Aylesbury Vale District Council & Buckinghamshire County Council

Aylesbury Vale Landscape Character Assessment

May 2008

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Contents

Executive Summary

The landscape character assessment detailed in this report has been carried out to inform the preparation by Aylesbury Vale District Council of the Aylesbury Vale Local Development Framework. The assessment has been carried out at the Local Authority (district) level to a methodology following national guidance in which biodiversity and historic environment factors are fully integrated with physiographic, natural, cultural and visual considerations.

The assessment identified 79 landscape character areas grouped within 13 landscape character types.

All of the Aylesbury Vale District is covered and the assessment incorporates and supersedes previous landscape character assessment at the Local Authority (county and district) levels within the District. The assessment is set in the context of National/Regional level landscape character assessment and makes use of the National Landscape Typology as a key data set.

In addition to recording the methodology for the desk and field studies undertaken and describing in detail the landscape character of Aylesbury Vale, the report also includes a condition/sensitivity analysis for all landscape character areas from which guidelines are derived for their future management.

The assessment forms a key component of the Buckinghamshire Environmental Character System. It is suitable for a wide range of applications both during the Local Development Framework process and subsequently in the application of new planning policies and to inform numerous landscape, biodiversity and land management activities in other spheres. Future use is not restricted to the County and District Councils and it is anticipated that their partner organisations and a wide spectrum of stakeholders will make use of the assessment both strategically and locally.

The format of the assessment allows for future addition of more detailed information to supplement character area descriptions and provides a structure for the organised collection, storage and retrieval of landscape related data and for the monitoring of landscape change. In this context it is hoped that the assessment will serve to stimulate long term interest and debate in the landscapes of Aylesbury Vale which constitute a significant and valuable resource for the provision of green infrastructure for both the existing and future residents of the District.

A wealth of information is provided about the landscapes of Aylesbury Vale contained in the descriptions of the landscape character types and areas. The following is a short summary of the findings of the assessment by way of introduction to provide a flavour of the range of landscapes present and some of the features therein.

The Landscapes of Aylesbury Vale

Aylesbury Vale is a large administrative area with a rich diversity of landscape. The District is perhaps best known for its characteristic low lying vales and clay plateaus making up a large percentage of the area. These landscapes are interrupted by distinctive low hills and ridges providing contrast. The underlying geology and resulting physiographic characteristics heavily influence the landscape pattern resulting in a northeast to southwest grain.

A factor in the diversity of the landscape is the occurrence on the margins of Aylesbury Vale of a number of differing landscapes relatively small in area but prominent in nature. They form the backdrop to many views, for example; the marked chalk scarp of the Chilterns and its foothills along the southeast boundary; the greensand ridge at Great Brickhill; and the comparatively well wooded area including remnants of Whittlewood Forest - an ancient hunting forest, on higher ground to the north of Buckingham. All of these landscapes are more extensive in area beyond the District boundary.

Aylesbury is the major town with Buckingham, Winslow, Wendover and Haddenham comprising the other significant settlements. Beyond them and the transport corridors focussed on Aylesbury, the countryside is distinctly rural and tranquil, dominated by mixed agricultural use. The settlement pattern is dispersed often in well defined villages which form an important part of the local character, including hilltop villages such as Oving and Brill.

The agricultural land is dominated by arable and improved grassland but more valuable grassland habitats are present, notably neutral grassland and more locally calcareous and acid grasslands and the occasional area of fen. These areas provide floristic and faunal interest often reflected in biodiversity designations. Hedgerows form the boundaries to most fields and their pattern is a critical visual characteristic in many landscapes whilst the network provides valuable habitat and connectivity between other habitats.

One of the most distinctive characteristics of the landscape is the pattern and distribution of field enclosure particularly those landscapes with strong hedgerows and a wealth of mature hedgerow trees. The presence and pattern of hedgerows may be a defining factor in distinguishing the appearance of different landscapes and the historic succession of 18th and 19th century and parliamentary enclosures can often be seen contrasting with older field patterns. Much of the field pattern still reflects the Parliamentary enclosures and other enclosure of the 18th and 19th centuries and whilst hedgerow clearance has since occurred the incidence of ‘prairie farming’ is limited.

The distribution and age of woodland cover, historic parkland, orchards, water meadows and pasture reflect the nature of the land and its capability to support distinctive land use. The 20th century and improvements in farm management technology have been seen as a major influence in change of the landscape and its distinctive appearance. Overlying this is the impact of 20th century development, mineral extraction, military development, sports and golf courses and road building.

Woodland cover is low over much of the area and predominantly broadleaved in nature but is locally more extensive and a strong characteristic to the north of Buckingham and in the west of the District, reflecting the Whittlewood and Bernwood Hunting Forests respectively, at Whaddon Chase and on the Chiltern scarp. These areas include concentrations of ancient woodlands with associated habitat interest - some have been replanted with conifers. Due to the lack of woodland cover hedgerow trees are a vital component of the landscape, typically of oak and ash but around Aylesbury black poplar is also common.

Major rivers are limited to the Great Ouse in the north, which flows through Buckingham and to which much of the north of the District drains whilst much of the south is within the catchment of the Thame – a tributary of the river Thames. The Grand Union Canal and its arms to Wendover and Aylesbury provide local interest, character and habitat diversity. Elsewhere aquatic habitats and visual interest are provided by ponds and a small number of reservoirs and lakes.

Aylesbury Vale features a number of historic parks and gardens distributed throughout the area; at Stowe the parklands include a number of distinctive ornaments that are widely visible in the locality; the hill top manor and parkland at Waddesdon is the most well known of a number of historic houses and parklands created by the Rothschild family, others being at nearby Eythrope alongside the Thame and at Mentmore overlooking the vales to the east of Aylesbury; others include Claydon House and Liscombe Park.

In addition to the parklands, rare habitats and woodlands etc mentioned above there is within the overall framework of the landscape a wealth of historic interest and landscape features, often small scale in nature and providing local character. They include for example ridge and furrow, moated sites, veteran trees, commons and greens, physiographic features and the use of local building materials.

Acknowledgements

Jacobs acknowledges and thanks David Green, Sandy Kidd and Andy McVeigh of Buckinghamshire County Council for their inputs in the development of the methodology, in particular Matrix 2 of the Condition/Sensitivity analysis and for their detailed comment and contributions to the emerging characterisation.

On behalf of Aylesbury Vale District Council and the County Council, Jacobs would also like to thank all those who participated in the key stakeholder workshops whose contributions were valued both in terms of confirming and developing the process and its outputs.

Cover photograph courtesy of Buckinghamshire County Council. All other photographs by Jon Mullins, Stas Tereszczuk and Rebecca Hiorns of Jacobs.

Cross valley view looking southeast from LCA 9.6 Ashendon Ridge. The ridge in the background is LCA 9.7 Chearsley Ridge and beyond that the Chiltern Scarp LCA 11.1. The lower A418 Ridge (LCA 9.9) is hidden by the Chearsley Ridge.

1 Introduction

1.1 The Aylesbury Vale Landscape Character Assessment (AVLCA) has been prepared on the instructions of Aylesbury Vale District Council (AVDC) and Buckinghamshire County Council (BCC).

1.2 The AVLCA has been carried out to inform the preparation by AVDC of the Aylesbury Vale Local Development Framework (AVLDF) for Aylesbury Vale District, which will replace the Aylesbury Vale District Local Plan (1). The AVLCA is a background document to the AVLDF and has arisen from a need for detailed information on the environment and local character to inform the process of identifying the actual and relative potential of areas for future development and for green infrastructure purposes.

1.3 It is not the purpose of the study to definitively rank one area against another in landscape terms nor is it intended to identify in detail areas suitable for development. The study will however provide guidance to both the local planning authority and developers when deciding the type and scale of development that may be appropriate, whilst respecting the character of the landscape.

1.4 The AVLCA applies to the whole of the AVDC administrative area ('Aylesbury Vale') with the exception of:

- Aylesbury
- Buckingham
- Haddenham
- Wendover
- Winslow
- Sites for housing and employment development identified in the Local Plan (1)

1.5 The assessment has followed current national guidance for landscape character assessment (2) and the output data has been recorded and presented in a standardised form, which will enable use for other purposes and for future updating and expansion. Whilst the principal purpose of the AVLCA is to inform the AVLDF process, in the longer term the data can be used in decision making on a wide range of landscape, biodiversity and land management issues.

1.6 Previously district and local level landscape character assessments (LSCA) were prepared for AVDC and BCC to inform the Aylesbury Vale Environmental Character Assessment (AVECA) (3), which built upon the earlier district level landscape character assessment around Milton Keynes (4) again prepared for AVDC and BCC. The methodology that evolved from these earlier studies has been developed further to increase the integration of biodiversity and historic environment in the assessment process. Details of the methodology are included in Section 3.

1.7 In contrast with the earlier work there has been stakeholder involvement for the AVLCA. This comprised workshops where key stakeholders reviewed and commented upon the methodology and the emerging landscape characterisation. In addition, the draft AVLCA was published on the AVDC website in July 2007 as part of the environmental evidence base for the AVLDF in support

of the stakeholder consultation on the preferred options for the following Development Plan Documents:

- Core Strategy
- Aylesbury Allocated Sites

1.8 The landscape characterisation identifies:

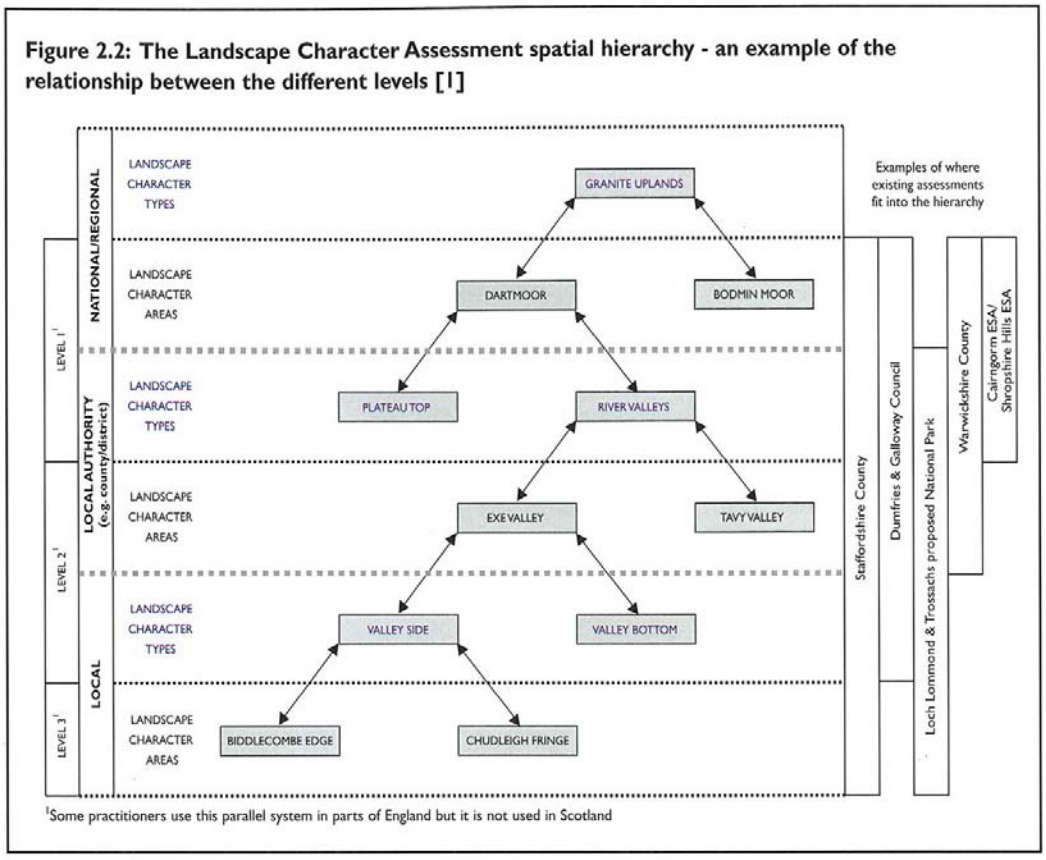
- 13 Landscape Character Types (LCT)
- 79 Landscape Character Areas (LCA)

Each LCT and LCA is described in detail in the Landscape Character Descriptions, however an overview of the landscape character of Aylesbury Vale is provided in Section 4.

2 Landscape Character Context

2.1 The most recent national landscape character assessment guidance (2) was issued by the Countryside Agency and Scottish Natural Heritage in 2002 and is supplemented by topic papers. The guidance recommends a method of fitting together a hierarchy at increasing scales of landscape character types and/or areas from 'National/Regional' level (typically 1:250,000) through 'Local Authority' (county and district) level (typically 1:50,000 or 1:25,000) to a more detailed 'Local' level (typically 1:10,000). The spatial hierarchy of landscape character assessment identified within the guidance is shown in Figure 1.

Figure 1: Landscape Character Assessment – Spatial Hierarchy



Extract from: Countryside Agency and Scottish Natural Heritage 2002 *'Landscape Character Assessment Guidance for England and Scotland'*

2.2 At the National/Regional level the Countryside Agency published a character assessment (5) in 1999 building upon the 'Character of England' map (6) published by the Countryside Commission and English Nature. Six Joint Character Areas (JCA) are shown within the Aylesbury Vale see Plan A and Appendix 1, but none are unique to the District. The extent of these JCAs beyond the Aylesbury Vale can be seen in Plan A. The boundaries of the JCAs are not precisely defined

due to the large scale of the assessment, which identifies and describes broad tracts of countryside of cohesive character.

2.3 At the Local Authority level (county level) a landscape character assessment was published in 2000 by BCC within the Landscape Plan for Buckinghamshire ('The Landscape Plan') (7). The Landscape Plan was prepared following the national guidance current at that time. BCC adopted the Landscape Plan as supplementary planning guidance in October 2000. The term Landscape Character Zone (LCZ) was used for the 13 areas identified in the county level assessment. Ten LCZs (Z1 to Z10) occur within Aylesbury Vale, see Plan B and Appendix 2. Due to the large scale of the assessment the boundaries of the LCZs are not precisely defined and indicate the general location of the changes in character.

2.4 The Landscape Plan (7) in paras 13, 20 and 65 acknowledges future preparation of district and local level LSCA. These assessments will serve at a more detailed level for a range of uses including informing strategies for assessing new forms of development. BCC recognises that the preparation of Local Authority level assessment (at the district level) will take place in response to local needs and accepts that full coverage of the county to a consistent standard and methodology will be built up over a number of years.

2.5 Previously LSCA at the Local Authority (district level) has been carried out on two occasions for parts of Aylesbury Vale. The first assessment (4) was carried out in 2003 and restricted to areas abutting and extending across the administrative boundary with Milton Keynes, also with Bedfordshire and Northamptonshire. In 2005, to inform the early stage of the AVLDF process a landscape character assessment was carried out around the five main settlements in Aylesbury Vale as part of the AVECA (3).

2.6 Both Local Authority (district level) assessment identified LCAs, which are shown on Plan C, and the accompanying reports give full descriptions of each LCA to standardised formats. Paras 3.10 and 3.11 set out how these assessments have been carried forward into the Aylesbury Vale wide AVLCA.

2.7 Within Aylesbury Vale the AVLCA supersedes all the previous Local Authority (county and district) level assessments and provides an assessment to current guidance and in greater depth at both the county (LCT) and district (LCA) levels.

2.8 To assist in the preparation of LSCAs, the Countryside Agency in 2001 published the National Landscape Typology (NLT) (8) prepared at a scale of 1:250,000. The NLT systematically divides the landscape into discrete and relatively homogeneous tracts of land within which the physical, biological and historical elements occur in repeating patterns. Further details of the NLT are given in paras 3.16 – 3.19, Appendix 3 and Plan 1.

2.9 BCC, Milton Keynes Council and English Heritage have collaborated to prepare the Buckinghamshire and Milton Keynes Historic Landscape Characterisation (9) published in 2006. The characterisation comprises a detailed analysis of the historic development of today's landscape which is presented in a wide range of plans and technical appendices. This work is largely desk based but constitutes an important data source for use in the preparation of this landscape character assessment. (Topic Paper 5 – Understanding Historic Landscape Character (2) is a useful reference in this context.)

3 Methodology

Landscape Character Assessment – The systematic division of the countryside into discrete and relatively homogenous units of land, within which the constituent physical, biological historical and cultural elements occur in repeating patterns and share certain aesthetic characteristics.

National Guidance and Terminology

3.1 The landscape has evolved over many years and has been created by the interaction of the natural environment and human activities, in particular the combination of physical, biological and cultural influences. Physical influences such as geology and landform, together with the overlying pattern of settlement and land use are key determinants of landscape character.

3.2 Many judgments regarding landscapes are subjective and hence are open to equally valid but different individual interpretations. The process of landscape assessment has evolved so that current practice is based on a logical and well thought out procedure. This approach breaks the analysis down into the component parts that collectively make up the landscape and enables decisions to be revisited over time as well as enabling different assessors to understand and contribute to the decisions reached.

3.3 The current national guidance for LSCA issued by the Countryside Agency and Scottish Natural Heritage in 2002 (2), recommends the method of fitting together a hierarchy of landscape character types and/or areas from National/Regional through Local Authority (county and district) levels to a more detailed Local level.

3.4 Characterisation for this study at the Local Authority level relates to the following levels of landscape characterisation, whilst details of National/Regional level characterisation are given in Section 2. This exercise has not been influenced by the existing Local Authority (county level) LSCA (7), which was carried out at a strategic scale and does not define precise boundaries.

Landscape Character Types (LCT) occurring at the Local Authority level are generic in nature and have a distinct homogeneous character. They may occur anywhere in the UK but wherever they occur they will have broadly similar pattern of geology, landform, soils, vegetation, and land use etc.

Landscape Character Areas (LCA) occurring at the Local Authority level are discrete geographical areas within a particular LCT. Each has its own individual character and identity but shares generic characteristics with other areas within the LCT. Within defined LCAs further subdivision may be undertaken at the 'Local' scale. This was undertaken in the AVECA (3) where Landscape Character Sub Areas (LCSA) were identified using the same overall principles. LCSAs represent subtle variations within an LCA in relation to one or more characteristic or in terms of condition. LCSAs have not been identified by this study.

3.5 Factors used to assess landscape character include:

- Physiographic - geology, soils, topography, vegetation, hydrology
- Biodiversity – vegetation, ecology

- Human Activities - land use, settlement, field enclosure, archaeology, landscape history
- Aesthetics - form, scale, enclosure, unity, colour, views, cultural perceptions

Methodology - General

3.6 The methodology for the AVLCA is based upon and consistent with current national guidance (2). It is an extension and development of the methodology used for previous LSCA in Aylesbury Vale (3 & 4). The key differences are:

- More detailed consideration of the following environmental factors using data from the GIS based Buckinghamshire Environmental Character System (BECS) established by BCC:
  - Historic environment – the Historic Landscape Characterisation (HLC) of Buckinghamshire and the subdivision of Aylesbury Vale in to historic landscape zones (HLZ)
  - Biodiversity – the Integrated Habitat Survey (IHS) of Buckinghamshire
  - Physiography – the draft Physiographic Model of Buckinghamshire
- Identification and description of generic LCTs and presentation of LCAs in the context of LCTs
- Stakeholder involvement

Hence a modified process is required to incorporate consideration of additional data sources and to enhance transparency in the derivation of LCAs and their boundaries.

3.7 For the purpose of this study the following existing and future urban areas were excluded from the assessment and appear as blank areas on the plans:

- Aylesbury
- Buckingham
- Haddenham
- Wendover
- Winslow
- Sites adjoining the above (where applicable) for housing and employment development identified in the Local Plan (1)

All other settlements are included within the character assessment however the urban character of the settlement itself is not assessed except in general terms of overall character and relationship to the surrounding landscape.

3.8 Having defined the scope of the study the LSCA was carried out in four interactive stages which are summarised in the methodology flowchart - see Figure 2A – 2C Through the stages the scale of the process progresses downwards as the assessment moves from broad characterisations to the delineation of boundaries and description of local character. The key outputs of each stage are identified on the methodology flow chart. The four stages are:

Stage 1 – Desk study
Stage 2 – Field study
Stage 3 – Analysis - classification and description
Stage 4 – Stakeholder participation

The methodology for Stages 1 and 2 is identical to the methodology used for the AVECA. The methodology for Stage 3 builds on the methodology of the earlier studies whilst Stage 4 is unique to the AVLCA.

3.9 The desk study gathered information to provide the context for the LSCA and involved the preparation of map overlays of different landscape factors as the basis for defining areas of common character, which can then be tested in the field. There is an interactive link between the desk and field study with the desk study informing the field study however the information gathered from the field study will identify issues, which may be resolved by further analysis and reference to the desk studies and to spatial data sets. The process of defining landscape character, in particular the drawing of LCA boundaries is iterative and the national guidance promotes stakeholder involvement. This occurred initially at Stage 3 to test the evolving methodology and emerging landscape characterisation with a group of key stakeholders. Further and more extensive stakeholder involvement took place at Stage 4.

