7049 Landscape-Scale Assessment

A Pilot Study Using the Yorkshire Dales Historic Environment

Final Report

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7049 - Landscape-Scale Assessment: A Pilot Study Using the Yorkshire Dales Historic Environment

Project Report

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Front cover: Part of a multi-period settlement and enclosure complex comprising prehistoric enclosures and hut circles and medieval enclosures and possible buildings, surviving as spread stone walls/banks and earthworks at Greenber Edge, Wensleydale (© R. White/YDNPA ANY344/10)

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Executive Summary

This report presents the findings of *Landscape-Scale Assessment: A Pilot Study Using the Yorkshire Dales Historic Environment*, a pilot project commissioned by English Heritage to inform the work of the National Importance Programme. This programme has been instigated as a partnership between English Heritage (EH), the Association of Local Government Archaeological Officers (ALGAO) and the Department for Culture, Media and Sport (DCMS) in order to address the issues surrounding nationally important sites that are not currently, or are unable to be designated. This pilot has been undertaken to provide a high-level appraisal of issues relating to landscape-scale heritage sites in rural areas, where such sites can contain many individual monuments.

This report comprises five sections:

Chapters one to three provide an introduction to the project and place it in the wider context of the National Importance Programme. There is then a short introduction to some of the specific terminology used through the report and an overview of the aims and methodological approach employed.

Chapters four through eight present the bulk of the issues appraisal and cover both theoretical and practical approaches to the following areas:

- Identification of sites
- Characterisation of sites
- Delimiting of sites
- Data management and access
- Conservation and site management

Chapter nine comprises an assessment of a number of extant methodologies and approaches to managing landscape-scale sites and designations and their potential relevance and applicability to landscape-scale archaeological sites of national importance.

Chapters ten to twelve present three separate case studies focusing on distinct landscape-scale heritage sites within the Yorkshire Dales in order to highlight the practical implications of some of the key issues discussed earlier.

The report concludes with a discussion and brief recommendations on the applicability of those key approaches identified and how the most pertinent issues may be addressed. Whilst it is beyond the scope of this summary to outline all findings, conclusions of the project include:

- A range of potentially applicable designation and management approaches including: wider adoption of scheduling, alteration or introduction of legislation to amend or create a more suitable form of designation, and application of a locally recognised form of designation where authority derives from local planning policy.
- Preference for a proactive identification of landscape-scale sites using local expertise and a level of subjectivity and informed judgement as opposed to a reactive threat-led approach or semi-automated identification in a GIS environment.
- The desirability of articulating landscape-scale national importance in terms of the scheduling criteria and approach outlined in *Conservation Principles, Policies and Guidance* (EH 2008), though with some nuanced alterations and additions based on other extant methods.
- Applicability of parts of a number of former and extant methods of assessment and designation including the Monuments Protection Programme (MPP) and the locally designated Principal/Premier Archaeological Landscapes instigated by a number of local authorities in the South West.

1. Introduction and Project Background

Landscape-Scale Assessment – A Pilot Study Using the Yorkshire Dales Historic Environment, was proposed as part of the wider National Importance Programme Pilot Projects. The English Heritage project identification number for this project is 7049 and it sits within the wider Measure 5 of the National Heritage Protection Plan (NHPP) relating to Protection of Significance.

1.1 The National Importance Programme

The National Importance Programme has been instigated as a partnership between English Heritage (EH), the Association of Local Government Archaeological Officers (ALGAO) and the Department for Culture, Media and Sport (DCMS) in order to address the issues surrounding nationally important sites that are not currently, or are unable to be designated. Some protection for such sites is currently provided by the National Planning Policy Framework (NPPF) paragraph 139 which states that "non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments, should be considered subject to the policies for designated heritage assets" (DCLG 2012, 132). Implementation of this policy and its associated guidance is reliant on an ability to recognise non-designated sites of national importance in a coherent way applicable across the country. The issue also has repercussions for other aspects of land management, particular agri-environment stewardship schemes.

1.2 The Yorkshire Dales Pilot Study

Identification of a shared way forward is the principal aim of the initial commissioned pilot projects, and four key themes were recognized as representative of particular issues in the identification and management of non-designated nationally important sites. Theme three focused on: "How to define boundaries for large landscape-scale sites containing many monuments in rural contexts". The Yorkshire Dales National Park, a predominantly upland environment which demonstrates good visibility of both single and multi-period landscapes, coupled with varied land management and monument preservation trajectories, provided an outstanding opportunity to define these issues.

1.3 Definition of NI Sites

This project report sets out an assessment of issues and benefits relating to various methods of identifying, characterising, delimiting and man-

Figure 1.1 The north facing slopes of Littondale contain numerous settlement and field system remains such as this Iron Age/Romano–British settlement, Ridge and furrow can be recognised in the lower pastures while co-axial boundaries extend onto the limestone plateau above systems. This site was featured on the cover of a seminal CBA Research Report *The Effect of Man on the Landscape; The Highland Zone*, in 1975 but despite this attention none of the well-preserved and highly visible settlement groups receive any heritage protection (© R. White/YDNPA ANY281/5)

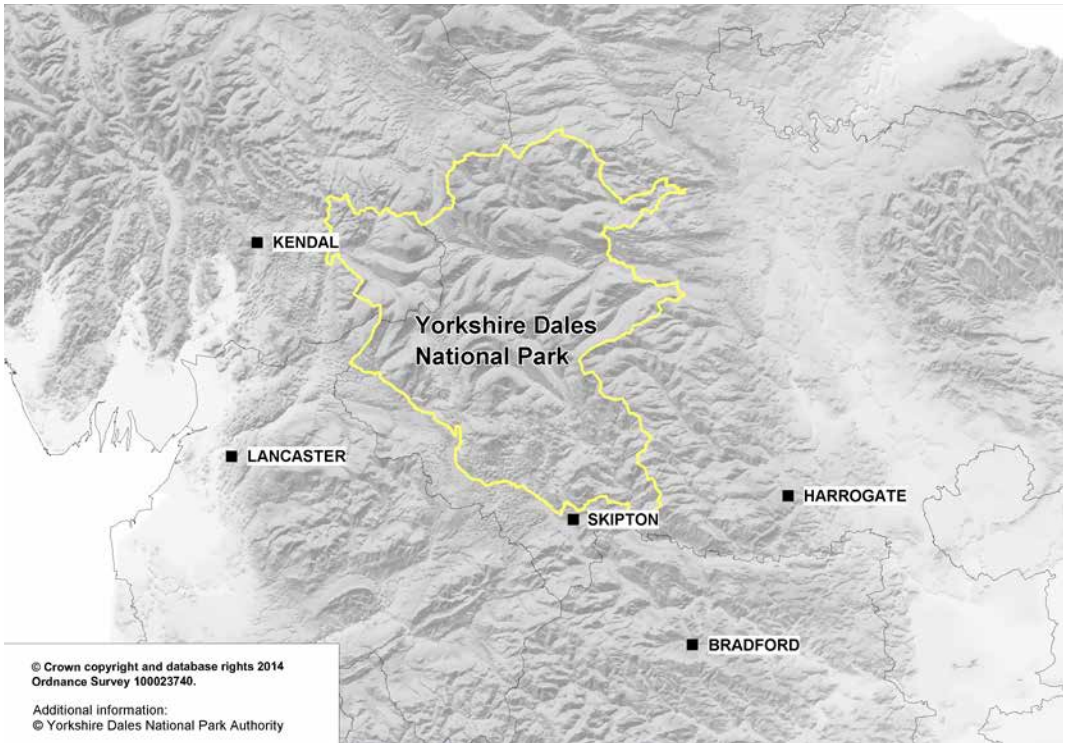


Figure 1.2 General topographic setting and location of the Yorkshire Dales National Park

aging landscape-scale, non-designated, nationally important sites (NI sites). The stage in the process whereby a site is assessed as meeting these criteria is discussed in more detail below, but for now it is relevant to reproduce generally accepted definitions for both these terms.

1.3.1 Nationally Important

For an archaeological site to be considered 'nationally important' in terms of the legal framework of the *Ancient Monuments and Archaeological Areas Act 1979*, it is assessed against a number of non-statutory criteria outlined in the Appendices of the 1979 act. These are discussed in depth below, in relation to characterisation of NI sites in chapter 5.

1.3.2 Non-Designated

A non-designated archaeological site is one that is not formally protected under the terms of the *Ancient Monuments and Archaeological Areas Act 1979* (whether by scheduling or, more unusually, as part of an Area of Archaeological Importance). A nationally important site may be non-designated for a number of reasons, many of which are addressed by various pilot projects currently underway within the National Importance Programme. This pilot project is most directly concerned with landscape-scale NI sites in rural areas comprising many individual monuments. Such sites have generally not been designated due to the constraints such protection would place on land management and the concomitant logistical strain that managing permissions would put on the curatorial body. It must also be noted, however, that the approach to scheduling is based on the assumption that it only be applied where it is the best solution for long term conservation management.

The emergence of Heritage Partnership Agreements (HPAs), as developed for use with Listed Buildings, may go some way to making large-area scheduling a more viable option, especially if agreed in tandem with Countryside Stewardship or equivalent arrangements, though such agreements become significantly more complex when dealing with landscape sites in multiple ownership. These management issues are discussed in more detail below.

1.3.3 Landscape-scale

As is outlined below, the main focus of this pilot is on landscape-scale sites comprising many individual monuments. A landscape-scale site is considered to be a coherent and contiguous group of monuments, the group value of which augments the significance or importance of each, though the importance of the whole landscape can also be defined in its own terms. Landscape-scale sites can be single-period, multi-period but of a single broad type (such as the Fell End/Slei Gill/Tanner Rake lead mining landscape described in Case Study 3 below), or multi-period and comprising largely unrelated monuments. In advance of the assessment work of the Monuments Protection Programme (MPP – discussed at length below), the theoretical approach to 'relict cultural landscapes' was explored and a series of broad criteria or principles for identification was put forward (Darvill 1992, 24-5) including:

- Integrity and articulation – a landscape will

Figure 1.3 The earthworks surrounding the scheduled settlement at Chapel house Wood represent complex field system remains of various dates. Much of this landscape is protected by a Limestone Pavement Order, the scheduled area, as depicted on the scheduling maplet, only covers about half of the visible settlement earthworks (© R. White/YDNPA YDP080/10)

have spatial integrity in the archaeological remains as understood (not necessarily coincidental with level of survival) and will be coherent and articulated or connected.
- Diversity and structure – a landscape will exhibit diversity of environment and monument type, as well as defined structure including the space between monuments.
- Pattern and repetition – a landscape will often be identifiable through patterning of monuments or monument groups.

In certain sections below approaches are described focusing on 'historic landscapes' as distinct from 'landscape-scale' sites. Issues are discussed in more detail where specific to certain approaches, but it is relevant here to define 'historic landscapes' as being much larger areas, potentially closer to AONBs in scale, which will likely contain many landscape-scale sites as well as substantial areas between where there are few known archaeological remains.

1.4 Terminology

This project is primarily concerned with non-designated, nationally important sites on a landscape scale comprising many individual monuments. There is no standardised terminology for this area currently, and in the project brief the acronym 'NDNIS' was used. Should the National Importance Programme proceed from pilot stage to implementation then it is assumed that terminology will be refined and standardised, but throughout this report landscape-scale, non-designated, nationally important sites have been referred to through the shorthand of 'NI sites'. Where a discussion requires reference to non-landscape-scale NI sites this is made explicit in the text.

2. Aims and Objectives

The principal aim of the National Importance Programme, as set out in the project brief, is to:

"To explore via a series of pilot projects, how we might help create a shared understanding and mechanism to identify non-scheduled but nationally important archaeological sites."

Given the nature of this project as a rapid and high-level 'snapshot' of data and issues, the outcomes comprise an overview of assessment feeding into the following questions:

- How are non-designated nationally important sites (NI sites) identified and by whom?
- What criteria and methodologies are used?
- How is information about NI sites stored, managed and accessed?

With specific reference to the identified subtheme, the project has addressed the following questions:

- What definition and criteria can be applied in the identification of landscape-scale NI sites in rural areas?
- What are the benefits and issues related to employing such an approach?

Through the National Importance Programme, the project addressed key needs identified within the NHPP Action Plan. It fell under Measure 5 (Protection of Significance) Activity 5A2 (Upgrade and Modernisation of Designation Base), whilst also delivering certain aspects of Activities 5B2 (Underpinning Local Planning Processes) and 5C1 (Enhancing the Capabilities of Historic Environment Records). The project also helps deliver under Measure 4 (Assessment of Character and Significance) Activity 4F (Rural Settlement and Land Use), and Measure 6 (Managing Change) Activity 6A4 (Decision Making in the Planning Process).

3. Method Statement

3.1 Stage 1 – Data Compilation and Project Inception

Following confirmation of the project start there was a phase of compilation of data held both locally within the Historic Environment Record for the Yorkshire Dales National Park maintained by the Yorkshire Dales National Park Authority (YDHER), and also readily accessible national records for the defined study areas within the Yorkshire Dales National Park (YDNP). This included all data related to previously identified NI sites, and also other landscape-scale sites which may not be of national importance but are derived from a standardised methodology (e.g. SHINE datasets). Assessment of all spatial data and production of illustration for the project was facilitated through use of MapInfo GIS and Quantum GIS. The flexibility of a GIS-supported approach not only gave substantial scope to the analysis of the distribution and form of any spatial data but also allowed the display of that data in a number of intuitive ways.

Following initial data compilation, a project inception meeting was held to allow discussion among the project team of any key issues identified at the outset of the project. Given that a full Project Design was not commissioned, this project inception meeting also provided an opportunity for clarification and confirmation of methodology. At this point the initial selection of case study areas was made to provide the necessary in-depth focus in what is necessarily a 'snapshot' assessment of issues and methods.

A number of areas had been preliminarily identified as potential case studies as they variously represent some of the key issues applicable to NI sites both in the YDNP and also in similar landscapes in other parts of the country – a key component in the viability of any approach or method recommended by this project. The two initially chosen areas were:

- Bolton Parks, Wensleydale – a multi-period landscape centred on the scheduled medieval castle, and including a designed landscape and significant and extensive medieval and post-medieval earthwork and field systems. The associated medieval parkland on the adjacent higher ground includes industrial remains. The potential value of this area for the pilot project was that it is representative of significant multi-period archaeological remains, some of which are demonstrably associated with a scheduled monument, and ranging across different geology, topography and land management regimes.
- Grassington and Conistone – A second multi-period landscape extending over a large area in the southern reaches of the National Park. The principal association of the area is the substantial network of prehistoric field systems, part of which are scheduled though the designation only extends across a small portion of the recognised remains. This area was suggested as a suitable illustration of the issues relating to a landscape of likely near-contemporary monuments with differential states of survival where there have been previous, apparently undocumented decisions on the drawing of schedule boundaries. The landscape is also currently the focus of two Combined Doctoral Award (CDA) PhD students at the University of Bradford, giving the potential for a significant gain to the project in the pooling of existing datasets and academic input.

It was initially decided to hold on undertaking a third case study until such point that the broader issues were better understood, and the value of adding an additional case study could be assessed.

The focus was on how the case study areas are indicative of issues of identification and definition and management applicable to comparable NI sites in the YDNP and in other areas.

3.2 Stage 2 – Assessment of Previously Identified NI Sites

During this stage there was a phased examination and assessment of NI sites within and without the study area, whether identified formally or informally. The also included assessment of the broader approaches of other heritage and non-heritage area designations and how such approaches could be applied to NI sites. Specific areas assessed included:

- Criteria used for identifying and characterising landscape-scale NI sites including but not limited to:
  - » The non-statutory scheduling criteria
  - » The contributing 'values' of importance detailed within Conservation Principles: Policies and Guidance (EH 2008)
  - » The contributing 'interests' of

significance introduced with PPS5 and largely carried across into NPPF and associated guidance
    - » Statements of significance using some or all of the above in a manner similar to formal designation descriptions
    - » Simple broad characterisation to a basic methodology exemplified by the SHINE datasets
    - » Experience of previous extensive work on the Monuments Protection Programme (MPP). The previous MPP work included a scoring system derived from analysis of the data held within the HER and the assessment of this method of identification was a key counterpoint to those that were derived from application of previous knowledge.
- Applicability of methods for identifying and characterising NI sites including but not limited to:
    - » Collection of field data through both professional and voluntary archaeological sectors
    - » Remote-sensing techniques for delimiting landscape-scale sites (aerial photography, LiDAR etc.)
    - » Using non-heritage landscape designations as drivers for identifying and managing NI sites e.g. Sites of Special Scientific Interest (SSSI), Special Areas of Conservation, Special Protection Areas, Ramsar Sites, Landscape Character Areas/Types.

The assessments built on previous experience with the Monument Protection Programme and included both a high-level sweep of the whole study area and more detailed investigation focusing on the identified case studies. This allowed for an identification of both wider patterns and site-specific issues. Following desk-based assessment, field visits were made to the identified case study areas to test the validity of the criteria and methodologies being assessed.

A key part of this phase, both in terms of the broad-brush and case study approaches, was in the assessment of the validity of existing boundaries and the inherent issues that are raised by any approach to landscape-designation that relies on defining a clear line on a map.

Although assessment of specific management issues was nominally beyond the scope of this pilot project, it became clear that an assessment of the constraints and effects on management that the formal identification of NI sites would have has a significant effect on the identification and characterisation of such landscapes.

3.3 Stage 3 – Assessment of Data Management and Access

Stage 3 comprised assessment of the current and potential data management and access provisions. This was through the existing YDHER and the assessment included any other relevant landscape-scale datasets and their management and access arrangements. The assessment extended to a discussion of data access arrangements through national bodies (such as the SHINE database curated by Natural England) or through online portals (e.g. MAGIC, ADS/Oasis).

During this phase there was also a rapid comparison with the data management and access arrangements for NI sites in other rural areas identified as part of the project inception discussions and liaison with ALGAO and Joint Statement colleagues (e.g. the Dartmoor Premier Archaeological Landscapes). Whilst this was necessarily a rapid and 'broad-brush' part of the project, and was included to provide context and comparison, it was considered key to the success of the pilot that identified issues and recommendations are applicable to rural landscapes with good monument visibility outside the YDNP.

3.4 Stage 4 – Reporting

Following all assessment and compilation of information, a meeting was held with the project team and key stakeholders. Following presentation of the assessment results and key issues identified, a discussion with all stakeholders provided input to the final conclusions and recommendations presented in this report. This meeting was well attended by representatives of English Heritage and members of Yorkshire ALGAO and contributed significantly to the final direction of conclusions and recommendations.

Following the stakeholder meeting, it was also decided to include a third case study area (Fell End – Slei Gill – Tanner Rake Lead Mining Landscape) to examine the issues of a largely single-period and single-industry archaeological landscape.

This final report, with accompanying illustrations, includes:

- Non-technical summary
- Project background
- Aims and objectives
- Method statement
- Results of assessment
- Discussion of key issues
- Conclusions and recommendations

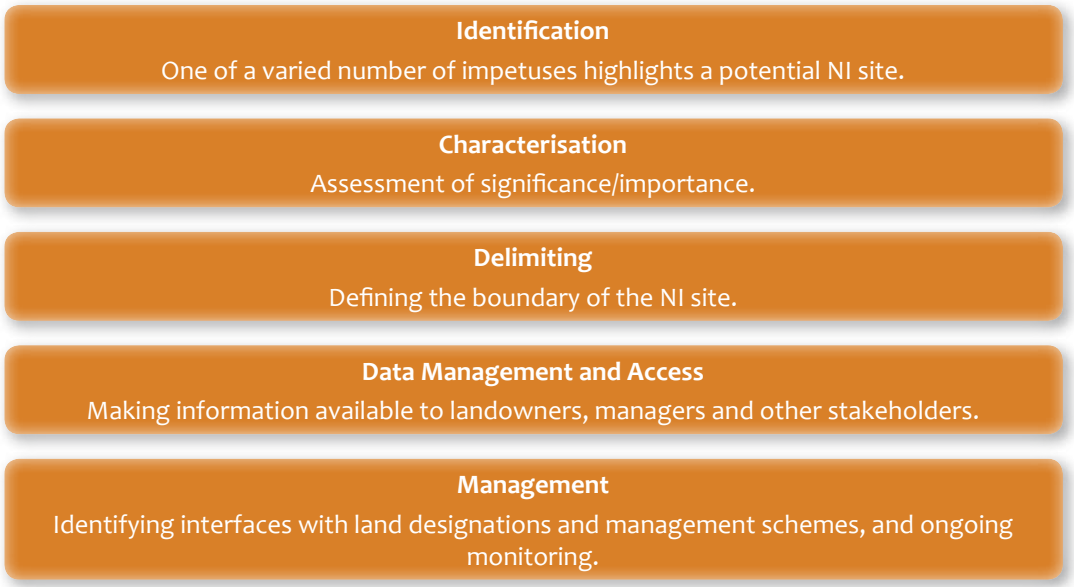


Figure 3.1 Idealised workflow for NI sites

3.5 Assessment – Process

Although the creation of a complete methodology is beyond the scope of this report, which is primarily concerned with information gathering and identification of wider issues and benefits, it is useful to consider an outline workflow for the process of identifying and managing NI sites, in order that the key steps can be assessed critically. This idealised workflow is shown in the figure above and comprises the logical steps in the identification and management of NI sites, regardless of detailed method. In reality many of these steps would be part of a single process and, as is outlined below, there are several feedback loops linking the inputs within this workflow.

Given that the process is iterative, there are feedback loops at every level so that at any stage information gained can result in an alteration to an earlier stage of the process. For example during the process of delimiting, further remains of significance could be identified (using whatever method is most suitable to the site in question), resulting in alteration to the characterisation of the site. This workflow is intuitive and, in the majority of cases, would be followed without explicit prior planning, but it is a useful model for the purposes of this assessment as a way of examining various methods and approaches and assessing their viability.

4. Identification of NI Sites

The approach to NI sites should be applicable to any situation in which their identification may be required. Impetuses for identification can be broadly reactive or proactive and are set out in the (non-exhaustive) list below.

- Reactive
  - » Threat
    - » Planning/land management
    - » Natural process
- Proactive
  - » Mass characterisation
  - » Targeted delimiting and/ or characterisation
- Reactive/Proactive
  - » External identification
    - » Volunteer-led
    - » New data assessment

4.1 Threat-based Identification

In a situation where there are insufficient resources to prioritise proactive identification of NI sites, it is likely that the process would be triggered by an external threat to the integrity of the landscape-scale site, or to one or more component monuments. The most common forms of threat are through proposed development, alteration to land management practices or natural processes (e.g. erosion). It should be noted that this approach is 'reactive' to threat as opposed to approaches such as the Monuments Protection Programme (see below), which although they considered current threats to monuments were primarily a 'proactive' form of identification.

The principal benefit of a reactive approach is that there are already protocols in place for dealing with development-based threats to heritage assets as part of the planning process alerting local authorities and/or English Heritage in regard to threat to designated heritage assets. A secondary toolkit could be developed and applied where sites under threat are identified as of national importance but cannot be formally designated. A reactive approach also would likely require fewer resources than a proactive process of identification, though the converse of this is that a proactive approach of identification and characterisation can be a 'known quantity' in terms of outlay of resources. It must also be acknowledged that a purely reactive approach to identification is somewhat haphazard, being skewed by the distribution and type of development proposals and/or the ability of the individual historic environment curator (local government archaeologist, development control/HER officer, or Inspector of Ancient Monuments) to recognise the issues associated with NI sites.

The main issue with a reactive, threat-led approach is that it is, in general, more suitable to the identification of individual or small groups of monuments rather than the landscape-scale NI sites that are the focus of this assessment, though it is conceivable that a previously unidentified landscape-scale site could be characterised through a threat from either large-scale development such as mineral extraction or alteration to land management practices.

4.1.1 *Archaeological Alert Areas*

Another issue of threat-led identification in regard to NI sites is illustrated by the use of Archaeological Alert Areas (or similarly titled defined areas – not to be confused with formally designated Areas of Archaeological Importance discussed below). Some local authorities have piloted an automated process of alerting a local authority curator to a development management threat to certain heritage assets within defined areas of archaeological interest. Such an approach (reactive to threat) is therefore predicated on a proactive process of identification, characterisation and delineation preceding it – the initial creation of the alert areas.

Certain aspects of the HER21 programme (launched in 2010 to assist in the assessment and augmentation of HERs) looked at the role of alert areas based on HER data, and the processes outlined within the resulting guidance are discussed below.

4.2 External Identification

External identification can be either reactive or proactive and encompasses any situation where groups or individuals external to those with curatorial responsibility for heritage assets identify potential sites.

4.2.1 *Volunteer-led*

Historically, new archaeological sites have often been identified by groups or individuals external to the local authority curator and been subsequently included in the HER for that area. It should be recognised that a dedicated programme of sur-

vey and other fieldwork by volunteer individuals or groups can significantly alter the amount, quality and understanding of data for a particular landscape over a relatively short period of time. Any NI site toolkit or method must have the capacity to be applied where new research or identification of landscapes results in their reassessment.

Proactive volunteer-led identification of NI sites could also be considered under the heading of mass characterisation discussed below, as it effectively combines the identification and initial broad characterisation. Use of volunteers could go some way to offsetting the cost of proactive characterisation of NI sites, though the resources and time required to instigate and coordinate such a programme, and compile the resultant information should not be underestimated. An additional issue with a volunteer-based identification and characterisation programme is the likely variability in data collection, though this could be mitigated to some extent through delivery of workshops or training and the implementation of a standard methodology. The use of volunteers to facilitate site identification and characterisation would be unlikely to be a nationally applicable approach, however, as the volunteer 'resource' is variable both geographically and through time. Whilst some local authorities, such as National Parks, may have a well established and committed volunteer infrastructure, others may not and even where volunteer support is strong there is significant uncertainty as to how this may be affected by future socio-economic factors.

4.2.2 *New Data Assessment*

New data assessment encompasses the process of identification whereby new information is obtained (e.g. data sharing of LIDAR between government departments, release of new aerial photography) and inclusion of such data sources into normal work patterns results in the identification of new areas of archaeological significance. This can also happen as a result of fieldwork commissioned externally to the local authority, for example landscape survey, though where such work is undertaken as a result of a development impetus it is more likely to be characterised as threat-led. As with threat-led and volunteer-led identification, the key issue illustrated by reactive identification of NI sites is that any toolkit must be applicable no matter what the impetus is.

4.3 Characterisation or Delimiting-Based Identification

The feedback-heavy nature of the process outlined above is such that identification of sites can often come from further down the workflow, effectively the characterisation or delineation of a site for a different purpose can lead to its identification as an NI site. A key example of this would be the identification of a landscape-scale NI site through a mass characterisation exercise of individual sites such as the now-discontinued Monuments Protection Programme.

4.4 Semi-Automated Spatial Analysis

This is, in effect, a sub-category of mass-characterisation discussed above, but the issues of a semi-automated identification approach are different enough to warrant assessment in its own right. This heading covers any GIS-based analysis

Figure 4.1 The density of scheduled sites in the Malham area reflects the fieldwork and courses of Dr Arthur Raistrick in the 1950s and 1960s as well as the visibility and quality of the archaeology. The arbitrary boundary of the Medieval settlements and lynchets extending NW from Town Head scheduled area (30ha) excludes much of the long linear earthworks, probably the remains of a later prehistoric co-axial field system. The seventeenth century and later drystone walls, which are a dominant feature of this cultural landscape, receive no protection (© R. White/ YDNPA ANY355/24)

that seeks to quantify distribution or other spatial characteristics of an existing historic environment dataset with the ultimate aim of identifying and delimiting NI sites through a semi-automated exercise.

The principal issue with an approach of this kind is that extrapolation from a dataset will reproduce and often magnify the inherent biases of those underlying data. Whilst the analytical power of GIS is undeniably useful, it is largely predicated on a significant pre-analysis stage of data compilation and cleaning. A semi-automated process for identifying NI sites would be required to start with the raw data held within the digital component of an HER (HBSMR or bespoke local authority database) or a national record such as the English Heritage Archive. Such data have not been compiled for the purpose of a single analytical process and are, in general, inherently unsuitable for such an exercise. The huge variability in data collection and recording standards would, without a prohibitively large and expensive 'data cleaning' exercise, produce putative landscape-scale NI sites inherently skewed to the collection and identification biases of the data source in question, and without the inclusion of key information such as 'condition' or 'threat' which may or may not be recorded within an HER.

There are currently pilot projects underway in Scotland examining how 'Historic Land Use Value' can be abstracted as a measurable character of defined parcels of land using a GIS approach to compile and analyse spatial historic data (Scottish Borders Council 2014). This is being undertaken as part of the wider Land Use Strategy implemented by the Scottish Government discussed in more detail below, though the conclusions of the pilots will provide an interesting case study in the management of disparate digital data outside Scotland.

Historic Landscape Characterisation is discussed in more detail below, but it should be noted here that it is not considered to be a suitable baseline for the abstraction of NI sites for many of the same reasons as HER data: specifically that it was not created for the purpose, makes only very broad characterisation of condition, and does not identify significance/importance.

It is possible that there are some spatial datasets, such as that generated by the National Mapping Programme (NMP), which can provide a useful coverage of monuments at a landscape scale with a level of reliability. Such datasets, however, will often vary in quality, method and form of output over time and area and are therefore likely to be unsuitable for any semi-automated process. Consideration of NMP data as an example also re-emphasises the danger of using data for a purpose for which it was not originally intended, as the NMP methodology does not include an assessment of significance/importance against rigorous criteria and was based on only one method of data collection/interpretation.

In view of the data management, software creation and general logistical difficulties that would be encountered in applying a semi-automated approach to identifying landscape-scale NI sites, this is not considered a useful method. The datasets that could be put forward as candidates for driving such a process would be as useful when employed in a more subjective identification process by an individual or group of individuals with expert knowledge of the landscape under study.

5. Characterisation of NI Sites

In many ways, characterisation of NI sites is the most important stage in the process as it represents a clear articulation of:

- What is significant about a given site or group of sites
- In what ways the site fulfills the criteria of national importance
- The baseline priorities for how it, or they, can be subsequently managed and conserved.

As has been stated above, characterisation and delineation can often be part of the same stage, and a planned exercise of characterisation can provide the impetus for identification of NI sites. Within this section, the focus is on application of the specific criteria that can be used to describe the significance of sites and their applicability to landscape-scale NI sites.

