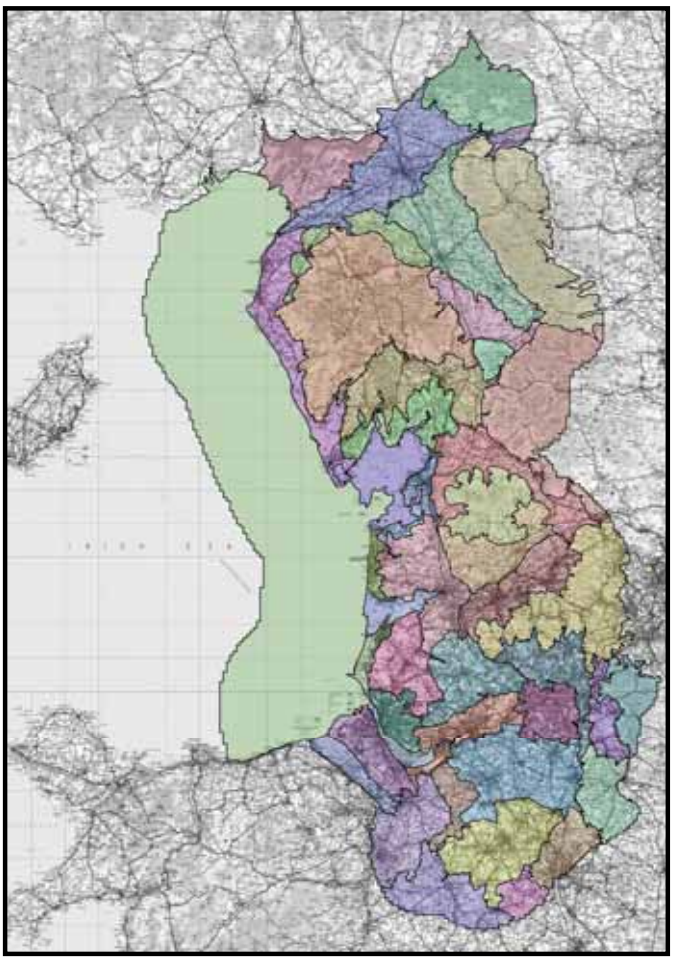

North West Regional Landscape Character Framework

Integration of Historic Landscape Character

Heritage Report

Oxford Archaeology North

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ABBREVIATIONS USED IN THE TEXT

ALGAO	Association of Local Government Archaeological Officers
ALSF	Aggregates Levy Sustainability Fund
CCG	Client Commission Group
DCMS	Department for Culture, Media and Sport
DEFRA	Department for Environment, Food and Rural Affairs
EC	European Community
EH	English Heritage
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
EP	Environmental Policy
EU	European Union
GIS	Geographical Information System
HER	Historic Environment Record
HLC	Historic Landscape Characterisation
HMS	Heritage Management Services
MoRPHE	Management of Research Projects in the Historic Environment
NE	Natural England
NWLCF	North West Landscape Character Framework
OA	Oxford Archaeology
OS	Ordnance Survey
PLU	Physical Landscape Unit
RHLC	Regional Historic Landscape Character
RLCA	Regional Landscape Character Area
RLCT	Regional Landscape Character Type
SEA	Strategic Environmental Assessment

SUMMARY

PROJECT OVERVIEW

This project forms part of the Natural England North West Regional Landscape Character Framework (NWLCF), which aims to describe the variation in landscape at a regional scale and provide a consistent level of mapping for all landscapes in the region, as 'a key step in the implementation of the European Landscape Convention' (Porter *et al* 2009, 4). The Convention calls for the integration of landscape into all relevant areas of policy, including cultural, economic and social policies. The NWLCF provides the vital stepping stone between national and local perspectives and aims to ensure that the landscape is fully integrated into regional and sub-regional policy. Furthermore, through the recognition that 'landscape' is a complex interaction between cultural, environmental, physical and heritage characteristics, the NWLCF aims to deliver the first fully comprehensive framework for landscape management and conservation throughout the region (*op cit*, 6-7).

The initial phase of the NWLCF defined regional landscape character types (RLCTs), which represent landscapes with similar characteristics (physical, environmental or cultural) wherever they occur in the region (*op cit*, 12-13). These were then used to create regional landscape character areas (RLCAs), which are parts of the landscapes with a unique identity within the region. Where possible, the boundaries of these RLCAs correlate with existing National Character Areas, or are subdivisions of them (http://www.naturalengland.org.uk/ourwork/landscape/englands/character/areas/). A baseline dataset on the biodiversity, cultural heritage and geodiversity of each RLCT was created in Phase 1, which was completed in 2009.

Phase 2, of which this project is one part, aims to provide more detail on the heritage, biodiversity and geodiversity of the RLCAs. It also aims to identify the change scenarios (that is the broad groupings of forces for change that are more appropriate to model for regional work than particular forces) that may affect the landscape character of the region (in a positive or negative manner), and rather more detailed objectives for the conservation and management of the landscape. Oxford Archaeology North (OA North) has been commissioned to undertake the heritage aspect of this work, and the work was undertaken between January and April 2010.

NON-TECHNICAL SUMMARY OF METHODOLOGY

There were three main stages to this project. Firstly, the existing historic landscape characterisation mapping and associated material, available at county-level, were amalgamated and interpreted to establish regional-level historic landscape character types. Secondly, these were integrated with the RLCAs. Thirdly, change scenarios were assessed and objectives were identified for these historic landscape types and the RLCAs.

The area of investigation was the North-West of England, and for the purposes of the present project included the counties of Cumbria, Lancashire, Merseyside, Greater Manchester and Cheshire. Historic Landscape Characterisations for the counties and metropolitan areas within the region were created as part of a series of English Heritage-funded projects (*Section 3.2.3*) and were made available to this project, where complete. These had been undertaken over a

number of years using several different methodologies, and to varying levels of detail. Before they could be integrated into a single region-wide layer, therefore, the terms used to describe different landscape types had to be made consistent. To go from a county-level dataset to a regional-level characterisation required a considerable amount of generalisation, and the process involved digitising larger blocks of land and identifying the dominant landscape type, rather than examining each individual field or village.

Scenarios were then identified that were likely to have an impact, either positive or negative, on the historic environment. These included broad scenarios, such as climate change and commercial forestry planting, but also smaller-scale scenarios, such as the regeneration of former extractive industry sites. For each historic landscape character type, those change scenarios likely to have an impact were assigned a score from 1 to 3, low to high, for both their anticipated positive and negative effects. Generic objectives for the management, preservation or conservation of each historic landscape character type were also identified. If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced.

In general, the historic landscape character types used in this project indicated the period, as well as the type, of landscape. The character types were further divided into sub-types identifying the type of landscape in more detail. For example, the Settlement type was given three periods: Ancient (prior to 1700), Post-Medieval, and Modern. It was then given sub-types representing Industrial, Commercial, Civic, Residential, and so on. In this way, the historical development of an area could be examined at differing levels of detail.

The regionalised historic landscape characterisation mapping was overlain onto the Regional Landscape Character Areas (RLCA) created during Phase 1 of the NWLCF project. In this way the most common, or dominant, historic landscape character type (or types) in each RLCA could be identified by calculating the percentage of the area that they covered. Using this information, the most likely change scenarios and most appropriate objectives for each RLCA could also be identified. The change scenario scores for each relevant character type were also totalled to create 'sensitivity scores' (positive and negative) for each RLCA. Again, it should be anticipated that meeting objectives would reduce negative and enhance positive impacts of change.

Finally, the historic character of each RLCA was examined in detail. This included the relationship between the physical and historical character, the development of settlement and agriculture, and any industrial development.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Natural England for commissioning and funding the project, which is supported by the Regional Landscape Partnership; in particular we would like to thank Ruth Benson (Natural England), who managed the project, for her support throughout. We would also like to thank the members of the Client Commission Group committee, which included Jill Collens (Cheshire East and Cheshire West and Chester Councils, and Association of Local Government Archaeological Officers North West), Peter Herring (English Heritage), Graham Fairclough (English Heritage), and Stuart Pasley (Natural England). Additional thanks are due to the original Historic Landscape Characterisation (HLC) providers: Cumbria County Council, Lancashire County Council, the Greater Manchester and Merseyside Metropolitan County Councils, and Cheshire East Council and Cheshire West and Chester Council.

The HLC GIS development work was undertaken by Dana Campbell and Joanne Povall, and assistance with the preparation of the Regional Landscape Characterisation Area (RLCA) reports was provided by Richard Gregory, Peter Schofield, Ian Miller and Rob Edwards (Cheshire County Council). The report was written by Joanne Cook and Jamie Quartermaine, and the illustrations were by Dana Campbell. The project was directed by Joanne Cook and was managed by Jamie Quartermaine. The report was edited by Rachel Newman.

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 This report outlines the reasoning, methodology, and the results of the integration of the Historic Landscape Characterisation (HLC) with the North West Landscape Character Framework (NWLCF), an approach that was detailed further by the *North West Regional Landscape Character Framework: Integration of Historic Landscape Character Project Design*, dated December 2009 (OA North 2009a). The project is a component of the wider North West Regional Landscape Character Framework (NWLCF) Phase 2, which aims to 'generate a robust evidence base to support strategy development for landscape planning and management in the North West region' (Natural England 2009, section 3.1). The focus of this component has been to amalgamate county-based Historic Landscape Character (HLC) material, and integrate a generalised or regionalised HLC with the results of the Phase 1 NWLCF. This framework underlines the need to recognise cultural heritage as integral to an holistic view of the landscape. The historic environment is as essential to our perceptions of the landscape as the physical or biological environments, and, as articulated by the European Landscape Convention, landscape is 'an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors' (Council of Europe 2007).

1.1.2 Some historic environment information was incorporated into the NWLCF during Phase 1 (Natural England 2009), where it was attached as attribute data to the Regional Landscape Characterisation Types (RLCTs) and Regional Landscape Character Areas (RLCAs) of the NWLCF. This included some information on the broad historic character of the areas, including brief descriptions that highlighted what, if any, features of historical significance were present. The primary goal of Phase 2 was to enhance and expand this preliminary work to include specialist information derived from the creation of a regional HLC. HLC introduced more nuanced information, and an archaeological understanding of the development of a place over time (a 'place', following English Heritage guidance, is any part of the historic environment that can be perceived as having a distinct identity; English Heritage 2008).

1.1.3 County-scale HLCs were available for Lancashire (Ede and Darlington 2002), Cheshire, Warrington and Halton (Edwards 2008), Cumbria and the Lake District National Park (Newman 2009), and selected parts of Merseyside and Greater Manchester (still in progress); in addition, there was also Extensive Urban Survey data for Lancashire (Lancashire County Council and Egerton Lea Consultancy 2005). HLC identifies and maps the historical dimension of today's rural and urban landscapes, covering all aspects of the landscape, not just designated areas and sites. Each HLC was created under a different methodology, and while their generalisation posed methodological challenges, their simplification has resulted in an effective tool for planning and offering guidance on the historic environment at a regional level. The wider characterisation of the North West has, until now, not been informed by this extensive heritage material.

1.2 STAKEHOLDERS AND PARTNERS

1.2.1 The creation of a generalised, regional HLC and its integration with the developing NWRLC Framework was accomplished through the joint efforts of several working partners. Natural England, the North West Regional Landscape Partnership and English Heritage, which provided guidance throughout the project. The management of the project was steered by the Client Commission Group (CCG), which included members of the English Heritage Characterisation Team, and the North West Regional Committee of the Association of Local Government Archaeological Officers (ALGAO). Additional guidance was provided by the original data source providers: Cumbria County Council; the Lake District National Park Authority; Lancashire County Council; the constituent councils of Greater Manchester and Merseyside; Cheshire East Council; and Cheshire West and Chester Council.

1.3 REPORT OUTLINE

1.3.1 The following brief report outlines the basic methodology used (*Section 2*), highlighting specific methodological issues encountered, as an introduction to the results of this analysis. A summary of the characteristics of the datasets used to compile the RHLC is presented in *Section 3*, followed by an overview of the historic landscape character of the North West (*Section 4*), and there is then a description of each of the Historic Character Types that have been used to formulate the RHLC (*Section 5).* A comparison is made between the RHLC types and the earlier Regionalised Landscape Character Types (RLCT) (*Section 6*), with recommendations for further work, presented in *Section 7*. *Appendix 1* provides a comparison between the different character types across all of the HLCs in the region. In *Appendices 2-5,* the summary descriptions of each Regional Landscape Character Area (RLCA) are presented, with respect to the historic environment and the potential impacts that change scenarios may have upon each.

2. METHODOLOGY

2.1 INTRODUCTION

2.1.1 The basic methodology of the project as defined by the project brief (Natural England 2009) was to acquire and combine historic landscape characterisations (created by various English Heritage-funded characterisation projects across the North West) into a single regional-level HLC. This was combined with the Regional Landscape Character Area (RLCA) dataset from Phase 1 of this project (Figs 1 and 2; Porter *et al* 2009), after which it was subject to analysis to suggest potential change scenarios, and used to identify objectives for the management, conservation and, where appropriate, the protection of the historic environment.

2.1.2 HLCs in the North West have been compiled using a variety of methodologies (*Section 1.1.3)*. Although they have all been funded by English Heritage, there is no single national approach, so that HLC methodology can evolve as an iterative process and respond to local needs and available resources. Methodological differences and differences of scale in the several HLCs therefore meant that it was not possible to create a usable regionalised HLC from the original county HLCs using an automated process. This did not affect the second stage of the process - amalgamation with the RLCA dataset created in Phase 1 of the project - but did require a modification of the brief, in consultation with the Client Commission Group, to allow for a second phase of generalisation and digitisation.

2.1.3 The detailed methodology set out below records the process that was undertaken, along with the issues that were encountered at each stage.

2.2 STAGE ONE: REGIONALISING HISTORIC LANDSCAPE CHARACTER

2.2.1 ***Collection of material:*** completed HLCs were obtained from Cumbria County Council, the Lake District National Park Authority, Lancashire County Council, and Cheshire East Council and Cheshire West and Chester Council for the area of the former Cheshire County Council. The datasets for Merseyside and Greater Manchester were known to be incomplete, and were obtained in their incomplete form.

2.2.2 All material was examined to establish the methodology and terminology used to describe the different historic landscape character types, sub-types and period information. These were added to a 'comparison matrix' showing the different terms in use in each HLC (*Appendix 1*).

2.2.3 ***Initial Classification:*** using the Lancashire HLC as the basis, being the oldest, earliest and simplest HLC, regionalised terms were established for each character type and sub-type identified across all of the six HLCs. Additional columns were added to the HLC datasets for the regionalised HLC type (RHLC_TYP) and sub-type (RHLC_SUB).

2.2.4 Due to the differing methodologies and terminologies employed, it was not always possible to classify each character type in each HLC completely consistently. If further information was not available in the original methodologies, these types had

to be assigned to more general categories, or classified as 'other'. For example, within the Cumbria and Lake District HLCs, Intakes and Vaccaries were originally given their own sub-type within the broad Enclosure type, but these were not specifically highlighted in any other HLC. Consequently, it was necessary to classify them as Ancient Enclosure, to ensure consistency across the entire region (Figs 3-6).

2.2.5 ***Urban Areas:*** as the characterisation for Greater Manchester had not been completed, there were large *lacunae* in the coverage. Ordnance Survey Mastermap data were used broadly to classify the unfinished areas - to a much less degree of detail than the original but sufficient at a regional scale (Figs 5 and 6). They were used for this process because, although it is considerably more detailed than the Ordnance Survey raster mapping, the vector features could be selected and copied into a new dataset rather than requiring individual digitising by hand. The latter alternative process would have been considerably more time-consuming.

2.2.6 Where possible, information about the historic development of urban areas and settlements was included if this existed in the county HLC. For Lancashire, it was possible to use additional GIS data from the Extensive Urban Survey (Lancashire County Council and Egerton Lea Consultancy 2005), which existed for principal settlements within that county (Fig 5). In this way it was possible to show the expansion of the various settlement types through time.

2.2.7 ***Further generalisation:*** once the Client Commission Group had agreed the classification, the county HLCs were merged into one, and then split into separate datasets per character type for easier handling. However, as the final datasets were too large for effective use at a regional level (*Sections 2.3.6-9*), the Client Commission Group agreed a second phase of generalisation. The objective for this was to reclassify larger areas of the region based on their dominant character type, therefore absorbing smaller polygons, such as discrete blocks of woodland or dispersed settlement, into their surrounding landscape.

2.2.8 This process involved considerable qualitative analysis and could not be undertaken automatically. The new boundaries of the larger landscape areas were identified by eye at approximately 1:10,000 scale, and the boundaries were traced by hand onto a new dataset. This was then assigned the dominant character and sub-character type.

2.2.9 ***Regionalised Historic Landscape Character Type Descriptions:*** detailed descriptions were then written for each Regionalised Historic Landscape Character type, along with an explanation of each sub-type. Objectives were then identified for the conservation and management of the historic environment within that character type, based on previous archaeological and heritage knowledge and experience (*Section 5*). Various sources were also consulted during this task, and these are defined within the project bibliography (*Section 8*).

2.3 STAGE ONE ISSUES

2.3.1 ***Temporal Information:*** there was variability in the recording of temporal information. Whilst a standard naming convention (English Heritage 2002) had often been employed to describe the period of a character type, the cut-off dates differed. The Lancashire HLC, for example, defined 'ancient' as prior to *c*1600 (Ede and Darlington 2002), while the Cumbria HLC defined it as prior to 1770

(Newman 2009). In some cases this led to some inconsistency in the final classification. Rather than lose all temporal information entirely, three broad periods were used: Ancient, Post-Medieval and Modern. As the comparison matrix in *Appendix 1* shows, the cut-offs have been kept necessarily vague, and include some overlap.

2.3.2 ***Woodland:*** it was not possible to identify readily the features representing woodland within the Lake District HLC. When manually checked, large areas of woodland, such as Grizedale Forest, were assigned multiple classifications with no single attribute clearly identifying the whole area. The original methodology in the HLC report (Chris Blandford Associates 2008) did not provide a full explanation of the classification process, and therefore it was necessary to make a 'best-guess' as to which classification to use.

2.3.3 ***Previous Use:*** the issue of previous use was also handled in various different ways, making it extremely difficult to maintain any consistency across all HLCs. In some, such as the Lake District, it was evident that previous use was the main classification. In others, such as Greater Manchester, there were separate layers for each mapping epoch (for example, Ordnance Survey First Edition), and therefore each land block had potentially many different previous uses to choose from. In Cumbria and the Lake District, a land block was duplicated to indicate its previous use; in other words, an Enclosure previously part of a Deer Park would appear twice, with two separate type classifications. In the original Cheshire HLC data structure, up to three previous descriptive types could be assigned to each HLC polygon. These data are now held within the HER and have been used to create mapping which broadly equates to the Ordnance Survey First and Third Editions.

2.3.4 The approach agreed for the Regionalised HLC was, where material was available, to apply the previous use classification as an additional attribute to a given polygon, with another attribute to indicate whether that polygon's land use had changed. This approach was also applied to the urban HLCs of Merseyside and Greater Manchester.

2.3.5 ***Granularity:*** a further issue was identified as to the level of detail, or granularity, recorded in each original HLC. Table 1 (below) shows the numbers of individual land blocks, or polygons, in each HLC, with their average areas. Granularity is dependent on the methodology used by each HLC and the amount of change experienced in the landscape, both of which influence the number of polygons. Table 1 shows that the number of polygons in the Cumbria and Lake District HLCs far exceeded that of Lancashire and, to a lesser extent, Cheshire. Similarly, the datasets for Merseyside and Manchester also had higher number of polygons.

2.3.6 In order to create a managable regional-scale dataset, it was necessary to generalise the data. The boundaries between adjacent polygons with the same type and sub-type were removed, creating a single larger polygon. However, in some cases this technique increased the overall number of polygons, and subsequently reduced the average area, where in the original dataset some unadjacent polygons with identical attribute data had been joined together as 'multi-part' polygons. This process led to a reduction from 543,619 polygons overall to 139,174, but the dataset still contained a level of detail not required at a regional scale.

2.3.7 It was also clear that there was variability in the level of detail recorded in each HLC, leading to anomalies in the regional dataset. For example, in Cumbria and the

Lake District, all roads and canals had been included, yet in Lancashire they had not. This led to discontinuities at the boundary between the counties, where it appeared that features stopped abruptly rather than continuing.

HLC Area (County or District)	Original Number of Polygons	Average Area (ha)	Number of Polygons after Generalisation	Average Area (ha)
Cheshire	15,166	16.3	*37,124	6.6
Cumbria and the Lake District	476,292	4.5	75,884	9.8
Greater Manchester	21,667	2.9	12,224	5.3
Lancashire	**11,005	60.9	5100	75.3
Merseyside	25,682	3.5	8842	6.5
Total	**543,619**		**139,174**	

** The increase in polygon numbers is due to the presence of multi-part polygons in the original dataset.*

*** The Lancashire total includes data from the Extensive Urban Survey (Section 2.2.6)*

Table 1: original number of polygons in each HLC and their average areas, compared to the number of polygons after regionalisation and generalisation

2.3.8 To assuage this problem, major roads such as motorways and A roads were kept, where it was possible to identify them, but minor roads and paths were removed, where they could be identified using an automated process. However, in these cases, small gaps between polygons remained. As it was not possible to remove these using an automated process, this left separate polygons of the same character type where one would have been sufficient. Furthermore, small discrete polygons of different character types, such as dispersed settlement or blocks of woodland, also remained as 'islands' in a landscape of an entirely different character.

2.4 STAGE TWO: INTEGRATION WITH REGIONAL LANDSCAPE CHARACTER AREAS

2.4.1 The RLCA data covered much larger areas than the Regionalised HLC (RHLC), and therefore multiple RHLC types could be found within each RLCA. By using a spatial join within the GIS, it was possible to calculate the breakdown, by type and area, of RHLC data within each RLCA.

2.4.2 The areas of RHLC polygons, originally calculated in square metres, were converted to square kilometres and also shown as percentages of the total area of the RLCA polygon in which they sat. This made it possible quickly to calculate the dominant historic character type or types within each RLCA. Character types with a coverage of less than 0.1% of the area of the RLCA polygon were discarded from further analysis.

2.5 STAGE THREE: CHANGE SCENARIOS

2.5.1 For each historic landscape character type identified above, the change scenarios likely to have an impact on it, either positive or negative, were identified. Strategic documents such as the Regional Spatial Strategy (Government Office for the North West 2008) were examined in detail to identify issues and scenarios likely to affect

heritage character. Previous landscape character assessments (Countryside Commission 1998) were also examined, along with information from organisations such as the Forestry Commission (http://www.forestry.gov.uk/).

2.5.2 For each historic landscape character type, each change scenario was then assigned a rating, from 1 to 3, for its likely positive and negative impacts. These were then totalled to provide 'change sensitivity' ratings for each character type. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering any actual change scenario.

2.5.3 For each RLCA, the change sensitivity ratings for the historic character types that covered over 10% of its area were recorded, and these were totalled to provide an overall impact rating for that RLCA. Once all the RLCAs had been analysed in this way, and the range of positive and negative impact scores was known, these were then reclassified into 'low', 'medium' and 'high' positive ratings, or 'low', 'medium' and 'high' negative ratings.

2.5.4 Change scenarios specific to a given RLCA land block were also analysed in a qualitative way. For example, if a given settlement was highlighted in the Regional Spatial Strategy as a housing regeneration hotspot, this was recorded. Shoreline Management Plans (Halcrow 2009a) were also consulted for coastal RLCAs, as they provided specific information on flood management. Other management plans, where they could be identified, were also consulted, for example the Mersey Estuary Management Plan (Action Mersey Estuary 2006).

2.6 REGIONAL LANDSCAPE CHARACTER AREA ANALYSIS

2.6.1 The historic character of each RLCA was analysed qualitatively using the following headings:

- ***Relationship between physical and historic landscape character:*** a qualitative analysis of the extent to which the historic landscape was influenced by the physical landscape;
- ***General historic character:*** a brief outline of the historical development of the area, including an assessment of the proportions of different RHLC types, and their significance;
- ***Settlement and Enclosure character:*** a more detailed assessment of the character of enclosure and settlement patterns within the RLCA, as a further measure of its historical development and antiquity;
- ***Non-agricultural character:*** a more detailed assessment of the industrial and any other non-agricultural character of the RLCA, and its influence on the overall landscape character;
- ***Change scenarios:*** a qualitative and quantitative assessment of the overall change sensitivity for the most dominant RHLC types (those covering more than 10% of the area of the RLCA);
- ***Specific objectives:*** an outline of the specific objectives for this RLCA, based on the Regional Spatial Strategy (Government Office for the North West 2008) and other geographically-specific information;

- ***Generic objectives:*** an outline of those objectives identified for the dominant character types (*Section 2.2.11*);

3. SUMMARY OF DATA PROVIDED

3.1 SUMMARY OF DATA PROVIDED

3.1.1 The results of the generalisation and regionalisation of the individual county-scale HLCs are supplied in ESRI shapefile format, compliant *with EH Guidelines for Projects Involving GIS* (Froggatt 2004) and includes metadata compliant with ISO standard 19155 and UK Gemini version 2.1 (Walker 2009).

3.1.2 Three groups of files are included: the original data as provided by the counties, the North West Regional HLC data split according to county but including all historic character types and sub-types, and the North West Regional dataset, split according to type, but covering the whole of the North West. Upon agreement by the CCG, it was determined that the large datasets were made more managable when split and presented in this way.

3.2 ORIGINAL DATA

3.2.1 The original datasets, as provided by Cumbria County Council, the Lake District National Park Authority, Lancashire County Council, the Greater Manchester and Merseyside Metropolitan County Councils, Cheshire East Council and Cheshire West and Chester Council, are included in the data provided. These facilitate easy consultation with the original material, in addition to more rigorous interrogation of the data, in the event that a more granular view of the Regional HLC is required.

3.2.2 The following files are provided, and their contents are summarised by their attached metadata:

- CheshireHLC
- LakeDistrictHLC
- LancashireHLC
- Manchester_DraftHLC_Current
- Manchester_DraftHLC_Previous
- Mersey_DraftHLC_Current
- Mersey_DraftHLC_Previous
- Cumbria (*Note: this includes several shapefiles with self-explanatory file names denoting which individual historic landscape character type and which local authority is represented*).

3.2.3 Both the Merseyside and Greater Manchester HLCs are currently available only in draft form, and the data were provided in two formats: the first showing current land use, and the second showing land use at the end of the nineteenth century. The Cumbria data was provided as 97 individual shapefiles, where data were split according to both the local authority and historic landscape character type.

3.3 REGIONALISED HISTORIC LANDSCAPE CHARACTER BY COUNTY

3.3.1 The North West Regional HLC data are to facilitate an ease of use for this large dataset, split according to the county boundaries as originally provided.

3.3.2 The following files are included, and their contents are summarised by their attached metadata:

- Regionalised_Cheshire
- Regionalised_Cumbria
- Regionalised_Lake_District
- Regionalised_Lancashire
- Regionalised_Manchester_Current
- Regionalised_Manchester_CurrentPrevious
- Regionalised_Merseyside_Current
- Regionalised_Merseyside_CurrentPrevious
- Manchester_Lacunae.

3.3.3 The codes for the historic landscape character types (as found in the attribute tables) are found in *Appendix 1*, along with a detailed breakdown of how the North West historic character types and sub-types relate back to the original, county HLC classification systems.

3.4 REGIONALISED HISTORIC LANDSCAPE CHARACTER BY TYPE

3.4.1 In order to view the data across the whole of the North West, but in shapefiles that are of a managable size, the data have been split according to Regional HLC type.

3.4.2 The following files are provided, and their contents are summarised by their attached metadata:

- AllAncientEnclosure
- AllAncientSettlement
- AllBuiltEnvironment
- AllCommunication
- AllDeerParks
- AllDesignedLandscapes
- AllIndustry
- AllMilitary
- AllModernEnclosures
- AllModernSettlement
- AllPostmedievalSettlement
- AllUnenclosed

- AllWater
- AllWoodland.

3.4.3 Again, the codes for the historic landscape character types (as found in the attribute tables) are found in *Appendix 1*, in addition to a detailed breakdown of how the North West historic landscape character types and sub-types relate back to the original, county, HLC classification systems.

4. HISTORIC CHARACTER OVERVIEW

4.1 CORRELATION OF HISTORIC AND LANDSCAPE CHARACTER

4.1.1 ***Introduction:*** the region is characterised by very variable topography; the Lake District contains exposed, craggy fells and deep lakes, while to the south are flat, lowland plains in Cheshire. To the east, rolling, peat-covered hills form the Pennines, and to the west are the salt marshes of Morecambe Bay. The character of the settlement and archaeological resource of each Regional Landscape Character Area are influenced by the topography, some obviously, others less so (Figs 1 and 2).

4.1.2 In the **High Fells** of the Central Lake District, the relationship between the topography and settlement development is self-evident, in that all settlement is located within the valleys, and there are few modern-day settlements on the higher ground. This, however, is at one level an over-simplistic interpretation, as there is an enormous archaeological resource on the marginal land, which reflects expansion of settlement in the past; this has now been preserved as important archaeological remains after the settlement focii have retreated back into the valleys. In addition, the area contains considerable potential for industrial extraction of minerals, which is determined directly by geological rather than topographical factors. Mines and quarries can often be in very remote locations, and the settlement to accommodate the workers of the industries will be located in similar areas. The uplands are still grazed, but increasingly the high fells are subject to visitor pressure. They are, however, protected by the Lake District National Park Authority and are mostly in the ownership of the National Trust. In localised areas, such as Honister, there is still localised industrial slate extraction, but this is now a rarity rather than the norm.

4.1.3 The lower **Moorland Hills**, such as around the edges of the Lake District and in the Pennines, have some later dispersed settlement extending on to their flanks, but the relationship between topography and settlement patterns is nevertheless largely self-evident. What is perhaps not obvious is the impact of peat formation on our perception of the archaeological resource. Mesolithic flint scatters are quite often found in the Pennines, and these reflect activity that may have precipitated woodland decline and peat formation, which then developed over an extended period (OA North 2009b). As the peat expanded outwards, often from the higher points, it discouraged agricultural activity in subsequent periods, and at the same time covered and obscured any pre-peat remains. The result is that, in the peat-covered Pennine areas, early remains are often limited to Mesolithic activity and there is, at least in part, an absence of activity from later periods. Historically, peat cutting has resulted in extensive truncation of the upper levels of the peats, although this no longer represents an ongoing threat in the uplands. The moorland hills are now predominantly used for grazing, and there is some visitor pressure, but not on the scale of the High Fells. Outside the Lake District National Park, there is some limited industrial extraction, but typically this is on a relatively small scale.

4.1.4 Across the region, there are several **Major Valleys** that are edged by substantial uplands, notably the Eden, Ribble and Lune Valleys. Being flat bottomed, and in contrast to the surrounding steeper ground, they have acted as a focus for settlement and farming. Yet the density of documented archaeological remains on the valley

floors is often lower than on the surrounding hills. This reflects the intensive farming practices in these areas that have either destroyed earlier remains, or, by increasing soil deposition in the valleys, has obscured them. The valleys have become a focus for settlement and are occupied by the major towns of their respective regions. Limited industry developed in these valleys because of available water power, but the valleys in the northern part of the region did not develop to the extent of the southern parts of the region when water power was exchanged for steam power.

4.1.5 The **Coastal Plain** was the main focus for the earliest activity in the region. Many Mesolithic settlements have been located on the coastal margins, and subsequent settlement has expanded out from these areas, making the coastal plains often rich in archaeological remains. It is the coastal interface with the Irish Sea that has provided considerable opportunities for cultural growth. Fishing ports and facilities have developed to farm the sea, and commercial ports, such as Liverpool and Whitehaven, have developed to exploit international trade. Agricultural usage of the flat lands has predominated through to the present, and while this is mostly pastoral, there is some arable farming also. The low-lying coastal plains contain areas of peatlands, which are the survivals of much more extensive mosslands. Over time, these have been subject to reclamation for agriculture and peat cutting for horticulture, and their long-term survival is under threat.

4.1.6 The **Lowland Plains** are in theory the main food production areas of the North West, and so have attracted settlement and agricultural activity; however, they are often low lying and there have been substantial areas that have until relatively recently been poorly drained mosses. While most of these mosses have been reclaimed, the settlements on them do not have an extended time-depth. Instead, settlement has in the past been concentrated on the sand islands within and between them.

4.1.7 Many of the cities and large towns have developed because of their positions on large rivers, at their intersections with major north/south routes, that have allowed good communications, such as Carlisle, Lancaster and Preston; Chester lies on one of the main routes into Wales. Manchester's development was also influenced by the topography and geology, although not as obviously as some other towns. Manchester had good natural communication links with other textile centres, such as Leeds and Halifax. It also stands at the confluence of rivers flowing through the area, which provided water power for early mills. It then developed further because of the proximity of the Lancashire coal measures, which provided fuel for steam power.

4.1.8 The Regional Landscape Character Areas (RLCAs) have been defined largely on the basis of their physical characteristics. Some of these RLCAs correlate closely with the historic landscape character types, notably in areas such as the Lake District, where settlement is closely defined by topography. In other areas, however, the correlation between the RLCA boundaries and those of the historic landscape characterisation are not so clearly defined, particularly around the major conurbations of Liverpool and Manchester, where urban expansion has pushed settlement onto areas of physical topography that are not ideal. Nevertheless, there remains that link, of varying strengths, between the physical characteristics of an area and its historic character.

4.2 CHRONOLOGICAL DEVELOPMENT OF THE REGION

4.2.1 A brief summary of the development of the region is presented below, following chronological periods. This account emphasises where the main areas of archaeological remains have been identified and highlights which RLCAs (shown in italics) seem to have been most significant for each period.

4.2.2 ***Palaeolithic and Mesolithic Periods:*** evidence of the earliest presence of humans in the Palaeolithic period is not well understood, and is only found in very limited areas, predominatly cave sites around the edge of Morecambe Bay. The first activity that can be characterised is from the Mesolithic period, and comprises flint scatters on the raised beaches around the West Cumbrian shoreline at Eskmeals, north of St Bees (*West Cumbria Coastal Plain RLCA*; Fig 1), and on the lower reaches of the Eden (Hodgson and Brennand 2006), which would suggest that people were exploiting coastal resources. Further indicators are human footprints preserved in silts and muds on the foreshore of Formby (*Sefton Coast RLCA*) (Fig 2), which have been dated to the late Mesolithic period (Gonzalez *et al* 1997). Other principal sites include the foothills of the *Southern Pennines RLCA*, such as at Rushy Brow, Anglezarke (Howard-Davis 1996), where there was seemingly a temporary camp site. Sites of a similar date have been identified at Greasby on the Wirral (Cowell and Innes 1994) and Tatton Mere in Cheshire (Higham 1993, 15).

4.2.3 ***Neolithic Period:*** in the Neolithic period, continued occupation of previously favoured Mesolithic sites is evident, but settlement also became more prevalent across the *West Cumbria Coastal Plain RLCA*. This is typified by the Ehenside Tarn settlement, near Sellafield (Darbishire 1873), where finds of axes, polishing stones, and wooden implements were made; the site has also produced palaeobotanical evidence for the earliest arable cultivation in the country (Walker 2001). There is also a possible domestic site at Plasketlands, in the *Solway Firth and Coast RLCA* (Bewley 1993). Further south, settlement remains from the period have been found at Tatton Park, within the context of earlier Mesolithic remains (Leah *et al* 1997) and a possible Neolithic rectangular structure has been identified at Oversley Farm, near Wilmslow (Garner 2007). On the coastal plain, some probable Neolithic henge monuments have been identified by aerial photography near Bootle, and at Mayburgh and King Arthur's Round Table, near Penrith (*West Cumbria Coastal Plain* and *Eden Valley* RLCAs; Fig 1), whilst around the periphery of the Lake District, there are several prominent stone circles, such as Swinside, Castlerigg and Long Meg and her daughters (Burl 2000). The most notable sites from the period are the remarkable complex of axe 'factory' workings around the summits of the *Lakeland High Fells RLCA* (Claris and Quartermaine 1989); these have produced thousands of tons of axe waste and the products of this industry have been recovered from all over Britain and even the Continent.

4.2.4 There is a markedly lower density of funerary activity in the southern part of the region by comparison with the north. In Lancashire there is only one one chambered long cairn (Pike Stones (Anglezarke, *Southern Pennines RLCA*)) and a further single example in Cheshire (Bridestones, near Congleton (*Potteries and Churnet Valley RLCA*; Fig 2)), in contrast to the 25 possible long cairns in Cumbria (Hodgson and Brennand 2006, 40).

4.2.5 ***Bronze Age:*** in the Bronze Age there was continued occupation of the *West Cumbria Coastal Plain RLCA* (Fig 1), which seems to have been largely obscured by later activity, and also an expansion onto the adjacent marginal lands, which is

still very visible. There are considerable remains of cairnfields, and settlements across the South-West Fells and the Western Fells of the *Lakeland High Fells RLCA*, that typologically can be dated to the Bronze Age (Quartermaine and Leech forthcoming). These cairnfields reveal a development from simple groups of randomly distributed cairns, which represent primary improvement of formerly forested lands, to the development of simple and then increasingly more complicated field systems, the latter being associated with stone-founded round houses. These landscapes are extensive, and on the South-West Fells alone there are upward of 13,000 component monuments (Hodgson and Brennand 2006, 34). Although these settlements are most common in Cumbria, there are surviving examples in the southern part of the region, such as at Irby, in the Wirral, where a circular building was discovered and dated to the later Bronze Age (Cowell and Innes 1994) and also Oversley Farm, Cheshire (Hodgson and Brennand 2006).

4.2.6 The most common type of Bronze Age monument is the round cairn, which is a funerary monument that is most abundant in the hills, usually positioned to provide the monument with a large vista. They are essentially circular piles of stone on top of a cist containing either an inhumation or cremation, and are common in the *Lakeland High Fells RLCA*, but can also be found in other upland areas, such as on Anglezarke and Winter Hill (*Southern Pennines RLCA*; Fig 2) (Higham 1986; Howard-Davis 1996). These are most common in the northern part of the region, but there are nevertheless 120 earthen barrows surviving across Cheshire. In part, the predominance of the barrow / cairn in the north may reflect the lower intensity of subsequent intensive farming and development, allowing increased survival. Other Bronze Age burial monuments include ring cairns, such as the one excavated at Hardendale (*Orton Fells RLCA*) (Howard-Davis and Williams 2005) and small stone circles, which are most prevalent in Cumbria, including a group of five Bronze Age-type from Burnmoor (Quartermaine and Leech forthcoming) (*Lakeland High Fells* RLCA). Remarkably, there are over 50 stone circles in Cumbria, which is the greatest number in any county in Britain. The other counties of the North West also have stone circles, but not in anything like a comparable number; Lancashire, for example, has no more than five (Burl 2000).

4.2.7 Occasionally, burial monuments are contained within coherent landscapes, such as that at Askham Fell (eastern side of the *Lakeland High Fells RLCA*), which has an alignment of ring cairns, round cairns, stone avenues, and stone circles that extend across a col between the Lowther valley and Ullswater (Quartermaine and Leech forthcoming).

4.2.8 One of the most remarkable Bronze Age copper-mining sites in the country is at Alderley Edge (*North Cheshire Plain RLCA*; Fig 2). The site has produced large numbers of grooved stone hammers and the chemical signature of the copper ore from the site has been identified within dispersed Bronze Age artefacts (Hodgson and Brennand 2006). However, the early levels have been substantially obscured or destroyed by the later working of the site.

4.2.9 ***Iron Age:*** at the start of the Iron Age, there was an episode of climatic deterioration (Lamb 1981) that made the marginal hills untenable, leading to a retreat to lower ground, which was already under stress from an increasing population. The outcome seems to have been a period of conflict, since most of the settlements of this period were defended (Higham 1986). The most visible form of this is the hillfort, of which there are a number of notable examples within the region, such as

Ingleborough (*Yorkshire Dales RLCA*) and Warton (*Morecambe Bay and Coast RLCA*), but there are also smaller examples, such as Castle Crag and Shoulthwaite (Haweswater and Thirlmere respectively (*Lakeland High Fells RLCA*) (Hodgson and Brennand 2006; LUAU 1999). The most significant group of this class of monument is on the *Cheshire Sandstone Ridge RLCA* (Fig 2), where there are at least seven examples: Maiden Castle, Beeston Castle, Kelsborrow Castle, Eddisbury Hillfort, Woodhouse Hillfort, Bradley Promontory Fort, and Helsby Hillfort (OA North 2008a). In addition, simple enclosed settlements have also been recorded, which are groups of round houses with a single palisade around, the sites being scattered across the region (*eg* Glencoyne Park, Ullswater (*Lakeland High Fells RLCA*) (Hoaen and Loney 2004)). These are generally few in number within the region and as there are also limited numbers of documented burials from the period, there has been some doubt as to where the principal locations of the population in the Iron Age were.

4.2.10 In the late Iron Age, there is evidence of woodland clearance and arable farming from the palaeobotanical record, and, at Stanwix, extensive areas of cord rig cultivation have been found underneath Hadrian's Wall (McCarthy 2002, 43-4; OA North 2007a). The settlements associated with this agriculture have not been found, but it is believed that many of the complex enclosed settlements, traditionally dated to the Romano-British period, may have Iron Age origins (Johnson 2004). There are also cropmark enclosures identified in the *Solway Farmlands RLCA* (Fig 1) and also across the plains of Cheshire and Merseyside (Collens 1994; 1999), but these have not revealed Iron Age material through fieldwalking, and their chronology cannot therefore be confirmed. In Cheshire, there is also a range of enclosed and unenclosed settlements including the double-ditched enclosed settlement at Brook House Farm, Halewood and the unenclosed settlement at Bruen Stapleford (Cowell and Philpott 2000, 27-67; Hodgson and Brennand 2006, 53). However, thre is not a clear cultural assemblage in the North West for the Iron Age, unlike the North East, and so sites of the period may simply not have been recognised.

4.2.11 ***Roman Period:*** in the Roman period, political and strategic decisions meant that from the late first century onwards, a military hinterland developed behind an increasingly static frontier, which included most of the North West. The elements of this infrastructure can be found in most of the RLCAs, with forts along communication routes that extended north/south and across the Pennines. A static frontier was built across the narrowest isthmus of England by the Emperor Hadrian, extending through the *Solway Farmland*s, and *Solway Firth and Coast RCLAs* (Fig 1), with a connected defensive system down the coast at least as far as Maryport, and possibly on to Ravenglass, in the *West Cumbria Coastal Plain RLCA*. Forts and roads were also established within the Lake District, notably at Hardknott and Ambleside (Shotter 2004).

4.2.12 Industrial sites, such as Wilderspool and Walton-le-Dale, seem to have supported the Roman Army (Philpott 2006). These sites were on the primary road arteries and were also linked into maritime communication routes via the Ribble and the Mersey, and there were clearly well-developed trade routes to ports on the coast throughout the period (see, for example, Swan *et al* 2009, for a discussion of pottery). One of the most important industrial products from the North West was salt, produced in central Cheshire, and industrial production of salt from the Roman period is attested at Middlewich, Nantwich and Northwich (Philpott 2006). Copper

production at Alderley Edge is also attested by the recovery of a fourth-century coin hoard in a backfilled shaft (*ibid*).

4.2.13 At Carlisle, a settlement beyond the fort had developed, which, by the early third century, had civic responsibilities (Edwards and Shotter 2005), and the settlement at Chester may also have developed similar urban responsibilities (Philpott 2006). Most other forts developed an associated civil settlement, but the legal nature of these is not understood. It is highly likely that they were encouraged by the military as a tool in the development of the economy. The topographical and strategic importance of the sites of these forts and associated settlements is perhaps reflected in the fact that there were Roman installations either at or in the vicinity of many modern towns and cities: Chester, Nantwich, Middlewich, Northwich, Manchester, Wigan, Preston, Kirkham, Ribchester, Lancaster, Kendal, Ambleside, Brough, Penrith, Maryport, Cockermouth, and Carlisle. In some cases, this could reflect the much later reoccupation of favoured places, however. The lines of the Roman roads across the region have in some instances continued in use; for example, substantial sections of the A66 and the A6 follow the Roman routes, but many other roads have not been adopted, a typical example being the Roman road through the Wrynose Pass in the central Lake District, which was abandoned when the bridges collapsed, and an alternative route was adopted on the other side of the valley, which could use crossings via fords (OA North 2007b).

4.2.14 While the forts, roads and infrastructure were Romanised, the rural settlements seem to have remained essentially native in character, largely comprising complex enclosed settlements containing round houses, and stock pounds, within an enclosing bank, and bearing most similarity to the Iron Age simple enclosed settlements that preceded them. Examples have been found in Lancashire, Cheshire and Merseyside, but the great majority are from the northern part of the region, particularly the eastern side of Cumbria (*Orton Fells*, *Eden Valley RLCAs*; Fig 1) and the *Yorkshire Dales RLCA* (OA North 2003a). These have traditionally been dated to the Roman period on the basis of the finding of Roman pottery on the sites, but recent excavations at Broadwood, near Ingleton (*Yorkshire Dales RLCA*), have shown that while they were in use in the Roman period, some at least may have had Iron Age origins (Johnson 2004). Although these Romano-British settlements are almost entirely native in character, there is one example of a Roman villa at Eaton by Tarporley (Philpott 2006).

4.2.15 ***Early Medieval Period:*** the ending of official Roman governance in the early fifth century precipitated a period of political turmoil, as society fragmented into small kingdoms, and the region seems to have entered a period of conflict. Expansion of Anglo-Saxon kingdoms from the east and south affected the region from the beginning of the seventh century (RM Newman 2006). From the ninth century there was also pressure from Scandinavian raids and incursions. The political instability of the period is reflected in the reoccupation of some Iron Age hillforts during the early medieval period, notably Shoulthwaite (Thirlmere, *Lakeland High Fells RLCA*) (LUAU 1999), and Eddisbury Hillfort (*Cheshire Sandstone Ridge RLCA*; Fig 2) was perhaps refortified by the early tenth century (Thacker 1987). The remarkable Cuerdale Hoard, which is dated to *c* AD 905 and contained more than 1000 silver items and over 7000 silver coins, is the largest of several hoards in the North West and, indeed, is the largest anywhere outside of Russia (RM Newman 2006). It has been interpreted as the pay chest of a war band, or perhaps was

intended as a political payment, and the fact that it was never recovered implies that the former owners were killed before they could do so.

4.2.16 There was potentially some degree of continuity in the principal Roman towns, and there is an historical reference to St Cuthbert's visit to Carlisle in AD 685, where he was shown the 'town walls' and a working Roman fountain, indicating continuance at least of some of the infrastructure (Webb 1998). The archaeological evidence, however, cannot confirm when an urban lifestyle ceased in any of the Roman settlements, although it is significant that many of these towns became important urban centres immediately after the Norman Conquest.

4.2.17 Generally, the archaeological evidence for settlement in the period is relatively sparse, but that does not mean a wholesale abandonment of the region, and the palaeobotanical evidence indicates that woodland regeneration did not begin until the sixth century, even in remote areas. Significant localised clearance episodes have been dated to between the seventh and tenth centuries (RM Newman 2006). Settlement sites have been identified in the *Eden Valley* / *Orton Fells* RLCAs (Fig 1) at Fremington, and perhaps also at Whinfell Forest and Shap (*ibid*), and there are scattered sites from elsewhere in the region.

4.2.18 One of the best indicators of early medieval activity is provided by stone sculpture, in the form of Christian crosses, slabs, tomb covers and architectural fragments, all apparently denoting the sites of pre-Norman churches. At present, there are known to be 320 pieces of pre-Norman sculpture, from 36 sites in Cumbria, 29 sites in Lancashire and 30 sites in Cheshire. A small but significant number of sites produce Anglo-Saxon material, largely associated with the kingdom of Northumbria and concentrated in Cumbria, where 28 monuments are known, but the majority of the sculpture is associated with Scandinavian styles (tenth / eleventh centuries), and is scattered more widely across the region (*ibid*).

4.2.19 ***Medieval Period:*** the landscape of the North West was substantially changed following the Norman Conquest, which occurred in stages, the southern part being already incorporated into the nascent kingdom of England by 1066, although most of Cumbria was not absorbed until 1092, when the *Anglo-Saxon Chronicle* records that William II (Rufus) marched north and took Carlisle (Earle and Plummer 1892). For a considerable period, control of the North was disputed and the border with the Scots fluctuated. A series of motte and bailey castles along the Lune Valley (*Lune / Ribble Drumlins RLCA*) is perhaps indicative of the extent of early Norman control (Higham 1991), although a further line of similar fortifications along the Ribble Valley (*Ribble Valley Lowlands RLCA*; Fig 2) was probably established during the anarchy of Stephen's reign (1135-54), when Scottish influence reached as far as Lancaster (Stringer 1993). In Cumbria, a line of castles protected the Stainmore route over the Pennines, and a similar line can be seen near to the Welsh Border; a further line of later castles was established close to the Scottish border (C Newman 2006). Some of the castles were newly built in stone, or rebuilt from timber originals, and reflect a consolidation of control; these include the power bases of Carlisle, Brougham, Appleby, Brough, Kendal, Egremont, Lancaster, Clitheroe, Chester, and Beeston.

4.2.20 The pattern of dispersed settlement that characterised the early medieval period largely continued into the medieval period across much of the region, particularly on the poorer-quality uplands. Vaccaries, which were farms for cattle and owned by the lords of the manor, were established across the more remote uplands of the

region (Winchester 1987). Moated sites are a relatively common form of medieval settlement; 500 are known in the region and are platforms, mostly accommodating a manor house, surrounded by a defensive moat. They typically date between the twelfth and thirteenth centuries, although some are much later (C Newman 2006); the largest concentration is in the southern part of the region: Merseyside, Greater Manchester and Cheshire. In the northern part of the region, sites of this status are more often in the form of stone pele towers, and represent a variant of such small defensive sites (*ibid*).

4.2.21 Select areas of good-quality agricultural land, such as the *North Cheshire Plains* and the *Eden Valley RLCAs*, included the nucleated villages that are recognisable in the modern landscape and which often exhibit evidence of having been planned (Roberts 1990). While the form of the Eden Valley examples is variable, many have houses set in two rows with a green in between, and often there is a back lane dividing the house plots from open/ strip fields beyond. These planned villages are perceived to reflect the consolidation of Norman manorial power, and were intended to improve the revenue from the land (C Newman 2006). Much of Cheshire and southern Lancashire, however, are characterised by lower levels of dispersed settlement than other lowland parts of the region, and corresponding higher levels of nucleated settlement.

4.2.22 In the medieval period, there were few towns, and those established were intended to develop the Norman economy. Early urban centres include Chester and Carlisle; the importance of the latter was reflected in that from 1133 it was the seat of a Bishopric (*ibid*). Towns such as Lancaster and Preston were awarded charters in the late twelfth centuries (White 1996), whereas many others, such as Liverpool, Penrith, Cockermouth, Macclesfield, Frodsham, Northwich, Congleton, and Warrington, were the creations of the thirteenth and fourteenth centuries. The medieval towns were intended to provide a market and income for the Norman lords and their importance and influence on the rural economy developed towards the end of the period (Higham 2004).

4.2.23 ***Post-medieval Period:*** the industrialisation of much of the region from the eighteenth century onwards created enormous amounts of change to some parts of the region and less so in others. Southern Lancashire, particularly the *Lancashire Coal Measures*, *Manchester Mill Towns* and *Manchester Conurbation RLCAs* (Fig 2), were subject to enormous landscape change, whereas the Lake District valleys had localised extractive industries but these left the essential character of the agricultural landscape relatively unscathed. Cumbria and other areas were, however, affected by a process of large-scale enclosure as a result of a series of Parliamentary acts in the eighteenth and early nineteenth centuries. The characteristic results of this were very large, straight-sided fields that encompassed extensive areas of former waste land. Some 483,000 acres (195,463ha) were enclosed as a result of this process, of which approximately 80% was in Cumbria (Whyte 2003; McNeil and Newman 2006). It was a process to bring common land under private control, and once enclosed, the land was often not improved; even now, there are large areas of essentially unimproved moorland that are technically enclosed.

4.2.24 The southern part of the region (*Lancashire Valleys and Pendle Hill; Manchester Mill Towns and Pennine Fringe; Manchester Conurbation RLCAs*; Fig 2) developed rapidly from the late eighteenth century as a direct result of the textile industry. Manchester was the focus, and 1600 mills have been documented in

Greater Manchester alone (Williams with Farnie 1992), but the peripheral mill towns of the *Lancashire Valleys RLCA* and East Cheshire also developed substantially. The industry was initially prompted by the availability of water to power the mills, but the industry also developed as a result of the introduction of improved communications, following the establishment of canals, and then, in the nineteenth century, because of the proximity of the Lancashire coalfields to fuel the steam-powered mills. The port of Liverpool developed alongside the massive increase in textile production (Belchem 2006), providing the point of contact with the rest of the world, although the construction of the Manchester Ship Canal, completed in 1894, was an attempt to provide a more direct transfer of raw materials and finished products (McNeil and Newman 2006).

