



ALTOGETHER ARCHAEOLOGY Theme 5. Holwick & Upper Teesdale.

Fieldwork module 5a COW GREEN MESOLITHIC SETTLEMENT - EXCAVATION

PROJECT DESIGN



Document control grid

Title	Altogether Archaeology Fieldwork Module 5a. Cow Green Mesolithic excavation.
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Derivation	
Origination date	July 2015
Reviser(s)	PF
Date of last revision	July 2015
Version	1.1 (final)
Status	Final version for distribution to vlunteers
Circulation	English Heritage, landowner, tenant, AA volunteers, Project Team members.
Required Action	
File/location	G:/North Pennines/Historic Environment/Altogether Archaeology/AA fieldwork modules/Module 5 Cow Green excavation.
Approval (Signature and Date)	

This document has been produced in accordance with the Management of Research Projects in the Historic Environment (MoRPHE) guidelines (English Heritage 2006).

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Cover illustration.

Dr Rob Young (foreground), Excavation Director, and Lance Moore, discoverer of the site, pictured at the site in June 2015.

Photo: Paul Frodsham.

1. General introduction to Altogether Archaeology

Altogether Archaeology, largely funded by the Heritage Lottery Fund, is the North Pennines AONB Partnership's community archaeology project. It enables volunteers to undertake practical archaeological projects with appropriate professional supervision and training. As well as raising the capacity of local groups to undertake research, the project makes a genuine contribution to our understanding of the North Pennines historic environment, thus contributing to future landscape management.

Over an initial 18 month period ending in December 2011, the project attracted 400 volunteers and completed a range of fieldwork modules including survey and excavation of prehistoric, Roman, medieval and post-medieval sites, and the survey of complex multi-period archaeological landscapes. Details of work completed during this pilot phase can be found on the AONB website.

The current *Altogether Archaeology* programme runs from September 2012 - September 2015. It involves a range of professional and academic partners, and participation is open to all; it currently has some 600 registered volunteers. Work is arranged according to ten themes, ranging from Early Farming to 20th-Century Industrial Archaeology. Further information, including details of how to register as a volunteer, are available on the AONB website.

2. Introduction to Altogether Archaeology Theme 5.

Theme 5 of the Altogether Archaeology project was originally intended to undertake survey and excavation work in Upper Teesdale to build on the successful survey project completed during the AA pilot phase at Holwick. Unfortunately, the proposed funding for this fell through, meaning that the original plans had to be shelved. The proposed work was largely replaced in the AA schedule by a survey of watercourses at the Nenthead lead mining complex in Weardale. Until recently the intention was to undertake an archaeological evaluation of the known early Mesolithic site at Staple Crag, near Wynch Bridge, which lies within the original Holwick survey area. However, the discovery in early summer 2015 of this 'new' and potentially very important Mesolithic site at Cow Green, which is under threat, means that it makes sense to leave Staple Crag, which is not any immediate threat of damage, for now, and concentrate on the investigation of the Cow Green site. Further information about the nature of the site and the justification for the work can be found within this document.

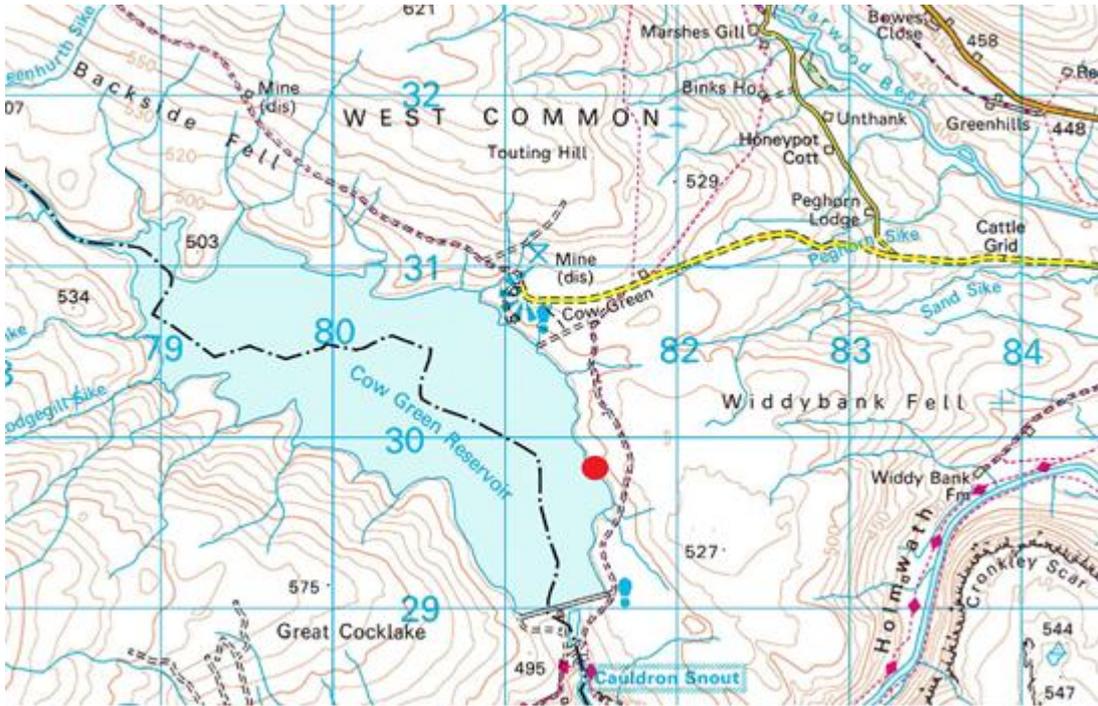


Fig 1.1. OS Map showing the location of the site (red circle) in relation to Cow Green reservoir. Participants in the project should use the main Cow Green car park, c1km north of the site. (Ordnance Survey LA 100049055. Landmark Information Group Copyright © 2015).

