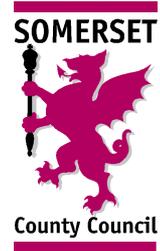
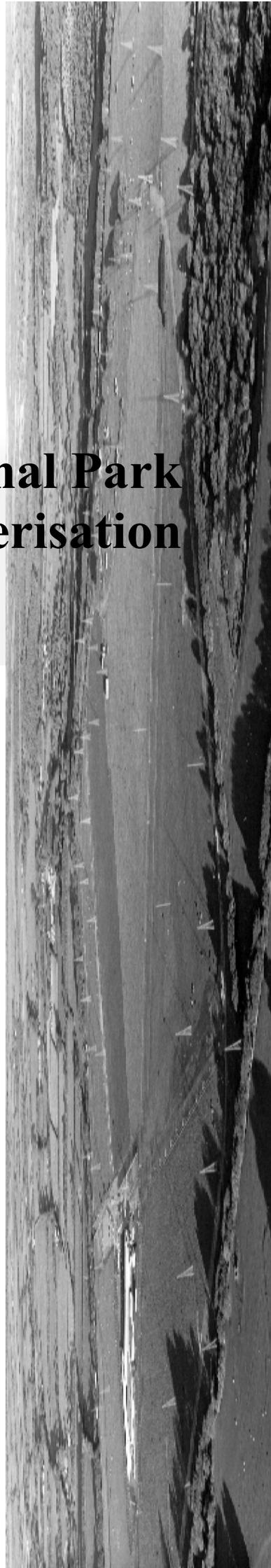
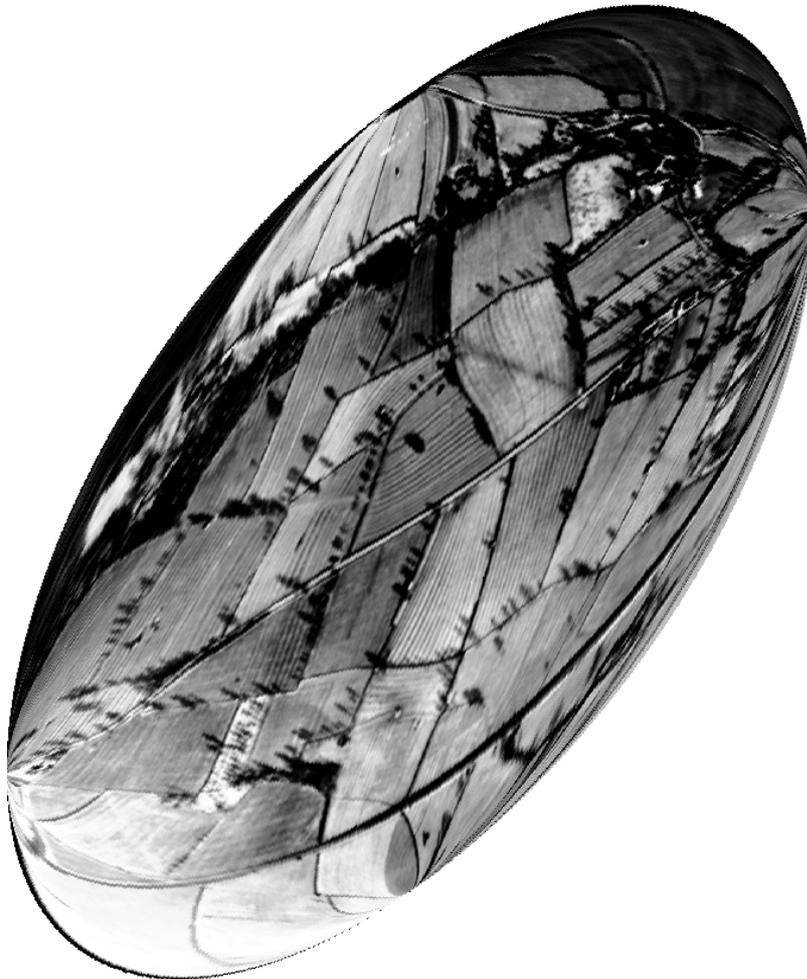




ENGLISH HERITAGE



Somerset and Exmoor National Park Historic Landscape Characterisation Project 1999-2000



Front cover (left): *Trickey Warren, Culmhead, looking north-east, showing a good example of landscape sequences (Devon Air Photography, Devon County Council)*
Front cover (below): *Ridge and Furrow, Marston Magana, 1947*

Volume 1: main report

OSCAR ALDRED
Architectural and Historic Heritage Group
Environment and Property Department
Somerset County Council
County Hall
Taunton
Somerset TA1 4DY

N. Farrow,
Corporate Director,
Environment and Property Department,
Somerset County Council, March 2001

Executive summary

The Somerset and Exmoor National Park Historic Landscape Characterisation (HLC) project is part of an English Heritage national scheme aimed at recognising the historic basis of the present-day countryside. The project carried out in Somerset and Exmoor National Park has adopted a methodology initially identifying the variety of field patterns in the present-day landscape from the modern OS map. Other information is also used, such as soil map, farm distribution, the Extensive Urban Survey of Somerset and the Sites and Monuments Record (SMR).

This approach has resulted in a large, map based, database which can be interrogated in a variety of ways to answer specific questions about the historic landscape. It also has the flexibility to allow incorporation of other data sources, such as topography and relict landscape information, which can help increase our understanding of how the rural historic environment has changed over thousands of years, producing what we see today in the modern landscape. The HLC is a powerful tool with which to analyse and research the historic landscape. It is being used for some current research at Bristol and Exeter Universities where the results of this, and subsequent research, can be fed back into the HLC database to enhance the range and reliability of interpretation.

Understanding the historic development of the landscape is vital for formulating meaningful Supplementary Planning Guidance (SPG) to help manage and protect the rural historic environment. Already the project has proved useful as a compliment to the more site specific SMR in helping to formulate responses to planning and agri-environment scheme applications. It will also form part of a Heritage Lottery Fund bid to put the SMR information on the web, the HLC part will help to inform the public about the interpretation and meaning of the rural environment which surrounds them. It will therefore be useful in Village Design Statements by empowering people with knowledge concerning their local area.

The HLC project has the potential to develop schemes with various partners who have stakeholder involvement in the landscape. These partners might include English Heritage, Environment Agency, English Nature, Countryside Agency, MAFF, Exmoor National Park, LAMP (Levels and Moors Partnership) and Somerset's AONBs (the Blackdown Hills, the Mendip Hills, and the Quantocks). Along with the partnership projects comes the opportunity for the HLC to develop its brief to encompass a wide range of applications. Already Somerset County Council has developed partnership projects with the Environment Agency and Lamp, and Exmoor National Park to examine the development of the landscape and the HLC.

Preface

The Historic Landscape Characterisation project for Somerset and Exmoor National Park has characterised the historic influences that have formed the present-day landscape. The database that has been created as a result of the project is a powerful tool for understanding, protecting and researching the historic features of the rural landscape. This report is a summary of the background behind the project, the development of the methodology, some of the immediate results and potential applications of the project. The landscape consists of many elements, and is definitely the sum of all its parts. The most important consideration in the HLC project is that of the enclosed landscape, the field systems. The project results confirm that a large part of the present landscape has been formed by complex processes of enclosure. Even though the project involved examination of a large area, at a broad-brush scale and in a relatively short time, it is detailed enough to indicate the whereabouts of processes and patterns to build a picture of the historic components of the present landscape.

Acknowledgements

The Historic Landscape Characterisation project for Somerset and Exmoor National Park was commissioned and funded by English Heritage and carried out by Somerset County Council; Oscar Aldred carried out the work, with considerable help and advice from Richard Brunning (SCC). Graham Fairclough (English Heritage) and the steering committee, which included Richard Brunning (SCC), Bob Croft (SCC), Chris Webster (SCC), Frances Griffith (DCC), Steve Rippon (Exeter Uni), Rob Wilson-North [Veryan Heal in the first instance] (ENP) and, periodically, John Schofield (English Heritage), provided advice on the methodology and configuration of the character types. Useful discussion with other HLC project staff, especially Paul White (Herefordshire), Joy Ede (Lancashire) and Lynn Dyson-Bruce (East Anglia), is gratefully acknowledged.

Contents	
Executive summary	i
Preface	ii
Acknowledgements	ii
Contents	iii
Figures	v
1 Introduction	1
1.1 The Historic Landscape Characterisation project of England	1
1.2 Somerset landscape: previous and current work	1
1.3 The Somerset and Exmoor NP Historic Landscape Characterisation project	2
2 Method Statement	5
2.1 Introduction	5
2.1.1 Formulating and testing the methodology	5
2.1.2 Principles behind the methodology	5
2.2 Structure of characterisation	5
2.2.1 Landscape Elements	6
2.2.2 Landscape Groups	6
2.2.3 Landscape Attributes	7
2.3 Characterisation method	7
2.3.1 Enclosed field systems	8
2.3.2 Unenclosed landscape element	10
2.3.3 Other landscape element	10
2.4 Morphological approach	12
3 Results	15
3.1 Introduction	15
3.2 Initial characterisation	15
3.2.1 Field pattern morphology	15
3.2.2 Field size and boundary loss	20
3.2.3 Farm density	21
3.2.4 Initial interpretation of character	21
3.3 Secondary characterisation	23
3.3.1 Database production	25
3.3.2 Previous landuse	25
3.4 Research questions derived from the HLC project	35
3.4.1 Enclosure Processes	35
3.4.2 Field system studies of Somerset's landscape	36
3.5 HLC: potential and future	37
3.5.1 Topography – slope, aspect and height	37
3.5.2 Monument survival	37
3.5.3 Testing methodology through case studies	39
3.5.4 Relict landscape using historic maps, extensive landscape surveys and the SMR	40
3.6 Project review	40
3.6.1 Avon Project and Somerset and Exmoor NP comparison	41
4 Applications	43
4.1 National Agencies	43
4.1.1 Countryside Agency and English Nature	43
4.1.2 Environment Agency	43
4.1.3 English Heritage	43
4.1.4 MAFF/RDS	43
4.2 Local government – Somerset County Council	44

4.2.1 Planning Department	44
4.2.2 Architectural and Historic Heritage Group	44
4.2.3 Other local Groups	44
4.3 District Councils	44
4.4 Exmoor National Park	44
4.5 Public benefit and community planning	44
4.6 The archaeological research community	45
Conclusions	47
Glossary	49
Bibliography	51
Appendix 1 Pilot areas	53
Appendix 2 Countryside Areas and Natural Areas in Somerset	55
Appendix 3 Initial characterisation coding	57
Appendix 4 Query descriptions of previous landuse	61
Appendix 5 Metadata	63
Appendix 6 Parliamentary Enclosure statistics	71
Volume 2 Character type example maps	

Figures

Figure 1 The characterisation structure	7
Figure 2 “Facts” divorced from “Interpretation” through Conceptual characterisation approach	13
Figure 3 Somerset and Exmoor NP HLC Project, the Initial characterisation	16
Figure 4 HLC landscape elements	17
Figure 5 Enclosed landscape element subdivided by morphology form and boundary shape	17
Figure 6 Regular and Irregular field patterns	18
Figure 7 Field pattern morphology illustrating discrete areas of difference at the county scale (a) and English Nature’s Natural Areas (b)	19
Figure 8 Field size within Enclosed landscape element	20
Figure 9 Boundary loss within Enclosed landscape element	21
Figure 10 Boundary gain in relation to field size	21
Figure 11 The variation in field sizes associated with areas of high boundary loss	22
Figure 12 Proportion of Interpretation assigned to Initial character types within the Enclosed landscape element	23
Figure 13 Grouped previous landuse	24
Figure 14 Previous landuse types	25
Figure 15 Analysis of distance from medieval settlement in relation to Open field/Subdivided interpretation	26
Figure 16 Open field/Subdivided interpretation	28
Figure 17 Complex boundary previous landuse separated into field pattern morphology	29
Figure 18 Total area of morphology, form and pattern within Complex boundary group	29
Figure 19 Wood and former wood	30
Figure 20 Area of field morphology character type in previous landuse Meadow	31
Figure 21 Common previous landuse	32
Figure 22 Area of field pattern morphology in Early moor reclamation type	34
Figure 23 Levels and Moor wetland interpretation	35
Figure 24 Levels and Moor wetland field pattern morphology	35
Figure 25 Proportion of Parliamentary Enclosure, Common and Waste in Somerset (inc N. Somerset and B&NES) (based upon Williams 1971, 65)	36
Figure 26 MPP Monument survival value (1-3) and field pattern morphology in Mendip Hills AONB (Somerset)	38
Figure 27 Proportion of MPP all Monument types and boundary loss	39
Figure 28 Proportion of SO103 Monument (Round Barrow) and boundary loss	39

1 Introduction

This project has been undertaken in recognition of the increasing value of the historic environment and the realisation that it is an important resource threatened by numerous pressures.

1.1 The Historic Landscape Characterisation project of England

Recent years have seen the growth of landscape characterisation and assessment, for example by the Countryside Commission, now the Countryside Agency (1987, 1993). In September 1991, the Government White Paper “This Common Inheritance” invited English Heritage to prepare a list of landscapes of historic importance (English Heritage 1991), similar to its Register of Parks and Gardens, the purpose of which would be to define areas of landscape deemed to be more “historic” and, therefore, more worthy of preservation than the surrounding areas.

In the intervening years English Heritage instigated a number of pilot projects to assess appropriate methodologies for identifying “historic landscapes” (summarised in English Heritage 1994). These led to the view that a simple register is not appropriate and that a more holistic approach is needed (Fairclough 1994).

This approach characterises *all* areas within the landscape with reference to agreed criteria, rather than concentrating on the identification of individual “historic landscapes”. Further grading, in terms of the relative importance of different parts of the landscape, would only be undertaken to meet the requirements of specific planning or other needs.

Recent work using HLC projects alongside Landscape Character Assessment has identified that “historic landscape assessment should ideally be prepared in advance of the landscape character assessment”, recognising that previous landscape character assessments have paid too much attention on the visual landscape and have not always paid enough consideration to biodiversity and historic aspects of landscape (Knight 1999).

1.2 Somerset landscape: previous and current work

Previous analysis of the Somerset landscape has taken place at varying scales level of detail. In the 1980's Somerset County Council carried out several archaeological audit surveys in conjunction with English Heritage. These surveys included the Somerset Claylands (McDonnell 1985, 1986), Mendip Hills AONB (Ellis 1987, 1992) and Quantock Hills AONB (McDonnell 1990). In 1993 a survey of the Blackdown Hills AONB was completed by AC Archaeology (Hawkes 1993). Within the Exmoor National Park, the Royal Commission on the Historical Monuments of England (now English Heritage) have recently completed an extensive survey of the park which has drawn upon earlier work by Richard McDonnell and others (Wilson-North and Riley *forthcoming*). The report on this work is in preparation but survey information has been supplied and accessioned into the Somerset Sites and Monuments Record. The urban landscape has been mapped via the Extensive Urban Survey Project, funded by English Heritage and Somerset County Council. This looked at forty-three settlements in the modern county of Somerset.

These surveys did not directly address the character of the historic landscape but they did identify many of the historic sites, buildings and structures which help to form the historic character of the landscape today.

In more recent years “countryside character” style landscape reports have been prepared and cover the following areas in Somerset:

- *The Blackdown Hills Landscape* (Countryside Commission 1989)
- *Exmoor Environmentally Sensitive Area: Landscape Assessment* (MAFF 1994)
- *Landscape Assessment of the Mendip Hills from Steep Holm to Frome* (Report to the AONB funding partners 1996)
- *Sedgemoor Landscape Assessment and Countryside Design Summary* (Land Use Consultants, September 1997)
- *The Landscape of the Quantock Hills AONB* (Report to the Countryside Commission by Land Use Consultants and Richard McDonnell 1997, revised document due for publication 1999)
- *Somerset County Character Areas* (WS Atkins 1999 for SCC)

The last report is based upon the New Environmental Capital Approach as defined in “What Matters and Why” (Countryside Commission *et al.* 1997), and is presently in draft form in anticipation of being developed into Supplementary Planning Guidance (SPG). It is envisaged that the HLC will constitute a major part in the development of landscape SPG.

Most of the surveys listed above make reference to the historic landscape or cultural landscape but none of them have managed to clarify the importance and place of historic landscapes in characterisation of the countryside, or what constitutes historic landscape character.

1.3 The Somerset and Exmoor NP Historic Landscape Characterisation project

The aim of the project is to characterise the historic nature of the present landscape of Somerset and Exmoor NP, based upon the criteria outlined in the method statement (section 2). The enclosed landscape (fields) is analysed in most detail and is defined by its morphology. This forms the basis for an interpretation about the processes of enclosure, previous landuse, and the extent of change in the landscape since *c.* 1905. The interpretation reflects the chronology of process, or time-depth within the landscape of Somerset.

The study area covers the county of Somerset and the part of the county of Devon which lies within Exmoor National Park. The total area covered is 3707 sq km.

The objectives of the project:

1. To define and describe Historic Landscape Character Types based on present landuse, land management and settlement patterns which reflect differing historical processes in their formation.
2. To identify sources to be examined to inform the characterisation process.

3. To collect data from identified sources in a consistent manner.
4. To assign modern land parcels to Historic Landscape Character Types.
5. To map areas of Historic Landscape Character Types using GIS.
6. To review the character areas so defined and assess the potential for further development.
7. To produce an archive and a report summarising the project.

2 Method Statement

This section describes in detail the method taken to characterise the present landscape in order to derive historic landscape character. Illustrated is how the approach developed, how it was implemented during the project, and the principles and philosophy behind historic landscape characterisation.

2.1 Introduction

2.1.1 Formulating and testing the methodology

Pilot areas were used to formulate and test the characterisation methodology for the project. Five pilot areas were selected to include a variety of topography, possible landscape type and the potential for illustrating some of the problems that might be encountered. They were located in the Mendips, the Levels and Moors, SW Somerset, the Devon part of Exmoor and the parish of Shapwick (see Appendix 1 for locations). Shapwick was chosen because the pilot characterisation could be checked against the map regression for the parish (Aston 1994, 20-5, figs 3.1-3.6). A total area of 136.7 sq km was tested, 3.7% of the study area.

Modifications of different methodologies used in other HLC projects were tried and tested on the pilot areas. The methodology used by the Cotswolds project, and a variation of it used by Hampshire, were adopted initially but discarded because the approach was not rigorous enough for the complex Somerset landscape. A modification of the Lancashire approach (Lancashire County Council HLC draft detailed project design 1999) was judged to have worked best, as it encompassed the complexity of the landscape while at the same time being able to describe the attributes of the present landscape from which “interpretations” could be established. This approach was tested in the parish of Shapwick which had a well researched landscape history. The method successfully identified areas that were previously open field, reclaimed wetland or more recent disturbances which had eradicated early patterns. A similar overall methodology as Lancashire’s was adopted for the project area, including the original pilot areas.

2.1.2 Principles behind the methodology

The Somerset methodology is based on the following principles;

- Process of characterisation uses the present landscape as depicted on the 1:25000 OS map sheets
- The characterisation information is processed and displayed using a GIS (MapInfo)
- The Historic Landscape Character takes the form of an object orientated database within the GIS, separated into data fields and information based upon landscape attributes
- Digitisation is carried out at a scale of 1:12500, based upon the 1:25000 OS; resolution of data limited to 1:12500
- The “facts” are separated from the “interpretation” using a descriptive-led approach to characterisation

2.2 Structure of characterisation

The project uses a hierarchical system of classification, based on a “bottom-up” methodology. The characterised landscape is divided into Landscape Elements, Landscape Groups and Landscape Attributes (Figure 1).

There are several stages of characterisation. The Initial characterisation is the designation of attributes to the enclosed element. The Secondary characterisation is the analysis of the attributes of the field systems, resulting in interpretations of historic character.

2.2.1 Landscape Elements

The **Elements** are the three broad categories of landscape; enclosed, unenclosed and other.

Enclosed is the largest of the elements, the most complex and forms the main component of the project. The enclosed category consists of field systems and the woodland which comprise 80% and 5% of the total project area respectively.

Unenclosed comprises open pasture (mainly upland moor and heath), coastal and marine areas where there is no visible subdivision of land. This element constitutes 7% of the total land area.

Other is composed of areas not included within the elements Enclosed and Unenclosed. It is subdivided into different categories based on the experience of earlier projects and the view of the steering committee (see below).

2.2.2 Landscape Groups

The Elements are divided into **Groups**, as follows;

Enclosed

- Field systems
- Woodland

Unenclosed

- Unenclosed land

Other

- Settlement
- Horticulture
- Parkland and designed landscapes
- Recreation
- Industrial
- Harbours, docks, marinas
- Water bodies
- Military and defence
- Linear features
- Small islands within wetlands

medium field size, with single farms, supportive of periphery enclosure).

