County Durham and Darlington
Historic Landscape Characterisation
Provisional Method Statement

A provisional methodology for characterising sample areas for the County Durham and Darlington HLC

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Introduction

This methodology statement follows on from the preceding project design (DCC 2003) for the County Durham and Darlington Historic Landscape Characterisation (CD&D HLC) project, which suggested 30 month breakdown as follows:

- **Stage 1**
    - Familiarisation 1 month
    - Pilot areas 3 months
    - Refinement of project methodology 1 month
- **Stage 2** - Characterisation and mapping of:
    - West Durham Coalfield 3 months
    - East Durham Limestone Plateau 3 months
    - North Pennines 3 months
    - Dales Fringe 3 months
    - Tees Lowland 3 months
    - Wear Lowland 3 months
- **Stage 3**
    - Whole county analysis and HLC project review 4 months
- **Stage 4**
    - Report, archive and dissemination of CD&D HLC 3 months

This report is a result of the process of familiarisation and aims to be a method statement based on the initial methodology as described within the project design. It is envisaged this methodology will be revised after its application on sample areas, before being used as the 'manual' for the main

characterisation of the HLC. To this end, *provisional methodology* will refer to that created for application on the sample areas. *Revised methodology* will refer to the refined edition of this same methodology and if necessary will consist of several different *drafts*. It is hoped that the *final methodology* will be that featured in the final written report of the HLC project.

The CD&D HLC aims to follow best practice as set out by Aldred and Fairclough (2003) (see Appendix A – The principles of HLC), the main aims of which are to define the present-day landscape within the context of the historical mechanisms that created it, thus which give it its Historic Landscape Characteristic. This method should attempt to be transparent in its data collection, but interpretative in its final presentation of the landscape as material culture. The applications of the HLC model once created (not *completed* as this is a dynamic model) are wide ranging (Clark *et al* 2004) and should be considered at an early stage to make sure integration is as smooth and complete as possible. If not integrated into policies, planning, environmental issues and the wider public audience, the project will become a meaningless exercise and as a direct result, funding for development may not be so forthcoming. For this reason it is vital to keep the end goals of the project in mind.

This report is divided into four parts which roughly correspond to the four stages outlined in the project design. It should be noted that this report has been produced only half way through Part 1 of this methodology. Therefore whilst the early stages of the project are written in the past tense and have been completed, the main methodology is still to be tested.

The CD&D HLC project intends to use OS master map toids as the base for spatial data, and aims to have complete, impartial, coverage for the whole of the area by the end of the project in the last quarter of 2009.

1 Stage One

1.1 Familiarisation

The broad background to this project has already been discussed in the project design that was used as the basis for further work by the HLC Project Officer once in post. HLC project designs for the bordering counties of Northumberland, North Yorkshire and Cumbria were examined, as were project designs from other counties such as Lancashire, Hampshire, and Surrey, many of which are available online: Lancashire also had a more detailed methodological statement available online. Background literature on HLC was also consulted during the course of the familiarisation.

Visits to both the Northumberland and North Yorkshire HLC offices were undertaken during this stage in order to see how both counties were progressing. Issues of methodology, typology and data structure and its compatibility were discussed during this time, in order that the CD&D HLC was compatible with the bordering counties at least on the most broad landscape scale. A certain amount of regional continuity is preferred within the two northern, rural counties of County Durham and Northumberland, especially with regard to the North Pennines Area of Outstanding Natural Beauty (AONB), which itself spans further west into Cumbria.

The provisional method statement was then created and sample areas were defined on the basis of the above research and discussion. The following sections of Part 1 discuss the motivations and outcomes in defining this strategy.

Finally, a Management Steering Group (MSG) meeting was organised for the end of the familiarisation stage in order to discuss, refine and eventually approve this provisional methodology and the sample areas to which it applies. The four main members of this group are Graham Fairclough (English Heritage Characterisation Team), David Mason (DCC County Archaeologist), Ged Lawson (DCC Landscape Architect) and Hannah Wiggins (DCC HLC PO).

1.2 Provisional method statement design

As noted above this provisional methodology has been created using examples from other HLC work already undertaken around the country.

Attribute fields and typology codes were drawn up with the understanding that these may need further alteration at a later date, in line with the multi-mode approach of recent HLC methods as described in Aldred and Fairclough (2003: pp18-19).

During the familiarisation period, a GIS officer from Durham County Council was present at meetings and visits to view the digital systems other counties were using. The structure of Northumberland County Council's HLC (NCC HLC) database (designed and run within Microsoft Access, but soon to be upgraded into Oracle) was used as a starting point from which the provisional database for the CD&D HLC was developed. This enabled changes to be undertaken quickly and efficiently by the HLC PO within the Access database. It is envisaged that once all sample areas have completed and the methodology revised for the main characterisation, this database will be migrated to an ESRI geodatabase within SQL Server and accessed through ArcMap 9 using ArcSDE. This, a new development within the HLC GIS use, will allow geographic and attribute data to be maintained together. It should be noted that any development of a spatial database should be in a format which is easy to interrogate, both spatially and as a tabled dataset (see *4.1 GIS format and the written report* for further discussion of GIS dissemination requirements)

An examination of potential data sources, their content; geographical cover and possible exploitation within the project was also undertaken at this stage. A list was drawn up of the main sources to be consulted, and the database was constructed in such a way as to admit detailed information on source material to be included for each polygon. This allows for many sources to be entered and the main sources to be marked as such (see Appendices B & C)

While counties such as Cornwall and Lancashire planned the HLC to be undertaken in parallel with their Landscape Character Assessment (LCA), other counties such as Bath and Gloucester deliberately created the HLC beforehand in order to underpin later LCA work (Clark *et al* 2004: pp21). However, a reasonably thorough LCA for County Durham has already been undertaken (Durham County Council 2003) and this should be used as a guide for the current HLC, with regard to current land use and, to a degree, relict land use. It should be noted at this point that the LCA only relates to

County Durham and that the unitary authority of Darlington has not been covered by any LCA as yet. The LCA formed the backbone of the County Durham Landscape Strategy, the latter of which is available as a written report and the former as spatial data within a GIS file format. It is envisaged that the LCA spatial database should be a primary tool in the creation of the CD&D HLC.

Consequently, the methodology developed for the CD&D HLC will differ slightly from counties that had no LCA or that had developed the HLC and LCA in tandem. Counties such as Northumberland and Surrey, for example, have two quite distinct stages of identification and interpretation (Bannister 2001: pp7-10; E Williams *pers comm*). This method of making a distinction between firstly defining landscape morphology and secondly interpreting the morphology to give a landscape character, is defined as a *descriptive* way of using the attributes: 'determining HL character by ascribing attributes to polygons without initially assigning interpretations to HL character' (Aldred *et al* 2003: p22).

In contrast to this method, a *prescriptive* approach would attempt 'interpretation as the only means of identifying the criteria' (*Ibid*: p22). The recent trend is moving towards 'using the best parts from each of the *prescriptive* and *descriptive* [methods]' (*Ibid*: p22). Embracing this combined approach, the CD&D HLC will undertake identification and interpretation of each polygon in a single stage. It must be noted, however, that the two phases will be made distinct from each other through the mechanisms of the database and the data input procedure. It is felt that this method will avoid time-consuming 'double handling' of data; once for identification and again for interpretation.