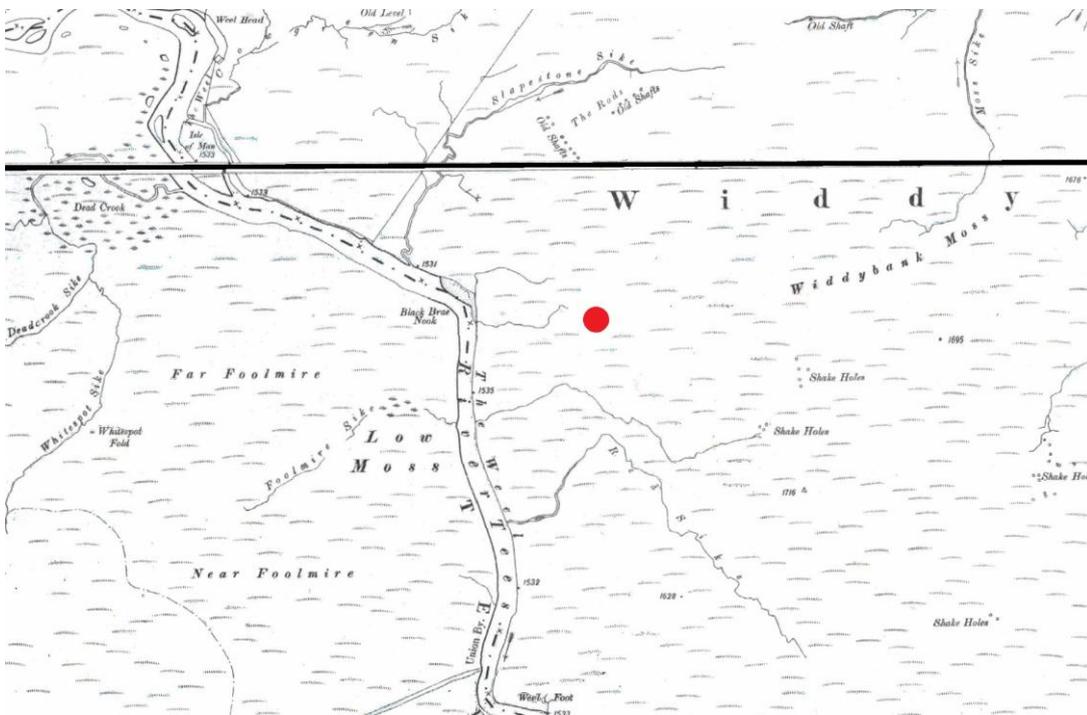


Fig 1.2. Location of the site shown on an 1898 OS map, surveyed some eight decades before the construction of Cow Green Reservoir. Although the river may have changed its course somewhat since Mesolithic times, and we don't know the extent of woodland at the time the site was occupied, this gives a much better indication than the modern map of the relationship between the site and the river in the Mesolithic. (Ordnance Survey LA 100049055. Landmark Information Group Copyright © 2015).

3 The Mesolithic in the North Pennines

(Based on information provided by Rob Young)

Late Upper Palaeolithic and early Mesolithic (c15,000 – 7,000BC)

During warmer interludes during the Ice Age it is probable that occasional bands of hunters crossed the North Pennines in search of woolly mammoths and other prey, but such episodes were probably few and far between and it is perhaps unlikely that evidence of a human presence in the uplands from these early times will ever be found. At the end of the Ice Age, as the land reappeared from beneath the ice sheets from about 12,000 years ago, the North Pennines landscape was one of open tundra with few trees. Occasional hunting parties must have wandered into the area from time to time in search of wild cattle, horse, giant deer, elk reindeer and smaller prey, as well as fish in the rivers and wild nuts and fruits. But these people probably congregated into large camps in the lowlands during the winter, and left very little evidence of their seasonal presence in the uplands.

Archaeologists refer to this period, from about 15,000 to 9,000 years ago as the Late Upper Palaeolithic (c13,000 – 10,000 BC) and Early Mesolithic (c10,000 – 7,000BC). Labels such as this can appear complicated, but the basic chronological division is quite straightforward. Palaeolithic means 'old stone age', and 'Mesolithic' means 'middle stone age'; people during these times lived by hunting, gathering and fishing. Farming was not introduced until the 'Neolithic' (new stone age) from about 4,000 BC.

Evidence about the changing landscape comes from palaeoenvironmental work, mainly pollen analysis. The careful analysis of pollen grains in deposits such as peat can give us a good idea of changing vegetation patterns over time, which can be linked to archaeological remains to give an idea of developing relationship between people and the environment since the end of the Ice Age. Such work is particularly important in trying to understand the Mesolithic, for which archaeological evidence is sparse.

In the North Pennines, possible Late Upper Palaeolithic (c13,000 – 10,000BC) flint material has been discovered by Tim Laurie on the terraces of the Tees at Towler Hill near Lartington in Teesdale (Coggins *et al* 1989), but nothing of such early date has been found elsewhere.

There are two places in Upper Teesdale at which material from early Mesolithic (c10,000 – 7,000 BC) settlement has been recovered; Towler Hill (Lartington) and Staple Crag, near Wynch Bridge on the south side of the Tees opposite Bowlees (Coggins *et al* 1989). At the latter site, more than 200 pieces of worked flint and chert, along with a couple of shale beads, were recovered from the eroding river bank (now protected by a stone revetment wall). The flint appears to be from Yorkshire, though the chert is probably local. We don't know the extent of the site here, but it may well be that people congregated here for a few weeks each year, presumably linked to the seasonal exploitation of salmon, possibly for many centuries.

