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March 2004

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PREFACE

The Creswell Crags Limestone Heritage Area Management Action Plan was commissioned by English Heritage, and funded by the Aggregates Levy Sustainability Fund.

The project was commissioned in response to a project proposal from Creswell Heritage Trust who also prepared the brief for the work and managed the project.

The work on the project was undertaken by ARCUS, Groundwork Creswell and Creswell Heritage Trust. ARCUS undertook the archaeological and landscape history elements of the project. The access study was undertaken by Groundwork Creswell and Creswell Heritage Trust with Groundwork Creswell undertaking the study on the physical and visual access and Creswell Heritage Trust reporting on the intellectual access.

NON TECHNICAL SUMMARY

1 Introduction

The Creswell Crags Limestone Heritage Area Management Action Plan outlines an innovative, integrated archaeological, palaeontological, ecological and access Management Action Plan for the main limestone vales and gorges within the Creswell Crags Limestone Heritage Area (the southern Magnesian Limestone Natural Area).

The Management Action Plan forms the second stage of a three stage programme that will result in major improvements to cultural and natural heritage conservation and access across the southern Magnesian Limestone.

Stage 1

The first stage of the programme involved the production of the Creswell Crags Conservation Plan (2001) and the Creswell Limestone Strategy (2000). The current proposed Management Action Plan responds to policies and actions set out in these documents.

Stage 2

The second stage is the production of the Management Action Plan. The Management Action Plan comprises several elements which are being undertaken in two phases.

Phase A, has been completed and forms the basis of this report. Phase A was concerned with archaeology, GIS, access and management action proposals were drawn up in relation to these issues.

Phase B will deal with the ecological study and revision of the access and the management action proposals to take into account the results of the ecological study.

Stage 3

The third stage will involve the implementation of key action plan proposals through a range of mechanisms including local partnerships, community groups, and New Deal programmes.

1.1 **Project Elements**

The proposals for the Management Action Plan were divided into six main areas listed below:

- 1 GIS for the Creswell Heritage Area.
- 2 Outline archaeological/palaeontological sensitivity study.
- 3 Consolidation and stabilisation of the national collection and archive of Ice Age archaeological material from the Heritage Area.

- 4 An ecological potentiality study, to be undertaken in Phase B of the Management Action Plan.
- 5 An intellectual, physical and visual access study.
- 6 Production of integrated conservation statements and management action proposals.

1.2 **Project co-ordination**

Phase A of the project was managed by Creswell Heritage Trust and was implemented by ARCUS, Groundwork Creswell and Creswell Heritage Trust.

1.3 Background

1.3.1 Landscape, wildlife and habitats

The Magnesian limestone runs in a narrow belt from Nottingham to the north east of England around Tynemouth. English Nature recognise the section from Nottingham to North Yorkshire as a distinct 'natural area'. The Creswell Crags Limestone Heritage Area and Creswell Limestone Strategy Area cover the southern third of this area.

Magnesian limestone is a relatively soft rock that weathers easily. In the Creswell Limestone Heritage Area weathering has formed a plateau with rounded hills and dry valleys, cut by a number of sharply defined vales and gorges with caves and crags. The steep valley sides with cliffs in association with narrow river corridors create a strong sense of visual confinement. Areas of unimproved pasture and grazing meadows, often with patches of wet grassland, are a recurring feature of the gorges.

Due to intense agricultural exploitation of the plateau, areas of wildlife interest are largely restricted to oases of high species diversity associated with the limestone gorges and vales. Because of their relative scarcity and high quality, it is particularly important that these sites are protected. The values and gorges contain Magnesian limestone grassland, a nationally scarce habitat listed on the EC Habitats and Species Directive (1992) as a habitat type of Community Interest, and fine examples of semi-natural broadleaved woodlands recognised as being of national importance for their plants and animals.

Several of the limestone gorges that characterise the area are Regionally Important Geological Sites (RIGS), coinciding closely with the important Pleistocene sites, areas of rare Magnesian Limestone grassland and fine examples of semi-natural broadleaved woodlands.

