

**Methodology for**  
**Nottinghamshire Landscape Character Assessment**

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## **1.0 INTRODUCTION**

The revision of the Nottinghamshire Countryside Appraisal, first published as the Nottinghamshire Landscape Guidelines in 1997, is being undertaken by Nottinghamshire County Council's Landscape and Reclamation Team. The client for the pilot stage of the project was Nottinghamshire County Council's Conservation Group. Both of the above are located within the Environment Department.

### **1.1 What is Landscape Character Assessment?**

Natural England (formerly The Countryside Agency), the Government body established to conserve and enhance England's countryside, defines Landscape Character Assessment as follows:-

*"Landscape Character Assessment provides a framework for understanding and describing an area in a systematic way, enabling us to make better judgements and decisions to help guide future changes in our countryside."*

### **1.2 Why do the existing guidelines need to be revised?**

The reasons why the existing guidelines need to be revised are as follows:-

- changes in Government legislation;
- development of GIS based systems;
- need for transparency of method.

## **2.0 CHANGES IN GOVERNMENT LEGISLATION**

The recent developments in legislation may be summarised as follows:-

### **2.1 Planning Policy Guidance (PPG) Note Number 7 January 1992 The Countryside – Environmental Quality and Economic and Social Development**

This document recognised, in paragraph 3.17, that some local authorities had devised Local Landscape Designations (LLDs) to:-

*"Highlight particularly important areas of countryside that should be taken into account in planning decisions".* These included locally devised designations *"which local authorities sometimes include in their Structure or Local Plans to denote areas to which special countryside protection or other policies apply".*

### **2.2 The Rural White Paper 1995**

In 1995 the Government set out its policy to strengthen the distinctive character of the land and built environment in the Rural White Paper. This placed emphasis on the need to identify local characteristics and promoted a joint initiative by the Countryside Agency and English Nature to classify and map the cultural and natural dimensions of the landscape.

The output of this initiative, known as “The Joint Map” entitled “The Character of England – landscape, wildlife and natural features” was described as providing for the first time a comprehensive and consistent analysis of the English countryside that would help to guide future efforts to conserve and enhance it. This national study provided the framework around which local authorities set their more detailed assessments.

This has since been updated in 2005 and is now called “The Character of England – Landscape, Wildlife, Natural and Cultural Features”.

### **2.3 Revision to PPG Note Number 7 1997**

This revision further developed previous guidance and stated in para 2.14 that the priority was *“to find new ways of enriching the quality of the whole countryside whilst accommodating appropriate development, in order to complement the protections which designations offer”*. It attached significant weight to the countryside character approach, which it promoted as an important tool to accommodate this change without sacrificing local character. Para 2.15 stated *“it (CCA approach) can help ensure that development respects the distinctive character of the land and built environment”*.

The revision of the PPG7 marked a change in emphasis with regard to the use and value of LLDs. Whilst the revision did not specifically preclude development plans from containing LLDs, it did place the onus on local authorities to carefully consider whether appropriate development and economic activity were being unduly restricted by LLDs.

### **2.4 Planning Policy Statement – PPS7 – 2004 Sustainable Development In Rural Areas**

This document replaced the former PPG7 and marked a further change in emphasis in the use of LLDs.

Para 24 set out that:-

*“The Government recognises and accepts that there are areas of landscape outside nationally designated areas that are particularly highly valued locally. The Government believes that carefully drafted, criteria-based policies in Local Development Documents, utilising tools such as landscape character assessment, should provide sufficient protection for these areas, without the need for rigid local designations that may unduly restrict acceptable, sustainable development and the economic activity that underpins the vitality of rural areas”*.

and Para 25:-

*“LLDs should only be maintained or, exceptionally, extended where it can be clearly shown that criteria-based planning policies cannot provide the necessary protection. LLDs should state what it is that requires extra*

*protection and why. When reviewing their local area-wide development plans and LLDs, planning authorities should rigorously consider the justification for retaining LLDs. They should ensure that such designations are based on a formal and robust assessment of the qualities of the landscape concerned."*

## **2.5 Nottinghamshire and Nottingham Joint Structure Plan – Adopted February 2006**

The above document contained the following Policy 2/7 concerning Landscape Character:-

"Local Plans / development plan documents will define local landscape characteristics in accordance with the work of the Countryside Agency and Nottinghamshire County Council's Landscape Guidelines, to inform land allocations and assessment of development proposals. The landscape character approach will be used to promote the conservation and enhancement of local landscape character and distinctiveness and the maintenance of landscape diversity throughout the whole plan area."

It also states in the explanatory notes that a revised landscape character assessment is currently underway.

In the interim period before the completion of the new landscape character assessment, the existing landscape guidelines and Mature Landscape Areas should still be referred to.

Policy 2/10 'Development in the Countryside' aims to protect the character and qualities of the countryside. It states:-

"The character and qualities of the countryside will be protected ... development proposals must be located and designed to respect the character of the surrounding area ..."

The policy goes on to highlight the importance of design which is in keeping with the existing character, and states:-

"In all cases, development proposals will be located and designed to respect the character of the surrounding area and priority will be given to the re-use of existing buildings and derelict land."

## **2.6 Regional Spatial Strategy RSS8 – 8<sup>th</sup> March 2005**

The East Midlands Regional Spatial Strategy states in the explanatory text that:-

"Understanding the importance of all landscapes and reducing the emphasis on local landscape designations will ensure that the character of one area is not protected at the expense of another, Paragraph 4.13.15."