Later Mesolithic (c. 7,000 – 4,000 BC)

Evidence for human activity in the North Pennines during the later Mesolithic (c.7,000 – 4,000BC) is far from prolific, but much more common than that from earlier periods. From 1910 up to the present, researchers have recorded Mesolithic material from various locations in Weardale and Teesdale (Egglestone 1909-1910, 1911-1912a, 1911-1912b; Trechmann 1905; 1912 ; Fell and Hildyard 1953, 99; Fell and Hildyard 1956). Hildyard's catalogue of sites formed the basis for Rob Young's fieldwork in Weardale over 20 years later. As part of research for a PhD at the University of Durham, Young re-examined all of the extant flint and stone material from the Wear Valley and carried out a programme of field-walking in the area (Young 1984; 1987). Denis Coggins (1986) produced an excellent summary of his own multi-period fieldwork in Teesdale; and Tim Laurie has published a review of early post-glacial settlement data from the Tees and Swale Valleys (1985). In 1989 Coggins, Laurie and Young collaborated in a review of the late Upper Palaeolithic and Mesolithic of the North Pennine dales. This was an attempt at a comprehensive review of what was known about the early prehistoric period in the North Pennine area, concentrating in particular on Weardale and Teesdale. In 2002 Young reviewed the evidence for the Palaeolithic and Mesolithic periods in the north of England (Young 2002).

Mesolithic material is known from excavation sites in the North Pennines, but invariably this has been recovered by chance during the excavation of sites of later periods. In 1997 for example, Coggins and Fairless produced the report on their excavations at the multi-period site of Middle Hurth Edge in Teesdale (Coggins and Fairless 1997). Here, a later Mesolithic flint assemblage was documented, in a secondary context, from the make-up of the mound from this site (Young 1997). Similarly, an assemblage of Mesolithic flint was recorded from the earliest levels of excavation on the medieval castle at Barnard Castle (Young 2002). In 1999 a further later Mesolithic assemblage consisting of over 200 pieces of flint and chert was recovered from beneath Romano-British levels during excavations at the Iron Age/Romano-British site of Bollihope Common, near Stanhope (Co.Durham) (Young and Webster forthcoming). Lithics from a Mesolithic settlement were also recovered during excavation of a Bronze Age burial mound by Newcastle University on Birkside Fell, north of Blanchland, in the mid 1990s (Tolan-Smith 2005). Most recently, during excavations at the early Bronze Age cairn site of Kirkhaugh near Alston, famous for the pair of gold tress-rings found there, an assemblage of later Mesolithic flint was recovered, again in a secondary context, from the scraped up material of the burial mound (Young, in prep.).

Clearly there is material evidence for a substantial human presence in the North Pennines in the later Mesolithic period. The Cow Green site is a further reflection of the nature of that early settlement.

Of particular importance in the current discussion is the information contained in Johnson and Dunham's seminal work on the *The Geology of Moor House: A National Nature Reserve in North-East Westmorland* (1963). Written and published well before the commencement of construction of the Cow Green Reservoir in 1967, chapter 17 discusses 'The Prehistory and Human

Occupation of the Reserve' and the authors record the recovery of later Mesolithic material from five locations in the high uplands of the reserve to the west of the site at Cow Green. All of the material was found in similar relationship to the overlying peat as those finds from Cow Green. The artefacts were recovered directly at the interface between the natural mineral soil and the overlying peat, and in terms of typology and raw materials these finds seem very similar to the newly discovered material from the reservoir site.

The finds from Hard Hill (NY 727331. Johnson and Dunham, 1963, 156) are of particular importance because here the lithic material, which is similar to the Cow Green finds, was recorded in association with two wild cattle (aurochs) horn sheaths. Pollen associated with the peat in the horn sheaths indicated that the finds can be placed at the end of the Atlantic (pollen zone VIIa) climatic phase, right at the end of the later Mesolithic. The landscape throughout the later Mesolithic was heavily wooded, though tree cover on the high hills was probably sparse, with open moorland on some hilltops. It is possible that some Mesolithic campsites were located on the tree line, at the junction between woodland and open ground.

There must without doubt be much evidence of Mesolithic activity preserved beneath the peat at numerous locations throughout the North Pennines, but finding it is to a large extent reliant on chance. The material only becomes visible when the overlying peat is eroding, and the chances of someone capable of recognising Mesolithic material wandering by while a site is thus exposed are not great. From the available evidence it would appear that much of the Mesolithic activity throughout the North Pennines relates to temporarily occupied campsites, some of which may have been occupied only once, perhaps for a few days, while others may have been returned to numerous times over several years or even centuries. These sites would have been located for particular tasks during the year, perhaps hunting, fishing, gathering of fruit or nuts, or procurement of other resources such as stone for tool manufacture. If sites can be found preserved beneath the peat, then there is quite high potential for preservation of organic materials (such as wood or bone) and evidence of structures such as hearths or post-holes for temporary wooden structures (eg frames for tents or wind-breaks) which normally rot away through natural processes following the abandonment of a site. Such sites therefore offer much potential for investigating various aspects of Mesolithic life, rather than simply the collection and analysis of stone tools. Although we cannot be sure whether any such evidence survives at the newly discovered site, the potential is high, and the opportunity to excavate here represents a unique opportunity to study the elusive lives of our Mesolithic ancestors in the North Pennines.