3.10 LCAs identified and described under previous LSCA (3 & 4) have been revisited and updated to relate to the modified methodology as follows:

- AVECA (3) – Stages 3 and 4 only where LCAs have been reviewed in order to confirm/adjust boundaries (see para 3.26 on). This is because Stages 1 and 2 of the AVECA are identical to the AVLCA. The application of Stages 3 and 4 has lead to a number of revisions to the boundaries of LCAs first identified by the AVECA.
- LSCA around Milton Keynes (4) – Stages 1-4, ie no direct account taken of this earlier assessment. This is for consistency as this study did not make use of the NLT; however the LCAs identified under this study have been used as a reference data set at Stage 3 (see para 3.29).

3.11 The standard description format adopted for the AVECA has been extended by:

- Addition of LCT summary description and location plan
- Presentation of LCAs by LCT
- Extension of LCA descriptions by inclusion of:
  - Small scale location plan showing area of LCA in relation to LCT and Aylesbury Vale boundary
  - Small scale location plan on OS base
  - Additional descriptive categories for:
    - Biodiversity
    - Historic environment
    - Designations – listing of statutory and local designations (NB Excluding Listed Buildings and local landscape designations)

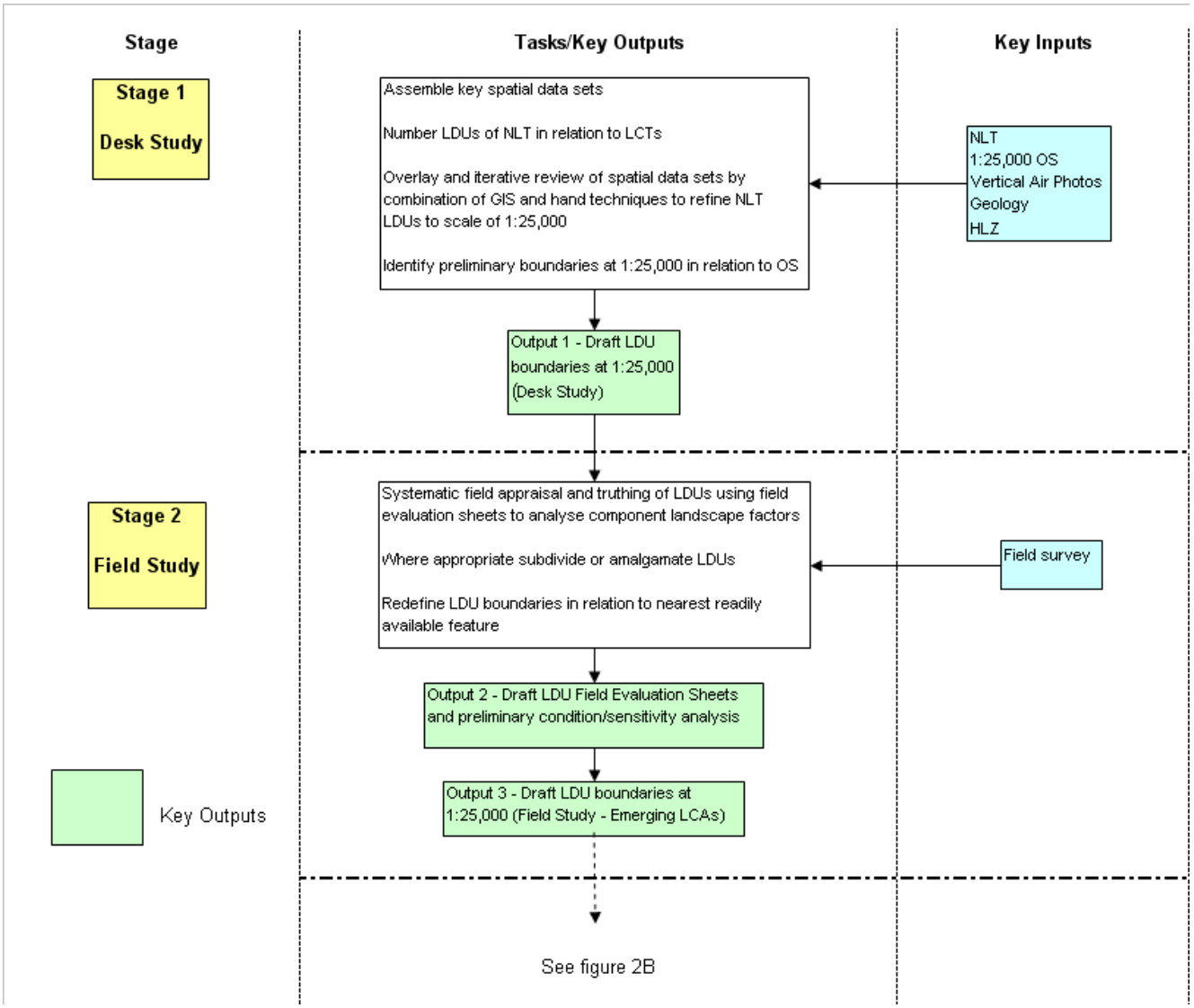
Stage 1 - Desk Study

3.12 The Stage 1 desk study process may be summarised as:

- Obtaining and assembly of data
- Preparation and combination of data in suitable formats

- Interrogation of each key spatial dataset to sub divide into areas of common attributes
- The overlap and interrogation of the data sets together to sub divide the study area into areas in which there is commonality within combined data sets
- Preparation of maps on an OS base showing the areas of combined common attributes for use in the field survey to test these findings and to combine with visual and other considerations

Figure 2A Methodology Flow Chart: Stages 1 and 2



3.13 The purpose of this stage is to review the data available and to identify areas of common attributes using principally data that is available across the whole study area or can be derived from map and air photo interpretation. All boundaries between these areas are approximate and are typically drawn in general terms rather than in relation to individual features on the OS base. These areas of common attributes are known as **Landscape Description Units** (LDU). LDUs are the 'building blocks' of the landscape and they form the framework for subsequent evaluation.

For the AVLCA the data review element of Stage 1 was simplified by the use of the National Landscape Typology (NLT) (8).

3.14 Existing map-based data was assembled as well as accumulating information readily available regarding historic and cultural influences, nature conservation interests and land use. A listing of the data used is contained in Appendix 4, however the listing includes data used locally only, and in conjunction with the biodiversity and historic environment considerations predominantly at Stage 3. Plans 1 - 4 illustrate key data sources. (The data for topography, biodiversity and historic environment has been presented on several plans for ease of interpretation).

Data Review

3.15 The data review process comprises an assessment of natural and cultural factors comprising principally topography, geology, land use and settlement pattern. A key step in this process is the preparation and analysis of simplified map overlays for each dataset. The map based data is then overlain and interrogated using a combination of GIS and hand techniques to divide the countryside into LDUs - discrete and relatively homogenous units of land, within which the constituent factors occur in repeating patterns and share common characteristics. For each data set this process requires the assessor to first consider the whole of the study area to recognise broad patterns which are then progressively refined by closer examination. This is repeated for each data set prior to overlay and assessment in combination. The LDUs are transferred to the OS base in general terms as a basis for field study. Inputs at this stage were reduced by the use of the NLT and comprised testing of the NLT data and refinement of its output, see para 3.20.

3.16 The NLT is a comprehensive study available in GIS format that has been prepared by Natural England to assist in the preparation of LSCAs, and to provide a common basis for assessments across the country. Nevertheless there is no requirement in the national guidance to make use of the NLT. The consistency and applicability of the NLT data within Aylesbury Vale was tested prior to the decision taken to adopt the NLT as a key data set.

3.17 The desk based NLT identifies LDUs at a scale of 1:250,000 grouped within LCTs. It has been used to inform the process of identifying LDUs at a smaller scale of 1:25,000 suitable for the purposes of LSCA at the Local Authority level.

3.18 The LDUs divide the study area in relation to individual attributes for which a coding is given. These generic descriptions are applicable throughout the UK and hence codings would be similar to units in other parts of the country. Adjoining LDUs may have the same or a different coding for a particular attribute. In the NLT the combination of LDUs of similar characteristics leads to the definition of LCTs again with a representative coding. The process of LDU mapping involves four main phases of analysis (Tasks 1-4) – all mapping is to generalised boundaries, ie not following ground features.

Task 1 Physiographic analysis
Task 2 Ground type analysis
Task 3 Landcover analysis
Task 4 Cultural pattern analysis

3.19 The output of the NLT for the study area is shown on Plan 1. There are 45 LDUs within 12 LCTs. Due to the large scale and generic nature of the LDUs and LCTs the NLT does not include detailed description. However, to assist understanding of the relationship between LDUs and LCTs Appendix 3 comprises a background paper for LCTs prepared by Natural England, summary attribute coding information and a tabulation for use with Plan 1. The NLT has been prepared for national use and hence the definitive attribute codes for LCTs (see Appendix 3B) and glossary of terms for LDUs (see Appendix 3C) are generic and have not been tailored for local use.

Identification of Landscape Description Units

3.20 The LDUs and LCTs of the NLT were reviewed at a scale of 1:25,000 and overlain with map based data -(notably solid and surface geology and historic landscape zones (HLZ) identified by BCC), aerial photographs and 1:25,000 Ordnance Survey (OS) maps to test applicability to the area and to develop further at this scale. Study of the aerial photographs suggested variations in field size and vegetation cover that although not significant enough to alter an area's classification in terms of national LDU, might appear significant enough on the ground to warrant a separate LCA. Similarly the 1:25,000 OS maps gave an indication of where other elements in the landscape such as major roads, pylon lines and industrial areas might have a significant enough impact to create a different LCA. Comparison of the LDUs with the 1:25,000 OS map also showed that the LDUs tended to divide escarpments into separate narrow units for the foot, steep slopes and top, suggesting that perhaps in some sloping areas it might be appropriate to amalgamate some LDU for simplification and the purpose of identifying LCAs that are readily recognisable to all users of the assessment. Elsewhere sub division of LDUs might be appropriate to reflect internal difference notable at a scale of 1:25,000.

3.21 The output of this desk exercise was a provisional subdivision of the study area into draft LDUs at a scale of 1:25,000, in which there was an apparent good level of consistency in all attributes. Further subdivision was also noted where local variation in one or more factors occurred but was insufficient to support the definition of a separate LDU. Hence, through further subdivision of the NLT data, working at a larger scale and with local knowledge and closer examination of key data sets the desk study process identified draft LDUs with tentative boundaries related to features shown on the OS at 1:25,000. These draft LDUs comprising Output 1, were then available for field-testing and with potential to form LCAs at the district level.