Policy 30 'Priorities for the Management and Enhancement of the Region's Landscape' states that "development plans, future Local Development Frameworks and other strategies of local authorities and agencies should:-

"Development Plans, future Local Development Frameworks, and other strategies of local authorities and agencies should:-

- continue to promote the highest level of landscape character protection for the region's nationally designated landscapes of the Peak District National Park and the Lincolnshire Wolds Area of Outstanding Natural Beauty;
- promote initiatives to protect and enhance the natural and heritage landscape assets, in particular the Sherwood, Charnwood and Rockingham Forests; and
- be informed by landscape character assessments to underpin and act as key components of criteria-based policies for the consideration of development proposals in rural or urban fringe areas. Where not already in place, local authorities should work towards preparing comprehensive assessments of the character of their landscapes to coincide with the review of their local development documents. This should assess whether there are exceptional local circumstances that would require the retention of any local landscape designations and associated policies in local development frameworks."

## **2.7 Regional Spatial Strategy Review Pre-Submission Draft**

The existing Policy 30 is replaced by the following draft policy:-

"Policy 30 – 'Priorities for the Management and Enhancement of the Region's Landscape.

The Region's natural and heritage landscapes should be protected and enhanced by:-

- the promotion of the highest level of protection for the nationally designed landscapes of the Peak District National Park and the Lincolnshire Wolds Area of Outstanding Natural Beauty;
- the promotion of initiatives to protect and enhance the particular character of the Sherwood, Charnwood and Rockingham Forests;
- the establishment of criteria-based policies in Local Development Frameworks to ensure that development proposals respect intrinsic landscape character in rural and urban fringe areas; and
- the identification in Local Development Frameworks of landscape and biodiversity protection and enhancement objectives through the integration of Landscape Character Assessments with historic and ecological assessments.

Where not already in place, Local Authorities should prepare Landscape Character Assessments to inform the preparation of Local Development Frameworks. These can also be used to develop Supplementary Planning documents.

Any local landscape designations should be based on Landscape Character Assessments and justified by exceptional local circumstances.“

This continues to move away from local landscape designations.

## **2.8 Summary**

To summarise the changes in Government legislation, this continues to support the process of Landscape Character Assessment but is moving away from the designation of local landscape designations as a result of PPS7 statement to “rigorously consider the justification for retaining existing Local Landscape Designations.”

With the commencement of production of Local Development Frameworks to replace existing Local Plans, local authorities have to decide on their approach. The review of LLDs of June 2006 indicates that different approaches are being taken; of the authorities sampled, 36% intending to retain LLDs, 19% were not intending to retain LLDs, 45% did not know or did not use LLDs in their planning documents.

## **3.0 DEVELOPMENT OF GIS BASED SYSTEMS**

The original Nottinghamshire Landscape Guidelines, published in 1997, were developed as a result of a manual process of information collection begun in 1990 which was stored on a paper based system. Central to the process of Landscape Character Assessment is the analysis of the relationship between different landscape elements such as geology, soils, and settlement pattern in order to classify and describe the landscape. Since the start of the first assessment there have been major developments in the use of GIS software used for handling map-based information. This facilitates the process, storage and analysis of presentation of spatial data and is therefore particularly suited to LCA work.

## **4.0 THE NEED FOR TRANSPARENCY AND REPEATABILITY OF THE PROCESS**

A paper-based system has two major disadvantages. Firstly it may be difficult for later interrogators of the system to understand the exact process by which the different character areas were derived. Secondly, if the process were to be repeated, there may be slight variations in classification achieved by different assessors. A GIS based system on the other hand should be more transparent in that it should be possible to break down the stages of the assessment process and see how different character areas are derived.



Theoretically, because it is a computer-based system, given the same initial datasets, the same classification should be achieved every time.

## **5.0 WHAT HAS ALREADY BEEN ACHIEVED IN NOTTINGHAMSHIRE?**

### **5.1 Introduction to the Nottinghamshire Countryside Appraisal**

Research, survey and assessment work for the NCA began in 1989. This work was undertaken by the County Council's Rural Environment Group, located within the Environment Department.

The aim of the NCA was to provide a detailed information base and strategic overview of the county's rural environment around which environment planning, landscape management and other decisions could be made. The output of this work has been used to underpin the Environment Department's work, not only in landscape protection and conservation but also in nature conservation, environmental appraisal, development control and the formulation of statutory and non-statutory plans. The outputs of the process are described below.

### **5.2 The Nottinghamshire Landscape Guidelines Document and the Landscape Types Plan**

These documents were concerned with landscape conservation and the management of the county's landscape. The detailed methodology of the process is set out in "Nottinghamshire Countryside Appraisal Revised Methodology 1999". However, in summary, the project was adapted from work undertaken by the Warwickshire Landscape Partnership and was compatible with the Countryside Agency's Landscape Assessment Guidance at the time.

The process involved the classification of the landscape into a series of regional character areas and landscape sub types, which were described in detail in the document, including the visual character of the landscape.

The main drivers of change within each Landscape Character Area were assessed and this led to the development of a series of management strategies and key recommendations for each landscape type, along with detailed guidelines for the management of various landscape features and components.

### **5.3 Definition of Mature Landscape Areas – MLAs**

This process was concerned with landscape protection within the county. The detailed methodology of the process is set out in "Nottinghamshire Countryside Appraisal Revised Methodology 1999". In summary, the process involved mapping the land use of the county using existing land use data and aerial photographs together with historical and ecological information. The following features were identified:-

mature deciduous woodland;  
intact field patterns;  
ancient species rich hedgerows;  
permanent grassland;  
heathland;  
parkland;  
mature river / stream courses.

The following features were excluded:-

urban development;  
mineral extraction;  
existing commercial forestry;  
intensive agriculture.

