THE ENGLISH HERITAGE HISTORIC LANDSCAPE CHARACTERISATION PROGRAMME

NORTHUMBERLAND Project Design

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1 SUMMARY AND INTRODUCTION

- 1.1 The Northumberland Historic Landscape Characterisation (HLC) project forms part of a national programme supported and developed by English Heritage but carried out by local government, chiefly county council historic environment services within Sites and Monuments Records/Historic Environment Records. They aim, through a desk-based programme of geographic information system (GIS) mapping and analysis, to achieve an archaeologist's understanding of the historical and cultural origins and development of the current landscape using existing information available from the SMR/HER and cartographic sources. They seek to identify material remains at landscape-scale that demonstrate the human activities that formed the landscape as it is seen today.
- 1.2 Like all types of characterisation, HLC projects provide broad-brush overviews of complex aspects of the historic environment in order to provide new, wide-ranging information for conservation, management and development decisions. Their objective is to promote better understanding and management of the historic landscape resource, to facilitate the management of continued change within it, and to establish an integrated approach to its sustainable management in partnership with other organisations.
- 1.3 Historic Landscape Characterisation has become increasingly sophisticated over the last eight to nine years. In Cornwall, the first project of this type completed in England, a satisfactory characterisation of landscape types was achieved using 14 basic landscape categories, which were elaborated to 18 character zones. Subsequently, projects for the landscapes of counties such as Avon and Derbyshire, and in the Cotswolds AONB, began to use GIS alongside comparatively good coverage of historic survey data and new research, to produce a wider range of categorisations (over 30 in Avon and over 40 in the Cotswolds). This perhaps also betrays the scale of the areas addressed and the complexity of the archaeological/ historic landscapes present.
- 1.4 Fundamental to the new approach, taken by the more recent projects in Hertfordshire, Essex, Herefordshire, Northamptonshire and also Somerset and Exmoor National Park, is a fuller and more sophisticated use of GIS as the analytical tool in querying landscape attributes to give resulting interpretation of the identified parts. From these it appears that a relatively generalised characterisation of historic attributes offers the maximum benefit, in terms of strategic planning and resource management. More detailed character mapping, to display multi-period characteristics, for example, will be used for specific management or research objectives. The primary requirement, however, is for a consistent overall approach which is as objective as possible, inclusive, repeatable, and comprehensive (ie leaves no "white land") within which more discriminating assessment can be located.
- 1.5 Historic Landscape Characterisation is now a firmly GIS-based technique. Its information is structured by the identification and grouping of archaeological, historic and other environmental attributes attached to land parcels (ie 'HLC polygons' within a GIS). This method allows the creation of many different classifications of historic landscape types, each of distinct and recognisable common character, to meet many different uses and applications. The distribution of landscape types can be mapped using GIS supported by written descriptions of the landscape types and the historical processes that they represent. HLC forms a permanent and renewable database that may be utilised to provide information for a variety of planning, conservation and management-led initiatives and strategies.
- 1.6 The principal stage of HLC will define GIS polygons, based on groups of modern land parcels, that reflect common historic characteristics. Each polygon will be assigned to one of a pre-defined set of broad high level HLC Types. More detailed characterisation is made possible by defining a range of attributes for each polygon and recording them in a relational database (such as Access or similar), linked to a GIS. These attributes reflect the specific historic landscape features that characterise each polygon (eg aspects of field pattern, origin/age of woodland, presence of abandoned industrial activity). Later stages of the project will interrogate these attributes to produce Historic Landscape Types and other classifications. The Historic Landscape characterisation will be concerned primarily to recognise visible, extant historic character.

1.7 This project design describes the Historic Landscape Characterisation project for Northumberland.

2 BACKGROUND

2.1 Location and description of the project area

- 2.1.1 Project Area (see figure 1)
 - The project will be carried out in partnership between Northumberland County Council and the Northumberland National Park Authority to cover the whole of the county of Northumberland. The study of the entire county (without the consideration of modern administrative/political boundaries) will enable a more compete and accurate characterisation to be formed both for the County Council and the National Park Authority.
- 2.1.2 The project will cover the historic administrative County of Northumberland, including the Northumberland National Park, to the current borders with the neighbouring local authorities of North Tyneside, City of Newcastle, Gateshead, County Durham, and Cumbria to the south and west, and the national border with Scotland to the north. In this project design the study area will henceforward be described as 'Northumberland' or 'the County'.
- 2.1.3 Northumberland is a county of some 5026 km² with a population of 308,800. The county is divided into six district council administrative areas (Alnwick, Berwick-upon-Tweed, Blyth Valley, Castle Morpeth, Tynedale and Wansbeck); the Northumberland National Park is also a Local Planning Authority. The main centres of population are the market towns of Alnwick, Berwick, Hexham, and Morpeth together with the larger urban centres of Ashington, Blyth, Bedlington and Cramlington in the south-east of the County.
- 2.1.4 Northumberland National Park lies entirely within the County boundary, with an area of over 1000 km² and a population of about 2000. The National Park has no urban centres but is constituted to manage an area of extraordinary historic, built and natural heritage resources that is primarily defined by large tracts of upland moorland and high grazing interspersed with small farming communities.
- 2.1.5 The County also encompasses the whole of the Northumberland Coast Area of Outstanding Natural Beauty (138 km²) designated in 1958 and Heritage Coast, much of which has also been designated a European Marine Site. The North Pennines Area of Outstanding Natural Beauty (1983 km²), designated in 1988, crosses the boundaries of two English Regions, being in both the North East and the North West, and includes parts of Northumberland, County Durham and Cumbria. As HLC is already well underway in Cumbria, and County Durham is in the planning stages, it will be necessary to consult closely to ensure cross-border compatibility in the area of the North Pennines AONB.
- 2.1.6 *Northumberland's landscape variety and character*The Northumberland landscape has diverse natural of the Northumberland landscape has diverse natural of the Northumberland landscape has diverse natural of the Northumberland's landscape variety and character.
 - The Northumberland landscape has diverse natural and historic attributes supporting a variety of land uses such as pasture, arable and woodlands. These attributes range from the large expanses of open moorland dominated by prehistoric and medieval landscapes in the western and northern uplands; through the Roman landscapes recorded along the 'Hadrian's Wall corridor' and the Tyne valley in the south; to the Industrial landscape predominant in the south-east of the County; and the long swathes of sandy beaches, wide belts of sand dunes and dramatic headlands along the coast.
- 2.1.7 This diverse landscape is characterised by the underlying geology which is principally composed of sedimentary rocks of Carboniferous age, but also igneous rocks that include the widespread intrusions of the Whin Sill and the igneous complex of the Cheviot Hills the remains of a Devonian volcano.