1.3.2 Ice Age archaeology and palaeontology

The area contains several Ice Age archaeological sites of which four are Scheduled Ancient Monuments. They represent a significant proportion of the Scheduled Ancient Monuments of this period in Britain. Archaeological exploration of the area began in the mid nineteenth century and has continued through to the present day.

For the purposes of this report Ice Age archaeology includes the archaeology of the Palaeolithic and Mesolithic periods. The Palaeolithic covers the period from the first human occupation in Britain through to the end of the last ice age around 10,000 years ago. The Mesolithic covers the period immediately after the last ice age. Both the Palaeolithic and Mesolithic periods are characterised by mobile hunting societies.

As well as the sites with human occupation there are several caves and rock shelters that containing palaeontological material from the ice age, these sites have no human input into them but they are also important as they contain the bones from the animals that lived in the area during the ice age including woolly mammoth, reindeer, bison, woolly rhinoceroses, hyenas, bears and wild horses. These palaeontological sites are important as they can be used to identify the animals that lived in the area during the ice age and so put the human activity in the area in context.

1.3.3 The modern cultural and organisational landscape

The whole of the Heritage Landscape Area lies at the heart of the economically depressed former coalfield. Long term conservation and development of the Ice Age scientific and educational resource is threatened by the continuing poor economic, social and environmental conditions that many of the communities continue to face and by the limited understanding and appreciation of the distinctive cultural and natural heritage by local people and by decision makers.

These conditions affect external perceptions of the area, are a break on inward investment, encourage vandalism and neglect and provide conditions for inappropriate development and use. There is the potential for the natural and cultural heritage to act as a catalyst for a new vision of the future of the area, creating a high quality sustainable natural and cultural environment and encouraging inward investment.

Strategic planning is made difficult by the location of the Heritage Area on the boundaries of three County or Unitary Authority areas and the diversity of administrative units that result. Organisations such as the Groundwork and Heritage Trusts that work across these boundaries are of particular value in acting as catalysts for partnership working and strategic planning.

1.3.4 Extent of the Creswell Limestone Heritage Area

There are 11 main vales and gorges within the Creswell Crags Limestone Heritage area and all of these have been included in the study of the management action plan except Creswell Crags which was covered in some detail in the Creswell Crags Conservation Plan. The main limestone vales and gorges are:

Roche Abbey Vale Firbeck Valley Anston Stones and Lindrick Vale Red Hill Valley Thorpe Common and Lob Wells Wood Ash Tree Gorge Markland and Hollinhill Grips Creswell Crags Elmton and Whaley Valleys Langwith Vale Pleasley Vale

2 A unified GIS for the Creswell Crags Limestone Heritage Area

2.1 Introduction

The location of the Creswell Heritage Area on the boundaries of three County or Unitary Authority areas and three District Councils has complicated strategic planning for conservation management, including landscape character assessment and nature conservation. To improve the conservation management of the Heritage Area and support natural and cultural heritage based regeneration projects a unified GIS index was developed. The partner organisations for the GIS are:

Nottinghamshire County Council

Derbyshire County Council

Rotherham Metropolitan Borough Council

South Yorkshire Archaeology Service

2.2 Aims

The aims of the unified GIS were:

- to share information between the different local authorities that deal with the Creswell Crags Limestone Heritage Area.
- to enable the different local authorities to development their management of the area based on knowledge and understanding of the whole of the Creswell Crags Limestone Heritage Area.

2.3 Methodology

The production of a usable, integrated GIS index for the Creswell Crags Limestone Heritage Area comprised four elements:

- 1) construction of a demonstration system.
- 2) agreement of protocols for operating the system.
- 3) setting up the system.
- 4) maintenance of the system (ongoing).

Elements 1 to 3 have been completed and element 4 relates to the ongoing management and updating of the system.

Nottinghamshire County Council have taken on responsibility for developing and managing the GIS. Subject to the reliability of the data provided, Nottinghamshire County Council guarantee the integrity of the resultant index and maintain the confidentiality of the system to the participating organisations. They will distribute copies of the GIS to all the partner organisations, these being the only bodies who have access to the GIS under the currently agreed protocols.

