Archaeological Evaluation on Land at Omega Proteins Ltd, Penrith, Cumbria

Overview of Trench 1, looking north-east.

ARS Ltd Report 2021/43
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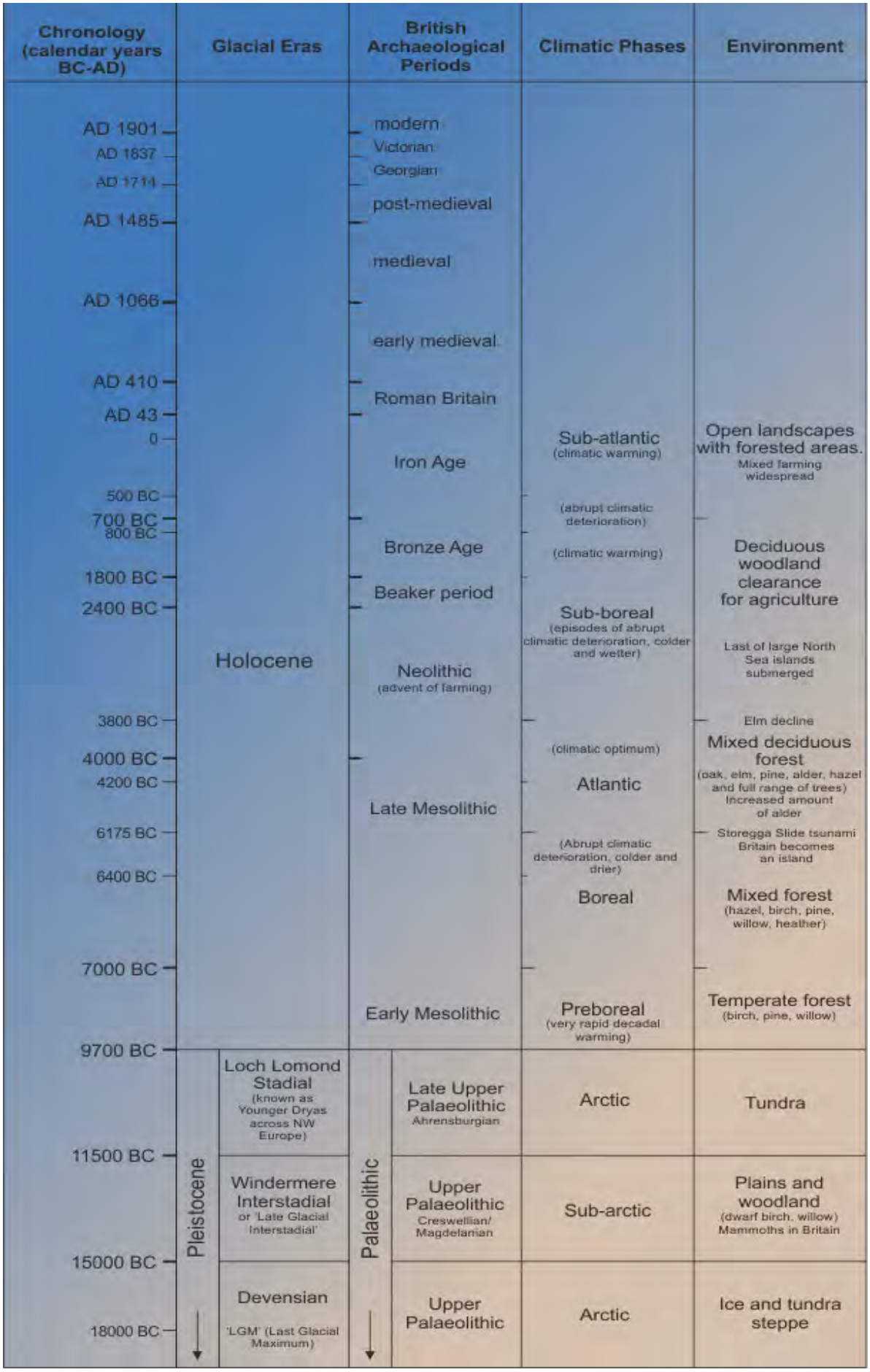
Chronology (calendar years BC-AD)
Glacial Eras
British Archaeological Periods
Climatic Phases
Environment
AD 1901
AD 1837
AD 1714
AD 1485
AD 1066
AD 410
AD 43
0
500 BC
700 BC
800 BC
1800 BC
2400 BC
3800 BC
4000 BC
4200 BC
6175 BC
6400 BC
7000 BC
9700 BC
11500 BC
15000 BC
18000 BC
Holocene
Pleistocene
Palaeolithic
modern
Victorian
Georgian
post-medieval
medieval
early medieval
Roman Britain
Iron Age
Bronze Age
Beaker period
Neolithic
(advent of farming)
Late Mesolithic
Early Mesolithic
Loch Lomond Stadial
(known as Younger Dryas across NW Europe)
Windermere Interstadial
or 'Late Glacial Interstadial'
Devensian
'LGM' (Last Glacial Maximum)
Late Upper Palaeolithic
Ahrensburgian
Upper Palaeolithic
Creswellian/ Magdelanian
Upper Palaeolithic
Sub-atlantic
(climatic warming)
(abrupt climatic deterioration)
(climatic warming)
Sub-boreal
(episodes of abrupt climatic deterioration, colder and wetter)
(climatic optimum)
Atlantic
(Abrupt climatic deterioration, colder and drier)
Boreal
Preboreal
(very rapid decadal warming)
Arctic
Sub-arctic
Arctic
Open landscapes with forested areas.
Mixed farming widespread
Deciduous woodland clearance for agriculture
Last of large North Sea islands submerged
Elm decline
Mixed deciduous forest
(oak, elm, pine, alder, hazel and full range of trees)
Increased amount of alder
Storegga Slide tsunami
Britain becomes an island
Mixed forest
(hazel, birch, pine, willow, heather)
Temperate forest
(birch, pine, willow)
Tundra
Plains and woodland
(dwarf birch, willow)
Mammoths in Britain
Ice and tundra steppe

Executive Summary

Project Name:	*Archaeological Evaluation Archaeological Evaluation on Land at Omega Proteins Ltd, Penrith, Cumbria*
Site Code:	*OPP21*
Planning Authority:	*Eden District Council*
Planning Reference:	*TBC*
Location:	*Land west of Omega, Proteins Ltd, Greystoke Road and Mile Lane, Penrith CA11 0BX*
Parish:	*Penrith*
Geology:	*Alston Formation – Limestone, Sandstone, Siltstone and Mudstone*
NGR:	*NY 49698 29652*
Date of Fieldwork:	*09/03/2021 – 12/03/2021*
Date of Report:	*10/05/2021*

In March 2021, Archaeological Research Services Ltd (ARS Ltd) was commissioned to undertake evaluation trenching on land adjacent to Omega Proteins Ltd facilities to determine the location, nature, date, character and form of any archaeologically sensitive features or deposits present within the proposed development area. The archaeological evaluation comprised the excavation of six evaluation trenches the positions of which were informed by geophysical survey and an archaeological desk-based assessment. The evaluation fieldwork was undertaken in March 2021 and extended across two fields to the west of the Omega Proteins plant.

The evaluation revealed a small number of features of archaeological potential within Trenches 1 and 3 in the form of undated shallow ditches and a possible terminus. These correlate with geophysical survey anomalies 1 and 38. Trench 2 revealed possible evidence of sandstone removal or extraction in the form of a void in the bedrock. No features of archaeological potential were revealed in Trenches 4, 5 and 6. No dating evidence or material suitable for palaeoenvironmental sampling was recovered from any of the features.

The archaeological evaluation was undertaken and reported upon by Ana Rodrigues, Project Officer at Archaeological Research Services Ltd. The project was managed by Karl Taylor, Head of Field Archaeology at Archaeological Research Services Ltd.

1 Introduction

1.1 Project Background

1.1.1 Archaeological Research Services Ltd (ARS Ltd) was commissioned by Maze Planning Solutions Ltd on behalf of Omega Proteins Ltd (the client), to undertake a phase of archaeological evaluation trenching to support a planning application for a proposed solar farm development on land (the proposed development area or (PDA)) to the west of the Omega Proteins Ltd plant, Cumbria (Figure 1), centred at NGR NY 49701 29659.

1.1.2 The PDA lies within the Eden Valley, which has formed an important routeway between the Yorkshire Dales and the Solway since the prehistoric period. The results of a geophysical survey carried out on the PDA in December 2020 (Durkin 2020) were generally unclear but revealed a small number of responses of archaeological potential. A subsequent desk-based assessment (Jacklin 2021) revealed that a number of prehistoric monuments, including two Early Neolithic long cairns and a Late Neolithic/Early Bronze Age Bowl Barrow are known to exist within the landscape surrounding the PDA.

1.1.3 The evaluation comprised the archaeological excavation of six evaluation trenches targeted to evaluate the geophysical survey responses of possible archaeological origin.

1.1.4 Paragraph 189 of the National Planning Policy Framework (MHCLG 2019, 55) states that:

> '*Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.'*

1.1.5 The programme of works was undertaken in accordance with a Written Scheme of Investigation (WSI) (Hunter 2021, Appendix III), approved by Jeremy Parsons, Historic Environment Officer, Environment & Regulatory Services, Cumbria County Council.

1.2 Site Location

1.2.1 The PDA is located some 1.9km to the south-west of Penrith comprising fields to the west of the Omega Proteins animal by-product processing site, centred at NY 49701 29659.

1.3 Site Description

1.3.1 The site boundary, depicted by a red polygon on Figures 1 and 2, extends to some *c*. 5.87ha in area. The overall proposed development area (PDA) was bound to the north by Newton Road (B5288), by Mile Lane to the south, by a small woodland area to the west and to the east by open fields associated with Omega Proteins Ltd. The fields slope from a low of 156m above Ordnance Datum (aOD) in the east, up to a maximum of 166m aOD at the western end of the site.

1.4 Landform, Geology and Soils

1.4.1 The underlying solid geology of the PDA comprises "Alston Formation - Limestone, Sandstone, Siltstone and Mudstone - Sedimentary Bedrock formed approximately 328 to 337 million years ago in the Carboniferous Period" (BGS 2020). This is overlain by a superficial deposit of "Till, Devensian – Diamicton - Superficial Deposits formed up to 2 million years ago in the Quaternary Period" (*ibid*).

1.3.2 The soils of the PDA are recorded as "slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils" (Cranfield University 2021).

1.5 Archaeological and Historical Background

1.5.1 A full and detailed archaeological background is contained within a rapid Desk-Based Assessment carried out for the PDA (Jacklin 2021). The assessment concluded that due to the results of the geophysical survey and the presence of potential archaeological remains within the surrounding landscape, there is the possibility of encountering further archaeological remains within the PDA.

1.5.2 The Myers Beck watercourse ran through the field to the east of the PDA and formed part of a prehistoric ceremonial landscape with numerous monuments located along its banks. These include two Early Neolithic long cairns in close proximity to a Late Neolithic/Early Bronze Age bowl barrow. Other Late Neolithic/Early Bronze Age monuments constructed along the course of the Myers Beck include a stone circle, a standing stone, and another round cairn that may have been located in the woods to the west of or within the PDA itself.