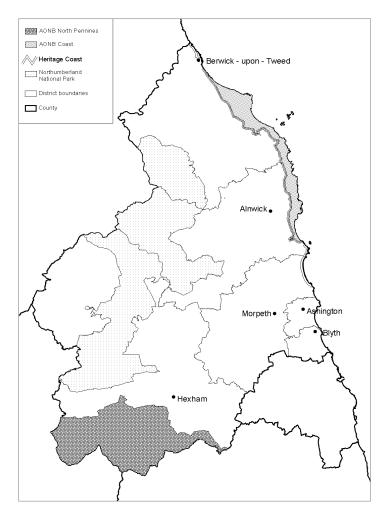


Figure 1. Northumberland HLC Project Area; showing County, National Park, district, AONB and Heritage Coast boundaries. © Crown copyright. OS Licence No. LA 076775.

- 2.1.8 Of the land surface of the County 75% is currently under agriculture. Of this, 134,299 ha (or 26.7% of the County) is under grass, 130,408 ha (or 26% of the County) is under rough grazing, 96,405 ha (19.2 % of the County) is under arable or is fallow and 7900 ha (1.6% of the County) is under farm woodland. A further area of 75,000 ha (or 14% of the County) is under commercial forestry, concentrated for the most part in the Kielder area.
- 2.1.9 The Countryside Character Map (figure 2) divides Northumberland into eleven areas that lie wholly or partly within in the County:
 - 1. North Northumberland Coastal Plain
 - 2. Northumberland Sandstone Hills
 - 3. Cheviot Fringe
 - 4. Cheviots
 - 5. Border Moors and Forests
 - 10. North Pennines
 - 11. Tyne Gap and Hadrian's Wall
 - 12. Mid Northumberland
 - 13. South East Northumberland Coastal Plain
 - 14. Tyne and Wear Lowlands
 - 16. Durham Coalfield Pennine Fringe

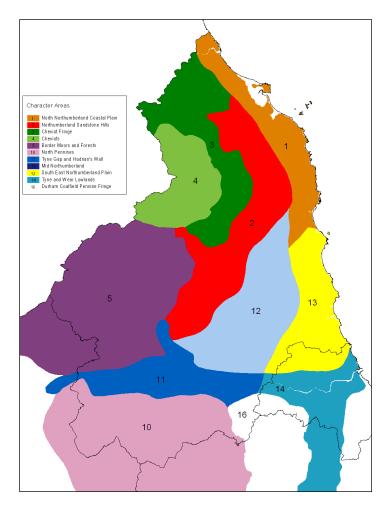


Figure 2. Countryside Character Area Map (based on Countryside Commission 1998, 7) © Crown copyright. OS Licence No. LA 076775.

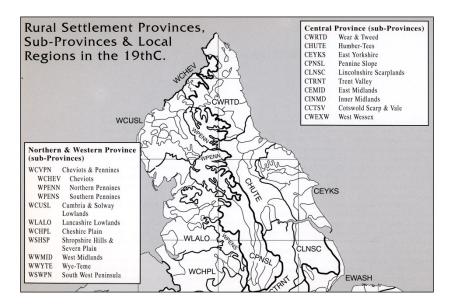


Figure 3: Rural settlement provinces, sub-regions and local regions in the 19th century. (From Roberts and Wrathmell 2000, 2).

2.1.10 The English Heritage Settlement Atlas outlines a proposed regional characterisation of rural medieval settlement in England and so divides England into three major provinces (South-East, Central, and North and Western). Most of Northumberland lies in the Central Province, with the exception of the Cheviots which lie in the North and Western Province. These major provinces are, in turn, divided into sub-provinces and local regions and those for Northumberland are as follows:

PROVINCE	SUB-PROVINCE	LOCAL REGION	
Central Province	Wear and Tweed	1a and 1b North-East Coalfield	
		2a Pennine Spurs	
		3 Upper Tyne	
		4 Northumberland Plain	
		5 Northumberland Scarps and Vales	
		6 Tweed	
		7 Cheviot Margin	
North and Western Province	Cheviots and Pennines	1a Cheviots	

- 2.1.11 The **Wear and Tweed** sub-province is formed of the coastal plain between the northern Pennines and Cheviots and the North Sea, while to the south the escarpment of the Magnesian Limestone forms the boundary; to the north, the Scottish border is adopted. Nucleated settlements spread over the coastal plain and deeply inland to the scarps and valleys and market towns appear. However, most nucleations are small and many show signs of shrinkage.
- 2.1.12 The Cheviots and Pennines sub-province comprises distinct upland masses with flat or undulating surfaces, often covered with peat and with deeply-incised valleys. In the medieval period and later the Cheviots region was one of specialist settlement (eg shielings), marginal and subject to boom and slump depending on short term climatic conditions to which local agriculture responded.
- 2.1.13 Previous landscape and characterisation work
 - <u>Landscape Assessment:</u> (see figures 3, 4 and 5) Northumberland as a county has not yet embarked on landscape character assessment. However, three landscape assessments have been carried out within the County Berwick-upon-Tweed Borough Landscape Assessment, excluding that part of the Borough which lies in the Northumberland National Park (Berwick-upon-Tweed Borough Council 1999); The North Pennines Landscape (Countryside Commission 1991); and The Northumberland Coast Landscape (Countryside Commission 1996).
 - An <u>Extensive Urban Survey</u> programme has been undertaken in the County and, although
 it remains unfinished, a programme of work is in place to complete the project during
 2005.
 - The English Heritage <u>National Mapping Programme</u> has completed work for the Till-Tweed ALSF-NMP Project based on blocks of landscapes around the rivers Till and Tweed in the north of the County. The Till block covers five whole Ordnance Survey 1:10,000-scale quarter sheets, and the Tweed block consists of three whole and five part OS 1:10,000-scale quarter sheets (equivalent to 5.5 whole quarter sheets). The National Mapping Programme is also engaged in a project along the Hadrian's Wall corridor from South Shields in the east to the Cumbrian coast in the west; this project is still in progress.
 - HLC has been underway in Cumbria since 2003 and was designed to encompass the whole county.
 - Various themed studies have been carried out that have already contributed to the Sites and Monuments Record and, as a result, will contribute to HLC. These include an examination of bastles, nonconformist chapels (Ryder 1995) and lime kilns (Lancaster University Archaeological Unit 2000). More recently a proposal has been forwarded to English Heritage to examine all of the Prehistoric Rock Art within Northumberland and Durham. This project is running broadly concurrently with the proposed HLC programme but where relevant would help to inform the HLC results.

