



**ARCHAEOLOGICAL EVALUATION  
AND MONITORING ASSESSMENT  
REPORT**

Northern Archaeological Associates Ltd

Marwood House  
Harmire Enterprise Park  
Barnard Castle  
Co. Durham  
DL12 8BN

t: 01833 690800

e: [mt@naaheritage.com](mailto:mt@naaheritage.com)

w: [www.naaheritage.com](http://www.naaheritage.com)

**BREAST MILL BECK ROAD,  
BARROW-IN-FURNESS**

Project No.: 1269  
Text: Alex Hartley  
Illustrations: Dawn Knowles

prepared for  
Oakmere Homes (North-West) Ltd.

NAA 20-90  
December 2020

QUALITY ASSURANCE	
Project Number	1269
Report Number	20-90
Manager	Matt Town
Draft	Alex Hartley
Graphics	Dawn Knowles
Edit	Dave Fell
Authorised	Matthew Town
<i>Issue 1</i>	01/12/2020

#### Disclaimer

This document has been prepared in good faith on the basis of information available at the date of publication without any independent verification for the exclusive use and benefit of the named client and for the sole purpose for which it is provided. Northern Archaeological Associates does not guarantee the accuracy, reliability, completeness, or currency of the content of this document nor its usefulness in achieving any purpose. This document is not intended to nor should it be relied upon by any third party. Northern Archaeological Associates accepts no responsibility nor liability should this document be used for any alternative purpose other than for which it is intended nor to any third party. Northern Archaeological Associates will not be liable for any loss, damage, cost, or expense incurred or arising by reason of any person using or relying on information in this document.

Author Alex Hartley, BA  
 Photographs Alex Hartley, BA  
 Illustrations Dawn Knowles, MA  
 Pottery Alex Gibson, PhD; Charlotte Britton, MA

Client Oakmere Homes (North-West) Ltd  
 Location Breast Mill Beck Road, LA14 4RT  
 District Barrow-in-Furness  
 Planning Ref B22/2015/0707  
 Grid Ref NGR 321500 472400

Dates of Fieldwork May – October 2019

**BREAST MILL BECK ROAD, BARROW-IN-FURNESS**  
**ARCHAEOLOGICAL EVALUATION AND MONITORING ASSESSMENT REPORT**

**TABLE OF CONTENTS**

Summary		
1.0	Introduction	1
2.0	Location, topography and geology	2
3.0	Summary archaeological and historical background	2
4.0	Aims and objectives	4
5.0	Methodology	5
6.0	Results	7
7.0	Discussion	17
8.0	Conclusions	19
	References	21
	Appendix A Context catalogue	23
	Appendix B Trench summary	31
	Appendix C Archaeobotanical assessment	32
	Appendix D Building material assessment	36
	Appendix E Small and recorded finds and stone objects assessment	38
	Appendix F Lithics assessment	43
	Appendix G Glass assessment	46
	Appendix H Industrial waste assessment	50
	Appendix I Post-medieval pottery assessment	52
	Appendix J Prehistoric pottery assessment	54
	Appendix K Animal bone assessment	56

## Illustrations

Figure 1: Site location

Figure 2: Recorded archaeological features in evaluation

Figure 3: Sections of features in the evaluation

Figure 3: All feature phased plan of watching brief excavation

Figure 5: Sections of features in the watching brief excavation

## Plates

Plate 1: Prehistoric pit <b>159</b>	8
Plate 2: Ditch <b>110</b>	10
Plate 3: Metalled hollow-way <b>1085</b>	11
Plate 4: Demolition rubble layer in Trench 2.1	12
Plate 5: Pit <b>1003</b>	14
Plate 6: Hollow-way <b>1085</b> crossing the excavation area	15

**BREAST MILL BECK ROAD, BARROW-IN-FURNESS**  
**ARCHAEOLOGICAL EVALUATION AND MONITORING ASSESSMENT REPORT**

***Summary***

*A trial trench evaluation and an archaeological watching brief were conducted on land at Breast Mill Beck Road, Barrow-in-Furness, Cumbria (NGR 321500 47200). The work was undertaken by Northern Archaeological Associates Ltd on behalf of Oakmere Homes (North-West) Ltd. The evaluation was conducted in May and June, and the watching brief between August and October of 2019.*

*The purpose of the evaluation was to assess the presence, significance and extent of any archaeological remains that may be impacted by a proposed residential development. To achieve this, 45 archaeological trial trenches of differing sizes were excavated across the proposed development area, targeting geophysical anomalies, cropmarks, and blank areas identified by prior non-invasive evaluations. Archaeological deposits and features were observed within 28 of the trenches, which were further investigated through hand excavation.*

*The results of the evaluation identified the need for further archaeological mitigation in an area that would be impacted by the first phase of development. Archaeological monitoring undertaken to identify remains would be followed by excavation, sampling and recording, in order to achieve their preservation by record. To this end, a trench measuring 2,650m<sup>2</sup> was opened in the south-west of the site, targeting previously identified archaeological remains, which lay within the limits of the first phase of construction. The remains were then investigated through hand excavation.*

*The investigations recorded the presence of significant archaeological remains, which included pits dated to the Early Neolithic and Early Bronze Age by a significant assemblage of diagnostic pottery, fragments of a Group VI Langdale polished stone axehead, and pieces of struck flint. The same pits contained evidence for contemporary cereal cultivation, indicating the presence of a farming community.*

*A probable early field system, metalled trackways of medieval or post-medieval date, evidence for ridge-and-furrow agriculture, and the remains of a Second World War camp (Dane Ghyll Camp), as well as material relating to the occupation and demolition of Dane Ghyll Camp, were also identified.*

## 1.0 INTRODUCTION

- 1.1 This document reports on the results of an archaeological trial trench evaluation and watching brief on land at Breast Mill Beck Road, Barrow-in-Furness, Cumbria (NGR 321500 472400; Fig. 1). The evaluation was undertaken between May and June of 2019, and the watching brief between August and October of the same year.
- 1.2 The work was carried out by Northern Archaeological Associates Ltd (NAA) on behalf of Oakmere Homes (North-West) Ltd, in order to meet a requirement of planning consent for a proposed residential development of up to 142 residential units, associated open space and landscaping (Ref: B07/2015/0707).
- 1.3 The trial trench evaluation was designed to assess the presence, significance and extent of any archaeological remains within the development area. The results were used by Cumbria County Council Historic Environment Service (CCCHES) to inform on the need for any further archaeological mitigation, either before or during construction.
- 1.4 The results of the evaluation suggested that significant archaeological remains would be impacted by the first phase of construction in the south-west of the development site, and therefore required further mitigation in the form of a watching brief/limited excavation within this area.
- 1.5 Paragraph 199 of the National Planning Policy Framework (MHCLG 2019) states that local planning authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible.
- 1.6 Archaeological investigations were undertaken in accordance with relevant standards, guidance and best practice published by Historic England (2008; 2015) and the Chartered Institute for Archaeologists (2014a, 2014b). The results of the fieldwork will be subject to post-excavation assessment, analysis, and reporting as appropriate. If warranted, the results of the work will be published in an appropriate journal. Subject to landowner agreement, the finds and archives arising out of the archaeological works will be deposited with the appropriate museum service. Copies of all reports will be deposited with the Historic Environment Record held by CCCHES, the recipient museum service, and the Archaeology Data Service (ADS).

1.7 The side code used was BMB19.

## **2.0 LOCATION, TOPOGRAPHY AND GEOLOGY**

### **Location**

2.1 The proposed development (hereafter known as 'the site') is centred at NGR 321500 472400 and is situated approximately 2.8km north of the centre of Barrow-in-Furness, 1km north-east of the centre of Hawcoat village, and 1.8km south-west of Dalton-in-Furness (Fig.1). The residential site comprises an irregular-shaped parcel of undeveloped pasture and arable land, north of Dalton Lane, which has been allocated to Phase 1 of the proposed residential development (21 units).

### **Geology and soils**

2.2 The solid geology of the site is comprised of sandstone of the Sherwood Sandstone Group, overlain by superficial deposits of Devensian glaciofluvial-derived tills (British Geological Society 2018).

### **Topography and land-use**

2.3 The site is primarily comprised of undulating arable land, with pasture at the western extent and lies at approximately 51m AOD to the south of the site, increasing in elevation to 65m AOD to the north.

## **3.0 SUMMARY ARCHAEOLOGICAL AND HISTORICAL BACKGROUND**

3.1 The site has been subject to a comprehensive Desk Based Assessment (DBA), which has identified heritage assets relating to early prehistoric, medieval, and Second World War period activity within the local landscape (NAA 2015).

### **Prehistoric**

3.2 A substantial lithic assemblage has been recovered from the area surrounding the site. Flint scatters suggestive of in situ flint working have been identified at Breast Mill Beck to the east, and at Manor Park to the south, which comprised 89 and 138 lithic fragments respectively and included a fragment of jet bangle amongst the Manor Park assemblage. Three Neolithic stone axes have been recovered nearby; two to the south at Furness General Hospital and Barrow-in Furness Sixth Form College, and one approximately 150m north of the site at Breast Mill Beck Farm. Cropmarks of putative Neolithic settlements at Hawcoat, Rakesmoor Lane and Millwood Bridge may also indicate early prehistoric activity close to the site (NAA 2015, 34).

### **Medieval**

- 3.3 The site lies 60m to the north-west of the medieval remains of Furness Abbey, which include the upstanding and buried remains of both the original Savignac house dating to 1127-47 and the considerably more extensive upstanding and buried remains of the subsequent Cistercian monastery. As a result of its considerable capital, the Abbey eventually became one of the most powerful ecclesiastical centres in northern England (after Fountains Abbey in North Yorkshire), holding lands across Furness, Lancaster, Lonsdale, Craven, the Isle of Man and even extending to the southern and midland counties of Ireland, creating an extensive trading network. Within the grounds of the Abbey, watching briefs and an archaeological evaluation (have identified archaeological remains associated with the medieval and later post-dissolution occupation of the site (NAA 2015, 32).

### **Post-medieval and modern**

- 3.4 It is assumed that the site remained in agricultural use following the dissolution of the Abbey in 1537. In c.1944, a military camp (Dane Ghyll Camp) was established on the site. Constructed by the Ministry of Works and Planning, a detailed survey plan of the site shows an extensive complex of brick, maycrete and Nissen structures serviced by overhead electric cables and a water/drainage system. The primary use of the encampment during the war years is unclear, though the camp's plan indicates extensive space for military officers, administration as well as NAAFI (Navy, Army and Air Force Institutes) staff suggesting the presence of a British military unit. It may have served as a military transit depot, as an advance party from 187 Field Ambulance unit are recorded as going to it in late 1942 (NAA 2015, 38-40).
- 3.5 In 1946 following the end of the war, Dane Ghyll Camp was requisitioned by the Polish Resettlement Corps and became a resettlement camp for those Polish Armed Forces who did not wish to return to Soviet-occupied Poland. The primary aim of these encampments was to transition occupants into the wider British community, or to aid in their emigration to the USA, Canada, Australia and New Zealand. It is believed that the 'Battalion Wart. A 400' unit was stationed at the site, though it is also possible that members of other units, as well as Polish civilian refugees were resident. These encampments were largely disbanded by 1948, and there is no evidence for the encampment by 1956 (NAA 2015, 40).



### **Geophysical survey**

3.6 The proposed development area was subject to two phases of geophysical survey, which were undertaken by Phase Site Investigations in 2016 (PSI 2016) and Northern Archaeological Associates (NAA) in 2018. The only significant features identified in the western extent of the site (Fields 1– 4) were the remains of Dane Ghyll Camp and some linear anomalies thought likely to represent agricultural features (PSI 2016). The results suggested that high levels of magnetic disturbance, perhaps caused by material derived from the demolished camp, may have masked underlying features. In the Screening Area to the east, all geophysical anomalies were considered to be either modern, agricultural or geological/pedological in origin (NAA 2018).

## **4.0 AIMS AND OBJECTIVES**

### **Trial trench evaluation**

4.1 The main aim of archaeological trial trenching was to assess the potential for the presence of sub-surface archaeological remains. Where remains were present, the work aimed to confirm their location, extent, nature, date, and to characterise them sufficiently so that an informed assessment of the impact of the development upon these remains could be undertaken and a suitable mitigation strategy agreed.

4.2 The stated objectives of the archaeological trial-trenching were:

- to establish the presence, nature, extent, preservation, date and significance of any archaeological remains within the trenches;
- to provide a detailed record of any such archaeological remains;
- to recover and assess any associated structural, artefactual and environmental evidence;
- to determine which areas within the footprint of the proposed scheme require archaeological mitigation in the form of preservation in situ, open area investigation in advance of construction, or monitoring of soil stripping during construction works;
- to prepare an illustrated report on the results of the trial-trenching to be deposited with the Historic Environment Record (HER) held by Cumbria County Council Historic Environment Service and the National Monuments Record (NMR);
- to evaluate the potential for further unrecorded significant archaeological remains to be present within the site; and

- to undertake a scheme of work, in line with current professional standards (English Heritage 2008, CIFA 2014a).

4.3 Upon completion of trial trenching, the requirement for further mitigation was agreed through consultation between Oakmere Homes (North-West) Ltd and CCCHES.

#### **Watching brief / monitoring**

4.4 The aim of the archaeological monitoring was to identify the presence and location of archaeological remains within the area of development, and sample, excavate and record any such remains in order to achieve their 'preservation by record'.

4.5 The objectives of the monitoring were:

- to establish the presence, nature, extent, preservation and significance of any archaeological remains within the area of development;
- to provide a detailed record of any such archaeological remains;
- to recover and assess any associated structural, artefactual and environmental evidence;
- to undertake a programme of investigation that meets with national and regional standards (Historic England 2015a; CIFA 2014b; 2014c; 2017); and
- to prepare an illustrated report on the results of the archaeological investigations to be deposited with the CCC HER.

## **5.0 METHODOLOGY**

### **Trial trench evaluation**

5.1 Forty-five trial trenches of differing sizes and orientations were excavated across the proposed development area in May and June of 2019. Trenches were positioned to target the remains of Dane Ghyll Camp, geophysical anomalies, and areas appearing as 'blank' in the geophysics surveys across Fields 1, 2, 3, and 4 in the main residential development area. Trenches in the Screening Area were positioned to target geophysical anomalies and a cropmark of a putative enclosure visible on aerial photographs.

