

FURNESS ABBEY, MANOR ROAD, BARROW-IN-FURNESS, CUMBRIA

Archaeological Watching Brief



Client: English Heritage

NGR: 321850 471729 (centre)

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July 2021



The Site	
Site Name	Furness Abbey, Manor Road, Barrow-in-Furness
County	Cumbria
NGR	321850 471729 (centre)

Client	
Client Name	English Heritage
Client's architect/agent	-

Scheduled Monument Consent	
SMC No.	S00240689
Works	Excavation of two pits for new signage, cutting back edge of culvert, and exploratory excavation to locate course of drainage pipe

Archiving	
Relevant Record Office(s)/Archive Centre(s)	Barrow-in-Furness
Relevant HER	Cumbria
Relevant museum	Furness Abbey

Staffing	
Desk-based assessment	Dan Elsworth
Watching brief	Dan Elsworth
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Date(s) site work carried out	23/03/2021 and 24/05/2021

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Contents

Contents.....	1
Illustrations.....	1
Non-Technical Summary	3
Acknowledgements.....	3
1. Introduction	4
2. Methodology	6
3. Desk-Based Assessment.....	7
4. Fieldwork Results.....	10
5. Discussion.....	21
6. Bibliography	23
Appendix 1: Summary Context List	26
Appendix 2: Summary Finds List.....	27
Appendix 3: Animal Bone Assessment.....	30

Illustrations

Figures

Figure 1: Site location	5
Figure 2: Signage Pit 1 plan	18
Figure 3: Signage Pit 2 plan	18
Figure 4: Plan of area of overhanging vegetation edge cut.....	19
Figure 5: Drainage pits plan.....	19
Figure 6: Drainage trench plan	20

Plates

Plate 1 (left): Signage Pit 1 excavated, viewed from the south	10
Plate 2 (right): Signage Pit 1 excavated, viewed from the west	10
Plate 3 (left): Signage Pit 2 excavated, viewed from the north.....	10
Plate 4 (right): Signage Pit 2 excavated, viewed from the east.....	10
Plate 5 (left): The edge cut, viewed from the east.....	11
Plate 6 (right): The exposed section above the culvert wall, viewed from the north-west.....	11
Plate 7: Pipe visible in section in the culvert wall, viewed from the north-east	11
Plate 8 (left): Drainage Pit 1 excavated, showing the pipe, viewed from the west.....	12
Plate 9 (right): Drainage Pit 2 excavated, showing the pipe, viewed from the north-east.....	12
Plate 10: Drainage Pit 3 excavated, showing the pipe, viewed from the north-east	12
Plate 11 (left): The north-east end of the trench, viewed from the south-west end.....	13
Plate 12 (right): The south-west end of the trench, viewed from the north-east end	13

Plate 13: Maker’s mark on a pipe section, viewed from the west..... 14

Plate 14 (left): Area excavated against the infirmary chapel wall, showing deposits 702 and 703, viewed from the north-east..... 14

Plate 15 (right): Area excavated against the infirmary chapel wall, showing the foundation boulders, viewed from the north-east..... 14

Plate 16: The east end of the infirmary chapel, showing the removed mouldings, viewed from the south-east..... 15

Plate 17 (left): Loose stones from the arch..... 15

Plate 18 (right): Loose stones from the arch 15

Plate 19 (left): Painting of the area around the Abbot’s house during excavation, probably late 19th century (D Elsworth collection).....21

Plate 20 (right): The present view of the Abbot’s house from the location of Signage Pit 221

Non-Technical Summary

Following proposals to install new signage and carry out investigative work associated with cutting back overhanging vegetation and investigating the line of a presumed drainage pipe at Furness Abbey, Manor Road, Barrow-in-Furness, Cumbria, Greenlane Archaeology was commissioned to carry out an archaeological watching brief on the work. The site is located within the Scheduled Monument area for Furness Abbey, and the archaeological work was carried out as one of the conditions on the Scheduled Monument consent.

The local area is rich in archaeological remains dating from the end of the last Ice Age onwards, but the primary feature of historic interest is Furness Abbey itself, which was established on the site in 1127. The buildings making up the Abbey went through several phases of alteration and expansion until the final Dissolution in 1537, after which part of the site became a mansion and subsequently a hotel serving the railway that ran through the valley.