- Area studies have also been carried out within discrete parts of the County, which will further help to refine the overall HLC. These include estate surveys of the Lord Crewe Estate at Blanchland, the Carr Ellison Estate on Beanley Moor, and Glantlees Farm. Other studies have also examined Holy Island (Leicester University) and Bamburgh (Bamburgh Research Project) two of the key coastal concentrations of heritage activity in Northumberland. Aerial photographic surveys have been carried out across the College Valley, Hadrian's Wall (within the National Park), the Otterburn Training Area, and at the National Trust's Wallington Estate.
- Specific research projects have been carried out to examine particular aspects of the County's heritage, including an assessment of the lead mining industry (Ash Consulting Group 1998) and a study of the early prehistoric landscape of the Milfield Basin that is ongoing (primarily Clive Waddington).
- In addition, more detailed landscape and themed studies have been carried out based primarily in the National Park. These include, the Historic Village Atlas Project, which has examined the historic development and landscape context of 17 'historic villages' within the National Park area; and the Discovering Our Hillfort Heritage Project, a five year initiative aimed at researching, conserving and interpreting the hillforts which lie within some of the most impressive and complex, yet least understood, tracts of surviving prehistoric landscapes in Britain. These wider landscape studies will help to inform HLC, particularly when it comes to examine the less populated upland areas of the County that predominate within the Northumberland National Park. They will help to inform the time slices for that area and support an understanding of the wider County, particularly in the upland areas (within and outside the NNP), which are more poorly served by existing documentary sources.
- Such large scale projects, while only covering a small percentage of the County Study Area (perhaps less than 10% in each case) will provide valuable overall information during the formation of the HLC, allowing the characterisations to be compared to more specific data and results. This comparison will help to make an overall assessment of the HLC for other areas indicating its strengths and weaknesses as an analytical tool in characterising the landscape.

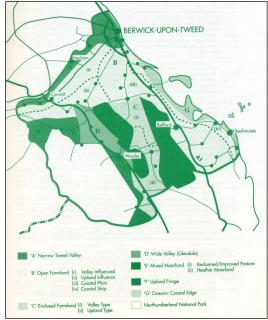


Figure 4. Berwick-upon-Tweed Borough Zones of Landscape Character (Berwick-upon-Tweed Borough Council 1999).

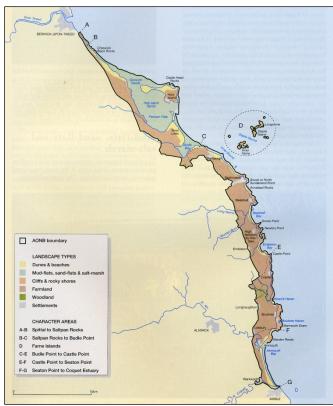


Figure 5. Character of the Coastal Landscape (Countryside Commission 1996, Figure 4)

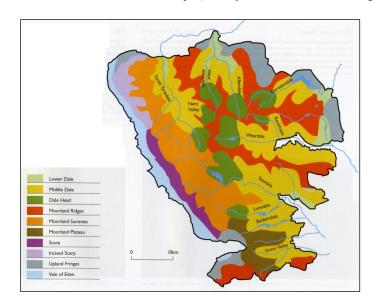


Figure 6. North Pennines AONB landscape types and their characteristics (AONB Partnership 2004, 19).

2.2 Rationale

2.2.1 The HLC Programme

The landscape that we see today is the result of human activity over thousands of years. This has seen successive periods of change and modification brought about by people through the way they live and work in that landscape. To understand the landscape of today means that we need to understand the underlying cultural processes and political, social, economic and cultural influences.

- 2.2.2 Work on a landscape scale is nothing new with the beginnings of landscape research found in the 1960s/70s and the work of W G Hoskins. Landscape archaeology too is now a long-established discipline. Other subjects have also embraced a landscape approach, such as landscape ecology and the work of Oliver Rackham.
- 2.2.3 Recent years have seen the growth of landscape characterisation and assessment to a position where it is now well-established (Countryside Commission 1987, 1993; Countryside Agency and Scottish National Heritage 2002). A number of attempts to "bolt on" the historical dimension to this have demonstrated the increasing importance of this aspect of landscape formation to overall characterisation. 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 this would have been to define areas of landscape deemed to be more "historic" and, therefore, more worthy of preservation than the surrounding areas. In response, English Heritage instigated a number of pilot projects to assess appropriate methodologies for identifying "historic landscapes" (summarised in English Heritage 1994). These have led to the view that a simple register is not appropriate and that a more holistic approach is needed (Fairclough 1994, Fairclough et al 1999).
- 2.2.4 The aim of this alternative approach is to characterise all areas within the present landscape with reference to agreed criteria reflecting historic development and archaeological dimensions. This would mean creating a categorisation that identifies groups of surviving historic features within their wider modern context and does not concentrate on the identification of individual "historic landscapes" to the exclusion of their modern contexts. Further grading, in terms of the relative importance of different parts of the landscape, would only be undertaken to meet the needs of specific planning requirements. This approach, in which the whole of an area of landscape is assessed and characterised, is in line with methodologies of landscape assessments undertaken for non-historical reasons.
- 2.2.5 The general purpose of landscape assessments has been defined by the Countryside Commission (1993) as assisting local authorities, land use and conservation agencies and the private sector to:
 - Understand how and why landscapes are important.
 - Promote the appreciation of landscape issues.
 - Successfully accommodate new development within the landscape.
 - Guide and direct landscape change.
- 2.2.6 Most recently, the Countryside Agency and Scottish Natural Heritage have jointly published Landscape Character Assessment Guidance (2002) that reviews current practice and sets out appropriate approaches to the subject. This describes Historic Landscape Characterisation as "a practical and robust method for defining and mapping historic landscape character at the county scale". Significantly, this Guidance recommends that Historic Landscape Characterisation should 'inform' ie precede, the process of Landscape Character Assessment.
- 2.2.7 The Historic Landscape Characterisation proposed for Northumberland will adopt the above approach and will result in improved understanding of the processes of landscape evolution in the historic environment as a whole to enable the identification of what is vulnerable, and the maintenance of diversity and distinctiveness. This can also provide a sound objective characterisation on which interpretation can subsequently be overlaid without compromising the primary data.