Several examples of characterisation of the significance of heritage assets employ a hierarchical and progressive approach from an initial broad overview to a more-detailed description later in the process. This is of relevance to NI sites in instances where proactive mass characterisation is used for identification and applying a set of broad criteria can provide the basic discrimination of suitable sites, allowing later development of a detailed description.

The key broad issues with characterisation are discussed in this chapter, but there is extensive further discussion of potential criteria in the assessment of extant methods in chapter 9 below.

5.1 Non-statutory Scheduling Criteria

The assessment of national importance in terms of deeming a site to be schedulable is undertaken with reference to the non-statutory scheduling criteria set out, most recently, in a DCMS guide to the implementation of the *Ancient Monuments and Archaeological Areas Act 1979* (DCMS 2010). This is a necessary first stage of characterisation as the three possible outcomes of this assessment dictate the workflow that follows, as shown in the figure below. Within this broad workflow, only the central strand is of direct relevance to this project, but it is included here to demonstrate that the process is based on assessment using the non-statutory scheduling criteria.

The non-statutory criteria are (order not representative of ranking):

- Period
- Rarity
- Documentation
- Group Value
- Survival/Condition
- Fragility/Vulnerability
- Diversity
- Potential

These criteria have been used, with some amendments or additions, as the basis for characterisation of monuments in a number of methods outlined below, and so are not discussed further here.

There are clear benefits in articulating the significance of NI sites in terms of the scheduling criteria. The issue in question is whether description in terms of these criteria alone is sufficient to allow meaningful comparison with other heritage assets and the implementation of management/conservation plans. A principal aim of any characterisation process should be ensuring compatibility with other widely used assessment criteria, and so it is not recommended that a bespoke set of criteria be used for NI sites.

5.2 Further Characterisation

Within the heritage sector in England, the most widely used sets of criteria for describing importance or significance are those set out in *Conser-*

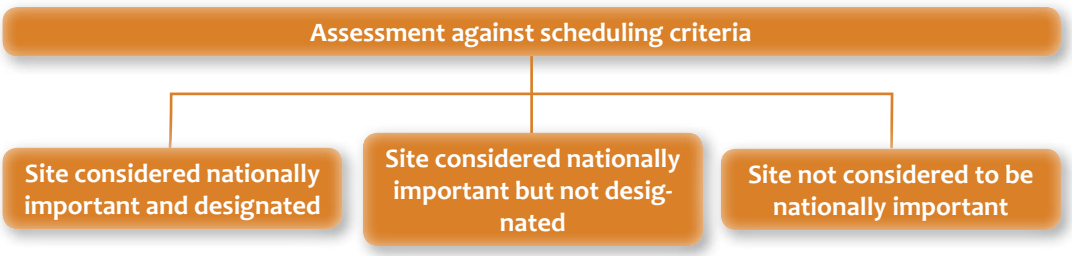


Figure 5.1 Workflow for initial assessment using non-statutory scheduling criteria

vation Principles, Policies and Guidance (English Heritage 2008) and those in the *National Planning Policy Framework* (DCLG 2012) and its associated guidance.

5.2.1 Conservation Principles, Policies and Guidance

English Heritage's statement of principles and method for assessment identifies the characteristics of heritage sites as being grouped into four *values*:

- Evidential – the value of a place to provide information about past human activity.
- Historical – the ways in which past people, events and aspects of life can be connected through a place to the present (normally either illustrative or associative).
- Aesthetic – the ways in which people draw sensory and intellectual stimulation from a place.
- Communal – deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory.

Each of these values is relatively broad and has overlap with one or more of the criteria of national importance but, as is made clear in the document, qualities that contribute to the significance of a heritage asset can go beyond those required to demonstrate national importance: "Many heritage values are recognised by the statutory designation and regulation of significant places, where a particular value, such as 'architectural or historic interest' or 'scientific interest', is judged to be 'special', that is above a defined threshold of importance. Designation necessarily requires the assessment of the importance of specific heritage values of a place; but decisions about its day-to-day management should take account of all the values that contribute to its significance" (English Heritage 2008, 27).

Those values that can be grouped under evidential and, to a certain degree, historical can be satisfactorily articulated in terms of the scheduling criteria, but description of aesthetic and associative values are more problematic. The Monuments Protection Programme (discussed below) included a scored Amenity Value with the scheduling criteria, which goes some way to addressing the values of public appreciation, though falling short of clearly articulating often-nuanced characteristics. In terms of landscape-scale sites the extent to which the heritage assets that comprise a *cultural* landscape interact with a *natural* landscape can result in a strong aesthetic value being attached to place, and having a clear way of describing that value is considered key.

It is also important to note that *Conservation Principles, Policies and Guidance* outlines a staged approach to assessing significance of heritage assets which is as relevant to characterising the significance of landscape-scale sites as individual monuments.

A key aim of the articulation of significance for landscape-scale sites is to ensure that significance/importance, using whatever criteria are ultimately deemed most applicable, is communicated with clarity and disseminated widely. The desirable form of a statement of significance is outlined in paragraph 82 of *Conservation Principles, Policies and Guidance* (2008, 40) and is worth reproducing in full here, given its direct relevance:

> "A 'statement of significance' of a place should be a summary of the cultural and natural heritage values currently attached to it and how they inter-relate, which distils the particular character of the place. It should explain the relative importance of the heritage values of the place (where appropriate, by reference to criteria for statutory designation), how they relate to its physical fabric, the extent of any uncertainty about its values (particularly in relation to potential for hidden or buried elements), and identify any tensions between potentially conflicting values. So far as possible, it should be agreed by all who have an interest in the place. The result should guide all decisions about material change to a significant place".

In addition to this, it would also be useful for the dissemination of better understanding of the issues of landscape-scale heritage management for a shorter statement of significance to be prepared in 'plain' language – effectively a clear, concise summary of why a landscape is culturally significant and therefore worth protecting. A good example of this is the approach to Historic Landscape Characterisation adopted in Wales, where large 'Historic Landscapes' are identified and delimited with perhaps more in common with AONBs or World Heritage Sites than with the blanket approach to HLC adopted in England. Each landscape is divided into defined character area units with a readily comprehensible and widely accessible description of significance.

5.2.2 National Planning Policy Framework

Within the *National Planning Policy Framework* (NPPF) (DCLG 2012) and the associated *National Planning Practice Guidance* (NPPG) (DCLG 2014), the assessment of significance (the principal measure of value of a heritage asset) broadly follows that introduced in the now-cancelled *Planning Policy Statement 5: Planning for the Historic Environment (PPS5)* (DCLG 2010). Significance is articulated in terms of four interests: archaeological, architectural, artistic and historic, with extant guidance including *The Setting of Heritage Assets* (EH 2011b) also describing the contribution that a heritage asset's setting can make to its signifi-

cance.

The benefit of using the terminology of NPPF to articulate the importance of NI sites is that sites that currently are not or cannot be designated are already assessed in this manner, and some aspects of their conservation may be managed through the planning process. The drawback of such an approach, however, would be if future alterations to the management of cultural heritage within the planning system introduced new terminology or assessment priorities. It is perhaps more desirable to have a terminology of characterisation for NI sites which is expressed in terms of English Heritage's language of conservation but, if considered necessary, with some form of 'bridge' statement which equates it to the terminology of current heritage management within planning.

5.2.3 *Local Distinctiveness*

The landscape designation of Premier/Principal Archaeological Landscapes (PALs – discussed in more detail below) recognise a characteristic of local or regional distinctiveness as being a key criterion in assessing their overall significance as landscape-scale sites. Distinctiveness is not satisfactorily covered within the scheduling criteria discussed above and is particularly apposite when characterising heritage at a landscape-scale. Such an approach should not be confused with the common division of significance into 'local', 'regional' or 'national', itself something of an unhelpful system of characterisation. Local or regional distinctiveness describes the characteristic of landscapes to be representative of a cultural heritage particular to that area, with the most locally distinctive being close to unique landscapes, and therefore very likely to be nationally important. A good example of this is the drystone walls and field barns of Swaledale and Arkengarthdale – locally and regionally distinctive to the degree that it is designated as the largest Conservation Area in England and is described in the Conservation Area Appraisal as "

5.3 Characterisation Method

The case studies below highlight that the articulation of importance for landscape-scale sites is necessarily undertaken at two levels. This is over and above the initial broad discrimination made during identification of potential sites and is aimed at providing the greatest clarity when describing importance.

In terms of the sites assessed for this project, the first level of characterisation focused on the components of the landscape and how they as monuments and groups of monuments had their own importance or significance, and how those significances interacted. With the Bolton Parks case study (see Chapter 10) the component monuments were discrete enough to allow application of the scheduling criteria (MPP methodology) and this is discussed in more detail below.

The form of an archaeological landscape, as a coherent and interrelated series of monuments, means that a major contribution to overall importance/significance will be derived from the component monuments, however there is also a second level of characterisation whereby the importance of the coherent landscape must also be described. It is likely that with many landscape-scale sites, the way in which they meet the criteria of national importance can be described in terms of the associative group value of the component monuments, but there are also a number of other values, such as landscape aesthetic or landscape amenity, which are relevant only on a large scale. These are explored in more detail below through the three case studies.

6. Delimiting of NI Sites

A number of approaches to delimiting NI sites are intrinsically linked to the characterisation of such landscapes. The discussion below focuses on two different aspects: firstly the wider issues of landscape delineation, and secondly, based on the assumption that delimiting a boundary around landscape-scale NI sites is considered desirable, a discussion of the broad methods and criteria that could be applied and their pros and cons.

A fundamental question to be addressed in relation to landscape-scale sites is whether it is desirable to delimit such sites at all. It is possible, if problematic in places, to apply broad identification and characterisation and to instigate conservation management policies without absolute delimiting of the site in question. The need for processes to allow the effective identification and management of NI sites is undeniable, but the question of whether or not to apply defined boundaries to 'sites' on a landscape-scale is a more balanced judgement.

6.1 The Boundary Problem

An inherent problem with delineation of NI sites, also applicable to most other delineated heritage sites, lies in the disconnect between a clearly defined spatial extent for administrative purposes and the 'fuzzy' extent of a landscape-scale site's 'actual' extent. An explicit statement of importance for an NI site can go *some* way to addressing the issues of physical extent as it can provide a rationale for the spatial extent (e.g. a statement which clearly identifies that all known structural remains directly relating to a medieval and post-medieval industrial complex will be included, or perhaps at least those remains with an above-ground presence), though this is admittedly only a step towards clarity rather than a resolution to the issue.

The second aspect of the boundary problem is that the establishment of a clear boundary of national importance creates an implicit admission that the landscape outside the boundary is of lower importance. On a wider level this statement is accurate, but it fails to acknowledge the inherent fluidity and partially intangible nature of a cultural or historic landscape. This issue, of course, relates to any spatial designation but its effect is arguably magnified when moving from the scale of a single scheduled monument to a landscape comprising a suite of coherent systems of monuments, their immediate settings, wider settings, interactions between those monuments within the modern landscape, and the spaces that link all of these.

6.2 Boundary Clarity

The converse of the fundamental issues of delimiting described above is that, where such issues are deemed an acceptable simplification, the drawing of a boundary provides a level of clarity suited to the processes of spatial planning and land management. In terms of the overall aims of the National Importance Programme, the level of ambiguity resulting from not having a clear delineation of a landscape-scale site may well be unacceptable for conservation management.

6.3 Internal Homogeneity and Core/Periphery

The simplified abstraction of a single boundary around a site can create a false impression of uniformity within the boundary, particularly when dealing with multi-period sites with markedly different values contributing to their significance/importance. Delineation by a single boundary can fail to display adequately what may be important clustering of sites in certain parts of the landscape.

The implementation of a core/periphery or core/buffer model to delineation of landscape-scale sites would go some way to addressing the issue of false internal homogeneity. A core/periphery model could be based on assessment of significance of key features within a landscape, though necessarily based on the premise that the landscape as a whole represents a coherent site of national importance (otherwise it should be managed as individual sites of national importance potentially contributing to the group value or setting of each other). Should a core/periphery approach be employed, it should be made explicit that not all landscape-scale sites fit this model and it is applied only in relevant situations where a differentiation can be clearly made and justified in a transparent way. Some of these issues are explored in the case studies below, where the assessment of component monuments in relation to the wider landscape provides a variety of potential ways of delimiting, and ultimately managing, the monuments and the spaces between.

A drawback to a core/periphery approach is that a hierarchy of features within a landscape requires a hierarchy of constraints or management priorities of greater complexity. This is not necessarily a

significant impediment, however, and where such sites are enshrined within local planning policy, for example, a relatively straightforward policy distinction could be made between the landscape-scale NI site as defined in an overall boundary, and the 'core monuments' which are of the highest individual significance/importance. This would mirror, to a certain extent, the management of SSSIs (discussed within Case Study 2 below) where a wide area designation is split down into smaller parcels or units to allow management to be targeted to specific sensitivities.

Perhaps the most straightforward distinction that could be made in a core/periphery model would be between active and passive management. In such an approach the whole landscape, having been defined as nationally important, would be subject to whatever passive constraints are required by the level of designation (see Chapter 8 below for a discussion of levels of protection). Core areas could then be defined as those areas where active management is prioritised, through implementation of management plans, targeting of funding etc. Such an approach has the benefit of providing a clear focus for what criteria define a 'core monument', which need not necessarily be decided solely in terms of historical or archaeological value, but also in terms of, for example, amenity value contributory to the access and appreciation of the wider landscape.

6.4 Level of Protection

A full discussion of potential levels of protection applicable to landscape designations is included in chapter 8 below, but the issue is raised here as this can also have a practical influence on the realistic extent of a site. Effectively a locally designated site with weight through local planning policy but no additional constraints is more likely to be acceptable to all stakeholders, and may therefore have a broad delineation. An area designation with statutory underpinning and enforcing specific and potentially onerous constraints may have to be drawn more conservatively in order to be acceptable through consultation (if consultation is appropriate in view of potential threats). Some statutory designations can be implemented without recourse to landowner approval, but given that the desired outcome is better management of nationally important remains, broad consensus between stakeholders is desirable.

6.5 Setting within Delineation

The concept of setting as a contributory factor to the overall importance or significance of a monument has always been considered to be a factor, but since the publication of PPS5 (DCLG 2010) and its replacement by NPPF (DCLG 2012) the assessment of setting has become increasingly formalised. The definition of setting as "the surroundings in which a heritage asset is experienced" (DCLG 2014) is now well understood and methodologies for defining setting and potential impacts upon it are set out in a number of guidance documents (e.g. EH 2011a; EH 2011b).

Key aspects of setting that contribute to the overall importance of an NI site can be articulated at characterisation stage using existing terminology and guidance; the question, however, is whether it is of benefit to the protection of landscape-scale sites to attempt to delimit a formal setting boundary, perhaps borrowing from the concept of World Heritage Site (WHS) 'buffer zones'. Depending on the legal protections for cultural heritage within the host country, the buffer zone to a WHS can have a number of different precise definitions, but broadly speaking a buffer zone defines an area around a WHS within which there are restrictions or controls designed to preserve the special value of the core WHS.

The benefit of formally extending the protection of the setting of a landscape-scale site to a defined line is clear in terms of the conservation of that site, but the difficulties in defining and implementing such an approach are substantial. The time and resources spent in defining an accurate spatial representation of the immediate setting of a cultural landscape are substantial but justified when submitting a proposal for inscription as a WHS, but might be impractical in terms of landscape-scale NI sites. Perhaps more significantly, defining setting as a fixed extent is at odds with current national planning policy and there is no legislative underpinning for applying restrictions to a fixed 'buffer zone' in terms of cultural heritage. Where NI sites are recognised as a designation within local planning policy (see discussion of levels of protection in Chapter 8 below) there would be the potential to also define buffer zones. Overall it is considered that the setting of landscape-scale NI sites can be adequately addressed through characterisation in terms of extant methodologies, and the introduction of formal buffers would be needlessly complex.

6.6 Boundary Definition

In terms of delimiting NI Sites specifically there is a substantial list of potential criteria that could be applied to boundary definition. In practice it is most likely that a combination of available sources, assessed through the application of expert local knowledge will result in the most representative boundary to a landscape-scale site. Given that the landscape must be demonstrably of national importance, however, it is desirable that any decision to include or exclude a monument or group of monuments should be justified in terms of the contribution made to the overall coherent landscape as defined by the scheduling criteria.

Figure 6.1 A late prehistoric co-axial field system, enclosures and settlement earthworks east of Malham Cove scheduled as Hut circles, enclosures and fields north of Shorkley Hill (15ha). The dewpond is probably contemporary with the parliamentary enclosure walls. The area between Malham village and the Malham Cove contains 5 large scheduled areas ranging between 2.7 and 30 hectares all with very arbitrary boundaries which make no sense in management terms and which cut across archaeological features and two scheduled areas of less than 0.03ha (© R. White/YDNPA ANY279/18)

Boundaries can be defined by (among others):

- Mapped extent extracted from HER or other dataset
- Visible survival of remains
- Assessment of importance/significance of the known resource
- Defined by natural topography and/or geomorphology
- Modern land boundaries
- Use of existing abstracted landscape divisions (character areas/historic landscape characterisation)
- Use of existing non-heritage designated boundaries
- Use of existing land management parcels

6.6.1 HER

Monument extent, as defined within the GIS component of an HER represents a good baseline for extrapolating a wider landscape-scale site, but suffers from the same problems as noted above in relation to GIS-based identification. Where the mapping of monuments within an HER is derived from multiple, checkable sources this is a more acceptable approach, but it would still be desirable to augment this mapping based on other spatial datasets such as historic mapping and aerial photography.

6.6.2 Visible/known survival

Perhaps the most straightforward criteria for defining the boundary of an NI site is to base it on the extent of visible or known archaeological remains, even where it is suspected that the remains for which the landscape has been identified may continue outside the defined boundary. Such an approach has both benefits and drawbacks in terms of land management with the archaeological resource being a broadly 'known quantity', and also being robust and provable should the line of the boundary be challenged in any way. The converse of this is it may result in situations where archaeological remains require more than one different land management regime in the same parcel of land.

Where such delineation is based on high-quality data, such as within a well-maintained HER, this approach can be instigated rapidly as a desk-based exercise, particularly in regions which have had National Mapping Programme projects deliver wide-scale aerial photograph transcription datasets. Such an exercise can then be augmented or tested by field observation, particularly given the relative cost to accuracy of modern mapping-grade GPS units.

The downside of delineation based on visibility and known survival is that, where desk-based, it is based on the quality of information held and this can therefore produce data which is skewed and non-representative of the actual remains. In the event of a characterisation and delineation exercise being undertaken proactively by a local authority, the cost of even rapid field survey to refine boundaries and examine the condition of monuments may be prohibitive. Secondly, this approach also makes inherent assumptions about the significance and extent of monuments based on visibility of surviving remains, though in terms of practical conservation and management this may be a necessary compromise.

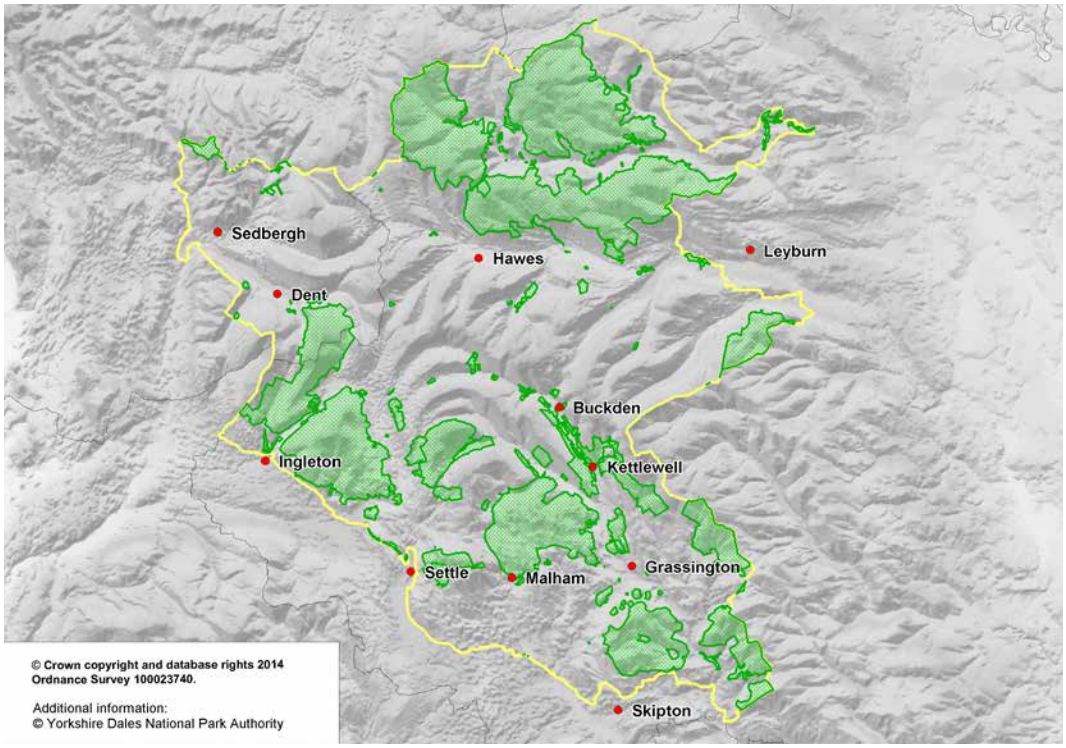


Figure 6.2 Location and scale of SSSIs within the Yorkshire Dales National Park

6.6.3 *Significance/importance*

Whilst an obvious statement in many ways, it is a necessity that any boundary drawn around a landscape-scale site includes those monuments that contribute to the national importance of the coherent landscape, and excludes those that do not. This is complicated in certain situations where a central area of a landscape-scale site may be nominally 'blank' but it is desirable to include it in the overall boundary to maintain coherence. This is an exercise that is undertaken largely intuitively, but any such approach should always be supported by the articulation of importance/significance. This is the basic approach adopted for other heritage designations.

6.6.4 *Modern Landscape Features*

Discussed in more detail in chapter 9 below, the approach of Historic Landscape Characterisation (HLC) was to explicitly base the creation of HLC polygons on modern mapping and the divisions of the modern landscape. The benefits of this are clear, inasmuch as the majority of the land management regimes and approaches that can potentially benefit the conservation of the historic environment are also based on these divisions, and this approach can provide clarity for the land owner/manager. The clean demarcation of the modern landscape, however, has a clear and obvious drawback when applied to the delimiting of historic landscapes– namely that such boundaries are rarely coincident with the limits of earlier archaeological remains. In some cases, as with well-preserved parkland or grounds associated with a medieval or post-medieval hall, the extent of a landscape can be clearly visible, but generally an artificial approach to delimiting such remains could be inaccurate. The use of modern boundaries to define historic landscapes can also exacerbate the 'edge effect' discussed above, as the limit of an area of importance is not only represented by a line on a map, but also by a clear boundary feature on the ground.

6.6.5 *Geology and Geomorphology*

Through the late 1990s and 2000s a series of English Heritage-funded Aggregate Resource Assessments were undertaken, often based on partitioning the landscape by geological or geomorphological unit in order to both assess and predict the archaeological resource, and also to manage evaluation and mitigation in response to mineral extraction in these areas. A number of these assessments (e.g. Hewitt *et al.* 2011; Brightman and Waddington 2011; Knight *et al.* 2012) were based on establishing geomorphological units with specific archaeological associations and suitable management approaches. At a broad scale there is the potential for the application of geological mapping as one contributory factor to delimiting NI sites, for example mapping large-scale lead extraction and processing sites with regard to the veins being worked.

6.6.6 *Existing Area Designations*

There are a number of non-heritage area designations, predominantly used to protect natural sites and landscapes, and many landscape-scale NI sites are likely to overlap and interact with these. In terms of delineation such sites broadly follow that for heritage designations in that they are based

on the articulation of what is special or significant and requires protection or conservation (though this can encompass wide areas such as habitats etc.). It was considered whether areas previously designated for one purpose could have a heritage consideration attached to them. The potential benefits of such an approach could include enhanced controls on some agricultural operations harmful to archaeological interest and a simplification of constraint areas for land managers. On the whole, however, such an approach is considered impractical for a number of reasons including:

- Such sites are delimited for a specific purpose and this will very infrequently be coincidental with the boundary of cultural landscape
- The primary focus for protection will not be heritage-based
- The legislation that underpins natural area designations has no provision for those areas also providing heritage protection. Such an approach would require new legislation or policy, at which point it would be more practical and desirable to create boundaries specifically relating to heritage concerns.

6.6.7 *Land Management Schemes*

Where the definition of NI sites is supported by local planning policy (in some form of local designation), it is likely that the main route to proactive conservation will be through agri-environment stewardship or similar land management schemes. In this case it would be possible to define the boundaries of NI sites purely based on parcels of land relating to existing and potential land management schemes. It is considered, however, that this would be an unacceptably inaccurate representation of the extent of a cultural landscape skewed by modern management concerns. Drawing the boundaries of a site based on the significance and extent of known remains does not preclude the management of parcels of land therein based on stewardship and other land management regimes. This would partially mirror the approach of SSSI management where an overall designation boundary contains individual units with differing management approaches addressing specific concerns or sensitivities.

6.6.8 *Ownership Boundaries*

Although some designations do not require individual notification of landowners, if NI sites are locally designated with the aim of promoting and prioritising conservation of cultural heritage, consultation and consensus is likely to be required. It may be possible, therefore, that the boundary of an NI site requires compromise to ensure 'buy-in' from landowners and stakeholders.

7. Data Management and Access for NI Sites

An aim of identifying NI sites is to allow a wider dissemination of information related to such sites and their locations. A clear delineation of nationally important archaeological landscapes (accepting the issues of delimiting discussed above) represents a clear statement of heritage value to landowners and other land managers in the surrounding area, and thus it is important to make the information about such areas accessible.

7.1 Historic Environment Record/ Sites and Monuments Record

The local Historic Environment Record will usually be the primary repository of information on heritage assets, and the inclusion of an additional dataset representing landscape-scale NI sites, linked to associated documentation/characterisation data/management priorities etc., would be a straightforward process. Indeed, where a local authority is the body undertaking an exercise to identify and manage such sites, the initial stages of characterisation and delineation are likely to be based on data held within a digital GIS component of the HER (HBSMR or similar). The process of identification, characterisation and delineation of such monuments is likely to result in the augmentation of the HER, providing an additional benefit to a local authority.

7.2 Alert Areas and Planning Triggers

Referring to HER21 as a model of archaeological alert areas, one of the key drivers of this approach was to ensure the wider dissemination and availability of data on the historic environment. This was envisioned as primarily driven through online portals, thereby allowing developers and other land managers access to clear constraint and alert mappings.

7.3 Centrally-held Accessible Databases

There are a number of central databases held by English Heritage and government bodies which are accessible through various means, most of which include some form of online portal access. These include:

- The English Heritage Archive (formerly National Monuments Record)
- The National Heritage List for England
- Magic (online GIS including spatial designations from many government departments)

Providing that landscape-scale NI sites have a digitally mapped component then such information can also be made accessible through some or all of these routes. The SHINE (selected Heritage Inventory for Natural England) relates directly to land management administration through agri-environment schemes and will presumably be used within the new Countryside Stewardship Scheme. Incorporation within the above datasets would presumably facilitate a presence in the SHINE online inventory.

7.4 OASIS

Online Access to the Index of Archaeological Investigations (OASIS) is an online repository hosted by the Archaeology Data Service (ADS) at the University of York. It is a requirement for most archaeological projects to be curated or made available in some form through this service, and the increasing capacity for storing and retrieving GIS and survey files would mean that spatial data relating to NI sites could also be made accessible here.

7.5 Accessibility

All the examples described above are means of accessing heritage-based spatial information either in-person or through online portals. There are existing data-sharing routes between these repositories, and once a dataset of landscape-scale NI sites is made available within either a local authority's HER or through a national dataset this can then be made widely available using the existing data-sharing protocols.

8. Management of NI Sites

Although the initial stages of management (identification of management needs, design and preparation of management plans etc.) may often be undertaken alongside the initial characterisation of NI sites, and indeed may be a criteria in their identification, the implementation of that management will generally be a later stage.

One of the main issues relating to the management of landscape-scale NI sites, expanded on in the case studies below, is that of multiple landowners/land managers. Whereas a single scheduled monument is likely to have one, or at most two, separate landowners, landscape-scale sites can cover areas belonging to many different landowners, and farmed or worked by many different tenants and land managers. This can have a knock-on effect on all aspects of the management of such sites, from initial consultation through to the implementation of Countryside Stewardship or heritage-specific management agreements, generally irrespective of the other issues discussed below.

8.1 Level of Protection

In broad terms the form of protection afforded to NI sites will have a fundamental impact on their management or conservation, and identification of the form of protection, and therefore constraint, should be a priority as the NIP progresses. The scale of protection afforded to landscapes identified as being of national importance can vary significantly and the following section explores a few potential approaches.

8.1.1 Scheduling

The strongest level of protection under current legislation would result from simply scheduling those landscapes that are assessed as being nationally important, initially disregarding any practical issues that such designation may produce and only applying the test of national importance. The benefit of such an approach is that it would provide legal underpinning to prioritise heritage-related conservation in areas of nationally important archaeological remains, though this may then cause conflict with other land management priorities (ecological designations etc.), potentially creating an adversarial rather than consensual and integrated approach to land management. In practice, however, this conflict exists already on a smaller scale with individual scheduled monuments and has, in some cases, promoted a careful and considered integrated approach requiring input and resources from all parties to achieve the best outcome.

Scheduling has the benefit of being relatively well understood as a form of designation, and large-scale scheduling would also provide a formal opportunity for implementation of Heritage Partnership Agreements (HPAs) in relation to archaeological remains, discussed in more detail below.

8.1.2 Area of Archaeological Importance

Under existing legislation (The 1979 *Ancient Monuments and Archaeological Areas Act*) Areas of Archaeological Importance (AAIs) can be designated. This protection provides reactive constraints within the designated boundary by requiring notification of groundworks to the local authority and therefore providing the opportunity for an appointed 'investigating authority' to monitor the groundworks, or to request up to a set period of time to mount an excavation in advance of works. In practical terms the designation of an AAI provides an extra 'safety net' to allow consideration of the impact of any works which fall outside the requirement for planning permission, though a significant drawback is that the Act predates the adoption of the polluter pays principle and there is therefore no requirement for the developer to bear the cost of archaeological works, as would be the case with planning-led investigation.