The watching brief monitored the excavation of two small pits for new signage, the cutting back of an area of overhanging vegetation next to a culvert, the excavation of three pits along the line of a ceramic pipe thought to be for drainage, and the subsequent enlargement of this into a trench examining the full length of the pipe. In most cases a thin layer of topsoil was encountered beneath which was a layer of probable demolition material, from which various finds were recovered, especially from the area investigating the ceramic drainage pipe. These predominately comprised fragments of animal bone, but also stone roofing slate, lead window came strips, a copper alloy 'lace tag', and post-medieval pottery and glass. In the case of the area of overhanging vegetation a thick deposit of firm silty clay was revealed, perhaps alluvium or dumped material, raised over 0.5m above the top of the culvert.

Although limited in scale the watching brief revealed numerous finds of archaeological interest; some of the animal bone is probably of medieval date and derives from food consumed within the Abbey, while the window came strips potentially result from the destruction of the Abbey that occurred during the Dissolution.

Acknowledgements

Greenlane Archaeology would like to thank English Heritage for commissioning the project, in particular Sally Wilson, Properties Curator (North), and Stephanie Jenkins, Project Manager. Special thanks are due to Daron Deighton and colleagues at Historic Property Restoration Ltd for their assistance on site, and Jane Ricardson at ASWYAS for providing an assessment of the animal bone.

