PART II: METHODOLOGY

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3. PROJECT METHODOLOGY

3.1 PREVIOUS HISTORIC LANDSCAPE CHARACTERISATIONS

Approaches to landscape assessment have become methodologically more complex as work in this area has developed over the last nine years. In Cornwall, the first county for which a project of this type was completed in England, a satisfactory characterisation of historic landscape was achieved using fourteen basic historic landscape categories, which were elaborated to eighteen historic character zones. Time depth matrices for these were prepared to introduce some transparency into the characterisation of zones with apparently similar attributes. In subsequent projects for the landscapes of counties such as Avon and Derbyshire, and in the Cotswolds AONB, relatively complex patterns of changing, multi-period land use, and comparatively good coverage of historic survey data and new research, have allowed the design of more sophisticated categorisations for historic land use (over thirty in Avon and over forty in Cotswolds). This includes a system of tagged attributes, or sub-sets of landscape categories, which allows an element of the time-depth of visible landscape features to be displayed in character types. In Hampshire over eighty different historic landscape types were identified and mapped.

3.2 BACKGROUND RESEARCH AND PILOT STUDIES

In order to devise a system of classification suitable for the landscape of Lancashire a multi-stranded approach was adopted, including:

- Methodological review; including extensive consultation with previously studied counties. Visits were made to the Peak District National Park and the Oxford Archaeological Unit (responsible for Hampshire's HLC with Scott Wilson Resource Consultants). The methodologies from Cornwall and the Cotswolds AONB were also examined in detail.

- Familiarisation days with local experts.

- Pilot studies, both at the early stage of the project design submission to English Heritage, and as a more formal procedure after the project had commenced. This enabled other categories to be added as they were recognised during the mapping process. The approach adopted was to look at 10km by 5km areas around identified settlements or parishes. The following were chosen to represent the wide range of landscape types present in Lancashire:

  Arkholme, Lancaster District
  Barnacre with Bonds, Wyre District
  Pilling, Wyre District
  Rufford, West Lancashire District
  Whitworth, Rossendale District
  Formby area, Sefton/West Lancs District
  Oswaldtwistle, Hyndburn District
  Ribchester, Ribble Valley District
  Wray, Lancaster District
  Silverdale, Lancaster District
  Trawden, Pendle District

The large sample area, approximately one eighth of Lancashire (550 km^2), was considered necessary due to the significant variation within the landscape. Once completed the results from the pilot areas and the consultation exercises were used to prepare a series of generic landscape types that are described in Part 3 below. The final methodology draws upon elements from several earlier HLCs, modified to suit the Lancashire landscape and the demands of the project.

The main difference between the Lancashire project and those that preceded it relates to the interpretation of historic landscape character types, particularly those describing the enclosure and improvement of agricultural land. Here, as elsewhere, interpretation was based primarily on the size and shape of the enclosures as well as the wider patterning of these forms in the landscape. Boundary type, topography, hydrology, place name and other archaeological evidence were also taken into consideration. Because of this it was decided to make the process of interpretation transparent by dividing the descriptive morphological information from the interpretative information. In such a way future changes could be easily accommodated within the project to reflect increases in knowledge. This was complemented by a combined assessment of confidence in the interpretation of both the date and historic landuse categories.

3.3 GENERAL METHOD

The characterisation of the historic environment is essentially a structured data gathering exercise, followed by analysis and mapping of areas of historic environment character *types* which share distinct groupings of attributes. The process of Historic Landscape Characterisation in Lancashire was relatively straightforward. It began with the systematic identification and description of historic attributes in the contemporary rural and urban landscape. These attributes included all aspects of the natural and built environment that 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. Thus for the whole of the county the following attributes were examined (data sources used are listed under 3.4 below):

- current land use
- field shape
- field size
- field groups
- boundary types
- shape and disposition of paths/lanes/roads
- shape and type of woodland
- shape and type of water
- distribution and types of buildings
- contour/geology/soils
- place names
- settlement pattern
- previous fieldwork
- *c.*1850 mapping (O.S. First Edition 6")
- enclosure awards and other historical information
- and, at the later assessment stage, SMR data.

