

MORECAMBE BAY PARTNERSHIP

Headlands to Headspace

Headlands to Headspace Heritage at Risk Vegetation Clearance Project

2015-2016 Review

**Birkrigg Common
Nr Urswick
Ulverston
Cumbria**



January 2017

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1. Introduction

Over the last two years Morecambe Bay Partnership, working in partnership with Historic England and volunteers from the Ulverston branch of Cumbria Wildlife Trust, the National Trust, local businesses and the local community have been undertaking targeted vegetation (bracken) clearance on Birkrigg Common, Urswick, near Ulverston Cumbria (Figure 1). This work is to be delivered as part of the Heritage Lottery Funded Headlands to Headspace (H2H) Landscape Partnership Scheme, which is designed to record, preserve and protect the rich cultural heritage, located around Morecambe Bay.

This document outlines the results of the work to date and present proposals for future work and aspirations during 2017-8

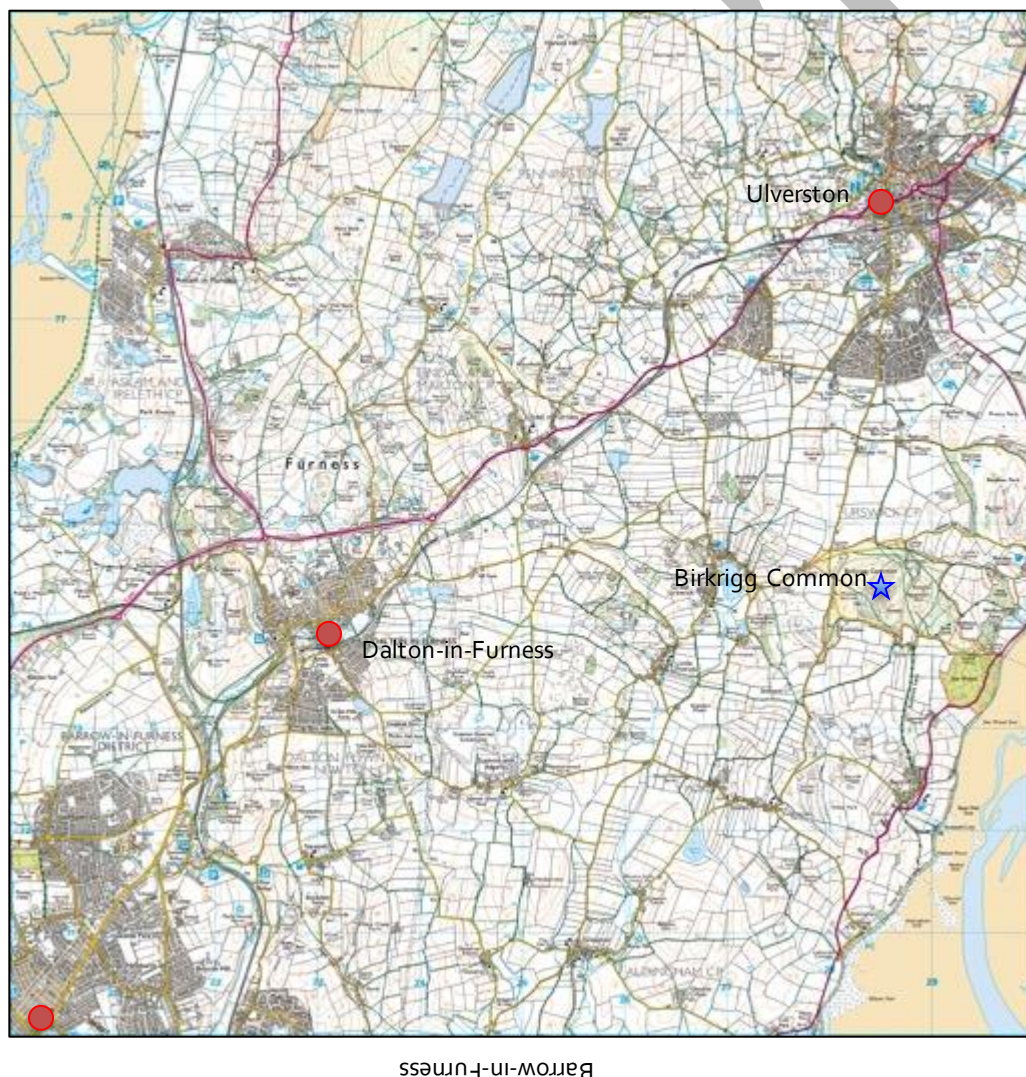


Figure 1. Location of Birkrigg Common and its relationship with nearby towns.
Ordnance Survey mapping provided by Cumbria County Council under licence no. 10019596

2. Site Location and Description

Birkrigg Common is situated on the Furness Peninsula, to the south-west of the town of Ulverston and to the south-east of the village of Urswick (Figures 1 and 2), Cumbria (site centred SD 269 731).