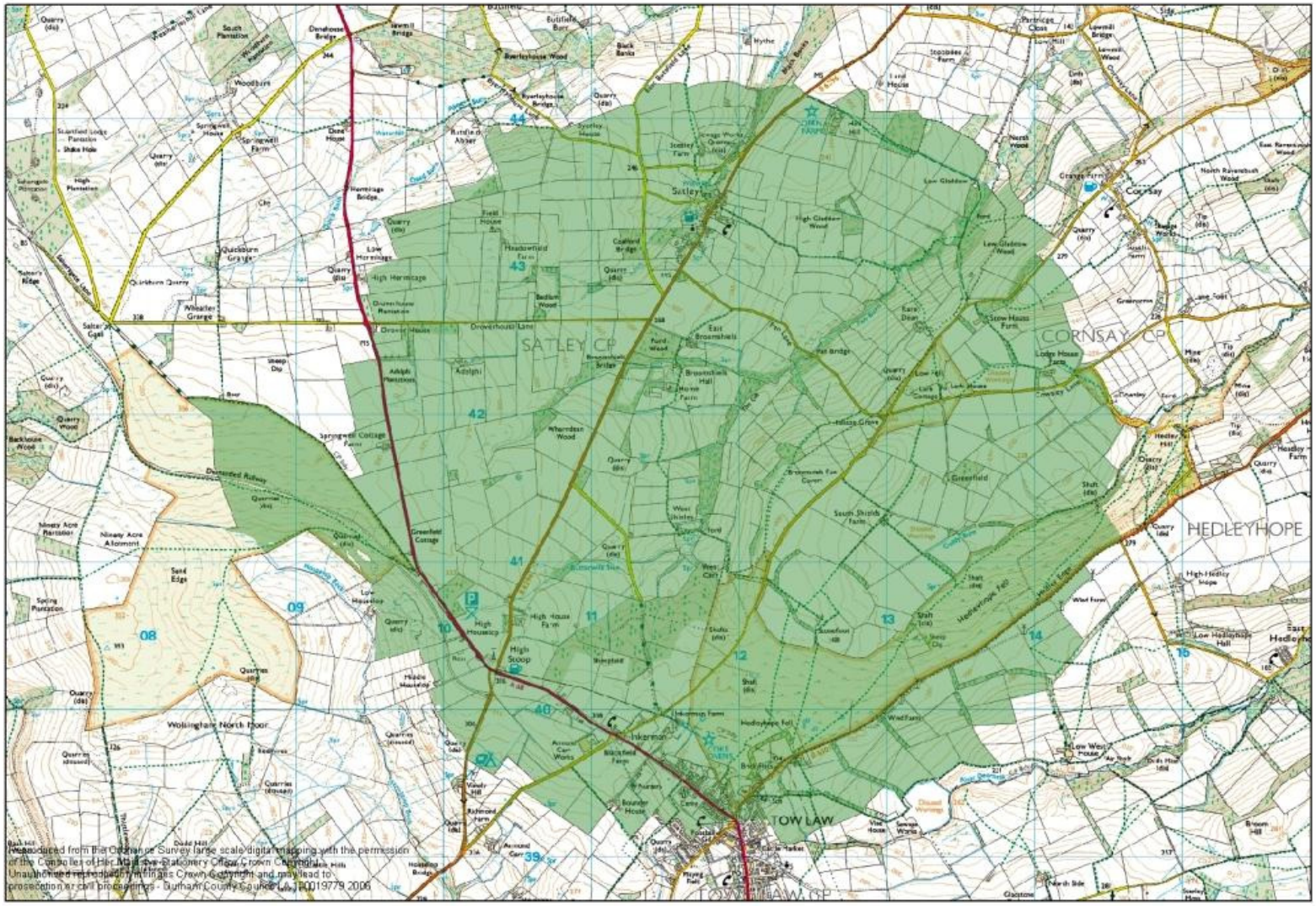
1.3 Sample work

In order to test the provisional methodology, pilot areas were chosen on which to apply the technique. The areas would include examples of the landscape diversity in County Durham and Darlington, guided in the first instance by the County Character Areas. Regions containing contemporary yet dissimilar landscapes and areas with complex overlain landscapes should be included in the pilot group in order to fully test the method.

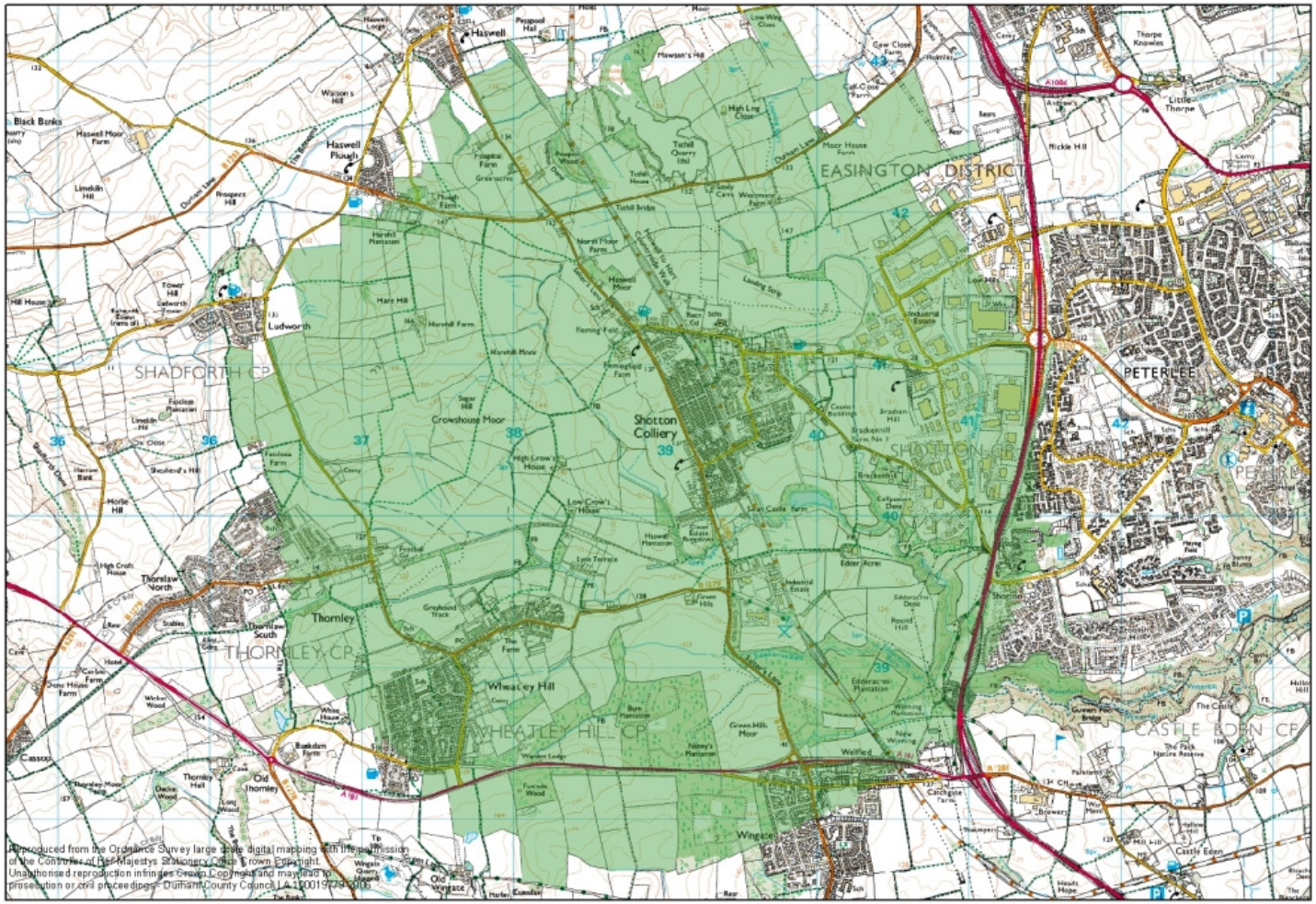
Whilst the project design proposes three to four sample areas, each of 5 -10 sq km in size, further consideration of the information required from this sample work suggests that a slightly different approach may in fact be more beneficial. As a result, consideration of County Durham and Darlington within the County Character Areas highlights the following landscapes (sample areas shown in figures 1-4):

- The *West Durham Coalfield* County Character Area is a rolling upland area of ridges and valleys characterised by an industrial extractive landscape, now mainly restored, with urban development. Rural elements include remnants of medieval open fields systems and post-medieval parliamentary enclosure. A sample area should aim to encompass all these features.
- The *East Durham limestone plateau* County Character Area consists of non-parliamentary post-medieval enclosure, remnants of medieval open fields systems and urban and industrial development.
- The *Dale Fringe* County Character Area is unique for the county in as much as it contains a large amount of former medieval strip fields, with instances of ridge and furrow, fossilised within the current landscape. It also contains medieval enclosures which are not strip field, or associated within open field system, which may have been demesne or grange land. Historic parks and gardens are also a feature of this landscape as are the more dominant nucleated villages again with medieval origins apparent in the current layout. It would be useful to include a sample area of this Character Area within the provisional stages in order to see how robust the methodology is at characterising near contemporary, but overlain landscapes.
- The *Weardale*/*North Pennine* County Character Area contains large tracts of open moorland and heathland, with pre-parliamentary and parliamentary enclosure. Widespread remains of lead working are characteristic of this area. Any sample area should attempt to include all the above features within its bounds.

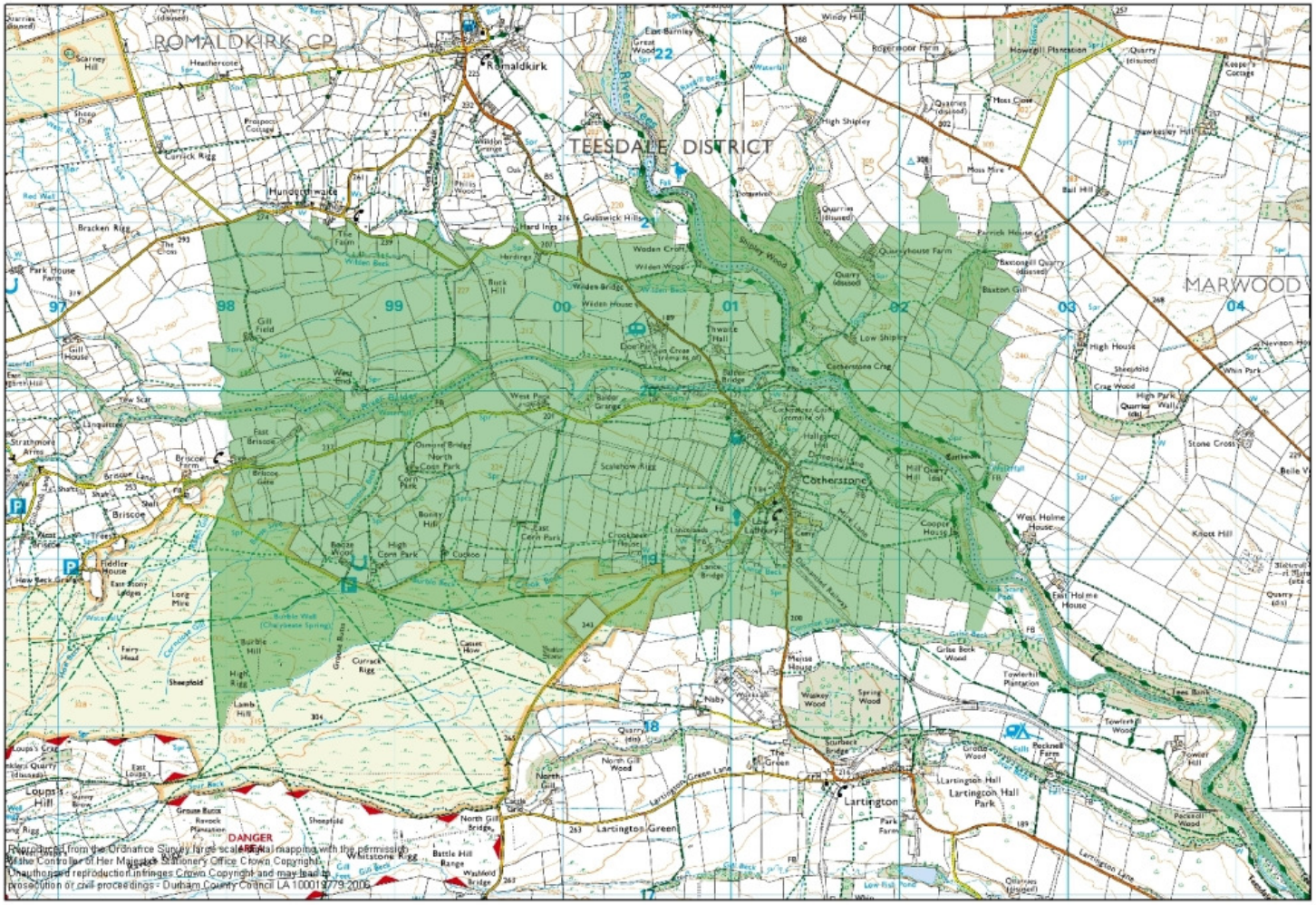
West Durham Coalfield sample area, centred on NZ11874159