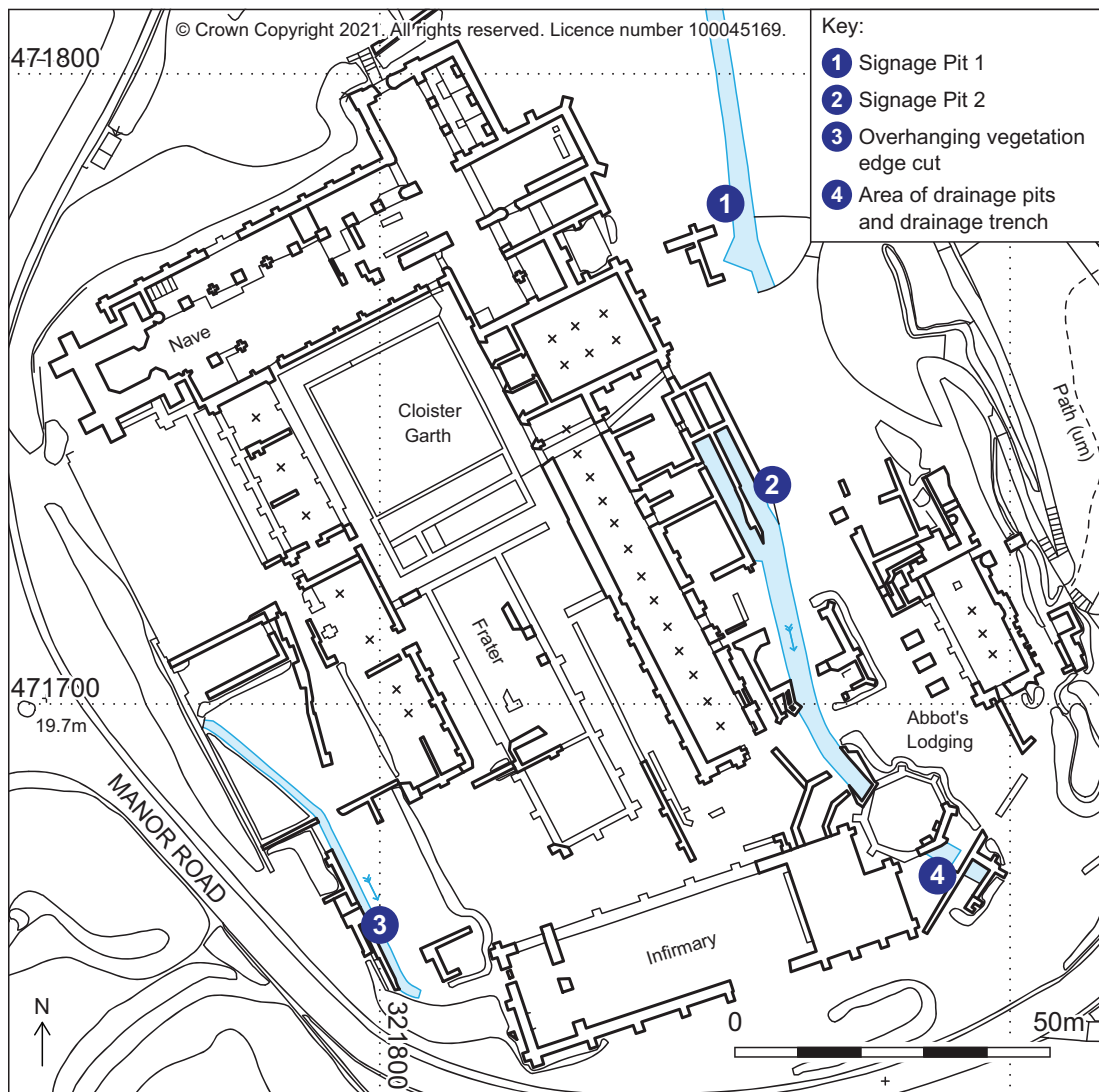
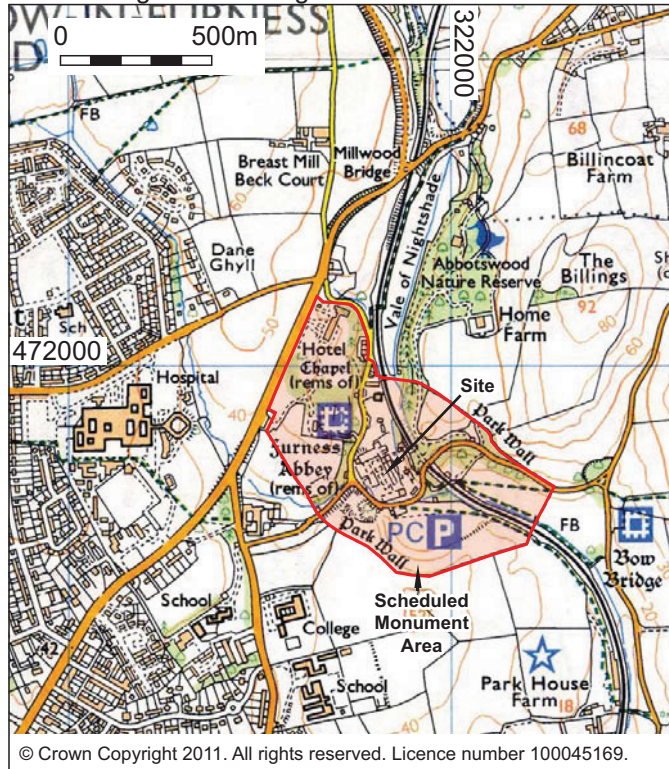
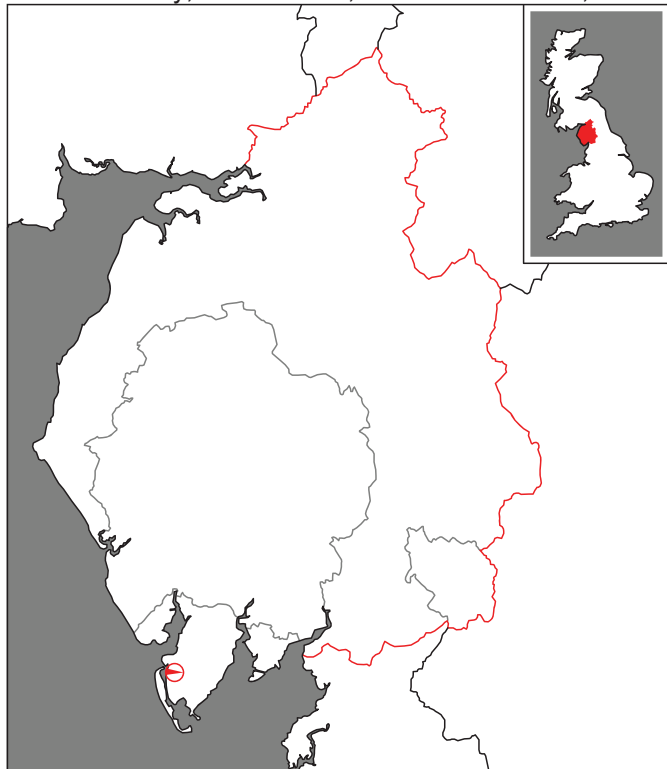
1. Introduction

1.1 Circumstances of the Project

1.1.1 The circumstances of the project are set out in the tables on the inside cover of this report.

1.2 Location, Geology, and Topography

1.2.1 Furness Abbey is located towards the south-west end of the Furness Peninsula between the towns of Dalton-in-Furness and Barrow-in-Furness, in southern Cumbria. This area is on the north side of Morecambe Bay, on a sandy coastal plain consisting of gently undulating pastureland, and the Furness low fells begin a short distance to the north (Countryside Commission 1998, 65). The Abbey is situated at the base of the west edge of the steep sided and wooded Vale of Nightshade; this sheltered valley is fed by Mill Beck which has cut deep into the Sherwood sandstone geology of the area (Moseley 1978, figure 1). Furness Abbey is approximately 20m above sea level (see Figure 1; Ordnance Survey 2011).