There is, theoretically, no impediment to using the existing legislation of AAIs to designate landscape-scale NI sites, as it would serve as an alert area for any works requiring planning permission, provide an additional layer of protection in relation to minor works, and also may well promote the use of Heritage Partnership Agreements or similar (discussed in more detail below) to allow a landowner lee-way in undertaking certain regular activities. The major practical drawback to using the existing AAI legislation, as noted above, is that there is no clear obligation for any particular party to bear the cost, and so it would become likely that decisions relating to the preservation or conservation of remains would be made on a purely financial basis.

8.1.3 National Designation

Identification of nationally important landscape-scale sites could theoretically form the basis for a new national designation. This would provide the opportunity to define the conservation aims

and management constraints freely, without recourse to an existing system that may require alteration. Many of the potential protection and management aims outlined here and in other parts of this report (e.g. prioritisation of stewardship schemes, focus for external funding) could be implemented through a nationally recognised designation, though responsibility for such sites could be devolved to local authorities, following the model of Conservation Areas.

The practical issues with implementation of a new form of designation are, however, considerable, as such an approach would require amendment to, or creation of primary legislation, even in terms of what may be the simplest approach – the amendment of the *Planning (Listed Building and Conservation Area) Act* to recognise 'special archaeological interest' in addition to 'special architectural or historic interest' and include measures for its protection. In addition, the logistical implications of instigating a new form of heritage designation on a national basis are likely to be prohibitive, with use of existing provision or local designation requiring substantially less outlay in terms of time and resources.

8.1.4 Locally Designated

The strength of a local designation would derive principally from its recognition within local planning policy, with any power of constraint or sanction being largely confined to issues resolved through the planning system. The underlying authority of a locally designated area, however, could lie in the 'soft power' of consensus. To instigate such a local designation could require extensive consultation, ensuring that the defining of priority areas for heritage conservation and management does not unacceptably impact on the requirements of other land management stakeholders. It could be argued that such an approach, particularly where unified to some level with Countryside Stewardship, could be more likely to result in 'buy-in' from landowners than might an imposed set of constraints such as would be the case with large-area scheduling.

A local landscape-scale designation can also be identified as a priority for external funding (such as through the Heritage Lottery Fund) promoting a proactive management within such areas, though this is also true of a national form of area designation, perhaps even more so.

8.1.5 Emergency Protection

Whilst not a long term solution to the issues of conserving and managing NI sites, a 1986 government green paper (DOE 1986) proposed Landscape Conservation Orders as an instrument of last resort for specifically National Parks to prevent degradation of landscapes through changes in land management outside statutory control. The proposed LCOs were only intended to apply to those landscapes "of most national importance and most vulnerable to change". LCOs would prevent escalation of a defined set of agriculturally based 'potentially harmful operations'. The proposed approach, in the form in which it was set out, had a number of flaws and was ultimately not taken any further, but it does serve to illustrate a potential level of protection whereby a designation could serve as a short-term measure until such time as a management agreement could be put in place. As with other approaches, however, this would require the weight of new legislation to support it.

8.1.6 Protected through NPPF

Where NI sites have been recognised and delimited but no formal designation (whether national or local) has been applied, then such areas will still benefit from augmented protection within the planning process, being considered of equal significance to scheduled monuments under paragraph 139 of NPPF (DCLG 2012, 32). It must be stated, however, that this will not affect activities that are already allowable permitted development.

8.2 Stewardship

It has been noted a number of times above that perhaps one of the most applicable current routes to promoting the long-term conservation of landscape-scale NI sites would be through identifying such sites as priority areas for heritage-related Countryside Stewardship (or its successor schemes). This would be of particular relevance where a national designation for such sites, supported by legislation, would be impractical, and the significance of the sites is recognised primarily through local planning policy.

Such an approach would be unlikely to clash with the Select Heritage Inventory for Natural England (SHINE) project (discussed in more detail below) given that the component monuments of an NI site are almost certain to meet the criteria for recording as SHINE sites. This would in turn result in the targeting of proactive conservation to the most significant monuments within a landscape.

8.3 Heritage Partnership Agreements

When originally outlined in 2007, Heritage Partnership Agreements (HPAs) were intended to have statutory underpinning to encompass any designated heritage asset within a putative combined designation list (incorporating all current disparate heritage designations) (DCMS 2007). Governmental changes and the alteration of broader priorities has meant that the designation system is still split and the legislative underpinning that has been brought forward currently relates only to Listed Buildings. Heritage Partnership Agree-

ments are generally between the owners of Listed Buildings and the local authority with oversight to provide Listed Building Consent, and outline a schedule of agreed works for which pre-emptive consent is given providing the outlined method and terms are adhered to.

Such a model could be readily applied to scheduled monuments, and is arguably particularly suited to large-scale sites where it could be considered not cost-effective to require individual consents for regular maintenance for example, though there is currently no statutory underpinning for such an agreement. Should this situation be altered then it would address some of the practical arguments against large-area scheduling.

In terms of an HPA, as currently legally defined in terms of Listed Buildings, there would need to be constraints on land-use for the real benefit of such an instrument to be felt. However, there are situations in which an HPA, in terms of an agreement between landowner and curatorial authority to limit some works that may be harmful to archaeological significance, could be entered into voluntarily. In such cases, the HPA model would be a comprehensive and useful way of approaching the long-term management of a block of land by prioritising nationally important archaeology. Situations where HPAs or similar could be employed might include:

- Part of an agreement made involving landowner, prospective tenant and curatorial authority in order to control land-use activities and ensure the conservation of nationally important archaeological features that contribute to landscape value.
- In terms of Inheritance Tax, exemptions may be granted on transfer of land which is of "outstanding scenic, historic or scientific interest" subject to a number of conditions and controls. The HMRC memorandum *Capital Taxation and the National Heritage* states that "earthworks, archaeological sites or archaeological landscapes which have been scheduled as ancient monuments will clearly be eligible for consideration for [exemption]" (HMRC 2011, 49). In terms of dealing with demonstrably nationally important landscapes the HPA model would provide a comprehensive structure for ensuring land exempted from Inheritance Tax in these terms would be maintained and conserved in a suitable and monitored manner and could form part of the necessary monitoring arrangements for ensuring that an estate complies with its statutory undertakings that form the legal basis for conditional exemption from capital taxes.
- A landowner may enter into an HPA as part of enabling development

8.4 Local Plans and Spatial Planning

The principal driver for this pilot project was the need to identify those non-scheduled sites which require equal protection to scheduled sites, as outlined in NPPF, and therefore there will be strong protection within the planning system for such sites. In addition to this, however, the identification and delineation of nationally important archaeological landscapes can provide a clear set of priority areas to be highlighted in a local plan, vision or management. This specificity would provide an additional layer of protection to such landscapes, as well as allow for measurable progress under priorities such as 'percentage of area where the heritage significance of a site is managed through a Countryside Stewardship agreement' or similar.

An example of the benefits of this level of integration is the adoption of the Principal/Premier Archaeological Landscapes (PALs) by a number of South West-based local authorities, discussed in more detail below. The Dartmoor PALs are enshrined within the Dartmoor National Park Management Plan and have been found to be a useful tool for prioritising areas for Higher Level Stewardship since their implementation (J. Marchand pers. comm.).

8.5 Research Frameworks

The majority of the discussion and assessment above has related to the practical management of NI sites through the planning system or as priority areas for various forms of stewardship. In addition to this NI sites can also be considered priority areas in terms of archaeological research and investigation. Part of the designation of such sites as nationally important will derive from their potential to yield information about the past based on previous work and current condition. This archaeological interest (in terms of NPPF) or evidential value (English Heritage) underpins the process of all long-term conservation and so this should be acknowledged within the characterisation and management of NI sites. The most straightforward approach would be to reference NI sites to both the priorities of English Heritage and also to the relevant Regional Research Framework.

8.6 Monitoring

A final issue to note in terms of management of NI sites is that the identification of such areas will inevitably introduce a need for monitoring. The level of designation will have some effect on where the onus of monitoring will fall, though it is possible that the responsibility may fall to the relevant local authority, the pressures of which, in terms of funding, must be recognised in any final approach to protecting nationally important sites.

In addition to the broader issue of responsibility for landscape-scale sites there is the practical issue of monitoring sites that cross several ownership and access boundaries. Issues relating to this are explored in the case studies below.

9. Assessment of Extant Methodologies and Criteria

Although based on, and drawing case studies from the historic environment of the Yorkshire Dales, this pilot project also examines previous and extant methodologies for addressing the issues of landscape-scale historic environment sites (very few previous methodologies are concerned explicitly with the identification and characterisation of solely nationally important sites).

9.1 Areas of Archaeological Importance

The designation of AAIs is provided for under the terms of the *Ancient Monuments and Archaeological Areas Act 1979*, requiring the submission of notice of groundworks within a defined area and the right of investigation by a designated authority. The use of AAIs is not widespread as a means of managing archaeological sites but does have weight as a precedent for large area heritage designations where constraints are lighter than under scheduling.

A discussion of the level of protection and main drawbacks of using AAIs to designate landscape-scale NI sites is included above, but during and following a project meeting, the issues of AAIs and the possible amendments that would be required to the 1979 Act were discussed. It was summarised (J. Oxley pers. comm.) that the following amendments would be likely needed to provide the level of protection for landscape-scale NI sites through implementation of the AAI designation:

Retention of:

- Notification process and timescale
- Opportunity for archaeological investigation and enforcement of access for such
- Ban on metal-detecting

Amendment of:

- The notification process to apply to permitted development, effectively 'catching' those elements of groundworks and alterations that cannot be adequately managed through the planning process or existing designation consents
- The notification process to apply also to changes in land management practice and land use

Introduction of:

- A duty to meet costs of archaeological mitigation if an operation would potentially lead to a loss of significance
- The ability to enter into management agreements (likely using HPA model) for all or part of an AAI.

Where the specific contributory values of national importance are well understood, it is possible that an AAI could be strengthened through an Article 4 direction removing specific permitted development rights, though this would require political support and would therefore be more suited to individual cases than to a coherent approach to all NI sites.

9.2 Conservation Areas

As a heritage-based area designation, Conservation Areas provide one of the most direct comparisons to the potential issues of landscape-scale NI sites; this is particularly apposite in the YDNP as there are several large Conservation Areas (including the largest in Britain), which interact with a wide variety of other different area designations. It must be made explicit, however, that there are key differences between Conservation Areas and the types of landscape-scale sites that are the focus of this project: principally that Conservation Areas are concerned with the built environment, and that the criteria for designation are based on 'special architectural or historic interest', rather than on national importance. At present Conservation Areas do not protect archaeological interest from change, other than where such change would also have a potential effect on the setting of upstanding structures with special architectural or historic interest.

Local authorities are required to review the areas for which they have curatorial oversight and recommend those areas that are considered to meet the criteria for designation as a Conservation Area. The English Heritage guidance on Conservation Areas highlights a number of routes to identification. In addition to the proactive statutory requirement to review on a regular basis, several reactive routes are identified: development threats, master planning, information gathering for local plan, neighbourhood plans.

An important part of the Conservation Area process is a detailed and rigorously documented appraisal, description and management plan, and the requirement for the latter to be subject to consultation. This is a model of good practice fully applicable to NI sites of archaeological interest.

As is noted above, should there be an appetite for legislative change to provide designated protec-

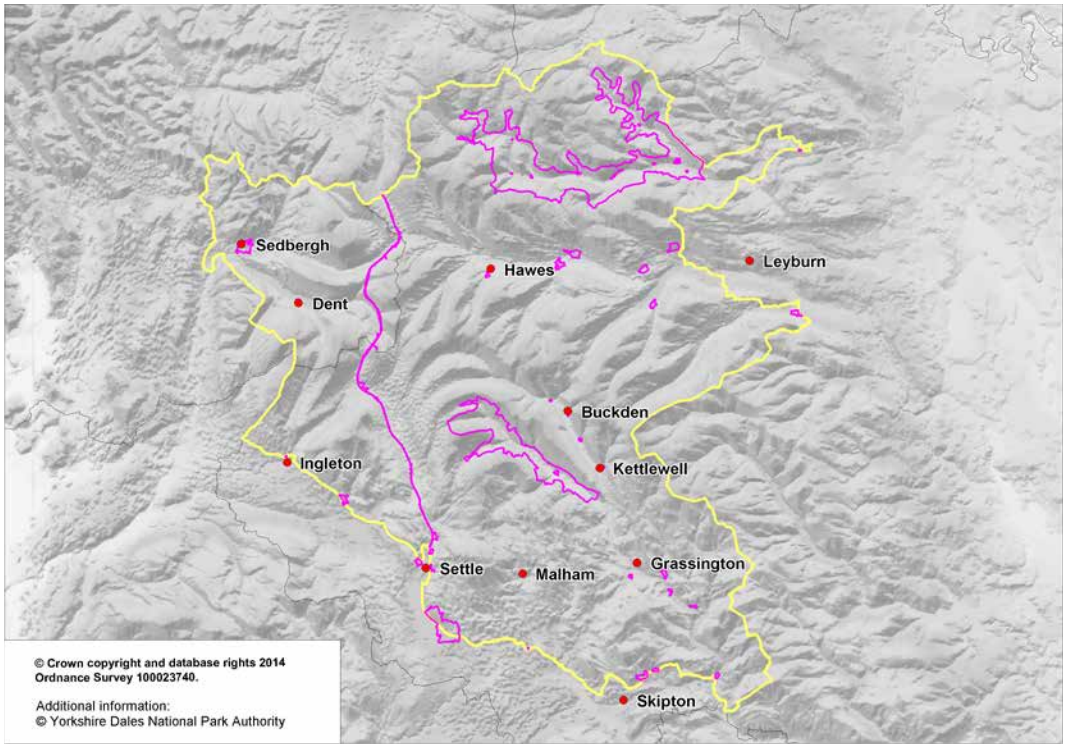


Figure 9.1 Conservation Areas (outlined in pink) within the Yorkshire Dales National Park illustrating the extent, in particular, of the Swaledale and Arkengarthdale Barns and Walls area (the most northerly shown)

tion for landscape-scale NI sites, then perhaps the most straightforward approach would be to amend the 1990 Planning (Listed Building and Conservation Area) Act to also recognise 'special archaeological interest', effectively creating the basis for archaeological Conservation Areas.

9.3 HER21

The HER21 project report relating specifically to constraint and alert mapping (Land Use Consultants 2011) contains specific, high-level guidance on the creation of alert areas. This process partially conflates the identification, characterisation and delineation processes as it advocates a GIS-based approach. The recommended process comprises:

- An initial audit of the HER data that screens out:
  - » Event records where they are not the sole record of a recognised and surviving heritage asset
  - » Findspots and PAS records where they are not the sole representation of a recognised site
  - » Records with poor positional accuracy
  - » Any records of questionable provenance or significance
  - » Records with no spatial data

Beyond this the guidance then outlines priorities and approaches for the delineation of the alert areas noted above. The process outlined here was designed to allow non-specialist stakeholders in the planning process (including developers, planning officers etc.) an easy way of understanding the potential for heritage constraints on a development at the earliest possible stage in the process. As such, the workflow for creation of alert areas has, at best, a very coarse approach to discriminating different levels of significance of the heritage assets within a given HER.

The application of HER21 guidelines, based as they are on an outcome related to planning constraints, highlights one of the key issues of comparing such approaches to identifying and managing NI sites: the differences in development management between local authorities necessitates bespoke approaches to constraint mapping at a local authority level, whereas NI sites are ideally dealt with through a nationally consistent approach.

As has been discussed above, extrapolation of NI sites using a set of GIS protocols is likely to be unsatisfactory, even were there national consistency in the structure of HERs. The application of a workflow such as that for HER21 would likely require a significant outlay of time and resources to achieve a less satisfactory result than that achieved by a group of people with expert knowledge of the area in question.

9.4 Historic Land Use Value

As part of the implementation of the wider Land Use Strategy implemented by the Scottish Government (SBC 2014), a current Land Use Strategy Pilot in the Scottish Borders is examining a method for prioritising land use through assessing land parcels in terms of different cultural and environmental sensitivities and combining such assess-

ment in a GIS environment to allow the ranking of priorities. At the time of writing, the viability of assigning broad Historic Land Use Value across a number of case study areas was being assessed.

The suggested (though not prescribed) method outlined in the brief for the HLUV pilot (SBC 2014) would see an assessment of both individual monuments and landscapes and discrimination into, for example, three categories of relative importance. Such a method would allow for easy integration into the wider Land Use Strategy approach through the creation of a 'heritage baseline', which would be nominally informed and repeatable.

HLUV will be required to fit into a larger system that has already been relatively well defined and with a methodology that is being implemented for all land use. Upon completion, and despite the significant reservations attached to using abstracted data to define NI sites, the applicability of the outline methodology will be of some interest to the National Importance Programme.

9.5 Historic Landscape Characterisation

9.5.1 *England*

The central stage of Historic Landscape Characterisation (HLC) comprised a single phase of combined characterisation and delineation. Characterisation was based on three principal levels of attributes (Aldred and Fairclough 2003, 27):

- Attribute Set 1 – HLC Groups (Broad Type). Very broad groups including such general terms as *Unenclosed (or Unimproved) Land*, *Enclosed Land (Fieldscapes)*, *Woodland*, *Industrial Land* etc.
- Attribute Set 2 – Present Day HLC Attributes. A series of more detailed attributes attached to each polygon including, for example, *Boundary Morphology*, *Interpretation and Indicative Features*, *Period*, *Confidence*, *Sources* etc.
- Attribute Set 3 – Former HLC Attributes. An overview, where possible, of former historic landscape attributes and character recorded in terms of the same attributes as set 2 above.

Whilst the attributes are, in the main, not directly relevant to the issues of NI sites discussed here, the overall form of a layered and hierarchical expression of characterisation is potentially useful. When dealing with landscape-scale sites it may often be necessary to adopt a reductionist approach to allow for high-level comparisons or the implementation of broad management approaches. A hierarchical characterisation provides one possible structure for this, whilst also allowing for detailed 'lower level' description.

The core of HLC comprised an interpretation of the modern landscape in terms of its cultural heritage and historic environment associations. The delineation of HLC polygons was, therefore, based on discrete units of the modern landscape where each block as a whole shared a common broad historic character. The sample HLC Project Design prepared following the 2002 review of HLC methodology summarises the following criteria for delineation of a polygon:

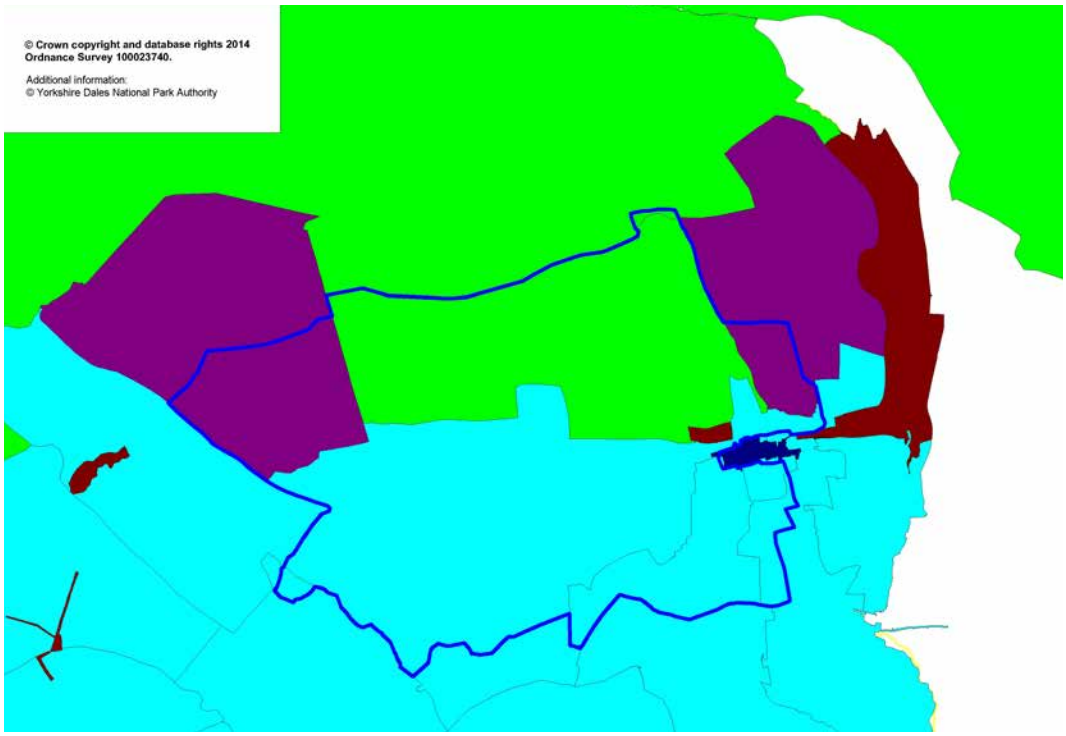


Figure 9.2 Extracted map of HLC polygons against the area of archaeological importance defined as the Bolton Parks PAL discussed in Case Study 1 below. The broad HLC types are: extractive (green), enclosed land (blue), designed landscape (purple) and woodland (maroon), and clearly do not match the extent of the diachronic landscape-scale site mapped using other datasets

- "Most areas included within it [the HLC polygon] possess characteristics that can be assigned to the same Broad Group (e.g. unimproved land, fieldscapes etc.)
- Most areas included within it share a common set of other attributes. (For example, all of the woodland included within the polygon is broad-leaved and has one or more wavy external boundaries etc.; or that it shares same predominant Pattern, i.e. 'regular', 'irregular', or 'none' or Boundary Morphology, i.e. 'sinuous', 'straight', 'erratic' or 'none').
- Most areas within it can be interpreted as having the same previous landscape character (i.e. all of the fields within the polygon contain evidence of medieval strip fields) (EH 2002, 26).

In addition to a refinement of specific method, the review of HLC method (Aldred and Fairclough 2002) also highlighted the applicability of a 'core/periphery' approach, recognising the necessity of a centralised system with the flexibility of local variation. Given the wide variety of forms and management requirements of NI sites nationally, this is an approach with some merit to the current project. There is, ostensibly, some benefit in defining NI sites in terms of their historic landscape character, but a rapid comparison of the extent of coherent landscape-scale sites and HLC polygons in the Yorkshire Dales National Park shows very little coincidence between the two.

9.5.2 *Wales*

The approach to HLC in Wales is notably different to that in England, and arguably of greater relevance to the identification and management of landscape-scale NI sites. The approach is based on identification of sites to be included on the Register of Landscapes of Historic Interest in Wales, designated as such for outstanding historic character. These landscapes are then divided into smaller character areas (though still coherent landscapes in their own right) for which it is intended there be character appraisals to guide development and conservation in a manner sympathetic with the overall historic character.

One of the more significant aspects of Welsh HLC is in terms of presentation and dissemination of data about historic landscapes. For those areas where HLC has been completed, descriptions of significance/importance for character areas are available online, and are generally articulated in 'plain language'.

9.6 The Lead Legacy

The Lead Legacy has been an ongoing project based on the lead-bearing geologies of the Peak District, which also host the archaeological remains of centuries of lead mining. As is made clear in the Fell End-Slei Gill-Tanner Rake case study below, defining the coherence of even a single-industry historic landscape can be problematic, and so the Lead Legacy aimed to provide an assessment of the resource and priorities for the long-term conservation and management of the remains. The approach taken to the resource (compiled in Barnatt *et al*. 2013) is of relevance to the identification and management of NI sites in a number of key ways:

- Given competing interests of land management and the scarcity of funding it is unrealistic to attempt to conserve all remains and 'fossilise' the landscape, and priority should be attached to those sites of greatest importance.
- The project adopted a practical approach to delimiting site boundaries, based mainly on the visible survival of coherent groups of monuments, but often bounded within convenient modern land parcels. It should be noted that a major component of the lead legacy assessment also investigated the ecological value of the landscapes.
- The inventory of sites used a basic scoring system for some aspects of assessing the presence and importance of particular remains within a wider site. This adds a level of objectivity to the assessment and mirrors the approach of MPP (described below).

9.7 Monuments Protection Programme

The Monuments Protection Programme (MPP) was a comprehensive assessment exercise undertaken by and through English Heritage, and many aspects of it of particular relevance to the identification and management of NI sites are reproduced here. MPP was addressed at "the systematic and consistent evaluation of monuments on a nation-wide basis, and to the careful appraisal of the known range of monument classes in order to create a balanced sample of the best monuments for preservation" (Darvill 1988, 4), and had the following aims:

- "To review and evaluate existing information on sites of archaeological and historical interest so that those monuments which are of national importance can be identified.
- To make recommendations to the Secretary of State that those monuments identified as being of national importance should be scheduled, or to identify that some alternative appropriate action should be taken.
- To collate information more generally on the condition of monuments of national importance so that the resource requirements for future preservation and the priorities for action

can be established" (Darvill 1988, 3).
The MPP identified sites through a mass characterisation of individual monuments, but there was also an initial differentiation (and subsequent methodological differentiation) made between single monuments, relict cultural landscapes (of most interest to this pilot), and urban areas. Relict cultural landscapes were initially defined as "a tract of countryside which has survived in a relatively unaltered state since its period of use and which exhibits sufficient traces to allow its structure and arrangement to be wholly or partly interpreted" (Darvill 1988, 10). The definition of relict landscapes is unpacked and a substantial discussion of the nature of landscape, landscape archaeology and the variable nature of synchronic and diachronic landscapes was also included within the MPP method (Darvill 1992). The discussion presented in the MPP manual identified the following key issues in relation to the identification of relict cultural landscapes, and therefore also of relevance to NI sites:

- Identification and delineation are part of the same process and are based upon a certain level of knowledge about the archaeology of a given area.
- Given the absence of a range of defined relict cultural landscapes there is no clear set of templates or prescribed list of characteristics that can be applied as an objective test.
- The usual starting point for identification and delineation is an exhaustive compilation of mapping. It is worth noting that since the compilation of the MPP discussion in 1992, the processing capability, widespread adoption and integration of GIS into landscape-scale assessment add considerable weight to this point, as does the increasing percentage of the country covered by National Mapping Programme (NMP) aerial photograph transcription.
- Professional interpretation is a key factor in the comprehension of disparate data required for the identification and delimiting of relict cultural landscapes. This professional assessment also acts as a check on the quality and validity of the underlying data.
- Identification of relict cultural landscapes is predicated on answering two key questions:
  - » Are the remains in question of the right scale; should the evidence be interpreted as a group, cluster or complex of monuments?
  - » Does the evidence have integrity and articulation, diversity and structure, and pattern and repetition?

A proactive approach to identification such as that outlined by MPP is well suited to NI sites particularly in highlighting the importance of local knowledge, professional judgement and the inherent variability of landscape-scale remains.

In terms of the evaluation method, MPP assessment was undertaken in a series of stages defined as:

- Class Characterisation Stage
- Monument Discrimination Stage
- Site Management Appraisal Stage.

The MPP characterisation stages vary between use of absolute (and often numerical) values at the class characterisation stage, and relative evaluation in which one or more of a select group of criteria is applied at monument discrimination stage to determine the relative importance of each monument. The evaluation criteria used across all stages were based on those outlined by the Secretary of State in 1983 (DoE 1983) and further expanded. Most notably the broad definitions of four of the criteria were expanded into two sub-criteria each in order to better represent the monuments being assessed, and two new criteria – amenity value and conservation value – were added. The MPP evaluation criteria are of particular importance to the assessment of NI sites and, as such, are reproduced in full the table below:

Table 9.1 Monuments Protection Programme evaluation criteria (Darvill 1988, 6)

Criteria		Description
Survival/Condition		The survival of the monument's archaeological potential both above and below ground is a crucial consideration and needs to be assessed in relation to its present condition and surviving features.
Period	Currency	It is important to consider for preservation all types of monument that categorize a category or period. Period (currency) specifically relates to the date and duration of use of monuments.
	Representativity	Period (representativity) specifically relates to the importance of monuments as relics from a particular time.
Rarity		There are some monument categories which in some periods are so scarce that all of them which still retain any archaeological potential should be preserved. In general, however, a selection of must be made which portrays the typical and commonplace as well as the rare. For this, account should be taken of all aspects of the distribution of a particular class of monument not only in the broad national context but also in its region.
Fragility/Vulnerability		Highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or unsympathetic treatment; these monuments would particularly benefit form statutory protection which scheduling confers. There are also standing structures of particular form or complexity where again their value could be severely reduced by neglect or careless treatment and which are well suited to protection by this legislation even though they may also be listed historic buildings.
Diversity	Form	Some monuments have a combination of high quality features – others are chosen for a single important attribute. Diversity (form) specifically relates to regional or chronological variations within a class of monuments.
	Features	Diversity (features) specifically relates to the range of components within individual complex monuments.
Documentation	Archaeological	The significance of a monument may be given great weight by the existence of records of previous investigation (archaeological) or, in the case of more recent monuments, by the support of contemporary written records (historical).
	Historical	
Group Value	Association	The value of a single monument (such as a field system) is greatly enhanced by association with a group of related contemporary monuments (such as a settlement or cemetery) or with monuments of other periods. In the case of some groups it is preferable to protect the whole including the associated and adjacent land rather than to protect isolated monuments within the group. Group Value (association) specifically relates to the relationships between monuments of different classes.
	Clustering	Group Value (clustering) specifically relates to aggregations of monuments of similar class.
Potential		On occasion the nature of the evidence cannot be precisely specified but it is possible to document reasons for anticipating its probable existence and importance and so demonstrate the justification for scheduling. This is usually confined to sites rather than upstanding monuments.
Amenity Value		Reflects the potential of the monument as a visual, educational and recreational resource within the landscape/townscape.
Conservation Value		Reflects the potential of a site in the context of other conservation interests, such as the protection of the built environments or nature conservation.

Characterisation Criteria	Discrimination Criteria	Management Appraisal Criteria
Period (currency)	Group Value (association	Condition
Rarity	Survival	Fragility/Vulnerability
Diversity	Potential	Conservation Value
Period	Documentation (archaeological)	
	Diversity (features)	
	Group Value (clustering)	
	Documentation (historical)	
	Amenity Value	

Table 9.2 Applicability of criteria to the Monument Protection Programme evaluation stages (Darvill 1988, 8)

In order to ensure a consistent and applicable method, relevant criteria were assigned to each stage of the assessment, as in the table above.