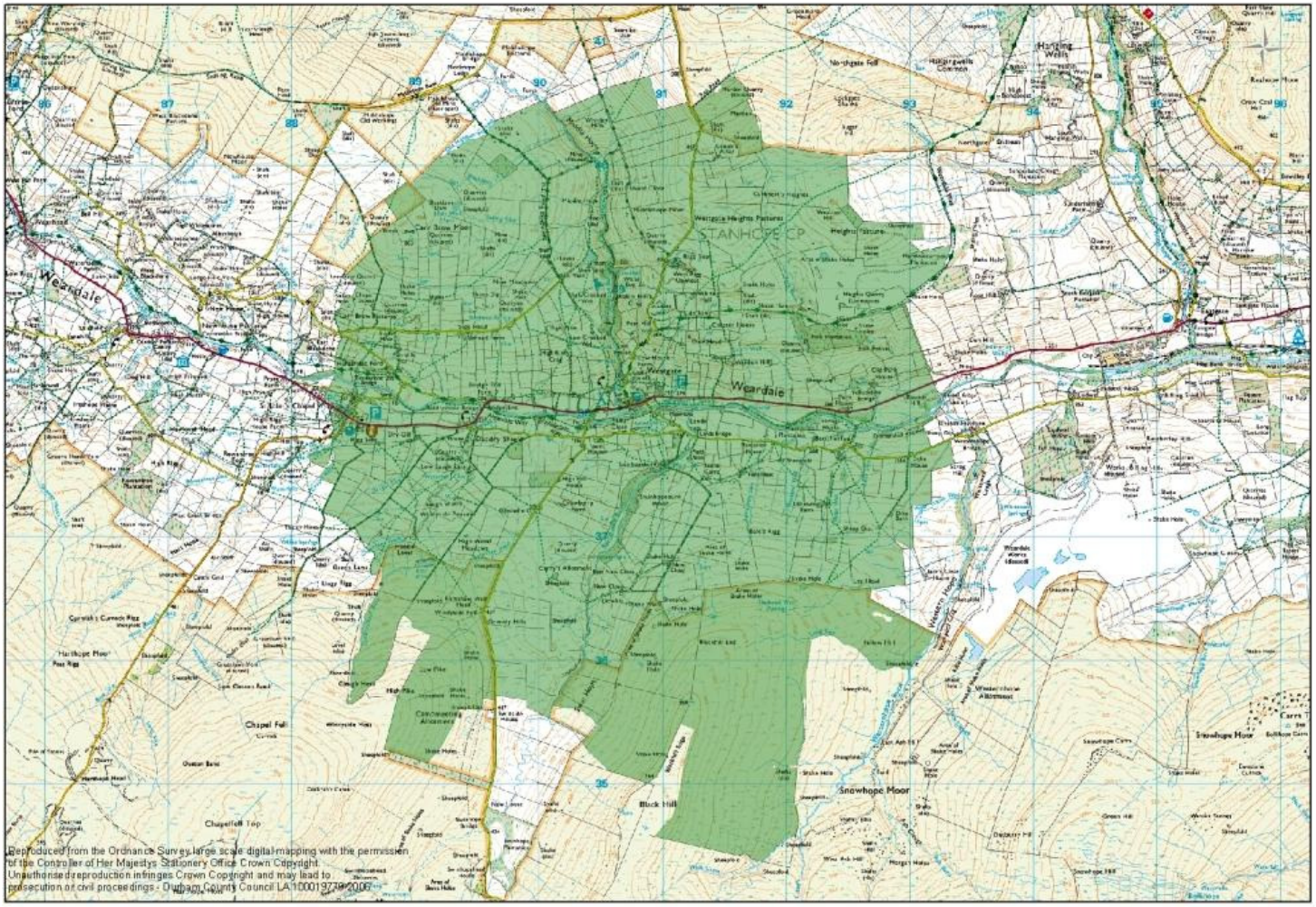
East Durham Limestone Plateau sample area, centred on NZ38954051



Dales Fringe sample area, centred on NZ00311978



Weardale sample area, centred on NY90833808



It was noted that other councils such as Cumbria had chosen to broadly base the sample areas on the parish unit. While this is indeed more sympathetic to landscape character than imposing an arbitrary shape, in order for sample areas to remain of a manageable size and also incorporate the key characteristics as mentioned above, the approach taken involved drawing an arbitrary circle to encompass the required area, selecting all MasterMap polygons intersected by this imaginary line. The MasterMap TOID (TOpographic IDentifier) polygon (Fairclough 2002a) have not as yet been divided, in order to make the polygons of linear features such as rivers and roads conform to the mainly circular or rectangular sample area shape, as this will be done later in the process, during the technical interrogation of MasterMap.

An initial list of key partners for a project advisory group was drawn up in preparation for an inaugural meeting to take place once the provisional methodology had been finalised. It is to include the following representatives:

- Niall Benson — Heritage Coastline
- Maggie Bosanquet — DCC Environment: Sustainability Section
- David Butler — Private
- Susan Clark — Countryside Agency
- Helen Dunsford — Newcastle University: Environmental Management
- Graham Fairclough — English Heritage - National
- Rob George — Darlington Borough Council
- Chris Gerrard — Durham University: Dept of Archaeology
- Tom Gledhill — Rural Development Service DEFRA
- Richard Hall — English Nature
- Nial Hammond — Defence Estates
- Val Hepworth — Yorkshire Gardens Trust
- Dave Heslop — Tyne & Wear County Council
- Ged Lawson — DCC Environment: Environment/Landscape
- David Mason — DCC Culture & Leisure: Archaeology
- Jennifer Morrison — Newcastle City Council
- Chris Myers — Sedgefield District Council
- Richard Newman — Cumbria County Council
- Joan Portrey — DCC Environment: Policy planning
- Richard Pow — Forestry Commission
- Brian Roberts — Private
- Geoff Singleton — Derwentside District Council
- Steve Toase — North Yorkshire and former Cleveland HLC
- Sam Turner — Newcastle University: Dept of Archaeology

- Hannah Wiggins DCC Environment/Culture & Leisure
- Liz Williams Northumberland County Council HLC
- Kate Wilson English Heritage - regional
- Chris Woodley-Stuart North Pennine AONB

It is suggested that one of the pilot areas is not completed until after this project advisory group have met, thereby giving chance for methodological refinement to be applied to this final area, before these changes are accepted as part of the main methodology.

The project advisory group meeting should consider all the aims and intended applications of the HLC from the initial meeting onwards in order that focus on outcome is retained throughout the characterisation.

Once all the sample areas have been completed and a project advisory group meeting has taken place, the revised method statement will be produced with the intention of being used as a manual for stage 2. This is once again with the provision that it may be updated and revised as the main stage of characterisation is undertaken. It is envisaged that the fully evolved method statement will be the starting point for Stage Four.

Finally, it should be borne in mind that the HLC is a dynamic process and the data and interpretation will be re-examined within a time frame to be agreed; once every five years is a provisional recommendation. For this reason the methodology must incorporate in its design the ability for this regular updating.

1.4 Summary of Stage 1

- ***Familiarisation***: Read of background literature; Research into methodologies of other HLCs; Visit neighbouring HLC POs; Create list of stakeholders for the project advisory group.
- ***Provisional method statement design***: Involve GIS CPO from early stage; base CD&D HLC database on that of NCC HLC; develop database in Access before being handed to CPO for evolution into ARCSDE; methodology to incorporate the already complete LCA for County Durham; examination of data sources for use and exploitation.
- ***Sample work***: pilot areas chosen test methodology on specific landscape types; pilot areas to be bounded by physical delimiters

rather than political impositions; arrange project advisory group meeting to take place before last sample area undertaken, to allow for last minute changes to be trialled.