2.3.1 Structure of the system

The GIS index is based on Mapinfo and has the following attributes:

- all sites will ideally be marked with as boundary polygons, but points will be included where boundary polygons are not available ;
- the index will have two layers, one for statutory designated sites and one for other types of sites.

Four fields are recorded for each site:

Site reference number – designated by originator

Site name - designated by originator

Type of site – e.g. SAM, SMR, SSSI, NNR

Contact – who to contact for further information, i.e. which partner organisations holds the full record.

2.4 Results

The development of the unified GIS has produced a working system that can be used by all the partner organisations. The basic aims of the system were outlined above but further development of the system will depend on the value of the system to the partner organisations and potential further developments they identify.

2.5 Recommendations

For the GIS to have continuing value it is necessary that it is updated regularly. This will be undertaken by Nottinghamshire County Council. It is proposed that annual updates to the system are organised by Creswell Heritage Trust and Nottinghamshire County Council who will contact the partner organisations for relevant new information.

3 Identification and assessment of management Issues relating to the known sites

3.1 Introduction

The Creswell Crags Limestone Heritage Area is well known for its Ice Age archaeology and this chapter examines the condition and management of known and potential Palaeolithic and Mesolithic sites within the area. The sites examined are those in the vales and gorges that were identified in the Creswell Crags Conservation Plan and its gazetteer, and those sites identified in the survey undertaken here.

3.2 Aims

The aims of the identification and assessment of management issues were:

- through desktop research, supported by field visits, to identify and record information relating to ownership, condition, management (including habitat management), issues, threats and access.
- identify, agree and cost proposals to improve conservation, management and access.

3.3 Methodology

The methodology for this study involved two stages:

- identifying the condition of each site and its surroundings,
- making recommendations as to the management of the sites.

To identify the management issues relating to the sites required that the condition of each site was identified. This was undertaken by means of a sensitivity study following a methodology similar to that used on the study of Creswell Crags Gorge by Collcutt and Johnson (1999). The sensitivity study assesses the potential archaeological value of a site and its vulnerability to damage. These factors are then combined to give the overall the sensitivity of the site. There were two elements to the sensitivity study, a desk based study and a field survey. In the desk based study, archives and published works were searched for information relating to any of the known sites. In the field survey a walk-over survey was undertaken of all the vales and gorges, all rock faces were examined and all caves, rock shelters and rock faces were recorded and photographed. Maps were produced of all the valleys showing all the sites identifies. A database was produced describing each cave, rock shelter or section of rock face, this incorporated all relevant data recorded via the desk based study or the field survey.

On completion of the fieldwork and database the condition of each site was considered and strategies developed for the long term management of all the sites.

3.4 Results

In general most of the sites were in good condition with little evidence of ongoing damage to the sites. However, several different processes that had or could cause

damage were identified. These had operated in the past, were ongoing or had the potential to cause damage in the future.

quarrying - there was evidence of quarrying in several areas in the past.

vandalism –was ongoing in some areas, this included graffiti on rock faces and fires lit in caves or rock shelters.

rubbish dumping or littering – there were old rubbish dumped in some areas, and there were several caves or rock shelters where littering was currently taking place.

farming – ploughing was cutting close to the base a of a few rock faces, however, this was unusual as arable fields were rare in the vales and gorges.

erosion – visible erosion was not common but this could occur where footpaths ran along the base of rock faces.

animal activity – animal holes were present on some sites, these included badger setts, rabbit burrows and rat holes. Although not widely distributed they can be very damaging to individual sites where they exist.

root activity – Many of the vales and gorges contained woodland, particularly on or near the rock faces. The roots from trees and bushes can disturb and damage buried archaeology. In some vales and gorges the woodland is expanding as the bottoms of the vales and gorges are no longer used for pasture.

3.5 Recommendations

The management recommendations were drawn up in the office following completion of the fieldwork. These recommendations fall into four groups,

3.5.1 Immediate Actions

These are actions taken to remediate immediate threats to sites or specific problems that need special attention in the public education or monitoring programmes.

