



# Chapter 7:

## Cultural Heritage



State of the Environment Report

## EAST AYRSHIRE COUNCIL STATE OF THE ENVIRONMENT REPORT CHAPTER 7 – CULTURAL HERITAGE

### SUMMARY

#### **Key Messages**

##### **Cultural Heritage Resource of East Ayrshire**

The cultural heritage of East Ayrshire comprises some 2680 archaeological sites, monuments, buildings and artefacts that are recorded on the Historic Environment Record (HER). The register of archaeology is maintained by the West of Scotland Archaeology Service (WoSAS) on behalf of East Ayrshire Council with records of listed buildings, scheduled monuments and conservation areas covered by Historic Environment Scotland.

Cultural heritage sites in East Ayrshire with statutory or non-statutory designation comprise:

- 30 Scheduled Monuments (inclusion of Bogton Airfield in 2018)
- 44 category A Listed Buildings
- 334 category B Listed Buildings
- 362 category C Listed Buildings
- 26 Conservation Areas
- 7 Inventory Historic Garden & Designed Landscapes
- 1 Inventory Battlefield
- 1877 undesignated cultural heritage sites

There are currently 60 buildings, either listed or within conservation areas, which are considered to be 'at risk' according to the Buildings at Risk Register, with 4 of these under restoration.

#### **Trends in Cultural Heritage**

The cultural heritage of East Ayrshire has been affected by several distinct trends over the last few decades, some of which have led to direct impacts on the cultural heritage resource. Among these trends are:

- The change from deep mining to surface coal mining, which has led to the remains of earlier mines and pits being destroyed by the later surface coaling operation;
- The development of infrastructure (e.g. M77);
- The development of housing;
- Renewable energy initiatives, including windfarms and wind turbines;
- Afforestation; and
- A number of listed buildings have been demolished, mostly due to poor maintenance by the owners that result in them becoming a danger to the public.

Records show an overall reduction in the number of A listed buildings at risk and levels of buildings added to the register have also declined between 2009 and 2013. The current level of buildings at risk is expected to be maintained rather than improving further across Scotland as a result of a group of buildings which are long standing entries on the register and have particular challenges to restoration.

It is important to note that loss of cultural heritage features is sometimes an unavoidable result of development and where impacts are identified conditions to protect where possible or record interest are often applied to planning consents in agreement with Historic Environment Scotland and / or the local authority archaeologist.

**State and Trend**

Topic	Assessment Grade		Confidence	
	Very Poor	Very Good	In Grade	In Trend
Historic Environment			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Recent Trends**

Improving
  Deteriorating
  Stable
  Unclear

**Grades**

Very Good
  Very Poor

**Confidence**

- Adequate high-quality evidence and high level of consensus
- Limited evidence or limited consensus
- Evidence and consensus too low to make an assessment

## OVERVIEW

The cultural heritage of Scotland consists of the physical evidence of past human activity and includes archaeological landscapes, cultural heritage sites and monuments, individual buildings, gardens and designed landscapes, artefacts and archives. All of these elements comprise the historic environment, which enriches landscapes and townscape, and is central to the country's distinctive character. Cultural heritage makes a major contribution to Scotland's national identity, culture and economy, and is an important, non-renewable asset<sup>1</sup>. The known components that make up the historical landscape of Scotland are recorded by Historic Environment Scotland.

The historic environment of East Ayrshire has been shaped by millennia of human influence and has created a landscape that combines prehistoric remains, such as standing stones, cairns and cup-and-ring marked stones, with the agricultural and industrial remnants of more recent human activity. These types of visual reminders create a link with the past, and help to instil a sense of belonging, which allows people to value, understand and enjoy the historic environment of their local area. Visitors who come to East Ayrshire for the purpose of visiting cultural heritage remains bring economic benefits to local communities.

### 1.1 Cultural Heritage Resource of East Ayrshire

The cultural heritage of East Ayrshire comprises some 2680 archaeological sites, monuments, buildings and artefacts that are recorded on the Historic Environment Record (HER). The register of archaeology is maintained by the West of Scotland Archaeology Service (WoSAS) on behalf of East Ayrshire Council with records of listed buildings, scheduled monuments and conservation areas covered by Historic Environment Scotland.

Cultural heritage sites in East Ayrshire with statutory or non-statutory designation comprise:

- 30 Scheduled Monuments<sup>2</sup>
- 44 category A Listed Buildings<sup>3</sup>
- 334 category B Listed Buildings<sup>3</sup>
- 362 category C Listed Buildings<sup>3</sup>
- 26 Conservation Areas<sup>3</sup>
- 7 Inventory Historic Garden & Designed Landscapes<sup>3</sup>
- 1 Inventory Battlefield<sup>3</sup>
- 1877 undesignated cultural heritage sites (e.g. elements of local importance and on local inventories such as non-listed buildings, cropmarks, find spots)<sup>4</sup>

### 1.2 Description of the Cultural Heritage Landscape

#### **Scheduled Monuments**

Scheduled Monuments are of national or international importance and are protected under the Ancient Monuments and Archaeological Areas Act 1979 and the Historic Environment (Amendment) (Scotland) Act 2011.

#### **Listed Buildings**

Listing of a building or structure with special architectural or historic interest is provided through legislation and the Planning (Listed Buildings and Conservation Areas) (Scotland) Act

<sup>1</sup> Critchlow-Watton, N., Dobbie, K.E., Bell, R., Campbell, S.D.G., Hinze, D., Motion, A., Robertson, K., Russell, M., Simpson, J., Thomson, D. and Towers, W. (eds) (2014) Scotland's State of the Environment Report, 2014. Scotland's Environment Web.

<sup>2</sup> <http://historicscotland.maps.arcgis.com/apps/Viewer/index.html?appid=18d2608ac1284066ba3927312710d16d>

<sup>3</sup> <http://historicscotland.maps.arcgis.com/apps/Viewer/index.html?appid=18d2608ac1284066ba3927312710d16d>.

<sup>4</sup> Information from WoSAS 11 June 2015.

1997. Historic Environment Scotland is responsible for listing buildings of particular historical or architectural merit. Buildings are assigned to one of three categories according to their relative importance. All listed buildings receive equal legal protection, which applies to the interior and exterior of the building, regardless of its category<sup>5</sup>.

- Category A: buildings of national or international importance, either architectural, historical, or fine, little altered examples of a particular period, style or building type.
- Category B: buildings of regional (or more than local) importance, or major examples of a particular period, style or building type, which may have been altered.
- Category C: buildings of local importance, lesser examples of any period, style or building type, as originally constructed or moderately altered, and simple traditional buildings that group well with others in categories A and B.

### ***Historic Gardens and Designed Landscapes***

The Historic Environment (Amendment) Scotland Act (2011) made it a statutory duty for Historic Environment Scotland to compile and maintain an Inventory of Gardens and Designed Landscapes in Scotland<sup>6</sup>. Sites on the inventory of Historic Gardens and Designed landscapes are of national importance and should be taken into account during the planning process.

### ***Conservation Areas***

Conservation areas are described by the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 "as areas of special architectural or historic interest, the character of which it is desirable to preserve or enhance". Local planning authorities are required to determine which parts of their area should be safeguarded due to their architectural or historic interest, to ensure that any new development pays respect to or enhances their character<sup>7</sup>.

### ***Battlefields***

Historic Environment Scotland compiles the Battlefield Inventory which is the first dedicated designation for nationally important battlefields in Scotland. Additional protection of battlefield features is provided through existing legislation for scheduled monuments, listed buildings, gardens and designed landscapes, and conservation areas. Historic Environment Scotland works closely with planning authorities and relevant public bodies to ensure that Inventory sites are taken into account in their plans, policies and decision-making processes.

### ***Undesignated cultural heritage***

Most of the historic environment in Scotland and East Ayrshire is not covered by statutory designation and therefore is not afforded national protection from development. Protection of local interest is covered by individual local authorities and recorded in the Historic Environment Record (HER)<sup>8</sup>. Typically sites with cultural heritage interest are privately owned. WoSAS has assessed some 964 sites of interest on the HER for East Ayrshire, and has identified 557 of these as being archaeologically sensitive. Historic Environment Scotland note in Scotland's Historic Environment Audit 2014<sup>9</sup> that the perceived scale of the undesignated resource is around 90-95% of the total resource.

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<sup>5</sup> The Historic Environment (Amendment) (Scotland) Act 2011.

<sup>6</sup> <http://www.historic-scotland.gov.uk/gardens.pdf>

<sup>7</sup> The Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997

<sup>8</sup> <http://www.wosas.net/search.php>

<sup>9</sup> SHEA Scotland's historic environment Audit 2014

## STATE AND TREND – DETAILED ANALYSIS

### 2.1 Overview – Cultural Heritage

#### **State**

The records maintained by Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) and West of Scotland Archaeology Service (WoSAS) contain much valuable information about the condition of individual cultural heritage sites and monuments at the time the record was made. However, the condition of sites and monuments can change due to variable factors such as erosion, agricultural practices and development.

Within East Ayrshire, WoSAS has carried out assessments of cultural heritage sites, and both RCAHMS and Historic Environment Scotland also undertake such work, allowing Canmore and HER records to be updated. Over the last two decades, the fieldwork carried out by private archaeological contractors has added significantly to East Ayrshire's HER, and a number of previously unknown sites have been recorded for the first time. The work undertaken by archaeological contractors is almost exclusively carried out in response to conditions attached to planning permission for new development which require archaeological investigation of a site prior to development taking place.

#### **Trends in Cultural Heritage**

The cultural heritage of East Ayrshire has been affected by several changes over the last few decades, some of which have led to direct impacts on the cultural heritage resource. Among these changes/influences are:

- the change from deep mining to surface coal mining, which has led to the remains of earlier mines and pits being destroyed by the later surface coaling operation;
- the development of infrastructure (e.g. M77);
- the development of housing;
- inappropriate development within conservation areas;
- renewable energy initiatives, including windfarms and wind turbines, and afforestation.

### 2.2 Listed Buildings

#### **State**

The buildings at risk register for Scotland was established in 1990 and highlights buildings with architectural or historical significance throughout the country that are considered to be vulnerable to deterioration or demolition through lack of use or maintenance.

Currently, 60 buildings within East Ayrshire are on the BARR, 4 of which are under restoration<sup>10</sup>. Of the other buildings considered to be at risk, these comprise 3 category A Listed Buildings, 19 category B Listed Buildings, 15 category C Listed Buildings and 23 unlisted buildings.

#### **Trend**

In 2013<sup>11</sup>, the Buildings at Risk Register (BARR): Survey of A-listed entries in Scotland noted that:

<sup>10</sup> Buildings at Risk Register accessed 8.3.19

<sup>11</sup> Buildings at Risk Register 2013 Report

<http://www.buildingsatrisk.org.uk/sites/default/files/publications/National%20Report%20BARR%202013%20-%20Final.pdf>

- 8.0% of A-listed entries are at risk (and are included on the Buildings At Risk Register) in 2013, compared to 8.2% in 2011 and 8.7% in 2009. This means that 262 A-listed entries are assessed as at risk out of the 3,264 A-listed entries in the survey scope and assessed.
- Of the 277 A-listed entries on the BARR in 2009, 78 have been removed as they are no longer considered to be at risk. Over this period 63 A-list entries have been added to the BARR.
- At risk levels are higher in rural areas than in urban areas. 5.4% (113) of A-listed buildings in urban areas and small towns are on the BARR, compared to 12.4% (149) in rural and remote areas.

These findings suggest an overall reduction in the number of A listed buildings at risk and levels of buildings added to the register also declining. The current level is expected to be maintained rather than improving further as a result of a group of buildings which are long standing entries on the register and have particular challenges to restoration.