After data gathering the study area was systematically subdivided into areas sharing similar attributes and the information entered into the project database (both as a digital GIS layer and an Access database – Excel and Dbase formats were also produced). The primary attributes that dictated the extent and scale of subdivision were current and historic landuse, with further subdivision made on the basis of enclosure size and shape. In this way areas of the same landuse were subdivided along morphological grounds. For example irregular wavy-edged fields were separated from areas of irregular straight-edged fields, or straight-edged plantations of woodland were split from tracts of irregularly bounded woodland. This methodology also allowed the interpretative elements of the mapping (i.e. predominant date of current land-use, or likely origins) to be distinguished from the purely descriptive.

hlc final : Table

POLYGON	CODE1	CODE2	STEEP	PITS	BOUN	DAT	INT1	INT2	INT3	INT4	CON	COMMENTS	CHK
1882	E01		N	N		2	as	he			iv	Carr Side Farm	Y
1883	E04Z	E01	N	N		4					i	Bailey Hippings	Y
1884	E01		N	N		2	as	he			iv	Gibbon Bridge, Greenlands Farm	Y
1885	RL07A	E03	N	N		4					i		Y
1886	WD2		N	N		7					i	Townley Moss Wood	Y
1887	RL07A	E06	N	N		4					i		Y
1888	E03		N	N		2					iv	Stakes	Y
1889	WD1		N	N		7					i		Y
1890	E04A	E02	N	N		2	as				iv	Wardsley	Y
1891	E01		N	N		2	sf	as			iv	Leagram Hall	N
1892	E02		N	N		2	sf	as			iv	Dinkling Green Farm, Tunstall Ing, Lickhurst, Greystoneley, Holme	Y
1893	WD1		N	Y		7					i	Buckbanks Wood, Dinkley Green Hey	Y
1894	E01		N	N		2	dp				iv	Park Style, Park Gate	Y
1895	E04		N	N		3	he				iv		Y
1896	RL07		N	N		3					i		Y
1897	RL07A	E02	N	N		4					i	Ginney Hey	Y
1898	E07		N	N		6	he				iv		Y
1899	RL07A	E04	N	N		4					i	Burnslack	Y
1900	RL07		N	N		3					i	Four Oak Fell, Whitmore Fell	Y
1901	E07		N	N		6	he				iv	Higher Fence Wood	Y
1902	RL07A	E07	N	N		4					i	Pether Stake	Y
1903	I01		N	N		4					i		N
1904	E04		N	N		3	he	as			iv	New Laund Hill, Craggy, Reed Barn	Y
1905	WD1		N	N		7					i		N
1906	E07		N	N		6	he	ep			iv	Burholme Moor	Y
1907	RL07A	E08	N	N		4	dp				i		N
1908	WD1		N	N		7					i	Porter Wood	Y
1909	S1		N	N		7					i	Whitewell	Y
1910	E07		N	N		6	ep	dp			iv	Radholme Laund, Park Gate, lose the path boundary in woods to E	N
1911	E07Z	E04	N	N		4	dp				i		Y
1912	WD1		N	N		7					i		Y

Record:

The database structure (sample shown above), which is described in detail in Appendix A, comprised the following:

- **Polygon** – a unique identifier for each of the 4,800+ polygons
- **Code 1** – a code identifying current landuse of the polygon, including:
    - Enclosed land
    - Woodland
    - Recreational land
    - Communications
    - Coastal rough ground
    - Upland moor
    - Other unimproved land
    - Industrial land
    - Settlement
    - Ornamental land
    - Military
    - Water

  Further subdivision was made on the basis of more specific landuses (for example Dunes or Saltmarsh within Coastal rough ground), or on the basis of enclosure size

or shape. The coding also included an element to indicate degree of change between the *c.*1850 First Edition mapping and the modern mapping.

- **Code 2** – a second code for identifying landuse (and shape and size) in *c.*1850, taken from the First Edition Ordnance Survey if different from the present day.
- **Slope** – a field for identifying steep ground – used only in association with Woodland categories
- **Pits** – a field for identifying the presence or absence of sand, marl or gravel pits in the Enclosed land and other categories
- **Boundary** – a field for identifying water-filled boundary ditches in the Enclosed land categories
- **Interpretation 1-4** – four fields for identifying origins of enclosed land (for example areas of current enclosed land which were previously mossland)
- **Date** - the date of the predominant historic character of the polygon
- **Confidence** – a field in which a combined measure of confidence is allocated to the date and interpretation fields
- **Comment** – a field for descriptive notes
- **Checked** – a field to confirm that the polygon has been double-checked by someone other than the Project Officer.