4.2.25 While the greatest impact of the industrialisation was in the southern part of the region, the northern uplands did not escape such pressures, as they were exploited for raw materials. The extraction of lead ore by means of mines, adits, and a process of hushing substantially affected the landscape around Alston in the *Northern Pennines RLCA*, whilst copper mining had a major but localised impact at Coniston (*Lakeland High Fells RLCA*). Stone quarrying for slate was extensive at Honister and Broughton in the *Lakeland High Fells RLCA* and iron-ore extraction had a major impact at Askam and Ireleth in the *South Cumbria Low Fells RLCA* (Fig 1). Coal extraction in West Cumbria not only changed the physical landscape, but resulted in the establishment of mining towns and villages, and prompted the development of ports at Maryport and Whitehaven (Collier and Pearson 1991). Coal mining also had a substantial impact on the area of the *Lancashire Coal Measures RLCA*, where much of the coal workings were opencast and have left numerous flashes and spoil heaps. Salt continued to be a major extractive industry in Cheshire (*Southern and Eastern Cheshire Plain RLCA*; Fig 2), although the techniques changed and became more intensive during this period, causing widespread subsidence in extraction areas (Rochester 1975).

4.2.26 The wealth resulting from this industrial expansion was increasingly invested in the industrial buildings themselves. Later buildings take on an elegance not previously exhibited in earlier industrial buildings, and incorporate decorative features as well as functional ones (Briggs 1971). The status, and pride, of the industrial owner is reflected in the form and character of the industrial buildings, which are intended to make a statement as to the success of the business. They are well constructed and use increasing amounts of ironwork, reflecting the availability of what was once an expensive material.

4.2.27 ***Post-Industrial Change:*** the twentieth century has seen a major transition across the North West, and particularly in the southern part of the region. A decline in the textile trade has resulted in the closure of the mills and competition from foreign imports of coal has resulted in a sharp decline of the local coal industry (Galloway 1971). The iron industry of Barrow-in-Furness and Workington has also declined as a result of competition from cheaper imports (Bowden 2000). Liverpool's port has seen a dramatic contraction as it was slow to respond to the move to containerisation in the 1970s. The major cities, particularly Liverpool, were badly damaged during the bombing raids of the Second World War, precipitating a major post-war redevelopment of the city centres (Belchem 2006). A corresponding move towards light service industries has resulted in the expansion of offices and industrial estates. Some new heavy industries have, however, appeared, such as that of nuclear reprocessing centred on Sellafield in West Cumbria.

4.2.28 The effect of these and other changes has had a considerable impact on the landscape. Towns, such as Blackburn, have had their city centres largely rebuilt and most of the mills have been demolished (Halstead and Duckworth 2000). Manchester has similarly seen a major regeneration, although a significant number of the mills have been converted for residential use. Most of Liverpool's historic docks are unused or backfilled, although notably the Albert Docks were reused for residential and retail use (OANorth 2010c; Belchem 2006). All the cities have seen an increase of residential accommodation, in some instances by expansion of the urban footprint onto greenfield sites, but more recently by redevelopment of brownfield sites, with a corresponding loss of historic terraced housing.

4.2.29 The landscape of the *Lancashire Coal Measures RLCA* (Fig 2) has largely been restored back to agriculture; flashes have been filled, spoil mounds have been spread back over the land and the mining infrastructure removed (Galloway 1971). The economy of the Lake District has changed from a reliance on agriculture to a tourism-driven economy; this has changed the infrastructure of the area, though not necessarily caused major physical changes, given that the landscape is protected by a National Park Authority, and much of the land is in the ownership of the National Trust. The agricultural economy across the whole region has changed, making many smaller farms uneconomic, and many of these have then been sold as accommodation for commuters.

4.2.30 ***Landscape Perception:*** there has been a change in the perception of the landscape over the last two centuries. Historically, the land has been perceived in purely functional terms, and the remote Lakeland Fells were regarded as unusable waste by those that worked them. With the improvement in communications there was an influx of visitors, and the Lakeland poets were particularly influential in romanticising the stark character of the landscape (Horne 1941). With time, this perception intensified, and conservation and planning legislation, as well as National Park Authorities, were introduced to protect the landscape from changes that could have an impact on the perception of wilderness. In addition, the lowland farming land has been subject to increasingly intensive agricultural practices that have affected the form of the landscape, and also the external perception of the land, where it is seen, by some, as being exploited on an industrial scale.

4.2.31 The heavy industrialisation of the southern part of the region was perceived by some during the Industrial Revolution as an awesome expression of man's ability to control and manipulate his environment. By others, this was perceived as oppressive, reflected in William Blake's poem (*Jerusalem* (Blake 1993)), where industry is described as comprising 'dark satanic mills'. By the time of the later twentieth century, the scars of this industry were perceived as the relicts of a dark and depressing past, and they were actively removed by planners to make way for a new vision of the North West.

4.2.32 More recently, there has been a reversal of perception with a marked sea-change in attitude, whereby the past is once again a material issue. The remains of the industrial revolution are now rarely perceived as reminders of a depressing past, and many industrial buildings, such as mills and warehouses, are being conserved and converted rather than being demolished. While living in an historic house was formerly considered undesirable, now the buildings are perceived as having character and thus increased value, by comparison with modern houses, as a consequence.

4.2.33 In archaeological studies there has been a move away from the microscopic perspective of intensive, but localised, archaeological excavations, towards a macroscopic outlook, with studies of the development of the wider landscape, and attempts to develop a wider understanding of man's impact on the landscape and ecosystem. Studies, such as the present RHLC programme, reflect this change, as there are increasing moves to demonstrate how much of the present-day landscape is a product of man's influence over the last 10,000 years.

5. REGIONAL HISTORIC CHARACTER TYPE DESCRIPTIONS

5.1 INTRODUCTION

5.1.1 The project has defined a series of historic landscape character types and sub-types that were based on the terminology in the original county HLCs (Figs 3-6). The character types have been defined to incorporate, as much as possible, the commonality that exists between the diverse HLC formats (*Section 2.2.9*); the correlation between the final RHLCTs and those of the original HLCs is presented in *Appendix 1* and the spatial distribution of selected RLCTs is presented as Figures 7 and 8. In general, the types and sub-types are defined to provide either an element of time-depth (for example, Ancient Enclosure as compared to Post-Medieval Enclosure), or of functional difference (for example, Woodland Plantation, or Woodland Other). For each Type, assessments have been made of the predictable negative and positive impacts of relevant change scenarios, each scored high, medium or low. It should be appreciated that these can only be broadly indicative, and that each actual situation should be assessed on its own merits. These assessments have then led to the proposal of generic management objectives that would, if adopted, enhance positive outcomes of change and reduce negative impacts. The objectives are generally not financially prohibitive and in many cases are linked to management targets for the natural environment.

5.2 WOODLAND

5.2.1 ***Description:*** the regional HLC has two woodland types: Plantation and Other, to define a broad distinction between recent plantations and older woodlands. There is no natural, undisturbed woodland left in the region, which reflects the extensive woodland clearance practised in the region since the Mesolithic period (Rackham 1990). Although there have been well-documented periods of woodland recovery, this clearance activity has, in effect, steadily reduced the cover across the region, as the demand for wood for fuel, building materials and for industry has increased. This culminated in the sixteenth century with the establishment of the Mines Royal Company in Cumbria, which had royal assent to clear-fell woods so as to produce charcoal for iron production, and resulted in the loss of substantial areas of undisturbed woodland (OA North 2007c). Medieval royal forests existed throughout the North West, but this was a legal definition of the area rather than an indication of the extent of woodland cover (Grant 1991). By the seventeenth century, there is evidence of limited woodland cover in the south of the region and the start of commercial forestry, with the introduction of foreign conifers (Rackham 1990). The older woodlands in the region have tended to develop from coppices, which were created to provide a renewable supply of wood. Many of the woodlands reveal aspects of former management (coppicing, pollarding, and shredding). Many, now redundant, features are often visible, including banks, tracks, and charcoal burners' platforms. The age structure of the trees in woodlands helps us to understand former management.

The **Woodland Other** type incorporates any woodland that provides an indication of antiquity, such as those included in the Ancient Woodland Inventory, or those

depicted on nineteenth-century mapping. They tend to have wavy/irregular boundaries and are mixed or deciduous woodland.

The **Plantation** type is defined as modern woodland blocks, that have been created as a crop and are largely coniferous. They are mostly twentieth-century in date, but include woodland blocks labelled as plantation from the nineteenth century. They have straight-edged boundaries and are typically not depicted on the Ordnance Survey first edition mapping (mid-nineteenth century).

5.2.2 *Change Scenarios*

- ***Timber production****:* national plans for forestry include a desire to increase the number of trees for timber production and carbon sequestration. Regionally, the North West has one of the lowest levels of forest cover in the country. The Forestry Commission has initiated management schemes, such as 'Complete Cover Forest Management', that aim for much more natural regeneration, a reduction of clear felling, and increased biodiversity. This does, however, need to be balanced against schemes for climate change mitigation and timber production. The impact of increasing woodland affects both archaeological monuments and the historic character of the existing woodland, which will be modified.

  Impact: High Negative, Medium Positive

- ***Regeneration/Woodland Management:*** the *North West England Forest District Strategic Plan 2005-2009* sets out a management plan for the region's woodland, under the auspices of the Forestry Commission (Forestry Commission England 2005). This aims to maximise public benefits from forests through social, environmental, and economic management objectives. Strategic aims should include the conversion of derelict land to community woodland, and, where woodland is not economically viable, consider the enlargement of these blocks by buying up adjacent land. Whilst safeguarding and increasing access to archaeological and heritage interests and the historic environment is an objective, at present this is mainly focused around known Scheduled Monuments and small surveys, and in effect relates to discrete sites rather than the wider historic environment. This approach may lead to decisions that focus on important, and already well-known, sites, at the risk of damaging lesser known but more coherent landscapes.

  Historically, the needs of forestry and historic environment management have been antagonistic; however, recent research and practice (Crow 2003) aims to improve the dialogue between the two disciplines and to lead to greater co-operation.

  Impact: Medium Negative, Low Positive

- ***Commercial Planting:*** new commercial plantings, or the expansion of existing plantations, impacts on extant woodland by obscuring its original boundaries, or by the cutting down of historic woodland to facilitate commercial planting.

  Additionally, buried archaeology within existing woodland areas is at risk from unsympathetic commercial planting, either as coniferous forestry, short-rotation coppicing, or biofuels. In all cases, ploughing and root growth causes considerable damage. Subsequent changes in the buried environment, such as desiccation, soil erosion, burrowing animals, and fire, may also have a

detrimental effect. Tree removal can also cause significant damage if not undertaken sensitively and if the foresters are not aware of the existence of the archaeological resource. The establishment of woodland in upland areas poses an increased risk to the resource, as the soils there are very shallow and archaeological remains are often either on the surface or beneath a very shallow topsoil cover. Consequently, they are very vulnerable to any activity on the surface or just below.

The planting of early twentieth-century plantations was largely undertaken by hand and the trees tend to be well spaced. This minimised the initial impact upon the archaeological resource, resulting in archaeological remains often surviving between the trees, but there was then a need for very careful felling to prevent any impact on the remains (OA North 2003b). In the mid-twentieth century, there was a policy of deep ploughing and dense planting, which has resulted in almost wholesale destruction of archaeological remains within the planted areas in an upland context. In these instances, the plantations have been rendered almost archaeologically sterile. Where replanting is undertaken on an 'industrial scale' for areas previously only subject to hand planting, there is the potential impact on archaeological remains that have survived the earlier episode of planting.

Impact: Medium Negative, Low Positive

- ***Mixed Woodland:*** a move towards more mixed woodland, longer-lived trees and more hardwoods (such as for building materials) will, ironically, cause more damage in the long term due to increased root damage. However, for certain types of archaeological site, such as earthwork banks, roots can sometimes provide a stabilising lattice for the structure (Crow 2003, 52).

  Impact: Low Negative, Low Positive

Overall scores: Negative impacts 9; positive impacts 4.

5.2.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Effects on historic landscape character, and the needs of historic environment conservation, should be considered when assessing afforestation, woodland extension proposals, or changes of existing woodland to a more commercial regime.
- The use of locally derived tree species and traditional planting schemes in the design of new plantations should be encouraged, to complement and enhance existing historic landscape features. Traditional woodland locations (for instance, on steep slopes, or hilltops) should be established in the region and sub-regions, and these should be reinforced with new plantings and through agreed planting subsidy strategies.
- Historical woodland features and relict landscape attributes should be conserved where possible. Woodland management plans are required to identify historic woodland features and to make provision for their conservation. Woodland management plans should aim to conserve historic

woodland management features, and consider the potential of enhancing such attributes for educational, recreational and tourism benefits. Where possible and appropriate, access to these features should be opened up to improve visibility, with management of the surrounding vegetation to prevent the encroachment of scrub or bracken.

- An enhanced appreciation of the historical origins and the ecological value of these woodlands should be encouraged, which is likely to lead to their sensitive management.
- Appropriate advice should be sought for parkland woods containing non-native and exotic species that require active management to maintain and sustain their historic character.
- Research should be undertaken into the impact of root growth and different soils, with the intention of preserving buried archaeology.
- Old orchards should be retained or enhanced where possible. Where they were once common, the restoration and creation of orchards around farmsteads should be encouraged.

5.3 WATER

5.3.1 ***Description:*** water features in the Regional HLC are defined as either **Natural** or **Artificial**, and at the regional level correspond to lakes or reservoirs. As the name implies, lakes are a significant component of the Lake District, and, for the most part, are defined as natural features. Many of them have been enhanced to some degree, the most extreme being Haweswater, which is an extremely large reservoir. When the Haweswater dam was completed in 1935, it drowned the village of Mardale, and the remains are still visible on the rare occasions that the reservoir level drops significantly (Hay and Hay 1976). The size and extent of Haweswater and Thirlmere have been significantly changed by the establishment of dams, and are as a result now defined as Reservoirs. There are, however, other water bodies, such as Ennerdale Water, Seathwaite Tarn and Crummock Water, that are defined as Natural but have had their levels raised slightly by the establishment of a dam. The southern part of the region is characterised by large numbers of glacial meres, some of which have been incorporated into designed landscapes. The archaeological resource within the lakes and meres includes features relating to their enhancement, but also shore infrastructure, such as jetties, harbourages, leats, dams and trackways and even small craft, such as dug-out canoes. Sediments within the lakes provide a palaeoenvironmental record of the area that, in most instances, dates back to the beginning of the Holocene (since the last retreat of the glaciers).

Included within the category of **Water Artificial** are flooded quarries and docks. The archaeological resource within this category includes the dams and associated infrastructure for the reservoirs or docks, but also includes the archaeological remains that were flooded when the reservoir was completed.

5.3.2 ***Change Scenarios***

- ***Low Carbon/Renewable Energy:*** water is a main focus for low-carbon and renewable energy schemes. These can be at industrial or domestic scale, but all

are likely to damage the sediment and the current regime within the water bodies, and therefore impact on buried archaeological remains.

Impact: Low Negative

- ***Mineral Extraction:*** pressure for minerals may lead to increased extraction at riverine sites, such as gravel bars, leading to considerable disruption to sediment, current, and erosion of banks and river beds, all of which will have an effect on the historic environment, as well as on the general perception of the landscape. Currently, this practice is allowed only as part of flood-risk management (Bassenthwaite Reflections Project nd, 36), but this may change as aggregates are subject to increasing demand in future.

  Impact: High Negative

- ***Flood Risk Management:*** as part of flood-risk management, 'watercourse rehabilitation' and sediment reduction are advocated in many areas of the North West under the auspices of the Environment Agency. This involves the removal of previous flood management practices from the nineteenth and twentieth centuries, which are now known to have increased flood risk further downstream. One such practice involves the reintroduction of meanders to artificially straightened watercourses (*op cit,* 40). The Environment Agency's current management strategies do set ecological targets for watercourses (*op cit,* 37-8), but are predicated around managing flood, and many of the current practices can degrade the water courses and the associated heritage and buried archaeological and palaeoenvironmental remains.

  Impact: Medium Negative

- ***Climate Change:*** the large water bodies, most notably in the Lake District, are susceptible to climatic change, which affects the amount of run-off and has greatest impact on the heritage resource in extreme events. Such events cause erosion to features on the shore and along feeder water courses, but can also have an adverse impact on the resource downstream of the main water bodies. This was demonstrated at Bassenthwaite (November 2009), when a land slippage at the outfall of the lake during an extreme rain event resulted in serious flash flooding along the River Derwent, causing considerable damage to the historic towns of Cockermouth and Workington.

  Climate change can also cause periods of drought, which, coupled with increased demands by water users, result in large reductions in reservoir water levels. This has the potential to expose a heritage resource that is normally covered, and therefore protected, when the reservoir was constructed. Most notably, the flooded village of Mardale, beneath Haweswater, was exposed in 1984 and the remains suffered at the hands of souvenir collectors and from erosion arising from intensive visitor activity (J Quartermaine *pers comm*).

  Any move to increase woodland within the catchments of water bodies would slow the run-off during such flood events and would reduce the impact on the landscape and the heritage resource.

  Impact: High Negative, Low Positive

- ***Moorland Flood Management:*** the reservoirs are subject to controls by the Water Framework Directive and the water utility companies typically own the

catchment areas for major reservoirs and impose restrictions on activities that have the potential to affect water quality (EU 2000). Typically, there are restrictions on the use of moorland burning on the surrounding uplands for game shooting, and moves to block grips in peat, so as to reduce discoloration of the water from humic matter. This has the effect of reducing the erosion of the surrounding peatland resource.

Impact: Medium Negative, Medium Positive

- ***Tourism:*** increased visitor pressure has the potential to impact on the heritage resource around the water bodies and around the access routes. There exists the potential for low-level developments on the shoreline to maximise the visitor potential. Increasing temperature, caused by climate change, has the potential to encourage further expansion of tourist-related activities, and the corresponding infrastructure may impact on the heritage resource.

  Impact: Medium Negative, Medium Positive

- ***Regeneration:*** docklands from around the region have come under pressure from economic change, and have either been abandoned or been subject to major changes to adapt them to modern needs, including those at Port Carlisle, Whitehaven, Salford, Chester, Maryport, Glasson Dock, and Fleetwood. Most notably, though, the docklands of Liverpool have come under considerable pressure from development, despite their being designated a World Heritage Site, and it is anticipated that there will be further pressure to redevelop disused dock areas. The heritage resource of these docks is of particular archaeological importance, as they chart the development of wet docks, and the earliest of these, the Old Dock, was the first commercial wet dock in the world.

  Impact: High Negative, Medium Positive

- ***Regional Spatial Strategy (RSS):*** this represents the top level of management strategy within the region (Government Office for the North West 2008). Policy RDF3 highlights regeneration opportunities associated with reuse of developed or under-used developed coast, former docks and other adjacent industrial areas. There is a risk that the heritage of these areas may be lost if development is not approached sympathetically.

  The Lake District Management Plan (Lake District National Park Authority 2004) treats the landscape in a more holistic manner and contains specific objectives concerning the historic environment (for example, Policy L2). However, when specifically referring to the lakes and shores, the policy is to 'repair damage caused by human activity' and 'maintain the diversity of lakeshores and watercourses by conserving and restoring their naturalness where appropriate and achievable' (Policies L3 and L11 respectively). These policies, taken at face value, could lead to a degradation of the historic landscape by removing man-made features such as boathouses that are a key part of the unique character of the Lakes.

  Impact: High Negative, Low Positive

  Overall scores: Negative impacts 19; Positive impacts 8.

5.3.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Special care should be taken of water-edge archaeological features that are most sensitive to change (through erosion or through exposure during periods of drought or flood), and sediments (which often contain buried archaeological and palaeoecological remains).
- Awareness of archaeological issues should be raised and good management practice guidance established, in partnership with all interested authorities and parties. This character type has considerable potential for buried and hidden archaeological remains, either within lake or reservoir sediments, under expanses of water or within and below alluvial deposits.
- Careful consideration should be given to the downstream effects on water levels and sediments from water management features.
- Early consultation with the appropriate historic environment curator should be required for all new schemes, such as reservoir construction or hydro-electric power generation of any scale. The location and form of the scheme, and any mitigation recording, need to be taken into account.

5.4 INDUSTRIAL NON-SETTLEMENT

5.4.1 ***Description:*** the Industrial Non-Settlement type comprises mainly extractive industrial sites, set within a rural context, and is distinct from the Settlement Industrial type, which comprises industrial manufacturing buildings and complexes (*eg* mills) that are found within or associated with settlements. In the south of the region, this type is also characterised by chemical and petrochemical industries centred on Runcorn and Stanlow, which developed along the Mersey Valley due to the proximity of raw materials from the Cheshire salt fields and the Lancashire coal fields (Fig 5). The Industrial Non-Settlement type is mostly characterised by the landscape resultant from winning raw materials from the ground, and includes quarries, mines and opencast sites. These are divided into **Active**, **Inactive** and **Other** sub-types.

Many of the **Active** Sites are of twentieth-century origin, but there are notable exceptions, such as the Winsford Rock Salt Mine, which was established in 1844, the Claughton Brick Works, Lancashire, that was founded in 1898, as well as the Burlington Slate Quarries from the 1820s (Rochester 1975; Geddes 1975). The current extractive sites in the North West include aggregate opencast sites, stone quarries, opencast coal workings, salt works, and peat workings.

Inactive extraction sites comprise those sites where there is no longer any production, and is distinct from Other Industrial Non-Settlement, where it is not known if the site is inactive. Substantial remains of now disused industries abound across the region, where there has historically been extensive extraction, but were abandoned when they became uneconomic. Examples include the extensive Coniston Copper Mines (Lake District), Greenside Lead Mines (near Ullswater), Rossendale Stone Quarries, Lion Salt Works (Cheshire). The peak of the extractive activity was in the seventeenth to early twentieth centuries, although the same

seams of mineral have often been worked less intensively in earlier periods. There are often traces of earlier technologies, plant, dumps etc among the remains of the latest, making time-depth a key feature of their character.

While the sites are primarily extractive, there are often large mineral-processing sites located near to the quarries or mines. Examples include the lead-smelting works at Greenside, lime kilns in Silverdale, and iron working at Backbarrow and Newlands (South Cumbria), which were linked to charcoal production areas and the proximity of iron ore.

Other Industrial Non-Settlement includes areas of flashes in Cheshire, which are areas of open water created by salt being washed out of underlying rock and the subsequent collapse of the overlying rock, as well as sites where no other knowledge is available (Fig 5).

5.4.2 ***Change Scenarios***

- ***Abandonment and Neglect:*** extractive industrial sites have often been abandoned within the last 100 - 200 years. Structures deteriorate most rapidly in the first 100 years following abandonment; wooden components of buildings rot, roofs collapse, and walls are subject to frost damage and start to collapse. Along with the degradation of the structures, there are often moves to make the sites safe, which can result in further damage to the decaying fabric.

  Impact: Medium Negative, Low Positive

- ***Remedial and reclamation works:*** minerals extracted from the sites can be relatively toxic, and the spoil mounds contain large concentrations of the source mineral; there is therefore a risk of contamination of water supplies and people using the site. The notable examples are lead workings, because the toxicity of the lead discourages vegetation growth on the spoil mounds, which leads to increased run-off and therefore water contamination. Remedies by water authorities to improve water quality can have an impact on the extant remains.

  Industrial extraction can also produce substantial spoil mounds of sometimes relatively fine material which can be subject to extreme slippage, causing damage to the heritage resource and posing a significant health risk. Remedies to make unstable spoil mounds safe can have an adverse impact on the heritage resource. A notable example is at Greenside, near Ullswater in Cumbria, where there has been a catastrophic failure of large mounds of lead tailings and also subsequently extensive consolidation works to make the remaining mounds safe (OA North 2001).

  Former industrial sites can present attractive brown-earth sites for redevelopment or reclamation. Large quarry pits are often flooded and used as recreational sites, with a corresponding landscaping of the heritage resource.

  Impact: High Negative, Low Positive

- ***Re-exploitation:*** extraction sites, that were abandoned because they were uneconomic can become viable again with the fluctuation of mineral prices or with the introduction of new methods of extraction. Opencast coal mining on areas of previous deep mining will result in the loss of mining heritage. Historic spoil heaps that still contain substantial concentrations of mineral will often be reworked, using more modern techniques.

Impact: Medium Negative

Overall scores: Negative impacts 7; Positive impacts 2.

5.4.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Opportunities should be pursued for heritage-led regeneration through sustainable reuse of key industrial buildings and areas, and through tourism.
- The historic dimension of industrial landscapes should be properly assessed during proposals for development. Industrial landscapes are vulnerable to change, both through neglect and through programmes of land reclamation. Initiatives, such as quarry reclamation schemes, derelict land programmes, contaminated land strategies and environmental improvement projects, may all coincide with areas of former industrial heritage. These should be informed by appropriate levels of data in order that decisions can be made to conserve important assets, record others, sympathetically develop others, and to raise awareness that the historic environment may act as a positive catalyst for change.
- There should be an increased awareness of the historical basis and context of earlier industrial landscapes in order to improve perception and appreciation.
- Grants for consolidation and presentation should be encouraged. Statutory protection of the most important sites and complexes should be extended.

5.5 SETTLEMENT

5.5.1 ***Description*****:** study of the history and archaeology of many of the region's cities and towns has been neglected, despite the great potential to add to an understanding of the region's development. Work can be done on the relationship between them and the countryside, industry, communications, the sea and the wider economic and social history of Britain and north-west Europe. In the rural context, the North West is characterised by its predominantly dispersed settlement, and this historic pattern warrants closer investigation into the buildings, the layout and the origin of settlements, which often pre-date the standing structures. In addition, there will usually be a wealth of sub-surface settlement remains, some dating back to later prehistory. Study of documents and maps will also shed light on rural settlements (Brennand 2007).

The settlements within the region are a focus of the Regional Spatial Strategy (Government Office for the North West 2008). Large urban areas such as Merseyside and Greater Manchester are defined as economic cores, whereas Preston is a driver for regional growth. Smaller towns and cities such as Chester, Lancaster and Carlisle are sub-regional hubs.

The settlement is divided into three broad types:

Settlement Ancient – Pre-eighteenth century;

Settlement Post-medieval – Pre-twentieth century;

Settlement Modern - Twentieth century.

These define the basic phasing of settlement remains on the basis of their date of origin and which are still extant. For the most part, surviving settlement remains in the North West do not date before a building episode called 'The Great Rebuilding', which was a broad period of extensive renovation of housing stock (Brunskill 2004). In the North West, this approximately correlates with the seventeenth century. The earlier domestic **Settlement Ancient** can be found in the historic cores of many towns and villages in the North West and in rural contexts, which have not been subject to extensive change and there have been no economic drives to replace them. An examination of street plans, market places, and surviving major medieval buildings, such as castles and churches, can reveal evidence for settlement back a further four or five centuries. The steady trickle of discoveries of artefacts and features encountered during developments reminds observant dwellers of the richness of their settlement's past. **Settlement Post-medieval** corresponds to the later post-medieval (or industrial) period and reflects an increase in housing and industry during a period of considerable change, particularly in the southern part of the region. Around Birkenhead, expansion took place in response to the development of the docks, whilst in Warrington and Widnes expansion was largely related to the chemical industries (Hardie 1950). The towns of Crewe and Ellesmere Port in Cheshire developed in the nineteenth century, as new towns to serve the railway and canal industries respectively. **Settlement Modern** reflects housing and light-industry that have either been newly established in the twentieth century or have replaced earlier building stock. The present extents of Liverpool and Manchester, by comparison with their historic cores (defined as pre-dating the twentieth century), are shown in Figure 9, and demonstrate the amount of expansion of both urban centres in a period when both the cotton industry and international trade were ultimately in decline.

The three period-based broad types are further sub-divided into the following:

- Residential
- Mixed Residential and Light Industry
- Other Residential
- Designed Landscapes
- Commercial
- Civic
- Industrial.

Residential comprises domestic housing. **Mixed Residential and Light Industry** are formed by blocks of interlinked light industry and domestic housing, and include mills and the directly associated domestic housing that was built to accommodate mill workers. It also includes farm complexes, where the domestic and the functional components cannot be distinguished. **Other Residential** comprises building stock of unknown function, or settlement areas where the date of origin was not defined by the original HLC data. **Designed Landscapes** are areas of green space within a town or city, and typically include cemeteries, urban public parks, and allotments. **Commercial** comprises areas of commercial buildings for purposes other than manufacturing, including retail stock, offices, entertainment

centres, public houses, markets and retail parks. **Civic** comprises public buildings and includes municipal buildings, such as town halls, as well as prisons, hospitals, fire stations, police stations, railway stations, and universities. Finally, **Industrial** comprises the buildings that relate to manufacturing, and includes mills, brickworks, breweries, glassworks, factories, chemical plants, and food-processing sites.

5.5.2 *Change Scenarios*

- ***Pressure on Rural Settlement***: there has been a general decline of agriculture, making small farms uneconomic, and there has been a corresponding selling up of both farm buildings and land. This is coupled with a general increase of 'exurbanisation', whereby, usually affluent, people move from the city to rural areas but maintain an urban way of life made possible by long-distance commuting. An increasing number of working farms are being converted to multiple dwellings, with a corresponding impact on the historic fabric of the properties. Many available agricultural buildings are being converted to dwellings, irreparably altering the historic fabric, but at least providing them with a function and allowing for their survival, albeit in a substantially changed form. Small field barns are being demolished to provide stone and slate for this vernacular redevelopment. These potential negative impacts are offset by the fact that the reuse of former agricultural buildings ensures that they survive in some form, but it is important that planning guidelines provide for the preservation of historic fabric where possible.

  Impact: High Negative, Medium Positive

- ***Settlement Expansion***: an increasing population in the country is putting heavy demands on existing housing stock, and there is as a result considerable conversion of housing, that has an impact on the heritage resource. Moves to protect the countryside have resulted in the exploitation of brown-earth sites, and a corresponding impact on the heritage resource from earlier occupations on the site. This results in a significant change of the historic landscape character; former industrial buildings, such as warehouses and mills, are frequently being demolished and replaced with new housing stock rather than being converted.

  There are also pressures to replace dated housing stock with new housing, rather than renovation. Urban terraced housing, that is functional and could be adequately modernised, is being demolished and replaced with housing that has a larger footprint. This reduces the density of housing stock and creates further pressure to expand the urban areas in order to meet quotas for new build (http://www.britarch.ac.uk/ba/ba75/feat4.shtml).

  The pressure for new domestic build means that housing is being extended onto greenfield sites for new towns, or major expansions of existing towns are being proposed. These have the potential to change significantly the character of historic towns and to result in the loss of buried remains within these greenfield sites.

  There is therefore potential for substantial changes to the historic character of both individual properties and the wider landscape as a result of the reorganisation of settlements. New architectural designs that contrast with the surrounding historic, vernacular, build have the potential to degrade the overall

historic character of a settlement. Similarly, major new urban designs are impacting on a global scale and are resulting in major modifications to original town layouts, with the loss of historic streets and burgage plots substantially altering the historic character.

Impact: High Negative

- ***Regional Spatial Strategy (RSS)****:* this represents the top level of management strategy within the region (Government Office for the North West 2008). Within it, key cities are highlighted as economic cores (Liverpool and Manchester), drivers for economic growth (Preston), or sub-regional hubs (Crewe, Warrington, Chester, Lancaster, Carlisle). Areas such as Pennine Lancashire, Blackpool, Barrow, West Cumbria and parts of Liverpool and Manchester are highlighted as substantial social and economic regeneration challenges.

  A key aim of the RSS includes housing regeneration. Policy DP4 (Make the Best Use of Existing Resources and Infrastructure) says that building should be concentrated on areas of existing settlement where possible. Policy L3 advocates making the best use of the existing housing stock, where appropriate; however, it also identifies occasions when housing clearance may be necessary, such as to assist the local housing market or overall regeneration of an area.

  In general, there is a desire to protect the region's heritage, and a recognition of it as an asset for tourism (Policies W6 and W7). There is also a specific policy (EM1C) for the historic environment, which emphasises a conservation-led approach to regeneration, and highlights a number of key urban areas for particular 'exploitation potential'. However, without further emphasis from the other policies, in particular housing renewal, there is a risk that this will be seen as a lower priority, and irrelevant outside of the highlighted areas.

  Impact: Low Negative, Low Positive

  Overall scores: Negative impacts 7; Positive impacts 3.

5.5.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Good-quality building design should be promoted for all new developments, which respect and enhance the existing structure and layout of the settlement that they are a part of. They should reflect and enhance the local historic building styles and materials.
- Retention, reuse and adaptation should be encouraged, wherever possible, of former agricultural, industrial and commercial buildings. This should be highlighted as a benefit to both the historic landscape character and the reduction of carbon costs through unnecessary new build.
- Housing renewal, through the demolition and replacement of historic housing, should be discouraged, except where there is no alternative, and instead should encourage the refurbishment and appropriate modernisation of existing housing.
- New development should enhance rather than degrade the historic character, recognising its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.
- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of villages, or similar forms of nucleation, should not dilute this. Similarly, development in towns should respect the inherited layouts of streets, open areas, and burgage plots. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites. There is a need to encourage the preparation of detailed characterisation studies of urban areas to inform master planning for major regeneration studies, similar to the Urban Archaeological Databases already prepared for Carlisle and Lancaster (OA North 2007d; 2009c).

5.6 BUILT ENVIRONMENT

5.6.1 ***Description:*** the Built Environment Regional HLC type comprises all, mostly modern, developments that are not found within settlement areas, and includes airports or airfields, power plants, wind farms and other twentieth-century infrastructure (*eg* telecommunication stations). Such areas are distinct from the Industrial Non- Settlement type, as they tend to have a less varied developmental history and their original use is not likely to have changed. Despite their relatively recent origin, they nevertheless have heritage value; airports that have developed from Second World War airfields (*eg* Blackpool Airport) incorporate early structural fabric and buried remains. Similarly, the Calder Hall nuclear reactor at Sellafield was the world's first commercial reactor, and there have been calls for its statutory protection (Kragh 1999).

5.6.2 ***Change Scenarios***

- ***Expansion:*** the predicted expansion of current infrastructure can have an impact on historic character in one of two ways. First, surviving features of historic value, such as the Second World War infrastructure at Blackpool Airport, could be adversely affected by insensitive development. Secondly, any expansion to current facilities will impact on the former undisturbed land surrounding them, and could affect any extant below-ground archaeological remains.

  Impact: Medium Negative

- ***Infrastructure Development*:** the amount of land classified as part of the Built Environment historic landscape character type will increase significantly in the future, largely in response to anticipated climate change and the need for renewable energy generation. There is considerable potential for new infrastructure developments or the expansion of existing developments, such as wind farms, that could have a direct impact on a buried heritage resource, in addition to the built environment as it currently stands.

  Impact: Medium Negative

- ***Regional Spatial Strategy (RSS):*** this represents the top level of management strategy within the region (Government Office for the North West 2008). Key aims of the RSS include growth of connectivity (physical and digital), in particular within the Manchester-Liverpool corridor, and the growth of transport links throughout the region. Policy DP4 (Make the Best Use of Existing Resources and Infrastructure) says that regeneration should avoid major investment in new infrastructure, where possible. However, policy EM17 (Renewable Energy) has the following criteria that should be taken into account but should not be used to rule out or place constraints on a development: '(the) effect on the region's World Heritage Sites and other national and internationally designated sites or areas, and their settings but avoiding the creation of buffer zones and noting that small scale developments may be permitted in such areas provided there is no significant environmental detriment'. This does not take into account the wider historic landscape, or indeed specific sites that are not statutorily protected.

  Impact: Medium Negative, Low Positive

  Overall scores: Negative impacts 2; Positive impacts 1.

5.6.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Features of this character type (such as wind farms) can have a large visual impact on their locality and on people's perception of place, and these impacts and perceptions are often negative. Consequently, management objectives for this type of landscape should be focused on the historic setting of the installation.
- Where possible, the impact on the historic character of the surrounding locality should be considered when planning developments of this type. For example, developments such as wind farms should always consider the visual impact on the locality alongside the limited physical impact to the immediate area.
- Attempts should be made to preserve elements of the historic character, where possible, in large-scale developments.
- There should be an improved awareness of the historic character of the locality, through interpretation facilities. This may help to improve public perception of any development.
- The archaeological significance of elements of the built environment reflect not just their antiquity, but also their rarity and significance. So, for example, the Calder Hall power station was the world's first commercial nuclear reactor and has a significant archaeological importance despite its post-war date. The archaeological significance of even relatively recent buildings should be assessed before considering radical changes or demolition.

5.7 UNENCLOSED LAND

5.7.1 ***Description:*** the implication of this category is that it comprises elements of the landscape that have not been constrained for agriculture or other land use and

therefore should be entirely natural. The reality, though, is somewhat different, reflecting only the fact that the land has not been disturbed by more intensive farming, and there is nevertheless a considerable potential for the survival of the remains of earlier episodes of human activity. In many areas of Unenclosed Land, palimpsest landscapes exist of up to 6000 years of human activity, where the land use is either rough grazing or relatively neglected, since the lack of intensive use has ensured the survival of most of the remains of previous episodes. Particularly on the uplands, where soil formation can be very slow, early remains are often very close to the surface, providing very good site visibility. In Cumbria, there are very significant archaeological remains of settlement extant on the marginal lands around the edges of the Lake District, which reflect episodes of occupation that date back to the Bronze Age (Fig 4). The South-Western Fells of the Lake District, for example, have some of the greatest density of prehistoric settlement remains in England, comprising cairnfields, field systems, round houses and platform settlements and associated burial monuments (Quartermaine and Leech forthcoming; Higham 1986).

Remains of mineral and stone extraction abound on the unenclosed lands; some of the earliest and most significant are the internationally important Neolithic axe 'factories', around Langdale and Scafell Pike in the Central Lake District (Claris and Quartermaine 1989). Other evidence of mineral extraction in the Lake District includes lead extraction in the Thirlmere and Ullswater valleys, slate extraction in the central fells, and a graphite mine at Seathwaite, in Borrowdale (OA North 2007c).

Although the unenclosed lands have not been subject to recent intensive agriculture, they have been used for grazing animals since the introduction of agriculture in the Neolithic period. As a result, there has been an erratic, but ongoing, process of woodland clearance, culminating in the medieval period with an almost treeless upland landscape. Palaeoenvironmental work, particularly that investigating ancient pollen preserved in peat bogs, provides a valuable indication of historic land use and historic climatic conditions (OA North 2009b). There are, however, large areas for which record and interpretation, for both historic and palaeoenvironmental evidence, are currently sketchy.

Coastal foreshore land is a sometimes forgotten resource, which has considerable archaeological potential. Sea levels have fluctuated considerably since the last glaciation and land that is now submerged was formerly occupied. At Meols, on the Wirral, at Formby, and on the western coast of Cumbria (*eg* Drigg), there are the remains of submerged forests within the tidal zone, which predominantly date from the Mesolithic period (Gonzalez *et al* 1997; Hodgson and Brennand 2006). At Formby there is also evidence of footprints, as well as a former track surviving. There are now extensive tidal mud and sand banks on the Dee and Mersey estuaries which have the potential to preserve a range of historic features and structures, whilst, in contrast, parts of the coast of Lancashire are suffering from active erosion and the archaeological resource may be affected.

The unenclosed land type is sub-divided into Coastal, Moorland and Other:

The **Coastal** sub-type comprises the unenclosed coastal waste land, including areas of dunes, saltmarsh, scrub land, sand and mudflats. The **Moorland** sub-type is the upland unenclosed and unimproved land. It includes the peat moorlands, and also the craggy fell lands of Cumbria. It also includes some very large Parliamentary

enclosures, which may seem a contradiction, but in actuality the land within these blocks is essentially unimproved moorland. The **Other** unenclosed land sub-type is predominantly lowland, unenclosed land, but which is not on the coast. It includes expanses of moss, scrub, limestone pavement, and lowland commons.

5.7.2 *Change Scenarios*

Coastal Unenclosed Land

- ***Climate Change**:* rising sea levels, coupled with extreme storm events, will result in increased salination, and the inundation and loss of drained land, as the shoreline retreats inland. *The Shoreline Management Plan* (SMP) for the region (Halcrow 2009a) lists a number of approaches for coastline management, including 'Managed Realignment' or allowing the shoreline to retreat naturally. In a 'managed realignment' scenario, some areas of historic interest, such as around Sunderland Point, Lancashire, may become inundated. Heritage remains on the shoreline, and within the coastal margins, will have the potential to be adversely affected.

  The SMP also states that: '…in areas where there are benefits in reverting to natural processes, either by no active intervention or through managed realignment, there may be an increase in tidal flooding or erosion risk with associated negative impacts on isolated historic assets (*eg* Scheduled Monuments, a Registered Park and Garden, parts of Hadrian's Wall WHS and non-scheduled archaeological features of medium and high importance)' (*op cit*, 16).

  Areas remote from coastal flooding have the potential to be affected by drainage and the corresponding conversion to pasture; however, this is considered a reduced risk in comparison to that of saline inundation from rising sea levels.

  Impact: High Negative

- ***Developments***: construction of offshore wind farms and tidal barriers will have the potential to impact on archaeological deposits in coastal areas, *eg* through increased / decreased sedimentation.

  Impact: Low Negative

- ***Regional Spatial Strategy (RSS)**:* within the RSS, the historical landscape associated with the coast is considered an asset that should be conserved and enhanced (Government Office for the North West 2008, 37).

  Impact: Medium Positive

  Overall scores: Negative impacts 4; Positive impacts 2.

Moorland Unenclosed Land

- ***Developments:*** the move to environmentally sustainable power generation is resulting in increasing numbers of applications for the siting of wind farms on summits or exposed hill flanks. These have the potential to have a direct impact on the heritage resource from turbine and road construction, but also through changes to the drainage of peatlands caused by such roads and service ditches.

Increases in quarrying and mineral extraction on the unenclosed land can have a direct impact on the heritage resource. This is less of an issue within National Parks, which have greater planning controls with respect to intrusive developments.

Impact: Low Negative

- ***Agriculture:*** there has been a marked decrease in the numbers of sheep on the hills, which is, in part, a result of the Common Agricultural Policy Single Payments Scheme introduced in 2005, which is subject to 'cross-compliance' conditions relating to environmental, food safety and animal welfare standards but also because of the effects of agri-environment schemes (OA North 2009b). The Environmentally Sensitive Areas Scheme introduced in phases after 1987 for the Lake District, Pennine Dales, and North Peak, and the Countryside Stewardship Scheme, which had a more scattered distribution, are coming to an end, replaced by the Entry Level Stewardship scheme open to all, and the Higher Level Stewardship scheme which is targeted and selective (but much of the uplands is targeted). This is resulting in an increase in scrub in some areas, and particularly gorse, which adversely affects monuments through root damage and reduces site visibility, although these detrimental effects are countered by a reduction in direct stock erosion.
- *Impact: Medium Negative, Low Positive*
- ***Climate Change*:** climate change can adversely affect the moorland heritage resource directly or as a result of measures to offset it. Climate change has the potential to create extreme events, resulting in flash floods that cause gully erosion and major landslips of peatlands. Alternatively, droughts will potentially allow catastrophic wild fires that can destroy peatlands and the heritage resource, as occurred at Fylingdales (North York Moors) in 2003 (Vyner 2005).

  Impact: High Negative, Low Positive

- ***Woodland Expansion:*** national plans include a desire to increase forestry for timber production and carbon sequestration. The unenclosed land is potentially under threat from woodland expansion, either by expanding existing discrete areas or by new planting.

  Impact: High Negative

  Overall scores: Negative impacts 9; Positive impacts 2.

5.7.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

The role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by people, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities should be initiated for increased and improved interpretation, and the appropriate extension of access, whilst at the same time deflecting visitors from sensitive historic attributes.

- Surveys across unenclosed uplands should be encouraged in order to understand more fully their historic use and development, and to identify areas of sensitive archaeological remains.
- Targeted agri-environment schemes should be implemented to conserve and enhance valuable historic features. Hedges and walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open, and bracken and European gorse domination should be reduced.
- Research on historic relationships between Unenclosed and Enclosed Land should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management should be encouraged.
- Management and restoration of historic features, such as vernacular buildings, should be encouraged. It should be recognised at all times that the network of walls, historic trackways and isolated agricultural buildings is a distinctive feature of the moorland landscape, which provides time-depth and inter-county historical variation.
- Opportunities should be made for increased and improved interpretation, and the appropriate extension of access, whilst at the same time deflecting visitors from sensitive historic attributes.
- There should be liaison with historic environment professionals during any scheme to enhance or change the characteristics of the area, as such schemes may have unintended consequences for buried archaeological remains. In particular, control over large-scale energy, mining/quarrying developments, that could rapidly transform significant landscape features and characteristics, should be implemented.
- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be control of other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.
- Strategies should be developed, in consultation with the fire service, to limit the impact of moorland fires on visible historic features or buried archaeological remains.
- The visibility of archaeological sites should be improved by clearing bracken and scrub vegetation. A low level of stock grazing is a sustainable way of achieving this but sensitive management is required to avoid soil erosion. Where possible, woodland establishment in historically important areas should be avoided. Maintenance of thin peat soils, and hence the archaeological remains within them, may be promoted through rotational heather burning. Bracken should be controlled by spraying, as opposed to mechanical means that may damage the archaeological resource.
- A sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- Whole-fell grazing management should be promoted where possible; erecting new fences on open fell only where alternatives are not practicable, and redundant fencing should be removed. This should ensure careful design of new fencelines to minimise visual and perceptual impacts, for example avoiding the crossing of and close proximity to fell paths, siting below ridgelines *etc*.
- There should be an avoidance of the use of ancient cairns, walls and buildings as sources of building or repair material.
- Footpaths, bridleways or byways, along with their associated features, such as pinch stiles and gates, which represent historic routeways, should be conserved. However, management of such features, to avoid erosion of the surrounding soils, and littering, should be undertaken.

5.8 DESIGNED LANDSCAPES

5.8.1 ***Description:*** the **Designed Landscape** character type comprises all parkland, ornamental landscapes and recreational areas that are not found within settlements, and are ascribed one of two sub-types, **Ornamental** or **Recreational**. Urban parks or formal gardens within settlements are not included, as they are a sub-type of Settlement (*Section 5.5*).

Some parks were created through single designs, but others have elements of earlier gardens or parks incorporated into them, and some contain features inherited from earlier landscapes, such as barrows, ridge and furrow ploughing, hillforts, or quarries. Archaeological survey typically reveals a complex of designed elements on the surface, and analysis of garden books and diaries helps to reveal the development of the designed landscapes and the desires and motives behind them (*eg* OA North 2006). Relatively little work has been done on the economic and social background to the formation of designed landscapes in the region.

Ornamental land includes parkland (country parks, private parkland and designated parkland), deer parks and nature reserves. Most of these areas are 'ancient' (*ie* medieval) or post-medieval in origin and tend to have significant historic value. Usually, the principal house of an estate, around which the park was designed, survives (and is almost always a listed building), as well as the ancillary buildings that related to the running of the estate. Landscaping and ancient plantations are often preserved, and the lack of modern development in such areas can allow the preservation of archaeological remains pre-dating the establishment of the parkland. The south of the region has significant numbers of ornamental parks, many of which were originally medieval deer parks, such as Tatton Park, near Knutsford, Cheshire (McKean 1998), which encompasses an entire township. Because **Designed** and **Ornamental Landscapes** tend to include other historic character types, such as woodland and ancient enclosures (particularly deer parks), they also contain the archaeological and historical value of those types.

Recreational land, by contrast, is a more varied classification, including golf courses, caravan parks and campsites, playing or sports fields (that are not within settlement areas), racecourses and zoos. Recreational facilities can also be located on available green areas within wider settlement boundaries. Although the facilities are, for the most part, of recent date, they can include significant historical elements if there is reuse of an earlier building, such as a country house as a golf clubhouse.

A notable example is the Vale Royal Golf Club, Cheshire, which has as its clubhouse a country house which was formerly part of Vale Royal Abbey (LUAU 1998), and the foundations of the former abbey church are within the grounds. In open areas, the landscape's previous use will often be unenclosed or agricultural in character, and the preservation of earlier landscape features and buried archaeology is likely.

5.8.2 *Change Scenarios*

- ***Policy:*** current government policy recognises the importance of designed landscapes but affords them little statutory protection. The Register of Parks and Gardens (http://www.english-heritage.org.uk/server/show/nav.1410), for example, while affording some special consideration during the planning process, offers no actual statutory protection, given the historic value of ornamental parkland.

  Impact: Low Negative, Medium Positive

- ***Redevelopment****:* the owners of private ornamental parkland may experience economic pressure to sell parts of the landscape, or redevelop it by building and selling houses, changing the landscape's current use. Similarly, buildings of historical significance, often the principal house of a former estate, are vulnerable to redevelopment, should owners be unable to afford their maintenance.

  Impact: Medium Negative

- ***Woodland Management****:* ornamental landscapes characterised by woodland, planting and other forms of woodland management can cause significant damage to buried archaeological remains.

  Impact: Medium Negative, Medium Positive

- ***Tourism and Recreation****:* any predicted increase to the importance of tourism in the North West may have an impact on all of the historical components of the **Designed Landscape** type, both positively and negatively. Tourism offers opportunities for promoting the historic fabric of the inherited landscape, while issues relating to accessibility and health and safety may put some original hard landscaping at risk. Any expansion or redevelopment of current recreational areas, such as sports fields, zoos or racecourses, will have an impact on formerly undisturbed buried archaeological remains.

  Impact: Low Negative, Medium Positive

- ***Abandonment and Neglect****:* enclosure boundaries represent a significant standing historical component of the **Designed Landscape** type, as does the legibility of the original landscape design concepts, represented by early field systems that are embedded within later ones. Boundaries such as dry-stone walls are especially vulnerable to neglect, and as a consequence, the original design can be lost, as boundaries become relict. Regular maintenance, repairs, and restoration are required, particularly in areas where land use and traffic are intensifying.

  Impact: Medium Negative

- ***Green Infrastructure**:* designed landscapes have an important role within the region as part of the green infrastructure. The Regional Spatial Strategy (RSS; Government Office for the North West 2008), and other strategies, highlights the importance of green infrastructure for health and tourism as well as biodiversity and environmental benefits. Policy EM3 aims to 'protect the integrity of sites of national and international importance including the historic environment'. Furthermore, policy EM4 identifies areas to be designated as Regional Parks, within which the cultural heritage will be highlighted and managed. These policies have the potential to act as positive forces for change within the region.

  Impact: Low Negative, High Positive

  Overall scores: Negative impacts 9; Positive impacts 9.

5.8.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- Some designed landscapes are included in English Heritage's *Register of Parks and Gardens of Special Historic Interest in England* (http://www.english-heritage.org.uk/server/show/nav.1410) and, although such listing provides no statutory protection, it affords them special consideration within the planning process. Development that results in substantive negative change to such landscapes should be avoided, where possible.
- Parkland boundaries, and key relict parkland features that provide time-depth within the modern landscape, should be conserved and enhanced. Original or important alterations to the landscape design should underpin designs for future management. Conservation Management Plans should, where appropriate, be prepared to guide repair, maintenance and restoration of designed landscapes.
- Non-native and exotic species should be actively managed, to maintain and sustain their historic character. Replacement planting, however, should be considered where such species are not represented in the original design. Consideration should be given to identify and plan for the potential impact of climate change on designed landscapes.
- Unlisted buildings and structures related to ornamental land should be protected. The principal buildings within the parks, and other related structures, are often Listed Buildings and occasionally lie within conservation areas, and as such benefit from the additional protection provided by the Planning (Listed Buildings and Conservation Areas) Act 1990. Where the principal building is not listed or there are buildings that do not directly relate to the principal building, then there is a shortfall in statutory protection. Buildings are often left in disrepair or demolished, and can affect the coherence of the wider ornamental landscape. Since grant aid is available, owners should be encouraged to explore opportunities for repair, maintenance and enhancement.
- Public access, appreciation and understanding of ornamental landscapes should be encouraged, but also actively managed to avoid damage. The potential of ornamental landscapes for heritage interest and recreation should be highlighted.

- Loss of integrity by division into multiple ownership, or through inappropriate changes of use, should be avoided. Where ornamental landscapes are in multiple ownership, management regimes should be encouraged that foster joint-working whilst protecting the key ornamental attributes, such as parkland trees through Tree Preservation Orders, or parkland structures through listing or scheduling.
- Relict archaeological remains should be conserved. The preservation of earlier archaeological remains within areas of ornamental land is usually good, given the low intensity of most parkland uses. Development proposals or changes of land use should require an archaeological assessment in advance to mitigate the impact of the proposal.
- Early consultation, and the provision of supporting information for development proposals, should be promoted. Many ornamental landscapes are the subject of proposals for conversion to golf courses. Early consultation should be recommended, to assess the impact of such proposals upon the historic components of the landscape (see recently issued English Heritage guidance on golf courses; English Heritage 2006).

5.9 ENCLOSED LAND

5.9.1 ***Description:*** **Enclosed Land** is the most extensive historic character type in the North West, comprising all currently agricultural and pastoral land. Its influence, however, is more far-reaching, having an impact on national identity, social and cultural life, industry and economy, tourism and recreation. There is considerable potential for further research in this area, as each farming settlement contains a wealth of historical, architectural and archaeological information. Surveys of field systems yield considerable agricultural, social and tenurial information. Buried archaeological features from the prehistoric, medieval and post-medieval periods, including settlements, fields, ceremonial and ritual monuments and industrial remains, can be expected.

Modern buildings often stand alongside nineteenth-, eighteenth-, or seventeenth-century or even earlier ones, the positions of which may follow medieval layouts in settlements linked by medieval or even prehistoric lanes and tracks. The relationship between the modern enclosure layout and that of the past provides a measure of the antiquity of the landscape.

Enclosed Land is classified as one of three broad types on the basis of the date of origin, making the time-depth of historical landscapes still extant immediately accessible. A fourth broad type represents enclosures for which the date of origin has not been determined.

