also beginning to challenge some of the accepted views about landscape history, e.g. field boundary loss, survival and date of field systems, in that some fields are much older than previously thought, and their morphology has in instances undergone several subtle changes.

Finally the author believes that:

- A national framework needs to be set to allow a compatibility of methodology and datacapture, within GIS. Also that national metadata standards are established, which will facilitate mutually compatible datasets. Most importantly this will facilitate replicable results with conformity of approach and methodology.
- A national framework of broad 'historic landscape types' could be established, which may act as a national umbrella, into which all the various counties could feed into and inform and provide a regional series of sets and sub-sets to reflect regional and local diversity. This could be accomplished now and still be flexible and updateable as and when necessary, all that is required are extra fields within the database, indicating National, Regional and Local types (see schema above). This would ensure a

consistency of application and that results would represent landscape diversity rather than methodological differences. Thus enabling national and regional landscape models to be developed.

This is an exciting project in which to be involved, which enables the richness and diversity of our landscape history, locally, regionally and nationally, to be recorded and assessed. This information is now proving to be an effective and pragmatic management tool in a wide variety of arenas.

The HLA methodology, now incorporating metadata, facilitates all the complexity of our historic landscape to be recognized and charted for further GIS management, analysis and academic evaluation. The methodology of data capture will continue to evolve, to reflect new technological advances e.g. object-oriented databases (geodata-databases), OS Digital National Framework (DNF). The new DNF MasterMAp form the OS will allow more efficient data entry while it should also assure greater consistency with other layers, based on this polygonized data. There is no doubt that in the future, the management and analysis of spatial data lies within the GIS platform, as GIS is a powerful tool able to handle vast amounts of complex spatial data., which will reflect true landscape diversity, rather than methodological differences across England

Acknowledgements

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References

- Cadw. 1998. *Register of Landscapes of Outstanding Historic Interest in Wales*, Cadw, Cardiff
- Countryside Commission. 1997. *Landscape Assessment Guidance*.
- Countryside Commission
- Dyson-Bruce, L. 1998. *Historic Landuse Assessment*, Unpublished Report for Historic Scotland.
- Dyson-Bruce, L., with Dixon, P, Hingley, R., Stevenson J. 1999. *Historic Landuse Assessment (HLA): Development and Potential of a technique for Assessing Historic Landuse Patterns. Report of the pilot project 1996-98*, Research Report, HS & RCAHMS, Edinburgh.
- Fairclough, G. ed. 1999. *Historic Landscape Characterization*, English Heritage, London.
- Ford, M. 1999. *Historic Landscape Characterization in Suffolk 1998-1999*. Draft Report.

Garsd, A. 1984. Spurious correlation in ecological modeling, *Ecological Modeling*, 23: 191-201.

Herring, P. 1998. *Cornwall's Historic Landscape: Presenting a method of historic landscape character assessment*. Cornwall Archaeology Unit, Truro.

Wrathmell, S., Roberts, BK. 2001. *An Historical Settlement Atlas of England*. English Heritage, London.

Figures

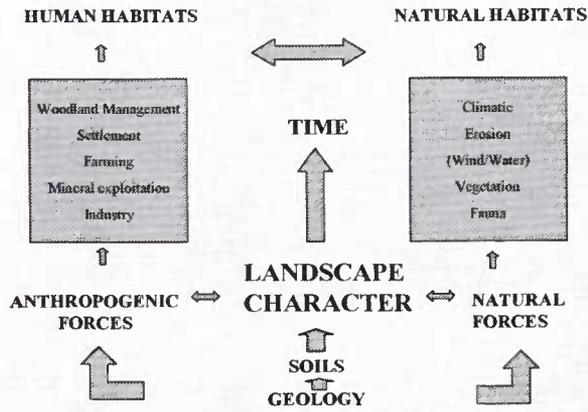


Figure 1. Landscape character in relation to natural and anthropogenic factors

NATIONAL TYPES

A,B,C,D etc



REGIONAL TYPES

A1, A2, A3, B1, B2, B3, etc.



LOCAL TYPES

A1-a, A1-b, A1-c, B1-a, B2-a etc

Figure 2. Proposed schema for National HLA Types.