1.5.3 The *Penrith Tithe Map* dated 1843 shows the PDA covering the majority of an enclosed field and a small parcel of the neighbouring field to the east, before the fields were formally enclosed and the boundaries were realigned. The tithe apportionment details the fields as plots 1026 and 1028, belonging to Matthew Bell, and occupied by John Irving. The lands are recorded as 'Steadman Land', the origins of which could relate to *Steadfolds or Stadfield,* meaning horse enclosure (Field 1989, 399). This field name was

commonly attributed to 'pre-historic earthworks or walled Roman enclosures' as medieval people believed these resembled horse enclosures (ibid).

1.5.4 By 1867, the PDA had undergone more formal enclosure and comprised two semi-rectangular fields. By 1900 a clay pit, brick works and cottage occupied the fields immediately to the east (now the site of the Omega Proteins Ltd buildings). The PDA remained unchanged throughout the 20th century although the clay pit to the east appears to have shut down by 1927 and the brick works was labelled as a manure works on OS mapping.

2 Aims and Objectives

2.1 Regional Research Aims and Objectives

2.1.1 Research topics were identified in the WSI from the regional research framework *'The Archaeology of North West England: An Archaeological Research Framework'* (Hodgson and Brennand 2007, 41). The regional research framework was updated in 2021 (Research Frameworks 2021) and the research aims and objectives outlined in the WSI are presented below:

- PH38: How can re-excavation or new excavation inform our understanding of the constructional sequence and chronology of Prehistoric funerary monuments?
- PH43: What evidence is there in the region for Neolithic ceremonial sites and how should they be investigated? and
- PH46: How good is our understanding of the location and distribution of Neolithic long and round cairns?

2.2 Archaeological Evaluation Aims and Objectives

2.2.1 The fieldwork aims and objectives, outlined in detail in the WSI included in Appendix III, can be summarised as follows:

- Identify the presence/absence of archaeological features and deposits within the PDA;
- Record all archaeological features and deposits encountered;
- Sample a sufficient percentage of the archaeological features and deposits to establish relative sequence, likely dating and quality of preservation; and

- Gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological deposits with a view to evaluating their significance and potential to inform established aims and objectives, and identify if additional aims might be achieved.

3 Method Statement

3.1 Introduction

3.1.1 A full method statement is outlined in the WSI and summarised here. All work was undertaken in accordance with the methodology outlined in the WSI as well the Chartered Institute for Archaeologists' (CIfA's) *Standard and Guidance for Archaeological Field Evaluation* (2020a).

3.1.2 All works were undertaken in full compliance with the Health and Safety at Work Act 1974 and with the Management of Health and Safety Regulations 1992.

3.1.3 A risk assessment (RA No. 019/21/N) was produced before commencement of the work and was adhered to throughout.

3.2 Coverage

3.2.1 A total of six trenches were excavated covering an area of 320m^2. The trenches targeted potential archaeological anomalies highlighted by the geophysical survey (Durkin 2020) and comprised:

- Trench 1 – 30 x 2m orientated north-east to south-west across a possible 'U'-shaped enclosure;
- Trench 2 – 30 x 2m orientated north/south across a possible 'L'-shaped enclosure;
- Trench 3 – 40 x 2m orientated north/south across a possible curvilinear enclosure;
- Trench 4 – 20 x 2m orientated north/west to south-east across a possible curvilinear enclosure;
- Trench 5 – 20 x 2m orientated east/west across a possible curvilinear enclosure; and
- Trench 6 – 20 x 2m orientated east/west across a possible curvilinear enclosure.

3.3 Methodology

3.3.1 Trenches were sited in accordance with the trench plan contained within the WSI using a Leica Smartrover GPS to a tolerance of 0.025m. The GPS used to locate drawn plans and sections and to take spot heights within the trenches.

3.3.2 All trenches were excavated by a 21 tonne, 360° mechanical excavator equipped with toothless ditching buckets. Topsoil was removed in successive spits, under constant archaeological supervision, down to either, the first archaeological horizon or to natural substrate, whichever was encountered first.

3.3.3 All trenches were cleaned by hand to expose and clarify archaeological features. Pre-excavation photographs were taken of exposed archaeology and each cleaned trench.

3.3.4 All archaeological features encountered were cleaned by hand and investigated. A full written, drawn, and photographic record kept in accordance with the ARS Ltd recording system.

3.3.5 All features and trenches were tied into Ordnance Survey, all deposits were levelled and their spot heights expressed in metres above Ordnance Datum (aOD).

3.3.6 Spoil generated from both machine and hand excavation was carefully examined for finds and artefacts.

4 Results

4.1 Introduction

4.1.1 The following section provides an overview and synthesis of the archaeological sequence encountered on the site. Depths of deposits are expressed in metres above Ordnance Datum (aOD).

4.1.1 Trench locations are presented in Figures 2 & 3. A context summary table of the depositional sequence encountered in the evaluation trenches is presented in Appendix II and provides a synthesis of the presence/absence of archaeological features or potential archaeological features in each of the trenches. This should be viewed in conjunction with the figures and the photographs presented in this section.

4.2 Trench 1

4.2.1 Trench 1 targeted geophysical survey anomaly 38 and was excavated to the depth of natural substrate (102) and (103) at a height of 162.75m aOD. In the south-west half of the trench (Figure 3, 4, 10 and 11), a ditch [105] roughly corresponding to the abstracted

position of geophysical survey anomaly 38, was identified at a height of 164.53m aOD. It measured 0.42m deep by 3.20m wide and extended across the width of the trench. This ditch had concave sides with a sloping base revealing sandstone bedrock (104). It was filled by a light brown silty-sand fill (106) and dark greyish-brown silty-sand (107) that contained occasional large to medium stones.

4.2.2 The alignment of ditch [105], together with a very indistinct feature [108] located in the north-eastern half of the trench, broadly matched the alignment of a U-shaped anomaly (38) identified in the geophysical survey. No dating evidence was revealed and the other geophysical survey anomalies targeted within this trench appeared to reflect changes in the natural substrate.

4.3 Trench 2

4.3.1 Trench 2 targeted geophysical survey anomaly 27 and was excavated to the depth of the natural substrate (202) and (205) at a height of 165.70m aOD. At the southern end of the trench (Figure 3, 5, 12 and 13), a void [203] in the sandstone bedrock was revealed. This was filled with an undated dark brownish-black silty-sand fill (204) and contained very frequent medium to large fragmented sandstones of exactly the same fabric as the surrounding bedrock.

4.3.2 This feature was not visible the geophysical survey data and the west side of it was outside of the limits of the trench. Considering its location on top of the hill where the sandstone bedrock is close to the surface, it is within reason to assume that this feature is the result of sandstone extraction, perhaps from field clearance. However, it may also be natural in origin. Geophysical survey anomaly 27 was not identified within this trench.

4.4 Trench 3

4.4.1 Trench 3 targeted geophysical anomalies 1 and 2 and was excavated to the depth of the natural substrate (302) and (303), at a height of 162.52m aOD (Figure 6, 14, 15 and 16).

4.4.2 A ditch [304] at the south end and a possible ditch terminus [310] at the north end of the trench aligns broadly with geophysical anomaly 1. The ditch [304] measured 3.12m wide by 0.52m deep and had concave sides with flat base. It was filled by a sandy-clay layer (307), a mid-reddish brown sandy-silt deposit (306) and sealed by a mid-orange, brown sandy-silt deposit (305) suggesting gradual deposition after disuse. The possible terminus [310] of anomaly 1 measured 0.88m wide by 0.28m deep and was filled with a very stony deposit (311). No dating evidence was recovered from any of the features. A field drain was revealed in the location of anomaly 2, no other features were revealed.

4.5 Trench 4

4.5.1 Trench 4 targeted geophysical anomaly 5 and was excavated to the depth of the natural substrate (402) and (403), which was revealed at a height of 160.97m aOD (Figure 7, 17 and 18).

4.5.2 The natural substrate varied from a light orange- brown clay (402) to a mid-reddish grey sandy-clay (403). No archaeological features were revealed.

4.6 Trench 5

4.6.1 Trench 5 targeted geophysical survey anomaly 14 and was excavated to the depth of the natural substrate (502), (503) and (504) which was revealed at a height of 158.73m aOD (Figure 8, 19 and 20).

4.6.2 Three field drains were identified, one aligned broadly north-east/south-west while the two others were on a north-west/south-east alignment. No archaeological features were revealed.

4.7 Trench 6

4.7.1 Trench 6 targeted geophysical survey anomaly 13 and was excavated to the depth of the natural substrate (602), (603) and (604), which was revealed at a maximum height of 157.39m aOD (Figure 9, 28 and 29).

4.7.2 The natural substrate varied from a mid-reddish-grey sandy-clay (602) to a light yellowish-grey sandy-clay containing ironstone (603) and to a mid-reddish-grey sandy-clay with frequent sandstone inclusions (604). No archaeological features were revealed.

5 Discussion

5.1 The archaeological evaluation on land at Omega Proteins Ltd has revealed a small number of features of archaeological potential within Trenches 1 and 3 in the form of undated shallow ditches and a possible terminus. These correlate with geophysical survey anomalies 1 and 38. Trench 2 revealed possible evidence of sandstone removal or extraction in the form of a void in the bedrock. No features of archaeological potential were revealed in Trenches 4, 5 and 6. No dating evidence or material suitable for palaeoenvironmental sampling was recovered from any of the features.

5.3 Most of the other anomalies within the geophysical survey data were either due to variations in the natural substrate or field drains.

5.2 The evaluation did not answer the key topics (PH38, PH43, PH46) as defined by the North West England Regional Research Framework (Research Frameworks 2021). Further research topics were not identified during the course of the works.

6 Publicity, Confidentiality and Copyright

6.1 Any publicity will be handled by the client.

6.2 ARS Ltd. will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

7 Statement of Indemnity

7.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

8 Archive Deposition

8.1.1 A PDF/A copy of this report will be deposited with the Cumbria Historic Environment Record (HER). This is in line with CIfA's (2020b) 'Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives'.

8.1.2 An OASIS online record http://ads.ahds.ac.uk/project/oasis/417838] has been initiated and completed for this work and all parts of the OASIS online form completed for submission to the HER. This will include an uploaded pdf version of this report. The site has produced a paper and digital archive which will be deposited, along with this report, in digital form with Archaeological Data Service (ADS). In addition, a copy of this report will be deposited with the Cumbria Historic Environment Record (HER).

9 Acknowledgements

9.1 ARS Ltd would like to thank to Andrew Wyatt of Maze Planning Solutions and Omega Proteins for commissioning the project. Thanks are also extended to Jeremy Parsons, Historic Environmental Officer for his assistance during the project.

