

## **4. HLC/LCA Integration**

### **Introduction.**

- 4.1 Paragraph 4.20 of The Countryside Agency and Scottish Natural Heritage's Guidance on LCA states that: -

“A study which combines Landscape Character Assessment with a historic [landscape] assessment...is likely to be the most satisfactory” (The countryside Agency and Scottish Natural Heritage 2002:26).

- 4.2 The importance of integrating HLC and LCA is further emphasised in LCA Topic Paper 5: Understanding Historic Landscape Character (Scottish Natural Heritage *et al* 2003).

- 4.3 The main advantages of the integrating both forms of landscape assessment are stated in paragraph 30 of Topic Paper 5: -

“The inclusion of HLC/HLA within the Landscape Character Assessment process improves understanding of how changes in the past have affected the modern environment and of the complex interaction between human actions and natural forces (i.e. its time depth). It enables Landscape Character Assessment to take better account of the varied ways in which the landscape has been influenced by past activity and the length of time over which this has occurred. This allows current issues to be seen within a longer-term perspective and contemporary management decisions to be taken with a fuller understanding of past management practices.” (Scottish Natural Heritage 2003: 9).

- 4.4 As noted in Section 2 above, the Shropshire HLC project methodology was designed to be compatible with the existing LCA from the outset. The completion of data capture and analysis in December 2004, and the creation of Landscape Officer post within Shropshire County Council, provided an opportunity to review the LCA and integrate it with the HLC.
- 4.5 This section describes the methodology that was developed to integrate HLC with LCA with assistance Steven Warnock of The Living Landscapes Project.

### **Methodology**

#### *Processing the HLC data*

- 4.6 Because HLC operates at a different resolution to LCA it was firstly necessary to process the HLC data in a way that would it to be related to the LCA.
- 4.7 This was done by developing two GIS layers, which could be used to produce a composite map displaying the current extent of certain aggregated or 'higher level' HLC Types against 'deep time depth' (in practice a 'late medieval' map projection). This provided an illustration of how different parts of the landscape have evolved over several centuries, thus illustrating key differences which should be reflected within the LDU framework (e.g. between areas of piecemeal enclosure

from open fields as apposed to those that have developed from former tracts of common rough pasture - see Fig. 3).

- 4.8 *Developing 'higher level' HLC Types* - This was achieved firstly inserting an additional field, labelled 'Level\_2', into a copy of the HLC GIS shapefile. Certain HLC Types were then selected using a definition query and a code inserted into the new field (see Table 7). These codes were then used to define a legend.

**Table 7 – Higher Level HLC Types used in HLC/LCA integration**

Higher Level HLC Type	Code	Definition	Constituent HLC Types
Ancient woodland (including post-1945 clearance)	1	Ancient woodlands, including areas of ancient woodland that were cleared in the later 20 <sup>th</sup> century.	Broadleaved ancient woodland, Large irregular fields*, Mixed ancient woodland, Other large rectilinear fields, Other small rectilinear fields, Paddocks/closes, Planned enclosure, Replanted ancient woodland, Small irregular fields, Very large post-war fields
Other woodlands with irregular boundaries	2	Other woodlands that <i>may</i> have ancient origins	Broadleaved woodland with sinuous boundaries, Coniferous woodland with sinuous boundaries, Mixed woodland with sinuous boundaries, Other woodland with sinuous boundaries.
Parks and gardens (including areas lost post-1945)	3	Parks and gardens, including areas converted to farmland etc. in the later 20 <sup>th</sup> century.	Large irregular fields**, Other large rectilinear fields*, Paddocks/closes*, Parks and gardens, Planned enclosure*, Small irregular fields*, Very large post-war fields*

· When period = 'Post-War' & Previous HLC Type = 'Ancient broadleaved woodland' OR 'Other broadleaved woodland'.

\* When previous HLC Type = 'Parks and gardens'

Unimproved land (including post-1945 improvement).	4	Areas of unimproved land, including areas former unimproved land that was improved in the later 20 <sup>th</sup> century.	Heathland, Moorland, Other commons, Large irregular fields*, Other unimproved ground, Unimproved enclosed hill pasture, Unimproved open hill pasture, Very large post-war fields
Wetlands (including post-1945 drainage).	5	Wetlands, including areas drained/ improved in the later 20 <sup>th</sup> century.	Large irregular fields**, Miscellaneous floodplain fields, Moss/raised bog, Natural open water, Other large rectilinear fields*, Paddocks/closes*, Planned enclosure*, Small irregular fields*, Very large post-war fields*

4.9 *Developing a late medieval map projection to show ‘deep time depth’* – This projection was produced in much the same way as the Level 2 HLC map. An additional field, labelled ‘L\_Med\_HLC’ was again inserted into the duplicate HLC shapefile. A specific set of Current and Previous HLC Types were then selected using a definition query and a code number inserted into the new field. These codes were then used to develop a legend.