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Figure 1: Site location

2. Methodology

2.1 Desk-Based Assessment

2.1.1 A desk-based assessment was carried out in accordance with the guidelines of the Chartered Institute for Archaeologists (CIfA 2020a). This only comprised an examination of published secondary sources in order to provide a background history so that the results of the watching brief could be seen in context. These were consulted in Greenlane Archaeology's office library.

2.2 Archaeological Watching Brief

2.2.1 The watching brief monitored groundworks associated with the project set out in the tables on the inside cover of this report.

2.2.2 All aspects of the archaeological recording were carried out according to the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2020b) and Greenlane Archaeology's own excavation manual (2007). The deposits encountered were recorded in the following manner:

- **Written record:** descriptive records of all deposits were made using Greenlane Archaeology's *pro forma* record sheets. A list of the contexts encountered is presented in *Appendix 1*;
- **Photographs:** photographs in colour digital format (both 12 meg JPEG and RAW file format) were taken of the site as well as general working shots. A selection of the colour digital photographs is included in this report. A written record of all of the photographs was also made using Greenlane Archaeology's *pro forma* record sheets;
- **Drawings:** drawings were produced on site as follows:
 - i. the location of the areas of excavation were plotted on a site plan at a scale of 1:100.

2.3 Environmental Samples

2.3.1 No environmental samples were taken as no appropriate deposits were encountered.

2.4 Finds

2.4.1 **Processing:** all of the artefacts recovered from the watching brief were washed, with the exception of metal objects, which were dry-brushed. They were then naturally air-dried and packaged appropriately in self-seal bags with white write-on panels.

2.4.2 **Assessment and recording:** the finds were assessed and identified in the first instance by Jo Dawson (post-medieval finds), Tom Mace (medieval pottery), and Dan Elsworth (stone and metal). A specialist assessment of the animal bone was produced by Jane Richardson at ASWYAS. The finds were recorded directly into the catalogue produced as part of this report (*Appendix 2*), with the assessment report on the bone presented in *Appendix 3*.

2.5 Archive

2.5.1 The archive of the project will be deposited with the relevant Record Office or Archive Centre, as detailed on the cover sheet of this report, together with a copy of the report. The archive has been compiled according to the standards and guidelines of the CIfA guidelines (CIfA 2020c). In addition, details will be submitted to the *Online Access to the Index of Archaeological Investigations* (OASIS) scheme. This is an internet-based project intended to improve the flow of information between contractors, local authority heritage managers and the general public. A copy of the report will be provided to the client and a digital copy of the report will be provided for the relevant Historic Environment Record, as detailed on the cover sheet of this report.

3. Desk-Based Assessment

3.1 Introduction

3.1.1 The desk-based assessment was carried out in order to place the results of the watching brief in context and comprised only the examination of secondary sources, in order to provide a history of the site from the prehistoric period onwards, but focussing particularly on the medieval history of the abbey.

3.2 Background History

3.2.1 **Prehistoric Period (c11,000 BC – 1st century AD):** while there is limited evidence for human activity in the county in the period immediately following the last Ice Age, what there is has been found in the southernmost part, on the north side of Morecambe Bay. Excavation of a small number of cave sites has found the remains of animal species common at the time but now extinct in this country and artefacts of Late Upper Palaeolithic type (Young 2002).

3.2.2 The county was clearly more densely inhabited during the following period, the Mesolithic (c8,000 – 4,000 BC), as large numbers of artefacts of this date have been discovered during field walking and eroding from sand dunes along the coast (Cherry and Cherry 2002). Coastal areas and river valleys are notably places where such material is frequently found in the wider region (Middleton *et al* 1995, 202; Hodgkinson *et al* 2000, 151-152; Hodgson and Brennand 2006, 26) and in the area around Morecambe Bay there is generally quite plentiful evidence for activity in this period (Elsworth 1998).