5.2 A mechanical excavator under constant archaeological supervision stripped the overburden within each trench using a toothless ditching bucket, down to a level at which natural drift geology or archaeological deposits were identified. Thereafter, all archaeological investigations were undertaken by hand.

### **Watching brief / monitoring**

- 5.3 In August of 2019, an area measuring 2,650m<sup>2</sup> within the south-west part of the proposed development site was stripped of soils, and archaeological investigations then conducted. This expanded upon those trenches which contained significant archaeological remains within the area of the first phase of construction.
- 5.4 A mechanical excavator under archaeological supervision stripped the overburden using a toothless ditching bucket, down to a level at which natural drift geology or archaeological deposits were identified. Thereafter, all archaeological investigations were undertaken by hand.

### **Hand excavation**

- 5.5 Where structures, finds, soil features or layers of archaeological interest were exposed, an archaeologist cleaned, assessed, excavated by hand, sampled and recorded these features as appropriate.
- 5.6 Hand excavation of archaeological remains (where present) was undertaken in order to characterise the site's archaeology, understand the site's stratigraphy and ensure recovery of artefactual and environmental evidence.

### **Recording**

- 5.7 Significant archaeological remains were located with respect to the National Grid using a GPS or a total station theodolite linked to a pen computer using real-time mapping software. Information was transferred to AutoCAD software and reproduced for inclusion within the final report. All levels were tied into Ordnance Datum.
- 5.8 Drawn records of all archaeological features were created at appropriate scales and included data on levels relative to Ordnance Datum. Written descriptions of trenches and archaeological features/deposits were recorded on pro-forma site record sheets, which employ standard archaeological recording conventions.
- 5.9 A photographic record of the site was taken using 35mm monochrome prints film and digital photography.

### **Finds recording**

- 5.10 Finds of pottery, animal bone and modern artefacts relating to the Second World War camp were collected as bulk assemblages. Any significant artefacts were three-

dimensionally recorded prior to removal. All finds recovered were appropriately packaged and stored under optimum conditions, in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 2001).

- 5.11 In accordance with English Heritage guidance (2006), all iron objects, a selection of non-ferrous artefacts and a sample of any industrial debris relating to metallurgy, will need to be x-radiographed before assessment.

### **Environmental sampling**

- 5.12 Where possible, 40-litre bulk palaeoenvironmental samples were taken from appropriate deposits and submitted to the named environmental specialist for assessment of the environmental potential. Recovery and sampling of environmental remains was in accordance with published guidelines (Campbell et al 2011; HE 2015).

## **6.0 RESULTS**

Archaeological contexts referred to in the following sections are tabulated in the Context catalogue (Appendix A).

### **Trial trench evaluation**

- 6.1 All trenches were excavated in their proposed locations (Fig. 2), although a swathe of subsoil approximately 2m wide was left unexcavated in Trench 4.5 due to the presence of organic remains thought to be a modern animal burial. Minor machine excavated extensions were made to Trenches 2.2 and 2.5 in order to expedite hand excavation. The overburden above the archaeological horizon was between 0.25m and 0.45m thick, generally being thicker towards the lower, eastern side of the site.
- 6.2 The trial trench investigations revealed the remains of eleven pits, twelve ditches, two trackways, evidence for a ridge-and-furrow system, and the remains of Dane Ghyll Camp. Some of the pits and ditches contained artefacts indicating an early prehistoric origin, and it was thought possible that the ditches represented components of a coherent field system.
- 6.3 The pits, putative field system, and trackways were recorded across Fields 2 and 4 (Trenches 2.2, 2.5–2.7, 2.15–2.18, 2.21–2.24, 4.1, 4.2, and 4.8–4.11). The remains of Dane Ghyll Camp were recorded in the south-west of the residential development area, in Fields 1, 2, 3, and 4 (Trenches 1.1–1.3, 2.1, 2.3, 2.8, 2.11, 3.1, and 4.1).

6.4 A total of 17 trenches revealed no features of archaeological interest. All five trenches in the Screening Area (SA1– SA5) were barren, as were Trenches 2.4, 2.9, 2.10, 2.12, 2.13, 2.14, 2.19, 2.20, 2.25 in Field 2, and Trenches 4.3, 4.4, and 4.7 in Field 4. Empty trenches are summarised in the table in Appendix B at the end of this document and will not be detailed further here.

### *Prehistoric pits*

6.5 Fourteen pits were investigated across Fields 2 and 4, in Trenches 2.5, 2.7, 2.17, 2.18, 2.21, 2.23, and 4.9. Most were devoid of diagnostic finds, although one produced a large assemblage of early prehistoric pottery and a stone axehead.

6.6 Pit **159** (Figs 2 and 3) was revealed during machine stripping of Trench 2.5. It appeared oval in plan, with shallow sides and a flat base, and contained four fills (**160–4**). The first fill appeared to be a formed naturally through erosion, and had been sealed by three deposits of deliberately back-filled material.



*Plate 1: Prehistoric pit 159*

6.7 The fills of pit **159** contained a significant number of early prehistoric artefacts, including over 100 early prehistoric pottery sherds amounting to over 1kg in weight

(unwashed). The pottery is awaiting detailed analysis, although initial assessment suggests that the assemblage included sherds from either the Late Neolithic Grooved Ware tradition or Early Bronze Age Food Vessel Urn tradition (formerly Encrusted Urns) (Appendix J).

- 6.8 The same fills of pit **159** also contained heat-affected rocks, oak, willow and birch charcoal, charred grasses and cereal kernels (Appendix C), and possible hammer stones. Additional recorded finds included a fragment from probable Group VI polished Langdale tuff stone-axe of earlier Neolithic date (RF1; Appendix E), a worked pebble core (RF4), an assemblage of seven worked flints of probable Mesolithic or earlier Neolithic date including: a flint scraper (RF2), a piercer with blade (RF6), another blade (RF3), and two flint flakes (RF7, RF9; Appendix F). Consequently, it is reasonable to infer that the materials contained within the pit were deposited during the Neolithic period, there being no later objects or obvious signs of redeposition.
- 6.9 Although no other pits were found to contain datable pottery, some shared characteristics with pit **159** and were considered highly likely to be of a similar date. For example, pit **149** in Trench 2.5 and pit **175** (Fig. 3) in Trench 2.7 had similarly been left open to accumulate sediment before being deliberately back-filled with charcoal-rich material, and pit **127** in Trench 2.21 also contained heat-affected rocks.
- 6.10 Pit **253** in Trench 2.23 was revealed to be a tree-throw or dug-out root bole, which had been back-filled with stones and silt, and contained a single flint blade of Mesolithic or earlier Neolithic date (RF10; Appendix F).
- 6.11 Three undated postholes were recorded in Trenches 2.7, 2.23 and 4.10, although these appeared in isolation and were therefore poorly understood.

#### ***A putative field system***

- 6.12 Twelve ditches and gullies were recorded across Fields 2 and 4 in Trenches 2.2, 2.6, 2.7, 2.15, 2.22–2.24, 4.1, 4.2, 4.8, 4.10, 4.11 (Fig. 2). These ran obliquely to the modern field boundaries and were broadly oriented north-west to south-east, with two following a south-west to north-east course. The ditches and gullies displayed varied profiles, which ranged from 0.42m to 2.20m wide and between 0.11m to 1.18m deep. Most contained only naturally formed deposits, although several also contained back-filled material.

- 6.13 Ditch **61** (Fig. 3) in Trench 4.2, ditch **110** (Fig. 3; Plate 2) in Trench 4.1, and ditch **192** in Trench 2.24 were the most substantial and best-preserved components of the putative field system. Each been partly back-filled with cobbles and boulders after a period of natural silting, with charcoal-rich tips observed within ditch **61** and ditch **110**. Finds were generally sparse, but flecks of burnt bone were observed amongst the charcoal in ditch **110**, and ditch **61** yielded a flint core (Appendix F) and some fragments of animal bone (Appendix K).
- 6.14 A back-filled deposit of burnt earth was recorded in ditch **32**, Trench 4.11. No diagnostic artefacts were recovered, but a significant amount of charcoal was observed within the fill. The charcoal appeared to mainly lie on the base of the cut, although it didn't appear to represent in situ burning.

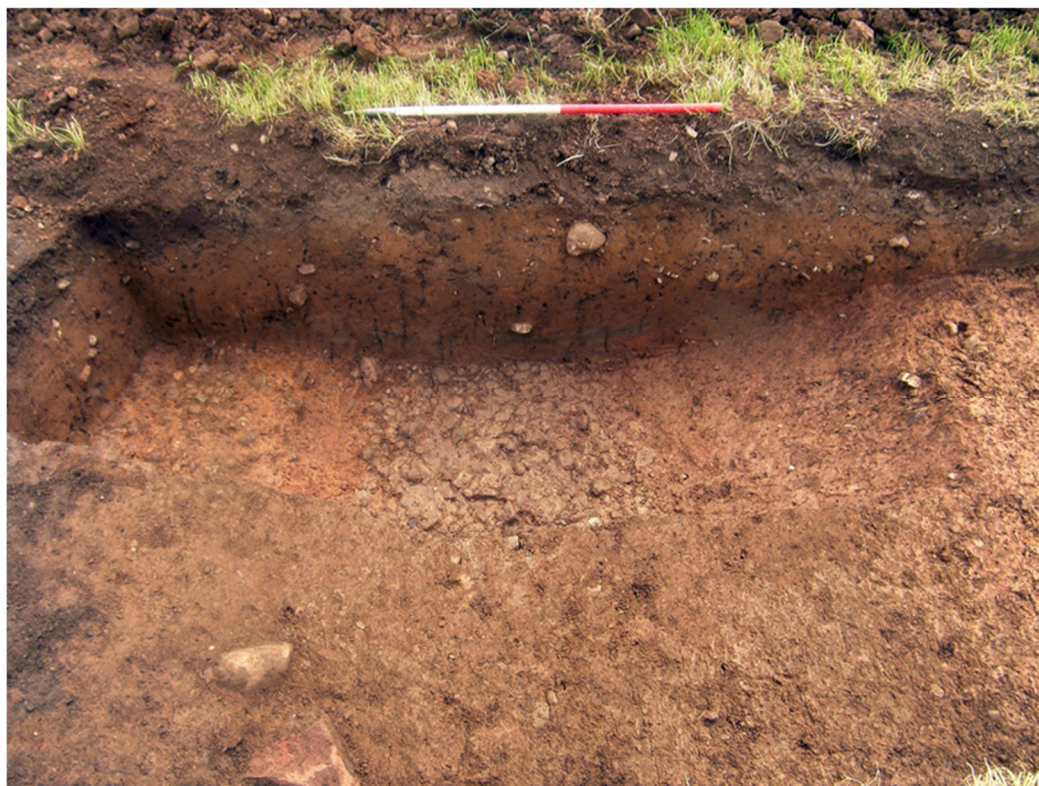


*Plate 2: Ditch 110*

### *The trackways*

- 6.15 A north-south oriented hollow-way (trackway) was observed in the eastern end of Trench 2.2 (Fig. 2; Plate 3). It measured over 2.40m wide and extended beyond the eastern limit of the trench. The hollow-way was worn approximately 0.40m into natural deposits before it had been enhanced with the addition of a metallised surface. Few artefacts were recovered, and the few tiny fragments of brick or tile that were observed

within the fill of the hollow-way were almost certainly intrusive. This feature was also recorded within the open area excavation as hollow-way **1085**, which is discussed below in the 'Watching Brief' section.



*Plate 3: Metalled hollow-way 1085*

- 6.16 The remains of an east–west oriented trackway crossed the centre of Trench 4.8 (Fig. 2). The trackway comprised a poorly preserved stone surface and an adjacent trackside gully along its south side. Although the trackway had been heavily truncated by modern ploughing, the remains of a ploughed-out camber may have been evidenced by the high frequency of large cobbles and small boulders within the overburden in this area. Smaller stones filled the base of the gully, which are thought likely to have represented the tumbled remains of the original running-surface.
- 6.17 A recut ditch was observed to cut a layer in the north-eastern end of Trench 2.8. Subsequent work in the open area excavation revealed these remains to be part of ditched trackway **1087**, which is discussed further below.

#### *Ridge-and-furrow agriculture*

- 6.18 Three east–west oriented shallow linear features were recorded in Field 4, Trench 4.6. These were regularly spaced about 8m apart and were considered to represent the bases of furrows within an early medieval ridge-and-furrow system.



***Dane Ghyll Camp***

- 6.19 Remains of Dane Ghyll Camp were revealed and investigated in the south-west of the proposed residential development area, in Trenches 1.1–1.3, 2.1, 2.3, 2.11, 3.1 and 4.5. The remains comprised trackways, drains, drainage gullies, several postholes, and demolition layers, which were backfilled into hollows, and pits cut to receive demolition rubble. Hand excavation did not find any evidence for sub-surface foundations and relatively small amounts of construction materials were observed within most demolition layers, which could suggest that the camp huts investigated in Trenches 1.1-1.3 and 3.1 were generally of a lightweight construction, or construction materials were removed or re-used.
- 6.20 Evidence for a more substantial structure was investigated in Trench 2.1, where an extensive layer was found to contain bricks and concrete, which presumably derived from the demolition of a building nearby, or within the footprint of the subsequent demolition rubble pit (Plate 4).



*Plate 4: Demolition rubble layer in Trench 2.1*

- 6.21 All finds recovered from the remains of the camp were found within demolition layers. They included personal items such a brass button and fragments of a plastic comb

(Appendix E), as well as samples of construction materials and fixtures (Appendix D), sections of clay pipe, and some sherds of modern china (Appendix I). A small number of unfired blank .303 rifle cartridges were uncovered during hand excavation of demolition layers, which were safely removed by Cumbria Constabulary and taken away to be destroyed.

#### **Watching brief / monitoring excavation**

- 6.22 A trench was excavated in Field 2 to the depth of the archaeological remains, which lay approximately 0.35m below the modern ground surface (Figs 2 and 4). The overburden mainly comprised recently ploughed topsoil, although some subsoil remained in lower-lying areas. Modern plough scars were visible within the natural boulder clay and in the tops of archaeological deposits, which suggested that the archaeological remains had been truncated by modern ploughing.
- 6.23 Archaeological investigations recorded prehistoric, medieval or post-medieval, and modern remains. These comprised three prehistoric pits, a prehistoric or medieval enclosure ditch, a medieval or post-medieval metalled hollow-way, a medieval or post-medieval ditched trackway, evidence for ridge-and-furrow agriculture, a modern rectangular structure, and several pits and postholes of modern date.