- Ancient Enclosures - Pre-eighteenth century
- Post-medieval Enclosures - Pre-twentieth century
- Modern Enclosures - Twentieth century
- Unknown Enclosures - Unknown or unclassified origin.

Surviving **Ancient Enclosures** tend to be (but are not exclusively) small, characterised by irregular enclosure patterns and shapes, often with wavy-edged

boundaries that followed former routes between dispersed areas of settlement. Boundaries are highly varied and are monuments in themselves, particularly dry-stone walls or biodiversity-rich hedgerows, and represent the primary above-ground archaeological component of this type. Some patterns in ancient enclosures are the result of enclosure of former open fields, worked in common, using sinuous-sided strips, created by ploughing. Some fossilise elements of Roman or even prehistoric enclosure; notable examples are where the extended lines of prehistoric boundaries on now unenclosed land are continued as boundaries within present-day enclosure systems. Others are patterns of irregular fields cut out of former woodland, moorland and heath in the later medieval period.

Post-medieval Enclosures comprise a great variety of forms, and are not restricted by size, pattern and shape, or boundary type. A large amount of land in the northern part of the region, however, was enclosed by formal agreement or Parliamentary Act, and therefore this tends to have a regularised, straight-edged pattern, and the fields were often very large. In the south of the region, in Cheshire, the majority of Parliamentary Acts cover small areas and simply finalise the process of piecemeal private enclosure that had been going on for some time. In the northern parts of the region, where there is an abundance of surface stone, the boundaries were typically marked with dry-stone walls, but in the south they typically comprised laid thorn hedges.

One might predict that **Modern Enclosures** would be large, regular and have straight boundaries, but the majority of recently enclosed land has been constrained by the irregular network of previously enclosed fields, settlement and other landscape types, and so it includes a variety of forms. In the south of the region, in Cheshire, both large fields of 8ha plus size, as well as smaller fields which are the degraded remnants of earlier field systems, are characteristic of this type, and are bounded by new hedgerows and fences or boundaries retained from previous field systems. The significant archaeological elements found within this type are recently established boundaries, ditches and buildings that have predominantly straight-edged field boundaries.

5.9.2 *Change Scenarios*

- ***Agricultural Intensification:*** ongoing economic challenges in the farming industry may lead to the loss of small farms or their amalgamation into larger, purportedly more efficient, agricultural complexes; as such, this changes the character of the landscape dramatically. Following the animal health crises in the 1990s and early 2000s, for example, farms unable to recover from the loss of livestock and income succumbed either to amalgamation or a complete change of land use. Similarly, an evident trend towards fragmentation within the agricultural landscape is expected to continue, where large holdings are divided and applied to other uses on land where farming is no longer viable. This results in change of use of farms, as well as the application of more intensive farming techniques, causing deeper ploughing and the loss of former field boundaries.

  Impact: High Negative

- ***Change in Use:*** economic pressures, particularly the declining prices of livestock and increasing amounts of imported agricultural products, are

predicted to continue to lead to farm closures and land sales, potentially resulting in complete land use change for areas of currently **Enclosed Land**.

Enclosures near settlement areas, existing recreational land, and near large infrastructure facilities (or sites that would be favourable to future facilities) are particularly at risk from developmental change of use. The proposed development of a high-speed rail network through the North West will, where the route passes through currently **Enclosed Land**, alter the character of the landscape considerably.

Impact: Medium Negative

- ***Flood Risk Management:*** this landscape type will increasingly be at risk from floods, and also from the impact of flood management regimes. Because of the ubiquity of the landscape type, many environmental management prescriptions have the potential to impact on **Ancient Enclosed Land**.

  Impact: Medium Negative, Medium Positive

- ***Tourism and Recreation:*** like the **Designed Landscape** type, any increase in the importance of tourism in the North West will have an impact on the historical components of **Enclosed Land**, both positively and negatively. Tourism and recreation offer opportunities for promoting the historic fabric of the inherited landscape, but sensitivity to boundary maintenance is required. The notable exception is in the Yorkshire Dales, where the myriad of dry-stone walls is perceived by the visitor as being an essential component of the landscape, and as such warrants protection.

  Impact: Low Negative, Low Positive

- ***Woodland Expansion:*** national plans for forestry include a desire to increase woodland cover for timber production and carbon sequestration. Regionally, the North West has one of the lowest amounts of forest cover in the country, and as such, enclosed land is potentially under threat from woodland expansion, either by expanding existing discrete areas or by new planting.

  Impact: High Negative, Low Positive

  Overall scores: Negative impacts 11; Positive impacts 4.

5.9.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that pre-date the Parliamentary Enclosure Movement.
- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds, marl pits and man-made, but naturally fed, stock-drinking areas, should be promoted.
- The retention of smaller, irregular fields, and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) that define them, should be encouraged.

- The maintenance of hedgerows, as boundaries of still-functioning fields, through the gapping up and use of appropriate local hedge-laying techniques, should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.
- The planting of trees in hedgerows, in order to replace overly mature specimens, should be promoted. The identification of, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as it may provide evidence of former field boundaries or land use practices. The renewed pollarding of formerly pollarded trees, and where appropriate unpollarded trees, in hedgerow and in-field locations should be encouraged.
- New field boundaries should be inserted into inherited patterns in ways that do not unnecessarily reduce the legibility of the earlier patterns.
- The identification and protection from ploughing of ridge and furrow and lynchet earthworks, that are an indication of former farming practices, should be promoted. Where possible, the retention of areas of surviving ridge and furrow should be encouraged through the maintenance of an appropriate pastoral regime.
- The maintenance of commons so that they remain open but within actively farmed areas should be encouraged, so as to sustain traditional upland farming practices and the viability of upland farming in general.
- The state of the historic farm building stock should be reviewed, to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm buildings should be fully considered before permissions are granted to convert into dwellings. Any conversions should be guided by current best practice principles.
- The overall character of the **Ancient Enclosed Land**, with its dispersed settlement pattern, should be maintained. The great historic value of **Ancient Enclosed Land** needs fully to be borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to planning applications to disturb **Ancient Enclosed Land**. Management should seek to retain field boundaries in their existing forms, rather than seek to restore historic patterns, as this is particularly important for preserving the character of modern field systems.

5.10 COMMUNICATIONS

5.10.1 ***Description:*** the **Communications** type consists of motorways, major roads, railways and canals that bisect the landscape; smaller roads and tracks are excluded. The elements within this type represent a mixture of modern and older communication lines, but there is no subdivision. Many of the features associated with communications, such as locks, quaysides, storage sheds and depots, bridges and tunnels, which often have significant historical value, are considered to be part

of the settlement to which they belong. More research has been undertaken on the region's canals and railways than on roads, other routeways, and air transport (*eg* Hadfield and Biddle 1970; Shannon and Hilmer 2004).

Much more could be learnt about the social and economic effects of all communication systems, and their relationship with the settlements they serve. For example, roads running along medieval and earlier lines display considerable evidence for time-depth and settlement development.

5.10.2 ***Change Scenarios***

- ***Expansion:*** extending, expanding or creating additional lanes on existing motorways would be a threat to any adjacent, undisturbed archaeology that survives at these locations.

  Impact: Medium Negative

- ***Modernisation:*** the predicted modernisation of existing railways poses a risk to standing buildings and structures of historical significance that are part of the fabric of the railway network. Improvements to historic roads have the potential to impact upon extant, buried remains of the earlier communication lines.

  Impact: Medium Negative

- ***Abandonment and Neglect:*** canals, as essential industrial communication routes, are redundant, although many continue to be used for recreation and remain part of the historic character of settlement areas. Their historic components are vulnerable to drainage and development. British Waterways have, however, been involved in an ongoing programme to assess, manage, and secure their heritage assets (British Waterways 2009), which should address this issue.

  Impact: Low Negative, Low Positive

- ***Regional Spatial Strategy (RSS):*** this represents the top level of management strategy within the region (Government Office for the North West 2008). While reducing travel and increasing accessibility are seen as key principles of the RSS, there is also an aim to improve journey-time reliability and to enhance the accessibility of the region's gateways (Manchester and Liverpool) and their connections with cities in other regions (such as Leeds). The emphasis is now on making the best use of the existing transport infrastructure (public transport and the road network) rather than constructing new roads (Policy RT1).

  Policy RT3 relates to the public transport network within the region; however, few concrete aims are laid out. In part this is due to the difficulty in improving this aspect as a result of regulation and funding, and there is no reference to the historic environment within this policy. Consequently, there is a considerable risk that no attention will be paid to heritage issues, even within such obvious historic structures as the railway stations at Preston and Carlisle.

  Canals are treated as either industrial transport networks (Policy RT6, for example the Manchester Ship Canal) or as green spaces for recreation or pedestrian/cycling transport (Policy RT9). Specific sites of importance, such as the canal in Burnley and its role within the Weaver's Triangle, are highlighted (Halcrow 2009a, 149), but not the wider historic importance of canals within

the region. There is, therefore, a risk that the heritage importance of canals will be overlooked if not explicitly highlighted.

Impact: Low Negative, Low Positive

Overall scores: Negative impacts 6; Positive impacts 2.

5.10.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- The key historic examples of each type of communcations route included should be conserved and enhanced.
- The management of the historic canal network should be promoted, as a method of increasing its use for recreation activities.
- Railway lines should be retained and maintained, and, where possible, disused railway lines should be reused as cycle routes or similar (www.helm.org.uk/ upload/road-schemes.pdf).

5.11 MILITARY

5.11.1 ***Description:*** the **Military** type is erratically represented in the Regional HLC; the type is defined in Cumbria, the Lake District and Cheshire, but not in Lancashire and Greater Manchester. It includes military camps, buildings and barracks, but significantly does not include the ranges, which are variously defined as **Woodland** or **Unenclosed Land**, or even in some instances **Enclosed Land**, depending upon their individual characteristics. This is particularly marked in the *Border Moors and Forests RLCA*, which in reality is dominated by the RAF Spadeadam military range, but the HLC classifies only a small proportion of the range as military.

Many of the camps have been adapted from Second World War camps, and Second World War features still survive within them. The importance of such features is increasingly being recognised and there is a need for their long-term preservation where possible.

5.11.2 ***Change Scenarios***

- ***Expansion:*** the military ranges include large areas of unenclosed moorland, which can have a considerable potential for archaeological remains. Any expansion of either the ranges or artillery impact zones can have an impact upon these remains. In practice, it is difficult to assess the archaeological resource within the impact zones because of the risk of unexploded ordnance.

  Impact: Medium Negative

- ***Modernisation and Adaptation***: there is considerable potential for changes to the ranges as new weaponry is introduced that needs to be tested, and soldiers trained in its use, as a result of rationalisation changes within the services. This can affect both infrastructure at the camps, and environs, and at the impact zone.

  Impact: Medium Negative

- ***Abandonment / reduction of training facilities:*** rationalisation of the peace-time military sites has in the past resulted in either the reduction of training facilities or less intensive usage. In either instance, this favours the preservation of archaeological landscapes.

  Impact: Medium Positive

  Overall scores: Negative impacts 4; Positive impacts 2.

5.11.3 ***Management Objectives:*** the following generic management objectives are examples of positive landscape management for this character type. If adopted, these would accommodate change under sustainable management, by enhancing the positive outcomes of change and reducing the negative impacts.

- The large areas of land occupied by military training grounds and camps can contain significant archaeological landscapes, which should be preserved in the course of any proposed changes to the military infrastructure.
- Archaeological surveys should be undertaken of all military training grounds, where health and safety permit, to allow for their conservation in the course of any landscape changes.

6. CORRELATION BETWEEN RHLC AND RLCT

6.1 INTRODUCTION

6.1.1 A truly objective comparison of the RHLC and RLCT types was not possible, due to the vast differences of scale and granularity between the two datasets. For example, the RLCT dataset comprises 576 individual polygons across the region, whereas the RHLC comprises 139,174 polygons (Figs 3-6). Furthermore, the historic character data within the RLCT contain multiple classifications for each feature. For example, a single polygon may have the classification 'Ancient enclosed; Medieval and post-medieval planned enclosure; Parks and recreation; Plantation woodland; Discrete Ancient farms; Ancient Woodland'; and as such is a very generalised catch-all. Furthermore, settlement and enclosure character or type are included in additional attribute fields that have similar multiple classifications within a single feature. Within the RHLC, this polygon would be split into its constituent parts, each with a separate single classification.

6.1.2 Consequently, a more subjective, visual comparison was made of the two datasets, concentrating on the pattern of enclosure and settlement within the region. This comparison was necessarily crude and subjective, and should be used in the most general sense only.

6.2 ENCLOSURE CORRELATION

6.2.1 Time-depth of enclosure is included within the 'HistChrCt' field in the RLCT data and the dataset was classified according to this field; all values that did not include **Ancient Enclosure** were removed from the map. This gave a broad overview of the location of ancient enclosure within the region, as measured by the RLCT. The RHLC Ancient Enclosure dataset was overlain on the map, to allow comparison with the RLCT. This showed that there are significant belts of extensive ancient enclosed land, particularly around the Cumbria/Lancashire border (Fig 4), around the Solway, and in South Lancashire, that are not categorised within the RLCT as having any ancient enclosure. However, elsewhere, particularly in areas where Ancient enclosure is the predominant landscape type, the correlation visually appears to be very good.

6.2.2 Whilst originally a discrepancy between classification periods appeared to be a problem, this is not actually the case. In the RLCT, the periods for enclosure are Ancient, Medieval and Post-Medieval, and Modern, compared to Ancient, Post-Medieval and Modern in the RHLC. However, the cut-off between Ancient and Medieval is the beginning of the seventeenth century (Porter *et al* 2009), which is the same as the cut-off between **Ancient Enclosure** and Post-medieval enclosure for the RHLC.

6.3 SETTLEMENT CORRELATION

6.3.1 Settlement is described by pattern in the RLCT, in the 'SettPatCt' field. This classifies areas as containing one or more of the following settlement patterns:

Dispersed, Nucleated, Isolated, Clustered, Urban, Unsettled, and Industrial. In some areas, up to three of these patterns types are used. The three periods of settlement data from the RHLC (Ancient, Post-Medieval, and Modern) were overlain on this data to allow a visual comparison of settlement pattern between the two datasets.

6.3.2 Visually, it is clear that areas classified as 'unsettled' in the RLCT match with areas of no settlement in the RHLC, and that areas classified as 'urban' also match well. However, the RHLC shows clear evidence of nucleated settlement, including its development extending along lines of communications, in many areas that are currently described as Dispersed or Isolated. This is particularly clear in Cumbria and the Lake District, where the detail of the original HLC data was so much greater.

6.4 CONCLUSIONS

6.4.1 This crude visual comparison highlights the difference in scale of the two datasets, and also those areas where the RLCT classification may be misleading. It also shows, however, that the two datasets can be used together to provide far more useful information than in isolation, as it is possible to see two levels of detail at the same time.

6.4.2 There are also some clear objectives for further work. A more objective comparison could be made between the datasets, examining statistical correlation and breaking down the RHLC types within each RLCT. A further comparison with the geodiversity, biodiversity, and perceptual data, also recorded in the RLCT, may also be interesting; for example, relating historic character against geodiversity may provide an insight into human development at a regional level. Measuring settlement character against tranquillity or wilderness may also provide insight into why people perceive certain areas as being more tranquil, or wilder, than others.

7. RECOMMENDATIONS

7.1 SUGGESTED RLCA BOUNDARY CHANGES

7.1.1 The boundaries of the RLCAs are largely defined on the basis of physical and geological characteristics of the landscape, rather than cultural characteristics. Despite this, for the most part, the boundaries actually reflect the cultural characteristics of the landscape as settlement and land use patterns have respected the natural topography. In a few instances, though, there is a direct conflict between the definition of the RLCA boundaries and the cultural landscape. Perhaps the issue of greatest concern is with respect to the large valleys of the Ribble and Eden, which have had an enormous impact upon the development of the landscape and the region.

7.1.2 ***Eden Valley:*** the *Eden Valley RLCA* is one of the most important landscape areas of Cumbria, reflecting some of the best agricultural land, and has attracted settlement since at least the Neolithic period (Fig 1). It also serves as a major communication route from the Solway through, into, and over, the Pennines, and also into the Lune Valley. It is no coincidence that the most influential urban area in the county, Carlisle, is located near the mouth of the Eden at a point where it can control and exploit maritime traffic from the sea and into the hinterland through the Eden Valley. Yet although it is the most important and significant urban centre of the Eden Valley, Carlisle is defined as being in the *Solway Farmlands RLCA* rather than the Eden Valley, where culturally it belongs. Given that the Eden Valley is a corridor into the interior of the country, it makes little sense, from a heritage perspective, to have the *Eden Valley RLCA* truncated by the *Solway Farmlands RLCA*. It is therefore proposed that the corridor of the *Eden Valley RLCA* should extend through to the *Solway Firth and Coast RLCA* and, most importantly of all, it should encompass Carlisle.

7.1.3 ***Ribble Valley:*** similarly, the Ribble Valley is a major communication route that extends into, and through, the Pennines, and has been in use as such since at least the Bronze Age, as evidenced by finds during the construction of Preston Dock (OA North and University of Liverpool 2007) (Fig 2). The Ribble Valley served as a boundary during the early medieval period, and there is a line of Norman motte and bailey castles along its course. The river has marked a cultural boundary, reflected in the fact that dialects, fossilised in place names, were different on either side of the river. Preston is the principal town on the Ribble Valley, and is close to a Roman settlement (at Walton-le-Dale), both of which were located so as to utilise the river, yet this is not within the *Ribble Valley Lowlands RLCA*. At present, the *Fylde Plain RLCA* extends across the former cultural divide of the Ribble and includes a large section of the West Lancashire Plain; the boundary between it and the *West Lancashire Plain RLCA* does not correspond to any cultural divide. It is therefore proposed that the RLCAs should reflect the cultural significance of the Ribble. The *Ribble Valley Lowlands RLCA* should link directly with the *Ribble Estuary and Coast RLCA*, and the *West Lancashire Plain RLCA* should be expanded to include that part of the former *Fylde Plain RLCA* that was south of the Ribble.

7.1.4 ***Bolton***: the border between the *Manchester Mill Towns and Pennine Fringe RLCA* and the *Lancashire Coal Measures RLCA* extends through the middle of the historic

town of Bolton, which does not make cultural sense (Fig 2). It is therefore proposed that the boundary is moved to the south of the town.

7.1.5 ***Craven Gap***: the name of the *Lune / Ribble Drumlins RLCA* does not adequately reflect the character of the area defined, particularly as the most notable drumlins are actually in the *South Cumbria Low Fells RLCA* to the north (Fig 2). The RLCA does, however, include the historically important Craven Gap - a natural communications route that extends through, and over, the Pennines. It is therefore proposed that the name be changed to recognise this, and that it should be called the *Lune / Craven Gap RLCA*.

7.2 RECOMMENDATIONS FOR FURTHER WORK

7.2.1 ***Historic character and perception of landscape:*** English Heritage's *Conservation Principles, Policies and Guidance* (2008) recognises the importance that cultural heritage has in people's perception of the landscape. Furthermore, it outlines a method for quantifying the significance of a place in terms of its cultural and natural heritage value.

7.2.2 Four forms of valuation are included in *Conservation Principles*, namely: evidential, aesthetic, historical, and communal. Each of these could be applied to each RLCA and RLCT to provide a further level of landscape management and conservation. This would also establish a benchmark for measuring future landscape change.

7.2.3 ***Tranquillity and change scenarios:*** the Campaign for Rural England has produced 'tranquillity' measurements for each county in England (Campaign for Rural England 2005). These show that the North West is currently fourth out of the nine regions for average tranquillity, but that within the region the scores vary considerably at county and local level.

7.2.4 These measurements could be added to the RLCA information, and analysed in conjunction with both the change scenarios and historic character information. In this way it may be possible to establish connections between historic character and tranquillity, and also to highlight areas where the negative impacts of change scenarios are likely to have a higher perceived effect. These maps could be compared with older tranquillity maps from the 1960s and 1990s (*op cit*, 16) to assess changes over time.

7.2.5 ***Land Use Change:*** the *Countryside Quality Counts* (CQC) project measures multiple indicators of land use and perceived landscape quality changes over time, from 1990 onwards (Haines-Young *et al* 2004; Haines-Young 2007). This information could be mapped in the GIS and analysed with respect to the information for each RLCA, such as historic character, and change scenarios. In this way more targeted objectives could be provided for each RLCA, along with more accurate indicators of the impact of change scenarios.

7.2.6 Historical land use is reported in the *Land Utilisation Survey of Great Britain*, first undertaken in the 1930s by L Dudley Stamp of the London School of Economics (Stamp 1937) and again in the 1960s by Alice Coleman at Kings College London (Coleman 1961). These projects were volunteer-led, and the scanned maps are available at the *Vision of Britain Through Time* website (http://www.visionofbritain.org.uk/maps). In 1990, a remote-sensing Land Cover

Survey was undertaken, and a further volunteer-led survey was undertaken in 1996 (Walford 1997).

7.2.7 This information has generally been collected at a local scale (1:10,000), unsuitable for regional-level mapping such as the NWLCF. Data, however, could be abstracted from the sources above to provide a more broad-brush view, possibly using the density of farms and settlement per RLCA as the indicator. In that way, the changing character of the landscape in each RLCA could be measured, leading to more specific management objectives and change scenarios. This process could also be expanded to take in other data sources as they became available, such as *An Atlas of Rural Settlement in England* (Roberts and Wrathmell 2000).

7.2.8 ***Event-driven landscape character change:*** changes in landscape character over time could be measured with respect to specific events, such as the coming of the railways, or the impact of the World Wars. These events clearly had an impact on land use and character, and by analysing this at an RLCA level it may be possible to show the wider, and longer-term impact of these events.

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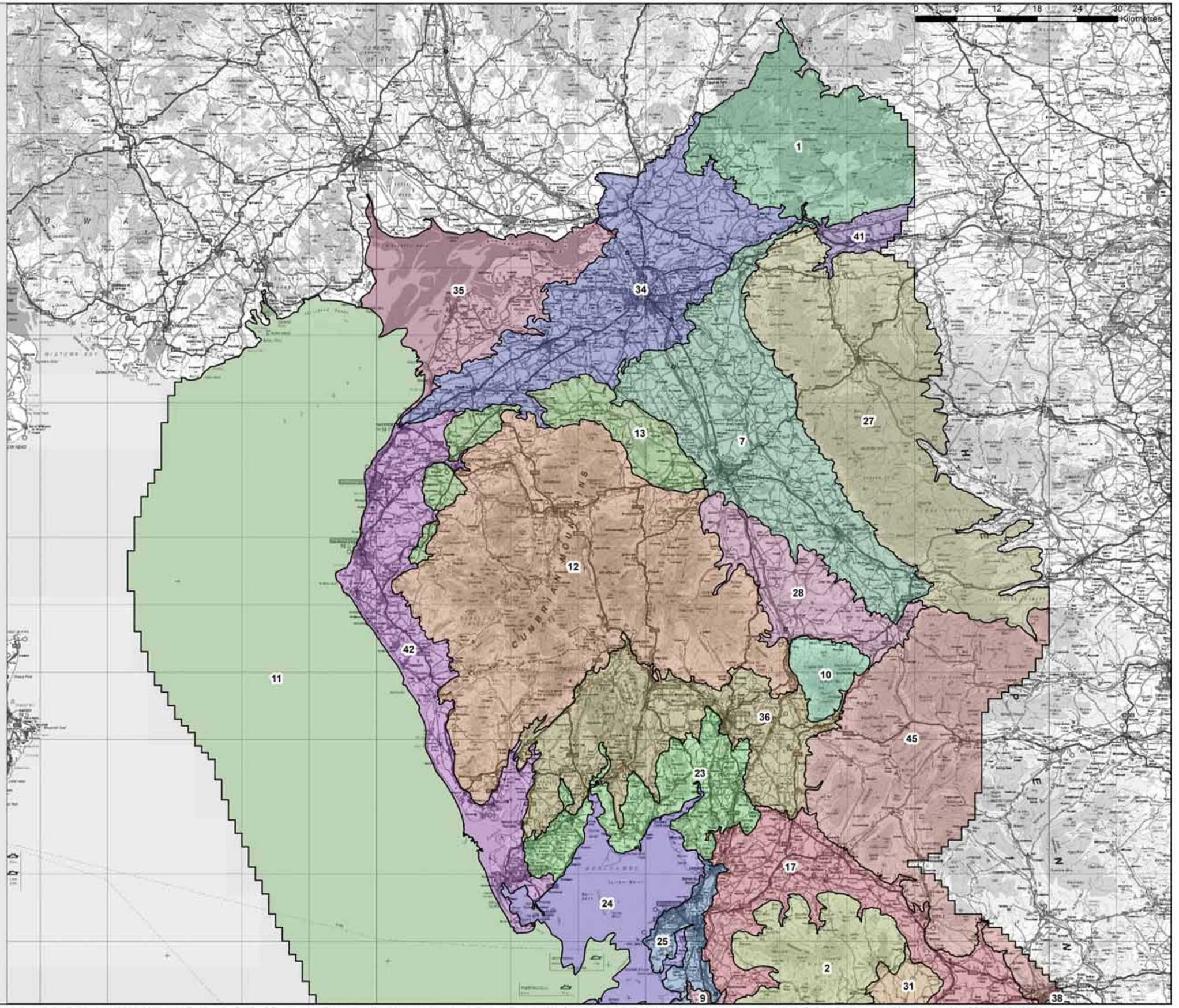
ILLUSTRATIONS

Figure 1
Regional Landscape Character Areas (RLCAs) in the northern part of the North-West



Legend

1	Border Moors and Forests
2	Bowland Fells
7	Eden Valley
10	Howgill Fells
11	Irish Sea
12	Lakeland High Fells
13	Lakeland Limestone Fringe
17	Lune / Ribble Drumlins
23	Morecambe Bay Limestones
24	Morecambe Bay and Coast
25	Morecambe Coast & Lune Estuary
27	North Pennines
28	Orton Fells
31	Ribble Valley Lowlands
34	Solway Farmlands
35	Solway Firth and Coast
36	South Cumbria Low Fells
41	Tyne Gap and Hadrian's Wall
42	West Cumbria Coastal Plain
45	Yorkshire Dales

RLCA boundaries are a result of Phase 1 of the North West Landscape Character Framework (NWLCF), provided by Natural England.

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Figure 2

Regional Landscape Character Areas (RLCAs) in the southern part of the North-West

Legend

- 2 Bowland Fells
- 3 Cheshire Sandstone Ridge
- 4 Dark Peak High Moors
- 5 Dark Peak Western Fringe
- 6 Dee Estuary and Coast
- 8 Fylde Coast
- 9 Fylde Plain
- 11 Irish Sea
- 14 Lancashire Coal Measures
- 15 Lancashire Valleys and Pendle Hill
- 16 Liverpool Conurbation
- 17 Lune / Ribble Drumlins
- 18 Maer Hills and Heaths
- 19 Manchester Conurbation
- 20 Manchester Mill Towns and Pennine Fringe
- 21 Mersey Estuary
- 22 Mersey Valley
- 24 Morecambe Bay and Coast
- 25 Morecambe Coast & Lune Estuary
- 26 North Cheshire Plain
- 29 Potteries and Churnet Valley
- 30 Ribble Estuary and Coast
- 31 Ribble Valley Lowlands
- 32 Sefton Coast
- 33 Shropshire Wooded Farmlands
- 37 South West Peak
- 38 Southern Pennines
- 39 Southern and Eastern Cheshire Plain
- 40 The Wirral
- 43 West Lancashire Plain
- 44 Western Cheshire Plain
- 45 Yorkshire Dales

Figure 3

Regionalised Historic Landscape Character types in the northern part of Cumbria and the Lake District National Park.
Note that the HLC data corresponds to the county boundaries, while the RLCA boundaries extend further than those limits. The original Greater Manchester HLC is incomplete, and some of this area is not classified to the same level as others

Legend

- RLCA Boundaries
- County Boundaries
- Built Environment (Non-Settlement)
- Communications
- Designed Landscapes
- Ancient Enclosures
- Modern Enclosures
- Post-medieval Enclosures
- Industrial (Non-Settlement)
- Pre-Modern Settlement
- Modern Settlement
- Unenclosed Land
- Water
- Woodland

Figure 4
Regionalised Historic Landscape Character types in the southern part of Cumbria, the Lake District National Park, and north Lancashire.
Note that the HLC data corresponds to the county boundaries, while the RLCA boundaries extend further than those limits.
The original Greater Manchester HLC is incomplete, and some of this area is not classified to the same level as others

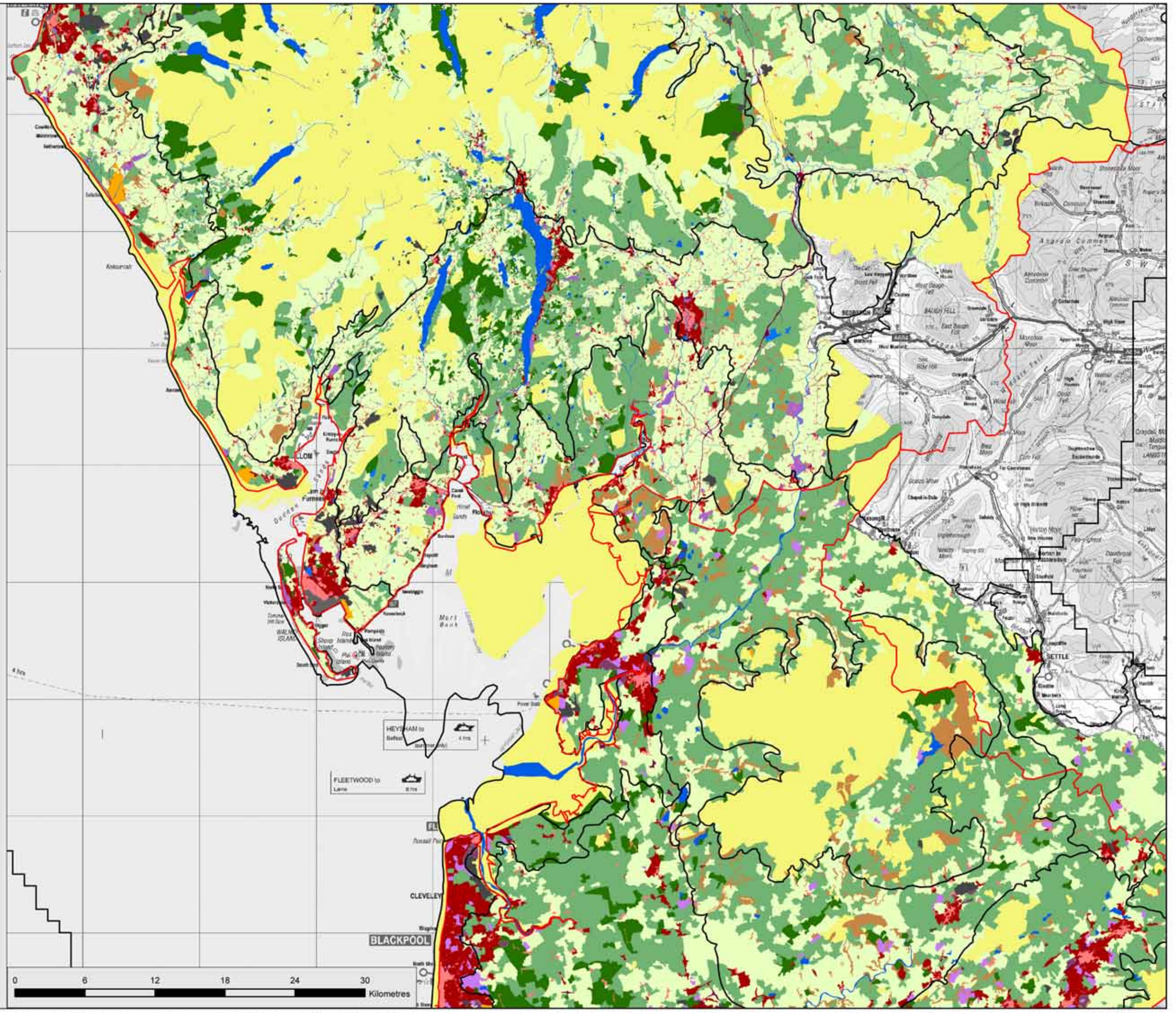
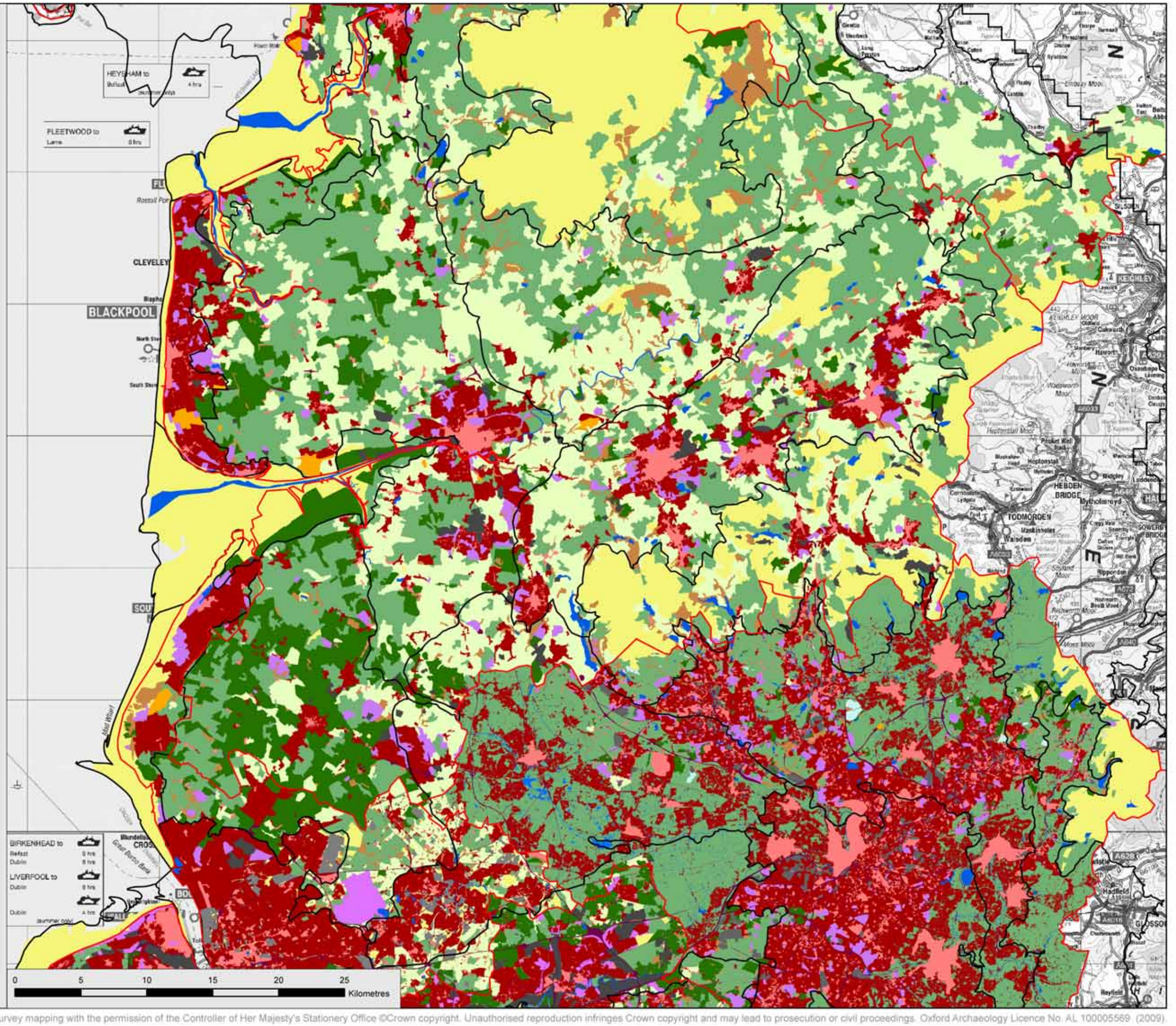


Figure 5

Regionalised Historic Landscape Character types in Lancashire, Merseyside, Greater Manchester and north Cheshire.
Note that the HLC data corresponds to the county boundaries, while the RLCA boundaries extend further than those limits.
The original Manchester HLC is incomplete, and some of this area is not classified to the same level as others.

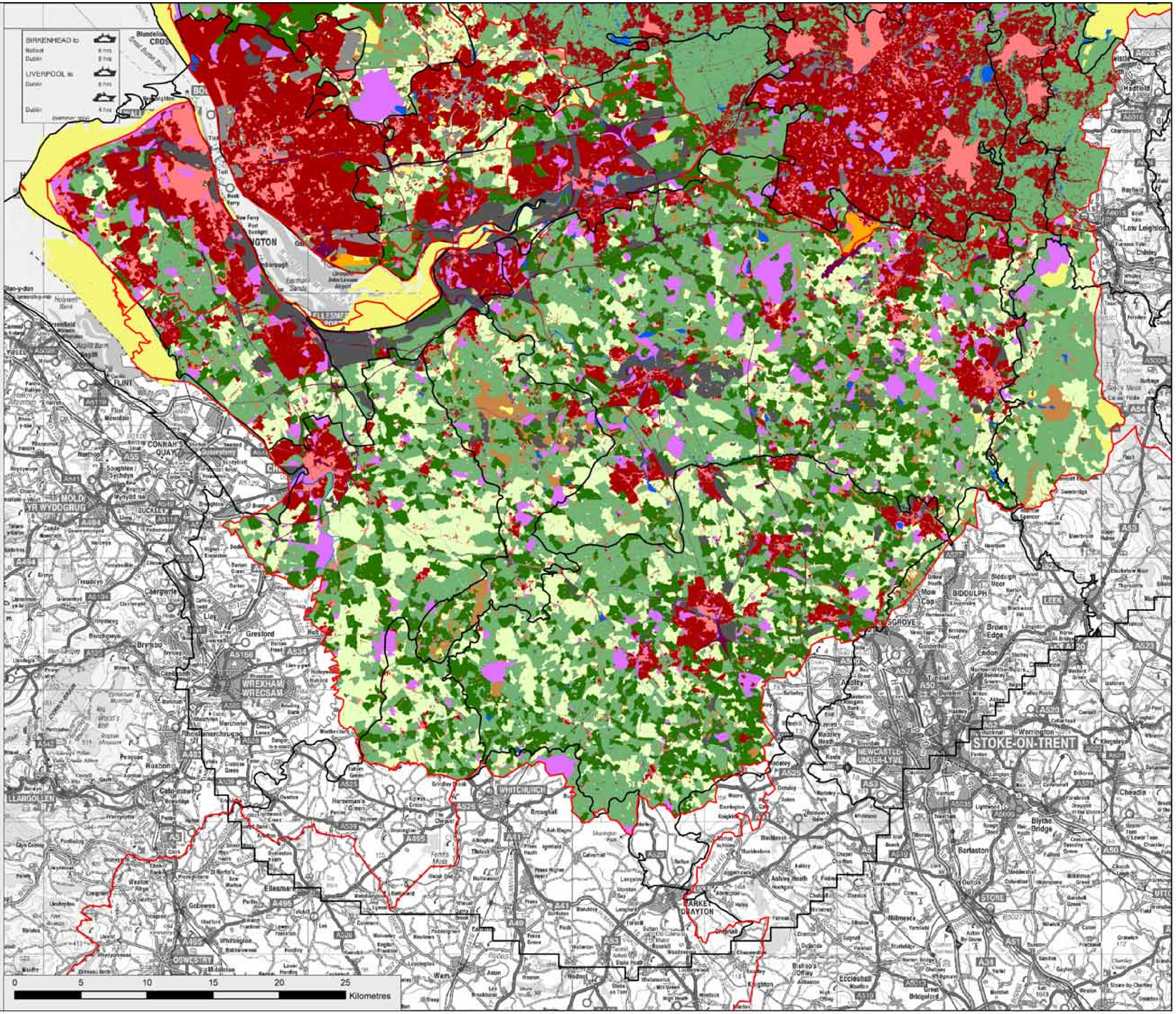


Legend

- RLCA Boundaries
- County Boundaries
- Built Environment (Non-Settlement)
- Communications
- Designed Landscapes
- Ancient Enclosures
- Modern Enclosures
- Post-medieval Enclosures
- Industrial (Non-Settlement)
- Pre-Modern Settlement
- Modern Settlement
- Unenclosed Land
- Water
- Woodland

Figure 6

Regional Historic Landscape Character broad types in Merseyside, the southern parts of Greater Manchester and Cheshire
Note that the HLC data corresponds to the county boundaries extend further than those limits.
The original Greater Manchester HLC is incomplete, and some of this area is not classified to the same level as others

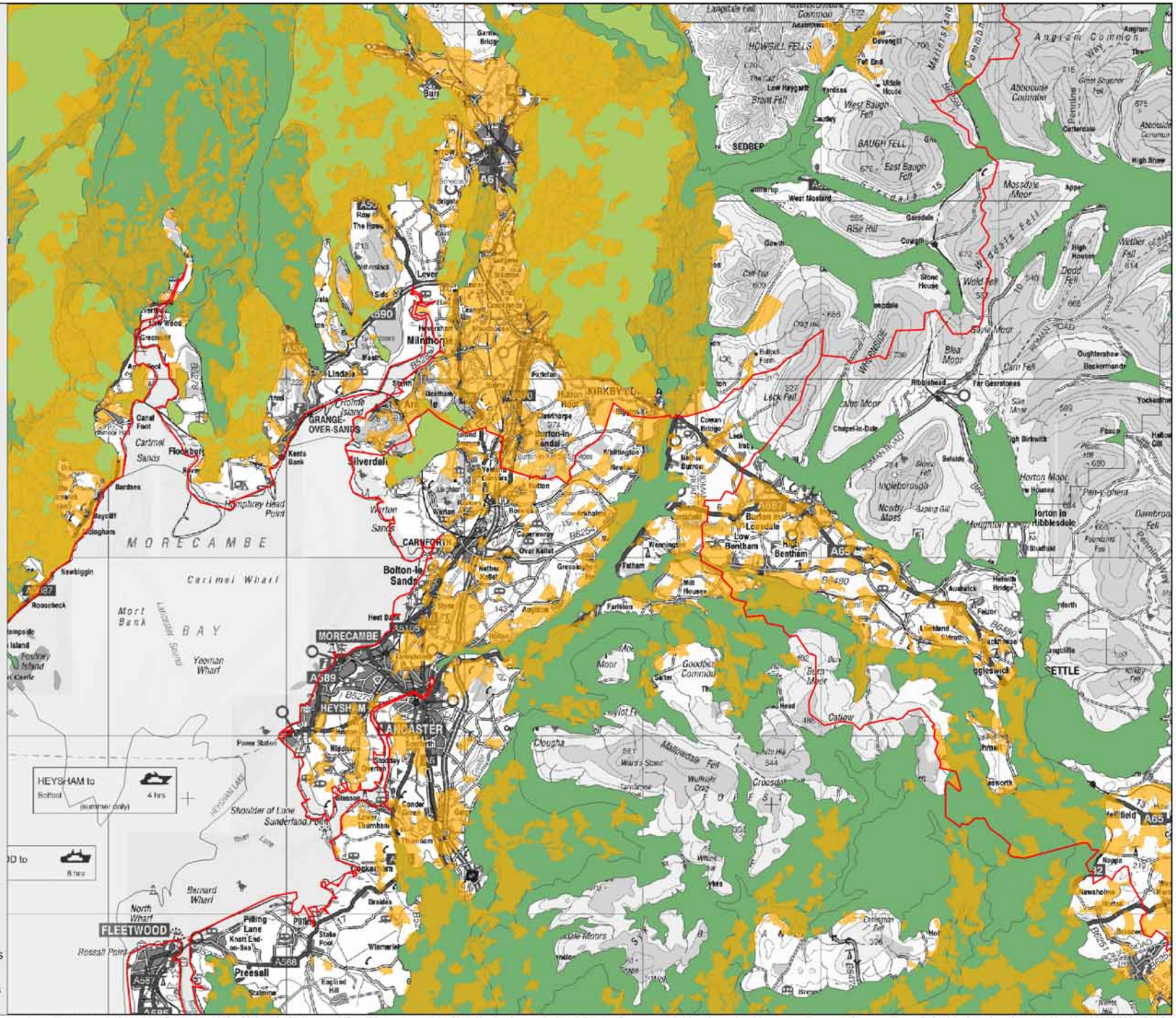


Legend

- RLCA Boundaries
- County Boundaries
- Built Environment (Non-Settlement)
- Communications
- Designed Landscapes
- Ancient Enclosures
- Modern Enclosures
- Post-medieval Enclosures
- Industrial (Non-Settlement)
- Pre-Modern Settlement
- Modern Settlement
- Unenclosed Land
- Water
- Woodland

Figure 7

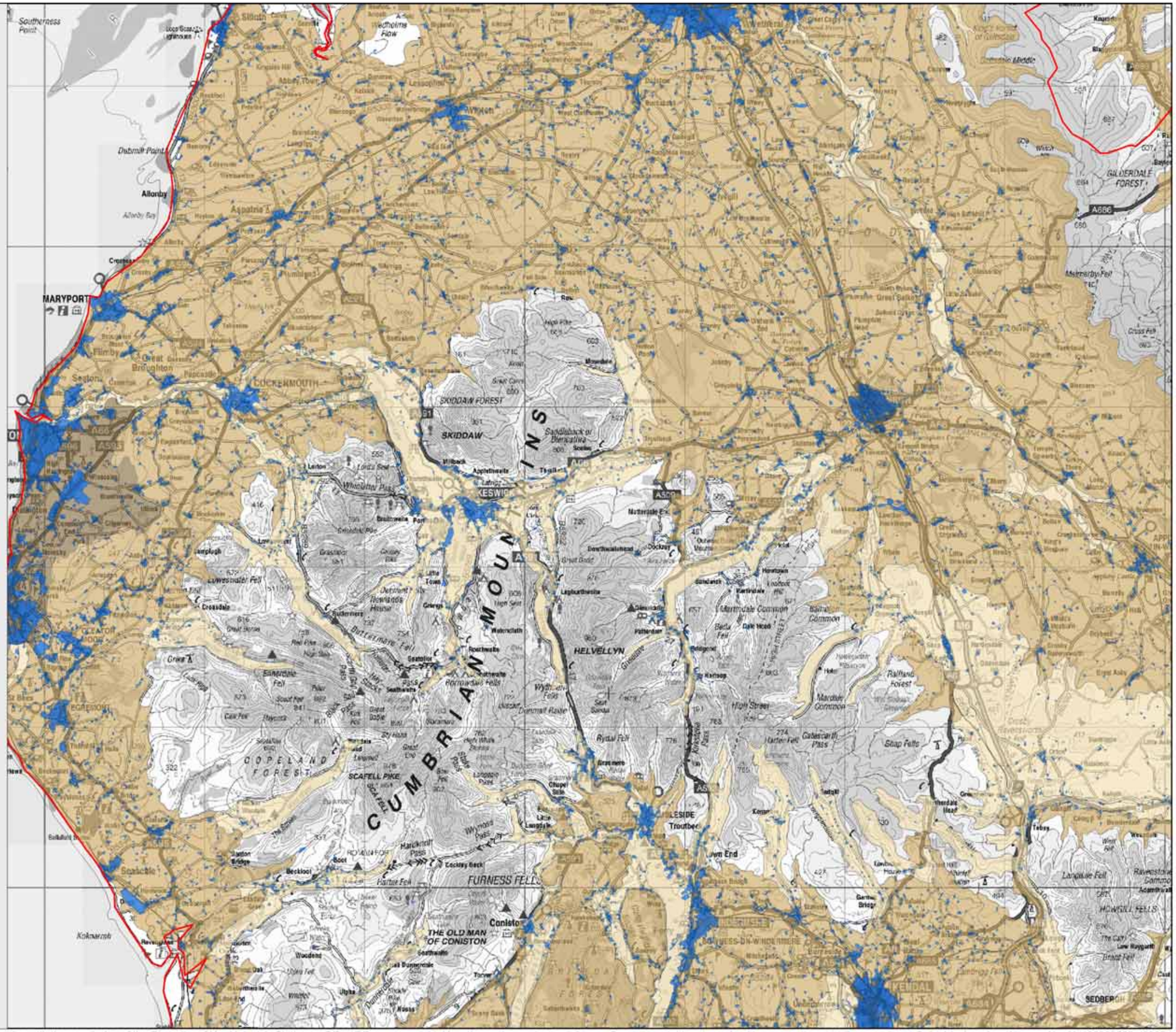
RLCT Enclosures in South Cumbria and North Lancashire, determined during Stage 1 of the NWLCF, as compared with the RHLC Ancient Enclosures



Legend

- County Boundaries
- Regionalised HLC Ancient Enclosure Areas
- RLCT Primarily Ancient Enclosures
- RLCT Includes Ancient Enclosures

Figure 8
RLCT Settlement in the Lake District, determined during Stage 1 of the NWLCF, as compared with the RHLC Settlement

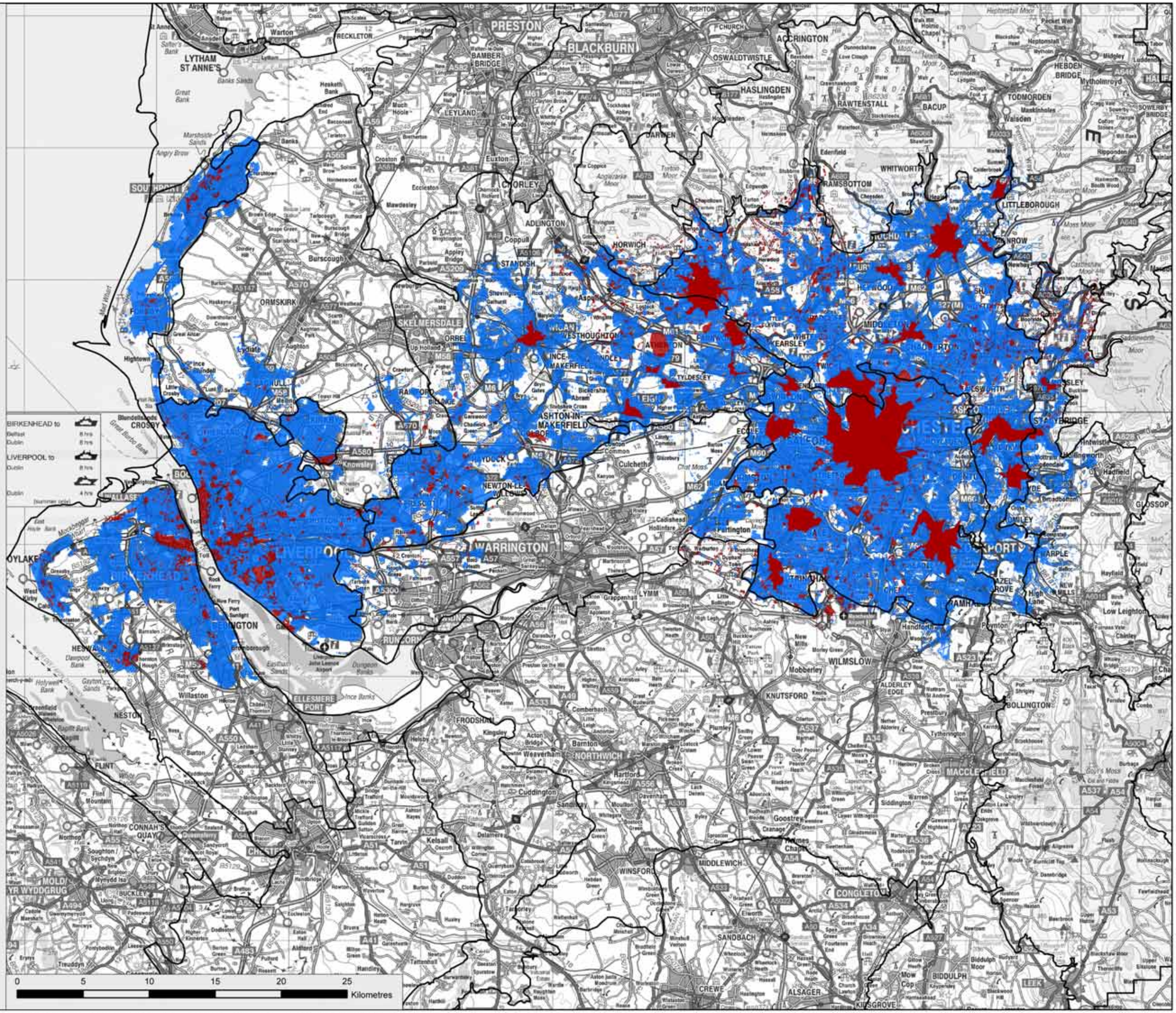


Legend

- County Boundaries
- Regionalised HLC Settlement Areas
- RLCT Isolated Settlement
- RLCT Dispersed Settlement
- RLCT Nucleated Settlement

Figure 9

Settlement areas within Greater Manchester and Merseyside, overlain by their historic cores. Please note that the original Greater Manchester HLC is incomplete, and some of this area is not classified to the same level as others.



APPENDIX 1: COMPARISON MATRIX OF RHLC TYPES

The comparison matrix of the Regionalised HLC types and sub-types with the types, sub-types and additional categorisation found in the original, county-scale HLCs.

Please note that while this comparison matrix has been split into three tables for the sake of presentation, but the overall matrix is meant to be a single, coherent, table.