This process gave an initial list of “areas least affected by adverse change”. Detailed field survey work was carried out to look at identified features on the ground and the list was further refined. A set of criteria was established against which identified MLAs were tested. Once each MLA was finalised, a written description, a representative photo or sketch, and a MLA plan with a clearly marked boundary were produced. There then followed a further period of consultation with the Local Planning Authorities on their MLAs, which were made formal with the adoption of the relevant Local Plan.

#### **5.4 History of the Nottinghamshire Countryside Appraisal**

The Nottinghamshire Landscape Guidelines and the Mature Landscape Area designations were first tested at a Local Plan Public Inquiry in 1992. Landscape policies arising from the NCA are included in local plans (see Appendix 1) and planning inspectors have made a number of recommendations since as to how the work should be interpreted, applied and approved. The NCA has also been tested at both Minerals Local Plan Inquiries and Waste Local Plan Inquiries as well as those for individual projects.

In 1997 the council commissioned an independent and impartial study by David Tyldesley and Associates to review the MLA designations within the NCA. The review recommended that a countywide MLA policy framework should be retained and that MLAs continue to provide a systematic, consistent and rational basis for taking into account areas of countryside meriting special protection.

Obviously, there have been a number of changes in legislation during this time as discussed previously. The key issue is that, since MLAs are local landscape designations and therefore must be underpinned by a “formal and robust” assessment of landscape type and quality, this needs to be a more transparent process with the ability to be explained at Public Inquiry for example, and also one which does not unduly restrict development. These factors taken together reinforce the need for the review of the existing guidelines.

## **6.0 METHODOLOGY OF THE LANDSCAPE CHARACTER ASSESSMENT**

### **6.1 Introduction**

The detailed methodology of the original project described in the previous section is contained in "Nottinghamshire Countryside Appraisal, Revised Methodology 1999 – Section F Landscape Assessment Methodology" and consists of the following stages:-

- Stage 1 Defining Regional Character Areas
- Stage 2 Literature Review
- Stage 3 Classification into Landscape Types
- Stage 4 Preparation of Management Strategies, Key Recommendations and Landscape Guidelines

The detailed methodology of the pilot stage of current assessment will be described in the following sections and consisted of the following stages:-

- Stage 1 Information Collection and Research
- Stage 2 Definition of Regional Character Areas
- Stage 3 Description of Landscape Character – Desk based and field based
- Stage 4 Classification of LCPs into Draft Policy Zones
- Stage 5 Description of Landscape Condition and Landscape Sensitivity – Desk based and field based
- Section 6 Preparation of Key Policies

## **7.0 STAGE 1 INFORMATION COLLECTION AND RESEARCH**

This stage involved a review of methods used by other organisations to carry out Landscape Character Assessments. It involved telephone discussions, visits and meetings, as well as review of published literature and review of information available on line, such as the Countryside Character network database. The following organisations were consulted directly:-

Staffordshire County Council Meeting with Steve Potter and visit December 2003 to discuss methodology of Staffordshire Landscape Character Assessment.

Northamptonshire County Council Meeting with Jason Longhurst – March 2004 to discuss methodology of Northamptonshire Landscape

Characterisation.

Derbyshire County Council	Various meetings with Glynis Foster, Gary ..... to discuss methodology of Derbyshire Landscape Character Assessment.
David Tydlesley and Associates	Telephone discussions and meetings with Anthony Brown, particularly with reference to Landscape Character work carried out in Scotland.
Lincolnshire County Council	Telephone discussions.
Leicestershire County Council	Telephone discussions.
Peak District National Park Authority	Telephone discussions.
High Peak Borough Council	Telephone discussions.

A Literature Review of published information produced by Warwickshire County Council and South Gloucestershire County Council also took place.

In addition, during the period of pilot study, Natural England (formerly the Countryside Agency) set up the Regional Landscape Forum in February 2005, which gathered together all Landscape Architects working on Landscape Character Assessment in the East Midlands to facilitate exchange of information.

In addition, the team worked closely with Jane Farmer and David Green of Jacobs Babbie, who had carried out the Kent County Council Landscape Appraisal.

This collaboration involved a presentation of the methodology of their project, as well as one to one tuition of the method including joint field survey work. Parts of the written documentation produced by Kent County Council was also used as a model for work by Nottinghamshire County Council and this is referred to in the relevant sections.

The team also received one to one training from Stephen Warnock on the production and interpretation of the LDU Map and its associated database.

## **8.0 STAGE 2 DEFINITION OF REGIONAL CHARACTER AREAS**

The areas within the Nottinghamshire County boundary that have been defined by the Countryside Agency on the 'Joint Map' are as follows:-

30	Southern Magnesian Limestone
38	Nottinghamshire, Derbyshire and Yorkshire Coalfield
39	Humberhead Levels
48	Trent and Belvoir Vales
49	Sherwood
69	Trent Valley Washlands
74	Leicestershire and Nottinghamshire Wolds

These character areas have been classified using geology, topography, soils, vegetation, field enclosure and settlement patterns.

The decision was taken by Nottinghamshire County Council to further sub-divide these areas using 'The Living Landscapes Project' Methodology. This was developed by Stephen Warnock of the Department of Geography, University of Reading, and piloted in the Warwickshire Landscape Project. This decision was taken for the following reasons:-

- The methodology builds on previous work carried out by the Countryside Agency. The Countryside Agency was the lead agency for mapping the landscape character of England at the 1:250,000 scale to produce the Joint Map and the GIS based landscape character framework and associated database for the whole of England. This is Level 1 of the Living Landscape Project Methodology.
- The 'Living Landscapes Project' methodology is GIS based. GIS systems are used to assemble, analyse, present and store data.
- The 'Living Landscapes Project' methodology is already established in use. In 2002 the approach had been used by 10 counties in England.
- The 'Living Landscapes Project' methodology has already been used in adjacent counties with borders linking with Nottinghamshire including Derbyshire and Leicestershire. This would assist sharing of best practice between lead officers working on this project in neighbouring counties.