3.5.2 Public Education

This involves informing the public about the importance of the sites and educating them as to what can damage the archaeological potential of a sites. This information will be aimed at land owners, councils, and visitors. It will also provide contact information where the public can report problems or get advice.

It is proposed that a short management guide is produced for each valley this will include the following sections:

- 1. Background to the Creswell Crags Limestone Heritage Area.
- 2. The nature and importance of Ice Age archaeology, this would describe the nature of the archaeology, the types of sites and what it can tell us.
- 3. A description of the sites in the valley.
- 4. An explanation of what processes could damage the archaeology and natural environment. This will cover such issues as natural erosion, land use, farming practices, rubbish tipping, informal footpaths, vandalism and fire lighting.

- 5. Recommendations for best practice in looking after the sites and their environment. This will cover such issues as maintenance (removal of rubbish and graffiti), site use, access and management. These recommendations will cover all sites whether on farmland, in a garden or in woodland.
- 6. Contacts to report damage or get further advice. This will include county archaeologists for concerns about planning issues, English Heritage for general advice on archaeology and Creswell Heritage Trust for reporting concerns about the condition of sites unless they are scheduled in which case it should be English Heritage. In some cases the contacts could include land owners or managers if they are councils or wild life trusts.

3.5.3 Monitoring

This involves a long term programme of regular monitoring visits to look for changes to sites that will impact on the archaeological/palaeontological potential of site.

This long term monitoring will aim:

- to check up on any reports of damage received from members of the public,
- to identify any damage that has occurred to the sites since the last visit,
- to identify any human actions that may be detrimental to the sites through disturbing deposits or encouraging erosion,
- to identify any threats to the site from ongoing natural erosion,
- to identify any threats to the sites from animals or plant roots,
- to identify any other threats to the sites,
- to make recommendations for any actions required to protect the sites.

3.5.4 **Protection through the planning process.**

Protection of archaeological sites from development is undertaken through the planning process. Planning Policy Guidance Note 16, Archaeology and Planning, provides the framework by which this is undertaken. Under this process the state of current knowledge is a key factor in informing the planning authorities deliberations. These determine whether evaluation is required before determination or whether mitigation is required before or during development. By providing copies of the Management Action Plan including the survey database and maps to the local council archaeological officers their knowledge of the Palaeolithic and Mesolithic archaeological potential of the vales and gorges in the Creswell Crags Limestone Heritage Area will be considerably enhanced. This will enable the council archaeological officers to give more informed advice to the planning authority on the caves and rock shelters and their archaeological potential. This in turn will enhance the protection and management of the cave and rock shelters to preserve them over the long term.

4 Predictive Modelling for the existence and location of other potential Palaeolithic/Pleistocene period sites

4.1 Introduction

There is a need to establish the potential of the Creswell Crags Limestone Heritage Area for further research, and to develop a coherent research framework within which such research can be carried out. By identifying the significance of the area for Quaternary, assessment of research potential will also help to protect the scientific resource by contributing to strategic planning and management and contribute to the significance of Creswell Crags as a centre for promoting awareness and understanding of Quaternary environments.

In order to develop a research framework it is first necessary to assess the character of the surviving sites. This chapter attempts to use predictive modelling to assess the archaeological and palaeontological research potential of the cave and rock shelter sites in the Creswell Crags Heritage area. In the model previously investigated sites are used as a control with which to compare previously uninvestigated sites.

The predictive modelling can not be used on open air sites as there are no control sites and no specific potential sites. Instead a more speculative approach based on desk-top research and consideration of the potential preservation of Pleistocene and early Holocene deposits in the valley bottoms was applied.

4.2 Aims

The aim of the predictive model is to identify all the known and potential cave and rock shelter sites in the main limestone gorges and to assess the potential of these sites to contain archaeologically significant remains.