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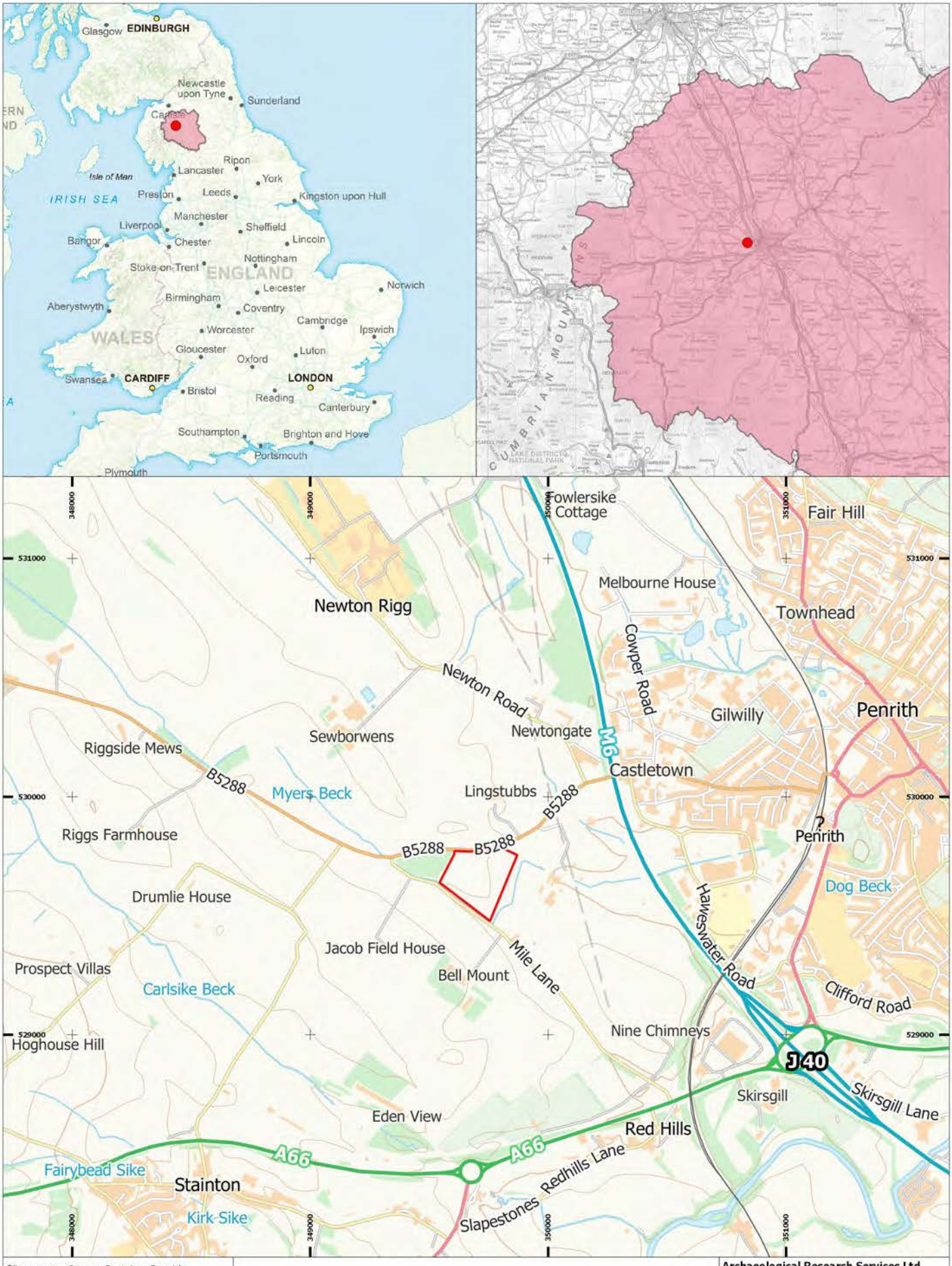
APPENDIX I: Archaeological Evaluation Figures



Site name: Omega Proteins, Penrith Date: February 2021 Drawn by: ARJ Scale: Varies	**Figure 1:** **Site location**	**Archaeological Research Services Ltd** The Eco Centre Windmill Way Hebburn Tyne and Wear NE31 1SR Tel: 01914 775111 www.archaeologicalresearchservices.com
	Site Boundary Site Location Eden District Council	

Figure 2: Plan of trench locations

Site Boundary
Evaluation Trench

N

0 20 40 60 80 100 m

Site name: Omega Proteins, Penrith
Date: May 2021
Drawn by: ARJ
Scale: 1:1250 @ A3

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Figure 3: Plan of trench locations overlaid on geophysical survey results

- Site Boundary
- Evaluation Trench

Geophysical Anomalies

- Drainage
- Modern
- Negative
- Plough Scarring
- Possible Archaeology
- Probable Archaeology
- Probable Topography

N

0 20 40 60 80 100 m

Site name: Omega Proteins, Penrith
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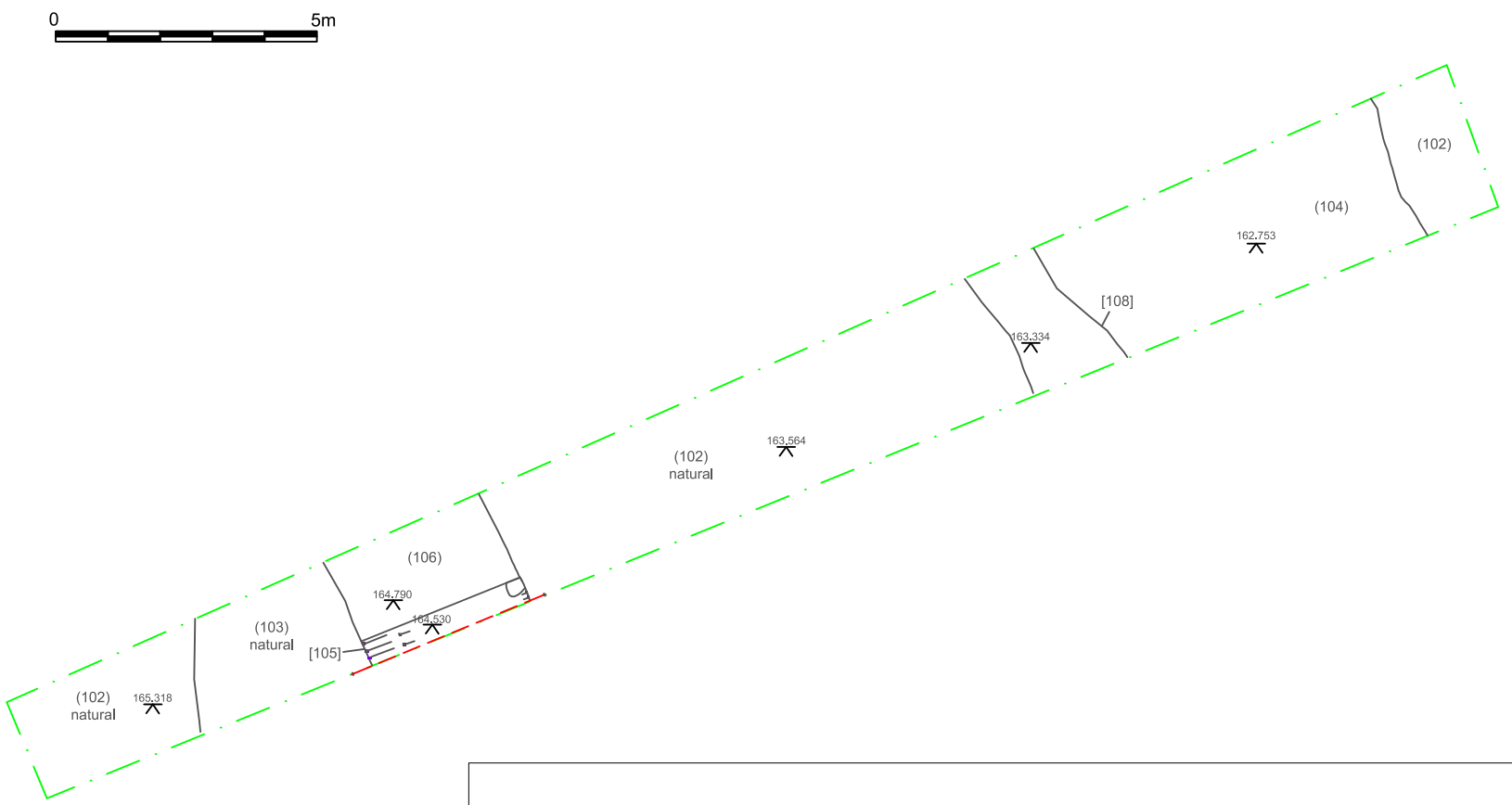
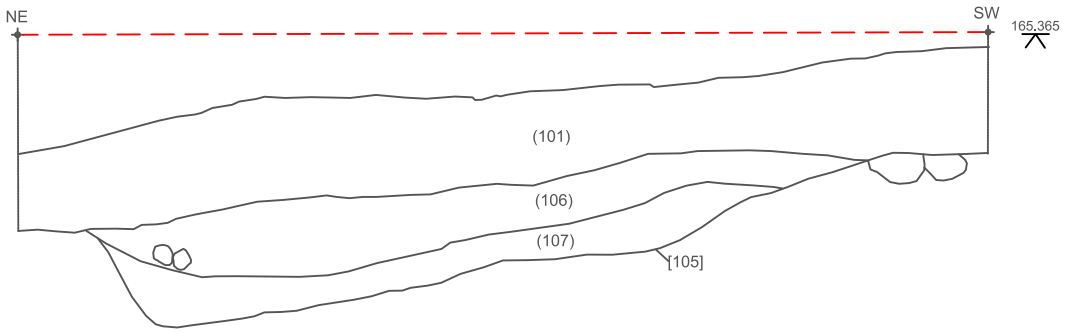
Figure 4: Plan of Trench 1 and north-west facing section of [105]





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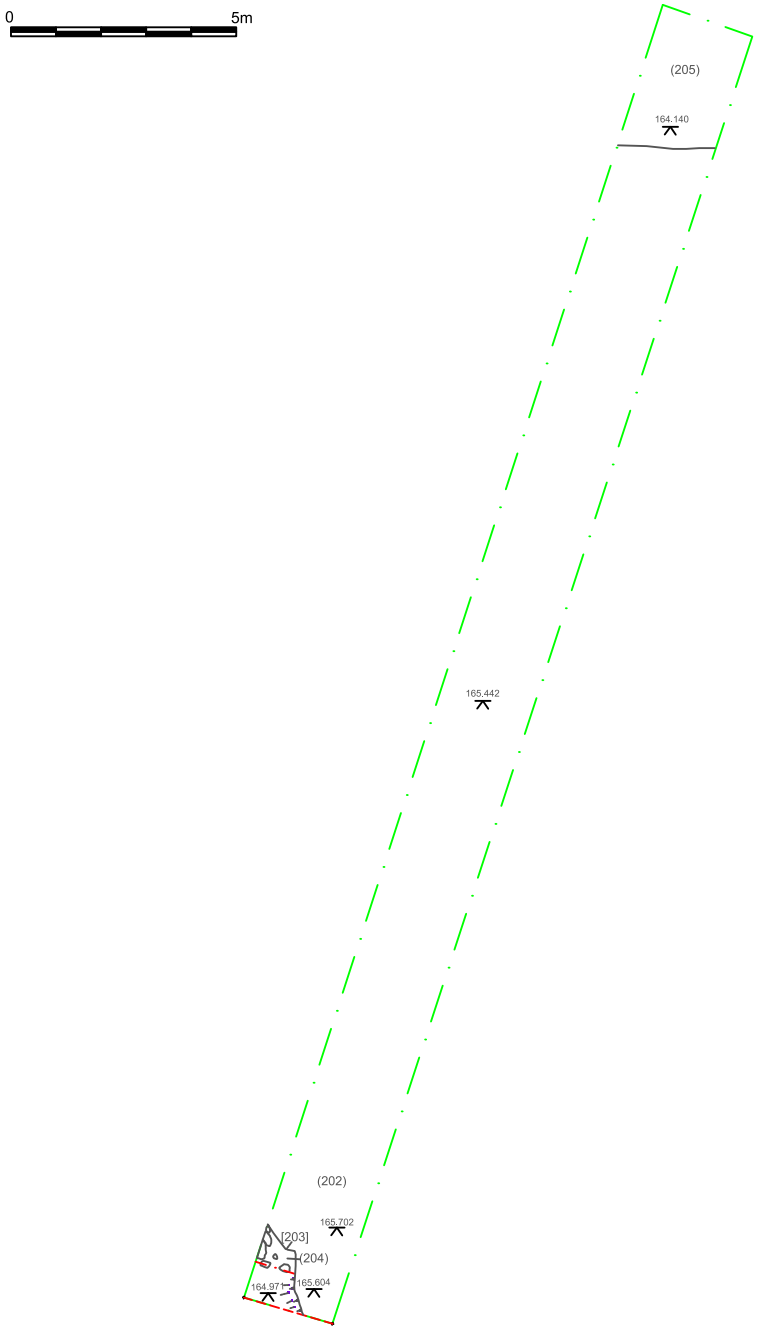