BROAD TYPES	SUB-TYPES	DEFINITION	Cumbria (Type; Sub-type)	Lake District (Type; Sub-type)
Communication (C)	***no sub-type* (C)**	All roads, railway, paths and canals	Roads; Road Roads; Track Roads; Path Railways Canals	Roads; *no sub-type*
Industrial (non-settlement) (I)	**Active (I_A)**	All mines, quarries, industrial installations not found in settlements. Includes peat extraction	Extraction; Peat cutting	Extractive (active); *no sub-type*
	Inactive (I_I)			Extractive (disused); *no sub-type*
	Other (I_O)		Extraction; Mine Extraction; Open-cast Extraction; Quarry	
Military (M)	***no sub-type* (M)**	All military installations	Built environment; Military	Military (disused); *no sub-type* Military (active); *no sub-type*
Designed Landscapes (DL)	**Recreation (DL_R)**	All sports / holiday-type recreation areas	Recreation; Caravan Recreation; Golf course Recreation; Playing field Recreation; Race course Recreation; Sports ground Recreation; Caravan Recreation; Attraction Recreation; Zoo	Recreational (active); *no sub-type*
	Other (DL_O)	All parks, including urban areas	Recreation; Allotment Recreation; Nature reserve Designed landscapes; Ornamental park Designed landscapes; Urban park Deer park; *mixture of periods / types* Ancient enclosures; Deer park	Parkland/formal gardens; Lowland improved Parkland/formal gardens; Woodland
Water (W)	**Natural (W_N)**	All natural water features	Water region; Lake / tarn Water region; River	Natural water
	Artificial (W_A)	All made water features, including docks	Water region; Reservoir Water region; Waterworks	Reservoirs and water treatment
Unenclosed Land (UL)	**Coastal (UL_C)**	All coastal rough, unimproved or unenclosed land	Unenclosed coast; Cliff / crag Unenclosed coast; Mudflats Unenclosed coast; Saltmarsh Unenclosed coast; Sand / shingle Unenclosed coast; Scrub	
	Moorland (UL_M)	All upland rough, unimproved or unenclosed land	Unenclosed land; Moorland Unenclosed land; Fell	Unenclosed; Moorland Unenclosed; Fell
	Other (UL_O)	All remaining unenclosed lowland	Ancient enclosures; Cow pasture Unenclosed land; Green Unenclosed land; Limestone pavement Unenclosed land; Moss / mire Unenclosed land; Scrub Ancient enclosures; Unenclosed land Unenclosed land; Woodland	
Woodland (WD)	**Other (WD_O)**	All wavy-edged woodland, likely mostly ancient	Woodland; Ancient Woodland; Scattered Ancient enclosures; Woodland	Spare; Woodland (*several types*); Ancient woodland Spare; Improved; Ancient woodland
	Plantation (WD_P)	All straight-edged / presumed modern woodland	Woodland; Plantation	Spare; Woodland (*several types*); Plantation Spare; Lowland improved; Plantation Spare; Scrub; Plantation Spare; Moorland; Plantation Spare; Fell; Plantation
Enclosed Land (E)			Ancient enclosures; Ancient closes Ancient enclosures; Demesne Ancient enclosures; Intake Ancient enclosures; Meadow Ancient enclosures; Medieval croft Ancient enclosures; Monastic Ancient enclosures; Outfield Ancient enclosures; Reclaimed land Monastic; Ancient enclosure Intakes; *no sub-type* Former common arable; *no sub-type* Planned enclosure; Parliamentary Planned enclosure; Private Planned enclosure; Unknown	Irregular enclosures with regular enclosure boundaries Irregular enclosures with wavy-edged enclosure boundaries Rectangular or sub-rectangular enclosures with wavy-edged boundaries Rectangular or sub-rectangular enclosures with ruler straight enclosure boundaries Elongated enclosures with wavy-edged enclosure boundaries Elongated enclosures with regular enclosure boundaries
Ancient (E_A)			**For Cumbria: Periods are determined using Morphology and Date fields** pre-1700	**For Lake District: Periods are determined using Morphology and Date fields** pre-1700
Post-Medieval (E_PM)			1770-1864	1770-1864
Modern (E_M)			post-1950 1864-1950	post-1950 1864-1950
Unknown (E_U)				
Deer Park (E_DP)				
Settlement (S1) (S2) (S3) **1: Pre-18th Century** **2: Pre-20th Century** **3: Modern**	**Historic Residential (S_HR)**			
	Modern Residential (S_MR)			
	Mixed Residential and Light Industry (S_MRI)			
	Other Residential (Uncertain Period/Character) (S_OR)		Settlement; Discrete Settlement; Small nucleated Settlement; Nucleated	Settlement nucleated Settlement dispersed
	Designed Landscapes (Settlement) (S_DL)		Designed landscapes; Cemetery	Urban parks and cemeteries; *no sub-type*
	Commercial (S_CM)		Built environment; Manufacturing / retail	
	Civic (S_CV)			
	Industrial (S_I)		Built environment; Dock / harbour	
Built Environment	**Infrastructure**	Not necessarily in settlement areas	Built Environment; Airfield Built Environment; Power plant Built Environment; Wind farm	Airfields (active); *no sub-type*

Table A1: Comparison matrix of RHLC types and sub-types in relation to Cumbria and the Lake District

BROAD TYPES	SUB-TYPES	DEFINITION			Lancashire (Code; Broad Type; Sub-Type)	Cheshire (Group; Type; Sub-type)
Communication (C)	***no sub-type* (C)**	All roads, railway, paths and canals			Communication; Motorway Communication; Other main road Communication; Rail Communication; Canal	Communication; Post-medieval communications; Active/Inactive Communication; C20th communications; Active/Inactive
Industrial (non-settlement) (I)	**Active (I_A)**	All mines, quarries, industrial installations not found in settlements. Includes peat extraction			Industrial; Active quarry Industrial; Active mine	Industrial; Post-medieval industry; Active Industrial; C20th industry; Active Industrial; C20th industry; Salt gas cavity storage Industrial; C20th industry; Agri-industrial
	Inactive (I_I)				Industrial; Inactive quarry Industrial; Inactive mine Industrial; Other inactive industrial	Industrial; Post-medieval industry; Inactive Industrial; C20th industry; Inactive
	Other (I_O)				Industrial; Other works	Industrial; Post-medieval industry; Agri-industrial Non-improved land; Flashes
Military (M)	***no sub-type* (M)**	All military installations			Military; Active military	Military; Other military Military; C20th military; Active/Inactive
Designed Landscapes (DL)	**Recreation (DL_R)**	All sports / holiday-type recreation areas			Recreation; Golf course Recreation; Caravan park Recreation; Playing field / sport / amenity land Recreation; Racecourse Recreation; Holiday camp Settlement; Tourism / leisure	Recreation; Post-medieval recreation Recreation; C20th recreation Recreation; Golf course; Post-medieval/C20th
	Other (DL_O)	All parks, including urban areas			Ornamental; Park created before / after 1st OS 6"	Ornamental; Deer park; Medieval/Post-medieval Ornamental; Post-medieval ornamental parkland Ornamental; C20th ornamental parkland
Water (W)	**Natural (W_N)**	All natural water features			Water; Intertidal water Water; Natural lake / large pond	Water bodies; Natural
	Artificial (W_A)	All made water features, including docks			Water; Reservoir Water; Mill pool Water; Flooded quarry Water; Man-made lake / large pond	Water bodies; C20th Water bodies; Other artificial
Unenclosed Land (UL)	**Coastal (UL_C)**	All coastal rough, unimproved or unenclosed land			Rough land coastal; Dunes Rough land coastal; Saltmarsh Rough land coastal; Sand Rough land coastal; Mudflats / Shingle Rough land coastal; Other	Non-improved land; Unimproved land coastal
	Moorland (UL_M)	All upland rough, unimproved or unenclosed land			Rough land upland; Unenclosed moorland Rough land upland; Large moorland enclosures >50ha Rough land upland; Enclosed moorland <50ha Rough land upland; Reverted moorland	
	Other (UL_O)	All remaining unenclosed lowland			Rough land lowland; Moss Rough land lowland; Scrub	Non-improved land; Unimproved land
Woodland (WD)	**Other (WD_O)**	All wavy-edged woodland, likely mostly ancient			Woodland; wavy-edged woodland	Woodland; Ancient woodland Woodland; Other; Post-medieval/C20th Woodland; Former woodland Woodland; Regenerated
	Plantation (WD_P)	All straight-edged / presumed modern woodland			Woodland; straight-edged woodland	Woodland; Post-medieval plantation Woodland; C20th plantation
Enclosed Land (E)					Enclosed land; Small irregular wavy-edged enclosures <4ha Enclosed land; Medium irregular wavy-edged enclosures 4-16ha Enclosed land; Small irregular straight-sided enclosures <4ha Enclosed land; Medium irregular straight-sided enclosures 4-16ha Enclosed land; Large irregular straight-sided enclosures >16 ha Enclosed land; Small regular straight-sided enclosures <4ha Enclosed land; Medium regular straight-sided enclosures 4-16ha Enclosed land; Large regular straight-sided enclosures >16ha Enclosed land; Regular wavy-edged enclosures Enclosed land; Straight-sided long enclosures Enclosed land; Wavy-edged long enclosures Enclosed land; Pattern of narrow enclosures <100m Enclosed land; Grid of small enclosures <4ha Enclosed land; Grid of medium enclosures 4-16ha Enclosed land; Grid of large enclosures >16ha Enclosed land; Nurseries Pattern wider enclosures	
Ancient (E_A)			Date Codes		**For Lancashire: Periods are determined using Code and Date fields**	Enclosed fieldscapes; Ancient field systems; Irregular Enclosed fieldscapes; Ancient field systems; Semi-regular
			pre-1700	1 = Prehistory		
				2 = Prehistory-1600		Enclosed fieldscapes; Ancient field systems; Regular Enclosed fieldscapes; Ancient field systems; Moss rooms
Post-Medieval (E_PM)			1770-1864	3 = 1600-1844/49		Enclosed fieldscapes; Post-medieval field systems; Planned enclosure
				6 = Mid C18-Early C19		Enclosed fieldscapes; Post-medieval field systems; Planned marsh enclosure
				7 = Pre1910		Enclosed fieldscapes; Post-medieval field systems; Enclosure Enclosed fieldscapes; Late-post-medieval agricultural improvement Enclosed fieldscapes; Post-medieval enclosed parkland Enclosed fieldscapes; C19th field systems; Parliamentary enclosure Enclosed fieldscapes; C19th field systems; Planned enclosure Enclosed fieldscapes; C19th field systems; Planned marsh enclosure Enclosed fieldscapes; C19th field systems; Enclosure
Modern (E_M)			post-1950 1864-1950	4 = Post 1844/49		Enclosed fieldscapes; C20th field systems Enclosed fieldscapes; C20th agricultural improvement Enclosed fieldscapes; C20th enclosed parkland
Unknown (E_U)				5 = No Date		
Deer Park (E_DP)						
Settlement (S1) (S2) (S3)	**Historic Residential (S_HR)**					
	Modern Residential (S_MR)				Settlement; Modern residential	
1: Pre-18th Century **2: Pre-20th Century** **3: Modern**	**Mixed Residential & Light Industry (S_MRI)**				Settlement; Mills / housing	
	Other Residential (Uncertain Period/Character) (S_OR)				Settlement; Settlement	Settlement; Post-medieval settlement Settlement; C20th settlement
	Designed Landscapes (Settlement) (S_DL)				Settlement; Cemeteries	
	Commercial (S_CM)					
	Civic (S_CV)				Settlement; Predominantly hospitals Settlement; Municipal / civic centre Settlement; Educational establishments	
	Industrial (S_I)				Industrial; Docks Industrial; Textile mills Industrial; Active industrial estates	
Built Environment	**Infrastructure**	Not necessarily in settlement areas			Communication; Airport / field Communication; Telecommunication station Industrial; Power-generating sites	

Table A2: Comparison matrix of RHLC types and sub-types in relation to Lancashire and Cheshire

BROAD TYPES	SUB-TYPES	DEFINITION	Merseyside	Greater Manchester / Urban Areas
Communication (C)	***no sub-type* (C)**	All roads, railway, paths and canals	Communication; Railway Communication; Historic route Communication; Road Canal?	Communication; Motorway; Motorway services; Motorway and Communication; Ring road / bypass Railway line Communication; Canal; Canal lock
Industrial (non-settlement) (I)	**Active (I_A)**	All mines, quarries, industrial installations not found in settlements. Includes peat extraction		Extraction; Quarry Extraction; Reclaimed coal mine Extraction; Colliery
	Inactive (I_I)			Extraction; Landfill Extraction; Water-powered site Extraction; Other mineral extraction / processing Extraction; Clay pits/brickworks
	Other (I_O)			Extraction; Open-cast coal mine Extraction; Shallow coal workings
Military (M)	**no sub-type (M)**	All military installations	Defence; Range Defence; Camp Defence; Barracks Defence; Other	Military; Barracks Military; Airbase Military; Ammunititon store Military; Military training ground Military; Prisoner of war camp
Designed Landscapes (DL)	**Recreation (DL_R)**	All sports / holiday-type recreation areas	Recreation and ornamental; Sports ground Recreation and ornamental; Other	Ornamental; Caravan / campsite Ornamental; Racecourse Ornamental; Playing fields / recreation ground Ornamental; Golf course Ornamental; Sports ground Ornamental; Leisure / sports centre Ornamental; Zoo Ornamental; Zoo
	Other (DL_O)	All parks, including urban areas	Recreation and ornamental; Deer park Recreation and ornamental; Nature reserve Recreation and ornamental; Designed parkland	Ornamental; Country park Ornamental; Deer park Ornamental; Private parkland
Water (W)	**Natural (W_N)**	All natural water features	Water bodies; Natural water body	Water bodies; Lake
	Artificial (W_A)	All made water features, including docks	Water bodies; Artificial water body	Water bodies; Artificial channel / leat Water bodies; Artificial lake Water bodies; Fishery Water bodies; Reservoir
Unenclosed Land (UL)	**Coastal (UL_C)**	All coastal rough, unimproved or unenclosed land	Coastal; Dunes Coastal; Sand and mud flats Coastal; Salt marsh	
	Moorland (UL_M)	All upland rough, unimproved or unenclosed land	Rough land; Upland	Unenclosed land; Moorland Extraction; Peat extraction
	Other (UL_O)	All remaining unenclosed lowland	Rough land; Other land Rough land; Lowland Rough land; Moss (wetlands) Rough land; Scrub Other land; Other land Other land; Reclaimed land	Unenclosed land; Commons and greens
Woodland (WD)	**Other (WD_O)**	All wavy-edged woodland, likely mostly ancient	Woodland; Ancient woodland Woodland; Curved edged Woodland; Woodland	*Several, depends on date field*
	Plantation (WD_P)	All straight-edged / presumed modern woodland	Woodland; Forestry and plantation Woodland; Managed woodland Woodland; Plantation	
Enclosed Land (E)			Field system; Regular / small Field system; Semi-regular / small Field system; Irregular / small Field system; Regular / medium Field system; Semi-regular / medium Field system; Irregular / medium Field system; Regular / large Field system; Semi-regular / large Field system; Irregular / large	Enclosed land; Agglomerated fields Enclosed land; Assarts Enclosed land; Surveyed enclosure (parliamentary or private) Enclosed land; Drained wetland Enclosed land; Intake Enclosed land; Open fields Enclosed land; Paddocks and closes Enclosed land; Piecemeal enclosure Enclosed land; Valley floor meadows Enclosed land; Strip fields
Ancient (E_A)			pre-1700	
Post-Medieval (E_PM)			1770-1864	
Modern (E_M)			post-1950 1864-1950	
Unknown (E_U)				
Deer Park (E_DP)				
Settlement (S1) (S2) (S3)	**Historic Residential (S_HR)**			Residential; Historic settlement core Residential; Weaver's-cottages Residential; Back-to-back courtyard houses Residential; Villas / detached housing
	Modern Residential (S_MR)		Residential; Modern housing development Residential; High-rise development	Residential; Conversions Residential; Elite residence Residential; Empty housing plots Residential; Estate houses
1: Pre-18th Century **2: Pre-20th Century** **3: Modern**	**Mixed Residential & Light Industry (S_MRI)**			Residential; Farm complex Residential; Fold Residential; Vernacular cottages Residential; High-rise flats Residential; Low-rise flats Residential; Planned estate (industrial)
	Other Residential (Uncertain Period/Character) (S_OR)		Residential; Farmhouse Residential; Villa housing Residential; Council housing Residential; Semi-detached housing Residential; Detached housing Residential; Model village Residential; Terraced Residential; Private estate	Residential; Social housing development Residential; Town houses Residential; Private housing estate Residential; Romany or other traveller site Residential; Semi-detatched housing Residential; Terraced housing
	Designed Landscapes (Settlement) (S_DL)		Industrial; Nursery Civil; Cemetery	Horticulture; Allotments Horticulture; Nursery

BROAD TYPES	SUB-TYPES	DEFINITION	Merseyside	Greater Manchester / Urban Areas
Communication (C)	***no sub-type*** **(C)**	All roads, railway, paths and canals	Communication; Railway Communication; Historic route Recreation and ornamental; Allotment gardens Recreation and ornamental; Public park	Communication; Motorway; Motorway services; Motorway and Communication; Ring road / bypass Institutional; Cemetery Ornamental; Public square / green Ornamental; Public park Ornamental; Urban green space Ornamental; Walled garden
	Commercial (S_CM)		Commercial; Commercial core (office) Commercial; Commercial core (retail) Commercial; Retail park Commercial; Business park Commercial; Commercial core Commercial; Offices	Commercial; Business (general) Commercial; Business park Commercial; Commercial core suburban Commercial; Commercial core urban Commercial; Distribution centre Commercial; Entertainment complex Commercial; Entertainment site Commercial; Garden centre Commercial; Hotel complex Commercial; Markets Commercial; Offices Commercial; Public house Commercial; Retail (general) Commercial; Retail park Commercial; Shopping centre Commercial; Storage Commercial; Superstore Commercial; Timber yard/ builders yard Commercial; Warehousing
	Civic (S_CV)		Industrial; Municipal depot Civil; Place of worship Civil; Prison Civil; Police station Civil; Hospital Civil; School Civil; College/university area Civil; Crematorium Civil; Cultural Civil; Institution	Institutional; Ambulance station; Medical complex Institutional; Asylum Institutional; Civic and municipal buildings; Fire station; Municipal depot Fortified site; Prison Institutional; Museum / gallery Institutional; Nursing home / almshouse / hostel Institutional; Public baths Institutional; Religious (other); Religious (worship) Institutional; School; University / college Institutional; Workhouse / orphanage Communication; Train depot / sidings; Train station Communication; Transport interchange Communication; Viaduct / aqueduct Communication; Bus / coach station; Bus depot Communication; Car park Communication; Freight terminal Communication; Goods station Communication; Tram depot Communication; Tunnel portal Institutional; Police station Institutional; Municipal depot
	Industrial (S_I)		Industrial; Disused industry Industrial; Warehousing Industrial; Maritime commercial area Industrial; Dock and port-related industry Industrial; Manufacturing industry Industrial; Extraction industry Industrial; Chemical Industry Industrial; Municipal works Industrial; Glass industry Industrial; Iron industry / foundries Industrial; Industrial	Industrial; Brewery Industrial; Brickworks Industrial; Chemical Industrial; Corn mill; Paper mill; Saw mill Industrial; Craft industry Industrial; Food manufactory Industrial; Glassworks Industrial; Hatting Industrial; Industrial estate Industrial; Industrial works (general) Industrial; Limeworks / cement works Industrial; Metal trades (heavy); Metal trades (light) Industrial; Other industry Industrial; Tanneries / abattoirs Industrial; Potteries / ceramics Industrial; Textile finishing; Textile mill; Textile trade Industrial; Utilities Industrial; Vehicle factory / locomotive works Industrial; Waste ground Industrial; Water-powered site Communication; Docks / wharfs / basins
Built Environment	**Infrastructure**	Not necessarily in settlement areas	Communication; Airfield	Communication; Airport

Table A3: Comparison matrix of RHLC types and sub-types in relation to Merseyside and Greater Manchester

APPENDIX 2

INTRODUCTION AND CUMBRIA RLCAS

A2.1 INTRODUCTION

A2.1.1 *Definition of RLCA boundaries*

These descriptions of the Regional Landscape Character Areas (RLCA) provide a brief overview of the heritage character of each, and an outline as to how the heritage correlates with the physical character that primarily defines the RLCA boundary. As the RLCAs are defined primarily by the physical characteristics of the land, there is little or no coincidence between their boundaries and political boundaries.

The source material for the present heritage characterisation is, on the other hand, primarily defined by political boundaries, as the responsibility for the creation of each HLC rests with the county or metropolitan county. Where the majority of an RLCA includes land outside the counties of the North West (Cumbria, Lancashire, Greater Manchester, Merseyside, and Cheshire), then it has been agreed with Natural England that their descriptions were not to be enhanced. In Cumbria, the RLCAs known as *Irish Sea*, *Tyne Gap and Hadrian's Wall* and *Yorkshire Dales* have not had their descriptions enhanced, as they are predominantly outside the county. Around the east, south of Greater Manchester and Cheshire, were the *Dark Peak High Moors, Dark Peak Western Fringe, South West Peak, , Potteries and Churnet Valley, Maer Hills and Heaths*, and *Shropshire Wooded Farmlands* RLCAs, which were also predominantly outside the North West and therefore have not been enhanced.

The Cumbria RLCAs relate to Figures 1, 3 and 4. The Lancashire RLCAs relate to Figures 1, 2 and 4. The Merseyside and Greater Manchester RLCAs relate to Figures 2, 5 and 6, and the Cheshire RLCAs relate to Figures 2 and 6. These figures should be viewed alongside the relevant text.

A2.2 BORDER MOORS AND FORESTS (RLCA 1)

A2.2.1 *General Historic Character and Physical Character Description*

Settlement activity in this RLCA (Fig 1) has, in part, been determined by its physical characteristics, but has, within the recent historic period, also been determined by political factors. The area is characterised by rolling exposed and relatively isolated hills, which have restricted intensive agriculture and settlement. The topography is characterised by a north-east / south-west line of relatively high hills, the Cheviots, which were adopted legally as the border between England and Scotland in 1237 (Aird 1997). Subsequently, the area was affected by cross-border conflict, which further discouraged any expansion of settlement. As the area was relatively uninhabited, it was subject in the twentieth-century to widespread forestry plantation, and large areas were taken up as military training grounds centred on Otterburn (in Northumberland) and Spadeadam.

A2.2.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Woodland (Plantation)	WD_P	116.0	44.9	5	8
Enclosures (Post-Medieval)	E_PM	69.8	26.9	4	11
Enclosures (Ancient)	E_A	37.5	14.5	4	11
Unenclosed Land (Moorland)	UL_M	22.9	8.7	-	-
Enclosures (Deer Park)	ED_P	4.7	1.8	-	-
Military	M	3.4	1.3	-	-
Settlement (Other Residential)	S_OR	1.3	0.5	-	-
Water (Natural)	W_N	1	0.4	-	-
Woodland (Other)	WD_O	1	0.4	-	-
Communications	C	1	0.4	-	-
Totals		**258.6**	**99.8**	**12**	**31**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.2.3 *Overall Character of RHLC distribution*

The area is characterised by intensive forestry plantation (Fig 3), which makes up the largest proportion of any RLCA in the North West. The RLCA also has relatively limited amounts of unenclosed moorland. A significant proportion of the area is used as a RAF Range at Spadeadam (*c*36 sq km), but this is not reflected in the statistics, as the military type only includes the camps, and not the wider training ground. The

area of the range is instead distributed between the woodland plantation and unenclosed moorland character types. There is an unusually large amount of ancient enclosure, which reflects the fact that the area has not been subject to substantial changes in settlement, allowing the survival of historic land use.

A2.2.4 ***Settlement and Enclosure Character***

The upland area is characterised by large areas of intensive forestry plantation, which has obscured or destroyed archaeological remains. However, remote from these plantations, there is relatively good survival of archaeological features. Early activity is represented by occasional Neolithic long cairns, and there are also cairnfields, field systems and funerary cairns from the Bronze Age (Countryside Commission 1998). Settlement activity seems to have increased markedly during the Roman Period, when native Romano-British farmsteads are recorded, which may have supplied grain for the Roman army. Bewcastle (Austen 1991) is a site of some importance, with a Roman fort, and there was apparently reuse in the early medieval period when there was probably a monastery, of which the Bewcastle cross is a survivor, possibly the finest example of Northumbrian (Anglo-Saxon) craftsmanship in the country (Bailey and Cramp 1988). This site became an important element in the defence of the English border, and a castle had been built there by the late fourteenth century (Perriam and Robinson 1998).

In the medieval period, the uplands were used for summer grazing, and an abundance of shielings remain, some of which developed into permanent settlements (Ramm *et al* 1970). Border conflict predominated during the fourteenth to seventeenth centuries, and the latter part of this period was characterised by the raids of Border Reivers. A response to this was to construct fortified farmhouses across the area, called bastles, which were small, well-defended houses with the domestic accommodation on the first floor and the animals kept securely on the ground floor. Now settlements are very sparse across the area and communications are limited (*ibid*).

A2.2.5 ***Non-Agricultural Activity Character***

There has been some small-scale coal extraction across the area, in part to fuel small limekilns, but otherwise the most intensive activity relates to the forestry plantations of Spadeadam and Kershope Forests. There is also a major RAF range at Spadeadam, which has had limited impact on the heritage resource.

A2.2.6 ***Change Scenarios***

The change scenarios most likely to have an impact on this RLCA are those relating to Woodland and Enclosed Land. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Timber Production (-3, 2), Regeneration/Woodland Management (-2, 1), Commercial Planting (-2, 1), Mixed Woodland (-1, 1), Agricultural Intensification (-3), Change in use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 31 Negative, 12 Positive.

Although only covering a small part of this RLCA, the RAF range at Spadeadam has a large impact on the landscape, in particular with the construction of new roads and tracks, and the effect of low-flying aircraft. There has also been a lack of moorland management, in terms of over-grazing and drainage of the mosses. Farm expansion in the 1960s and 1970s, involving drainage and reseeding grassland, have contributed to moorland damage. Management of the commercially planted forest has led to areas of felling, along with access roads and moss management, all of which have a largely negative impact on the landscape.

A2.2.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Woodland character type:

- The use of locally derived tree species and traditional planting schemes should be encouraged in the design of new plantations, to complement and enhance existing historic landscape features.

- Traditional woodland locations (*eg* on steep slopes, or hill tops) should be established and these with new plantings should be reinforeced through agreed planting subsidy strategies.

- Appropriate advice for parkland woods containing non-native and exotic species that require active management should be sought, to maintain and sustain their historic character.

- A programme of vegetation management should be undertaken to avoid soil erosion from wind or water that may damage buried archaeological features.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.3 SOLWAY FIRTH AND COAST (RLCA 35)

A2.3.1 *General Historic Character and Physical Character Description*

This RLCA (Fig 1) has a coastal fringe physical character and includes areas of salt marsh, wetlands and reclaimed wetlands. The landscape away from the wetland areas comprises mainly dispersed settlement, predominantly of post-medieval date, and the northern area is predominantly reclaimed land. This RLCA forms part of the Solway Coast AONB. The heritage remains are often located on the islands of better-drained land, such as the Abbeytown ridge, or along the shore. The Roman Hadrianic frontier extended along the coast and there are two forts on it within the RLCA, as well as a further two Roman forts at Kirkbride and Beckfoot, as parts of the wider defensive system.

A2.3.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Coastal)	UL_C	94.3	34.8	1	4
Enclosures (Post-Medieval)	E_PM	82.8	30.6	4	11
Enclosures (Ancient)	E_A	69.2	25.5	4	11
Built Environment	BE	6.4	2.4	-	-
Industrial Non-Settlement (Other)	I_O	4.8	1.8	-	-
Settlement Other (Residential)	S_OR	3.8	1.4	-	-
Enclosures (Modern)	E_M	3.1	1.2	-	-
Communications	C	2.8	1.0	-	-
Enclosures (Deer Park)	E_DP	1.5	0.5	-	-
Unenclosed Land (Moorland)	UL_M	0.5	0.2	-	-
Water (Natural)	W_N	0.6	0.2	-	-
Designed Landscape (Recreation)	DL_R	0.4	0.1	-	-
Settlement (Civic)	S_CV	0.2	0.1	-	-
Settlement (Commercial)	S_CM	0.2	0.1	-	-
Settlement (Industrial)	S_I	0.1	0.1	-	-
Totals		**270.7**	**100**	**9**	**26**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.3.3 *Overall Character of RHLC distribution*

Collectively, the dominant historic landscape character type in the Solway Firth and Coast RLCA is Enclosed Land (Fig 3), where most was enclosed before the twentieth

century (31%) or prior to 1700 (26%). The distribution of the ancient enclosures clearly delineate areas of higher ground and naturally well-drained soils, while many of the post-medieval enclosures, especially those in the north-eastern part of the RLCA, were only facilitated by drainage schemes reclaiming former salt marshes. A significant proportion of the landscape, naturally, remains unenclosed coastal land, dominated by intertidal flats and salt marshes. A relatively large expanse of the industrial character type within Wedholme Flow represents an historical area of peat extraction.

A2.3.4 ***Settlement and Enclosure Character***

In the wetland areas, early settlement has inevitably been concentrated on the better drained land. There are indications of some limited occupation since the Neolithic period, as demonstrated by excavations at Plasketlands, on the south-west end of the Abbeytown sand ridge (Bewley 1993), and up to 100 Neolithic axes have been discovered within this RLCA. Iron Age enclosed settlements have been identified by aerial photography at Wolsty Hall (near Beckfoot, NY 10512) and at Finglands (near Kirkbride, NY 251 573), which indicate early activity on the better agricultural land (Bewley 1994).

The line of Hadrian's Wall extended along the Solway coast, and two Roman forts on it, at Drumburgh and Bowness on Solway, are within the RLCA, where Hadrian's Wall terminates. However, a line of forts extended down the West Cumbrian coast, including one at Beckfoot. There was also an early fort at Kirkbride, perhaps part of a pre-Hadrianic frontier system (Shotter 2004).

In the medieval period, there was again a concentration of activity on the better-drained land, with the largest settlements at Abbeytown and Kirkbride. The former gains its name from Holme Cultram Abbey, which was founded in 1150, with Cistercian Monks from Melrose Abbey in the Scottish Borders (Knowles and Hadcock 1971).

A notable monument in the region is the King Edward I monument, near Burgh by Sands, which marks the place where, traditionally, Edward died in 1307 whilst marshalling his forces to subjugate Scotland (LUAU 2000).

The settlement pattern to the south, on drier lands, includes a mixture of nucleated and dispersed settlements, while the northern, wetter coastal lands have predominantly later dispersed settlement, particularly around the areas of reclaimed wetlands. The predominant landscape character is agricultural land, of which a significant proportion was enclosed in the post-medieval period.

A2.3.5 ***Non-Agricultural Activity Character***

The predominant industrial activity within the RLCA is sand extraction on the Abbeytown Ridge, and peat extraction in the southern part of the Wedholme Flow, and near Whitrigg.

A2.3.6 ***Change Scenarios***

The following historic character types dominate this area: Unenclosed Land (Coastal) and Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Climate Change (-3, 1), Development (-1), Regional Spatial Strategy (-1, 1), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), and Tourism (-1, 1). Woodland expansion is not considered a significant risk in this area, due to its location and the lack of existing plantations or woods.

Overall Impact: 26 Negative, 9 Positive.

Perhaps the biggest forces for change in this area are coastal erosion and sea-level change. The *Shoreline Management Plan* for the area (Halcrow 2009b) advocates a policy of 'managed realignment', given the overall lack of economic justification for maintaining flood defences. This is despite the risk to part of the Frontiers of the Roman Empire: Hadrian's Wall World Heritage Site, the Scheduled Monuments in the RLCA, including that of Bowness Roman Fort, the SSSIs and that it is within the Solway Coast AONB. An increase in tourism has led to additional pressures on the foreshore, particularly damage to the dunes from four-wheel drive vehicles. Unsympathetic development of derelict former airfields has led to discordant elements in the landscape, and new road developments threaten the remote character of the area.

Aggregate extraction is an increasing threat. The best source of aggregate in the area is the Abbeytown Ridge. Material has been extracted for some time and there is the potential for considerable expansion of this industry. Early settlement has been concentrated on this ridge because it is an area of dry land, surrounded by wetlands, and any further sand extraction has the potential to impact on a significant archaeological resource.

A2.3.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Damage to the Frontiers of the Roman Empire: Hadrian's Wall World Heritage Site and the Roman forts at Bowness and Drumburgh should be mitigated against during managed retreat of the coastline and the ensuing encroachment of salt marshes.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.

- The evidence for relict occupation and land use should be conserved and enhanced.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be encouraged, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practises. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.4 SOLWAY FARMLANDS (RLCA 34)

A2.4.1 *General Historic Character and Physical Character Description*

The area is characterised by generally low-lying, good-quality agricultural land that has been extensively exploited since the prehistoric period. The character of settlement has largely been determined by political boundaries, which are related to the topography. Carlisle developed because of its position on the Eden as an anchorage and its position in relation to the Roman Hadrianic and later frontier across the narrowest point between the east and west coasts. The settlement was also key to the border between England and Scotland boundary that forms the northern edge of the RLCA (Fig 1). The RLCA forms part of the Solway Coast Area of Outstanding Natural Beauty (AONB).

The settlement character comprises nucleated villages that have exploited the good-quality agricultural land, and there is an abundance of ancient enclosure, reflecting the historic character of the landscape.

A2.4.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	373.2	42.5	4	11
Enclosures (Post-Medieval)	E_PM	322.8	36.7	4	11
Settlement (Other Residential)	S_OR	41.5	4.7	-	-
Woodland (Plantation)	WD_P	23.3	2.7	-	-
Communications	C	21.0	2.4	-	-
Designed Landscape (Ornamental)	DL_O	21.1	2.4	-	-
Woodland (Other)	WD_O	12.8	1.5	-	-
Unenclosed Land (Moorland)	UL_M	12.5	1.4	-	-
Enclosures (Modern)	E_M	11.7	1.3	-	-
Water (Natural)	W_N	8.3	0.9	-	-
Industrial Non-Settlement (Other)	I_O	7.1	0.8	-	-
Built Environment	BE	5.1	0.6	-	-
Enclosures (Deer Park)	E_DP	5.4	0.6	-	-
Designed Landscape (Recreation)	DL_R	4.6	0.5	-	-
Settlement (Commercial)	S_CM	4.1	0.5	-	-
Settlement (Civic)	S_CV	1.8	0.2	-	-
Unenclosed Land (Coastal)	UL_C	2.1	0.2	-	-
Totals		**878.4**	**99.9**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.4.3 ***Overall Character of RHLC distribution***

The predominant historic landscape character type in the Solway Farmlands RLCA is Enclosed Land (Fig 3), with the largest proportion having been enclosed prior to 1700 (43%) or before the twentieth century (37%), illustrating both its antiquity and the generally conservative nature of land use and development in this area. Settlement represents a relatively small proportion of the total landscape, reflecting the fact that this RLCA has a primarily agrarian character historically. The largest proportion of the settled area is taken up by the city of Carlisle, with smaller, widely dispersed farms and villages throughout the remaining landscape. Some unenclosed land survives in the north-eastern part of the RLCA, in addition to scattered woodland, including some ancient or semi-natural woods in the north-west.

A2.4.4 ***Settlement and Enclosure Character***

The Solway Farmlands RLCA has some of the best-quality agricultural land in Cumbria, and as a consequence the area has been intensively farmed for a considerable period. While this has obscured early remains, there are nevertheless significant discoveries being made. These include a palimpsest of Mesolithic, Neolithic and Bronze Age remains on the edge of the Eden, which demonstrates some of the earliest human activity recorded in the area, and the longevity of the site (OA North forthcoming a). Aerial photography has revealed enclosures that have the potential to be Iron Age settlements, including one at Thursby, near Wigton, and another at Fingland, near the Solway coast, which has two superimposed phases of enclosed settlement dating to the Iron Age and Roman periods. An Iron Age hillfort on the coast at Swarthy Hill, north of Maryport, is also known (Bewley 1994).

In the Roman period, the northern frontier of Roman occupation, and the province of Britannia, was established in this area in the second century AD (Breeze 2006), and there are considerable numbers of Roman defensive sites and associated infrastructure. Hadrian's Wall, together with its associated features, extends through the RLCA.

Roman forts along the Wall in the RLCA include Birdoswald, Castlesteads, Stanwix and Burgh by Sands. Other forts in the immediate hinterland are Old Carlisle (near Wigton), and Carlisle. Carlisle was the most important Roman centre, with a fort first constructed in AD 72/3, but from the first there was an associated civilian settlement that had achieved urban status by the early third century (Edwards and Shotter 2005). There is clear evidence that Romanised life continued in both the fort and town into the fifth century, and a documentary account relates that when St Cuthbert visited Carlisle in AD 685 he was shown a working fountain (Webb 1998). In the medieval period, a royal castle was constructed and the urban area was walled, and it became a major stronghold to control the border. A bishopric was created in 1133 (McCarthy 1993).

Other important medieval monuments within the RLCA include Lanercost Priory, which had a turbulent history given its proximity to the border with Scotland

(Summerson and Harrison 2000). The settlement pattern includes a mixture of dispersed and nucleated villages and there is good survival of ancient enclosures around the principal settlements.

The landscape has an ancient agricultural character, and the area is dominated by the city of Carlisle, which in the North West is equal to Chester in terms of archaeological importance.

A2.4.5 ***Non-Agricultural Activity Character***

While there are relatively few industrial monuments within the wider RLCA, Carlisle has a history of manufacturing; from the second half of the eighteenth century, textile manufacture became increasingly important in the city. Clockmaking, brickmaking, ironworking, manufacture of tin-plate, and the production of biscuits also developed into significant industries during the nineteenth century and remained so well into the twentieth century (McCarthy 1993, 87-8). This activity prompted improved communications, and the Carlisle Navigation Canal was constructed between 1821 and 1823, to link Carlisle with the sea on the Solway Firth (Ramshaw 1997). Communications were further improved with the arrival of a railway from Newcastle in 1836, and from the south in 1846 (Awdry 1990).

A2.4.6 ***Change Scenarios***

This area is dominated by Ancient and Post-Medieval Enclosed Land. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact:24 Negative, 2 Positive.

To some extent, changing agricultural practices, woodland expansion and environmental management have already had a detrimental effect on the historic character of the landscape, mainly in terms of visual impact. Furthermore, rural settlement expansion and conversion of agricultural buildings has not always been in the local vernacular style.

A2.4.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced.

Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Development in Carlisle should endeavour to maintain its historic character.
- Development around Carlisle's urban fringe should be designed to work within the landscape and maintain its character.

Generic Objectives for the Enclosed Land character type:

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.
- The maintenance of hedgerows as boundaries of still-functioning fields should be encouraged through gapping up and use of appropriate local hedge-laying techniques. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.
- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.
- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.
- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.
- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.
- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.
- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.
- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and

furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

A2.5 EDEN VALLEY (RLCA 7)

A2.5.1 *General Historic Character and Physical Character Description*

The character of the historic landscape within this RLCA (Fig 1) largely reflects its physical characteristics. The Eden valley is a large, fertile, flat-bottomed area surrounded by very steep hills to the north-east, and more rolling hills to the south-west. It represents one of the larger areas of good-quality agricultural land in Cumbria, and has been a focus for settlement since the prehistoric period. Many of the older, long-established, towns in the county are within the Eden Valley (although not necessarily in this RLCA): Carlisle, Brough, Penrith, Appleby and Kirkby Stephen.

The topography of valley has encouraged its use as a primary line of communication, which, along with the Stainmore crossing of the Pennines, has been, and still is, a primary east/west route. There are numerous defensive sites within the valley to protect this communication route, including a line of Roman forts, largely repeated by medieval castles.

A2.5.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	370.9	41.3	4	11
Enclosures (Post-Medieval)	E_PM	358.7	40.0	4	11
Woodland (Plantation)	WD_P	39.5	4.4	-	-
Enclosures (Deer Park)	E_DP	26.4	2.9	-	-
Settlement Other (Residential)	S_OR	22.7	2.5	-	-
Communications	C	19.9	2.2	-	-
Designed Landscape (Ornamental)	DL_O	19.3	2.2	-	-
Woodland (Other)	WD_O	13.7	1.5	-	-
Unenclosed Land (Moorland)	UL_M	11.2	1.3	-	-
Water (Natural)	W_N	6.6	0.7	-	-
Designed Landscape (Recreation)	DL_R	3.4	0.4	-	-
Industrial Non-Settlement (Other)	I_O	1.9	0.2	-	-
Enclosures (Modern)	E_M	0.9	0.1	-	-
Settlement (Commercial)	S_CM	1.2	0.1	-	-
Water (Artificial)	W_A	0.8	0.1	-	-
Totals		**897.1**	**99.9**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.5.3 ***Overall Character of RHLC distribution***

The most dominant character type is Ancient Enclosure, closely followed by Post-Medieval Enclosure (Fig 3). This emphasises that agriculture remains the most dominant use of the landscape. Considerable numbers of ancient field systems remain around the mainly medieval historic nucleated settlements. There is a scattering of woodland plantations, contributing to the 4.4% coverage of woodland.

Settlement makes up only 2.5% of the area, even though there are several important towns within the RLCA. Similarly, the low percentage of Industrial (either within settlement or outwith) emphasises that there is almost no mineral extraction from within the area and very little productive industry.

The character of the RLCA, from the statistics, is of a long-standing agricultural landscape, which retains considerable historic character.

A2.5.4 ***Settlement and Enclosure Character***

There are numerous Neolithic monuments within the valley, such as Long Meg and her Daughters stone circle (Burl 2000), and King Arthur's Round Table and Mayburgh henges. These imply that the valley was an important early focus and/or communication line. While there are relatively few known Bronze Age settlements within the valley, this largely reflects that it has been subject to intensive cultivation for millennia, the earlier remains having been either destroyed or obscured by sediment build-up. There are, however, Bronze Age settlements and burial remains on the marginal lands to the south-west (Higham 1986), which seemingly reflect an expansion of settlement out from the Eden Valley. Similarly, some of the largest concentrations of native Romano-British settlements in the county are found on the raised margins above the valley floor. Within the valley floor is a line of Roman forts, at Brough, Kirkby Thore, Brougham, Old Penrith, and Carlisle, which follows the route of the Roman road from the Stainmore Gap through to Carlisle (Shotter 2004). To the North, in the Irthing Valley, elements of the Stanegate, and its associated forts, such as that at Nether Denton survive (*ibid*). Some of these important defensive points were reoccupied in the medieval period, with castles at Brough, Brougham and Carlisle (C Newman 2006).

Early medieval activity in the valley is reflected in place names and early medieval sculpture at sites such as Addingham (near Glassonby), Appleby, Carlisle, Glassonby, Kirkby Stephen and Penrith (Bailey and Cramp 1988). In the medieval period, as well as the castles on the sites of Roman forts, there were also castles at Hartley, Appleby, Penrith and Naworth, the latter in the tributary Irthing Valley (C Newman 2006). The principal towns of the valley are Kirkby Stephen, Appleby and Penrith, but there are also scattered nucleated villages, many of which seem to have been planned, probably in the twelfth / thirteenth centuries (Roberts 1993). The pattern of enclosure around these settlements retains much of its ancient character, and in some instance the medieval open fields have been fossilised within the present-day field systems.

A2.5.5 ***Non-Agricultural Activity Character***

The valley has survived largely on an agricultural economy and, more recently, has become reliant on tourism. Historically, there has been relatively little industry within the valley, apart from limestone quarrying and limekilns on the limestone margins. The notable exception is that Gypsum (hydrated calcium sulphate) has been quarried or mined at Kirkby Thore for over 200 years and is used to make plaster, historically Plaster of Paris (Tyler 2000). The area has also been used as a military training ground, centred on Warcop, and also contains some large stone quarries.

A2.5.6 ***Change Scenarios***

Over 80% of this RLCA comprises Enclosed Land (either Ancient or Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

However, within this RLCA are several important settlements, which would in theory be the focus for any future development. For example, Carlisle is highlighted as a sub-regional hub and historic city, and also a regional transport gateway within the Regional Spatial Strategy (RSS2010, Government Office for the North West 2008). RSS2010 does attempt to balance heritage needs against development and regeneration, and as such should help to ensure that the historic environment is treated sympathetically.

A2.5.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will

disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.6 NORTH PENNINES (RLCA 27)

A2.6.1 *General Historic Character and Physical Character Description*

The large North Pennines RLCA (Fig 1) is an upland, and predominantly moorland, landscape, dissected by extensive dales or valleys that extend out from the ridge of the Pennine Chain (Countryside Commission 1998, 43); it forms part of the North Pennines Area of Outstanding Natural Beauty (AONB). Within the moorland areas, the landscape is characterised by blanket bogs and occasional rocky outcrops, and a vast plateau along its western edge ends abruptly at the escarpment defining the edge of the Eden Valley. By contrast, the largely enclosed landscape within the dales is agricultural, with widely dispersed small settlements of some antiquity. The general historic character of this RLCA has clearly been shaped by topographical constraints, and is probably the most sparsely occupied area within England. There is widespread Parliamentary enclosure of the higher ground around Alston, but much of this enclosed land is still unimproved. More intensive pastoral farmed land is found along the narrow South Tyne and Nent valleys, but outside these corridors of communication and settlement, the only activity on the higher ground relates to mineral extraction.

A2.6.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	310.8	51.8	4	11
Unenclosed Land (Moorland)	UL_M	195.8	32.6	2	10
Enclosures (Ancient)	E_A	63.7	10.6	-	-
Woodland (Plantation)	WD_P	12.3	2.1	-	-
Communications	C	3.1	0.5	-	-
Water (Artificial)	W_A	3.0	0.5	-	-
Enclosures (Deer Park)	E_DP	2.3	0.4	-	-
Industrial Non-Settlement (Other)	I_O	2.1	0.4	-	-
Settlement Other (Residential)	S_OR	2.4	0.4	-	-
Woodland (Other)	WD_O	2.6	0.4	-	-
Water (Natural)	W_N	1.7	0.3	-	-
Designed Landscape (Ornamental)	DL_O	0.4	0.1	-	-
Totals		**600.2**	**100.1**	**6**	**21**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.6.3 ***Overall Character of RHLC distribution***

The dominant historic landscape character type in the North Pennines RLCA is that of Enclosed Land (Fig 3), with the largest proportion (52%) having been enclosed prior to the twentieth century, and 11% enclosed before 1700. This reflects the very large proportion of the area that was taken up as Parliamentary enclosure, but within these very large fields, the land is still unimproved moorland. The majority of the remaining landscape is surviving unenclosed moorland (33%), mostly concentrated at the southern end of the area, on the plateau. There is a small amount of plantation, mostly within a single site, Denton Plantation, in the northern part of the area. There are also pockets of rejuvenated woodland found in the lowermost valleys.

A2.6.4 ***Settlement and Industrial Character***

The moorland areas have a thick deposit of peat, and generally early peat inception dates (OA North 2009b). This would have discouraged later prehistoric activity; and there is a preponderance of Mesolithic finds in peat exposures across the higher lands (Countryside Commission 1998, 43). Such finds have the potential to relate to former temporary camps. Bronze Age burial mounds have been found on high points overlooking the principal valleys, but the density of such monuments is generally low. Prehistoric activity for the most part, as now, has been concentrated on the Tees and South Tyne valleys to the east, and Bronze Age field systems have been found on the margins of these valleys.

In the Roman period, the South Tyne valley was an important communication route. There is a Roman road along the western side of the valley, which passes through the remarkably well-preserved Whitley Castle fort (Shotter 2004).

The enclosed landscape of the narrow dales contrasts strongly with the open landscape of the moorlands. In the valleys are small villages, hamlets and dispersed settlement along the valley floor and the moorland margins. The moorland around Alston, particularly, has been subject to Parliamentary enclosure, reflecting the taking of land for grazing and mineral rights; however, this 'enclosed' land is largely unimproved moorland.

The historical character of the landscape is largely affected by lead extraction and processing. Early lead workings on Alston Moor are recorded from the twelfth century, and during the medieval period rich silver mines were supplying the Royal Mint in Carlisle, until these seams were exhausted. From this period on, the winning and processing of metal ores has been a major part of the valley's economy, and by 1861 there was a population of 27,000 people involved in the industry (Countryside Character 1998). The decline in the industry in the late nineteenth century resulted in a dramatic depopulation of the area.

Alston, at the intersection of the South Tyne and Nent Rivers, is an important crossing point, and has its origins in the medieval period. However, it was not until the seventeenth century that it started to expand as a result of local mining, principally for lead. Similarly, Nenthead was a small village, until the construction of a large smelt-mill in 1738 by Colonel Liddell, and the subsequent take up of

interests by the London Lead Company in 1753 (*ibid*). The company developed the Rampgill smelt mill and also the town, building shops and chapels for the workers. In 1905, the dressing mill was rebuilt and then lead processing continued in fits and starts until closure in the 1960s.

The industrial remains cover the hillsides and comprise shafts, mine buildings, adits, flues, tracks, and open quarries. A particular characteristic of the valley sides is the scars caused by hushing (Raistrick 1965).

A2.6.5 ***Change Scenarios***

Almost 85% of this RLCA is covered by Enclosed Land (Post-Medieval) and Unenclosed Land (Moorland), and change scenarios have been assessed for these. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Woodland Expansion (-3, 1), Development (-2), and Climate Change (-3, 1). Woodland Management and Agricultural Intensification are considered to affect both character types.

Overall Impact: 22 Negative, 3 Positive.

A2.6.6 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Enclosed Land character type:

- The retention and enhancement of old orchards and the restoration, and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries

and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

- The maintenance of commons should be advocated, so they remain open but actively farmed areas, as should the sustaining of traditional upland farming practices and the viability of upland farming in general.

Generic Objectives for the Unenclosed Land character type:

- Agri-environment schemes should be targeted to conserve and enhance valuable historic features. Walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open and bracken and European gorse domination reduced.

- Research on the historical relationships between Unenclosed and Enclosed Land

should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management are encouraged.

- Management and restoration of historic features such as vernacular buildings should be encouraged. It should be recognised at all times that the network of walls, historic trackways and isolated agricultural buildings is a distinctive feature of the moorland landscape, providing time-depth and inter-county historical variation.

- Strategies should be developed, in consultation with the fire service, to limit the impact of moorland fires on visible historic features or buried archaeological remains.

- The visibility of archaeological sites should be improved by clearing bracken and scrub vegetation. A low level of stock grazing is a sustainable way of achieving this, but sensitive management is required to avoid soil erosion. Where possible, woodland establishment in historically important areas should be avoided. Maintenance of thin peat soils, and hence the archaeological remains within them, may be promoted through rotational heather burning. Bracken should be controlled by spraying, as opposed to mechanical means that may damage the archaeological resource.

- Whole-fell grazing management should be promoted, where possible, erecting new fences on open fell only where alternatives are not practicable, and redundant fencing should be recovered.

- Footpaths, bridleways or byways should be conserved, along with their associated features, such as pinch stiles and gates, which represent historic routeways. However, management of such features to avoid erosion of the surrounding soils, and littering, should be undertaken.

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historical use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over

other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.
- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.
- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.
- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.
- The evidence for relict occupation and land use should be conserved and enhanced.

A2.7 LAKELAND LIMESTONE FRINGE (RLCA 13)

A2.7.1 *General Historic Character and Physical Character Description*

The topography of this RLCA (Fig 1) is similar to that of the adjacent Eden Valley RLCA. The historic character is not particularly defined by the physical characteristics of the area, apart from the presence of limited limestone extraction. There are two discrete areas; the first is on the north-eastern side of the Caldbeck Fells, and is characterised by parkland around Greystoke to the south, some Parliamentary enclosures to the north-east and ancient enclosure, particularly around Caldbeck. The other areas are small land blocks around Cockermouth, which are characterised by gentle undulating farmland.

A2.7.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	127.7	33.3	4	11
Enclosures (Post-Medieval)	E_PM	113.4	29.6	4	11
Unenclosed Land (Other)	UL_O	90.3	23.6	2	10
Woodland (Plantation)	WD_P	15.9	4.2	-	-
Enclosures (Deer Park)	E_DP	7.3	1.9	-	-
Settlement Other (Residential)	S_OR	6.7	1.7	-	-
Communications	C	5.8	1.5	-	-
Industrial Non-Settlement (Other)	I_O	4.4	1.1	-	-
Woodland (Other)	WD_O	2.9	0.8	-	-
Designed Landscape (Ornamental)	DL_O	2.6	0.7	-	-
Unenclosed Land (Moorland)	UL_M	2.4	0.6	-	-
Enclosures (Modern)	E_M	2.0	0.5	-	-
Water (Natural)	W_N	0.9	0.2	-	-
Designed Landscape (Recreation)	DL_R	0.3	0.1	-	-
Totals		**382.6**	**99.8**	**10**	**32**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.7.3 ***Overall Character of RHLC distribution***

The most dominant character type is Ancient Enclosed Land (Fig 3), reflecting the relatively undisturbed agricultural landscapes centred on Caldbeck. Around these enclosures are areas of Parliamentary enclosure, which took up former waste land, and large areas of unenclosed land. Woodland plantation covers a significant part of the area, the largest of the plantations being Greystoke Forest. The Deer Parks category is relatively small, given the size of Greystoke Park, and reflects the fact that much of the former park has been planted with trees and is no longer characterised as parkland. The proportion of settlement within the dataset is in keeping with the small village character of the area, and the small area of Industrial (Non-Settlement) is concentrated primarily on the Flusco cement works. The areas of land around Cockermouth are generally similar to the northern part of the east block centred on Caldbeck, in terms of overall character, which is an historic agricultural landscape.