#### ***Prehistoric pits***

- 6.24 Oval pit **1003** (Figs 4 and 5) measured 0.77m long by 0.52m wide and survived to a depth of only 0.12m. It contained a single fill (**1004**), which yielded a small sherd of Early Bronze Age pottery (Appendix J), as well as occasional charcoal flecks and a small quantity of spheroidal hammerscale (Appendix H), perhaps suggesting that the pottery was redeposited, or that the hammerscale was intrusive. The same deposit also contained charred 40 kernels of barley and 167 of more unidentified cereal species, indicating crop cultivation in the vicinity (Appendix C).
- 6.25 Pit **1035** was similar in size and shape to pit **1003** but had survived to a greater depth of 0.23m. A single fill contained occasional charcoal flecks. Although no diagnostic artefacts were recovered from pit **1035**, it was considered likely to represent prehistoric activity.
- 6.26 In the south-east trench annexe, pit **1020** extended beyond the limit of the excavation so was not fully excavated. It held a single fill, which contained a relatively large amount

of charcoal, but yielded no other finds. Several root channels were observed, and the pit was suspected to be a backfilled tree-throw.



*Plate 5: Pit 1003*

#### ***Ditched enclosure 1086***

- 6.27 The truncated remains of enclosure **1086** (Figs 4 and 5) were identified in the north-west of the trench. The enclosure boundary extended from the northern limit of excavation and followed a south-easterly course before it was fully truncated by later features and modern ploughing. The entrance break was approximately 15m wide, defined by two terminals that had been refurbished after a period of natural silting. No artefacts were recovered during hand excavations, but the enclosure was suspected to be of prehistoric or medieval date due to the nature and orientation of the ditches, and their early position within the overall site stratigraphic sequence.
- 6.28 Two postholes observed beneath the southern segment of the enclosure were thought likely to represent an early iteration of the same boundary. It was also possible that two further undated postholes to the east and west of the ditch were related to this activity, although with pit **1035**, they shared the alignment of the post-medieval or modern structure **1032**, so could have been associated with it.



*Plate 6: Hollow-way 1085 crossing the excavation area*

***Metalled hollow-way 1085***

- 6.29 Hollow-way **1085** (Figs 4 and 5) traced a north to south course from the north-eastern corner to the southern edge of the trench. It measured over 70m long, up to 4.5m wide, and survived to a depth of up to 0.6m. The hollow-way appeared to be relatively well-preserved in the north but had been almost entirely ploughed away at the southern trench edge.
- 6.30 The base of hollow-way **1085** had been consolidated with a thick layer of small cobbles and gravel, and a grit-sand running surface was seen to have survived in some excavated segments. Well-defined wheel-ruts were observed in slots excavated across the length of the hollow-way, worn into and sometimes through the stone fabric. The metalled surface had survived better in the lower-lying south of the trench, possibly as a result of becoming quickly buried by silt. In the same area, the hollow-way as a whole appeared significantly truncated and was almost entirely ploughed away.
- 6.31 All the fills above the metalled surface appeared to represent colluvial silts, which had accumulated post-abandonment. None of the excavated segments yielded any finds, diagnostic or otherwise. The nature of the remains, and stratigraphic position of the hollow-way beneath a later trackway and a ridge-and-furrow system suggested a medieval or post-medieval date.

***Ditched trackway 1087***

- 6.32 The remains of trackway **1087** (Figs 4 and 5) crossed the trench from north-west to south-east. It lay across the top of earlier hollow-way **1085**, then turn to the west, whereupon it was lost to modern plough truncation. Within the trench, the remains of the trackway measured approximately 40m long, up to 3.60m wide and survived to a maximum depth of 0.15m.
- 6.33 The trackway comprised a thin layer of small stones, which were thought to have represented an abraded surface. The surface had been pressed into a layer of disturbed natural which sat within a shallow hollow. A ditch was recorded adjacent to the western side of the trackway, which was thought to have carried run-off away down the slope of the hill.
- 6.34 No finds were recovered from any of the deposits associated with the trackway, but it was observed to cut hollow-way **1085** and be cut by a series of furrows, so a medieval or post-medieval date is suggested.

***Ridge-and-furrow agriculture***

- 6.35 A series of east to west oriented furrows were recorded across the stripped area. These were regularly spaced approximately 7-8m apart, cutting through other archaeological remains they encountered, except for a rectangular structure (**1032**), which post-dated the furrows.

***Modern remains***

- 6.36 The remains of rectangular structure **1032** were recorded in the north-west of the trench. It was approximately 7.5m long and 5.5m wide and was defined by a continuous rectilinear beam slot or robbed-out wall foundation trench, which measured 0.40m wide and 0.10m deep where investigated. Hand investigation yielded no artefacts, though the nature of the remains and their late position in the site sequence would suggest it represented an agricultural building of post-medieval or modern date, or a structure associated with the Second World War period Dane Ghyll camp. A pit and posthole a short distance to the north were observed to contain 20th century debris.
- 6.37 Twelve postholes in the south-west of the trench seemed to form alignments that corresponded with structure **1032**. All were considered to be modern in date, and many had been backfilled with demolition material from Dane Ghyll camp.

## 7.0 DISCUSSION

### Prehistoric

- 7.1 A Desk Based Assessment suggested high potential for the presence of significant Early Neolithic remains within the development area (NAA 2015, 34), which has been confirmed by the results of the evaluation and open area excavation. Of particular significance, pit **159** contained a large assemblage of pottery, flint tools and fragments of stone-axe, and would appear to be of local or regional importance.
- 7.2 Hand excavation of other pits did not yield similar quantities of artefacts, however pit **1003** contained a small amount of early prehistoric pottery and pit **253** contained a single piece of worked flint. Although the other pits were devoid of diagnostic finds, they appeared to share characteristics with pit **159**. Most had seemingly been left open to accumulate colluvium before being back-filled with charcoal-rich material, some contained heat-affected rocks, and others displayed a similar profile. As a result, they are all suggested to date from the Mesolithic through to Early Bronze Age, by which time cereal cultivation appears to have been undertaken locally. Consequently, the flint tools and stone axehead may relate to the same settled community, rather than itinerants.
- 7.3 The pit-type features were largely in the north of Field 2, although this may not reflect a true zone or focus for this type of activity. It is thought probable that similar, and as yet unidentified remains, extend north into Field 4, and considered likely that modern truncation has destroyed others within the area of the former Dane Ghyll camp.
- 7.4 The trial trench evaluation recorded ditches forming a putative field system, largely oriented north-west to south-east. The alignment could indicate an early date; the ditches were mainly oblique to modern field boundaries and the modern courses of the adjacent roads, instead appearing to reference the contours of the local landscape and the valley floor. One of the ditches appeared to represent part of a recut enclosure ditch. An entrance break was recorded, though the results of the evaluation suggested that at one time a shallow continuation of the enclosure existed between the terminals.
- 7.5 The small assemblage of artefacts recovered from the putative field system comprised a piece of struck flint and fragments of animal bone from two ditches in Field 4. The struck flint and absence of ostensibly modern artefacts may indicate a prehistoric date for the

ditches, but it is as yet unclear whether these all features represented contemporary boundaries within a comprehensive field system, and some may date from later periods.

### **Medieval/post-medieval**

- 7.6 Metalled hollow-way **1085** was first observed in the trial trench evaluation, before a longer segment was exposed during the larger trench. The later investigations revealed the trackway fabric to be more substantial than observed in the evaluation, and a running surface had survived in some lower-lying areas. This investment of labour may suggest that the route was more than an agricultural trackway, and perhaps served a wider community. Hand excavation did not yield any artefacts, though the nature of the remains and their stratigraphic position suggested a medieval or post-medieval date.
- 7.7 Trackway **1087** was recorded in the trial trench evaluation, and subsequently in the larger trench. The surface had been extensively truncated in the south and west, but survived better in the centre of the site where hand investigations recorded a linear hollow which contained disturbed natural clay and an abraded metalled surface, immediately downhill from a parallel ditch. The relatively poor construction suggested that this may have represented a crude agricultural trackway. The trackway cut across hollow-way **1085** and was cut by a ridge-and-furrow system, so was presumed to be of medieval or post-medieval date.
- 7.8 The investigations recorded evidence for an extensive ridge-and-furrow system which ran west to east down the slope of the hill and perpendicular to the course of the valley. No diagnostic finds were recovered, although the furrows were observed to have cut across the top of, and were therefore later than, features considered to be medieval or post-medieval in date.

### **20th century**

- 7.9 Structure **1032** was considered likely to be modern in date. The remains were late in the site sequence, appeared to be associated with 20th century rubbish pits, and were closely aligned with a modern field boundary. However, no finds were recovered from the fill of the beam slot, and the structure does not appear on any Ordnance Survey map. It is thought possible that the structure was associated with the Second World War Dane Ghyll camp.
- 7.10 The remains of Dane Ghyll camp were recorded in the evaluation trenches, although observed to be less substantial than suggested by the results of a preceding geophysical

survey (PSI 2016). Investigation found no evidence for sub-surface foundations, and the camp buildings would appear to have been efficiently dismantled before waste material was buried in shallow pits cut into the side of the hill. The remains were focused in the south-west of the development area, and generally survived better in Fields 1 and 3, which were being utilised for rough grazing prior to the evaluation, whereas the remains in Fields 2 and 4 appeared to have been subject to an appreciable degree of plough truncation.

- 7.11 Twelve postholes in the larger trench contained material derived from the demolition of the Second World War camp and were therefore considered to have represented fence posts or services dating from the same period. Their alignments corresponded with the foundations of a nearby modern structure.

## **8.0 CONCLUSIONS**

- 8.1 The results of the evaluation suggested that the development would have an impact on significant archaeological remains including locally or regionally important evidence for Mesolithic, Early Neolithic and Early Bronze Age activity, as well as a putative prehistoric field system, and trackways of a probable medieval or post-medieval date. Subsequent investigations confirmed many of these findings; prehistoric pits, a putative prehistoric enclosure, and medieval or post-medieval trackways were recorded within the watching brief excavation area. The archaeological remains appeared to be focused on Field 4 and the north of Field 2, and it is possible that they also extend into the north of Field 3.
- 8.2 Deposits associated with the occupation of Dane Ghyll Camp will also be impacted by development, although the remains are less substantial than previously thought and are largely characterised by drain trenches and large demolition layers buried in shallow pits. The remains were centred in Field 1 and the south of Field 3, although some heavily truncated deposits were recorded in the south-west corner of Field 4 and the west of Field 2.
- 8.3 The impact of the development on the significant archaeological remains identified in the evaluation meant that further archaeological mitigation was required prior to the first phase of construction, which took the form of the watching brief/open area excavation. Further archaeological mitigation may be required before further phases of construction in the residential development area, subject to consultation between Oakmere Homes (North-West) Ltd and CCCHES. This may take the form of watching



brief and/or strip, map, and record excavation across the extent of the significant archaeological remains in Fields 2, 3 and 4 in the residential development area.

- 8.4 It was thought that further archaeological mitigation was not required in the Screening Area, and on the remains of Dane Ghyll Camp which mainly lie within Field 1 in the south-west of the residential development area.

## REFERENCES

- Archaeology Data Service (ADS)/Digital Antiquity (2011) *Guides to Good Practice*. Archaeology Data Service, University of York, UK.
- British Geological Survey Geology of Britain Viewer (online) available at: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed 15/10/2018).
- Campbell, G., Moffett, L. and Straker, V. (2011) *Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* (second edition). Portsmouth: English Heritage.
- Chartered Institute for Archaeologists (CIfA) (2014a) *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*.
- Chartered Institute for Archaeologists (CIfA) (2014b) *Standard and guidance for an archaeological field evaluation*.
- English Heritage (1995) *A Strategy for the Care and Investigation of Finds*.
- English Heritage (2006) *Archaeomagnetic Dating: Guidelines on producing and interpreting archaeomagnetic dates*.
- English Heritage (2008) *MoRPHE Project Planning Note 3 Archaeological Excavations*.
- Historic England (2015) *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*.
- Ministry for Housing, Communities and Local Government (MHCLG) (2019) *National Planning Policy Framework*.
- NAA (2015) *Breast Mill Beck Road, Barrow-in-Furness, Cumbria: Desk-Based Heritage Assessment*. Unpublished report **15/99**.
- NAA (2018) *Breast Mill Beck Road, Barrow-in-Furness, Cumbria: Geophysical Survey*. Unpublished report **18/32**.
- NAA (2019) *Breast Mill Beck Road, Barrow-in-Furness, Cumbria: Archaeological Trial Trenching Written Scheme of Investigation*. Unpublished report **19/36**.

Phase Site Investigations (2016) *Land at Dalton Lane, Barrow-in-Furness, Cumbria: Archaeological Geophysical Survey*. Unpublished report.

Watkinson, D. and Neal, V. (2001) *First Aid for Finds*. Rescue/UKICAS.