Once each polygon had been described and digitised they were analysed and grouped under generic historic landscape character *types* that shared distinct attributes. For example, an area possessing a pattern of small, irregular fields, dissected by winding lanes and footpaths, associated with known medieval settlements, place and field names, and shown to be in existence prior to the earliest comprehensive map evidence may have been allocated to the *Ancient Enclosure* (pre-AD1600*)* HLC type. Alternatively, an extensive area of redundant quarry marked on the First Edition Ordnance survey mapping would be placed in the *Ancient and Post-Medieval Industry* (pre-AD1850) HLC type. The resulting mapping is hierarchical and includes the following entry level HLC types:

- Ancient (pre-AD1600) Enclosure
- Post-Medieval (AD1600-1850) Enclosure
- Modern (post AD1850) Enclosure
- Ancient and Post-Medieval (Pre-AD1850) Woodland
- Modern Woodland
- Ancient and Post-Medieval Settlement
- Modern Settlement
- Ancient and Post-Medieval Industry
- Modern Industry
- Ancient and Post-Medieval Ornamental Land
- Modern Ornamental Land
- Modern Recreational Land
- Modern Military
- Modern Communications
- Moorland
- Reverted Moorland
- Lowland Moss and Grassland/Scrub
- Water
- Coastal Rough Ground
- Saltmarsh
- Dunes
- Sand and Mudflats