## **8.1 The 'Living Landscapes Project' Methodology**

Level 2 of the 'Living Landscapes Project' considers landscape character at the 1:50,000 scale and the onus is on individual local authorities to undertake county ' district level assessments.

The full methodology is described in the 'Living Landscapes Project Handbook', Stephen Warnock 2002, but is summarised below.

The fundamental building block of the hierarchy at this level is the Landscape Description Unit (LDU). LDUs are distinct and relatively homogenous units of land, each defined by a series of attributes. There are four attributes at Level 1:-

- Physiography
- Ground Type (which describe the natural dimensions of the landscape)
- Land Cover
- Cultural Pattern (which describe the cultural dimension of the landscape)

At Level 2 each of the Level 1 attributes is split into two parts, giving a total of 8 attributes:-

• Physiography	→	<ul style="list-style-type: none"> <li>• Landform</li> <li>• Geology</li> </ul>
• Ground Type	→	<ul style="list-style-type: none"> <li>• Geology</li> <li>• Soils</li> </ul>
• Settlement	→	<ul style="list-style-type: none"> <li>• Settlement Pattern</li> <li>• Farm Type (structure)</li> </ul>
• Land Cover	→	<ul style="list-style-type: none"> <li>• Tree Cover</li> <li>• Farm Type (cover)</li> </ul>

Definitive attributes are derived through a process of overlay mapping. This process was previously carried out by physically overlaying a number of acetate sheets on top of one another. Undertaking the same process on GIS overcomes many of the physical problems associated with this method, as well as allowing greater scope for analysis of the data. The process allows broad patterns to be distinguished, which in turn make it possible to begin to understand the many factors that contribute to landscape character and define Landscape Character Types or Regional Character Areas.

This process was carried out on behalf of Nottinghamshire County Council by Mark Diacono of Diacono Associates in March 2004 (and was later refined slightly by Stephen Warnock in December 2004). The outputs were a map of the County (Appendix 2) and an associated database.

The following Regional Character Areas were derived from this process:-

SH Sherwood

- ML Magnesian Limestone
- HL Humberhead Levels (Idle Lowlands)
- MN Mid Nottinghamshire Farmlands
- DC Derbyshire and Nottinghamshire Coalfields
- TV Trent Valley
- LW Leicestershire and Nottinghamshire Wolds
- ES East Nottinghamshire Sandlands
- SN South Nottinghamshire Farmlands
- VB Vale of Belvoir
- TW Trent Washlands

Each LDU derived from the process has a 6-figure reference within the database. The database can be interrogated further to see the eight definitive attributes it is derived from and also to give a summary description of the LDU.

Example	LDU 382
Written Description	6 figure reference: SSD PSS Sloping undulating, soft sandstone / sandy drift, impoverished soils, low dispersal with farms, small farms, secondary woodland
Example	LDU 389
Written Description	6 figure reference: LFB MEP Vales and valley bottoms, other fluvial drift, deep sandy loamy soils, unsettled (meadow and marsh), large estates, estate plantations

## 9.0 STAGE 3 DESCRIPTION OF LANDSCAPE CHARACTER

### 9.1 Introduction

The next stage of the process was to describe the landscape character of the Landscape Description Units.

In Nottinghamshire, some of the LDUs derived were large in extent and it was decided that they needed to be divided into more manageable units to

describe their character. These smaller units are known as Landscape Character Parcels (LCPs).

## 9.2 The Process of Definition of the LCPs

This process was carried out by a desk based manual process and was achieved by carrying out the following operations:-

Step 1	Overlay tracing sheets onto a 1:25,000 scale plan of LDU's boundaries on an Ordnance Survey Base. This plan was also colour coded to show the descriptions given by Stephen Warnock to each LCP, e.g. Estatelands with plantations, Meadowlands with plantations. The major river valleys and the LDU boundaries were then traced off this plan.
Step 2	Check that all LDUs included are within the Regional Character Area derived from the database, e.g. Sherwood.  Remove any LDU boundaries traced on that are not in the Regional Character Area being studied at that time.
Step 3	Sub-divide the LDUs using a desk based assessment of field pattern and land use based on the O.S. base. Group together areas which have regular geometric field patterns, or show a parkland landscape, or have been substantially modified due to mineral extraction for example.
Step 4	Overlay the traced sheet onto 1:25,000 scale plan of LDU boundaries on Historical Landscape Characterisation Summary Plan. (Refer to section 14.00)  Amend any divisions made that obviously contradict the boundaries shown on the historical plan.
Step 5	Overlay tracing overlay onto 1:25,000 Ordnance Survey Base. Check boundaries of the identified areas. For practicality at the field assessment stage it may be necessary at this point to slightly amend the LCP boundaries to tie into features on the ground, such as major roads, field boundaries, Public Rights of Way. Also, the precise boundaries or urban areas should be checked at this stage with the latest District Plan, because these may be more up to date than the O.S. plan.
Step 6	Each identified LCP should then be given a unique reference number, e.g. S10:  S – identifying the Regional Character Area, such as Sherwood. 10 – being the unique reference number for that LCP.