**APPENDIX A**  
**CONTEXT CATALOGUE**

*Table 1: Context catalogue (Combined evaluation and WB Phase 1: Site Code BMB19)*

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
1	12			Topsoil in Trench SA1	SA1
2	13			Subsoil in Trench SA1	SA1
3				Natural drift geology in Screening Area	SA1
4	12			Topsoil in Trench SA2	SA2
5	13			Subsoil in Trench SA2	SA2
6	12			Topsoil in Trench SA3	SA3
7	13			Subsoil in Trench SA3	SA3
8	12			Topsoil in Trench SA4	SA4
9	13			Subsoil in Trench SA4	SA4
10	12			Topsoil in Trench SA5	SA5
11	13			Subsoil in Trench SA5	SA5
12			1, 4, 6, 8, 10	Group number for topsoil in Screening Area	SA
13			2, 5, 7, 9, 11	Group number for topsoil in Screening Area	SA
14	43			Topsoil in Trench 1.2	1.2
15	44	16		Subsoil in Trench 1.2	1.2
16	44	15		Subsoil in Trench 1.2	1.2
17				Cut of land drain	1.2
18				Second fill of demolition cut 42	1.2
19	43			Topsoil in Trench 1.3	1.3
20	44			Subsoil in Trench 1.3	1.3
21				Residual subsoil ijn Trench 1.3	1.3
22				Cut of gully	1.3
23				Fill of gully 22	1.3
24				Cut of hollow	1.3
25				Fill of hollow 24	1.3
26				Cut of gully	1.3
27	40			Topsoil in Trench 4.11	4.11
28	41			Subsoil in Trench 4.11	4.11
29				Natural drift geology in Field 4	4
30				Second fill of ditch 32	4.11
31				First fill of ditch 32	4.11
32				Cut of ditch	4.11
33	40			Topsoil in Trench 4.7	4.7
34	41			Subsoil in Trench 4.7	4.7
35				First fill of levelling/demolition cut 42	1.2
38				Cut of land drain	1.2
39				Fill of land drain 38	1.2
40			27, 33, 55, 74, 76, 83, 103, 108, 119, 121	Group number for topsoil in Field 4	4
41			28, 34, 56, 75, 84, 104, 109, 120, 122	Group number for subsoil in Field 4	4
42				Levelling/demolition cut	1.2
43			14, 19, 287	Group number for topsoil in Field 1	1
44			15, 16, 20, 286	Group number for subsoil in Field 1	1
45				First fill of gully 26	1.3

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
46				Second fill of gully 26	1.3
47				Fill of land drain 17	1.2
48				Cut of gully	1.2
49				Fill of gully 48	1.2
50				Cut of posthole	1.2
51				Fill of posthole 50	1.2
52				Natural drift geology in Field 1	1
53				Demolition layer	1.3
54				Metalled surface	1.3
55	40			Topsoil in Trench 4.2	4.2
56	41			Subsoil in Trench 4.2	4.2
57				Fill of pit 58	4.2
58				Cut of pit	4.2
59				Fifth fill of ditch 61	4.2
60				Fourth fill of ditch 61	4.2
61				Cut of ditch	4.2
62				Cut of pit	1.3
63				First fill of pit 62	1.3
64				Second fill of pit 62	1.3
65				Cut of service trench	1.3
66				Fill of service trench 65	1.3
67				Cut of drain	1.3
68				Fill of drain 67	1.3
69				Colluvial layer	1.3
70				Remains of possible metalled surface	1.3
71				Cut of drain	1.3
72				Stone lining in drain 71	1.3
73				Fill of drain 71	1.3
74	40			Topsoil in Trench 4.4	4.4
75	41			Subsoil in Trench 4.4	4.4
76	40			Topsoil in Trench 4.6	4.6
77				Fill of probable furrow 88	4.6
78				Cut of probable furrow	4.6
79				Fill of probable furrow 78	4.6
80				Third fill of ditch 61	4.2
81				Second fill of ditch 61	4.2
82				First fill of ditch 61	4.2
83	40			Topsoil in Trench 4.5	4.5
84	41			Subsoil in Trench 4.5	4.5
85				Colluvial deposit	4.5
86				Fill of gully 87	4.5
87				Cut of gully	4.5
88				Cut of probable furrow	4.6
89				Cut of probable furrow	4.6
90				Fill of probable furrow 89	4.6
91				Cut of probable furrow	4.6
92				Fill of probable furrow 91	4.6
93				Cut of hedgerow/shallow boundary ditch	4.5
94				Fill of hedgerow/shallow boundary ditch 93	4.5
95				Fill of pit 96	4.8
96				Cut of pit	4.8
97				Fill of gully 99	4.8
98				Metalled surface in gully 99	4.8
99				Cut of gully	4.8
100				Remains of metalled trackway	4.8

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
101				Fill of ditch 102	4.8
102				Cut of ditch	4.8
103	40			Topsoil in Trench 4.9	4.9
104	41			Subsoil in Trench 4.9	4.9
105				Fill of pit/root bole 106	4.9
106				Cut of pit/root bole	4.9
107				Natural drift geology in Field 4	4
108	40			Topsoil in Trench 4.1	4.1
109	41			Subsoil in Trench 4.1	4.1
110				Cut of ditch	4.1
111				Sixth fill of ditch 110	4.1
112				Fifth fill of ditch 110	4.1
113				Fourth fill of ditch 110	4.1
114				Third fill of ditch 110	4.1
115				Cut of a gully terminal	4.10
116				Fill of gully terminal 115	4.10
117				Cut of posthole	4.10
118				Fill of posthole 117	4.10
119	40			Topsoil in Trench 4.8	4.8
120	41			Subsoil in Trench 4.8	4.8
121	40			Topsoil in Trench 4.10	4.10
122	41			Subsoil in Trench 4.10	4.10
123				Second fill of ditch 110	4.1
124				First fill of ditch 110	4.1
125	200			Topsoil in Trench 2.21	2.1
126				Natural drift geology in Field 2	2
127				Cut of pit	2.21
128				Fill of pit 127	2.21
129	200			Topsoil in Trench 2.9	2.9
130	200			Topsoil in Trench 2.14	2.14
131	201			Subsoil in Trench 2.14	2.14
132	200			Topsoil in Trench 2.19	2.19
133	201			Subsoil in Trench 2.19	2.19
134				Root bole	2.19
135	152			Topsoil in Trench 3.1	3.1
136	153			Subsoil in Trench 3.1	3.1
137				Cut of ditch	3.1
138				First fill of ditch 137	3.1
139				Cut of posthole	3.1
140				Fill of posthole 139	3.1
141				Cut of ditch	3.1
142				Fill of ditch 141	3.1
143				Cut of posthole	3.1
144				Fill of posthole 143	3.1
145				Cut of shallow ditch	3.1
146				Fill of shallow ditch 145	3.1
147				Natural drift geology in Field 3	3
148	200			Topsoil in Trench 2.5	2.5
149				Cut of pit	2.5
150				First fill of pit 149	2.5
151				Second fill of pit 149	2.5
152			135	Group number for topsoil in Field 3	3
153			136	Group number for subsoil in Field 3	3
154				Second fill of ditch 137	3.1
155				Demolition layer	3.1
156				Drain	3.1

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
157	1085			Metalled surface in hollow-way 158	2.2
158	1085			Cut of hollow-way	2.2
159				Cut of prehistoric pit	2.5
160				First fill of pit 159	2.5
161				Second fill of pit 159	2.5
162				Third fill of pit 159	2.5
163				Fourth fill of pit 159	2.5
164	201			Subsoil in Trench 2.5	2.5
165	1086			Fill of gully 166	2.2
166	1086			Cut of gully	2.2
167	200			Topsoil in Trench 2.2	2.2
168	201			Subsoil in Trench 2.2	2.2
169	1087			Fifth fill of hollow-way 158	2.2
170	1087			Fourth fill of hollow-way 158	2.2
171	1087	173		Third fill of hollow-way 158	2.2
172	1087			Second fill of hollow-way 158	2.2
173	1087	171		Third fill of hollow-way 158	2.2
174	1087			Disturbed metalled surface in hollow-way 158	2.2
175				Cut of pit	2.7
176				First fill of pit 175	2.7
177				Second fill of pit 175	2.7
178				VOID	
179				Cut of pit	2.7
180				Fill of pit 179	2.7
181				Cut of gully terminal	2.7
182				Fill of gully terminal 181	2.7
183	201			Subsoil in Trench 2.7	2.7
184	200			Topsoil in Trench 2.7	2.7
185				Cut of pit	2.17
186				First fill of pit 185	2.17
187				Second fill of pit 185	2.17
188				Cut of posthole	2.7
189				Fill of posthole 189	2.7
190				Cut of ditch	2.6
191				Fill of ditch 190	2.6
192				Cut of ditch	2.24
193				Stones in ditch 192	2.24
194				Cut of gully/natural feature	2.6
195				Fill of gully/natural feature 194	2.6
196	200			Topsoil in Trench 2.6	2.6
197	201			Subsoil in Trench 2.6	2.6
198	200			Topsoil in Trench 2.17	2.17
199	201			Subsoil in Trench 2.17	2.17
200			125, 129, 130, 132, 148, 167, 184, 196, 198, 212, 227, 233, 238, 244, 262, 266, 268, 273, 275, 279, 281	Group number for topsoil in Field 2	2
201			131, 133, 164, 168, 183, 197, 199, 213, 232, 239, 245, 263, 269, 274, 276, 280, 282	Group number for subsoil in Field 2	2
202				Fill of pit/root bole 203	2.24
203				Cut of pit/ root bole	2.24
204				Fill of posthole 205	2.24
205				Cut of posthole	2.24

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
206				Cut of pit	2.18
207				First fill of pit 206	2.18
208				Cut of furrow/natural depression	2.16
209				Fill of furrow/natural depression 208	2.16
210				Cut of pit	2.16
211				Fill of pit 210	2.16
212	200			Topsoil in Trench 2.15	2.15
213	201			Subsoil in Trench 2.15	2.15
214				Cut of gully terminal	2.15
215				Fill of gully terminal 214	2.15
216				Cut of pit/ditch terminal	2.15
217				First fill of pit/ditch terminal 216	2.15
218				Cut of natural feature	2.15
219				First fill of natural feature 218	2.15
220				Cut of posthole	2.15
221				Fill of posthole 220	2.15
222				Second fill of pit 206	2.18
223				Cut of pit	2.18
224				First fill of pit 223	2.18
225				Second fill of pit 223	2.18
226				Third fill of pit 223	2.18
227	200			Topsoil in Trench 2.16	2.16
228				Second fill of pit/ditch terminal 2.16	2.16
229				Second fill of natural feature 2.18	2.18
230				Cut of pit	2.18
231				Fill of pit 230	2.18
232	201			Subsoil in Trench 2.22	2.22
233	200			Topsoil in Trench 2.22	2.22
234				Cut of gully	2.22
235				Fill of gully 234	2.22
236				VOID	
237				VOID	
238	200			Topsoil in Trench 2.23	2.23
239	201			Subsoil in Trench 2.23	2.23
240				Cut of gully terminal	2.23
241				First fill of gully terminal 240	2.23
242				Second fill of gully terminal 240	2.23
243				Third fill of gully terminal 240	2.23
244	200			Topsoil in Trench 2.24	2.24
245	201			Subsoil in Trench 2.24	2.24
246				Second fill of ditch 192	2.24
247		248		First fill of ditch 192	2.24
248		247		Redeposited natural in fill 247 of ditch 192	2.24
249				Cut of modern posthole	2.3
250				First fill of modern posthole 249	2.3
251				Cut of posthole	2.23
252				Fill of posthole 251	2.23
253				Cut of pit/tree throw	2.23
254				Stony first fill of pit/tree throw 253	2.23



Context	Group number	Same as	Group components	Interpretative description	Area/Trench
255				Second fill of pit/tree throw 253	2.23
256	1087			Cut of ditch	2.8
257	1087			Fill of ditch 256	2.8
258				Cut of gully	2.3
259				Fill of gully 258	2.3
260				Cut of pit	2.3
261				Fill of pit 260	2.3
262	200			Topsoil in Trench 2.3	2.3
263	201			Subsoil in Trench 2.3	2.3
264	1087			Cut of ditch	2.8
265	1087			Fill of ditch 264	2.8
266	200			Topsoil in Trench 2.8	2.8
267	1087			Disturbed natural in trackway 1087	2.8
268	200			Topsoil in Trench 2.4	2.4
269	201			Subsoil in Trench 2.4	2.4
270				VOID	
271				VOID	
272				Second fill of modern posthole 249	2.3
273	200			Topsoil in Trench 2.11	2.11
274	201			Subsoil in Trench 2.11	2.11
275	200			Topsoil in Trench 2.18	2.18
276	201			Subsoil in Trench 2.18	2.18
277				Demolition cut	2.1
278				Demolition layer in cut 277	2.1
279	200			Topsoil in Trench 2.1	2.1
280	201			Subsoil in Trench 2.1	2.1
281	200			Topsoil in Trench 2.10	2.10
282	201			Subsoil in Trench 2.10	2.10
283				Demolition layer	1.1
284				Demolition layer	1.1
285				Demolition layer	1.1
286	44			Subsoil in Trench 1.1	1.1
287	43			Topsoil in Trench 1.1	1.1
1000				Topsoil	Phase I WB
1001				Subsoil	Phase I WB
1002				Natural gravels and clays	Phase I WB
1003				Cut of prehistoric pit	Phase I WB
1004				Fill of prehistoric pit 1003	Phase I WB
1005	1086			Recut of enclosure ditch terminal	Phase I WB
1006	1086			Fill of ditch 1005	Phase I WB
1007	1086			Cut of ditch terminal	Phase I WB
1008	1086			Fill of ditch 1007	Phase I WB
1009	1086			Fill of ditch 1005, slot 2	Phase I WB
1010	1086			Fill of ditch 1007, slot 2	Phase I WB
1011				Fill of feature 1012	Phase I WB
1012				Cut of tree throw	Phase I WB
1013				Fill of tree throw 1012	Phase I WB
1014	1086	1018, 1049		Cut of enclosure ditch terminal	Phase I WB
1015	1086			Fill of ditch 1014	Phase I WB
1016				Redeposited natural within 1012	Phase I WB
1017	1086			Fill of possible post/feature in end of terminal 1014	Phase I WB

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
1018	1086	1014, 1049		Cut of enclosure ditch	Phase I WB
1019				Fill of possible pit/ tree throw 1020	Phase I WB
1020				Cut of possible pit/ tree throw	Phase I WB
1021	1085			Metalled surface in hollow-way 1030	Phase I WB
1022	1086			Fill of enclosure ditch 1018	Phase I WB
1023				Cut of feature truncated by 1018	Phase I WB
1024				Fill of feature 1023	Phase I WB
1025				Cut of possible posthole	Phase I WB
1026				Fill of possible posthole 1025	Phase I WB
1027	1085			Fourth fill of hollow-way 1030	Phase I WB
1028	1085			Third fill of hollow-way 1030	Phase I WB
1029	1085			Second fill of hollow-way 1030	Phase I WB
1030	1085	1084		Cut of hollow-way	Phase I WB
1031				Cut of wheel-rut	Phase I WB
1032				Cut of foundation trench/beam slot 1032	Phase I WB
1033				Cut of posthole	Phase I WB
1034				Fill of posthole 1033	Phase I WB
1035				Cut of pit	Phase I WB
1036				Fill of pit 1035	Phase I WB
1037				Cut of posthole	Phase I WB
1038				Fill of posthole 1037	Phase I WB
1039				Fill of wheel-rut 1031	Phase I WB
1040				Metalled surface in wheel-rut 1031	Phase I WB
1041				Fill of wheel-rut 1031, in terminal	Phase I WB
1042				Fill of foundation trench/beam slot 1032	Phase I WB
1043	1085			Metalled surface in hollow-way 1030	Phase I WB
1044	1085			Fourth fill of hollow-way 1030	Phase I WB
1045	1085			Third fill of hollow-way 1030	Phase I WB
1046	1085			Second fill of hollow-way 1030	Phase I WB
1047	1086			Cut of enclosure ditch	Phase I WB
1048	1086			Fill of enclosure ditch 1047	Phase I WB
1049	1086	1014, 1018		Recut of enclosure ditch 1047	Phase I WB
1050	1086			Fill of ditch recut 1049	Phase I WB
1051	1085			Metalled surface in hollow-way 1030	Phase I WB
1052	1085			Third fill of hollow-way 1030	Phase I WB
1053	1085			Second fill of hollow-way 1030	Phase I WB
1054				Cut of posthole	Phase I WB
1055				Fill of posthole 1054	Phase I WB
1056				Cut of posthole	Phase I WB