· When period = ‘Post-War’ & Previous attribute group = ‘Unimproved land’

\* When period = ‘Post-War’ & Previous attribute group = ‘Wetland and valley floor’

**Table 8 – Late Medieval HLC Types**

Late Medieval HLC Type	Code	Definition	Constituent Current and Previous HLC Types
Ancient woodland	1	Areas of woodland that probably to have existed in the later medieval period.	<p><i>Current HLC Types</i> – Broadleaved ancient woodland, Broadleaved woods with sinuous boundaries, Coniferous woodland with sinuous boundaries, Late clearance/assarts, Mixed ancient woodland, Mixed woods with sinuous boundaries, Other woods with sinuous boundaries, Replanted ancient woodland</p> <p><i>Previous HLC Types</i> – Ancient broadleaved woodland, Late clearance/assarts</p>
Assarts	2	Areas that are likely to have been cleared and enclosed from woodland in the medieval period	<p><i>Current HLC Types</i> – Small assarts, Large assarts with sinuous boundaries</p> <p><i>Previous HLC Types</i> – Small assarts, Large assarts with sinuous boundaries</p>
Closes	2	Enclosed pasture fields beyond the open fields and adjacent to settlements	<p><i>Current HLC Types</i> – Paddocks/closes, Other small rectilinear fields, Small irregular fields</p> <p><i>Previous HLC Types</i> – Iron Age/Roman field systems, Other large fields, Other small fields, Paddocks/closes</p>

Deer parks	4	Medieval parklands recorded by Stamper (1993).	<i>Previous HLC Types –</i> Deer parks
Meadowland and wetlands	5	Areas of wet and meadowland wetlands	<i>Current HLC Types –</i> Drained wetlands, Miscellaneous floodplain fields, Moss/raised bog, Natural open water  <i>Previous HLC Types –</i> Drained wetlands, Floodplain marshes, Miscellaneous floodplain fields, Moss/raised bog, Natural open water
Rough grazing	6	Areas of lowland heathland, moorland, and rough pasture, much of which was subject to common grazing	<i>Current HLC Types –</i> Heathland, Moorland, Other commons, Other unimproved ground, Unimproved enclosed hill pasture, Unimproved open hill pasture  <i>Previous HLC Types –</i> Heathland, Moorland, Other commons, Other unimproved ground, Unimproved enclosed hill pasture, Unimproved open hill pasture
Settlements	7	Pre-1880s settlements, the origins of many of which will lie in the medieval period	<i>Current HLC Types –</i> Historic settlement core, Pre-1880s settlement, Redeveloped pre-1880s settlement  <i>Previous HLC Types –</i> Historic settlement core, Medieval settlement, pre-1880s settlement

Strip fields	8	Areas that lay within open fields. Enclosure of some open fields may already have begun by the 14 <sup>th</sup> century.	<p><i>Current HLC Types</i> – Piecemeal enclosure, Reorganised piecemeal enclosure</p> <p><i>Previous HLC Types</i> – Piecemeal enclosure, Reorganised piecemeal enclosure, Strip fields.</p>
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4.10 *Projecting the composite map* – This was generated by overlaying the Level 2 HLC layer over the Late Medieval HLC layer (see Figure 3).

*Reviewing the LCA Landscape Description Unit framework*

4.11 *Comparing the LDU boundaries to the composite HLC map* – Firstly, LDU shapefile was displayed with a hollow legend with a black outline at 0.5pt thickness. This was then overlaid over the composite HLC map (see Fig. ).

4.12 *Checking and revising the LDU boundaries* – A visual check of the relationship between the LDU boundaries was undertaken. It was found that there was a significant degree of correlation between the LDU boundaries and the information about the historic character and time depth displayed by the composite map. However, in a number of instances anomalies were seen to exist where, for example, LDU boundaries did not adequately differentiate between areas with significantly different histories. In these circumstances the LDU boundaries were adjusted to better reflect these differences in the historic character of the landscape (See Figure 3)

4.13 *Review the LDU coding* – The composite map was also used to review the Settlement codes held within the LDU attribute table. For example, it helped to distinguish patterns of ancient dispersed settlement in areas with a history of assarting from areas of post-medieval encroachment on areas of former waste.