2.3 HLC in Northumberland

2.3.1 Landscape Characterisation is the process of systematic identification and description of components in the contemporary rural and urban landscape. It is envisaged that the programme in Northumberland has five primary components, based on the project model successfully executed in Northamptonshire. In addition to the HLC these are likely to include,

- The *Modern Landscape* a visual assessment of the modern land use and the predominant landscape characters across the County.
- The *Natural Landscape* an assessment of all aspects of the natural heritage and biodiversity of the County, to give a model of the current state of the natural resource and a methodology/mechanism for easy/rolling updating of the model in the future.
- The *Physiographic Landscape* an assessment of the underlying geological and geomorphological building blocks that have informed all of the development of the County.
- The *Palaeoenvironmental Landscape* an assessment of the surviving palaeoenvironmental resources within the County, and of previous palaeoenvironmental studies that might help to draw up a time slice model of the environment within the North East at specific strategic points through history and prehistory.
- 2.3.2 All components should make reference to the characterisation of the physiographic nature of the landscape within the County as it will provide a base line of commonality between the studies. It is proposed that in the future all the strands will then be bought together to form one overall characterisation of the landscape of Northumberland.
- 2.3.3 Historic Landscape Characterisation will provide broad-brush overviews of complex aspects of the historic environment in order to provide new, wide-ranging information for conservation, management and development decisions. The objective of this broad-brush approach is to promote better understanding and management of the historic landscape resource, to facilitate the management of continued change within it, and to establish an integrated approach to its sustainable management in partnership with other organisations.
- 2.3.4 Anticipated Users of HLC include local authorities (County, National Park and districts) as well as organisations with broader regional interests, such as DEFRA, English Heritage, and the Countryside Agency. There is also a potential audience in estates and landowners, such as Defence Estates and the National Trust.
- 2.3.5 Uses of HLC in Northumberland are likely to fall under a number of broad headings, including Land Use Planning, Conservation, Public Outreach, and Research.
- 2.3.6 HLC will inform strategic planning, contributing to supplementary planning guidance and providing a context for archaeological development control advice. It will help inform policies contained in the County and National Park structure plans as well as district local plans. In Berwick-upon-Tweed Borough this will build upon the landscape assessment carried out in 1992.
- 2.3.7 HLC will also inform conservation policies and management strategies in the Northumberland National Park, the two Areas of Outstanding Natural Beauty, Hadrian's Wall World Heritage Site, etc, as well as informing the targeting statements and implementation of DEFRA agrienvironment schemes.

The Northumberland Coast AONB Management Plan (2004) includes a policy promoting a landscape-scale approach to conserving and enhancing the historic environment:

Policy H6: Inform conservation of the historic environment through an historic landscape character assessment for Northumberland. This identifies that the conservation and enhancement of the historic features of the AONB would be improved by allowing them to be understood and managed in the context of their wider landscape setting including the natural and palaeo-environmental landscape.

The North Pennines Area of Outstanding Natural Beauty Management Plan 2004-2009 (2004, 40) recognises "there is a need to characterise the historic element of the countryside" and that "HLC will deliver the information needed to inform management and conservation decisions now and in the future, both on a day-to-day level and at a strategic and regional level." Under the management plan are objectives:

Objective 15: To increase the range and quality of data available to support the conservation of the natural and historic environment; and

Objective 16: To ensure increased research and survey of the historic environment and identify priorities for action.

Under DEFRA's new *Higher Level Stewardship Scheme*, Historic Landscape Characterisation is identified as a useful component in compiling a Farm Environment Plan in that it: "can be used to help understand today's landscape pattern and its origins and any direction of change, which is useful when proposing suitable management in the application" (DEFRA 2004).

The Northumberland National Park Management Plan (2003) highlights the lack of detail on the full extent and nature of historic landscapes, as well as its condition and management priorities. The Plan sets a cultural heritage 'target' to agree a research and management strategy with English Heritage.

The *Hadrian's Wall Management Plan 2002-2007* (English Heritage 2002) includes: <u>Issue 4: The conservation of the special landscape character of the WHS and its setting, while managing the processes of change</u> with,

Policy 4: The Conservation of the Landscape of the WHS should be guided by an overall Conservation Framework which should be developed in the management of change in the landscape. One of the actions identified to achieve this is that HLC should be ... undertaken in Northumberland in order to inform and meet the objectives of the Conservation Framework, Research Framework and Local Interpretive Plans (NCC/NNPA).

The Strategy for the Defence Estate (2000), recognises the estate: "contains areas of land with a very high landscape value which should be safeguarded and sympathetically managed. The management of the estate should respect and improve the character of the countryside...". The MOD's stated aim "seeks to safeguard and improve the valued landscape character of its estate." In respect of cultural heritage in particular, the MOD aims to "maintain, protect and,

2.3.8 The HLC project will be fully integrated into the Northumberland Historic Environment Record, with individual HER entries linked to character types through a database and ArcView GIS. On-line access through the Keys to the Past website will also be explored to enable a wider 'readership' of HLC.

where possible, enhance the cultural heritage value of the estate."

2.3.9 While the results of this project are initially likely to have to be a stand alone assessment, and the project design here has been drawn up with that in mind, it is hoped in the future to draw together a more complete overall Landscape Characterisation model for Northumberland.