To date, this process has only been carried out for the Sherwood Regional Character area as an initial pilot study; 80 LCPs were identified. The same process could now be repeated, provided the source data was made available to the Landscape Architect, to divide other Regional Character Areas into LCPs. If different people carried out the process, although the results would not be exactly the same, there should be broad consistency.

### **9.3 Desk Based Landscape Character Assessment**

Once the LCPs have been defined for a Regional Character Area, a desk-based collection of information is carried out. (Refer to Appendix 3 which shows the checklist for this stage)

### **9.4 Field Based Landscape Character Assessment**

The purpose of the field survey is to identify the key qualities and components of the landscape that cannot be determined by desk based assessment. The landscape character was assessed by completing a field survey sheet template for each LCP. (Refer to Appendix 4 which shows the field survey sheet)

The NCC field survey sheet used was derived from the field sheet used for the original landscape character survey in the 1990s and survey sheets developed by other authorities, such as Kent County Council.

The survey itself was carried out by two assessors per LCP, one or both of which was a Landscape Architect. It was found to be important to have two assessors to come to a mutual agreement on whether a particular attribute was Dominant, Prominent, Apparent or Insignificant. (Please see Appendix 5 for further explanation of these classifications)

Each LCP area was explored by car initially and footpaths walked where necessary to view inaccessible areas. Once the extent of the LCP could be visualised on the ground by the assessors, a suitable viewpoint was chosen to make the record. This was generally a high point in the LCP from which a typical view of the LCP could be obtained.

The data was entered directly into a Map Info database using a laptop. A concise, written summary was also written in the field for each LCP.

A representative photograph of the landscape character, together with photos of any particular representative features, was taken for each LCP. The survey point and the photo point locations were fixed using a 6-figure GPS reference.

## **10.0 STAGE 4 CLASSIFICATION OF LANDSCAPE CHARACTER PARCELS (LCPs) INTO DRAFT POLICY ZONES (DPZs)**

Once the Landscape Character survey was complete LCPs were then grouped together prior to the next survey stage to link areas of similar

character. The assessment of Landscape Condition and Landscape Sensitivity for each individual LCP was considered but it was thought to be too time consuming to repeat the process when there were obvious similarities between LCPs.

The grouping of the LCPs was a desk based process.

Step 1: List LCPs, also noting LDU reference, 6-figure reference and description, and land use identified in the field.

Step 2: Using a map of LCPs and a tracing overlay amalgamate similar areas using the above parameters.

Step 3: Tabulate the information collected and include reasons for amalgamation such as same LDU, similar land use; or reasons for retaining as a single unit such as being a distinct geographical feature such as a river valley. This is to provide a written record of how the LDUs were grouped into DPZs.

An example of this tabulated information is included as Appendix 6.

## **11.0 STAGE 5 ASSESSMENT OF LANDSCAPE CONDITION AND LANDSCAPE SENSITIVITY**

### **11.1 Desk Based Assessment of Landscape Condition and Sensitivity**

Once the DPZs have been defined for a Regional Character Area, a desk based collection of information is carried out. (Refer to Appendix 7 which shows the checklist for this stage.)

### **11.2 Field Based Assessment of Landscape Condition and Sensitivity – Method 1**

A method was trialled for the southern half of the Sherwood Regional Character Area using the valley of the River Maun as the dividing feature.

It was agreed not to separate out at the amalgamation stage areas formerly identified as Mature Landscape Areas. The sequence of operations is shown below.

The purpose of the field survey is to identify the key qualities and components of the landscape that cannot be determined by desk based assessment. The landscape condition and sensitivity was assessed by completing a field survey sheet for each DPZ. (Refer to Appendix 8 which shows a field survey sheet template.)

The field survey sheet used was derived from a survey sheet developed by Kent County Council.

The survey itself was carried out by two assessors per DPZ, one or both of which was a Landscape Architect . It was found to be important to have two assessors to come to a mutual agreement on the data to be entered.

Each DPZ was explored by car (the assessors were not necessarily the same ones that had carried out the assessment of landscape character parcels). A suitable viewpoint was selected from those used previously for the landscape character field survey.

The data was entered directly into a Map Info database using a laptop.

### **11.3 Modification to Methodology**

Once the whole of this pilot area had been completed and results generated, it was felt that the qualities of the MLAs in terms of their high landscape condition and high sensitivity was being “diluted” within the much larger DPZ area. (In the landscape character stage they had largely stayed separate by virtue of their differing qualities from their neighbouring LCP).

Therefore, the northern area of the county using the valley of the River Maun as the dividing feature was trialled using a slightly different method as well as the previous one.

### **11.4 Field Based Assessment of Landscape Condition and Sensitivity – Method 2**

This method was exactly the same as Method 1 except that, at the amalgamation stage, MLAs were considered as separate DPZ units at the outset.

A comparison of the two methods showed that when the MLAs were considered as separate entities they scored more highly, generally having scores of 18, 19 and 20 in the matrix.

### **11.5 Modifications to Methodology**

It was agreed after this pilot study that Method 2 was the more satisfactory one.

Although previously identified LLDs were used, the revised survey methodology provided justification for their continued recognition.

### **11.6 Future work necessary**

The MLAs were originally identified from desk based and field surveys undertaken before 1990. For the full methodology refer to “Nottinghamshire Countryside Appraisal Revised Methodology 1999”. These MLAs need to be re-assessed because in certain situations development may have taken place which has removed part of the identified area; or changes in agricultural practice may have affected their boundaries.

This is a related but separate piece of work required as part of the new Landscape Character Assessment which will also involve input from an ecologist.