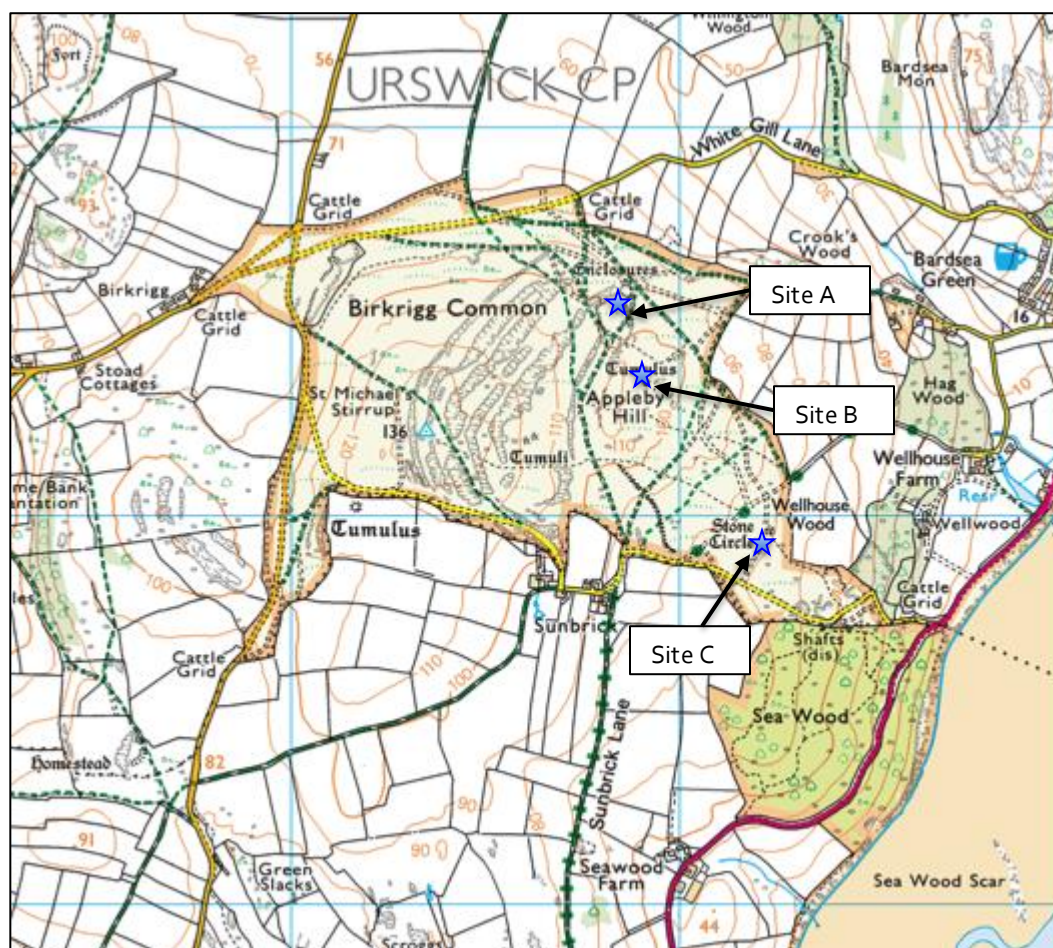


Figure 2. Location of Birkrigg Common and Heritage at Risk sites.
Ordnance Survey mapping provided by Cumbria County Council under licence no.

The Common comprises an irregular shaped parcel of land (Figure 2) comprising 1.2 sq km/118.5 hectares. The majority of the Common is bound by pastures fields, with the small settlement at Birkrigg and Sunbrick on the western and southern perimeter of the site. The south-east of the site is bounded by Sea Wood, an ancient woodland which is a rare example of woodland on boulder clay overlying limestone. Given the importance of the woodland it has been designated as a Site of Special Scientific Interest (SSSi) and is currently managed by the Woodland Trust. (http://www.sssi.naturalengland.org.uk/citation/citation_photo/1001967.pdf).