A2.7.4 ***Settlement and Enclosure Character***

The land use in the eastern part of this small RLCA is characterised by parkland to the north-east of Greystoke Castle, and ancient enclosure centred upon the villages of Skelton, Hesket Newmarket, Millhouse, and Caldbeck. The largest concentration of ancient enclosure is around Caldbeck and Hesket Newmarket, and extends in an arc around the Caldbeck Fells to the northern boundary of Greystoke Park. This is characterised by small piecemeal fields, which are predominantly pastoral, and there are very few strip fields, which are the fossilised remains of former open fields. A further focus of settlement was Skelton, which has a similar cluster of small fields. Between the two areas of ancient enclosure was a strip of Parliamentary enclosure, emphasising the distinct development of settlement in the two places. The western block of land (north and south of Cockermouth) is generally similar, but there is a distinct grouping of fossilised arable strip fields extending out from the village of Blindcrake, which would suggest that this area has a tradition of historic arable farming.

One of the other blocks of the RLCA, to the south of Cockermouth, includes the important early medieval cemetery at Eaglesfield (RM Newman 2006). The presence of a cemetery implies contemporary settlement within its environs.

Greystoke Park is a major component of the eastern part of the RLCA. The earliest fortification at Greystoke dates to late eleventh / early twelfth century, when a wooden tower surrounded by a pale was constructed, a stone-built castle being added in *c*1346 (Perriam and Robinson 1998). The castle was destroyed in the English Civil Wars and was then subsequently rebuilt as a country estate. The park was used as a tank training ground during the Second World War, causing considerable damage, but it still retains some of its original character, although a large plantation was established across the northern part of the park.

A2.7.5 ***Non-Agricultural Activity Character***

There has been limited industrial activity within the RLCA, although some extraction of limestone has taken place, characterised most notably within the present landscape by the Flusco quarry and cement works near Newbiggin. There is a limited number of historic water-driven mills within the area, notably the Howk bobbin mill at Caldbeck, reflecting the abundance of water sources coming off the Caldbeck Fells (Allen 1987).

A2.7.6 ***Change Scenarios***

This RLCA is covered by Enclosed Land and Unenclosed Land character types. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Woodland Expansion (-3, 1), Development (-2), and Climate Change (-2, 1). Agricultural Intensification and Woodland Expansion are considered forces for change in both character types.

Overall Impact: 32 Negative, 10 Positive.

However, Greystoke and its plantations are a more important part of this RLCA than their size suggests, and development of the park would have a large impact, visually and perceptually. Scenarios impacting on Greystoke might include expansion of the plantation, and management of the historic buildings and gardens. An increase of tourism would also have an impact on this fairly isolated area.

A2.7.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- There should be consultation with the appropriate archaeological curator in the event of any development at Greystoke, and also in the long-term management of the park.

- If expansion of woodland is planned, either within the park or within the surrounding enclosed land, this should also be undertaken only in consultation with the archaeological curator.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields, through gapping up and the use of appropriate local hedge-laying techniques, should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards and the restoration, and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess

the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.8 WEST CUMBRIA COASTAL PLAIN (RLCA 42)

A2.8.1 *General Historic Character and Physical Character Description*

The character of the historic landscape is dominated by the gently undulating coastal topography, with rich natural mineral resources (Fig 1). These have combined to give a densely occupied region from as early as the prehistoric period, with a long history of industrial exploitation and associated maritime trade. The natural topography and geology is conducive to the rich, predominantly pastoral agricultural landscape that stretches in a band between the Lakeland High Fells RLCA and the coast. The agricultural pattern consists of relict enclosures centred upon historic centres, such as Egremont and St Bees. The coastline is a mixture of intertidal estuaries, mosslands, sand dune complexes, intertidal salt marshes, and beaches, and, in the centre, an outcrop of red sandstone cliffs around St Bees. In the nineteenth and twentieth centuries, the abundance of shallow coal seams encouraged extensive coal extraction, initially by shallow mines, but more recently by opencast extraction.

A2.8.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	210.8	39.6	4	11
Enclosures (Post-Medieval)	E_PM	114.6	21.6	4	11
Settlement (Other Residential)	S_OR	46.5	8.8	-	-
Unenclosed Land (Coastal)	UL_C	31.5	5.9	-	-
Industrial Non-Settlement (Other)	I_O	20.5	3.9	-	-
Enclosures (Modern)	E_M	19.2	3.6	-	-
Unenclosed Land (Other)	UL_O	17.4	3.3	-	-
Communications	C	13.6	2.6	-	-
Settlement (Commercial)	S_CM	9.7	1.8	-	-
Built Environment	BE	7	1.3	-	-
Unenclosed Land (Moorland)	UL_M	6.4	1.2	-	-
Woodland (Plantation)	WD_P	6.2	1.2	-	-
Designed Landscape (Recreation)	DL_R	6.1	1.1	-	-
Designed Landscape (Ornamental)	DL_O	4.7	0.9	-	-
Water (Natural)	W_N	4.1	0.8	-	-
Woodland (Other)	WD_O	4.1	0.8	-	-
Settlement (Industrial)	S_I	4.1	0.8	-	-
Settlement (Designed Landscape)	S_DL	1.4	0.3	-	-
Water (Artificial)	W_A	0.9	0.2	-	-
Enclosures (Deer Park)	E_DP	1.1	0.2	-	-
Enclosures (Unknown)	E_U	0.5	0.1	-	-
Totals		**530.4**	**100**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.8.3 ***Overall Character of RHLC Distribution***

Significantly the most dominant character type in this RLCA is Ancient Enclosure (Figs 3 and 4), which suggests that the lowland agricultural landscape has not changed significantly within the last 300 years. However, there is nevertheless a significant amount of Post-Medieval (Parliamentary) Enclosure, demonstrating that there has been some take up of unimproved land within the area. There is only a tiny amount of unenclosed fell left, which includes areas such as Muncaster Fell, at the mouth of Eskdale.

A significant proportion of the area is Settlement, which reflects how many large towns exist within the area (Barrow, Workington, Maryport, Whitehaven, Cockermouth and Egremont). The proportion of Industrial (Non-Settlement) is unusually low, given how much of the area has in the past been given over to coal and iron ore extraction, but this reflects the lack of much active mineral extraction on the coastal plain.

The statistics indicate that the RLCA is largely agricultural land which retains much of its historic character, and which includes relict landscapes, both agricultural and industrial.

A2.8.4 ***Settlement and Enclosure Character***

The good-quality agricultural land of the coastal plain is tightly constrained to the east by the extreme topography of the Lakeland High Fells RLCA, and settlement and agriculture has been inevitably concentrated within this limited locale. The earliest known settlement is Mesolithic, represented by small coastal settlement sites at Eskmeals (Bonsall *et al* 1994; Hodgkinson *et al* 2000) and finds from fieldwalking on the coastal strip at Drigg and St Bees (Cherry and Cherry 2002). The Neolithic period is characterised by one of the most important settlement sites in Northern England, at Ehenside Tarn (Darbishire 1873), which produced evidence for the earliest arable cultivation in the country. There is also a group of overlapping timber henge monuments at Bootle (J Quartermaine *pers comm*). Bronze Age activity is largely in the form of finds from fieldwalking, but there is a greater abundance of Bronze Age remains on the adjacent marginal uplands, reflecting the limited survival of settlement remains within the heavily farmed lowland plain. Enclosed settlements from the Iron Age have been identified by aerial photography in the northern part of the RLCA (Bewley 1994). One of these, at Ewanrigg near Maryport, has been excavated, demonstrating activity spanning the Late Bronze Age to the later Roman period, perhaps as much as 1800 years.

In the Roman period, the Hadrianic defensive system extended down the West Cumbrian coast, comprising in this RLCA a series of forts, at Ravenglass, Moresby, Burrow Walls (near Workington) and Maryport, linked by a road. Ravenglass was

an important anchorage and also at the end of a road over the top of the Lake District Fells from Ambleside (Shotter 2004). The Roman baths at Ravenglass are the fullest surviving free-standing Roman building in the country (Potter 1979). In the medieval period, Egremont was the centre of the Barony of Copeland and was an important power base (Winchester 1987). The area was also dominated by monasteries, with Calder and Furness Abbeys, and St Bees Priory, having major urban and coastal land holdings, and therefore regional influence (*ibid*). Settlement in Whitehaven, Workington, Maryport and Barrow in Furness was linked to the development of coal mining and iron ore extraction and working. The important port at Whitehaven developed from the need to transport coal and other minerals from the area, and its town was planned on a grid layout by Lord Lonsdale in the 1640s (Collier and Pearson 1991). Barrow was until the end of the eighteenth century only a small village, but then developed as a port to ship out iron ore (Bowden 2000). It then developed a steel industry and briefly was home to the largest steelworks in the world. The availability of an abundance of steel, coupled with a deep anchorage, allowed it to develop a ship industry and now its wealth is reliant on the manufacture of submarines.

While some of the villages have ancient origins, such as Gosforth, several more modern settlements developed on the coalfields to house mine workers, including Cleator Moor, Arlecdon, Keekle, Rowrah, and Frizington.

A2.8.5 ***Non-Agricultural Activity Character***

The historic character of West Cumbria has been heavily dominated by industry, which reflects the availability of coal and iron ore. Extensive coal extraction was undertaken from the coalfield between Whitehaven and Maryport, which was developed in the seventeenth century by Sir John Lowther (Collier and Pearson 1991). Iron ore was extracted from across South Lakeland, but also in the area of Cleator Moor and Egremont; this, with the availability of coal, led to iron and steel production at Workington and Barrow (Fell 1908). Whitehaven and Barrow developed as ports to ship coal and iron ore respectively. Harrington, to the south of Workington, similarly developed as a port but then ship building became dominant and during the Second World War it was used to extract magnesium from seawater, for use in aircraft components and incendiary bombs (http://www.users.globalnet.co.uk/~rwbarnes/defence/magnesit.htm).

The most dominant industry in the region is now the nuclear industry, which developed from the Second World War Royal Ordnance Factory at Sellafield. It was adapted to produce nuclear materials from 1947, and two air-cooled graphite-moderated reactors were built (Kragh 1999). A magnox reactor was completed in 1956, which was the world's first commercial reactor. Since then it has developed as a nuclear-processing facility.

Other activities include a gunnery range at Eskmeals, dating back to 1897, which shoots artillery out to sea. It was originally used to test naval artillery produced at Barrow (Scott 1962).

A2.8.6 ***Change Scenarios***

The historic character types that cover the largest part of this RLCA are Ancient and Post-Medieval Enclosures. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

Agricultural 'improvement' has already resulted in the drainage of land and the replacement of traditional hedgerows with wire fences. Intensification of agriculture has also led to the loss of moorland and rough pasture through over-grazing and reclamation. A lack of woodland management has led to the decline of traditional broad-leaf cover. Settlement expansion has led to encroachment onto agricultural land, resulting in a semi-industrial landscape characterised by patches of waste land.

However, it is the effects of industry in the area that are, perhaps, responsible for the most adverse impacts on the landscape. The large industrial areas such as Sellafield, and their associated infrastructure, such as power lines and communication masts, are a discordant element in the landscape, that detracts from the historic character. Small mining villages and other associated features of the mining industry are declining and suffering from neglect, and where development does take place it is often unsympathetic to the local character.

Coastal erosion also has a major impact. The *Shoreline Management Plan* (Halcrow 2009c) advocates a policy of 'no active intervention', mainly due to the lack of economic incentive for any management. Localised management for settlements such as Ravenglass, and the railway lines in the area, will continue, however.

A2.8.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Management of settlement fringes should be more sympathetic to the historic character. The rich industrial heritage of the area, and the promotion of it as an asset, should be considered important.

Generic Objectives for the Enclosed Land Character Type:

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but

naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.9 LAKELAND HIGH FELLS (RLCA 12)

A2.9.1 *General Historic Character and Physical Character Description*

The character of the historic landscape within this RLCA (Fig 1) largely reflects its physical characteristics. Settlement is concentrated in the valleys, and the patterns of enclosure are constrained by the topography. There is a limited amount of dispersed agricultural settlement that has developed out from the primary settlement centres in the valley bottoms, but this has not extended far up the valley sides, and much of the settlement is tightly constrained and surrounded by unimproved land. The settlement and land use in the RLCA is extremely conservative; many of the farms have considerable antiquity and have seen very little recent development. Borrowdale, for example, was not served by a road until the early twentieth-century, and the lack of communication routes have restricted the development of the valley (OA North 2007c).

A2.9.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Other)	UL_O	485.5	26.9	2	10
Enclosures (Ancient)	E_A	480.0	26.6	4	11
Unenclosed Land (Moorland)	UL_M	324.8	18.0	2	10
Enclosures (Post-Medieval)	E_PM	202.6	11.2	4	14
Woodland (Plantation)	WD_P	95.4	5.3	-	-
Enclosures (Modern)	E_M	85.8	4.7	-	-
Water (Natural)	W_N	46.1	2.5	-	-
Woodland (Other)	WD_O	42.1	2.3	-	-
Settlement Other (Residential)	S_OR	18.5	1.0	-	-
Communications	C	9.4	0.5	-	-
Water (Artificial)	W_A	4.8	0.3	-	-
Designed Landscape (Recreation)	DL_R	3.4	0.2	-	-
Industrial Non-Settlement (Inactive)	I_I	2.8	0.2	-	-
Enclosures (Deer Park)	E_DP	1.9	0.1	-	-
Unenclosed Land (Coastal)	UL_C	1.4	0.1	-	-
Totals		**1804.5**	**99.9**	**12**	**45**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.9.3 ***Overall Character of RHLC distribution***

The majority of the area is unenclosed fell and moorland (45% of the RLCA), and, self-evidently, Natural Water makes up 2.5% of the RLCA (Figs 3 and 4). Given the extremely rugged character of the land, it is perhaps surprising that there is so much enclosed land within the RLCA. This, however, does reflect a policy of Parliamentary Enclosure in the post-medieval period, which entailed the enclosure of large expanses of very rugged waste land to claim private ownership. Much of this land has never been improved and is, to all intents and purposes, heathland or moorland.

From a cultural perspective, it is significant that an unusually large proportion of the enclosed lands are Ancient Enclosure. Along with the relatively large expanse of Ancient Settlement, this demonstrates that the Lake District has had a very conservative development, retaining its historic character.

The antiquity of the landscape is reflected in a relatively large number of Scheduled Monuments distributed across the whole RLCA. Many are within the unenclosed lands, demonstrating that these areas have not been subject to intensive land use, allowing the survival of large numbers of monuments from early periods.

By comparison with other RLCAs, there is an unusually small amount of industrial landscape, and what there is, for the most part, reflects extractive industries, such as slate working and copper extraction.

A2.9.4 ***Settlement and Enclosure Character***

All of the area is within the Lake District National Park and much of it is owned by the National Trust; consequently, much of the landscape, and the housing stock, has seen relatively little change by comparison with other parts of the North West. Where landscape studies have been undertaken (OA North 2003b; 2007c; 2009d; 2010a), they have demonstrated that the present settlement of the valley bottoms has its origins in the medieval period or earlier, and that early fields forms are preserved within the current field systems. In areas such as Ennerdale, putative early medieval houses still survive as ruined structures and are in close proximity to the present settlement centres (OA North 2003b). These settlements are all linked into ancient field systems that show a clearly defined development from primary enclosures, called ring garths. There are few towns within the region, of which some, such as Bowness and Keswick, have medieval origins; Ambleside is located adjacent to a Roman fort and its associated civilian settlement, which may suggest an early origin (Shotter 2004).

Although present settlement is concentrated in the valley bottoms, there are considerable, and very significant, settlement remains surviving on the marginal lands around the edge of the Lake District. These reflect episodes of activity that date between the Bronze Age and Roman period, and are most common on the marginal lands adjacent to the West Cumbria Coastal Plain. The South Western Fells of the Lake District have the largest density of prehistoric settlement remains in England, comprising cairnfields, field systems, round house and platform

settlements and associated burial monuments (Quartermaine and Leech forthcoming; Higham 1986).

In the Roman period, the settlements developed from those of the preceding Iron Age; they are native in character and were often located on the same sites as earlier Iron Age settlements. They do not display Romanised influences similar to those exhibited in settlements elsewhere in Britain, which seems to reflect the intensely conservative nature of rural settlement. There was an infrastructure of Roman military sites extending across the Lake District, including roads, and forts at Ambleside and Hardknott, the latter commanding a position on the main east / west pass through the centre of the Lake District (Shotter 2004).

The density of visible remains reflects partly the intense activity in these areas during the prehistoric period, but also that there has been very little subsequent agricultural or industrial activity to destroy or obscure them. Furthermore, there has been only a very slow build up of upland soils, such that the remains are still exposed on the surface.

A2.9.5 ***Non-Agricultural Activity Character***

The distinctive, largely volcanic, geology of the area has provided the raw material for considerable industrial extraction that dates back to the prehistoric period. In particular, the Langdale Pikes and the Central Fells, a band of fine-grained volcanic rock was used in the Neolithic period for the production of axes. The axe production sites, which survive in abundance, produced very large numbers of axes that were then distributed all over Britain and even onto the Continent (Claris and Quartermaine 1989).

In the medieval period, there was localised extraction of iron ores, although this was on a small scale by comparison with iron ore extraction in the Southern Lakes (Bowden 2000). There was a heavy demand on woodland to provided charcoal for iron production; initially, this was a non-renewable cutting of woodland, culminating in an extensive clear fell by the Mines Royal in the sixteenth century (OA North 2007c). By the seventeenth century, woodland was managed, with the establishment of extensive coppices. In the post-medieval period there was extensive lead extraction in the Thirlmere and Ullswater valleys, slate extraction from the Central Fells, and a graphite mine at Seathwaite, in Borrowdale (LUAU 1997a; OA North 2001; OA North 2007c).

A2.9.6 ***Change Scenarios***

This RLCA comprises mainly Unenclosed Moorland and Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-2), Agriculture (-2, 1), Climate Change (-3, 1), Woodland Expansion (-3), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), and Tourism (-1, 1). Woodland Expansion is a change scenario that affects both character types.

Overall Impact: 45 Negative, 12 Positive.

This score does not, however, take into account the fact that this RLCA is entirely within of the Lake District National Park, and therefore large-scale unsympathetic development is constrained. Furthermore, the bodies of water, both natural and artificial, that make up the Lakes have a far greater impact than their area implies, both visually and economically. They are also more likely to be affected by climate change and flood management regimes, sometimes outwith their immediate vicinity. There are likely to be increased pressures for renewable energy development, such as hydrological power (large and small-scale) and also wind farms. The impacts of these will be hard to judge accurately.

A2.9.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Public transport links should be improved to reduce the pressure of cars in the area.

- Heritage management should be included in all development plans, and it should be acknowledged that the historic development of the area has had a large impact on its character and visual impact.

- Schemes for renewable energy should take into account the downstream impact or visual impact on the landscape, and the effect this has on the overall landscape character, along with the localised impact on any archaeological remains.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more

fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.

- The evidence for relict occupation and land use should be conserved and enhanced.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.10 ORTON FELLS (RLCA 28)

A2.10.1 *General Historic Character and Physical Character Description*

The character of the historic landscape is dominated by the physical character of this RLCA (Fig 1), which comprises a large block of limestone uplands, with some granite areas near Shap in the west. It consists of a central core of elevated limestone with a combination of dispersed farms on the marginal land at the fringes, and large expanses of open moorland and commons in the centre, often with large bands of exposed limestone pavement evident. Enclosure of the moorland and commons has been undertaken in a piecemeal manner, partly as a result of *ad hoc* squatter assarts, and even now various parcels remain open common today. The rolling fringes of farmland are predominantly pasture and hay meadow, descending into the Eden Valley to the north and Lune Valley to the south. Small, nucleated villages are a focal point in the lower reaches of the area, where stone-walled enclosures form irregular field patterns of some antiquity, although these often overlie earlier open strip-field cultivation adjacent to the settlements. The settlement and land use character in the area is extremely conservative and many of the settlements and farms have considerable antiquity, often with either medieval monastic or manorial origins, and have seen very little recent development. The area is dissected by various moorland routeways, originating as drove roads but fossilised as green lanes in the walled landscape, that cross over the watershed between the Lune and Eden valleys, the most prominent being through the corridor between Tebay and Shap.

A2.10.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	145.3	35.0	4	11
Unenclosed Land (Other)	UL_O	95.8	23.0	2	10
Enclosures (Post-Medieval)	E_PM	85.9	20.7	4	11
Unenclosed Land (Moorland)	UL_M	46.9	11.3	2	10
Enclosures (Deer Park)	E_DP	8.6	2.1	-	-
Woodland (Plantation)	WD_P	7.5	1.8	-	-
Communications	C	7.3	1.7	-	-
Water (Natural)	W_N	5.5	1.3	-	-
Settlement Other (Residential)	S_OR	4.0	1.0	-	-
Industrial Non-Settlement (Other)	I_O	3.0	0.7	-	-
Enclosures (Modern)	E_M	1.9	0.5	-	-
Woodland (Other)	WD_O	2.1	0.5	-	-
Designed Landscape (Ornamental)	DL_O	1.0	0.2	-	-
Designed Landscape (Recreation)	DL_R	0.5	0.1	-	-
Water (Artificial)	W_A	0.2	0.1	-	-
Totals		**415.5**	**100**	**12**	**42**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.10.3 ***Overall Character of RHLC distribution***

Most of the Orton Fells RLCA (Figs 3 and 4) is Enclosed Land (55.7%), and the majority of this comprises surviving ancient enclosures (35%). Only a very small fraction has been enclosed in recent times (less than 1%), and, similar to the neighbouring RLCAs, this demonstrates the conservative nature of land use change in this area. A significant amount of the area remains Unenclosed Moorland, suggesting that, while clearly largely agricultural, there are unimproved landscapes preserved. Very little of the landscape is settled, and this is seemingly restricted to nucleated communities (often of great antiquity) within valleys and lowland settings. Less than 1% of the area is used for industry and the presence of modern infrastructure (as represented by the Built Environment type) is non-existent. The preservation of historic components, and the potential for the preservation of buried archaeology in this RLCA, is exceptional.

A2.10.4 ***Settlement and Enclosure Character***

Where landscape studies have been undertaken (OA North 2003a; 2004; 2008b; 2009e) they have demonstrated that the present nucleated and dispersed settlement and enclosed field-systems of the fringe lands have their origins in the medieval period or earlier (Roberts 1993). There is preservation of the early field forms within the current field systems, as well as fossilised open-field cultivation in the form of strip fields, often containing broad ridge and furrow cultivation and strip lynchets underlying them. Later medieval and post-medieval assarting and planned enclosure associated with single farmsteads has taken place on the upper edges of the fringe lands adjacent to, and often encroaching onto, the common land. The enclosed fringe lands and the more elevated open limestone commons have considerable evidence of prehistoric enclosed and unenclosed settlement, typically located on the shallow flanking slopes between the 250m and 300m contours (Higham and Jones 1975). These potentially date from the Iron Age/Romano-British period through to the early medieval period.

Medieval occupation of the most elevated parts of the area often consisted of a pattern of transhumant occupation, where family groups travelled up from the parent lowland farms to live seasonally with their livestock on the common grazings in small huts called shielings (OA North 2009e). Deposits of pre-Norman metalwork, often found in close association with upland transhumant settlement sites, have been retrieved around Asby and Orton commons, which may point towards the longevity of this occupational system. Evidence for associated fossilised field-systems in the form of possible co-axial fields were identified around Little Asby common, which could hint at more formalised semi-permanent occupation of the commons, in the

medieval period (*ibid*).

Evidence for prehistoric upland occupation from at least the Mesolithic period is well represented in the archaeological record for the area. Widely distributed scatters of flints and pottery fragments, often of large scale, are evidence in the area (Cherry and Cherry 1987), whilst small-scale, localised (when compared to the Lake District) cairnfields are also evident (OA North 2009e). Extensive, though dispersed, evidence for ritual and funerary landscapes is widespread in the area, represented by upstanding burial cairns, both long cairns dated to the Neolithic period and round cairns of Bronze Age date. To a lesser extent, there are ritual monuments such as stone circles, standing stones, stone rows (particularly around Shap) and ring cairns that can be found across the open commons (Turnbull and Walsh 1997).

Modern habitation is limited in the most part to dispersed post-medieval farmsteads and small nucleated settlements, often surviving, particularly on the lower land, on the footprint of fossilised medieval occupation.

A2.10.5 ***Non-Agricultural Activity Character***

The predominantly limestone geology of the area has been used on an industrial scale for extractive industries. Modern extraction, in the form of large-scale quarries, is evident around Shap and Kirkby Stephen, where lime is extracted for industrial and chemical industries (OA North 2003a; 2008b). The former area also has significant extractive areas of granite and the Shap Pink quarry is famed as a source of this. Smaller-scale extraction has occurred throughout the area, with extensive stripping of exposed limestone pavement, in addition to localised quarries to provide raw materials for limekilns, which in turn produce lime for fertilising the farmed land. Small-scale speculative extraction and primary processing of copper and iron ores has taken place in the uplands in the post-medieval period (OA North 2003a; 2004).

A2.10.6 ***Change Scenarios***

The character types covering the largest area in this RLCA are Ancient and Post-Medieval Enclosures, and Unenclosed Land. These are the three RHLCTs which exceed 10% of the RLCA and the change scenarios have been assessed for these. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-2), Agriculture (-2, 1), Climate Change (-3, 1), Woodland Expansion (-3), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2) and Tourism (-1, 1). Woodland Expansion is a change scenario in both character types.

Overall Impact: 42 Negative, 12 Positive.

As this is a largely under-exploited landscape, it retains much of its historic character. However, unsympathetic development, such as rural settlement expansion, will have a large negative impact. Some of the settlements are Special Areas of Conservation, which tempers some of the negative aspects of such expansion.

Changes in agricultural practices already have had an impact on the landscape, as have poor woodland management practices, such as the large-scale planting of conifers in areas of mixed woodland and previously open fell. Limestone quarries have also been extended and areas of limestone pavement have been damaged or removed, although these are now subject to Limestone Pavement Orders.

A2.10.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Woodland expansion should be sympathetic to the landscape, and focus on the regeneration and better management of mixed woodland, rather than continued planting of mono-culture conifer blocks. Furthermore, it should only be undertaken in consultation with the appropriate archaeological curator.

- Expansion of quarrying should be kept to a minimum and every attempt should be made to avoid further negative impacts on the visual landscape.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.

- The evidence for relict occupation and land use should be conserved and enhanced.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former

field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.11 HOWGILL FELLS (RLCA 10)

A2.11.1 *General Historic Character and Physical Character Description*

The character of the historic landscape is closely defined by the physical characteristics contained within the small discrete roughly-triangular block of smooth, round-topped and steep-sided hills (Fig 1). The hills are formed of successive bands of sandstones, siltstones and mudstones (Countryside Commission 1998). The majority of the area consists of exposed, unenclosed moorland on Brant Fell, Langdale Fell and Ravenstonedale Common, which is surrounded by an outer fringe of much lower land in the Lune and Eden valleys. The moorland is particularly elevated, with the shallow tops of the hills being covered in blanket peat, the more steeply sloping sides of the fells being better drained and containing rough grassland, with bands of bracken and heather depending upon the current land-management regimes. The open commons on the fells are bounded by a band of upper intake walls associated with dispersed farmsteads, often consisting of medieval assarting fringing the area. Nucleated settlement is limited to small hamlets and villages on the north side of the area, most of the associated habitation in the surrounding valleys lying outside of the area, in particular the market town of Sedbergh to the south. The remote nature of the RLCA, combined with the narrow surrounding valleys, has limited the historical impact of man to upland farming in the form of pasture and upland grazing on the commons. The area is skirted by major routeways that avoid the upland block of the fells, the most prominent being through the corridor through the Tebay Gorge on the western boundary of the RLCA.

A2.11.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Moorland)	UL_M	53.7	79.1	2	10
Enclosures (Ancient)	E_A	10.3	15.2	4	11
Enclosures (Post-Medieval)	E_PM	3.2	4.8	-	-
Settlement (Other Residential)	S_OR	0.2	0.4	-	-
Woodland (Plantation)	WD_P	0.2	0.3	-	-
Communications	C	0.1	0.2	-	-
Water (Natural)	W_N	0.1	0.1	-	-
Woodland (Other)	WD_O	0.1	0.1	-	-
Total		**67.7**	**100**	**6**	**21**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.11.3 ***Overall Character of RHLC Distribution***

The Howgill Fells RLCA overlaps the boundary between Cumbria and the Yorkshire Dales National Park; HLC data are currently available only for that part of the area within Cumbria. The majority (79%) of land for which there is coverage in this RLCA belongs to the Unenclosed Land (specifically moorland) type (Fig 4). This represents a far higher proportion than most RLCAs in the North West, seconded only by the West Cumbria Coastal Plain. Much of the remaining landscape is enclosed, and a significant proportion of this land (15%) was enclosed prior to 1700. This is, therefore, an under-exploited landscape, one where the nature of change with respect to the historic environment is highly conservative, and the ancient enclosures have an exceptionally high survival rate. Only a small amount of land is currently settled, and these communities and farmsteads are dispersed throughout the valleys. Notably, there is an absence of industry (extraction) and modern infrastructure (as represented by the Built Environment type), again demonstrating the conservative nature of land use in this area, and indicating that buried archaeology, where present, is highly likely to be preserved.

A2.11.4 ***Settlement and Enclosure Character***

Where landscape studies have been undertaken (*eg* Lambert 1996; Bowden 1996; Hair and Newman 1999), they have demonstrated a relative paucity of surviving prehistoric and Romano-British settlement remains on the fells. Some possible enclosed settlements have been identified, but few with definitive round houses (Bowden 1996). The impact of Rome is, however, immediately evident in the adjacent Tebay Gorge, where the fort of Low Borrowbridge protects the Roman road through the pass (Shotter 2004). Medieval and post-medieval sites in the form of dispersed vaccaries/granges and more transhumant shieling settlements are evident. Medieval occupation of the most elevated parts of the area often consisted of a pattern of transhumant occupation, where family groups travelled up from the parent lowland farms to live seasonally with their livestock on the common grazings in small huts called shielings. Two possible medieval shieling sites have been excavated in the area, one at Powsons Farm (Lambert 1996) and a further site at Crosedale, that has been associated with a grange of Cockersand Abbey (Hair and Newman 1999). Evidence of abandoned farmstead foundations, surrounding ridge and furrow cultivation marks, peat cuttings and packhorse tracks have been found on the Howgill Fells.

A2.11.5 ***Non-Agricultural Activity Character***

Non-Agricultural activity is dominated by post-medieval peat extraction on the gently rolling tops of the fells, where the peat formation is particularly deep. Evidence of extensive cutting for domestic fuel has been identified, along with assorted sledways, which run sinuously down the steep sides of the fells (Bowden 1996).

A2.11.6 ***Change Scenarios***

This RLCA is dominated by Unenclosed Moorland, with a small amount of Ancient Enclosed Land. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-2), Agriculture (-2, 1), Climate Change (-3, 1), Woodland Expansion (-3), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2) and Tourism (-1, 1). Woodland Expansion is a change scenario in both character types.

Overall Impact: 21 Negative, 6 Positive.

One largely positive change scenario not included in the above calculation is the fact that there is a desire to expand the Lake District National Park to include this RLCA. This will strengthen the case against large-scale alteration of the landscape, such as industrial afforestation or development. However, in the past there have been applications for wind farms at Tebay, on the border of this RLCA and the adjacent Lakeland High Fells. Whilst these were turned down, with increased pressure for low-carbon and renewable energy solutions, there is every likelihood that a repeat application will be made.

A2.11.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Wind farm developments should ensure that their visual impact on the landscape, and in particular the historic landscape, are kept to a minimum.

Generic Objectives for the Unenclosed Land Character Type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.

- The evidence for relict occupation and land use should be conserved and enhanced.

Generic Objectives for the Enclosed Land Character Type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows, in order to replace overly mature specimens, should be promoted.

- New field boundaries should be inserted into inherited patterns in ways that do not unnecessarily reduce the legibility of earlier patterns.

- The identification of, and retention where possible, and if necessary replacement of, in-field trees should be encouraged, that may provide evidence of former

field boundaries or land use practices.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons should be advocated, so they remain open but actively farmed areas, and traditional upland farming practices, and the viability of upland farming in general, should be sustained wherever possible.

- Incentives to farmers should be considered to reinstate areas of marsh, copse and brake that would have been important elements in the landscape. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed, to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.12 SOUTH CUMBRIA LOW FELLS (RLCA 36)

A2.12.1 *General Historic Character and Physical Character Description*

The physical character heavily dominates the land use of the area (Fig 1). Although the hills are low and undulating by comparison with the high fells to the north, there are substantial unimproved areas of moorland, notably in the northern part of the area, with most of the enclosed land in the southern and eastern parts. While the area is unimproved and unenclosed now, there has been considerable anthropogenic activity across the land, which has been preserved because of the lack of subsequent agricultural exploitation. The Grizedale area, between Coniston Water and Windermere, has been extensively planted with forest and represents one of the largest areas of woodland plantation in the Lake District and in the wider region.

A2.12.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion adds up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	303.9	41.1	4	11
Enclosures (Post-Medieval)	E_PM	165.0	22.3	4	11
Woodland (Other)	WD_O	67.6	9.1	-	-
Unenclosed Land (Moorland)	UL_M	55.0	7.4	-	-
Woodland (Plantation)	WD_P	48.1	6.5	-	-
Settlement Other (Residential)	S_OR	25.6	3.5	-	-
Water (Natural)	W_N	26.1	3.5	-	-
Communications	C	10.1	1.4	-	-
Enclosures (Deer Park)	E_DP	8.7	1.2	-	-
Unenclosed Land (Other)	UL_O	8.7	1.2	-	-
Designed Landscape (Ornamental)	DL_O	5.8	0.8	-	-
Enclosures (Modern)	E_M	6.2	0.8	-	-
Designed Landscape (Recreation)	DL_R	2.3	0.3	-	-
Industrial Non-Settlement (Other)	I_O	2.6	0.3	-	-
Water (Artificial)	W_A	2.0	0.3	-	-
Industrial Non-Settlement (Inactive)	I_I	0.5	0.1	-	-
Settlement (Commercial)	S_CM	0.8	0.1	-	-
Settlement (Designed Landscape)	S_DL	0.8	0.1	-	-
Totals		**739.8**	**100**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.12.3 ***Overall Character of RHLC Distribution***

The most dominant character types in this RLCA are Ancient and Post-Medieval Enclosed land, covering over 63% of the area (Fig 4). This reflects the fact that the area is mainly pastoral. Woodland comprises almost 20% of the area, which is partially a reflection of the plantation at Grizedale, and other discrete patches. Unenclosed Moorland is also a significant contributor, as is to be expected. There is relatively little settlement within the area, comprising dispersed villages, rather than larger urban areas; as a consequence, only Residential Settlement is significant in this type of character designation.

A2.12.4 ***Settlement and Enclosure Character***

The area has low rounded hills, which have not been intensively farmed; consequently, there is a potential for the survival of prehistoric remains. In the area of the Blawith Fells and Heathwaite Fell, the remains of Bronze Age field systems and cairnfields have been identified, reflecting limited agricultural exploitation from the period (LUAU 1995; Quartermaine and Leech forthcoming). There is also an abundance of Bronze Age burial mounds throughout the area, most notably on summits, and also burnt mounds located near to water. On Heathwaite Fell, there is an instance of a medieval settlement superimposed upon prehistoric activity, reflecting the reuse of a favoured place (*ibid*).

In the medieval period, the western part of the area was under monastic influence from Cartmel Priory and Furness Abbey, the farms of which (called granges) can be found across the area; one such site can be seen in the surviving place name (Grange) of the town to the east of Cartmel (Leach 1987).

There is a clear distinction between the character of the medieval and post-medieval settlements in the western and eastern parts of the area. That in the west is characterised by dispersed settlements, and the origins of the villages were linked to specific industrial activities, such as Askam (iron ore), Kirkby in Furness (slate), Haverthwaite (iron), Greenodd (port/ship building) (Bowden 2000). In the east, the land has a greater proportion of nucleated villages, with a primarily agricultural economy, and the settlements are for the most part surrounded by ancient enclosure.

The principal towns in the area are Kendal and Bowness, of which the most important is Kendal. A Roman fort was built at Watercrook, now on the outskirts of the town, around which developed a civilian settlement (Potter 1979). An early church is suggested by the name ‘Cherchebi’, given in the Domesday Book (Faull and Stinson 1986), and there was a Norman motte and bailey on Castle Howe, which seems to have related to a pre-Norman settlement in Kendal (Perriam and Robinson 1998). This appears to have gone out of use when another castle was on the other side of the River Kent in *c* 1200. This period of construction coincides with the granting of a Market Charter in 1189 (Munby 1985), which enabled Kendal to develop as an important market town. In the fourteenth century the town acquired an importance as the centre of the local woollen industry, and this importance was not superseded until the expansion of the cotton industry in South Lancashire in the

eighteenth century.

A2.12.5 ***Non-Agricultural Activity Character***

The character of much of the area has been created by the extraction of iron ore and iron working (Bowden 2000). While iron ore is a relatively common mineral throughout much of South Lakeland, rich deposits were found in the Furness peninsula, near Askam and Ireleth, which resulted in the development of the iron industry. The medieval method of smelting iron used bloomeries, which are common in this RLCA. These were superseded by blast furnaces in the eighteenth and nineteenth centuries, which were established at Backbarrow, Newlands, Duddon, Penny Bridge and Nibthwaite. Bloomeries and blast furnaces consumed large amounts of charcoal, and a major woodland industry was developed to provide a sustainable source of fuel. Remains of the woodland industries abound within much of the older woodland across the area (*ibid*).

In addition, there are also major slate industries, such as the Burlington Slate works, near Kirkby in Furness, which is still in operation (Geddes 1975).

A2.12.6 ***Change Scenarios***

Some 63% of this area is covered by Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

In this RLCA, changes in agricultural practices have already led to the loss of traditional enclosure features such as barns and stone walls. Furthermore, large areas of open fell have been planted with conifers, which have also been introduced into areas of mixed broad-leaf woodland. New build around settlements does not always reflect the vernacular character. Increasing tourism, in particular hill walking and water-based activities, has led to an influx of cars in the area.

A2.12.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Public transport links should be improved to reduce the pressure of cars in the area.

- Further commercial planting, where needed, should concentrate on mixed broad-leaf woodland rather than conifers, and efforts should be made to increase integration into the landscape.

- Where possible, existing plantations should be expanded rather than new areas planted, but this should only be in consultation with the appropriate archaeological curator to avoid damage to buried archaeological remains.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields should be encouraged, through gapping up and the use of appropriate local hedge-laying techniques. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields, and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming

practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed, so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A2.13 MORECAMBE BAY LIMESTONES (RLCA 23)

A2.13.1 *General Historic Character and Physical Character Description*

Morecambe Bay Limestones RLCA is divided into three parts, corresponding to the Furness Peninsula, Cartmel Peninsula and the Arnside Silverdale AONB (Fig 1); and the heritage in each of these areas is quite distinct. The Furness Peninsula is an area of gently undulating landscape with ancient nucleated settlement, including Dalton in Furness, the ancient centre, as well as Furness Abbey. The Cartmel Peninsula is centred on Cartmel Priory and has a landscape characterised by nucleated settlement and former coppiced woodland. The Arnside Silverdale AONB has large areas of limestone pavement and considerable coppiced and recovered woodland. The older settlement extends around the eastern side of what was historically waste land.

A2.13.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	158.9	41.6	4	11
Enclosures (Post-Medieval)	E_PM	97.7	25.6	4	11
Woodland (Other)	WD_O	28.5	7.4	-	-
Settlement Other (Residential)	S_OR	21.2	5.6	-	-
Woodland (Plantation)	WD_P	17.4	4.5	-	-
Communications	C	8.6	2.3	-	-
Enclosures (Deer Park)	E_DP	8.4	2.2	-	-
Unenclosed Land (Other)	UL_O	6.4	1.7	-	-
Designed Landscape (Ornamental)	DL_O	6.1	1.6	-	-
Unenclosed Land (Moorland)	UL_M	5.3	1.4	-	-
Unenclosed Land (Coastal)	UL_C	4.8	1.3	-	-
Designed Landscape (Recreation)	DL_R	4.5	1.2	-	-
Enclosures (Modern)	E_M	4.8	1.2	-	-
Industrial Non-Settlement (Other)	I_O	3.6	0.9	-	-
Water (Natural)	W_N	3.4	0.9	-	-
Built Environment	BE	1.0	0.3	-	-
Settlement (Commercial)	S_CM	0.9	0.2	-	-
Industrial Non-Settlement (Inactive)	I_I	0.2	0.1	-	-
Settlement (Designed Landscape)	S_DL	0.4	0.1	-	-
Totals		**382.1**	**100.1**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care

should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A2.13.3 ***Overall Character of RHLC distribution***

Like many RLCAs in the North West, most of the Morecambe Bay Limestone RLCA belongs to the Enclosed Land historic character type, and most of this area (42%) comprises surviving ancient enclosures, in addition to a significant amount (26%) that was enclosed prior to the twentieth century (Fig 4). Similarly, a relatively large amount of ancient or rejuvenated woodland survives in this area, largely near Swarthmoor Hall in the western part of the RLCA, and Grange-over-Sands in the eastern part. This, coupled with deer parks and Designed Landscapes (the remnants of former estates), illustrates the antiquity of the historic components of this RLCA and the conservative nature of land use change within this area. The Industrial Non-Settlement character type reflects limestone extraction, but this is no longer undertaken on a large scale.

A2.13.4 ***Settlement and Enclosure Character***

Archaeologically, the RLCA is extremely rich. The earliest remains are from Kirkhead Cave, near Allithwaite, which has activity dating back to the Palaeolithic period (*c*10,500 BC) (Higham 1986). There is a scattering of burial remains throughout the area testifying to Bronze Age activity, in particular on Birkrigg common, where there are round cairns and a stone circle (*ibid*); however, only at Arnside Silverdale has there been any systematic survey, and there are potentially considerably more sites to be discovered (LUAU 1993). The Iron Age is represented by a hillfort on top of Warton Crag in the eastern part of the RLCA (Haselgrove 1996). Native-type settlements are known from the Roman period, most notably that of Stone Walls, Urswick in the Furness Peninsula (Higham 1986). The early medieval period is represented by early stone crosses at Urswick church (Bailey and Cramp 1988) and an important centre in at least the later part of this period was Dalton in Furness, which was the ancient capital of Furness (Walton 1984). Castles abound across the region, including Gleaston Castle in the Furness Peninsula, but significant numbers of Pele towers were built during the fourteenth century, including one at Dalton, and others at Arnside, Hazleslack, and Beetham (Perriam and Robinson 1998). Perhaps the most dominant influence in the area during this period was monastic, as much land was held by Furness Abbey, as well as Conishead and Cartmel Priories.

The antiquity of the Furness Peninsula is emphasised by the complexity of nucleated villages, surrounded by aratral strip fields that have fossilised medieval open fields. In the Cartmel Peninsula, there is a similar nucleation of settlement, but the fields are characteristic of pastoral farming, reflecting the more undulating topography. In Arnside Silverdale, the early, nucleated settlements are on the eastern margins of the area, such as Warton, the Yealands, Beetham, Milnthorpe, Sizergh and Hazleslack. Within the AONB, the settlements are more recent, indicating that the area was formerly waste and was only settled relatively recently.

A2.13.5 ***Non-Agricultural Activity Character***

The area is characterised by its history of the extraction of iron ore and iron working. While iron ore is a relatively common mineral in much of South Lakeland, rich deposits were found, particularly in the Furness Peninsula and near Leighton, which resulted in a development of the iron industry in the region (Bowden 2000). The medieval method of smelting iron used bloomeries, which abound in the RLCA. These were superseded by blast furnaces in the eighteenth and nineteenth centuries, which were established at Backbarrow, Newlands, Leighton Beck (in Arnside Silverdale) and Penny Bridge. Blast furnaces and bloomeries consumed large amounts of charcoal, and a major woodland industry was developed to provide a sustainable source of fuel (*ibid*). Remains of the woodland industries abound within much of the older woodland within the area.

An important town in the RLCA is Ulverston, which developed in part as a port, which had its roots in the Greenodd area in the seventeenth and eighteenth centuries. In the mid-eighteenth century, the shipping moved down the Duddon Estuary to Carter Pool, to the south-east of Ulverston, in response to the need for boats with deeper draughts. Ulverston's maritime heyday was further stimulated by the construction in 1796 of a canal linking the town to the estuary at Hammerside Point. This was short-lived, however, as the expansion of Liverpool, as well as the construction of the Furness Railway in 1854 and the Ulverston Lancaster railway in 1857, effectively killed Ulverston as a maritime centre (McKeever and Layfield 2004).

An important industry in the area is limestone extraction, producing lime on a small agricultural scale, but also on an industrial scale for building works; limestone was also used as a flux in the iron industry. Kilns and quarries abound, particularly within the Arnside Silverdale AONB.

A2.13.6 ***Change Scenarios***

Some 70% of this RLCA comprises Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

However, the character of this RLCA is as much of small rural dispersed settlement as of agricultural land, and rural settlement pressures are likely to have a disproportionately large impact. Furthermore, strengthening transport links, such as to nearby Barrow (in the adjacent West Cumbria Coastal Plain RLCA), or the main West Coast railway line, are likely to affect this area.

While the limestone pavements in the area are now protected under Limestone

Pavement Orders (Wildlife and Countryside Act 1981), this does not explicitly protect heritage resources, which may require additional protection.

A2.13.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

*Specific Objec*tives:

- The heritage of the limestone pavements should be protected.
- The overall historic character of the area should not be adversely affected by developing transport links or expansion of settlements or woodland.
- Plans to improve tourism should be sympathetic to the needs of the heritage.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.
- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.
- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.
- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.
- The retention and enhancement of old orchards should be advocated, as should and the restoration and creation of orchards around farmsteads in areas where they were once more common.
- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.
- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

APPENDIX 3

LANCASHIRE RLCAS

A3.1 MORECAMBE BAY AND COAST (RLCA 24)

A3.1.1 *General Historic Character and Physical Character Description*

This area comprises the predominantly open expanse of Morecambe Bay (Figs 1 and 2), and its historic character is largely constrained by the physical landscape. The bay itself is an area of intertidal sand-flats, and the surrounding coast has extensive estuarine salt-marshes, reclaimed mosses and marshland, and also has shingle beaches and sandstone cliffs.

Settlement is concentrated mainly in the adjacent RLCA of the Morecambe Coast and Lune Estuary (*Section A3.2*), along with the historic city of Lancaster and the town of Morecambe. Other small dispersed settlements have developed on the coastal strip, and the remainder of the area is given over to pastoral farming. The open marshes of the Bay are grazed by sheep, with cattle on the adjoining reclaimed pasture. In the south of the RLCA, arable farming is more prevalent.

A3.1.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Coastal)	UL_C	263.4	91.2	1	4
Water (Natural)	W_N	10.6	3.7	-	-
Enclosures (Modern)	E_M	4.2	1.5	-	-
Unenclosed Land (Other)	UL_O	4.2	1.4	-	-
Enclosures (Post-Medieval)	E_PM	3.1	1.1	-	-
Industrial Non-Settlement (Other)	I_O	1.4	0.5	-	-
Enclosures (Ancient)	E_A	0.9	0.3	-	-
Settlement (Industrial)	S_I	0.6	0.2	-	-
Totals		**288.4**	**100**	**1**	**4**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.1.3 *Overall Character of RHLC distribution*

Not surprisingly, the character types that predominate are Unenclosed Land (Coastal) and Water (Natural) (Figs 4 and 5). Together these make up 95% of the

area. The small area remaining is taken up by Post-Medieval and Modern Enclosed Land, reflecting the recent reclamations that have taken place, with a smaller percentage of Ancient Enclosed Land and non-settlement Industry, in effect the port at Heysham.

A3.1.4 ***Settlement and Enclosure Character***

There is very little settlement in the area, as the majority is contained within the adjacent RLCA of Morecambe Coast and Lune Estuary (*Section 3.2*). The small amounts of Enclosed Land reflect episodes of reclamation that have taken place, supporting cattle grazing and small amounts of arable farming towards the south of the area.

A3.1.5 ***Non-Agricultural Activity Character***

The predominant industry in this RLCA has been fishing and seafood collecting, principally shrimps, cockles and mussels. There is little evidence of historic remains, due to the dynamic ecosystem of the Bay, and the transient nature of this type of fishing. Some wooden fish traps, however, have been found in the northern part of the area. The remains of a nineteenth-century jetty have also been uncovered at Hest Bank, which demonstrated a failed attempt to provide access between coastal shipping and the adjacent canal (Iles 2006).

A3.1.6 ***Change Scenarios***

As this RLCA comprises almost entirely Unenclosed Land (Coastal). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:
Climate Change (-3), Development (-1) and the Regional Spatial Strategy (1).

Overall Impact: 4 Negative, 1 Positive.

The overwhelming issues facing this RLCA centre on climate change, and in particular flood management. The area is covered by at least 12 Shoreline Management Plans (Halcrow 2009d), which consider the economic and environmental value of maintaining the existing coastal flood defences, or allowing 'managed realignment' or retreat. There is little economic justification for attempting to prevent such a dynamic ecosystem as the entire bay changing through time, so some areas of the coastline that are topographically at risk from erosion or flooding, including the locations of Scheduled Monuments such as Cockersands Abbey, are likely to be inundated.

There have been plans to develop a bridge across the Bay to provide better transport links to Barrow and South-West Cumbria. The most recent plan, in 2004, suggested

a 'green bridge' that could also be used to generate tidal power, but this has not progressed (http://www.edie.net/news/news_story.asp?id=8542). Leases have been granted for wind farms at Walney, in the north of the area, and Cleveleys in the south, which are likely to comprise at least 50 turbines in total (http://www.dongenergy.com/Walney/Pages/index.aspx). From a heritage perspective, notwithstanding the effect on the ecosystem of the Bay, the biggest impact of these developments will be visual rather than localised. The Bay, however, is an important tourist asset and also one of the defining images of the region; as such, the visual impact should not be under-estimated.

A3.1.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- The visual impact of off-shore developments should not be under-estimated.
- The historic character of the RLCA should be maintained where possible in any coastline management decisions.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.
- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.
- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.
- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.
- The monitoring of soil erosion in areas where there are visible historic features,

or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.
- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.
- The evidence for relict occupation and land use should be conserved and enhanced.

A3.2 MORECAMBE COAST AND LUNE ESTUARY (RLCA 25)

A3.2.1 *General Historic Character and Physical Character Description*

The Morecambe Coast and Lune Estuary (Figs 1 and 2) is bound on the east by the edge of the Bowland Fells, which also defines the eastern boundary of the adjacent Fylde Plain RLCA, and is defined by the transitional landscape between the coast and the inland plain in the south. This RLCA is characterised by broad, relatively flat lowlands bounded by escarpments, opening out into an undulating landscape near the coast, punctuated by drumlins, and ultimately includes the intertidal sand flats and salt marshes of Morecambe Bay (Countryside Commission 1998, 82). The drumlin fields were formed by glaciers as they moved southward around the Bowland Massif, and the large area of higher ground from Heysham to Middleton is composed of rocky outcrops interspersed with drumlins. Woods are rare, and limited to small areas of wind-swept ancient woodland. Most of the landscape is used as pasture, and the distribution of enclosed land is only restricted by the remaining areas of salt marsh on the coast. The area includes the urban centres of Carnforth, Heysham, Lancaster, and Morecambe.

A3.2.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	54.7	38.4	1	9
Enclosures (Ancient)	E_A	36.2	25.3	1	9
Settlement (Modern Residential)	S_MR	12.8	8.9	-	-
Settlement Other (Residential)	S_OR	9.8	6.9	-	-
Enclosures (Modern)	E_M	7.5	5.3	-	-
Unenclosed Land (Coastal)	UL_C	7.5	5.3	-	-
Designed Landscape (Recreation)	DL_R	4.8	3.4	-	-
Industrial Non-Settlement (Other)	I_O	2.1	1.5	-	-
Settlement (Industrial)	S_I	1.8	1.3	-	-
Built Environment	BE	0.9	0.7	-	-
Settlement (Civic)	S_CV	1.0	0.7	-	-
Woodland (Other)	WD_O	0.8	0.6	-	-
Communications	C	0.8	0.5	-	-
Designed Landscape (Ornamental)	DL_O	0.4	0.3	-	-
Water (Natural)	W_N	0.4	0.3	-	-
Industrial Non-Settlement (Inactive)	I_I	0.3	0.2	-	-
Unenclosed Land (Other)	UL_O	0.3	0.2	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	0.2	0.1	-	-
Water (Artificial)	W_A	0.1	0.1	-	-
Woodland (Plantation)	WD_P	0.1	0.1	-	-
Totals		**142.5**	**100.1**	**2**	**18**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.2.3 ***Overall Character of RHLC distribution***

Most (69%) of the Morecambe Coast and Lune Estuary RLCA belongs to the Enclosed Land historic character type (Figs 4 and 5), with the majority of this area having been enclosed prior to the twentieth century and a significant proportion (25%) was enclosed before 1700. This reflects the long-standing and extensive character of settlement in this RLCA, particularly in its northern part, and the secondmost dominant historic landscape character type is made up of the various Settlement sub-types. Relatively large amounts of the modern settlement areas are defined as industrial in character, restricted to areas to the north of Lancaster and within Heysham, where there is a power station; in addition, there are non-settlement industrial areas along the coast, in the form of landfill sites. Naturally, a large part of this RLCA, along the River Lune, remains unenclosed coastal land, and several recreational areas, currently used as caravan parks, are dispersed widely across the area.