Context	Group number	Same as	Group components	Interpretative description	Area/Trench
1057				Fill of posthole 1056	Phase I WB
1059	1085			Metalled surface in hollow-way 1030	Phase I WB
1060	1085			Second fill of hollow-way 1030	Phase I WB
1061	1085			Third fill of hollow-way 1030	Phase I WB
1062	1087	1067, 1071, 1081		Cut of trackside ditch	Phase I WB
1063	1087			Fill of ditch 1062	Phase I WB
1064	1087	1077		Cut of trackway	Phase I WB
1065	1087			Fill of trackway 1064	Phase I WB
1066				Fill of posthole 1056	Phase I WB
1067	1087	1071, 1081, 1062		Cut of trackside ditch	Phase I WB
1068	1087			Fill of ditch 1067	Phase I WB
1069	1085			Metalled surface in hollow-way 1030	Phase I WB
1070	1085			Second fill of hollow-way 1030	Phase I WB
1071	1087	1062, 1067, 1081		Cut of ditch	Phase I WB
1072	1087			Fill of ditch 1071	Phase I WB
1073	1087			Cut of posthole	Phase I WB
1074	1087			Fill of posthole 1073	Phase I WB
1075	1087			Cut of wheel-rut	Phase I WB
1076	1087			Fill of wheel-rut 1075	Phase I WB
1077	1087	1064		Cut of trackway	Phase I WB
1078	1087			Metalled surface in trackway 1077	Phase I WB
1079	1087			Disturbed natural in trackway 1077	Phase I WB
1080	1087			Fill of trackway 1077 overlying surface 1078	Phase I WB
1081	1087	1062, 1067, 1071		Cut of trackside ditch	Phase I WB
1082	1087			Fill of ditch 1081	Phase I WB
1083	1085			Metalled surface in hollow-way 1084	Phase I WB
1084	1085	1030		Cut of hollow-way	Phase I WB
1085	1085		1021, 1027, 1028, 1029, 1030, 1043, 1044, 1045, 1046, 1051, 1052, 1053, 1059, 1060, 1061, 1069, 1070, 1083, 1084, 1085	Group number for hollow-way	Phase I WB
1086	1086		165, 166, 1005, 1006, 1007, 1008, 1009, 1010, 1014, 1015, 1017, 1018, 1021, 1022, 1047, 1048, 1049, 1050, 1086	Group number for enclosure ditch	Phase I WB
1087	1087		1062, 1063, 1064, 1065, 1071, 1072, 1073, 1074, 1075, 1076, 1077, 1078, 1079, 1080, 1081, 1082, 1087	Group number for trackway	Phase I WB

**APPENDIX B**  
**TRENCH SUMMARY**

*Table 2: Summary of trial trench results*

Trench	Length	Width	Depth of trench	Max. thickness of topsoil	Max. thickness of subsoil	Features present
SA1	c.10m	c.2m	0.30m	0.25m	0.05m	-
SA2	c.10m	c.2m	0.50m	0.40m	0.10m	-
SA3	c.10m	c.2m	0.30m	0.26m	0.04m	-
SA4	c.10m	c.2m	0.30m	0.25m	0.05m	-
SA5	c.10m	c.2m	0.90m	0.35m	0.40m	-
1.1	c.30m	c.2m	0.40m	0.30m	0.10m	Remains of Dane Ghyll
1.2	c.30m	c.2m	0.38m	0.20m	0.18m	Remains of Dane Ghyll
1.3	c.30m	c.2m	0.30m	0.20m	0.10m	Remains of Dane Ghyll
2.1	c.30m	c.2m	0.34m	0.20m	0.10m	Remains of Dane Ghyll
2.2	c.30m	c.2m	0.58m	0.30m	0.20m	Ditch, hollow-way
2.3	c.30m	c.2m	0.45m	0.30m	0.15m	Remains of Dane Ghyll
2.4	c.30m	c.2m	0.34m	0.25m	0.12m	-
2.5	c.30m	c.2m	0.40m	0.30m	0.10m	2 Pits, one yielded large finds assemblage
2.6	c.30m	c.2m	0.40m	0.35m	0.10m	Ditch
2.7	c.30m	c.2m	0.35m	0.35m	0.10m	Ditch terminal, pit
2.8	c.30m	c.2m	0.38m	0.30m	0.07m	Truncated trackway
2.9	c.30m	c.2m	0.38m	0.38m	-	-
2.10	c.30m	c.2m	0.50m	0.35m	0.15m	-
2.11	c.30m	c.2m	0.40m	0.30m	0.10m	Remains of Dane Ghyll
2.12	c.30m	c.2m	0.40m	0.35m	0.15m	-
2.13	c.30m	c.2m	0.50m	0.30m	0.20m	-
2.14	c.30m	c.2m	0.65m	0.50m	0.20m	-
2.15	c.30m	c.2m	0.50m	0.30m	0.20m	Ditch terminal, 2 pits
2.16	c.30m	c.2m	0.35m	0.35m	-	Posthole, agricultural feature
2.17	c.30m	c.2m	0.50m	0.30m	0.20m	Pit
2.18	c.30m	c.2m	0.35m	0.30m	0.10m	3 pits
2.19	c.30m	c.2m	0.58m	0.30m	0.28m	-
2.20	c.30m	c.2m	0.35m	0.30m	0.05m	-
2.21	c.30m	c.2m	0.30m	0.15m	0.15m	Pit
2.22	c.30m	c.2m	0.40m	0.32m	0.08m	Ditch
2.23	c.20m	c.2m	0.40m	0.25m	0.15m	Ditch terminal, pit which yielded flint, posthole
2.24	c.20m	c.2m	0.48m	0.30m	0.20m	Ditch, pit
2.25	c.30m	c.2m	0.50m	0.35m	0.15m	-
3.1	c.30m	c.2m	0.30m	0.20m	0.10m	Remains of Dane Ghyll
4.1	c.30m	c.2m	0.33m	0.35m	0.10m	Ditch
4.2	c.30m	c.2m	0.30m	0.23m	0.10m	Ditch which yielded animal bone and flint, pit
4.3	c.30m	c.2m	0.30m	0.25m	0.05m	-
4.4	c.30m	c.2m	0.30m	0.10m	0.20m	-
4.5	c.30m	c.2m	0.50m	0.35m	0.20m	Remains of Dane Ghyll
4.6	c.30m	c.2m	0.35m	0.35m	-	Agricultural features
4.7	c.30m	c.2m	0.35m	0.30m	0.05m	-
4.8	c.30m	c.2m	0.38m	0.20m	0.19m	Ditch, trackway, trackway ditch
4.9	c.30m	c.2m	0.65m	0.35m	0.25m	Pit
4.10	c.30m	c.2m	0.60m	0.35m	0.25m	Ditch terminal, posthole
4.11	c.15m	c.2m	0.37m	0.30m	0.10m	Ditch

## APPENDIX C

### ARCHAEOBOTANICAL ASSESSMENT

*Jonathan Baines and Robin Putland*

#### INTRODUCTION

41 samples, taken during the course of archaeological investigations at Breast Mill Beck Road, were examined for environmental remains according to Historic England (2011) guidelines and standards. These contained barley kernels (*Hordeum vulgare*), pale smartweed (*Persicaria lapathifolia*), common hempnettle (*Galeopsis tetrahit*), a small legume (*Lathyrus / Vicia*), hazelnut shell fragments (*Corylus avellana*) and undetermined grasses. The charcoal assemblage included oak (*Quercus*), hazel (*Corylus avellana*), birch (*Betula*) and poplar or willow (*Populus / Salix*).

#### METHODOLOGY

The bulk environmental samples were processed at NAA in June and July 2019 with 0.5 mm retention meshes using the Siraf method of flotation (Williams 1973). The plant remains and charcoal were identified to species by as far as possible by J. Baines using Schweingruber (1990), Hather (2000), Cappers et al. (2006), Jacomet (2006) and the NAA reference collections. The botanical Society of Britain and Ireland PLANTATT was consulted for all binomial nomenclature and plant habitat descriptions (Hill et al. 2004).

As the field team had remarked that context 31 was rich in botanical remains, this sample was also bucket sieved, but using a 0.25 mm mesh. Four teaspoons of botanically rich residue < 0.25 mm were also kept for further identification.

Prehistoric pottery had been observed in contexts 160-163 in the field. For that reason, these samples were bucket floated to prevent destruction of potential fragments of "biscuity pottery." The mesh size was 0.5mm. The remaining tubs from samples 160-163 were fully processed in April 2020 following Baines' recommendations.

In March 2020, the following additional samples from new excavation work at the site were also processed. Namely: 31, 59, 80, 114, 171, 176, 177, 227, 255, 1004, 1006, 1011, 1013, 1015, 1017, 1019, 1034, 1036, 1038, 1055. The plant remains were identified to species by as far as possible by R. Putland using the same reference materials as Baines (above). The presence and abundance of charcoal was recorded, but identification work was not carried out at this time.

#### RESULTS

Despite considerable effort at retaining as many charred plant remains from the samples, they did not contain a broad floral spectrum. Nonetheless the recovery of four barley kernels in contexts 161 and 163 evinced cultivation of this crop. The three pale smartweed seeds observed in contexts 31 and 161 imply arable fields were extant nearby. Though they may have derived from on-site processing of grain, the absence of chaff remains and other representatives of a weed community, mean they may have inadvertently charred on site.

Due to the effect of charring, it was not possible to distinguish whether two more kernels in context 163 were barley or wheat (cf. indet cerealia). The four undetermined grasses (length between 2 and 5 mm) were not cereals. Presumably they, like the common hemp nettle and small legume in context 151, preserved on site as traces of the surrounding grassland. Whether

they derived from forage, bedding, roofing or as discarded arable weeds cannot be ascertained. Tentatively the occurrence of pale smartweed and common hemp nettle suggest the arable fields surrounding the site were nutrient rich.

Although analysis of 1004 during the second phase of flotation yielded forty kernels of barley no wheat could be positively identified, however 167 kernels were recorded as cf. indet cerelia due to the effects of charring and poor preservation meaning that it was not possible to distinguish between wheat and barley. The recovery of these kernels strengthens the suggestion that crop cultivation took place in this area. The lack of identifiable wheat also concurs with findings from this earlier stage of work. This could be indicative of wheat not having been cultivated in the area, or of poor preservation of wheat kernels in comparison to barley, however it is not possible to draw firm conclusions.

Alas the hazelnut shell fragment found in context 224 may have been transported from elsewhere - and is therefore temporally intrusive in that archaeological horizon - because the sample was mostly gravel.

Oak and hazel dominated the charcoal assemblage. Whilst these two taxa were presumably exploited for both construction and firewood, the fragments were too small to successfully observe any signs of working or coppicing. Birch and poplar or willow are common components of an oak and hazel woodland. It seems like the occupants collected whatever firewood was readily available nearby. Though no charcoal was retrieved from sample 57, some fragments of undetermined wood ash adhered to clumps of sediment that had been in contact with fire.

## RECOMMENDATION

It is recommended that the assemblage be retained for consideration alongside future findings from the same time. Further identification of the charcoal to species may also be warranted.

**Table 3: charcoal**

Context	Weight (g)	Species Identification
30	2.4	Quercus
31	118	Quercus
31		Corylus
57	1	Quercus
59	2.1	Quercus
80	1.1	Quercus
128	87	Quercus
151	9	Quercus
160	1.6	Quercus
160		Corylus
160	0.4	Quercus
161	7.3	Populus / Salix
161		Quercus
161		Corylus
161		Quercus
162	48	Quercus
162		Populus / Salix
162		Corylus
163	16.7	Betula
163		Corylus
163		Quercus
171		Betula
171	1.3	Quercus
176	2.2	undet hardwood
177	2.1	Quercus

182	2.2	Quercus
211	6.8	Quercus
224	0.1	Quercus
255	4	Quercus
867	0.3	Quercus

**Table 4 : charcoal abundance**

Context	Size	Abundance
31	Flecks	Rare
59	Flecks	Rare
80	Flecks	Rare
114	Flecks	Rare
161	Fragments	Common
162	Fragments	Common
163	Fragments	Common
171	Flecks	Rare
176	Flecks	Rare
177	Fragments	Common
227	Flecks	Rare
255	Fragments	Common
1011	Fragments	Common
1004	Fragments	Abundant
1006	Flecks	Rare
1013	Fragments	Common
1015	Flecks	Rare
1017	Flecks	Rare
1019	Fragments	Common
1036	Fragments	Rare
1038	Flecks	Rare
1055	Flecks	Rare

Table key: Size: flecks = <2 mm, fragments >2 mm. Abundancies: Rare = <25% Occasional = 25-50%, Common = 50-75%, Abundant = 75-100%.

**Table 5: charred seeds and fruit remains**

Context	Identification	Amount
31	Polygonum lapathifolium	2
128	Corylus avellana shell	1
151	Galeopsis tetrahit	1
151	Lathyrus / Vicia	1
161	Polygonum lapathifolium	1
161	Hordeum	1
162	Poaceae 2 - 5 mm	1
163	indet cerealia	2
163	Poaceae 2 - 5 mm	3
163	Hordeum	4
224	Corylus avellana shell	1
1004	Hordeum	40
1004	indet cerealia	167

## REFERENCES

Cappers, R., Bekker, R. and Jans, J. (2006) Digitale Zadenatlas Van Nederland: Digital Seed Atlas of the Netherlands. Groningen: Barkhuis Publishing.