The Common is Crown Estate Land, whose land agents are Smith Gore. The Management of the site is the responsibility of South Lakeland District Council and numerous Commoners (number and names unknown) have Commoners rights to the land. Three main Commoners who use the Common for grazing have been consulted during the development of the clearance work. The Scheduled Monuments contained on the Common are managed by Historic England.

3. Archaeological Background

The Common contains a rich Prehistoric archaeological landscape and is recognised as being of national importance with five sites designated as Scheduled Monuments. Three of these sites are currently on the Heritage at Risk Register (HAR; Figure 3). The three HAR site include:

- Site A: Prehistoric enclosed hut circle settlement, an associated enclosure, and a bowl barrow NNE of Appleby Slack, Urswick - South Lakeland (List Entry Number: 1013818)
- Site B: Round cairn on Appleby Hill, Urswick - South Lakeland (List Entry Number: 1013963)
- Site C: Concentric stone circle on Birkrigg Common, Urswick - South Lakeland (List Entry Number: 1013501)

Site A

The three monuments making up the site at Appleby Slack include a large possible stock enclosure (Site A1), a smaller pear-shaped enclosure (Site A2), which contains a possible hut circle settlement, and a bowl barrow (Site A3) located between the two enclosures. The association of these three features is unclear with only the bowl barrowing being subject to excavation. Sites A1 and A2 are clearly shown on historic mapping (see Figure 3), although in the summer months are concealed beneath a dense canopy of bracken.



Figure 3. 1910 Ordnance Survey map showing Sites A and B, Scale 25 inch to 1 mile
Published 1913. Lancashire Sheet XVI.11

The most westerly feature (Site A1) comprises a large, fairly poorly defined feature measuring c.105m by c.75m. The Historic England listing for this feature describes it as a stock enclosure, defended by a turf-covered bank of limestone rubble up to 5m wide and 0.4m high, which is best preserved on its eastern side (Historic England 2017a).

Site A2 is listed as a pear-shaped enclosure measuring c.40m by 35m, with an entrance on the enclosure's eastern side. Similarly to Site A1 it is defended by a turf-covered bank of limestone, which survives up to 4m in width and 1m in height. The traces on three hut circles within the enclosure are mentioned in the listing and this enclosure is described as a hut-circle settlement (Historic England 2017a).

A flat-topped bowl barrow (Site A3) is situated to the north of, and between, the two enclosures. It comprises earth and stone and measures c.12m in diameter by up to 1.1m in height (on the southern-eastern side) and only 0.2m on the west side. This site was excavated in 1912 by the North Lonsdale Field Club, with a report of the results of the excavations presented in the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society (Gelder 1914). Excavation yielded three urns and five burial pits, containing cremated bone and charcoal. 'One of the urns was inverted and packed around with sharp stone flakes. Within this urn were stone tools 'very like arrow or spear heads or very primitive knives or scrapers' according to the excavator' (Historic England 2017a). Interestingly, despite being excavated in 1912, this tumulus does not appear on the historic mapping until the 1968-9 1:2,500 edition.

Site B

This feature is located to the south-west of Site A, on Appleby Hill. It comprises an oval-shaped turf and bracken-covered mound of limestone rubble, which measures c.13.5m by 12m and up to 1m in height. Limited excavation, undertaken on the mound in 1912, was reported in the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society (Gelder 1914). Excavation revealed a circle of standing stones (c.3.7m in diameter) placed on 'the old land surface', which contained deposits of 'black earth' covered by a large stone or slabs. Artefacts recovered from the 'black earth' deposits include pottery, charcoal and red, green or quartz pebbles. Human teeth and fragments of pottery were discovered outside the stone circle (on the old land surface) and within the stone cairn itself fragments of three human interments were found together with a bronze pin which has been interpreted as a tattooing awl. Such round cairns are interpreted as prehistoric funerary monuments dating to the Bronze Age (c.2000-700 BC) (Historic England 2017b.)

Site C

Located to the north-east of the Hamlet of Sunbrick, is the most well-known/visited historic site contained on Birkrigg Common- the concentric stone circle or 'Druid's Circle'.