In the class characterisation stage, selected classes of monument were initially assessed to ascertain their relative importance. This was a broad-brush evaluation at a national scale, and was undertaken to ensure that those monuments ultimately adjudged to be of national importance would be nominally representative of the range of all known monuments, though in practice some classes (e.g. industrial period remains) were under-represented.

Based on the characterisation, individual monuments within each class were then assessed as part of the discrimination stage, again producing a relative importance within each class that could allow monuments to be ultimately assigned national, regional or local importance. In terms of assessing landscape-scale sites, class characterisation was replaced with a period/form characterisation, resulting in the high-level method in the figure below.

Some stages of the MPP assessment were based on an objective scoring of the criteria, an approach which is clearly of some use to the management of NI sites. Scoring provides a transparent and repeatable measure for demonstrating the relative importance of, particularly, component monuments within a landscape. This is particularly relevant where one of the aims of identification of an NI site is to prioritise management and conservation efforts and approaches. Application of MPP scoring as a means of assessing and prioritising 'core' monuments or monument groups within a coherent landscape-scale site is explored in the case studies below.

This approach links most clearly to the final stage of the MPP evaluation process: the Site Management Appraisal comprising the examination of management issues and needs specific to the site. This then resulted in a relative characterisation of sites by management or conservation needs based on a site visit and a recommendation for scheduling or other appropriate action.

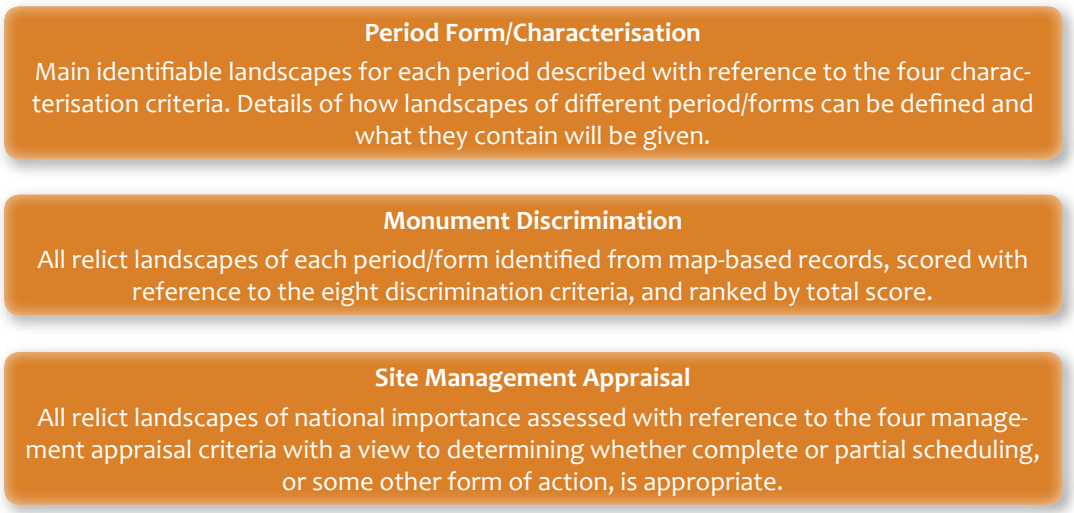


Figure 9.3 Flow diagram showing the main stages of Monument Protection Programme evaluation for relict landscapes (Darvill 1988, 10)

9.8 Premier/Principal Archaeological Landscapes

PALs are a local landscape scale designation first introduced by the Dartmoor National Park Authority. The terminology varies slightly but all PALs (including Dartmoor National Park's Premier Archaeological Landscapes and Exmoor National Park's Principal Archaeological Landscapes) follow a relatively simple format for characterisation and description of significance.

9.8.1 *Dartmoor National Park*

Dartmoor National Park Authority identified a series of PALs in response to a Vision Statement for the management of the moorland within the national park. This was a cooperative undertaking involving all upland stakeholders, particularly in relation to the areas of Dartmoor known as *commons*. One of the identified priorities was that certain areas could be given a local designation of Premier Archaeological Landscape where commons management would have a focus on archaeology (J. Marchand pers. comm.). Given the status of the PALs as local priority areas, the delivery of heritage conservation is primarily intended to be through the uptake of agri-environment schemes.

9.8.2 *Exmoor National Park*

The Dartmoor PAL model was developed by Exmoor National Park to define Principal Archaeological Landscapes. These PALs each have a simple statement of reasons for designation accompanied by short statement of significance. Significance is articulated using language from both the English Heritage *values* and the NPPF model of *significance* and *interests*, depending on what most accurately describes the landscape in question. This is a pragmatic and intuitive approach that is also readily comprehensible. The initial discrimination of the PALs was based on the following selection criteria:

- Numbers - areas which contain a concentration of a particular type of monument or monument group.
- Associations - where monuments can be shown to be associated with other groups of monuments.
- Completeness - areas where the survival of archaeological features is such that a relict landscape of a particular period is preserved in a largely undamaged form.
- Complexity - where the survival of archaeological features is such that sites of different time periods are preserved, creating a chronology of human use and/or occupation.
- Special degree of preservation - where the degree of survival of archaeological remains is unusually high
- Special or unique to Exmoor - areas which make a special contribution to telling the story of Exmoor's past.
- Contributing significantly to the character of the landscape - where the nature of the archaeology contributes directly to the landscape character.
- Accessibility - where the sites are particularly popular and well known with visitors, school groups and local people (Exmoor National Park 2011, 8).

The Exmoor PAL descriptions also characterise significance in terms of the South West Archaeological Research Framework (SWARF), a useful method for linking area designations that are, in one respect at least, alert areas within the planning process to the wider approach of question-led fieldwork promulgated by most extant guidance.

9.8.3 *Bodmin Moor, Cornwall*

As with the PALs identified for Dartmoor, a similar process of identification in response to a management Vision was undertaken by Cornwall Council for the area of Bodmin Moor. The PALs were created through consultation between heritage professionals working in the area and were deliberately intended to represent coherent landscapes, defined in a method statement as "blocks of continuous significant archaeological value with interrelationships with the topographical landscape of the moor" (A. Reynolds pers. comm.).

It is made explicit by Cornwall County Council that the Bodmin Moor PALs do not have statutory status, take no precedence over national designations and are seen as a separate historic environment dataset to the Scheduled Monuments, World Heritage Site and non-designated HER sites.

The topographic focus of the PALs, specifically on the CRoW access moorland, meant that the initial phase of mapping only defined those parts of coherent historic landscapes that fell within the moorland, even when it was clear that related monuments extended into adjacent enclosed land, though it is intended to amend and extend the mapping in future. This approach is a response to practical constraints, but in terms of identifying and delimiting NI sites, it is clearly more desirable to delimit all known remains rather than creating an artificial split based on modern land management.

The specific criteria used for identifying and characterising the Bodmin Moor PALs were abstracted from those used for Exmoor National Park set out above and included local distinctiveness, as discussed above.

9.8.4 *Yorkshire Dales National Park*

Prior to this project a rapid exercise was undertaken by the historic environment team of the YDNPA to identify draft landscape-scale areas of historic environment significance. These particularly related to archaeological interest in order to assist in targeting Countryside Stewardship, the successor scheme to Environmental Stewardship. Following the Dartmoor National Park precedent, these were provisionally termed Premier Archaeological Landscapes (PALs). Sixteen PALs were initially identified for the Countryside Stewardship targeting, although there are areas warranting further consideration. As a rapid exercise, the YDNPA PALs illustrate the intuitive and reflexive nature of the process (see Section 4 above), as identification, broad characterisation and delineation were all undertaken as part of the same stage, though heavily based upon the existing knowledge of the historic environment curators, developed over considerable time.

Two historic environment officers working separately carried out the initial identification of these areas. Based on this approach twelve areas were jointly identified based on existing knowledge of the sites. The subsequent basic mapping using key datasets from the YDNPA HER (aerial photography and Yorkshire Dales pilot NMP data) compiled within the GIS environment of HBSMR then took a further two days. The prime factor in delimiting PALs in this case was the degree of extensive earthwork survival and visibility, whether multi-period or single period in date.

9.9 Registered Parks and Gardens

A register of Parks and Gardens of historic interest is maintained by English Heritage under the provisions of the *National Heritage Act (1983)* as a heritage-based area designation. The designation process involves a staged assessment of importance and includes a set of period-specific criteria of particular relevance to designed landscapes. The register discriminates, as with Listed Buildings, between Grade I, II* and II parks and gardens providing a scale where even those of the lowest grade (II) are considered to be "of special interest, warranting every effort to preserve them". Unlike designation as a scheduled monument, inclusion on the register does not introduce specific new constraints, but does highlight the presence of an important heritage asset as a material consideration within the planning process, as well as triggering consultation with the Garden History Society and/or English Heritage depending on the grade of garden.

Parks and gardens generally have clearly mapped boundaries even though these were subject to temporal variation and not all of a historically defined park or garden may be included on the register.

9.10 Scottish Historic Environment Policy

The determination of national importance, and therefore the criteria for scheduling within Scotland has been dictated by the same legislation as in England (now overseen by the newly formed Historic Environment Scotland), however the

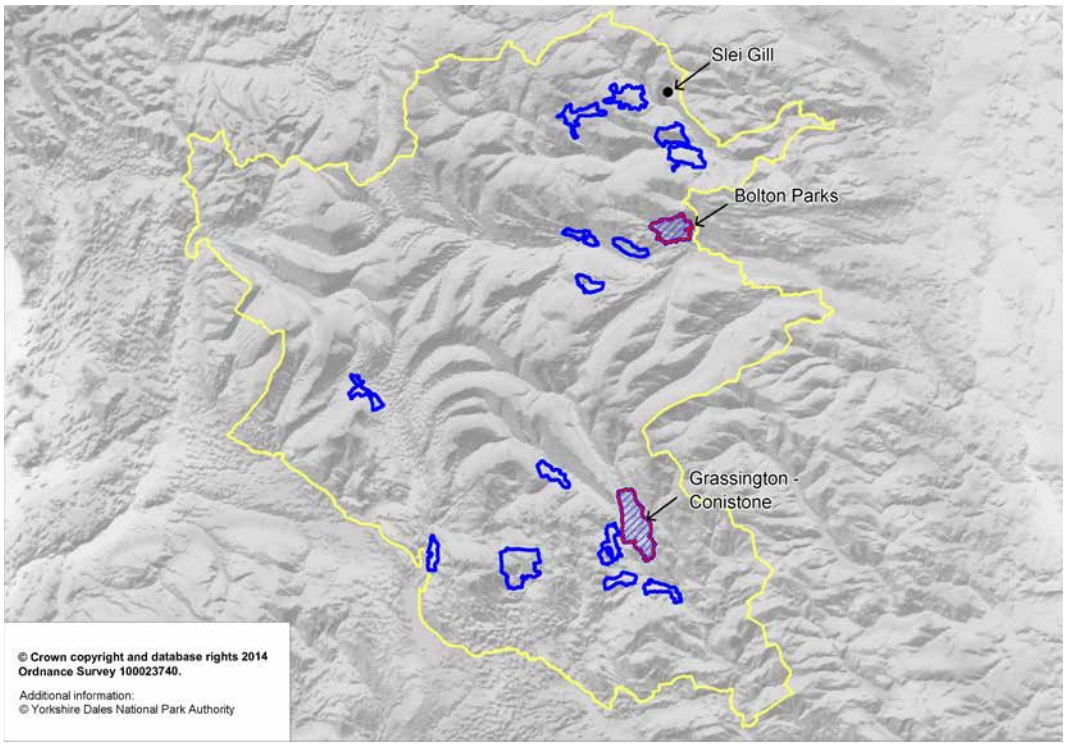


Figure 9.4 Distribution and extent of PALs initially identified in the YDNP (shown in lighter blue). The three case study areas are highlighted with two of them being PALs and the Slei Gill area identified purely for the purposes of this pilot study

Table 9.3 Criteria for national importance under Scottish Historic Environment Policy

Group	Characteristics
Intrinsic – inherent to the monument.	The condition in which the monument has survived. 'Condition' includes the potential survival of archaeological evidence above and below ground and goes beyond the survival of marked field characteristics.
	The archaeological, scientific, technological or other interest or research potential of the monument or any part of it.
	The apparent developmental sequence of the monument. Monuments that show a sequence of development can provide insights of importance, as can places occupied for a short time.
	The original or subsequent functions of the monument and its parts .
Contextual – relating to the monument's place in the landscape or in the existing body of knowledge.	The present rarity or representativeness of all or any part of the monument, assessed against knowledge of the archaeology of Scotland and of the region in which the monument occurs.
	The relationship of the monument to other monuments of the same or related classes or period, or to features or monuments in the vicinity. This is particularly important where individual monuments, themselves perhaps of limited immediate significance, form an important part of a widespread but varied class. The diversity of the class should be a material consideration in making individual decisions.
	The relationship of the monument and its parts with its wider landscape and setting.
Associative – more subjective assessments of the associations of the monument, including with current or past aesthetic preferences.	The historical, cultural and social influences that have affected the form and fabric of the monument, and vice versa.
	The aesthetic attributes of the monument.
	Its significance in the national consciousness or to people who use or have used the monument, or descendants of such people.
	The associations the monument has with historical, traditional or artistic characters or events.

current process of assessment as outlined in Scottish Historic Environment Policy (SHEP) (Historic Scotland 2011) varies to the approach espoused in English guidance. The basis of characterisation of heritage assets is based on a description of 'cultural significance' that splits characteristics into three separate groups as set out in the table above.

Once the cultural significance of a heritage asset is characterised in terms of the criteria above then a decision can be made as to whether the site is of national importance, and therefore schedulable, based upon one or more of the following (though the wording is left open to intimate that the list of criteria is not exhaustive):

- The monument's inherent capability or potential to make a significant addition to the understanding or appreciation of the past;
- The monument's retention of the structural, decorative or field characteristics of its kind to a marked degree;
- The monument's contribution, or the contribution of its class, to today's landscape and/or the historic landscape;
- The quality and extent of any documentation or association that adds to the understanding of the monument or its context;
- The diminution of the potential of a particular class or classes of monument to contribute to an understanding of the past, should the monument be lost or damaged; and
- The monument's place in the national consciousness is a factor that may be considered in support of other factors. (Historic Scotland 2011, 73).

9.11 SHINE

The SHINE (Selected Heritage Inventory for Natural England) can be considered as a mass characterisation and delineation approach to identifying constraint areas based on heritage assets. In relation to this assessment, its main focus is not specifically the identification of NI sites, but it is of relevance as a heritage-based area dataset abstracting data from HERs to inform agri-environment schemes. The applicability of SHINE is also discussed above with regards to management of NI sites through agri-environment schemes. SHINE datasets were developed essentially by identifying sites of known and verifiable character that are manageable under the options available within Environmental Stewardship agreements. The SHINE boundaries were developed following strict geographic guidelines imposed by the need to incorporate the data into Natural England's database GENESIS. The polygons produced frequently combine HER sites in adjacent areas to form a more coherent boundary based on management requirements.

10. Case Study 1 - Bolton Parks, Wensleydale

10.1 Introduction and Reasons for Initial Selection

This case study is based around the Bolton Parks PAL. As is described above, the YDNP PALs were initially identified in draft as landscape-scale areas of historic environment significance, particularly in terms of archaeological interest, to assist in targeting Countryside Stewardship. The PAL itself covers an area of some 507 hectares in the two civil parishes of Carperby cum Thoresby and Castle Bolton with East and West Bolton.

It was chosen as an example of a complex landscape containing already designated nationally important remains of various periods which are themselves surrounded by undesignated features of great significance and potential. Loosely based on the scheduled medieval castle, the wider environs include an early designed landscape and significant and extensive medieval and post-medieval field systems surviving as earthworks. The associated medieval and post medieval park on the adjacent higher ground includes industrial remains. The potential value of this area for the pilot project was that it is representative of significant multi-period archaeological remains, ranging across different geology, topography and land management regimes, many but not all of which are demonstrably associated with a scheduled monument. Correspondence between the National Park Authority and Inspectors of Ancient Monuments dating back to 1986 indicate the Bolton Castle scheduling would be reassessed and that features such as the rabbit warrens would be put forward for scheduling – it is not known whether any action was taken.

10.2 Characterisation – Existing Heritage Designations

10.2.1 Scheduled monuments.

There are three scheduled monuments in the case study area.

Bolton Castle (NY14, 1003582): Scheduled in 1971, the description of the monument, though not the area, is currently being revised by English Heritage. The boundary of the monument appears to be drawn very tightly around the building with the inclusion of a "moat", now interpreted as a sunken garden, to the immediate west of the castle. It covers an area of some 0.5ha.

Deserted Medieval Village, Carperby cum Thoresby (NY1194, 1003665): Scheduled in 1976. No

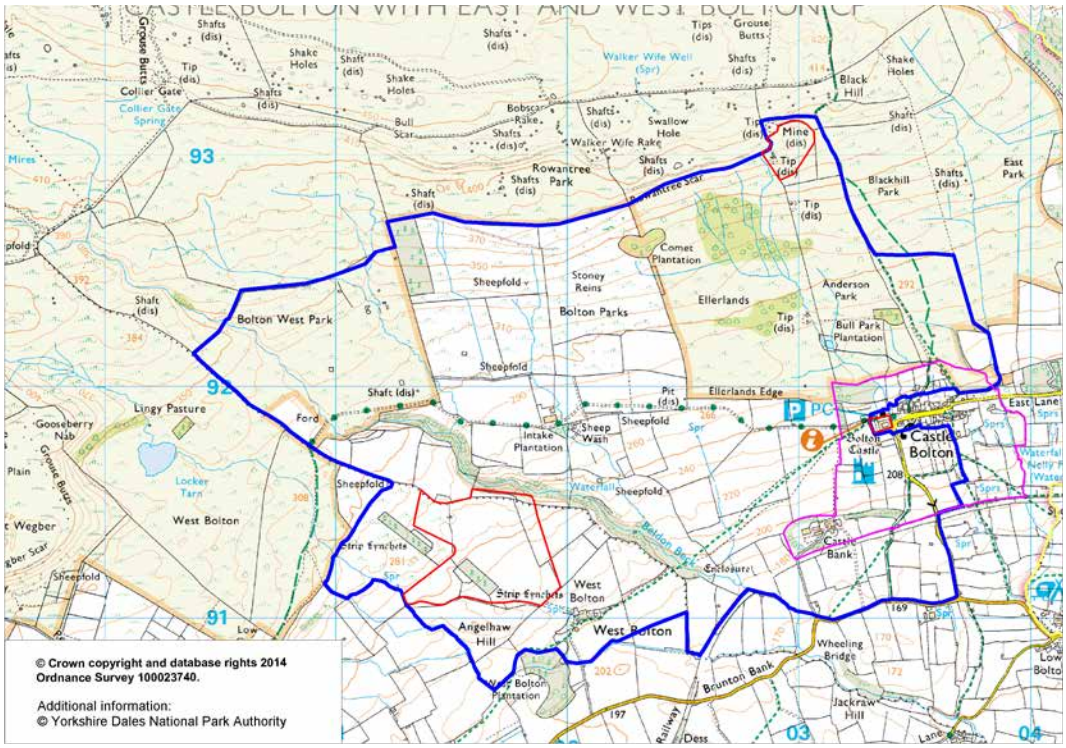


Figure 10.1 Location and overview of the Bolton Parks PAL

Figure 10.2 Ellerlands and Castle Bolton. The Castle occupies a prominent position at the head of the village of Castle Bolton. It was constructed between 1377 and c.1400 and either physically or economically dominated this landscape. The village today has something of a planned estate character but may predate the castle. The castle was garrisoned during the English Civil War and partly slighted soon afterwards although the estate remained intact until the twentieth century (© R. White/YDNPA YDP121/23)

formal description. The monument includes an extensive area of ridge and furrow and lynchets as well as the earthworks of the settlement. This covers an area of some 23.8ha.

Bolton Parks Lead Mine and Ore Works (SM31344, 1018712): Scheduled in 1999, one of a very small selection of lead mining sites in the Yorkshire Dales scheduled as part of the Monuments Protection Programme, the monument consists of the dressing floor and one level. Two adjacent levels with large spoil heaps, directly associated with the ore works, are not included. This covers an area of 3.6ha.

10.2.2 Conservation Area

Part of the area lies within the Castle Bolton Conservation Area, designated by the YDNPA in 1999. This benefits from a short Conservation Area appraisal/designation statement that concentrates on the buildings within the village: a two-row settlement flanking a long rectangular green immediately east of the castle. Unlike some conservation areas in the YDNP the boundary was not drawn tightly around the built core but follows field boundaries and topographical features to includes part of the landscape setting of the village including a model farm complex. It deviates from a topographical feature, a stream, to deliberately incorporate an undesignated archaeological site – the Rievaulx Abbey grange and vicarage earthworks to the south-east of the village.

10.2.3 Listed Buildings

Bolton Castle is also a Grade I Listed Building. There are three other Listed Buildings in the village of Castle Bolton but no others within the study area.

There are no locally listed Heritage Assets in the study area.

10.2.4 Data sources consulted

- YDNPA HER. A major component of the YDNPA HER was the Yorkshire Dales (mapping) Project, a pilot for the National Mapping Programme (NMP), completed in 1992 (Horne and Macleod 1995). This incorporated analysis of available aerial photography (3 vertical sets) and an extensive collection of archaeological aerial photographs and analysis of the 1st edition OS 6" maps.
- 2001 and 2008 digital aerial imagery.
- Environment Agency LIDAR – partial coverage only

Reports in the HER include:

- Bolton Castle – extensive studies of Bolton Castle
- Level 3 survey – Bolton Park Mine
- Earthwork surveys by Stephen Moorhouse. Reduced field drawings with snippets of discussion only have been published, mainly in Moorhouse (2003).
- 1:2500 aerial photograph transcription of the Ellerlands rabbit warren earthworks

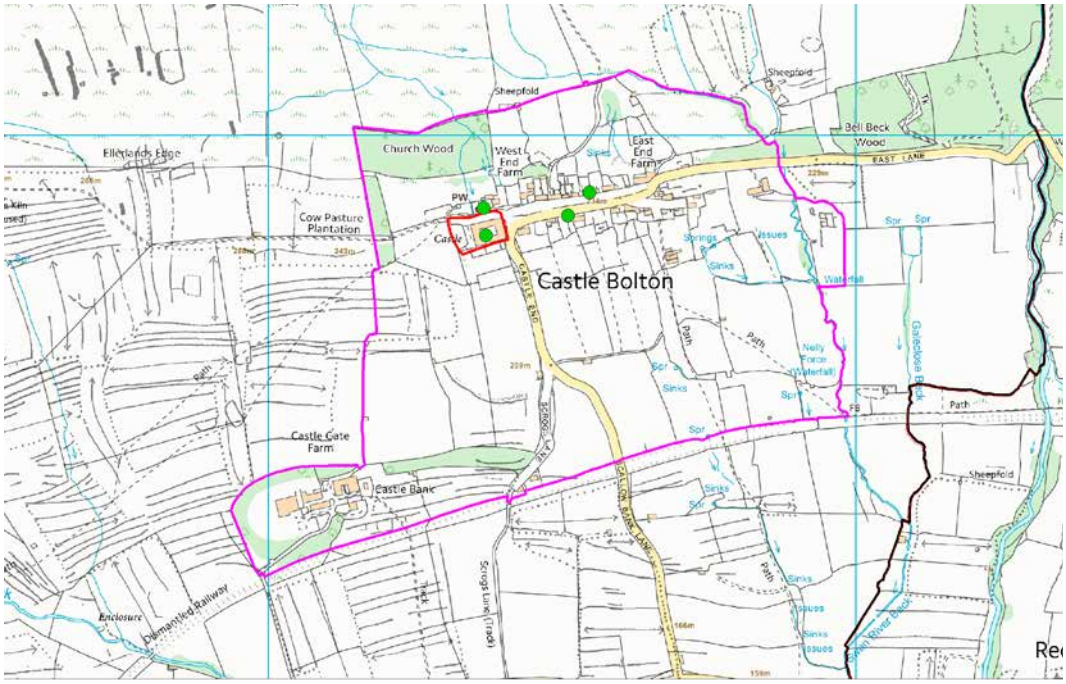


Figure 10.3 Castle Bolton Conservation Area, listed buildings (green) and scheduled monument (red). The grey lines are rapid sketch plots of archaeological features identified from aerial photographs created by the Yorkshire Dales (Mapping) Project

10.3 Characterisation – The Archaeological Interest

The case study area, in addition to Bolton Castle itself, includes a highly visible and well preserved variety of monuments of different periods, the most significant of which are described below.

10.3.1 Bolton Low Park - Lynchets and ridge and furrow to the west of Castle Bolton village

To the south-west of Bolton Castle is an extensive area of very well preserved earthworks well known from aerial photography. Most of this area is known as Bolton Low Park. The earthworks are described on the HER as an "extensive field system of lynchets and ridge and furrow of probable medieval date extending to the west of Castle Bolton village" (YDNPA HER reference MYD 52384) but the area also contains at least three apparently contemporary polygonal/sub-rectangular enclosures, one 56m by 41m edged on its north and south sides by stony lynchets and on its east and west by the turf covered remains of a stone wall, and another turf banked measuring

Figure 10.4 Earthwork lynchets, ridge and furrow and enclosures in Bolton Low Park overlain by 18th century enclosure walls (© R. White/ YDNPA YDP178/05)

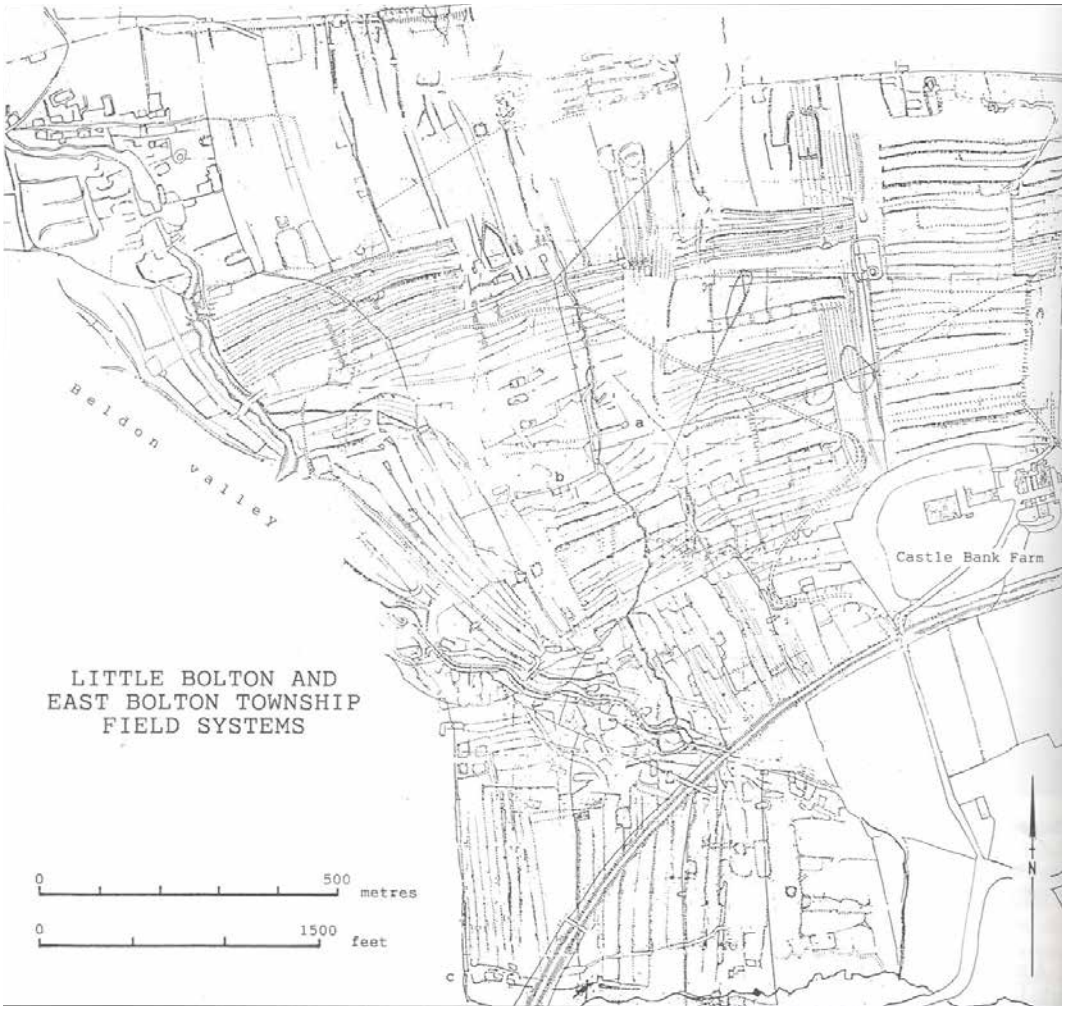


Figure 10.5 Stephen Moorhouse's earthwork plot of the area. "b" indicates the banqueting or prospect tower (Moorhouse 2003, Fig. 105)

some 36m by 21m. There has been earthwork survey by Stephen Moorhouse who has suggested that some of these arable landscape features are relatively late and that lynchets were still being formed and cultivated in the 17th century. Moorhouse also suggests that part of the arable landscape overlies features related to a potentially late medieval designed ornamental garden centred on the castle, measuring c. 600m east west and 400m north south and including the remains of a banqueting or prospect tower where quantities of high quality tableware pottery have been found (2003, 329, 332). The enclosure walls overlying these earthworks may date to the late 18th century, particularly around Castle Bank, where a new model farm and house was built on land formerly known as Kidgill Banks.

10.3.2 West Bolton DMV

To the west of this block of lynchet and ridge and furrow landscape lies the scheduled West Bolton DMV (MYD4567), separated by a small stream, Beldon Beck, which formed the township boundary between East and West Bolton and is now the civil parish boundary.

The reason for the shape of the 23ha scheduled monument boundary is unclear. It partly follows field boundaries but in other sections clearly pays no heed to topographical features to include an apparently arbitrary selection of field system earthworks.

Stone walled pasture fields overlying an extensive array of mainly well preserved ridge and furrow also surround the DMV. Moorhouse has surveyed the DMV and field system and interpreted the DMV earthworks as a medieval sheephouse, in existence in 1394, a planned village consisting mainly of 3 bay buildings and a manorial complex, overlain by two later farmsteads and at least 21 stackgarths. He identified several further stackgarths within the field system together with some 60 timber buildings and a possibly underlying prehistoric co-axial field system (Moorhouse 2003, 312).