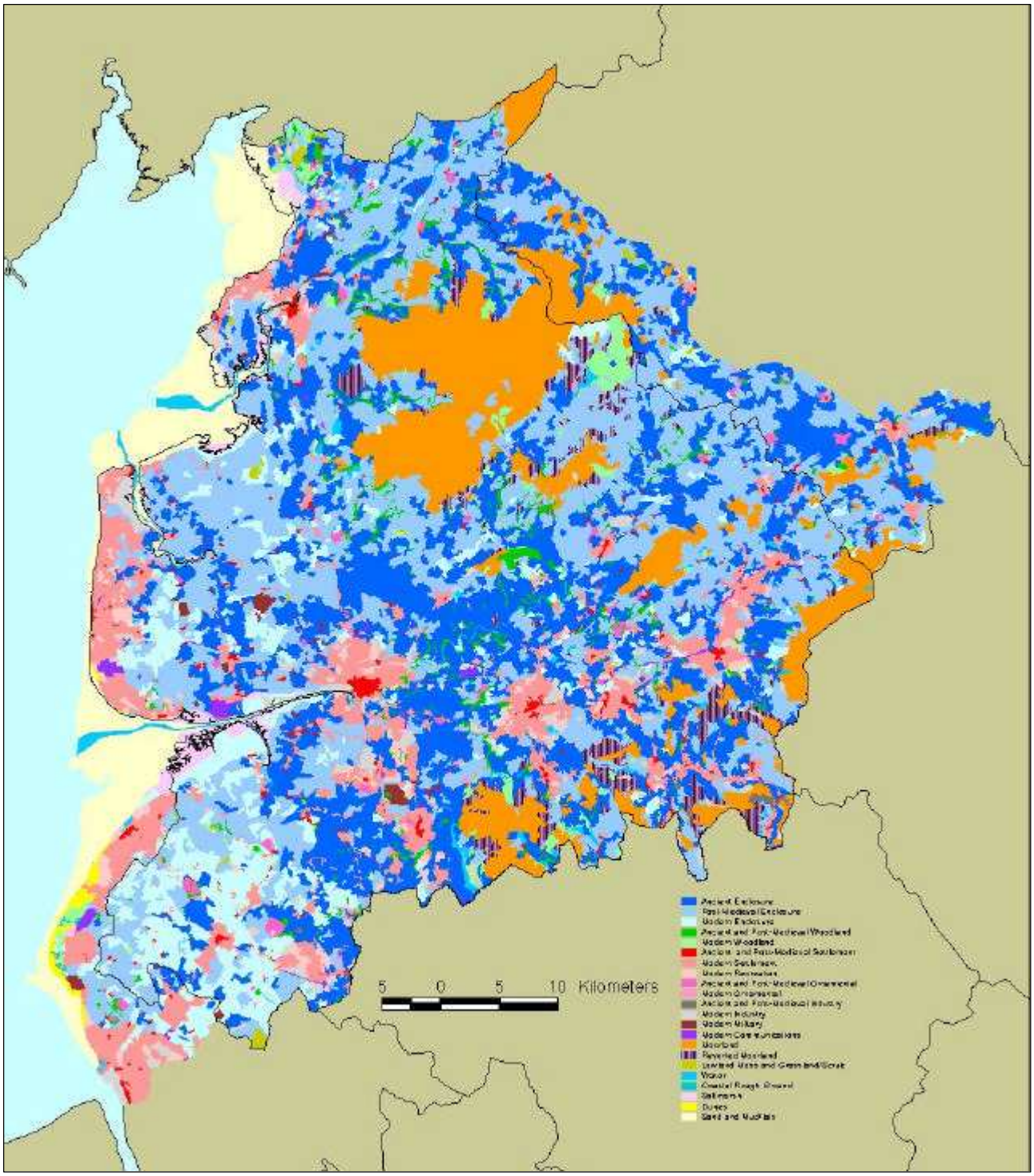
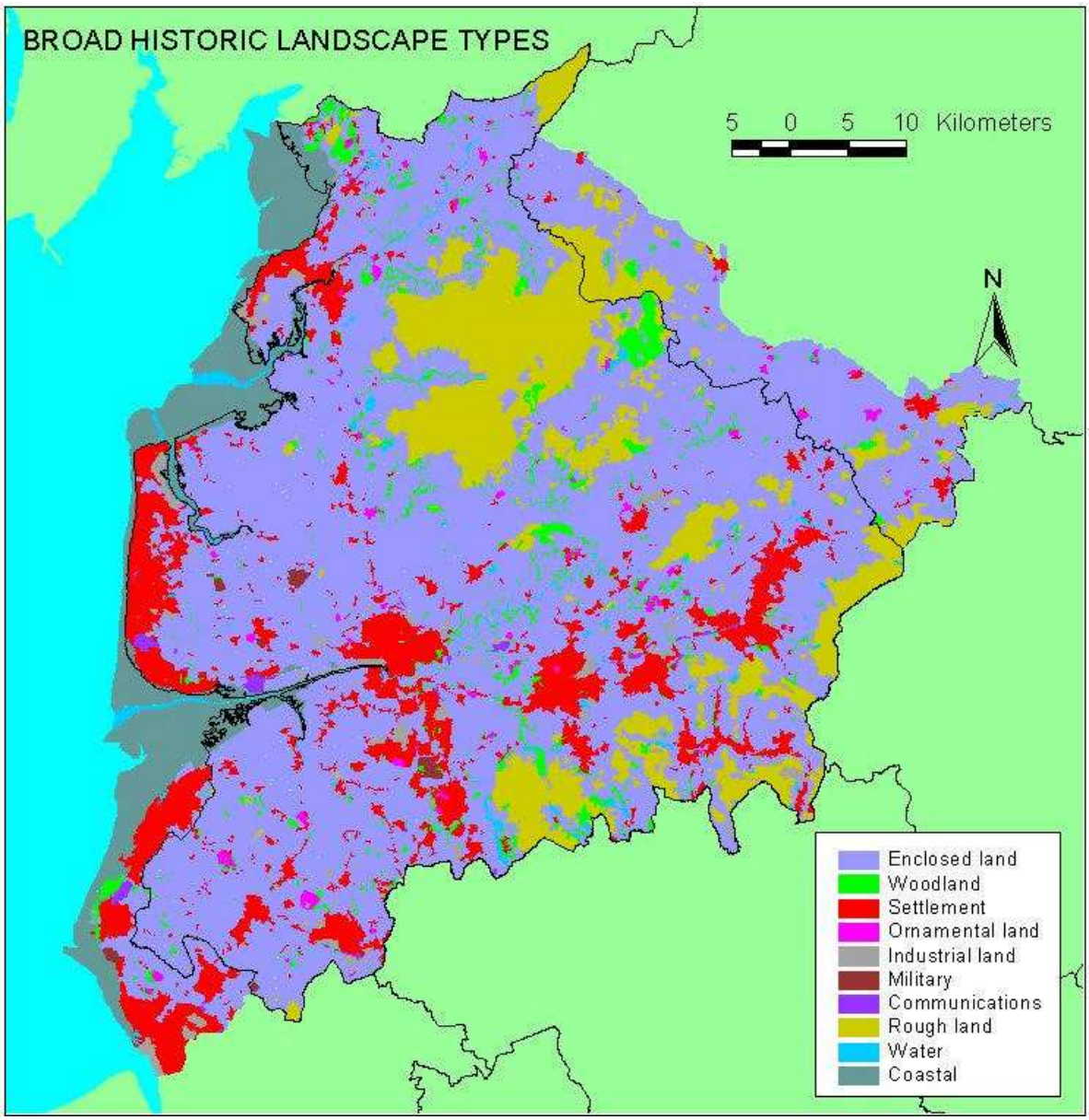


Figure showing general or entry-level HLC types.

The hierarchy of mapping is illustrated in the table below.

Broad types	General (entry-level) types	Detailed subtypes	Further data nests (within linked projects)
Enclosed land	Ancient Enclosure	Land anciently enclosed from former mossland	Forest of Bowland and Lune Valley project nests
Settlement	Modern settlement	Mills and terraced housing	Lancashire Extensive Urban Survey nests (for example two storey, stone-built terrace with ginnel access)

General entry level types can be amalgamated to produce broad types.