Stage 2 - Field Study

3.22 The Stage 2 field study process may be summarised as:

- Systematic field survey to test the LDUs and LCTs derived from Stage 1
- Consideration of additional field based factors
- Refinement of LDUs to take account of field data
- Definition of preliminary LDU boundaries
- Systematic record of findings

3.23 Landscape assessors working in the field systematically appraised the LDUs derived from the desk study and defined their broad character using 'field evaluation sheets' (see Appendix 5) supplemented by photographic records. Field evaluation sheets and photographs informed the

later process of drafting a description and illustrating each LCA – see Stage 3, and the former (updated) was also used in the preparation of a condition/sensitivity analysis for each LCA – see Section 5. Field assessment was carried out principally from publicly available viewpoints with extensive use made of the public right of way network.

3.24 The field evaluation sheets are designed to analyse the component factors of the landscape, to reach a series of decisions on the following subsections which are not readily assessed using map based data and air photo interpretation alone:

- Aesthetics
- Key characteristics
- Visual unity
- Ecological integrity
- Condition of heritage features (tree cover, field boundaries, visible historic environment)
- Impact of built development

Stage 2 comprises a visual assessment combined with further data collection, which together are used to corroborate, amend and supplement the outputs of the desk study. The field assessors did not introduce or make reference to additional map based data sets at this stage. Subsequent field verification where required in relation to these datasets was undertaken as part of Stage 3, see para 3.36.

3.25 The boundaries of the desk study LDUs were assessed and where appropriate redefined, and the characteristics of each LDU were more fully established. LDUs constituting a potential LCA in their own right were identified along with scope for merger or subdivision of LDUs to achieve consistency of characteristics. The outputs of the field study comprise Outputs 2 and 3 of the study:

- Output 2 – Draft LDU field evaluation sheets
- Output 3 - Draft LDU boundaries

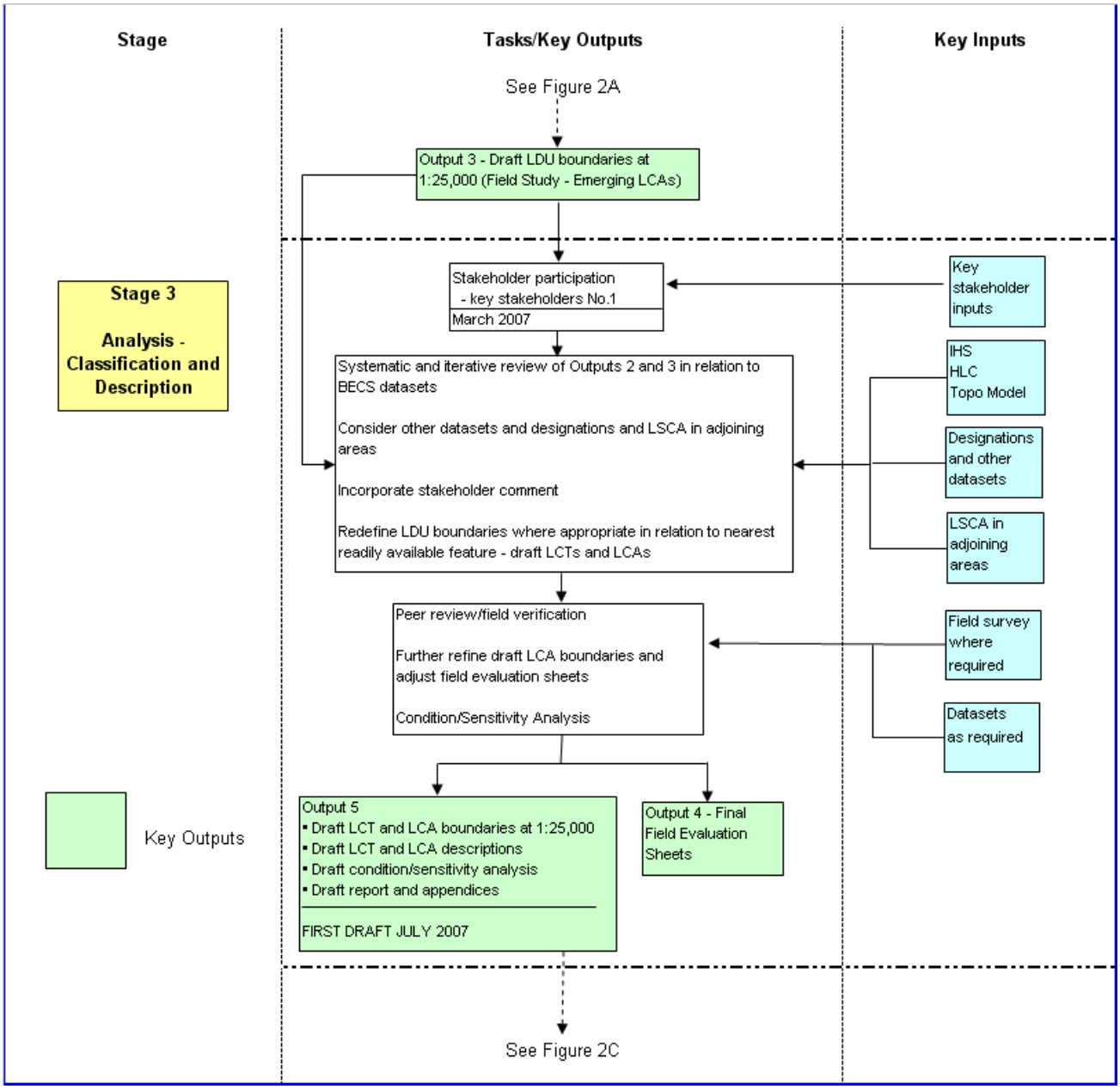
At this stage the LDUs represent the emerging draft LCAs.

Stages 3 and 4 – Analysis, Classification and Description and Stakeholder Participation

3.26 Stages 3 and 4 may be summarised as:

- Use of additional data sets to adjust the emerging landscape characterisation
- Incorporation of stakeholders views
- Peer review
- Definition of boundaries for draft LCAs
- Drafting of LCT and LCA descriptions
- Preparation of First Draft AVLCA for further stakeholder involvement
- Undertaking condition/sensitivity analysis
- Incorporation of stakeholders views
- Preparation of AVLCA

Figure 2B : Methodology Flow Chart: Stage 3



3.27 Stage 3 represents fine tuning where, in conjunction with review of additional data sets and inputs from key stakeholders, the emerging draft LCAs have been defined from the LDUs via a systematic and iterative process of analysis, classification and description of the outputs of the desk and field studies. The outputs of Stage comprise Outputs 4 and 5 of the study:

- Output 4 – Final field evaluation sheets – applies only where significant change in area is made during Stages 3 and 4
- Output 5 – First Draft AVLCA

Stage 4 covers all inputs made following the publication of the First Draft AVLCA. This stage involves further refinement following stakeholder comment on the First Draft AVLCA leading to the updated version of the AVLCA - Output 6. The characterisation is shown at a small scale in Plan D for ready reference and in detail at 1:25,000 on an OS base in Plan E (Quadrants 1-4). The LCTs and LCAs are described in the 'Landscape Character Descriptions' section of this report.

Review of Additional Datasets

3.28 Additional data sets have been used to fine-tune boundaries and descriptions. The principal datasets introduced at Stage 3 are component parts of the BECS. (The AVLCA forms the first landscape component of this database). The BECS datasets used are listed in para 3.6, see Plans 2B to 2D, 3A to 3B and 4A to 4E. It should be noted that the NLT and the desk and field studies all include consideration of these factors in general terms.

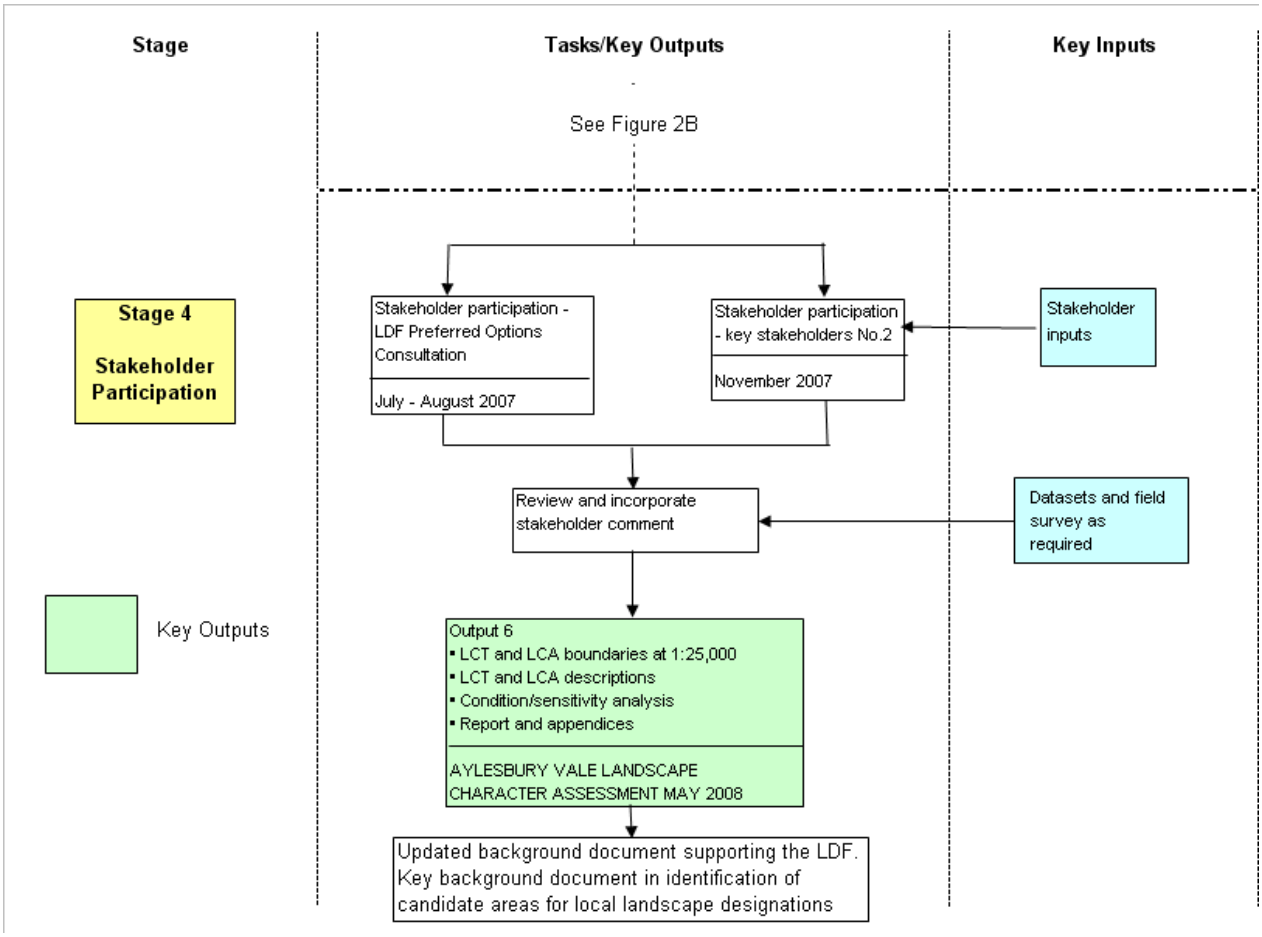
3.29 Further datasets (see Appendix 4) introduced at this stage comprised the following, which in contrast to the BECS datasets include predominantly point based information or data relating to small parts of the overall survey area:

- Biodiversity and historic environment designations – see Plan 3D and 4F respectively
- UK Biodiversity Action Plan Habitats – see Plan 3C
- LCAs identified by the earlier district level landscape character assessment around Milton Keynes (4) – see Plan C
- LSCA in adjoining administrative areas (10) – see Plan F
- Historic environment sensitivity

3.30 The draft LCAs and their boundaries were reviewed in detail in relation to the additional datasets and closer examination of the previous data sets (notably the IHS and HLC), to identify relationships with mapped data. All boundaries were included in this exercise. The principal objective was to establish how the draft boundaries related to the mapped data and to redraw boundaries where practical to best reflect variations and features within that data. Landscape is a continuum and in some areas change is slight or very gradual and hence the boundaries between LCAs may not always follow strong definitive changes in landscape character. Similarly the biodiversity and historic environment data may not follow strong patterns at the survey scale. In many instances the draft boundaries already reflected changes in the patterns of biodiversity and historic environment. Elsewhere boundaries were redrawn to reflect biodiversity and/or historic environment factors that may not have been readily apparent to the field assessor and where a revised boundary location remained consistent in the context of other factors.

3.31 An iterative approach was used involving overlay of the draft LCAs with the BECS and other datasets both individually and in combination. A proforma was adopted to record this process – see Appendix 6. No priority or weighting was given to any data set or landscape component, rather the strength of changes was assessed. The boundaries of the formal designations listed in para 3.29 were taken account in this process and where practical and appropriate draft LCA boundaries were drawn to recognise their extent. The boundaries of LSCA in adjoining areas were reviewed, however the methodologies and scales do vary and hence in some locations boundaries do not necessarily meet with those of character areas defined beyond the administrative boundary of AVDC.

Figure 2C Methodology Flow Chart: Stage 4



3.32 This exercise yielded a much refined set of LCAs and boundaries. An iterative process then ensued with numerous modifications being made following consideration of key stakeholder participation at Stages 3 and 4 and through peer review and field verification.

Key Stakeholder Participation

3.33 During Stage 3 a stakeholder workshop was held on 27 March 2007 for an invited group of key stakeholders. The workshop comprised a presentation on the background and methodology and the emerging characterisation followed by open forum review and discussion of the LCTs and LDUs derived from Stage 2 and early Stage 3 work. The invitee and attendee list for the workshop is included at Appendix 7.

3.34 The workshop yielded helpful comment and views in particular on the naming of draft LCAs, local boundary and character information and relationships with LSCA in adjoining administrative areas. These comments were taken on board during Stage 3 in further improving the characterisation.

3.35 The First Draft AVLCA was published in July 2007 as part of the environmental evidence base for the AVLDF at the time of the stakeholder consultation on preferred options which took place in July and August 2007. Subsequently the Stage 4 key stakeholder workshop took place on 29

November 2007. The range of organisations invited was extended – see Appendix 7. Comment and views on the draft AVLCA were taken in to account during Stage 4.

Peer Review/Field Verification

3.36 LSCA is not an exact science and hence peer review was sought in the determination of a number of boundaries including by field verification where appropriate. This facility was used mainly to resolve uncertainties arising from the review of additional datasets but also included random sampling to test for consistency. This is particularly important where an assessment is carried out to a standard methodology by field surveyors acting independently following an initial joint training and familiarisation period.

Boundary Definition

3.37 LSCA at a scale of 1:25,000 requires the accurate definition of boundaries to LCAs and LCTs. Boundaries may readily follow clearly defined changes in the appearance and character of a landscape, eg around the edge of a settlement. However, more typically in lowland areas there is a much more subtle transition in landscape character. Hence the boundary of an LCA may reflect a transition zone where the balance of the defining characteristics has changed from one area to another.

3.38 LCA boundaries have been defined to follow the nearest readily recognisable boundaries or features that would be defensible in the LDF and future planning processes. Where no suitable physical boundary is present then it is appropriate for a boundary to follow a contour line or a break of slope.

3.39 Boundaries have been plotted at a scale of 1:2,000 against a 1:10,000 OS base. At this level of detail practical decisions have been made regarding boundary location, eg in relation to which side of a property or road. Such decisions rely on data available and field assessment and hence boundaries represent the best professional judgment. It is intended that boundaries are accurate at a scale of 1:2000 and hence caution should be exercised if boundaries are viewed at greater scales.

3.40 The boundaries of LCAs (and LCTs) rarely coincide with administrative boundaries. Hence LCAs and LCTs on the margins of the Aylesbury Vale will extend across the AVDC boundary and the bulk of an LCA may lie in an adjoining administrative area. In order to identify with certainty the LCAs occurring within the study area and to allow an accurate description it is necessary to be aware of determine the approximate full extent of LCAs extending beyond the study area. Reference has therefore been made to LSCA carried out in adjoining administrative areas where available (9) in the definition, description and boundaries of LCAs, but LCA boundaries have not been defined beyond the administrative boundary of AVDC. All detailed description of features relates to that part of a LCA within the AVDC boundary. The relationship of LCAs with LSCA beyond the Aylesbury Vale is shown on Plan F. A number of adjoining assessments have published boundaries of character areas extending into Aylesbury Vale. See also para 3.31.

3.41 The boundaries of draft LCTs may differ quite significantly from the general boundaries of the LCTs of the desk based NLT, which was undertaken at a smaller scale; nevertheless the overall

pattern was found to be generally comparable. During the assessment it emerged that a small number of LDUs identified by the NLT were considered to belong to a different LCT than that allocated by the NLT. This may be expected as the NLT is desk based only and visual factors determined during the field study are very significant in conveying and imparting landscape character.

3.42 LCAs are aggregated within an LCT and do not normally occur within one or more LCT. However, due to strong local influence of a principal factor a situation may arise where a LCA determined principally on that factor lies within two LCTs. This has occurred within the AVLCA where the strong influence of the historic landscape associated with Hartwell House is superimposed on the boundary between LCT 8 and LCT 9 where there are gradual changes in landform and geology. A separate LCA (LCA 9.9) has been identified to relate solely to the area of the historic landscape and for mapping purposes has been included in LCT 9 within which the bulk of the LCA occurs.

Condition/Sensitivity Analysis

3.43 The LDU field evaluation sheets prepared during the field study are the starting point for a matrix based condition/sensitivity analysis. The field evaluation sheets were revisited during Stage 3 to make adjustments for boundary revisions or for the merger or splitting of LDUs prior to undertaking the condition/sensitivity analysis for each LCA. For the purposes of the Draft AVLCA a condition and sensitivity analysis was undertaken based solely on the updated field evaluation sheets. This is superseded by a revised analysis incorporating a higher level of biodiversity and historic environment input as described in Section 5.

LCT and LCA Descriptions

3.44 A standard description format has been adopted for the AVLCA (see also para 3.11) in order to present all LCT and LCA information in a consistent and comparable way and to a common level of detail. LCTs are described simply in general terms whilst LCAs are described in relation to a standard set of headings. Nevertheless as the character, complexity and area of LCAs differs, accordingly the volume of text needed to describe them will also vary. There is some overlap between the headings but descriptions have been drafted wherever possible to minimise repetition. Hence it is important that LCA and LCT descriptions are read in full for each area to fully appreciate the character that is represented. The content and basis of the text provided under the standard headings can be summarised as follows:

Key Characteristics – A bullet point summary is provided of the key characteristics of the LCA which might be expected to apply throughout its area, although with local variations in strength and emphasis. Key characteristics are stated in general terms and will be drawn from the full range of physiographic, land cover, cultural, biodiversity and historic environment factors defining the LCA. Characteristics may be unique to an LCA however consistency may be expected in the characteristics of LCAs within a LCT.

Distinctive Features – A bullet point summary is included of features which are distinctive within the LCA. These may be locally based, eg a prominent building or local landform such as a knoll, or may apply in only a part of the area, eg willows along a watercourse. Where notable features are widespread within the LCA eg black poplar or ridge and furrow, these may be listed as a key characteristic, where they are not they will be listed as a distinctive feature.

Intrusive Elements – A bullet point listing is provided of features either within or immediately adjoining the boundaries that detract significantly from the landscape and overall character of the LCA. Whilst predominantly visual in nature there may also be aural effects reducing tranquillity and perceptions of the landscape. The extent of intrusion may be localised eg unsympathetic development, or more general such as major roads and pylon lines.

Location – The approximate location of the LCA is described in general terms to supplement the two small scale plans provided for each LCA to show:

- Location within the LCT
- LCA boundaries on an OS Base

Landscape character – A broad summary is provided drawing together the character that defines the LCA as set out under other headings. This should be read in conjunction with the key characteristics and distinctive features.

Geology – The broad geology of the LCA is identified – see also Plan 2A which shows both solid and drift geology in a simplified format.

Topography – The principle landform(s) of the LCA are described and the height range stated in metres above Ordnance Datum (AOD). Reference should also be made to Plans 3B to 3D depicting topography in terms of slope, physiography and elevation, and to the 1:25,000 OS.

Hydrology – The hydrology of the LCA is described in general terms identifying the principal hydrological features. Specific reference to minor drainage channels is made only where particularly relevant to the character of the LCA. Hydrological features have been sourced from the 1:25,000 OS, air photo interpretation and from field observations.

Land use and settlement – The overall pattern of land use is described in general terms with specific reference to the incidence of settlements. This information has been sourced from a combination of the 1:25,000 OS, air photo interpretation, IHS and from field observations.

Tree cover – The extent, location and form of woodland and tree cover is described with key species information where recorded. Tree cover has been identified from air photo interpretation, IHS and from field observations.