3 AIMS AND OBJECTIVES

3.1 Overall Aim

- 3.1.1 The aim of the Northumberland project is to characterise the modern landscape of Northumberland in terms of the visible evidence of the human processes that formed it. This will be a broad and generalised, GIS-based exercise using existing information and understanding of the archaeological and historical attributes of the present-day landscape.
- 3.1.2 This characterisation (the HLC) will be capable of contributing to emerging national and regional HLCs as well as a future overall landscape assessment of the County. It will also enhance and provide a context for, the existing HER.

3.2 Objectives

3.2.1 To identify, collect and create a set of relevant data sources for understanding the historic depth and archaeological dimension of the present-day landscape, to be transparent and to facilitate future updates.

- 3.2.2 To produce a GIS-based HLC by characterising the landscape in historic terms using GIS polygons to define areas of land with similar historic character, defining each by collecting attribute data.
- 3.2.3 To use the structured attributes attached to each HLC polygon to define and describe Historic Landscape Character based on aspects of present land-use, land management and settlement patterns, which reflect differing historical processes in their formation.
- 3.2.4 To analyse and interpret the HLC to produce preliminary syntheses and to inform countryside management, spatial planning and outreach, research and evaluation programmes.
- 3.2.5 To assess the potential for further development of HLC and its uses, and for the definition of future HL research strategies.
- 3.2.6 To disseminate the results of the project through professional and popular publications and other media.
- 3.2.7 To produce an archive, a report summarising the project, and practical recommendations and methods for updating.

3.3 Broader Objectives

- 3.3.1 Improving and promoting an understanding of the historic character of the landscape of the County and of local areas to a variety of users, owners and stakeholders.
- 3.3.2 Establishing HLC as first and foremost a resource management tool, creating an accessible body of information and data in order to enable high-quality well-informed and sustainable resource management and conservation at a landscape level; for example, through National Park and AONB management plans, DEFRA Stewardship schemes, local plans, and other estate management plans (Defence Estates, National Trust, English Heritage).
- 3.3.3 Finding ways to update and enlarge the County HLC so that it continues to reflect current landscape character, and may be compared in future to the benchmark of the original HLC.
- 3.3.4 Addressing the importance of areas of historic interest, significance and evident potential as well as individual sites, widening old-fashioned views of what is the proper subject of archaeological study and understanding.
- 3.3.5 Assisting the building of partnerships with other agencies and other disciplines and encourage integrated working with other environmental and conservation agencies, and landowners, eg. The National Trust, English Heritage, DEFRA, Countryside Agency, Defence Estates, Forestry Authority, Northumberland Estates.
- 3.3.7 Enhancing awareness of local distinctiveness and identity among communities.

4 METHOD STATEMENT

4.1 Stage 1 - Familiarisation, Refinement of Project Methodology and Sample Areas

4.1.1 Familiarisation

The project will begin with a six week period of familiarisation with the historical development of the County, identification of data sources, understanding the methodology, development of an ArcView GIS project and complementary database, and visiting other HLC projects. This will ensure that the HLC methodology proposed in Northumberland is compatible with those used in the surrounding counties and also in the wider Northern region. It is also important that "a common methodological approach [be] taken to the Historic Landscape Characterisation projects being carried out in the region. This is essential to ensure effective comparison of patterns in landscape use across the region" (Petts forthcoming, para.11.2.1). Particular attention will be paid to the HLC already well underway in Cumbria,

and to that proposed for County Durham, but contact will also be made with North Yorkshire and with the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) to see to what extent compatibility can be ensured. This will be followed by the preparation of a detailed project design.

4.1.2 Refinement of Project Methodology

The detailed project design (method statement) is based on the methodology devised in Cornwall and developed elsewhere, most recently particularly in Devon, Lancashire, Somerset, Shropshire, Cheshire, Northamptonshire and Exmoor National Park. This has been adapted to reflect the differences in cultural history, land management, climate, etc in Northumberland. The approach taken will be to work from the broad to the detailed. This will allow an overview of the whole area together with the ability to refine the characterisation in those areas that merit it. There will be potential for the integration, through GIS, of these results with other heritage data-sets.

- 4.1.3 The HLC study will include all aspects, at the supra-site level, of the natural and built environment which have been shaped by human activity in the past: the distribution of woodland and other semi-natural habitats, the form of fields and their boundaries, the lines of roads, streets and pathways, the disposition of buildings in the towns, villages and countryside. The process is not concerned primarily with identifying the character and extent of patterns of land use and settlement in the past (although these may in some cases be inferred). Its objective is to define the way in which the activities of people in the past survive and have contributed to the form and appearance of the modern landscape and the significance of this in managing future change.
- 4.1.4 The project officer will examine potential data and information sources with regard to their content, geographical cover and how they might be exploited in relation to the HLC. The familiarisation period will also include the development of both an ArcView9-based GIS system, a database structure (Access or Oracle), and a practical regime of data collection and analysis.

An outline structure is shown below, based on three levels (broad high level *descriptive groups*; present-day historic landscape character; and previous historic landscape character).

Main table: polygon ID, *descriptive group*, date entered and who by, polygon area, central grid reference

Attribute tables based on the following headings: boundary morphology, interpretation and indicative features, active/inactive distinctions, boundary changes, period, confidence, source and free text notes.

The upland is defined by English Nature as "usually above the upper edge of enclosed agricultural land (generally at around 250-400m)". Therefore for this project land generally above 250m has been classed as 'upland'.

These will be access via a series of forms based on the three levels: core polygon record with broad high level *descriptive group*; present-day historic landscape character; and previous historic landscape character

4.1.3 *Sample Work*

A programme of sample work has been designed to test the draft project method and its GIS database structure on four test areas in the County. These are based largely on the parish areas of Alnham/Whittingham, Ancroft, Haydon, and Ponteland. These areas have been chosen to reflect the widest variations in the County's landscape, from north Northumberland coastal plain/Cheviot fringe (Ancroft), Cheviots/Cheviot fringe (Alnham and Whittingham), Tyne Gap and and Hadrian's Wall/North Pennines (Haydon), south-east coastal plain/mid-Northumberland (Ponteland).