While doubt may be expressed about the identification of some of these features there is no doubt that the very well preserved settlement earthworks are surrounded by an extensive, complex and visually significant field system which together with the field system to the east of Boldon Beck, Bolton Low Park, makes a major contribution to the setting of Bolton Castle itself.

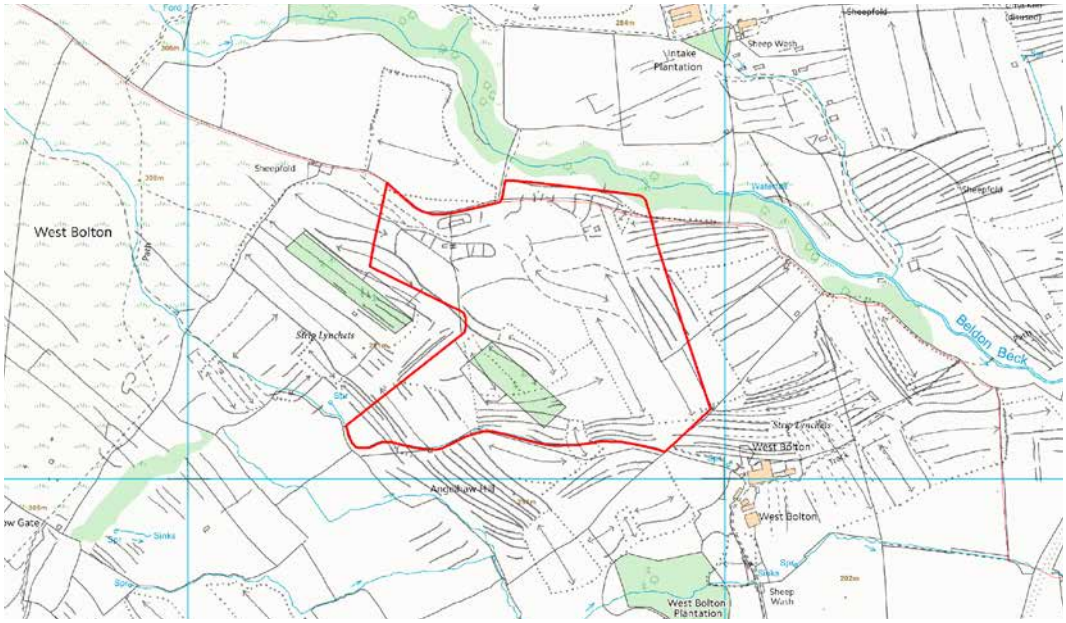


Figure 10.6 YDNPA HER extract showing West Bolton DMV Scheduled Monument boundary (Red) The grey lines are the rapid sketch plots of archaeological features identified from aerial photographs created by the Yorkshire Dales (Mapping) Project

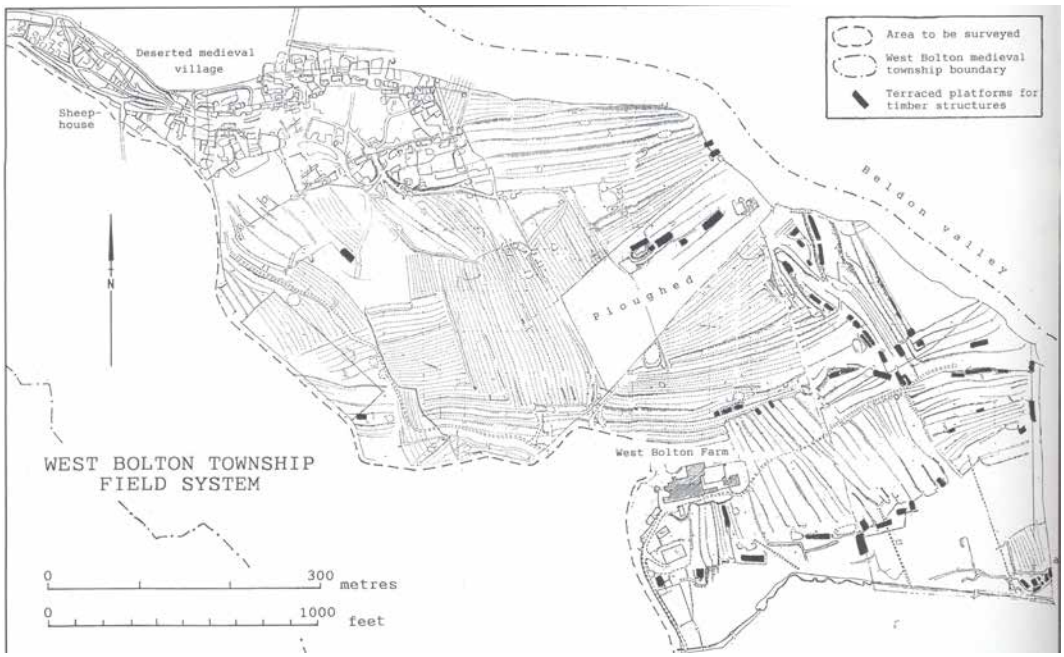


Figure 10.7 Earthwork plan of the West Bolton Township Field System (Moorhouse 2003, Fig 104)

10.3.3 *Ellerlands Scar Medieval Quarries*

Ellerlands Scar to the north-west of Bolton Castle has been extensively quarried. Although no geological analysis has been published it is believed that stone from these quarries provided the main walling stone used in the construction of the castle. Individual parallel working tenements have been identified, including areas used for sorting as well as unused blocks of quarried stone. Moorhouse suggests they illustrate the entire process of stone extraction and its working as revealed elsewhere by documentary evidence (MYD59475; Moorhouse 2003, 335). The 1996 MPP Step 4 Site assessment gave the site a ++ rating and described it as a particularly well documented and consequently important medieval quarry displaying evidence for all the process involved in medieval quarrying and with good archaeological potential and recommended it for scheduling.

10.3.4 *Ellerlands rabbit warren*

Immediately above this scar is a wide terrace on which lies a series of pillow mounds and other earthwork remains of the Ellerlands rabbit warren (MYD36704). The different shaped mounds at Ellerlands may indicate different phases of use. Close by are what appear to be the foundations of several buildings, possibly for storage or on-site processing. The warren lies within the deer park of Bolton Castle and accounts dating to 1609 record the sale of rabbits or 'cunyes' by the 'Warrenor of the Lords Cunyes at Bolton', as well as his purchase of hay to feed them. Isolated pillow mounds

Figure 10.8 The West Bolton DMV (© R. White/ YDNPA YDP178/01)

Figure 10.9 Part of the Bolton Low Park field system, the Ellerland Scar quarries and the Ellerlands rabbit warren and underlying co-axial field system (© R. White/ YDNPA ANY228/11)

to the north of the core warren were identified during the Yorkshire Dales Mapping Project but have not been examined on the ground. In 1986 English Heritage stated that this site would be put forward for scheduling but it is not known whether any action was taken on this proposal. The site was then under threat from ploughing and reseeding, a threat averted by the YDNPA entering into a compensatory management agreement covering the core area of the warren, not the whole field on the basis that would be enough to severely impede the viability of ploughing the remainder.

Figure 10.10 The Commandants/observation post of the Wensleydale Volunteers Rifle Range reroofed with grant aid from the Yorkshire Dales National Park Authority in 1995

10.3.5 *Running Deer Rifle Range*

At the east end of the main rabbit warren is the unusual survival of the Ellerlands Running Deer Rifle Range (MYD43241), believed to have been constructed for the Wensleydale Volunteers in the mid-19th century. A single storey observation building and much of the target support structure survives although stone was robbed from the west end off the latter to construct a toilet block in the Castle car park in the 1960s.

Figure 10.11 The east section of the Running Deer Target

Figure 10.12 A small, square hunting tower and other earthworks in Bolton West Park (© R. White/YDNPA ANY228/20)

10.3.6 Co-axial field system

Underlying the rabbit warren is a series of boundaries of a co-axial field system, undated but of possible prehistoric date. Moorhouse has suggested that traces of this can be seen within the later medieval field system to the south, similar linear earthworks exist in part in the rough grazing along the terrace to the west of the rabbit warren around SE02279232 (MYD47843).

10.3.7 Bolton High Park Hunting Tower

1800m west of the rabbit warren are well-preserved earthworks interpreted as the base of a hunting tower, in the corner of part of an apparently contemporary system of massive earth and stone banks (SE01019241; MYD36635). These do not form discrete enclosures and may be related to deer management. This tower also functioned as a look out tower for poachers (Moorhouse 2003, 332). Less massive are the footings of a series of structures on either side of a small stream to the east, currently only recorded from aerial photographs, possibly the site of a parker's house.

10.3.8 Bolton Parks Lead Mine

North of the rifle range is Dents Level, the lowest of four levels worked by the Bolton Parks Mining Company in the late 19th century (SE03039232; MYD42649). Dent's Level primarily functions as a drainage level and a private water supply. The Company's main dressing floor and one level entrance, Bolton Park Level 3, are scheduled (MYD47828). In addition to the level, this scheduled site includes a set of six bouse teams, a dressing floor, crushing plant, settling tanks, a stone built two storey office building and an ambitious though apparently unfinished water management system which utilised the spoil from the level for dam construction. The site is enclosed within a walled field. The designated boundary cuts across this boundary but the whole enclosure is the subject of a management agreement between the National Park Authority and the estate and has benefited from detailed survey and consolidation work. The immediately adjacent Levels 2 and 4 are not included in the scheduled area – while not particularly distinctive they do inform the rationale behind the dressing floor. The name Bolton Parks Mine indicates the location of this mining complex

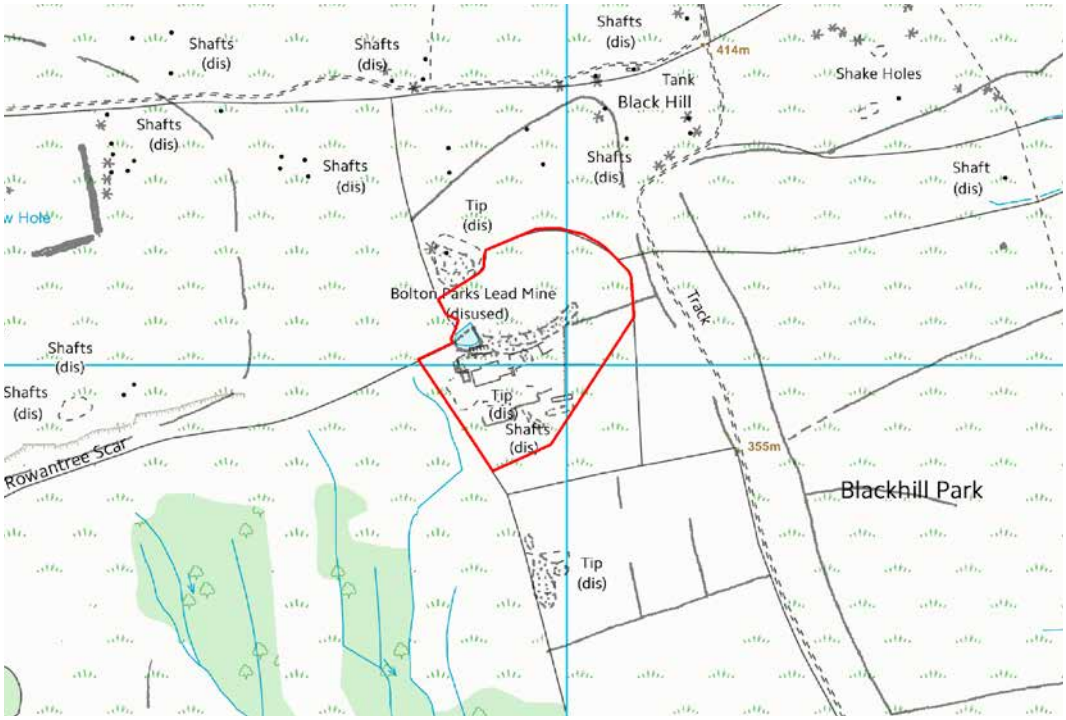


Figure 10.13 Extent of scheduled area around the Bolton Parks Mine complex, extracted from the YDNPA HER

Figure 10.14 Bolton Parks Mine. The levels and spoil heaps on either side of the walled enclosure are not scheduled. The boundary wall in the top left of the image formerly ran straight across the enclosure – parts of its footings can still be seen, lining up with the wall to the right. The height and width of some surviving sections of this wall suggest it was built for deer management. The line of the wall in the top centre of the photograph also continues as an earthwork inside the mine enclosure (© R. White/ YDNPA YDP121/22).

10.3.9 *Bolton Park*

The full extent and development of the parks associated with Bolton Castle is not currently known. The original Bolton Park was beside the River Ure (Beresford and St Joseph 1979, 148); it had moved to around the present village by the mid-14th century and was extended when the castle was built in the late 14th century. A park is shown on an estate map of 1778 and several associative place names are recorded on the 1st edition OS 6" map with font sizes indicating a degree of hierarchy led by Bolton Parks, Bolton Low Park, Bolton High Park, Blackhill Park, East Park, Anderson Park. There are various stages of subdivision within this landscape, some extant including high stone walls which could have functioned as barriers for deer as well as lines of heavily robbed large stone footings which probably supported major walls, and indicate different stages of parkland enclosure or subdivision. The possible park boundaries have not been examined on the ground but basic map regression suggests that the boundary

of what is now named Bolton High Park was the north-western boundary (SD99759261) and that this extended to at least Bolton Gill/Apedale Beck on the north-east (SE03719374). This is partly co-terminous with the township boundary but would exclude Lingy Pasture and the fishery potential of Locker Tarn (SE00219174), which Moorhouse has suggested was also exploited in the medieval period by the castle. The Lingy Pasture place name however may indicate a significant management difference. Various estate maps survive which might cast light on this issue but examination of these has been considered to be outside the scope of this study. The southern park boundaries will be rather harder to identify due to varying phases of agricultural enclosure. Only part of the Bolton Parks area lies within the PAL as initially defined.

10.3.10 Other features

Only the most obvious features within the PAL have been mentioned above. The landscape includes numerous other archaeological features – probable clearance cairns, burnt mounds, enclosures and field systems, lead mine shafts and adits (some probably early, others documented to various degrees in the Bolton papers), quarries, limekilns etc. but most have never been subject to any detailed assessment and are mainly only known from aerial photography. This is particularly the case for the area of Bolton Parks outwith the PAL – a little visited area less well covered by aerial photography and, before CRoW, inaccessible to the general public due to the absence of public rights of way.

10.3.11 Grange Garth

To the east of the village, outwith the original case study area but included here because of issues it raises, is a complex of earthworks (MYD4572) interpreted as part of a grange of Rievaulx Abbey which was abandoned in 1315 and later reused as the vicarage when this was moved from north of St Oswald's Church to extend the gardens of the castle in 1404. The mill complex to the south of this group may be that documented on Rievaulx's estate.

10.3.12 The village

The origins of the village itself, not covered by the case study, are unclear. Its present form has something of a planned estate character dominated by the Castle, which occupies a prominent position at the head of the village. In its present layout it probably dates from after the abandonment of the Castle, built between 1377 and c.1400 garrisoned during the English Civil War and partly slighted soon afterwards. However the existence of a sundial, situated in the shadow of the Castle

Figure 10.15 (right) Plan of East End Farm reproduced from Moorhouse (2003, Fig. 110)

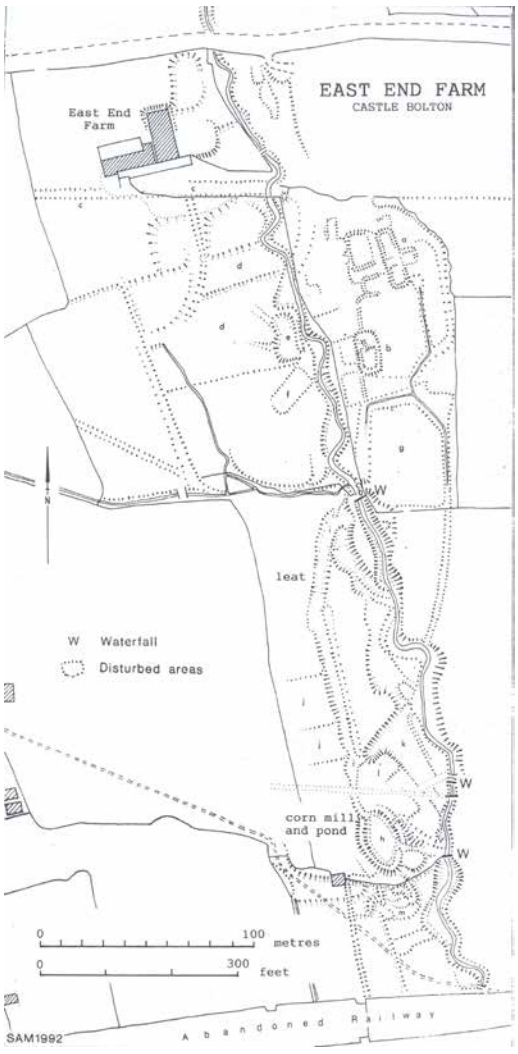


Figure 10.16 (far right) The Grange Garth earthworks looking south (© R. White/YDNPA YDP146/6)

on the 14th century St Oswald's Church, as well as documentary evidence of an associated vicarage being relocated in 1403 to the east end of the village possibly because of the Castle's construction, suggests that a settlement may well have existed at or about this position in the later half of the 14th century. The groups of long narrow fields, survivors of former croft and toft boundaries were little altered during the late 18th century development of the landscape and contrast with the open parkland to the north and west and the larger field sizes to the east of the village.

There are relatively few non-domestic buildings in the study area but both West Bolton and Castle Banks were designed estate farmsteads, plans for which survive in the estate documents. The Wensleydale Railway, closed in 1964, also traverses the area.

10.4 Characterisation – Assessment of importance

Most of the features briefly described above are either currently designated as of national importance or display sufficient characteristics to make them serious candidates for designation. This is confirmed by a rapid assessment against selected MPP criteria. Formal assessment using the MPP Single Monument Class Descriptions was not carried out, as some of the monument types have no class description. The Introductions to Heritage Assets published by English Heritage provided useful background information but were usually not specific enough to be of significant use in assessing importance.

This assessment grades the monuments on a scale of 1-5 (low to high or poor to good) based on professional knowledge and comparison with similar or equivalent sites elsewhere in the Yorkshire Dales and the wider region. Significantly this would suggest that several of the undesignated features are potentially more important than the two field monuments which are designated, the West Bolton DMV complex and Bolton Parks Mine (highlighted in orange in the table below), including the two for which scheduling proposals have been initiated, but not apparently processed: the Ellerlands medieval quarries and the Ellerlands rabbit warren.

Although the overall PAL is loosely based around a medieval/post-medieval park landscape the significance of the park itself has not been assessed due to the lack of information currently available on it. However the assessment based on professional knowledge suggests that the majority of the monuments at Bolton Parks, briefly discussed above, would clearly meet the criteria of national importance. The geographical extent of the two contiguous medieval field system complexes, Bolton Low Park and West Bolton DMV alone mean that a landscape-scale designation is appropriate. The contiguous and near-contiguous nature of other features of national importance means that a landscape-scale designation covering a more diverse range of monuments would also be appropriate.

10.5 Delimiting – Key Issues

Issues raised by this case study include:

How to treat contiguous features of national importance? As noted above several of the monuments briefly described and illustrated are either already scheduled or could be relatively simply treated as discrete sites following established pro-

	Condition	Rarity	Vulnerability	Diversity	Documentation	Group value	Potential	Sum
Bolton Low Park	4	3	4	5	4	4	5	29
West Bolton DMV	4	3	4	5	2	4	5	27
Ellerlands quarries	4	4	3	4	4	4	5	29
Ellerlands warren	4	3	4	4	4	4	5	28
Rifle Range	4	5	4	3	4	4	3	27
Co-axial	3	3	4	3	1	3	4	21
Hunting Tower	4	4	4	3	3	4	5	27
Bolton Parks Mine	4	3	4	4	4	4	4	27
Bolton Parks	3	4	4	4	4	4	5	28
Village boundaries	3	3	4	3	3	3	4	23
Grange garth	3	4	5	4	5	3	5	29

Table 10.1 Rapid assessment of importance for monuments in Bolton Parks PAL using selected MPP criteria

cedures for identifying whether or not the monument is of national importance. They do however gain from the combination of features, some of which have some functional relationship - e.g. the rabbit warren and hunting lodges or perhaps the quarries – all of which are related to the high status castle, others just a geographical one – e.g. the rabbit warren and the rifle range. Arguably this is the Group Value criterion. Boundaries could relatively easily be drawn around the discrete features/monuments, albeit with sometimes, as in the case of the Ellerlands quarries and rabbit warren, either contiguous boundaries or with a boundary including a variety of several discrete types of monument.

Dispersed within the discrete sites however are blocks of land of lesser or possibly no known interest – e.g. where medieval/post-medieval arable field systems have been ploughed and reseeded either for pasture improvement, possibly even as part of the War Effort during the Second World War. Should these areas be excluded from any landscape scale designation? If not, how large an area of damaged landscape where above ground preservation and visibility are poor is acceptable? Should factors such as land ownership and land use be considered; should there be rules based on the relative sizes of the assets or should setting/intervisibility be the material consideration? How does identification of an area as being nationally important impact on the perception of the landowner/manager?

These factors also occur between and adjacent to sites or features that are of national importance – where known archaeological features, if present, are either of lower quality or individually of lower significance. An example might be Grange Garth to the east of Castle Bolton, although arguably here the features may also be of schedulable quality.

The core features within this landscape are those described and illustrated though not separately mapped above. Between these however there are areas of lesser interest. One approach to this issue could be the drawing of an overall boundary with core features delineated within it, a form of core-periphery/buffer area although in some cases it would be appropriate for core features to be coterminous with the overall boundary. The core areas would be those monuments or groups of monuments targeted for proactive heritage management and possibly a higher level of constraint with regard to planned activities.

10.6 Management – Existing Land use

Land use in the area varies. Most of the land in the southern part of study area, below the Ellerlands Edge scar at c.260m OD, is permanent pasture. This is not of particular ecological interest as much has been 'improved', although this appears mainly not to have involved significant intrusive measures that would have damaged the visibility of archaeological features. Several blocks of flatter land have clearly been ploughed and reseeded however, including a group close to the castle itself that would presumably have included medieval garden features, and a block of pastures south of the new farmstead at Intake Plantation. Work in the last has considerably reduced the visibility of a former likely medieval farmstead. Later enclosures on flatter ground around this Intake Plantation farmstead, possibly outwith the core medieval

Figure 10.17 Silage cutting by Intake Plantation. The hand drawn grey lines are sketch plotted information from the Yorkshire Dales Mapping Project pilot which utilised aerial photographs of various dates. Part of the Ellerlands rabbit warren can be seen top right

field system, have been ploughed and are used for silage. The National Park Authority's management agreement over the adjacent Ellerlands rabbit warren was necessary because of a ploughing and reseeding threat. Pasture improvement is the main threat to the former arable landscape in the short term – the fact that it was cultivable in the past indicates that soil depth may be sufficient to warrant further improvement. As much of the land has been subject to pasture improvement the earthworks receive no protection through the Environmental Impact Assessment (Agriculture) (England) (No.2) Regulations (2006), which aim to protect uncultivated land and semi-natural areas from being damaged by certain types of agricultural work.

West Bolton Farm, in the south-west corner of the project area has recently changed hands, often a precursor to land management change. A small round mound of either glacial or archaeological origin just outwith the case study boundary was removed in 2013 prior to the field being ploughed and reseeded.

Above the 260m contour land use is mainly rough pasture, divided into large walled enclosures some of which are only very lightly grazed and almost merge into wood pasture. There appears to have been little vegetation management or alteration to the drainage pattern here and its appearance may have changed little over the last few hundred years since it was enclosed as a hunting ground. There are a couple of small coniferous plantations, probably planted more for shooting cover than timber production. These plantations however are reaching maturity: felling will involve heavy machinery and significant vehicle movements traversing the area.

The area around the castle is more heavily managed. A formal car park and toilet block was built by the National Park in the 1960s. This was on land leased from the Castle Bolton estate and was returned to them in *c.*2008. Land immediately adjacent to the castle, formerly mainly pasture but incorporating a pair of narrow abandoned gardens/allotments, was converted to formal 'medieval' gardens as part of the tourism offer for the castle in 1995 (without SMC or planning consent which was granted retrospectively). The former car park immediately adjacent to the castle was converted to a garden a few years later and an overspill extension to the former National Park car park had topsoil stripped and was surfaced, again apparently without consent, and a new overspill area created. To the north of this car park a small coniferous plantation overlying part of the medieval quarries has been converted into a wild boar enclosure, again as part of the castle tourism offer, resulting in extensive ground disturbance.

10.6.1 Land agreements

Most of the land in the western part of the study area is under agri-environment agreements, mainly Entry Level Stewardship with some Higher Level Stewardship. A small part of the area is also subject to a Capital Transfer Tax agreement.

10.6.2 Access

Part of the area is designated Open Access land under the Countryside and Rights of Way Act, 2000.

10.7 Management – Existing Land ownership

Land ownership in this case study varies. Although all of the area once formed part of the Bolton estate and is therefore documented to varying degrees in the Bolton estate papers, land sales in the 20th century have complicated the picture. Most of the land to the north and west of the Castle, including Castle Bank farm and West Bolton farms, is separately owned as are more isolated blocks of land such as the Ellerlands rabbit warren and the plots surrounding the village buildings which would have incorporated part of the medieval garden earthworks claimed by Moorhouse (2003).

10.8 Management – Key Issues

The combination of the relative complexity of the land ownership at Bolton Parks, the discrete nature of many of the monuments within the study area and the considerable variations in land use and potential threats to the archaeological remains means that a dual approach might be the best form of protection given current legislation; formal designation/protection of the core sites through scheduling and a separate designation of the surrounding landscape. This could be via a core –periphery approach from one agency or using separate designations. Management prescriptions will vary for the different monuments and land use and this would need to be recognised in any agri-environment agreements, and potentially through a Heritage Partnership Agreement or Agreements.

11. Case Study 2 - Grassington and Conistone Moors

11.1 Introduction and Reasons for Initial Selection

This case study covers an extensive area of largely upland limestone grassland defined by a PAL covering 9.616 km2. As is described above, the YDNP PALs were initially identified in draft as landscape-scale areas of historic environment significance, particularly in terms of archaeological interest, to assist in targeting Countryside Stewardship. The PAL covers parts of three civil parishes, Grassington, Conistone with Kilnsey and Kettlewell with Starbotton.

This area was targeted as a case study as a widely recognised example of a complex historic landscape, which has attracted archaeological investigation from 19th Century antiquarian activity, through to active current research in the form of two PhDs from the University of Bradford. The PAL is characterised by extensive and continuous earthwork remains, and includes a number of already designated nationally important remains of various periods.

The area contains two broad types of landscape, with associated complex archaeology. To simplify, these are:

- Upland limestone grassland (occasionally giving way to areas of limestone pavement), which is largely subdivided into enclosure period rectilinear allotments that bear little or no relation to the underlying earthwork remains. These areas of the PAL contain visibly complex earthwork field systems and settlements, likely to date to multiple periods, but probably originating in the later prehistoric period.
- Along the western side of the PAL are areas of historically more improved land with deeper soils, typically showing extensive areas of classic medieval lynchet field system and settlement remains dating from the Saxon period or earlier.

A small area of woodland, part of Bastow Wood is also contained within the PAL.

11.2 Characterisation – Existing Designations

11.2.1 *Scheduled Monuments*

There are ten scheduled monuments within the PAL, most of which cover discrete areas, and some of which have more than one constraint area.

The scheduled sites include two larger blocks that protect a small proportion of the field system and settlement remains that cover the PAL. These two larger areas are:

- Fields and hut circles south-east of Scot Gate Lane: designated 27/01/1964 with the number NY665 (9.34 ha)
- Grassington Enclosures: first designated in 1961 with the number NY536, with two subsequent revisions extending the limits of the scheduled area (19.99 ha).

There are several smaller scheduled sites, these are:

- NY710 a-d Cairns and settlements on Lea Green: Four separate small constraint areas, covering the Lea Green settlement an isolated enclosure and two funerary cairns
- NY666 a-b Enclosures on Old Pasture: Two constraint areas covering individual enclosures deemed prehistoric
- SM27939 Cairn On Old Pasture, 820m south-east of Bull Scar: Structural remains of a kerbed round cairn excavated in 1892
- SM27937 Cairn On Old Pasture 885m north-east of Little Lathe: Presumed Bronze Age cairn with projecting stony bank
- NY667 Enclosure south of Bull Scar: Part of presumed Iron Age enclosure complex
- NY668 Enclosures 600yds (550m) south-east of Wassa Hill: Earthwork settlement complex - described as Iron Age
- NY663 a-b Hut Circle, Farm Site And Enclosures 340yds (310m) north-east of Wassa Hill: Two constraint areas covering parts of a presumed Iron Age settlement site
- NY 664 a-c Enclosures and House Sites north-east of Hill Castles Scar: Three adjacent constraint areas covering a complex of Iron Age buildings, enclosures and hut circles.

As can be seen from the older designation numbers used here, the majority of the Scheduled Monuments in the PAL, like most settlements and field systems in the Yorkshire Dales, were not reassessed during the MPP process. The two monuments that were scheduled under the MPP are individual cairns (SM27939, SM27937).

11.2.2 *Limestone Pavement Orders*

The PAL contains areas partly covered by three Limestone Pavement Orders.