2 Stage Two

2.1 Characterisation: identification and description

The second stage of the methodology is intended to systematically identify and describe the morphological features and topography of the *current* landscape. While the intention is to keep compatibility between the HLC projects in bordering counties to a maximum, in reality they will not be 100% compatible given the landscape diversity within the each county. However it is envisaged that management recommendations should be coherent with other councils' advice, specifically when concerning the North Pennines AONB which lies across the bordering counties of Cumbria, Northumberland and County Durham.

There are two main elements to the underlying data structure, firstly the attribute table itself – what information is gathered, in what way it is stored and structured and if this is a controlled event (i.e. when the user can only choose from a predetermined list). The second element to the data structure is the actual terminology used: which morphological features should be recorded and how these features, in order to keep objective and transparent entries, should be described. Furthermore, the structure and grouping of the interpretative typology needs to be agreed (see Appendices B & C)

As a feature of the fourth and most recent wave of HLC work, time-slices and time-depths are recommended as a way of showing the former land character of an area to help inform its current landscape character (Aldred *et al* 2003: pp16-17). For this reason the structure of the database table needs to reflect the many types of data required for each HLC polygon created. The complete structure of the main tables and the relationships between them can be seen in Appendix B. This structure was created after analysis of other HLC structures, including North Yorkshire's HLC typology and Lancashire's HLC methodology which were particularly influential. Most significant however, was NCC's HLC model, as it is this model which CD&D HLC is attempting to follow. This structure will of course change through time, especially when it is transferred into the ESRI geodatabase.

The fields were identified to collect all relevant data in the least time-consuming way for the HLC PO. In order to retain a degree of objectivity (and continuity with NCC HLC) many fields were controlled entry, with 'drop down' lists from which to choose an option. In some cases this was a 'combo' box which allows the user to add further choices, as it was felt this flexibility was necessary, at least during this pilot study phase. However, the 'summary' and 'description' fields have been added as free-text fields, similar to those in the North Yorkshire HLC. The summary field is designed to be an integral part of any presentation of the HLC model, and as such is to be a simple and clear textual summary of the landscape polygon. The description field is to include any further information which is felt to be relevant but cannot otherwise be captured easily within the database structure.

Each polygon will be assigned size, based on the absolute spatial data available from the master map data. The preferred mean size of the polygons is between 25-50ha, although it recognised that this figure may in practise have a wider range and this is something to be addressed by the pilot areas. A detailed polygonalisation, with a average polygon area much lower than this is considered a risk to the generalising power of HLC by Aldred *et al* (2003: p42) who state that showing differences in a landscape is more easily achieved than observing similarities, but it is the latter which is considered more important.

Other fields within the database, such as soil type, geology (drift), geology (solid), Parish, district, and County Character Area, can be populated with data later in the process, and this can be done as blanket queries and data entry.

Analysis of each polygon should include the study of its assigned attributes, including the morphological characteristics of field boundaries within the polygon (sinuous, reverse-S curve, ruler-straight etc), the pattern these boundaries create (regular/irregular grid, radial, co-axial etc) and any obvious external boundary characteristic which may suggest a discreet field system.

The integration of other datasets into the HLC will take two forms. The categorised dataset of MasterMap will be systematically interrogated to identify and separate specific aspects of the landscape such as 'woodland',

roads' and 'water'. Such interrogation will need careful thought if it is to be used most effectively and liaison with the GIS team in creating queries which will best suit the need of the HLC will be necessary. Furthermore, incorporation of attribute data held by the County Durham LCA is currently thought to be best served by simple querying and manual addition to HLC dataset, although again it may be possible to run such queries wholesale across the entire LCA landscape. At this point it is felt that dictating an absolute methodology for these processes would be at best tedious, and at worse, unobtainable, and so the exact processes shall be defined during development. Comprehensive notes will be taken so that the procedures are repeatable.

In line with the part *3.4 Disaster Recovery* of the DCC Computer User's Handbook (version 11.0 2000), regular backups of the HLC digital data are a necessary precaution. It is acknowledged that the main storage area for the daily working data of the HLC should be one of the main DCC servers (G: drive), but it is suggested that copies of this working HLC is made at least once a week, daily during high output periods of work, with at least one copy committed to an over-writable portable storage device, ideally a 1GB data stick, but failing this to CDRW. Furthermore a permanent copy of the digital data should be backed up on a monthly basis to a portable device and stored offsite of the main working environment. The dual location of the project, straddling both Environment and Culture & Leisure is ideal for storing such back-ups in a separate place. Strict nomenclature of all back-ups is necessary to avoid confusion.

Any fieldwork undertaken for this project will be limited to stage 1 during the familiarisation period. After this stage the characterisation will be based mainly on map, aerial photography and other documentary evidence.

2.2 Digitisation: sources

Sources to be used for the CD&D HLC include the following:

- Current OS digital vector and raster maps
- Historic digital raster maps

- Geo-referenced GIS-based vertical aerial photographs
- County Durham Landscape Character Assessment database
- English Nature Ancient Woodland Inventory
- DEFRA England Rural Development Programme
- DCC's GIS digital mapping of Parliamentary Enclosures
- DCC's GIS digital mapping of mineral workings
- DCC's GIS digital mapping of Parish and Township boundaries
- DCC's GIS digital mapping of the old county boundary
- Urban archaeological database not accessible GIS based?
- DCC's GIS digital mapping of Common Land Register
- Enclosure awards, tithe maps and estates maps where possible
- Work undertaken by Helen Dunsford on settlement and waste
- MPP work in Teesdale
- Weardale Pilot Historic Settlement Survey
- Darlington DMV survey.
- National Mapping Programme work and state of progress
- Major (extensive) landscape archaeological surveys
- Any lifescapes, habitat surveys or related ecological work
- Tithe map parish boundaries

Further considerations include:

- Countryside Agency's Countryside Character Map
- English Nature's Natural Areas Map

- Environmental Agency's River Corridor Landscapes Project
- Local management plans
- Historic parish boundaries/historic maps etc.

A complete list of available data sets is appended (Appendix D). The use of tithe maps, estate plans, and enclosure awards must be strategic as there will not be full coverage. In these instances some extrapolation to non-covered areas will be required to inform the characterisation process. While the SMR point data has not been used directly, is has been referred to in order to gain a full understanding of landscape use. However, no Listed Building, Scheduled Ancient Monument or similar information has been incorporated as this is contradictory to the values of landscape characterisation. Furthermore, this would be a duplication of data which is already more effective stored in the SMR and which itself will be subject to a restructuring as England moves towards a more holistic Historic Environment Record database.

2.3 Characterisation: attributes (typology)

Characterisation of the landscape, once it has been identified, should take a very structured form. Clark *et al* (2004) list eleven HLC Broad types which would enable each HLC to be joined at a regional level, with these common core elements to allow comparison. The eleven suggested broad types are:

1. Communications
2. Enclosed land
3. Industrial land
4. Military
5. Orchards
6. Ornamental and recreational
7. Settlements
8. Unenclosed or unimproved land
9. Water and valley floor
10. Water bodies
11. Woodland

This system is designed to be hierarchical, allowing for several subtype levels, if necessary. Furthermore the eleven listed broad types are to be viewed as guideline broad types. After reviewing other councils' typology sets and after discussion within the management working group it was decided that the main broad types to be used for the County Durham and Darlington HLC would be as follows:

1. Coastal
2. Enclosed Land
3. Industrial
4. Infrastructure
5. Inland Water
6. Military
7. Recreational & Ornamental
8. Settlement
9. Unenclosed land
10. Woodland

Comparison of these types against those suggested by English Heritage show a great degree of correlation, with some typologies only slightly differing in name in order to subsume other land character subtypes within the category.

To allow the landscape character to be defined in a straightforward, and yet short hand fashion, within the main attributes table, each broad type was assigned a number in the hundreds, thus 'coastal' was given the code 100, 'Enclosed land' was given the code 200 and 'industrial given the code 300. In this way subtypes could be broken into further categories. This system was used successfully in Surrey County Council's HLC methodology (Bannister 2001).

Finally a stakeholder meeting must be arranged near the end of this data collection stage with the purpose of discussing progress and direction.

2.4 Summary of Stage 2

- ***Characterisation: identification and description***: The systematic identification and interpretation of all morphological features within the

entire landscape of County Durham and Darlington Borough using the given attribute data collection structure.

- ***Digitisation: sources***: All main sources listed, with comprehensive list appended over the course of the project (Appendix D).
- ***Characterisation: attributes***: The list of attribute data to be collected for each polygon was created; a discussion on typology to be used, with full breakdown of both in appendices B & C; Stakeholder meeting to discuss progress and direction.

3 Stage Three

As already noted, the County Durham landscape character assessment has already been completed, and will be used as a prime resource for the data capture and interpretation for the CD&D HLC. Consequently, in practice the distinction between Stages Two and Three may be indistinct. However for reasons of clarity as well as good practice, Stage Three shall be considered as a distinct and separate phase of the HLC.

3.1 Analysis and Interpretation

The analysis of the attributes assigned to each polygon during Stage 2 becomes the basis for the interpretation of the landscape within the prescribed typological framework.

This analysis and interpretation should consider previous land use, current landuse, and general landscape trends in order to make an informed judgement when assigning a typology to the polygon. This classification of type should not reflect current landuse alone, but reflect the landscape character as a whole.

The current table structure allows for entry of both a primary and secondary typology for the current landscape character to be recorded. Three separate tables of a similar structure have been incorporated into the design, each with the capability of capturing primary and secondary typological data. This method will be closely examined to see if it is really necessary to add these secondary typologies for past landscapes, or if this further information field is redundant.