The predictive modelling has three aims:

- To assess what environmental/site characteristics can be used to asses the research potential of cave and rock shelter sites.
- To use the environmental/site characteristics to develop a predictive model that can be used to assess the archaeological and palaeontological research potential of cave and rock shelter sites.
- Through desk-top research to assess the potential for the existence of open air sites in and around the vales and gorges.

4.3 Methodology

Data for the predictive model was collected from two sources a desk based study and a field survey. In the desk based study archives and published works were searched for information relating to any of the sites. In the field survey all caves and rock shelters were examined and various environmental and physical attributes relating to the sites were recorded. A database was produced describing each cave or rock shelter. The database was combined with the database from the sensitivity survey. These were combined for two main reasons:

- much of the data was duplicated in the two studies and combining the two databases minimised data inputting.
- management of the database is simplified, as any additions or alterations to the database will only have to be done once

The information in the database was then transferred to a standard statistical analysis program (SPSS) for analysis. The analysis involved two stages. The first stage was examination of the data to determine is integrity and to identify what attributes appeared to relate to possible human use of the sites. The second stage was to build the predictive model, this was undertaken using Discriminant analysis.

As there are no known open air sites from the ice age in the area the assessment of the potential for open air sites was undertaken through a desk based study that attempted to identify areas that had the potential to contain geological deposits that could contain ice age archaeological sites.

4.4 Results

4.4.1 Statistical Analysis

The field survey increased the number of known or potential cave and rock shelter sites from 50 to 163. The statistical analysis compared the sites that have been investigated by excavation with those that have not. This means that there were three groups of sites in the analysis, investigated sites with archaeology, investigated sites without archaeology, uninvestigated sites.

During the first stage of the statistical analysis, determining the integrity of the data and to identifying the attributes that appeared to relate to possible human use of the sites, the following observations were made:

- This comparison of archaeological, non archaeological and uninvestigated sites shows that there are few obvious major differences in the topographic or environmental location between those sites that are archaeological, non archaeological or uninvestigated.
- Archaeological cave sites tend to exclude the long deep caves. They also tend to have entrances around 5m², avoiding the very large or small entrances.
- The archaeological rock shelters cover the full range of sizes identified whereas all the non archaeological rock shelters identified were small. This possibly suggests that large rock shelters were more likely to have been used by humans in the past.
- There is no identified relationship between the altitude of the site and human occupation though there may be relationships within valleys that are obscured by the varying altitudes of the valleys.
- Investigated archaeological and non archaeological caves tend to be high on the valley side. However, the highest number of uninvestigated sites are located at mid level on the valley side. This demonstrates that previous excavations have focused disproportionately on high level sites, possibly for reasons of easier access/visibility.

- There is the suggestion that for uninvestigated and non archaeological sites the site aspects tend to be towards the south while for archaeological sites it tends to be towards the north.
- There is no identified relationship between archaeological sites, non archaeological sites and light zone extent.
- There was no significant variation in the distribution of valley side slope angles for archaeological, non archaeological and uninvestigated sites, with the exception of slopes below sites where a difference between the slope angles for archaeological and uninvestigated sites was identified. The histogram for slope below for uninvestigated sites had peaks at 0° and 35° while the histogram for archaeological sites showed a spread over the whole range with a small peak at 35°. The small sample size of investigated sites should, however, be taken into consideration.
- As virtually all the sites are near to a water supply there is no identified relationship between water supply and site use.

4.4.2 Predictive Model

In the predictive modelling two models were developed, one just covering the caves and one incorporating all the caves and rock shelters.

In assessing the results of the predictive models one must take into account the problems with predictive modelling and the small sample size of investigated sites available to develop the models. However, despite these reservations, the results are very similar, with both models suggesting that the majority of sites, around 75-85%, have the potential to contain archaeology. This appears to be very high but is not dissimilar to the number of investigated sites known to contain archaeology (65%).

There were 17 sites in the analysis that were included in both the Caves Predictive Model and the All Sites Predictive Model. Of these, all bar three were classified in the same way in both models which means that 82% received the same predicted group membership in both models. This demonstrates a high degree of agreement between the two models despite one model having four times as many cases in it and some of the variables differing between the models.