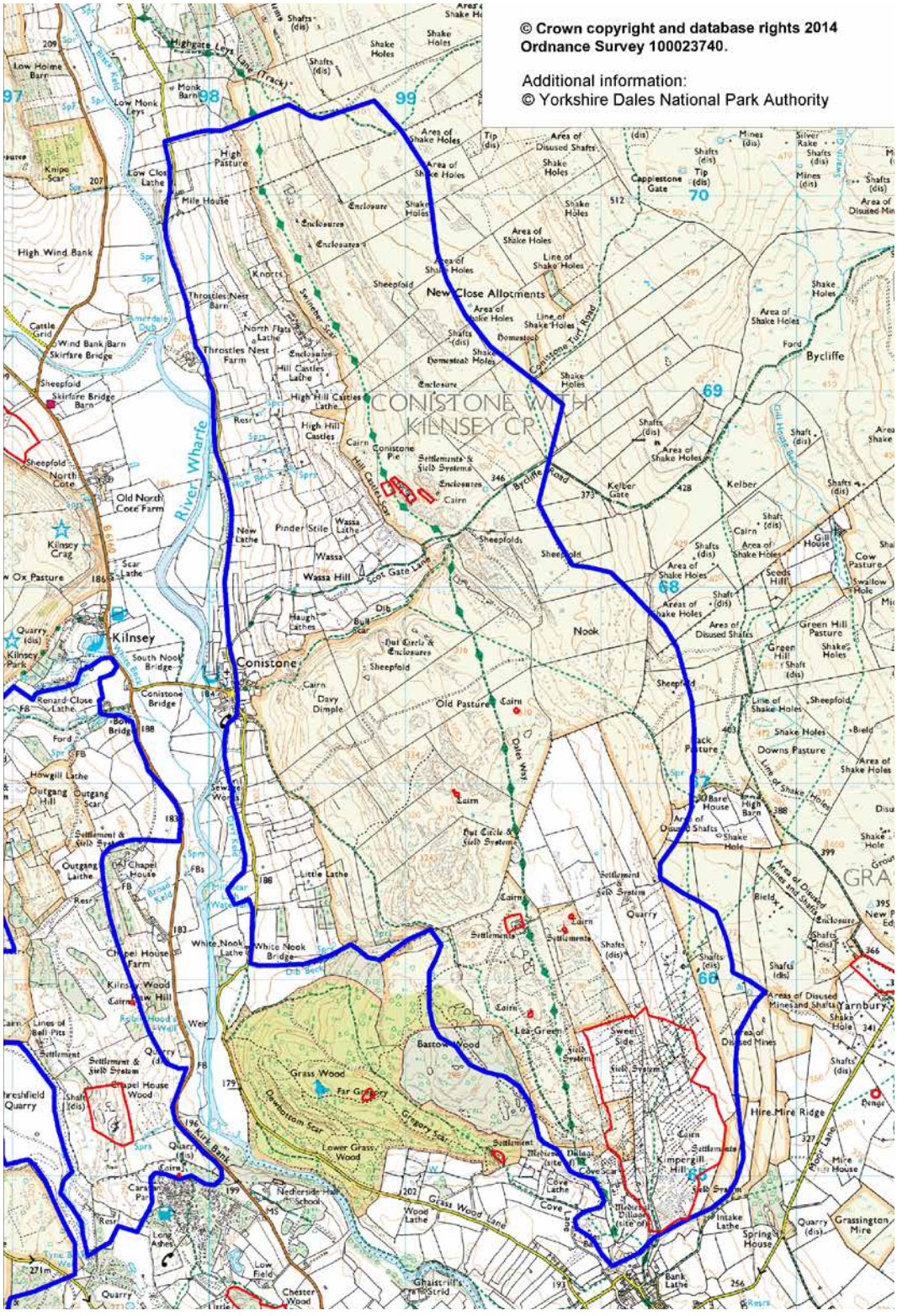


Figure 11.1 Location and overview of Grassington and Conistone Moors PAL

- Y059 Langcliffe and Knipe Scar LPO 1999
- Y050 Conistone Old Pasture LPO 1987
- Y010/Y011 Grass Wood and Bastow Wood

The implications of the limestone pavement orders are that planning consent is required for any intrusive works that disturb limestone within the LPO constraint areas.

11.2.3 *Data sources consulted*

- YDNPA HER. A major component of the YDNPA HER was the Yorkshire Dales (mapping) Project, a pilot for the National Mapping Programme (NMP), completed in 1992 (Horne and Macleod 1995). This incorporated analysis of available aerial photography (3 verti-

Figure 11.2 Areas of extensive coaxial field system extending north and west of the scheduled 'Grassington Enclosures', the scheduled area for which just encroaches on the upper left side of the image. Open rake and shallow shaft lead mining that is likely to predate the 18th-19th century intensifications overlie the coaxial field system. In the distance at the top (south end) of the image are the earthworks of the medieval Cove settlement, also unscheduled. The cairn in the foreground, which was excavated in 1892 by the Upper Wharfedale Exploration Committee, is scheduled, Lea Green Cairn, NY710 (© D.N. Riley DNR1062/06)

cal sets) and an extensive collection of archaeological aerial photographs and analysis of the 1st edition OS 6" maps.
- 2001 and 2008 digital aerial imagery.
- Environment Agency LIDAR – partial coverage only.

11.3 Characterisation – The Archaeological Interest

11.3.1 Summary of Antiquarian and Archaeological Activity

The area of the Grassington Conistone PAL has a long history of archaeological investigation, with some documentation of 19th century antiquarian excavations. In 1892 Reverend Bailey Harker excavated the large cairn at the Borrans (Grassington Enclosures) (YDNPA HER EYD4414, EI 10519), which contained four inhumations, one of which was crouched, and a beaker (Abercromby's Type B).

Harker was one of a number of antiquarians conducting investigations in the area north of Grassington and a rival, Ernest Speight along with the Upper Wharfedale Exploration Committee (UWEC), was involved in opening the substantial cairn on Lea Green also in 1892. The cairn contained seven burials at various locations within the mound, and metalwork including a bronze pin and bronze razor (identified as Late Bronze Age),

Figure 11.3 Grassington Enclosures (part-scheduled). The unscheduled Cove settlement lies in the upper right of the image, close to the Town Head Farm dairy complex (© R. White/YDNPA ANY336-4)

as well as iron knives perhaps indicative of later secondary burial activity.

The UWEC were also involved in investigation of the Lea Green Settlement (NY 710d) during 1893. The settlement produced large amounts of material identified as Romano-British. Arthur Raistrick excavated at the same settlement during the 1920s and in 1956.

John Crowther also excavated on the Borrans (High Close) in 1922, the "supposed site of a barrow, possibly a clearance mound/midden or part of a field bank. Some Samian and other Roman pottery was found dating from the 2nd to the 4th century" (EYD4416, EI10521).

Perhaps because of the history of investigation, and certainly because of the involvement of Arthur Raistrick, the area of the PAL close to Grassington saw substantive aerial survey during the 20th century, including by Derrick Riley, the Cambridge University aerial unit, North Yorkshire County Council (NYCC), and more recently by English Heritage.

Relatively soon following the initial designation of the Grassington Enclosures in 1961, Raistrick worked in collaboration with the Ordnance Survey (OS) Archaeology Division to produce an annotated and enhanced Air-Machine Survey of the area from Grassington to the Lea Green Settlement. While the suggested interpretation of large blocks of field system as belonging entirely to specific periods is open to question, this was the first informed attempt both to document the remains at a landscape scale, and to begin to interpret the extensive complex.

11.3.2 *Areas of Non-designated national Importance*

North Flatts field system (MYD4021): an extensive area visually characterised as a well preserved and relatively complete medieval field system, but showing evidence of a layout (and potentially surviving features) from an earlier coaxial field system of Romano-British or later Prehistoric origin.

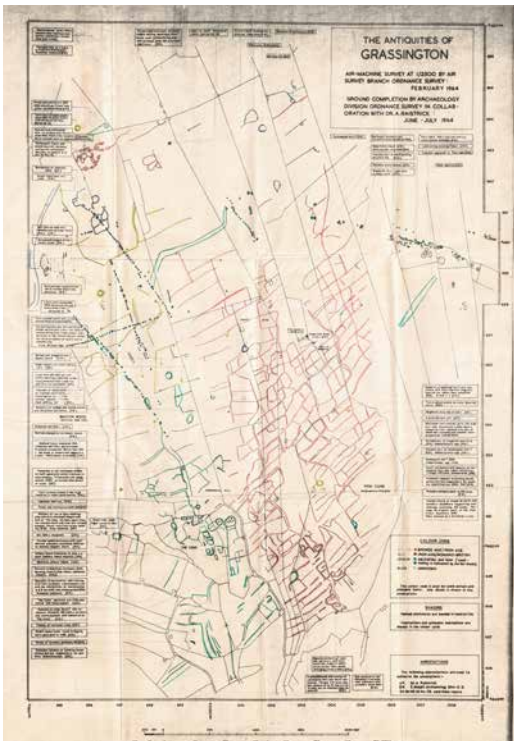


Figure 11.4 'The Antiquities of Grassington' Air Machine Survey 1964, with colour coded annotations by Arthur Raistrick, and showing Raistrick's themed date interpretation of coaxial and settlement remains

Figure 11.5 A relatively small part of the extensive coaxial system (MYD39270) above North Flatts (© D.N. Riley 21-6-77 DNR 1060/34)

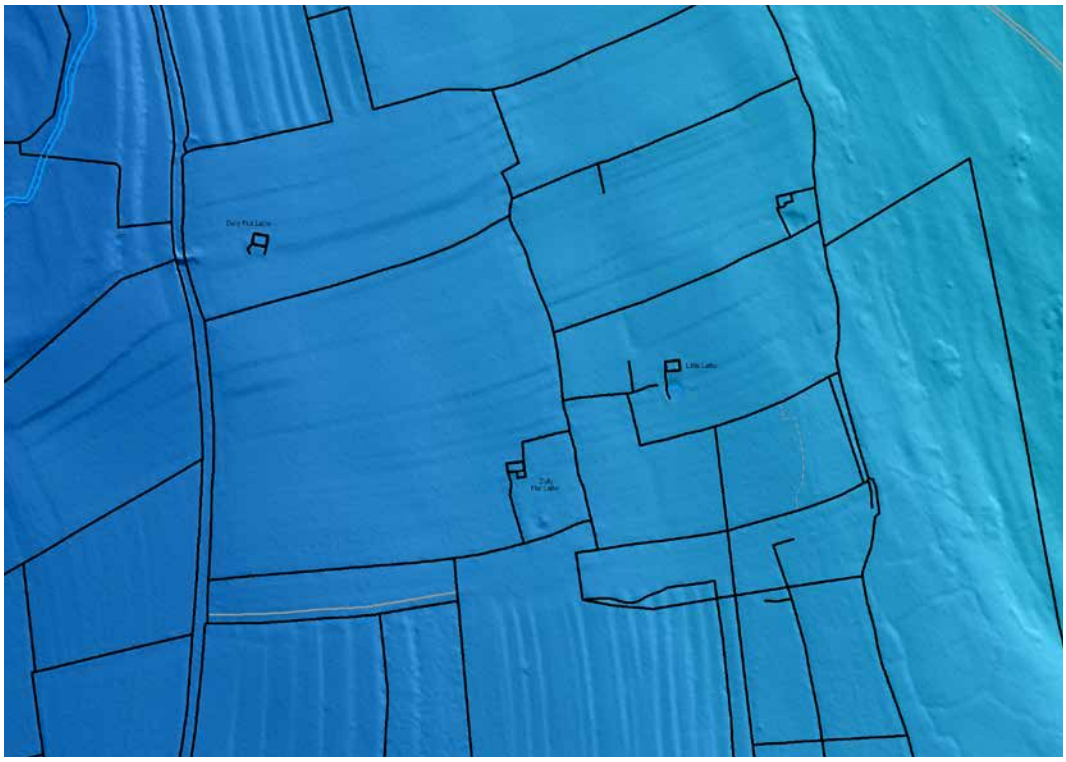


Figure 11.6 Environment Agency Lidar data showing part of the classic Medieval strip system associated with Conistone Village, parts of the system appear likely to overlie earlier coaxial boundaries. Lidar data © Environment Agency.

A well preserved settlement, characterised as Iron Age or Romano-British at North Flatts (MYD53712) appears to be associated with the earlier phases of the north Flatts field system (see Fig. 11.5 above).

Coaxial field system (MYD39270): an extensive and well-preserved co-axial system lying on the higher ground above North Flatts. The remains here appear undisturbed and show exceptional visibility across a large area, although reduced grazing numbers increasingly diminishes this visibility.

Medieval Field Systems, Conistone (MYD36676): Extensive classic medieval lynchet field system to the south of Conistone village. The earthworks comprise a largely complete medieval complex with substantial earthworks. Significant parts of the area are in intensive grassland management and at threat of gradual deterioration through periodic scarification/ploughing.

Medieval Settlement, Cove Scar (MYD41851) - A substantial and long recognised, although poorly–documented, well preserved earthwork settlement. Raistrick suggested (on the basis of a

pottery midden and morphological comparisons) that the complex is medieval though there have been no modern events to investigate further. The Cove Scar settlement is directly adjacent to and highly accessible from Grassington village, it is also grazed and to a degree poached by the large dairy herd from Town Head Farm.

11.4 Characterisation – Assessment of importance

An assessment of key areas of unscheduled remains (outlined above) against the MPP criteria was undertaken following the methodology outlined within the Bolton Parks case study. The results suggest that they clearly meet the requirements to warrant designation through scheduling.

The table below grades different attributes of the monuments on a scale of 1-5 (low to high or poor to good). The scoring has been based on professional knowledge and comparison with similar or equivalent sites elsewhere in the Yorkshire Dales and the wider region

Barring two cairns, scheduled in 1996 and 1997, the existing scheduled sites all pre-date the MPP assessments.

Although the remains reflect well in the criteria, the MPP assessment does seem to lack any measure of 'extensiveness', a key characteristic of the field system complexes within the Grassington-Conistone PAL. Given that similar scores could have been ascribed to complexes that were far smaller in scale, consideration should perhaps be given to ascribing some kind of additional value to extensiveness (in addition to the other criteria). Alongside the MPP assessments, there might be some value in demonstrating this particularly in those situations where large complexes have in the past been deemed 'too big' or politically difficult to schedule.

The actual measure of whether a large area can be practically managed as a Scheduled Monument presumably relates to factors such as the potential for significant changes in land use,

Figure 11.7 Cairn on Lea Green – photo from YDNPA Monuments at Risk Survey 2010 (SYD14415)

and proximity to areas where there is likely to be development pressure. Also important is the resource available to the designating or managing body for enforcement or control of the asset.

The rapid assessments above do not give any particular weight to the enhanced accessibility (CRoW access) and proximity of many of the key complexes to the Dales Way. Neither do they reflect the aesthetic of the landscape within which the monuments are experienced, i.e. in this case the experience of a visible relict landscape within (to the popular eye) a highly 'natural' setting. A less defined route to identifying national importance for such areas could be taken through assessing the heritage values outlined in *Conservation Principles, Policies and Guidance* (EH 2008): evidential, historical, aesthetic and communal.

11.5 Delimiting – Key Issues

Issues and perceptions prompted by this case study include:

The boundary to the PAL was drawn as a subjective and rapid exercise, primarily using HER data and the digital overlays of the Yorkshire Dales Mapping Project (NMP pilot). The aim in defining areas for the PALs was to identify agglomerations of known and important remains of a particularly extensive nature. The boundary of the PAL contains within it more-or-less continuous and highly visible earthwork remains.

	Condition	Rarity	Vulnerability	Diversity	Documentation	Group value	Potential	Sum
Cover Scar Settlement	4	3	5	4	3	4	5	32
Conistone Field System	3	3	5	4	2	4	4	28
Co-axial Systems E of N Flatts	4	4	3	4	3	4	5	31
North Flatts Field System	4	4	5	5	4	4	5	35
North Flatts Settlement	4	3	3	3	3	4	5	29

Table 11.1 Assessment of key groups of monuments on Grassington and Conistone Moors against selected MPP criteria

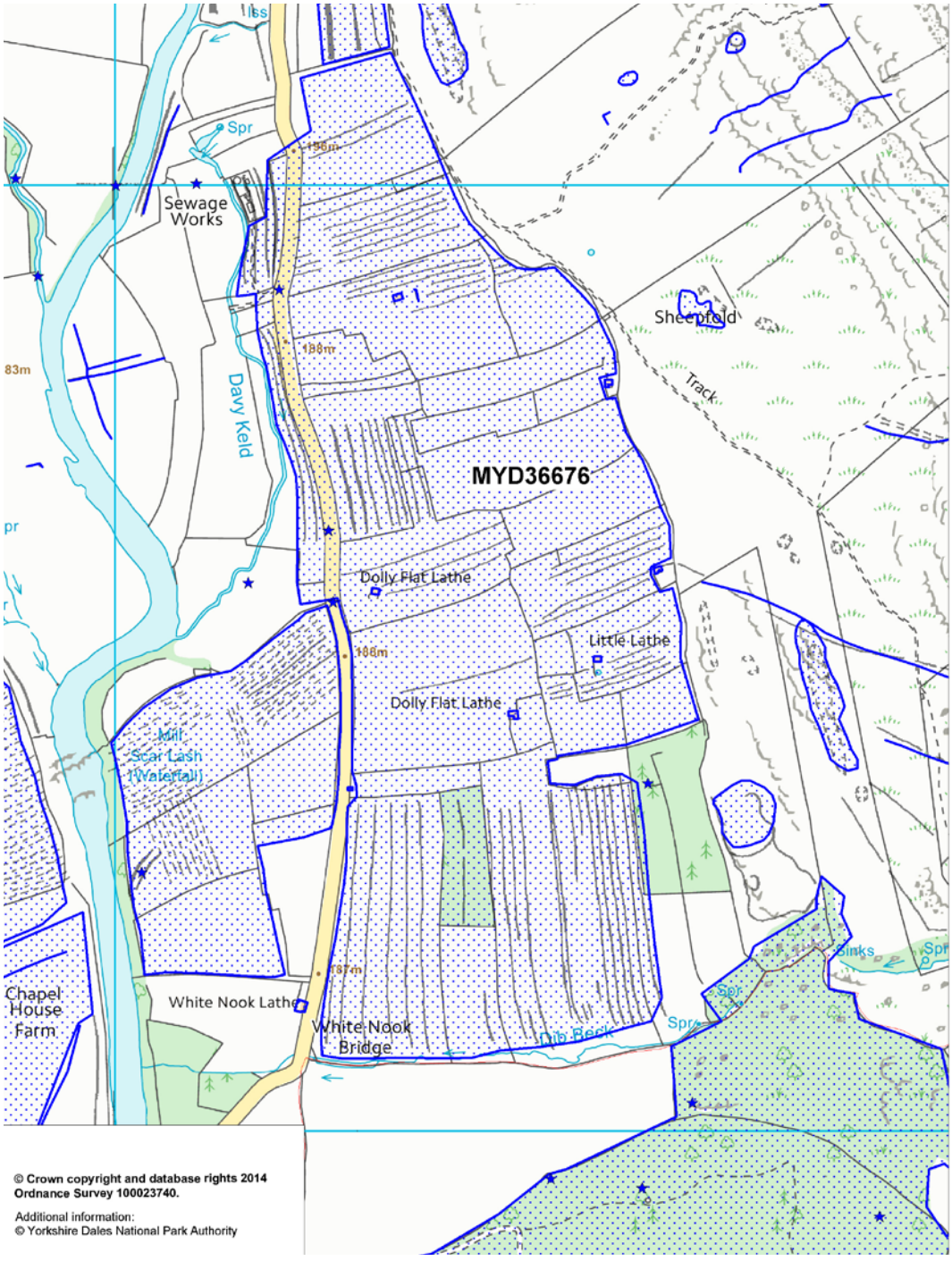


Figure 11.8 HER polygon for MYD36676, based on the observed limits of earthwork remains

One of the potential issues, and a draw in identifying a very large area of national importance is the extensive nature of earthwork remains. There is some precedent for large area scheduling within the National Park, with the largest being the Grassington Moor Lead Mines (multi-period lead mines and processing works and 20th Century barites mill on Grassington Moor, SM31331 NHLE), some 2.03 km2 in area. However, the area of continuous significant remains in this area is much larger in this case.

Within the Grassington-Conistone PAL, there are small areas of arguably less significance – areas of post-Medieval ridge and furrow, small voids in the presence of earthwork remains, and features related to the C17 enclosure and later improvements, quarries, lime kilns, dew ponds, that are arguably of local or regional rather than national significance. Should these features be excluded, or should it be recognised that the complex as a whole represents an exceptional survival?

If National importance was the only consideration, then theoretically an extremely large area potentially coterminous with the PAL could be delimited as nationally important. The complexity of managing potential Heritage Partnership Agreements

(HPAs) across several ownership boundaries is something that would need consideration in defining the limits of such a boundary. Assuming the area was identified as suitable for management through an HPA, there would be a significant bureaucratic burden involved in managing such an agreement across a number of landowners; however, there are clear precedents (particularly for SSSIs) in managing similar (and larger) areas of national importance.

Alternately, it would be possible to define, with some level of modification a number of large area schedulings within the PAL, based on the characterization of similar areas of remains identified as large area HER features included above.

By way of example, a starting point for defining a discrete earthwork complex exists within the NPA's HER. The polygon below follows the boundary of the recognized core of the Conistone South medieval field system (MYD36676). This boundary would need a little further work to confirm the limits of visible archaeological remains, and potentially some further small refinements to ensure that it tied directly to logical management boundaries. If further analysis showed any areas where earthworks had been slighted within this area, a decision would need to be taken on whether to include them, and an assessment of the potential for significant below ground deposits in the area.

Not all large area complexes are identified in this way within the HER, but in many cases, the spatial HER data can provide a starting point for characterising logical areas of significant remains to be used in this way.

11.6 Management - Existing Land Use

11.6.1 *Pennine Dales ESA*

Much of the PAL was included within the boundary of the Pennine Dales Environmentally Sensitive Area (ESA) (Wharfedale with Littondale parcel). This meant that landholdings within it were eligible for voluntary agreements under the scheme, which theoretically could provide significant support for the conservation of heritage features, in practice, largely weighted to barns and walls rather than other historic features. The ESA scheme has now been superseded but the designation under the Agriculture Act of 1986 has not been revoked.

11.6.2 *SSSI*

The area of the PAL also contains parts of two SSSI's:

- Conistone Old Pasture (Southern area), which covers 298ha, nearly all of which is contained within the Grassington and Conistone Moors PAL
- Bastow Wood

The SSSI designations, particularly that of Conistone Old Pasture brings some significant implications for the management of heritage assets both designated and undesignated. The designation is governed by a citation document explaining the significance of what is contained within the SSSI. There is a list of ORNECS (operations requiring Natural England Consent, also known as OLD (operations likely to damage the special interest)- links to the SSSI documents are included in the

Figure 11.9 Limestone pavements and scars in Conistone Old Pasture (© B. Mercer 1990). Scrub growth and bracken encroachment have increased over the steeper parts of the PAL, and on limestone pavement in the last two decades

references section below.

11.6.3 SAC

A significant part of the area within the PAL, including all of the land designated as SSSI, is protected under the European Habitats Directive as a Special Area of Conservation (SAC). The SAC is named as 'Craven Limestone Complex' UK0014776. This means that Natural England is required both to define natural environment conservation objectives for the complex, and both to monitor the condition of the SAC and to report on progress towards achieving the objectives. This raises questions as to whether conservation objectives could/should be defined as part of the designation or statement of NI, or whether this can be best managed through an instrument such as the HPAs.

11.6.4 CRoW and other access

Much of the higher ground, largely areas of limestone grassland and limestone pavement, is designated open Access land under the Countryside and Rights of Way Act (2000).

The area is extremely popular with walkers and contains several public rights of way, including part of the long distance Dales Way, which runs through the Cove settlement, Lea Green settlement, as well as fields and hut circles south-east of Scot Gate Lane. The Dales Way also runs adjacent to several other significant complexes, some of which are scheduled.

11.6.5 Limestone Grassland

As a generalisation, much of the area covered by the Grassington and Conistone Moors PAL is in pastoral management, with sheep grazing being the dominant agricultural use. A large dairy herd based at Town Head Farm grazes some areas, particularly around the Cove settlement and close to Grassington.

The higher ground is divided into substantial allotments, and represents several land ownerships. The land is targeted as a BAP priority habitat (lowland calcareous grassland) and almost all of the higher land is managed within Higher Level Environmental Stewardship schemes

A trend in the management of the higher pastoral areas over the last twenty years, brought about by successive agri-environment agreements has been a reduction in numbers of grazing stock, with the intention of improving the diversity and erosion and compaction from sheep grazing. These aims have been largely successful, although there is clear evidence that the increase in sward length has led to a reduction in the visibility of archaeological features. Parts of the area were targeted in the early 2000s by the Limestone Country Project, a YDNPA led initiative which reintroduced traditional upland cattle breeds to several areas of limestone grassland within the National Park.

11.6.6 Inbye Grassland

While there are a few surviving areas of species rich grassland within the inbye areas of the PAL, much of the lower ground is in more intensive grassland management and has been improved either through reseeding or through the use of fertilisers and slurry over significant periods of time. Where silage grasslands are reseeded, this is usually done on a periodic basis (often around five years) by spraying off the existing sward and then lightly ploughing or rotovating, or sometimes by just scarifying the surface before seeding with rye grass.

The implications of this management for archaeological features are for incremental loss of definition of earthworks and potentially for longer-term truncation of deeper deposits, with the degree of damage dependent on the type and amount of cultivation used. There is no data on the levels of cultivation that may have been used, and it is difficult to compare LIDAR data with aerial imagery to assess loss of definition. Once a second tranche of LIDAR is flown, there will be a more objective dataset for comparison.

Whilst the earthworks do still survive, the intensive agricultural management of these inbye areas means that they would be deemed 'chemically cultivated' and therefore likely to fail to meet the definition of 'uncultivated land' under the 2006 EIA Agriculture Regulations. Based upon this, should a farmer wish to change land management to arable, or to a whole crop silage regime such as maize, then it is unlikely that an EIA would present a barrier to this.

Silage management also brings other issues in that larger and heavier machinery is increasingly used and there is over the longer term a greater risk of compaction affecting agricultural productivity and drainage. There are two broad compaction alleviation methods that might be used in pasture: aeration, which involves removal of large numbers of small (pencil sized) cores from the topsoil, and subsoiling, which is designed (via mole ploughing) to break up pans that might lie under grass swards, without significantly disturbing the surface. There is no evidence that these methods have been used within the PAL, however, the NPA is aware of machinery rings that are proposing to purchase and share the kind of equipment required for these projects within other parts of the National Park. The Environment Agency/Natural England administered Catchment Sensitive Farming initiative has also funded similar compaction alleviation measures in several parts of the country.

Figure 11.10 Inbye fields – showing part of the North Flatts field system and the North Flatts settlement (© CUCAP 1973-02-14 BLX51)

11.6.7 Woodland

The relatively small area of Bastow Wood that is contained within the PAL is also protected as a SSSI and within a stable management regime. Bastow Wood was historically managed as wood pasture and retains status as common land. The management appears relatively stable, and current management allows for periodic cattle grazing, although the grazing regime is designed principally to support the SSSI rather than maintaining the visibility of historic features.

11.7 Management – Existing Land Ownership

As might be expected from the size of the PAL there are a significant number of landowners. Many agricultural holdings within the Dales still retain an inherited and diverse tenure pattern, with areas of inbye meadow, strip fields, and areas of pasture on the higher ground. Some areas are tenanted rather than farmed direct.

Bastow Wood is registered common land with rights of Estovers. According to the Common Land Register it was part owned by the Ministry of Agriculture, Fisheries and Food (and presumably now Defra), although the remainder was unclaimed. Other areas of common land in Grassington parish also have no registered owner, a result of a sale of manorial rights in the sixteenth century.

11.8 Management – Key Issues

To maximise the potential to manage the remains of a nationally important landscape-scale site (or portion thereof), an HPA or similar instrument would need to be drawn up in advance of entrance into an agri-environment scheme (in this case 10 year agreements), primarily to ensure the HPA be recognised within the administration and targeting of the scheme.

Substantial parts of the PAL are already well protected through nature conservation and geological designations (SAC, SSSI, LPO etc.) and consequently there is already a high degree of control

Figure 11.11 GIS data from the MAGIC website showing Agri-Environment agreements (largely HLS (Green) with some areas of ELS (Brown)) and inferring multiple ownership boundaries over part of the PAL

over land management changes or development requiring planning consent that might occur to these areas. Certain agricultural activities, including ground-intrusive works are restricted within the SSSI and outlined in a list of operations that require Natural England Consent (OLD/ORNECS).

A landscape-scale heritage designation or statement of National Importance with an associated HPA or equivalent may, in effect, formalize some contradicting management aims between nature and heritage conservation, although any such contradictions could provide an incentive to develop a fully integrated management regime.

The prevalence of nature conservation/habitat designations and the relatively small size of heritage areas formally recognised and designated as nationally important does mean that, in land management terms, the wider historic environment has for some time suffered as 'the poor relation'. This is becoming increasingly evident in the gradual changes in vegetation over areas such as limestone pavements. The negative effects are largely impacting on the visibility and amenity of the remains, rather than to their intrinsic evidential value, although from experience it does become more difficult to appreciate or demonstrate the significance of remains that are not easily visible on the ground.

There may be some value in considering something akin to the SSSI model (see links to information on the Conistone Old Pasture SSSI in reference below) when considering how an HPA or similar agreement might be developed to cover a large area such as Grassington and Conistone Moors. SSSIs have an overall citation statement defining the significance of the area protected and an overall document outlining Natural England's views about the management of the SSSI. When applied to large areas, however, they tend to be broken up into smaller management units that reflect the both the tenure and the management requirements of different areas. SSSI units are condition-assessed separately and have individual brief management statements that summarize the requirements of the individual unit (for an illustration of this see the links to documents on the Grassington and Conistone Moors SSSIs in the references section below).

The vulnerability of remains within the case study area varies significantly, with earthworks surviving in silage grassland at far greater risk of damage through agricultural improvement. Silage management and the potential for future moves either to arable or whole crop silage management (e.g. maize), or through 'compaction alleviation' measures such as subsoiling, probably represent the greatest current threat to historic remains within

the PAL. Formal recognition and designation as NI sites would demonstrably arrest this degradation.

If the approach is to schedule a number of larger areas within the PAL, this may have the effect of creating a more diverse management, with some areas more ideally managed for historic interest, and others – while containing significant historic remains –that would be subject to increasingly nature conservation-driven management regimes with little scope for heritage input. Wider area recognition of national importance coupled with the implementation of large-area HPAs or similar instruments could potentially deliver a more balanced overall management for this kind of landscape.

12. Case Study 3 - Fell End - Slei Gill - Tanner Rake - A Lead Mining Landscape

12.1 Introduction and Reasons for Initial Selection

The Fell End – Slei Gill – Tanner Rake area was chosen as a case study to consider issues in a landscape which does not include any individually designated monuments.