- Hather, J. (2000) *The Identification of the Northern European Woods: A Guide for Archaeologists and Conservators*. London: Archetype.
- Hill, M., Preston, C. and Roy, D. (2004) *PLANTATT Attributes of British and Irish Plants: Status, Size, Life History, Geography and Habitats*. Huntingdon: Centre for Ecology and Hydrology.
- Campbell, G., Moffett, L. & Straker, V. (2011) *Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation* (second edition). Swindon: English Heritage.
- Jacomet, S. (2006) *Identification of Cereal Remains from Archaeological Sites*. 2nd Edition. Archaeobotany Lab. Basel: IPAS, Basel University.
- Schweingruber, F. H. (1990) *Microscopic Wood Anatomy*. 3rd Edition. Swiss Federal Institute for Forest, Snow and Landscape Research.
- Williams, D. (1973) Flotation at Siraf. *Antiquity* 47, 198-202.



## APPENDIX D BUILDING MATERIAL ASSESSMENT

### *Chrystal Antink*

#### INTRODUCTION

This report details the ceramic building material (CBM) and concrete recovered from excavations at Breast Mill Beck Lane, Barrow-in-Furness.

#### METHOD

The material was examined following the Minimum Standards for Recovery, Curation, Analysis, and Publication for Ceramic Building Material (Archaeological Ceramic Building Materials Group, 2002). Fragments were recorded in a Microsoft Access database following McComish (2012, 122) by count, weight, form, and surviving complete dimensions. Any unusual firing characteristics, stamps, and external effects were noted. The date range of the bricks were estimated using historic sizes referenced by Davey (1961), McComish (2012), and PAYE Conservation (2017).

#### OUTLINE OF THE ASSEMBLAGE

Twenty-four fragments of building material, totalling 9,416g, were recovered. The assemblage was comprised of three handmade and one machine-made post-medieval (AD1800+) bricks, a salt-glazed Victorian drain fragment, a modern field drain fragment, fourteen small (<10g) fragments of modern brick, and a 1,387g fragment of post-medieval concrete (table 6).

*Table 6: summary of building material, by form and period*

	Post-Medieval		Modern		Total Count	Total Weight (g)
Form	Count	Weight (g)	Count	Weight (g)		
Brick	4	7766	14	108	18	7874
Concrete	1	1387			1	1387
Drain	4	98	1	57	5	155
Grand Total	9	9251	15	165	24	9416

#### PROVENANCE OF THE OBJECTS

Three of the handmade post-medieval bricks were recovered from a modern posthole, otherwise there does not seem to be any concentration of material on the site.

#### DISCUSSION

Very little can be gleaned from such a sparse assemblage. It is of interest that three of the four post-medieval bricks were handmade, presumably before the turn of the 20th century, and therefore unlikely to have been related to any of the Second World War buildings on the site. The concrete retains the impression of a flat surface, and has unusually been moulded on the surviving face into a curving W profile.

## RECOMMENDATIONS

No further investigation of the material is required. As a digital photographic record has been made of the assemblage, physical retention with the archive is unnecessary.

## REFERENCES

Archaeological Ceramic Building Materials Group, (2002), Minimum Standards for Recovery, Curation, Analysis, and Publication for Ceramic Building Material (Draft Minimum Standards, 2002)

Davey, N. (1961) A History of Building Materials. Phoenix House: London.

McComish, J. (2012) An Analysis of Roman Ceramic Building Material from York and its Immediate Environs. Master's degree, University of York.

PAYE Conservation (2017) Brickwork, An overview. [Online] Available at [www.payeconservation.net/past\\_papers/brickwork-an-overview](http://www.payeconservation.net/past_papers/brickwork-an-overview) (Accessed on 28 October 2019)

## APPENDIX E

### SMALL AND RECORDED FINDS AND STONE OBJECTS ASSESSMENT

*Julie Shoemark*

#### INTRODUCTION

A total of 66 finds comprising those assigned Recorded Find (RF) numbers and bulk finds were recovered from archaeological excavations carried out at Dalton Lane, Barrow-in-Furness (at NGR 321500 472400).

This report should be read in conjunction with the accompanying spreadsheet. It presents an assessment of the finds by material and by period, followed by a consideration of the archaeological significance of the assemblage and makes suggestions for any further work that may be required.

#### METHODOLOGY

The finds were assessed by eye between the 25th and 28th of January 2020. X-rays of the ferrous objects were examined in order to enable more accurate identification. The assemblage was organised by material, quantified by count and weight and was then assigned a functional group after the method of Crummy (1983). The assemblage was then considered in terms of its stratigraphic relationship. Artefacts were assigned a broad period according to their stratigraphic relationship and by reference to comparators from the literature where possible.

#### OUTLINE OF THE ASSEMBLAGE

The objects are discussed below by period and functional group. Of the 68 small finds recovered, 18 items were discovered upon examination to be fragments of stone with no signs of working visible. They are likely to be either naturally occurring on site or fragments from worked objects, now too heavily damaged to identify. As such, they can provide no useful information and have been excluded from the quantification of finds presented in table 7.

A fragment from a polished stone axehead. Three fragments of stone which appear unworked but are of similar material to the axehead were also recovered. For this reason, they have been retained and are discussed as part of the assemblage.

Two stone objects suggested as hammerstones recovered from 163 should be briefly discussed. Both are heavily worn. One exhibits a small slightly flattened patch at one end which appears too limited to have been caused by use as a hammerstone. The other stone has two opposed flat surfaces; however, the surface as a whole is heavily abraded, and there is no differential wear observable. It is the opinion of the current author that there is insufficient evidence for these having been used as hammerstones, or any other form of tool.

***Table 7: quantification of finds***

Material	Neolithic	Modern	Unknown	Total
Ceramic		2	1	3
Ceramic and Iron Fe		1		1
Iron Fe		15	15	30
Iron Fe and lead alloy(?)		1		1
Aluminium(?)		2		2
Copper alloy		1		1

Copper alloy and Iron Fe		4		4
Plastic		2		2
Carbon		1		1
Concrete		1		1
Stone	1		3	4
				50

## Early Neolithic

### *Tools (one object)*

A fragment of probable polished stone axehead (RF1) was recovered from fill 163 of pit 159. The fragment has one outer ground and polished surface remaining and, when complete, would have originally had a pointed oval cross-section. The stone is fine-grained and buff-coloured with dark grey inclusions visible in the matrix. It is probably of Group VI, Langdale tuff, however, petrographic analysis is required for this to be confirmed (see recommendations, below). Group VI is the dominant form of axehead recovered from Cumbria (Fell and Davis, 1988, 71) and the stone closely resembles other examples, including one from near Catterick (See Clarke, 2016).

It exhibits a transverse break at the butt end, two parallel scars on the interior surface and four parallel flake scars at the blade end. It is not clear whether the latter were an attempt to rework the fragment after it broke or incidental damage caused after deposition. The outer surface has been polished smooth across the entirety of the surviving surface, indicating that when intact, it would have been completely ground, a common practice with Group VI axeheads (Taylor, 2016, 17). There is no obvious side or blade faceting or tapering, indicating that this fragment derives from the body of the axehead.

### *Unknown date (three objects)*

Three fragments of buff-coloured stone similar in appearance to RF1 were recovered; two from fill 161 of pit 159 and one from fill 163 of pit 159. Although none exhibited any obvious signs of working, the similarity in appearance and proximity in terms of find spot is notable.

## Modern

### *Dress (two objects)*

A single plastic button was recovered from demolition layer 278 of cut 277. A copper alloy button was recovered from fill 18 of demolition cut 42.

### *Toilet (one object)*

An incomplete pink plastic comb was recovered from fill 66 of service trench 65.

### *Buildings and services (four objects)*

Three ceramic wire clips were recovered: one from fill 18 of demolition cut 42 and two from demolition layer 53. One of the clips from layer 53 retains an iron screw in the central perforation and exhibits the legend B I MACINTOSH above and PCT below. The second clip from layer 53 is incomplete and exhibits the legend M[ADE IN] above the central aperture and ENGLA[ND] below.

A large fragment of concrete was recovered from fill 261 of pit 260. The concrete is buff coloured with pebbles and large fragments of slag or clinker embedded in the matrix. The front is moulded into two ridges. All edges terminate in jagged breaks. It is not possible to state what the fragment was originally part of.

#### ***Tools (one object)***

A modern carbon battery rod was recovered from demolition layer 278 of cut 277.

#### ***Fasteners and fittings (14 objects)***

Seven modern flat-headed nails were recovered from fill 18 of demolition cut 42. Two further flat-headed nails were recovered from demolition layer 53 and a single nail was recovered from demolition layer 278 in cut 277. A nail with a domed head was recovered from fill 25 of hollow 24. A corroded screw and an iron nail with a square shank passing through a discoidal lead or lead alloy washer were recovered from fill 261 of pit 260.

#### ***Unknown (eight objects)***

Two aluminium(?) objects were recovered from fill 18 of demolition cut 42. Both were incomplete. One was discoidal with the edges curled inwards and had a central projecting cylinder with a screw thread visible on the exterior. The other was a folded sheet of silver-coloured metal, most of the exterior was obscured by a flaky black substance, possibly paint or corrosion product.

Four fragments of bent copper alloy wire partially covered in ferrous corrosion product were recovered from demolition layer 53.

Two iron objects were recovered from demolition layer 278 in cut 277. One was a flat bar with an old break at one end. It expands along its length to a rounded terminal with central circular perforation. The other object is oblong with one flat long edge and one curved long edge with an off-centre U-shaped notch. There are no obvious breaks visible on the x-ray. There are small shards of glass embedded in the corrosion product covering both objects. Both objects are likely to be components from machinery.

#### ***Recreation (one object)***

A possible gaming counter was recovered from fill 18 of demolition cut 42. It appears to be poorly fired ceramic in a buff-orange fabric. Both faces exhibit a series of concentric moulded ridges and grooves.

#### ***Fasteners and fittings (eight objects)***

Two iron nails were recovered from fill 18 of demolition cut 42. One has a flat rectangular head. The other nail is too heavily corroded and/or damaged for a head to be discernible. Both are intrinsically undatable.

Six iron nails were recovered from fill 261 of pit 260. Four of them were missing the head and heavily corroded. They are therefore undatable. Two of the nails had flat heads tapering into a square shank. Nails are utilitarian objects which changed form very little between the Roman and Victorian period. This can make dating difficult, especially in cases such as this where the

objects are heavily corroded and have been recovered from topsoil or disturbed deposits. It is probable that all are less than 200 years old, however, this cannot be confirmed.

### ***Unknown (seven objects)***

All seven objects were recovered from fill 18 of demolition cut 42. Three heavily corroded square-sectioned lengths of iron are probably the broken shanks of iron nails; however, it is not possible to confirm this. Two lengths of twisted wire, both bent into loops were recovered. They may derive from fencing wire. A large lump of corroded iron was also recovered. The x-ray does not reveal any diagnostic features and it is not possible to state a function.

### **Provenance of objects**

The fragment of polished flint axehead (RF1) and three potentially associated stone fragments all came from the fills of pit 159. Fills from this pit also produced seven flint objects of Mesolithic or Early Neolithic date (Appendix F). There were no finds of later date recovered from the fills of pit 159, providing a relatively secure Early Neolithic date for deposition.

Of the 46 non-stone objects recovered, 27 were modern. The remaining 20 finds were of unknown date and, apart from one ceramic counter, consisted entirely of undiagnostic iron objects such as nails and unidentifiable fragments. The material of unknown date derived from fill 18 of demolition cut 42 and from fill 261 of pit 260. Given the overwhelmingly modern character of the dateable assemblage it is likely that this material is contemporary.

## **DISCUSSION**

Apart from the fragment of polished axehead (RF1), the entirety of the datable assemblage is modern in date. Although it is not possible to state with complete certainty, the undatable material is also likely to be modern. This material relates to the occupation and demolition of Dane Ghyll Camp; however, the assemblage is too small and varied in nature for any further useful information to be elucidated. There are no significant artefacts of modern date present.

As Bishop notes, in addition to contributing to an understanding of Neolithic activity at this site, the stone axehead, in conjunction with the other lithic material may contribute to a broader understanding of Neolithic procurement, settlement and depositional practices.

## **RECOMMENDATIONS**

It is recommended that unless further work is to be undertaken, the modern assemblage in its entirety be discarded.

It is recommended that the fragment of polished axehead (RF1) and the three associated unidentified stone fragments from fills 161 and 163 of pit 159 be retained and submitted to a specialist in Neolithic axeheads for further analysis. This should include petrographic analysis of both the axehead and fragments to establish the source of the material and to establish whether or not RF1 and the unidentified fragments are of the same material or not.

This material should also be considered alongside the lithic material from this project and considered alongside any subsequent material recovered from the site.

## REFERENCES

- Clarke, A. (2016) Four stone axes from excavations along A1L2B, Unpublished NAA report.
- Crummy, N. (1983) Colchester Archaeological Report 5: The Post-Roman Small Finds from Excavations in Colchester 1971 – 85, Colchester: Colchester Archaeological Trust Ltd.
- Fell, C. I and Davis, R. V. (1988) 'The Petrological Identification of Stone Implements from Cumbria' in McK Clough, T .H. and Cummins, W. A. Stone Axe Studies. Volume 2. CBA Research Report no. 67.
- Taylor, S. (2016) 'Journeys to Neolithic Langdale: how a Cumbrian landscape may help explain prehistoric movement of polished stone axes.' *Lithics: the Journal of the Lithic Studies Society* 37: 15–32.

**APPENDIX F**  
**LITHICS ASSESSMENT**

*Barry Bishop*

**INTRODUCTION**

Archaeological investigations resulted in the recovery of a small assemblage of struck flint. The assemblage has been comprehensively catalogued by context and this includes further descriptive details of the material. This report summarises the data in the catalogue; it quantifies and describes the material and presents a preliminary assessment and outline of its significance. The assemblage was recorded following standard technological and typological classifications and largely follows the methodology of Inizan et al (1999) with modifications and additions as indicated in the text by the author. Retouched tools were classified following standard British works such as Healy (1988) and Bamford (1985). Measurements were taken following the methodology of Saville (1980).

**QUANTIFICATION AND DISTRIBUTION**

*Table 8: quantification of the struck and burnt flint*

	Decortication flake	Flake	Blade: prismatic	Flake fragment	Core	Retouched
Ditch [61]					1	
Pit [159]	1	1	1	1	1	2
Pit [253]						1
Total	1	1	1	1	2	3

A total of nine pieces of struck flint, including two cores and three retouched implements, were recovered during the investigations (table 8). The majority of these, comprising seven pieces, were recovered from three fills of pit [159] with ditch [61] and pit [253] contributing one piece each.