A3.2.4 ***Settlement and Enclosure Character***

The character of the enclosed landscape in this RLCA is variable, and is largely a reflection of the two different main landscape character types within the area. Inland, the enclosed landscape is primarily ancient and post-medieval fields and pastoral enclosures that survive where there is no encroachment from the urbanised areas of Morecambe, Lancaster and Carnforth, and surrounding the dispersed post-medieval farmsteads set within this diverse grassland (Countryside Commission 1998, 83). Within the coastal landscape, however, many enclosures are relatively recent, having been reclaimed from the salt marshes. The latter's boundaries are embankments and drainage ditches, in addition to some sea defences, whereas further inland hedgerows and modern fencing predominate. The unenclosed coastal landscape is not exempt from agricultural activities, as sheep and cattle graze regularly within the marshes.

Surveys undertaken on the Lune estuary have established that occupation in this area was widespread during the Mesolithic period, and included a seemingly permanent settlement on Heysham Head (Salisbury and Sheppard 1994). Similarly, occasional Neolithic finds demonstrate that the landscape was also used at this time (Middleton *et al* 1995). The Heysham Barrows could be prehistoric in origin, but they lack any datable evidence.

The Romano-British presence in the area is firmly established, reflected by a Roman fort and extramural settlement at Lancaster (Jones and Shotter 1988), and there are occasional finds at Heysham, Morecambe and along what would have then been a route to the south.

During the early medieval period, the area, particularly Heysham and Lancaster, became the focus of religious activity, with the establishment of St Patrick's Chapel and the nearby St Peter's Church at Heysham (Potter and Andrews 1994). Sculptural

fragments from the Priory Church, Lancaster, which was first documented by 1094 (Pevsner 2002), and the survival of an early Norman door to its tower, demonstrate early activity in this area also (*ibid*; OA North 200c).

At the end of the twelfth century, Cockersands Abbey (originally St Mary of the Marsh) and a hospital were established at the furthest end of the Thurnham mosses, and contemporary reports indicate that this, the southern part of the RLCA, was uninhabited and barely accessible at the time (Swarbrick 1922, 164). Lancaster, with its eleventh-century Dominican Friary, Priory and Castle, was the focus of medieval settlement and administration in the region (Penney 1981).

Lancaster was an important port during the seventeenth and eighteenth centuries, and there was a significant influx of wealth during this period, resulting in the construction of many ornate buildings. The port of Lancaster declined at the beginning of the nineteenth century, losing its trade to Liverpool (Dalziel 2001). This limited further rebuilding and has allowed the preservation of a broad range of Georgian architecture throughout the town.

Much of the settlement character of this RLCA is post-medieval or modern. Morecambe, which is an amalgamation of the former communities of Bare, Poulton-le-Sands and Torrisholme, is primarily a Victorian community, and one that grew, with the success of coastal resorts from the mid-nineteenth century, as a northern alternative to Blackpool (Countryside Commission 1998, 84). Carnforth similarly developed during the nineteenth century as a railway town, with a significant iron industry (Ashmore 1982).

A3.2.5 ***Non-Agricultural Activity Character***

Morecambe Bay is an important site for the collection of shellfish, and deep-sea fishing takes place from the port of Heysham. Tourism and recreation, however, are the main non-agricultural uses for this landscape today, with caravan and camping sites dispersed across the area. Historically, there have been minor industries, including iron-working around Carnforth in the north, and the creation of landfill waste sites along the Morecambe Bay coast and at Salt Ayre on the River Lune. The Heysham nuclear power station represents a significant component of the industrial character of the RLCA.

A3.2.6 ***Change Scenarios***

This RLCA comprises over 60% Enclosed Land (Post-Medieval and Ancient). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2) and Tourism (-1, 1). The areas of woodland within the RLCA are so small that woodland expansion is not considered a threat.

Overall Impact: 18 negative, 2 positive.

However, as the percentages show, almost 40% of this RLCA is also made up of Settlement, Modern Enclosed Land, and Designed Landscape (Recreation), and these landscape types have a considerable impact on the character of the area. The settlements of Morecambe and Lancaster are both identified in the Regional Spatial Strategy - Morecambe for housing regeneration and tourism (Government Office of the North West 2008, 157), and Lancaster as an historic city, with the university as a driver for knowledge-based growth (*ibid*). Furthermore, the Port of Heysham is to be developed, and transport links are to be improved (*ibid*).

A3.2.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Development within the historic city of Lancaster should ensure that the heritage value is maintained.
- Strengthening of transport links around the RLCA should not negatively impact on the historic character of the area.
- Regeneration of Morecambe should use existing housing stock, where possible.
- Morecambe's unique heritage, with its close association with the Bay, should be emphasised in any drive to increase tourism.
- Developments of the Port at Heysham should only be undertaken with the advice of the appropriate archaeological curator.

Generic Objectives for Enclosed Land character type:

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.
- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.
- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.3 LUNE AND RIBBLE DRUMLINS (RLCA 17)

A3.3.1 *General Historic Character and Physical Character Description*

The RLCA comprises an area of glacial drumlins along the Lune Valley, and to the east is a corridor between the Yorkshire Dales and the Forest of Bowland, called the Craven Gap (Figs 1 and 2). It is an area of low-lying, good-quality agricultural land, that is largely surrounded by upland. Settlement and agriculture have inevitably been concentrated on these lowland areas, which have had relatively intensive historic land use, but the historic remains are obscured, or lost, as a result of continued, more intensive, agricultural usage. The Craven Gap has historically been one of the few crossing points of the Pennines and has attracted activity within the Gap as a communication route, as well as associated settlement. In addition, the Lune Valley has served as a primary north/south route towards the Tebay Gorge. There is potential for archaeological remains within this RLCA.

A3.3.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	494.0	48.9	4	11
Enclosures (Ancient)	E_A	381.3	37.7	4	11
Woodland (Other)	WD_O	30.3	3.0	-	-
Unenclosed Land (Moorland)	UL_M	20.2	2.0	-	-
Settlement Other (Residential)	S_OR	18.5	1.8	-	-
Enclosures (Modern)	E_M	17.5	1.7	-	-
Designed Landscape (Ornamental)	DL_O	15.4	1.5	-	-
Woodland (Plantation)	WD_P	9.5	0.9	-	-
Water (Natural)	W_N	4.1	0.4	-	-
Designed Landscape (Recreation)	DL_R	2.6	0.3	-	-
Industrial Non-Settlement (Other)	I_O	2.7	0.3	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	3.5	0.3	-	-
Water (Artificial)	W_A	3.3	0.3	-	-
Industrial Non-Settlement (Active)	I_A	2.3	0.2	-	-
Communications	C	0.8	0.1	-	-
Enclosures (Deer Park)	E_DP	1.3	0.1	-	-
Settlement (Civic)	S_CV	0.8	0.1	-	-
Settlement (Modern Residential)	S_MR	1.2	0.1	-	-
Unenclosed Land (Other)	UL_O	0.6	0.1	-	-
Totals		**1009.9**	**99.8**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a

scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.3.3 ***Overall Character of RHLC distribution***

Most of the Lune and Ribble Drumlins RLCA comprises the Enclosed Land historic character type, with a significant proportion (38%) representing surviving ancient enclosures (Figs 4 and 5), reflecting the primarily agricultural and pastoral focus of land use in this area. Although only present in a relatively small amount, the second most dominant historic landscape character type in this area is Woodland, and most of this is represented by ancient or regenerated woods. Relatively little of the RLCA comprises settlement, and only a fraction of this area has been subject to modern development, reflecting the antiquity of the settlement. Few settlements have surviving ancient enclosures around them. Despite the fact that this RLCA contains an important, historical communication route between the Yorkshire Dales and the Forest of Bowland, there is a relatively small proportion of the Communication historic character type is misleading and does not reflect the significance of communications within the RLCA.

A3.3.4 ***Settlement and Enclosure Character***

The settlement pattern comprises a line of historic towns through the Craven Gap, emphasising the importance of the Gap as a communication route, which converges on the Ribble Valley, a similarly primary route, to the south-east of Settle. Neolithic axes have been found along this route, indicating its use in the prehistoric period (Manby 1965). Just above the Craven Gap is the imposing and well-defended Iron Age hillfort on Ingleborough. Roman communications extended, for the most part, on a north/south orientation across the line of the Craven Gap, passing to the immediate east of Kirkby Lonsdale, past a fort at Over Burrow with a further road through Ingleton towards the fort at Bainbridge in the Yorkshire Dales (Shotter 2004). There are numerous Romano-British settlements on the marginal land just above the floor of the Craven Gap, particularly along its northern side, near Ingleton and Clapham (Johnson 2004).

The principal towns within the Craven Gap are Kirkby Lonsdale, Ingleton, Giggleswick/Settle, Gargrave and Skipton. The Lune Valley seems to have been an important border in the eleventh century, reflected by a line of motte and bailey castles, notably at Lancaster, Halton, Hornby, Castle Stead, Arkholme, Melling, Thurland, and Burton in Lonsdale (Higham 1991). At the other end of the Craven Gap is Skipton Castle, which controlled traffic through Airedale. Settlements developed from most of these defensive locations and have characteristic ancient enclosures around them. Enclosure patterns around the historic villages are ancient, notably around Wrathmel on the south side of the Ribble, which has an extant medieval field system, with associated ridge and furrow. Between these centres of enclosure there were, historically, large areas of unenclosed low-level moorland, which was enclosed as a result of the Parliamentary enclosure movement.

Remarkably, there is still an extant low-lying area of unenclosed moorland on Newby Moor, Clapham, which indicates that some areas have not been subject to intensive cultivation (Winchester 2006).

A3.3.5 ***Non-Agricultural Activity Character***

There is relatively little industry within the study area, but there is some extraction of clays for brick production at Claughton, which until recently was the last surviving aerial ropeway still in operation (http://www.geograph.org.uk /photo/62345). There is a line of limestone quarries adjacent to the M6 at Nether Kellet, Over Kellet and Clawthorpe, which for the most part is crushed for use as aggregate. Further historic limestone quarries are located at Settle. A recent study (OA North and Liverpool University 2007) has highlighted a prime area for future aggregate extraction from Magnesian Limestone in the Hellifield / Gargrave area of the Craven Gap. Historically, there is a very important Hoffmann limekiln and quarry at Ingleton, the kiln being one of only four surviving in the country; there are numerous smaller limekilns around the margins of the Craven Gap (Johnson 2002).

Water mills have been located on the line of the Ribble at Settle, and also at Ingleton and Low Bentham, to take advantage of the water sources, which were variously then adapted for steam power. The fortunes of Skipton were largely dependent upon its textile industry. The earliest mills there were water powered, notably High Mill, built in 1785, which was later adapted for steam power. Subsequent mills include Belle Vue Mills (built 1828) and Low Mill (built 1839), Firth Shed (built 1877), Park Shed (built 1889), Union Mill (built 1867), and Alexandria Mill (1887) (Ingle 1997).

Despite this industry, the character of the area is largely agricultural, with ancient enclosure around the principal historic settlements.

A3.3.6 ***Change Scenarios***

This RLCA comprises nearly 90% Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1).

Overall Impact: 22 Negative, 8 Positive.

While Settlement forms a relatively small proportion of this area, those within the area are predominantly historic, and have developed in conjunction with the enclosure pattern throughout the area. Unsympathetic development or expansion would have a much larger impact on the character of the area than might otherwise be inferred. The Regional Spatial Strategy (Government Office for the North West

2008) does not touch upon this area explicitly, but some growth of the settlements and pressure on agriculture is to be expected.

A3.3.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for Enclosed Land character type:

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed, so as to assess

the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.4 BOWLAND FELLS (RLCA 2)

A3.4.1 *General Historic Character and Physical Character Description*

The character of the historic landscape within the RLCA (Figs 1 and 2) largely reflects the physical characteristics of the area, which are predominantly low, rolling peat-covered hills. Most of the settlement is concentrated in the Hodder Valley, which runs east/west through the area and includes Slaidburn, the largest settlement in the area. Early peat initiation across the summits (OA North 2009b) has restricted prehistoric and later settlement, and / or has obscured early remains. Despite a number of archaeological surveys across the higher fells, very few monuments before the post-medieval period have been discovered (LUAU 1997b).

Medieval vaccaries (cow farms) are documented on the lower ground and for the most part appear to correspond to present-day farms. The historic boundaries of the vaccaries appear to coincide with present enclosure patterns, demonstrating considerable conservatism of settlement behaviour (*ibid*). The implication is that it is an area that has seen little landscape change since the medieval period, which contrasts with other upland areas, such as the Lake District, where landscape modification has been more prevalent.

A3.4.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Moorland)	UL_M	257.9	60.4	2	10
Enclosures (Post-Medieval)	E_PM	94.2	22.1	4	11
Enclosures (Ancient)	E_A	37.2	8.7	-	-
Woodland (Plantation)	WD_P	19.4	4.6	-	-
Enclosures (Modern)	E_M	5.9	1.4	-	-
Enclosures (Unknown)	E_U	5.6	1.3	-	-
Woodland (Other)	WD_O	3.5	0.8	-	-
Water (Artificial)	W_A	1.5	0.3	-	-
Designed Landscape (Ornamental)	DL_O	0.7	0.2	-	-
Industrial Non-Settlement (Active)	I_A	0.2	0.1	-	-
Built Environment	BE	0.2	0.1	-	-
Settlement (Other Residential)	S_OR	0.5	0.1	-	-
Industrial Non-Settlement (Inactive)	I_I	0.2	0.04	-	-
Industrial Non-Settlement (Other)	I_O	0.1	0.03	-	-
Totals		**425.9**	**101.37**	**6**	**21**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care

should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.4.3 ***Overall Character of RHLC distribution***

The most extensive character type is unenclosed moorland (Figs 4 and 5), demonstrating that the area is a largely undeveloped area of moorland, but this figure is not as widespread as that for the Howgills. What is surprising, in the light of the historic land use pattern, is that the extent of the post-medieval enclosures is very large by comparison with that of the ancient enclosure. This would appear to indicate that there has been some extensive Parliamentary enclosure, particularly in the area around Stocks Reservoir.

A significant part of the RLCA has been taken up with forest plantation, and represents, along with grouse shooting, one of the major upland industries practised within the RLCA. The area of settlement is exceptionally small, there being only a limited number of villages within the whole 101 sq km expanse of the RLCA. As would be expected, industry makes up a tiny proportion of the area.

A3.4.4 ***Settlement and Enclosure Character***

Much of the land is owned by the Duke of Westminster, and is used, primarily, for game shooting, or by United Utilities as a catchment for Stocks reservoir. These land owners have ensured a largely conservative management policy, limiting expansion out from present settlement areas.

Two landscape studies have been undertaken (LUAU 1997b, OA North 2009b) which have revealed limited remains of prehistoric activity, although there is a potentially Bronze Age cairnfield at Nicky Nook, on the lower western slopes of the Forest of Bowland. The surveys have demonstrated that most of the present settlement of the valley bottoms has its origins in the medieval period or earlier (LUAU 1997b). The documented medieval vaccaries correlate with present-day farms, largely through place-name evidence, and at a limited number of these farms there is also earthwork evidence to support their medieval origins. The assumption is that the remains of the medieval farms have been lost by the expansion of the post-medieval buildings and farm complexes.

The earliest documented territorial boundaries in the area correspond to the present ownership boundaries, often marked by stone crosses, such as the Cross of Greet (*ibid*). This, when linked to the fact that the enclosures correlate with documentary evidence for the vaccaries, suggests that land use and ownership has been extremely conservative since at least the medieval period. Much of the land within the area was historically in the control of the de Lacy family (resident at Clitheroe Castle) or Sawley Abbey, just to the east of the RLCA (*ibid*).

There are only small nucleated settlements within the area, the largest of which is Slaidburn, most being little more than villages.

A3.4.5 ***Non-Agricultural Activity Character***

There is relatively little industrial activity within the RLCA, either productive or extractive. There are some limekilns scattered across these areas using the local limestone, but most of these are small and would have served individual farms (Johnson 2002). Some medieval flax ponds at Newton (Higham 1989) reflect a small-scale, local textile industry.

There is a large reservoir on the eastern side of the RLCA, which was created in 1932 by the Fylde Water Board by flooding the village of Dalehead and the surrounding farmland, including the hamlet of Stocks-in-Bowland, from which the reservoir derives its name (LUAU 1997b). The remains of these settlements are preserved beneath the waters.

A3.4.6 ***Change Scenarios***

The change scenarios most likely to impact upon this RLCA are those relating to Unenclosed Land (moorland) and Enclosures. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-2), Agriculture (-2, 1), Climate Change (-3, 1), Woodland Expansion (-3, 1), Change in Use (-2), Flood Risk Management (-2, 2), and Tourism (-1, 1). Of these scenarios, Agriculture and Woodland Expansion are a threat to both major character types.

Overall Impact: 21 Negative, 6 Positive.

A3.4.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Plans for expansion of woodland should be discussed with the appropriate archaeological curator.

- Sensitive agricultural and environmental management regimes should be put in place to minimise unforeseen damage to the historic environment.

Generic Objectives for the Unenclosed Land character type:

- Interpretation of the landscape should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In

particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- The evidence for relict occupation and land use should be conserved and enhanced.

- Agri-environment schemes should be targeted to conserve and enhance valuable historic features. Hedges and walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open and bracken and European gorse domination reduced.

- Research on historic relationships between Unenclosed and Enclosed Land should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management are encouraged.

- The management and restoration of historic features such as vernacular buildings should be encouraged. It should be recognised at all times that the network of walls, historic trackways and isolated agricultural buildings is a distinctive feature of the moorland landscape, providing time-depth and inter-county historical variation.

- Strategies should be developed, in consultation with the fire service, to limit the impact of moorland fires on visible historic features or buried archaeological

remains.

- The visibility of archaeological sites should be improved by clearing bracken and scrub vegetation. A low level of stock grazing is a sustainable way of achieving this but sensitive management is required to avoid soil erosion. Where possible, woodland establishment in historically important areas should be avoided. Maintenance of thin peat soils, and hence the archaeological remains within them, may be promoted through rotational heather burning. Bracken should be controlled by spraying, as opposed to mechanical means that may damage the archaeological resource.

- Whole-fell grazing management should be promoted where possible, erecting new fences on open fell only where alternatives are not practicable. The careful design of new fencelines should minimise visual and perceptual impacts, for example avoiding crossing and close proximity to fell paths, or siting below ridgelines.

- Stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be avoided.

- The conservation of footpaths, bridleways or byways should be encouraged, along with their associated features such as pinch stiles and gates. The management of such features to avoid erosion of the surrounding soils, and littering, should be undertaken.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not

unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.5 RIBBLE VALLEY LOWLANDS (RLCA 31)

A3.5.1 *General Historic Character and Physical Character Description*

The Ribble flows through a flat-bottomed valley edged to the north by the Forest of Bowland and to the south by the Pendle Hills (Figs 1 and 2). The settlement has been constrained by the topography and has also avoided the floodplain of the river. The valley is historically a major communications route that extends from the navigable, lower part of the Ribble into the Craven Gap and thereby provides a crossing of the Pennines. The river has a complex development of flood terraces, some of which are relatively recent, and these have, in some instances, buried archaeological remains (OA North and University of Liverpool 2007). The north-western part of the area is characterised by morainal development, which has also affected the distribution of settlements. The principal settlements in the RLCA are Longridge, Whalley and Clitheroe.

A3.5.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	169.1	42.4	4	11
Enclosures (Post-Medieval)	E_PM	159.9	40.1	4	11
Woodland (Other)	WD_O	15.7	3.9	-	-
Enclosures (Modern)	E_M	13.2	3.3	-	-
Unenclosed Land (Moorland)	UL_M	11.0	2.8	-	-
Woodland (Plantation)	WD_P	7.3	1.8	-	-
Settlement Other (Residential)	S_OR	5.4	1.3	-	-
Designed Landscape (Ornamental)	DL_O	2.2	0.6	-	-
Settlement (Civic)	S_CV	2.4	0.6	-	-
Settlement (Modern Residential)	S_MR	2.3	0.6	-	-
Designed Landscape (Recreation)	DL_R	1.8	0.4	-	-
Industrial Non-Settlement (Active)	I_A	1.5	0.4	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	1.5	0.4	-	-
Water (Natural)	W_N	1.6	0.4	-	-
Settlement (Industrial)	S_I	1.3	0.3	-	-
Water (Artificial)	W_A	1.3	0.3	-	-
Built Environment	BE	1.0	0.2	-	-
Industrial Non-Settlement (Other)	I_O	0.4	0.1	-	-
Totals		**398.9**	**99.9**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care

should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.5.3 ***Overall Character of RHLC distribution***

This area is dominated by Enclosed Land (Ancient and Post-Medieval), reflecting the fact that the floodplain provides ideal land for grazing, and has done so since antiquity (Figs 4 and 5). The enclosure pattern on the floor of the valley is piecemeal and irregular, and is older than that on the valley sides and higher ground, which was enclosed more recently, under Parliamentary Enclosure Acts of the eighteenth and nineteenth centuries (Whyte 2003). The settlement pattern comprises limited numbers of small villages associated with areas of ancient enclosure, and also extensive dispersed settlement. There are three towns within the RLCA: Longridge, Whalley and Clitheroe, of which Clitheroe is the largest.

Large country houses with ornamental parks are also a characteristic of this area, along with small areas of mixed native woodland.

Industry is confined mainly to extractive industries, relating to the Ribble and its tributaries.

A3.5.4 ***Settlement and Enclosure Character***

The valley has had a long history of development, but the earliest remains discovered to date (Neolithic) have been found beneath thick deposits (up to 5m thick) of river sediment (OA North and University of Liverpool 2007). Bronze Age activity is represented by spearheads from the river, and also burial remains, including a timber circle at Bleasdale, on the higher ground away from the centre of the river. An Iron Age defended hilltop enclosure has been identified at Portfield, near Whalley (*ibid*).

In the Roman period, the valley was an important communications route, with one road running up it and another across it. The junction was at an important fording point of the river at Ribchester, which was controlled by a Roman fort (Shotter 2004).

During the early medieval period, the river may have served at some point as a border between Northumbria to the north and Mercia to the south, resulting in place name differences on either side of the river (RM Newman 2006). Remains of the period include important stone crosses at Whalley.

In the medieval period, a line of motte and bailey fortifications along the line of the Ribble indicate that this was a defended line, probably constructed during the anarchy of King Stephen's reign (1135-54) (Higham 1991). In this period, the power centres of the area were Clitheroe Castle, Whalley Abbey and Sawley Abbey, which between them owned much of the land within, and adjacent to, the RLCA. Nucleated settlement developed just above the floodplain on both sides of the river,

and these villages are surrounded by ancient enclosures.

The valley is rich in archaeological remains, although these survive mostly on the higher ground, on either side of the river, which have not been affected by the river terraces. The field systems are survivals of an old agricultural landscape, as the area has not been subject to recent intensive landscape change (OA North and University of Liverpool 2007).

A3.5.5 ***Non-Agricultural Activity Character***

The Ribble, and its fast-flowing tributaries, were the ideal places for water-powered mills, and as a consequence significant numbers of such mills are known, which often then developed into steam-powered mills. There were 24 mills, built mostly around Clitheroe and Longridge (OA North and University of Liverpool 2008a). However, this level of nineteenth-century industry is low by comparison with the Lancashire Valleys and Pendle Hill RLCA immediately to the south.

There has been extensive recent aggregate extraction at Brockholes, near Samlesbury, and there is some potential for further aggregate extraction along the river valley floor (OA North and University of Liverpool 2007). Limestone, around the margins of the valley, has historically been extracted for small-scale lime production, but there is presently a very large cement works at Clitheroe, and this is a major industry in the valley.

A Second World War airfield at Samlesbury was developed by British Aerospace as an aircraft manufacturing centre and is now one of the largest industries in the valley.

Despite these industries, the landscape still retains its essentially largely agricultural character.

A3.5.6 ***Change Scenarios***

The character types covering more than 10% of the area of this RLCA are Ancient Enclosed Land (42%) and Post-Medieval Enclosed Land (40%). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

Exploitation of mineral deposits, in particular associated with the expansion of the cement works at Clitheroe, is an important force for change in this RLCA. There are also likely to be extractions of gravels from the river terraces. This will also lead to

pressure on the road network, which will have a considerable impact on the tranquillity of the area. Furthermore, the likelihood of buried archaeological and palaeoenvironmental remains being destroyed is considerable.

Agricultural pressures are likely to cause the decline of riverside woods as a result of over-grazing. There is also a likelihood that farms will be amalgamated, with the commensurate removal of ancient enclosures.

A3.5.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Extraction of sand and gravels should only take place subject to consultation with the appropriate archaeological curator, and where possible the location should be such that the historic character is conserved and damage to archaeological remains is kept to a minimum.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.6 FYLDE PLAIN (RLCA 9)

A3.6.1 *General Historic Character and Physical Character Description*

The Fylde Plain RLCA (Fig 2), also known as the Amounderness Plain, is bounded by Morecambe Bay and Blackpool to the north and west, and by the Bowland Fells and the Upholland ridge, on the edge of the Lancashire Coal Measures, to the east and south (Countryside Commission 1998, 86). The gently undulating plain is characterised by an extensive network of enclosed land, much of it created in antiquity, which is today used largely for pasture. Although only small and sparsely distributed areas of mosses and meres survive, such as the Winmarleigh Moss SSSI, a complex network of drainage channels (from which the plain's angular field pattern is derived) testifies to its former, marshland, character (*op cit*, 87; Middleton *et al* 1995). Drainage of the extensive mosslands and coastal mires only began during the eighteenth century, and the relatively restricted nature of the ancient settlement pattern reflects this constraint. The RLCA is dominated by the city of Preston, which has its origins in the medieval period and developed into an important port and mill town during the nineteenth century (Hunt 1992).

A3.6.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	206.5	36.7	4	11
Enclosures (Ancient)	E_A	176.6	31.4	4	11
Enclosures (Modern)	E_M	65.1	11.6	4	11
Settlement (Other Residential)	S_OR	54.6	10	5	7
Industrial Non-Settlement (Other)	I_O	1.2	6.6	-	-
Designed Landscape (Recreation)	DL_R	13.6	2.4	-	-
Settlement (Modern Residential)	S_MR	9.3	1.6	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	5.8	1	-	-
Woodland (Other)	WD_O	4.4	0.8	-	-
Designed Landscape (Ornamental)	DL_O	3.2	0.6	-	-
Built Environment	BE	3	0.5	-	-
Settlement (Civic)	S_CV	2.5	0.4	-	-
Settlement (Industrial)	S_I	2.2	0.4	-	-
Communications	C	1.5	0.3	-	-
Water (Artificial)	W_A	1.9	0.3	-	-
Water (Natural)	W_N	1.5	0.3	-	-
Unenclosed Land (Coastal)	UL_C	1.8	0.3	-	-
Unenclosed Land (Other)	UL_O	1	0.2	-	-
Woodland (Plantation)	WD_P	1.3	0.2	-	-
Settlement (Designed	S_DL	0.5	0.1	-	-

Landscape)					
Unenclosed Land (Moorland)	UL_M	0.3	0.1	-	-
Industrial Non-Settlement (Active)	I_A	0.2	0.1	-	-
Industrial Non-Settlement (Inactive)	I_I	0.1	0.1	-	-
Totals		**558.1**	**106**	**17**	**40**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.6.3 ***Overall Character of RHLC distribution***

Given its general agrarian character historically, it is not surprising that most of the landscape is currently enclosed land (Figs 4 and 5). Illustrating both its antiquity, and the conservative nature of land use in this RLCA, is the fact that the majority of this area became enclosed in either ancient (31%) or post-medieval (37%) times. Settlements and areas of industrial activity (extraction) form most of the remaining landscape, but in relatively small proportions, suggesting that large areas of the Fylde Plain were unsuitable for settlement before mossland drainage schemes were undertaken. The largest proportion of the settled area is taken up by Preston, with smaller, nucleated settlements scattered throughout the landscape on higher ground. The fact that the RLCA contains an exceptionally small amount of woodland is a reflection of its former mossland character.

A3.6.4 ***Settlement and Enclosure Character***

The settlement character of the Fylde Plain RLCA has been shaped largely by topographic constraints. Prior to the mossland drainage schemes of the eighteenth century, settlements were generally limited to small, dispersed sites situated on or at the edges of higher ground (Middleton *et al* 1995). The network of dispersed settlements was largely established during the medieval period. Known settlements of greater antiquity are rare, although, significant examples include the Roman fort at Dowbridge, Kirkham, and the site at Walton-le-Dale (Howard-Davis and Buxton 2000; Gibbons *et al* forthcoming). Prehistoric activity is demonstrated by Bronze Age barrows at Whitprick Hill, and the distribution of flint-working sites, identified from intensive surveys in the northern part of the plain (Middleton *et al* 1995), as well as the famous Poulton Elk (Hallam *et al* 1973), which had a stone projectile point lodged in it. This suggests anthropogenic activity from the Palaeolithic period, and through the Mesolithic to the later Neolithic periods (Middleton *et al* 1995). The potential for buried archaeological preservation on the plain is exceptional, but the known archaeological record is still limited to those areas where peat removal, by erosion, cultivation or development, have made it visible.

Although the higher ground surrounding the medieval settlements has been subject to arable farming, the character of much of the enclosed landscape of the Fylde

Plain RLCA is largely the result of eighteenth-century drainage schemes. The medium-sized enclosures are defined by drainage channels and hedgerows, and are punctuated by small, landscaped ponds and isolated, sporadic patches of woodland blocks. Since the nineteenth century, more and more enclosures have been changed from arable fields to larger, open pastures, and an amalgamation of smaller enclosures is apparent (Countryside Commission 1998).

The RLCA is dominated by Preston, which had its origins in the twelfth century, attaining a town charter in 1179. In the thirteenth century, a friary was established in the town. In the subsequent centuries, Preston slowly developed, but then expanded rapidly with the expansion of the cotton industry and the opening of the Albert Edward dock in the nineteenth century (Hunt 1992). Preston became a city in 2002.

A3.6.5 ***Non-Agricultural Activity Character***

The industry of the area is varied and reflects development from a largely agricultural economy. Preston is an historic market town and developed a textile industry from the middle of the thirteenth century, when locally produced wool was woven in people's house. This was expanded when Flemish weavers settled in the area during the fourteenth century. The most rapid period of growth and development in Preston's history was a result of the expansion of the textile industry in the nineteenth century, manufacturing cotton cloth (Dickinson 1984). By the middle of the nineteenth century, 80% of the population of Preston depended on this industry.

The creation of Preston's dock was an attempt to develop an output for its textile products and to capitalise on the Atlantic trade (Hunt 1992). The dock was built between 1885 and 1892 and an infrastructure of warehouses and railway connections developed. Unfortunately, the Ribble was unable to cope with the increasing size of shipping, so the dock officially closed in 1981; it now serves as a marina.

A significant post-medieval industrial development was the opening of the Lancaster Canal (Philpott 1983); although the full extent of this has been lost, the section from Preston to near Carnforth being currently open.

A3.6.6 ***Change Scenarios***

This RLCA comprises mainly Ancient and Post-Medieval Enclosed Land, with a lesser amount of Modern Enclosed Land and Residential Settlement. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Woodland Expansion (-3, 1), Rural Settlement Pressure (-3, 2),

Settlement Expansion (-3) and the Regional Spatial Strategy (-1, 1).

Overall Impact: 40 Negative, 15 Positive.

However, perception of this RLCA is characterised as much by the large urban developments, such as Blackpool in the adjacent RLCA, and Preston, as by the areas of Enclosed Land. The pressure to market Blackpool as a 'leisure destination' brings with it an increase in developments such as caravan parks, golf courses and other outdoor pursuits, all of which will have a large impact on the landscape in this RLCA, as well as encroachment into the surrounding historic landscape. This tourism-led expansion is set out in the Regional Spatial Strategy (Government Office for the North West 2008, 145), which focuses on the development of Preston and Blackpool as major economic contributors within the North West.

A3.6.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Consideration should be given to the historic environment within any urban or tourism-led development plans.

- Plans for expansion of the isolated wooded areas within the RLCA should be made in consultation with the appropriate archaeological curator to avoid unnecessary destruction of the enclosed landscape and its characteristic features.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.7 FYLDE COAST (RLCA 8)

A3.7.1 *General Historic Character and Physical Character Description*

The Fylde Coast RLCA is bound by the Lytham – Skippool valley and the Fylde plain to the east, and the Irish Sea to the west (Fig 2). It currently comprises the urbanised landscape extending from Fleetwood in the north, including Cleveleys, and Blackpool, to Lytham St Anne's and the mouth of the Ribble Estuary in the south (Middleton *et al* 1995). Although the area mostly comprises urban settlement, the RLCA also contains intertidal landscapes and farmed pasture land. Poorly drained hollows, filled with post-glacial peat, and sand dunes characterised this landscape until relatively recently. It was only during the eighteenth century, when large-scale drainage of the mosslands occurred (and in the adjacent Fylde Plain RLCA), that settlement began to thrive on the sand dunes, mosses and heavy clay soils of the Fylde Coast (*ibid*). The distinctive character of the RLCA reflects its importance as a seaside recreational area; its significant historical components include many listed buildings and structures of historical significance, and it has potential for buried (particularly prehistoric) archaeology.

A3.7.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Other Residential)	S_OR	39.5	54.1	3	7
Unenclosed Land (Coastal)	U_LC	9.2	13.5	3	7
Designed Landscape (Recreation)	DL_R	6.9	9.4	-	-
Settlement (Modern Residential)	S_MR	4.1	5.6	-	-
Enclosures (Post-Medieval)	E_PM	3.6	5	-	-
Built Environment	BE	2.5	3.4	-	-
Enclosures (Modern)	E_M	2.5	3.4	-	-
Industrial Non-Settlement (Other)	I_O	1.8	2.4	-	-
Settlement (Industrial)	S_I	1.4	1.9	-	-
Enclosures (Ancient)	E_A	0.5	0.8	-	-
Communications	C	0.7	0.2	-	-
Woodland (Other)	WD_O	0.1	0.2	-	-
Water (Artificial)	W_A	0.1	0.1	-	-
Totals		**72.9**	**100**	**6**	**14**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.7.3 ***Overall Character of RHLC distribution***

Most of the Fylde Coast comprises the Settlement Broad Character Type, and most belongs to the one of a few Residential sub-types (Figs 4 and 5). In total, the settled area is 62% of the whole RLCA, reflecting its distinctly urbanised character. Unenclosed coastal landscapes (14%) survive, but only a very small part of this area has been enclosed for strictly agricultural purposes. This reflects the poor quality of some coastal land and that an amount of formerly agricultural land has been lost to the expanding needs of tourism and recreation. The relatively large proportion (9%) of strictly recreational land (which in this case comprises an historic golf course near Blackpool) is expected, given the area's character as a series of seaside resorts.

A3.7.4 ***Settlement and Enclosure Character***

Although the settlement character of the Fylde Coast is largely the result of relatively recent recreational developments, the area does not lack historical significance, as important prehistoric and medieval sites have been found within this relatively small RLCA. Early activity, is reflected by the famous Poulton Elk, found near Blackpool, which was hunted in the Palaeolithic period in what was then a heavily wooded landscape with swamps and bogs (Middleton *et al* 1995, 11-12). There are also lithic scatters across the area, which are thought to date from the Mesolithic period, and an ephemeral Neolithic settlement was reported in the sand dunes north of St Anne's (*op cit*, 90-1). A possible Iron Age settlement with roundhouses, roadway and defensive embankments has recently been identified at Bourne Hill, between Fleetwood and Thornton, by the Wyre Archaeology Group (http://www.thornton.btik.com/p_The_Iron_Age_and_The_Romans.ikml). The recent discovery of a native settlement of the Roman period at Poulton-le-Fylde indicates some activity within the RLCA at that time (OA North forthcoming b), and potentially links with a Roman road postulated as extending north and west from Kirkham (OA North and University of Liverpool 2008b).

Although several communities within the area are referred to in Domesday Book (Faull and Stinson 1986), this survey implies that the coast was sparely inhabited during the early medieval period. A Benedictine monastic cell was established at Lytham in the twelfth century (Farrer and Brownbill 1912). The settlement and enclosure pattern, as recognised today, seems to have been established in the sixteenth century, when Bispham was a main centre on the coast, with Poulton further inland on the plain (*ibid*). Large areas of the landscape were enclosed at that time, and the field pattern was punctuated by dispersed farmsteads.

The urban conurbation of Blackpool grew in the late eighteenth century from a collection of such farmsteads, following the growth of the ports at Skippool and Hambleton. Owing to the popularisation of sea bathing, and later combined with the recreational needs of Lancashire's mill workers, and improved rail communications, the area developed into the seaside resort of today (Cunliffe 1997).

Formerly an agricultural landscape, the Fylde Coast, also known as the Windmill Coast, contained 35 windmills in the mid-nineteenth century (*ibid*), several of which

survive (*eg* Marsh Mill, Grade II Listed).

A3.7.5 ***Non-Agricultural Activity Character***

The Fylde Coast RLCA's distinctive historic character relates to its role as a recreational centre for the area. It experienced significant growth in the late eighteenth – early nineteenth century, when all of the coastal communities, but particularly Blackpool, developed into seaside resort towns (Cunliffe 1997). The arrival of the railway joining Blackpool to the main Preston and Wyre Joint Railway line in 1846 facilitated easy communications from the agricultural and industrial landscapes further east, cementing this recreational role. The practice of closing the Lancashire mills annually for repairs ensured a steady stream of tourists and visitors. The North, Central and South piers were built, and by the 1890s the town had dramatically expanded, to service up to 250,000 holidaymakers at any one time. The industry has declined since its heyday, but the economy of the town is still dominated by tourism.

The fishing industry has been important to the area, and to Fleetwood in particular. The port there was developed from the 1860s with the construction of Wyre Dock (completed 1877; Dobson 1991). By the 1890s the fishing industry had superseded trade as the main employer of the town, taking advantage of good rail links to get the fish quickly to the customer; the heyday of the fishing industry was in the 1920s.

During World War II, the RAF station at Blackpool was reputed to be the largest military training centre in the world, and the golf club outside the town was adapted for use as additional runways (Cunliffe 1997).

The area has been influenced by the chemical industry, at Fleetwood / Thornton since the 1920s. An existing saltworks was expanded, and became an ammonia-processing plant belonging to ICI, which built an adjacent chemical-processing plant, known as ICI Hillhouse (http://en.wikipedia.org/wiki/Fleetwood).

A3.7.6 ***Change Scenarios***

This RLCA is predominantly Residential Settlement and Unenclosed Coastal Land. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Settlement expansion (-3), Regional Spatial Strategy (-1, 1), Climate Change (-3), Coastal Development (-1). The Regional Spatial Strategy is listed as a change scenario in both character types.

Overall Impact: 14 Negative, 6 Positive.

The pressure to market Blackpool as a 'leisure destination' brings with it an increase in developments such as caravan parks, golf courses and other outdoor pursuits. This

tourism-led expansion is set out in the Regional Spatial Strategy (Government Office for the North West 2008, 145).

A3.7.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which respects and enhances the existing structure and layout of the settlement that it is a part of. The development should reflect and enhance the local historic building styles and materials.

- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged, wherever possible. This should be highlighted as a benefit to both the historic landscape character and the reduction of carbon costs though unnecessary new build.

- If at all possible, housing renewal, through the demolition and replacement of housing that contributes to the historic character of an area, should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

Generic Objectives for the Unenclosed Land character type:

- Interpretation of the landscape should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation,

and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- The evidence for relict occupation and land use should be conserved and enhanced.

- Agri-environment schemes should be targeted to conserve and enhance valuable historic features. Hedges and walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open and bracken and European gorse domination reduced.

- Research on historic relationships between Unenclosed and Enclosed Land should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management are encouraged.

- The management and restoration of historic features such as vernacular buildings should be encouraged. It should be recognised at all times that the network of walls, historic trackways and isolated agricultural buildings is a distinctive feature of the moorland landscape, providing time-depth and inter-county historical variation.

- Stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be avoided.

- The conservation of footpaths, bridleways or byways should be encouraged, along with their associated features such as pinch stiles and gates. The

management of such features to avoid erosion of the surrounding soils, and littering, should be undertaken.

A3.8 LANCASHIRE VALLEYS AND PENDLE HILL (RLCA 15)

A3.8.1 *General Historic Character and Physical Character Description*

The RLCA incorporates the valleys of the Rivers Darwen and Calder, which form a natural corridor into the Pennines towards Leeds / Bradford (Fig 2). The availability of a good water supply and its links with the early wool industry, centred on Leeds and Halifax, contributed to the industrial and urban development of this RLCA. Blackburn was an important medieval town; during the later medieval and early post-medieval periods, there was small-scale development of the woollen industry in the valley that enabled the very large expansion of the mill towns of Blackburn, Darwen, Accrington, Burnley and Nelson (Abram 1877; Bennett 1969). The development of these towns was, however, constrained by the surrounding upland topography, particularly to the south.

A3.8.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	148.6	33.4	4	11
Enclosures (Post-Medieval)	E_PM	127.7	28.7	4	11
Settlement (Modern Residential)	S_MR	32.9	7.4	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	27.8	6.3	-	-
Settlement Other (Residential)	S_OR	24.4	5.5	-	-
Unenclosed Land (Moorland)	UL_M	19.5	4.4	-	-
Designed Landscape (Recreation)	DL_R	14.3	3.2	-	-
Woodland (Other)	WD_O	12.9	2.9	-	-
Enclosures (Modern)	E_M	11.3	2.5	-	-
Industrial Non-Settlement (Other)	I_O	5.1	1.1	-	-
Designed Landscape (Ornamental)	DL_O	4.7	1.1	-	-
Water (Artificial)	W_A	4.2	0.9	-	-
Settlement (Industrial)	S_I	3.5	0.8	-	-
Woodland (Plantation)	WD_P	2.1	0.5	-	-
Communications	C	2.0	0.4	-	-
Industrial Non-Settlement (Active)	I_A	1.7	0.4	-	-
Industrial Non-Settlement (Inactive)	I_I	0.6	0.1	-	-
Built Environment	BE	0.3	0.1	-	-
Water (Natural)	W_N	0.5	0.1	-	-
Settlement (Civic)	S_CV	0.2	0.1	-	-
Settlement (Designed Landscape)	S_DL	0.5	0.1	-	-
Totals		**444.8**	**100**	**8**	**22**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.8.3 ***Overall Character of RHLC distribution***

Surprisingly, given the expanse of urbanised settlement throughout the Lancashire Valleys and Pendle Hill RLCA, the area's predominant historic landscape character type is Enclosed Land, with 62% of the RLCA enclosed prior to the twentieth-century, and 33% enclosed in antiquity (Figs 4 and 5). Ancient enclosures survive across the area's northern boundary with the Ribble Valley Lowlands, and between the main settlement areas of Chorley, Blackpool, Burnley, Nelson and Colne, as well as along the southern boundary with the Southern Pennines RLCA (Fig 2). These southern enclosures are reclaimed moorland, as evidenced by the vast extent of the latter within the Southern Pennines RLCA (*Section A3.9*). Settlement areas, both modern and those of some antiquity, characterise the majority of the remaining area, and stretch as a nearly continuous band along the Calder Valley from Chorley to Colne. Over 20% of the area comprises residential or industrial coverage, reflecting this urbanisation. Given the industrial origins of many of the towns, the industrial area is relatively small, and reflects the fact that significant numbers of mills have been demolished in the later twentieth-century (OA North 2010b).

Despite the impression provided by the statistics, the salient landscape character of the RLCA is the urbanisation and industrial remains that developed during the eighteenth and nineteenth centuries.

A3.8.4 ***Settlement and Industrial Character***

The RLCA is dominated by the line of mill towns extending through the valley, which have had a complicated development that extends back to at least the medieval period. Blackburn was an important medieval town (Abram 1877), wool production there being recorded from the thirteenth century. Flemish weavers who settled in the area during the fourteenth century helped to develop the woollen cottage industry in the region. The natural communication line with the wool towns of Yorkshire (Leeds, Bradford and Halifax) encouraged the development of small-scale weaving sheds, which were established in the town of Burnley and other mill towns by the seventeenth century (*ibid*). In the middle of the eighteenth century, cotton largely superseded wool production and cotton-spinning water mills were developed, taking advantage of the abundance of streams and rivers in this area. In 1796, the Leeds / Liverpool canal was completed in the area and enabled the transfer of raw materials in and the finished product out, contributing to the expansion of the urban centres (*ibid*).

Local coal reserves fuelled a further expansion of the textile industry with the development of steam-powered mills, and by the mid-nineteenth century, Burnley

was one of the largest textile-production centres in the world (Bennett 1969).

Accrington's development was closely linked into the textile industry, manufacturing spinning machinery, and for a period had the largest textile machinery output of any town in the world (Halstead and Duckworth 2000).

With the decline of the textile industry in the twentieth century, the towns have also been in decline and have had to reinvent themselves. Most of the mills of Blackburn have been demolished as part of regeneration programmes, which have tried to change its gritty mill town reputation, and there is a relative dearth of mills surviving in some of the towns. In Pendle Borough, 18 of the surviving 109 mill have sustained considerable or complete demolition over the last ten years (16.5% of surviving mills; OA North 2010b). Surrounding the towns are the outlying remains of the industry: reservoirs for supplying water to the mills, as well as quarries and mining remains.

In addition to the industrial heritage of the region, many prehistoric burial mounds have been identified on the hills surrounding the towns. There are also significant halls and estates, the owners of which have largely benefited from the fortunes of the textile industry; these include Towneley Hall, Gawthorpe Hall, Shuttleworth Hall, and Read Hall (Robinson 1991).

A3.8.5 ***Change Scenarios***

Over 62% of this RLCA comprises Enclosed Land (Ancient and Post-Medieval). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 22 Negative, 8 Positive.

The urban settlement, forming a band from Chorley, north-east to Colne, has had a large impact on the landscape of this RLCA, despite its proportionally small size. Blackburn is identified within the Regional Spatial Strategy (Government Office for the North West 2008, 145) as an area of growth and knowledge-based development. Few of the mills that enabled the expansion of these towns survive, as they have been largely cleared as part of urban redevelopment. A continuation of this policy will have a great impact on the surviving heritage resource.

A3.8.6 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the

RLCA's area.

Generic Objectives for the Enclosed Land character type:

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls, as boundaries of still-functioning fields, should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- Advocate the retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement

pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.9 SOUTHERN PENNINES (RLCA 38)

A3.9.1 *General Historic Character and Physical Character Description*

The RLCA is formed by the southern part of the Pennines, south of the Ribble Valley, and is an area of rolling upland that has divided the major urban conurbations of Greater Manchester, Leeds/Bradford and the Lancashire Mill towns (Fig 2). The majority of the RLCA is in West Yorkshire and thus outside the North West, but a western outlier of uplands is within Lancashire. The RLCA description given here, and the associated RHLC statistics, only cover that western part of the RLCA in Lancashire. It is an expansive sweeping landscape of exposed upland moorland, used predominantly for pasture. The moorland plateau is the source of major river systems, such as the Aire, Colne and Calder, which flow eastwards, and the Roach and Thame, flowing westwards.

While the uplands have impeded the expansion of urban and industrial sprawl, their proximity to the intensive industrial centres has had an impact. There are extensive extraction sites across the area and the uplands are a valuable water catchment, containing many reservoirs which provide water for the surrounding conurbations. The valleys are occupied by villages and small towns, particularly Rawtenstall and Bacup.

Much of the upland areas are covered by peat, and this has both discouraged prehistoric activity and hidden its remains; however, there is, for the county, a relatively rich archaeological resource within these uplands, particularly on Anglezarke Moor in the west (OA North 2009b). Mesolithic flint scatters have been found in exposures beneath the peat, which are testament to considerable activity on the uplands before the onset of peat growth. Later remains, notably Bronze Age burial monuments, exist on the margins of the individual upland blocks.

A3.9.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table. Only 403 sq km of the 918 sq km Southern Pennines RLCA has HLC coverage, and these proportions relate to the area of coverage only.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Moorland)	UL_M	149.8	37.1	2	10
Enclosures (Post-Medieval)	E_PM	121.7	30.2	4	11
Enclosures (Ancient)	E_A	80.1	19.9	4	11
Woodland (Other)	WD_O	8.3	2.1	-	-
Settlement (Other Residential)	S_OR	8.3	2.0	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	6.2	1.5	-	-
Enclosures (Modern)	E_M	6.1	1.5	-	-
Industrial Non-Settlement (Inactive)	I_I	4.9	1.2	-	-
Water (Artificial)	W_A	4.2	1.0	-	-

Settlement (Modern Residential)	S_MR	3.5	0.9	-	-
Woodland (Plantation)	WD_P	3.0	0.7	-	-
Designed Landscape (Recreation)	DL_R	2.9	0.7	-	-
Industrial Non-Settlement (Active)	I_A	2.8	0.7	-	-
Industrial Non-Settlement (Other)	I_O	1.3	0.3	-	-
Totals		**394.8**	**100**	**10**	**32**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.9.3 ***Overall Character of RHLC distribution***

As most of the Southern Pennines RLCA lies outside of Lancashire, the HLC coverage is restricted to the area's western half. For that part of the RLCA within Lancashire, the predominant historic landscape character type is Enclosed land (50%), with a significant proportion pre-dating *c*1700 and most pre-dating *c*1800 (Fig 5). This land, spread outside the valleys, and combined with the large proportion of Unenclosed moorland, indicates the largely agricultural and conservative character of this landscape. The substantial expanse of post-medieval enclosures reflects the Parliamentary intake of moorland in the eighteenth and nineteenth centuries. The relatively small proportion of Settlement is misleading, as the eastern part of the RLCA is not included in these figures, but this type of land use is clearly concentrated throughout the main valleys of the area.

A3.9.4 ***Settlement and Industrial Character***

The rolling moorland of the western part of the RLCA has extensive peat cover over the higher lands, which started forming from the late Mesolithic period onwards (OA North 2009b), and once formed, discouraged further activity. There is a propensity for Mesolithic flint finds to be revealed in exposures through the peat within the area, the most notable example being at Rushy Brow on Anglezarke Moor, where excavations revealed a temporary settlement site (Howard-Davis 1996).

In the Neolithic period, there was limited activity, best represented, again, on Anglezarke Moor, where the only two chambered cairns in Lancashire have been identified (*ibid*). There is a substantial concentration of prehistoric activity on Anglezarke, exceeding the other parts of the RLCA, which may reflect the proximity to the lowland plain to the immediate west.

From the Bronze Age, there is a scattering of burial mounds across the uplands, typically located on high points with good outward vistas; notable examples include the round cairns on Winter Hill and Worsthorne Moor. Bronze Age examples of

stone circles are to be found at Worsthorne, but also at Cheetham Close (Middleton 1996). Early agricultural, and possibly settlement, activity is represented by the cairnfield at Stronstrey Bank on Anglezarke (OA North 2009b).

Roman activity is limited, beyond the construction of the Manchester to Ribchester road through the region, and only limited occupation of the upland areas of Anglezarke was indicated by palaeobotanical evidence (*ibid*).

In the medieval period, much of the western part of the RLCA was a part of the Forest of Rossendale, which meant that the land was reserved for hunting, and as such discouraged the expansion of settlement, apart from vaccaries, which were cow farms run directly by the lord of the manor (Newman 1996). Extensive enclosure of the former forest did not occur until the early seventeenth century, when a series of decrees enabled intake of the waste land (Winchester 2006).

The availability of water power, coupled with the proximity of the South Pennines to the centre of the cotton industry, meant that there was inevitably an expansion of settlement and industry. Haslingden developed from the late seventeenth century, but most of the expansion of the three valley towns of Haslingden, Rawtenstall and Bacup was during the early part of the nineteenth century (Aspin 1962), to provide accommodation for workers in the increasing numbers of cotton mills.

The mineral and geological resources of the uplands were heavily exploited during the eighteenth and nineteenth centuries to provide for these expanding mill towns. This varied from millstone working on Anglezarke Moor (Howard-Davis 1996), to the major quarries exploiting the millstone grit sandstones around Rawtenstall. The latter was a major, industry that expanded in the middle of the nineteenth century and provided the stone for the construction of the surrounding towns; the stone was of such quality, thouth, that it was exported to Paris.

The surviving landscape of the valleys is largely a product of this industrial episode; the housing developed around the mills, of which most have now gone, and settlement survives as extensive rows of terraces clinging to the hillsides. Higher up the valleys are the scars of coal mines and quarries.

A3.9.5 ***Change Scenarios***

Over 37% of this RLCA comprises Unenclosed Land and post-medieval enclosures. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-2), Agriculture (-2, 1), Climate Change (-3, 1), Woodland Expansion (-3, 1), Change in Use (-2), Flood Risk Management (-2, 2), and Tourism (-1, 1). Of these scenarios, Agriculture and Woodland Expansion have the potential to impact on both major character types.

Overall Impact: 20 Negative, 8 Positive.

A3.9.6 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Plans for expansion of woodland should be discussed with the appropriate archaeological curator.

- Sensitive agricultural and environmental management regimes should be put in place to minimise unforeseen damage to the historic environment.

Generic Objectives for the Unenclosed Land character type:

- Interpretation of the landscape should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- The evidence for relict occupation and land use should be conserved and enhanced.

- Agri-environment schemes should be targeted to conserve and enhance valuable historic features. Hedges and walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open and bracken and European gorse domination reduced.

- Research on historic relationships between Unenclosed and Enclosed Land should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management are encouraged.

- The management and restoration of historic features such as vernacular buildings should be encouraged. It should be recognised at all times that the network of walls, historic trackways and isolated agricultural buildings is a distinctive feature of the moorland landscape, providing time-depth and inter-county historical variation.