2.3.1 Enclosed field systems

Field enclosure patterns were characterised by the following attributes;

1. **Form**
2. **Boundary Shape**
3. **Average size of field**
4. **Indicator**
5. **Pattern**
6. **Farm**
7. **Period**
8. **Confidence**
9. **Process**

2.3.1.1 *Form*

The regular or irregular pattern of the *region* forms the basis for the Form description. It is also the distinction between the 2 *groups* of field systems. Even though there may have been some boundary loss on the 1:25000 when checked against the 2nd edition 6" OS, the predominant regular, or irregular nature of the *region* is the attribute that is assessed.

The statement made about the overall pattern reflects the process of enclosure. A regular attribute suggests that the layout occurred at one moment incorporating no discernible evidence of an earlier system. An irregular attribute suggests that the present pattern has grown organically or incorporates elements of earlier systems. These theories are to be tested with relict and other landscape evidence. The pattern may also reflect the level of change, boundary loss and/or reworking and rationalisation of earlier systems. This is something that the HLC project tests with the addition of further data sources.

The most significant features of the regular attribute:

- commonly aligned boundaries

The most significant features of the irregular attribute:

- no discernible commonly aligned boundaries
- inconsistent spacing between fields

2.3.1.2 *Boundary Shape*

The dominant type of boundary within the *region* is the one used for classification.

- .1 Straight
- .2 Sinuous
- .3 Mixed

.4 Other.

Straight boundaries are perceived to have been created at late dates, usually associated with Parliamentary enclosure or other enclosure by agreement in the eighteenth and nineteenth centuries (Williams 1971; 1972; Yelling 1977, 11-29,120-145, 131; Taylor 1982, 96; Williamson 2000, 58-61). *Sinuuous* patterns are often assumed to be earlier than straight patterns, and associated with piecemeal enclosure (*ibid.*). The project examines enclosure patterns on the basis that the processes and dates are more complex than this classification, and are a result of combinations of topography, landownership and landuse, rationalisation and change, often over long periods.

The *mixed* attribute is used only where there appears to be no overall dominance of a boundary attribute. This might suggest rationalisation of an earlier system by straightening, added, or removing boundaries (*ibid.*; Wade Martins and Williamson 1999, 45-6). The *other* attribute is used for comment on field systems which have been influenced by complete, or near complete, loss in boundaries, thus preventing comment on boundary shape.

2.3.1.3 Average size of field

The assessment of the size attribute is made from a rough calculation on the average size of field within the recognised pattern as a whole. While it is recognised that this is subjective in approach, the predominant size of field will still be picked out in the pattern. This will tend to be biased towards boundary loss rather fields where boundary gain has occurred.

The categories are:

sm	small	0-3 hectares
sm-md	small – medium	3-6 hectares
md	medium	6-12 hectares
lg	large	12 + hectares

2.3.1.4 Indicator

This makes a statement about the development and process of the enclosure within the pattern by using specific extant attributes. For example, reversed S (rs) boundaries and/or dog legged ones (dl) suggest enclosed open field/subdivided types.

2.3.1.5 Pattern

The organisational pattern within each *region* is divided into piecemeal, grid-like, axial, long/thin attributes, for example. This allows a comment on the perceived strategy for enclosure by suggesting whether a planned or organic process was involved.

2.3.1.6 Farm

The relationship between field and settlement is important in the study of the historic landscape. Urban, village and hamlet settlements are characterised within the Other Element. This attribute considers more dispersed settlement. Where farms are located within a *region* a tag is given that indicates whether there is a single farm, a number of single farms, a cluster of farms and if a church is present in connection with any of these. As a result the nature of farm dispersal can be related to other field attributes.

2.3.1.7 Period

A date is assigned to the *region* if it is known when the enclosure pattern was created.

Currently the periods are medieval, post medieval, post title map, but with the addition of external data more precise dates *terminus post quem* can be given (see section 3.5).

2.3.1.8 *Confidence*

When a value for period is assigned to a region, the confidence in that date for that pattern is given. With the addition of further data this data-field can be amended.

2.3.1.9 *Process*

Process consists of three divisions: previous landuse, method of enclosure, and boundary loss. Combinations of these allow a detailed analysis of the enclosure process to be inferred. The project only confidently measured the degree of boundary loss between *c.* 1905 and the present-day because of the limited map evidence which could be utilised within the project timetable. Previous landuse has only been assigned to *regions* where there has been confidence in the interpretation of previous landuse. This is also reinforced by the inclusion of attributes that inform the process and make the interpretation at the Initial stage possible. It will be possible to verify if the interpretations given at the Initial characterisation are correct or not by checking them with additional data sources. The method of enclosure is assigned when further data, such as earlier cartographic evidence, is used.

2.3.1.10 *Woodland type*

The characterisation of wood is separated into Ancient wood (semi-natural and replanted), coniferous plantations, and other wood.

Ancient wood is captured digitally from the English Nature web site <http://www.english-nature.org.uk/start.htm> (see Appendix 5).

Coniferous plantation and other wood is derived from 1:25000, and digitised at 1:12500 using the OS Landline as a base. Coniferous and Other wood is differentiated by map symbols on the OS 1:25000. Only wood greater than 1 hectare in size has been characterised.

Orchards are included in the Other Element. Wood pasture has not been distinguished.

2.3.2 Unenclosed landscape element

2.3.2.1 *Unenclosed type*

Unenclosed pasture uses a combination of Section 3 designation (see Appendix 5), and consideration of the enclosure pattern around it. If an area is deemed to have been taken out of a formerly unenclosed area of land then it is included in the Enclosed element. The unenclosed pasture areas are normally large where the irregularity of the *outer* boundary suggests intake around it rather than inside. Where these large areas have internal boundaries they are normally divisions in the land following parish boundaries, rather than enclosures of it. Clarity of definition is required when the scale of enclosure is very large.

Mud flats, Saltings, Sand, sand and shingle, dunes, outcrop and scree are all defined by the OS 1:25000 map.

2.3.3 Other landscape element

2.3.3.1 *Settlement*

Settlement consists of the village and urban landscape, i.e. nucleated settlement.

The *village* landscape is mainly defined by areas in the designation of AHAP (Areas of

Higher Archaeological Potential) which relate to the limits of historic settlement. Where the settlement is not an AHAP then the tithe map was consulted to identify the limits of the settlement.

The *urban* landscape is defined by the Extensive Urban Survey map for the towns included in that survey. The period classifications medieval and post medieval define the historic cores, and Pre 1839/40 settlement, respectively. The period classifications of Industrial and 20th Century define the extent of Post 1839/40 settlement.

Caravan parks are included where they have defined the landscape character, and where it is shown on the 1:25000. These mostly comprise permanent sites.

2.3.3.2 Horticulture

Orchard areas are included where they have made a substantial impact on landscape character, often large and denoted on the 1:25000. Only orchards greater than 20 hectares are included.

2.3.3.3 Parkland and designed landscapes

Historic landscape park is defined by the areas of park listed in the Register of Parks and Gardens, and other park areas, when indicated on the 2nd edition 6" OS, c.1905.

The parkland group is defined when it forms the dominant character of an area. Where the field patterning within an area of park is different from that outside its boundaries, this is a Parkland and designed landscape, but where the imposition of a park over a field system has not affected any changes to that landscape then it is characterised as a field system.

2.3.3.4 Recreation

These include racetracks, golf courses and sports fields, as derived from the 1:25000 map.

2.3.3.5 Industrial

As defined by the dominant character of the historic landscape from which the present landscape is derived, and by the 1:25000 map.

Peat extraction character type is based upon the Minerals Plan policy map (Somerset County Council 1997). A larger area of Somerset Levels and Moors has been affected by peat extraction in the past but this is not reflected in the present-day landscape.

Industrial areas are indicated as redundant or active as characterised by this project 1999-2000.

2.3.3.6 Harbours, docks, marinas

As defined by the principle of the dominant character of the historic landscape from which the present landscape is derived, and by the 1:25000 map.

2.3.3.7 Water bodies

As defined by the 1:25000 map.

2.3.3.8 Military and defence

As defined by the dominant character of the historic landscape from which the present landscape is derived, and by the 1:25000.

2.3.3.9 *Linear features*

Sites and Monuments Record information and map observation are used to identify linear features in the landscape that have had an influence in the enclosure process. These include boundaries of parks not characterised because they are not the dominant character of the landscape or recorded on the 2nd edition 6" OS (see section 2.3.3.3), non-topographic features such as early estate boundaries, and flood banks and causeways. In the most part these are shown on the SMR map.

This data is dated to the time of this report, and is part of an on-going process of enhancement to the database.

2.3.3.10 *Small islands within wetlands*

The islands within the wetlands have influenced the process of enclosure of that landscape, resulting in conscious boundary formations around areas of hard geology in the wet landscape. The islands are characterised by the Soil Survey of England and Wales Peat and Clay depth map (1984), Panorama (contours) OS data set and interpretation of sand islands within the Levels and Moors landscape (Williams 1970; Kidson and Heyworth 1976; Brunning *pers com*).

2.4 **Morphological approach**

“There is a bewildering array of fascinating patterns that need analysis” (Williams 1972, 113)

The landscape is a product of complex processes, enclosure being one, which survive in one form or another today as specific characteristics of field pattern morphology. The approach used is description-led, using morphological attributes, instead of using an interpretation-led approach, as occurred in earlier HLC projects. Separation of the “facts” from the “interpretation” is seen as vital to producing a meaningful historic characterisation. Interpretative attributes have only been assigned if known at the time of characterisation, or, more likely, after the Initial characterisation was completed.

The pilots suggested that 60% or more of field system character types could not be given an interpretation tag that commented on the process of enclosure/previous landuse with any confidence at the Initial characterisation stage. The completed project has produced an actual figure of 74%. This is a product of the complex enclosure processes which have been at work in the area.

The philosophy of the approach is based on the premise that field pattern morphology reflects the processes of enclosure in the landscape. Only once an assessment of the field patterns has been achieved through HLC can the questions of how did the enclosure process develop, how has it used and adopted earlier systems, and what is its current representation in the present landscape, be asked.

Historic environment indicators of change from one year to the next are monitored by mapping change on “temporal” maps. The present map is a landscape resource assessment of 2000AD from which other maps can be produced using “morphological regression”.

Field pattern morphological attributes that have similar characteristics are selected into *regions*. These are known as Initial character types. The tagging code assigned to each *region* relates to all the field patterns within it.

Enclosed landscape element
Conceptual Characterisation
The Somerset Approach

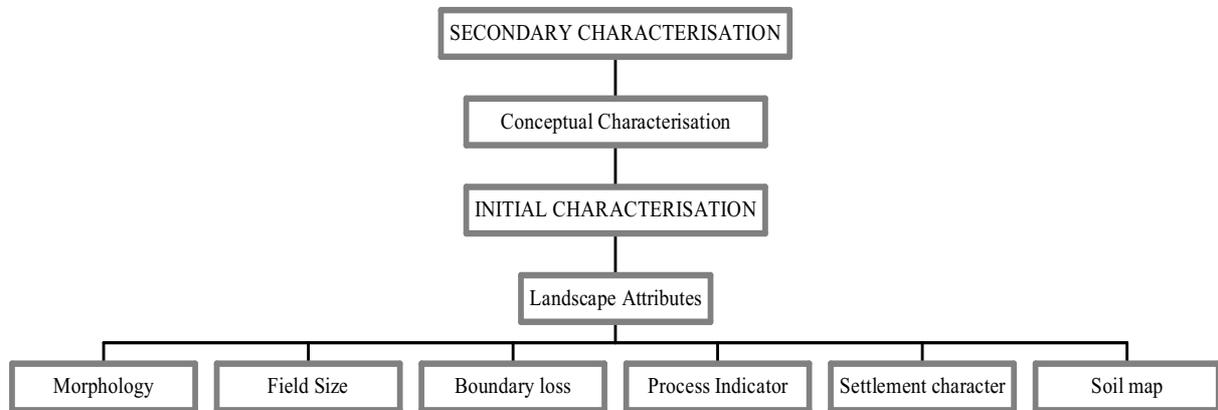


Figure 2 “Facts” divorced from “Interpretation” through Conceptual characterisation approach

It was decided that the topography should not bias the Initial characterisation. The topographic features of the natural landscape could be examined in conjunction with the character types in a separate database, using vector converted raster images, created by image processing software like ER Mapper Version 6.1, of varying slope, aspect and height definitions. Systematic coverage of the entire county using varying slopes, aspects and heights would enable the HLC to test the ways topography has influenced the enclosure of land. Regional distinctions within the county may become apparent with such a test, and may help to inform the generic type database at the national and region levels for future HLC projects. The time limits of the project have so far prevented the examination of topographic features alongside characterisation.

The result of the Initial characterisation is a map displaying *regions* which identify fields of similar morphological attributes and groups from other elements (e.g. unenclosed, other). The Initial characterisation is analysed and displayed as the Secondary characterisation through a conceptual approach. The process is an interpretation of the combinations of the attributes identified in the Initial characterisation and information from external data sets. The database and maps produced by the Secondary characterisation are working models which can then be redefined by the addition of more criteria, data sets, or updated information. Therefore, the resultant maps are not static and can be updated continually.

Muir stresses the need for a systematic study of landscape types between different areas of the country that might exhibit similar processes of landscape development for direct comparison (2000, 12-14). This project’s approach allows previous landuse, boundary formation, process chronology, and generic type maps to be created, for comparison at local, county, region and national scales.

Historic character interpretation is based on the attributes of the modern map and from the addition of further external data sources, such as topography and soil type. The database is designed so that other data sets can be incorporated into the analysis stage of the Initial character types; for example, the relict and archaeological landscape features included in the SMR and NMR/RCHME survey data. Therefore the potential illustrated by using an

approach onto which further data can be “bolted-on” is greater than having a one-dimensional database. This was a major reason why the morphological approach was adopted.

3 Results

The results of the first year's work on the project are presented in this section. The Initial and Secondary characterisation results are summarised, as is the potential HLC has in helping to inform the questions concerned with the understanding, management and research of the historic environment.

3.1 Introduction

The project results are based upon queries of the HLC database. Due to the flexibility of the database a number of interpretations can be derived by asking different questions. The results presented in this report represent a limited portrayal of what can potentially be achieved. As new data is added the results of the queries may change and new questions may be made possible.

The scale at which maps are produced is an important consideration for the visual interpretation of the data. The Initial characterisation, derived from the raw elements of the landscape resource, such as field morphology, field size, boundary loss, is best viewed from the region or county scale. Smaller scale views are appropriate when the query results are too complex or “busy” to view at larger scales. Interpretations of historic character become meaningful when examined in conjunction with other sources and at appropriate scales of view. Meaningful patterns may emerge from the county scale view.

3.2 Initial characterisation

The HLC database consists of 7924 polygons or *regions*, digitised in MapInfo (Figure 3). The total area of polygons is 3730 sq km. The total land area of the study area, Somerset and Exmoor NP, is 3707 sq km (the difference between the *region* area and study area is due to occasional overlapping of wood, and parkland and designed landscapes).

The Enclosed landscape element, including present wood constitutes 3198 sq km (85.7% of the total land area) of which 2985 sq km (80.5% of the total land area) are field systems. The Unenclosed landscape element constitutes 250 sq km (6.7% of the total land area). The Other landscape element constitutes 282 sq km (7.6% of the total land area); of this, 155 sq km is village and urban settlement (4.2% of the total land area) (see Figure 4).

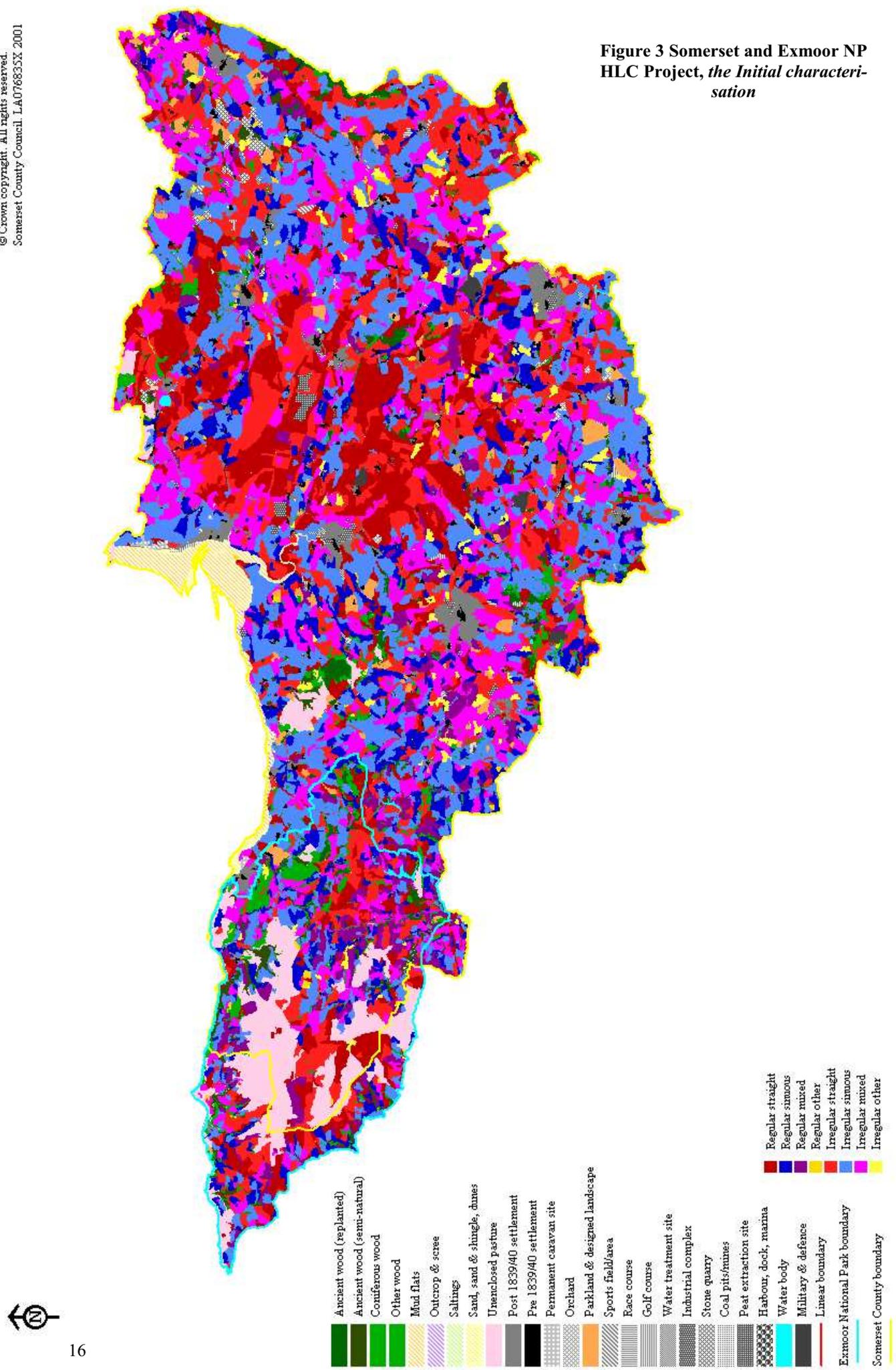
3.2.1 Field pattern morphology

The Initial characterisation of the Enclosed landscape produces meaningful and interesting patterns of morphological differences, specifically form and boundary shape (see sections 2.3.1.1 and 2.3.1.2).

Regular patterns constitute 33.8% and irregular patterns 66.2% of the field system Group type (Figure 6). Sinuous represents 35.7% of the field patterns, and straight boundaries 38.3%, whilst 24.1% are mixed.

Figure 6 shows that the Levels and Moors area is almost wholly regular in form, along with areas on the West Mendip Hills, and Exmoor. This level of interpretation illustrates possible areas of *general* and *piecemeal* enclosure, as suggested by Yelling (1977, 48-91), and Williamson (2000, 59-61).