Fig. 3.1. Artist's impression of a small, seasonal Mesolithic campsite, based on evidence from various sites. This gives a flavour of how the Cow Green site may have looked, although it is much further from the river. However, the results of the excavation may suggest something very different!



Fig 4.1. A general view over the Cow Green site. There is absolutely nothing on the surface to suggest the presence of the site beneath the peat; we only know about it through the disturbance of lithics due to erosion of the reservoir bank.

4 Introduction to the Cow Green Mesolithic site

The newly discovered Mesolithic site at Cow Green (NY 81492 29854, at a height of 490 metres OD. Fig 4.1) was first recognised by Lance Moore in the early summer of 2015. He noticed a number of small but clearly worked lithics (pieces of artificially worked stone) of chert and flint eroding from the side of the reservoir. Realising their potential importance, he reported them to the Finds Liaison Officer for NE England, Ellie Cox, who confirmed that they are indeed Mesolithic. The find was reported to Clare Hutchinson (Senior Archaeologist, Durham County Council), who brought it to the attention of Paul Frodsham, Altogether Archaeology project manager with the North Pennines AONB Partnership.

A site visit was arranged, along with Rob Young, an expert on the Mesolithic of northern England. This confirmed the nature of the site, the immediate threat to it through erosion of the reservoir bank, and the high potential it offers to provide unique information about the local Mesolithic. Following discussion with landowners (Northumbrian Water and Raby Estates) and tenants (the Moor House-Upper Teesdale National Nature Reserve), this Project Design has been drawn up for investigation of the site by Altogether Archaeology volunteers.

Further artefacts have been recovered on each occasion that the site has been visited; the current total stands at about 200. They are all from the top of the old ground surface sealed beneath the peat (fig 5.2); they must have been left here before the onset of peat formation. What we cannot know at this stage, however, is whether these represent the last vestiges of a large site which has already largely disappeared into the reservoir, or whether an extensive site remains for investigation. Neither are we able to say anything about the original size of the site, whether it is the result of a single episode or perhaps a site that was revisited many times. These issues can only be addressed through careful excavation. It will also be interesting to establish whether any comparable sites also survive in the vicinity, though finding these, should they exist, will be reliant on a degree of good luck as well as careful survey.

All the lithics recovered from the site are being systematically recorded and catalogued by Ellie Cox; a selection of her photographs of some of the lithics recorded during the first phase of this work are included here as fig 5.3. There will be ample opportunity for participants to examine and discuss these finds with Rob Young, including methods of manufacture and potential usage, during the project.

As well as being within the Moor House National Nature Reserve, the site falls within the Upper Teesdale Site of Special Scientific Interest (SSSI), an extensive 14,365ha upland site containing a number of nationally rare species and habitat types, as well as a rich variety of representative habitats and associated plant and animal communities. The site is also within the Moor House - Upper Teesdale Special Area of Conservation (SAC) as it represents the least damaged and most extensive tracts of typical M19 (*Calluna vulgaris* - *Eriophorum vaginatum*) blanket mire in England, and shows this community type up to its highest altitude in England.

The archaeological site is situated within this nationally and internationally important M19 habitat, therefore all work here, including the removal, storage and reinstatement of vegetation and peat, must be carried out in a manner that pays due regard to the quality and functionality of the blanket mire. Special consent has been granted by Natural England for the work to take place in accordance with the Methods Statement set out in Section 10 of this document.

Many more artefacts have been found at Cow Green than at any of the sites recorded by Johnson and Dunham (discussed in Section 4, above) and the archaeological potential of the site to produce lithic material in association with dateable organic deposits is high. Its location at what seems to have been an old spring head is a classic one for later Mesolithic sites in the North Pennines and on the North York Moors. It may also be close to the tree line at the time, although this is currently little more than guesswork as much carefully targeted palaeoenvironmental research will be required before we can hope to reconstruct the detailed nature of the landscape here during the Mesolithic, and the way in which it changed through time.

Excavation of the Cow Green site is essential from a 'rescue' perspective. The site is in imminent danger of being completely eroded into the reservoir. The proposed work at the site would also be the first intentional excavation of an *in-situ* later Mesolithic site in the North Pennines area and as such this is an opportunity not to be missed. The work has the potential to give us detailed information about seasonal occupation of the North Pennines uplands, the procurement of important lithic raw materials in the later Mesolithic period and the range of tasks that might have been carried out on the site. The results of the excavation would fully complement the information from the main river valleys of the North Pennines outlined above, and the work will significantly enhance our understanding of human activity in the area some seven or eight thousand years ago.



Fig 4.2. Two views showing the relationship of the subsoil and overlying peat. All the lithics come from a narrow band between the two; they were lying on the old ground surface at the onset of peat formation and have lain here undisturbed for thousands of years until erosion of the reservoir bank in modern times.



Fig 4.3. A selection of lithics from the first batch to be processed by Ellie Cox. The top two are chert which was probably sourced locally; the lower two are flint which must have been brought in from afar, possibly from Yorkshire. Note the scales; these are very small objects. (Photography by Ellie Cox).

5 Research Aims and Objectives

5.1 The main aim of the work is to recover as much information as possible about the site, and the people who used it back in the Mesolithic.

In particular, the project aims to address, so far as possible from the surviving remains:

The original extent of the site.

The nature of the lithic assemblage.

The form of the site, together with evidence for its development over time.

The chronology of the site.

The nature of any features, such as hearths, pits or post-holes, that may be present.

The nature of the surrounding environment before, during and after the occupation of the site.

5.2 Volunteers will also undertake a walkover survey around the reservoir bank to search for any similar sites that may exist in the area. Should any such sites be located then appropriate recommendations for their future management will be included in the project report.