- Strategies should be developed, in consultation with the fire service, to limit the impact of moorland fires on visible historic features or buried archaeological remains.

- The visibility of archaeological sites should be improved by clearing bracken and scrub vegetation. A low level of stock grazing is a sustainable way of achieving this, but sensitive management is required to avoid soil erosion. Where possible, woodland establishment in historically important areas should be avoided. Maintenance of thin peat soils, and hence the archaeological remains within them, may be promoted through rotational heather burning. Bracken should be controlled by spraying, as opposed to mechanical means that may damage the archaeological resource.

- Whole-fell grazing management should be promoted where possible, erecting new fences on open fell only where alternatives are not practicable. The careful design of new fencelines should minimise visual and perceptual impacts, for example avoiding crossing and close proximity to fell paths, siting below ridgelines.

- Stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be avoided.

- The conservation of footpaths, bridleways or byways should be encouraged, along with their associated features, such as pinch stiles and gates. The management of such features to avoid erosion of the surrounding soils, and littering, should be undertaken.

A3.10 RIBBLE ESTUARY AND COAST (RLCA 30)

A3.10.1 *General Historic Character and Physical Character Description*

From an historic environment perspective, the Ribble Estuary and Coast RLCA (Fig 2) has little direct significance. Although the area's importance as an SSSI, a Special Protection Area and a National Nature Reserve cannot be understated, its general historic character is relatively recent. The boundary of the RLCA is drawn so that all settlements in the environs are excluded from it, and are included instead within the adjacent Fylde Coast, Fylde Plain, the West Lancashire Plain and the Sefton Coast RLCAs. Until the mid-nineteenth century, and efforts to straighten and deepen the river channel for shipping, most of the land in this RLCA was inaccessible, and was inappropriate for habitation (Greenhalgh 2009).

A3.10.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Coastal)	UL_C	91.6	67.7	1	4
Enclosures (Modern)	E_M	21.3	15.7	4	11
Enclosures (Post-Medieval)	E_PM	8.1	6	-	-
Water (Natural)	W_N	6.8	5	-	-
Industrial Non-Settlement (Other)	I_O	2.1	1.5	-	-
Enclosures (Ancient)	E_A	1.6	1.2	-	-
Settlement (Industrial)	S_I	0.9	0.7	-	-
Settlement (Designed Landscape)	S_DL	0.9	0.7	-	-
Designed Landscape (Recreation)	DL_R	0.9	0.7	-	-
Settlement (Other Residential)	S_OR	0.7	0.5	-	-
Settlement Modern Residential	S_MR	0.3	0.2	-	-
Settlement (Civic)	S_CV	0.1	0.1	-	-
Totals		**135.3**	**100**	**5**	**15**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.10.3 *Overall Character of RHLC distribution*

The majority (68%) of the Ribble Estuary and Coast RLCA's historic character is natural, Unenclosed Coastal land, with a smaller but significant proportion (16%)

belonging to the Modern Enclosures type (Fig 5). The latter represents land reclaimed from the former salt marshes of the estuary. Excluding water, all other historic character types are represented by only very small proportions.

A3.10.5 ***Settlement and Enclosure Character***

The Ribble Estuary and Coast RLCA boundary is drawn just around the edges of settlements that should, because of their historical relationship with the River Ribble, be considered part of this landscape unit. Lytham, for example, is inside the Fylde Coast RLCA, while Freckleton and Preston are within the Fylde Plain, and Southport is in the Sefton Coast. These communities grew largely around their ports, as the river represented one of the more important shipping routes for the North West.

The relatively small amount of enclosed land was created after the mid-nineteenth century, when training walls on either side of the main navigation channel were constructed, and silt excavated from the newly deepened channel was resituated within the off-shore channels (Greenhalgh 2009). Landowners on the southern bank of the estuary then had the opportunity to reclaim large areas of former salt marsh, and the process of enclosing this land has continued until recently.

A3.10.5 ***Non-Agricultural Activity Character***

Since this is predominantly an estuarine area, there is little additional industry. In the nineteenth century attempts were made to improve the river channel, as part of an enhancement of the port facilities at Preston, but this was short-lived and the river is now mainly used for recreational boating.

Landscape and nature conservation are important contributors to this character area, in the form of bird-watching and nature reserves.

A3.10.6 ***Change Scenarios***

The character types covering over 10% of the RLCA are Unenclosed Land (Coastal), covering nearly 68%, and Modern Enclosed Land, covering 16%. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Climate Change (-3), Development (-1), Regional Spatial Strategy (-1, 1), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2) and Tourism (-1, 1).

Overall Impact: 15 Negative, 5 Positive.

The natural flood defences of salt marsh and dunes in this area have been vastly reduced by the reclamation of salt marshes for grazing land, and the clearance of sand dunes. The current policy, however, as set out in the Shoreline Management Plan (Halcrow 2009e), advocates a 'hold the line' approach for the majority of the area, at least in the short- to medium-term. In some areas such as Hesketh Marsh, there is some conflict between the need for agricultural land and a desire to allow salt marshes to revert to their natural state, as advocated by the RSPB and the Environment Agency.

The impact of tourism in the area is double-edged. Low-impact tourism in the form of visitors to nature reserves or walkers provides economic benefit, but the increasing use of the estuary for water-sports such as jet skis has a negative impact on the character and tranquillity of the area, and results in a likelihood of environmental damage.

A3.10.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Unenclosed Land character type:

- Interpretation of the landscape should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- The evidence for relict occupation and land use should be conserved and enhanced.

- Agri-environment schemes should be targeted to conserve and enhance valuable historic features. Hedges and walls should be repaired/maintained, but not wholly rebuilt (as dismantling damages or destroys their fabric). Lanes should be kept open and bracken and European gorse domination reduced.

- Research on historic relationships between Unenclosed and Enclosed Land should contribute to the construction of models for sustainable future relations. Further agricultural improvement should be discouraged, at the same time as more sustainable (generally traditional) land use and management are encouraged.

- The management and restoration of historic features such as vernacular buildings should be encouraged.

- The conservation of footpaths, bridleways or byways should be encouraged, along with their associated features such as pinch stiles and gates. The management of such features to avoid erosion of the surrounding soils, and littering, should be undertaken.

Generic Objectives for the Enclosed Land character type:

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.11 WEST LANCASHIRE PLAIN (RLCA 43)

A3.11.1 *General Historic Character and Physical Character Description*

The West Lancashire Plain is very low lying, and has historically incorporated large areas of wetland (Fig 2). This has largely been reclaimed and is now high-quality agricultural land. Historically, settlement has concentrated on the better-drained, sand islands that rose above the areas of mire. On such islands there is invariably a palimpsest of many periods of activity extending through to the present, and they have high densities of archaeological remains. The older developed settlements, such as Ormskirk, are located on the high ground in the southern part of the RLCA. There is overall a close correlation between settlement patterns, altitude and drainage.

A3.11.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	138.2	32.3	4	11
Enclosures (Modern)	E_M	136.5	31.9	4	11
Enclosures (Ancient)	E_A	60.5	14.1	4	11
Settlement Other (Residential)	S_OR	26.9	6.3	-	-
Settlement (Modern Residential)	S_MR	11.2	2.6	-	-
Settlement (Historic Residential)	S_HR	9.2	2.1	-	-
Woodland (Plantation)	WD_P	6.8	1.6	-	-
Designed Landscape (Ornamental)	DL_O	5.1	1.2	-	-
Settlement (Civic)	S_CV	5.1	1.2	-	-
Settlement (Designed Landscape)	S_DL	4.7	1.1	-	-
Settlement (Industrial)	S_I	4.5	1.1	-	-
Unenclosed Land (Other)	UL_O	4.2	1.0	-	-
Woodland (Other)	WD_O	3.5	0.8	-	-
Communications	C	3.2	0.7	-	-
Designed Landscape (Recreation)	DL_R	2.8	0.7	-	-
Settlement (Commercial)	S_CM	3.1	0.7	-	-
Industrial Non-Settlement (Other)	I_O	1.6	0.4	-	-
Water (Artificial)	W_A	0.8	0.2	-	-
Totals		**427.9**	**100**	**12**	**33**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.11.3 ***Overall Character of RHLC distribution***

Like the neighbouring Fylde Plain, the majority of the West Lancashire Plain RLCA belongs to the Enclosed Land historic landscape character type, a substantial amount (14%) being surviving ancient enclosures, and most of this area was enclosed prior to the twentieth century (Fig 5). Ancient enclosures are found exclusively in the immediate surroundings of the main settlement areas such as Ormskirk, while post-medieval enclosures seem to be largely restricted to the northern and western parts of the RLCA. The larger settlement areas are the towns of Ormskirk, Skelmersdale (part of which is found within the Lancashire Coal Measures RLCA) and Maghull. A small, but relatively significant, amount of the area is of the Ornamental Designed Landscape sub-type, which demonstrates the number of parkland estates in the area, such as Rufford Old Hall, Lathom House, Downholland Hall, and Scarisbrick Hall.

A3.11.4 ***Settlement and Enclosure Character***

Archaeological activity in the area dates back to the late Mesolithic period, as indicated by the finding of scatters of flint tools, particularly in the eastern part of the RLCA, and this activity continued into the Neolithic period (Middleton *et al* forthcoming). Bronze Age burial mounds have been identified on the higher ground at the eastern margins of the area, near Parbold. Settlement has developed at a number of well-drained sand islands within the area, typified by a sand island at Lathom, where there has been activity over an extended period (Cowell 2002). The earliest indications were a scatter of flint implements from the late Mesolithic period, and a late Iron Age farmstead of about 100 BC was later established, comprising a group of four roundhouses, their use extending into the Roman period; field systems also abound from this period. A medieval moated site was established at Lathom belonging to the de Lathom family (Neil *et al* 2005), one of a general profusion of medieval moated sites within the area, some of which developed into large estates, others dwindling into obscurity. Lathom, after the battle of Bosworth in 1485, became the site of a very large castle, which became the political capital of the North West; this influence ceased after it was slighted following the second of two sieges in the English Civil Wars in 1645.

In the medieval period, monastic and manorial sites such as Burscough Priory, Rufford Old Hall, and Lathom House controlled and owned much of the surrounding land and this in some instances inhibited the development of nucleated settlement (*ibid*).

Ormskirk, the largest town in the RLCA, had its origins as an ecclesiastical site (hence the name) and dates to at least the eleventh century; it subsequently developed as a market town and as an administrative centre (Duggan 2005). Much of the urban development of the RLCA occurred in the post-medieval period, following the draining of the mosses, particularly at sites such as Skelmersdale and Maghull.

Some medieval nucleated villages developed, but these were on the southern and eastern, better-drained lands, such as at Newburgh, Croston and Parbold; elsewhere, there is considerable dispersed settlement, which increased following the draining of

the mosses.

A3.11.5 ***Non-Agricultural Activity Character***

This landscape has a largely agricultural character, and there has been relatively little industrial activity within the RLCA. There were limited amounts of coal extraction at the far eastern edges of the area, but this was very much at the edge of the Lancashire coalfields, and it was not particularly productive. Within the RLCA is the Martin Mere Wildlife and Wetlands Trust, which reflects the former wetland character of much of the area. There is some peat extraction undertaken in the area of Simonswood Moss (east of Kirkby) and at White Moss (south of Skelmersdale) (Cowell and Innes 1994).

A3.11.6 ***Change Scenarios***

Almost 80% of this RLCA is covered by Enclosed Land of all periods. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Woodland Expansion (-3, 1).

Overall Impact: 33 Negative, 12 Positive.

Changes in land use and intensification of agricultural practices are already a problem in this RLCA. There are increasing numbers of caravan parks and other features associated with tourism and recreation, and there has been a gradual loss of traditional enclosures. A lack of woodland management has led to the degradation of the traditional hedgerow and small woodland areas.

A3.11.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Traditional hedgerows should be reintroduced.

Generic Objectives for the Enclosed Land character type:

- The retention of field furniture should be promoted, particularly ditches,

gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A3.12 LANCASHIRE COAL MEASURES (RLCA 14)

A3.12.1 *General Historic Character and Physical Character Description*

The RLCA is characterised by relatively shallow coal measures, which provided the fuel for the massive industrial expansion of the region in the nineteenth century (Fig 2). The landscape is characterised by the settlement and industry that developed out from the direct winning of the coal, and also the industry that was encouraged by the availability of local coal. The rural landscape is dominated by a complex arrangement of urban centres, derelict coal workings and coal flashes, intermixed with agricultural land. The urban centres developed from villages or small towns and developed primarily as a result of coal mining, but also from the development of textile mills.

A3.12.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	68.4	26.7	4	11
Enclosures (Post-Medieval)	E_PM	43.3	16.9	4	11
Settlement (Modern Residential)	S_MR	40.8	15.9	3	7
Settlement (Designed Landscape)	S_DL	15.6	6.1	-	-
Settlement (Other Residential)	S_OR	14.6	5.7	-	-
Settlement (Industrial)	S_I	13.2	5.1	-	-
Enclosures (Modern)	E_M	12.7	5	-	-
Designed Landscape (Recreation)	DL_R	10	3.9	-	-
Settlement (Civic)	S_CV	6.3	2.5	-	-
Woodland (Other)	WD_O	5.5	2.2	-	-
Communications	C	5.4	2.1	-	-
Unenclosed Land (Other)	UL_O	5.4	2.1	-	-
Settlement (Commercial)	S_CM	4.9	1.9	-	-
Water (Artificial)	W_A	2.6	1	-	-
Settlement (Historic Residential)	S_HR	2.2	0.9	-	-
Industrial Non-Settlement (Active)	I_A	1.9	0.7	-	-
Woodland (Plantation)	WD_P	1.4	0.6	-	-
Industrial Non-Settlement (Other)	I_O	0.9	0.3	-	-
Industrial Non-Settlement (Inactive)	I_I	0.5	0.2	-	-
Designed Landscape (Ornamental)	DL_O	0.5	0.2	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	0.2	0.1	-	-
Water (Natural)	W_N	0.2	0.1	-	-
Totals		**256.5**	**100.2**	**11**	**29**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care

should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A3.12.3 ***Overall Character of RHLC distribution***

The Lancashire Coal Measures RLCA overlaps the county boundaries of Lancashire, Merseyside and Greater Manchester, but the HLC coverage for Greater Manchester does not currently include the Local Authority of Wigan. Comments on the distribution and meaning of Regional Historic Landscape Character types are therefore limited. Like most RLCAs in the North West, the majority of this area (49%) is of the broad Enclosed Land character type (Fig 5). A large proportion of this area (27%) was apparently enclosed prior to 1700, but this may be misleading, given that a substantial proportion of the area has been reclaimed from coal-mining areas, and the figures do not include Wigan Borough, where much of the mining was undertaken. Far less land (5%) has been recently enclosed, as land use in this area has shifted away from agriculture, towards the needs of modern urban living. The currently settled area comprises 38% of this RLCA, and a significant proportion of this is modern development. It is notable that in the Lancashire Coal Measures, only a fraction of the landscape has been classified as industrial non-settlement, which in part indicates that most of the former coal mines are no longer active, but also that this is a very small sample of the overall area.

A3.12.4 ***Settlement and Industrial Character***

Wigan and other towns within the RLCA have had at least medieval origins; Wigan was awarded royal borough status in 1246, but had Roman antecedents (I Miller *pers comm*; Hannavy 1990). The earliest coal mining in Wigan dates back to 1450, and since then there has been a steady increase in coal extraction, at its peak in the nineteenth century there being 1000 shafts within the immediate environs of the town (Galloway 1971).

Many of the former villages expanded on the back of coal mining. The demand dramatically increased in the early nineteenth century in response to the move from water to steam-powered textile mills, coupled with a general expansion in the textile industry. Initially, mining was undertaken within shallow mine shafts, but, as the seams were relatively close to the surface, there was a move to opencast coal extraction in the nineteenth century (*ibid*). The scars of this activity are numerous flashes and spoil heaps; however, considerable efforts have been made to reclaim the mining landscape and return it to agriculture, and the evidence for the historic mining landscape is steadily being lost. The area has been seen as a prime target for urban regeneration and there has recently been an expansion of housing developments around the edges of the towns onto the brownfield, former mining areas.

In addition to coal mining, there were also many mills established within the towns in order to exploit the availability of the coal and good communications provided by canal and rail links. St Helens became a centre for glass production as a result of the development by Pilkingtons of the Siemens process for clean and efficient glass production. Only two of the many former glass-manufacturing tank houses remain,

of which one has been made into a museum celebrating glass manufacture (Krupa and Heawood 2002).

The landscape is dominated by its industrial past, both in the development of its settlements but also in the present-day, largely reclaimed, landscapes.

A3.12.5 ***Change Scenarios***

The character of this RLCA is one of Enclosed Land (Ancient and Post-Medieval) and Residential Settlement. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Settlement Expansion (-3) and the Regional Spatial Strategy (1, -1). It is considered unlikely that woodland expansion is a relevant scenario as there is relatively little existing woodland within the area. Furthermore, rural settlement expansion pressures are also considered unlikely.

Overall Impact: 29 Negative, 11 Positive.

The Regional Spatial Strategy (Government Office for the North West 2008, 133) identifies Wigan as a potential growth area. It has been highlighted for retail growth, with a corresponding increase in the visitor numbers and transport this would bring. It is also highlighted as an area where expansion of housing should concentrate primarily on brownfield land and buildings. Furthermore, the Wigan/Salford Greenheart Regional Park, in the north-east of this RLCA, is identified as a potential Regional Park, for high-quality recreation and leisure activities (*op cit*, 98).

A3.12.6 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- The sympathetic treatment of the historic landscape should be permanent throughout any development, and with any increase in tourism/foot-fall.

Generic Objectives for the Enclosed Land character type:

- The retention of field furniture should be promoted, particularly ditches, gateposts, hog holes, sheep-folds, stone-stiles, ponds and man-made but naturally fed stock-drinking areas.

- The retention of smaller, irregular fields, along with the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged. Hedgerows should be maintained through gapping up and the use of appropriate local hedge-laying techniques. Dry-stone walls as boundaries of still-functioning fields should be maintained, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows should be promoted, in order to replace overly mature specimens.

- The retention and enhancement of old orchards should be advocated, as should the restoration and creation of orchards around farmsteads in areas where they were once more common.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which respects and enhances the existing structure and layout of the settlement

that it is a part of. The development should reflect and enhance the local historic building styles and materials.

- The retention, reuse and adaptation former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to both the historic landscape character and the reduction of carbon costs though unnecessary new build.

- If at all possible, housing renewal through the demolition and replacement of housing that contributes to the historic character of an area should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

APPENDIX 4

THE MERSEYSIDE AND MANCHESTER RLCAS

A4.1 SEFTON COAST (RLCA 32)

A4.1.1 *General Historic Character and Physical Character Description*

This is a broad low-lying coastal area with intertidal sands, silts and muds, dune systems and dune heaths and salt marshes. It is bordered to the north by the Ribble Estuary and Coast RLCA, to the east by the West Lancashire Plain, and to the south by the Merseyside Conurbation (Fig 2). The historical character is largely constrained by the physical character, and there has been little early settlement. The greatest man-made influence on the landscape has been the drainage of the coastal mires, which enabled the introduction of the railway to the area and the expansion of Victorian resorts such as Southport.

A4.1.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Coastal)	UL_C	53.8	35.5	1	4
Settlement (Other Residential)	S_OR	27.7	18.3	3	7
Settlement (Modern Residential)	S_MR	20.8	13.7	3	7
Settlement (Designed Landscape)	S_DL	9.8	6.5	-	-
Enclosures (Post-Medieval)	E_PM	9.3	6.2	-	-
Designed Landscape (Recreation)	DL_R	5.6	3.7	-	-
Woodland (Other)	WD_O	3.8	2.5	-	-
Enclosures (Modern)	E_M	3.4	2.3	-	-
Built Environment	BE	3.3	2.2	-	-
Unenclosed Land (Other)	UL_O	2.6	1.7	-	-
Settlement (Historic Residential)	S_HR	2.4	1.6	-	-
Enclosures (Ancient)	E_A	1.5	1.0	-	-
Settlement (Civic)	S_CV	1.6	1.0	-	-
Settlement (Commercial)	S_CM	1.4	1.0	-	-
Woodland (Plantation)	WD_P	1.0	0.7	-	-
Military	M	0.8	0.5	-	-
Settlement (Industrial)	S_I	0.7	0.5	-	-
Water (Artificial)	W_A	0.8	0.5	-	-
Communications	C	0.6	0.4	-	-
Industrial Non-Settlement (Other)	I_O	0.3	0.2	-	-
Settlement (Mixed Residential and Light Industry)	S_MRI	0.3	0.2	-	-

Totals		**151.5**	**100.2**	**7**	**18**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.1.3 ***Overall Character of RHLC distribution***

Unenclosed Land (Coastal) and the various types of Settlement essentially make up this RLCA (Fig 5). The Enclosure covers a relatively small area (less than 10%), and is mainly Modern or Post-Medieval in date, reflecting the fact that considerable human intervention only became possible with the drainage of the coastal mires. Settlement covers approximately 42% of the area in total, and mainly comprises Residential or Designed Landscape Sub-types. This implies that settlement expansion within the area mainly occurred in the Victorian period, with the development of the tourist resorts of Southport, Formby, Hightown and Crosby; however, archaeological evidence for human activity in the area goes back to the Later Mesolithic period (Gonzalez *et al* 1997). Relatively small areas are covered by woodland, which are restricted to small copses of salt-tolerant species, along with a large conifer plantation at Formby.

A4.1.4 ***Settlement and Enclosure Character***

The earliest human activity in this area was as early as the Mesolithic period. Sea-level change has revealed footprints of humans and animals, including aurochs, cattle, deer, unshod horses, dog/wolf, wild boar, and sheep/goat, in the intertidal zone silts at Formby (*ibid*). Later peat deposits show evidence for domestication of oxen during the Iron Age. Evidence for Celtic and Norse settlement, likely in the inland meres and mosses, derives from place names such as Ainsdale, Formby, Ravenmeols, Altcar and Crosby, which all have origins in this period (Ekwall 1922). There were several abbeys and chapels in the RLCA that date back to the Norman period (Farrer and Brownbill 1907).

Settlement was, however, limited until relatively modern times, and consequently a rural settlement pattern survives, with some patterns of Ancient Enclosure, despite the growth of small fishing hamlets such as Formby and Hightown into commuter towns following the development of the railway in the 1840s. The development, which has taken place in tourist/commuter towns, is primarily of Victorian date or later (Countryside Commission 1998). The largest settlement is Southport, which expanded rapidly as a holiday resort and dormitory town during this period (Bailey 1992).

Enclosure is limited to reclaimed pasture-land grazed by cattle, whereas sheep graze on the open marshes adjacent to the tidal flats. The pasture is enclosed using earth banks or relatively modern hedgerows and fencing. Asparagus was also farmed on the dunes at Formby until the 1970s (http://www.seftoncoast.org.uk/articles/99summer_asparagus.html).

A4.1.5 ***Non-Agricultural Activity Character***

Sand extraction has been a major feature of this RLCA in recent times, especially at Formby Point, but also further north at Ainsdale and Southport. Extraction at Formby was halted in the 1950s due to flood risk, but at Ainsdale and Southport it continued until the recent past (Crosby 2007).

Tourism and recreation are the main focus of activity now. The towns act as satellites to Manchester and Liverpool, and the beaches are popular destinations for bathing, land and watersports, and several are also nature reserves.

A4.1.6 ***Change Scenarios***

The character types with the largest coverage in this RLCA are Unenclosed Land (Coastal), Settlement (Other Residential) and Settlement (Residential). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Climate Change (-3), Development (-1), Regional Spatial Strategy (1), and Settlement Expansion (-3). The Regional Spatial Strategy is considered a force for change, impacting on all three character types, as it advocates development of this area as part of the overall Liverpool and Manchester city regions.

Overall Impact: 18 Negative, 7 Positive.

Climate Change is likely to have the biggest overall impact on this area. The dune system is incredibly fragile, and under the Shoreline Management Plan (Halcrow 2009e) there is no economically viable method of maintaining the current line, so a procedure of 'managed realignment' or retreat is advocated. While some areas of the coastline are accreting, others are being eroded, and this area will be vulnerable to changes in the hydrological environment in surrounding coastal areas. Unmanaged shoreline retreat in particular will have a major effect on the visual impact of the area, and there is likely to be a corresponding drop in tourism and recreation. Furthermore, as the Alt and Wyre floodplains to the east are below sea level, and are intensively farmed, flood management in this area is critical.

A4.1.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- The archaeological evidence for early human activity should be promoted as a positive asset.
- The evidence for asparagus farming should be conserved as part of the unique character of the RLCA.
- The Mesolithic footprints should be protected by statute.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.
- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.
- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.
- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.
- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.
- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.
- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.
- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.
- The evidence for relict occupation and land use should be conserved and enhanced.

A4.2 LIVERPOOL CONURBATION (RLCA 16)

A4.2.1 *General Historic Character and Physical Character Description*

The RLCA (Fig 2) is characterised by urban development, that has extended out from a thirteenth-century designed town plan centred on the present-day Dale and Chapel Streets. The early development of Liverpool was undoubtedly influenced by the physical characteristics of the area, particularly the Mersey shoreline and a small saline estuary called the Pool, which served as a poor anchorage. These provide inadequate for anchoring larger vessels, and the landscape was substantially altered to create a large port (Belchem 2006). A dock (the Old Dock) was inserted into the Pool in the early eighteenth century, which was reclaimed, and further extensive docks were built out into the Mersey on reclaimed land. The earliest standing buildings are of eighteenth-century date and are within the historic core or in the vicinity of the former pool; settlement has expanded out from the centre and the line of docks, and more recent housing is on the eastern margins of the city.

A4.2.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Modern Residential)	S_MR	76	36.3	3	7
Settlement (Designed Landscape)	S_DL	29	13.8	3	7
Settlement (Other Residential)	S_OR	24.8	11.8	3	7
Settlement (Industrial)	S_I	23.6	11.2	3	7
Settlement (Civic)	S_CV	13.9	6.6	-	-
Settlement (Commercial)	S_CM	9.7	4.6	-	-
Settlement (Historic Residential)	S_HR	8.5	4	-	-
Communications	C	6	2.8	-	-
Unenclosed Land (Other)	UL_O	3.9	1.9	-	-
Enclosures (Post-Medieval)	E_PM	3.6	1.7	-	-
Designed Landscape (Recreation)	DL_R	2.1	1	-	-
Enclosures (Modern)	E_M	1.9	0.9	-	-
Industrial Non-Settlement (Active)	I_A	1.2	0.6	-	-
Built Environment	BE	1.9	0.9	-	-
Industrial Non-Settlement (Other)	I_O	1	0.5	-	-
Water (Artificial)	W_A	0.8	0.4	-	-
Woodland (Other)	WD_O	0.5	0.3	-	-
Enclosures (Ancient)	E_A	0.5	0.2	-	-
Woodland (Plantation)	WD_P	0.4	0.2	-	-
Unenclosed (Land Coastal)	UL_C	0.3	0.1	-	-
Totals		**209.6**	**99.8**	**12**	**28**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.2.3 ***Overall Character of RHLC distribution***

The largest character type is Modern Residential (Figs 5 and 6), demonstrating the substantial expansion of the city in the later nineteenth and twentieth centuries. The large proportion of designed landscape in part reflects the wealth of Liverpool during its massive expansion, since the wealthy merchants were buying up large areas of countryside around Liverpool as parkland for their stately homes, which then became absorbed in the subsequent expansion of the city (Belchem 2006).

The large proportion of Industrial character type reflects the large expanse of docks, warehouses and associated commercial land, and is only slightly higher than the extent of civic buildings within the city, which developed during Liverpool's heyday, in the nineteenth century, and lent it prestige and eminence. Interestingly, the proportion of Historic Residential character type is small, and is unusually low given the long history of the settlement, perhaps indicating that many of the older buildings have been replaced with more modern structures.

The low level of enclosure indicates that this is primarily a working, commercial and residential city, and that there is very little agricultural land or land of other rural character.

A4.2.4 ***Settlement and Enclosure Character***

Liverpool was granted borough status by King John in 1207, but the town did not develop beyond its central core until the construction of the Old Dock in 1715 (Belchem 2006). This prompted a massive expansion of the docks along the shoreline, reaching a maximum in the early twentieth century. In the eighteenth century, the expansion of trade demanded the rapid building of warehouses around the docks at the expense of housing, and the working population tended to live in relative squalor in the cellars of the warehouses. It was not until the nineteenth century that there was any significant expansion in the housing stock. The expansion of the settlement into the hinterland of the port extended out in waves, north-eastwards from the centre and shore, and this development was centred on the villages of Wavertree, West Derby, Everton, Kirkdale, Bootle, Walton, Knotty Ash, Old Swan and Fairfield. The greatest period of urban expansion was between 1860 and 1947 (*ibid*).

Liverpool was heavily bombed during the Second World War, and the historic centre was severely damaged. In the 1960s, there was widespread clearance of the damaged housing stock to make way for new city-centre developments, and this included the demolition of Foster's Custom House, on the site of the former Old Dock. Excavations in advance of the recent Liverpool One development demonstrated that there was good below-ground survival of the cellars and foundations of the former eighteenth / nineteenth-century housing and warehouses,

as well as of the Old Dock itself. The excavations also revealed medieval burgage plot boundaries (OA North 2010c).

Because of the wealth of Liverpool in the nineteenth century, many of the older buildings in the city centre were replaced with building stock of opulent design, and at the same time some streets were realigned. This, coupled with the damage during the Second World War, means that there are relatively few buildings of earlier eighteenth-century date left, and those that do survive are mostly churches or warehouses. The nineteenth- and early twentieth-century architecture is, though, extremely ostentatious and designed to make a powerful, statement. This is typified by the Three Graces on the Pier Head, of which the largest is the Liver Building, and also buildings such as the White Star Building, the Town Hall, and the India Buildings (Belchem 2006).

At Speke, on the south-eastern margins of the RLCA, is the half-timbered Speke Hall, which was built from *c* 1490, and which has an important Great Hall of that date (Robinson 1991).

A4.2.5 ***Non-Agricultural Activity Character***

The commercial success of Liverpool arises from its port infrastructure, with docks that expanded in extent from 3.5 acres in 1715, with the construction of the Old Dock, to 396 acres of docks in 1903. These were all built on reclaimed land, either extending out into the Mersey or into the Pool. The large range of docks extends along the western Mersey shore, being built variously over a period of 200 years, of which the earliest, the Old Dock, was the first commercial wet dock in the world (OA North 2010c; Belchem 2006). While some docks have been backfilled, they mostly survive as either below-ground or surface features, and illustrate the development of docks over that period. The port was not able to adapt to the introduction of containerisation in the 1970s, however, and lost much of its trade to other, more modern, ports; as a consequence, many of the docks are now abandoned. Albert Dock was revitalised in the 1980s as a leisure and tourist venue, and the city was awarded World Heritage Site status in 2004 to reflect its unique maritime heritage (*ibid*).

Around the docks are a multitude of warehouses, which are of varied character, of which the largest are the more recent. Notable examples are the Goree Warehouse complex, the huge tobacco warehouse, the Waterloo Dock Warehouse, and the Wapping Warehouse (Giles and Hawkins 2004).

Historically, Liverpool was not a major manufacturing centre, although there was a thriving chandlery industry, including numerous ropeworks, necessary to support the merchant shipping. There was also a limited pottery industry, notable amongst which was the Herculaneum Pottery based in Toxteth, which operated between 1793/4 and 1841 (Belchem 2006).

A4.2.6 ***Change Scenarios***

This RLCA comprises predominantly urban Residential settlement. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Settlement Expansion (-3) and Regional Spatial Strategy (-1, 1).

Overall Impact: 28 Negative, 12 Positive.

However, in terms of the visual impact and perception of place within this RLCA, the areas around the docks and the city centre should be considered more significant than their size implies. Proposed retail and residential developments have the potential to impact directly on the former docklands, which contain a very significant archaeological resource and are within the vicinity of, and are part of the setting for, a World Heritage Site. A significant proportion of the buildings within the historic core of the city are listed.

Many of the docks are disused and have the potential for redevelopment. The success of the Albert Dock restoration has highlighted that there is potential for a tourist-related conversion of existing buildings, although there has also been a tendency in the past in Liverpool to destroy the historic fabric and rebuild rather than convert.

Liverpool has some of the largest brick-built warehouses in the world, which are historically very important, reflected in their listed status; most, however, are presently empty, reflecting the fact that the late twentieth-century containerisation of the port made them redundant. Their future depends upon their being adapted for an appropriate reuse, otherwise they will deteriorate rapidly (Giles and Hawkins 2004).

A4.2.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Regeneration of the dock areas and city centre should be undertaken in a manner that is sympathetic to the unique historic character of the area.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which respect and enhance the existing structure and layout of the settlement that they are a part of. Development should reflect and enhance the local historic

building styles and materials.

- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to the historic landscape character, as well as resulting in the reduction of carbon costs through preventing unnecessary new build.

- If at all possible, housing renewal through the demolition and replacement of housing that contributes to the historic character of an area should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of new villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

A4.3 MERSEY ESTUARY (RLCA 21)

A4.3.1 *General Historic Character and Physical Character Description*

This character area comprises the tidal section of the River Mersey where it reaches the Irish Sea, consisting of intertidal mudflats, rocky shores, salt marshes, beaches, dunes and areas of permanent water, including docks (Fig 2). It has a very high tidal range and is consequently considerably more dynamic than some of the other estuaries within the region.

As this is a predominantly estuarine landscape, the historic character is heavily constrained by the physical character of an open intertidal landscape with areas of saltmarsh. However, modern developments on the fringes, such as the chemical industries at Halton, Widnes and Ellesmere Port, and also the Port of Liverpool, visually dominate the landscape.

A4.3.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land Coastal	UL_C	30.2	89.5	1	4
Communications	C	1.2	3.5	-	-
Water Natural	W_N	1.2	3.5	-	-
Industrial Non-Settlement (Active)	I_A	0.3	1	-	-
Settlement Industrial	S_I	0.2	0.7	-	-
Settlement Modern Residential	S_MR	0.2	0.5	-	-
Enclosures (Modern)	E_M	0.1	0.3	-	-
Enclosures (Post-Medieval)	E_PM	0.1	0.3	-	-
Settlement Designed Landscape	S_DL	0.1	0.2	-	-
Settlement Other Residential	S_OR	0.1	0.2	-	-
Woodland Other	WD_O	0.1	0.2	-	-
Totals		**33.8**	**99.9**	**1**	**4**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.3.3 *Overall Character of RHLC distribution*

Unenclosed Land (Coastal), not unsurprisingly, dominates this RLCA, with smaller elements of Natural Water, Communications and Industry, relating to the Port of Liverpool (Figs 5 and 6). Other character types have an almost insignificant coverage within this RLCA.

A4.3.4 ***Settlement and Enclosure Character***

There is no real settlement or enclosure within this RLCA, as it is almost entirely an estuarine landscape, constrained by the adjacent industrialised and urban areas of Merseyside and Birkenhead. Unlike other estuaries within the region, the small area of salt marsh in the south of the RLCA, near Frodsham, is not used for grazing, due to the difficulty of access.

A4.3.5 ***Non-Agricultural Activity Character***

Activity within this RLCA relates entirely to those that border it, such as the Liverpool Conurbation (*Section A4.2*). It is a major freight-communications route, connecting the Port of Liverpool with Ireland, mainland Europe and the rest of the world. Cargo passing through the Port of Liverpool is at an all-time high, and millions of pounds have been invested in new facilities and terminals, such as the Euro Rail freight terminal. New plans for taking ships that are too large to pass through the Panama Canal will greatly increase the tonnage of freight through the port (Action Mersey Estuary 2006).

Other parts of the estuary are renowned for their biodiversity and environmental interests, such as the dune system at Sefton. Tourism, linked to both environmental and recreational pursuits, is increasing.

A4.3.6 ***Change Scenarios***

The dominant character type within this RLCA is Unenclosed Land (Coastal) and as such the change scenarios relating to that character type are considered the most important. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Development (-1), Climate Change (-3), Regional Spatial Strategy (1).

Overall Impact: 4 Negative, 1 Positive.

This area is covered by a number of strategic management plans. The Shoreline Management Plan (Halcrow 2009f) for the area suggests a policy of maintaining the current coastal line in most areas for at least the short- to medium-term, with only small areas of 'managed realignment' or retreat where maintenance of defences is not economically viable. The Regional Spatial Strategy (Government Office for the North West 2008, 135) identifies the Port of Liverpool as the only viable deep-water port in the region. It also highlights Birkenhead and the Seaforth Container Terminal as having the potential for significant further development (*op cit*, 83). The Mersey Estuary Management Plan attempts to ensure that 'any human development or activity does not upset the natural processes in the area' (Action Mersey Estuary 2006, 2). The historic environment is not a major part of this RLCA, although it has a major visual impact on the landscape in adjacent areas.

A4.3.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Developments should not cause increased flood risk to adjacent coastal areas, such as Liverpool's World Heritage Site.

- Developments of port facilities should necessarily require corresponding enhancement of land-based transport links and supporting infrastructure, which should be undertaken in such a way as to minimise the negative impact on the historic environment.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- The evidence for relict occupation and land use should be conserved and

enhanced.

A4.4 MERSEY VALLEY (RLCA 22)

A4.4.1 *General Historic Character and Physical Character Description*

The historic character of the Mersey Valley has been influenced by the course of the River Mersey, its estuary and tributaries, and in particular by the presence of mosslands located at the eastern end of the river valley, close to the Manchester conurbation (Hall *et al* 1995). In consequence, in the western and central section of the area, settlement has developed close to the banks of the Mersey and its tributaries, and the presence of the Mersey has also been an important factor in the industrial development of Warrington, Runcorn, Widnes, and Ellesmere Port (Fig 2). Historically, in the central section of the Mersey Valley, the area to the north of the river was used for arable farming, whilst a mixture of arable and pastoral farming was found to the south of the river (Countryside Commission 1998). In this latter area, the river valley slopes more steeply than that to the north. In contrast, the eastern section of the Mersey Valley is sparsely populated and has remained relatively undeveloped until recent programmes of land reclamation (*ibid*; Hall *et al* 1995). The Mersey Valley has also acted as a major route of communication, probably since prehistoric times, and in the eighteenth century this was initially enhanced through improvements in the navigability of the river, and in the nineteenth century through the construction of the Liverpool to Manchester railway and the Manchester Ship Canal (Paget-Tomlinson 1993; Walker 1830).

A4.4.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Modern Residential)	S_MR	55.7	20.1	3	7
Enclosures (Post-Medieval)	E_PM	51.4	18.6	4	11
Industrial Non-Settlement (Active)	I_A	45.3	16.3	2	7
Enclosures (Modern)	E_M	43.1	15.6	4	11
Enclosures (Ancient)	E_A	24.8	9	-	-
Communications	C	14.9	5.4	-	-
Designed Landscape (Recreation)	DL_R	12	4.3	-	-
Settlement (Other Residential)	S_OR	7	2.5	-	-
Settlement (Industrial)	S_I	5	1.8	-	-
Settlement (Designed Landscape)	S_DL	2.8	1	-	-
Unenclosed Land (Other)	UL_O	2.3	0.9	-	-
Woodland (Plantation)	WD_P	2.5	0.9	-	-
Industrial Non-Settlement (Inactive)	II	1.9	0.7	-	-
Unenclosed Land (Coastal)	UL_C	2	0.7	-	-

Woodland (Other)	WD_O	1.6	0.6	-	-
Water (Natural)	W_N	1.3	0.5	-	-
Settlement (Commercial)	SCM	1.1	0.4	-	-
Designed Landscape (Ornamental)	DL_O	0.8	0.3	-	-
Settlement (Civic)	S_CV	0.6	0.2	-	-
Settlement (Historic Residential)	S_HR	0.5	0.2	-	-
Water (Artificial)	W_A	0.4	0.1	-	-
Totals		**277.2**	**100.1**	**13**	**36**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.4.3 ***Overall Character of RHLC distribution***

The largest area in the Mersey Valley RLCA is represented by modern settlement (20%), reflecting the twentieth-century growth of Widnes, Warrington, Runcorn, and Ellesmere Port (Figs 5 and 6). In particular, the populations of Runcorn and Warrington have doubled in the latter part of the twentieth-century, following the construction of New Towns in both of these settlements. The relatively large proportion of the Industrial Non-Settlement type reflects the establishment of nineteenth- and twentieth-century industry within the central and eastern parts of the Mersey Valley (Countryside Commission 1998). The landscape surrounding the present-day settlements is largely characterised by Post-medieval and Modern Enclosures, which historically relate to arable farming to the north of the Mersey, and mixed arable and pastoral farming to the south of this watercourse, although some Ancient Enclosure is still found within the area.

A4.4.4 ***Settlement and Enclosure Character***

Historically, the River Mersey, its estuary, and tributaries, and the areas of surrounding mossland, formed a natural frontier and regional boundary, which separated the historic landscapes of Cheshire and Lancashire (Higham 2004). Prehistoric settlement appears to have been located close to the Mersey, or its tributaries, on minor promontories, which in the east avoided the areas of mossland (Collens 1999). A Roman industrial settlement was established at Wilderspool, Warrington, at a convenient crossing point across the Mersey, and a Roman road running between Northwich and Wigan crossed the Mersey Valley at this point (Hinchliffe and Williams 1992). During the medieval period, the route of the Roman road continued to be utilised and the area contained several medieval moated sites, whilst medieval towns were established at Warrington, Halton, Hale, and Widnes (Higham 2004). Some of these moated sites are still present, such as that at Bewsey Old Hall, close to Warrington (Lewis *et al* forthcoming).

The later history of the area is dominated by the post-medieval and industrial development of Widnes, Warrington, Runcorn, and Ellesmere Port, with agricultural

use of the intervening areas, and these settlements and enclosures largely characterise the form of the historic landscape (Countryside Commission 1998).

A4.4.5 ***Non-Agricultural Activity Character***

Industry has played a significant part in shaping the character of this area. The earliest identified industry dates to the Roman period and comprises the industrial settlement at Wilderspool, Warrington, which appears to have been supplying metalwork and pottery to the Roman military (Hinchliffe and Williams 1992).

The nineteenth and twentieth centuries witnessed the greatest expansion in industry, which is geographically confined to the central and western sections of the Mersey Valley. Initially, in the nineteenth century, this included the development of shipbuilding, engineering, tanning, and the manufacture of soap and alkali at Runcorn (Nickson 1887); and the establishment of chemical factories at Widnes (Hardie 1950). During the twentieth century, the manufacture of chemicals was, and remains, the principal industry in Runcorn and Widnes, whilst oil refineries were established at Ellesmere Port. The nineteenth and twentieth centuries also witnessed an expansion in residential settlement and the construction of a dense communication network across the area. This included the establishment of the M62 motorway in the latter part of the twentieth-century, the construction of numerous minor roads, the construction of the Liverpool to Manchester railway, and the establishment of the Manchester Ship Canal.

A4.4.6 ***Change Scenarios***

This area is dominated by the following historic character types: Modern Residential Settlement, Modern and Post-Medieval Enclosure, and Active Industry. These all cover 15-20% of the area. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Settlement Expansion (-3), Regional Spatial Strategy (-1, 1), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1), Abandonment (-2, 1), and Re-exploitation (-2). Woodland Expansion is not seen as a major change scenario as so little of the existing area is wooded. As the industries in the area are mainly non-extractive, reclamation and contamination are also not seen as change scenarios. In addition, rural settlement expansion is not considered, given the mainly urban nature of the area.

Overall Impact: 36 Negative, 13 Positive.

In certain parts of the Mersey Valley, such as Runcorn, there is increasing pressure on the rural landscape, which relates to the expansion of industry, whilst residential development is also prevalent around Warrington, Widnes, and Runcorn. Several landfill sites are also now a feature of the landscape. Land reclamation of the

mosslands is a dominant feature of the eastern part of the area, close to the Manchester conurbation, which affects the historic character of this specific area. The Regional Spatial Strategy (Government Office for the North West 2008) considers this area as part of the Merseyside City Region and identifies sustainable growth and local regeneration as key foci, along with the development of transport links to North Wales and other adjacent regions.

A4.4.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Future expansion and landfill schemes should be designed so that they fit better within the landscape.
- Existing industrial developments should be assessed for the potential for reuse rather than building on greenfield sites.
- The extraction of peat and reclamation of mossland should be halted, where possible, to retain the historic character of the area, and prevent damage to potential buried archaeological remains.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which should respect and enhance the existing structure and layout of the settlement that they are a part of. The development should reflect and enhance the local historic building styles and materials.
- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to the historic landscape character, as well as resulting in the reduction of carbon costs through preventing unnecessary new build.
- If at all possible, housing renewal through the demolition and replacement of housing that contributes to the historic character of an area should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.
- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.
- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of new villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement of, in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices, and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

Generic Objectives for the Industry character type:

- The conservation of industrial remains should be encouraged.

- Opportunities for heritage-led regeneration should be pursued through the sustainable reuse of key industrial buildings and areas, and through tourism.

- The historic dimension of industrial landscapes should be properly assessed during proposals for development. Industrial landscapes are vulnerable to change both through neglect and through programmes of land reclamation. Initiatives, such as quarry reclamation schemes, derelict land programmes, contaminated land strategies and environmental improvement projects, may all coincide with areas of former industrial heritage. These should be supported by appropriate levels of information in order that decisions can be made to conserve important assets, record others, sympathetically develop others, and to raise awareness that the historic environment may act as a positive catalyst for change.

- An awareness of the historical basis and context of earlier industrial landscapes should be encouraged in order to improve perception and appreciation.

- Grants for consolidation and presentation should be encouraged. Statutory protection of the most important sites and complexes should be extended.

A4.5 THE WIRRAL (RLCA 40)

A4.5.1 *General Historic Character and Physical Character Description*

The Wirral RLCA includes the whole of the peninsula formed by the Mersey and Dee estuaries, and therefore includes two different broad landscape types (Fig 2). To the west of the prominent sandstone ridge, bisecting the peninsula, is a broad expanse of agricultural and ornamental landscapes, punctuated by sandstone outcrops and, approaching the coast, sand dunes, while the eastern part is almost entirely covered by the urbanised, industrial landscapes of Birkenhead, Bebington, Bromborough, Whitby and part of Ellesmere Port (the latter is also part of the Mersey Valley RLCA) (Countryside Commission 1998, 137). Traditionally, this eastern part of the Wirral is considered to be within the Liverpool conurbation. The western Wirral is largely agricultural and horticultural, with some unenclosed and undeveloped coastline along the Dee estuary that provides a focus for recreational activities in the region (*op cit*, 138). The sandstone ridge, by contrast, preserves some ancient or semi-natural woodland, remnants of the area's former, medieval, role as a zone of ornamental estates and hunting grounds. The 'natural' landscape of the eastern part of the Wirral is unrecognisable, having experienced an explosion of population, settlement, and industry since the early nineteenth century.

A4.5.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Modern Residential)	S_MR	110.7	30	3	7
Enclosures (Post-Medieval)	E_PM	61.5	16.7	4	11
Enclosures (Ancient)	E_A	30.1	8.2	-	-
Settlement (Other Residential)	S_OR	27.9	7.6	-	-
Unenclosed Land (Coastal)	UL_C	26.7	7.2	-	-
Industrial Non-Settlement (Active)	I_A	19.1	5.2	-	-
Enclosures (Modern)	E_M	18	4.9	-	-
Designed Landscape (Recreation)	DL_R	15.7	4.2	-	-
Settlement (Designed Landscape)	S_DL	11.7	3.2	-	-
Settlement (Industrial)	S_I	8.5	2.3	-	-
Communications	C	7.8	2.1	-	-
Settlement (Historic Residential)	S_HR	6.9	1.9	-	-
Designed Landscape (Ornamental)	DL_O	5.2	1.4	-	-
Settlement (Civic)	S_CV	4	1.1	-	-

Unenclosed Land (Other)	UL_O	3.6	1	-	-
Woodland (Plantation)	WD_P	3.5	0.9	-	-
Settlement (Commercial)	S_CM	3.2	0.9	-	-
Woodland (Other)	WD_O	2.9	0.8	-	-
Industrial Non-Settlement (Inactive)	I_I	1	0.3	-	-
Industrial Non-Settlement (Other)	I_O	0.5	0.1	-	-
Water (Artificial)	W_A	0.4	0.1	-	-
Unenclosed Land (Moorland)	UL_M	0.4	0.1	-	-
Totals		**369.3**	**100.2**	**7**	**18**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.5.3 ***Overall Character of RHLC distribution***

Given the general urban character of the Wirral RLCA, it is not surprising that the majority (47%) of the area is of the Settlement historic character broad type, and most of this area (30%) is of post-twentieth-century date (Figs 5 and 6). What is surprising is the large amount of enclosed land, including ancient enclosures, that survives despite the encroachment of modern settlement, particularly in Birkenhead. Naturally, there is a significant amount of unenclosed coastal land along Liverpool Bay from Wallasey to Hoylake, and a very small amount of ancient or semi-natural woodland scattered throughout the southern part of the area. In comparison to other RLCAs, a relatively large area outside of settlement areas is industrial, representing sites for clay extraction and waste disposal. The fact that a relatively high proportion (more than 5%) of the area still belongs to the Designed Landscape broad type reflects the historical use of the region for hunting, large estates, and coastal recreation.

A4.5.4 ***Settlement and Enclosure Character***

The historical development of settlement and landscape use in each part of the Wirral RLCA, was, until recently, fairly similar. Archaeological surveys have established that the peninsula was occupied or used extensively during the Mesolithic period, with strong evidence for at least one permanent settlement at Greasby dating to *c* 7000 BC (Cowell and Innes 1994). The remains of a small Iron Age fort are known at Burton in the south-west of the area, on the outskirts of Chester (Roberts 2002). A Romano-British presence on the Wirral is evident, related to the occupation of Chester in the AD 70s, and Roman roads are found near Mollington, Willanston and Ledsham, and other traces of early Roman activity have been found at Meols. Meols developed as a port, potentially from the Iron Age, but was also active in the Roman period from the mid-first century to the late fourth century (Philpott 2006). Following the cessation of Roman governance in *c* AD 400, Meols seems to have continued to operate as a port, indicated by the discovery of a

sizable early medieval finds assemblage (RM Newman 2006). The proliferation of Scandinavian place-names, and archaeological finds demonstrate continued activity into the tenth and eleventh centuries.

The area's agricultural pattern of enclosures and small settlements seems to have been in place at the time of the Norman Conquest, as by then the landscape was characterised as areas of small, dispersed settlements engaging in farming and fishing along the coast (Countryside Commission 1998, 138). Large areas, however, remained heavily wooded, and much of the Wirral was converted into a hunting forest in the early twelfth century (Roberts 2002).

Since the early nineteenth century, and particularly since the opening of the Mersey Railway tunnel, the development of settlement in the eastern Wirral has taken a different turn. The formerly small communities of Wallasey, Birkenhead, Bebington, Bromborough, Whitby and Ellesmere Port have expanded significantly and been amalgamated into a single urbanised area. Very recent population growth has begun to place pressure on the western part of the Wirral, and modern commuter communities are encroaching on the historically enclosed and ornamental landscape (Countryside Commission 1998).

A4.5.5 ***Non-Agricultural Activity Character***

Two hundred years after the establishment of the Benedictine priory (a Scheduled Monument) at Birkenhead in the mid-twelfth century, the monks there received permission to operate a ferry across the Mersey (Roberts 2002). The priory is the oldest surviving building on Merseyside, and its chapter house is now used for (Anglican) services. The improved communications between Liverpool and the Wirral slowly changed the area's relationship with the rest of the region, and improving port facilities cemented the Wirral's role as a centre for fishing, shipping and trade. The Dee estuary, and the ports along it, at Parkgate, for example, had historically provided access to Chester.

It was not until the introduction of the steam ferry in the early nineteenth century, however, and the opening of the Mersey Railway Tunnel in 1886, that the wealthy merchants of Liverpool began to change the formerly ornamental and agricultural landscape into private estates and industrial centres (Roberts 2002). Shipbuilding, ironworks and clay extraction, and the rapid expansion of settlement to accommodate these industries, have given the eastern part of the Wirral peninsula its distinct historic character.

A4.5.6 ***Change Scenarios***

Modern Residential Settlement and Post-Medieval Enclosure are the historic character types that each cover over 10% of this RLCA. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Settlement Expansion (-3), Regional Spatial Strategy (-1, 1), Agricultural Change (-3), Change in Use (-2), Flood Risk Management (-2, 2) and Tourism (-1, 1). Woodland expansion and Rural settlement expansion are not considered relevant in this RLCA.

Overall Impact: 18 Negative, 7 Positive.

Whilst coastal land forms a relatively small proportion of this RLCA, erosion is a growing problem. The shoreline management plans (Halcrow 2009a; 2009g) advocate a policy of containment and managed realignment, but cliff erosion at the Thurstaston SSSI on the western side of the peninsula is already occurring. Settlement and industrial expansion are also a concern. In particular, there is a major redevelopment under consideration aiming to regenerate the dock area at Birkenhead, which if implemented would have a major impact, particularly visual, on the area (www.peel.co.uk/news/wirralplanning).

A4.5.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which should respect and enhance the existing structure and layout of the settlement that they are a part of. The development should reflect and enhance the local historic building styles and materials.

- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to the historic landscape character, as well as resulting in the reduction of carbon costs through preventing unnecessary new build.