Figure 3 Somerset and Exmoor NP
HLC Project, *the Initial characteri-
sation*



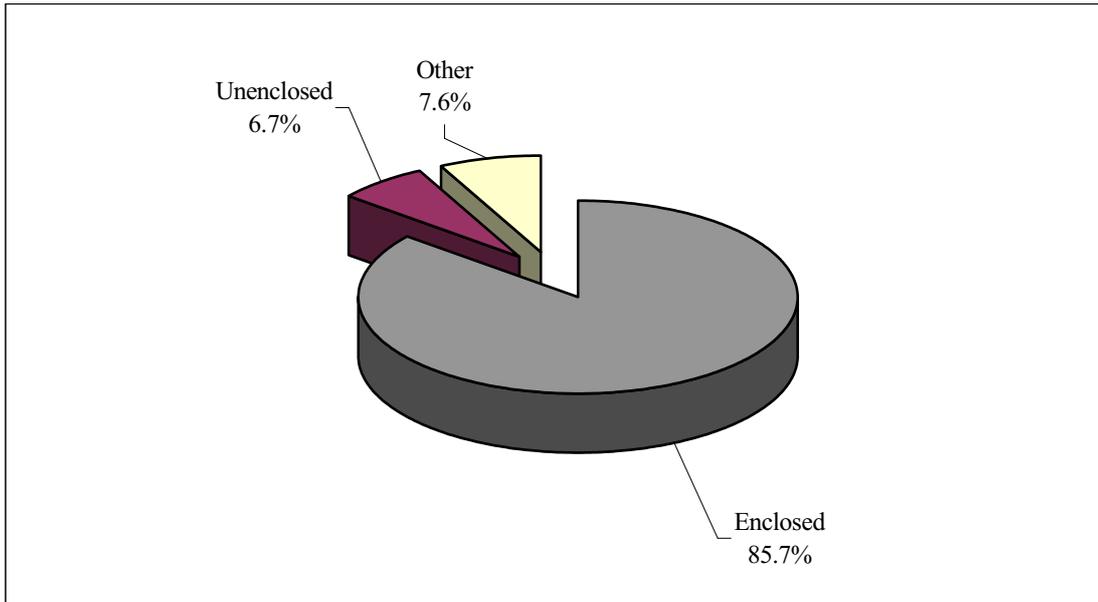


Figure 4 HLC landscape elements

The field systems across the county show an even ratio between the main morphological types (Figure 5). The spatial distribution of the patterns indicates areas that suggest differences at the county scale. These boundaries identify significant differences in historic character, against which the Secondary characterisation, Countryside Agency’s Character Areas and English Nature’s Natural Areas can be compared (see Appendix 2, Figure 7).

The Vale of Taunton Deane, and East Exmoor are both visibly different at the county level. There is a similarity between the Coastal Claylands, East and West Quantocks in the north, the Lias and Yeovil Lowlands in the south, and the area to the east of the Levels and Moors. The contrasts are a result of differing processes of enclosure that are reflected in the morphology of field boundaries. More intensive studies could target these areas to increase understanding of these processes.

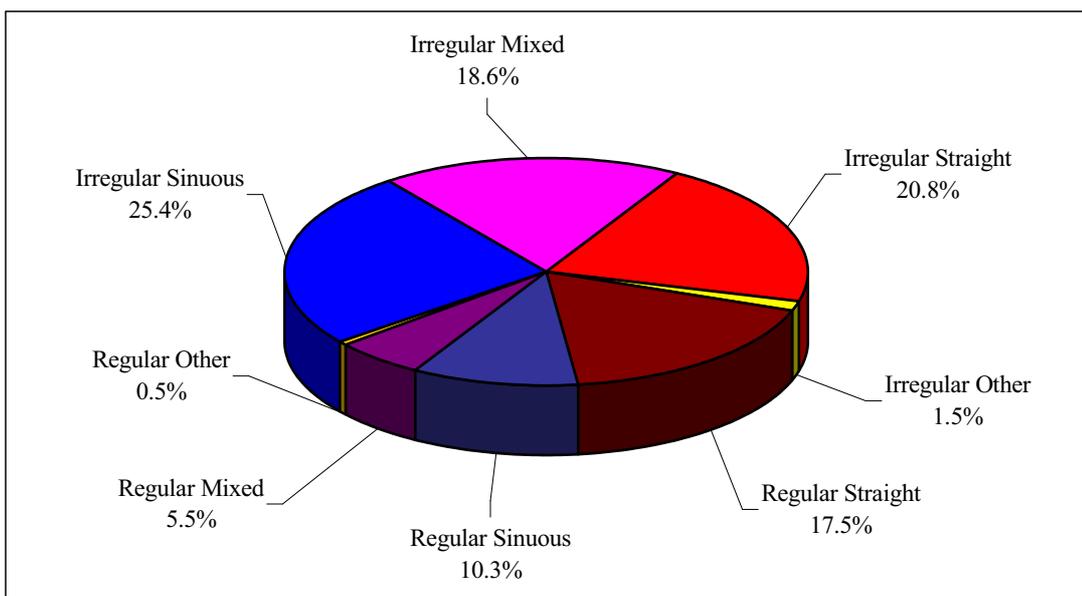


Figure 5 Enclosed landscape element subdivided by morphology form and boundary shape

Figure 6 Regular and Irregular field patterns

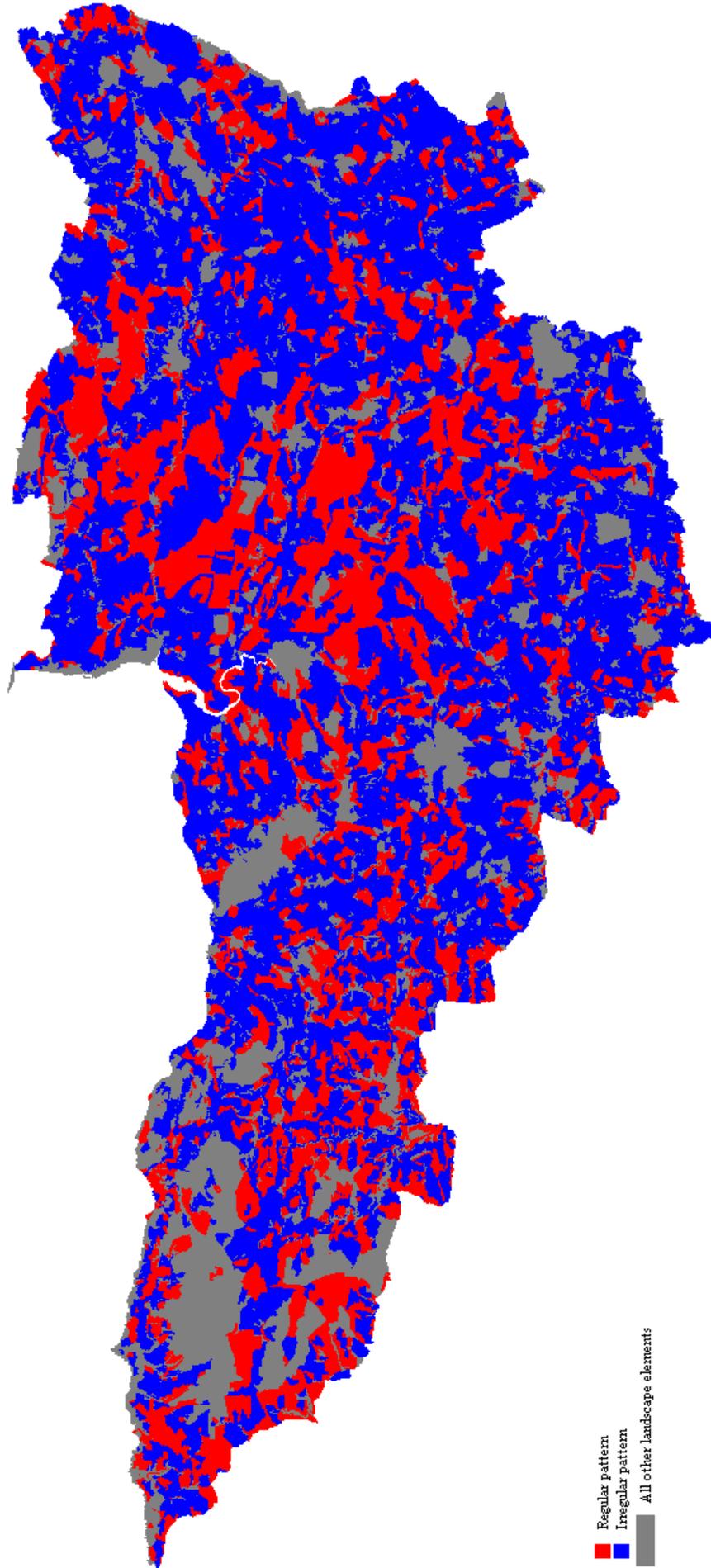
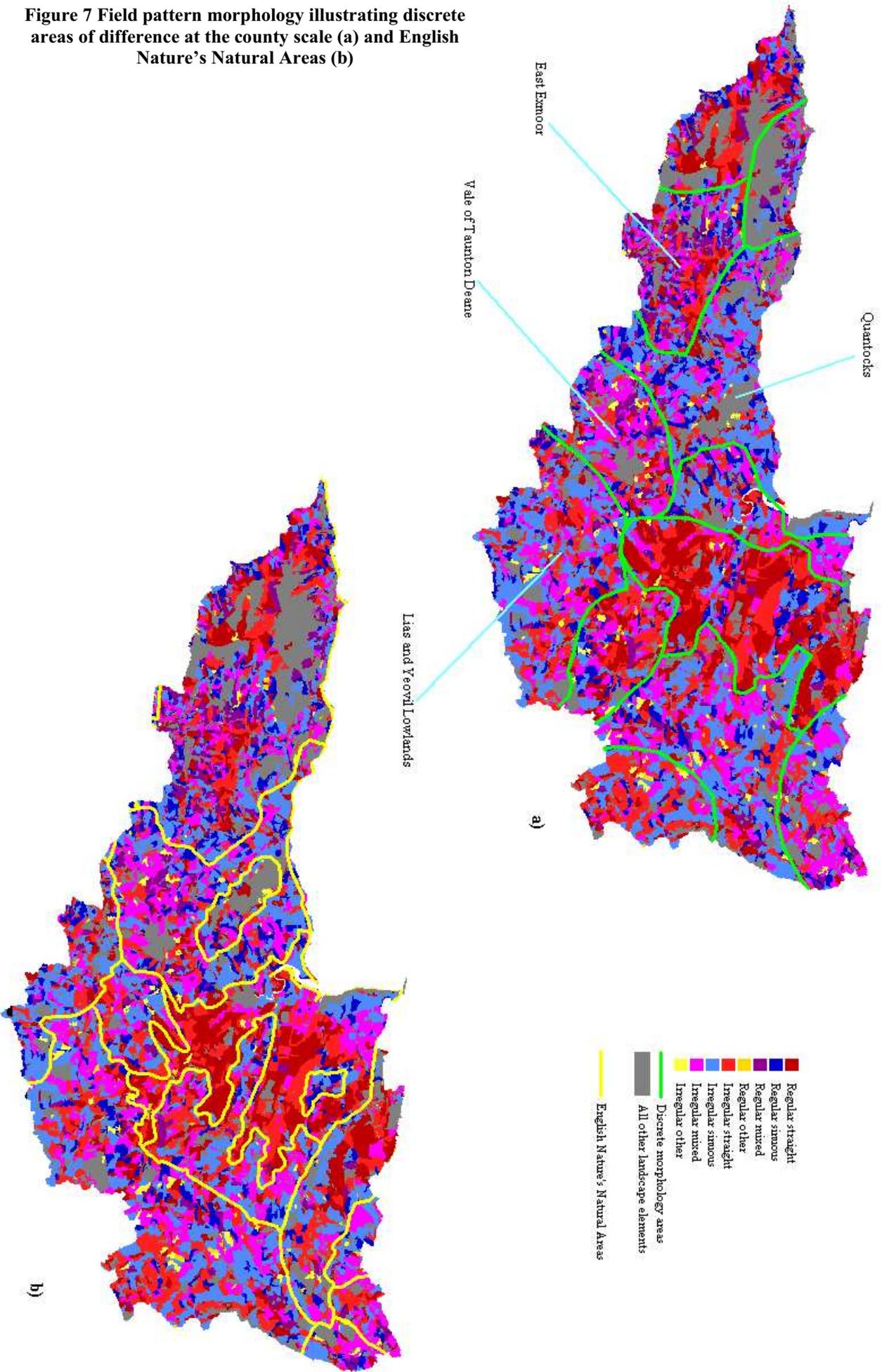


Figure 7 Field pattern morphology illustrating discrete areas of difference at the county scale (a) and English Nature's Natural Areas (b)



3.2.2 Field size and boundary loss

Field size queries give useful interpretations at the district, and county scales. Field size suggests two influences on the enclosure processes. Firstly, it reflects the limitations of space and function of the enclosure (the natural topography, or the origins of enclosure and the availability of physical space left for field creation). Secondly, field size can be a reflection of the level of boundary removal. There is a correlation between high boundary loss from c.1905 (the comparative map for measuring boundary loss) and large and medium field sizes, suggesting that the size of the fields is heavily influenced by boundary loss (Figure 11).

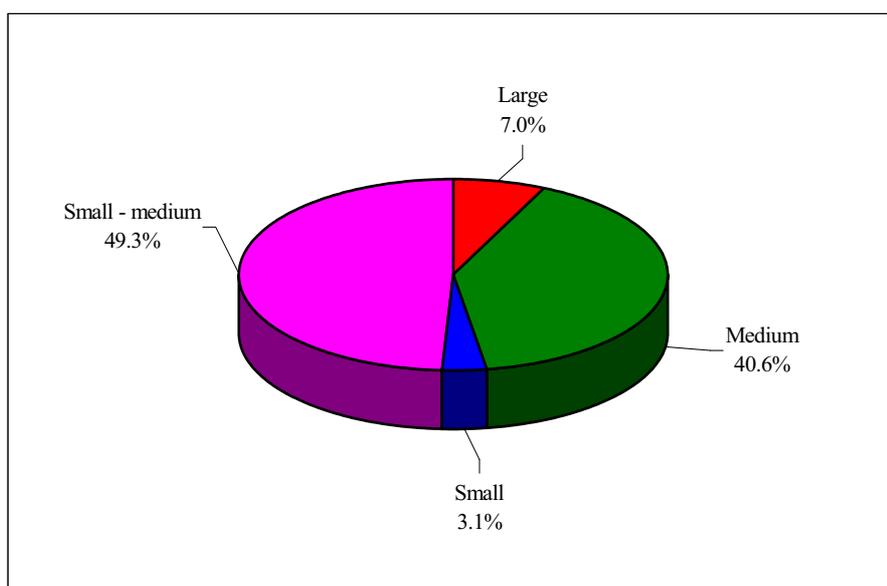


Figure 8 Field size within Enclosed landscape element

Field size is mostly small – medium or medium, i.e. between 3 and 12 hectares. The field size attribute represents the dominant size in any particular *region*. There will often be some variation in the field size of individual enclosures within the *region* that is not picked up by the dominant size. At a county scale this is not a significant drawback but it is an important consideration for small-scale use of the HLC. The Polywized (MapInfo tool for converting OS lines into areas) OS Landline data can be used to determine individual enclosure size at smaller scales.

Figure 9 shows the variation of boundary loss within the study area. The majority of fields, 76.5% of the Enclosed landscape element, have had low boundary loss. This is where minimal boundary removal has occurred. This suggests that extensive boundary loss has not been a feature of the Somerset landscape in the twentieth century.

There has been occasional boundary gain since 1905, 0.8%. There is a significant correlation of gain tagged *regions* with large sized fields (57%) (Figure 10).

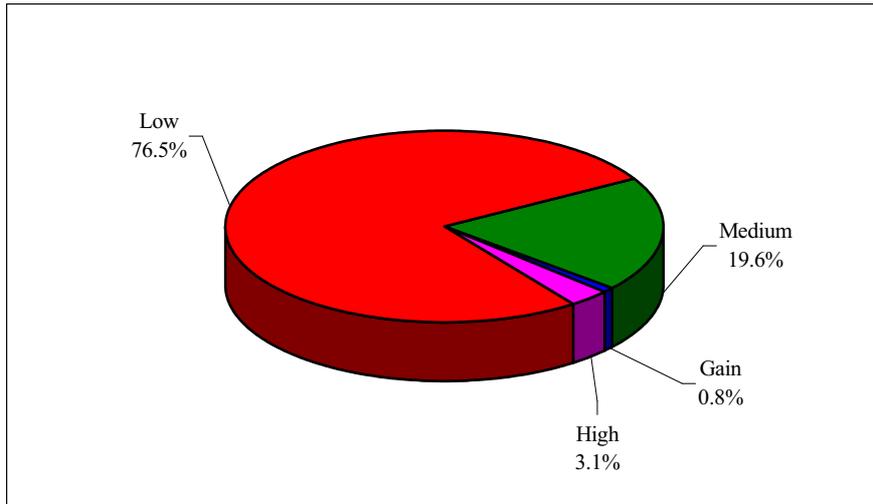


Figure 9 Boundary loss within Enclosed landscape element

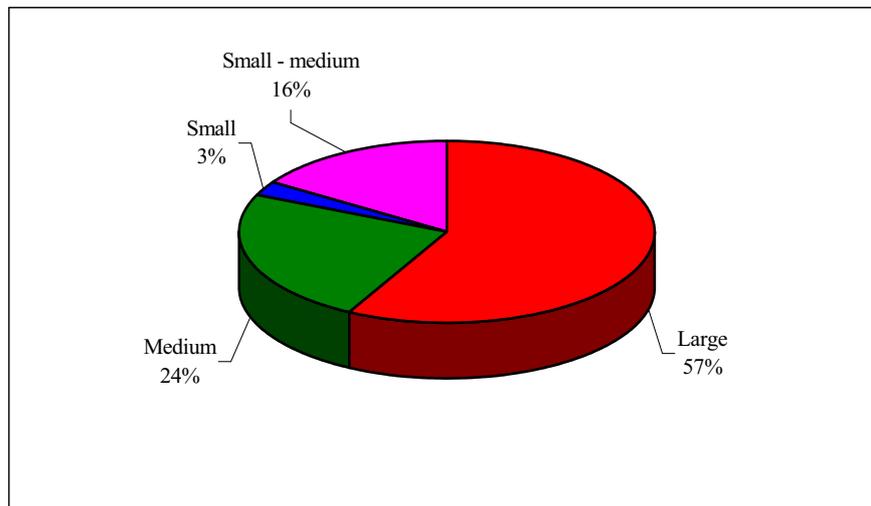


Figure 10 Boundary gain in relation to field size

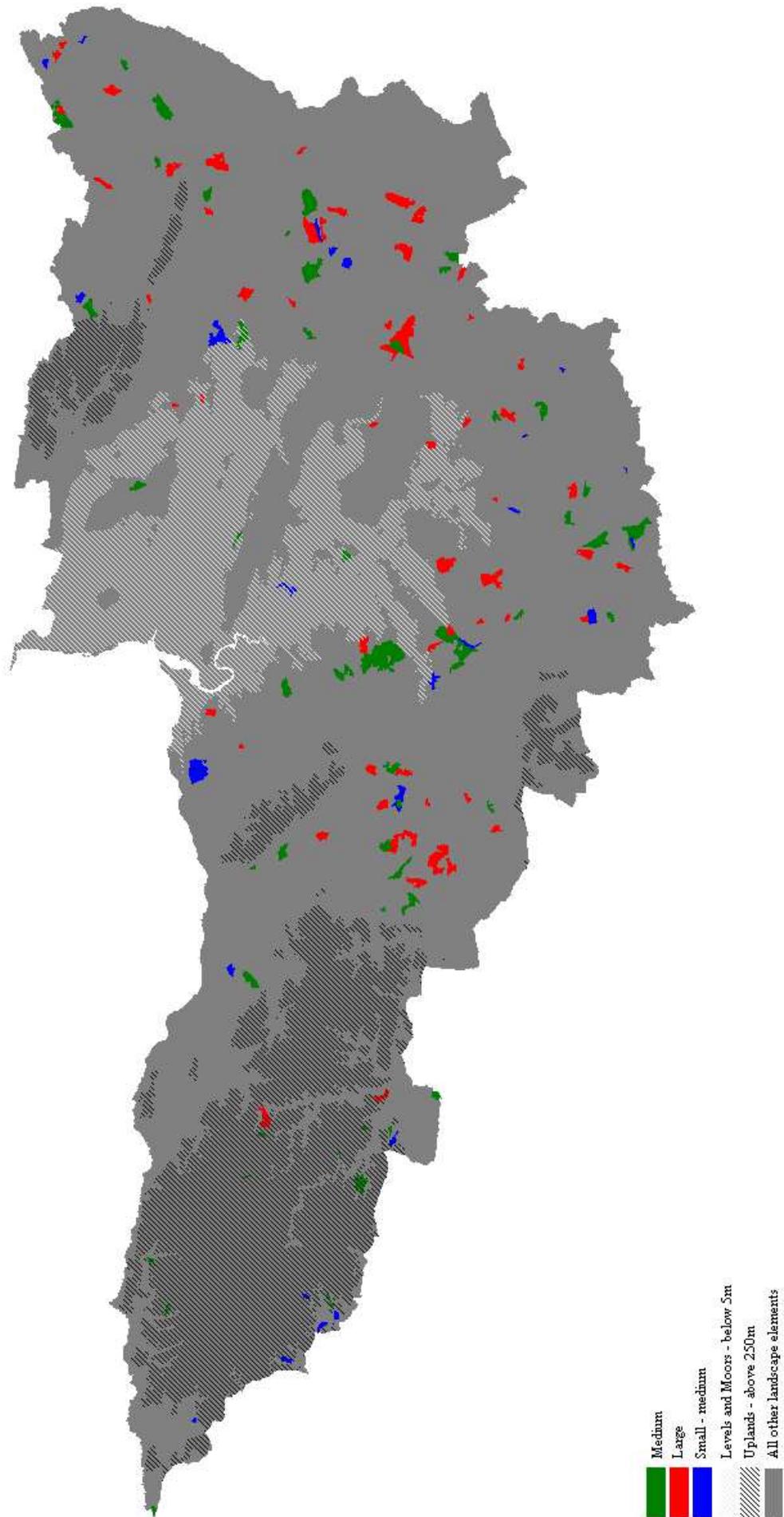
3.2.3 Farm density

The characterisation identified 1668 *regions*, or 21% of the total number of Initial character *regions*, with information relating to farms (see section 2.3.1.6). Their distribution is fairly consistent across the whole study area. *Regions* tagged with single farm and single farms information represents 95% of the total farm *regions*. Their distribution is best examined at the local level and alongside further information concerned with more precise enclosure dates, when specific interpretation about the dating of farms can be suggested. Not included are the deserted farmsteads which can be taken from the SMR and other sources such as Aston (1983). These may help to further identify and understand the development of the landscape and the relationship between settlement and field.

