

# Technical Support Document 2



## Tranquillity

**2013**

# A Methodology for Recording the Tranquillity of the Landscape

## 1.0 Introduction

The term 'tranquillity' is not a new concept and now appears in a great many policy and planning documents including the National Planning Policy Framework. Much of the work relating to the recording and assessment of tranquillity has been undertaken by the Campaign to Protect Rural England (CPRE) culminating in the publication of a national tranquillity map in 2008.

Tranquillity is an important perceptual quality of the landscape and makes a significant contribution to people's enjoyment of an area. Unfortunately a lot of modern development, such as new roads and urban extensions, has led to a diminution of tranquillity. In order to reverse this trend it is important to record the current resource and provide a spatial context for considering tranquillity within Derbyshire.

## 2.0 Establishing a Spatial Framework

In order to inform the planning process it is necessary to identify an appropriate spatial framework in which to assess and analyse tranquillity data supplied by the CPRE. It is important to ensure that the spatial unit is robust, meaningful and operates at an appropriate level of detail to inform the planning process and yet respond to the underlying character of the wider landscape.

It was decided that the most appropriate spatial unit for undertaking this exercise was the Landscape Description Unit (LDU); the fundamental building block of the Derbyshire Landscape Character Assessment. A detailed methodology for the definition of an LDU can be obtained from "*The Living Landscapes Project Landscape Characterisation Handbook: Level 2 (Version 4.1)*", Warnock S, 2002.

However, in general terms, LDUs are distinct and relatively homogenous units of land defined by a number of attributes relating to:

- Physiography – the relationship between geology and landform
- Ground Type – the relationship between geology and soils
- Land cover – a reflection of surface vegetation; both land-use and tree cover
- Cultural pattern – an assessment of settlement pattern and farm type

Not only do LDUs provide a meaningful and structured spatial framework for the analysis of tranquillity data, but they also provide full coverage within the study area. Furthermore, all LDUs are digitally mapped and held in a Geographic Information System (GIS) allowing for various datasets to be compared through a process of overlay and query mapping.

In general terms, those landscapes of highest value will be areas that retain a high degree of tranquillity.

## 3.0 Methodology

The CPRE study utilised a GIS to score 500m x 500m squares based on a range of attributes both positive and negative that contribute to or detract from tranquillity. These attributes were agreed through participatory workshops with local people in two pilot areas in Northumberland. A detailed methodology for this work undertaken by Northumbria University can be obtained at the following link <http://www.cpre.org.uk/library/campaign/tranquillity?month=0&year=0&keyword=&offer=false&format=&type=&orderby=title&topic=0&page=6>

Once a value is attributed to each square these can then be thematically mapped in a GIS to show the range of values and produce the national tranquillity map.

## County Scale

Whilst this approach provides a broad overview of tranquillity at a national scale, the spatial context (500m x 500m squares) is quite arbitrary and lacks a landscape context; the medium within which tranquillity is appreciated. Having clipped the national dataset to the county boundary, excluding the area covered by the Peak District National Park, the CPRE values for each 500m x 500m square within an individual LDU are averaged to assign a tranquillity value to each LDU. Although at face value this seems to be a coarser scale than the CPRE study, its strength is that it now has a landscape context i.e. an area of landscape with common characteristics. When each LDU has been scored in this way we are then able to thematically map these landscape units in GIS to produce a range of values. This new map is effectively a tranquillity map for Derbyshire that utilises a landscape framework – see map below.

The following range of values was used to express the spread of tranquillity scores for each LDU across the county.

- 12 to 28
- -3 to 12
- -18 to -3
- -46 to -18
- -74 to -46

The mean (average) value within this range is -18. In strategic planning terms it is considered that all LDUs with values above or equal to the mean i.e. the top three bands, are considered significant with respect to tranquillity.