- If at all possible, housing renewal through the demolition and replacement of housing that contributes to the historic character of an area should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of new

villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields, and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement of, in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant

redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A4.6 MANCHESTER MILL TOWNS AND PENNINE FRINGE (RLCA 20)

A4.6.1 *General Historic Character and Physical Character Description*

This RLCA occupies the transitional zone between the open moorlands of the adjacent Dark Peak and Southern Pennines RLCAs and the densely populated urban Conurbation of Manchester (Fig 2). Visually, there is an abrupt boundary where the towns stop and the countryside starts.

The physical landscape character is one of ridges and steep-sided valleys with fast-flowing rivers, ideal for the early development of the textile industry. This has led to a profusion of valley-bottom settlements and heritage relating to mills, including reservoirs, mill lodges and other stone- and brick-built industrial buildings. Much of this later development reflects the exploitation of nearby coalfields for steam power and the availability of communications (canals and rail) to provide raw materials and disperse the textile products.

Encroachment from the adjacent Manchester Conurbation has led to increasing use of the open countryside for recreational use, and diversification of farmland for light-industrial uses, leading to an unkempt appearance. Overspill housing estates also negatively affect the visual character.

A4.6.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Modern Residential)	S_MR	65.5	29.2	3	7
Enclosures (Post-Medieval)	E_PM	53.8	23.9	4	11
Settlement (Designed Landscape)	S_DL	15.8	7	-	-
Designed Landscape (Recreation)	DL_R	12.8	5.7	-	-
Settlement (Civic)	S_CV	12.1	5.4	-	-
Settlement (Industrial)	S_I	10.7	4.7	-	-
Settlement (Commercial)	S_CM	9.6	4.3	-	-
Woodland (Other)	WD_O	8.4	3.7	-	-
Settlement (Other Residential)	S_OR	7.4	3.3	-	-
Communications	C	6.3	2.8	-	-
Enclosures (Modern)	E_M	5.6	2.5	-	-
Enclosures (Ancient)	E_A	4.4	2	-	-
Water (Artificial)	W_A	4.0	1.8	-	-
Designed Landscape (Ornamental)	DL_O	3.7	1.6	-	-
Industrial Non-Settlement (Other)	I_O	2.3	1	-	-
Woodland (Plantation)	WD_P	0.9	0.4	-	-

Settlement (Mixed Residential and Light Industry)	S_MRI	0.8	0.4	-	-
Industrial Non-Settlement (Inactive)	I_I	0.2	0.1	-	-
Built Environment	BE	0.2	0.1	-	-
Industrial Non-Settlement (Active)	I_A	0.2	0.1	-	-
Water (Natural)	W_N	0.1	0.1	-	-
Unenclosed Land (Moorland)	UL_M	0.1	0.1	-	-
Totals		**224.9**	**100.2**	**7**	**18**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.6.3 ***Overall Character of RHLC distribution***

Modern Residential Settlement and Post-Medieval Enclosures make up the largest proportion of this area, although this adds up to only just over 50% (Figs 5 and 6). Other types of settlement make up a further 30%, and Designed Landscape (Recreational) adds a further 6%. This is a reflection of the development of the area as a cornerstone of the textile industry in the region, with the necessary settlements needed to sustain the industry. In more modern times it reflects the nearness of the adjacent Manchester conurbation, with many of the settlements acting as 'satellite towns'. Recreation is an important factor, also relating to the closeness of Manchester.

A4.6.4 ***Settlement Enclosure and Industry Character***

The present landscape of the RLCA is dominated by its eighteenth- and nineteenth-century industrial development, but there are remains of its earlier past, although this survival is best on higher ground. Examples of Bronze Age cremation burials have been found near Whitelow Hill, Ramsbottom, and in the Iron Age, there were several defended settlements, including one at Castlesteads, to the north of Bury, which overlooks the River Irwell (Hodgson and Brennand 2006, 74).

In the medieval period, there was a scattering of settlements, such as Bury, which was first documented in 1194, and a defensive manor house, Bury Castle, constructed in 1469 (Miller and Gregory in press). Bolton was given a charter to hold a market in 1251, the town developing initially as a market town, and similarly Rochdale had a market from the thirteenth century (McNeil and Nevell 2000). These towns developed as centres of the textile industry during the seventeenth century, with the development of fulling mills and weaving sheds. From the late eighteenth century the cotton industry developed. Bolton and Bury became centres for bleaching and printing works, which required abundant supplies of water. The introduction of steam power between 1780 and 1820, coupled with an increased demand for textiles, improved communications, and caused a dramatic expansion in the number and size of the mills. Communications were improved further with the opening of the Bolton and Bury canal in 1797, and the Rochdale Canal from 1794

(*ibid*).

There was a dramatic expansion of industry in the nineteenth century; for example, in this period in Bury there were 271 industrial sites, including mills, bleachworks, dyeworks and print works. Oldham dramatically expanded cotton production in the second half of the nineteenth century, and by 1911 had 28% of the total British production. The latest of these mills (Elk Mill) was the last cotton mill to close in 1998 (*ibid*).

The present landscape is dominated by the residential housing associated with the massive increase in industry during the industrial revolution. The once enormous number of mills has dramatically declined as a result of urban renewal schemes, but many still survive and have in some instances been converted for residential accommodation.

A4.6.5 ***Change Scenarios***

The character types with the greatest coverage within this RLCA are Settlement (Modern Residential) and Post-Medieval Enclosures, but these cover only 53% of the area. The areas of these types exceed 10% of the RLCA, and so they are those for which the change scenarios have been assessed. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Settlement Expansion (-3), Regional Spatial Strategy (-1, 1), Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2) and Tourism (-1, 1).

Overall Impact: 18 Negative, 7 Positive.

As the area is predominantly urban, rural settlement pressures and woodland expansion are not considered threats.

The remainder of the area is covered by a fairly even mix of other Settlement types and Designed Landscapes (Recreational). It would appear, therefore, that those scenarios relating to Settlement are likely to have the greatest impact.

The Regional Spatial Strategy (Government Office for the North West 2008, 124) considers the Manchester City Region, which encompasses this RLCA, to be of prime economic importance within the North West. While the focus of this is necessarily on Manchester itself, there is a strong desire to avoid regional disparity, and a recognition that transport links and housing stocks need to be improved throughout the area. Housing regeneration is likely to entail replacement of 'obsolete' stock as well as redevelopment of appropriate existing housing. The prevalence of fast-flowing rivers suggests that hydroelectric power (either small- or large-scale) is a possibility in this area, and could have a positive impact.

A4.6.6 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- The unique industrial heritage should be maintained throughout any development.

- Where possible, regeneration should involve re-purposing existing stock rather than its removal and replacement with new build.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which should respect and enhance the existing structure and layout of the settlement that they are a part of. The development should reflect and enhance the local historic building styles and materials.

- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to the historic landscape character, as well as resulting in the reduction of carbon costs through preventing unnecessary new build.

- If at all possible, housing renewal, through the demolition and replacement of housing that contributes to the historic character of an area, should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of new villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through

gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields, and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles), should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices, and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are

granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A4.7 MANCHESTER CONURBATION (RLCA 19)

A4.7.1 *General Historic Character and Physical Character Description*

The Manchester Conurbation RLCA (Fig 2) is characterised by dense urban and industrial development, focused on the principal centres of Manchester, Salford and Stockport (Kidd 2002). These settlements all emerged as market towns during the later medieval period, surrounded by agricultural areas and isolated settlements that formed the south-eastern part of historical Lancashire. The region developed at a phenomenal rate from the late eighteenth century, with settlement spreading from the medieval core of the towns, subsuming agricultural land. The primary reason for this dramatic growth was an explosion of the textile industry, and the introduction of steam-powered textile mills, which were built in urban areas rather than being limited to riverside locations (*ibid*). The transformation of Manchester into a leading centre of cotton manufacturing on an international stage is reflected in the surviving built heritage of the region, which is dominated by former cotton warehouses, steam-powered mills and large engineering works that were established to serve the textile industry. In addition, examples of eighteenth-century attic workshops, that represent the growth of the textile industry immediately before the factory-based system predominated, can still be found on the fringe of the settlements' historic cores.

Manchester itself is the now seen as the archetype city of the industrial revolution (http://whc.unesco.org/en/tentativelists/1316/). It witnessed the creation of Britain's first 'true' canal, Britain's first mainline, inter-city passenger railway, and the country's first industrial suburb based on steam (Miller and Wild 2007), and the city centre itself is arguably the finest expression of a Victorian commercial district in England (Briggs 1971).

A4.7.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up to slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Settlement (Modern Residential)	S_MR	72.1	43.2	3	7
Settlement (Designed Landscape)	S_DL	18.9	11.3	3	7
Settlement (Commercial)	S_CM	17.5	10.5	3	7
Settlement (Civic)	S_CV	14.2	8.5	-	-
Designed Landscape (Recreation)	DL_R	13.5	8.1	-	-
Settlement (Industrial)	S_I	9.9	5.9	-	-
Settlement (Other Residential)	S_OR	8.2	4.9	-	-
Communications	C	5.4	3.3	-	-
Enclosures (Post-Medieval)	E_PM	3.8	2.3	-	-
Enclosures (Modern)	E_M	1.4	0.9	-	-
Woodland (Other)	WD_O	1.1	0.6	-	-
Designed Landscape (Ornamental)	DL_O	0.5	0.3	-	-
Water (Artificial)	W_A	0.4	0.2	-	-

Woodland (Plantation)	WD_P	0.2	0.1	-	-
Totals		**167.1**	**100.1**	**9**	**21**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A4.7.3 ***Overall Character of RHLC distribution***

The largest character type is modern residential (Figs 5 and 6), which reflects the substantial expansion of the city over the later-nineteenth- and twentieth-centuries. The large proportion of designed landscape in part reflects the wealth of Manchester during its massive expansion. The wealthy merchants were buying up large areas of countryside around Manchester as parkland for their stately homes, which then were absorbed into the subsequent expansion of the city (Kidd 2002). However, there was a substantial amount of specifically designed green land incorporated into Manchester's expansion.

There is a relatively small amount of industrial character type, by comparison with Liverpool, indicating that much of the mill landscape has been lost or converted to residential use.

The low level of enclosure suggests that this is primarily a working, commercial and residential city, and there is very little agricultural land or land of other rural character.

A4.7.4 ***Settlement and Enclosure Character***

The origins of settlement in Manchester can be traced to the late first century AD, when the Roman military established a fort at Castlefield and a substantial extramural settlement expanded to the north, and along Chester Road to the south (Kidd 2002). However, it was Salford that emerged as the principal settlement in the area following the collapse of the Roman Empire in the fifth century and, at the time of the Norman Conquest, it was the administrative centre for the Hundred of Salford. The town was granted a charter in *c* 1230, whilst Stockport was granted its first borough charter in *c* 1220. Manchester, however, did not obtain a charter until 1301, when the focus of the settlement was centred on the manor house situated at the confluence of the rivers Irwell and Irk, close to the site of the present cathedral.

The area developed rapidly from the late eighteenth century as a direct result of the textile industry (*ibid*). This process was facilitated greatly by the introduction of canals, which provided the first efficient means of transporting bulk loads of goods. The first true industrial canal in Britain was that built by the Duke of Bridgewater in 1764, the terminus of which was at Castlefield. This soon became a hub for a network of canals across the region, and provided Manchester in particular with a very distinctive attribute to its townscape. The local canal system was also a key factor in influencing the location of some textile mills in Manchester, which depended on the waterways as a source of water for their steam-powered plant. This relationship is demonstrated clearly in Ancoats, the world's first industrial suburb

based on steam power, where some of the oldest steam-powered mills in the world survive largely intact (*ibid*). Associated closely with the textile industry were the engineering trades, in which the region developed an international reputation. Numerous foundries and engineering firms were established, including William Fairbairn's celebrated engineering works in Ancoats, with larger examples in surrounding districts such as Bradford, Newton Heath and Openshaw. Manchester's dominance as a financial and commercial centre in the later nineteenth century is reflected in the numerous opulent warehouses built within the city centre, with particular concentrations around Portland Street, Whitworth Street and Charlotte Street.

A4.7.5 ***Non-Agricultural Activity Character***

The commercial success of the region arises out of its manufacturing industries of the late eighteenth and nineteenth centuries. The cotton industry was of especial importance, although ancillary trades, such as the production of textile machinery and associated engineering, also became important (Kidd 2002).

A4.7.6 ***Change Scenarios***

This is a predominantly urban area, with Settlement of various types covering almost 85% of the area. The most common types are Residential, Designed Landscape and Commercial Settlement. The area of each of these exceeds 10% of the RLCA and so they are those for whom the change scenarios have been assessed. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Expansion (-3) and Regional Spatial Strategy (-1, 1).

Overall Impacts: 21 Negative, 9 Positive.

Within the Regional Spatial Strategy (Government Office for the North West 2008, 124) the Manchester City Region is seen as being of prime economic importance within the North West, contributing almost half of the region's Gross Value Added (GVA). Along with Liverpool, under the 'Atlantic Gateway' concept, the long-term aim is to create a city region capable of providing a counterweight to the European core cities of London, Paris and Frankfurt. In order to achieve this, significant investment is needed within the city, including the enhancement of transport links, development of housing, flood management works and green infrastructure provision.

In 1999, the area of Anfields, Castlefield and Worsley was submitted as a tentative World Heritage Site, in recognition of its position as the archetypal industrial city (http://whc.unesco.org/en/tentativelists/1316/). The city centre itself is not within the proposed site, but rather the focus is on the Bridgewater canal, the Liverpool Road

railway station, and the industrial suburb of Ancoats. This would have a positive impact on the city, if successful. It would raise the status and profile of the city, improve awareness of the unique industrial heritage, and hopefully help to prevent unsympathetic development. However, there is no current plan to approve this submission.

The main emphasis for housing development has generally focused on the conversion of former mill buildings to apartments, which has retained the basic heritage resource, albeit with some loss of internal fabric. However, the market for city-centre apartments is now saturated and it is anticipated that, post-recession, there will be a reduced emphasis on this type of development. There are several high-profile brownfield regeneration developments, such as the New Islington Millennium Village, which has focused on former derelict industrial areas (I Miller *pers comm*). These were areas of former terraced housing, the buried foundations of which will be impacted on by the development.

A4.7.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Settlement character type:

- Good-quality building design should be promoted for all new developments, which should respect and enhance the existing structure and layout of the settlement that they are a part of. The development should reflect and enhance the local historic building styles and materials.

- The retention, reuse and adaptation of former agricultural, industrial and commercial buildings should be encouraged wherever possible. This should be highlighted as a benefit to the historic landscape character, as well as resulting in the reduction of carbon costs through preventing unnecessary new build.

- If at all possible, housing renewal through the demolition and replacement of housing that contributes to the historic character of an area should be discouraged; instead, the refurbishment and appropriate modernisation of existing housing should be encouraged.

- New development should enhance rather than degrade historic character, and should recognise its importance to perception and sense of place and identity.

- Building work to historic structures, including repairs, should not detract from the existing design.

- Strategically, planners should reinforce inherited settlement patterns to maintain the historic landscape character: much of the region has dispersed rural settlement with small evenly spaced historic towns. The introduction of new

villages or similar forms of nucleation should not dilute this. Similarly, development in towns should respect inherited layouts of streets, open areas, burgage plots *etc*. Large developments, such as in-town car parks, which over-ride and obliterate historic features and patterns, should be discouraged, and careful consideration should be given to better-designed alternative proposals and sites.

APPENDIX 5

CHESHIRE RLCAS

A5.1 NORTH CHESHIRE PLAIN (RLCA 26)

A5.1.1 *General Historic Character and Physical Character Description*

The North Cheshire Plain (Fig 2) is a rural landscape, the historic character of which has been influenced, to some degree, by the landscape's physical character. It is an undulating area of sandstone outcrops, glacial tills and glaciofluvial deposits. A notable ridge in the area is Alderley Edge, which has a long association with copper mining (Timberlake and Prag 2005). A large glacial mere survives at Budworth and there are the remnants of once extensive mosses, such as Lindow Moss (Leah *et al* 1997). The area also contains the major estates and the medieval deer parks of Tatton and Arley, and a large concentration of smaller parklands. Settlement within this area is very dispersed, but it still contains a number of (former) industrial and market towns. These include the historic settlements of Northwich and Macclesfield, whilst Knutsford formed an important market town during the post-medieval period (Higham 2004).

Pre-1700 field systems are found in this area, although most field systems are post-medieval and modern in date, created though the reclamation of the many mosses (Leah *et al* 1997) or by remodelling earlier field systems. The modern enclosures may indicate the difficulty in applying the agricultural practices of the nineteenth and twentieth centuries to small and irregular fields, or to the relatively high density of estates in this area. Within the majority of these fields, marl pits are common features. Historically, this landscape has been used for pastoral farming, with arable farming now being more predominant close to the Mersey Valley, and nurseries are a common sight.

A5.1.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	249.7	34	4	11
Enclosures (Modern)	E_M	137.7	18.7	4	11
Enclosures (Ancient)	E_A	122.8	16.7	4	11
Settlement (Modern Residential)	S_MR	61.4	8.4	-	-
Designed Landscape (Ornamental)	DL_O	32.2	4.4	-	-
Industrial Non-Settlement (Active)	I_A	28.8	3.9	-	-
Designed Landscape	DL_R	20.6	2.8	-	-

(Recreation)					
Settlement (Other Residential)	S_OR	17.2	2.3	-	-
Woodland (Other)	WD_O	15.3	2.1	-	-
Woodland (Plantation)	WD_P	15.2	2.1	-	-
Communications	C	15.3	2	-	-
Built Environment	BE	4.9	0.7	-	-
Water (Natural)	W_N	4.2	0.6	-	-
Industrial Non-Settlement (Inactive)	I_I	2.4	0.3	-	-
Industrial Non-Settlement (Other)	I_O	2.2	0.3	-	-
Water (Artificial)	W_A	2.2	0.3	-	-
Unenclosed Land (Other)	UL_O	1.7	0.2	-	-
Settlement (Civic)	S_CV	0.8	0.1	-	-
Settlement (Commercial)	S_CM	0.4	0.1	-	-
Settlement (Designed Landscape)	S_DL	0.5	0.1	-	-
Totals		**735.5**	**100.1**	**12**	**33**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A5.1.3 ***Overall Character of RHLC distribution***

The largest character types are those connected with Enclosure which, in turn, reflect the rural character of the landscape (Fig 6). Ancient Enclosure is identifiable as a component of the historic landscape; the enclosure is, however, largely post-medieval and modern in date. Some has been created through the reclamation of mosses for agriculture, but a significant proportion of these field systems are derived from earlier systems, and will incorporate earlier boundaries and features. This may indicate the difficulty in applying the agricultural practices of the preceding nineteenth and twentieth centuries to small irregular fields, or to the relatively high density of estates in this area, something that is reflected in the relative number of ornamental parklands when compared to the rest of Cheshire. The area includes the two large parks at Tatton and Arley. Outside the commuter belt, former industrial, and market towns of this area, the settlement pattern is characteristically very dispersed. Woodland cover is low and is typically field sized.

A5.1.4 ***Settlement and Enclosure Character***

This landscape was utilised during the prehistoric period and significant discoveries have been made in the northern part of the area, which include the discovery of an area of prehistoric settlement located close to Wilmslow, within Manchester Airport (Garner 2007), the Bronze Age copper mines at Alderley Edge (Timberlake and Prag 2005) and the Lindow Man bog body, from Lindow Moss (Stead *et al* 1986).

Although the Roman auxiliary forts at Northwich and Middlewich and their extramural settlements were well established by the second century AD (Philpott

2006), and Sandbach became an important ecclesiastical centre in the ninth century (Thacker 1987), the majority of the other market towns of the area are known from the Domesday survey. Domesday records a heavily wooded and sparsely populated landscape, and part of the area became the forest of Macclesfield (Higham 1993; 2004). This would suggest that the typically dispersed settlement pattern is predominantly medieval and post-medieval in character, representing a landscape of colonisation. Some of the established towns and villages were to expand in the eighteenth and nineteenth centuries with the development of the textile industry (in the east), and the salt and chemical industries (in the west). In more recent years, many of these settlements have become an attractive location for the residences of commuters, as well as sport and media personalities.

The pattern of small- to medium-sized enclosures is very mixed and comprises a patchwork of field systems of different geometries and date. The locations of the woods and mosses depicted on eighteenth-century maps are often still visible in the regular, surveyed field systems which have replaced them (Leah *et al* 1997). This RLCA contains extensive areas of 'improvement' field systems created in the eighteenth and nineteenth centuries by the major estates, such as Arley, Tatton and Norton.

There is a greater frequency of twentieth-century agricultural improvement in this area than in much of Cheshire. It is possible that this reflects the irregularity of the earlier field systems and forms a continuation of the practices of major estates (Edwards 2008). Furthermore, the presence of high densities of nurseries and enlarged farms in this area suggests differing agricultural practices or regimes, which are probably related to the proximity of the Manchester and Stoke conurbations and the M6.

A5.1.5 ***Non-Agricultural Activity Character***

Despite the largely agricultural character of the area, there have been several historical industries which have had a significant impact on the character of the area. The area between Northwich and Nantwich has long been one of the main centres for salt production in Britain (Rochester 1975). Industrialised brine extraction, largely for use by the chemical industry, developed in the eighteenth and nineteenth centuries, focused on Northwich and Winsford. In the nineteenth century, brine pumping began to have a significant effect on the underlying deposits, leading to large areas of subsidence, known as flashes. East Cheshire is known for its textile industry, the industrialisation of which led to the construction of over 175 mills. These were not just restricted to towns such as Macclesfield and Bollington, but were also established in small hamlets such as Timbersbrook, where fast-flowing streams could provide a reliable power source. The sand- and gritstone outcrops of the area have been quarried, often for mill-stones, since at least the medieval period. In later centuries, some of these developed into large quarries, such as at Kerridge. The extraction of copper has been taking place at Alderley Edge (Timberlake and Prag 2005) from the Bronze Age, and peaked during the mid-eighteenth and mid-nineteenth centuries, and Lymm was an outlier for the bar-iron trade, tool manufacture and wire-drawing industries at Warrington (OA North 2009e). During the eighteenth and nineteenth centuries, communications were also improved across

the region, through the construction of the Bridgewater and Macclesfield canals (Hadfield and Biddle 1970), the Weaver Navigation, a number of turnpike routes, and many small networks of tramways. During the nineteenth century, the area was also traversed by a number of railways, which converged on Crewe to the south (Hands 1996).

Most of the salt and textile industries of the area declined or died out in the twentieth century. Remnants of the salt industry survive at Northwich and rock salt is mined at Winsford. The mills are now closed, but many of the buildings remain and are in constant risk of demolition for redevelopment. New industries have been developed; the disused rock salt mines have found new uses, such as salt-cavity gas-storage, and as a dry environment for the storage of documents and archives. Winsford and Northwich are still important manufacturing centres, whilst modern communications include the M6 motorway (en.wikipedia.org/wiki/Northwich).

A5.1.6 ***Change Scenarios***

The dominant character type within this RLCA is Enclosed Land and as such the change scenarios relating to that character type are considered the most important are as follows. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 33 Negative, 12 Positive.

To a certain extent, the area's history of agricultural change has made a significant contribution to its character. However, the demands of modern farming practices have the potential to create an undesirable change in its character, a loss in historic field patterns and traditional pastures as a result of a shift to arable farming, the intensification of grassland management, and a focus on the production of fodder crops. Planning polices have led to an increase in nucleation within the settlement pattern of this area, changing a pattern which has been established over centuries. There is likely to be some expansion of the larger settlements, causing further encroachment on the rural landscape, but brownfield development will continue to result in the loss of historic buildings, rather than that adaptation to new uses. There has been some targeting of the area for energy crops, largely *miscanthus*.

A5.1.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess

the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A5.2 CHESHIRE SANDSTONE RIDGE (RLCA 3)

A5.2.1 *General Historic Character and Physical Character Description*

This area covers the northern and southern parts of the Cheshire Sandstone Ridge, parts of the Weaver Valley and Delamere (Fig 2). It comprises much of the lands which were formerly part of the Forest of Mara (Cheshire County Council 2003, 5). East of the sandstone outcrops which comprise the northern Ridge is a large area of glaciofluvial sands and gravels dotted with glacial meres and small mosses. This area is fringed with glacial tills to the west of the Ridge and in the Weaver Valley. Although pre-AD 1700 field systems are present, by far the majority are associated with the disafforestation of Mara in the nineteenth century (Edwards 2008). Enclosed within this area are two deer parks which retain their distinctive boundaries. The Delamere area also contains a number of active aggregates quarries which are creating new water bodies and industries associated with equine sports. Woodland cover is generally higher than the majority of Cheshire and largely comprises coniferous plantations, with some ancient woodland (Countryside Commission 1998).

A5.2.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	59.3	36.9	4	11
Enclosures (Modern)	E_M	26.6	16.6	4	11
Enclosures (Ancient)	E_A	26.2	16.3	4	11
Woodland (Plantation)	WD_P	14.3	8.9	-	-
Woodland (Other)	WD_O	7.2	4.4	-	-
Settlement (Modern Residential)	S_MR	7.2	4.4	-	-
Designed Landscape (Recreation)	DL_R	5.1	3.2	-	-
Industrial Non-Settlement (Active)	I_A	5.1	3.2	-	-
Settlement (Other Residential)	S_OR	3.1	2	-	-
Designed Landscape (Ornamental)	DL_O	2.5	1.5	-	-
Unenclosed Land (Other)	UL_O	1.3	0.8	-	-
Industrial Non-Settlement (Inactive)	I_I	1	0.6	-	-
Communications	C	1	0.6	-	-
Water (Natural)	W_N	0.6	0.3	-	-
Industrial Non-Settlement (Other)	I_O	0.2	0.1	-	-
Water (Artificial)	W_A	0.1	0.1	-	-
Totals		**160.8**	**99.9**	**12**	**33**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A5.2.3 ***Overall Character of RHLC Distribution***

Like much of the North West, the predominant historic landscape character type in the Cheshire Sandstone Ridge RLCA is Enclosed Land, with most (37%) of this having been enclosed prior to the twentieth century (Fig 6). There remains a substantial amount of surviving ancient enclosures (16%), but by far the majority is associated with the disafforestation of Mara in the nineteenth century (Cheshire County Council 2003). Enclosed within this area are two deer parks which retain their distinctive boundaries: the medieval Old Pale and the seventeenth-century New Pale. There are also the remnants of a number of small enclosures associated with private hunting lodges, such as Massey's Lodge. The Delamere area also contains a number of active aggregates quarries which are creating new water bodies (*ibid*). The network of main roads in this area is very distinctive, being the turnpikes established in the eighteenth / nineteenth centuries, in part influenced by medieval and Roman predecessors (*ibid*).

Woodland cover is generally higher than in the majority of Cheshire. Forestry was initially established, with the deforestation of Mara (Cheshire County Council 2003), to grow oaks for the Royal Navy, but this has been superseded by coniferous plantations. To the south-west, in the vicinity of Peckforton, are large plantations along the Ridge itself. These conifers are slowly being replaced by new broadleaf plantations. Along the edges of the Weaver Valley are sinuous areas of ancient woodland.

A5.2.4 ***Settlement and Enclosure Character***

Palaeobotanical evidence indicates increasing levels of anthropogenic woodland clearance from the late Bronze Age onwards (Leah *et al* 1997), rising to a peak in the Late Iron Age and Romano-British periods. The most obvious sites of this activity are a chain of hillforts and promontory forts on the Cheshire Sandstone Ridge which are probably of Iron Age date, and include Maiden Castle, Beeston Castle, Kelsborrow Castle, Eddisbury Hillfort, Woodhouse hillfort, Bradley promontory fort, and Helsby hillfort (Matthews 2002, 8). The Beeston site was reused in the medieval period, with the construction of a castle in about 1220 (Keen 1993, 211), and after it was slighted in the Civil War it became part of a deer park.

Settlement is dispersed, although the main medieval settlements of Frodsham, Kingsley, Weaverham, Kelsall and Tarporley are nucleated. Some settlement is recorded in the uplands of this area at the time of the Domesday survey (1086) (Morgan 1978), but the majority of medieval settlement was located on the glacial tills and edges of the Sandstone Ridge (as are any moated sites). Medieval field systems are commonly associated with these settlements and may include the fossilised remains of open-field systems. Later field systems, created in the eighteenth and nineteenth centuries, attest to the enclosure of the few remaining

commons and heaths.

Delamere was largely uninhabited and undeveloped until the disafforestation and enclosure of the Forest of Mara in the early nineteenth century. There the enclosure pattern is dominated by a large area of regular and geometric field systems. This is the largest area enclosed by Parliamentary Act in Cheshire, 49% of the total recorded by the Cheshire HLC project (Edwards 2008). Within this area, settlement is dispersed.

A5.2.5 ***Non-Agricultural Activity Character***

Historically, the Delamere area has been used for hunting, some glass making, and as a source of timber, though by the eighteenth century there was probably little or no quality timber left (Cheshire County Council 2003). Modern forestry plantations were initially established in the nineteenth century and forestry continues to this day, though a shift in emphasis to recreation and nature conservation has taken place. Aggregate extraction is a common feature, with two active quarries in the area. In places, a new water body has been left, in others the ground has been reinstated. The area also includes a significant equine sports industry. Outside the Delamere area, small-scale sandstone quarrying has taken place in the past and proposals have been made to restart quarrying in selected locations as a source of stone for restoration projects. Copper was also mined in the southern part of the Ridge (Edwards 2008).

A5.2.6 ***Change Scenarios***

The dominant character type within this RLCA is Enclosed Land. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 33 Negative, 12 Positive.

A5.2.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- If woodland expansion in this RLCA is planned, it should be in consultation with an archaeological curator to avoid damage to the historic environment, either locally or in terms of visual impact.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would

have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A5.3 WESTERN CHESHIRE PLAIN (RLCA 44)

A5.3.1 *General Historic Character and Physical Character Description*

The landscape of this RLCA (Fig 2) comprises flat or slightly undulating glacial tills defined by the Cheshire Sandstone Ridge to the east, the Clwydians to the west and an area of glacial moraine to the south. It includes the majority of the lower flood plain of the River Dee and woodland cover is historically low. This area contains a high density of medieval field systems, many of which are the fossilised remains of once extensive open field systems. Cattle farming began to predominate in the area from the late sixteenth century and a significant proportion of agricultural land was meadow and pasture by 1650 (Edwards 2008). This relatively rapid change in farming practice led to the preservation of the extensive areas of ridge and furrow associated with these medieval and later early post-medieval field systems. Later field systems, created in the eighteenth and nineteenth centuries, attest to the reclamation of estuarine marsh, the enclosure of the few remaining commons and the restructuring of the great Cheshire estates. Marl pits are common features. Outside the two large historic settlements of Chester and Wrexham, settlement is commonly nucleated and estate architecture is common.

The latter part of the twentieth century has seen the greatest landscape change, with settlement expansion and changes in agricultural practice creating new landscapes.

A5.3.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Ancient)	E_A	96.7	36.3	4	11
Enclosures (Post-Medieval)	E_PM	67.9	25.5	4	11
Enclosures (Modern)	E_M	50.1	18.8	4	11
Settlement (Modern Residential)	S_MR	17.9	6.7	-	-
Settlement (Other Residential)	S_OR	8.2	3.1	-	-
Designed Landscape (Ornamental)	DL_O	6.7	2.5	-	-
Designed Landscape (Recreation)	DL_R	6.2	2.3	-	-
Woodland (Plantation)	WD_P	4.1	1.5	-	-
Communications	C	3.2	1.2	-	-
Industrial Non-Settlement (Active)	I_A	3	1.1	-	-
Water (Natural)	W_N	1.5	0.6	-	-
Woodland (Other)	WD_O	0.5	0.2	-	-
Industrial Non-Settlement (Inactive)	I_I	0.3	0.1	-	-
Water (Artificial)	W_A	0.2	0.1	-	-
Totals		**266.5**	**100**	**12**	**33**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A5.3.3 ***Overall Character of RHLC distribution***

The Western Cheshire Plain RLCA overlaps the boundaries between Cheshire, Wrexham County Borough and Shropshire, but HLC data is currently available only for that part of the area that is within Cheshire (Edwards 2008). Enclosed land represents the majority of this area, with a significant proportion pre-dating 1700 (Fig 6). Most of the settled area within this RLCA is made up of Chester and (although not represented by HLC data) Wrexham, with small areas of relatively nucleated settlement scattered throughout the otherwise pastoral landscape. A relatively large area belongs to the Ornamental Designed Landscape Sub-type, represented largely by Eaton Hall. The landscape of the surrounding estate is visibly different, with later field systems, estate villages and architecture, and a greater predominance of arable and fodder crops.

A5.3.4 ***Settlement and Enclosure Character***

Much of the prehistoric activity is to be found on the adjacent Cheshire Ridge RLCA (*Section A5.2*), reflecting the better survival away from the intensively farmed lands. There have, however, been prehistoric finds recovered as a result of fieldwalking from across the area, which confirm that there are early remains, even though the physical remains are not particularly evident (Higham 2004).

Chester was established as a legionary fortress in the AD 70s and was served by the *canabae legionis* (civilian settlement), and a wide range of settlements from the legion's tile works at Holt to small farmsteads such as at Birch Heath (Shotter 2004). Whether or not there was continuity after the end of the Roman governance, there was an indication of an urban renaissance following the establishment of a Mercian burh there in AD 907 (RM Newman 2006). At the time of the Norman conquest, it was an important political centre, and a motte and bailey castle was built near the river (rebuilt in stone in 1245) (Salter 2001). In the medieval period, Chester flourished and its port brought considerable wealth into the town and surrounding area.

Following the Norman occupation, the RLCA was within the border zone of Norman England, which is reflected in the significant number of motte and bailey fortifications, including Aldford, Chester, Castleton, Doddleston, Pulford, Shocklach, and Shotwick castles (*ibid*).

Despite the early origins of Chester, the settlement pattern is predominantly medieval and post-medieval in character. This RLCA had some of the most densely populated and agriculturally developed countryside at the time of the Domesday survey (1086), when compared to Cheshire to the east and North Wales to the west, and this is still reflected in the nucleated settlement pattern which survives from the medieval period. However, there has been significant settlement development in the

post-medieval period associated with industrial activity along the Dee estuary, mining in the Wrexham area (Leach 1985) and the remodelling of estate villages.

A significant proportion (36%) of the enclosure evident in the modern landscape of this area pre-dates 1700. Field size is usually below 4ha and the overall field pattern is semi-regular. Earthworks indicative of multi-period ridge and furrow are still a common feature, as are marl pits, but aerial photographic evidence indicates that there has been a substantial loss of the former feature since the 1940s.

It is probable that some of the later enclosures, such as the eighteenth- and nineteenth-century field systems belonging to the Grosvenor Estate (Eaton Hall), derive from and include elements of this earlier enclosure pattern. New field systems created in these centuries are commonly regular grids with quickset hedgerows. Field amalgamation and the cultivation of fodder crops are becoming more common in this area.

A5.3.5 ***Non-Agricultural Activity Character***

West Cheshire has a fairly rural landscape character. However, the wealth of Chester and the region developed in the medieval and early post-medieval period from its port facility, although with the silting up of the River Dee, this trade was lost to Liverpool by the eighteenth century (Belchem 2006). Now the city's main industries are retail, tourism and financial services. In the eighteenth and nineteenth centuries, the area around Wrexham was intensively mined for lead (from Minera mines) and coal, the latter fuelling local iron works (Leach 1985).

A5.3.6 ***Change Scenarios***

Over 80% of the area for which HLC coverage is available is covered by Enclosed Land of all periods. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), Tourism (-1, 1) and Woodland Expansion (-3, 1).

Overall Impact: 33 Negative, 12 Positive.

Woodland management is already an issue in this area, as a result of inappropriate planting schemes. The increase in farm size and amalgamation of small fields has led to the loss of many enclosures and their associated features. There has been an increase in the conversion of permanent pasture to improved pasture or for cultivation for fodder crops, with a corresponding loss of ridge and furrow.

In the Regional Spatial Strategy (Government Office for the North West 2008, 142) Chester is highlighted as a growth area, as well as a key sub-regional component for retail, recreation and tourism. The need to ensure that development is compatible

with the needs of the historic environment is highlighted.

A5.3.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.

A5.4 DEE ESTUARY AND COAST (RLCA 6)

A5.4.1 *General Historic Character and Physical Character Description*

The Dee Estuary RLCA is bounded by the limits of the Welsh coast to the south, the boundary of the Wirral peninsula (and RLCA) to the north, and the western edge of the city of Chester (not within this RLCA) in the south-east (Fig 2). Known for being one of the more shallow rivers in Britain, the history of the estuary is one of a long, slow process of silting up, followed by people's attempts either to stop this process, or at least interfere with it for the sake of maintaining shipping routes between Liverpool Bay and Chester (Roberts 2002). The area has historically been a frontier zone and a political boundary, with Chester situated to dominate the east-west route into Wales. Nearly all of the current landscape within the Dee estuary is land reclaimed during post-medieval or more recent times, and large tracts of the river are still prone to severe flooding. This fact has discouraged the kind of development that is common on the Wirral (Crosby 1996, 15).

A5.4.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Unenclosed Land (Coastal)	UL_C	39	88.2	1	4
Enclosures (Post-Medieval)	E_PM	3.1	6.9	-	-
Settlement (Modern Residential)	S_MR	0.4	1	-	-
Designed Landscape (Recreation)	DL_R	0.3	0.7	-	-
Enclosures (Ancient)	E_A	0.3	0.6	-	-
Settlement (Other Residential)	S_OR	0.3	0.6	-	-
Industrial Non-Settlement (Inactive)	I_I	0.2	0.5		-
Communications	C	0.2	0.4	-	-
Industrial Non-Settlement (Active)	I_A	0.2	0.4	-	-
Water (Natural)	W_N	0.1	0.3	-	-
Enclosures (Modern)	E_M	0.1	0.2	-	-
Water (Artificial)	W_A	0.1	0.1	-	-
Totals		**44.3**	**99.9**	**1**	**4**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A5.4.3 ***Overall Character of RHLC distribution***

Current HLC coverage for the Dee Estuary and Coast RLCA is incomplete, and is restricted to the north-western bank of the river, and a small area in the south-east at Bretton, on the western edge of Chester; comments on the distribution and meaning of regional historic landscape character types are therefore limited. The majority of the land for which HLC coverage is available is, naturally, Unenclosed Coastal land (Fig 6). Although the proportions given by the current HLC do not reflect this, the remaining land within the RLCA belongs to either the Enclosed Land broad type, with the majority of these enclosures having been established in modern times, Industrial Land, and a small amount of modern settlement, which relates largely to the industrial needs of the area (for example Queensferry). Some very small parts of the landscape that have greater antiquity are found on the western edge of Chester.

A5.4.4 ***Settlement and Enclosure Character***

The development of settlement and the enclosed landscape in the Dee Estuary RLCA is, in comparison to other areas, relatively simple and short-lived. During Roman times and (presumably) earlier, the coast of the estuary skirted around the higher ground of Burton, and to the edge of Chester, reflecting the current boundary of the RLCA. Historical records suggest that the build up of silt in the estuary, had, by at least the sixteenth century, made the port facilities at Chester ineffective, and required the cutting of a canal through the newly created landscape in order to maintain Chester's shipping industry (Crosby 1996, 16).

As this part of the estuary silted up and became salt marshes, the people living in Wales, the Wirral and the West Cheshire plain rapidly reclaimed the land, enclosing arable fields and pastures, establishing new communication routes, and ultimately creating large industrial centres with modern settlements that facilitate them (Countryside Commission 1998, 138).

A5.4.5 ***Non-Agricultural Activity Character***

Chester's port facilities (although not technically part of the Dee Estuary RLCA) were important to trade throughout Europe from at least the fourteenth century (Higham 1993). The silting up of the river, however, combined with the rapid land reclamation that was taking place, restricted this trade, and necessitated the cutting of the 'New Cut' in 1737. Today, this canal measures roughly 10km, and the estuary begins properly at the north-western edge of Shotton (in Wales). It was the filling of the estuary that was largely responsible for the growth of the alternative ports around the Wirral, and the success of the port of Liverpool (Place 1994).

The area is currently home to a large amount of industry: a power station is located at Connah's Quay, and a natural gas plant and several chemical manufacturing plants and paper mills are found within this relatively small area.

A5.4.6 ***Change Scenarios***

Almost 90% of this RLCA comprises Unenclosed Land (Coastal). Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Climate Change (-3), Development (-1) and Regional Spatial Strategy (1). The Shoreline Management Plan for this region (Halcrow 2009f) advocates a policy of maintaining the existing defences (holding the line) for the majority of the area, although the north coast of the estuary has a policy of managed realignment (retreat) in the medium to long term. This will have a negative impact on the historic environment in that locality.

Overall Impact: 4 Negative, 1 Positive.

The Dee Estuary is covered by a number of management strategies, including an Estuary Strategy (Jemmett 1995), and is a Ramsar site. These collectively raise a number of issues, including planning considerations, industrial development and transport infrastructure, development mitigation/restoration, water quality and pollution, coastal defences and flood management, cockling, recreation activities and integrated estuary management (Ramsar Convention 1995). These are mainly focused on the protection of wildlife, but relate equally to the historic environment.

A5.4.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- Consultation should be undertaken with the appropriate archaeological curator when considering coastline management or development.

Generic Objectives for the Unenclosed Land character type:

- Interpretation should be enhanced, as the role of humans in the creation and management of unenclosed land is not well appreciated. In particular, there is a perception that these areas are a wilderness hardly touched by man, rather than the result of many centuries (and sometimes millennia) of human intervention. Opportunities for increased and improved interpretation, and the appropriate extension of access, should be taken, whilst at the same time deflecting visitors from sensitive historic attributes.

- Survey of this landscape type should be encouraged in order to understand more fully its historic use and development, and to identify areas of sensitive

archaeological remains.

- Liaison with the appropriate archaeological curator should be undertaken during any scheme to enhance or change the characteristics of the area, as these may have unintended consequences for buried archaeological remains.

- Damage to the historic environment through mineral exploitation, tree planting and agricultural improvement should be avoided. There should be controls over other large-scale energy, mining/quarrying developments that could rapidly transform significant landscape features and characteristics. Full archaeological assessment prior to decision-making should be carried out where appropriate.

- The monitoring of soil erosion in areas where there are visible historic features, or the potential for buried archaeological remains, should be encouraged.

- The sympathetic creation and management of recreational and tourism activities should be encouraged in order to maintain landscape quality.

- When considering repair, priority should be given to features according to their period, rarity, condition, vulnerability, diversity and potential.

- An avoidance of stone clearance, and the use of ancient cairns, walls and buildings as sources of building or repair material, should be encouraged.

- The evidence for relict occupation and land use should be conserved and enhanced.

A5.5 SOUTHERN AND EASTERN CHESHIRE PLAIN (RLCA 39)

A5.5.1 *General Historic Character and Physical Character Description*

The Southern and Eastern Cheshire Plain is a settled, low-lying, slightly undulating landscape bounded by the Cheshire Sandstone Ridge in the west and Congleton Edge in the east (Fig 2). Adjacent to the Ridge, this is a gently undulating landscape and to the east the topography becomes very flat, before moving into an area of gently undulating ground in the east. Geologically, glacial tills predominate in the west, with glaciofluvial deposits, intermixed with small areas of glacial till in the east. The remnants of small mosses are a common feature of the western, southern and eastern parts of this area. Small glacial meres are a common feature adjacent to the Ridge. Settlement within this area is very dispersed, but includes a number of market towns and small nucleated villages.

Pre-AD 1700 fields systems are common in this area, and later field systems, created though the reclamation of the many mosses or by remodelling earlier field systems, are also present. Within the majority of these fields, marl pits are common features. West of Nantwich, ridge and furrow and moated sites are also common. Historically, this landscape has been used for pastoral farming; however, there has been an increase in arable farming and the conversion of pasture for fodder crops.

A5.5.2 *Summary of Regional Historic Landscape Character*

Note all areas and percentage values have been rounded to the nearest decimal place, and as a result of overlap between county-scale HLC types, the total proportion may add up slightly more than 100%. RHLC types of less than 0.1 sq km are not included in this table.

RHLC Sub-type	Sub-type Code	Total Area (sq km)	% of Total RLCA	Positive Impacts	Negative Impacts
Enclosures (Post-Medieval)	E_PM	159.9	30.7	4	11
Enclosures (Modern)	E_M	134.1	25.7	4	11
Enclosures (Ancient)	E_A	124.3	23.9	4	11
Settlement (Modern Residential)	S_MR	35.5	6.8	-	-
Industrial Non-Settlement (Active)	I_A	15.7	3	-	-
Designed Landscape (Ornamental)	DL_O	11.3	2.2	-	-
Settlement (Other Residential)	S_OR	9.1	1.8	-	-
Designed Landscape (Recreation)	DL_R	8.6	1.7	-	-
Woodland (Plantation)	WD_P	7.8	1.5	-	-
Communications	C	6.9	1.3	-	-
Woodland (Other)	WD_O	3.8	0.7	-	-
Unenclosed Land (Other)	UL_O	1.4	0.3	-	-
Water Natural	W_N	1	0.2	-	-
Industrial Non-Settlement (Inactive)	I_I	0.7	0.1	-	-
Industrial Non-Settlement (Other)	I_O	0.6	0.1	-	-
Water (Artificial)	W_A	0.6	0.1	-	-
Totals		**521.3**	**100.1**	**12**	**33**

NB The scores for positive and negative impacts refer to likely typical outcomes of various change scenarios; see below and the main report for more details. These ratings should be regarded as a scheme intended to stimulate constructive consideration of issues when considering change. Care should always be taken to minimise negative effects and maximise positive ones, and the Objectives (below) are intended to help ensure such an outcome.

A5.5.3 ***Overall Character of RHLC distribution***

The largest character types are those connected with Enclosure which, in turn, reflect the rural character of the landscape (Fig 6). Ancient Enclosure is identifiable as a significant component of the historic landscape. Later field systems have been created though the reclamation/enclosure of moss, wood and heath, but a significant proportion of these field systems are relatively ancient in origin and incorporate earlier boundaries and features. Outside the market towns and the few nucleated villages of this area, the settlement pattern is characteristically very dispersed. Woodland cover is low and is typically field-sized.

A5.5.4 ***Settlement and Enclosure Character***

Although the Roman settlement outside the fort at Middlewich and the settlement at Nantwich were well established by the second century AD (Philpott 2006), the majority of the other settlements of the area are known from the Domesday survey (1086). Domesday records a landscape heavily wooded in places and sparsely populated outside the market towns, suggesting that the typically dispersed settlement pattern is predominantly medieval (Higham 1993). Congleton was to expand in the eighteenth and nineteenth centuries with the development of the textile industry, and Crewe was an entirely new town established in the 1838 by the Grand Junction Railway Company (Drummond 1995).

The Domesday entries for most of the RLCA contain a large number of references to woodland, as recorded in the place-names: for instance Threapwood, Royal Wood and Northwood (Morgan 1978). Within this area, there is a strong survival of small irregular fields, probably medieval assarts, often associated with moats, marl pits and ridge and furrow. To the north of Nantwich lay the Forest of Mondrem, which is an area that has a high density of ridge and furrow, comparable to the West Cheshire plain. The settlement is dispersed, although the main medieval settlements are nucleated, in comparison with much of Cheshire, and the area contains a large number of moated sites. This area contains a high density of medieval field systems, many of which are the fossilised remains of once extensive open-field systems. The settled and enclosed nature of this landscape forms an interesting contrast to that of Delamere to the north, as this area was also subject to forest law (Cheshire County Council 2003).

Later field systems were created through the enclosure of the small heaths, commons, mosses and wetlands, largely by private agreement, but occasionally by Parliamentary Act (Leah *et al* 1997). In the west of this area lay the large estates of Cholmondeley Combermere, and Shavington. Improvement field systems, created in the eighteenth and nineteenth centuries, are common and, in the area between the

latter estates, have completely eradicated all traces of the medieval fields other than the network of roads and lanes.

There is a greater frequency of twentieth-century agricultural improvement in this area than in much of Cheshire. Furthermore, the presence of high densities of nurseries and enlarged farms in this area suggest differing agricultural practices or regimes, which are probably related to the proximity of the Manchester and Stoke conurbations, the railway and the M6.

A5.5.5 ***Non-Agricultural Activity Character***

The effect of industry on this area has been slight and is largely restricted to the creation of new water bodies through the extraction of aggregates and peat, though it is generally restricted to the eastern part of this area. Crewe was a major railway town, founding in 1838 and developed, initially by the Grand Junction Railway Company (GJR), and later by the London and North Western Railway Company (LNWR) (Drummond 1995). These organisations not only constructed the architectural fabric of the town, but were also its municipal administrators and the self-appointed guardians of the population's moral, spiritual and social development. The locomotive and wagon-building works, that at its height employed 20,000 people, is now a general maintenance depot employing less than 1000. Crewe is also the site of a motor-car production works, originally for Rolls Royce, but now for Bentley.

A5.5.6 ***Change Scenarios***

The area is predominantly covered by Enclosed Land of all periods. Negative scores represent adverse impacts while positive numbers reflect beneficial effects of the change scenario. It will be seen that some changes can have both positive and negative effects. Those change scenarios likely to have the most impact are as follows:

Agricultural Intensification (-3), Change in Use (-2), Flood Risk Management (-2, 2), and Tourism (-1, 1). Despite the wooded appearance that the hedgerows bring to the landscape, there is actually very little woodland cover, therefore expansion is not considered as a likely occurrence.

Overall Impact: 33 Negative, 12 Positive.

Intensification of grassland management and the conversion of crops to fodder production are already having an effect on the landscape. The amalgamation of smaller enclosures as part of farm consolidation is likely to be a problem in the future. The major settlements are likely to be subject to expansion into the surrounding rural areas.

The demands of modern farming practices have the potential to create an undesirable change in this character, a loss in historic field patterns and traditional

pastures as a result of a shift to arable farming, the intensification of grassland management, and the focus on the production of fodder crops. Planning polices have led to an increase in nucleation within the settlement pattern of this area, changing a pattern which has been established over centuries. The dispersed housing of the area is seen as desirable, and associated development is often of poor quality, detracting from the dispersed settlement's built character, as has the paraphernalia associated with horse ownership. There is likely to be some expansion of the larger settlements, causing further encroachment on the rural landscape. There is also a loss of historic farm buildings to poor-quality residential conversions. There has been some targeting of the area for English Woodland Grant Scheme (EWGS) and energy crops, largely *miscanthus*, either in the vicinity of Rights of Way or population centres, or around existing woodland.

A5.5.7 ***Objectives***

If these objectives were to be met then it should be expected that the negative impacts of change scenarios would be reduced, and the positive ones enhanced. Objectives are suggested for only those RHLCTs covering more than 10% of the RLCA's area.

Specific Objectives:

- The rural, pastoral character of the plain should be maintained and enhanced where possible, through the maintenance of the hedgerows, and limiting the amalgamation of enclosures.

- The meres and mosses are already considered a valuable resource, and these should be maintained as part of the unique character, and as a record of past industry.

- Expansion around the major settlements should only be undertaken in consultation with the appropriate archaeological curator to ensure they are in keeping with the character of the area.

- The unique railway heritage of Crewe should be conserved, particularly as a tourist asset.

Generic Objectives for the Enclosed Land character type:

- The maintenance of hedgerows as boundaries of still-functioning fields through gapping up and the use of appropriate local hedge-laying techniques should be encouraged. Similarly, the maintenance of dry-stone walls as boundaries of still-functioning fields should be encouraged, along with the use of appropriate stone sources and coursing techniques during their repair.

- The planting of trees in hedgerows in order to replace overly mature specimens should be promoted.

- The retention and enhancement of old orchards, and the restoration and creation

of orchards around farmsteads in areas where they were once more common, should be advocated.

- The conservation of upland field enclosures should be encouraged, particularly those features such as ring garths and intakes that may pre-date the Enclosure Movement.

- The retention of field furniture, such as ditches, gateposts, hog holes, sheep folds, stone stiles, ponds and man-made but naturally fed stock-drinking areas, should be promoted.

- The retention of smaller, irregular fields and the maintenance of the boundaries and associated structures (walls, hedges, ditches, gateposts and stone stiles) should be encouraged.

- New field boundaries that are inserted into inherited patterns should not unnecessarily reduce the legibility of earlier patterns.

- The identification, and retention where possible, and if necessary replacement, of in-field trees should be encouraged, as this may provide evidence of former field boundaries or land use practices.

- The identification and protection from ploughing of ridge and furrow and lynchet earthworks should be promoted, as they are an indication of former farming practices. Where possible, the retention of areas of surviving ridge and furrow, through the maintenance of an appropriate pastoral regime, should be encouraged.

- The maintenance of commons so they remain open but actively farmed areas should be encouraged, as should the maintenance of traditional upland farming practices and the viability of upland farming in general.

- Incentives to farmers to reinstate areas of marsh, copse and brake that would have been important elements in the landscape should be considered. Many of these also provide the additional benefit of restricting the flow of water (and nutrients or pollutants) into the rivers and streams.

- The state of the historic farm-building stock should be reviewed so as to assess the rate and impact of conversions and demolitions on the stock of intact pre-twentieth-century farmsteads. Alternative uses of particularly significant redundant farm-buildings should be fully considered before permissions are granted to convert into dwellings.

- The overall character of the Ancient Enclosed land with its dispersed settlement pattern should be maintained. The great historic value of Ancient Enclosed land needs to be fully borne in mind when applications for developments that will disturb parts of it are being considered. The predictability of encountering prehistoric, medieval and earlier post-medieval remains should also be borne in mind when designing responses to applications to disturb Ancient Enclosed land.