Concentric stone-circles are an arrangement of two or more circles and relatively rare, with only 15 of the 250 stone circles in England being concentric. Stone circle date from the Late Neolithic to Middle Bronze Age (c.2000-1240 BC), and appear to have served a ritual importance, with excavation revealing they provided a focus for burial. They may also have provided a calendric function, helping mark the passage of time and seasons and/or a gathering point for a specific social group (Historic England 2017c).

The stone circle at Birkrigg comprises an inner ring of 12 stones measuring 8.5m in diameter. The stones are all carboniferous limestone and range from 0.3m to 0.9m in height. The outer ring is not a full circle but is listed as comprising 20 irregularly placed stones with a diameter of c.24m (Historic England 2017c). Prior to the vegetation clearance undertaken in 2015, during the summer months the outer circle was being heavily encroached/hidden by the bracken.

The site was partially excavated in 1911 and 1921 and the excavations were reported as articles in the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society (Gelderd 1912 and North Lonsdale Field Club 1921). The excavations in 1912 focused on the inner circle, where five cremation burials were found, three of which were found within pits. One cremation was found on a layer of cobbles, with the fifth being covered by an inverted urn. The cremations were sealed by a pavement of cobbles (lower pavement), which was sealed by a further upper layer of cobbles.

The 1921 excavation focused on the area between the inner and outer stone circles, where a number of artefacts have been interpreted as objects used for ceremonial purposes (Historic England 2017c).



Figure 4. 1889 Ordnance Survey map showing the stone circle (Site C). Scale 25 inches to 1 mile. Surveyed 1889, Published 1891. Lancashire Sheet XV1.15.

All three sites (A-C) have been placed on the HAR register because of vegetation growth (primarily bracken), which is encroaching and/or concealing the

archaeological features. The bracken cover has been increasing over the years and now presents a significant threat to these historic monuments.

This vegetation cover is making it difficult to identify archaeological features, increasing their susceptibility to accidental damage (such as a tractor or vehicle) and readability, so visitors to the common are unaware of any topographical differences or potential features. The bracken root system is also deep and may cause extensive damage to below ground archaeological deposits. Site C, the Concentric Stone Circle has also been the subject of vandalism in recent years, with paint being poured over some of the stones and fires lit within the circle.

The bracken control work is designed to reduce, over time, the height and density (or vigor) of the vegetation to prevent further encroachment onto the scheduled areas. This is a trial project and is being continuously reviewed and adapted during the course of the H2H Scheme.

4. Natural Heritage

The Common supports a diverse range of flora and fauna and all vegetation removal is being undertaken in consideration with the natural heritage. This includes using specialists to assess areas prior to clearance to minimise/mitigate any disturbance to ground nesting birds/nests. To enable bracken clearance in 2016 to be undertaken slightly earlier than it had been in 2015, South Lakes Ecology were commissioned to undertake an assessment of the three sites due to be cleared. The results of this work and recommendation are presented in Appendix 1.

Natural Heritage Designations have been checked through Magic (<http://www.magic.gov.uk>), Figure 2. All the sites are contained within a SSSI Impact Risk Zone, although the type of activity proposed does not require consultation with Natural England (as outlined in the advice for planning authorities provided for planning application for sites within a SSSI Impact Risk Zone). The sites all fall within Catchment Sensitive Farming Capital Grant Scheme Target Areas (England) and Catchment Sensitive Farming Delivery Initiative 2011-2016 (England). The Catchment Sensitive Farming Officer at Natural England has been consulted and these schemes will have no impact on the work proposed.

Two of the sites (Sites A and B) are contained within a Limestone Pavement Order area, however, this only relates to removal of the limestone pavement and does not impact on the proposed programme of work.

5. Aims and Objectives of the Project

The aim of this project is:

To undertake targeted removal of vegetation (primarily bracken) and remove the three sites from the HAR register.

The objectives of the project are:

- To use best practice methods to remove and reduce vegetation growth around three HAR sites by undertaking vegetation clearance with volunteers and where required contractors;
- To develop a network of volunteers to undertake seasonal vegetation clearance and continue the work to protect the HAR sites beyond H2H;
- To identify and record (through other H2H projects) any archaeological features exposed during the bracken removal;
- To report results back to the local community and professional organisations/stakeholders (e.g. Historic England, County Council Archaeology Service, SLDC, Crown Estate, Commoners, members of the public) allowing for plans to be formulated for the future management of the archaeological features contained on the common;
- To increase local knowledge and appreciation of nationally important sites contained on Birkrigg Common.