3.2.3 In the following period, the Neolithic (c4,000 – 2,500 BC), large scale monuments such as burial mounds and stone circles begin to appear in the region and one of the most recognisable tool types of this period, the polished stone axe, is found in large numbers across the county, having been manufactured at Langdale in the central Lake District (Hodgson and Brennand 2006, 45). Remains other than monumental structures or stray finds are generally rare but in Furness a number of sites have now been found containing evidence of what might be settlement remains of this date, including two groups of features in the Roose area (Headland Archaeology 2001; Evans 2018) and substantial remains at Stainton Quarry (Matt Town pers comm). In addition, flint finds of various dates, including the Neolithic, have been found during ploughed field walking from the wider area around the site (Evans 2008).

3.2.4 During the Bronze Age (c2,500 – 600 BC) monuments, particularly those thought to be ceremonial in nature, become more common still (see Barrowclough 2010, 105-191), although settlements start to become more readily identified during this period, many of which probably continued to be occupied into the Iron Age and beyond. Stray finds of Bronze Age date are found throughout the county, often deliberately deposited in wetland areas (*op cit*, 169-191).

3.2.5 As mentioned above, it is likely that settlement sites thought to belong to the Iron Age have their origins in this period, although few have been studied in enough detail to be certain of this. Sites of this type are recorded typically as crop marks revealed in aerial photographs but they are typically undated and little understood. The classic site of the Iron Age is the hillfort, and while these are not well represented in the immediate area, there was possibly one at what is now the site of a park on the edge of Barrow, and there are others recorded in the local area, for example on Hoad hill near Ulverston (Elsworth 2014), and Skelmore Heads near Urswick, although evidence for activity in the Neolithic was also associated with the latter (Powell 1963). There is likely to have been a considerable overlap between the end of the Iron Age and the beginning of the Romano-British period and it is evident that in this part of the country, initially at least, the Roman invasion had a minimal impact on the native population in rural areas (Philpott 2006, 73-74). Stray finds are rare from this period, although part of a beehive quern of either Iron Age or Roman date was found within the precinct of Furness Abbey near the 'Abbey Mill' in 1881 (Spence 1935, 180).

3.2.6 **Romano-British to Early Medieval Period (1st century AD – 11th century AD):** there have been occasional finds of Roman coins from the general area (e.g. Shotter 1989), but evidence has yet to be confirmed of settlement in the area from the period. There has been discussion about the likelihood of Roman military occupation in the Cartmel and Furness Peninsulas for some time, and although a good

case can be made for a Roman presence the evidence for it is limited and not yet totally convincing (see Elsworth 2007). What is of note is that of the various finds of Roman date that have been discovered in the area, many came from the vicinity of Furness Abbey. These include four Roman coins found in 1915 and 1916 of second and fourth century date, which, although not located at the time beyond having been found in the garden of 'Mr Archibald Miller, director of Vickers' near Furness Abbey (Anon 1916, 292) is presumably a reference to the Mr Miller of Dunlop House (now named Oaklands) immediately to the south off the Abbey House Hotel. These form part of a remarkable number of Roman coins found within the precinct of Furness Abbey (Shotter 1989), to which a Roman statue thought to be of Hercules and apparently also found at Furness Abbey can also be added (Elsworth 2007, 43).

3.2.7 The early medieval period is not well represented in the area in terms of physical archaeological remains, which is a common situation throughout the county. The local area as a whole has a complex mixture of place-names of Celtic British, Anglian (Old English), and Norse type suggesting that the early medieval period was a time of dynamic and rapid population change (Edmonds 2013). However, physical evidence for settlement of this date is very limited. Many local place-names demonstrate the mixture of Anglian and Norse influence, such as Dalton, while place-names such as Roose and Leece suggest the late survival of British people (Ekwall 1922; Coates and Breeze 2000, 317). While the name 'Furness' is Norse the valley in which the abbey now stands was known as Beckansgill, suggesting an Irish influence (Ekwall 1922, 138), although probably due to the movement of Norse people from that area into Cumbria in the early 10th century (Griffith 2010, 48-66). Finds of early medieval date in the immediate vicinity of the site are rare, although a lead weight decorated with a reused piece of Anglian metalwork was found near Breast Mill Beck and is now in the Dock Museum. In addition, a further early medieval weight, again made from a piece of reused metalwork, of ecclesiastical origin, may also have been found near Furness Abbey (it is currently held in the British Museum, Ref. 1870,0609.1, who list its find spot as 'Furness abbey, near'; British Museum 2017) although in reality its provenance is less certain (Edwards 1998, 38-39).