5.3 Information about the nature and condition of the site will be of potential use to the location and study of other Mesolithic sites in the surrounding landscape and further afield. Thus the project aims to help inform Mesolithic studies throughout the North Pennines, not just within this area of Upper Teesdale.

5.4 A further key objective is to provide an opportunity for the volunteers to build on their experience of excavating a range of later sites throughout the North Pennines by completing what will certainly be the earliest site investigated by the Altogether Archaeology project. The nature of the site dictates that the experience of working here will be very different to all other sites investigated, and all experience gained by volunteers here will potentially be of value to a range of possible future projects elsewhere.

5.5 The results of this work will potentially represent a key episode in the study of the Mesolithic in the North Pennines. They will potentially be of great value in their own right, but will also provide a basis for future conservation, interpretation and research.

6. Business Case

6.1 The main justification for undertaking this project now is the immediate and genuine threat to the site through erosion of the reservoir bank. The *Altogether Archaeology* project provides an ideal and timely opportunity to undertake this proposed work, engaging local volunteers directly in the work and therefore raising public awareness of Mesolithic archaeology which may well lead to the recognition of further sites elsewhere.

6.2 In general terms, the strong desire amongst local people to better understand the archaeology of the North Pennines and protect it for the future provides clear impetus to complete this project at this time. Once equipped with skills obtained through the project, local volunteers will be at liberty to plan further works to enhance the historic environment throughout the North Pennines.

6.3 The project is supported by English Heritage. It will thus contribute to the aims of the joint accord signed between English Heritage and the National Association of AONBs to work together to further the understanding, conservation, enhancement and public enjoyment of the historic environment within the AONB (English Heritage 2005b).

6.4 With regard to SHAPE 2008 (A Strategic Framework for Historic Environment Activities & Programmes in English Heritage), this project, although small in scale, contributes to several of English Heritage's stated corporate objectives. The project could fit into several of the Sub-Programmes within SHAPE 2008, but the most appropriate is sub-programme number 51311.110:

Sub-programme name	Community Involvement and Awareness Projects
Sub-programme number	51311.110
Corporate Objective	5A. Increase public awareness of the historic environment
Sub-programme description	Projects raising community awareness of historic environment through direct communication, engagement and participation. (eg Community-led research programmes)
Reason for EH support	Builds direct support and engages enthusiasm from which multiple benefits flow. Encourages knowledge transfer through enjoyment.

It should also be noted that the project has multiple benefits and a sound case could also be made for including it within any of the following SHAPE sub-programmes:

Understanding Place: Analysis of specific historic assets and locales (11111.130).

Community Training Projects (12211.110).

Protected Landscape Research (23111.110).

Guidance for Volunteer and Community Groups. (43215.110).

6.5 This project at Cow Green will contribute directly to the following objectives within the *North Pennines AONB Management Plan (2014-2019)*:

Objective 5. To ensure an increase in professional and public knowledge and understanding of the AONB's historic environment.

Objective 13. To ensure that a wide range of opportunities exists for everyone to get involved in conserving and celebrating the North Pennines.

7. Project scope and interfaces

This is self-contained project, the results of which will be produced and disseminated accordingly. Further work to merge the results with those of other Altogether Archaeology fieldwork modules, and other work elsewhere, does not form part of this module. If appropriate, the project report will include outline recommendations for further work aimed at better understanding and management of Mesolithic sites in Upper Teesdale and throughout the North Pennines.

This work forms part of the wider *Altogether Archaeology* project which aims to improve understanding of, and direct public involvement with, the archaeological heritage of the entire North Pennines. Links between this module and the wider project will be maintained through the project web pages, and the results will be discussed at the *Altogether Archaeology* public conference scheduled for October 2015. The results will also be incorporated into the Durham HER, and the report will be available via the AONB website.

8. Project team

8.1 Given the small-scale nature of this project, the Project Team is smaller than that for many other *Altogether Archaeology* projects.

The Project Team consists of:

Paul Frodsham	North Pennines AONB Partnership Historic Environment Officer and <i>Altogether Archaeology</i> Project Manager	Overall project management/coordination. Supervision of fieldwork.
Rob Young	Private consultant and Mesolithic expert.	Direction of fieldwork.
Lance Moore	Discoverer of the site.	General assistance and advice.
Ellie Cox	Finds Liaison Officer, NE England.	Advice regarding finds; cataloguing of finds.
Martin Furness	Reserve Manager, North Pennines NNR.	Liaison with North Pennines NNR

8.2 Overall project management will be by Paul Frodsham, assisted if appropriate by other members of the North Pennines AONB Historic Environment Working Group (HEWG). The HEWG is the designated advisory group for the whole of the *Altogether Archaeology* project; it includes the Durham County Archaeologist and English Heritage North-East Region Inspector of Ancient Monuments. Paul Frodsham will be responsible for co-ordinating volunteer involvement in the project, and for preparatory work including liaison with the landowner and the provision of site facilities.

8.3 Fieldwork will be undertaken by *Altogether Archaeology* volunteers with training and supervision provided by Rob Young and Paul Frodsham. Paul Frodsham will produce a risk assessment, and will be responsible for health and safety on site throughout fieldwork.

8.4 The *Altogether Archaeology* project has a pool of some 600 volunteers, of whom up to 50 are expected to participate actively in this module. Although there must be some flexibility with regard to volunteer involvement, up to 20 volunteers are expected on site each day. Paul Frodsham will draw up a rota showing which volunteers expect to be on site each day, and fieldwork can then be planned accordingly. Some volunteers are more experienced in excavation than others, but all will receive an appropriate level of training and supervision. Their experience should then be of value to future projects.