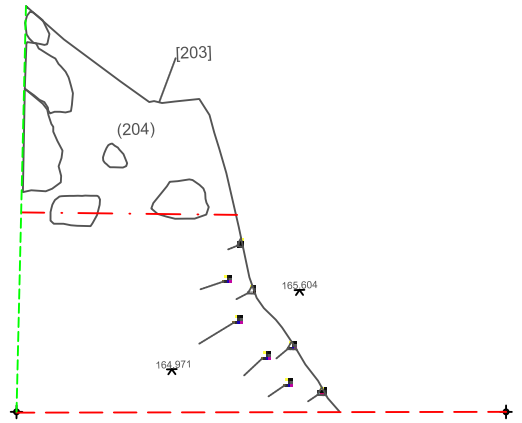

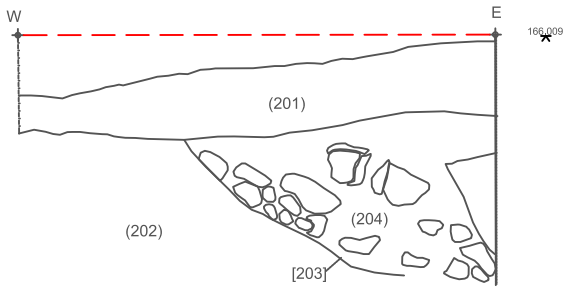

Figure 5: Plan of Trench 2 and [203] and north-east facing section of [203]

Evaluation Trench

Section Line

above Ordnance Datum heights

Limit of Excavation

N

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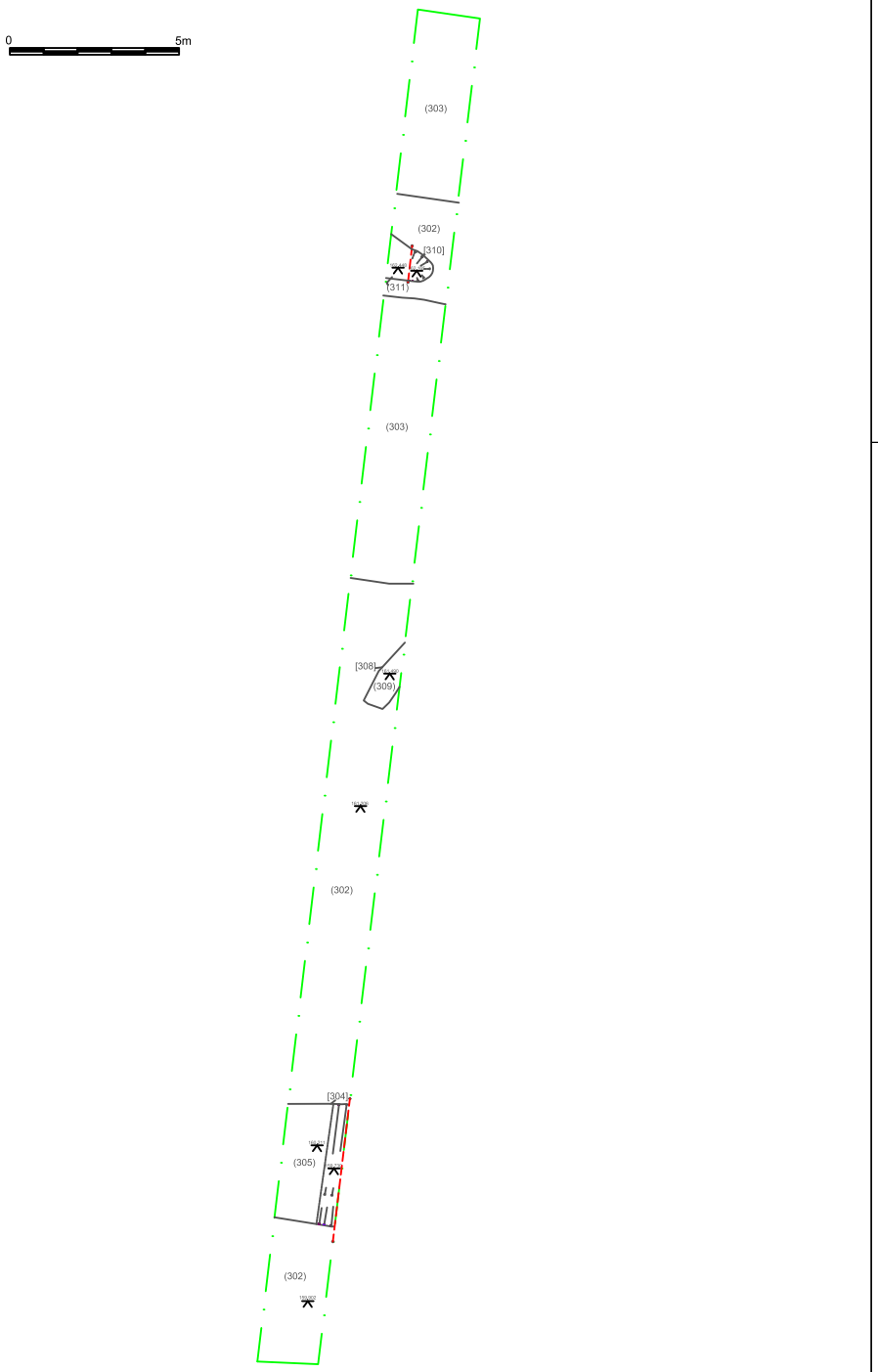

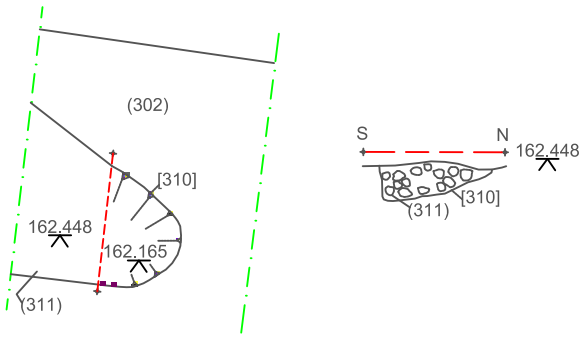

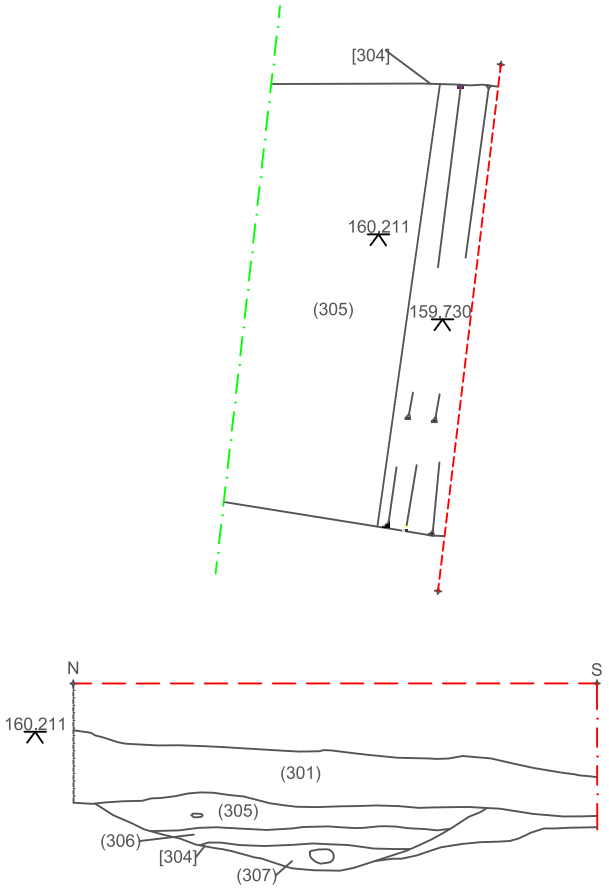

Figure 6: Plan of Trench 3. West facing section and plan of [304]. East facing section and plan of [310].

Evaluation Trench

Section Line

above Ordnance Datum heights

N

Site name: Omega Proteins, Penrith
Date: May 2021
Drawn by: AR/ARJ

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Angel House
Portland Square
Bakewell
Derbyshire
DE45 1HB
Tel: 01629 814540
www.archaeologicalresearchservices.com

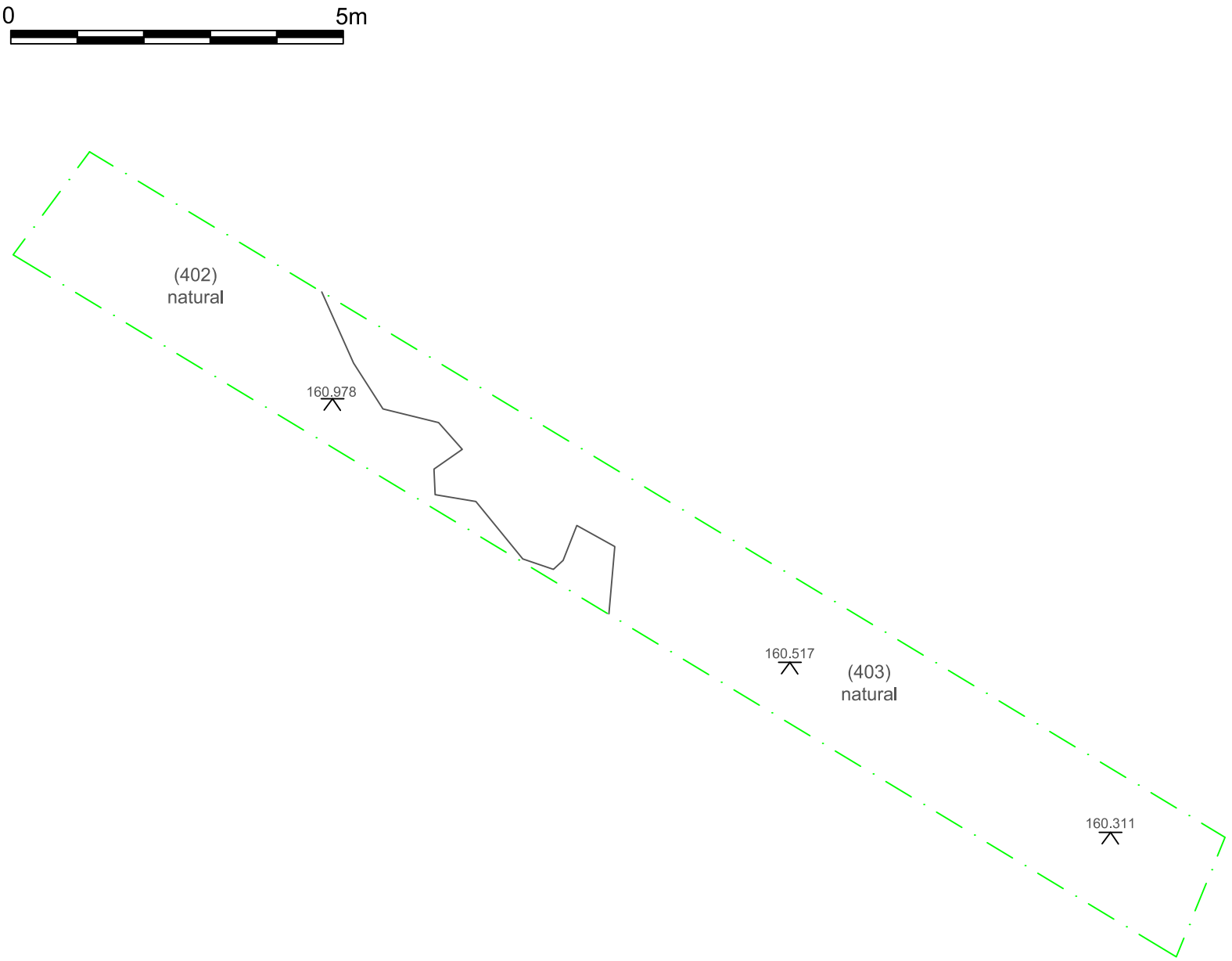

Figure 7: Plan of Trench 4.