3.2.8 **Medieval Period (11th century AD – 16th century AD):** the areas of the watching brief are situated within the extant ruins of Furness Abbey, which inevitably therefore dominates the relevant history of this period. The following historical background is largely taken from the Victoria History of the County of Lancashire (Farrer and Brownbill 1914). The Abbey was founded by Stephen, Count of Boulogne and Mortain, later king of England. In 1124 he gave a site at Tulketh, Preston to monks of the Savignac order, before granting them land in Furness in 1127 at which point, they established a monastic house there. By 1147 the Savignac order had been incorporated into the Cistercian tradition making Furness Abbey the first Cistercian house in England, and further expansion of the site began. The remains of the Savignac monastery are still present above and below ground as well as the more extensive Cistercian monastery, as revealed during recent excavation work carried out as part of recent stabilisation work (Jeremy Bradley pers comm). The monastery grew in prosperity, and at the time of its dissolution in 1537 it was the second richest Cistercian monastery in England. The Abbey had acquired extensive property in the Lake District, Yorkshire, Scotland, and Lincolnshire and the deep-water port at Piel allowed access and trade with the Isle of Man and Ireland, where the Abbey also held important properties. Sheep farming played an important part in the Abbey's growing wealth, due to the price of wool, as did the continued exploitation of the Furness iron ore deposits, which paved the way for the region's post-medieval development.

3.2.9 The areas of the watching brief are close to a number of specific parts of the Abbey, each of which developed at different times (from Harrison 1998; see also Dickinson 1967):

- **Signage Pit 1:** this is located alongside a water course to the east, which was probably repositioned into this location during the construction of the railway in the mid-19th century, and the Abbey's cemetery to the west. This probably began in use from the outset of the construction of the Abbey in the early 12th century, although burials were also placed within the abbey church further to the west, some of which have been dated to this period (Jeremy Bradley pers comm);
- **Signage Pit 2:** this is positioned between the reredorter to the west and the Abbot's house to the south-east. The reredorter formed the latrines for the Abbey's dormitory, with direct access over the watercourse that ran through the Abbey grounds, and is thought to be of 12th century date.

The Abbot's house is thought to be early to mid-13th century with later additions, and formed a substantial building with numerous chambers over two floors including a main hall;

- **Overhanging Vegetation Edge Cut:** this is on the edge of a water course that ran through the south-west reredorter, which was constructed in the later 12th century;
- **Drainage Pits 1-3/Drainage Trench:** these were located between the octagonal kitchen building and the chapel at the east end of the infirmary. Both of these elements are considered to have been constructed in late 13th century.

3.2.10 **Post-medieval Period (16th century AD – present):** after the Dissolution the monastery was handed over to the crown and the land was subsequently granted to the king's minister Thomas Cromwell. Two years later it was passed to Sir Thomas Curwen the head of a leading local family. Thomas Curwen passed the property to his son-in-law John Preston, and in 1671 the then owner, Thomas Preston, built a mansion house on the grounds. The mansion deteriorated until it was sold to the railway company and rebuilt as a hotel during the 1850s and the 1860s (Wood 1998, 34), following the construction of a railway line through the valley, which had a station at Furness Abbey. The hotel suffered bomb damage in 1941 and was demolished in 1953 (*ibid*). Some traces of the north wing have been incorporated into the Abbey Tavern, which now stands in its place. In 1923 Richard Cavendish placed the ruins in the care of the Ministry of Works (*ibid*).

4. Fieldwork Results

4.1 Watching Brief

4.1.1 **Signage Pit 1:** this was c0.3m square and below the turf a soft dark reddish brown sandy silt was encountered 0.05m – 0.1m thick (**100**). This was on top of a deposit with a similar matrix but containing 30% angular gravel and 10% angular sandstone cobbles as well as some grey slate and lumps of lime mortar, and was between 0.15m and 0.2m thick (**101**; Plate 1 and Plate 2).



Plate 1 (left): Signage Pit 1 excavated, viewed from the south



Plate 2 (right): Signage Pit 1 excavated, viewed from the west

4.1.2 **Signage Pit 2:** this was also c0.3m square and beneath the turf was again an initial layer of soft dark reddish brown sandy silt 0.05m – 0.1m thick (**200**). Beneath this was a similar matrix but 75% angular cobbles, mostly red sandstone, but also some grey slate and lumps of lime mortar, up to 0.2m thick (**201**; Plate 3 and Plate 4).