9. Communications

9.1 Paul Frodsham maintains a volunteer database of all *Altogether Archaeology* volunteers, and information about the project will generally be disseminated by email or telephone using contact details contained within this

database. For ease of communication, any local people wishing to take part in the project who have not registered with the *Altogether Archaeology* project will be asked to do so, at least temporarily. All communication with volunteers will then be via the *Altogether Archaeology* volunteer database.

9.2 The North Pennines AONB Historic Environment Working Group (the advisory group for the *Altogether Archaeology* project) meets quarterly. A draft report on the results of this project will be presented by PF for discussion at the first meeting following completion of the project.

10. Methods statement.

10.1 General

10.1.1 All work will be completed according to relevant professional standards and guidelines. Fieldwork will be undertaken by volunteers from the *Altogether Archaeology* project, with training and constant on-site supervision provided by Rob Young assisted by Paul Frodsham.

10.1.2 The Project Design incorporates a degree of flexibility; decisions will be taken according to factors such as ongoing results, numbers of volunteers attending, and the weather. Volunteers will be encouraged to take part in discussion and debate about the project design while work is in progress and during lunch breaks.

10.1.3 It is expected that fieldwork will take place over 9 days from Sat 1 to Sun 9th August 2015. A volunteer programme will be prepared, with a maximum of twenty volunteers on site each day. Full training will be provided to all volunteers, who will be closely supervised throughout the fieldwork.

10.1.4 Since the site is a Scheduled Monument, the necessary legal consent will be obtained from English Heritage well in advance of fieldwork. In addition, access arrangements will be clarified with relevant landowners and tenants well in advance.

10.1.5 Volunteers should gather at 9.45 each morning in the Cow Green public car park, from where travel to site will be arranged in as few vehicles as possible. Final details regarding access and on-site facilities will be supplied to participants in due course. There will be an on-site briefing for volunteers at the start of each day. The working day will be from 10am through until 4.00pm, with breaks.

10.2 Pre-start planning and start-up meeting

10.2.1 An initial on-site meeting was held by Rob Young, Lance Moore and Ellie Cox on 4th June. A subsequent site meeting was held by Paul Frodsham, Martin Furness (Reserve Manager - North Pennine National

Nature Reserve) and Karen Purvis (Land Management and Conservation Adviser, Natural England) on 17th June. Discussions have also taken place with Northumbrian Water and Raby Estates regarding access and other practical matters.

10.2.2 There will be an on-site project start-up meeting, including an introduction to the site and health and safety induction, at 10am on Saturday 1 August. Participating volunteers will be encouraged to attend this meeting, although numbers may dictate that not everyone can attend on the first day, in which case all relevant information will be made available to the volunteers on the first occasion that they attend.

10.3 Fieldwork: excavation strategy and methods.

10.3.1 The excavation plans are flexible, and the amount of work completed during the project will be dependent on factors such as the weather, the numbers of volunteers attending, and the complexity of the archaeological deposits encountered. It will be possible to amend the plans during fieldwork should this become necessary, but the basic proposal is for the excavation of one large trench measuring 10 by 5 metres, together with a number of 1x1m test pits if the results of the main trench suggest these might be worthwhile. A walkover survey, to establish whether or not any further comparable sites are visible in the vicinity, is also planned.

Trench 1. A trench measuring 10 x 5 metres will be opened extending inland from the reservoir bank (with its long axis parallel to the bank). The purpose this trench is to fully excavate the entire lithic scatter along with any associated features. It is possible that cut features such as gullies, pits or hearths may survive, and deposits within these may be crucial in ascertaining the nature and chronology of the site. It is also possible, given that the site appears to be sealed by peat, that fragile artefacts that do not normally survive on upland sites may be preserved here. Depending on the nature of results within this initial area, extensions may be opened in any direction, perhaps linked to a grid of test pits (see below). Decisions regarding possible extensions cannot be made until work is underway. In addition, the area directly beneath the bank will be explored for lithics that may have eroded out of the bank and worked their way down amongst the boulders here.

Test pits. Depending on results in the main trench, a series of test pits, each measuring 1x1metre, may be excavated down through the peat onto the top of the underlying mineral soil. The purpose of these test pits will be to investigate the extent of the site, if it appears to extend outside the main trench. The methodology for each test pit will effectively be the same in miniature as for the main trench.

Walkover survey. In addition to the excavation of the main site, it is proposed that small groups of volunteers will methodically examine the shore around the entire reservoir perimeter to establish whether any other comparable sites are visible. Should any further sites be discovered, it is not proposed that any excavation of them is undertaken as part of this project, but

their location(s) will be accurately recorded to enable possible follow-up work at a later date.

10.3.2 In accordance with advice provided by Natural England, and taking into account the high ecological importance of the site, it is important that removal of vegetation and peat, and reinstatement following the excavation, adhere to the following guidelines. Vegetation (heather and turf) will be cut in manageable 'turves' and lifted by hand, with as much peat still adhering to the roots as possible. These 'turves' will be stored close to site on plastic or tarpaulin, vegetation side up, and care will be taken to ensure they do not dry out; if necessary they will be watered using water taken from the reservoir. Peat will also be lifted by hand and stored on plastic/tarpaulin for the duration of the excavation. When choosing the area in which to store the vegetation and peat, a buffer zone of at least 5 meters will be left around any areas of flush or bog pools. On completion of the excavation, peat and vegetation will be carefully replaced, by hand, so that the ground profile and general appearance of the site are almost identical to those prior to the work.