**Identify and describing Landscape Types**

4.14 The revised LDU data provided the basis for identify a set of Landscape Types for the county, based on an analysis of landform, ecological character, cultural pattern (based on settlement pattern and farm type) and tree cover (see Figure 4).

4.15 The composite HLC map also proved useful in the production of the written descriptions for each Landscape Type, and facilitated the integration of information relating their historical development.

Figure 3 – Composite HLC maps and revised LDU boundaries.

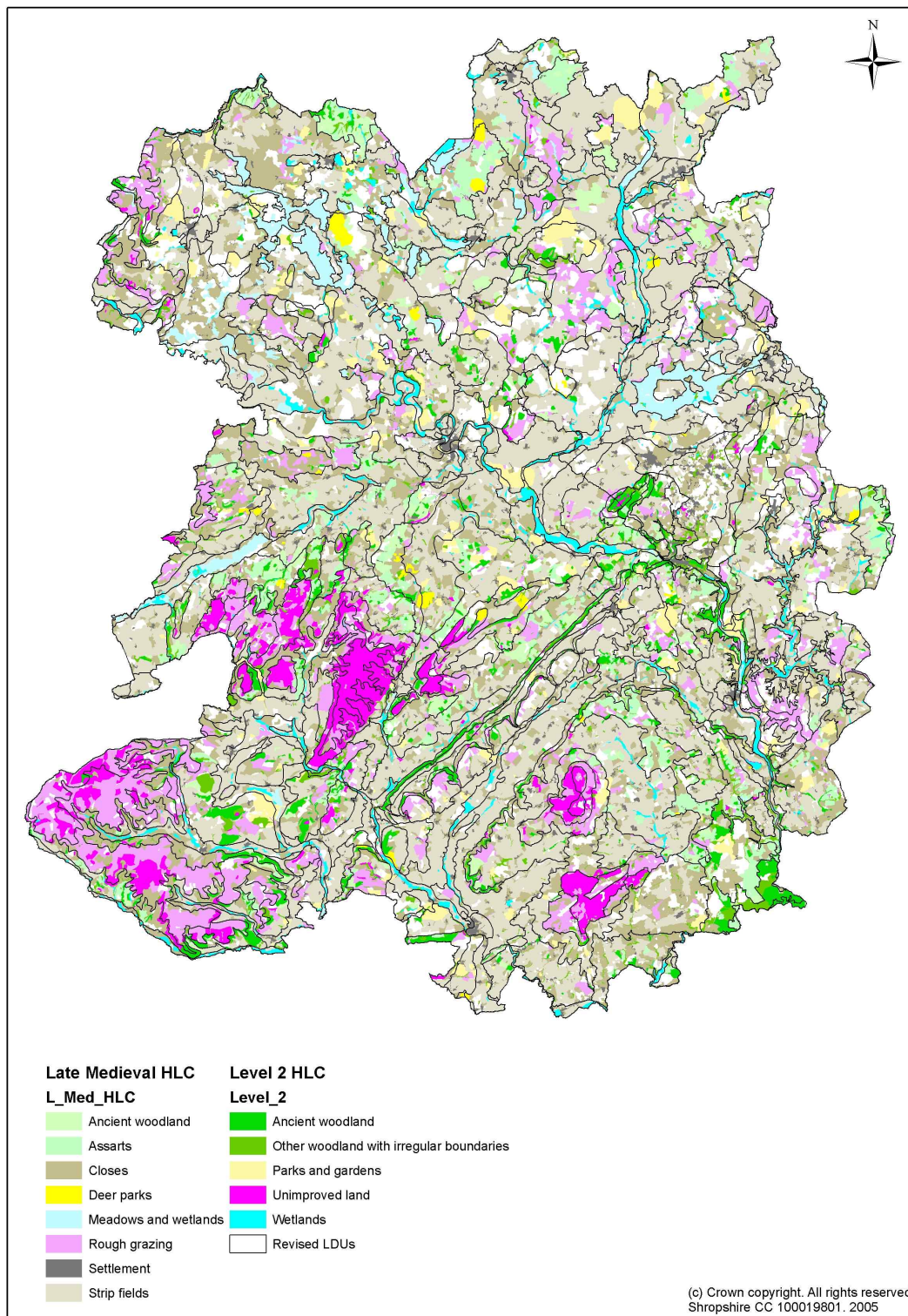


Figure 4 – Landscape Types map for Shropshire.