Overall it would appear from the results that most sites have a high potential to contain archaeology. The proportion of sites suggested as having the potential to contain archaeology is much higher than recorded in other surveys, where between 14% and 29% where found to contain archaeology. It is possible that this is partly due to a lack of reporting of sterile excavations by early. The excavated sites might also be a biased sample and not representative of all the sites, as excavators generally choose the most promising sites. However, it might be due to the character of the Magnesian Limestone where the caves generally occur in discrete groups in the vales and gorges, often in very close proximity. This may result in caves being used differently in this area resulting in a greater proportion of sites being used than in the rest of the country.

4.4.3 Open air Sites

From the study of the potential for open air sites it has been possible to identify which valleys contain drift geology that could bury archaeological remains. This, combined with the background archaeological information, has been used to produce a simple

model of the potential of each valley to contain open air sites. The model produced is qualitative rather than quantitative and should be seen as a guide to potential rather than as a predictive model.

The model assessed the potential for different types of open air sites on a scale from high to low. In assessing the potential for archaeological deposits or remains to survive the following principals were followed. If an appropriate location exists and finds are known from the locality the potential is deemed to be high. If an appropriate location exists but no finds are known from the locality the potential is deemed to be moderate. If no appropriate location exists the potential is deemed to be low. The potential preservation conditions within deposits were also considered as were potential human impacts on the valley bottom deposits.

The vales and gorges with the highest potential were assessed as Thorpe Common and Lob Wells Wood, Elmton and Whaley Valleys, and Langwith Vale, lesser though still significant potential was identified in Roche Abbey Vale, Ash Tree Gorge, Markland Grips and Pleasley Vale.

4.5 Recommendations

To investigate the reliability of the predictive model it is necessary to test it by investigating some of the sites used in the model to see if their predicted group membership is correct. This would increase the sample size for investigated sites, allowing the model to be refined. It is proposed that a programme of test pitting is used to investigate a number of sites. These would help to establish the presence or absence of archaeology, and the date of any archaeological remains.

Due to the limited nature of the data on which the assessment for the potential for open air sites was undertaken this is currently a guide to the potential rather than predictive model. To take this study further deposit models would be required for each vale or gorge. These would describe the sequence of deposits in the valley bottom and identify those that have the potential to contain Ice Age archaeology. To undertake this further work more borehole data would be required for the vales and gorges.

5 The impact of later human activities on the vales and gorges

5.1 Introduction

This chapter examines the impact of human activity within the gorges, primarily from the medieval period onwards, although mention is made of human impacts from the prehistoric period. The study was undertaken through a combination of desk-based research and rapid field survey, and was designed to provide an general overview of the landscape development for the whole area, as well as a more detailed study of each gorge and vale.

5.2 Aims

The aim of this study was to identify the principal agencies that have shaped the development and current landscapes of the gorges and vales. The study was designed to enable a series of landscape types to be characterised for each gorge, which would set the present land use and management into its historical context, and enable the impacts of these past and present land uses upon the prehistoric landscapes and features to be assessed.

5.3 Methodology

The study was undertake through a combination of desk based study and field survey. The desk based study made use of the landscape characterisation studies previously undertaken by Derbyshire County Council and Nottinghamshire County Council. Further information was obtained from historic maps particularly on the Rotherham area where a landscape characterisation study has not been undertaken.

The desk-based assessment was enhanced through a programme of rapid field survey. The aim of the field survey was to gain a feel for the general character of the gorges, identify and illustrate particular instances of human impact of different types, and provide a baseline against which to assess the information gathered during the desk-based assessment.

5.4 Results

A general overview of the landscape development for the Creswell Crags limestone Heritage Area was produced. This described the processes and land uses that have shaped the current landscape and how it has developed over time. This identified that the gorges and vales lie within a distinctive limestone landscape, the character of which has been shaped by its underlying geology and natural formation processes, as well as human activity from the Palaeolithic period onwards. A wide range of landscape types including ancient woodland, river meadowlands, agricultural land, designed parklands, settlements, transportation networks, minerals extraction and industrial complexes are present in the area.