**THE ASSEMBLAGE**

**Raw material**

The struck assemblage was all made from 'glassy' or cherty flint of a variety of colours, textures and hues. Cortex, where retained, is mostly smooth-rolled or weathered and the raw materials were probably gathered as rounded pebbles or small cobbles from the glacial tills or alluvial deposits that form the superficial geology in this area. One possible exception to this is the blade from pit [159] which is made from an opaque, almost porcelain-like, white flint that is reminiscent of flint from the Lincolnshire and Yorkshire Wolds, and which may have been brought to the site from across the Pennines.

**Condition**

The struck flint is in a good or only slightly chipped condition. There is no evidence for in-situ working but it is likely that the pieces were recovered from close to where they were originally discarded and, at least in the case of the assemblage from pit [159], are broadly contemporary with the feature from which they were recovered.



## **Description**

The assemblage is technologically and typologically homogeneous and represents a competent, blade-based reduction technique that can be broadly dated to the Mesolithic or Early Neolithic periods (see full catalogue for descriptions of individual pieces). Some leeway in the dating must be allowed, however, as no truly diagnostic pieces were recovered and blade manufacture did occasionally continue over into the later Neolithic.

The assemblage from pit [159] is the most informative and includes blades, flakes, a core that was probably abandoned due to the low knapping-quality of its raw materials, and two retouched implements, both of which had broken during use. They comprise a point or piercing tool made by accentuating the converging distal end of a well struck blade and a steeply retouched flake fragment that may have originally been a scraper.

The other two struck pieces from the site comprise a small blade core made on a flake from ditch [61] and a serrated blade-like flake from pit [253].

## **Significance**

The most significant aspect of the assemblage is the material from pit [159] which demonstrates Neolithic occupation and flint use at the site. The presence of broadly contemporary flintwork from other locations within the site suggests that the occupation may have been more extensive than indicated by that feature alone.

The assemblage from pit [159] was manufactured from a variety of raw materials and includes a high proportion of retouched pieces, suggesting that it represents the gathering of possibly deliberately selected pieces that derived from 'domestic' or settlement type activities. This is supported by the assemblage's condition which is predominantly good but does vary, suggesting that it was not knapped in-situ but had experienced a 'pre-pit' context between manufacture and final discard. Taken together, these traits are reminiscent of the dumping of midden material or other accumulations of occupation waste in pits, as is commonly seen in broader traditions of Neolithic depositional practices (e.g. Anderson-Whymark and Thomas 2012). Such pits are often regarded as being markers of temporary inhabitation sites with their contents reflecting the range of activities undertaken during the occupation. Well contextualized assemblages of this date have the potential to contribute to further understandings of the variety and distribution of 'pit assemblages' as well as providing insights into broader patterns of flintworking technologies, settlement organization and depositional practices.

## **RECOMMENDATIONS**

The struck flint assemblage has been comprehensively catalogued and no further analytical work is recommended. However, the overall assemblage and particularly the material from pit [159] is of at least local significance and worthy of being described for inclusion in any published accounts of the investigations, which should also include illustrations of selected pieces.

## **REFERENCES**

Anderson-Whymark, H. and Thomas, J. (eds) 2012 Regional Perspectives on Neolithic Pit Deposition. Beyond the Mundane. Neolithic Studies Group Seminar Papers 12. Oxford: Oxbow Books

Bamford, H. 1985 Briar Hill: Excavation 1974–1978. Northampton Development Corporation. Northampton.

Healy, F. 1988 The Anglo-Saxon Cemetery at Spong Hill, North Elmham. Part VI: Occupation in the seventh to second millennia BC. *East Anglian Archaeology* 39

Inizan, M-L., Reduron-Ballinger, M., Roche, H. and Tixier, J. 1999 Technology and Typology of Knapped Stone (Translated by J. Feblot-Augustines). *Cercle de Recherches et d'Etudes Préhistoriques Tome 5*. Nanterre.

Saville, A. 1980 On the Measurement of Struck Flakes and Flake Tools. *Lithics* 1, 16-20.

**APPENDIX G**  
**GLASS ASESSMENT**

*Charlotte Britton*

**INTRODUCTION**

A total of 27 sherds (800.3g) of glass were recovered from the 2019 evaluation that took place at Brest Mill, Beck Road, Barrow-in-Furness, Cumbria (NGR 321500 472400).

**METHODOLOGY**

This report presents the results of the assessment of that material examined in accordance with Historic England (2018). All the material recovered was assessed by eye on 31st October 2019. The material was organised by stratified deposit (context) and quantified by count and weight (table 9). Object type, form and period were also documented where possible. As no further work is to be carried out, a catalogue of the glass finds was created.

*Table 9: glass present by context, with count and weight*

Context	Count	Weight (g)
18	2	25.8
20	2	26.7
23	1	3.7
53	14	695.9
66	1	8.5
86	1	5.1
261	5	15.7
278	1	18.9
Total	27	800.3

**OUTLINE OF THE ASSEMBLAGE**

The assemblage dated to the post-medieval period (20th century) and included vessel, mirror and window glass. The assemblage represented a maximum of six individual domestic vessels, three windows and a single mirror fragment (table 10, below). The artefacts and forms identified were highly typical of the period and region.

**Vessel Glass**

A total of 13 sherds (140.1g) of vessel glass was recovered from the site dating to the 20th century. The assemblage represented a maximum of six individual vessels and all the glass present was in a very good condition. Most of the assemblage was British in origin and most likely produced within the local region. Vessel types included two green coloured wine/beer bottles, two colourless water/soda bottles and a colourless jar fragment, that likely originally held a food product. All were machine made and composed of soda-lime-silica glass, common to the period. A single fragment of a soda bottle displayed letters embossed on the sidewall, likely indicating the product it contained, although it was not identifiable. Four sherds from a single brown coloured bottle were also recovered from demolition layer 53. Deriving from a liquor bottle, these sherds included two base sherds from a rectangular shaped base, that displayed a maker's mark comprised of an I in diamond, encompassed by a large O. This indicated the bottle was produced by the Owen's-Illinois Glass Company, based in Ohio, USA during the late 19th-early

20th century. The mark and bottle shape indicated it was made between 1930s-50s and was produced to hold liquor (Lockhart & Hoenig 2018, 311). The company distributed their glass goods world-wide throughout the 20th century, and they were widespread in Britain at the time.

### Window and Mirror Glass

One sherd (3.7g) of mirror glass was recovered composed of plate glass, likely dating to 20th century and produced within the local region. In addition, 13 sherds (656.5g) of window glass were recovered, likely deriving from three separate windows. A single sherd of clear colourless window glass was recovered within the assemblage possibly deriving from a domestic building. In addition, eight sherds of toughened safety glass and four sherds of wire mesh toughened safety glass were recovered from across three demolition contexts. The safety glasses were aqua-marine in colour and likely derived from a nearby public building. All were comprised of soda-lime-silica glass dating to the 20th century.

**Table 10: glass type by context, count and weight**

Type	Mirror		Vessel		Window		Total Count	Total Weight (g)
Context	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)		
18					2	25.8	2	25.8
20			2	26.7			2	26.7
23	1	3.7					1	3.7
53			4	73.7	10	622.2	14	695.9
66					1	8.5	1	8.5
86			1	5.1			1	5.1
261			5	15.7			5	15.7
278			1	18.9			1	18.9
Total	1	3.7	13	140.1	13	656.5	27	800.3

### PROVENANCE OF OBJECTS

Most assemblage was recovered from subsoil or demolition layers and so therefore could tell us little about the site beyond indicating human occupation occurred around the site, during the post-medieval period. The remainder of the assemblage was recovered from gully and pit fills, known to be of a post-medieval date. The research potential of the material recovered therefore, is low.

### DISCUSSION

The assemblage dated to the 20th century and encompassed domestic vessels, window glass and a single mirror fragment. The assemblage was clearly associated with a settlement located within the vicinity during the period, and likely originated from the military camp located on site (NAA 2019). All the vessels recovered were connected to drink and food storage, indicating they were related to human occupation. The domestic nature of the vessels and the dateable maker's mark within the vessel group, suggested they dated to between 1930s-50s, coinciding with the period the military camp was used by both British and Polish officers (NAA 2019). In addition, the safety glass found probably derived from military buildings located on site. The assemblage therefore points to both leisure and military activities taking place at the camp during the period, establishing the nature of the site, during the 20th century.

## RECOMMENDATIONS

All the glass recovered dated from 20th century and was in very good condition. It was highly characteristic of the period and region and was mainly recovered from unstratified or residual contexts. Therefore, no further work is required, and the assemblage is recommended for discard.

## CATALOGUE

### *Context 18: Second fill of demolition cut 42*

Fragment of aqua-marine coloured wire mesh safety window glass. Weight: 14.5g. 20th century.

Fragment of colourless window glass. Weight: 11.3g. 20th century.

### *Context 20: Subsoil in Trench 1.3*

Two fragments of a green coloured wine bottle. Machine made, with a kick up present on the base. Weight: 26.7g. 20th century.

### *Context 23: Fill of gully 22*

Fragment of mirror glass. Weight: 3.7g. 20th century.

### *Context 53: Demolition layer*

Four fragments of a brown coloured liquor bottle with a rectangular base. Machine made. Maker's mark on the base (I in diamond encompassed by an O) indicating it was produced by Owen's-Illinois Glass Company. Weight: 73.7g. 1930s-1950s.

Seven fragments of aqua-marine coloured toughened safety window glass. Weight: 500.8g. 20th century.

Three fragments of aqua-marine coloured wire mesh safety window glass. Weight: 121.4g. 20th century.

### *Context 66: Fill of service trench 65*

Fragment of aqua-marine coloured toughened safety window glass. Weight: 8.5g. 20th century.

### *Context 86: Fill of gully 87*

Fragment of a colourless jar fragment. Machine made. Weight: 5.1g. 20th century.

### *Context 261: Fill of pit 260*

Fragment of a green coloured beer bottle. Machine made. Weight: 2.5g. 20th century.

Four fragments of colourless soda/water bottle. 'R/P T' embossed on the sidewall. Machine made. Weight: 13.2g. 20th century.

***Context 278: Context 261: Fill of pit 260***

Fragment of colourless soda/water bottle. Complete rolled rim: 3mm diameter. Machine made. Weight: 18.9g. 20th century.

**REFERENCES**

Historic England (2018) Archaeological Evidence for Glass Working Guidelines for Recovering, Analysing and Interpreting Evidence. Swindon. Historic England.

Lockhart, B. & Hoenig, R. (2018) Owens-Illinois Glass Co. Part 2. The Bewildering Array of Owens-Illinois Glass Co. Logos and Codes. Society for Historical Archaeology. p297-320. [Online] Available at <<https://sha.org/bottle/pdffiles/OwensIllinois2018Part2.pdf>> (Accessed on 31/10/2019).

NAA (2019) Brest Mill, Beck Road, Barrow-in-Furness: Archaeological evaluation and strip, map and record interim report. Report number: 19-104.

**APPENDIX H**  
**INDUSTRIAL WASTE ASSESSMENT**

*Charlotte Britton*

**INTRODUCTION**

A total of 561.7g of possible industrial waste was recovered from the 2019 evaluation that took place at Breast Mill, Beck Road, Barrow-in-Furness, Cumbria (NGR 321500 472400).

**METHOD**

This report presents the results of the assessment of that material which was assessed by eye on 13th December 2019. The material was organised by stratified deposit (context) and quantified by weight (table 11). Slag type was documented where possible.

*Table 11: industrial material present by context, with weight*

Context	Weight (g)
18	155.4
30	5.1
31	1.2
59	2.5
80	2.7
114	3.2
161	1.3
162	1.4
163	5.3
176	2.7
177	12.8
224	0.5
250	350
1004	0.7
1006	1.5
1011	1.2
1013	11.6
1015	0
1019	0.2
1034	0
1036	1.3
1038	0.5
1055	0.6
Total	561.7

**OUTLINE OF THE ASSEMBLAGE**

The material was undiagnostic in date and the majority of the assemblage (82%) constituted magnetic matter, made up of natural ferruginous concretion, and so could tell us nothing about the site. The remainder of the assemblage, however, included three fragments of spheroidal hammerscale, 14 pieces (415g) of fayalitic slag and 11 fragments (90.4g) of clinker. Although a small assemblage of finds, this material suggested that industrial activity had taken place on the site, in the past.

Spheroidal hammerscale is formed during iron-smithing, and comprises tiny droplets of magnetic material. Similarly, fayalitic slag is an iron rich by-product of smelting and smithing (Bayley 1991). Finally, clinker is the residue produced after coal has been burnt. All these materials point

to metalworking or a similar high temperature process taking place on site at some point in the past.

## **PROVENANCE OF OBJECTS**

The diagnostic material was recovered from across four contexts, including post-holes and pits, and so was likely recovered from primary deposition contexts.

## **DISCUSSION**

The small amount of diagnostic material recovered exclusively indicated that industrial activity had taken place on the site. Although recovered from primary contexts of deposition, the locus of metalworking was not identifiable as no hearths or other structural evidence for the activity was identified in the archaeological record. The spheroidal hammer scale was recovered from across two contexts, prehistoric pit 1003 and posthole 1037 and suggested that iron smithing had possibly occurred within the vicinity. In addition, fayalitic slag and clinker were recovered from modern posthole 250 suggesting that metalworking, or a similar high temperature activity, had taken place on site, likely during the post-medieval or modern period. Although a small suite of components, this assemblage intimated that the site had been industrial in nature, or had an industrial component, during the past.

## **RECOMMENDATIONS**

The small amount of diagnostic material was in a good condition, however, could tell us little about the site beyond indicating industrial activity had taken place on the site. It is therefore recommended for discard alongside the natural magnetic material.

## **REFERENCES**

Bayley, J. (1991) Evidence for Metalworking. Finds Research Group 700-1700. Datasheet 12b.



## APPENDIX I

### POST-MEDIEVAL POTTERY ASSESSMENT

*Charlotte Britton*

#### INTRODUCTION

A total of 19 sherds (182.3g) of post-medieval pottery were recovered from the 2019 evaluation that took place at Brest Mill, Beck Road, Barrow-in-Furness, Cumbria (NGR 321500 472400).