The area is part of the North Swaledale Mineral Belt which runs for some 18 miles (29 km) between Great Sleddale in the west and Feldom in the east. Mineralisation varies along this belt but is concentrated in the central section.

Several individual sites along the belt have been scheduled, concentrating on discrete monuments such as the Lead Mines, Ore Works and Smelt Mills at Old Gang on Reeth High Moor (12 ha), Surrender Smelt Mills (3.2ha) , Beldi Hill Low Level Lead Mine and Ore Works (0.9ha), West Stonesdale Lead Mine and Ore Works (1.1ha), The Blakethwaite Dams (0.23ha) and The Blakethwaite Smelt Mill and Dressing Floors (0.6ha). Two monuments, the Gunnerside Gill Lead Mines and Ore Works (in three parts totalling 32.6ha) and the Lead Mines And Smeltmills At Moulds Side west of Langthwaite , also in three parts (87.3 ha), cover extensive areas of mining as well as discrete above ground buildings and structures.

Some of the features noted above are also listed as being of special architectural or historic interest but the majority of the mining remains, including the Fell End – Slei Gill – Tanner Rake area, currently have no specific historic environment designation.

The concentration on sites with upstanding built remains creates a bias in the formally protected elements of the industry: unlike earlier phases the nineteenth century industry tended to produce large complexes with significant above ground structures and thus the later phases of the industry, particularly processing activity are considerably better represented in the scheduled monuments than are earlier processing sites which tended to leave rather less visually striking or prominent remains. It also biases the scheduled sample against the extraction stage of the industry, both above ground and below ground: no underground mining remains are specifically scheduled in the Yorkshire Dales despite underground activity accounting for a very considerable proportion of the extraction process and contain-

Figure 12.1 Shallow shafts and hand dressing waste near the head of Tanner Rake Hush looking across Slei Gill towards Fell End

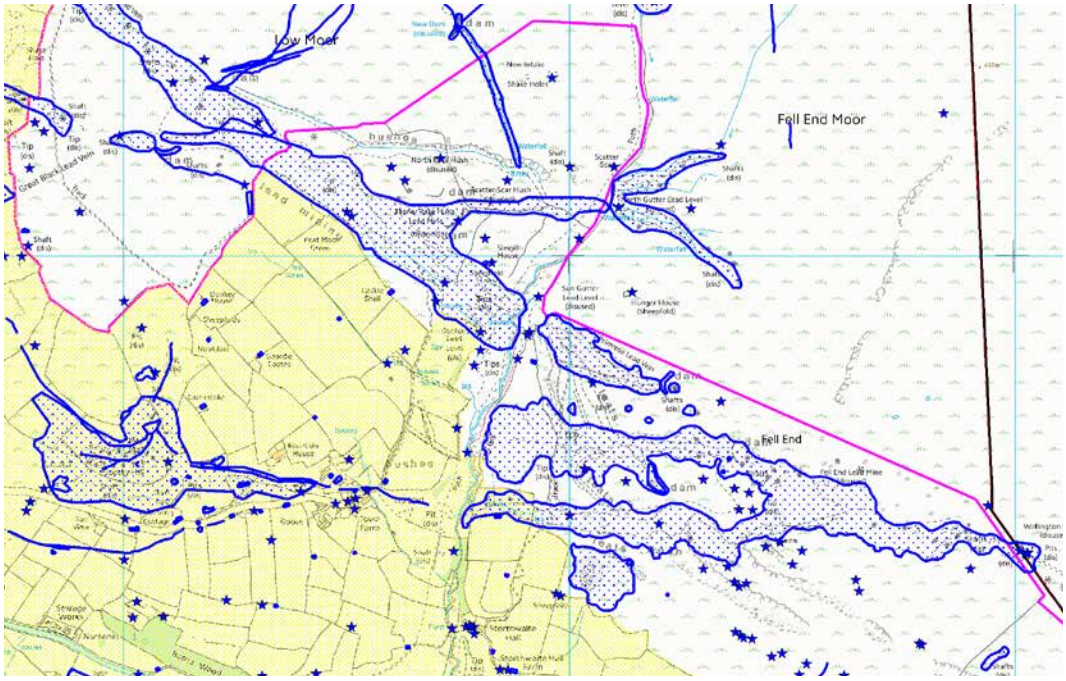


Figure 12.2 A YDNPA Historic Environment Record screen shot of the Slei Gill area showing the monuments layer (blue stars and polygons), the Swaledale and Arkengarthdale Conservation Area boundary (pink), parish boundaries (red) and the Pennine Dales Environmentally Sensitive Area (yellow). A small part of the study area is outwith the Yorkshire Dales National Park.

Figure 12.3 Fell End from the Reeth- Arkengarthdale road, showing what Dunham described as Fell End Hush "one of the most spectacular mining excavations in the whole district" (Dunham 1985, 141). The large spoil heaps centre left are from Fell End Level, the orange tones of the unvegetated mineral rich material contrasting with the greyer hues of the driving waste piles, parts of which have been colonised by vegetation

ing well preserved evidence of the mining activity. The above-ground extraction stage, however, is probably of most landscape significance.

12.2 Characterisation – Existing Designations

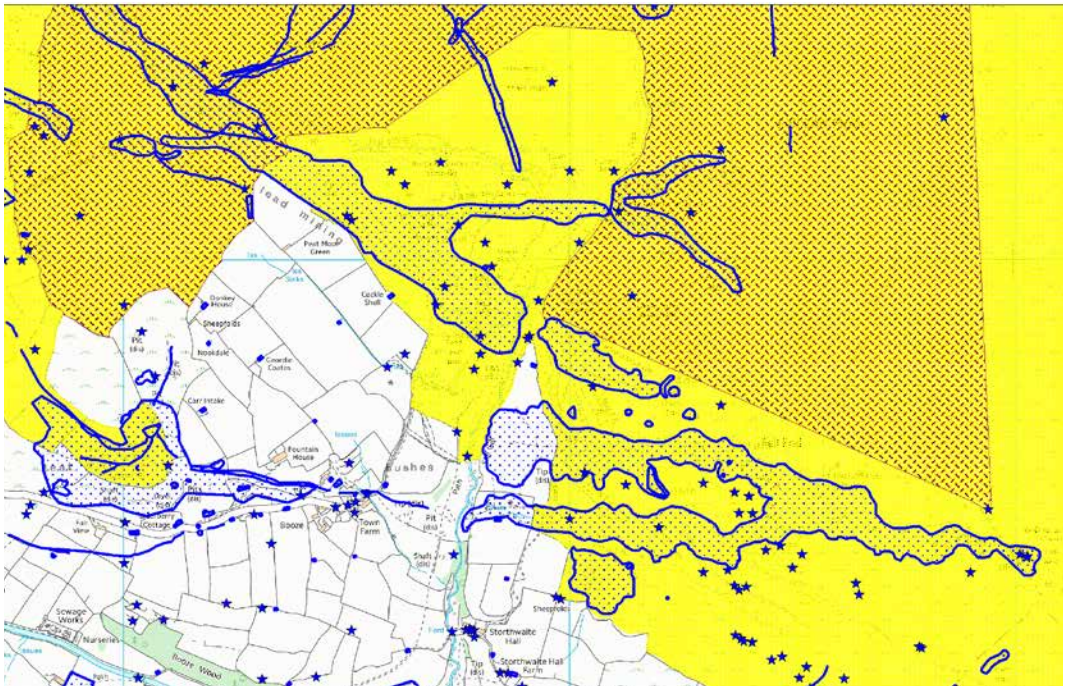
12.2.1 *Heritage Designations*

There are no Scheduled Monuments, Listed Buildings or Locally Listed Heritage assets in the study area.

Table 12.1 Proposed Local Geological Sites adjacent to Slei Gill

UID	Easting	Northing	Name	Description	Status
32.03	401580	502470	Arkengarthdale - Fell End Hush	Underset Limestone and Chert, Main Limestone, Richmond Chert and Fell End Vein	Candidate 1 (S and E)
32.04/5	401600	503220	Arkengarthdale - North Rake Hush (N. wall) and Tanner Rake Hush	North Rake Hush - Main Limestone well exposed on north side of hush, Tanner Rake Hush - Brigantian Marske Chert Bed, Red Beds (Richmond Cherts)	Candidate 1 (S and E)

Figure 12.4 CRoW Access Land (yellow) and Common Land (red hatching). The Conservation Area boundary largely follows the common land boundary



12.2.2 Conservation Area

Much of the area is included within the Swaledale and Arkengarthdale Conservation Area, designated by the YDNPA in 1989. The impact of mining activity was identified as part of the special interest of the conservation area in a recent Conservation Area Appraisal but was not overtly considered or documented in the initial designation (YDNPA 2014, 37).

12.2.3 Pennine Dales Environmentally Sensitive Area

The enclosed fields, though not the moorland element, lie within the Swaledale and Arkengarthdale part of the Pennine Dales Environmentally Sensitive area. The drivers behind this boundary, defined following the 1986 Agriculture Act, were the protection of hay meadows and the barns and wall landscape of the area through voluntary agri-environment agreements. The ESA agreements have been replaced by the nationwide Countryside Stewardship scheme and the designation is effectively redundant.

12.2.4 Common Land

The western end of the mining remains of Tanner Rake Hush is on common land – Arkengarthdale CL 43.

12.2.5 Open Access

The common land and other parts of the area have been designated as open Access land following the CRoW 2000 Act.

12.2.6 Ecological.

There are no SSSIs within the study area.

12.2.7 Moorland Line.

Much of the area, including all of the Access land except for part of Scotty Hill, is above the Moorland Line.

12.2.8 Geological Designations

The North Yorkshire Geodiversity Partnership have proposed areas on both sides of Slei Gill as candidate Local Geological Sites for their educational and historic interest and potential as well as for purely geological interest. Local Geological

Sites are a local designation recognised as a material consideration in the planning process.

12.3 Data sources consulted

12.3.1 YDNPA HER

A major component of the YDNPA HER was the Yorkshire Dales (mapping) Project, a pilot for the National Mapping Programme completed in 1992 This incorporated analysis of available aerial photography (3 vertical sets), an extensive collection of archaeological aerial photographs and analysis of the 1st edition OS 6" maps. The GIS layers of the HER include 2001 and 2008 digital aerial imagery and 1st edition OS 6" and, where published, 1st edition and 2nd edition OS 25" mapping. The buffer zone of the YDNPA HER covers the whole of the study area.

12.3.2 Historic Landscape Management Characterisation (HLMC)

The interactive maps of the Historic Landscape Management Characterisation Pilot Project – Swaledale. This project was a characterisation of modern land use and management in relation to its impact on the historic environment (Luke 2007)

12.3.3 Magic Website

Natural England's Magic website

12.3.4 Publications

The area has not been subject to any detailed archaeological survey. The lead industry, however, has been the subject of varying amounts of geological and historical survey. The geological interest has been condensed by the British Geological Survey (Dunham and Wilson 1985) and the historical interest briefly discussed by Tyson (1995) and Gill (2004).

12.4 Management – Existing Land use

The Historic Land Management Characterisation project discussed land use in this area and identified three main land uses: Grouse moor, Moorland fringe and Pastoral farming.

12.4.1 Grouse Moor

Grouse moor was described as unenclosed moorland managed primarily for grouse shooting with moorland defined as areas of unenclosed land where the predominant vegetation is a mixture of heather, bracken, bilberry and rough grassland. The moorland may be grazed by sheep and, in some areas, cattle. The heather moorland is primarily managed for grouse shooting and the heather periodically burnt in patches to maximise the habitats needed by grouse. Sheep and cattle numbers tend to be controlled to avoid completion with grouse; predators which might affect ground-nesting birds are heavily controlled leading to a high rabbit population.

12.4.2 Moorland fringe

The area between the unenclosed moorland and enclosed meadows and pastures of the farmland, often within large allotments dedicated to the provision of rough grazing for stock. In the study area the topography and mining remains severely limit improvement.

12.4.3 Pastoral farming

Here a relatively low intensity of use due to the topography and altitude and poor access limiting dairy farming. Some of the flatter fields around Booze and in the valley bottom are cut for silage; historically there would have been more meadows.

12.5 Management – Existing Land ownership

Precise details of land ownership are not known but the MAGIC web site suggests that there are 3 Entry Level Environmental Stewardship agreements and two Entry Level with Higher Level Stewardship agreements which cover the bulk of the study area other than individual house plots.

12.6 Management –Issues and Threats

12.6.1 Water Quality

Metal mining frequently has a direct impact on water quality. Arkle Beck, of which Slei Gill is an important tributary, currently fails Water Quality Standards with regard to lead, zinc and cadmium. This is partly caused by heavy metals in solution, concentrated sources being the drainage levels, surface run off particularly across areas of dressing waste and the frequent reworking and redistribution of spoil in the valley floor. The recent modification of mining related leats above Tanner Rake Hush has exacerbated the problem by increasing the flow of water into the hushes. Management initiatives such as the following would all have an impact on historic environment remains:

- Attempting to reduce or alter water flows in the area by water management activity e.g. grip or leat blocking elsewhere in the catchment
- Encouraging revegetation particularly woodland to reduce run off
- Physical treatment works

such as reed beds.

12.6.2 *Rabbits*

As with other types of monument, burrowing animals are a significant threat to the integrity of the surviving structures and deposits. In this location rabbits, which seem to be attracted by the burrowing opportunities provided by mining spoil, are a particular problem as their natural predators are heavily controlled on the grouse moor. Rabbit grazing does however partly offset reductions in sheep grazing stimulated by changes to sheep subsidies which elsewhere has increased sward length and thus has some beneficial effect with regard to maintaining feature visibility.

12.6.3 *Improvement*

Land improvement in pastures to increase stock carrying capacity is a potential threat but the majority of the mining remains are not within the enclosed pastures; those that are in areas where pasture improvement is unlikely, both for topographic reasons and because alterations to mine spoil heaps can increase the risk of ingestion of heavy metals by grazing livestock.

12.6.4 *Recreational Use*

The footpaths and bridleways in the study area are well used by walkers, particularly along Slei Gill and across Fell End, which provide extensive views of the mineral working, and across Arkengarthdale towards Reeth Low Moor and opportunities for circular walks. The Open Access right tends to be relatively little used with most walkers sticking to established paths. The Bridleway across Fell End is well used by mountain bike riders, some of whom are also attracted to the challenges posed by the open cast workings and spoil heaps. The route of the bridleway has become increasingly well defined by use in recent years although not all users stick to it. The area is also used by two annual motor bike trials, the Scott Trial and, more recently, the Reeth three day trial. These users are also attracted by the challenge posed by the natural topography and mineral workings. However because parts of these events take place on SSSIs planning consent is necessary and liaison with the organisers has begun to reduce the direct impact of the events. If the organisers chose to run events on land that was not SSSI they would not be subject to planning control.

12.7 Characterisation – The Archaeological Interest

The impact of the extraction and processing of mineral deposits dominates the Fell End –Slei Gill – Tanner Rake landscape. Galena (PbS) was the principal ore worked, other gangue minerals such as fluorite (CaF_2) and Baryte ($BaSO_4$), although economically significant elsewhere in the Yorkshire Dales, were not exploited in this study area. The mineral veins run in an approximately north-west to south-east direction and have been partly bisected by Slei Gill, a tributary of the Arkle Beck. Most galena has been found either as distinct 'ribs' running through the vein or mixed with the gangue minerals. Mineralisation could vary considerably over short distances which made lead mining a highly speculative venture and affected the types of extraction practised.

It is likely that the first ore deposits worked were naturally occurring concentrations of redeposited material in the stream bed of Slei Gill and/or surface exposures of the veins in the valley sides but the nature of the industry and landscape is such that no trace of this activity will remain.

Once a vein had been discovered it could be worked by digging small pits, opencast trenches and shallow shafts sunk along its line, the technique and thus the visible evidence varying according to the geology, particularly the nature of any overburden. Small pits and opencast workings could result in a narrow trench along the vein, shallow shafts, which were rarely more than 100ft deep, are normally visible as lines of discrete circular mounds of spoil, with central depressions over the shaft. These may be at regular intervals along the vein, a pattern that is often indicative of controlled exploitation of the mineral resource, managed through customary law. As pumping and lifting technology developed in the post-medieval period deep shafts, recognisable by their much larger spoil heaps and the remains of pumping and winding structures were also used, but these are not present in this study area where the local topography enabled the use of hushes and levels. Hushing was a form of opencast working, which was used where the mineral veins were cut by valleys. Water was collected in reservoirs above the area to be worked, which were then breached to release a torrent of water that would erode the soil and vegetation to expose the underlying rock and any veins. Although there are dams above North Rake Hush, Scatter Scar Hush and Tanner Rake Hush on the west bank and smaller dams on the east bank these are too small to have provided sufficient force to erode anything other than soil and vegetation so it is likely that the gorge-like trenches or hushes on either side of the valley were mainly formed through working by opencast methods with the dams above them providing water for dressing purposes.

Water was used in the dressing (beneficiation) process to separate lead ore from the gangue minerals and could also have helped flush away some debris. Hushing and opencast working resulted in huge quantities of broken rock being transferred into the river system and altering the valley profile.

The fortuitous position of the mineral veins in relation to the Slei Gill valley meant that large

Figure 12.5 Piles of spoil such as these on Primrose Vein at NZ02070260 disprove the theory that hushes were formed by water erosion

Figure 12.6 An unnamed level, marked as Old Level on the 1st edition OS 25" map at NZ01680244. The keystone on the intact portal entrance is dated to the 19th century and is a relatively rare survival of an intact mine portal. The level appears to have been driven along the vein directly underneath the area affected by hushing or opencast working.

areas could be easily worked by driving an adit, commonly known as a level, along the vein. If dug into the hillside below the vein being worked or the mining ground they could also provide drainage. Levels tend to be better documented than surface mining but like shafts, could be known by different names in different periods, especially if they were reused after a period of abandonment.

Early levels tend to be of small section but most were horse levels, normally some 2m high and 1.4m wide, large enough for a horse to draw a train of tubs along a tramway. This provided efficient haulage and in the nineteenth century often resulted in the development of large dressing floors at the mouths of principal levels. The core of the study area only includes small dressing floors, the largest being that of Fell End Level (NZ 02090232) where washings and a smithy are named on the 1st edition OS 6" map. Outside the core area in the second half of the nineteenth century a large mechanised dressing floor was built to serve Booze Wood Level (NZ01640202).

Slei Gill is the boundary between the parishes of Arkengarthdale and Reeth, Fremington and Healaugh. Mineral rights in Arkengarthdale belonged to the Manor of Arkengarthdale; owner-

Figure 12.7 A small dressing floor near the head of Tanner Rake Hush NZ01300326

ship of rights in Reeth parish was more complicated. Documentary references to the mining activity on both sides of the Gill is limited, particularly for the eastern, Reeth, side of the valley. Mining in Arkengarthdale is recorded from 1265 but not in sufficient detail to identify any workings. Most documentary evidence relates to the eighteenth and nineteenth centuries.

A smelt mill on the east bank of Slei Gill, New or Farndale Mill, is recorded in 1625 and was purchased by Charles Bathurst who owned the mineral rights in Arkengarthdale in 1729. Unusually it then had a peat store at a time when most mills were burning chopwood as fuel for the smelting furnaces. No obvious above ground remains of these structures survive.

In 1732 an inventory of Charles Bathurst's mining effects included 22 washing tubs at Tanner Rake (Tyson 1995, 29). Tyson's survey of the Arkengarthdale industry notes that several shafts and the Tanner Rake, North and Scatter Scar hushes were all being worked in 1738 when the Tanner Rake level was completed (Tyson 1995, 31). Level working probably began to be the main extraction technique in the study area in the early eighteenth century and Tyson notes nine levels in the Tanner Rake area in 1841. None of these has a large mechanised dressing floor. In the mid-nineteenth century the northern side was drained and worked from Booze Wood Level, begun in 1863 close to the Arkle Beck at NZ01430199 (YDNPA HER MYD37080). Ore from this level was taken by tramway to a new dressing floor at NZ01640202 (MYD51137).

Dunham and Wilson (1985) list Fell End Vein, Wellington Tanners Rake/Primrose/Slack Vein, Blucher vein and Scatter Scar vein as a group and briefly describe the mineralisation and workings.

The visible mining remains differ on either side of the Gill. The most prominent features on the west side of the Gill are the large hushes Tanner Rake Hush, Scatter Scar Hush and North Hush. These all contain smaller workings, both for extraction and processing and are surrounded by a series of shaft mounds of varying sizes and levels, the extent of activity relating to the degree of mineralisation along the geological faults. To the south of Tanner Rake Hush, Booze Vein runs under the miner/farmer hamlet of Booze but here working was mainly by shallow shaft, other than a shallow opencast which aligns with the principal workings on Fell End with an unnamed level with an intact portal driven under it. Above Booze the vein breaks up and was tested on Scotty Hill by a series of shafts, apparently with little success.

On the east side of the Gill the extraction is concentrated along three veins, primarily by surface activity. Here the workings are not named or labelled as hushes by the Ordnance Survey, possibly reflecting a different historical trajectory, although Dunham and Wilson used the name Fell End Hush for the workings above Fell End Level which they described as "one of the most spectacular mining excavations in the whole district" (Dunham and Wilson 1985, 141). A particularly prominent feature, especially when viewed from

Figure 12.8 Workings along Fell End vein looking west across Slei Gill to the miner farmer settlement of Booze (© R. White/YDNPA ANY268/33)

the south is the spoil heap associated with Fell End level that descends down the hillside (see Fig. 12.5 to the left).

As on the west bank the principal zones of extraction are surrounded by shaft mounds and areas of unvegetated ground representing hand processing sites and spoilheaps, crossed by a series of trackways and leats, as well as a number of small shallow reservoirs. Some 18 bale sites, a medieval/early post-medieval technology for converting ore into metallic lead, have been recorded.

There is only one roofed building within the core

Figure 12.9 An unusually rectangular reservoir at the top of Fell End NZ02880237

Figure 12.10 A more typical reservoir above Fell End Level, marked by its curving earth bank NZ02160235

Figure 12.11 A small washing or dressing floor below Primrose Vein, MYD60248. NZ02010265 not marked on OS mapping

study area. This is Slei Gil House, named as such on the 1st edition OS 6" map. This is a two-storey house with a catslide roof to the rear. The main elevation has one first floor window and one ground floor window with a door to the west. There are fireplaces in both ground and first floor rooms, despite the apparent absence of a chimney (presumably a result of later re-roofing) but the building has clearly been reduced in size. There is evidence for another fireplace in the now roofless single storey extension attached to the north-east gable and it is shown as a T-shaped structure on the 1st edition OS 6" map. The function of Slei Gill House is not known; it may have been purely domestic as might be suggested by the form but may also have functioned as an office building or dormitory/lodging house for the mining industry. Tithe ore from Tanner Rake was stored in a building near the mouth of Tanner Rake High Level in 1738, possibly this building although the OS map 1st edition 6" map does note old walls some 60m to the north. It is probably significant that Slei Gill House is associated with a fold to the south, possibly a pen for horses a major form of motive power for the industry used both above and below ground, with a well-defined trackway, still a public right of way immediately to the south. This suggests that it is a roofed building directly associated with the lead industry, a rare survival in the Yorkshire Dales.

The small, dispersed hamlet of Booze originally grew up on the fringes of common land, with its economy depending on a mixture of lead mining and farming. The collapse of the lead mining industry in the 1880s led to severe depopulation. Several dwellings were abandoned and their ruins can be seen today. Booze still maintains two working farms - Town Farm and Fountains Farm - both with a mixture of modern and traditional farm buildings while the rest of the domestic buildings in the hamlet are either in residential use or holiday homes. A series of well-worn tracks, some still followed by public rights of way, lead away from the settlement into the surrounding walled fields and mining areas.

The drystone walled pastures and meadows surrounding Booze hint at the intimate relationship between the mining and agricultural economies with many households gaining an income from both mining and farming. The angularity of some of the field boundaries hints at a relatively late period of enclosure, potentially encroachment onto the common by farmer/miners.

The above commentary concentrates on the mining remains in the core of the Slei Gill catchment. This does however only form a small part of the North Swaledale Mineral Belt and the principal veins run for some considerable distance on either side of the study area – underground mining

Figure 12.12 Slei Gill House. MYD51134

Figure 12.13 Tanner Rake Hush and Slei Gill House. Slei Gill House differs in character and location from the field barns set amongst the regular dry-stone walled enclosures shown in the upper left part of the image. Note the complex relationships between the linear features – trackways and dry stone walls – and the hush earthworks.

Figure 12.14 North Rake Hush with Tanner Rake Hush in the background, again with complex relationships between linear features (© R. White/ YDNPA ANY268/34)

was probably continuous between Fell End and Hurst. To the east there is an administrative and topographic boundary – the Reeth-Marrick parish boundary - marked by a dry stone wall where the landscape character and land use also changes. Most of the Fell End (Reeth) side is rough pasture – moorland fringe, most of which is a relatively steep escarpment, the Marrick side is an actively managed grouse moor on a gently dipping plateau. A few shaft mounds mark the continuation of working along the Fell End vein on the Marrick side but are not particularly distinctive or prominent and then there is a break of some 200m before the shaft mounds gradually pick up again towards the important mining landscape of Hurst.

Figure 12.15 Booze. An abandoned and derelict former house looking towards Fell End

Figure 12.16 The sunken walled trackway leading west from Booze across Scotty Hill with small shaft mounds to the left

Also on the east side of Slei Gill are the smaller hushes of North Gutter. Visually they are much less prominent than those on the west bank, partly because of their smaller size but also because they are covered in relatively dense heather and bracken which may also be masking minor processing features.

The position to the west is different, the Tanner Rake Vein and North Rake merge into Cocker Vein which itself is crossed by Windegg. There is little difference in land use and no change in land ownership - the area all forms part of Arkengarthdale

Figure 12.17 The Windegg escarpment is pierced by a series of open cast workings and unusually a series of small levels, clearly marked by the spoil heaps bottom left, which were probably, judging from their size, not very productive. The pockmarks on the plateau above the Tanner Rake Hush and Slei Gil is visible in the top right of the image, separated by a wide expanse of heather moorland (© English Heritage 16/12/2014 28645_042)

Figure 12.18 The Windegg vein runs diagonally across this image, the open cast working on the escarpment being just visible top right. The centre foreground shows an area of very small shafts known as Brass Pump Floats, probably exploiting a mineralisation deposit known as flats which followed near horizontal bedding of the limestone rather than a vein deposit. Recent alterations to the leat beside the shooting hut just above Brass Pump Floats revealed an extensive array of Mesolithic flints, a reminder that although thi is perceived as a post-medieval mining landscape it contains evidence for a much longer history of land use. North Hush and Tanner Rake Hush are visible in the top left of the image, continuing to the right as the line of shafts along Cocker Vein (© English Heritage 16/12/2014 28645_047)

Common and is managed as grouse moor. The hard lines of the HER polygons mask differences in terrain and intensity of working. Much of Tanner Rake was worked by visually distinctive hushing or opencast activity, Cocker Rake by well-spaced shafts. These probably indicate different phases of working but the shaft mounds do not form a prominent landscape feature. No associated structural evidence has been recorded or is visible from aerial imagery although they have not been closely inspected.

Some 450m north of Tanner Rake lies Washy

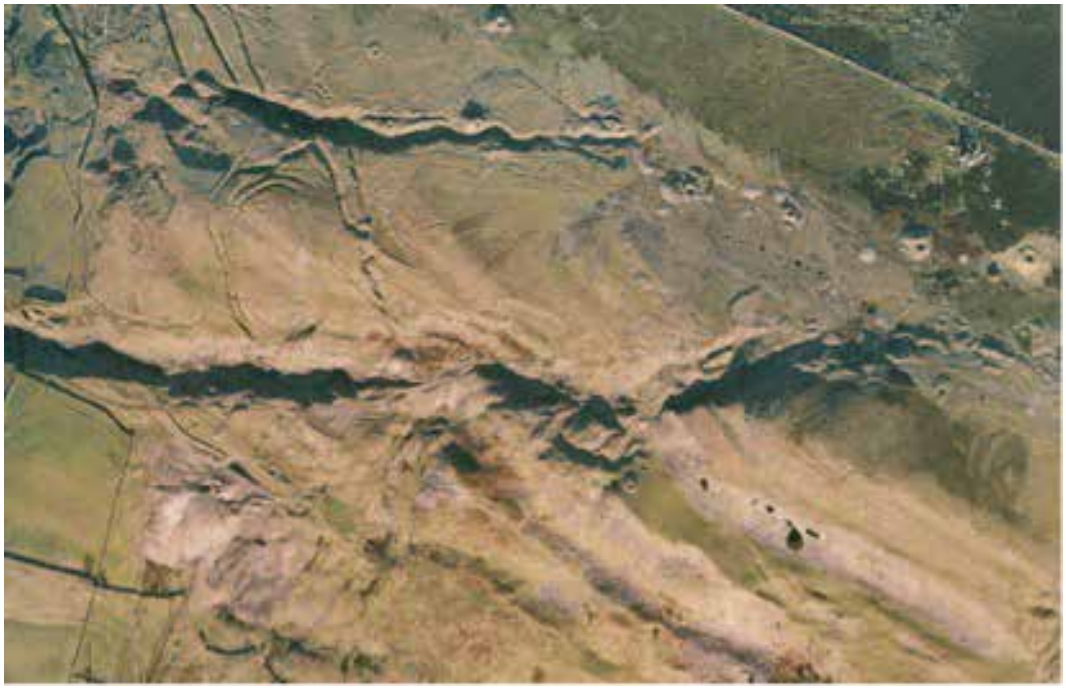


Figure 12.19 The complexity of the mining landscape. Fell End with the spoil heaps of Fell End Level bottom left, on the edge of the walled pastures. The east – west distance shown in this image is some 800m. Note the regularly spaced shaft mounds at the east end of the opencasts, the smaller pits with little surrounding spoil to the south of them and the linear depressions of water courses. The image gives little indication of the height difference of some 180 metres between bottom left and top right (derived from digital vertical aerial photography held within the HER)

Green level of which the most prominent remains are a large spoil heap and a wheel pit, the latter gradually succumbing to stream erosion. This worked the Windegg vein but was relatively unproductive. It is not intervisible with any significant features of the Tanner Rake – Fell End Group and is not considered of national importance.