In terms of entries for East Ayrshire, the data shows a general improvement with a reduction in the number of buildings at risk between reporting produced in 2010 and the current register of July 2015 and some notable success:

- There were 68 buildings at risk in February 2010 with a reduction to 56 buildings at risk in 2015.
- 4 buildings were under restoration in 2010 and the same number under restoration in 2015.
- Kilmarnock Opera House which was a long term record on the BARR (entered onto BARR 1990) was restored and opened in 2013 as office accommodation for East Ayrshire Council

East Ayrshire has a small number of buildings which have been present on the register for a number of years:

- Kirkland Park House, Darvel B (entered onto BARR 1990)
- Ochiltree Mill, Ochiltree C(S) (entered onto BARR 1990)
- The Palace Bar, Waterside B (entered onto BARR 1993)

### 2.3 Scheduled Monuments

#### **State**

The scheduling of monuments is an ongoing process that allows Historic Environment Scotland to assess and reassess monuments as our knowledge and understanding of what survives and its importance changes. Historic Environment Scotland lists 30 Scheduled Monuments (with the addition of Bogton Airfield in 2019) within both urban and rural areas of East Ayrshire. These nationally important cultural heritage remains, range in date from prehistory to the twentieth century, and include cairns, castles, farmsteads and industrial remains.

#### **Trend**

The legal protection given to Scheduled Monuments under the Ancient Monuments and Archaeological Areas Act (1979) has meant that planning applications that could have a direct or indirect impact on these remains are subject to stringent controls. In East Ayrshire, the local planning policy regarding Scheduled Monuments is in situ preservation within an appropriate setting<sup>12</sup>. As a result of this control over the direct and indirect effects of

<sup>12</sup> East Ayrshire Local Plan 2010; Policy ENV6.

development on Scheduled Monuments, the general trend has been an improvement in their preservation.

## **PRESSURES**

There are a range of pressures which affect and influence the status and trend of cultural heritage interest in Scotland also applicable to East Ayrshire.

### **3.1 Development**

The Scottish Government's State of the Environment Report 2014<sup>13</sup> identifies the main pressures on the cultural heritage resource as development, lack of maintenance and investment, inappropriate land use, climate change and visitors.

The development necessary to create a vibrant local economy and provide locations for housing, minerals, renewable energy and infrastructure can affect the character of a historical landscape or of individual buildings and monuments. Finding suitable locations for mineral extraction has, and will continue to, put pressure on East Ayrshire's cultural heritage due to the nature of the works requiring extensive ground-breaking and the scale in terms of land area. Typically, mineral sites are also located on land which has not been subject to previous development and is therefore more likely to have un-disturbed undiscovered interest.

Historic Environment Scotland has responsibility for the designation of scheduled monuments, listed buildings, battlefields and gardens and designed landscapes in their respective Inventories. Historic Environment Scotland should be consulted on any development proposal that may have a direct or indirect impact on cultural heritage sites within their remit.

WoSAS maintains the Historic Environment Record for East Ayrshire, and advises East Ayrshire Council on matters relating to cultural heritage. WoSAS should be consulted on all development proposals that may have a direct or indirect impact on cultural heritage sites within their remit. In practice, where a development is proposed, the relevant bodies will be consulted by the local authority in the processing of applications submitted for planning permission, listed building consent or conservation area consent.

#### ***Direct Effects***

Potential adverse direct effects on known cultural heritage features can occur within the boundary of a proposed development area, where avoidance of such features is not possible. There is also the potential for direct effects on as-yet-undiscovered archaeological remains, which may occur where, for example, sub-surface remains are present but have not yet been identified.

Direct effects on known or as-yet-unidentified cultural heritage features may result from:

- Ground-breaking and demolition works related to the construction of the proposed development;
- Movement of machines over or near to sensitive areas, resulting in the disturbance of elements of a feature, including through the rutting and/or compaction of archaeological deposits.

Such effects on the archaeological resource would typically be permanent and irreversible.

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<sup>13</sup> Critchlow-Watton, N., Dobbie, K.E., Bell, R., Campbell, S.D.G., Hinze, D., Motion, A., Robertson, K., Russell, M., Simpson, J., Thomson, D. and Towers, W. (eds) (2014) Scotland's State of the Environment Report, 2014. Scotland's Environment Web.



There is potential for positive effects through development via re-development of historical buildings and also recording of interest that would otherwise not have been identified e.g. through pre-construction excavation where information and any artefacts are submitted.

### **Indirect Effects**

Potential indirect effects comprise effects on the settings of cultural heritage sites and this includes such considerations as the landscape context of the historic environment asset – this is described in detail within Historic Environment Scotland’s document ‘*Managing Change in the Historic Environment: Setting*’<sup>14</sup>. A building’s surroundings or setting contribute to how it is experienced. Impacts upon setting can be localised to the curtilage of a cultural heritage site or broader.

Effects on setting might arise, as a result of new development, from:

- new inter-relationships between features;
- altered relationships of features with the wider landscape within which they sit;
- Changes in significant views to or from features.

Effects can be temporary or permanent, for instance they may only subsist during the construction phase of a development (e.g. scaffolding) or during operational hours of a particular use (e.g. smoke). Not all impacts are adverse – positive impacts can result from re-development of historical buildings and archaeological investigation.

## **3.2 Buildings at Risk**

The primary pressure on the numbers of buildings at risk is economic where location is undesirable or previous use renders a building unfit for modern use without substantive redevelopment. Ownership and the routine maintenance of old buildings can be expensive and when budgets are reduced through low economic growth, there is potential for buildings to fall into a state of disrepair. Long term lack of maintenance such as to roofs, windows and stonework can lead to more extensive problems. Buildings at risk can stay on the register for longer periods of time with increasing decline and new buildings can be added. The availability of grant funding can be a significant driver in terms of restoration of buildings on the register, coupled with local fund-raising

A secondary influence is the availability of skills required to make repairs and availability of materials e.g. stonework.

## **CONCLUSIONS**

### **4.1 Conclusions**

The historic environment of East Ayrshire has been shaped by millennia of human influence and has created a landscape that combines prehistoric remains, such as standing stones, cairns and cup-and-ring marked stones, with the agricultural and industrial remnants of more recent human activity. These types of visual reminders create a link with the past, and help to instil a sense of belonging, which allows people to value, understand and enjoy the historic environment of their local area.

The historic environment has been under protection of legislation and policy with efforts to secure protection of the historic environment first seen within legislation in 1882<sup>15</sup>. Subsequent enhanced protection has come through legislation which designates sites,

<sup>14</sup> <https://www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes/>

<sup>15</sup> Historic Scotland <http://www.historic-scotland.gov.uk/index/heritage/policy/shep.htm>

monuments and buildings across Scotland and within East Ayrshire. The importance placed on cultural heritage is recently set out in 'Our Place in Time - The Historic Environment Strategy for Scotland, 2014' which sets a 10 year strategy for protecting and managing historical buildings and other assets<sup>16</sup>.

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<sup>16</sup> <http://www.gov.scot/Topics/ArtsCultureSport/arts/Historic-environment/Strategy>

## MINERALS

### 5.1 Historic Environment Record and Minerals

The Historic Environment Record for East Ayrshire contains 2681 entries that cover both designated and un-designated cultural heritage sites<sup>17</sup>. The baseline assessment for this report identified 217 individual cultural heritage sites within the local authority area that have been disturbed or destroyed through mineral extraction operations. Of these, 211 have been affected by surface mining, and the remaining 6 by aggregate quarrying. This figure represents just over 8% of the known cultural heritage resource, and includes 3 Scheduled Monuments that have been indirectly impacted by mineral extraction operations.

Of the 47 open cast mines considered in this report, 32 had been the subject of a degree of archaeological assessment and/or investigation prior to the commencement of ground-works, while 14 were not assessed (potential impacts may not have been considered significant), and the status of one is not known (Table 7.1). It is important to note that loss of cultural heritage features is sometimes an unavoidable result of development and where impacts are identified conditions to protect where possible or record interest are often applied to planning consents in agreement with Historic Environment Scotland and / or the local authority archaeologist.

Cultural heritage assessment would be completed for sites where a constraint was identified. One quarry has been subject to an archaeological assessment prior to the commencement of operations with archaeological evaluations had been carried out at a further two. The current status of one quarry, which is within the planning system, is not known (Table 2).

This review of cultural heritage sites within mineral extraction areas, for obvious reasons, cannot take account of previously unrecorded sub-surface remains that have been destroyed. The number of such sites is unquantifiable.

Future open cast mining, quarrying and unconventional gas extraction will be dependent on the identification of suitable locations. Any applications for mineral or gas extraction should be subject to archaeological assessment where a constraint is identified through EIA or non-statutory environmental reporting and, where appropriate, intrusive archaeological investigation prior to the commencement of ground-breaking works.

### 5.2 Scope of Assessment

The assessment takes the form of a desk based assessment of existing archaeological, documentary and cartographic records of sites of cultural heritage value that have been affected by mineral extraction operations within the local authority area of East Ayrshire. It includes an assessment of the potential effects of future mineral and gas extraction, and advises on appropriate mitigation measures.

The desk-based review of the mineral extraction areas comprised the following:

- GIS data from the National Collections was obtained from Historic Environment Scotland;
- GIS data on the local Historic Environment Record (HER) was obtained from WoSAS;
- Information on Conservation Areas was derived from East Ayrshire Council website;
- GIS data on Scheduled Monuments and Listed Buildings in and around the mineral extraction areas was obtained from Historic Environment Scotland;

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<sup>17</sup> Information obtained from West of Scotland Archaeology Service on 11/06/15.

- Digital versions of the Pre-Ordnance Survey maps and various Ordnance Survey maps at 1:2500 and 1:10560 scales, held by the National Library of Scotland, were identified online and examined. Relevant maps range in date from the seventeenth to the early twentieth century;
- Readily accessible primary and secondary historical sources were consulted for information on the history of the local authority area and past land use.

**The assessment has been carried out in accordance with the Chartered Institute for Archaeologists' Code of Conduct and Standards and Guidance for Archaeological Assessment.**

### 5.3 Historical background to mineral extraction

#### **Coal mining**

Coal mining in Scotland can be dated to at least as early as the thirteenth century when erosion revealed coal seams on the coast of East Lothian, on lands belonging to the monks of Dunfermline, who are believed to have been the first to work coal in Scotland. By the end of the fifteenth century, land-owners had realised the potential value of coal seams on their land, with the result that:-

*Acts of Parliament passed in the later years of that century prohibiting the export of coal are evidence of the rise of an extensive trade with foreign countries, the wider development of existing coal-works, and the opening up of new fields to meet the demand. (<http://www.scottishmining.co.uk>).*

In the Medieval period, coal mining appears to have been confined to working outcrops, with the miners following the seam underground, creating *ingoun e'en* (ingoing eyes) that, although now long abandoned, can be found in Ayrshire, Lanarkshire and East Lothian. Where no surface outcrops existed but the coal was at a shallow depth, vertical pits were sunk to the depth of the seam, and the coal was mined in the area around the base of the shaft, creating bell-pits such as those at Grievehill, Powharnal and Galawhistle in East Ayrshire (CHS 7/3, 44/5, 44/9 and 66/17). The slightly later stair-pits could reach much greater depths than bell-pits and the coal seams could be worked for greater distances. The single shaft entrances/exits associated with these mining methods increased the potential for loss of life through fire or collapse, and demands for safer working conditions were eventually addressed by the Coal Mines Regulation Act of 1887 (Butt 1967, 83-85).

In 1896, some 60 coal mines were in operation in East Ayrshire employing 6,594 underground and 1,298 above-ground workers (Peak District Mines Historical Society Ltd). Abandoned coal mines are common in East Ayrshire, most especially in the area between Glenbuck and Cumnock, where mineral railway remains and engine houses seem to dot an otherwise unoccupied moorland (Butt 1967, 89). Many such remains are included in the Historic Environment Record (HER) and National Collections and these historical mine- workings constitute about a quarter of the cultural heritage sites included in this assessment.