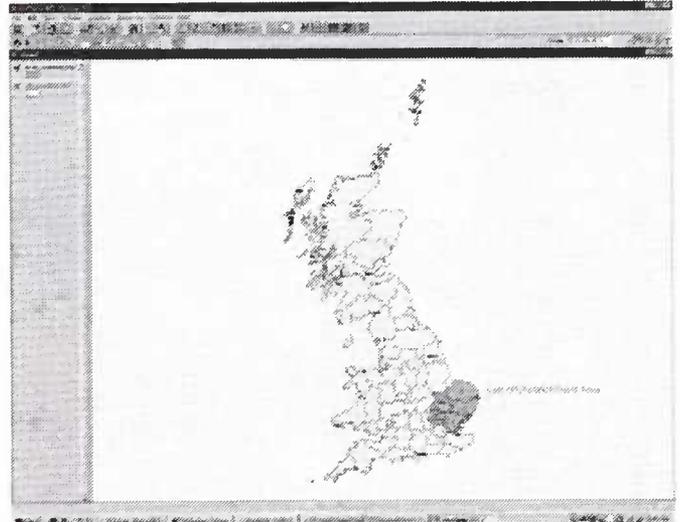


Figure 3. Map of the East of England Project Area within England

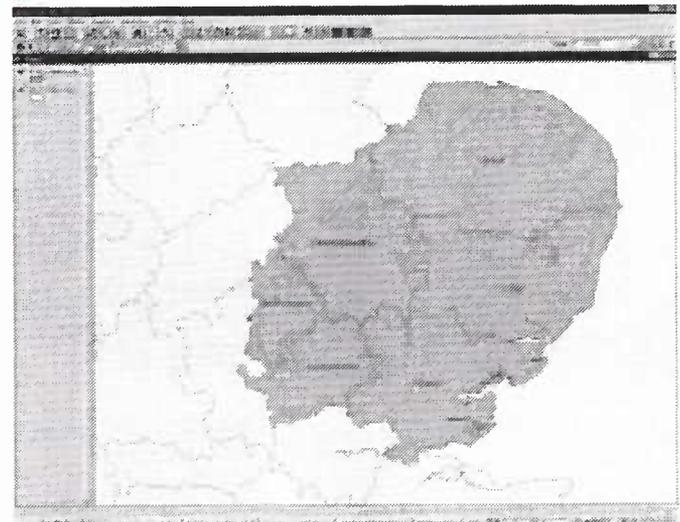


Figure 4. Detail of the Counties within the East of England Project Area.

COUNTY	COMPLETION	GIS SOFTWARE
Suffolk	1999	MapInfo
Hertfordshire	August 2001	ArcView
Essex	April 2002	ArcView
Cambridgeshire	April 2003	MapInfo
Bedfordshire	April 2003	MapInfo and Wings
Norfolk	? Date ?	? GIS ?

Figure 5. Table of Counties within East of England Project Area – Completion dates and GIS platform used.

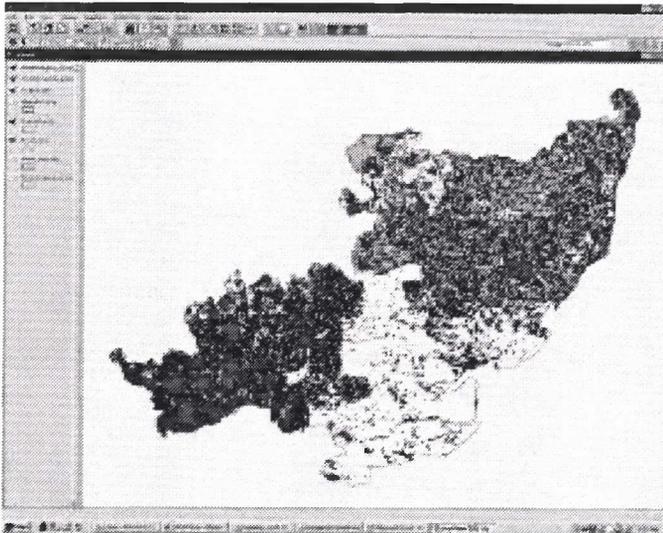


Figure 6. Map of Suffolk, Hertfordshire and Essex, depicting work in progress.