3.2.4 Initial interpretation of character

The Initial characterisation of the Enclosed landscape element included an interpretation of what the previous landuse was (see Figure 13), based on the judgement of the historic landscape officer using the OS 1:25000 map and other maps, such as the 2nd edition 6" and

Figure 11 The variation in field sizes associated with areas of high boundary loss



soil map (Lawes Agricultural Trust 1983).

The following interpretations were used (see Appendix 3):

- Common
- Open field/Subdivided
- Woodland
- River edge
- In field
- Various wetland and wetland edge depending on soil type
- Complex boundary

These interpretations were only carried out where there was little doubt about the previous landuse. A total of 3425 *regions* identified, covering 2195.92 sq km, or 73.5% of the Enclosed landscape element, were given a Complex boundary tag. These are areas where additional data sources are required to provide more specific interpretation. At the design stage of the project it was thought that there would not be enough confidence in assigning trustworthy interpretations to a majority of the enclosure patterns in the study area from the Initial characterisation alone. This is reflected in this proportion and shown in Figure 12. This raises questions about the validity of the data produced by previous HLC projects which have relied on an approach centred on singular interpretations of previous landuse.

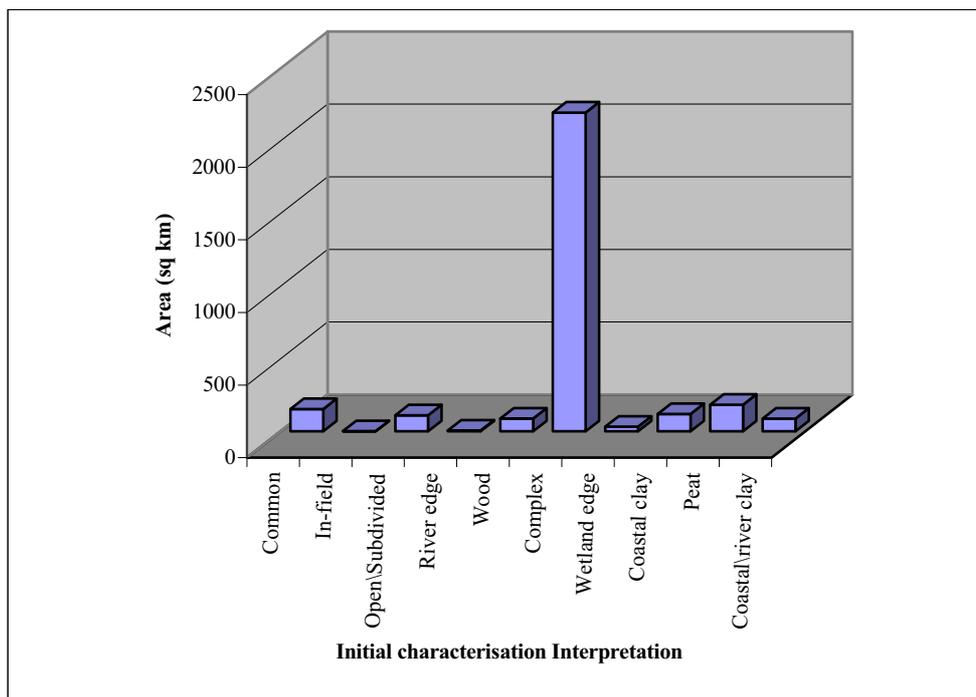
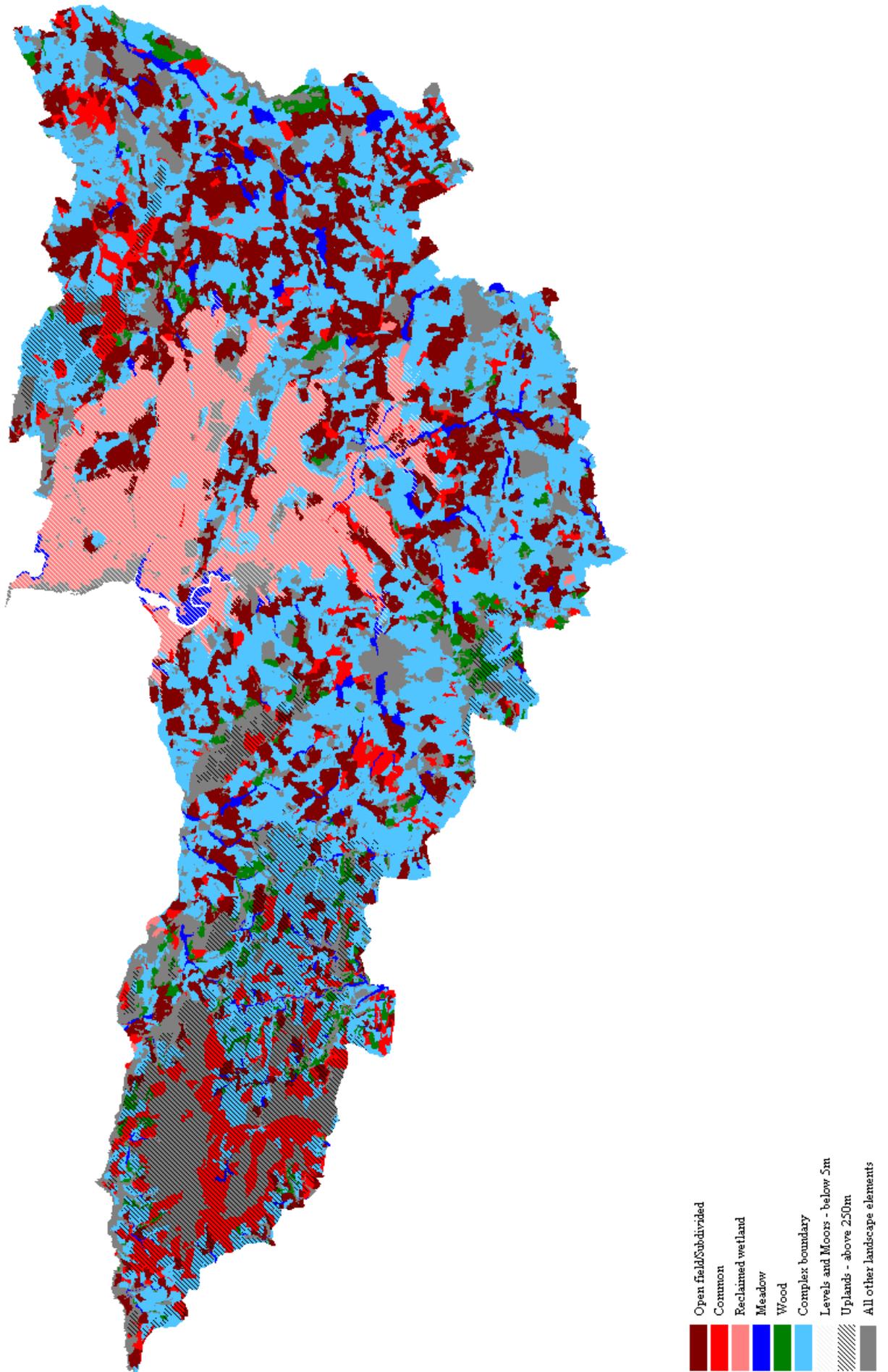


Figure 12 Proportion of Interpretation assigned to Initial character types within the Enclosed landscape element

3.3 Secondary characterisation

The Initial characterisation represents the database in its raw form, whereas the Secondary characterisation represents further interpretation created by querying the Initial characterisation database by itself or with other sources.

Figure 13 Grouped previous landuse



3.3.1 Database production

Previous landuse and process are, currently, two of the most valuable database products. These can help inform interpretations about time-depth and the evolution of the landscape at local and county levels. Other database products will be derived from use of the database as a planning and research tool. The production of the landuse interpretation is a working model and with further additions to the process attributes, a more detailed interpretation can be developed.

3.3.2 Previous landuse

One of the main aspects of Secondary characterisation is the identification of previous landuses which have led to distinctive patterns in the present landscape (Figure 14). The interpretation of previous landuse is based upon the field pattern morphology and indicator tags, and is representative of the fossilised attributes in the visible landscape. The interpretations are therefore built from the Initial characterisation as queries of the original data.

The previous landuse is divided into Grades of interpretation based upon its confidence and supporting evidence. For example, Grade 1 is an interpretation that is confident, whereas Grade 5 is an interpretation based upon less definitive proof.

The previous landuse map is presented in two ways:

1. Grouped interpretation, where all the grades are subsumed into one (e.g. Figure 13).
2. Ungrouped interpretation, with the grades separated (e.g. Open field/Subdivided, Figure 16).

The previous landuse descriptions are based upon some common generic types that have been used by other HLC projects. They are Open field, Wood, Common and Meadow. River edge, Moor reclamation and Complex boundary are types have also been used in this project.

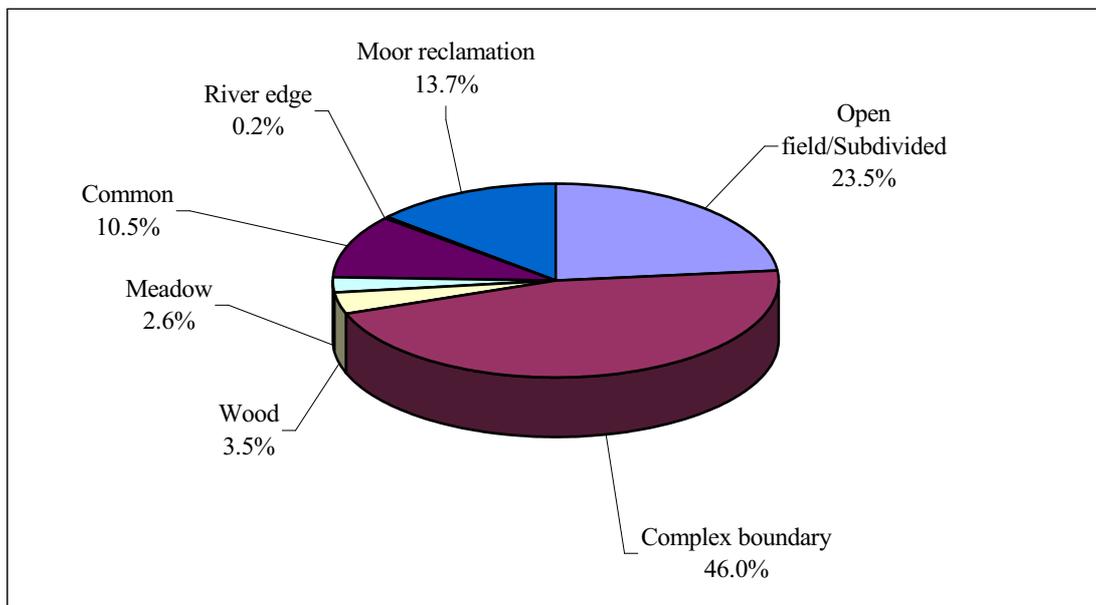


Figure 14 Previous landuse types

3.3.2.1 Open field/Subdivided (Figure 16)

Open field/Subdivided covers 704 sq km of the study area, 23.5% of the total field system Enclosed landscape element.

This category is thought to represent land that has been formed through “common” or shared ownership, either as open fields later subdivided by physical boundaries, or as fields already enclosed and but working in the same way as an open field system. The difference between the two types is not easily recognisable in the present landscape. The first type is easier to identify as suggested by the drop in the density of the higher Grades towards the west of Somerset where the second system is thought to be more prominent. This may be because fossilisation of open field systems takes on established forms such as reversed S and dog leg boundaries. It was not in the remit of the project to consider the distribution of particular types of former open field agriculture, such as the Midland or the Subdivided systems.

The most definite areas of Open field/Subdivided (Grades 1-3, see Appendix 4 for definitions) occur predominately in the east and southeast of the county. The core of Grade 1 is located around the ridges of the Levels and Moors, to the east of that area towards West Mendip and within the lowland lias and Yeovil areas in the southeast of the county. There is a correlation with these areas and the greatest density of medieval settlement in the county. There are occasional Open field/Subdivided types in the west of the county, but these are often smaller *regions* than their eastern counterparts. The distribution of Grade 4 shows a similar trend to Grades 1-3 with greater concentration in the east and southeast of the county and also in the west of the county, around the east and west of the Quantock Hills. Grade 4 is derived from field morphology attributes such as dog legs and reversed S shaped boundaries, within a 1 km radius of medieval settlement.

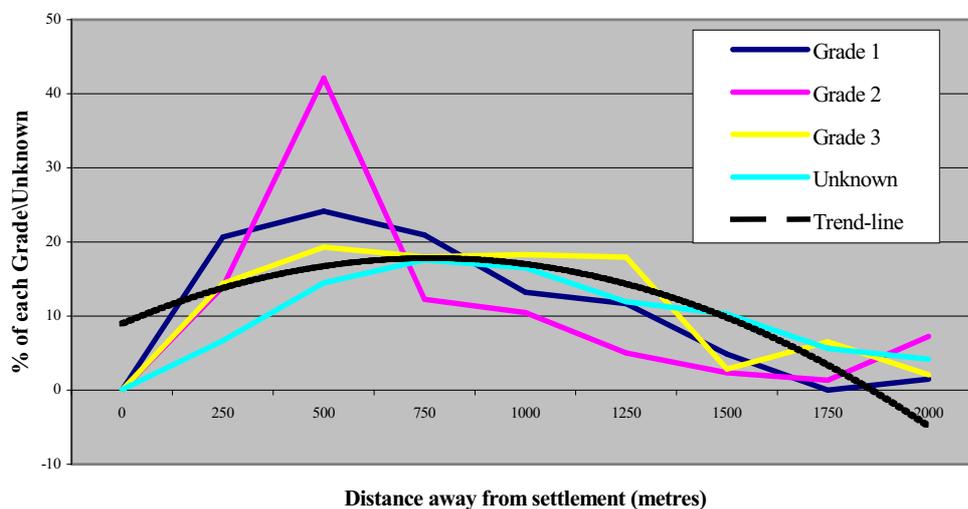


Figure 15 Analysis of distance from medieval settlement in relation to Open field/Subdivided interpretation

To test the relationship between known medieval settlement and the distance of Open field/Subdivided the HLC database was queried in combination with SMR data. The medieval settlement is derived from a combination of SMR deserted, shrunken and excavated medieval settlement sites and historic landscape character type Pre 1839/40 settlement. The amount of Grades 1-3 Open field/Subdivided at different distances away from medieval

settlement was plotted (Figure 15). The 1 km distance from settlement is a significant selection based upon a statistical study of Grades 1 – 3, using Initial Complex boundary types as a control. The percentage change in the number of selections made at 250m intervals from medieval settlement begins to tail off at 1 km (Figure 15).

The inclusion of Subdivided in the previous landuse description along with Open field, reiterates the point that different types of systems were in use in the Somerset landscape. The connection with the settlement pattern is important in understanding the origins of these early agricultural systems. Somerset lies between the West Wessex and South West Peninsula zones identified by Roberts and Wrathmell (1995; 2001) which reflect two very different settlement patterns that combine in the middle of the county. Several types of medieval agricultural systems are evident in Somerset: the Midland, variations of the Midland, Subdivided systems, and in-field systems. In this respect the Somerset landscape manifests a complex pattern of enclosure, both in its development and its survival. The interpretation presented by the HLC project does not separate these differing systems but shows their visible survival, identifying areas where more in-depth research can be carried out using other landscape sources, such as map regression and relict landscape evidence (see sections 3.5.3 and 3.5.4).

3.3.2.2 *Complex boundary*

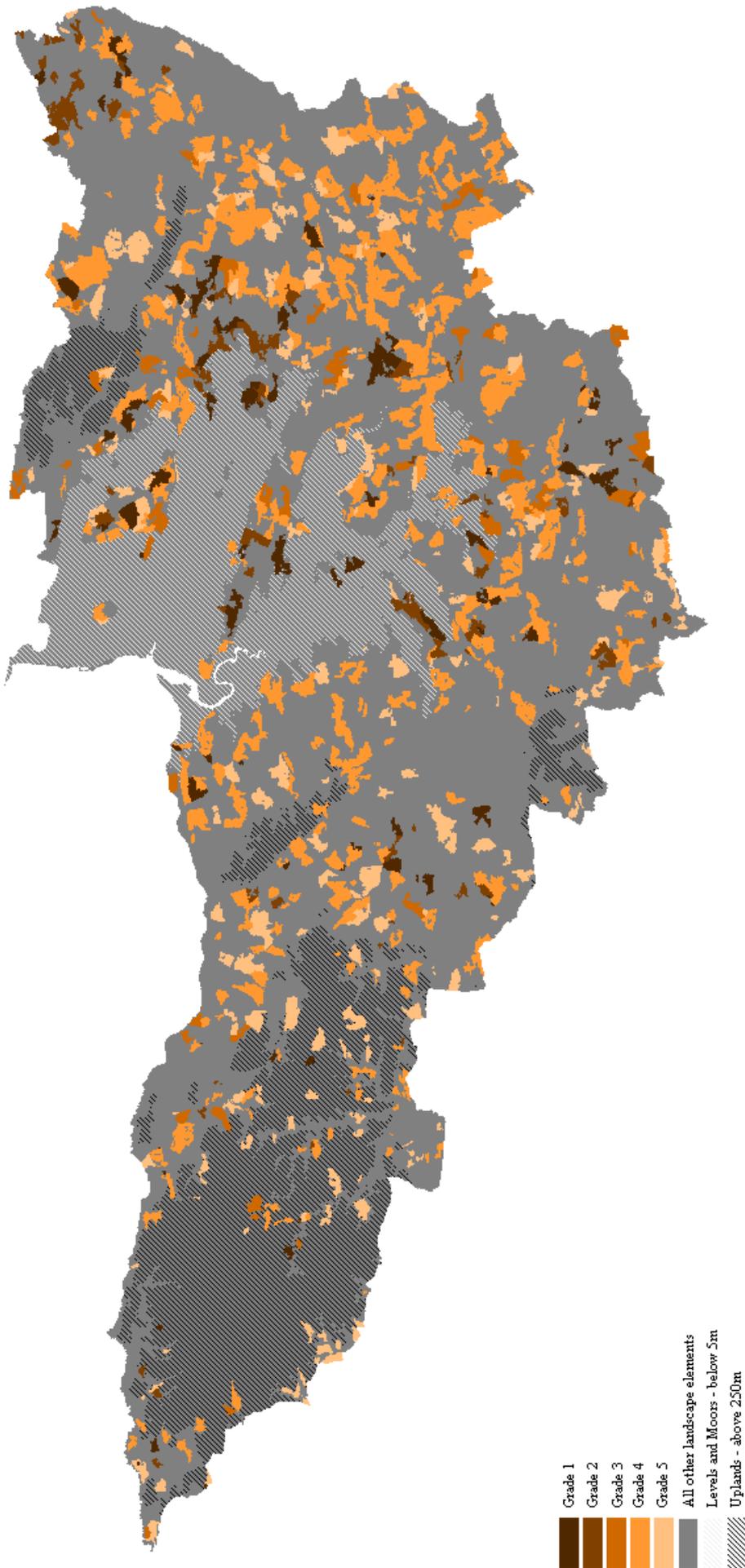
Complex boundary covers 1380 sq km of the study area; 46% of the total field system Enclosed landscape element.

This group represent field patterns that are not obviously late in date and do not show evidence of readily identifiable characteristics suggesting formation from already interpreted previous landuse. They may be of considerable antiquity and may reflect significant variations in enclosure processes across the county. Other data sources such as height, slope and aspect can be used to analyse the processes of enclosure within this group. It was known from the outset of the project that this group would be the hardest to assign interpretations to, and their identification is an important step forward to better understanding the landscape of Somerset.