Open cast coal mining began in 1942 as a wartime expedient, and early operations were limited to a depth of about 10 m by the size of the excavating plant then available. The increased size and capacity of modern plant means that working depths of over 80 m are common (History of the Angel Mining Website).

In the following assessment, the site numbers refer to the visual register of East Ayrshire surface coal mines (East Ayrshire Council 100023409; see Figure 13.1). The cultural heritage sites (CHS) are prefixed with the site number, and then individually numbered. Further information about the cultural heritage sites can be found in the gazetteer in Appendix 13.1. In each case, all of the known cultural heritage sites recorded within a given OCCS area have been included in the assessment. However, without conducting an extensive field survey of

each OCCS area, it has not been possible to accurately determine which, if any, of the cultural heritage sites have been unaffected by surface mining operations. For example, satellite imagery would suggest that many inhabited farms within OCCS areas have not been directly affected by the mining operations, but this cannot be ascertained without visiting their locations.

### **Quarrying**

Quarrying as an industry has been widespread in Scotland for many centuries, albeit on a relatively small scale, but the improvements in extraction techniques coupled with a higher demand for stone needed for projects such as road-building led to an expansion in quarrying from about the late seventeenth century onwards. Many quarries had been abandoned by the mid-nineteenth century, possibly having been worked-out, and are noted as 'old quarry' on First Edition Ordnance Survey maps.

Writing in 1837, the Reverend Dickie noted that in Dunlop parish "Quarries have been opened in every direction for procuring the stones used in dike-building, draining, &c" (Dickie 1837, 302).

As with former coal mines, old quarries are in themselves part of the cultural heritage of East Ayrshire. Many such sites are noted on historical Ordnance Survey maps, and have been recorded on the East Ayrshire Historical Environment Record and Historic Environment Scotland.

## **5.4 Baseline condition of Cultural Heritage affected by mineral extraction**

A total of 217 known cultural heritage sites that have been adversely affected by mineral extraction operations were recorded within the open-cast mines and aggregate quarries located in East Ayrshire (Figures 7.1 to 7.10 and the Cultural Heritage Technical Appendix). The overwhelming majority of these have been affected by surface mining.

Of the cultural heritage sites affected by mineral extraction, 3 are Scheduled Monuments with statutory designation. The remainder of the cultural heritage sites do not have statutory designation, and consist of:-

- 18 cultural heritage sites that are probably or almost certainly of national importance<sup>18</sup>;
- 3 sites of Regional significance;
- 3 sites of Regional/Local significance;
- 8 sites of Local significance;
- 8 sites of Local/Lesser significance;
- 154 sites of Lesser significance;
- 13 sites of unknown significance;
- 2 uncategorised sites, and
- 5 sites where WoSAS require more information.

While archaeological assessment and fieldwork carried out prior to mineral extraction operations means that records exist for many of these cultural heritage sites, 54 have not been preserved by record and are now lost.

In terms of the impact on the historical landscape, surface coal mining has been one of the most significant impacts in East Ayrshire.

Mineral extraction sites are largely situated in fairly rural areas, with clusters close to Muirkirk, Cumnock, Auchinleck, New Cumnock and Dalmellington. Almost all of the OCCS areas and some of the aggregate quarries included in this review have been the locations of historical

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<sup>18</sup> The Non-Statutory Register as defined in NPPG5 (2008).

mining and quarrying activities, and many of the remains of these earlier operations are now included in the Historic Environment Record (HER) as cultural heritage sites.

Where no cultural heritage assessment was found to have been carried out prior to the commencement of surface mining operations, the possible reasons can be summarised as:-

- A. no loss of the cultural heritage resource (OCCS 15, 20, 27, 30, 32, 38, 60);
- B. a desk-based assessment found no remains to investigate (OCCS 11), and
- C. earlier open-cast workings already exist on the site (OCCS 19, 25, 26, 66).

It is possible that an initial baseline assessments were carried out at OCCS sites 15, 20, 27, 30, 32, 38 and 60 and, there being no known cultural heritage sites affected by the development, no further assessment was required.

In the instance where a desk-based assessment was carried out, no cultural heritage remains were found to lie within the OCCS site and no further assessment was required.

It is possible that the existence of earlier open-cast mine-workings was a factor in any decision not to commission an archaeological assessment at OCCS sites 19, 25, 26 and 66.

No reason could be established for the lack of cultural heritage assessment prior to commencement of surface mining at OCCS 3, 28, 48 and 61.

**Table 1 - Cultural heritage sites within OCCS areas.**

EAC OCCS No.	Site Name	Cultural Heritage Assessment	Further archaeological fieldwork carried out	Potential number of known CH sites lost
2	Milzeoch	No	-	3
3	Skares	Yes	Assessment and standing building survey	16
3a	Skares Area D	Yes	Trial trenching and standing building survey	Figure included in OCCS Site 3.
4	Broomhill	Yes	Walkover survey, excavation and photographic survey	6
7	Grievehill	Yes	Walkover survey and mitigation	5
11	Burnfoot Moor	Yes	Desk-based assessment	None
12	Bankend	Yes	Not known	1
13	Gasswater	Yes	Recording survey and mitigation. Archaeological evaluation.	2
15	Hannahston Farm	No	-	None
17	House of Water	Yes	Topographic survey and standing building survey	None
19	Tardoes	No	-	1
20	Birnieknowe	No	-	None
21	Piperhill	Yes	Area was covered by CH assessment for renewables	7
22	Airdsgreen/ Viaduct	Yes	-	None
23	Spireslack	Yes	Archaeological evaluation	2
24	Chalmerston	Yes	Field survey	22
25	Roughhill	No	-	7
26	Darnconner	No	-	4

EAC OCCS No.	Site Name	Cultural Heritage Assessment	Further archaeological fieldwork carried out	Potential number of known CH sites lost
27	Common Farm	No	-	None
28	Bowes	No	-	1
29	Benbain	Yes	Area was covered by CH assessment for renewables	3
30	Horsecleugh	No	-	None
32	Auchingilsie	No	-	None
33	Chalmerston/ Pennyvenie	Yes	Area was covered by CH assessment for renewables	9
38	Garleffan 1 & 2	No	-	None
42	Greenburn	Yes	Archaeological evaluation and standing building survey	12
44	Powharnal	Yes	RCAHMS field visit	18
46	Laigh Glenmuir	Yes	Trial trenching	None
47	Chalmerston North	Yes	Area was covered by CH assessment for renewables	2
48	Dunstonhill	No	-	7
49	Not known		-	None
50	Grievehill Extension	Yes	Archaeological survey of quarry pits.	1
51	Burnston Remainder	Yes	Walkover survey	3
52	Dalgig Farm	Yes	Archaeological evaluation	2
54	Duncanziemere	Yes	Archaeological evaluation	2
56	Lanehead	Yes	Walkover survey	None
57	Netherton	Yes	-	9
58	Tappet Hill	Yes	Recording of quarries and earthwork enclosure	8
59	Dalfad	Yes	Area covered by assessments for Gasswater OCCS	13
60	Craigman South	No	-	None
61	Burnston Fields Extension	No	-	1
62	Braehead Farm	Yes	Archaeological evaluation	2
63	Carsgailloch Hill	Yes	Not known	5
64	Wellhill Farm	Yes	Archaeological evaluation	5
65	Benbain Remainder	Yes	Area was covered by CH assessment for renewables	12
66	Galawhistle	Yes	Evaluation of east side of OCCS area	17
67	Duncanziemere Extension	Yes	Archaeological evaluation, standing building survey and area excavation.	None

Of the 9 aggregate quarries included in this assessment, only 1 is known to have been the subject of an archaeological assessment, although archaeological evaluations were carried out at a further 2 locations (Table 7.2).

Quarrying operations have destroyed the remains of 6 known cultural heritage sites. Given that most of the quarries had not been assessed for cultural heritage remains, this figure is likely to be higher, as it does not take account of any previously unreported sub-surface remains.

**Table 2 - Cultural heritage sites within aggregate quarries**

Quarry No.	Quarry Name	Cultural Heritage Assessment	Further archaeological fieldwork carried out	Potential number of known CH sites lost
101	Laigh Newton	Yes	Evaluation and excavation	1
102	Loudonhill	No	Evaluation	1
103	Glen Logan Ironstone Works	No	Evaluation	1
104	Clawfin	No	None	None
105	Tincornhill	No	None	1
106	North Drumboy	No	None	1
107	Garpel	N/A	N/A	N/A
108	Craignaught	No	None	1
109	Totherick	No	None	None

### 5.5 Previous Archaeological Investigations

Of the 47 open cast mining locations in East Ayrshire, 29 are known to have been the subject of archaeological assessment prior to the commencement of operations. It is not known if any assessment has been carried out at OCCS 49. Where assessments have been carried out, further archaeological fieldwork, including trial trench evaluation, standing building recording and area excavation has been conducted at 25 of the OCCS areas (Table 7.1).

During subsequent fieldwork, some cultural heritage sites and features have been preserved by record, although many of the archaeological remains may now have been destroyed by open cast mining operations. In total, 208 known cultural heritage sites are likely to have been directly affected by open cast mining operations, and 3 Scheduled Monuments have been indirectly affected.

### 5.6 Consultation

WoSAS has indicated that they will have already commented on many of the OCCS and aggregate quarry sites in their capacity as archaeological advisors to East Ayrshire Council, and would have recommended appropriate mitigation measures to safeguard or record cultural heritage remains in advance of the commencement of mineral extraction. WoSAS was also consulted on the State of the Environment Report during its production.

### 5.7 Assessment of surface coal mines in East Ayrshire and Impacts on Cultural Heritage

There are a range of minerals sites where there is recorded loss of cultural heritage features and these include features such as:

- Agricultural Features such as sheepfolds, crop marks and farm buildings;
- Settlement features such as houses, church and manse, blacksmith workshop etc.;
- Industrial remains including a former quarry and a former colliery and brickworks with associated structures.

The records indicate indirect impacts on a number of features of cultural heritage interest including designated sites where surface coaling operations have affected the setting of these features.



A detailed review of impacts from surface coal working is provided in Appendix 1.

## 5.8 Potential Impacts from Future Minerals Extraction

### ***Open Cast Mining and Aggregate Quarrying***

Open cast mining and quarrying are, by their nature, destructive methods of mineral extraction, and have already led to the loss of over 200 known cultural heritage sites within East Ayrshire (see Paragraph 5.4). The archaeological assessments and field surveys that have been carried out prior to commencement of mineral extraction operations have recorded previously unknown remains, which have been of great benefit in enhancing our understanding of historical land use, but such assessments are limited in their ability to record only visible, above-ground remains.

Many cultural heritage sites exist only at sub-surface level and, with the exception of some cropmarks, are not recorded by HER or Historic Environment Scotland as their presence is as-yet unknown. The potential for previously unknown sub-surface cultural heritage remains being encountered can be gauged to a degree through studies such as desk-based assessments, and sub-surface remains are frequently uncovered during topsoil stripping and evaluation trial trenching over development areas. Sub-surface remains are more at risk from future mineral extraction operations than upstanding cultural heritage sites, as we simply do not know where they are located, and how significant they are.

While assessment and field survey have resulted in the addition of new sites to Historic Environment Scotland, these methods of recording cannot prevent the loss of or damage to as-yet unknown, sub-surface cultural heritage sites. It is, therefore, anticipated that the cultural heritage resource of East Ayrshire will be further directly impacted by future open cast mining and aggregate quarrying activities.

In addition to the direct impacts, future mineral extraction operations could potentially have indirect impacts on cultural heritage assets. Such impacts can occur when development affects the setting of, for example, a building or archaeological site. Indirect impacts are usually visual in nature. Visual impacts can be of temporary duration, and the magnitude of any such impact may change over time, becoming more or less intrusive. Restoration of mineral extraction sites can substantially reduce or nullify any indirect impacts on cultural heritage assets.