Evaluation Trench

above Ordnance Datum heights

N

Site name: Omega Proteins, Penrith
Date: May 2021
Drawn by: AR/ARJ

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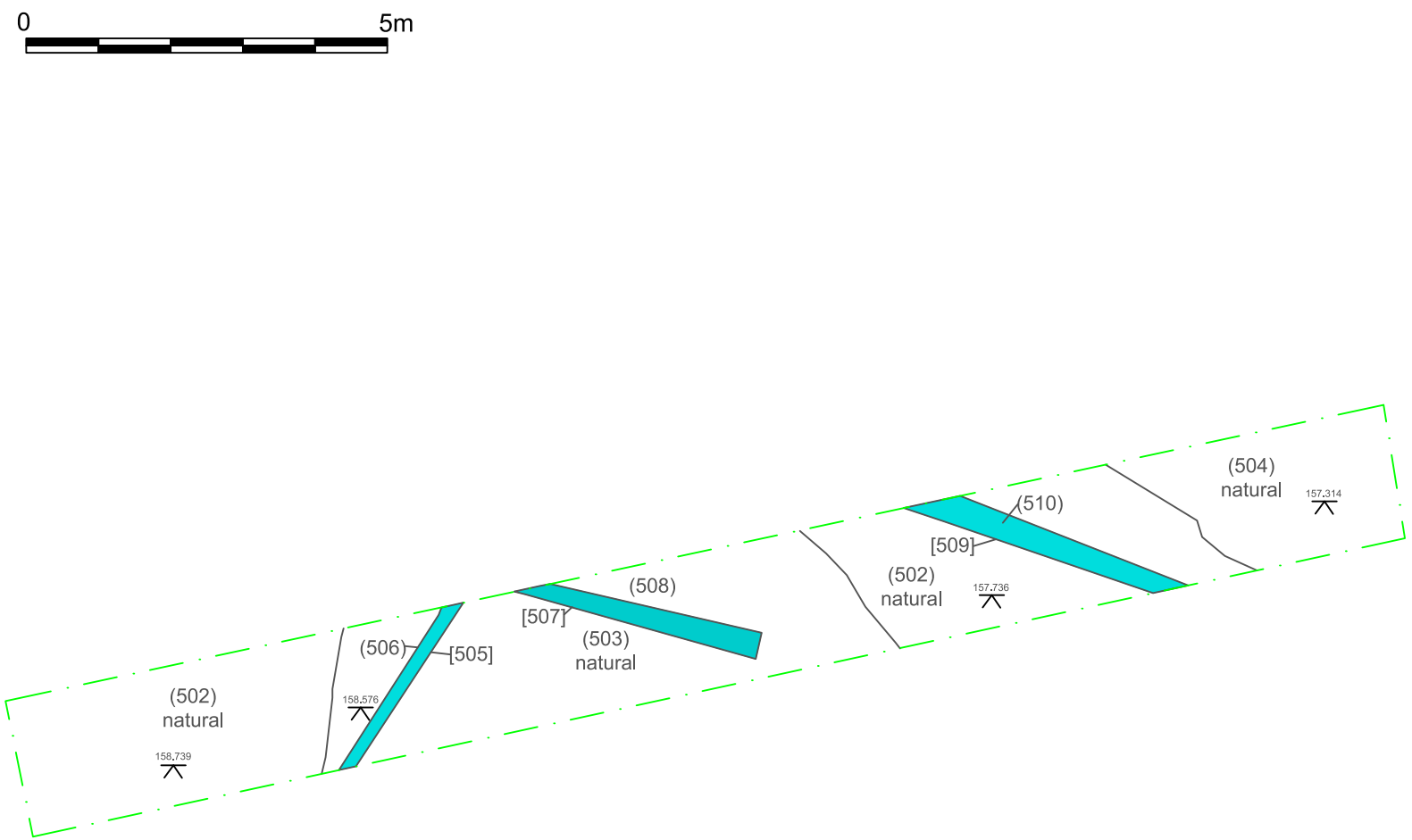
Figure 8: Plan of Trench 5.



Evaluation Trench

Field Drain

above Ordnance Datum heights

N

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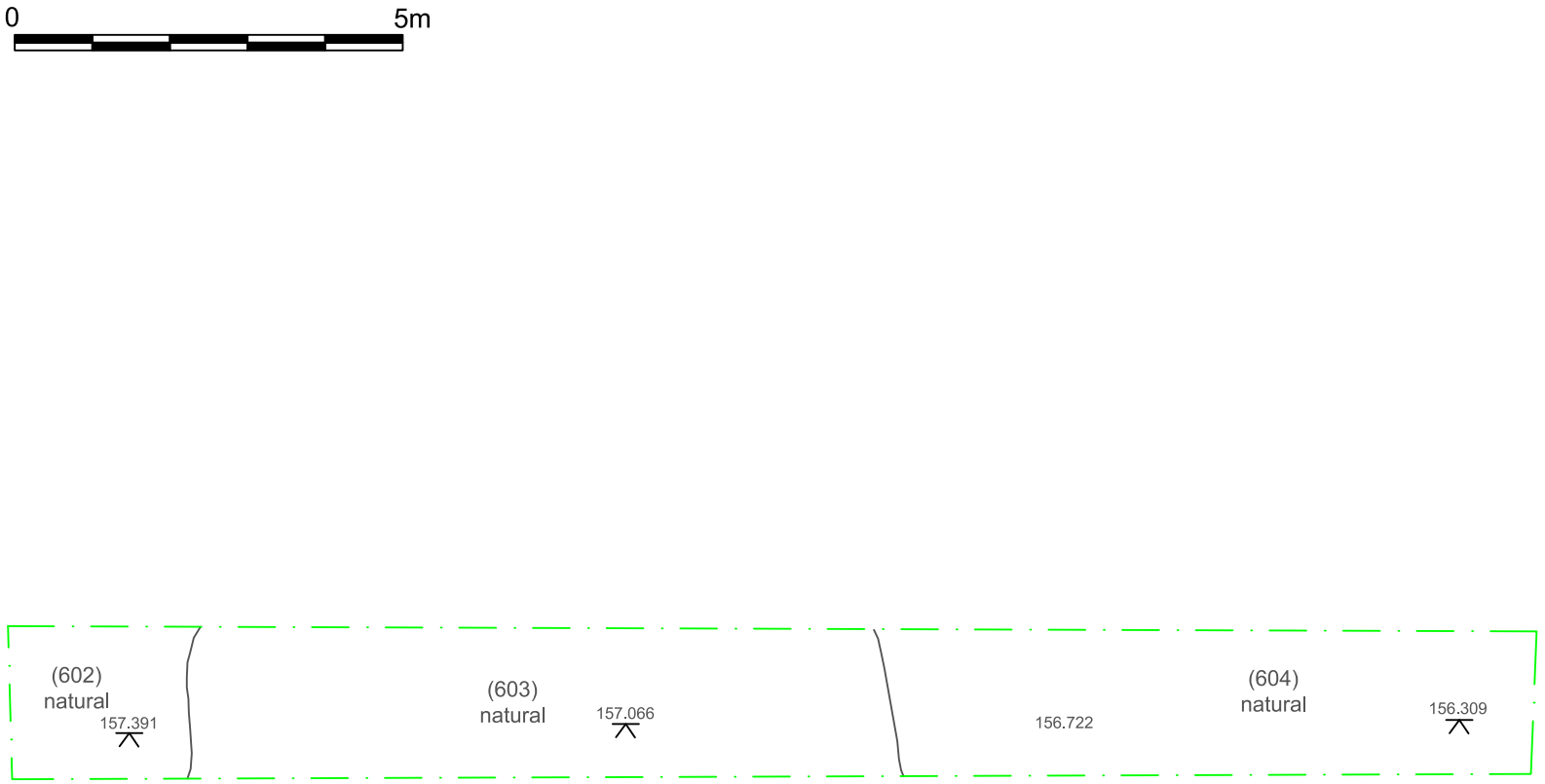
Figure 9: Plan of Trench 6.



Evaluation Trench

above Ordnance Datum heights

Site name: Omega Proteins, Penrith
Date: May 2021
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Figure 10. View of Trench 1 looking north-east (Scale = 2 x 1m in 0.5m graduations).

Figure 11. Oblique view of east facing section of ditch [105] (Scale = 1 x 2m in 0.5m graduations).

Figure 12. View of Trench 2 looking north-east (Scale = 2 x 1m in 0.5m graduations).

Figure 13. North facing section of feature in Trench 2 (Scale = 1 x 1m in 0.5m graduations).

Figure 14. Overview of Trench 3, looking north (Scale = 2 x 1m in 0.5m graduations).

Figure 15. West facing section of ditch [304] in Trench 3 (Scale = 1 x 2m in 0.5m graduations).

Figure 16. East facing section of ditch terminus [310] in Trench 3 (Scale = 0.40 x 1m in 0.10m graduations).

Figure 17. Overview of Trench 4, looking south-east (Scale = 2 x 1m in 0.5m graduations).

Figure 18. South facing representative section of Trench 4 (Scale = 1 x 1m in 0.5m graduations).

Figure 19. Overview of Trench 5, looking east (Scale = 2 x 1m in 0.5m graduations).

Figure 20. North facing representative section of Trench 5 (Scale = 1 x 1m in 0.5m graduations).

Figure 21. View of Trench 6 looking east (Scale = 2 x 1m in 0.5m graduations).

Figure 22. South facing representative section of Trench 6 (Scale = 1 x 1m in 0.5m graduations).