Biodiversity – The IHS (Plan 3A) was the key source interpreted to inform the descriptions. For ease of use the grassland and UK Biodiversity Action Plan (UKBAP) (11) data was presented separately (Plans 3B and 3C). Other data sources used to inform the descriptions include but are not exclusive to:

- Biodiversity designations (Plan 3D).
- Assessment of ecological connectivity undertaken for Matrix 2 of the condition/sensitivity analysis including notes taken about the condition of hedgerows and connectivity provided by watercourses
- Field evaluation sheets from Stage 2

The biodiversity descriptions should be read in conjunction with the descriptions of tree cover, land use and hydrology and with the LCT descriptions. The biodiversity descriptions relate principally to the habitats and level of interest present and give only very limited species information. Mention is made of habitats of District significance (PHTs and BHTs) and to designated areas however this is not comprehensive and thus reference should be made to Plans 3C and 3D for a fuller picture.

Historic environment – The principle sources informing the descriptions were the HLC (9) (Plans 4A-4D, HLZs (Plan 4E) and the historic environment designations (Plan 4F). These descriptions were prepared by BCC.

Designations – A simple summary is provided of the number of designations present in each LCA whilst Plans 3D and 4F show the distribution of designations to which individual reference may be made under other headings.

The LCA descriptions are not informed by a detailed field assessment of biodiversity and historic environment interest. They are intended to provide a flavour of the landscapes present and are not intended as an exhaustive coverage and description.

General

3.45 In parallel with the desk study and fieldwork a limited literature review was carried out. This provided background information and informed the process of defining LCAs. A selection of background documents is included in Appendix 9.

3.46 During the preparation of the LSCA no account was taken of national landscape designations (Area of Outstanding Natural Beauty) or local designations (Areas of Attractive Landscape and Local Landscape Areas) within the Local Plan (1). This is because the designations are principally for development control purposes and are not derived from a formal landscape character based assessment and description to current guidance. The occurrence of other non-landscape designations was taken into account in the definition of LCA boundaries at Stage 3, in particular English Heritage Registered Parks and Gardens and Conservation Areas.

3.47 The assessment of landscape character and the preparation of LCA descriptions have been made in relation to data available in 2006/7 and field observations made in the period October 2006 to December 2007. The landscape undergoes a process of continuous change. Hence over time elements of the descriptions may no longer apply, eg visual detractors may be removed, new woodland may be planted etc, whereas other factors such as geology and landform will be constant. Change in land use and settlement pattern may be expected to have the most influence, but given the breadth and scale of the assessment these changes would need to be significant before the overall character is affected.

3.48 The format of the assessment allows for the future addition of more detailed and changed information to supplement and update the LCA descriptions. Its structure forms an ideal basis for the organised collection, storage and retrieval of landscape related data for use in special studies and for the monitoring of landscape change.

Exemplar

3.49 The methodology is illustrated by way of an exemplar contained in Appendix 8 charting the evolution of LCA 8.1 Marsh Gibbon Vale. The appendix contains a written summary for each stage of the assessment process accompanied by:

- Extracts from the key data plans
- Field evaluation sheet
- Stage 3 record sheet
- Condition/sensitivity matrices

4 Landscape Character of Aylesbury Vale - Overview

4.1 The landscape character assessment has identified 13 LCTs within which there are 79 LCAs at the District level. Aylesbury Vale has thus been subdivided into a total of 92 units for detailed description purposes – see Plans D and E and the summary preceding the 'Landscape Character Descriptions' section of this report. LCTs and LCAs extend beyond the District boundary where their boundaries have not been defined by this assessment (see also para 3.40).

4.2 Aylesbury Vale is a large administrative area and has a diverse landscape character as evidenced by the range of LCTs. The underlying geology and resulting physiographic characteristics heavily influence the landscape pattern. The grain of the countryside is generally northeast to southwest. The occurrence of a number of small areas of LCTs on the margins of the Aylesbury Vale is a factor in this diversity.

4.3 Major rivers are limited to the Great Ouse in the north, which flows through Buckingham. The Great Ouse valley, and its tributary valleys to the north separate the Wooded Ridge (LCT 1) to the north from less well wooded Undulating Clay Plateau (LCT 4) to the south. In character terms the valley system may be subdivided into the Valley Bottom (LCT 3) comprising the shallow valley of the Great Ouse to the east of the town and the Incised Valleys (LCT 2) comprising the Great Ouse to the west of the town and tributary streams that cut into the Wooded Ridge to the east and west of Buckingham.

4.4 The Wooded Ridge is a tranquil and remote area with a high woodland cover including remnants of Whittlewood Forest an ancient hunting forest and the historic gardens and parklands of Stowe. The parkland includes a number of tall ornaments that are widely visible in the locality.

4.5 In contrast to the south of Buckingham the valleys of the Great Ouse tributaries occur within the Shallow Valleys (LCT 5). These valleys extend southwards in a central swathe between the two separate occurrences of the Undulating Clay Plateau. The Undulating Clay Plateau is a rural area with gentle topography and a dispersed settlement pattern in well defined and often large villages. The small town of Winslow is located on a small ridge centrally within this part of Aylesbury Vale.

4.6 The Undulating Clay Plateau extends eastwards into Milton Keynes and to a further occurrence of the Shallow Valleys formed by the Ousel another tributary to the Great Ouse. Beyond the valley is the clearly defined scarp face of the well-wooded Greensand Ridge (LCT 6), which is widely visible from the valley and as a backdrop in views from the eastern parts of the Undulating Clay Plateau. The Grand Union Canal follows the Ousel valley.

4.7 In the west of Aylesbury Vale the Wooded Rolling Lowlands (LCT 7) form a north-south spine including parts of the ancient hunting forest of Bernwood. The Wooded Rolling Lowlands define the low-lying landscapes of the Vale (LCT 8) further to the west centred on Marsh Gibbon and Panshill.

4.8 The Low Hills and Ridges (LCT 9) occur in a series of outcrops of differing elevations arranged generally northeast – southwest creating a number of distinctive hills contrasting with the much lower landscape of the Vale and of the southern parts of the Shallow Valleys, all draining to the

river Thame. These hills which define the northern extent of much of the Vale landscapes are marked by well-defined settlements on the higher ground, for example at Oving or on the side slopes as at Quainton. A number of historic landscapes are associated with the hills, notably at Brill and the parklands of Waddesdon Manor and Eythrope.

4.9 The Vale landscapes (LCT 8) are low lying often very flat for example to the east of Aylesbury and characterised by low woodland cover, although in some parts the incidence of hedgerow trees and the low topography often give an impression of a much higher tree cover. The county town sits within the Vale and is clearly visible in views from the higher ground to the north within the Low Hills and Ridges and the southern extremities of the Undulating Clay Plateau, notably at Weedon located on a notable ridge extending into the Vale. The Vale and Aylesbury are also clearly seen in the wide vistas available from the Chilterns Scarp (LCT 11), which forms the backdrop to many views in the Vale, and from the elevated viewpoints to the north. Aylesbury is the focus for busy communications corridors that radiate from the town nevertheless the strong definition of the town has ensured that adjoining landscapes have retained a rural feel. A salient of Hertfordshire extends into the Vale.

4.10 Within Aylesbury Vale the Chilterns Scarp orientated northeast - southwest occurs in four locations due to the dry valleys of the Chalk Valleys (LCT 13) that cut through it, and the administrative boundary with Hertfordshire. The scarp is heavily wooded in parts notably above Wendover and Halton where the Wendover Woods are a popular recreational resource. Immediately below the Chiltern Scarp are the Chalk Foothills (LCT 10) extending in a broad swathe and including the town of Wendover. A small but locally prominent outlier of the Chalk Foothills stands above the Vale at Cheddington. To the southeast of the scarp lie small areas only of the Chalk Dip Slope (LCT 12) which extend south eastwards beyond the administrative boundary.

5 Condition/Sensitivity Analysis

5.1 Section 3 sets out the overall methodology for recording and defining landscape character. Having identified the LCAs the data recorded in the field evaluation sheet (see Appendix 5) and other data may be analysed in terms of the 'condition' and 'sensitivity' of each LCA.

5.2 An objective methodology is required in which the terms condition and sensitivity are strictly defined to avoid subjective interpretation as far as possible. A standard matrix based methodology has been adopted, drawing from Topic Paper 6 of the national landscape character guidance (2) which can be applied consistently by assessors to enable policies and priorities to be set and so that comparisons can be made between landscapes. It is acknowledged that there will be subtle variations in character within an LCA, which would be the basis for defining LCSAs – see Section 3. (There may also be variation between those LCSAs in terms of condition and sensitivity.)

5.3 The description of each LCA in the Landscape Character Descriptions section includes the matrix outcomes for each LCA and a summary of condition and sensitivity. The condition/sensitivity analysis is not applied to LCTs

5.4 A condition/sensitivity analysis was applied to the LCAs identified in the previous LSCA in Aylesbury Vale (3 & 4). The methodology was carried forward to the Draft AVLCA but has since been modified to take greater account of biodiversity and historic environment data. In the revised methodology the field based assessment of cultural integrity and ecological integrity taking account of the historic environment, and biodiversity respectively, has been replaced by a more detailed assessment making use of the full range of data sets available for these factors – see Matrix 2 and paras 5.18 to 5.38.

5.5 The Matrices 1-7 used to complete the analysis are included at the end of this section. To assist understanding they are linked through highlighting to one another and to the field survey sheet included in Appendix 5, which has the appropriate fields highlighted for a fictitious LCA.

Condition

5.6 Condition is strongly influenced by the impact of external factors. The assessment of condition evaluates the pattern of the landscape and the presence of incongruous features on the unity of the landscape. It also evaluates how well the landscape functions as a habitat for wildlife and the condition of cultural or 'man-made' elements such as enclosure, built elements and roads. Urban fringe areas are often under pressure that can frustrate other land uses. This may mean that these areas are described as being in a poor condition whilst other more remote areas may still have the same basic features but be in a better condition. It is therefore practical to assume that condition may vary throughout an LCA so that any conclusions should be regarded as a summary of the overall situation. Condition is defined by an analysis of 'visual unity' and 'functional integrity.

5.7 Visual Unity is the result of an analysis of the 'pattern of elements,' for example the pattern of vegetation, enclosure, settlement, and the relationship of these to the landform etc, weighed against the number of 'visual detractors' in the landscape – see Matrix 1.

5.8 Functional Integrity is an assessment of how the landscape functions and considers both the influence of man 'cultural integrity' and 'ecological integrity' – see Matrix 2. This exercise is desk based and therefore indicates inherent sensitivity based on the attributes of the LCA.