10.3.3 Excavated areas will be hand-cleaned for the identification of archaeological deposits and recorded in plan. Excavation of archaeological deposits identified will proceed by hand, using standard archaeological procedures. All spoil will be sieved through a fine mesh to minimise potential loss of very small artefacts.

10.3.4 All suitable deposits will be subject to an environmental sampling strategy.

10.3.5 Archaeological features will be sectioned, excavated and recorded in plan and section. Plans will be drawn at 1:20 and sections at 1:10. The excavations will be tied in to the site boundary and related to an OS benchmark. Bracketed 35mm monochrome prints and colour digital photographic images will be taken. A site diary will be maintained, to which volunteers will be encouraged to contribute.

10.3.6 All excavation locations will be surveyed, together with plans, sections and levels, using a Leica Viva GS15 global navigation satellite system (GNSS), with real time kinematic (RTK) correction, typically providing accuracy of approximately 10mm.

Sampling

10.3.7 Bulk samples will be collected from the fills of all cut features, and from other deposits that have the potential to provide palaeoenvironmental information. Sample size will depend on the apparent potential value of the deposits, but the minimum volume collected from a context will be 40 litres or 100% of the available material. Assessment of processed material will be conducted by an appropriate specialist. The English Heritage Regional Science Advisor will be consulted in relation to any unusual sampling requirements.

Artefact recovery

10.3.8 The project will operate a 100% finds collection policy, including post-medieval, 19th century and modern material. Bulk finds such as pottery and animal bone will be collected by context. Where unusually large quantities of finds, or very small types of material are encountered (e.g. fish bones), such that recovery by hand is not practicable, soil samples will be sieved. Finds will be removed from site to a secure location at the end of each working day. All finds that are retained will be washed, marked and bagged in a manner suitable for long-term storage. Where finds fall under the Treasure Act (1996) relevant procedures will be followed.

Conservation

10.3.9 All finds will be appropriately packed following First Aid for Finds (2nd Edition) and UKIC's Conservation Guidelines No. 2. Where delicate artefacts are uncovered, appropriate immediate measures will be taken, and the artefacts transferred to the Conservation Laboratory at Durham University for stabilisation. Should particularly complex conservation requirements become apparent, an appropriately qualified and experienced specialist will be called to site to excavate and package the object(s).

Scientific dating

10.3.10 Samples of material suitable for scientific dating techniques including AMS C14 dating, archaeomagnetism (for example, charcoal or *in-situ* burnt clay from appropriate contexts) or thermoluminescence will be collected where appropriate. The value of these will be assessed during the post-fieldwork assessment phase and a suitable recommendation made.

Human remains

10.3.11 It is not envisaged that human remains will be excavated as part of this project. Should it become necessary for bones to be lifted then appropriate permissions will be sought from the Ministry of Justice before any work is begun.

10.4. Report and Archive

Post-excavation assessment and reporting

10.4.1 A report will be prepared in a form suitable for use by the North Pennines AONB Partnership. A digital copy will be provided in pdf format, suitable for use with the AONB website. Reporting will adhere to the reporting requirements for Durham County Council. This will include the deposition of one bound copy with the Historic Environment Record (HER). The report will include relevant plans and sections and will be based on the following format:

1. Executive summary
 - 1.1 The project
 - 1.2 Results
 - 1.3 Recommendations
 2. Project background
 - 2.1 Location
 - 2.2 Development proposal
 - 2.3 Objective
 - 2.4 Specification summary
 - 2.5 Dates
 - 2.6 Personnel
 - 2.7 Acknowledgements
 - 2.8 Archive
 3. Archaeological and historical background
 4. Landuse, topography and geology
 5. Results
 - 5.1 Introduction
 - 5.2 Trench 1 (and other trenches if appropriate)
 - 5.3 Test pits
 - 5.4 Walkover survey
 - 5.5 General
 6. Discussion
 7. Recommendations for further work
 8. Sources
- Appendix 1: Context data
Appendix 2: Stratigraphic matrices

Archive

10.4.2 The project archive will be prepared to the standard specified in Appendix 3 of MAP2 (English Heritage 1991) and in accordance with the Guidelines for the Preparation of Archaeological Archives for Long Term Storage (UKIC 1990). The archive will be deposited at Bowes Museum or other appropriate establishment by agreement with the Durham County Archaeologist.

OASIS

10.4.3 An OASIS form will be completed for this project. It is understood that after validation by the HER, and with the agreement of all the parties concerned, the project report may become a publicly accessible document.

Publication

10.4.4 Recommendations for publication will be made if required following completion of the works (including any further schemes of works): this may include a submission to an appropriate archaeological journal. The nature and extent of the publication will be dependent on the results of the work.

Copyright

10.4.5 Copyright in all material produced will reside jointly with Rob Young and the North Pennines AONB Partnership.

11. Publicity and Outreach.

11.1 It is anticipated that there will be much local public interest in this project, and also much general interest from further afield. However, it is not proposed to generate any advance publicity for the work. It is recognised that there may be inquiries about the work whilst on-going when a reactive response will be required. Decisions regarding reactive or proactive publicity will be made, subject to the nature of results, during and after fieldwork. Any publicity relating to the site will only occur following consultation with Northumbrian Water and the Moor House NNR. Should such publicity be considered desirable, it will be arranged through the AONB Partnership's Publicity Officer in conjunction with Northumbrian Water's PR & Media team. Depending on results, a press day and a public tour of the site may be arranged towards the end of fieldwork, in partnership with Northumbrian Water.

11.2 Once the survey is complete, and the results assessed, consideration will be given to the production of a press release, to be organised through the North Pennines AONB Publicity Officer following discussions and agreement with Northumbrian Water's PR & Media team.