### ***Unconventional Gas Extraction***

The anticipated effects of unconventional gas extraction on the cultural heritage resource are not easy to quantify. A report prepared by AMEC Environment & Infrastructure for the Department of Energy and Climate Change states that for each extraction site, between 20 and 240 test boreholes would be drilled and between 30 and 120 well pads, each up to 3 hectares in size, would need to be developed<sup>19</sup>. The AMEC report also states that 'Pad preparation and provision of associated infrastructure . . . are likely to require the clearance of vegetation and loss of soil layers and compaction<sup>20</sup>. The removal of soil layers could result in significant and permanent adverse direct impacts upon any sub-surface archaeological deposits, remains or artefacts.

In addition to the above potential direct impacts, there is potential for significant adverse indirect effects on the cultural heritage resource from unconventional gas extraction. Such effects are likely to be visual in nature, and could arise when the setting of a cultural heritage monument is adversely affected by, for example, construction activities and associated machinery. Indirect effects are not necessarily permanent and may be reversed.

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<sup>19</sup> AMEC Environment & Infrastructure UK Limited 2013, x

<sup>20</sup> Ibid., xvii

## 5.9 Mitigation

The effects of development upon the cultural heritage resource can be quantified as positive, neutral or negative, depending upon the type and scale of any impact, and the significance of the particular cultural heritage asset(s) affected. The assessment of effects is subjective and is based on specific elements such as rarity, type of feature, setting and location.

### *Mitigation of Direct Effects*

Direct effects relate to the physical effect of the development on cultural heritage features. These effects most often occur during ground-works, where subsoil deposits are disturbed or removed, resulting in damage to or destruction of cultural heritage features.

Direct effects can often be avoided during the design stage, when it may be possible to avoid damage to or destruction of the cultural heritage resource through alternative layouts. Mitigation through avoidance relies on the early identification of cultural heritage remains, which can be achieved by carrying out an archaeological desk-based assessment and walkover survey, followed by an archaeological evaluation through trial trenching.

Where cultural heritage remains are known, or where there is a likelihood that such remains will be encountered, current local and national planning policy and guidance should be utilised in order to preserve and/or record the archaeological resource.

### *Indirect Effects*

Indirect effects are most often visual in nature, and occur where a development affects the setting of statutorily and non-statutorily designated cultural heritage features. These include Listed Buildings, Scheduled Monuments, Conservation Areas, Historic Battlefields and Inventory Gardens and Designed Landscapes. While the potential effects are primarily visual in nature, there are instances where the setting of a cultural heritage feature may be affected even when important views to or from that feature are not affected, for example, where the development affects the curtilage of a listed building but is not visible in important views from or to that building.

There is no single form of mitigation that can reduce or remove all indirect adverse effects. This is best achieved on an individual basis that will vary depending on factors such as the location of a particular monument, its designation, its current setting and the nature of the indirect impact.

Local, regional and national planning policies and guidance should be utilised in order to minimise or negate any significant indirect adverse effects on the cultural heritage resource. WoSAS and Historic Environment Scotland should be consulted early in the planning process in order to prevent or minimise any indirect adverse effects that a development may have on the cultural heritage resource.

## 5.10 Conclusions

There is a significant history of minerals extraction in East Ayrshire with some evidence that there have been previous impacts on cultural heritage.

Mineral extraction by its nature requires significant ground breaking and removal of material which can give rise to both direct and indirect effects. Typically, a cultural heritage assessment would be produced as part of planning and consenting in consultation with the council archaeologist and Historic Environment Scotland and mitigation agreed to protect or conserve interest or to record it prior to its destruction.

No unconventional gas extraction is currently occurring in East Ayrshire and East Ayrshire is not a primary target for either shale gas or coal bed methane exploration at the time of writing. Both these energy sources are controversial and there is considerable public anxiety about their potential to cause environmental damage. Given the relatively recent development of

onshore unconventional gas operations in the UK, however, there is very little information available about their environmental impact. It is assumed that a cultural heritage assessment would be produced as part of any unconventional gas application.

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Ayrshire Joint Structure Plan 2007
East Ayrshire Local Plan 2010
East Ayrshire Opencast Coal Subject Plan

### GLOSSARY OF KEY TERMS

**Conservation Areas** - Conservation areas are described by the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997 "as areas of special architectural or historic interest, the character of which it is desirable to preserve or enhance". Local planning authorities are required to determine which parts of their area should be safeguarded due to their architectural or historic interest, to ensure that any new development pays respect to or enhances their character.

**Battlefields** - Historic Environment Scotland compiles the Battlefield Inventory which is the first dedicated designation for nationally important battlefields in Scotland. Additional protection of battlefield features is provided through existing legislation for scheduled monuments, listed buildings, gardens and designed landscapes, and conservation areas. Historic Environment Scotland works closely with planning authorities and relevant public bodies to ensure that Inventory sites are taken into account in their plans, policies and decision-making processes.

**Buildings at Risk Register** - All buildings on the Buildings at Risk Register are of architectural or historic importance and considered at risk or under threat

**Historic Environment Record (HER)** - record of archaeological sites and historic buildings for East Ayrshire

**Historic Environment Scotland (HES)** - lead public body established to investigate, care for and promote Scotland's historic environment

**Historic Gardens and Designed Landscapes** - The Historic Environment (Amendment) Scotland Act (2011) made it a statutory duty for Historic Environment Scotland to compile and maintain an Inventory of Gardens and Designed Landscapes in Scotland. Sites on the inventory of Historic Gardens and Designed Landscapes are of national importance and should be taken into account during the planning process.

### **Listed Buildings**

Listing of a building or structure with special architectural or historic interest is provided through legislation and the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997. Historic Environment Scotland is responsible for listing buildings of particular historical or architectural merit. Buildings are assigned to one of three categories according to their relative importance. All listed buildings receive equal legal protection, which applies to the interior and exterior of the building, regardless of its category<sup>21</sup>.

- Category A: buildings of national or international importance, either architectural, historical, or fine, little altered examples of a particular period, style or building type.
- Category B: buildings of regional (or more than local) importance, or major examples of a particular period, style or building type, which may have been altered.
- Category C: buildings of local importance, lesser examples of any period, style or building type, as originally constructed or moderately altered, and simple traditional buildings that group well with others in categories A and B.

**Scheduled Monuments** - Scheduled Monuments are of national or international importance and are protected under the Ancient Monuments and Archaeological Areas Act 1979 and the Historic Environment (Amendment) (Scotland) Act 2011.

**OCCS** – Opencast Coal Site

**RCHAMS** – Royal Commission on the Ancient and Historical Monuments of Scotland which is now part of Historic Environment Scotland (HES)

**Unconventional gas** - The term unconventional gas refers to natural gas held in rocks that cannot be exploited using traditional methods. Shale and coal are source rocks for unconventional gas.

**Undesignated cultural heritage** - Most of the historic environment in Scotland and East Ayrshire is not covered by statutory designation and therefore is not afforded national protection from development. Protection of local interest is covered by individual local authorities and recorded in the Historic Environment Record (HER). Typically sites with cultural heritage interest are privately owned. WoSAS has assessed some 964 sites of interest on the HER for East Ayrshire, and has identified 557 of these as being archaeologically sensitive. Historic Environment Scotland note in Scotland's Historic Environment Audit 2014<sup>22</sup> that the perceived scale of the undesignated resource is around 90-95% of the total resource.

**WoSAS** - West of Scotland Archaeology Service

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<sup>21</sup> The Historic Environment (Amendment) (Scotland) Act 2011.

<sup>22</sup> SHEA Scotland's historic environment Audit 2014

## APPENDIX 1

### DETAILED REVIEW OF IMPACTS ON CULTURAL HERITAGE FROM SURFACE COAL MINE WORKING IN EAST AYRSHIRE

#### **OCCS 2: Milzeoch**

No archaeological assessment was been carried out prior to development at this site. The remains of quarry scoops, three cropmark locations and an enclosure (CHS 2/1 to 2/3; Figure 7.5) are likely to have been destroyed by surface mining operations. The quarry scoops and enclosure are not considered to have been of great significance, while the crop marks are of unknown significance.

#### **OCCS 3 and 3a: Skares and Skares Area D**

An archaeological assessment and standing building survey were carried out in 2003 by CFA Archaeology (WoSAS Event 3101). Sixteen cultural heritage sites (CHS 3/1 to 3/16; Figure 7.5) lie within the boundary of the open cast mine. These comprise eight cropmarks, two farmsteads, a sheepfold, a former quarry, a smithy, a former colliery, and two areas of industrial remains. Of these, only Hindsward Farm appears to have been preserved by record. With the exception of the cropmarks, which are of unknown significance, none of the remains are considered to be of great significance.

Bibliographic reference: Hamilton 1998  
Cressey and Kirby 2003

#### **OCCS 4: Broomhill**

An archaeological assessment (WoSAS Event 142) and walkover survey found six cultural heritage sites within the boundaries of these open cast mines (Figure 7.8). These comprise three industrial sites, a cottage, a farmstead and a railway junction/station (CHS 4/1 to 4/6). All of these sites are of lesser archaeological significance.

Bibliographic reference: Cressey 1994

#### **OCCS 7: Grievehill**

CFA Archaeology carried out an assessment of this site in 1996 (WoSAS Event 1067), and subsequently preserved by record two roads, a bell pit, a sheepfold and industrial remains (CHS 7/1 to 7/5; Figure 7.4). A coal road (CHS 7/1) is considered to be potentially of national significance, and a bell-pit (CHS 7/3) is of Local/Lesser significance. The remainder of the sites are considered to be of lesser significance.

Bibliographic references: Cressey 1996b  
Cressey 1998  
Kirby 2005  
Suddaby 2007  
White, Richardson & Kirby 2008

#### **OCCS 11: Burnfoot Moor**

A desk-based assessment carried out in 2001 did not identify any sites of archaeological interest within the development area (Figure 7.2).

Bibliographic reference: Rosenberg 2001

#### **OCCS 12: Bankend**

An archaeological assessment (WoSAS Event 935) carried out in 2001 by John Samuels Archaeological Consultants did not identify any sites of archaeological interest. A former farmstead (CHS 12/1) of lesser significance may have been destroyed by surface mining operations (Figure 7.2).

Bibliographic reference: Rosenberg 2001

### **OCCS 13: Gasswater**

Four phases of archaeological fieldwork (including WoSAS Event 177) were carried out at Gasswater. A recording survey at the north-east of the area recorded thirteen sites, including turf or turf and stone banks, enclosures and buildings of possibly medieval/post-medieval date, and later features including three small collieries. CFA Archaeology carried out an archaeological survey, during which several features were discovered and a mitigation report was made. In 1998, G.U.A.R.D conducted an archaeological evaluation of the site, and recommended that further investigation should be carried out. An archaeological evaluation carried out in 2000 uncovered a substantial turf and earth bank field boundary, a sub-rectangular farmhouse and a complex of nineteenth century livestock enclosures. One building of potentially national significance and one enclosure of lesser significance (CHS 13/1 and 13/2; Figure 7.3) may have been directly affected by surface mining.

Bibliographic references:       Cressey 1996a  
  Atkinson & Duncan 1998  
  Carter 1999  
  Baker 2000, 2001

WoSAS Archive:                   229 and 866

### **OCCS 15: Hannahston Farm**

No archaeological assessment has been carried out for this development, and no known cultural heritage sites have been lost or disturbed through surface mining operations (Figure 7.8).

### **OCCS 17: House of Water**

A standing building survey and topographic survey (WoSAS Event 1177) were carried out in advance of OCCS mining (Figure 7.6). No known cultural heritage remains have been affected by mining operations.

Bibliographic reference:       Seretis & Arthur 2003

WoSAS Archive:                   1579

### **OCCS 19: Tardoes**

No archaeological assessment has been carried out for this development and no known cultural heritage remains have been lost or disturbed through surface mining operations (Figure 7.2).

### **OCCS 20: Birnieknowe**

No archaeological assessment has been carried out for this development and no known cultural heritage remains have been lost or disturbed through surface mining operations (Figure 7.3).