5.9 The condition analysis is completed in Matrix 3 using the outcomes of Matrices 1 and 2.

Sensitivity

5.10 Sensitivity is a measure of the ability of a landscape to accept change without causing irreparable damage to the essential fabric and distinctiveness of that landscape. Sensitivity is defined by an analysis of 'sense of place' ('strength of character') and 'visibility.'

5.11 **Strength of Place** (Strength of Character) balances 'distinctiveness' with 'continuity' – see Matrix 4. Distinctiveness is defined by the extent to which the key characteristics contribute to a sense of place. For example in a landscape where hedgerows are a key characteristic, if the network is intact the landscape can be described as distinct or characteristic. Some landscapes have features, which may be considered unique or rare, and these will contribute to the strength of character. Continuity ranges from recent, through historic to ancient and reflects how long that landscape has taken to establish. Historic landscapes are generally those formed from the medieval period onwards. Recent landscapes are those where historic elements have been replaced with new elements or land management. They include reclaimed landscapes.

5.12 **Visibility** addresses the issues of 'landform' and the intercepting feature of 'tree cover' – see Matrix 5. For example an open hilltop landscape has a higher visibility than an enclosed lowland landscape.

5.13 The sensitivity analysis is completed in Matrix 6 using the outcome of Matrices 4 and 5.

5.14 The outputs of Matrices 3 and 6 are combined using Matrix 7 to complete the condition/sensitivity analysis.

Methodology – General

5.15 The condition/sensitivity analysis makes use principally of data collected during the field survey and recorded in the field assessment sheets – there is no further data collection involved however Matrix 2 is derived from a separate assessment based on the analysis of data sets for biodiversity and historic environment, see paras 5.18 to 5.38. The field assessment process involves recording detail about an LCA in relation to the factors of the condition/sensitivity analysis. For each a judgement is made placing the LCA in one of three categories as most applicable to the LCA overall. These categories form the subdivisions of the X and Y axis of the matrices. The assessor may make reference to data sets in completing the field assessment, in particular to air photographs. This may be necessary where access is restricted; the LCA is too extensive to be appreciated from a key viewpoint; and where allocation to a category is more problematic due to variation in a factor across the LCA.

5.16 For some factors the category is transferred direct from the field evaluation sheet to the matrix, but for Strength of Place (Matrix 4) the assessor records distinctiveness and continuity as one of three categories against eight sub factors. These are then aggregated to determine the mean category to go forward to the matrix.

5.17 In each of Matrices 1 to 6 nine outcomes are possible. These are grouped into three bands as shown by shading on the Matrices at the rear of this section, and the band is then transferred to the next matrix in order to complete the analysis.

Methodology Matrix 2 – Cultural Integrity

5.18 The following methodology for cultural integrity has been prepared by BCC who have carried out the analysis for each LCA to provide the category for input into Matrix 2.

Assessing Importance and Influence of Cultural Heritage upon Landscape

5.19 The importance of cultural heritage as a planning consideration is reflected in the Planning Policy Guidance Notes 15 and 16 which refer to the importance of historic landscapes, historic buildings and archaeology. In order to assess significance for the purposes of LSCA assessments a rapid and subjective assessment is made each of the heritage components. Cultural heritage data is graded according to its importance; national designations are given the most weight, while local designations and HLC data are normally given lesser significance at county or local scale, see Table 1. Although exceptions can occur where archaeological sites are believed to be of national importance.

Table 1: Hierarchy of Cultural Heritage Data

Cultural Heritage Components	Data and Importance
Historic Buildings	Listed Buildings Grades I & II (National)
	Conservation Areas County (County) Listed Buildings Grade II
	Local lists/undesignated historic buildings
Archaeological Sites and Monuments	Scheduled Ancient Monuments (SAMs) (National) Archaeological Notification Sites (National)
	Archaeological Notification Sites (County)
	Sites on Historic Environment Record
Historic Landscape	Registered Parks and Gardens (National)
	HLC Parks and Gardens (County) HLC Types: Classified High & High/Medium Sensitivity[1]
	HLC Types: Classified Medium/Low Sensitivity*

5.20 Viewing cultural heritage data against the LCA boundaries, some consideration has to be made about the spatial relationship of these components in the context of the wider landscape. An assessment of scale of heritage components is relative to the LCA in question; this judgement is largely subjective although the list in Table 2 acts as a guide.

[1] Classifications taken from p.15 of the Buckinghamshire Historic Landscape Characterisation report

Table 2: Extent of Cultural Heritage Data

Cultural Heritage Components	Scale of Influence and Extent
Historic Buildings	Wide concentrations of Listed Buildings containing Grade I and II* with setting issues. (Numerous/Extensive)
	Spread of Listed Buildings (Moderate/ Intermediate)
	Few or isolated Listed Buildings and undesignated historic buildings (Few Localised)
Archaeological Sites and Monuments	Concentrations of archaeological monuments including SAMs with setting issues (Numerous/Extensive)
	Moderate incidence of archaeological monuments and notification sites (Moderate/ Intermediate)
	Isolated archaeological monuments (Few Localised)
Historic Landscape	Large parks and gardens; Extensive Historic Landscape Characterisation (Numerous/ Extensive)
	Historic Landscape Characterisation (Moderate/ Intermediate)
	Mixed landscape of HLC Types (Few Localised)

5.23 Matrix A combines the importance of cultural heritage against scale of influence on the landscape. Consequently the more important heritage assets with their extensive influence on a landscape scale achieve a higher rating than smaller monuments of local interest. As most LCAs will contain many different historic environment features, it is the greatest score in each category which will apply.

Matrix A: Cultural Resource against Scale of Influence

	Scale of influence on the landscape			
Importance of components		**Few Localised**	**Moderate Intermediate**	**Numerous Extensive**
	National	Moderate	Major	Outstanding
	County/ Regional	Minor	Moderate	Major
	Local	Negligible	Minor	Moderate

5.24 An assessment of this scale of influence against importance is undertaken against each of the heritage components, i.e. Historic Buildings, Archaeological Monuments and Historic Landscape Character.

Assessing Visual and Amenity Value of Cultural Heritage Features

5.25 In addition to assessing the importance and scale of cultural heritage, a final assessment is made of the sensitivity of cultural heritage for each LCA. This is assessed in two ways:

Visual: this relates to the extent to which the cultural heritage is visible and identifiable within its surroundings and will also reflect the likelihood of the average person being aware of (and able to appreciate) its presence. This can be classified as:

a) *Prominent* – presence constitutes a clearly identifiable aspect of the LCA, forming locally distinctive features or landmarks, in which the majority of the people in the locality, or the average visitor, would be aware of or be able to quickly recognise..
b) *Noticeable* – features that are readily visible, but would not be especially distinct or particularly apparent feature, but which the people in the locality are likely to be aware of or the average visitor would be able to identify.
c) *Negligible* – features that have little or no visual presence or are difficult to identify, and the awareness and understanding of features is only likely to be known, or correctly defined, by local enthusiasts or specialist knowledge.

Amenity – refers to how the cultural heritage is presented and thereby the extent to which it is publicised, the provision of facilities, and the ability of the average visitor to gain access. This is defined as:

a) *Facilitated* – the provision of information, e.g. information boards, visitor facilities, eg car parks, and the active promotion, through literature, brochures, leaflets etc, making the cultural heritage easy to locate, accessible, and easy to understand.
b) *Promoted* – generally limited facilities, with promotion of the site being through local leaflets, a specifically identified feature on a locally promoted walk, or where the local information centre would be aware of its presence and be able to promote, if asked.
c) *Not promoted* – no facilities provided for the visitor and little or no promotion of cultural heritage, with awareness only being identified from specialist archaeological literature or government and specialists' websites.

The combination of visual presence and amenity value forms a measure of sensitivity as shown in Matrix B.

Matrix B: Visual & Amenity Value of Cultural Heritage

		Visual		
		Negligible	Noticeable	Prominent
Amenity	Facilitated	Moderate	Major	Outstanding
	Promoted	Minor	Moderate	Major
	Not Promoted	Negligible	Minor	Moderate

5.27 In order to obtain a meaningful cumulative score the headings of minor, moderate, major and outstanding are converted into points for the outputs of Matrix A for Historic Buildings, Archaeological Monuments and Historic Landscape Character and for Matrix B, see Table 3.

Table 3: Point System for Matrices A and B

Status	Points
Outstanding	4
Major	3
Moderate	2
Minor	1
Negligible	0

Assessing Cultural Integrity

5.28 For each LCA the assessment from Matrices A and B is combined into a tabulation and the scores combined and assembled into three groups as follows:

Poor Score 1-4
Variable Score 5-8
Good Score 9-16

In practice very few LCAs will achieve a score of greater than 12. These rankings form the cultural integrity axis in Matrix 2.

5.29 In addition to the above note should also be taken of the sensitivity of setting and the prominence of certain monuments and landscapes and this should have some influence upon the interpretation of Matrix 4: Strength of Place.

5.30 By way of example Table 4 shows the results for LCA10.5 Drayton Manor Chalk Slopes. A further example is included in Appendix 8.

Table 4: Example - Summary

LCA No	10.5
LCA Name	Drayton Manor Chalk Slopes
Matrix A Historic Buildings	0
Matrix A Archaeological Monuments	1
Matrix A Historic Landscape Character	3
Matrix B	2
TOTAL SCORE:	**6**
Cultural Integrity	**Variable**

Methodology Matrix 2 – Ecological Integrity

5.31 The method for assessing the ecological integrity of an LCA consists of two evaluations designed to determine the relative contribution of each LCA to the District's total area of valued semi-natural habitat and the District's ecological network:

1. Proportion of the District's valued semi-natural habitat in each LCA. Semi-natural habitat is defined as being of value where it is recognised in legislation and/or planning policy

2. Visual assessment of the connectivity between semi-natural habitat in each LCA.

This method has been developed by BCC in partnership with Jacobs.

Assessing the Proportion of the District's Valuable Semi-natural Habitat in each LCA

5.32 The science of landscape ecology has shown that larger areas of semi-natural habitat are more likely to be resilient to change or threats and also more likely to support functioning ecological processes and populations of species. Area of semi-natural habitat is therefore a key factor in determining ecological integrity.

5.33 Areas of semi-natural habitat identified by legislation and planning policy as being of value are considered by the assessment and are detailed in Table 5 below.