The three tables for recording earlier landscape characteristics have been designed not to capture data from a *specific* and *comparable* point in time, for instance from the 1850's first edition OS map – as this would produce *time-slices*. Current HLC methodology is trying to move further towards a *time-depth* approach, where the capability of recording several past land uses is available but these need not be of a comparable time periods (Aldred *et al* 2003). Rather, they show the main historic characteristics over time of that particular character area. This should give a more relevant time-depth to each characterised polygon.

All relevant available background material including the CD&D SMR should be consulted during this phase to arrive at the most complete interpretation possible at this time. It is proposed to work inwards from a broad and general landscape character across the whole HLC area, toward the complex and detailed landscape typologies. This will be the attempted, and the process will be catalogued and if necessary revised for the future method statement.

3.2 Synthesis

The aim of the HLC is ultimately to identify and present emerging patterns and trends within the landscape to help other parties make informed decisions with regard to landscape management.

To this end, once the HLC model of spatial data with attributes has been completed, thematic assessment of this data can be undertaken to give broader overviews of proportions and percentages of landscape types within given areas. Areas of similar character types can be identified from attributes and management recommendations can be made.

The HLC can show possible gaps in data requisition and landscape comprehension within the County Durham and Darlington districts. By the overlaying of other GIS data layers such as the county SMR, there is also the potential for predictive modelling and identification of gaps within the SMR.

The applications of the CD&D HLC must be explored and it is suggested that this is done during the early stages of the HLC development process to be sure of compatibility issues with regard to data structures and data types. Integration of the HLC into stand-alone projects such as land management strategies and frameworks; management plans; designations; and development frameworks must all be considered. Consultations with potential user groups such as local authorities, English Heritage, English Nature and DEFRA into possible applications or documents will be arranged, and should explore suitable ways of data synthesis and presentation for such purposes.

Incorporation of the CD&D HLC as a GIS layer available on the DCC Intramap system is also an important issue which must be addressed and concluded so that the data is available for all DCC workers at least in its most basic spatial format.

Furthermore the integration of the new HLC model into the existing County Durham LCA, as both spatial and descriptive data, is seen as a fundamental outcome of this project. Although the work involved in undertaking such integration is far beyond the scope of the HLC project, it is still necessary to take the compatibility and complementary nature of the later work into consideration at this stage. Additional work may be undertaken for the integration of the HLC into the Countryside Character Areas, and reported to the Countryside Agency (soon to be amalgamated with others into 'Natural England').

Finally, a post-project seminar should be held and attended by all interested parties. This was undertaken by Surrey County Council as an exercise to promote and explain the purposes and applications of the Surrey HLC. Feedback was also gathered as part of Surrey's exercise, and this showed an overwhelming expectation and requirement from delegates that relative landscape *value* be assigned to each polygon area to help them in their decision making (Surrey County Council 2001). However, one of the most fundamental guiding principles of HLC recognises that no landscape is more important than another (see Appendix A, bulletin point 3). **This underlying notion of intrinsic equality needs to be recognised and emphasised at this early stage, and all project advisory group parties to acknowledge this, if the HLC is to become a valuable tool for future management.**

3.3 Summary of Stage 3

- ***Analysis* & *Interpretation***: Analysis of morphological attributes; interpretation and ascription to landscape type, from a broad to more narrow perspective; using all available data; production of a time-depth model – primary and secondary landscape character providing this depth, with the capability of up to three earlier landscape characters types to be recorded: Consideration of the method as a repeatable procedure.

- ***Synthesis***: Thematic assessment of data; comparison against other data to show gaps or potential modelling; use in stand-alone project for land management strategies and guidelines; Incorporation as spatial data into the DCC Intramap GIS; Consideration of implications of

integration into the DCC LCA ; Emphasis that HLC is not a way of assigning landscape *value*.

4 Stage Four

4.1 GIS format and the written report

The principal products of the HLC project will be the spatial and attribute data in GIS data format; an archive of raw survey data; and a written report.

The format of the prescribed GIS interfaced has been detailed already by the project design for this HLC and has been mentioned above under *3.2 Synthesis*. It is envisaged it will be hosted in the DCC online GIS Intramap interface: *www.durham.gov.uk/landscape/usp.nsf/pws/gis+-+online+mapping* for public access and accompanied by other relevant layers such as the conservation areas, listed buildings and historic parks and gardens. There should also be a prominent link to the Keys to the Past (SMR) website: *www.keystothepast.info/k2p/usp.nsf/pws/keys+to+the+Past+-+home+page*. Simplified versions of the digital GIS data may be made available for those groups requiring the HLC or parts thereof in such a format.

The HLC report produced for Surrey County Council, in two volumes, comprehensively covers all the issues relating to the HLC, from the methodology (Bannister 2001a) through to description and discussion of each recognised Historic Landscape Character type (Bannister 2001b). An additional report championing the implementation strategies sets out the views of various discussion groups invited to a seminar after the completion of the HLC (Surrey County Council 2001). Many of the insights gained from Surrey's experience have been instructive in fashioning the aims of this CD&D HLC.

A report along similar lines to Surrey or Lancashire is recommended, with HLC areas explained with clear reasoning behind the decisions taken during the HLC process. Having a comprehensive hard copy of the report is also important for those persons who will not, for what ever reason, be able to access the HLC either online or indeed electronically at all. The incorporation of large scale maps within the reports may be a further consideration, to facilitate the use of the HLC in this manner.

The CD&D HLC model should be periodically reviewed and updated in accordance with new base data received, and with respect to how often

Supplementary Planning Document & Local Plan frameworks are reviewed in order that the HLC is tied to planning cycle. This period of time is still to be decided and will involve discussion with various stakeholders before any decision is reached.

Meetings may take place at this stage to discuss results, both within the smaller management group, and also the larger project advisory group.

4.2 Archive

The archive of the project should be collated with a periodic review, by a different individual, in mind. The project archive must therefore include:

- Copies of the project design and method statements
- Data tables with clear explanations of structure
- Background text and mapped information produced during the project or collated during the project
- Copies of all reports produced
- Copies of all correspondence
- Copies of all digital data

4.3 Dissemination

This CD&D HLC has been created as a useful tool for use in drawing up strategic policies, management guidelines and to facilitate interpretation of the Durham and Darlington Landscape. As Bannister opines, with regard to the Surrey HLC:

> It is a springboard from which to develop initiatives for understanding and caring about the countryside and its historic character. Whether living in, working on or managing the landscape.
>
> (Bannister 2001: p59)

To this end the maps and supporting data must be presented in an accessible format, which are readily understood and easy to use. The project brief states

that the HLC will be designed to operate as a stand-alone Durham and Darlington HLC website with links from both authorities' websites. An outline of the project and a summary of the report will also be available as PDF downloads on the DCC website.

The mapping and data should be compatible with the SMR. However, the CD&D SMR has been acknowledged as an area to be reviewed in the future as some of its structures are now outmoded. When possible, similar structures have been retained – such as the chronological dating system. However further integration at this point is not possible, and it may be that in future years the SMR, by then the HER, is designed to be compatible with the HLC. This has been borne in mind throughout the entire HLC process although little can be done to facilitate this later process.

The database and spatial mapping used is supported by the corporate GIS team at DCC and, as this is used throughout the council, it will be completely compatible with other in-house data. It is also important that the HLCs of CD&D and NCC are cross-compatible. This should not be too problematic as the NCC is also being mapped in ArcMAP 9 although the database behind this spatial tool has been designed in Oracle. The spatial data of both HLC will therefore be compatible; however sharing data from the database behind this spatial tool may require file translation, but this should not be a significant or time consuming factor.

Further dissemination of the HLC model, in whichever format is best suited, should include: Land utilisation maps; mention/reference within the DCC Tourism and Action Plan Strategy; and an article in the DCC 'Countywide' magazine and any Darlington Borough equivalent.

A technical seminar for all interested parties should be considered for the end of the project in order to best implement the map and database. Both a digital copy and several hard copies of the report should be available at such an event. A travelling exhibition was an alternative suggestion as a way of presenting the HLC to various different user groups.

This, the last stage of the HLC process should include press releases to help launch this project into the wider public, corporate and local government audience.

It is suggested that a glossary of terms is considered for the final report as it has come to light that different disciplines understand words in slightly different contexts. Such a glossary may further help the transparency of the CD&D HLC.

4.4 Summary of Stage 4

- ***Report and GIS:*** GIS to be user-friendly and compatible with neighbouring systems and DCC's own Intramap service. The report should be an in-depth discussion of the methodology with clear reasoning for decisions made. The report must include discussion of every landscape type used with a sample area and map. A glossary of terms may be considered

- ***Archive:*** An archive of all relevant material should be kept and the project reviewed within an agreed timescale, to be confirmed.

- ***Dissemination:*** Accessible format to all users, online and as a hard copy. Press releases and possible technical seminar or travelling exhibition should be considered, and inclusion in the DCC *Countrywide* magazine should be made possible.