6. Consultation

Prior to commencement of the vegetation removal in 2015 the H2H Cultural Heritage Officer liaised with the three main commoners (Mr Richard Parker of Sunbrick Farm, Mr Peter Fell of Castle Hill Farm, Pennington and Eddie Shuttleworth of Far Mount Barrow Farm, Ulverston) who have all confirmed that they support the proposed bracken clearance. Contact has also been made with the land agents for the Crown Estate (Mr Mark Fodgen of Smiths Gore), Tony Naylor Parks and Leisure Client Officer for South Lakeland District Council (responsible for the management of Birkrigg Common), Sue Stallibrass-Historic England Regional Science Advisor, Sarah Howard-Historic England Heritage at Risk Officer and Mark Brennan-Senior Historic Environment Officer.

The H2H Cultural Heritage Officer has also liaised with Andrew Davidson, Historic England's North West Principal Inspector for Ancient Monuments, with regards to Scheduled Monument Consent (SMC). If the bracken is just to be bashed/cut, Scheduled Monument Consent is not required, however, if it were pulled this consent would have to be sought. The local community/commoners have been consulted through media coverage, advertisements in local publications (such as Parish and Farming Newsletters), liaison with Urswick and Lindal Parish Council and SLDC Councillors, during June/July 2015.

7. Methodology

The methodology used for vegetation clearance follows guidance and best practice outlined by Natural England (2008a and b) and English Heritage 2014. It has been

designed to minimise damage to any archaeological features concealed beneath the bracken and with due consideration for the natural heritage and health and safety. The approach presented is a staged approach as recommended by Natural England (2008a, 2). A method statement was prepared in 2015 and is presented in Appendix 2.

Baseline survey/photography

Aerial and ground digital photography has been captured at the three Heritage at Risk sites (A-C) by Aerial Artworks prior to, during and following clearance work. This photographic record is being used to track and demonstrate progress to funders and the local community/stakeholders. At Site A and the small enclosure/barrow at Site B photogrammetry has been used to create 3D models of the exposed area.

Cutting/bruising

To minimise impact to any archaeological features, the bracken has been cut/bruised by hand using either hand-held slashers/petrol strimmers, 3-4 times per year, since 2015. The work in 2015 only started July to mitigate any impact on ground nesting birds, however, work was brought forward at some sites in 2016, with late June clearance alongside further work in July/August/September (as per Natural England Guidance 2008a, 3).

In particular sensitive areas, where damage could be sustained to the monuments from being hit by slashers, bracken has been removed using hand held shears.

The programme of work is aiming to achieve a buffer area of 10m from the edge of the scheduled area to be cleared to assist in the long-term vegetation management/growth around the monuments.

The bracken control has been undertaken with due regard to the landscape and to minimize impact to the natural environment (as per Natural England guidance (2008a, 1)). The work has avoided leaving rectangular blocks, and was designed to create irregular patches with boundaries against natural features. Only small-scale clearance has been undertaken at one time and the areas monitored by the H2H Natural Heritage Officer for vegetation re-establishment. This approach of creating 'wavy edges' will provide a varied microhabitat to support the natural heritage of the common.

Removal of cut bracken

During 2015 the majority of the vegetation cut during the clearance (50+ ton bags) was removed from the site by a 4x4 pulled trailer in 1 ton sacks to Ford Park Ulverston, for use in their community and environmental projects (<http://www.ford-park.org.uk/aboutus.asp?id=AB4>).

When larger areas of bracken were cleared during 2016, only a proportion (10 ton bags) was removed to Ford Park.

Further options for reuse and disposal of cut bracken are currently being explored.

Removal of dead vegetation/litter

During the 2016 vegetation clearance seasons the cut/dead vegetation litter has been raked and stockpiled near the cleared sites to reveal the monuments, whilst exposing areas to frosts and assist with vegetation control.

Survey of exposed features

Limited survey work has been undertaken on the cleared areas by Furness Mapping Services with a survey grade GPS accurate to 0.1cm. This has mapped the exposed archaeological features and areas cleared. The information has been processed and exported in AutoCAD to create a 2D plan of Sites A and the small enclosure at Site B and a 3D model at Site B. See Section 8 for more information.