11.3 At a time to be agreed with the local community, a public lecture about the results, within the context of the wider Altogether Archaeology project, will be given at an appropriate local venue.

11.4 Discussion of the results will be worked into numerous talks given by AONB Partnership staff each year to local audiences throughout the North Pennines and further afield. They will also be discussed during occasional public walks around Cow Green arranged by the AONB Partnership.

11.5 A brief summary of the work will be placed on the AONB website, along with a link to the full project report via OASIS.

12. Stages, Tasks and Timetable

This project is divided into three stages and 17 tasks as shown in the table below. Following the approval of this project design by Historic England, dates for the fieldwork phase will be finalised with the landowners and volunteers. Fieldwork is planned to extend over nine days from Saturday 1st - Sunday 9th August 2015. Results analysis and report production will take up to four months following the completion of fieldwork. It is probable that the report will not be entirely completed prior to the 'official' end of the Altogether Archaeology project, but this will not be a problem as long as it is complete by the end of the calendar year.

STAGE or Task No.	STAGE/Task	Person(s) responsible	Dates (all 2015)
S 1	PREPARATION		
T 1.1	Drafting of MORPHE compliant project design and approval by Project Team members.	PF/RYP/PT	17 July
T 1.2	Obtain official Natural England consent for fieldwork.	PF	24 July
T 1.3	Agree health & safety provision and complete risk assessment.	PF	24 July
T 1.4	Finalise all access arrangements etc with landowners and tenant.	PF	16 July
T 1.5	Circulate Project Design to AA volunteers, inviting volunteers to register.	PF/volunteers	17 July
T 1.6	Closing date for volunteer registration	Volunteers	26 July
T 1.7	Agree volunteer participation rota - inform volunteers.	PF	28 July
T 1.8	On site start-up site meeting	Volunteers/PF/RYP	1 Aug
S 2	FIELDWORK		
T 2.1	Site set-up	Volunteers/PF/RYP	1 Aug
T 2.2	Fieldwork	Volunteers/PF/RYP	1-9 Aug
S 3	REPORT, ARCHIVE & PUBLICITY		
T 3.1	Production of interim project report	RY	Sept
T 3.2	Post-excavation work (finds analysis, sample processing, dating etc)	RY	Sept/Oct
T 3.3	Production of final report	RY	Nov
T 3.4	Presentation of final report to HEWG	PF	Dec
T 3.5	Deposition of archive, dissemination of final report to HER & OASIS	PF/RYP	Dec
T 3.6	Link to Project Report placed on AONB website.	PF	Dec
T 3.7	Contribution to Altogether Archaeology annual public conference.	PF/RYP	tbc

PF = Paul Frodsham (North Pennines AONB Partnership)

RY = Rob Young (English Heritage)

PT = all Project Team members

13. Project review.

13.1 The project will be subject to continuous review by the Project Manager and Fieldwork Director who will be on site throughout the fieldwork. Should any changes to the proposed programme become desirable during the course of the project then these will be discussed with the Northumbrian Water and the NNR Manager, but can be made without the need for any external permission.

13.2 Upon project completion, volunteers will be asked to complete a questionnaire outlining their experience of working on the project and highlighting anything they would like to see done differently in future projects. Thus, in addition to fulfilling its own stated aims and objectives, this project will also play a positive role in planning future *Altogether Archaeology* modules.

13.3 The Project Team will also hold a review meeting upon completion of the project. This may lead on to suggestions for the development of a programme of further investigation at this site or other sites in the vicinity, though any such work lies outside the scope of this project.

13.4 The project will also feature in the external *Altogether Archaeology* Project Review which will be completed towards the end of 2015 as a condition of HLF funding.

14. Land Ownership

The land on which fieldwork will take place is owned by Northumbrian Water plc, and forms part of the North Pennines National Nature Reserve. Both have granted permission for the excavation. Any finds will be the legal property of Northumbrian Water plc, and will hopefully be donated in due course to the Bowes Museum or other appropriate museum. Access to the site is across land owned by Raby Estates, who have kindly granted permission for the project to proceed.

15. Health & Safety and Insurance

15.1 Full consideration will be given to matters of health and safety throughout this project. All work will be undertaken in accordance with the 1974 *Health and Safety Act* and its subsequent amendments, the 2007 *Construction Design and Management Regulations*, and the Standing Conference of Archaeological Unit Managers (SCAUM) Health and Safety Manual (2007).

15.2 A full risk assessment will be undertaken to assess all real and potential hazards prior to the commencement of fieldwork. This will pay special regard to the fact that the site is in a very exposed upland location immediately adjacent to the steep reservoir bank. A comprehensive health and safety

induction will be given to all volunteers at project start-up, and all will be required to read a written statement on health and safety which will be kept on site and which all volunteers partaking in the project will be required to sign, stating that they have read and understood it and that they will abide by its terms. A generic Risk Assessment for Altogether Archaeology fieldwork is included herewith as Appendix 2, and a specific Risk Assessment for this module forms Appendix 3.

15.3 Paul Frodsham will ensure that at least one qualified First-Aider and appropriate first aid supplies are on site at all times while fieldwork is in progress. Advice regarding appropriate clothing and equipment will be provided to volunteers.

15.4 Welfare facilities in the form of a porta-cabin and porta-loos may be available close to site, but this has yet to be resolved. Toilet facilities are also available in the main Cow Green carpark. Further details of facilities will be provided to participants prior to the commencement of work.

15.5 All aspects of the Altogether Archaeology project are covered by Durham County Council's comprehensive insurance policy.

16. References

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