5 Bibliography

Aldred, O. & Fairclough, G. (2003) *Historic Landscape Characterisation: Taking Stock of Method.* English Heritage and Somerset County Council. **unpublished**

Bannister, N. (2001a) *Surrey Historic Landscape Characterisation: Final Report Volume 1: Main Report Method and Analysis.* The Countryside Agency, English Heritage and Surrey County Council. **unpublished**

Bannister, N. (2001b) *Surrey Historic Landscape Characterisation: Final Report Volume 2: Historic Landscape Character Types: descriptions and examples.* The Countryside Agency, English Heritage and Surrey County Council. **unpublished**

Clark, J., Darlington, J. & Fairclough, G. (2004) *Using Historic Landscape Characterisation.* English Heritage and Lancashire County Council. **ISBN1899907777**

Durham County Council (2000) *Policies and Procedures: Computer User's Handbook* Durham County Council. **Unpublished**

Durham County Council (2003) *The County Durham Landscape Strategy: Consultation Draft*. Durham County Council. **Unpublished**

Fairclough, G. (2002a) "Cultural landscape, computers and characterisation: GIS-based Historic Landscape Characterisation as a tool for archaeological resource management in England". In G Burenhult (ed) *Archaeological Informatics: Pushing the Envelope CAA 2001* BAR International Series **1016**

Fairclough, G. (ed) (2002b) *Historic Landscape Characterisation Template Project Design.* English Heritage. **Unpublished**

Surrey County Council (2001) *Surrey Historic Landscape Characterisation Project: Strategy for implementing the map and database*. Surrey County Council. **unpublished**

6 Appendices

6.1 Appendix A – The principles of HLC

HLC should:

1. Define historic character first and foremost in the present-day landscape;

2. Identify interactions and change in the landscape through time;

3. Characterise the whole of the landscape, not designate selected parts – i.e. no part of the landscape is to be regarded as intrinsically more important than any other;

4. Use an archaeologist's approach to 'read' landscape as material culture;

5. Use the present day landscape itself as the main source, through the desk-based medium of maps and air photos, using GIS;

6. Understand "landscape" through interpretation and perception rather than purely as an objective thing i.e. "landscape as perceived by people";

7. Remember that landscape is and always has been dynamic, both in terms of physical material components and shifting attitudes to it; thus management and change not preservation is the aim;

8. Ensure that its conclusions and interpretations are transparent, checkable and updateable;

9. Be fully integrated into other environmental and heritage management databases, particularly (in England) the SMR (or in future the HERC).

(Aldred and Fairclough 2003: pp40)

6.2 Appendix B – Table structure, attributes and relationships

It should be noted that *all* of this is currently provisional and may well be changed during the course of Stage 1.

Main HLC Polygons.tbl

Field Name	Field Type	Notes
HLC ID	Autonumber	Primary key for each polygon
Date compiled	Short Date	Default linked to the day of entry
Compilers Initials	Text	Default to HW
Elevation	List box	Under 244m (default) Over 244m
Area	Number	Automatically adds hectares (ha) to end of number
Primary Typology Code	List box	See Appendix C*
Primary Typology Broadclass	List box	See Appendix C*
Primary Typology Dominant	List box	See Appendix C*
Primary Typology HLC	List box	See Appendix C*
Secondary Typology Code	List box	See Appendix C*
Secondary Typology Broadclass	List box	See Appendix C*
Secondary Typology Dominant	List box	See Appendix C*

Secondary Typology HLC	List box	See Appendix C*
Period	List box	Palaeolithic: 500 000 - 10 000 BC Mesolithic: 10 000 - 4000 BC Neolithic: 4000 - 2100 BC Bronze Age: 2100 - 700 BC Iron Age: 700 BC - AD 43 Romano British: AD 43 – 410 Early medieval: AD 411 – 1065 Later medieval: AD 1066 – 1539 Post-medieval: AD 1540 – 1900 Modern: AD 1901-present Unknown: n/a
Legibility (of landscape typology assigned)	List box	Complete Significant Partial Fragmentary Invisible
Summary	Memo	Summary of polygon characteristics. Jargon free.
Description	Memo	Includes summary text plus further expanded text if necessary
District	List box	Chester-le-Street Darlington Derwentside Durham City Easington Sedgefield

		Teesdale
		Wear Valley
Designation	List box	Ancient Woodland Inventory
		Area of Great Landscape Value
		Area of Outstanding Natural Beauty
		Common Land Register
		Conservation Area
		Country Park
		Environmentally Sensitive Area
		Heritage Coast
		Historic Parks and Gardens
		Landscape Character Assessment Area
		Local Nature Reserve
		National Nature Reserve
		Natural Areas
		Site of Nature Conservation Importance
		Site of Special Scientific Interest
		Special Area of Conservation
		Specially Protected Area
		World Heritage Site
County Character Area	List box	Dales Fringe
		East Durham Limestone Plateau
		North Pennines (Weardale)
		Tees Lowlands
		Wear Lowlands
		West Durham Coalfields

Solid Geology	List box	Carboniferous Coal Measures
		Carboniferous Limestone
		Carboniferous Millstone Grit
		Igneous
		Permian Limestone
Drift Geology	List box	Alluvium
		Boulder clay
		Disturbed
		Drift free
		Glacial sand and gravel
		Marine
		Peat
		River terrace deposits
		Wind-blown sand
Soil type		Alluvial gley soils
		Argillic brown soils
		Brown alluvial soils
		Brown calcareous earths
		Brown earths
		Brown podzolic soils
		Brown sands
		Cliff & scree
		Disturbed soils
		Disturbed soils: urban
		Earthy peat soils
		Marine
		Podzols

		Rankers
		Raw peat
		Stagnogley soils
		Stagnohumic gely soils
		Stagnopodzols
		Water
		Wind-blown sand
Settlement: Morphology	List box	With regard to SETTLEMENT TYPOLOGY
		Complex
		Cul-de-sac
		Geometric
		Grid system
		Irregular
		Nucleated
		Ribbon development (settlement perpendicular to roads)
		None
Settlement: Housing type	List box	With regard to SETTLEMENT TYPOLOGY
		Terraced =>3units
		Semi-detached
		Detached
		Low rise flats <= 3 floors
		High flats => 4 floors
		Other
Settlement: Density	List box	With regard to SETTLEMENT TYPOLOGY
		<25 houses/ha
		25-50 houses/ha
		>50 houses/ha

Settlement: Private Space	List box	With regard to SETTLEMENT TYPOLOGY Front & back gardens Back garden & front yard Back garden Front garden Shared yard Back yard Front garden and back yard Courtyard Farmyard No private space No discernable private space Extensive private grounds
Industry: Density of extraction	List box	With regard to INDUSTRY TYPOLOGY Very dispersed Dispersed Nucleated Concentrated Very concentrated
Enclosed: Ridge & Furrow	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Assart	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Waste	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Grange	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY

		Not part of field morphology as these are features
Enclosed: Demesne	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed/Unenclosed: Sheepfold	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed /Unenclosed: Bields	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features

First earlier HL character.tbl

Field Name	Field Type	Notes
HLC ID	Auto number	Related to the main table via this HLC ID field
Date compiled	Short Date	Default linked to the day of entry
Compilers Initials	Text	Default to HW
Elevation	List box	Under 244m (default) Over 244m
Primary Typology Code	List box	See Appendix C*
Primary Typology Broadclass	List box	See Appendix C*
Primary Typology Dominant	List box	See Appendix C*
Primary Typology HLC	List box	See Appendix C*

Secondary Typology Code	List box	See Appendix C*
Secondary Typology Broadclass	List box	See Appendix C*
Secondary Typology Dominant	List box	See Appendix C*
Secondary Typology HLC	List box	See Appendix C*
Period	List box	Palaeolithic: 500 000 - 10 000 BC Mesolithic: 10 000 - 4000 BC Neolithic: 4000 - 2100 BC Bronze Age: 2100 - 700 BC Iron Age: 700 BC - AD 43 Romano British: AD 43 – 410 Early medieval: AD 411 – 1065 Later medieval: AD 1066 – 1539 Post-medieval: AD 1540 – 1900 Modern: AD 1901-present Unknown: n/a
Legibility(of landscape typology assigned)	List box	Complete Significant Partial Fragmentary Invisible
Summary	Memo	Summary of polygon characteristics. Jargon free.
Description	Memo	Includes summary text plus further expanded text if necessary
Settlement: Morphology	List box	With regard to SETTLEMENT TYPOLOGY

		Complex Cul-de-sac Geometric Grid system Irregular Nucleated Ribbon development (settlement perpendicular to roads) None
Settlement: Housing type	List box	With regard to SETTLEMENT TYPOLOGY Terraced =>3units Semi-detached Detached Low rise flats <= 3 floors High flats => 4 floors Other
Settlement: Density	List box	With regard to SETTLEMENT TYPOLOGY <25 houses/ha 25-50 houses/ha >50 houses/ha
Settlement: Private Space	List box	With regard to SETTLEMENT TYPOLOGY Front & back gardens Back garden & front yard Back garden Front garden Shared yard Back yard

		Front garden and back yard Courtyard Farmyard No private space No discernable private space Extensive private grounds
Industry: Density of extraction	List box	With regard to INDUSTRY TYPOLOGY Very dispersed Dispersed Nucleated Concentrated Very concentrated
Enclosed: Ridge & Furrow	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Assart	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Waste	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Grange	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed: Demesne	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features
Enclosed /Unenclosed:	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY

Sheepfolds		Not part of field morphology as these are features
Enclosed /Unenclosed: Bields	Yes/No	With regard to ENCLOSED /UNENCLOSED TYPOLOGY Not part of field morphology as these are features

Second earlier HL character.tbl – Similar in structure to **First earlier HL character.tbl**

Third earlier HL character.tbl – Similar in structure to **First earlier HL character.tbl**

subtable_Sources.tbl

Field Name	Field Type	Notes
HLC ID	Number	Related to the main table via this HLC ID field
Source	Combo box	(Primary key) This box will be editable so new sources can be added as and when necessary 1st edition OS (1856-1865) 2nd edition OS (1894-1899) 3rd edition OS (1919-1926) OS 1930's-40's OS 1950's OS 1960's OS 1970's OS 1980's Aerial Photography