### **11.7 Analysis of data collected in the field**

The field collected data was used to derive a level for landscape condition in a range from very poor to very good. A numerical score was also determined.

The field collected data was also used to derive a level for landscape sensitivity in a range from very low to very high. A numerical score was also determined.

#### **Analysis of Landscape Condition**

Landscape 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.

Condition is defined by an analysis of Visual Unity and Functional Integrity and is classified as very poor, poor, moderate, good and very good.

Visual unity, which may be significantly interrupted, interrupted, coherent, unified or strongly unified, is the result of an analysis of Pattern of Elements; for example the pattern of vegetation, enclosure, settlement, weighed against the number of detracting features in the landscape which may range from few to many. Using information collected on the field sheets, this may be unified, coherent or incoherent.

Functional integrity, which may be very weak, weak, coherent, strong or very strong, is an assessment of how the landscape functions and considers the human influence - Cultural integrity, which may range from poor to good, weighed against Ecological Integrity, which may range from weak to strong.

The matrices used to determine Landscape Condition are shown below. The attributes are given a numerical score.

## EVALUATION MATRIX TO DETERMINE CONDITION

### Visual Unity

<b>Pattern of Elements</b>	Unified	coherent	unified	strongly unified
	Coherent	interrupted	coherent	unified
	Incoherent	significantly interrupted	interrupted	coherent
		Many	Some	Few

**Detracting Features**

### Functional Integrity

<b>Cultural Integrity</b>	Traditional	coherent	strong	very strong
	Modified	weak	coherent	strong
	Weak	very weak	weak	coherent
		Weak	Moderate	Strong

**Ecology**

### Condition

<b>Visual Unity</b>	Unified	moderate	good	very good
	Coherent	poor	moderate	good
	Interrupted	very poor	poor	moderate
		Weak	Coherent	Strong

**Functional Integrity**

## Condition

<b>Visual Unity</b>	Strongly Unified 6	moderate 8	good 9	very good 10	very good 11	very good 12
	Unified 5	poor 7	moderate 8	good 9	very good 10	very good 11
	Coherent 4	very poor 6	poor 7	moderate 8	poor 9	moderate 10
	Interrupted 3	very poor 5	very poor 6	poor 7	moderate 9	Good 10
	Significantly Interrupted 2	very poor 4	very poor 5	very poor 6	poor 7	moderate 8
		Very weak 2	Weak 3	Coherent 4	Strong 5	Very strong 6

## Functional Integrity

### Analysis of Landscape Sensitivity

Landscape 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 and Visibility and is classified as very low, low, moderate, high and very high.

Sense of place, which may be very weak, weak, moderate, strong or very strong, is the result of the analysis of Distinctiveness and Time Depth / Continuity. Distinctiveness is defined by how much the key characteristics of an area contribute to its sense of place. For example in a landscape where hedgerows are a key characteristic, if the hedgerow network is intact the landscape can be described as distinct or characteristic. Some landscapes have features that may be considered 'unique' or 'rare', which will contribute to a strong sense of place; at other times characteristic features will be indistinct.

Time depth or continuity ranges from recent, through historic to ancient. Ancient landscapes are uncommon in Nottinghamshire but include those that have had very little human intervention or contain ancient and pre-historic features. Historic landscapes date from the medieval period onwards. This is when the pattern of most Nottinghamshire landscapes was established and is still discernable in some areas overlain by modern features.

Recent landscapes are those where historic elements have been replaced with new elements. They include reclaimed landscapes.

Visibility, which may be very low, low, moderate, high or very high, is the result of an analysis of landform and an assessment of whether this is Dominant, Apparent or Insignificant against Sense of Enclosure and whether this is Enclosed, Intermittent or Open.

The matrices used to determine Landscape Sensitivity are shown below. The attributes are given a numerical score.

### EVALUATION MATRIX TO DETERMINE SENSITIVITY

#### Sense of Place

<b>Distinctiveness</b>	Unique/Rare 3	moderate 4	strong 5	very strong 6
	Characteristic 2	weak 3	moderate 4	strong 5
	Indistinct 1	very weak 2	weak 3	moderate 4
		Recent 1	Historic 2	Ancient 3

**Continuity**

#### Visibility

<b>Landform</b>	Dominant 3	moderate 4	high 5	very high 6
	Apparent 2	low 3	moderate 4	high 5
	Insignificant 1	very low 2	low 3	moderate 4
		Enclosed 1	Intermittent 2	Open 3

**Sense of Enclosure**

## Sensitivity

<b>Sense of Place</b>	Very strong 6	moderate 8	high 9	very high 10	very high 11	very high 12
	Strong 5	low 7	moderate 8	high 9	very high 10	very high 11
	Moderate 4	very low 6	low 7	moderate 8	high 9	very high 10
	Weak 3	very low 5	very low 6	low 7	moderate 9	high 10
	Very weak 2	very low 4	very low 5	very low 6	low 7	moderate 8
		Very low 2	Low 3	Moderate 4	High 5	Very high 6
		<b>Visibility</b>				

### 11.8 Derivation of Landscape Policy

Landscape Condition and Landscape Sensitivity can then be plotted against each other as shown in the matrix below and a score derived for each attribute:-



## EVALUATION MATRIX TO DETERMINE LANDSCAPE ACTIONS

<b>Condition</b>	very good 10	very good condition very low sensitivity 16	very good condition low sensitivity 17	very good condition moderate sensitivity 18	very good condition high sensitivity 19	very good condition very high sensitivity 20
	good 9	good condition very low sensitivity 15	good condition low sensitivity 16	good condition moderate sensitivity 17	good condition high sensitivity 18	good condition very high sensitivity 19
	moderate 8	moderate condition very low sensitivity 14	moderate condition low sensitivity 15	moderate condition moderate sensitivity 16	moderate condition high sensitivity 17	moderate condition very high sensitivity 18
	poor 7	poor condition very low sensitivity 13	poor condition low sensitivity 14	poor condition moderate sensitivity 15	poor condition high sensitivity 16	poor condition very high sensitivity 17
	very poor 6	very poor condition very low sensitivity 12	very poor condition low sensitivity 13	very poor condition moderate sensitivity 14	very poor condition high sensitivity 15	very poor condition very high sensitivity 16
		very low 6	low 7	moderate 8	high 9	very high 10
		<b>Sensitivity</b>				

It can then be considered what tasks are required for each attribute.