On a smaller scale of analysis, the gorges themselves are remarkably diverse, containing between them a representative sample of all the land use types and impacts of human activity discussed above. The human impacts upon the gorges vary greatly, from those which appear relatively unchanged (except for variations in tree cover and the use of open land) to those which have been severely impacted by quarrying and the imposition of industrial infrastructure. Considered as a group, the gorges comprise a valuable amenity resource, comprising a palimpsest of the changing landscape through time, up to the present day.

More detailed analysis was undertake for each vale or gorge with the main historical influences or items of historic interest highlighted.

Vale or Gorge	Main historical influences or items of historic interest.
Roche Abbey Vale	Rock shelters in Seed Hill Wood Roche Abbey (<i>Cistercian monastery</i>), associated designed landscape and ghost stories Nor Wood (<i>limestone woodland</i>) Stone Mill and Mill farm (<i>possible medieval foundations</i>)
Firbeck	Part of designed parkland, including traces of water features. (<i>link also to St Leger family, and gallops still preserved in field boundary nearby</i>) Firbeck military airfield
Anston Stones Wood and Lindrick Dale	Rock shelters and caves in Anston Stones Limestone woodland in Anston Stones Railway in Anston Stones Rock shelters and landscaped gardens in Lindrick Dale Site of mill and ponds in Lindrick Dale
Red Hill	Possible Roman fort and road Chesterfield Canal
Thorpe Common and Lob Wells Wood	Moor Mill Farm and remnants of water power features
Ash Tree Gorge	
Markland Grips	Iron Age hillfort Limestone woodland Upper Mill Farm and water features Railway: site of viaduct across valley, and Clowne Linear Park
Elmton and Whaley Valley	Medieval settlement/farms and earthworks Scarcliffe Park (medieval earthworks, coppicing) Site of blast furnace Mill ponds
Langwith Vale	Possible medieval site Langwith Wood (<i>medieval deer park</i>) Railway cutting
Pleasley Vale	Pleasley Park (<i>medieval deer park</i>) Little Matlock Pleasely forges (<i>sites of</i>) Pleasley Mills (<i>quarrying, mill buildings, water power</i>) Pleasley Colliery and railway

5.5 Recommendations

It is proposed that the Historical Landscape Research is expanded to give more detail on the wider landscape. This aims to add flesh to the bones of the story of the landscape and to provide a resource for future management and interpretation.

6 Intellectual, physical, and visual access study

6.1 Introduction

Long term, high quality conservation of the natural, man-made and educational resource of the Heritage Area is dependent on those who have an impact on it understanding and appreciating its distinctive value. This applies to local people, visitors, land managers and decision makers alike. The high quality cultural and natural heritage is undervalued and this lack of appreciation can lead to neglect, vandalism and provide conditions for inappropriate development. The Heritage Area is further threatened by the continued poor economic, social and environmental conditions that much of the area faces.

Conversely there is enormous potential for the natural and cultural heritage of the area to act as a catalyst for a new vision for the future of the area, creating a high quality and sustainable environment that local people can be proud of and that visitors can enjoy and appreciate.

To maximise this potential there is a need to link management and improvement of the cultural and natural heritage with physical, visual and intellectual access opportunities. Identification of opportunities for interpretative and education use, together with the access improvements and the development of events, guides and teaching resources will enable local people and visitors to experience and value the Heritage Area.

6.2 Aims

The aims of this part of the study were to Identify and assess opportunities for consolidating and improving intellectual, physical and visual access to the Palaeolithic/Pleistocene and other natural and man-made resource for local people and for visitors, for recreational and formal education purposes and including the potential for involving local people in management and interpretation

6.3 Methodology

The study was undertake through a combination of desk based study and field survey. For physical and visual access, the desk study reviewed existing strategic policies, plans and networks; all existing rights of way and promoted/interpreted trails; and existing market research. The field survey involved walking all the existing promoted routes and many of the other rights of way within the limestone vales and along the Creswell Archaeological Way, recording condition and identifying potential for improvements or changes. A field survey of potential views and viewpoints was also carried out.