APPENDIX II: Context Summary Table

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
101	deposit	Trench 1 – Mid reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.52	-
102	deposit	Trench 1 – Reddish-grey sandy-clay Natural substrate	-	-
103	deposit	Trench 1 – Orange-brown loam-sand Natural substrate	-	-
104	deposit	Trench 1 – Sandstone bedrock Natural substrate	-	-
105	cut	Trench 1 – Cut of ditch, same as [108]. Filled by (106) and (107) Undated ditch, possible curvilinear.	-	D – 0.42m W – 3.20m L – 2m+
106	deposit	Trench 1 – Light brownish silty-sand. Fill of [105]. Undated secondary fill of ditch [105].	-	D – 0.32m W – 3.20m L – 2m+
107	deposit	Trench 1 – Dark greyish-brown silty-sand. Primary fill of [105]. Undated primary fill of ditch [105].	-	D – 0.14m W – 3.20m L – 2m+

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
108	cut	Trench 1 – Cut of ditch aligned N/S, same as [105]. Undated ditch, possible curvilinear	-	-
201	deposit	Trench 2 – Mid-reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.27	-
202	deposit	Trench 2 – Sandstone bedrock Natural substrate	-	-
203	deposit	Trench 2 – Cut/natural void filled by (205). Filled by (204). Undated possible sandstone quarrying/field clearance.	0.70	D – 0.70m W – 0.90m L – 1.70m+
204	deposit	Trench 2 – Dark brownish-black silty-sand. Fill of [203]. Undated fill of [203].	0.70	D – 0.70m W – 0.90m L – 1.70m+
205	deposit	Trench 2 – Mid-orangery-grey sandy-clay with frequent stones Natural substrate	-	-
301	deposit	Trench 3 – Mid-reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.35	-

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
302	deposit	Trench 3 – Mid-reddish-brown sandy-clay. Natural substrate	-	-
303	deposit	Trench 3 – Sandstone bedrock Natural substrate	-	-
304	cut	Trench 3 – Cut of ditch aligned E/W and filled by (305), (306) and (307). Same as [310]. Undated ditch, possible curvilinear	0.50	D – 0.50m W – 2.50m L – 2m+
305	deposit	Trench 3 – Mid-orangery-brown sandy-silt with occasional subangular stones with medium sizes. Undated secondary fill of ditch [304].	0.18/20	D – 0.18/20m W – 2.50m L – 2m+
306	deposit	Trench 3 – Mid-reddish-brown sandy-silt with occasional small to medium stones. Undated primary fill of ditch [304].	0.12	D – 0.12m W – 2.50m L – 2m+
307	deposit	Trench 3 – Mid-reddish-grey sandy-clay with rare large subangular stones. Redeposited natural at the base of ditch [304].	0.20	D – 0.20m W – 2.50m L – 2m+

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
308	cut	Trench 3 – Field drain oriented north-east/south-west. Possible 19th to 20th century field drain.	-	-
309	deposit	Trench 3 – Dark brown silty-sand. Fill of drain [308]. Possible 19th to 20th century field drain.	-	-
310	cut	Trench 3 – Cut of ditch terminus, aligned E/W and filled by (311). Same as [304]. Undated ditch, possible curvilinear	0.28	D – 0.28m W – 0.88m L – 2m+
311	deposit	Trench 3 – Mid-brownish-grey sandy-silt containing very frequent subangular stones. Undated fill of ditch [310].	0.28	D – 0.28m W – 0.88m L – 2m+
401	deposit	Trench 4 – Mid-reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.23	-
402	deposit	Trench 4 – Light orangey-brown clay Natural substrate	-	-
403	deposit	Trench 4 – Mid-reddish-grey sandy-clay. Natural substrate	-	-

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
501	deposit	Trench 5 – Mid-reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.34	-
502	deposit	Trench 5 – Mid-reddish-grey sandy-clay. Natural substrate	-	-
503	deposit	Trench 5 – Mid-reddish-grey sandy-clay with frequent sandstones. Natural substrate	-	-
504	deposit	Trench 5 – Light pinkish-grey clay. Natural substrate	-	-
505	cut	Trench 5– Field drain oriented NE/SW. Possible 19th to 20th century field drain.	-	W – 0.20m L – 1.58+
506	deposit	Trench 5 – Fill of field drain [505]. Possible 19th to 20th century field drain.	-	-
507	cut	Trench 5 – Field drain oriented NW/SE. It showed the same orientation as [509]. Possible 19th to 20th century field drain.	-	W – 0.37m L – 3.14+

Context	Type	Description & Interpretation	Thickness	Max. exposed dimensions
508	Deposit	Trench 5 – Fill of field drain [507]. Possible 19th to 20th century field drain.	-	-
509	Cut	Trench 5 – Field drain oriented NW/SE. It showed the same orientation as [507]. Possible 19th to 20th century field drain.	-	W – 0.37m L – 3.43+
510	deposit	Trench 5 – Fill of field drain [509]. Possible 19th to 20th century field drain.	-	-
601	deposit	Trench 6 – Mid-reddish-brown loamy-sand Present ground surface and modern topsoil deposit	0.31	-
602	deposit	Trench 6 – Mid-reddish-grey sandy-clay. Natural substrate	-	-
603	deposit	Trench 6 – Light yellowish-grey sandy-clay with iron stones. Natural substrate	-	-
604	deposit	Trench 6 – Mid-reddish-grey sandy-clay with frequent sandstones. Natural substrate	-	-

APPENDIX III: Written Scheme of Investigation

Land at Omega Proteins Ltd, Penrith, Cumbria

Written Scheme of Investigation for Archaeological Evaluation

February 2021

ARCHAEOLOGICAL
RESEARCH SERVICES LTD
Digging with Purpose

The Eco Centre, Windmill Way, Hebburn, NE31 1SR

www.archaeologicalresearchservices.com

Prepared on behalf of:	Omega Proteins Ltd
Date of compilation:	February 2021
Compiled by:	Philippa Hunter
Planning Reference:	TBC
Local Authority:	Eden District Council
Site central NGR:	NY 49701 29659

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1 INTRODUCTION

1.1 Project Background

1.1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Research Services Ltd (ARS Ltd) for Maze Planning Solutions Ltd on behalf of Omega Proteins Ltd. It details a scheme of works for an archaeological evaluation which is to be carried out to support a planning application for a proposed solar farm development on land to the west of the Omega Proteins Ltd plant. The proposed development area (PDA) is centred at NY 49701 29659.

1.1.2 The proposed development area (PDA) sits within the Eden Valley, which has formed an important route way between the Yorkshire Dales and the Solway since the prehistoric period. A number of prehistoric monuments, including two Early Neolithic long cairns and a Late Neolithic/Early Bronze Age Bowl Barrow are known to exist within the surrounding landscape of the PDA (Jacklin 2021). The results of a geophysical survey carried out on the site in December 2020 (Durkin 2020) were unclear but revealed a number of potential archaeological anomalies.

1.1.3 This document comprises a WSI confirming the nature of an archaeological evaluation to be undertaken by Archaeological Research Services Ltd (ARS Ltd) in accordance with guidance from Jeremy Parsons, Cumbria County Council Historic Environment Officer. It outlines the proposed method of investigation to be used by Archaeological Research Services Ltd (ARS Ltd) for carrying out an archaeological evaluation involving the machine excavation of six trenches.

1.1.4 Paragraph 189 of the National Planning Policy Framework (Ministry of Housing, Communities and Local Government 2019, 55) states that:

> *'Where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.'*

1.2 Site Description and Location

1.2.1 The 'red line boundary' of the PDA is depicted by a red polygon on Figure 1, and is *c.*5.87ha in area. It is bounded to the north by Newton Road (B5288), by Mile Lane to the south, by a small woodland area to the west and to the east by open fields associated with Omega Proteins Ltd. The fields slope from a low of 156m above Ordnance Datum (aOD) in the east up to a high of 166m aOD at the western end of the site. The PDA is centred at NY 49701 29659.

1.3 Geology and Soils

1.3.1 The underlying solid geology of the PDA comprises "Alston Formation - Limestone, Sandstone, Siltstone and Mudstone - Sedimentary Bedrock formed approximately 328 to 337 million years ago in the Carboniferous Period" (BGS 2020). This is overlain by a superficial deposit of "Till, Devensian – Diamicton - Superficial Deposits formed up to 2 million years ago in the Quaternary Period" (BGS 2020).

1.3.2 The soils of the PDA are recorded as "slowly permeable, seasonally wet, slightly acid but base-rich loamy and clayey soils" (CU 2020).

2 ARCHAEOLOGICAL BACKGROUND

2.1 A full and detailed archaeological background is contained within a rapid Desk-Based Assessment that has previously been carried out for the PDA (Jacklin 2021). The assessment concluded that due to the unclear results of the geophysical survey and the presence of significant archaeological remains within the surrounding landscape, there is the possibility of encountering further prehistoric archaeological remains within the PDA.

2.2 The Myers Beck watercourse ran through the field to the east of the PDA and formed part of a prehistoric ceremonial landscape with numerous monuments located along its bank. These include two Early Neolithic long cairns in close proximity to a Late Neolithic/Early Bronze Age bowl barrow. Other Late Neolithic/Early Bronze Age monuments constructed along the course of the Myers Beck include a stone circle, a standing stone, and another round cairn which may have been located in the woods to the west of or within the PDA itself.

2.3 The *Penrith Tithe Map* dated 1843 shows the PDA covering the majority of an enclosed field and a small parcel of the neighbouring field to the east, before the fields were formally enclosed and the boundaries were realigned. The tithe apportionment details the fields as plots 1026 and 1028, belonging to Matthew Bell, and occupied by a John Irving. The lands are recorded as 'Steadman Land', the origins of which could relate to *Steadfolds or Stadfield,* meaning horse enclosure (Field 1989, 399). This field name was commonly attributed to 'pre-historic earthworks or walled Roman enclosures' as medieval people believed these resembled horse enclosures (ibid).

2.4 By 1867 the PDA had undergone more formal enclosure and was comprised of two semi-rectangular fields. By 1900 a clay pit, brick works and cottage occupied the fields immediately to the east (now the site of the Omega Proteins Ltd buildings). The PDA remained unchanged throughout the 20th century, however, the clay pit to the east appears to have shut down by 1927 and the brick works was labelled as a manure works on OS mapping.

3 AIMS AND OBJECTIVES

3.1 Regional Research Aims and Objectives

3.1.1 The proposed archaeological works have the potential to provide evidence relating to research objectives and overarching research themes and questions identified in the Research and Archaeology of North West England. An Archaeological Research Framework for North West England (Hodgson and Brennand 2007, 41). These are, in particular:

- PH38: How can re-excavation or new excavation inform our understanding of the constructional sequence and chronology of Prehistoric funerary

monuments?

- PH43: What evidence is there in the region for Neolithic ceremonial sites and how should they be investigated?
- PH46: How good is our understanding of the location and distribution of Neolithic long and round cairns?

3.2 Archaeological Evaluation Aims and Objectives

3.2.1 The archaeological evaluation will aim to gather sufficient information to establish the presence/absence of archaeologically significant features and the character and extent of those features within the PDA.

3.2.2 The following objectives will contribute towards accomplishing this aim:

- Record any archaeological features and deposits encountered.
- Sufficiently sample the archaeological features and deposits to establish relative sequence, likely dating and quality of preservation.
- Gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological deposits with a view to evaluating their significance and potential to inform established aims and objectives, and identify if additional aims might be achieved

4 Archaeological Evaluation

4.1 Coverage

4.1.1 The evaluation will involve the machine-excavation of six trenches targeted to evaluate possible archaeological features that were identified during the geophysical survey. The trenches will be as follows:

- Trench 1 – 30 x 2m orientated north-east to south-west across a possible 'U'-shaped enclosure
- Trench 2 – 30 x 2m orientated north-south across a possible 'L'-shaped enclosure
- Trench 3 – 40 x 2m orientated north-south across a possible curvilinear enclosure
- Trench 4 – 20 x 2m orientated north-west to south-east across a possible curvilinear enclosure
- Trench 5 – 20 x 2m orientated east-west across a possible curvilinear enclosure
- Trench 6 – 20 x 2m orientated east-west across a possible curvilinear enclosure

4.2 Methodology

4.2.1 All elements of the archaeological evaluation will be carried out in accordance with CIfA's Standards and Guidance for archaeological field evaluation

(2020).