## EVALUATION MATRIX TO DETERMINE LANDSCAPE ACTIONS

<b>Condition</b>	very good	create sensitivity conserve condition	create sensitivity conserve condition	restore sensitivity conserve condition	conserve sensitivity conserve condition	conserve sensitivity conserve condition
	good	create sensitivity conserve condition	create sensitivity conserve condition	restore sensitivity conserve condition	conserve sensitivity conserve condition	conserve sensitivity conserve condition
	moderate	create sensitivity reinforce condition	create sensitivity reinforce condition	reinforce sensitivity reinforce condition	conserve sensitivity reinforce condition	conserve sensitivity reinforce condition
	poor	create sensitivity create condition	create sensitivity create condition	restore sensitivity create condition	conserve sensitivity create condition	conserve sensitivity create condition
	very poor	create sensitivity create condition	create sensitivity create condition	restore sensitivity create condition	conserve sensitivity create condition	conserve sensitivity create condition
		very low	low	moderate	high	very high
		<b>Sensitivity</b>				

From the above a series of policy words can be derived as shown below:-

Condition	Good	create sensitivity conserve condition  Reinforce	restore sensitivity conserve condition  Conserve and Reinforce	conserve sensitivity conserve condition  Conserve
	Moderate	create sensitivity reinforce condition  Create and Reinforce	reinforce sensitivity reinforce condition  Conserve and Create	conserve sensitivity reinforce condition  Conserve and Restore
	Poor	create sensitivity create condition  Create	restore sensitivity create condition  Restore and Create	conserve sensitivity create condition  Restore
		Low	Moderate	High
		Sensitivity		

Each policy can be defined more precisely 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.

**Reinforce** – actions that strengthen or reinforce distinctive features and patterns in the landscape.

**Conserve and Restore** – actions that encourage the conservation of distinctive features in good condition, whilst restoring elements or areas in poorer condition and removing or mitigating detracting features.

**Conserve and Create** – 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 features and the removal or mitigation of detracting features.

**Restore and Create** – 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.

**Reinforce and Create** – 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.

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

### **11.9 Software programme**

A software programme was written and incorporated into the field data collection sheet. In this way the policy description was derived at the end of the site collection data.

### **12.0 PREPARATION OF KEY POLICIES**

Once the score and a draft policy have been derived for each DPZ, the next stage is to define a set of specific landscape actions.

The model for this part of the process is work previously carried out by Kent County Council – references to documents produced by them are included at the end of this report.

The sequence of stages is as follows:-

- Produce a character summary for the DPZ. An example is included as Appendix 9 using information collected at the character stage.
- Produce a summary of the characteristic features as a series of bullet points.
- Write a short summary of Landscape Condition.
- Write a short summary of Landscape Sensitivity.
- Assemble the above information together with a representative photograph, matrix and summary of landscape analysis using the format developed by Kent County Council where by all key information is presented on an A4 sheet.
- Finally, using all the above information derive a bullet point summary of landscape actions.

### **13.0 PRESENTATION OF INFORMATION AND RELATIONSHIP TO THE EXISTING DOCUMENT**

The existing Nottinghamshire Landscape Guidelines consists of a published document as well as The Landscape Types Plan. For each Regional Character Area the following information is provided:-

Section 1 Physical and Human Influences

- Section 2 Visual Character of the Landscape
- Section 3 Landscape Evolution and Change
- Section 4 Landscape Strategies and Key Recommendations
- Section 5 Landscape Guidelines – including species list

The above information is all text based and is not available on line, requests for published information are provided as a hard copy. However, the above document contains very detailed information which should not be lost in the process of revision of the LCA.

For each Regional Character Area (as previous but with revised boundary) - Section 1 requires minor updates only but Section 3 (which details the drivers to landscape evolution and change such as agricultural policy, transportation, urban and industrial development, mineral extraction and tourism) will require substantial updating to bring it into line with recent developments and legislation.

Section 2 will require minor updates to the introduction. The sub-divisions of the Regional Character Areas such as for Sherwood – Forest Sandlands, River Meadowlands, etc. will no longer exist instead this will be replaced by descriptions of the character of each LCP. A bullet point summary is included on the data sheet. This will be able to be used in the same way as the visual character summary.

Sections 4 and 5 – Landscape Strategies and Landscape Guidelines – will be replaced by a bullet point summary for each DPZ included on the data sheet.

Ultimately the revised Sherwood chapter, for example, will consist of the following:-

- Section 1 Updated physical and human influences
- Section 2 Key Plan – Sherwood LCPs  
Visual character of LCPs in Sherwood (80 No.)
- Section 3 Updated landscape evolution and change
- Section 4 Key Plan – Sherwood DPZs  
Policy sheet for DPZs in Sherwood ( \*. No.)
- Section 5 Updated species list for Sherwood  
It is intended that this could be provided electronically or as a hard copy

The pilot study has produced information Section 2 and Section 4 and a revised Sherwood boundary.