The distribution, of this type, is fairly consistent across the whole of the study area, though excluded in the Levels and Moors area and Exmoor upland where the previous landuse is more identifiable. In the areas to the south and southeast of the county there is a lower density of this type because of the greater survival of Open field/Subdivided (Figure 17).

Within the Complex boundary group there are more irregular mixed types than regular. There is no significance in the boundary loss attribute within this group; 1018 sq km of low boundary loss, 293 sq km medium, 60 sq km high, 9 sq km gain, within the group. There is a similar proportion of field size within the group as in the overall ratio. The bar chart (Figure 18) indicates which morphologies exist within the group. With the addition of other sources alongside the database, more of the Complex field *regions* will be able to be placed into some of the categories representative of previous landuse, and perhaps new ones. Many of the Complex fields maybe the result of “interference” on the pattern in recent centuries, or the result of combinations of many previous landuses, some of which may have re-used earlier boundaries. Further research might be directed towards particular combinations of attributes. For example, there may be a correlation with topography, or distance from settlement or another landscape element.

Figure 16 Open field/Subdivided interpretation



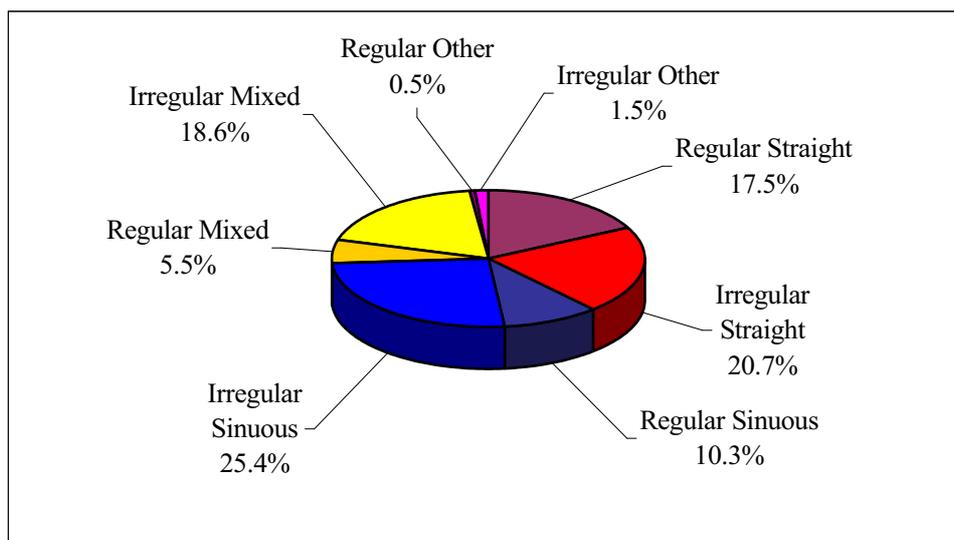


Figure 17 Complex boundary previous landuse separated into field pattern morphology

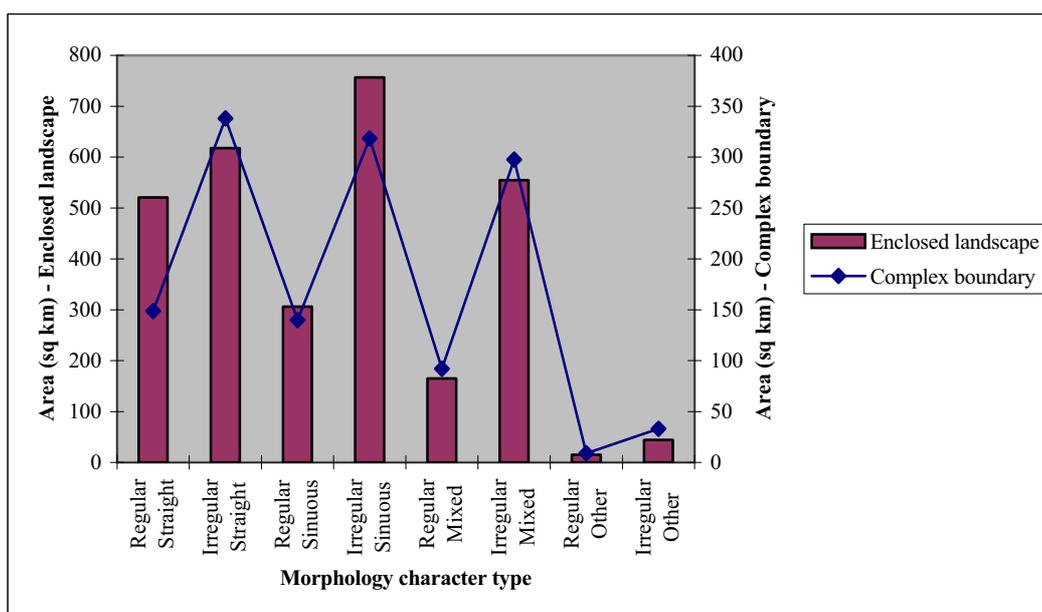


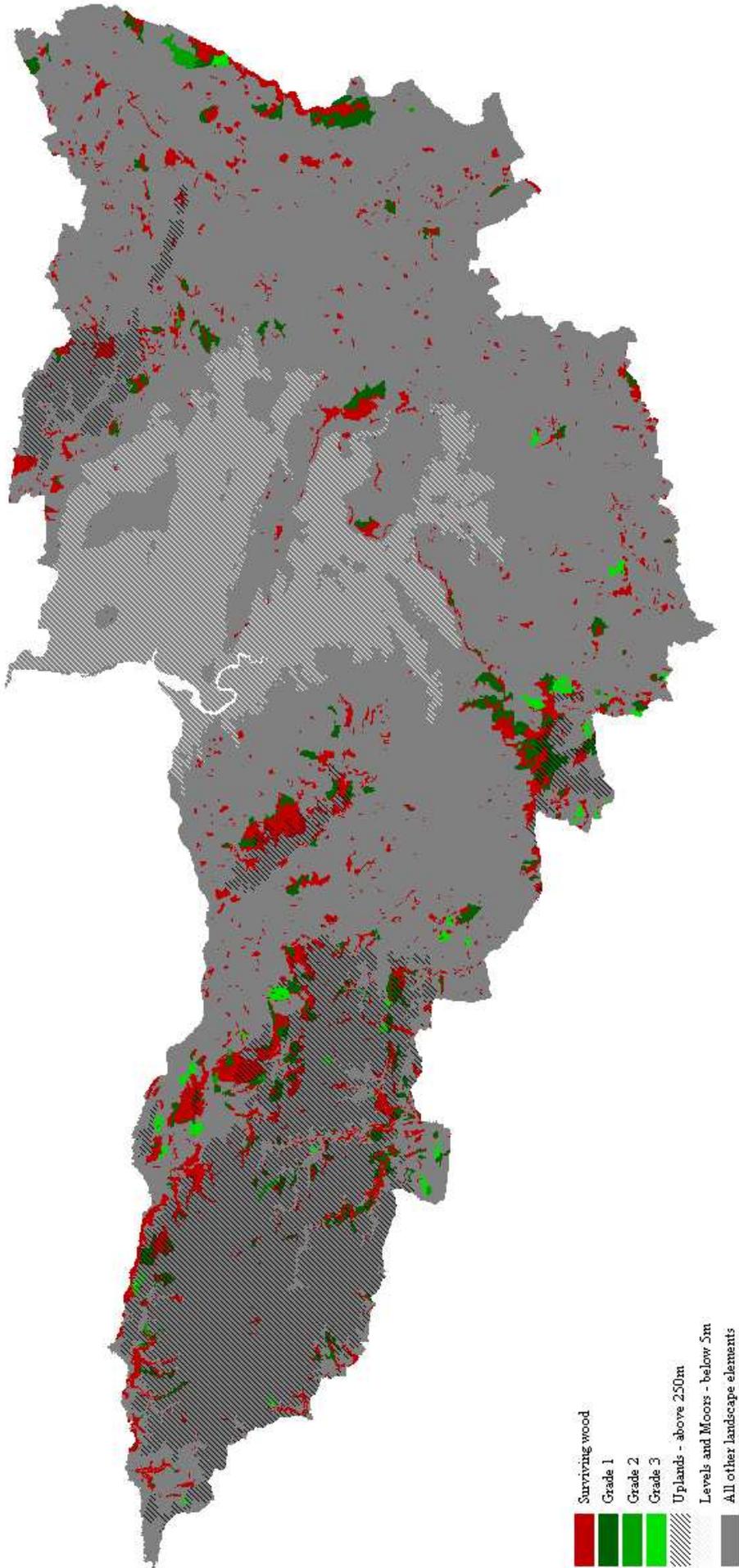
Figure 18 Total area of morphology, form and pattern within Complex boundary group

3.3.2.3 Wood

Wood covers 106 sq km of the study area; 3.5% of the total Enclosed landscape element.

This category represents the previous landuse that can be recognised as being derived from the removal of wood (assarting) and its subsequent enclosure. There is a strong correlation with existing wood coverage, both Ancient and other wood character types, in the areas of greatest survival such as Exmoor, Blackdowns and in the east of the county near Frome (Figure 19). A comparison with the Domesday woodland illustrated by Darby (1967, fig 41) shows a similarity with the HLC Wood group, with the exception of the wooded area east of

Figure 19 Wood and former wood



the Quantocks as shown on the Domesday map (*ibid.*). This may be explained by the predominance of Complex boundary types in this area compared with other parts of the county, perhaps suggesting differential processes of wood clearance occurring. Specific processes of enclosure and wood clearance are likely to relate to particular topographic attributes, such as slope and aspect. There is a correlation with steep slopes and present wood survival.

3.3.2.4 Meadow

Meadow covers 77 sq km of the study area; 2.6% of the total field system Enclosed landscape element.

This group represents land enclosed next to rivers, or has characteristics that suggest that it is a result of a complex drainage and enclosure processes that results in a meadow type field pattern.

Wood and Meadow often are juxtaposed together, especially in the west where topography has played an important part in the development of landuse. In areas not affected by strong contrasts in topography Meadow is associated mostly with lowland valleys.

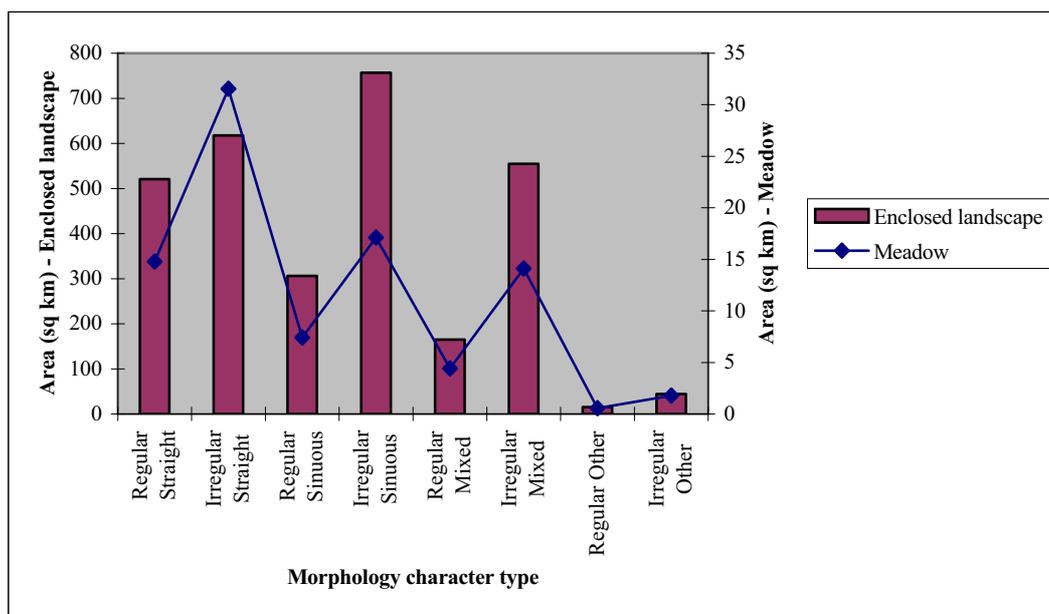


Figure 20 Area of field morphology character type in previous landuse Meadow

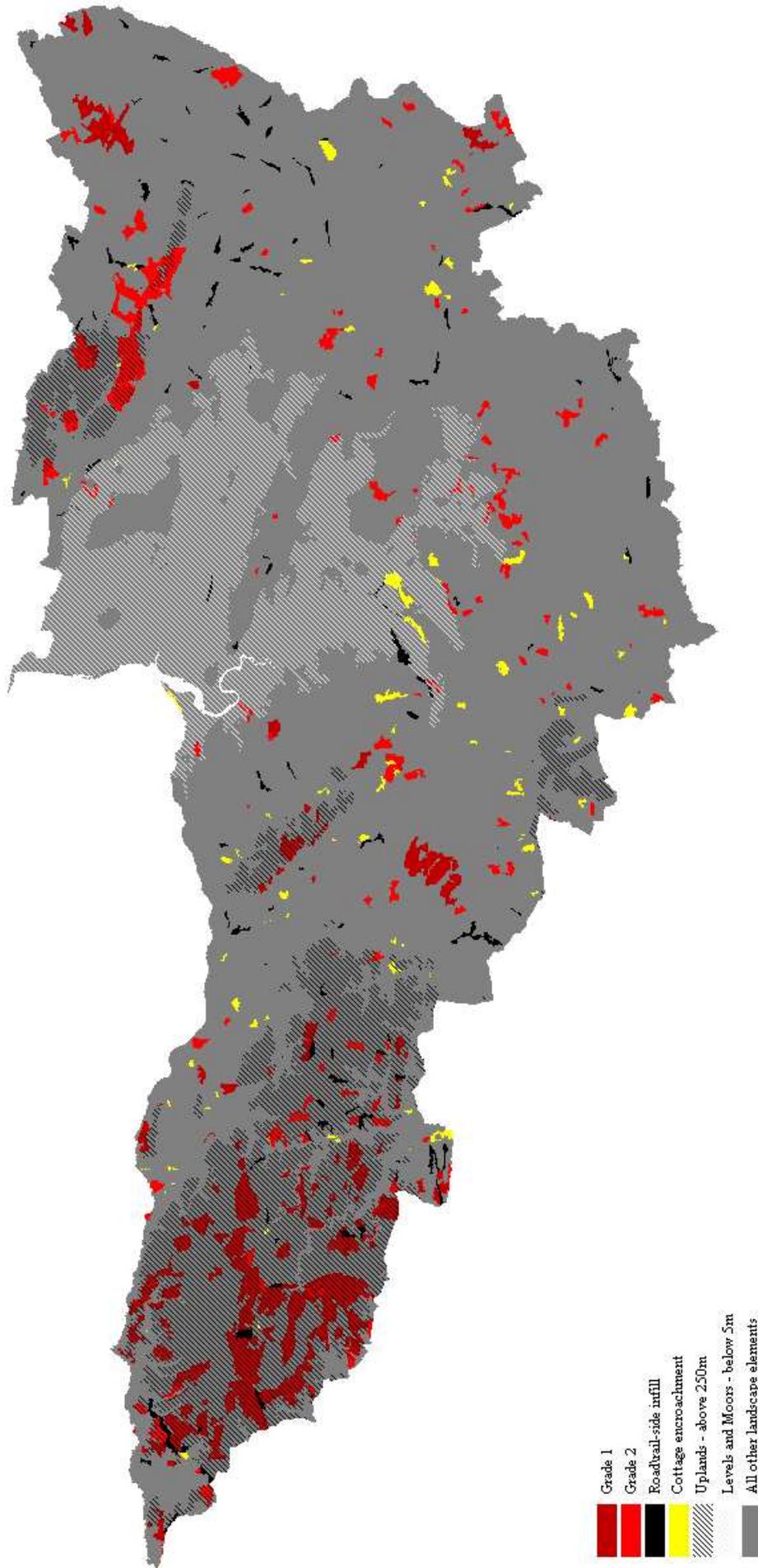
They are often quite wide in form and have particular field morphology. For example 54% have straight boundaries and 12% are sinuous (Figure 20). From this group 53% have small – medium fields, and 12% have small.

Regions that have characteristics similar to both Wood and Meadow are separated into their group by association with Wood or Meadow, either as a distance factor or in direct physical association with that type (see Figure 19).

3.3.2.5 Common

Common covers 315 sq km of the study area, 10.5% of the total field system Enclosed landscape element.

Figure 21 Common previous landuse



This group is defined as common waste or pasture that has been subsequently enclosed. It also includes enclosure of waste by the encroachment of settlement and linear features across the landscape.

The majority of Grade 1 Common historic character types (identified areas with the interpretative attribute Common) are located on Exmoor, the southeast end of the Quantocks and the area around Mendip Hills. Grade 2 is based on all other straight boundary patterns which are not assigned another previous landuse and have patterning that suggests planned enclosure. However, these areas need to be checked against map sources showing Parliamentary Enclosure and other sources that identify former common and waste or pasture.

Road/rail-side common is identified as the result of an association with the communication landscape elements road and rail, in which the area between the older fields and the new imposition of the communication feature invariably is enclosed using straight lines often at right angles to the new feature. The area identified is either previously unenclosed waste, or a reworking of the edge of an older system. The distribution is fairly widespread throughout the county, though generally rare in the south of the county. This is a product of the development of the road and rail system in the mid-nineteenth century.

Cottage encroachment is identified from the extent of settlement which is not identified as Post-1839/40 settlement but overlies earlier field systems. Often it occurs over common waste, but occasionally over Open field/Subdivided type fields. In East Anglia it is called Greenside settlement (Warner 1987), in Somerset, Cottage encroachment. There is a greater density of this type in the south and southwest of the county, and especially the Vale of Taunton Deane, in areas where there has been more settlement expansion since the mid-nineteenth century.

3.3.2.6 River edge

River edge covers 6 sq km of the study area; 0.2% of the total field system Enclosed landscape element.

Enclosure of land positioned next to rivers, especially the river Parrett, shows a distinctive form of patterning that is similar to the linear feature type landuse identified in the Common group. The pattern formed from the enclosure of areas next to large rivers is similar to Road/rail-side. The only main area is around the River Parrett, in Pawlett parish. These areas are formed by a series of reclamation events encroaching into the river. The extent of these encroachments can be seen in a series of relict sea defences.

3.3.2.7 Moor reclamation

Moor reclamation covers 412 sq km of the study area; 13.7% of the total field system Enclosed landscape element.

This group represents land reclaimed from wet, low lying areas of marsh, fen or raised bog. Within this group differentiation occurs between various soil types as sourced from the Soil Survey of England and Wales (Lawes Agricultural Trust 1983), and land along the edges of the wetlands where early enclosure is suspected.

Soil coverage of the Levels and Moors was used to identify potential differences in the Initial characterisation of the Interpretation attribute between peat, coastal clay, and marine

and river clay (see Appendix 3).

Early moor reclamation, on the edges of the Levels and Moors and within the peat, shows distinctive morphological patterns in shape and size (Figure 22). The Early moor types are often straight with a predominance of irregular forms, and small or small – medium sized fields. These areas are deemed to be the earliest areas of reclamation on the moor, but often reflect patterns that are considered late in date. The key defining characteristics is therefore their position at the edge of the moor. The field pattern morphology of enclosure can now be tested against further map regression by identifying documented areas of early enclosure.

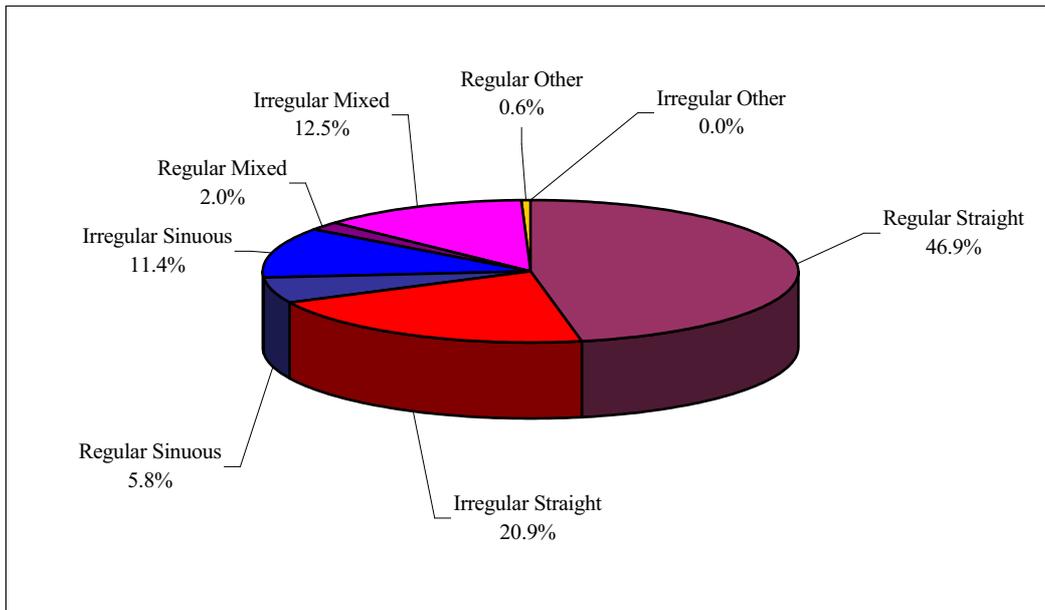


Figure 22 Area of field pattern morphology in Early moor reclamation type

The distribution of field pattern morphologies show a significant influence of soil type and present an opportunity to look at the interface zone between peat and coastal clay (Figure 24).