#### METHOD

This report presents the results of the assessment of that material examined in accordance with Barclay et al. (2016). All the material recovered was assessed by eye on 30th October 2019. The material was organised by stratified deposit (context) and quantified by count and weight (table 12). Wares and date were identified where possible, and vessel form and decoration were documented where practicable.

*Table 12: wares present with date range, count and weight*

Context	Count	Weight (g)
18	4	42.9
20	4	34.4
23	1	2.9
25	1	5.2
53	2	64.8
86	1	14.1
278	6	18
Total	19	182.3

#### OUTLINE OF THE ASSEMBLAGE

The assemblage dated to the post-medieval-modern period (19th-20th century) and was classified as domestic ware. The assemblage represented a maximum of twelve individual vessels and all the material recovered was in very good condition. All the pottery present was British in origin, most likely produced within the local region, and the wares identified were highly typical of the period. The assemblage encompassed a table and a utilitarian ware, including whiteware and stoneware. The forms identified were typical of the period and wares, taking the form of flatwares such as plates and saucers and hollow wares such as cups and jars. A single sherd (2.3g) of a painted whiteware saucer or plate recovered within the assemblage, from gully fill 23, displayed two red lines indicative of NAAFI crockery and therefore may have been part of a suite of material produced by the organisation. As the sherd was so fragmentary, however, this was difficult to prove.

#### PROVENANCE OF THE OBJECTS

Most of the assemblage was recovered from subsoil or demolition layers and so therefore could tell us little about the site beyond indicating human occupation occurred around the site, during the post-medieval-modern period. Three sherds were recovered from gully and hollow fills, some alongside finds dating to the prehistoric period. Recovering these finds together indicated that these contexts had been disturbed and mixed. The research potential of the material recovered therefore, is very low.

## **DISCUSSION**

The wares and forms present within the assemblage recovered encompassed both a utilitarian and tableware, associated mainly with food storage, preparation and consumption. The single sherd of a possible NAAFI plate likely originated from the military camp located on site. In addition, as plain whiteware and stoneware storage jars were also used by the NAAFI, it is possible that all the material recovered originated from the military camp, although it may have also simply derived from a nearby domestic civilian site, as the wares and decoration were used by both. The assemblage is therefore difficult to characterise and provided little information about the excavated area beyond indicating that domestic activity took place on or around the site, during the post-medieval-modern period.

## **RECOMMENDATIONS**

All the pottery recovered dated from 19th-20th century and was in very good condition. It was highly typical of the region, being characteristic of both a domestic and military site during this period. The assemblage was mainly recovered from unstratified or residual contexts and so no further work is required, and the assemblage is recommended for discard.

## **REFERENCES**

Barclay, A., Knight, D., Booth, P., Evans, J., Brown, D. & Wood, I. (2016) *A Standard for Pottery Studies in Archaeology*. Prehistoric Ceramics Research Group, Study Group for Roman Pottery & Medieval Pottery Research Group.

**APPENDIX J**  
**PREHISTORIC POTTERY ASSESSMENT**

*Alex Gibson*

**INTRODUCTION**

In December 2019, the writer was asked by NAA to undertake an assessment on a small assemblage of Bronze Age pottery from the 2019 excavations at Barrow in Furness.

The pottery had been wrapped in acid free tissue and packed in plastic boxes. The assemblage was unpacked, laid out onto plastic finds trays and examined in good light. A x10 hand lens was used to examine the material where necessary and to aid in compiling the fabric descriptions. No microscopic or petrological analyses have been undertaken and so the fabric description here is liable to modification should such work be undertaken in the future.

The material comes from a single pit (159) that contained 4 fills (161-164).

**DESCRIPTION**

The assemblage comprised 113 sherds plus crumbs weighing a total of 1113g. The pottery was received in an uncleaned state (apart from 4 sherds from (164)) and, being covered in silt from the same general context, they appeared remarkably similar and no true description of the fabric can be given at present other than for the washed sherds which appear gritty with abundant quartz inclusions. Other fresh breaks on some sherds suggest similar fabrics but also finer, more 'soapy-textured' fabrics probably with grog inclusions. Based on fabric thickness and decoration, 4 or 5 vessels may be present making this an important sealed assemblage from this region.

Decoration comprises horizontal incised lines on many sherds including simple rims (c.140mm diameter) however some toothed comb and/or twisted cord lines may also prove to be present once the sherds are cleaned (currently the impressions are filled with silt masking any detail of their internal structure). Flat base (diameter c.80mm) and slack shoulder sherds recovered from 163 suggest an element of Beaker and/or Food Vessel placing the assemblage firmly in the Early Bronze Age.

One large, thick rim sherd (estimated diam 220mm) recovered from 162 is decorated with large circular knobs which appear to have been applied though the uncleaned sherds make it impossible to be conclusive. The sherd may belong to a domestic potbeaker but the fabric is thick (15-20mm) which would be unusual for this type of pottery. The vessel may well be better placed within either the Late Neolithic Grooved Ware or Early Bronze Age Food Vessel Urn tradition many of which vessels have plastic decoration (formerly Encrusted Urns). In either case the association of this class of pottery with Beaker would be unusual. A definitive identification must await the cleaning of the sherds.

Some organic residues appear to coat the surfaces of some sherds.

A further sherd weighing 2.2g was recovered from (1004) from pit 1003. This was not included in the assemblage but a photograph supplied by NAA suggests that this small sherd is also Early Bronze Age in date. It appears to be undecorated.

## OVERVIEW

The assemblage is an important sealed assemblage for this region of England. Neolithic, Beaker and Bronze Age pottery have been recovered from nearby Walney Island (Gibson 1982) but from surface spreads eroding from the sand dunes and therefore lacking stratigraphic integrity. A similar Beaker assemblage has been found further up the coast at Maryport (Gibson 2016) but such contexts are rare in the North-west.

## RECOMMENDATIONS

- 1 The pottery should be cleaned and marked.
- 2 A publication report on the pottery should be undertaken by a specialist in Neolithic and Bronze Age ceramics.
- 3 Refitting of some conjoining sherds will shed more light on vessel forms.
- 4 The pottery should be drawn to publication standard by a qualified archaeological illustrator.
- 5 Organic residues should be sampled for radiocarbon dating and lipid analysis. These samples and/or sherds should also be isolated, wrapped in aluminium foil and kept free from plastic contaminants.

## REFERENCES

- Gibson, A.M. 1982. Beaker Domestic Sites. BAR British Series 107. Oxford: British Archaeological Reports.
- Gibson, A.M. 2016. The Beaker Pottery from Maryport, Cumbria. Report No.127 prepared for The University of Newcastle/Senhouse Museum. June 2016

**APPENDIX K**  
**ANIMAL BONE ASSESSMENT**

*Nathan Sleaford*

**INTRODUCTION**

Excavation at Breast Mill Beck Lane, Barrow, produced 12 fragments of animal bone weighing 17g. All of the material was recovered by hand from Trench 2.

**METHODOLOGY**

The data was recorded into a Microsoft Excel spreadsheet, with the faunal remains laid out in context order. Identification was undertaken using published catalogues (i.e. Schmid 1972, Cohen and Serjeantson 1996, Hillson 2003), the author's own reference collection, and NAA's comparative skeletal collection. All the animal remains were counted and weighed and assigned a unique reference number. To give an indication of fragmentation, specimens were recorded using the 'diagnostic zone' approach (Dobney and Reilly 1988) with each zone being noted as absent, less than 50% present, or greater than 50% present in each specimen. Where a lack of diagnostic features precluded identification to taxa or element, specimens were assigned to more generalised categories where possible e.g. micro-/small-/medium-/large-sized animals, long bone or crania fragments. The zonation system was also used to record the location, frequency and nature of butchery marks, pathology, and carnivore and rodent activity; however, in this case, no such evidence was noted. Due to the nature of the assemblage it was not possible to record tooth wear or eruption. Likewise, the fragmentary nature of the remains precluded the taking of measurements. The condition of each specimen was assessed with reference to Lyman's wear stages (1994) and graded 0-5 accordingly, with 0 being best preserved and grade 5 representing bone that had deteriorated to the point of being unrecognisable.

The material was recorded in October 2019 and reviewed in January 2020.

**OUTLINE OF THE ASSEMBLAGE**

The animal bone remains from Breast Mill Beck Lane constitute a very limited assemblage, both in terms of size and potential. Molariform teeth from cattle (Bos) are the only elements represented in the material. All of the specimens are extremely fragmentary and degraded, making the assessment of aging via tooth wear impossible. This also impeded the identification of teeth to their specific form and position; only two specimens, maxillary third molars, could be identified, and these should be considered tentative.

**PROVENANCE OF THE OBJECTS**

All of the remains were recovered from fill (81) within ditch (61).

**DISCUSSION**

It is difficult to say anything extensive about the nature of animal exploitation from the extremely limited material in this assemblage. Finds of loose teeth are generally problematic when it comes to interpretation; this issue is compounded when they comprise the entire assemblage and are recovered in such a fragmentary condition. The presence of two right maxillary third molars

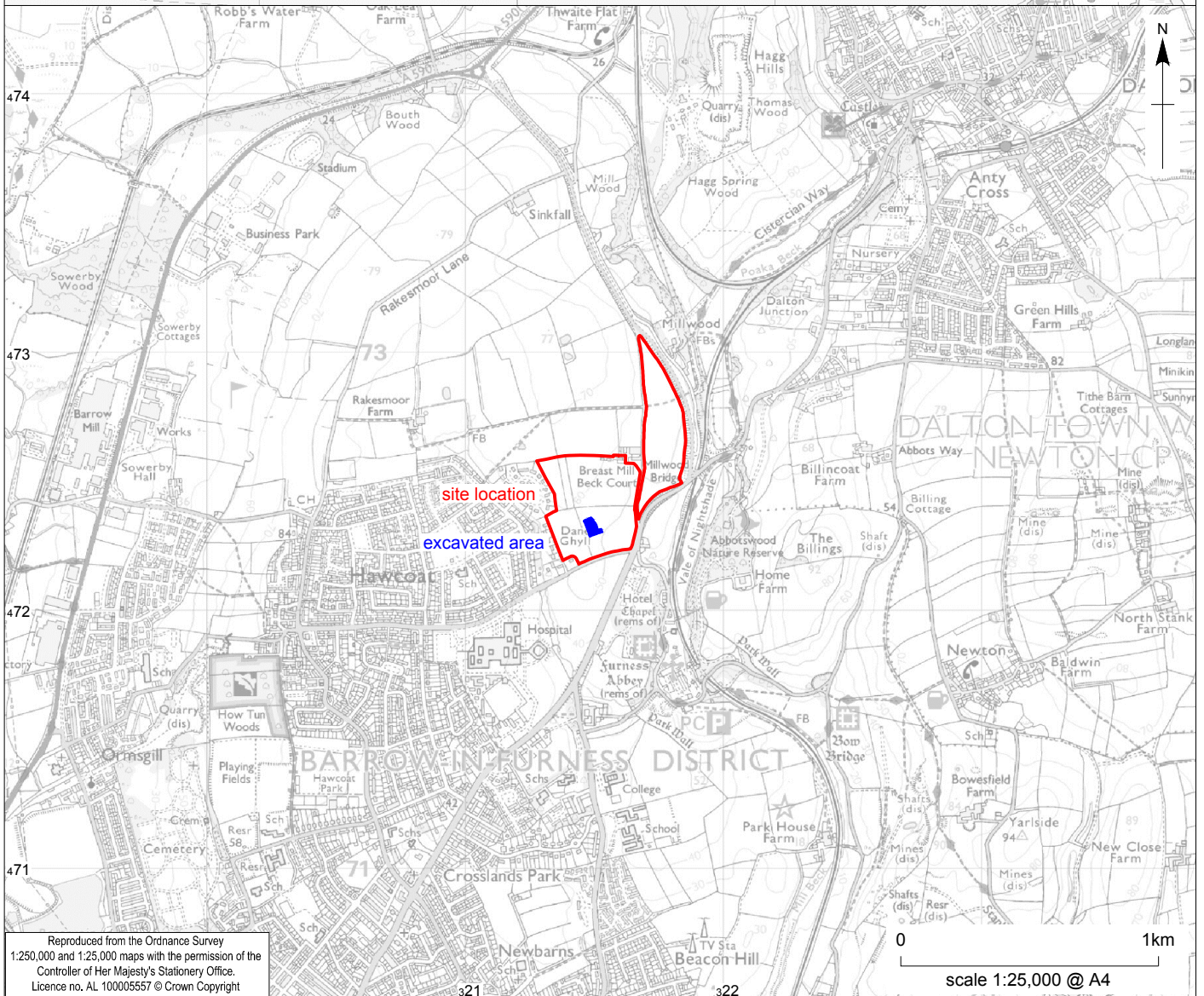
suggests at least two individuals are represented in the assemblage, but as mentioned above, this should be considered tentative. Due to the lack of other elements, it may be considered that preservation was poor and the material may have been disturbed or reworked. The assemblage is of negligible significance and no further work need be undertaken.

## **RECOMMENDATIONS**

The material does not need to be archived and can be disposed of; due to the fragmentary nature of the remains there are no examples that might be retained to be included in teaching collections.

## **REFERENCES**

- Cohen, A. and Serjeantson, D., 1996. A manual for the identification of bird bones from archaeological sites. London: Archetype Publications.
- Dobney, K. and Rielly, K., 1988. 'A method for recording archaeological animal bones: the use of diagnostic zones.' *Circaea*, 5(2), pp.79-96.
- Hillson, S., 2016. Mammal bones and teeth: an introductory guide to methods of identification. Routledge.
- Lyman, R.L., 1994. Vertebrate taphonomy. Cambridge: Cambridge University Press.
- Schmid, E., 1972. Atlas of animal bones. New York: Elsevier.



Reproduced from the Ordnance Survey  
 1:250,000 and 1:25,000 maps with the permission of the  
 Controller of Her Majesty's Stationary Office.  
 Licence no. AL 100005857 © Crown Copyright

©NAA 2020

*Breast Mill Beck Lane, Barrow-in-Furness: site location*

*Figure 1*



- KEY**
- prehistoric pits
  - field system
  - Dane Ghyll Camp
  - trackway
  - agricultural feature
  - trial trench with features
  - trial trench no features
  - area of excavation
  - initial development area

Breast Mill Beck Road: recorded archaeological features in evaluation

Figure 2