Table 5: Semi- natural Habitat in context of Legislation and Planning Policy

Legislation / Planning Policy	Relevant District Area
European Habitats Directive	Areas designated Special Area of Conservation (SAC) – None in Aylesbury Vale
European Birds Directive	Areas designated Special Protection Area (SPA) – One only in Aylesbury Vale
Wildlife and Countryside Act 1981	Areas designated Site of Special Scientific Interest (SSSI)
Planning Policy Statement 9: Biodiversity and Geological Conservation	Biodiversity Action Plan Habitats (Priority and Broad Habitat Types - PHT and BHT); Ancient semi-natural woodland (ASNW); Regional and Local Sites (County Wildlife Sites and Biological Notification Sites – CWS and BNS)

5.34 Using Arc GIS datasets, these habitats were identified and their area quantified in Arc GIS for each LCA in two groups.

Group 1: Internationally and nationally significant: SAC, SPA, SSSI and PHT
Group 2: Significant at District level: BHT, ASNW, CWS and BNS

To assess the relative contribution of the semi-natural habitat assets of each LCA to the total interest in the district, the LCAs were ranked according to their area of semi-natural habitat. Following ranking, the LCAs were then divided into three groups by identifying the 33% and 66% percentiles and these three groups were assigned scores. Weighting was applied to the scores to differentiate between areas of national and internationally significant semi-natural habitats and areas of district level significance, as shown in Table 6.

Table 6: Scoring – Semi-natural Habitat

Group	Group 1: Internationally and nationally significant	Group 2: Significant at District level
Third of LCAs containing greatest areas of semi-natural habitat	6	3
Third of LCAs containing moderate areas of semi-natural habitat	4	2
Third of LCAs containing least area of semi-natural habitat	2	1

Assessing Connectivity between Semi-natural Habitat in each LCA

5.35 The science of landscape ecology has shown that areas having greater connectivity between semi-natural habitat are more likely to be resilient to change or threats and also more likely to support functioning ecological processes and populations of species. Connectivity between semi-natural habitat areas and semi-natural habitat corridors, such as hedgerows and watercourses, is therefore a key factor in determining ecological integrity. Planning Policy Statement 9: Biodiversity and Geological Conservation refers to networks of semi-natural habitats as being a valuable resource that should be maintained and restored to address fragmentation and isolation.

5.36 The connectivity between semi-natural habitat is assessed by calculating the percentage of habitat within 0.25km of each other, and the percentage associated with ecological corridors such as hedgerows and watercourses. This evaluation was carried out by visual assessment of Arc GIS datasets and aerial photos. A score was then assigned to each LCA according to thresholds detailed in the Table 7 below - in recognition of the significance of connectivity; weighting was applied to the scores.

Table 7: Connectivity of Semi-natural Habitats

Connectivity thresholds	Connectivity score
>75% of habitat adjacent to, or within 0.25km of another area of habitat and/or >75% of habitat associated with an ecological link/corridor	6
>25% of habitat adjacent to, or within 0.25km of another area of habitat and/or >25% of habitat associated with an ecological link/corridor	4
<25% of habitat adjacent to, or within 0.25km of another area of habitat and/or <25% of habitat associated with an ecological link/corridor	2

Assessing Ecological Integrity

5.37 To produce an overall assessment of ecological integrity, the three scores for each LCA obtained as above were added together. The LCAs were then ranked according to their total score and then divided into three groups by identifying the 33% and 66% percentiles. These three groups

were then assigned a final Ecological Integrity category of Strong, Moderate or Weak. This categorisation reflects the relative ecological significance of each LCA to the District's ecological integrity as a whole.

5.38 By way of example Tables 8 to 10 show the results for LCA10.5 Drayton Manor Chalk Slopes. A further example is included in Appendix 8.

Table 8: Example - Group 1 Summary of Ecological Data and Score

LCA No	10.5
LCA Name	Drayton Manor Chalk Slopes
SAC/SPA	0
SSSI	4.01 Ha
Annexe 1 Habitats	0
PHT	4.31 Ha
Total area of ecological interest in each LCA:	8.31 Ha
Percentage of District total ecological interest	0.20%
Ranking (79 = highest percentage and 1 = lowest percentage):	40
Score:	4

Table 9: Example - Group 2 Summary of Ecological Data and Score

LCA No	10.5
LCA Name	Drayton Manor Chalk Slopes
CWS	1.13 Ha
BNS	3.68 Ha
ASNW	3.31 Ha
BHT	7.74 Ha
Total area of ecological interest in each LCA:	12.88 Ha
Percentage of District total ecological interest:	0.0818%
Ranking (79 = highest percentage and 1 = lowest percentage):	10
Score:	1

Table 10: Example - Summary

LCA No	10.5
LCA Name	Drayton Manor Chalk Slopes
Group 1	4
Group 2	1
Connectivity	6
TOTAL SCORE:	**11**
LCA Ranking (79 = highest score and 1 = lowest score)	37
Ecological Integrity	**Moderate**

Landscape Guidelines

5.39 This analysis gives a broad indication of each LCA's ability to accommodate a change in management or use without loss of overall integrity. The matrix helps to assist in the direction of any policy that might be applied to the land in question. The combination of condition and sensitivity assessments generates a generic 'landscape guideline' for each LCA as follows:

- **Conserve -** actions that encourage the conservation of distinctive features and features in good condition.
- **Conserve and Reinforce** - actions that conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable.
- **Conserve and Restore** - actions that encourage the conservation of distinctive features and features in good condition, whilst restoring elements or areas in poorer condition and removing or mitigating detracting features.
- **Reinforce** - actions that strengthen or reinforce distinctive features and patterns in the landscape.
- **Conserve and Enhance** - actions that conserve distinctive features and features in good condition, whilst creating new features or areas where they have been lost or are in poor condition.
- **Restore** - actions that encourage the restoration of distinctive landscape features and the removal or mitigation of detracting features.
- **Enhance and Reinforce** - actions that strengthen or reinforce distinctive features and patterns in the landscape, whilst creating new features or areas where they have been lost or are in poor condition.
- **Restore and Enhance** - actions that restore distinctive features and the removal or mitigation of detracting features, whilst creating new features or areas where they have been lost or are in poor condition.

- **Create** - actions that create new features or areas where existing elements are lost or in poor condition.

5.40 Within this context detailed landscape guidelines and actions are offered that are appropriate to the LCA and respond to the generic landscape guidelines. These may be site specific or for general application throughout the LCA. Many will not be within the remit of the local authority to implement directly as they are not responsible for managing the land in most cases and thus are included with the view to influencing opinions, generating support and guiding policy. Pragmatism is required as certain forms of land management having a strong influence on the landscape character may often be dependent on market forces and land management practices for their retention e.g. the coppicing of woodland and laying of hedgerows. Others may have potential to cause an adverse impact on biodiversity or the historic environment and must be carefully considered on a site by site basis.

5.41 It should be recognised that whilst the process adopts a complex but logical critique of the landscape many of the individual decisions are still based on the trained but subjective judgments of the assessors. However by simplifying the conclusions into a series of generic actions it is possible to reach informed and well supported judgments relating to the management of the landscape character of an LCA, whilst bearing in mind that the assessment is based on the overall character of the LCA and may not be fully representative locally within the LCA.

Matrices 1 – 3: Condition

See also Appendix 5 which for illustrative purposes has the appropriate fields highlighted for a fictitious LCA and the example provided in Appendix 8.

NB In the draft AVLCA the field sheet was used to inform Matrix 2. This was subsequently replaced by a revised methodology for Matrix 2 only as described in paras 5.18 to 5.38.

Matrix 1: Visual Unity

Pattern of Elements	Many	Some	Few
Unified	Coherent	Unified	Strongly unified
Coherent	Interrupted	Coherent	Unified
Incoherent	Significantly interrupted	Interrupted	Coherent

Visual Detractors

Matrix 2: Functional Integrity

Cultural Integrity	Weak	Moderate	Strong
Good	Coherent	Strong	Very strong
Variable	Weak	Coherent	Strong
Poor	Very weak	Weak	Coherent

Ecological Integrity

Matrix 3: Condition

Visual Unity	Weak	Coherent	Strong
Unified	Moderate	Good	Very good
Coherent	Poor	Moderate	Good
Interrupted	Very poor	Poor	Moderate

Functional Integrity

Matrices 4 – 6: Sensitivity

See also Appendix 5 which for illustrative purposes has the appropriate fields highlighted for a fictitious LCA and the example provided in Appendix 8.

Matrix 4: Strength of Place

Distinctiveness	Recent	Historic	Ancient
Unique/rare	Moderate	Strong	Very strong
Distinct	Weak	Moderate	Strong
Indistinct	Very weak	Weak	Moderate

Continuity

Matrix 5: Visibility

Landform	Enclosed	Intermittent	Open
Dominant	Moderate	High	Very high
Apparent	Low	Moderate	High
Insignificant	Very low	Low	Moderate

Tree Cover

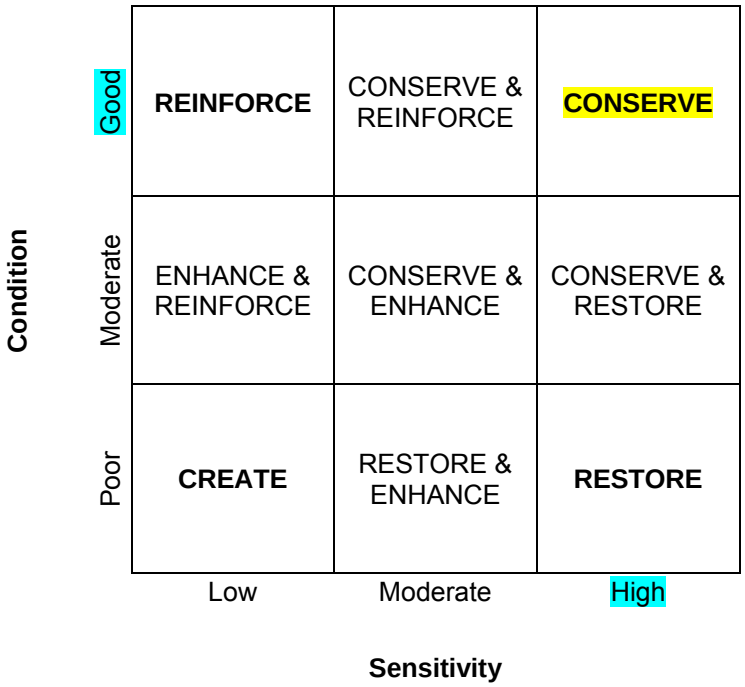
Matrix 6: Sensitivity

Strength of Place	Low	Moderate	High
Strong	Moderate	High	Very high
Moderate	Low	Moderate	High
Weak	Very low	Low	Moderate

Visibility

Matrix 7: Action

See also Appendix 5 which for illustrative purposes has the appropriate fields highlighted for a fictitious LCA and the example provided in Appendix 8.



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