Figure 23 and Figure 24 show that the area demarcated as marine and river clay shows a variety of different field pattern morphologies, some of which are similar to the ones around them in peat and coastal clay, but others which are quite different, such as the irregular mixed types. Questions about the processes of enclosure are suggested by such a study and can form the subject for further work.

The patterns identified on the coastal clay exhibit a process of enclosure which was very different from the peat, where irregular sinuous and mixed patterns were prevalent. The peat morphology pattern was mostly straight boundaries regular or irregular in form, with areas of earlier moor reclamation that have mixed or sinuous boundaries. The marine and river clay areas show a number of different morphologies that are marine/coastal or river-derived clay types. The processes involved in creating the patterns are a result of both the topographic conditions, the date of enclosure and the ownership of land. Peat reclamation involved drainage of large open tracts of land but was limited by the constraints of ownership. The form and pattern of enclosure in this area is predominately regular straight boundaries. Conversely, the coastal clay pattern is mostly sinuous type boundaries which are a result of piecemeal enclosure dictated by the natural drainage channels, which often form the boundaries. In both coastal and clay areas there are patterns in contrast to the ones around

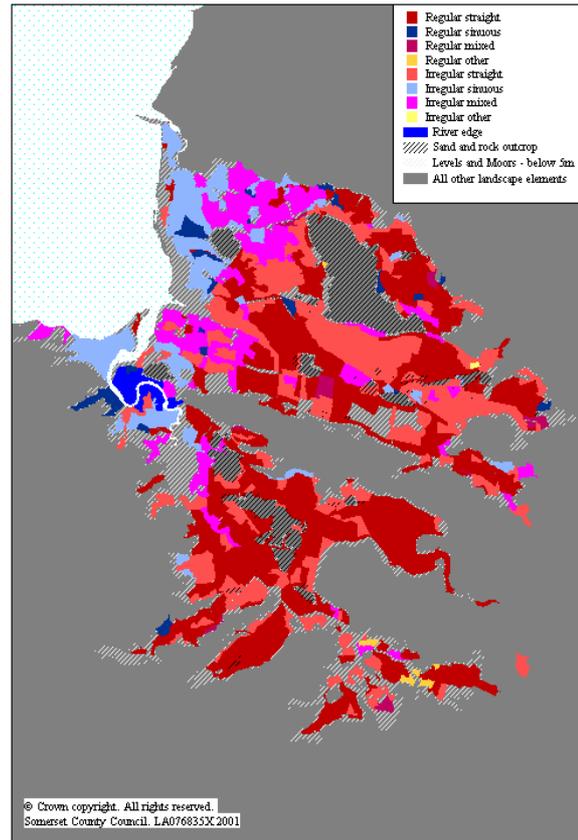
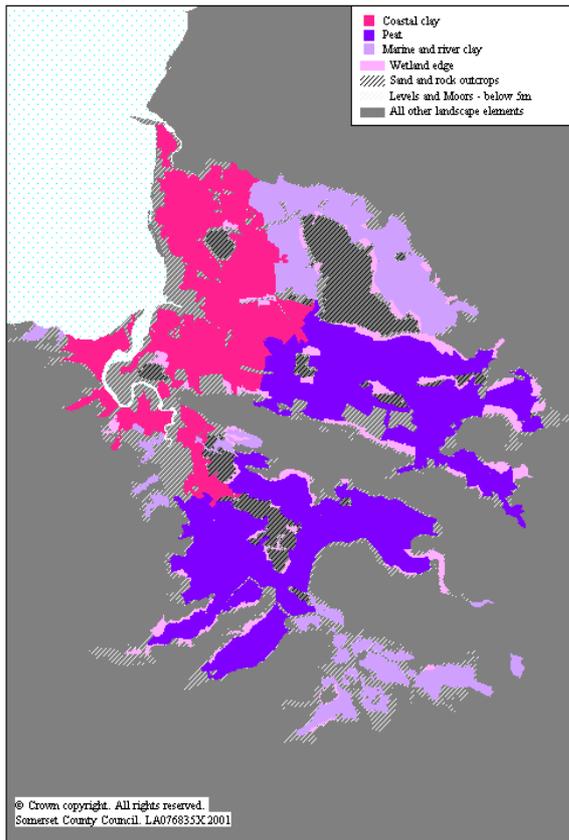


Figure 23 Levels and Moor wetland interpretation

Figure 24 Levels and Moor wetland field pattern morphology

them representing differing enclosure processes. These differences can be recognised with detailed study.

3.4 Research questions derived from the HLC project

3.4.1 Enclosure Processes

The application of specific dated processes of enclosure to the HLC *regions* will be the main target following the end of the project. Identifying Parliamentary Enclosure is the first step to achieving this.

Parliamentary Enclosure in Somerset (including N. Somerset and B&NES) totalled 171,234 acres, or 693 sq km, of which 155 sq km was open field and 538 sq km was common and waste (Turner 1980, 176-208). Williams suggests that there were 144,369 acres or 584 sq km of Parliamentary Enclosure, common and waste type (Williams 1971, 65; Appendix 6). The total area affected by Parliamentary Enclosure in the Somerset part of the study area is estimated at 576 sq km (approximately 133 sq km open field and 443 sq km common and waste). This represents 16% of the total area of Somerset and 21% of the Enclosed field systems landscape in the Somerset part of the study area. The majority of Parliamentary Enclosure occurred in Somerset between *c.*1750 and *c.*1836.

The morphological patterns and processes resulting in Parliamentary Enclosure have a recognisable pattern, especially the common and waste type (though this is to be tested). This was located in the Levels and Moors (41.4%), in Exmoor (30.7%), in the uplands of the

Mendip Hills (17.1%), and in the Blackdown Hills (8.1%) (Figure 25). The capture of these boundaries are part of the on-going enhance of the project. Once the boundaries of Parliamentary Enclosure are digitised, a regression method of understanding the processes and resultant forms of enclosure can then be incorporated into the project. Identifying the patterns which are the result of Parliamentary Enclosure can aid in assigning specific time-depth to the landscape. The Somerset and Exmoor NP HLC can also incorporate other boundaries derived from documentary sources to help understand landscape development and identify which morphological characteristics are associated with particular enclosure processes.

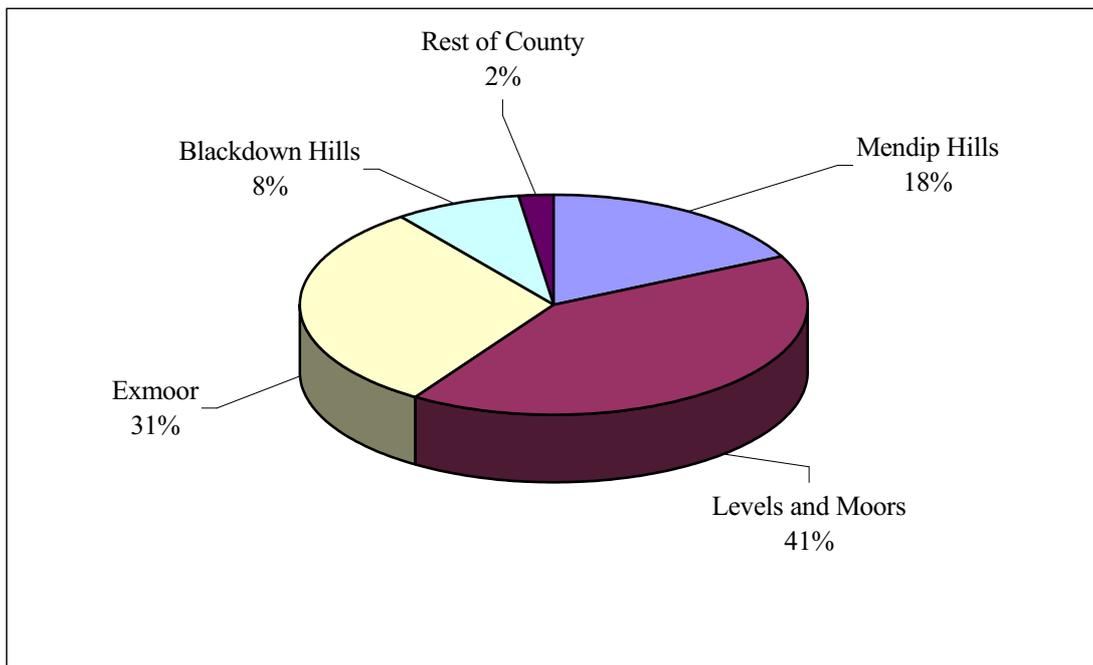


Figure 25 Proportion of Parliamentary Enclosure, Common and Waste in Somerset (inc N. Somerset and B&NES) (based upon Williams 1971, 65)

The hypothesis that morphological characteristics of the enclosed landscape reflect the processes of enclosure will be tested with the addition of further source material in a limited number of case study areas (see section 3.5.3). Questions concerning the origins and reuse of older boundaries which help inform the processes of enclosure, can be addressed by examining the extent and survival of relict landscape with HLC character types (see section 3.5.4). This will also help to date the field systems which overlies the relict landscape.

3.4.2 Field system studies of Somerset’s landscape

The dividing line between field patterns suggesting a predominance of open field system type and other arable systems appears along the Provincial boundary between the South West Peninsula and West Wessex, as suggested by Robert and Wrathmell (1995). However, the difference is probably subtler than this. What is suggested either side of this boundary are altogether different arable systems; Subdivided and Open field systems. The Subdivided type was enclosed either at an early date, fossilising early systems of agriculture, or used from its inception an enclosed form. Fox (1972) has suggested that arable farming in the South West Peninsula used internal boundaries as the initial dividers between fields as opposed to open

systems that were enclosed post 1770. Somerset straddles the two systems and is therefore an important area of study for field enclosure origins and processes. The dividing boundary can be pushed as far as the eastern limits of the Quantocks, similar to Roberts and Wrathmell (*ibid.*), though remnant forms of strip agriculture exist, whether Subdivided or Open, in the far west of the study area. For example, Braunton and Combe Martin, in Devon, represent two classic fossilised open field systems. The system in use in Somerset is not the classic Midland one but a combination of different types, and this is reflected in the variation in the morphological characteristics of the field patterns west of the Provincial boundary.

Emphasis for further work is directed to the areas which have Complex boundary character types. Understanding the processes involved in their creation will enable more confident interpretations concerning the relationship between previous landuse and morphological characteristics, and therefore identify the type of system that was used.

3.5 HLC: potential and future

One of the ways in which the HLC database can be interpreted is illustrated in the previous section.

The HLC database is robust enough to accommodate as many interrogations of the data as can be thought of. Investigations into the size of fields, the level of boundary loss, the number of small farms associated with regular or irregular straight field systems, are just some. The querying capabilities of the database are the most important part of the design. The data becomes even more powerful when external data sets are used in conjunction with the HLC. The lessons learnt by the analysis described in the sections below can subsequently be applied to future and previous HLC projects. In addition the value of the HLC as a research tool will be highlighted.

3.5.1 Topography – slope, aspect and height

Using an image processing application (ER Mapper) it is possible to extract slope, aspect and height data sets that can be used as areas within the GIS to analyse the HLC database. These areas can be used to select character types that fall within defined topographic criteria. Questions concerning whether topography has influenced particular field pattern morphologies, therefore, can be asked. The ability for the HLC database to be analysed in conjunction with this data set make it an extremely powerful tool.

Slopes, aspects, heights, or combinations of all three, are divided into value ranges to form a complete topographic data set with which to ask the HLC database questions. For example, what correlation exists between character type and slopes between 20-45 degrees? This could be used to identify areas of previous wood landuse within the Complex boundary type, and to ascertain what characteristics are common to these topographies. It can be used at a close resolution to investigate potential reasons for boundary direction, or locate areas where topography has influenced the enclosure process. Aspect and height are used to select field morphologies, that are, for example, on south facing slopes, and on heights above 100m. The complete topographic data set allows interrogation of the HLC database on given topographic data independently of the main database.

3.5.2 Monument survival

The relationship between monument type and character type may be significant. An opportunity is created to examine the potential correlation between boundary loss and monument survival, or site type and character type. Is the survival and recognition of archaeological sites influenced by the types of areas that have been farmed under arable conditions in the past? The interrogation of sites and HLC can be used to begin to assess this

question, and others related to it. An example of MPP survival value for the Mendips has been investigated using the HLC database, where the Initial character is used against which to measure the impact that boundary loss, enclosure type has had on monuments.

Figure 26 shows the distribution of field morphology with monument survival, illustrating the range of different field pattern morphologies that MPP monuments are located. There is no particular correlation between character type and monument type, or a correlation between high boundary loss and monument survival value of all monument types.

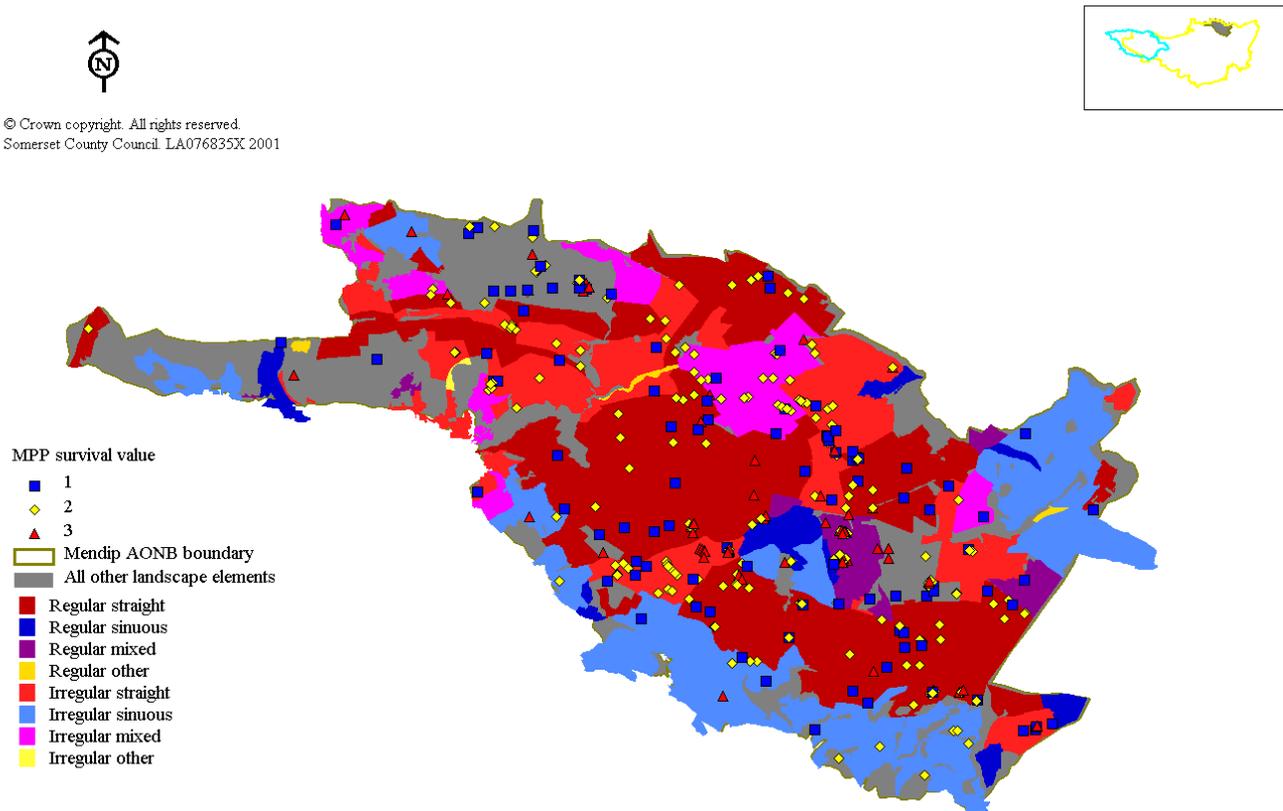


Figure 26 MPP Monument survival value (1-3) and field pattern morphology in Mendip Hills AONB (Somerset)

Most monuments in the enclosed landscape are located in low boundary loss areas. It may be that the factors behind high boundary loss may have also removed the recognisable traces of monuments in the area. There are however, a large proportion of monument types in the Other landscape element – 32% of the monument total.

Examination of one particular monument type and boundary loss (Figure 28) shows a similar proportion to all monument types (Figure 27). Further work using monument and boundary loss, or other HLC character type attributes would help to pick out the determining factor for survival of a monument or if there is a correlation between monument type and character type.

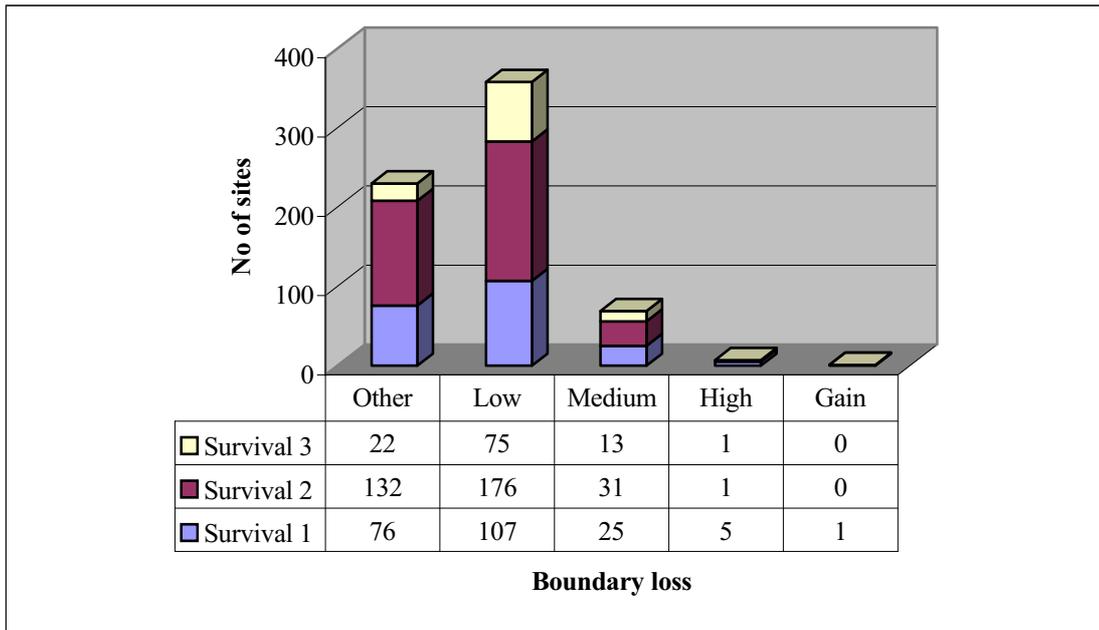


Figure 27 Proportion of MPP all Monument types and boundary loss

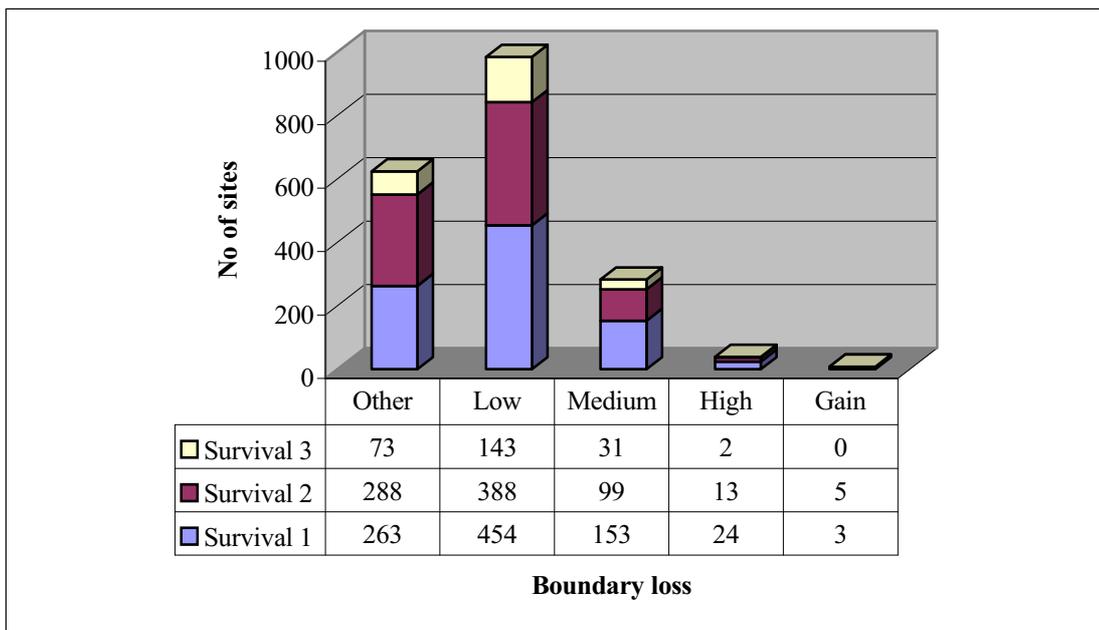


Figure 28 Proportion of SO103 Monument (Round Barrow) and boundary loss

3.5.3 Testing methodology through case studies

Association with University and private research was developed through the project. Current research is taking place in specific areas of Somerset and Exmoor at Bristol and Exeter Universities. The extensive use of documentary, topography and archaeology in multi-disciplinary studies of landscape in these studies create a comparable data source with which to carry out in-depth testing of the methodology and derive historic character types on the basis of other sources of evidence rather than just the modern map base. This aids in the interpretation of previous landuse by adding more validity to the interpretation of previous landuse.