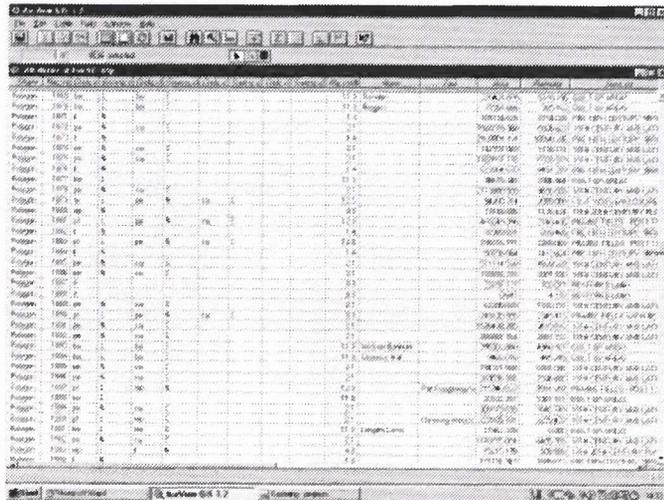


Figure 7. Sample of HLA data-base – work in progress.

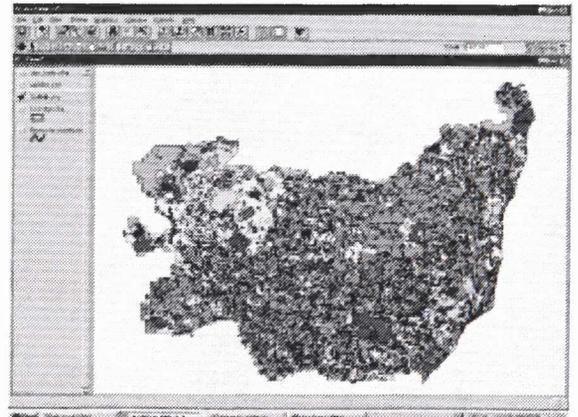


Figure 8. Map of the Historic Landscape Characterization of Suffolk

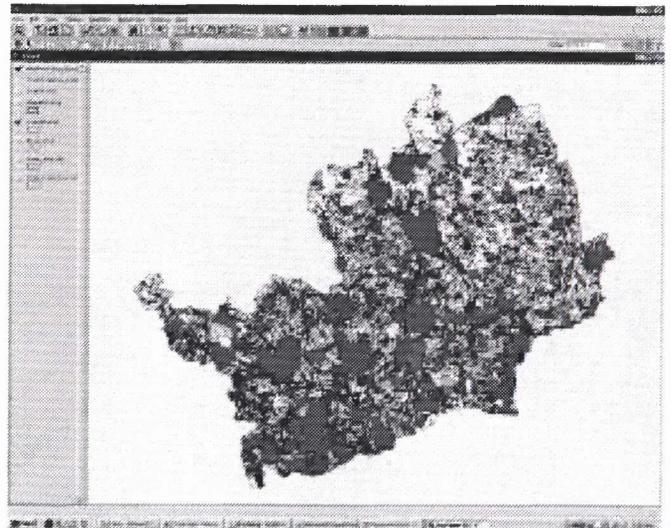


Figure 9. Map of the Historic Landscape Assessment of Hertfordshire – work in progress.

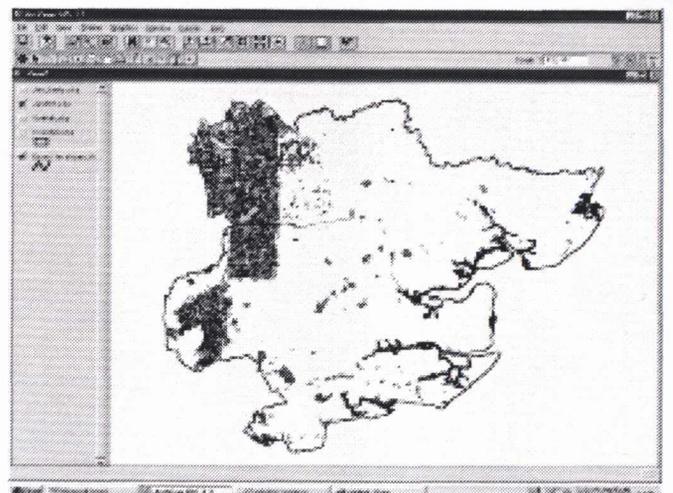


Figure 10. Map of Historic Landscapes in Essex – work in progress