		County Maps DCC SMR Enclosure Agreements Enclosure Awards Estate Maps Field name evidence Place name evidence Quarter Session Maps SMR data Tithe Map
Used	Yes/No	Tick box for if used
Main source	Yes/No	Tick box to mark up main sources

Subtable_boundary morphology.tbl

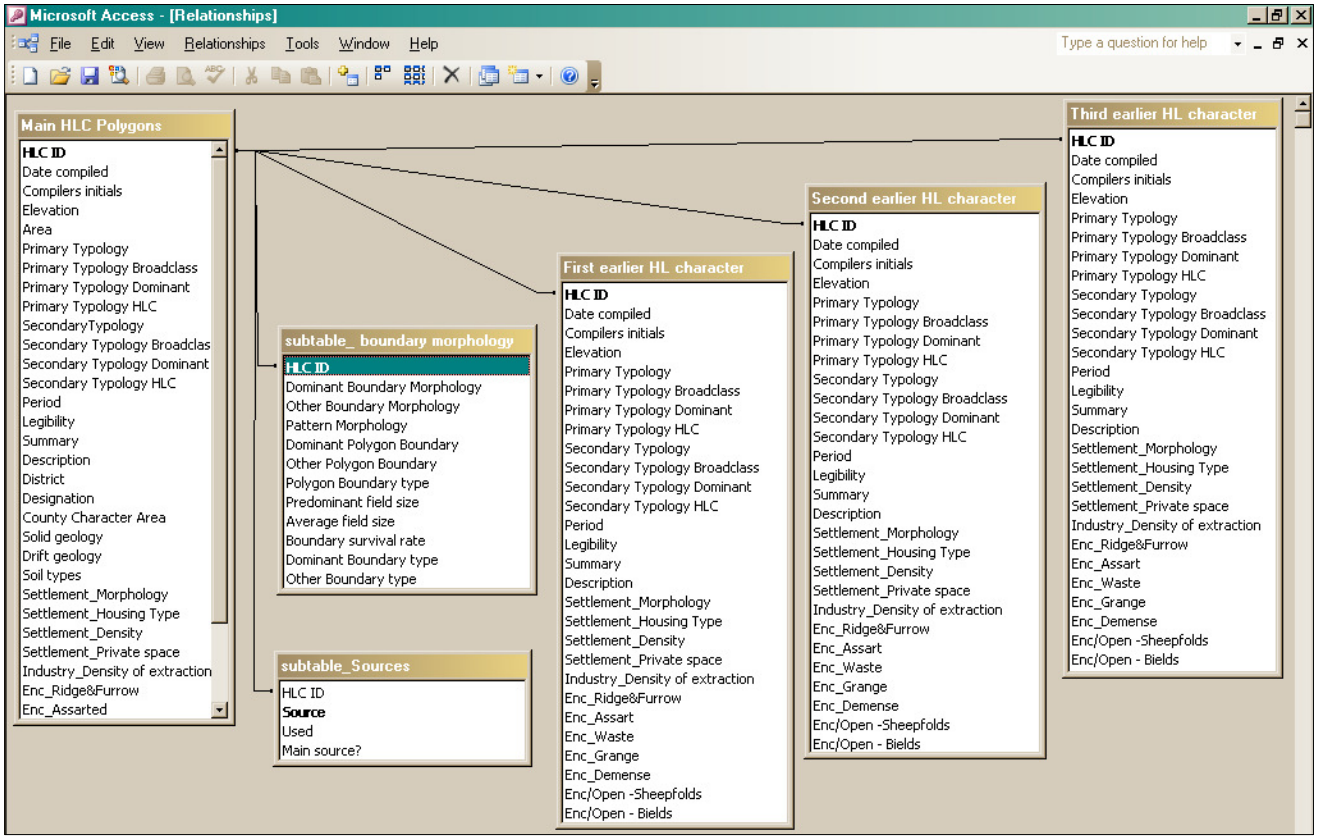
Field Name	Field Type	Notes
HLC ID	Number	Related to the main table via this HLC ID field
Dominant Boundary Morphology	Listbox	Ruler Straight Relatively Straight Sinuous Angled Reverse-S Curved

		none n/a
Other Boundary Morphology	Listbox	Ruler Straight Relatively Straight Sinuous Angled Reverse-S Curved none n/a
Pattern Morphology	Listbox	Irregular grid Regular grid Stepped grid Radial Co-axial Agglomerated None n/a
Dominant Polygon Boundary	Listbox	Arbitrary Ruler Straight Relatively Straight Irregular Sinuous Angled Curved Reverse-S

		n/a
Other Polygon Boundary	Listbox	Arbitrary Ruler Straight Relatively Straight Irregular Sinuous Angled Curved Reverse-S n/a
Polygon Boundary type	Listbox	Natural watercourse Man-made watercourse Settlement edge Line of communication Woodland Other None N/a
Predominant field size	Listbox	<2ha 2-10ha >10ha
Average field size	number	Calculated using MasterMap
Boundary	Listbox	<25% remaining 25-50% remaining

survival rate		50-75% remaining >75% remaining
Dominant Boundary type	Listbox	Dry stone wall Mortared wall Hedgerow - no trees Hedgerow with trees Tree line Post & rail fencing Other fencing Earthen bank Drainage ditch N/a
Other Boundary type	List box	Dry stone wall Mortared wall Hedgerow - no trees Hedgerow with trees Tree line Post & rail fencing Other fencing Earthen bank Drainage ditch N/a

Relationships between all tables in database



6.3 Appendix C – Typology structure

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
100	Coastal				
110		Cliffs and coastal slopes			
111			Dune	>1.0ha	
112			Modified cliff and coastal slope	>1.0ha	
113			Natural cliff and coastal slope	>1.0ha	
114			Sea defence	>1.0ha	
120		Foreshore			
121			Modified beach	>1.0ha	
122			Natural beach and rock platform	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
200	Enclosed land				
210		Enclosed farmland (medieval)			
211			Pre-medieval field system	>1.0ha	
212			Medieval farm fields	>1.0ha	
213			Medieval farm fields (grange/demense)	>1.0ha	
214			Medieval intakes	>1.0ha	
215			Medieval townfields	>1.0ha	
216			Medieval toft/croft or garth	>1.0ha	
220		Enclosed farmland (post-medieval)			
221			Post-med parliamentary planned enc	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
222			Post-med private planned enc	>1.0ha	
223			Post-med drainage scheme	>1.0ha	
224			Post-med farm fields	>1.0ha	
225			Post-med fossilised strips	>1.0ha	
226			Post-med peicemeal enclosure	>1.0ha	
227			Post-med smallholding	>1.0ha	
230		Enclosed land (modern)			
231			Modern drainage scheme	>1.0ha	
232			Modern enclosure	>1.0ha	
233			Modern field amalgamation	>1.0ha	
234			Modern restored enclosure	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
235			Modern smallholding	>1.0ha	
240		Horticulture			
241			Allotment garden	>1.0ha	
242			Nursery/glasshouse	>1.0ha	
243			Orchard	>0.5ha	
300	Industrial				
310		Manufacturing			
311			Industrial estate	>1.0ha	
312			Industrial land	>1.0ha	
320		Mineral working			
321			Abandoned clay pit	>1.0ha	
322			Abandoned colliery	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
323			Abandoned quarry	>1.0ha	
324			Abandoned sand & gravel workings	>1.0ha	
325			Active opencast coal/brickshale workings	>1.0ha	
326			Active quarry	>1.0ha	
327			Active sand & gravel workings	>1.0ha	
328			Dormant quarry	>1.0ha	
330		Retail			
331			Garden centre	>1.0ha	
332			Retail estate	>1.0ha	
333			Shopping centres	>1.0ha	In-town areas
400	Infrastructure				

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
410		Aviation			
411			Airfield	>1.0ha	
412			Airport	>1.0ha	
420		Docks and harbours			
421			Dock	>1.0ha	
422			Harbour	>1.0ha	
430		Railways			
431			Abandoned railway	>1.0ha	
432			Active railway	>1.0ha	
433			Railway path	>1.0ha	
440		Roads			
441			'A' class road	n/a	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
442			Trunk road	n/a	
450		Waste			
451			Landfill site	>1.0ha	
452			Waste transfer/treatment site	>1.0ha	
460		Water treatment			
461			Sewerage works	>1.0ha	
462			Water treatment works	>1.0ha	
500	Inland Water				
510		Water body			
511			Abandoned mineral working	>1.0ha	
512			Natural Lake/pond	>1.0ha	
513			Natural	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
			Swamp/Fen/Marsh/Carr		
514			Ornamental lake/pond	>1.0ha	
515			Reservoir	>1.0ha	
516			Restored mineral working	>1.0ha	
520		Watercourse			
521			Engineered river/stell	>1.0ha	
522			Natural river/stream	>1.0ha	
600	Military				
610		Defence			
611			Castle/similar fortification	>1.0ha	
612			Modern defence installation	>1.0ha	
613			Roman camp/fort	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
620		Infrastructure			
621			Ordnance store	>1.0ha	
622			Rifle/artillery range	>1.0ha	
630		Residential			
631			Active army camp	>1.0ha	
632			Disused army camp	>1.0ha	
633			Prisoner of War camp	>1.0ha	
700	Recreational and ornamental				
710		Parks & gardens			
711			Civic parkland	>1.0ha	
712			Deer park	>1.0ha	
713			Designed parkland	>1.0ha	Inc ornamental lakes?