8. Project Delivery and Summary of Results 2015-6

The bracken/vegetation cutting, removal and survey work has been led by the H2H Cultural Heritage Officer, assisted by volunteers from Cumbria Wildlife Trust. Cutting/bashing has been undertaken by community volunteers and teams from National Trust/Glaxo. Removal of the bracken from the Common to Ford Park has been undertaken by Ed Mills and Clive Stretton (National Trust) assisted by both H2H and Ford Park volunteers. See Table 1 for overview of dates of delivery

Site A: Prehistoric enclosed hut circle settlement, an associated enclosure, and a bowl barrow NNE of Appleby Slack



This is the largest site in the portfolio of projects and comprises two possible Bronze Age enclosures and a burial mound/tumulus. In 2015 only the smaller enclosure (Site A2) was partially cleared of bracken, during the working party assisted by the National Trust and GSK (September 2015).

Plate 1. Aerial view of Site A. The limestone pavement to the north of the enclosures can be clearly identified, along with the footpaths and bracken clearance

to the east undertaken by the Commoners. The enclosures and barrow are barely visible beneath the dense coverage of bracken. Goggle Earth Image © Infoterra and Bluesky



Plate 2. Volunteers stood on the south-eastern bank of the smaller enclosure (Site 1B) first cleared of vegetation in September 2015

This is one of the sites subject to a bird survey in June 2016 and due to the presence of ground nesting birds, MBP were advised by South Lakes Ecology to restrict work on this site until late July. Sites A2 and A3 were cleared by hand volunteers during working parties in July, August and September, producing good results, with the bank and entranceway of enclosure A2 being clearly defined, in particular from the 3D model created from the aerial images captured in August 2016. of bracken)

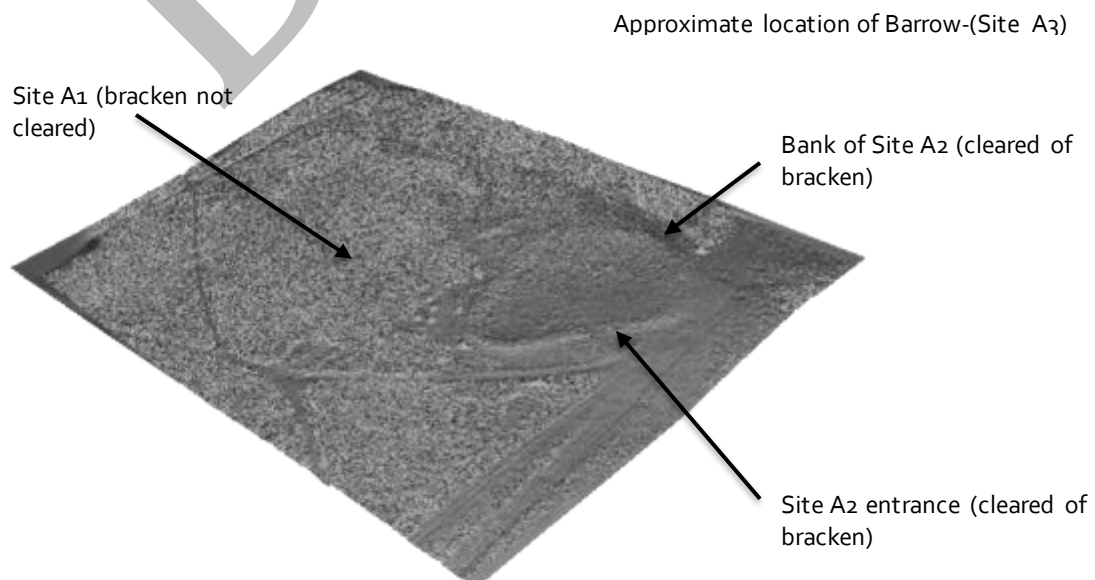


Plate 3. 3D model of Site A, showing the area cleared in August 2016 and the small enclosure (Site A2)

The barrow (A3) was cleared of a dense/tall/established bracken cover during July and August 2016. Once cleared the mound of the feature is relatively easy to define and further work will continue around and beyond this monument in 2017.

The long-term aspiration for these sites is to undertake sufficient clearance and develop a management plan that will enable them to be removed from the HAR register. This will require significant input, in particular over the large enclosure, probably requiring machine/trimmer intervention alongside hand clearance.

Site B: Round Cairn on Appleby Hill



This small site is difficult to locate, located on the top of Appleby Hill in an area covered in significant vegetation cover.