### **OCCS 21: Piperhill**

No archaeological assessment was carried out for open cast mining, although the area was covered by an assessment for South-West Scotland Renewables Connection Project (WoSAS Event 4394). The surface mining operations has had a significant indirect impact on the setting of Auchencloich Castle Scheduled Monument (CHS 21/3). A further seven cultural heritage sites may have been directly affected by surface mining (Figure 7.5).

Bibliographic reference:       CFA Archaeology Limited 2008

### **OCCS 22: Airdsgreen/Viaduct**

A survey and evaluation (WoSAS Event 4342) were undertaken in April 2010 in advance of coal extraction. The work focused on the settlement of Cairniebottom, which cartographic information suggests consisted of a single long building and associated enclosure, constructed after 1832 and abandoned prior to 1895. No known cultural heritage sites have been directly affected by surface mining (Figure 7.2).

Bibliographic reference: Murray 2010

#### **OCCS 23: Spireslack**

An archaeological evaluation was carried out in advance of open cast mining (WoSAS Event 167). Subsequent excavation confirmed the presence of structures associated with mines serving the short-lived Glenbuck Ironworks (CHS 23/1; Figure 7.2). Excavation of the nineteenth-century farmstead of Stottencleugh failed to confirm the presence of an earlier settlement suggested by map evidence. Trial excavations were carried out on selected archaeological sites within the opencast coal site, confirming the presence of structures associated with mines serving the short-lived Glenbuck Ironworks. The surface mining operations are very likely to have indirectly affected the setting of Glenbuck Ironworks Scheduled Monument. The mining has also resulted in direct impacts on a colliery and field wall that are of lesser archaeological significance (CHS 23/2 and 23/3).

Bibliographic references: Cressey 1997  
Dalland 2000  
Baker 2001

#### **OCCS 24: Chalmerston**

An intensive field study (WoSAS Event 102) was carried out in 1987-88, during which the industrial archaeology associated with the Dalmellington Iron Company and its successor was extensively recorded. Four pre-industrial settlements, including East and West Chalmerston and Benquhat Farms, were also recorded. Twenty-four cultural heritage sites, including one Scheduled Monument, lie within the OCCS boundary (Figure 7.7). Of these, eleven are associated with earlier mine works or quarries, and a further six are agricultural remains. The remaining cultural heritage sites comprise two bridges, a Roman road, one building, a reservoir, and a water course of unknown function. Waterside village and mineral railway (CHS 24/16), which is a nationally important monument, has been indirectly affected by surface mining operations. A Roman road (CHS 24/2) is of regional importance, a mineral railway (CHS 24/11) of local significance and 21 cultural heritage sites of lesser significance have been directly affected by open cast mining.

Bibliographic reference: Hothersall 1989

#### **OCCS 25: Roughhill**

No archaeological assessment is known to have been carried out prior to surface mining. The remains of a former coal mine, three collieries, industrial works and two buildings with enclosures (CHS 25/1 to 25/7) have been destroyed by surface mining operations. Two of the collieries (CHS 25/4 and 25/7) are of local significance as the scenes of a dramatic rescue, whilst the remainder of the sites are of lesser significance.

#### **OCCS 26: Darnconner**

No archaeological assessment is known to have been carried out prior to surface mining. The remains of a brickworks and associated structures, a store, a church and manse, and a mineral railway (CHS 26/1 to 26/4) may have been destroyed by open cast mining (Figure 7.6). With the exception of the manse and church (CHS 26/2) which is of local significance, these cultural heritage sites are considered to be of lesser significance.

#### **OCCS 27: Common Farm**

No archaeological assessment is known to have been carried out prior to surface mining and no known cultural heritage remains have been lost or disturbed through surface mining operations (Figure 7.3).

#### **OCCS 28: Bowes**

No archaeological assessment is known to have been carried out prior to surface mining. The location of one farmstead of lesser significance (CHS 28/1) has been destroyed by open cast mining operations (Figure 7.4).

### **OCCS 29: Benbain**

No archaeological assessment is known to have been carried out prior to surface mining, although the area was covered by a desk-based assessment for the South-West Scotland Renewables Connection Project (WoSAS Event 4394). Three cultural heritage sites of lesser significance (CHS 29/1 to 29/3) have been directly affected by the surface mining operations (Figure 7.7).

### **OCCS 30: Horsecleugh**

No archaeological assessment is known to have been carried out prior to surface mining, and no cultural heritage sites are recorded within the boundary of the mining operations (Figure 7.5).

### **OCCS 32: Auchingilsie**

No archaeological assessment is known to have been carried out prior to surface mining and no cultural heritage sites are recorded within the boundary of the mining operations (Figure 7.5).

### **CS 33: Chalmerston/Pennyvenie**

An archaeological evaluation was carried out in and around the nineteenth-century farmstead of Pennyvenie Mains, which has documentary records dating back to the seventeenth century. Of the five trenches excavated, only one revealed significant archaeological features, thought to be part of short-lived pre-1856 farmstead. Nineteenth century farm activity prior to 1856 when the OS first mapped the farm. No evidence of any earlier structures was identified. Nine cultural heritage sites lie inside the OCCS boundary (Figure 7.7). These comprise the remains of three collieries, and six agricultural features. One of the collieries (CHS 33/2) is of local significance, and another (33/3) is listed on the non-statutory register as requiring further information. The remainder of the cultural heritage sites are considered to be of lesser significance.

Bibliographic reference: MacGregor 1998  
Halliday 2000

### **CCS 38: Garleffan 1 & 2**

No archaeological assessment is known to have been carried out prior to surface mining and no known archaeological sites have been disturbed or destroyed by mining operations (Figure 7.4).

### **OCCS 42: Greenburn**

This area has been the subject of three phases of evaluation and recording since 2003 (WoSAS Events 1179, 3773 and 4740). Among the structures recorded are Crosshill Steading, Laigh Coalburn Miners Row, Fardenreoch Farm, Greenburn Farm and Old Coalburn Cottage. Despite targeted trenching, no remains of Crook Farmstead could be located. Twelve cultural heritage sites lie within the OCCS boundary (CHS 42/1 to 42/11; Figure 5). These consist overwhelmingly of agricultural remains, although a colliery and a row of miners' houses. All of these are of Local/lesser significance.

Bibliographic references: Cressey et al 2003  
Suddaby 2007  
White 2009

### **OCCS 44: Powharnal**

An archaeological assessment and standing building survey carried out in 2003 (WoSAS Events 177 and 12943) recorded 80 mine-shafts and 13 circular horse-engine platforms (CHS 44/3; Figure 7.3), all associated with nineteenth century mines, and which are potentially of national significance. All of these remains were subsequently preserved by record following a detailed survey. NMRS and HER record a further seventeen cultural heritage sites with the OCCS boundary, eight of which are associated with earlier coal mining. These include a possible prehistoric enclosure (CHS 44/1) listed on the non-statutory register as requiring

further information, and possible burial mounds (CHS 44/11) which are of unknown significance. The remaining cultural heritage sites are considered to be of lesser significance.

Bibliographic references: Lewis and Reed 1992  
Cressey 1996a  
Carter 1999  
Hatherley 2004

#### **OCCS 46: Laigh Glenmuir**

An archaeological evaluation and standing building survey of a later nineteenth century school (WoSAS Event 3665) were carried out prior to commencement of surface mining operations. The trial trench evaluation encountered only modern agricultural and drainage features. No other cultural heritage remains are known to exist within the OCCS site (Figure 7.4).

Bibliographic references: Hewat 2006  
Kimber 2008

#### **OCCS 47: Chalmerston North**

No archaeological assessment is known to have been carried out prior to surface mining, although the area was covered by a desk-based assessment for the South-West Scotland Renewables Connection Project (WoSAS Event 4394). An enclosure and farmstead (CHS 47/1 and 47/2; Figure 7.7) that may date from the eighteenth century are within the OCCS boundary. Both of these are considered to be of lesser significance.

#### **OCCS 48: Dunstonhill**

No archaeological assessment is known to have been carried out prior to surface mining. The remains of three former pits and a tip (CHS 48/1 to 48/3, 48/6) have been destroyed through open cast mining. All of these are listed on the non-statutory register of archaeological sites as being of probable national significance. The OCCS site boundary also includes two cultural heritage sites of lesser significance (CHS 48/4 and 48/5; Figure 7.7).

#### **OCCS 49: Darnconner (adjacent to site 26)**

No archaeological assessment is known to have been carried out prior to surface mining and no known archaeological sites have been disturbed or destroyed by mining operations (Figure 3).

#### **OCCS 50: Grievehill North/ Grievehill Extension**

An archaeological survey was carried out at Grievehill as part of a programme of archaeological works mitigating the impact of an extension to the extraction area on this site (WoSAS Event 3908). The survey identified 21 separate quarry pits, which were preserved by record via topographic survey, photographs and written records (CHS 50/1; Figure 7.4).

Bibliographic references: Johnson 2008

#### **OCCS 51: Burnston Remainder**

An archaeological survey and evaluation (WoSAS Event 4137) recorded the remains of modern quarries and an earthwork enclosure. The latter feature was the subject of an archaeological watching brief. A walkover survey (WoSAS Event 5108) did not locate any previously unknown archaeological remains. The remains of bothies and clearance cairns, an enclosure and a farmstead with associated rig & furrow (CHS 51/1 to 51/3; Figure 7.5) are located within the OCCS area. The latter cultural heritage site is listed on the non-statutory register as requiring further information.

Bibliographic references: Ward 2009  
Becket 2013

#### **OCCS 52: Dalgig Farm**

An archaeological evaluation and standing building survey were carried out at Dalgig Farm (WoSAS Event 4658). The evaluation revealed a single linear drainage ditch and the footing of a decorative garden wall, and demonstrated that the land immediately around Dalgig Farm has low archaeological potential. The farmhouse and a road bridge (CHS 52/1 and 52/2; Figure 7.5) are located within the OCCS boundary. Both of these are considered to be of Local/lesser significance.

Bibliographic reference: Mitchell 2011

#### **OCCS 54: Duncanziemere**

A trial trench evaluation was carried out in order to satisfy a condition of planning consent for the proposed extension to Laigh Glenmuir Surface Mine (WoSAS Event 4875). The evaluation primarily recorded drainage or boundary ditches, and a single pit containing charcoal and metallic waste. Two farmsteads are located within the OCCS boundary (Figure 7.3). The nineteenth century Hillhead farmstead (CHS 54/1) is of lesser cultural heritage significance, while Back o'Hill farmstead (CHS 54/2) was occupied from about 1730, and is of Local significance.

Bibliographic reference: Robertson 2011

#### **OCCS 57: Netherton**

A field assessment by CFA recorded nine cultural heritage sites within the OCCS area (CHS 57/1 to 57/9; Figure 7.5). These comprise two quarry sites, two coal mining sites, agricultural remains and a cropmark. With the exception of the cropmark, which is of unknown significance, the cultural heritage sites within Netherton OCCS are of Local or lesser significance.

Bibliographic reference: Finlayson and Alexander 1995

#### **OCCS 58: Tappet Hill**

An archaeological survey and evaluation was carried out by CFA, and further fieldwork by North Pennines Archaeology Ltd recorded quarries and associated remains (CHS 58/2 to 58/5, 58/8; Figure 7.6) within this OCCS area (WoSAS Event 4137). A watching brief was carried out on an earthwork (CHS 58/1) enclosure identified in 2009. Two drystone structures (CHS 58/6 and 58/7) were also recorded within Tappet Hill OCCS area.

Bibliographic reference: Dunwell 1994  
Ward 2009

OASIS reference: northpen3-67529

#### **OCCS 59: Dalfad**

A desk-based assessment and field inspection undertaken in 1995 demonstrated that most of the remains within the area are of industrial archaeological interest, and that extensive remains of other types of mineral extraction sites survive. Several features associated with agriculture, including settlement remains, stock enclosures and field systems, were also recorded in this area, as well as shielings, sheepfolds and evidence (CHS 59/1 to 59/13; Figure 7.3). This OCCS area is additionally covered by WoSAS Events 177 and 904.