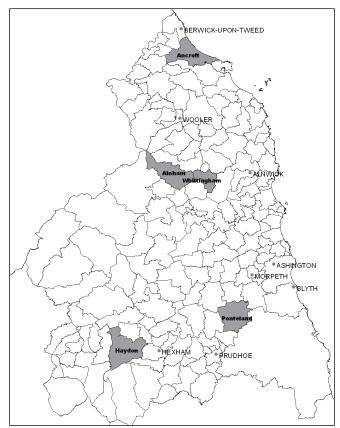


Figure 7. HLC Sample areas. © Crown copyright. OS Licence No. LA 076775.

4.1.4 The sample work will also study the varying information sources and examine them with regard to their content, geographical cover and their usefulness to the HLC (see Appendix 1)

4.1.5 Inter-tidal zone and beyond

Pilot studies are currently in progress to examine the application of historic landscape characterisation to marine landscapes, with the English Heritage *England's Historic Seascapes* project (see www.wessexarch.co.uk/projects/marine/eh/seascapes/). Consultation will be held with English Heritage Maritime Archaeology Team, Wessex Archaeology, and other appropriate projects, to ensure where appropriate that suitable allowance is made in the land-based HLC study of Northumberland to allow easy integration with any future maritime HLC model. It is envisage that five days should be allowed for these consultations. This consultation process will, where possible, occur during Stage 1 one of the project though it may in part need to be held over until Stage 2 depending on the progress made with the marine projects.

4.1.4 Planned Products of Stage 1

- a) application and testing of methodology in three or four sample areas followed by modification and/or confirmation of the method as necessary;
- b) production of a summary report for case studies;
- c) the sample results and modified method statement will be presented to a meeting of a the Project Steering Group and Management Group for discussion prior to Stage 2;
- d) a finalised *Method Statement* will be produced as a manual for Stage 2. This will be updated through the lifetime of the project as methods are refined or revised to accommodate new attributes or data sources, for example. The *Method Statement* will be the starting point for the final *Project Report* in Stage 4.

4.2 Stage 2 – Characterisation: Mapping and Digitisation

4.2.1 Stage 2 is the principal phase of the project, applying the methodology to the whole county by defining and characterising GIS polygons, creating a related database recording polygon attributes that describe its:

<u>present-day</u> historic landscape character <u>previous</u> historic landscape character, and earlier historic landscape character (where known).

4.2.2 Sources

The process of characterisation is a primarily desk-based exercise whose main source is the present-day landscape as recorded on maps and aerial photographs. In Northumberland, these will be Ordnance Survey mapping (digital MasterMap and 1:25,00 scale paper maps) and digital geo-referenced vertical colour aerial photographs (Getmapping plc 1999-2003). These sources will be interpreted principally using local archaeological knowledge, morphological interpretation, and landscape history — with the support of other data sources as appropriate (eg documentary evidence, historic maps), to create an archaeological understanding of the remains they illustrate. There are many other data sources of potential use to the Northumberland HLC and these are summarised in Appendix 1.

4.2.3 Defining HLC Polygons

Polygons will be defined as groups of modern land-parcels based on MasterMap polygons. Each group, or hyper-polygon, will in general possess the same historic landscape character – in other words, the character of defined polygons will not be entirely homogenous, but generalised, with minor diversity overlooked in favour of the broad picture. It is likely that where previous HLC is known (eg easily accessible documentary or cartographic evidence) or assumed (by interpretation, comparison or extrapolation) this will also influence the definition of polygons.

4.2.4 Polygons will be digitised in ArcView9 GIS, direct to screen at a scale of between 1:10,000 and 1:25,000.

4.2.5 Polygon Size

Polygons need to be small enough and distinctive enough to allow the attachment of attributes that can later be used to create classifications. On the other hand, polygons should not be too small that they fragment the landscape and prevent any generalised understanding of HLC. HLC looks for patterns and similiarities between areas, not always emphasising differences. It is self-evident that every field or enclosure is in some way distinctive and unique, but what is required for sensible landscape management is to recognise similarities, to group areas into higher level definitions, to create patterns. This warning is particularly pertinent to the use of MasterMap which creates the ability to map smaller and smaller polygons. The core ranges of HLC polygons are 18 - 61.5ha (Aldred 2003, 26) and in Northumberland the minimum polygon size is defined as one hectare.

4.2.6 *HLC Attributes*

Attributes of each polygon will be recorded in three areas of the HLC database, all linked by the unique polygon ID, and all drawn from a common list. These three areas are:

a) simple attribution to one of a small number of broad, descriptive high-level historic landscape types (unenclosed, enclosed, woodland, industrial, military, ornamental/parkland/recreational, settlement, communications, and water bodies);
b) attributes of present-day landscape character that allow the sub-division of the broad types and the interpretation of historic character and development;
c) attributes (if they exist) that indicate one or more successive previous types of historic landscape character (eg common or woodland prior to enclosure, mineral extraction prior to restoration of field boundaries, and before that parliamentary enclosure); this provides increased time depth.

4.3 Stage 3 – Analysis, Interpretation, Synthesis

4.3.1 The three levels defined above, particularly b) and c), will allow GIS interrogation to produce a range of interpretation, classification and modelling that provides the essence of the HL characterisation. This stage of analysis and interpretation will extend understanding of the county's HL character, and make connections with other landscape assessment and with planning and management agenda.