Because the above ground evidence for lead mining was largely controlled by a combination of topography which frequently determined extractive technique as well as the location of the lead veins workings along veins tend to alter in character where they are cut by valleys. The visible expression and archaeology of extraction activity along both Cocker Vein and the Windegg Vein become more complicated closer to the Windegg escarpment overlooking the valley of Shaw Beck to the west.

The workings along Windegg vein are very prominent and easily interpreted from these aerial images. Unlike the Tanner Rake - Slei Gill - Fell End area, however, the Windegg workings have never benefited from any archaeological survey and are not considered to be nationally important.

The brief description and images above give some idea of the range of features within the Slei Gill mining landscape and their relationships but the scale of this landscape is perhaps best appreciated from an aerial viewpoint.

12.8 Characterisation – Assessment of importance

The lack of any detailed survey in the project area makes an initial assessment of importance difficult. What is clear however from aerial imagery and ground visits is that the area contains a very wide range of extractive and processing features relating to the lead industry many of which are not well represented in those areas which have been selected for scheduling, (apparently partly on representative grounds), elsewhere in the Yorkshire Dales. It would be possible to attempt to assess the area for individual monuments based on existing HER documentation but this would risk omitting features which had not been previously individually recorded such as the small washing or dressing floor below Primrose Vein, noted and photographed during a walkover for a separate project but not added to the HER. There are no similar small washerys in the scheduled mining sites in the National Park

The Lead Legacy Project in the Peak District (Barnatt and Penny 2004) assessed lead mining sites and lead mining landscapes, and a revised site inventory was published in 2013 (Barnatt et al. 2013). Sites as defined here ranged from 1 to 108ha in extent, with four historic environment components classified: hillocks; relatively common surface features, including opencuts, adit entrances, coes, dressing floors, storage ponds; and a wide range of rare/special surface features, some of which were components of dressing floors; and underground features. These were given A, B and C grades in relation to brief criteria for assessing archaeological importance, though the authors note that "Unlike the ecological interest, which can be assessed under a small number of vegetation community types, with some sites taking on additional interest because of their more general wildlife potential, the archaeological features are significantly more disparate in character. Thus it would be wrong to prioritise specific feature-types in terms of relative importance; it is the variety

itself which is a key factor in the conservation interest" (Barnatt *et al*. 2013, 94).

The inventory of regionally and nationally important lead mining landscapes where mining features were sufficiently well preserved to make a significant contribution to the visual character of the Peak District landscape were not reassessed in 2013 – the 11 identified in 2004 ranged from 33 to 1179 ha in extent. The report does not make it clear how these boundaries were drawn, comparison of the boundaries of the important landscapes, reproduced at a scale of some 4km/inch and those of the important sites, which follow field boundaries or clearly marked topographic difference suggest simple agglomerations of sites.

The disparate character of archeological lead mining features noted in the Peak District is paralleled in the Yorkshire Dales and the Slei Gill area where levels, for example, range from the large, well documented and still accessible (Booze Wood), excavated to drain the mining field, to much older and smaller levels dug alongside veins; shafts range in size from the small to the large; dressing areas from small scatters of hand dressed waste through to small stone shelters and washerys such as those at the head of Tanner Rake (Fig. 12.7) to well constructed but undocumented areas such as the dressing floor by Primrose Vein (Fig. 12.11) which itself is tiny in comparison to some of the rather later and better documented scheduled dressing floors elsewhere in the Dales (e.g. Bolton Parks Mine (see Case Study 1 above) or the Yarnbury complex at Grassington Moor); hushes range from simple open cut 'trenches' to complex workings containing structures (Tanner Rake). The variety of features found in the Slei Gill area, the visual impact of the hushes and the overall coherence of the mining landscape are key factors in the archaeological interest of the area.

In landscape terms, the Fell End – Slei Gill – Tanner Rake area is an area of very high amenity value, very prominent from the Reeth - Arkengarthdale road yet even more impressive when seen from the sides of Slei Gill itself (Fig. 12.3 above).

The botanical interest, particularly the bryophytes and lichens, has not been formally assessed but the metalliferous substrates found in the mining spoil and in the gravelly valley floor deposits support calaminarian grassland, a UK Biodiversity Action Plan Habitat characterizes by plant such as spring sandwort *Minuartia verna*, and alpine pennycress *Thlaspi arvense.*

12.9 Delimiting – Key Issues

While at one level the absence of any detailed archaeological examination hinders the definition of a boundary for the Slei Gill area, the linear nature of the mineralisation means that the principal veins have been exploited wherever they have been identified. The extent of working and the nature of working varies along the veins and clearly some areas have had more exploitation – or at least have more surface expression of exploitation. These can fairly easily be rapidly identified and mapped from aerial photography or LIDAR imagery or a combination of the two. The use of HER entries may not be sufficient alone even where the data is relatively clean as at Slei Gill, partly as a result of a previous exercise to create SHINE boundaries. Examination as part of this project identified one significant hush structure (North Rake Hush) that for some unknown reason had been omitted, from the SHINE HER enhancement although its associated water supply had been mapped. Equally polygons drawn for a different purpose may be misleading. Fresh examination building on the HER resource or at least a detailed check would be necessary before this could be reliably used to define boundaries.

Extraction however is not the only process involved in the lead industry. It also included smelting sites – here mainly in the form of bales rather than smelt mills. Bales have been identified through walkover survey noting the presence of small scatters of slag deposits, normally recognised because their heavy metal content can inhibit the establishment of soil and vegetation cover. Bales may be associated with slight earthworks relating to the casting of lead but the recognition of earthworks can require a different skill set to recognition of slag scatters and earthwork features have not been mentioned in the brief descriptions of bales provided to the HER.

The intimate association of water with lead mining further complicates the position. Some reservoirs have a close topographical association, such as those visible in Figs 12.9 and 12.10 above, others such as the New Dam above North Rake Hush are less close. The New Dam reservoir is some 340m from this hush and is itself fed by feeder leats that collect water for a further 450m. The water supply was an integral part of the mining and processing process – if the mining/processing site is important it follows that the water supply should be too. These features would be relatively easy to map using a combination of historic maps and aerial photography but the archaeological interest may only be 1 or 2 metres wide. It might be considered that leats themselves are not of much interest and do not warrant protection but they can be vulnerable – one above Slei Gill was re-engineered for over a kilometre in 2006 to direct water to a hush dam, ostensibly for fire fighting purposes but in practice resulting in the near total loss of the original leat structure as well as breaching of the dam (Luke 2007, Fig 51).

The alternative if features such as leats are to be protected would be to draw boundaries which relate to other topographical features – property boundaries such as walls or more clearly defined features such as streams or tracks but this could involve formal protection of very large areas of

ground which are of little or no known archaeological interest.

The mining process in the extraction in the Fell End – Slei Gill – Tanner Rake area was intimately linked with farming – a dual economy was practised with many miners supplementing their mining income with farming or viceversa, the position frequently varying with an individual's age and the local and national economy. The shrunken settlement of Booze can thus be considered as an integral part of the mining landscape, many of the now abandoned houses having previously been occupied by miners or miner/farmers. None of these buildings were considered as listable during the listed building resurvey of the 1980s or were considered remarkable during the more recent Swaledale and Arkengarthdale conservation area appraisal. The inhabited area of the settlement would thus probably not warrant further protection.

The fields and field barns where cattle were overwintered form an important backdrop to the mining remains. Their landscape significance, although not their historic association with the mining remains, is recognised by the conservation area status. The conservation area generally follows field boundaries or other hard topographic features.

An alternative approach could be a core and buffer zone model with the field systems in particular considered as part of a buffer zone. This would enable their link to the core mining remains to be clearly articulated. Depending on the status given to the buffer zone this would not necessarily result in any direct land management impact or constraints on the buffer zone – farming practices could continue as before but it could be flagged as a potential material consideration with regard to any development proposals or highlighted as an increased priority for resources through agri-environment or heritage led schemes.

The area affected by surface extraction, while relatively easily mapped, does not precisely relate to the mining area – in the later nineteenth century the mineral veins were exploited at a greater depth from Booze Wood Level and the ore won processed at a mechanised dressing floor some 200 metres south of the level entrance. Although the surviving dressing floor remains alone are probably not of national interest as much stone has been robbed from the above ground structures the link with the mine contains unusual features which means the complex deserves further consideration. The long ramped uphill access, partly formed from driving waste which carried a tramway to the bouse teams above the crushing plant is pierced by a two-phase tunnel and a culverted watercourse. An air-shaft to the mine was sunk from Booze. The mine itself was later used for stone extraction, which adds to its interest. The Booze Wood site however is sufficiently distant from the more visible mining remains around Fell End-Slei Gill-Tanner Rake for it to be considered as a separate site for designation purposes – either as a separate designation or as a discrete component of a larger landscape site.

A similar issue arises with the Scotty Hill area. This is separated from the most visible remains by the settlement of Booze. Mining here appears to have been less productive and a superficial assessment would suggest that the mining remains here are less complex than those to the north. If further assessment confirms this area could be either be excluded from any designation or considered as a buffer area. Land improvement is unlikely to be a significant pressure here because of the topography. One problem with a buffer area which included remains of a similar character, albeit not of the same quality or significance as a core area, is that it would potentially further devalue remains which were not included in either area as well as being potentially very confusing to land managers who would normally want certainty with regard to any constraints.

A potential boundary or boundaries for the Tanner Rake-Slei Gill-Fell End area is shown in Figs 12.20 and 12.21 below. This largely follows field boundaries as currently mapped by the Ordnance Survey but there are places where the unenclosed landscape or the shape of the field boundaries in relation to the visible archaeological remains means field boundaries are not appropriate. The course of the boundary is described in the table to the right.

The boundary described would include an area of at least 1053 hectares, or potentially more depending on what alternative boundaries were followed. The blue boundary provides the line of a possible buffer zone that includes the workings on Scotty Hill and would be an alternative means of incorporating some recognition for the Booze Wood complex. This covers a further 817ha but could be extended to include all the closes below the Fell End allotment.

12.10 Benefits of designation

The combined interests of the Fell End – Slei Gill – Tanner Rake area and its evidential, historical and communal values make it a landscape of national importance. It currently benefits from two heritage-based designations; most lies within the YDNP and a significant part also lies within the Swaledale and Arkengarthdale Conservation Area. The remains of former industries are recognised as part of the special qualities of the National Park and the lead industry is recognised as part of the special qualities of the Conservation Area. Resources however are directed to specifically, generally nationally, designated sites and landscapes – the absence of any specific identification of the significance of the Tanner Rake - Slei Gill – Fell

Table 12.2 Potential boundary descriptions for delimiting a landscape-scale NI site for Tanner Rake - Slei Gill - Fell End

Key	Description
1	The boundary surrounding the west end of Tanner Rake Hush follows an arbitrary line which picks up some shaft mounds and water management features at the head of the open cast workings. Shaft mounds along Cocker Vein further to the west are not included.
2	To the north of North Rake Hush the line is drawn due east of the largely collapsed field wall to the boundary wall along Slei Gill. This only includes part of the leat from New Dam into North Rake Hush and not the Dam. An alternative would be to draw the boundary to include all of the leat and dam.
	Three possible alternatives are shown on Fell End Moor:
3	The line is drawn along the boundary wall between Arkengarthdale Moor and Fell End Moor. This has the advantage of simplicity but does not include the leats feeding from Slei Gill to workings on Fell End.
4	An alternative would be to draw either an arbitrary straight line or a line beside the upper of three contour hugging leats which channeled water from Slei Gill to Fell End, one possibly to the Farndale smelt mill to meet the wall dividing Fell End Moor and Fell End.
5	A third alternative would be to continue the arbitrary line from North Rake Hush to include the North Gutter hushes and level and shafts at the head of the hushes and then south to the moor wall.
6	The boundary then follows the line of the wall around the large Fell End allotment.
7	Where this wall is coincident with the parish and National Park boundary the boundary could make a slight deviation to the east to include the large shaft mound associated with Wellington Whim shaft and Wellington Whim Climbing shaft. This mound is clearly mapped by the Ordnance Survey and is markedly different on the ground to the surrounding heather moor and so could be easily delineated for designation purposes. There are further shaft mounds to the east but these are considerably less prominent and apparently rather less significant and not of national importance.
8	The boundary continues around the allotment boundary before deviating to include the walled pasture immediately below Fell End Mine. Although this does include some ground not directly affected by mining activity it also includes most of the early medieval/post-medieval bale smelting sites known at Fell End and has the advantage of following a defined boundary.
9	The deviation below Fell End Mine follows an unusually curved field boundary that appears to contain slumped spoil material from the hillside above.
10	The boundary then follows field boundaries incorporating a couple of managed fields which include mining related leats and trackways, but continuing the line of a field wall to cut across an otherwise projecting walled trackway.
11	The route chosen to Slei Gill includes a large spoil heap currently being eroded by the stream, before turning north to follow the relatively mobile line of the stream. An alternative would be to extend the tongue further south to pick up the Booze Wood mine and dressing floor, largely following field boundaries but with an arbitrary line across the field containing the dressing floor north of the tramway. This has the advantage of clearly linking Booze Wood with the mining field.
12	The boundary could then either follow the stream or field boundaries on the west bank of the stream before turning west to pick up the opencast workings below Booze.
13	It then follows field boundaries to the head of Tanner Rake.

End area means that the area has not benefited from any focused management intervention, from the National Park Authority or any other agency. Landowners and land managers are not aware of the specific interest of this landscape or its relative importance.

Designation and the articulation of a clear statement of significance would be a means of raising awareness and understanding of this important landscape, enable more consideration of the impacts of potentially damaging activities, particularly those associated with water quality management and recreational (mountain and trial bike) activity, and in the long run enable targeting of conservation resources.

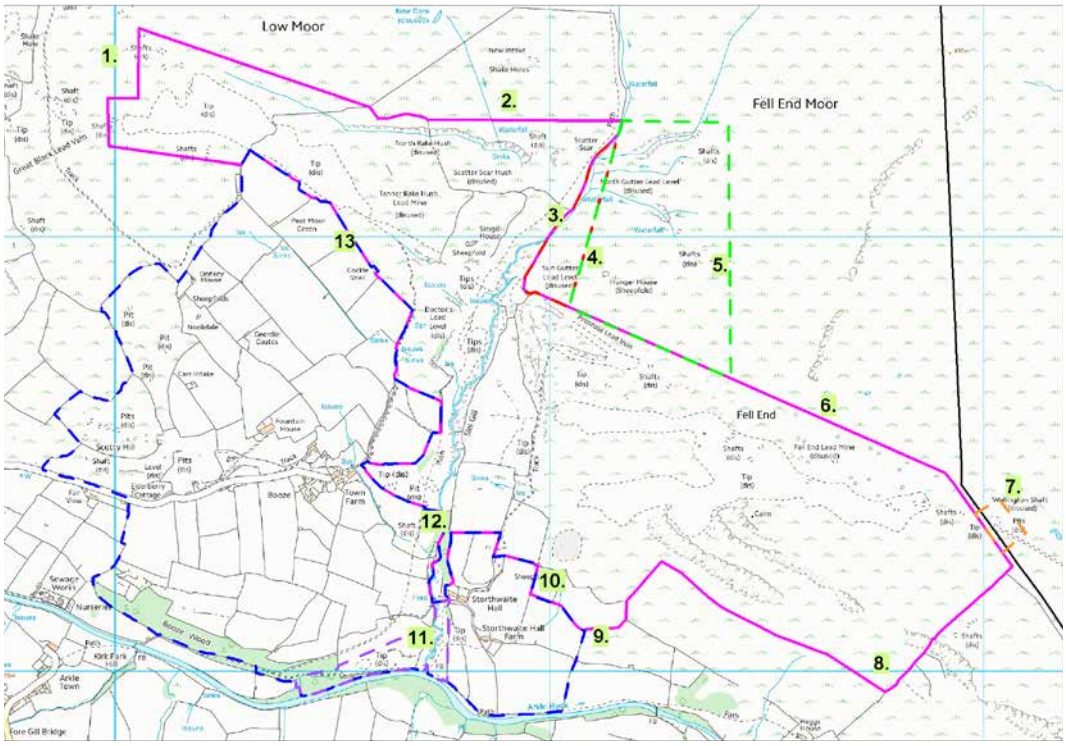


Figure 12.20 Potential boundaries for the Fell End – Slei Gill – Tanner Rake site over OS base mapping

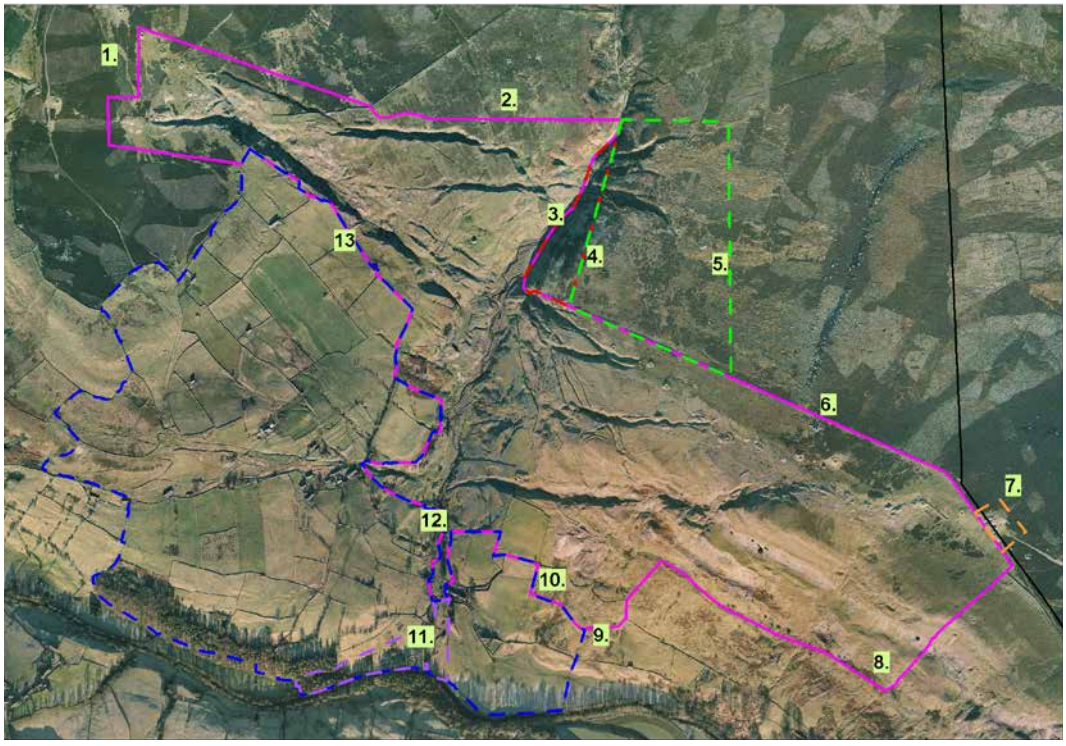


Figure 12.21 Potential boundaries for the Fell End – Slei Gill – Tanner Rake site over 2002 digital vertical aerial photography

13. Discussion

13.1 Form of Designation

Despite being discussed above primarily in reference to the long-term management and conservation of landscape-scale NI sites, it is clear from much of the preceding assessment that the level of designation or protection ultimately applied to such sites must be one of the first issues addressed, as it dictates much of what follows.

Despite this pilot being commissioned primarily to examine alternative methods where scheduling may be inappropriate, the first level of designation that should be considered is scheduling itself. It became clear through the course of the case studies that the process of characterisation of a potential NI site may result in a recommendation that the most applicable route for long-term conservation is the scheduling of discrete, albeit sometimes extensive components within that landscape.

A case can also be made for designation by scheduling on a landscape scale and it is worthwhile to question the principle that scheduling should not be the *de facto* instrument of conservation for archaeological remains. Whilst there are demonstrably cases where sufficient evidence is not available to apply the test of national importance or the site in questions falls outside the current definition of 'monument' (not the case with landscape-scale NI sites), there are also those sites where the discretion of the Secretary of State (under relevant advice) is applied to prevent scheduling. The recent government statement on Scheduled Monuments (DCMS 2013) highlights that discretion is used where sites can be protected through:

- "other forms of heritage designation (such as Protected Wreck Sites);
- regulating potentially harmful activities through the planning system or other controls (such as the marine licensing regime);
- promoting beneficial stewardship by land managers, including through targeted grant aid; or by
- being located in places that have legal protection for other reasons – such as their biodiversity or geodiversity value (including Sites of Special Scientific Interest or Marine Conservation Zones) – provided that the prevailing management regime is conducive to this" (DCMS 2013, 5).

The converse of this, however, is that designation does imply long term protection whereas the planning system in particular is prone to decision-making by local politicians who may not take the national picture fully into account and can only protect against planning related threats. Similarly protection through targeted grant aid such as agri-environment schemes will only last as long as their funding streams.

The application of scheduling to more sites and to larger areas would likely be a more acceptable approach to many stakeholders if there was a conservation management instrument allowing nominated works to be undertaken without the need for repeated application for and granting of Scheduled Monument Consents. The obvious candidate for such an approach would be the Heritage Partnership Agreement (HPA), which currently only has legislative support in terms of Listed Buildings but could be extended to Scheduled Monuments.

In order to provide a nationally recognised designation with legal underpinning specifically aimed at landscape-scale sites of archaeological interest (where scheduling is not a preferred option), then alteration to existing legislation would be required, primarily in terms of redefining either Areas of Archaeological Importance (AAIs) or Conservation Areas (CAs). Redefining AAIs would be more complex as, in order to be effective, the issue of who bears the cost of archaeological investigation would need to be addressed and this would likely prove contentious. In terms of redefining Conservation Areas, this would require amendment to recognise 'archaeological interest' in addition to aesthetic and architectural, though there would also be a need to redefine the terms under which Conservation Area consent would be required within an 'Archaeological Conservation Area', given that this would be the principal instrument of constraint. Despite these drawbacks there are certain benefits to this approach, mainly in terms of the model of Conservation Areas being a demonstrably successful way of managing heritage at a landscape-scale, although many activities which would be damaging to a monument would be classified as permitted development as far as a Conservation Area is concerned and thus not covered by the existing constraint processes.

Not requiring the same level of legislative underpinning, there is the potential for the introduction of a nationally recognised designation such as that for Listed Parks and Gardens, where there are no specific constraints as a result of the designation, but such sites are a material consideration in the planning process. The proactive identification and

delineation of a landscape as a nationally important site, however, would also provide augmented protection within the planning system under the provisions of NPPF and help attract additional resources.

While altering existing legislation or the introduction of a new national designation is unlikely to be a priority at the present time given the substantial logistics and cost of such an undertaking, a short-term option for identifying and managing landscape-scale sites of national importance may well be through a form of local designation. It should be stressed, however, that current logistical constraints should not preclude planning for a more-robust long-term solution to the issues of nationally important archaeological landscapes at a national scale.

Although not specifically aimed at identifying nationally important landscapes, the Premier/Principal Archaeological Landscapes (PALs) discussed in various sections above provide a useful basis for such a designation. Specific methodological points are highlighted below, but the case studies and assessment have indicated that a local designation for nationally important archaeological landscapes would provide clear protections within the planning process (through application of NPPF paragraph 139) and could serve as priority areas for agri-environment stewardship focusing on heritage conservation, as well as priority targeting for active management through internal or external funding. In order to deliver this, however, such a local designation would likely require resourcing and some form of support within local planning policy and/or local authority vision statements and management plans, and even then it would not provide any protection against damaging activities that a land owner or land manager might wish to carry out which do not require consent through either the planning process or any agri-environment agreement constraint or similar.

13.2 Potential Methodology

13.2.1 *Identification*

In terms of a practical method for identifying landscape-scale sites, there are a number of key principles identified through the course of the assessment.

It is clear that to get to the final designation of a nationally important archaeological landscape, there must be staged approach to site identification, characterisation and delineation. Through the assessment and, principally, the case studies, the necessity of using local knowledge has been strongly demonstrated. The initial rapid discrimination of candidate case studies for this project used all available information within the YDNPA HER but was primarily based on discussion between officers with substantial and long-standing knowledge of the specific archaeological associations of the local area.

This process of rapid discrimination based on filtering all available information by those with the greatest breadth of local knowledge can be contrasted to a semi-automated approach using GIS processing capability. Whilst there is undeniable power in the ability of GIS to provide (nominally) objective abstractions from underlying data, it is considered an unsuitable technique for identifying nationally important landscapes, due predominantly to the wide variability of the data upon which such a process would need to be based. Should a GIS-led process be trialed, it would be necessarily based on the digital component of an HER for a given area, the contents of which will not have been compiled for such a purpose. The process of 'cleaning' and concordance of all the necessary datasets to a point where an automated process could reliably abstract and delineate landscape-scale sites of national importance would be prohibitively costly.

The Fell End - Slei Gill – Tanner Rake case study provided a clear illustration of the potential problems with abstracting solely from HER data. In this case the underlying monuments records had been cleaned and enhanced for preparation of the SHINE dataset (a different aim and set of criteria to identifying and delimiting NI sites) but had still omitted a significant part of the archaeological extent of the mining complex.

13.2.2 *Articulation of Importance*

Articulation of the contributory factors of importance or significance of a landscape is key to the process, and the assessment and case studies (Bolton Parks in particular) have demonstrated that characterisation is most usefully based on the scheduling criteria. Description in these terms is necessary to demonstrate the national importance of a landscape, upon which the rest of the designation process is predicated, but it also creates a clear link with the assessment and management of scheduled sites.

A significant part of the assessment examined the method and theoretical underpinning that was prepared for the now-discontinued Monuments Protection Programme (MPP). Several principles and approaches are of direct relevance to the identification and characterisation of landscape-scale NI sites, but two are of particular use. The first is the enhancement of the scheduling criteria to include sub-categories under four of the top-level criteria (allowing greater clarity in description of importance) and the dividing of the criteria against the assessment stages to which they have most relevance. Such an approach reinforces the staged 'discrimination to characterisation' approach found to be relevant and useful in the case studies and assessment of other methods.

In addition to the modified scheduling criteria, the assessment has demonstrated that recognition of some form of landscape amenity is key when characterising landscape-scale sites, as is a consideration of the extent of coherent remains. The designation of PALs in South West England have demonstrated that local or regional distinctiveness is a final key characteristic largely particular to landscape-scale sites or historic landscapes, for example the drystone walls and field barns of the northern Yorkshire Dales are a locally distinctive feature not found elsewhere.

The staged approach of MPP, also illustrates the second key methodological approach that could be of relevance to NI sites: the use of an 'objective' scoring system. In terms of landscape-scale sites, undertaking scoring at an early stage when prospective sites are being identified is not considered to be particularly useful. However, when applied as part of detailed characterisation, particularly in terms of assessing the relative significance of the component monuments within a landscape, it provides a transparent and repeatable method. A relative assessment of the components of a landscape also provides the baseline for prioritisation and assignment of conservation efforts, particularly relevant in a core-buffer model of delineation.

The explanation and articulation of the characterisation of NI sites can be necessarily undertaken in the language of national importance using the criteria outlined above, but it is clear that a succinct statement of significance for each landscape in 'plain' language would be of substantial benefit in communicating and disseminating that value beyond a small circle of heritage curators and land managers.

13.2.3 *Delimiting Landscapes*

A broad discussion of the inherent issues and benefits of delineation is included within the main body of the assessment above, but in terms of creating a useable means of identifying areas of national importance in order to provide long-term protection, it is considered necessary to spatially delimit those landscapes with a clear boundary. How that boundary is drawn, however, is a more nuanced issue. Whilst each individual landscape will have specific requirements (one of the reasons why a semi-automated GIS approach to delineation would be unsuitable) there are a couple of criteria explored in the main assessment that will be applicable in most situations including:

- Areas of known survival, whether visible or not. Such an approach can often be a useful 'first pass' particularly in areas where NMP aerial photograph transcription or similar is included as a layer within the relevant HER.
- Natural topographic boundaries
- Modern (and in most cases historic) land boundaries. This also has the benefit of potentially tying the landscape designation to land ownership and management and thus to agri-environment schemes.

Whilst a tentative boundary may, and in most cases will be applied at an early stage in identifying an NI site, the final delineation must accompany, and in certain respects follow, the assessment and characterisation of the specific values of a landscape. Indeed, the defining criterion of delineation must always be whether the features being included can be categorised as nationally important in terms of their contribution to the overall landscape.

The final significant aspect of delineation explored is the application of a core-buffer model. Such an approach is a response to the issues of 'blank areas' within what is otherwise a coherent and articulated archaeological landscape, and also addresses the problem whereby a single boundary fails to adequately represent internal differences of clustering of significant monuments. A core-buffer model would not be applicable to existing designations such as scheduling, as it would require a tiered approach to restriction and enforcement that is not allowed for in the current legal underpinning. A core-buffer model would be more applicable, however, in a locally recognised designation and would provide an easy and useful distinction between areas of active and passive management. The whole landscape would benefit from the augmented 'passive' protection of being a recognised nationally important site in the planning process, and the most significant component monuments and groups of monuments would become priority areas for agri-environment stewardship and 'active' conservation management as recognised in planning policy.

14. Conclusion

The initial brief of this project was to examine the methods and criteria by which NI sites of a landscape-scale are identified, characterised and managed, and what the benefits and issues are of undertaking such an exercise. There are many and varied landscape-scale NI sites and the conservation of both their constituent monuments and spatial integrity is an important factor in maintaining their importance.

While the implementation of large-scale scheduling has been seen by some as too constraining and logistically challenging to represent the best conservation management solution, implementation of detailed management plans on the model of the Heritage Partnership Agreement would go a long way to mitigating any constraints while still providing essential statutory protection as a back stop if required, though this is applicable with all of the potential designations that could be applied.

Should there be an appetite for finding a solution through altering legislation then both Areas of Archaeological Importance and Conservation Areas could represent potential designations that could be fitted to the requirements of landscape-scale NI sites, the former being rather more appropriate to pure archaeological landscapes.

Without alteration to existing legislation, perhaps the best approach for identifying and protecting NI sites is through a form of local designation carrying weight within local planning policy and recognised by other agencies. A proactive process of identification led by local authorities could draw upon the existing methods of projects such as the MPP to apply local expert knowledge in a nationally consistent approach. Such an approach would highlight landscape-scale NI sites for augmented protection under NPPF, as well as forming the basis for funding priorities and targeting Countryside Stewardship on heritage management. Such an approach would, however, require the support of local authorities and an appetite to undertake it, and it must be recognised that without central funding and logistical support this may be unlikely in the current climate.

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