Bibliographic reference: Cressey 1996

#### **OCCS 60: Craigman South**

No archaeological assessment is known to have been carried out prior to surface mining, and no known archaeological sites have been disturbed or destroyed by mining operations (Figure 7.5).

#### **OCCS 61: Burnston Fields Extension**



No archaeological assessment is known to have been carried out prior to surface mining, although the area was included in the assessment for House of Water OCCS (WoSAS Event 1177). One cultural heritage site of lesser significance, an area of rig & furrow cultivation (CHS 61/1; Figure 7.5) was recorded within Burnston Fields Extension OCCS.

Bibliographic reference: Seretis & Arthur 2003

#### **OCCS 62: Braehead Farm**

An archaeological evaluation carried out at Braehead Farm Extension OCCS (WoSAS Event 4801) did not identify any features, deposits or artefacts of archaeological significance. An archaeological evaluation at Gilbertfield (WoSAS Event 4379) encountered only field drains. The farmsteads at Braehead and Riggfoot (CHS 62/1 and 62/2; Figure 6), which are both considered to be of lesser significance, lie within Braehead Farm OCCS area.

Bibliographic references: Arabaolaza 2010  
Kirby 2012

#### **OCCS 63: Carsgailoch Hill**

No archaeological assessment is known to have been carried out prior to surface mining. The OCCS area contains five known cultural heritage sites, comprising a Martyr's Grave of Regional significance (CHS 63/1; Figure 7.6), a cairn listed on the non-statutory register as almost certainly of National importance (CHS 63/2), a possible Roman road of Regional significance (CHS 63/3), an area of rig & furrow listed on the non-statutory register as requiring further information (CHS 63/4) and a farmstead of lesser significance (CHS 63/5).

#### **OCCS 64: Wellhill Farm**

Two archaeological evaluations and a field survey were undertaken in advance of opencast coal extraction at Wellhill Farm and Hall of Auchincross Farm (WoSAS Events 179, 190 and 5016). The field survey recorded a stretch of field bank and possible trackway (CHS 64/4), while the 2013 evaluation identified walls and features related to the recently demolished farmsteads (CHS 64/1 and 64/5), the remains of three walls at Wellhill Farm and an area of cobbling at Hall of Auchincross Farm. Other cultural heritage sites within the OCCS area (Figure 7.6) are the location of Hall of Auchincross country house and the court knoll where the lairs of Auchincross dispensed justice (CHS 64/2 and 64/3). All five cultural heritage sites are considered to be of lesser significance.

Bibliographic references: AOC Archaeology Group 1998  
Halliday 2001  
Kirby 2013

#### **OCCS 65: Benbain Remainder**

Some archaeological fieldwork, including evaluation and watching briefs, has been carried out at Benbain Remainder OCCS, and the area was additionally included in a desk-based assessment for the South-West Scotland Renewables Connection Project (WoSAS Event 4394). Trial trenching carried out in and around the nineteenth century farmstead at Upper Pennyvenie (CHS 65/12; Figure 7.7), which had been shown through documentary research to date back to the seventeenth century, found no evidence of an earlier structure, and associated rig & furrow was dated to the nineteenth century. In addition to Upper Pennyvenie farmstead, a further 11 cultural heritage sites lie within the OCCS area (CHS 65/1 to 65/11). These comprise four coal mining sites, a disused railway, a sheep ree, three enclosures, a fodder store and a mound. With the exception of the mound, which is of unknown significance, all of the cultural heritage sites are of lesser significance.

Bibliographic references: MacGregor 1996  
MacGregor and Duncan 1997  
Halliday 1999

WoSAS Archive: 755

#### **OCCS 66: Galawhistle**

The eastern portion of the OCCS was covered by assessments and field work, including evaluation and survey, for Spireslack OCCS (WoSAS Events 167, 917 and 1073). Seventeen cultural heritage sites (CHS 66/1 to 66/17; Figure 7.2) lie within Galawhistle OCCS, and part of Glenbuck Ironworks Scheduled Monument (CHS 23/1) is within its boundary. The cultural heritage remains include domestic, industrial and agricultural sites, and are almost all of local or lesser significance. The exceptions to this are Viaduct Mine (CHS 66/2), which is listed on the non-statutory register as uncategorised, and Glenbuck mine workings (CHS 66/11), which is listed on the non-statutory register as requiring further information.

Bibliographic references: Cressey 1997  
Dalland 1999 and 2000

#### **OCCS 67: Duncanziemere Extension**

A trial trench evaluation and excavation (WoSAS Event 4738) carried out in 2011 recorded Hillhead farmhouse, and associated agricultural buildings. A garden plot and the remains of rig and furrow cultivation were also uncovered, although little evidence for the Back of the Hill settlement was found. No other cultural heritage sites are recorded within this OCCS area (Figure 7.3).

Bibliographic reference: Robertson 2011

### **DETAILED REVIEW OF IMPACTS ON CULTURAL HERITAGE FROM AGGREGATE QUARRY WORKING IN EAST AYRSHIRE**

#### **Quarry 101: Laigh Newton Quarry**

A series of archaeological evaluations and excavations between 2003 and 2007 at Laigh Newton in East Ayrshire revealed evidence for intermittent occupation of this valley terrace between the Mesolithic and the Late Iron Age. The plough-truncated archaeology included the remains of a rectangular building and associated features of the mid-late fourth millennium BC, a more ephemeral structure and related pits of the mid third millennium BC, a charcoal-burning pit of the mid-first millennium AD and two other rectilinear structures of indeterminate date. On a lower terrace, a medieval farmstead was revealed, consisting of a dwelling and a corn-drying kiln, drainage ditches and some palisade fences (WoSAS Events 783, 3541 and 3858). All of these cultural heritage remains (CHS 101/1; Figure 9) have been destroyed by quarrying operations.

Bibliographic references: Wardell Armstrong 2001  
McLellan 2003  
Somerville 2005  
Carruthers 2006  
James, Swan and Francoz 2007  
Toolis 2011

#### **Quarry 102: Loudounhill Quarry**

An archaeological evaluation in advance of quarrying did not uncover any archaeological features, deposits or artefacts (NMRS NS63NW 59; WoSAS Pin 52155). The quarry is on the site of a Roman fort (CHS 102/1; Figure 7.9) that was occupied in the Flavian and Antonine periods. Earlier quarrying has removed all traces of the fort, which is listed on the non-statutory register as not likely to be of national importance.

Bibliographic references: Atkinson 1994  
Atkinson 2000  
Sneddon & Coulter 2003  
Duncan 2004

**Quarry 103: Glen Logan Ironstone Works**

An archaeological evaluation carried out the former ironstone quarry uncovered the remains of eighteenth to mid-nineteenth century structures of lesser significance (CHS 103/1; Figure 7.1). No other cultural heritage remains are known within this quarry site.

Bibliographic reference: Seretis 2006

**Quarry 104: Clawfin Quarry**

Although no archaeological assessment is known to have been carried out at Clawfin Quarry, the area was covered by WoSAS Event 4394. There are no known cultural heritage sites within the quarry boundary (Figure 7.1).

Bibliographic reference: CFA Archaeology Ltd 2008

**Quarry 105: Tincorn Hill Quarry, Sorn**

No archaeological assessment is known to have been carried out. A possible farmstead of lesser significance (CHS 105/1; Figure 7.3) has been destroyed by quarry operations.

**Quarry 106: North Drumbooy Quarry**

No archaeological assessment is known to have been carried out. The remains of Floak Bridge quarry (CHS 106/1; Figure 7.10) are likely to have been directly affected by the quarrying operations.

**Quarry 107: Garpel, Muirkirk**

Consented with conditions including those for archaeology (Figure 3).

*'Prior to development commencing, the developer shall secure the implementation of a programme of archaeological work in accordance with a detailed written scheme of investigation which has been submitted by the developer and approved in writing by the planning authority.'*

*Reason: To safeguard the archaeological heritage of the site and to ensure that there is an adequate opportunity to investigate, record and rescue any archaeological remains'.*

**Quarry 108: Craignaught Quarry**

No archaeological assessment is known to have been carried out. The possible location of a historical murder (CHS 108/1; Figure 7.10) may have been lost or damaged by quarrying operations.

**Quarry 109: Totherick Quarry, Dunlop**

No archaeological assessment is known to have been carried out, and there are no known cultural heritage sites within the boundary of the quarry (Figure 7.10).