- 4.3.2 The attributes recorded against polygons in Stage 2 will be used to define Historic Landscape Character Types, to create thematic assessments, and to determine areas of similar historic character.
- 4.3.3 The Historic Landscape Character Types produced at this stage, will range from simple 'entry level' broad brush types, to more complex classifications, eg field patterns. Analysis will also be able to answer questions on subjects such as vulnerability to loss, rates of change, and models of earlier landscape character.
- 4.3.4 Stage 3 analysis will also use a range of secondary sources to help understand emerging patterns and trends in the data, especially in terms of time depth and landscape change. The HLC will also be used to help explain patterning in the Sites and Monuments Record, such as gaps in data and predictive modelling.
- 4.3.5 Existing landscape characterisations and designations in the County will be reviewed in the light of the HLC (primarily Countryside Character Areas, and the North Pennines and Northumberland Coast AONBs). This will identify areas of consensus and suggest where refinements and improvements can be made. In particular, consideration will be given as to how the historic character can be incorporated into Countryside Character Area descriptions. The need and potential for further stages of more detailed historic environment assessment will be identified.
- 4.3.6 Consider how the HLC results could be used to assist management and conservation of the historic landscape and in the preparation of furture management strategies. Eg. management guidelines for landscape character areas or HLC types; rarity of different HLC types, or measures of vulnerability or risk. Discussion of how HLC will work in the planning process in Northumberland/NNPA.
- 4.3.7 The draft *North East Regional Research Framework for the Historic Environment* (Petts forthcoming) makes a number recommendations for future research projects in relation to the historic landscape:
 - The Historic Landscape Characterisation (HLC) project has real potential for teasing out variation at a micro-regional level. However, for true regional comparisons to be made it is essential that there is a broad consistency in methodology. The Northumberland Landscape Characterisation project is already underway, it is important that other projects in the region liaise and consult closely with Northumberland (10. Settlement and Urbanisation Settlement in the landscape: morphology).
 - Although current consensus suggests that HLC work use First Edition 6" OS maps as the base from which to work (Rippon 2004, 144), in areas which have seen extensive industrial activity, it may be appropriate to use later maps or create a series of regression maps covering the late 19th and 20th centuries, possibly at 25 year intervals (10. Settlement and Urbanisation Settlement in the landscape: morphology).
 - There is need for increased fieldwork to record known lowland pre-Enclosure landscapes. It may be possible to identify such areas through the Historic Landscape Characterisation process. Fieldwork to record the nature of field boundaries (e.g. presence of banks, ditches, hollow ways etc) is also essential. Collaboration with local naturalists/wildlife groups should be sought to carry out research on ecological aspects of early field boundaries, including species types and evidence for woodland management (12. Origin and Development of the Agrarian Economy Field system).
 - The Historic Landscape Characterisation project should be used as a base survey for historic woodland. Where available, this should be supplemented with earlier cartographic evidence (estate and enclosure maps) and placename evidence. All areas of historic woodland should be recorded on the HERs (12. Origin and Development of the Agrarian Economy Woodland Management).
- 4.3.8 A peer group and stakeholder seminar will be held during Stage 3.

4.4 Stage 4 – Report, Archive and Dissemination (publication, applications and updating)

4.4.1 The finished products of the project will be a mapped GIS database (that can be analysed in ArcView/MapInfo and Oracle/Access); an archive of the raw survey data; a written report covering both method and results, and acting as a guide to the HLC's structure and use; and a dissemination strategy.

4.4.2 GIS and Database

- Northumberland County Council is a licenced user of ArcView GIS and the Northumberland National Park Authority is a licenced user of MapInfo GIS. Although not directly compatible, there are routines for converting data between these two systems and there should therefore be no loss in functionality. The full digital HLC project will be held by both partners.
- The proposed database format is Oracle, which will sit within ArcView GIS and
 increase its functionality. Further investigation is needed to establish if this will be
 compatible when converting from ArcView to MapInfo and whether any additional
 software is needed by NNPA.
- HLC will be available to the SMR as additional layer(s) brought into the SMR GIS project.
- The HLC report will be made available online, via the County and National Park
 websites (www.nopa.org.uk). It will also be
 possible to make the mapped data available via the County and National Park
 websites, which are currently being reviewed in the light of E-Government National
 Priority Outcomes.
- It is also hoped that any future review of the Keys to the Past website (www.keystothepast.info) can incorporate HLC.

4.4.3 Archive

An archive will be prepared, which will include:

- copies of the initial and detailed project designs
- method statement
- user's manual
- correspondence
- text and mapped information produced or copied during the course of the project
- copies of all reports produced as part of the project

An archive of raw data will be held by the Northumberland SMR.

In the future, Northumberland County Council will seek ways to place the HLC information on to the internet and make it more widely available to the public, also on-line to DCs etc. An alternate option may be to produce a CD ROM that could either be offered for sale (for an administration fee) or be made available through Northumberland Libraries. Such IT based dissemination should however be part of a larger programme of disseminating the overall LSC results including the four strands (HLC, Modern, Physiographic and Ecological).

In the short term the HLC results would be made available to the public through the normal SMR service and could be accessed during a visit to County Hall to make a search in that facility.

Results will take two primary forms: firstly, the new GIS dataset which describes the historic landscape characterisation defined on the basis of the range of types of historic landscapes. Secondly, this will be supported by a report describing the dataset and defining each type of Historic Landscape Characterisation within the range.

4.5 Compatibility

As the data will be collated and prepared in the Northumberland County Council GIS system, using ArcView9 software, export options are numerous, allowing the final data sets to be provided to most other standard GIS and database systems as well as CAD and survey

software. Compatibility will be ensured from the outset of the project to allow the data to be easily transferred to MapInfo, the GIS system used by the Northumberland National Park.

The HLC methodology proposed by NCC/NNPA is designed so that compatibility with those methodologies utilised in the surrounding counties and also the wide northern region will be designed in during the detailed project development stage. Particular attention will be paid to the HLC already well underway in Cumbria, and to that proposed for County Durham, but contact will also be made with North Yorkshire and Borders Region in Scotland to see to what extent compatibility can be ensured.

5. RESOURCES AND PROGRAMME

5.1 Personnel

The characterisation programme will be undertaken by a single Project Officer appointed to Northumberland County Council's Conservation Team. The Project Officer will undertake the majority of all tasks, with specific responsibility for the detailed project design. The Project Officer will be responsible to the Northumberland County Archaeologist (Conservation Team Manager) on a day to day basis and to the Management Steering Group (MSG) during regular monitoring assessments to check the progress of the work. The Project Officer will receive support from other members of the County Conservation Team and Northumberland National Park Archaeology and Historic Environment Team.

The Management Steering Group will consist of representatives of partner authorities (NCC and NNP) and a representative of English Heritage as the primary external funding agency. It is proposed that the MSG will meet with the project officer on at least a monthly basis to discuss progress and assess the need for alterations in the overall project strategy.

The person engaged in the research for the project will have a good general knowledge of the processes of historic land-use change. A familiarity with Northumberland's landscape, history, historic buildings, and historical records is also desirable, as is some experience, or knowledge of the principles, of working with GIS.

