

LAND USE STUDY



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INTRODUCTION

INTRODUCTION

Northamptonshire County Council (NCC) is currently undertaking a Landscape Character Assessment. It is intended that the project will deliver an integrated, robust and comprehensive landscape characterisation for Northamptonshire. The project aims to provide a comprehensive characterisation of the county by integrating the three primary environmental aspects of the landscape; the historic, biodiversity and current landscape. To inform this process a data set is currently being created which will analyse the habitat and patterning of all fields within the county.

1 SOURCES

SOURCES

This data set, with the working title of “Field Characterisation”, currently has three fields of information that have been assigned to each field. These are Broad Habitat Subclass, Field Pattern and Field Size. These fields are informed by a number of data sets available to NCC, specifically Land Cover Map 2000 (LCM2000), produced by The Centre for Ecology and Hydrology (CEH), OS Master Map, the 1880s OS 1:10560 maps which have been georeferenced within MapInfo and vertical air photo coverage produced by Getmapping®.

2 METHODOLOGY

METHODOLOGY

- 1 A table is created within MapInfo containing the data fields Broad Habitat Subclass, Field Pattern and Field Size.
- 2 Using the current OS Mastermap GIS layer individual fields are copied and pasted into the Field Characterisation table. Since a high proportion of the Mastermap polygons cover more than one field at this stage they need to be edited so that each field is represented by a single polygon.
- 3 Information is now entered into the Broad Habitat Subclass data field. This field is informed by LCM 2000 and the vertical air photo coverage of the county. LCM 2000 is a thematic classification of spectral data recorded by satellite images. This method of recording data will produce misclassifications since different habitats often give off similar spectral signals. For this reason it is essential that the LCM 2000 data be cross checked with the air photo coverage.

The Broad Habitat Subclass Classifications found within the county are:
Water (inland)
Broad-leaved woodland
Coniferous woodland
Arable cereals
Arable horticultural
Improved grassland
Set-aside grass
Neutral grass
Calcareous grass
Surbaban/rural developed
Continuous Urban
Inland Bare Ground
- 4 The second data field to be entered is the Field pattern. This involves a degree of subjectivity. The model used is based on that used by Hertfordshire County Council for its Landscape Character Assessment for Southern Hertfordshire.

The Field Pattern classifications are:

Irregular: piecemeal enclosure pattern associated with an irregular network of winding lanes.

Subregular: interlocking pattern of fields and lanes with curving boundaries.

Regular: rectilinear pattern of fields with mainly curving boundaries.

Geometric: ordered pattern of rectilinear fields and lanes with straight boundaries.

Discontinuous: field pattern is so disturbed or destroyed that a pattern is no longer apparent.

Other models were considered but this, it was felt, was the most suitable since it was relatively uncomplicated and easy to understand. This data field is informed by the OS Mastermap with reference being made to the 1880s OS 1st edition and the vertical air photo coverage. Although it would be reasonable to assign a high degree of confidence to this data field prior to ground truthing it is important to be aware that maps become out of date almost as soon as they are published and new development can dramatically alter the picture in a very short space of time.
- 5 The third and final data field to be created is Field Size. The model used for this data field was devised by Chris Blandford Associates for the Countryside Character Initiative National Mapping Project sponsored jointly by the Countryside Commission and English Heritage. Fields are categorised as follows.

Large: 100,000 m sq. and over

Medium - large: 50,000 to 100,000 m sq.

Small - medium: 33,000 to 50,000 m sq.

Small: 33,000 m sq. or less

This final categorisation can be calculated using a simple operation in MapInfo once all other data has been entered.
- 6 Finally through the use of MapInfo's Query and Select facility copies of the map can be colour coded according to the required criteria. This will make the data set easier to understand visually.

FIGURES

PLEASE REFER TO THE DOCUMENT '**LUS - FIGURES 1-3**'.

REFERENCES

Chris Blandford Associates (1997) Countryside Character Initiative National Mapping Project: Technical Report of the Computer Phase, Countryside Commission.

Fuller, R.M., Smith, G.M., Sanderson, J.M., Hill, R.A., Thomson, A.G, Cox, R., Brown N.J., Clarke, R.T., Rothery, P. and Gerard, F.F. 2002, Land Cover Map 2000: A Guide to the Classification System, Centre for Ecology and Hydrology.

The Landscape Partnerships (2001) Hertfordshire Landscape Strategy Volume 2: Landscape Character Assessment, Evaluation and Guidelines for Southern Hertfordshire, Hertfordshire County Council.