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
714			Ornamental garden	>1.0ha	
720		Recreational			
721			Caravan/chalet park or campsite	>1.0ha	
722			Country park	>1.0ha	
723			Golf course	>1.0ha	
724			Racecourse	>1.0ha	
725			Sports facility	>1.0ha	
726			Urban green space	>1.0ha	
727			Village green	>1.0ha	
730		Ritual			
731			Cemetery/crematorium	>0.5ha	
732			Church/churchyard	>0.5ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
733			Monastery	>0.5ha	
734			Prehistoric ritual landscape	>1.0ha	
800	Settlement				
810		Institutions & their grounds			
811			Medical	>0.5ha	
812			Prisons & detention centres	>0.5ha	
813			Education	>0.5ha	
820		Rural			
821			Country house (manor/estate)	>0.5ha	
822			Farmstead	>0.5ha	
823			Dispersed settlement	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
824			Nucleated settlement without greens	>1.0ha	
825			Nucleated green village	>1.0ha	
830		Towns and larger villages			Those settlements no longer identifiable as rural.
831			Medieval Core	>0.5ha	Market core or other
832			Pre 1865 settlement (pre Ep1)	>0.5ha	early settlement?
833			1865-1900 settlement (Ep1-2)	>0.5ha	Later industrialised boom
834			1900-1926 settlement (Ep 3)	>0.5ha	Up to and inc WWI
835			1927-1950 settlement (Ep 4)	>0.5ha	Between WWI and II effectively
836			1951-1969 settlement (Ep5-6)	>0.5ha	Post-war development

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
837			1970-present settlement (Ep7-)	>0.5ha	'modern' building
900	Unenclosed land				
910		Lowland heath			
911			Lowland heath (common)	>1.0ha	
912			Lowland heath (other)	>1.0ha	
913			Lowland heath (stinted pasture)	>1.0ha	
920		Upland moors			
921			Divided upland common	>1.0ha	
922			Divided upland moor	>1.0ha	
923			Open upland common	>1.0ha	
924			Open upland moor	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
925			Outlying upland moor	>1.0ha	
1000	Woodland				
1010		Coppice			
1011			Coppice	>1.0ha	
1012			Short rotation coppice	>1.0ha	
1020		High forest			
1021			Ancient woodland	>1.0ha	
1022			Modern plantation	>1.0ha	
1023			Planted ancient woodland	>1.0ha	
1024			Post-medieval plantation	>1.0ha	
1025			Secondary woodland	>1.0ha	
1026			Wood pasture	>1.0ha	

Typology Code	Dominant Broadclass	Dominant Landuse/type	HLC type	Area threshold	notes
1030		Woodpasture & scrub			
1031			Ancient wood pasture	>1.0ha	
1032			Scrub	>1.0ha	
1033			Secondary wood pasture	>1.0ha	

6.4 Appendix D – Available data sets

Data	Location	Format	Notes
Modern Maps			
OS MasterMap	DCC	Electronic: Digital	
OS Vector	DCC	Electronic: Digital	
OS Panorama	DCC	Electronic: Digital	
OS 10,000 colour	DCC	Electronic: Raster	
OS 10,000 monochrome	DCC	Electronic: Raster	
OS 25,000 colour	DCC	Electronic: Raster	
OS 25,000 monochrome	DCC	Electronic: Raster	
OS 50,000 colour	DCC	Electronic: Raster	
OS 50,000 monochrome	DCC	Electronic: Raster	
OS 100,000 colour	DCC	Electronic: Raster	
OS 250,000 colour	DCC	Electronic: Raster	

Os 625,000 c0lour	DCC	Electronic: Raster	
OS 1,000,000 colour	DCC	Electronic: Raster	
OS Panorama & Landline contour data (25m & 5m)	DCC	Electronic: Digital	
Historic Maps & plans			
OS 1st Edition circa 1860 (6”)	DCC	Electronic: Raster	High resolution N of Tees only. Medium resolution elsewhere.
6”, 1”	CRO	Paper maps.	North of Tees only
OS 2nd Edition circa 1898	DCC	Electronic: Raster (6”)	High resolution N of Tees only. Medium resolution elsewhere.
6”, 1”	CRO	Paper maps.	North of Tees only
OS 3rd Edition circa 1923	DCC	Electronic: Raster	High resolution N of Tees only. Medium resolution elsewhere.
6”, 1”	CRO	Paper maps.	North of Tees only

OS 1950's epoch (6")	DCC	Electronic: Raster	Medium resolution
OS 1960's epoch (6")	DCC	Electronic: Raster	Medium resolution
OS 1970's epoch (6")	DCC	Electronic: Raster	Medium resolution
OS 1980's epoch (10,000)	DCC	Electronic: Raster	Medium resolution
OS 1990's epoch (10,000)	DCC	Electronic: Raster	Medium resolution
C17th, 18th & C19th County Maps	CRO	Paper maps	County Durham North of Tees.
C19th Tithe maps	CRO	Paper maps & documents	No maps for Tithe free areas.
	North Yorkshire CRO		Land south of River Tees
Enclosure Awards	DCC	Electronic: Digital	
	CRO	Paper maps & documents	
	Durham University A&SC	Paper maps & documents	
Estate maps & plans	CRO	Paper maps & documents	Miscellaneous. Localised coverage
Quarter Sessions maps & plans	CRO	Paper maps & documents	Miscellaneous. Localised coverage

Enclosure Agreements	Durham University A&SC	Paper maps & documents	Some errors
Aerial Photography			
Vertical Aerial Photography 2001 colour	DCC	Electronic: Raster	
Vertical Aerial Photography 1971 monochrome	DCC	Paper photograph	
Vertical Aerial Photography RAF 1940s monochrome	DCC	Electronic: Raster	
Oblique Aerial Photography	DCC	Paper photograph	Miscellaneous. Localised coverage.
Sites, Designations etc			
County Durham SMR	DCC	Digital (Point) & textual data	
Scheduled Ancient Monuments	DCC (EH)	Digital (Point) Paper maps (polygon)	? current state of Polygon data
EH Register of Parks &	DCC (EH)	Electronic: digital (Polygon).	

Gardens.			
Undesignated Parklands	DCC	Electronic: digital (Polygon).	
	District Wide Local Plans	Paper maps.	
Conservation Areas	DCC	Electronic: digital (Polygon).	Update in process.
	District Wide Local plans	Paper maps (polygon)	
Listed Buildings	DCC	Electronic: digital (Point)	
		Paper maps (polygon).	
Common Land Register	DCC	Electronic: digital (Polygon).	
World Heritage Site	DCC (UNESCO)	Electronic: digital (Polygon).	
Ancient Woodland Inventory	DCC (EH)	Electronic: digital (Polygon).	Some errors.
Nature Conservation:			
SSSI	DCC (EH)	Electronic: digital (Polygon)	
SAC	DCC (EH)	Electronic: digital (Polygon) Electronic: digital (Polygon)	
SPA	DCC (EH)	Electronic: digital (Polygon) Electronic: digital (Polygon)	

NNR	DCC (EH)	Electronic: digital (Polygon).
SNCI	DCC	
LNR	DCC	
Landscape:		
Area of Outstanding Natural Beauty	DCC	Electronic: digital (Polygon)
Area of Great Landscape Value	DCC	Electronic: digital (Polygon)
Environmentally Sensitive Area	DCC (DEFRA)	Electronic: digital (Polygon).
Heritage Coast	DCC	Electronic: digital (Polygon).
Boundaries		
County Boundary	DCC	Electronic: digital (Polygon, line).
District Boundaries	DCC	Electronic: digital (Polygon, line).
Parish Boundaries (1860)	DCC	Electronic: digital (Polygon,

		line).	
Parish Boundaries (modern)	DCC	Electronic: digital (Polygon, line).	
Topography, Landuse & Landscape			
Geology (solid) 250,000	DCC (BGS)	Electronic: digital (Polygon).	
50,000 10,000		Paper maps	Miscellaneous. Localised coverage
Geology (drift) 250,000	DCC (BGS)	Electronic: digital (Polygon).	
50,000 10,000		Paper maps	Miscellaneous. Localised coverage
Soils 250,000	DCC (Soils Survey)	Electronic: digital (Polygon).	
Landcovermap 2000	DCC (CEH)	Electronic: digital (Polygon).	
Phase 1 Habitat Survey (circa 1990s)	DCC (EH)	Electronic: digital (grid 1km).	
		Paper maps	
1:10,000			

Countryside Character Areas	DCC (CA)	Electronic: digital (Polygon).
Natural Areas	DCC (EH)	Electronic: digital (Polygon).
National Landscape Typology	DCC (CA)	Electronic: digital (Polygon).
County Durham Landscape Assessment Database: Geology Drift Soils Landform Landuse Field Pattern Field Scale Field Boundary Tree Cover Woodland Pattern Settlement Type Settlement Pattern Origins Relics: prehistoric Relics: roman Relics: medieval Relics: post medieval County Character Area	DCC	Electronic: digital (Polygon).

Broad Landscape Types
Broad Character Area
Local Landscape Types
Local Landscape Sub-type.

* All levels of the typology are currently shown in the table, and as these appear twice, for primary and secondary HLC character, it makes the table rather cumbersome. It is hoped that this issue may be resolved in the future, when the tables are migrated into an ESRI geodatabase.