The general entry types can also be subdivided further to create detailed subtypes: for example the three dated Enclosure HLC types can be split according to their likely origins (i.e. land enclosed from former open fields, from upland moor or from lowland moss; illustrated in Part III), and the Industrial HLC types can be subdivided according to the type

of industry. Alternately, the structure of the database also allows the mapping of attributes such as change (since 1850, regardless of landuse), enclosure shape and size (regardless of date) or date (regardless of landuse). These and many other mapping outputs are described in Part III below. Finally, related projects, such as the Lancashire Extensive Urban Survey, have or will provide more detailed levels of characterisation (both in terms of types and areas).

3.4 SOURCES

The modern day 1: 25,000 scale O.S. maps formed the mapping base for the characterisation exercise. These date from the early 1980s to the late 1990s. The First Edition six-inch (1: 10,560) O.S. maps dating to the later 1840s and early 1950s were used to identify changes and origins of categories in comparison with the present day maps.

After the O.S. maps, the most useful sources for the characterisation stage of the project were the eight volumes of the Victoria County History for Lancashire (1906-1914) and the 1983 Phase One Habitat Survey. Vertical aerial photographs of the county, flown in 1988/1990, were referred to when questions arose about details on the ground, for example the extent of parkland or industrial sites. Two coverages already on the GIS as digital data were used at the mapping stage: the urban extent in 1999 and the moor and marshland coverage. In addition the Forestry Commission made their draft woodland census digital data available for the use of the project. Unfortunately, other potentially useful coverages were not digitised at an adequate scale for the project (e.g. ancient woodland inventory, commons). A Manchester Metropolitan University study of designed landscapes in Lancashire (1998) was also of use.

Information	**Source: * indicates held by LCC**
Historic land use & settlement / historic urban centres	1840s O.S. 1:10,560 mile series, available as paper prints in the SMR and in digital form, originals in Lancashire Record Office and (part) SMR
	Victoria County History
	Lancashire SMR: digitised data*
	English Heritage (EH) Register of Parks & Gardens of Special Historic Interest
	EH Schedule of Ancient Monuments: digitised data
	DoE/DoNH/DCMS Listed Buildings: digitised data*
	DoE/DoNH/DCMS Conservation Areas: digitised data*
	RCHME survey digitised data
	Air photographs: vertical surveys 1960s, 1980s and RAF survey*
	Place name studies
	Air photographs (vertical survey 1988)
	Geophysical survey data
	Detailed parish history studies (where available and appropriate)
	Register of Common Land*
	Historic maps: enclosure awards*

Modern land parcels / property boundaries	O.S. digital data
Modern land-use	Air photographs*
Modern parish boundaries	Digital data*
County boundary	Digital data*
Local authority boundaries	Digital data*
AONB boundaries	Digital data*
Contours	Digital data*
Phase 1 Habitat Survey	Paper maps*
Ancient woodland survey	Forestry Commission Digital data*
Communications	O.S. digital data modern*
Water features	O.S. digital data modern*
Lancashire Landscape Character Areas	Paper mapping*
Natural Areas	Paper mapping, English Nature
National Character Areas	Paper mapping, Countryside Agency

3.5 DIGITISATION

The identification of distinct historic character types was done by hand onto a clear film overlay of the 1:25,000 O.S. mapping. Once completed, data was transferred onto the GIS either directly, using a digitising table, or via a scanner as a raster image which was then georeferenced and loaded on to the GIS. The image was then used as a template for screen editing. This method is fast and accurate, but problematical when large areas of land were characterised as one category. In these instances it was better to use the digitising table to input the larger polygons then edit the layer to add smaller areas, or continue to do all on the digitising table. The table method resulted in errors of up to 20m. The scanning and direct digitising on screen method was accurate to 5m.

The characterisation exercise was carried out at a scale of 1:25,000. This presented an appropriate balance between the project duration and the level of accuracy implied by the output. Certain defined areas will benefit from more detailed assessment within the overall characterisation programme. For historical places which are vulnerable to change, or areas with dense, multi-period historical attributes – for example the centre of a historic town or village, a well-preserved relic landscape, an historic estate – there is undoubtedly value to be gained from a finer grain of discrimination for planning and management purposes. The Lancashire Extensive Urban Survey project (2000-2003) and the Cultural Landscape of the Forest of Bowland and Lune Valley project (2001-2003) are two examples where this is now taking place within the framework provided by the HLC. The primary requirement, however, was for a consistent overall approach that was as objective as possible, inclusive, repeatable, and comprehensive (leaving no 'white land'), within which more discriminating assessments could be located.