For intellectual access the desk study reviewed the resources and issues that contribute to intellectual access (documentary sources, folklore etc), identified potential audiences, communication objectives and key messages and audited existing interpretative provision. The field survey was co-ordinated with that carried out for physical and visual access and identified opportunities for intellectual access and existing provision on the ground in relation to the interpretation plan.

6.4 Results

An overview of the existing strategic and promoted routes network was produced. This helped identify opportunities for linkage between strategic and local promoted routes, the extent of existing physical access and how this is currently managed and promoted, and opportunities for extending, modifying or consolidating existing promoted routes. Roche Abbey, Anston Stones/Lindrick Vale, the Creswell Hub and Pleasley Vale were identified as 'Pilot Action Areas' for more in depth analysis because of the good access opportunities and wide range of interesting and accessible landscape features they contain. The 'hidden' nature of the many of the vales restricts the number of viewpoints that allow these landscapes to be appreciated from a distance although some opportunities were identified.

For intellectual access, an overview of potential was produced, audiences identified and an interpretation plan developed that identifies the key themes and stories. Local communities were identified as the primary focus for interpretative activity at present. There are significant opportunities for engagement with local communities, contributing to local sense of place and identity as well as providing educational and lifelong learning opportunities. The key interpretative themes include the geology, the ice age archaeology, the abbeys and great estates of the medieval and renaissance periods, the industrial sites of the 18th and 19th centuries and the habitats and wildlife of the landscape today.

For the area as a whole and for each Pilot Action Area, an overview of existing interpretative provision was produced. The Creswell Hub provides the best opportunity to present the story of the Heritage Area as a whole, to visitors and to local communities, maximising the opportunity presented by the local village company in developing a community cafe and interpretation point in the village. Other pilot action areas provide complementary opportunities. There is a need to provide a hierarchy of interpretation provision and for this to be monitored and its currency maintained.

6.5 Recommendations

Key recommendations for physical access include extension of the Creswell Archaeological Way northwards to Anston Stones and Roche Abbey, creation of a strategic link between the Archaeological Way and the Robin Hood Way, renaming the route as the Limestone Heritage Trail (or similar), upgrading of car parks and interpretative panels, various minor amendments and improvements to the local routes promoted in the 'Walking in the Limestone Heritage Area' booklet.

Key recommendations for intellectual access include implementing a 'Pride of Place' community heritage project similar to that currently managed by Creswell Heritage Trust in the southern part of the Heritage Area, production of a quality guidebook that tells the story of the Magnesian limestone landscape, supported by a revised 'Walking in the Limestone Heritage Area' booklet and by short guides to each of the Pilot Action Areas, installation of a network of interpretation panels at key locations, production of an integrated interpretation and development plan for the Pleasley Vale area, networking with the key heritage attractions to promote the identity and story of the landscape to visitors, supporting the roles of the Groundwork and Heritage Trusts in co-ordinating, implementing and monitoring the proposals.

7. Conservation Statements and Management Action Proposals

7.1 Introduction

A Conservation Statement was produced for each limestone vale, providing a framework for action to conserve, to manage and to enhance their landscape, scientific, recreational and educational value. These statements are complemented by Management Action Proposals comprising recommended actions to preserve, manage and/or to enhance significance. These proposals can be implemented over a number of years by different groups or organisations working in partnership. Together with the Creswell Crags Conservation Plan and the Limestone Area Strategy, they are intended to provide a rationale and programme of action agreed and promoted by the stakeholders and partners of the Creswell Limestone Heritage Area through which to develop funding bids and opportunities as part of a rolling programme.

7.2 Aims and Methodology

The Conservation Statements and Management Action Proposals are built on the work undertaken in the different elements of the Creswell Crags Limestone Heritage Area Management Action Plan. The Conservation Statements are intended to provide a framework for partnership activity to conserve, to manage and to enhance the landscape, scientific, recreational and educational significance of the limestone vales and gorges. The Management Action Proposals are designed to provide a clearly identified set of costed actions that will protect and enhance that significance.