## **14.0 RELATIONSHIP TO OTHER DOCUMENTS**

### **14.1 Local Biodiversity Action Plan**

In 1998, the Biodiversity Action Group published 'Action for Wildlife'. The Local Biodiversity Action Plan (LBAP) for Nottinghamshire in response to the UK Biodiversity Action Plan (UKBAP) launched in 1994. The Biodiversity Action Group is a partnership of over 30 public, private, statutory and voluntary organisations.

The LBAP document lists priority habitats and contains an action plan for each, as well as species action plans. Each action plan details status of the habitat / species, threats, current initiatives to protect / increase, targets, proposed actions and for habitats a list of those species which will benefit from the targets in the plan.

At present there is no direct link between the targets in the LBAP and the Landscape Actions in the Nottinghamshire Landscape Character Assessment pilot study. This could be achieved in future work by:-

- making more reference to priority habitats in the landscape character descriptions (add "check LBAP priority habitats present" to landscape character checklist Appendix 3);
- making more links with threats detailed in habitat action plans when describing landscape ecological condition (add "check LBAP priority habitats present" to landscape condition and sensitivity checklist Appendix 7);
- making more links with LBAP targets in landscape actions (add "check LBAP priority habitats present" to landscape condition and sensitivity checklist Appendix 7);

### **14.2 Nottinghamshire Historic Landscape Characteristics**

The Nottinghamshire Historic Landscape Characterisation (HLC) has been published in 1999 by Nottinghamshire County Council's Conservation Team 1 in association with English Heritage as part of a national programme.

HLC is concerned to trace the imprint of the past on the landscape, known as 'time depth'. This is one of the landscape's most important characteristics. It can be defined as 'the long term interaction between human activity and natural processes'. It adds a further dimension to LCA and there is a close relationship between the two forms of assessment.

This has been recognised in the Nottinghamshire LCA in that the HLC plan has been used in the process of defining the LCPs (see 9.2 step 4).

Consideration of 'time depth' also feeds into information collected in the landscape character assessment – see Appendix 3, as well as the landscape condition and sensitivity assessment – see Appendix 7.

### **14.3 Green Infrastructure Plans**

Green Infrastructure Plans provide guidance on how green areas within urban settings should be protected, enhanced and where appropriate extended. Green spaces can include areas such as parks, public gardens, woodland and nature reserves. Linkages include linear features such as off-road paths, highways, rivers, streams or hedgerows, which can provide wildlife corridors and connect people to open spaces.

The requirement for Green Infrastructure Plans is being included within Regional Spatial Strategies and GIPs may form a component of the Local Development Framework. Since GIPs generally relate to urban areas and landscape character assessment concentrates on areas outside the urban envelope, these two assessments do not overlap. However, it is useful that organisations at a District / Borough level are aware of the LCA process at a County / Regional level, so that they can be cross-referenced to each other.

## **GLOSSARY OF TERMS**

DPZs	Draft Policy Zones
GIP	Green Infrastructure Plan
GIS	Geographical Information System
GPS	Global Positioning System
HLC	Historic Landscape Characterisation
LBAP	Local Biodiversity Action Plan
LCA	Landscape Character Assessment
LCP	Landscape Character Parcel
LDDs	Local Development Documents
LDU	Landscape Description Unit
LLDs	Local Landscape Designations
LLP	The Living Landscapes Project
PPG	Planning Policy Guidance Note
PPS	Planning Policy Statement
UKBAP	United Kingdom Biodiversity Action Plan



## REFERENCES

### **Canterbury Landscape Appraisal**

Kent County Council

### **Herne Bay and Whitstable Landscape Appraisal - June 2000**

Kent County Council

### **Landscape Character Assessment Guidance for England and Scotland 2002**

Published by the Countryside Agency and Scottish Natural Heritage

### **Mature Landscape Areas – Nottinghamshire**

An independent Review and Analysis of the Designation by David Tyldesley and Associates 1997

### **Nottinghamshire and Nottingham Joint Structure Plan**

Adopted February 2006

### **Nottinghamshire Countryside Appraisal**

Nottinghamshire County Council – Revised Methodology 1999

### **Review of Local Landscape Designations – Final Report – June 2006**

Chris Blandford Associates

### **The ‘Living Landscapes Project’ Handbook**

Stephen Warnock 2002

### **The Nottinghamshire Landscape Guidelines**

Nottinghamshire County Council, published 1997

### **Warwickshire Landscape Guidelines (3 Volumes) – November 1993**

Warwickshire County Council Countryside Commission

## APPENDIX 1

Ashfield District Council	Ashfield Local Plan Review - Adopted November 2002	relevant MLA Policy EV4
Bassetlaw District Council	Bassetlaw Local Plan – Deposit Draft Approved October 2001	relevant MLA Policy 6/5
Broxtowe Borough Council	Broxtowe Local Plan 2004	relevant MLA Policy E14
Gedling Borough Council	Gedling Borough Replacement Plan – Adopted 12 <sup>th</sup> July 2003	relevant MLA Policy ENV37
Mansfield District Council	Mansfield District Local Plan – Adopted November 1998	relevant MLA Policy NE8
Newark and Sherwood District Council	Newark and Sherwood Local Plan – Adopted 1999	relevant MLA Policy NE8
Rushcliffe Borough Council	Rushcliffe Borough Local Plan – Adopted 1996	relevant MLA Policy Statement of Intent ENV/J

## APPENDIX 5

### Definition of Attributes

Dominant            to be added

Prominent

Apparent

Insignificant