4.2.2 All staff employed on the project will be suitably qualified for their respective project roles and have substantial experience of archaeological excavation and recording. All staff will be made aware of the archaeological importance of the area surrounding the site and will be fully briefed on the work required by this specification.

4.2.3 Topsoil will be removed by a tracked or wheeled excavator using a toothless ditching bucket under continuous archaeological supervision. The topsoil and subsoil will be removed down to the first significant archaeological horizon, if present, in successive level spits.

4.2.4 Topsoil and subsoil will be stored separately if necessary and will in all circumstances be stored at least 1m away from the trench edges.

4.2.5 Machine movements will be strictly controlled so that no machinery will track over areas that have previously been stripped in the evaluation unless these areas have been signed off.

4.2.6 All trenches will be appropriately cleaned by hand to expose the full nature and extent of archaeological features and deposits.

4.2.7 All excavated spoil will be scanned visually to recover small finds. Finds so recovered will be recorded with their location of origin ascribed. Finds will be retained and recorded.

4.2.8 Isolated, discrete features such as non-structural pits or features representing industrial activities will be 50% sampled, if they produce artefacts then provision is made for full excavation.

4.2.9 Representative samples of bricks from brick-built structures and selective products of the brick working process will be retained for specialist analysis where appropriate.

4.2.10 Finds of "treasure" will be reported to the Coroner in accordance with the Treasure Act (DCMS 2008). The Portable Antiquities Liaison Officer will also be notified.

Coroner	*Finds Liaison Officer*
Dr Nicholas Shaw	*Ian Bass*
Fairfield	*Museum of Lancashire*
Station Road	*Stanley Street, Preston*
Lamplugh Rd, Cockermouth	*Lancashire*
CA13 9PT	*PR1 4YP*
Tel: 01900 706902	*Tel: 07557 030 768*

4.2.11 In the event of Treasure finds Jeremy Parsons, Cumbria County Council Historic Environment Officer, will be notified and, if necessary, a site meeting arranged to determine if further investigation in the vicinity of the find spot is

required.

4.2.12 The on-site archaeologist will be given the opportunity to stop site work in order to investigate potential archaeological features and adequate time will be allowed for recording any such features.

4.2.13 ARS Ltd will ensure that heavy plant or machinery will not be operated in the immediate vicinity of archaeological remains until the remains have been recorded. Contractors and plant operators will be notified that any observations of archaeological remains must be reported immediately to the archaeologist on site. Regular contact will be ensured between ARS Ltd. and the site project manager to ensure that ARS Ltd. is kept up to date with site works and given the chance to respond appropriately and in line with the Cumbria County Council Historic Environment Officer requirements.

4.2.14 A risk assessment will be undertaken before commencement of the work and health and safety regulations will be adhered to at all times.

4.3 Recording and Sampling

4.3.1 The trenches will be tied into the National Grid and located on a 1:2500 or 1:1250 map of the area. The trenches will be recorded in accordance with the ARS Ltd. field recording manual.

4.3.2 A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pre-printed record sheets with text descriptions appropriate to the work. Accurate measured scale plans and sections/elevations will be drawn where required at the appropriate and in accordance with best practice. In addition to relevant illustrations, provision for rectified photographic recording shall be made, if deemed necessary.

4.3.3 Where archaeological features and/or deposits are identified during the evaluation, then a sufficient quantity of the said features will be investigated by hand to allow their date, nature and degree of survival to be ascribed. All features thus investigated will be recorded in plan and section and significant archaeological finds recovered will be retained for analysis. Any archaeological features identified will be photographed and drawn in plan at a scale of 1:20 and in section at a scale of 1:10. The stratigraphy, where relevant and apparent, will be recorded. All significant archaeological features will be photographed (with scale) *in-situ* and their location recorded on a plan of the site.

4.3.4 For brick structures, the record will include details of brick dimensions and type (handmade/machine-made, plain/frogged), mortar (colour, composition, hardness) and the extent of structures (number of courses, thickness in skins). Brick samples will be taken for structures likely to pre-date the mid-19th century.

4.3.5 A full photographic record will be compiled using a digital camera, a Fuji XP90 with 16.4 MP resolution, and a register of all photographs will be kept. The photographic record will encompass all encountered archaeological entities. In addition key relationships between entities, where these help demonstrate sequence or form, will also be photographed. A clearly visible, graduated metric

scale will be included in all record shots. A supplementary record of working images will be taken to demonstrate how the site was investigated and what the prevailing conditions were like during excavation.

4.3.6 A plan of the excavated areas will be maintained, features noted and section lines recorded. All drawings will be carried out at an appropriate scale and all contexts will be recorded using a single context recording system. Sample representative levels will be taken to record the maximum depth of excavation and /or natural should no archaeological features be uncovered. The site archive will include plans and sections at an appropriate scale, a scale photographic record, and full stratigraphic records on recording forms/context sheets or their electronic equivalent. Should archaeological features be present then the locations and height AOD of the features will be accurately fixed, surveying in either the planning baselines or the features themselves.

4.3.7 Any human remains discovered will initially be left in-situ and, if removal is deemed necessary, this will be undertaken in accordance with the relevant Ministry of Justice regulations and in discussion with Jeremy Parsons, Cumbria County Council Historic Environment Officer.

4.3.8 A stratigraphic matrix will be compiled for all trenches where superimposed archaeological deposits, features or structures are encountered.

5 FINDS PROCESSING AND STORAGE

5.1 Finds Processing and Storage Statement

5.1.1 All finds processing, conservation work and storage of finds will be carried out in accordance with the CIfA *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2020) and the UKIC *Guidelines for the Preparation of Archives for Long-Term Storage* (1990).

5.1.2 Artefact collection and discard policies will be appropriate for the defined purpose.

5.1.3 Bulk finds which are not discarded will be washed and, with the exception of animal bone, marked. Marking and labelling will be indelible and irremovable by abrasion. Bulk finds will be appropriately bagged, boxed and recorded. This process will be carried out no later than two months after the end of the excavation.

5.1.4 All small finds will be recorded as individual items and appropriately packaged (e.g. lithics in self-sealing plastic bags and ceramic in acid-free tissue paper). Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. This process will be carried out within two days of the small find being excavated.

5.1.5 During and after the archaeological evaluation all objects will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (including controlled storage, correct packaging, and regular monitoring, immediate selection for conservation of vulnerable material). All storage will have appropriate security provision.

5.1.6 The deposition and disposal of artefacts will be agreed with the legal owner and Kendal Museum of Natural History and Archaeology prior to the work taking place. This will be in-line with current Covid-19 guidelines. All finds except treasure trove are the property of the landowner.

5.1.7 All retained artefacts and ecofacts will be cleaned and packaged in accordance with the requirements of the recipient museum.

6 MONITORING ARRANGEMENTS

6.1 Ideally at least one week prior notice of the commencement of the fieldwork is to be given to the Cumbria County Council Historic Environment Officer:

Jeremy Parsons
Cumbria County Council
County Offices
Kendal
Cumbria
LA9 4RQ

Tel: 01539 713431

6.2 ARS Ltd will liaise with the County Council Historic Environment Officer during the course of the work.

6.3 The client will afford reasonable access to the County Council Historic Environment Officer or their representative, for the purposes of monitoring the archaeological evaluation.

7 TIMETABLE, STAFFING AND RESOURCES

7.1 The Project Manager for the evaluation will be Karl Taylor at ARS Ltd. The Fieldwork Project Officer will be Michael Nicholson at ARS Ltd. An outline timetable for project implementation is presented below

Task	Commencement date
Commencement of archaeological evaluation	Early March 2021

Table 1. Outline timetable for project implementation

7.2 Finds analysis will be carried out by appropriately qualified specialists as detailed subject to availability.

- Flint and prehistoric pottery: Dr Robin Holgate MCIfA
- Romano-British pottery: Ian Rowlandson
- Samian ware: Dr Gwladys Monteil
- Medieval and post-medieval Dr Chris Cumberpatch/Dr Robin

pottery:	Holgate MCIfA
♦ Clay pipes:	Mike Wood MCIfA
♦ Plant macrofossils and charcoals:	Elise McLellan
♦ Human and animal bone:	Milena Grzybowska
♦ Radiocarbon dating:	Prof Gordon Cook (SUERC)
♦ Finds conservation:	Vicky Garlick (Durham University)

8 REPORT

8.1 Following completion of the archaeological evaluation, Archaeological Research Services Ltd will produce a report which will include,

- Non-technical summary
- Introductory statement
- Aims and purpose of the project
- Methodology
- A location plan showing all excavated trenches and any archaeological features with respect to nearby fixed structures and roads
- Plans and sections of all excavated trenches
- Illustrations of all archaeological features with appropriately scaled hachured plans and sections
- An objective summary statement of results
- Conclusions
- Supporting data – tabulated or in appendices to include
    - Specialist Reports
    - Structural and Stratigraphic details
- Index to archive and details of archive location
- References
- Statement of intent regarding publication
- Confirmation of archive transfer arrangements
- A copy of the OASIS form

8.2 One bound copy of the final report with a digital copy of the report in PDF/A format on disk will be deposited with the Cumbria Historic Environment Record (HER). A copy of the report should be uploaded as part of the OASIS record (see 9.4 below).

9 ARCHIVE SELECTION STRATEGY

9.1 Selection of the working project archive will be guided by the aims and objectives of the project, as set out in this Written Scheme of Investigation, the North West Regional Research Framework and Kendal Museum of Natural History and Archaeology's Policy.

9.2 Documentary Archive

9.2.1 All original documentary material created and collected during the archaeological works will be selected for inclusion in the final archive. Any duplicates (including photocopies) of original documents will not be included in the final archive, in line with Kendal Museum of Natural History and Archaeology's Policy.

9.2.2 The deselected documents will be recycled, subject to final checks by the Post-Excavation and Archives Officer.

9.3 Digital Archive

9.3.1 All digital data created over the course of this project will be collected, stored, and selected for final deposition in line with the project's Data Management Plan which will be agreed upon with the Cumbria County Council Historic Environment Officer.

9.3.2 The key types of digital data produced will include:

Type	Data
Text	Digital copies of the Written Scheme of Investigation and final report
Images	Site photography, scans of site drawings, graphics for reports, digitised drawings
Finds Data	Finds reports and tables, conservation records, images

9.3.3 Only final copies of any born digital data will be selected and deposited in the final project archive.

9.3.4 Digital data to be included in the final archive will be reviewed during the Post-Excavation and archiving phase of works.

9.3.5 The project manager and digital archive repository will be consulted on the fate of any deselected material. Deselected material is expected to include duplicates and any non-final versions of data. Digital photographs will be assessed during post-excavation works and selected in line with HE *Digital Image Capture and File Storage* (2015). The deselected material will be stored on the ARS Ltd server for a period before reviewed and deleted.