5.2 Equipment and resources

Two primary resources will be required to support the project. These will be PC and a centralised mass storage device (Hard Drive and or Optical Drive). These items will be connected to the existing Northumberland County Council network. The specifications for any new computer equipment will be "the best available at the time of purchase" as the actual top specification for such hardware changes on an almost weekly basis. Consideration will be given to the most appropriate from of PC for the HLC officer to use (Desktop of Laptop). In may cases elsewhere in the country it has been found that a Laptop provides the best form of computing hardware and allows for more flexibility and transportability. Peripheral to this will be a digitising tablet, which is the key piece of equipment required in the preparation of the HLC for handling map data. Ordnance Survey map resources (MasterMap) are already held by Northumberland County Council and as such the HLC should not require any additional licence extension or incur any costs for base map data. NCC and NNPA have recently purchased digital aerial photographic coverage of the county (at 25 and 10 cm resolution). This will be made available to the project. Partial coverage of hard copy historic aerial photographs (RAF and OS) is also available in house at NCC. It is proposed for the future to purchase countywide historic aerial photographs coverage however it is not clear whether this will occur during the life time of the project.

Geo-referenced historic maps (Landmark) have been purchased by NCC as part of the Keys to the Past project (www.keystothepast.info). These maps are available for use on the GIS system (ArcINFO) during the time of the HLC project.

6. PROJECT PROGRAMME AND COSTING

6.1 Project Programme

Stage	Task	Time in weeks		
Stage 1	1a: Familiarisation	6		
	<i>1b-c:</i> Sample areas and c	8		
	1d: Maritime Characteris	Maritime Characterisation consultation		
Stage 2	Defining and characterising GIS	Berwickshire (21%)	13	
	polygons and creating related databases	Alnwick (20%)	12	
	related databases	Castle Morpeth (13%)	8	
		Blyth Valley (6%)	5	
		Wansbeck (6%)	5	
		Tynedale (34%)	20	
Stage 3	3a: Analysis, interpretation and synthesis		12	
Stage 4	4a: Final report		8	
	4b: Archive completion	2		
		Total	100	

Table 1: Project Programme (also see Table 2, Gantt Chart)

- 6.2 Staffing
- 6.3 Facilities and Equipment
- 6.4 Data Access
- 6.5 Project Management and Support
- 6.6 Totals
- 6.7 English Heritage's Contribution

7. MONITORING AND CONSULTATION

- 7.1 Three levels of monitoring and consultation are envisaged.
 - a. The post will be managed on a daily basis by the Northumberland County Archaeologist.
 - b. Monthly based monitoring will occur through meetings of the MSG consisting of the County Archaeologist, the National Park Archaeologist and a representative of English Heritage.
 - Meetings will also be held for a Project Steering Group (PSG) to which the Project Officer will report on behalf of the Management Steering Group.

7.2 Management Steering Group (MSG)

The MSG will form the regular external point of monitoring and consultation for the project and will consist primarily of funding agencies and government agencies that may have an interest in the project including EH, NCC, NNP and other partners or stakeholders as appropriate. This group will include:

• the County Archaeologists (Sara Rushton and Chris Burgess - primary monitor of the archaeological aspects of the project for NCC)

- the Northumberland National Park Archaeologists, (Paul Frodsham and Rob Young one of whom will chair the group as the key Project Partner)
- Graham Fairclough (or his representative), English Heritage

7.3 Project Steering Group (PSG)

The PSG will be formed of a wider constituency than the MSG but will consist of all MSG members as well as other interested parties. This will provide a wider basis for consultation and additional expertise for comment at each stage.

It is proposed that the PSG meet or as key stages are met in the project to discuss the results and hopefully to provide support and constructive criticism. The PSG will be formed initially by invitation, a list being suggested by the MSG and the primary funding partner (English Heritage), though the PSG after it has convened for the first time may choose to invite additional interested parties to attend as is appropriate.

Initial members might include representatives from:

- Region Universities
- EH both regional and National
- NE Coast AONB
- NE Coast EMS
- N Pennine AONB
- Adjacent local authorities and Northumberland Districts
- Historic Scotland and other agencies (EN DEFRA etc)

These meetings might occur at the following key stages of the project.

- After completion of Stage 1 (once method finalised)
- Towards the end of Stage 2 (as final data collection is completed)
- During Stage 4 (to discuss the final result)

Additional meetings are not precluded by this schedule should the PSG feel they are necessary.

8. COPYRIGHT

Copyright will be retained jointly by Northumberland County Council, Northumberland National Park Authority and English Heritage. The key partners (NCC and NNPA) will licence partners and others to use the information where this does not conflict with other copyrights (eg Ordnance Survey). All material copied from other sources will be fully acknowledged and relevant copyright conditions observed.

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Appendix 1: Datasets available to Historic Landscape Characterisation in Northumberland

Data Set	Format	Coverage (<u>All</u> County, <u>N</u> orthumberland <u>N</u> ational <u>Park</u> , County <u>O</u> utside <u>P</u> ark)	Location
Northumberland SMR	Digital (Access database and ArcView GIS)	All	NCC
Historic Maps (1 st to 4 th edition OS)	Digital (GIS raster)	All	NCC
Enclosure Awards	Over 50% scanned (not geo-referenced)	All (some gaps)	NCC and NRO (Gosforth)
18 th and 19 th century County Maps	Hard copy	All	NRO (Gosforth)
English Heritage Register of Parks and Gardens	Digital (GIS)	All	NCC
Scheduled Monuments	Digital (GIS)	All	NCC
Conservation Areas	Digital (GIS)	All	NCC
Phase 1 Habitat Survey	Hard copy (scanned but not geo-referenced)	NNP	NNP
Phase 1 Habitat Survey	Hard copy	OP Partial	NCC
Placename data	Hard copy text		Published books (NCC/NRO)
English Nature Natural Areas	Digital (GIS)	All	NCC
Countryside Agency Countryside Character Areas	Digital (GIS)	All	NCC
Vertical aerial photography	Digital (GIS)	All	NCC
Geology	Digital?	NNP	NNP/BGS
Parish boundaries	Digital	All	NCC
Administrative boundaries (NP, County and districts)	Digital	All	NCC
Extensive Urban Survey	Digital text (completion due end 2005)	All	NCC
Village Atlas	Digital text/images	NNP	NNP
RAF 1940s vertical aerial photography	Hard copy prints	All (with gaps)	NCC