Plate 4. This shows that area containing Site B prior to vegetation clearance in July 2015. The Barrow is not visible on this aerial image. Goggle Earth

Image © Infoterra and Bluesky

The site was located and clearance work was undertaken at the site on 27th September 2016, revealing the circular mound. Clearance work required at this site is limited and therefore can be undertaken quickly with little input from volunteers. Clearance work will be continued during 2017-8.

The aspiration is for the site to be removed from the HAR register with continued vegetation clearance and the establishment of an Adopt-a-Monument Group during 2017-8.



Plate 5. The raised area of the cairn can be clearly seen in this image following vegetation clearance in September 2016.

Site C: Concentric Stone Circle



The stone circle at Site C was deemed to be the priority site and was the first Heritage at Risk site to be cleared (31st July 2015) and has been subject to eight separate clearance visits. Initial aerial survey of the site was undertaken by Aerial Artworks on 22nd July to record the site prior to clearance (see Plate 6).

Plate 6. Site C, the concentric stone circle before vegetation clearance in July 2015. This shows the majority of the outer ring of stones being concealed by the bracken. © Aerial Artworks



Plate 7. A volunteer beginning to clear vegetation from Site C, showing the height of the bracken in 2015.

Approximately 1500m² of area has been cleared around the stone circle, exposing and defining the outer stone circle and area beyond. All work at this site has been undertaken by hand using both long and short handles bracken/weed slashers and shears. The cut bracken has been raked away to clear the area of waste and the remaining stubble trimmed with a scythe/shears/slashers to open up the area and encourage trampling and natural suppression of the bracken through livestock/visitor traffic.

The initial visits in each season (July 2015 and June 2016) have seen the majority of bracken being removed from the site with subsequent visits designed to remove/suppress new growth.

The results of the clearance are impressive and have resulted in the outer stone circle to be fully exposed (see Plate 9) and appreciated by visitors to the Common.



Plate 9. Aerial view of Site C. Top is in July 2015, prior to vegetation clearance and below was taken in September 2016 showing the area cleared, with the second ring of stones and possible hollow-way clearly visible. ©Aerial Artworks

The results at this site are already clear to see and it is the aspiration is for this site to be removed from the HAR register with continued vegetation clearance and the establishment of an Adopt-a-Monument Group during 2017-8.

Site D: CWT Grassland site



In addition to Heritage at Risk sites, an area surrounding grassland has been cleared since 2013 by volunteers Cumbria Wildlife Trust (CWT). This site is located to the west of the Trig Point and the clearance is designed to maintain and open up areas of grassland which support a range of flora and fauna, including rare waxcap fungi.

Plate 10. Volunteers from CWT working on the grassland site in 2014.



*Plate *. Waxcap fungi present on Birkrigg Common which the vegetation clearance on the grassland sites is aiming to support and encourage. © Peter Wilde*

	Site A: Concentric Stone Circle	Site B: Enclosures and Barrow at Appleby Slack	Site C: Cairn on Appleby Hill	Site D: CWT Grassland	Bracken removal to Ford Park	Bird Survey	Aerial survey	Topographic survey
31st July 2015	✓			✓			July 2015	
6th August 2015	✓			✓	✓ Ed Mills			
26th August 2015	✓	✓ Small enclosure		✓				
24th Sept 2015	✓ Glaxo and NT	✓ Small enclosure Glaxo and NT			✓ (Clive Stretton)		Sept 2015	
22nd June 2016						✓		
27th June 2016	✓			✓				
12th July 2016	✓	✓ Small enclosure and barrow		✓		✓		
25th August 2016	✓ Glaxo	✓ Small enclosure and barrow		✓			✓	✓ (Site A and Site B: small enclosure)
27th September 2016	✓ Glaxo and NT	✓ Glaxo and NT	✓	✓	✓ (Clive Stretton)			

Table 1: Overview of clearance undertaken at the sites during 2015-6

Topographic Survey

During 2016 Furness Mapping Services undertook a rapid topographic survey using a survey grade GPS to accurately locate the area cleared around Site C, as well as rapidly mapping the features uncovered in Site A2 and Site C.

This is an initial non-intrusive survey, which is intended to be built on during 2017-8 to map and record both areas cleared and features exposed during the clearance work. Preliminary results of the survey are shown in Appendix 3.

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Appendix 1: South Lakes Ecology Report

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Appendix 2: Methodology

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Appendix 3: Preliminary Topographic Survey Results

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