The studies include:

Nick Corcos' (Bristol) study on Whitley Hundred and the medieval landscape

Martin Gillard's (Exeter) study on Exmoor and the medieval landscape

Dr Steve Rippon (Reading/Exeter) Coastal clayland landscape evolution and reclamation

Dr David Musgrove (Exeter) Wetland reclamation in the Levels and Moors

John Davey (Bristol) South Cadbury environs early medieval landscape

3.5.4 Relict landscape using historic maps, extensive landscape surveys and the SMR

The HLC as it stands is a useful tool with which to aid management of the historic environment, and help to direct future research concerning aspects of Somerset and Exmoor NP's landscape. A limitation of the project is that it is based upon the landscape attributes shown on modern maps. These attributes are derived from relict and historical processes that have been affected by many changes since their inception. With the addition of SMR information, extensive landscape surveys derived from air photo transcriptions and field surveys, and historic map sources, such as Parliamentary Awards, tithe and estate maps, a better understanding of the processes behind landscape evolution can be made, along with evidence on the modern map.

This approach is currently being developed in Somerset and will allow a more confident interpretation of previous landuses, and an assessment of the survival of relict landscapes and the present system that over lie them. Examination can be made on the continuity of relict boundaries, those fossilised and those not, and the directional influences that major relict boundaries have had on the development and organisation of enclosures. This will also help to date the abandonment of relict systems and the inception of the present-day landscape character.

3.6 Project review

Description-led approaches similar to the Somerset methodology have been developed in Lancashire and in Herefordshire. The Somerset approach will also form the basis for the Devon HLC project which will begin in 2001. The characterisation results show that the approach taken by Somerset identifies some of the processes of enclosure from the morphological attributes, but that more data can be added to make the interpretations more confident.

The database as it stands is a first stage resource assessment of the historic elements of the present landscape. The next stage is to add information from other data sources to enhance the interpretation of the historic landscape. A third stage will be updating the database when new data is available or when changes in historic landscape character or in designations occur.

Compatibility is an important consideration for the overall directive of the EH landscape project as a designation and conservation tool. The interpretation-led and descriptive-led approaches used in the completed projects differ in their levels of compatibility with each other. This may cause problems when comparing characterisation at region and national scales. It is harder for interpretation-led than descriptive-led characterisations to be "manipulated" into forms that are comparable across counties. The Somerset project can be compared with the interpretation-led project in Avon which was digitised into a GIS. The forthcoming Devon project will follow an approach to similar to Somerset's. When the Cornwall project is transferred into a GIS, the completed projects in the southwest will form the basis for comparison at the regional level.

3.6.1 Avon Project and Somerset and Exmoor NP comparison

The Avon project, included the present unitary authority areas of B&NES, North Somerset, South Gloucestershire and City of Bristol, and was carried out between 1995-8 (Chapman 1997; Sydes 1999). Its approach followed that taken by Cornwall, and other projects that have used an interpretation-led characterisation. As a result of the approach it is difficult to derive the reasoning behind the creation of the historic landscape character types, except by accessing the basic information given to each type. The database consisted of four data fields: the character type number, the interpretation of the type, the origin and notes, for example, “1” and “Late medieval enclosed open fields created by local arrangement and exchange” (Chapman 1997).

By using the project report and its descriptions of what constitutes a character type, forms of the Avon data were able to be produced that were “comparable” to the Secondary characterisation interpretation of previous landuse in the Somerset HLC. What is produced in Avon mirrors some aspects of predicted characterisation between the two projects, but there are some disagreements.

The moor area is consistent with the two projects, as are the meadow character types. But the greatest conflicts occur between the areas identified in the Avon project as “Enclosures derived from the enclosure of open fields” and “Enclosures derived from the assarting and organised enclosure of wood”, and the areas in the Somerset project that are previous landuse Open field/Subdivided, Common and Wood. The Mendip Hills, which should be a comparable area both sides of the county border shows a radical difference in interpretation. A confirmation of similarity is not the answer that was expected, but the differences are great. These are either real or one of the two approaches is flawed.

The Avon project has identified a large proportion of open field types, which is a probable result of the need to interpret field types in that interpretation-led way. However, there are a number of medieval or earlier irregular enclosed fields which is the type most comparable to the Complex type in Somerset. This suggests that the discrepancy between the two projects is a result of the terminology used and the difficulty of being able to establish the reasoning behind the Avon character types. Without this information there can be no validated comparison between projects at county and the regional scale.

4 Applications

The applications and uses of the HLC project underpin and aid a number of initiatives, some of which have already consulted the Somerset project. These are presented along with applications used in other HLC projects and in national policies relating to the conservation and management of the historic environment.

When HLC is used to give force to Supplementary Planning Guidance, this can provide the basis for better informed responses to development proposals and the future management of the landscape which is an identified recommendation of the Historic Environment Review (English Heritage 2000a, Recommendation 12). More specifically it is identified that “we need continuous...well-targeted research to enable us to identify significance and potential” in the historic environment and in order to look beyond individual sites “the first priority is to complete the national coverage of historic landscape characterisation.” (*ibid.*, section 99, Recommendation 14). Somerset has therefore gone some way already in achieving some of the local objectives identified by the Historic Environment Review (English Heritage 2000a).

4.1 National Agencies

4.1.1 Countryside Agency and English Nature

One of the major objectives of the project is to investigate the possible connections of HLC character types with the three character areas schemes, Character Areas, Natural Areas and the County Character Areas (Countryside Agency; English Nature; WS Atkins 1999). In previous HLC projects this has been done by statistically analysing what HLC character types falls within the Character and Natural Area boundaries. The County Character Areas in Somerset are in draft form (WS Atkins 1999), and are not yet established, therefore identification of Historic landscape Character Areas can take place. These should then form the basis for Supplementary Planning Guidance.

4.1.2 Environment Agency

The HLC project can be used to present information on landscape and drainage change in the Levels and Moors to the public. The aspect and slope gradient analysis may also be helpful in developing predictive models of surface runoff and watershed limits to examine the evolution of enclosure. This could be enhanced by the addition of digitised data on present landuse. The HLC has also resulted in an ongoing Agency project looking at peat wastage and archaeological remains in the Levels and Moors in connection with the modern enclosure pattern.

4.1.3 English Heritage

The use of HLC has been discussed at several seminars on Historic Landscape Characterisation. Its application as a responsive and reliable indicator of historic environment and landscape change is indicated in the requirements made in the recent Historic Environment Review (English Heritage 2000a; David Miles *pers com*). The project can be used to assess the regional and national perspectives of the historic landscape by comparison of generic types. MPP values can be assessed against HLC to further identify threats to monuments.

4.1.4 MAFF/RDS

With the appointment of several archaeologists to FRCA (from April 1st renamed the Rural

Development Service), the historic landscape is seen as a major facilitator for helping stewardship applications. The HLC plays an important role in the application process.

4.2 Local government – Somerset County Council

4.2.1 Planning Department

The HLC project will form one of the major components of future Supplementary Planning Guidance for the rural landscape of the county. Staffordshire County Council have recently produced a consultation draft of SPG documentation for their Structure Plan 1996-2011 (Staffordshire CC 2000a; 2000b). It designates character through an approach which identifies High and Low ranges of landscape in Staffordshire, based upon areas defined by Quality, Sensitivity and areas at risk of a rapid loss of character and quality. It accepts the complexity of the landscape and this is reflected in the way that this is used to build character from the combinations of its attributes. Somerset County Council may adopt a similar approach.

4.2.2 Architectural and Historic Heritage Group

The HLC project acts as a facilitator for a variety of Group initiatives. The SMR can be used in conjunction with the HLC to provide a backdrop for site information. The HLC can be used as a planning tool for advice on development areas for the Development Control Archaeologist. The Countryside Archaeologist uses the HLC to investigate aspects concerned with agri-environment and monument protection schemes in operation in Somerset. Conservation areas, which include within them small areas of the rural landscape, have benefited from the identification of field systems that are integral to the character of the area. Several consultations by Conservation Officers have been made in reference to Village Design Statements.

4.2.3 Other local Groups

FWAG and County Farms have used HLC derived information to help assess potential stewardship areas, hedgerow removal applications and historic landscape information, for inclusion in reports and responses.

4.3 District Councils

There has been consultation in connection with hedgerow applications, and landscape assessments in anticipation for housing and landscape development. This highlights the need for rural landscape Supplementary Planning Guidance which incorporates HLC data.

4.4 Exmoor National Park

A project is proposed that looks at the relict landscapes of Exmoor and compares the evidence with the HLC characterised areas. This will help to provide more detailed information concerning the process and date of both relict and present-day field systems (see section 3.5.4). For Exmoor NP it may be used for the SMR to aid in planning applications and the direction of research.

4.5 Public benefit and community planning

The HLC has potential to enhance the public perception of landscape. With several initiatives generated through Agenda 21, such as Village Design Statements and Community Planning, more emphasis is being made on the communities themselves to appreciate, understand and identify possible development areas in the places that they live. The HLC can be used in consultation by the general public for these initiatives. This information might

be available over the Intranet and Internet in a format for public consultation. The project identifies potential areas of further work within the landscape for people to research; greater emphasis can be made on the use of documentary sources in the identification of previous landuse. This provides an information loop which can then feed back into the project.

4.6 The archaeological research community

Several University based research are already utilising the HLC database (see section 3.5.3). The use of the HLC in the future is likely to increase in the immediate period especially because of its compatibility with the Somerset SMR. The potential for 3D modelling of Holocene deposits in the Somerset Levels and Moors is also being investigated as a result of the HLC.

Conclusions

The Somerset and Exmoor National Park Historic Landscape Characterisation project has created a powerful analytical tool which has the strength and flexibility required to achieve a firm understanding of the historic landscape processes that are presented in the countryside today. The modern day field pattern contains a complex variety of field systems. Only a small proportion of these can be assigned simplistic interpretations to explain their present-day characteristics. Those that are more complex in character are the result of historic formation processes which may be disguised by the “layering” of subsequent systems. The HLC developed for Somerset has identified these variations by separating the patterns into morphological categories. The project has not created a static characterisation map. Instead, an extensive database has been formed that has a large degree of flexibility and transparency to allow future modification and updating, and the utilisation of other data. Due to this approach additional data sets can be easily incorporated as landscape sources, such as title, Parliamentary Enclosure and estate maps, and archaeological data, such as that held by the SMR, NMR and extensive landscape surveys. These can test and give more specific time-depth to the characterisation. Topographic derived data sets can be used to assess the influence that slope, aspect and height have had in the creation processes of enclosures. The development of the GIS as a tool to interrogate the database is crucial in being able to unlock and illustrate the complexities of the historic landscape. This has been achieved by unravelling some of the complexities of the present landscape illustrated in the project results.

It is recognised that the interpretation of historic landscape character is dated to the collection of data during the lifetime of the current project. Therefore, the results presented in this report are limited by the level of interpretation derived from the present landscape and other sources used to determine historic landscape character that has been carried out during the project. However, areas of landscape within the study area have been identified as exhibiting particular interest. The large percentage of Complex enclosure shows that the landscape is the product of many processes, some of which may relate to early systems such as the co-axial patterns found on the Dartmoor fringe. The landscape shows recognisable late and early patterns, but also a large number of intermediate patterns of undermined date, some of which reflect complex evolutionary processes. Identifying where these different patterns occur is the first step to further understanding the evolution of the present landscape.

The historic character of the present landscape needs to be understood before it can be managed and protected. Without this knowledge the practicalities involved in the planning control and conservation of landscape cannot be achieved. The HLC should be seen as a first stage resource assessment of landscape, on which to develop testable hypotheses through objective research, as has been carried out by the HLC project.

Integration of the HLC projects alongside Character Areas and Natural Areas projects will enable further consideration of Landscape Character to be added to Structure Plans and see its implementation as SPG. Integration of HLC projects with SMR's should allow a greater appreciation of landscape to be included in setting a context for sites and monuments. In Somerset this is being developed as part of a SMR Outreach Heritage Lottery Fund bid, and by the integration of the Exmoor National Park's SMR and extensive landscape survey data into the HLC database. With the Government's movement towards e-government implementation in the next few years, the public's perception of historic landscape will be raised through easier access to information concerned with the heritage sector. The HLC

projects should be seen in the context within the recent Heritage Review, where, an audit of the historic environment is seen as a necessary requirement to protect heritage for future generations. The HLC provides an opportunity to measure change in the landscape and sites and monuments within it, where the HLC acts as baseline data. This also corresponds with the Countryside Agency's Countryside Survey 2000, "State of the Countryside". The audit potential is more favourable when the HLC characterisation method has used a morphological or properly referenced by metadata approach, where changes in landscape can be easily updated in the GIS.

The HLC has identified areas of interest for further research that would enhance and allow greater understanding of the historic landscape of Somerset, both its present-day and past forms. These have been mentioned in the report but are summarised here.

- Testing the Initial characterisation and developing interpretations that use a range of external data sources such as topographic, cartographic, documentary and archaeological, by adding extra time-depth to the Secondary characterisation. This applies specifically to Complex boundary types that may benefit from further information so that they can be assigned previous landuse interpretations. It also can be used to investigate other Secondary characterisation, in a similar way to the Complex boundaries, by testing their interpretations against documented sources.
- Comparison between Countryside Agency's Character Areas, English Nature's Natural Areas, and character areas generated by the HLC. Morphological created boundaries, as shown on Figure 6, and Secondary interpretations for the historic landscape can both be compared against the National Agencies areas to develop holistic landscape designation.
- The density and distribution of farms within the *regions* can be used to assess the chronological development of dispersed settlement, by using field morphology and time-depth as an indicator of origins.
- MPP and HLC can be used in conjunction with each other to assess the impact that enclosure and changes in the present-day landscapes have had on monuments in the landscape.
- Case study areas that have been well researched can be compared with the HLC to test the approach used in characterisation.
- The completion of several projects (Cornwall, Avon, Somerset) and forthcoming ones (Devon, ?Dorset) in the South West region give rise to an opportunity to compare historic landscape from the regional viewpoint. Guidelines can then be established for the national overview of the HLC.

The Historic Landscape Characterisation project fits into a number of local, region and national strategies. It is an important part of the bigger picture of landscape which is seen as a major player in the policies being directed towards broader issues such as the Historic Environment and countryside. It can be incorporated into, sit alongside, and lead the way in a number of projects already in place and forthcoming by the government, national agencies and local government. The immediate future is concerned with regional and local issues such as the comparison of HLC projects within a region and the development of SPG, but also in the continued development of the project for research, management and public perception of the historic landscape.

Glossary

Attribute

Feature; “distinguished quality or character” (OED 1989); the measurable aspects of the landscape, usually morphological characteristics that describe field patterning but also other aspects of the Unenclosed, and Other landscape elements of the landscape.

Character

“The aggregate of the distinctive features of any thing; essential peculiarity; nature, style; sort, kind, description” (OED 1989).

Character type

The descriptions of the attributes as a collective entity known as character type; a mosaic, patchwork of character types which then form character areas.

Characterisation

The process of describing character to an area using landscape attributes; the approach taken here separates the description, “facts” from the interpretation, “concepts”.

Common

An area of land subject to the rights of common, e.g. for grazing. Common, in this instance, refers to land, not arable, that is waste and used for pasturing.

Conceptual characterisation

The process of developing Secondary character types from the Initial characterisation and/or other data sets; an abstract interpretation of attribute combinations.

Element

The large subdivisions of the landscape from which smaller subsets are derived as Group types: Enclosed, Unenclosed and Other

Geographical Information System (GIS)

“a system for capturing, storing, checking, manipulating, analysing and displaying data which are spatially referenced to the Earth” (DoE 1987, 137). Geographic spatial referencing database system with which the historic landscape character types were mapped and interrogated.

Group type

Subsets of Elements, as aspects of particular types of landscape, e.g. Field systems.

Historic landscape

A shorthand description of the historic dimension of the whole landscape, “from that part of the environment’s character which derives from an appreciation and understanding of the past” (McNab and Lambrick 1999, 55); “the physical manifestation in the landscape of people’s interaction with their natural and cultural environment through time” (CAU 1998, 71; LDA/CAU 1994).

Historic landscape character (HLC)

The historic dimension of the present-day landscape described as descriptions, and concepts or interpretations.

Initial character type

The first stage results of characterisation as a description of the landscape attributes as “facts”.

Monument Protection Programme (MPP)

MPP is “... a comprehensive review and evaluation of England’s archaeological resource, designed to collect information which will enhance the conservation, management and public appreciation of the archaeological heritage.” (English Heritage 2000b)

Morphology

The patterning of field boundaries that are evident in the present landscape reflecting the processes of change resulting from the affects of the consolidation of land holdings such as

boundary loss, boundary gain and change in the appearance of enclosures. Therefore the morphology of enclosures and their field boundaries are themselves the products of enclosure processes, both constructional and destructional, and this is described through the characterisation method.

Open field

Agricultural arrangements by which land was managed by common agreement of the local community. Arable land was divided into a number of small strips, farmed by individual tenants. Strips were grouped into furlongs, which were then grouped into fields. Consolidation and then piecemeal enclosure of these by individuals' thorough agreement with each other occurred resulting in distinctive patterning. The removal and amendment of this system over many years' results in a particular characteristics being recognised in the present landscape.

Secondary character type

The second stage results of characterisation as an interpretation of the landscape attributes as "concepts" of character.

Sites and Monuments Record (SMR)

Sites and Monuments Record; SMR's hold information which has been gathered from a wide range of sources, and provide catalogues of information on the historic environment, referring users to collections held in local government offices, museums, record offices and other repositories. They are the primary sources of information on the historic environment in England" (Ferne and Gilman 2000).

Subdivided

Systems of arable agriculture similar to Open field systems, but are suggested to have been enclosed strips from their inception as arable fields. The system is thought to be more prevalent in the SW of England, particularly W of the River Parrett.

Supplementary Planning Guidance (SPG)

Supplementary Planning Guidance is an addition to plan policies and proposals, so long as it is consistent with national and regional planning guidance. "SPG should be reviewed on a regular basis alongside reviews of the development plan policies or proposals to which it relates" (DETR 1999, 3.15).

Time-depth

"The visible evidence in the landscape for change and continuity over periods of time" (CAU 1998, 71; LDA/CAU 1994).