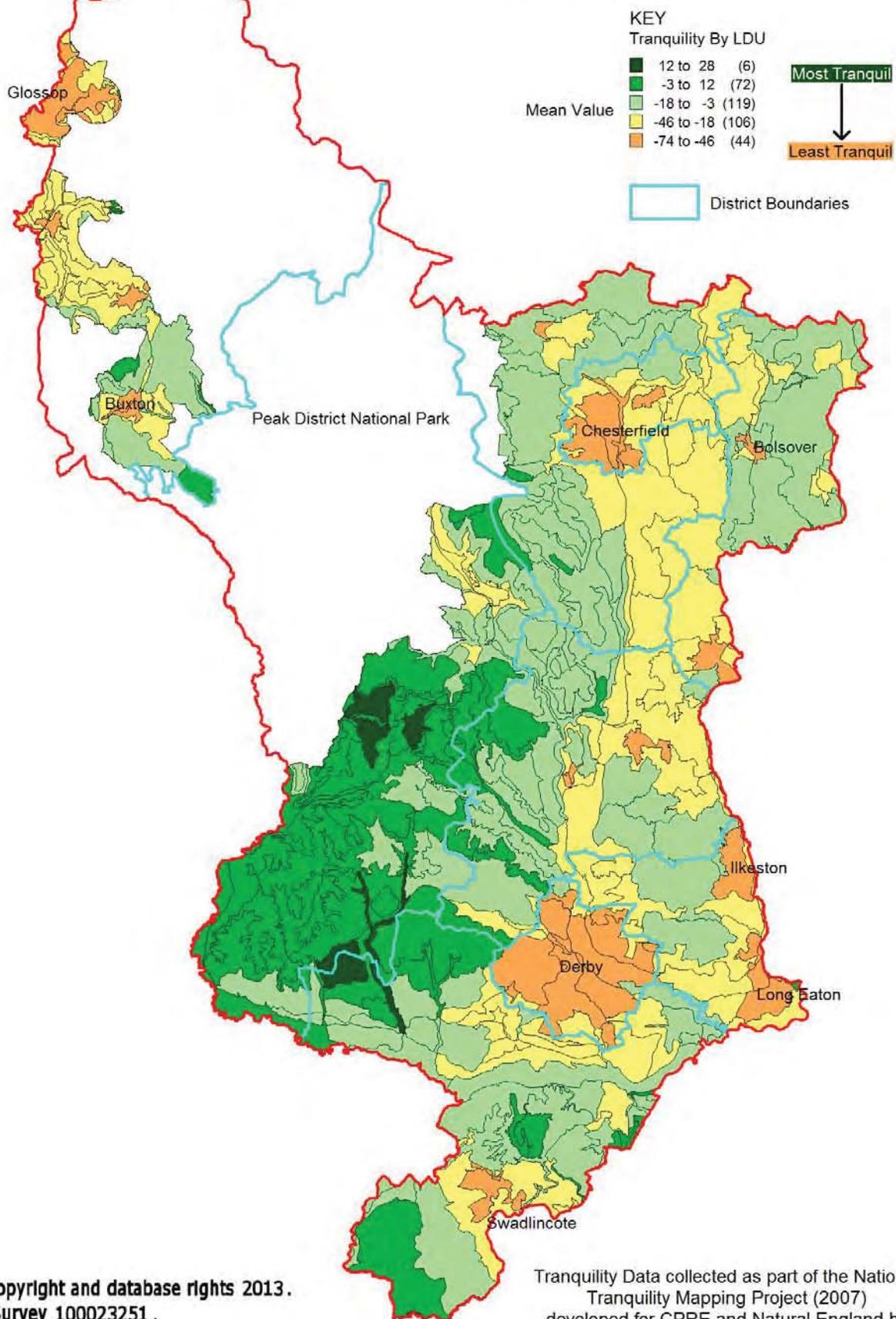
## 4.0 Results

Not surprisingly, the resultant map shows a distinct west-east divide with respect to tranquillity. Tranquil areas occur in the west associated with the Derbyshire Peak Fringe and Lower Derwent NCA and the Needwood and South Derbyshire Claylands NCA. The heavily urbanised parts of east Derbyshire are the least tranquil, particularly the areas associated with the Derbyshire Coalfield. There continue to be localised pockets of tranquillity associated with the Southern Magnesian Limestone, the Melbourne Parklands and the Mease/Sence Lowlands NCAs.

## 5.0 Conclusion

The strength of this methodology is that it reinforces a spatial approach which can be repeated in the evaluation of other environmental data such as biodiversity and historic landscapes. This allows for a composite of environmental values to be assigned to specific areas of landscape, helping to identify areas that are most sensitive to change. This will provide an important evidence base for strategic planning purposes at both the county and district scale. Furthermore, the CPRE dataset has become an accepted record of current national tranquillity. This methodology simply builds on this data by applying it to a spatial landscape framework developed around landscape characterisation.

## Relative Tranquillity of Derbyshire outside the Peak District National Park



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Ordnance Survey 100023251 .

Tranquility Data collected as part of the National  
Tranquility Mapping Project (2007)  
developed for CPRE and Natural England by  
Northumbria University.