9.4 Material Archive

9.4.1 The selection of material finds for final deposition in the archaeological archive will be decided in collaboration with the finds specialist during the post-excavation phase, based on addressing the aims and objectives of the project set out in this WSI, the North West Regional Research Framework, and Kendal Museum of Natural History and Archaeology's Policy.

9.4.2 No material will be discarded without processing and recording. Deselected material can be retained as part of a handling or teaching collection, returned to the landowner, or discarded as agreed by the landowner, specialists, collecting museum and planning archaeologist.

10 Archive Deposition

10.1 Should the archaeological works produce no archaeologically significant finds and, if agreed with the Cumbria County Council Historic Environment Officer, then it is not necessary to deposit an archive with the repository museum, which in this case is Kendal Museum of Natural History and Archaeology's. This is in line with the Kendal Museum of Natural History and Archaeology's Policy.

10.2 Should the archaeological works produce archaeologically significant finds, a project archive will be prepared for deposition by ARS Ltd with Kendal Museum of Natural History and Archaeology's. The archive will comprise the primary record and synthetic works arising from the project, including documents, plans, sections, photographs, and electronic data and an accompanying metadata statement.

10.3 High resolution digital photographs would, in discussion with the Cumbria County Council Historic Environment Officer, be submitted to the Archaeological Data Service (ADS) digital archive repository with the associated photographic registers and metadata. The digital archive will be prepared in line with current best practice outline in *Archaeology Data Service/Digital Antiquity Guides to Good Practice* (ADS/Digital Antiquity 2011).

10.4 One bound copy with a digital copy of the final report in PDF/A format on disc will be deposited with the Cumbria Historic Environment Record (HER). A copy of the report will be uploaded as part of the OASIS record (see below) for online access via the Archaeological Data Service.

10.5 The archive will be deposited in line with *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2007), CIfA's (2020b) *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*, and Society of Museum Archaeologists (1993) *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland*. In addition, the recommendations of the Museums of Derbyshire (2016) *Procedures for the Deposition of Archaeological Archives from Derbyshire at Derby Museum and Art Gallery* will be adhered to. The archive will be deposited within two months of the completion of the report.

10.6 The Cumbria County Council Historic Environment Officer and Museum Curator will be notified at the earliest opportunity should the site produce archaeologically significant, unusual, or unexpected finds.

10.7 The Cumbria County Council Historic Environment Officer will be notified in writing on completion of the fieldwork with project dates for the completion of the report and deposition of the archive. The date for deposition of the archive and its contents will be outlines in the report and the Cumbria County Council Historic Environment Officer informed in writing on final deposition of the archive.

10.8 All retained artefacts and associated material will be cleaned, recorded, properly stored and deposited in the archive.

10.9 A full set of annotated, illustrative pictures of the site, excavation, features, layers and selected artefacts deposited with the archive as digital images on disc.

10.10 At the start of work (immediately before fieldwork commences) an OASIS online record http://ads.ahds.ac.uk/project/oasis/ will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded .pdf version of the entire report.

11 GENERAL ITEMS

11.1 Health and Safety

11.1.1 All work will be carried out in accordance with The Health and Safety at Work Act 1974. Specific health and safety policies exist for all out workplaces and all staff employed will be made aware of the policy and any relevant issues. The particular risks involved with this project will be assessed, recorded and relevant mitigation measures put in place as part of a full risk assessment, which will be compiled in advance of fieldwork. ARS Ltd retains Peninsula as its expert health and safety consultants.

11.2 Insurance Cover

11.2.1 ARS Ltd has full insurance cover for employee liability (£10 million) public liability (£5 million), professional indemnity (£2 million) and all-risks cover.

11.3 Changes to the Written Scheme of Investigation

11.3.1 Changes to the approved methodology or programme of works will only be made with prior written approval of the Cumbria County Council Historic Environment Officer.

11.4 Publication

11.4.1 If significant archaeological remains are recorded, a summary of the project with, if appropriate, selected drawings, illustrations and photographs will be submitted within 2 years of the completion of the project to CWAAS 'Transactions' for publication. ARS Ltd has full insurance cover for employee liability public liability, professional indemnity

11.5 Copyright

11.5.1 Any publicity will be handled by the client. ARS Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

12 REFERENCES

ADS/Digital Antiquity. 2011. *Archaeology Data Service/Digital Antiquity Guides to Good Practice*.

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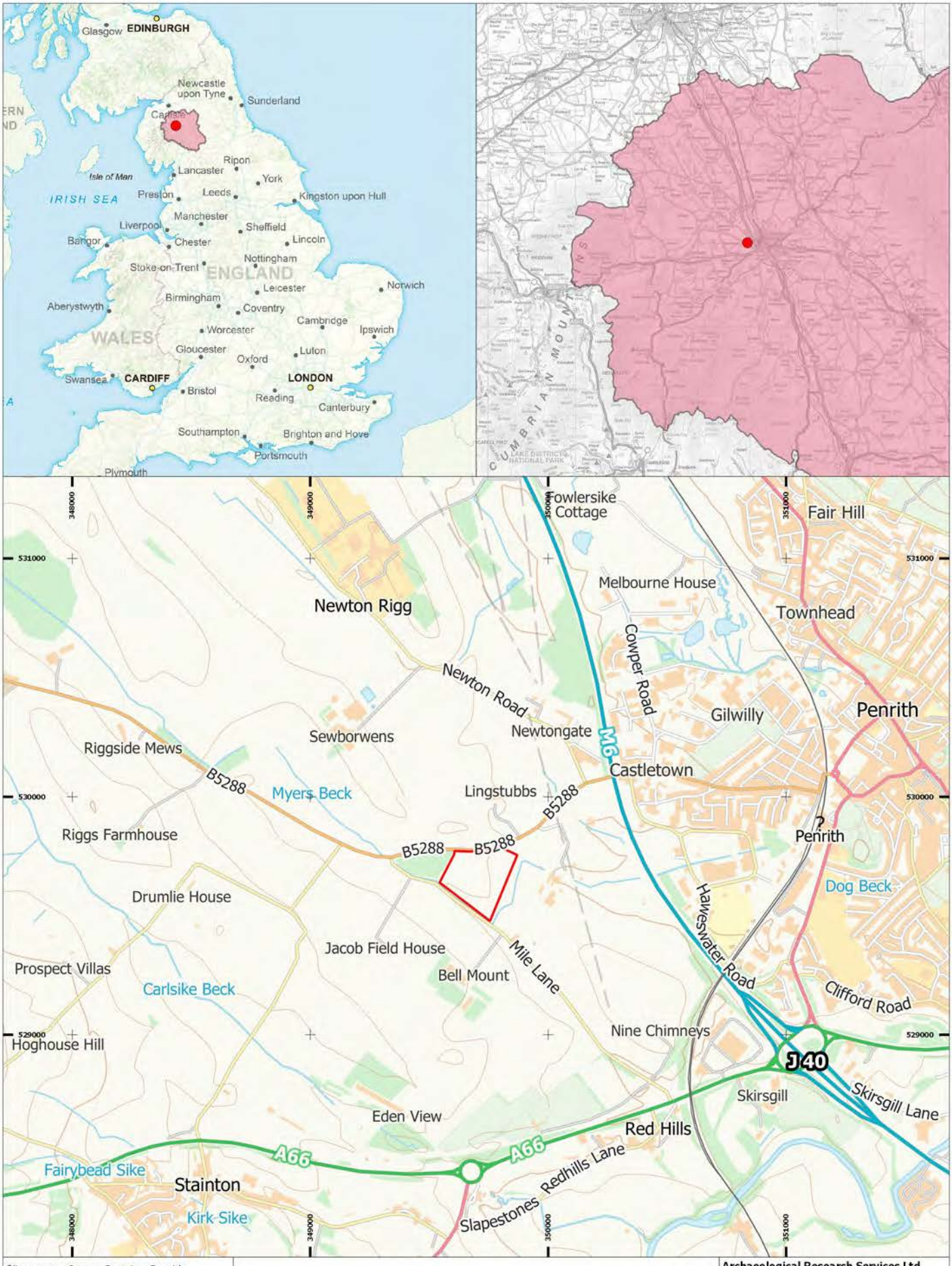
FIGURES



Site name: Omega Proteins, Penrith Date: February 2021 Drawn by: ARJ Scale: Varies	**Figure 1:** **Site location**	**Archaeological Research Services Ltd** The Eco Centre Windmill Way Hebburn Tyne and Wear NE31 1SR Tel: 01914 775111 www.archaeologicalresearchservices.com
	Site Boundary Site Location Eden District Council	

Figure 2: Trench Locations overlaid on Geophysical Survey Results

Site Boundary

20m x 2m Trench
30m x 2m Trench
40m x 2m Trench

Geophysical Survey Results
- Positive anomaly - Possible archaeology
- Negative anomaly - probable natural
- Magnetic enhancement - probable natural
- Modern disturbance
- Pipe/service or drain

1m Contour

0 20 40 60 80 m

N

Site name: Omega Proteins, Cumbria
Date: February 2021
Drawn by: PH
Scale: 1:1200 @ A3

Archaeological Research Services Ltd

The Eco Centre
Windmill Way
Hebburn
NE31 1SR

Tel: 0191 4775111

ARCHAEOLOGICAL RESEARCH SERVICES LTD

www.archaeologicalresearchservices.com

APPENDIX IV: OASIS Form

OASIS DATA COLLECTION FORM: England

Printable version

OASIS ID: archaeol5-417838

Project details

Project name	Archaeological Evaluation on Land at Omega Proteins Ltd, Penrith, Cumbria
Short description of the project	The evaluation fieldwork was undertaken in March 2021 and extended across two fields, that, revealed the presence of two undated curvilinear features observed in trench 1 and 3 that were identified in the geophysics survey. Trench 2 showed an undated pit possible used for quarry extraction. The remained trench 4 and 6 showed geophysics anomalies that were most likely changes in the natural substrate, while the anomaly 14 in trench 5 showed the same orientation of two field drains possible dating from 19th/20th century.
Project dates	Start: 09-03-2021 End: 12-03-2021
Previous/future work	No / Not known
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	DITCHES Uncertain
Significant Finds	NONE None

Project location

Country	England
Site location	CUMBRIA EDEN PENRITH Land at Omega Proteins Ltd,
Postcode	CA11 0BX
Study area	5.87 Square metres

Site coordinates	NY 49701 29659 54.659393816562 -2.779800723903 54 39 33 N 002 46 47 W Point

Project creators

Name of Organisation	Archaeological Research Services Ltd
Project brief originator	Archaeological Research Services Ltd
Project design originator	Archaeological Research Services Ltd
Project director/manager	Karl Taylor
Project supervisor	Ana Rodrigues
Type of sponsor/funding body	Developer

Project archives

Physical Archive recipient	Kendal Museum of Natural History and Archaeology
Digital Archive recipient	Kendal Museum of Natural History and Archaeology
Digital Contents	"none"
Digital Media available	"Survey","Text"
Paper Archive recipient	Kendal Museum of Natural History and Archaeology
Paper Contents	"none"
Paper Media available	"Context sheet","Drawing","Photograph","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Archaeological Evaluation on Land at Omega Proteins Ltd, Penrith, Cumbria
Author(s)/Editor(s)	Rodrigues, A.

Date	2021
Issuer or publisher	Archaeological Research Services Ltd
Place of issue or publication	Tyneside

Entered by	Ana Rodrigues (ana@archaeologicalresearchservices.com)
Entered on	22 March 2021