Bibliography

- Aston, M, A 1983 Deserted farmsteads on Exmoor and the Lay Subsidy of 1327 in West Somerset *PSANHS* **127**, 71-104
- Aston, M, A 1994 More regressive map analysis of Shapwick parish in Aston and Costen (eds), 19-26
- Aston, M, A and Costen, M, D (eds) 1994 *The Shapwick Report. A topographical and historical study. The fifth report* University of Bristol
- CAU 1998 *Cornwall's Historic Landscape – presenting a method of historic landscape assessment* CAU
- Chapman, M 1997 *Avon historic landscape characterisation* (draft rep for English Heritage)
- Countryside Commission 1987 *Landscape assessment: a Countryside Commission approach* CCP **18**, Cheltenham
- Countryside Commission 1993 *Landscape Assessment Guidance*, CCP **423**, Cheltenham
- Countryside Commission, English Heritage and English Nature 1997 *What matters and why environmental capital – a new approach* Cheltenham
- Department of the Environment (DoE) 1987 *Handling Geographic Information* HMSO
- DETR 1999 *PPG12: Development plans* HMSO
- Ellis, P 1987 *Mendip Hills AONB, a report on archaeological survey work 1986-1987* Unpublished
- Ellis, P 1992 *Mendip Hills, an archaeological survey of the Area of Outstanding Natural Beauty* Somerset County Council
- English Heritage 1991 *Register of landscapes of historic importance, consultation paper* English Heritage Conservation Group October 1991
- English Heritage 1994 Historic Landscape Project seminar briefing note. 23/2/1994
- English Heritage 2000a *Power of place. The future of the historic environment* English Heritage
- English Heritage 2000b *MPP 2000. A review of the Monuments Protection Programme, 1986-2000* English Heritage
- Fairclough, G 1994 Recent work in England. English Heritage paper presented to ICOMOS UK seminar on cultural landscape, Society of Antiquaries, London 23/6/1994
- Fairclough, G (ed) 1999 *Historic Landscape Characterisation – papers presented at an English Heritage seminar, 11 December 1998* English Heritage
- Fairclough, G, Lambrick, G, McNab, A (eds) 1999 *Yesterday's world, tomorrow's landscape – the English Heritage Historic Landscape project 1992-94* English Heritage
- Fernie, K and Gilman, P (eds) 2000 *Informing the future of the past: guidelines for SMRs* English Heritage
- Fox, H, S, A 1972 Field systems of East and South Devon Part I: East Devon *Trans Devonshire Assoc* **104**, 81-135
- Hawkes, J 1993 *The Blackdown Hills AONB, report on the preliminary archaeological survey in Somerset* Unpublished
- Kidson, C and Heyworth, A 1976 The quaternary deposits of the Somerset Levels *Q. Jl Engng Geol.* **9**, 217-235
- Knight, R 1999 Character assessment in the New Forest in *Managing Countryside Change, Countryside Character Newsletter Autumn 1999* Countryside Agency, Issue **2**, 6
- Landscape Design Associates (LDA and Cornwall Archaeol Unit (CAU) 1994 *Historic landscape assessment: a methodological case study in Cornwall* (draft rep for English Heritage and Countryside Agency)
- Lawes Agricultural Trust 1983 *Soils of South West England* Soil Survey of England and Wales

- McDonnell, R, R, J 1985 *Archaeological survey of the Somerset Claylands, report on survey work in 1984-85* Unpublished
- McDonnell, R, R, J 1986 *Archaeological survey of the Somerset Claylands, report on survey work in 1985-86 Part II* Unpublished
- McDonnell, R, R, J 1990 *The Quantock Hills Area of Outstanding Natural Beauty, summary report of an archaeological survey* Unpublished
- McNab, A and Lambrick, G 1999 10: Conclusions and recommendations in Fairclough, G, Lambrick, G, McNab, A (eds), 54-9
- MAFF 1994 Exmoor Environmentally Sensitive Area – landscape assessment
- Wilson-North, R and Riley, H *forthcoming The Archaeology of Exmoor* English Heritage
- Rippon, S 1997 *The Severn Estuary* Leicester University Press
- Roberts, B, K and Wrathmell, S 1995 *Terrain and rural settlement mapping – the methodology and preliminary results* Durham University Geography Dept Rep Services
- Roberts, B, K and Wrathmell, S 2001 *Atlas of land settlement in England* English Heritage
- Somerset County Council 1997 *Minerals local plan. Consultation document* Somerset County Council
- Staffordshire County Council 2000 *Planning for landscape change: Supplementary Planning Guidance to the Staffordshire and Stoke on Trent Structure Plan 1996-2011* Volumes 1 & 2 Staffordshire County Council, Development Services Department
- Sydes, B 1999 Building on the map: Avon in Fairclough, G (ed) 1999, 67-82
- Tate, W, E 1948 Somerset enclosure Acts and Awards SANHS
- Taylor, C, C 1982 *Fields in the English landscape* Dent, London
- Turner, M 1980 *English Parliamentary enclosure* Dawson, Folkstone
- Wade Martins, S and Williamson, T 1999 *Roots of change: farming and the landscape in East Anglia c.1700-1870* British Agricultural History Society Agr Hist Review Supplement Series 2
- Warner, P 1987 *Greens, commons and clayland colonization: the origins and development of greenside settlement in East Suffolk* Leicester Univ Dept Local Hist Occas Papers, 4th series 2
- Williams, M 1970 *Draining of the Somerset Levels* CUP
- Williams, M 1971 The enclosure and reclamation of the Mendip Hills, 1770-1870 *Agr. Hist. Review* 19, 65-81
- Williams, M 1972 The enclosure of waste land in Somerset, 1700-1900 in *Trans. Inst. British Geographers* 57, 99-123
- Williamson, T 2000 Understanding enclosure in *Landscapes* 1.1, 56-79
- WS Atkins 1999 *Somerset County Character Areas – an analysis in accordance with the new environmental capital approach* Somerset County Council
- Yelling, J, A 1977 *Common field and enclosure in England 1450-1850* Macmillan, London

Appendix 1 Pilot areas

Pilot areas (SW corner)

Exmoor (Devon part)	SS 63 44 – 25 sq km
Levels and Moors	ST 35 39 – 25 sq km
Mendip Hills	ST 63 38 – 50 sq km
Shapwick (centre)	ST 42 40 – 12.6 sq km
SW Somerset	ST 04 22 – 25 sq km

Appendix 2 Countryside Areas and Natural Areas in Somerset

Countryside Agency's Character Areas and English Nature's Natural Areas.

CA No	CA Name	NA No	NA Name
107	Cotswolds	55	Cotswolds
117	Avon Vale	63	Thames and Avon Vales
118	Bristol, Avon Valleys and Ridges	62	Bristol, Avon Valleys and Ridges
133	Blackmoor Vale and the Vale of Wardour	83	Wessex Vales
140	Yeovil Scarplands	83	Wessex Vales
141	Mendip Hills	84	Mendip Hills
142	Somerset Levels and Moors	85	Somerset Levels and Moors
143	Mid Somerset Hills	86	Mid Somerset Hills
144	Quantock Hills	87	Exmoor and the Quantocks
145	Exmoor	87	Exmoor and the Quantocks
146	Vale of Taunton and Quantock Fringes	88	Vale of Taunton and Quantock Fringes
147	Blackdowns	89	Blackdowns
148	Devon Redlands	90	Devon Redlands
175	Land's End to Minehead (coast)		
176	Bridgewater Bay (coast)		

Character Areas (CA) and Natural Areas (NA) within Somerset and Exmoor NP (English Nature)

[<http://www.english-nature.org.uk/start.htm>]

Appendix 3 Initial characterisation coding

Initial character type coding

<i>CODE</i>	<i>GROUP TYPE</i>	<i>CHARACTER TYPE</i>	<i>ATTRIBUTE</i>
	ENCLOSED	Field System type	
<i>Form</i>			
1	<i>Regular</i>		
2	<i>Irregular</i>		
<i>Boundary shape</i>			
1		Straight	
2		Sinuuous	
3		Mixed	
4		Other	
<i>Size</i>			
Sm			Small
Sm-md			Small-medium
Md			Medium
Lg			Large
<i>Indicator</i>			
Dl			Dog legs
Rs			Reversed S
Ri			Road/rail side
Rp			Riverside
Zi			Zig-zag
Ci (dl + rs)			Composite 1
<i>Pattern</i>			
Lt			Long & thin
Int			Interlocking
Ax			Axial
Gd			Grid
Lf			Long furlong
Nr			Non-rectilinear
<i>Farm</i>			
Sf			Single farm
Sfc			Single farm with church
Cf			Farm cluster
Cfc			Farm cluster with church
Sfs			Several single farms
Sfsc			Several single farms, one with a church
<i>Period</i>			
Med			Medieval
Pmed			Post medieval
Mod			Post tithe map
<i>Confidence</i>			
1			Documentary certain
2			Educated guess
(none)			No idea
<i>Process</i>	<i>Previous landuse</i>		
Wo			Woodland

Wu		Wetland marine and river clay
Wc		Wetland clay
Wp		Wetland peat
Weu		Wetland edge marine and river clay
Wec		Wetland edge clay
Wep		Wetland edge peat
Re		River edge
Op		Open field/Subdivided
Cm		Common
If		In field
Uk		Complex boundary
	<i>Method of enclosure</i>	
1		Parliamentary
2		Agreement
3		Piecemeal
4		Unknown
	<i>Post c.1905 boundary loss</i>	
Hi		High
Md		Medium
Lo		Low
Ga		Gain

<i>CODE</i>	<i>GROUP TYPE</i>	<i>CHARACTER TYPE</i>
	ENCLOSED	Woodland type
3	<i>Woodland</i>	
1		Semi-natural ancient woodland
2		Replanted ancient woodland
3		Other conifer plantation
4		Other woodland

<i>CODE</i>	<i>GROUP TYPE</i>	<i>CHARACTER TYPE</i>
	UNENCLOSED	Unenclosed type
4	<i>Unenclosed land</i>	
1		Unenclosed pasture
2		Mud flats
3		Saltings
4		Sand, sand & shingle, dunes
5		Outcrop & scree

<i>CODE</i>	<i>GROUP TYPE</i>	<i>CHARACTER TYPE</i>
	OTHER	Other type
5	<i>Settlement</i>	
1		Extent pre 1839/40
2		Extent post 1839/40
3		Caravan sites
6	<i>Horticulture</i>	
1		Orchards
7	<i>Parkland & designed landscapes</i>	

1		Historic landscape park
8	<i>Recreation</i>	
1		Race courses
2		Golf courses
3		Sports fields/areas
9	<i>Industrial</i>	
1		Peat extraction
2		Stone quarry
3		Coal pits/mines
4		Water treatment
5		Industrial complexes
10	<i>Harbours, docks, marinas</i>	
1		Harbours, docks, marinas
11	<i>Water bodies</i>	
1		Lakes
12	<i>Military & defence</i>	
1		Military and defence
<i>CODE</i>	<i>GROUP TYPE</i>	<i>CHARACTER TYPE</i>
13	<i>Linear features</i>	
1		Boundaries of park
2		Other non-specific interesting boundaries (non topographic)
3		Causeways/relict flood banks
14	<i>Small islands within wetlands</i>	
1		Small islands

Appendix 4 Query descriptions of previous landuse

Open field/Subdivided

1. Grouped interpretation Figure 13

All Open field/Subdivided Ungrouped interpretation

2. Ungrouped interpretation

Grade 1	Open field OR Open field + reversed S AND dog legs OR In field
Grade 2	Open field + reversed S OR dog legs OR piecemeal OR long & thin
Grade 3	Unknown + reversed S AND dog legs
Grade 4	Unknown + reversed S OR + dog legs, 1 km from medieval settlement [from SMR]
Grade 5	(from <i>regions</i> not included in the 1km distance from medieval settlement) Sinuous or mixed boundaries + long & thin boundary pattern OR + reversed S OR + piecemeal pattern OR + dog legs OR + long furlong

Complex field

1. Grouped interpretation Figure 13

All of Complex field Ungrouped interpretation

2. Ungrouped interpretation

Complex	<i>Regions</i> not selected through any other categories
Complex with modification	Regular and irregular Other
Interlocking pattern	Interlocking attribute

Wood

1. Grouped interpretation Figure 13

All of Wood Ungrouped interpretation

2. Ungrouped interpretation

Grade 1 Wood	Wood
Grade 2 Wood	Wood + Non-rectilinear pattern
Grade 3 Wood	(From Wood or Meadow selection/Zig-zag boundary AND/OR Non-rectilinear pattern associated surviving wood AND/OR Grade 1/2 Wood

Wood or Meadow	Zig-zag boundary AND/OR Non-rectilinear pattern associated either with wood or meadow
----------------	---

Meadow

1. Grouped interpretation Figure 13

All Meadow Ungrouped interpretation

2. Ungrouped interpretation

Grade 1 Meadow	River piece
----------------	-------------

Grade 2 Meadow Zig-zag boundary AND/OR Non-rectilinear pattern associated with water AND/OR Grade 1 Meadow

Common

1. Grouped interpretation Figure 13
All Common Ungrouped interpretation

2. Ungrouped interpretation

Grade 1 Common	Common
Grade 2 Common	Straight boundaries + grid pattern OR + axial OR + long & thin
Road/rail-side	Road/rail-side infill
Cottage encroach	Encroachment of cottage settlement over enclosures

River edge

1. Grouped interpretation Figure 13
All River edge Ungrouped interpretation

2. Ungrouped interpretation

River edge	River edge
------------	------------

Moor reclamation

1. Grouped interpretation Figure 13
All Moor reclamation Ungrouped interpretation

2. Ungrouped interpretation

Early moor	Moor - peat edge
	Moor – coastal clay edge
	Moor - marine and river clay edge
Reclamation	Moor – coastal clay
	Moor – peat
	Moor – marine and river clay

Appendix 5 Metadata

Digital data sources used and created for the HLC project where external data sources have been used to characterise a specific character type. Source origins are indicated in the data table, but also here for reference.

Element name	Element Description
Subject	The topic addressed by the object
Title	The name of the object
Author	The person(s) primarily responsible for the intellectual content of the object
Publisher	The agent or agency responsible for making the object available
OtherAgent	The person(s), such as editors and transcribers, who have made other significant intellectual contributions to the work
Date	The date of publication
ObjectType	The genre of the object, such as novel, poem, or dictionary
Form	The data representation of the object, such as Postscript file
Identifier	String or number used to uniquely identify the object
Relation	Relationship to other objects
Source	Objects, either print or electronic, from which this object is derived
Language	Language of the intellectual content
Coverage	The spatial locations and temporal duration characteristic of the object

Metadata standards based upon “An application of Dublin Core from the Archaeology Data Service” [<http://ads.ahds.ac.uk/project/metadata/dublin.html>]

Peat Extraction – 9.1

Subject

Historic Landscape Character type – Peat extraction 9.1

Title

Peat extraction 9.1

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Oscar Aldred

Date

1999-2000

ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Relation

OS Landline 1:1250

Source

Somerset County Council Minerals Local Plan 1997 – Consultation document

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13
Coverage
Somerset and Exmoor National Park

Linear features – Group 13

Subject
Historic Landscape Character type – Linear features Group 13
Title
Linear features Group 13 – Boundaries of park, Other non-specific interesting boundaries, Causeways/relict flood banks
Author
Somerset County Council, English Heritage
Publisher
Somerset County Council, English Heritage
OtherAgent
Oscar Aldred
Date
1999-2000
ObjectType
Digital data and database
Form
MapInfo .TAB, .DAT, .ID, .MAP files
Identifier
HLC polygon id_number
Relation
OS Landline 1:1250
Source
Williams 1970, OS 1:25000, SMR
Language
MapInfo
Export: Arcview Shapefile
Export: Microstation DGN
Export: AutoCad DXF v. 12/13
Coverage
Somerset and Exmoor National Park

Small islands within wetlands – 14.1

Subject
Historic Landscape Character type – Sand and rock outcrops in Levels and Moors 14.1
Title
Small islands within wetlands – 14.1
Author
Somerset County Council, English Heritage
Publisher
Somerset County Council, English Heritage
OtherAgent
Oscar Aldred
Date
1999-2000
ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Relation

OS Landline 1:1250

Source

Williams 1970, Soil Survey of England and Wales – thickness of peat (1981), Panorama

OS – 5m contour, Kidson and Heyworth 1976

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Post 1839/40 Settlement – 5.2

Subject

Historic Landscape Character type - Post 1839/40 Settlement 5.2

Title

Post 1839/40 Settlement – 5.2

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Oscar Aldred

Date

1999-2000

ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Extensive Urban Survey (EUS) survey code

Relation

OS Landline 1:1250

Source

OS 1:25000, EUS (English Heritage), Tithe maps and transcriptions (Somerset Record Office and Somerset County Council)

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Pre 1839/40 Settlement – 5.1

Subject

Historic Landscape Character type - Pre 1839/40 Settlement 5.1

Title

Pre 1839/40 Settlement – 5.1

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Oscar Aldred

Date

1999-2000

ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Extensive Urban Survey (EUS) survey code

Relation

OS Landline 1:1250

Source

OS 1:25000, EUS (English Heritage), Areas of Higher Archaeological Potential (AHAP),
Tithe maps and transcriptions (Somerset Record Office and Somerset County Council)

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Parks and designed landscapes - Register of Parks and Gardens Group 7

Subject

Historic Landscape Character type - Parks and designed landscapes

Title

Historic landscape park – 7.1

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Oscar Aldred

Date

1999-2000

ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Relation

OS Landline 1:1250

Source

OS 1:25000, 2nd Edition 6" to 1 mile OS c.1905, Register of Parks and Gardens (English Heritage)

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

HLC character_type – Groups 1-14

Subject

Historic Landscape Character types derived from 1:25000

Title

Historic landscape character types

Author

Somerset County Council

Publisher

Somerset County Council, English Heritage

OtherAgent

Oscar Aldred

Date

1999-2000

ObjectType

Digital data and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Relation

OS Landline 1:1250

Source

OS 1:25000, OS Landline 1:1250

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Ancient woodland – semi-natural, replanted 3.1 and 3.2

Subject

Historic Landscape Characterisation - Ancient woodland

Title

Historic landscape character type - Ancient woodland (semi-natural, replanted) 3.1, 3.2

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Exmoor National Park

English Nature

Oscar Aldred

Date

September 1999

ObjectType

Digital data, and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Aw_site_Id

Relation

OS Landline 1:1250

OS 1:50000

Source

Ancient Woodland coverage map sheets SS se, SS sw, ST se, ST sw, ST ne, ST nw

OS 1:25000

OS 1:50000, previous coverage

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Unenclosed pasture – 4.1

Subject

Historic Landscape Characterisation – Unenclosed pasture

Title

Historic landscape character type – Unenclosed pasture 4.1

Author

Somerset County Council, English Heritage

Publisher

Somerset County Council, English Heritage

OtherAgent

Exmoor National Park

English Nature

Oscar Aldred

Date

1999 - 2000

ObjectType

Digital data, and database

Form

MapInfo .TAB, .DAT, .ID, .MAP files

Identifier

HLC polygon id_number

Aw_site_Id

Relation

OS Landline 1:1250

Source

Section 3 designation of land (Wildlife and Countryside Act (amendment) 1985) – Exmoor National Park; “whose natural beauty is, in the opinion of NPA, particularly important to conserve”

OS 1:25000, OS Landline 1:1250

Language

MapInfo

Export: Arcview Shapefile

Export: Microstation DGN

Export: AutoCad DXF v. 12/13

Coverage

Somerset and Exmoor National Park

Appendix 6 Parliamentary Enclosure statistics

Based upon Tate (1948), Williams (1971) and Turner (1980)

Enclosure	A Some open field	B Common and waste	C (inc. open fields) 1836	D (not inc. open fields) 1836	E (inc. open fields) 1845	F (not inc. open fields) 1845	G Private Agreement	Total
Devon		33		1		39		73
Somerset	47	100	12		2	23	7	191

1 Number of Parliamentary Acts – By County (Turner 1980)

Enclosure	A Some open field	B Common and waste	C (inc. open fields) 1836	D (not inc. open fields) 1836	E (inc. open fields) 1845	F (not inc. open fields) 1845	G Private Agreement	Total
Devon		30115		241		11287		41643
Somerset	37243	118515	900		63	14513		171234

2 Number of Acres Enclosed by Parliamentary Act – By County (Turner 1980)

Enclosure	A Some open field	B Common and waste	C (inc. open fields) 1836	D (not inc. open fields) 1836	E (inc. open fields) 1845	F (not inc. open fields) 1845	G Private Agreement	Total
Devon		1.8		0.01		0.7		2.5
Somerset	3.6	11.4	0.1		/	1.4		16.4

3 Density of Parliamentary Enclosure as Measured by the Percentage of Each County Enclosed (Turner 1980)

Devon 169 sq km of Parliamentary Enclosure

Open field (A+C+E) / /

Common and Waste (B+D+F) 41643 2.5

Somerset 693 sq km of Parliamentary Enclosure

Open field (A+C+E) 38206 3.6

Common and Waste (B+D+F) 133028 12.7

Williams (1971) gives the total acreage of common and waste for Somerset as 144,369 acres compared to Turner, 133,028 acres (1980). Reasons for this are indicated by Turner (*op cit*, 23-5) that he may have underestimated the amount of open field arable and as a result underestimating the amount of common and waste, or, Turner divides equally the amount given for Exmoor forest whereas Williams may not have.

Williams (1971) common and waste, statistics based on percentages of land distributed across county:

Mendip Hills (inc. N Somerset and B&NES part) 17.7

Floodable areas of Levels 41.4

Exmoor uplands 30.7

Blackdown Hills 8.1

Rest Somerset County 2.1

Total Acreage of N. Somerset and B&NES	182,705.9 acres 73,970 hectares 739.7 sq km
Total Acreage of Somerset exc. N. Somerset and B&NES	915,629 acres 370,700 hectares 3,707 sq km

Total Parliamentary Enclosure in Somerset (inc. N. Somerset and B&NES) is 693 sq km.

The Avon HLC study suggests that the area covered by Parliamentary type enclosure (Cat 9, 11, 15, 20) is 117 sq km.

Estimate of total Parliamentary Enclosure affecting the landscape of the Somerset part of the study area: 576 sq km (133 sq km open field, 443 sq km common and waste).