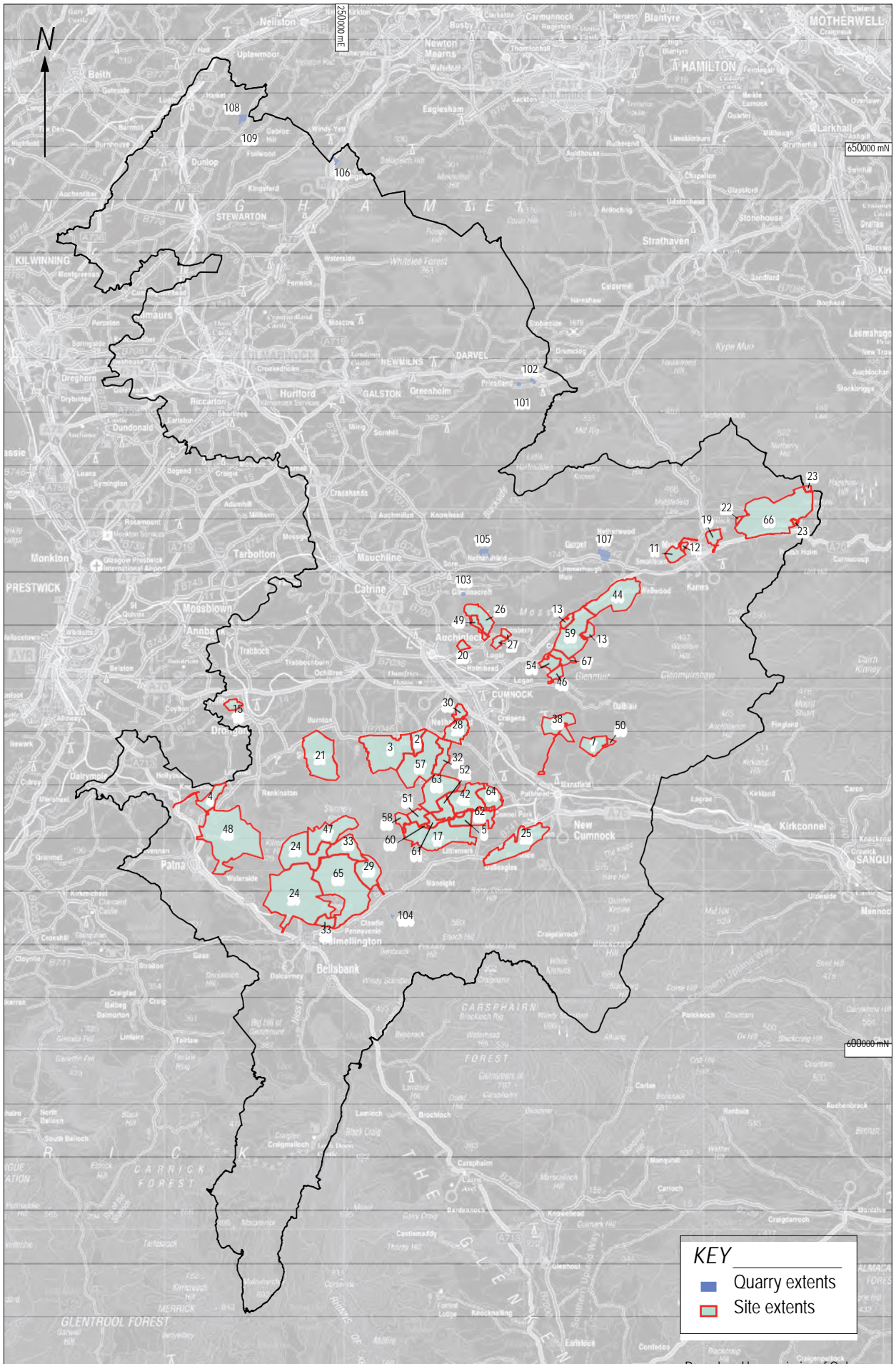
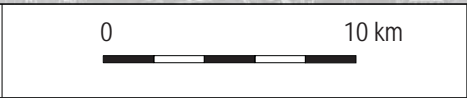
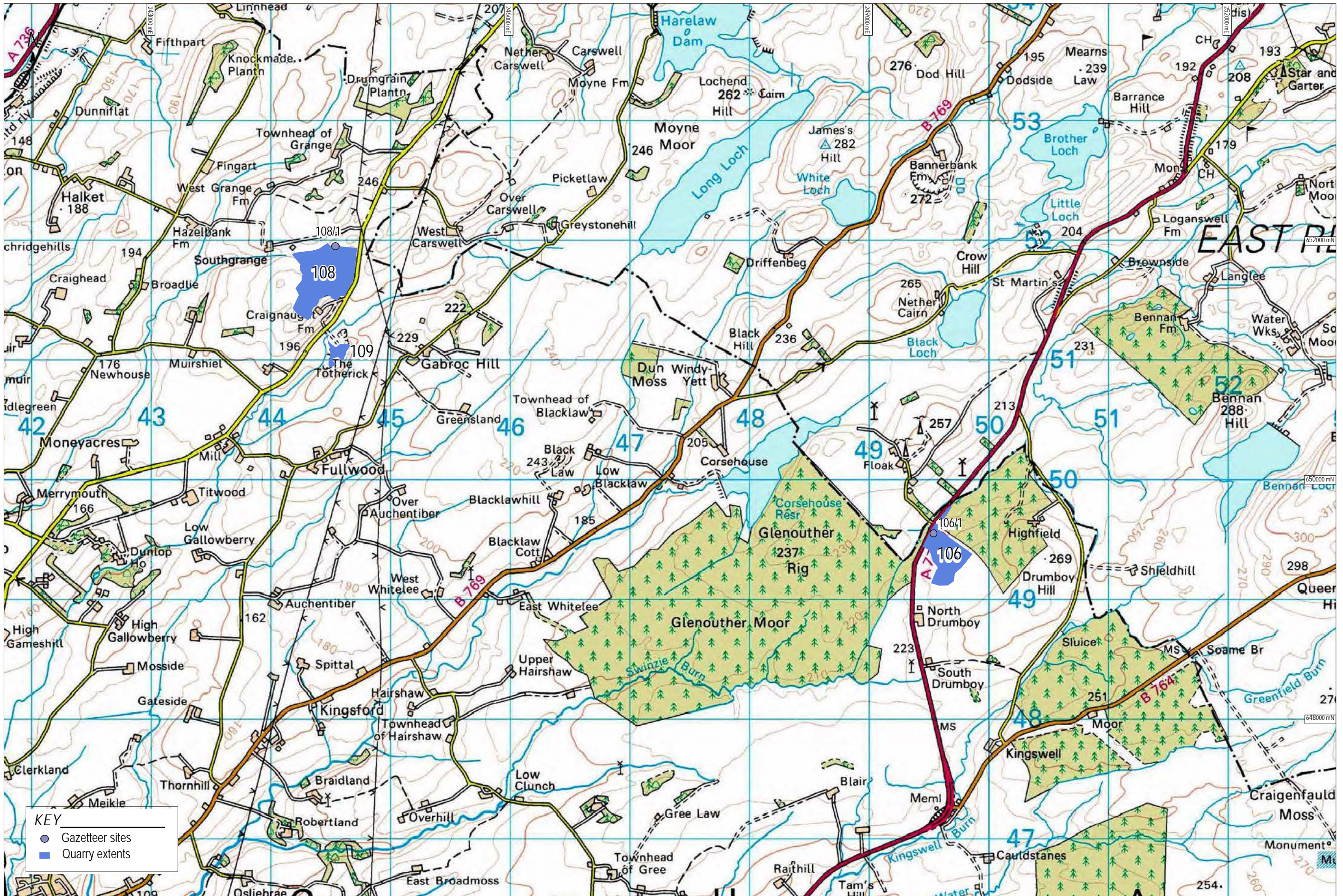


Figure 7.1:  
Site locations.





**KEY**

- Gazetteer sites
- Quarry extents

Figure 7.10:  
Cultural Heritage Sites.

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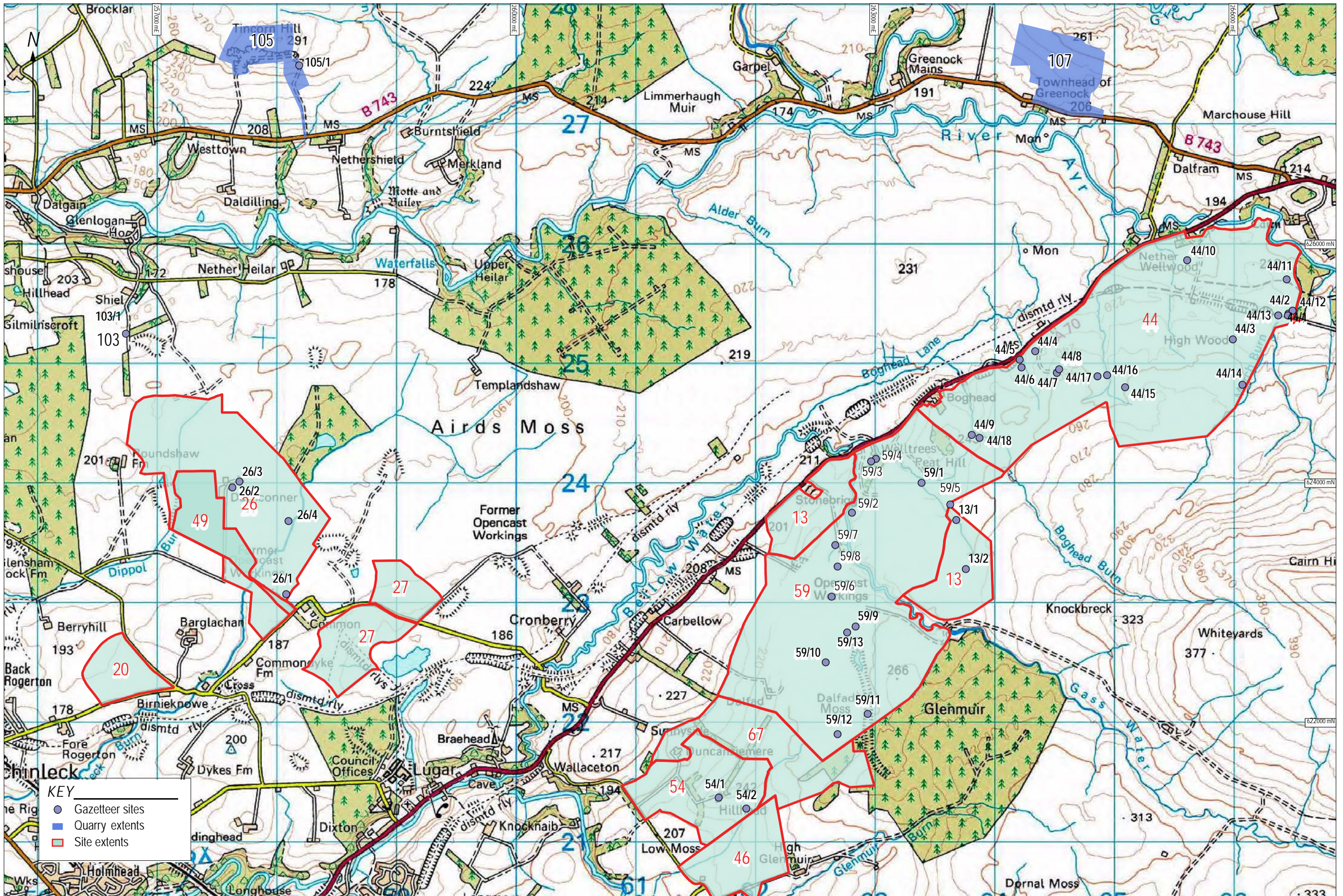


Figure 7.3:  
Cultural Heritage Sites.





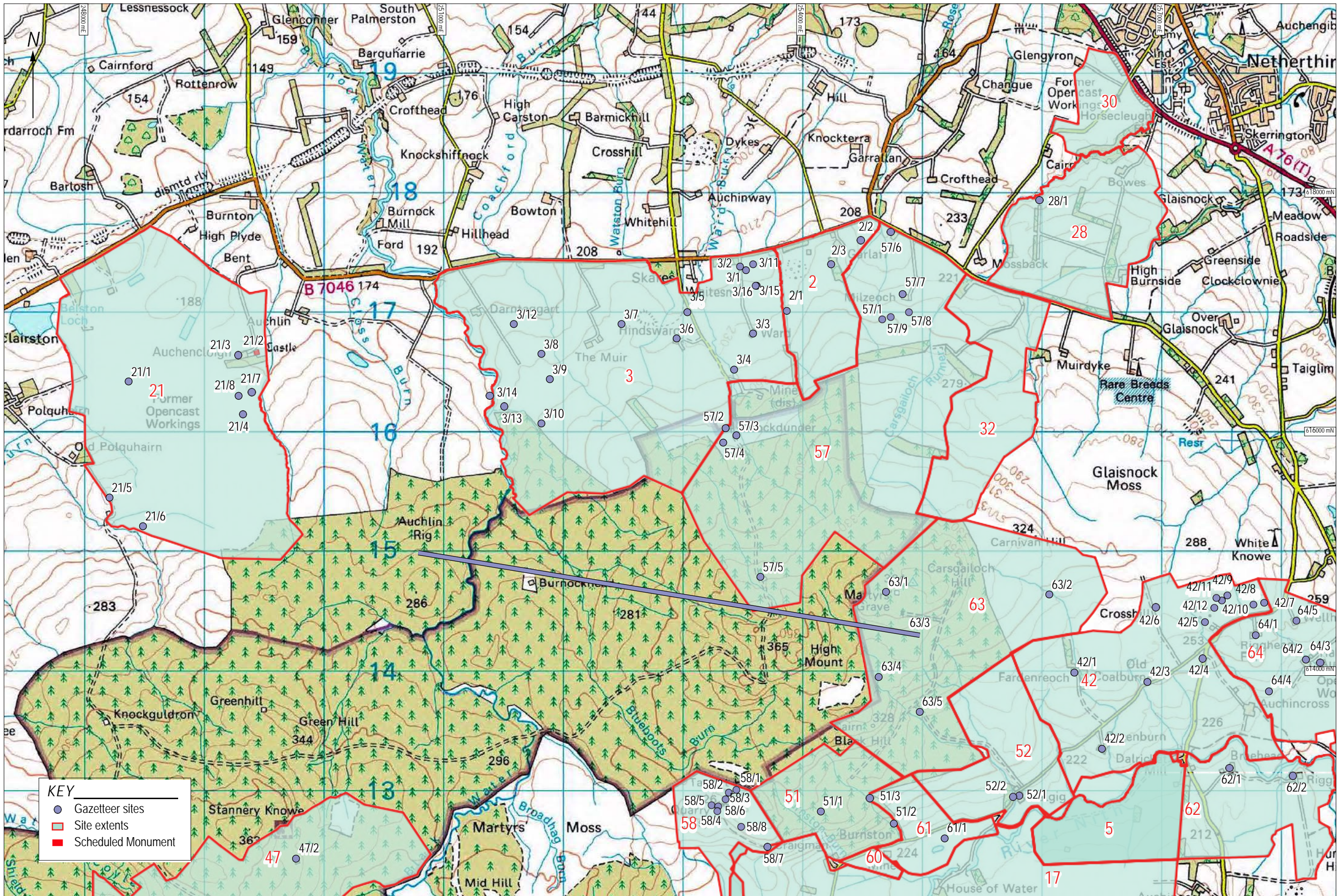


Figure 7.5:  
Cultural Heritage Sites.

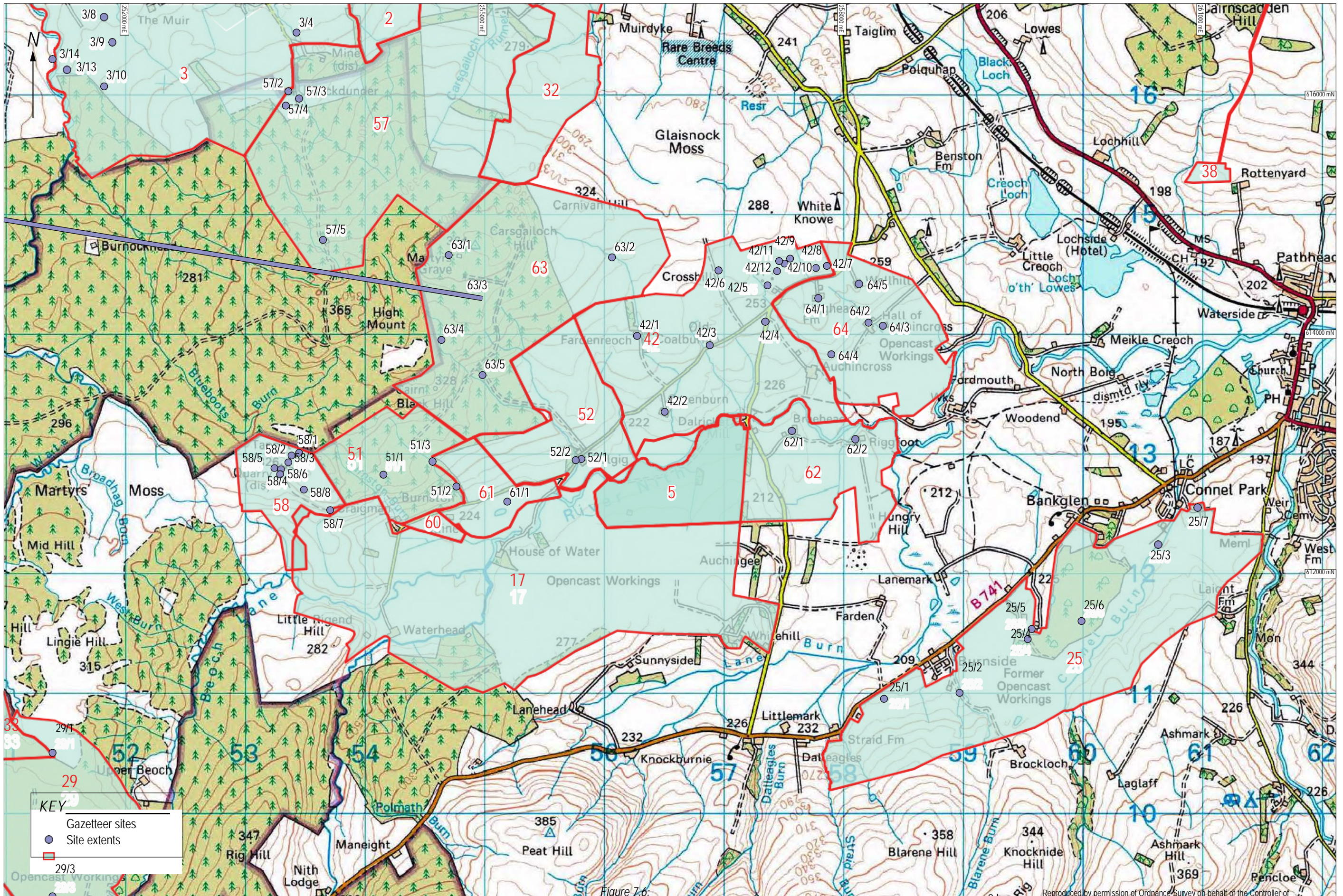


Figure 7.6: Cultural Heritage Sites.

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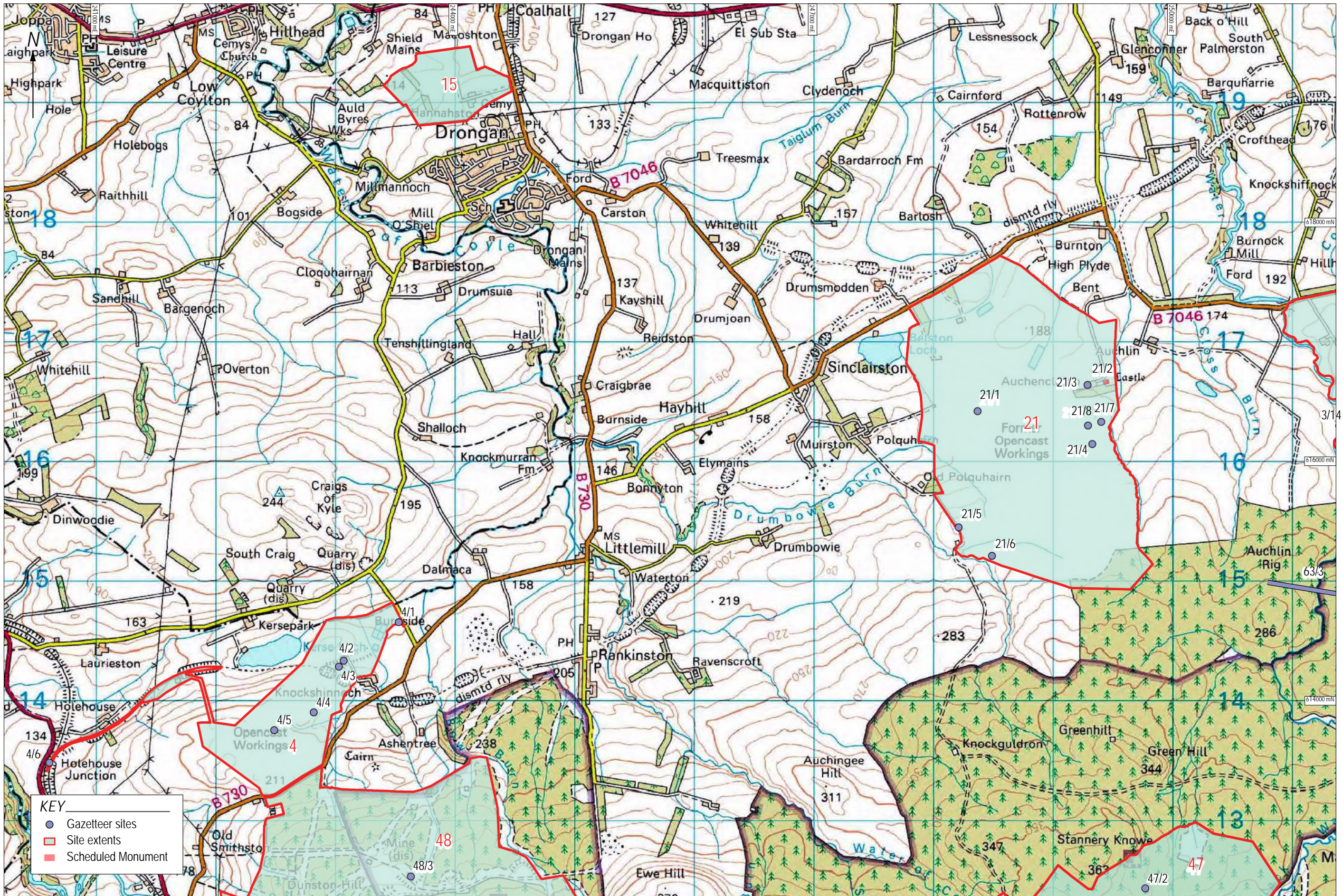
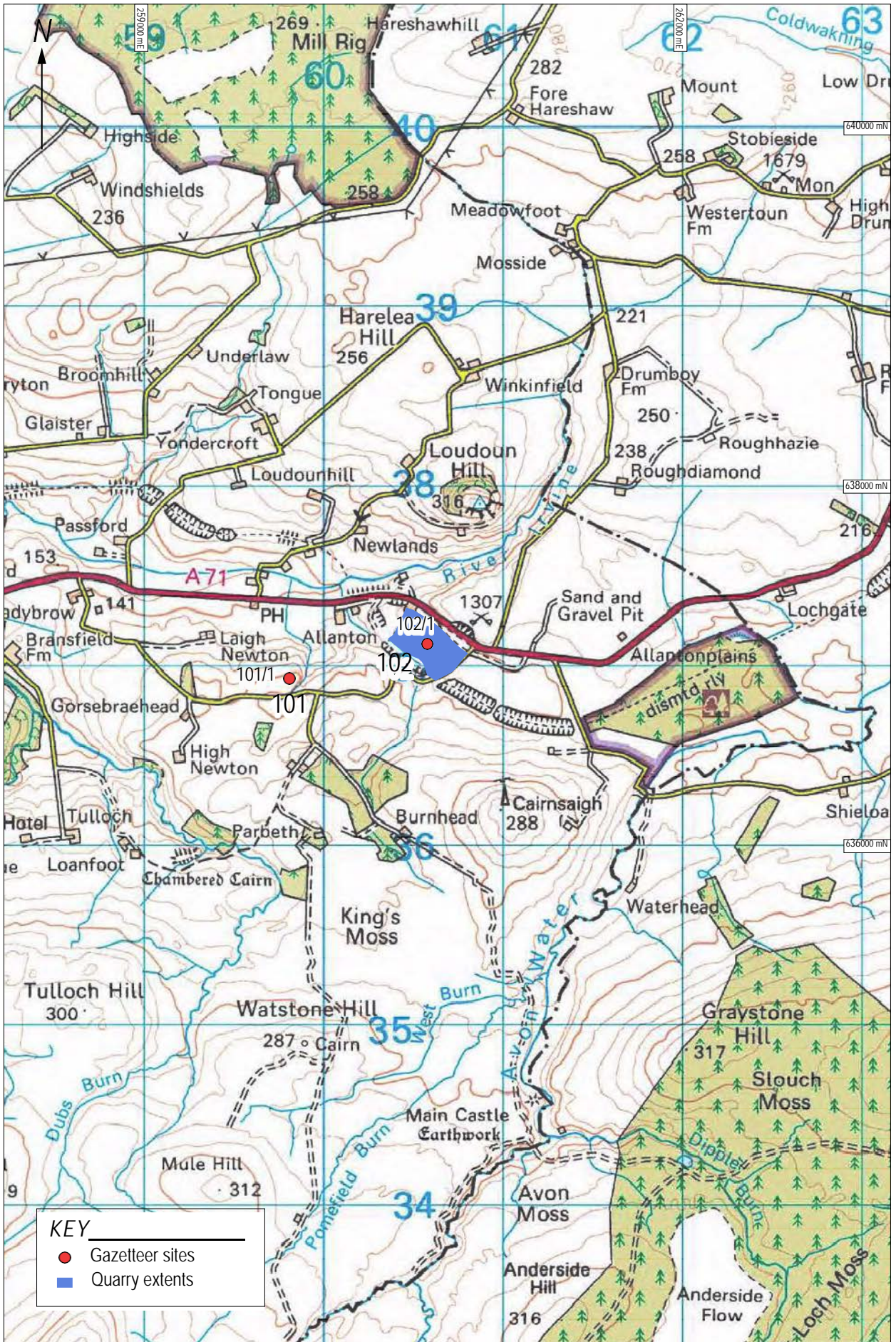


Figure 7.8:  
Cultural Heritage Sites.

0 2 km

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