Plate 3 (left): Signage Pit 2 excavated, viewed from the north



Plate 4 (right): Signage Pit 2 excavated, viewed from the east

4.1.3 **Overhanging Vegetation Edge Cut:** this comprised the excavation of a small section 0.8m long north/south, cut back less than 0.2m from the edge of the culvert (Plate 5). It was evident from limited excavation and an examination of the side of the culvert, that a firm dark reddish brown silty clay 0.5m to 0.6m thick extended above the top of the east wall of the culvert (**300**; Plate 6).



Plate 5 (left): The edge cut, viewed from the east

Plate 6 (right): The exposed section above the culvert wall, viewed from the north-west

4.1.4 **Drainage Pits:** this comprised the excavation of three pits, each c0.3m square, following the presumed line of a ceramic drainage pipe visible in section c0.5m down the side of the culvert wall to the north-east. The north-easternmost pit, which was close to the edge of the culvert, had a deposit of loose dark reddish brown silty clay, 0.1m thick (**400**) below the turf. Beneath this was a similar deposit but with 30-40% angular cobbles, mostly red sandstone (**401**). The pipe was encountered at a depth of 0.4m below the surface. The second pit to the south-west of the first, had similar deposits (**500** and **501**) and the pipe was again encountered at a depth of 0.4m. It was essentially on the same alignment, although turning slightly to the south. The third pit, to the south-west of the second, had the same general deposits (**600** and **601**) and the pipe was encountered at a depth of 0.4m. At this point it had a large collar and the section fitting into it on the west side had a considerable amount of clay or concrete filler, suggesting the pieces of the pipe were not a good fit.



Plate 7: Pipe visible in section in the culvert wall, viewed from the north-east



Plate 8 (left): Drainage Pit 1 excavated, showing the pipe, viewed from the west

Plate 9 (right): Drainage Pit 2 excavated, showing the pipe, viewed from the north-east



Plate 10: Drainage Pit 3 excavated, showing the pipe, viewed from the north-east

4.1.5 Following the excavation of the three initial drainage pits and the identification of the line of the ceramic drain pipe a trench exposing the whole length of this was excavated by hand on the 25th May 2021. This began from the edge of the culvert at the north-east end and revealed the same deposits as exposed in the original pits: an overlying soft dark reddish-brown silty clay up to 0.1m thick (**700**), over a similar matrix but sandier and with 30-40% angular cobbles, mostly red sandstone at least 0.4m thick and extending to the full depth of the trench. At the base of the trench the ceramic pipe, a dark reddish-brown salt glazed stoneware, was exposed and consisted of 13 sections each approximately 0.6m long including the collars, which were secured with concrete and it noticeably dropped in height from the south-west end to the north-east (Plate 11 and Plate 12). Two sections had a maker's mark visible comprising 'LFC' in three linked circles with 'IW' above (Plate 13). At the south-west end the pipe abruptly stopped. Beyond it a larger area was excavated in the angle formed by the south end of the

infirmary chapel wall and the buttress in order to form a new soakaway. Within this was an area of large loose angular stones in a similar matrix to **700** but darker and softer due to increased moisture (**702**), but generally only 0.1m thick, although thicker where it met the pipe (Plate 14). This also incorporated a patch of loose limestone gravel against the infirmary chapel wall, approximately 0.3m wide by 0.7m long (**703**) (Plate 14). Excavation through these deposits, to a depth of no more than 0.3m, revealed deposit **701** below, beneath which rough angular boulders were exposed below the dressed plinth of the wall, which were evidently the foundations (Plate 15). In addition, it was observed that the plinth and a moulded rail above had been deliberately removed across an area 2m in from either end, perhaps suggesting a lean-to building. but clearly a later addition, had formerly stood against the east end of the infirmary chapel (Plate 16).



Plate 11 (left): The north-east end of the trench, viewed from the south-west end

Plate 12 (right): The south-west end of the trench, viewed from the north-east end



Plate 13: Maker's mark on a pipe section, viewed from the west



Plate 14 (left): Area excavated against the infirmary chapel wall, showing deposits 702 and 703, viewed from the north-east



Plate 15 (right): Area excavated against the infirmary chapel wall, showing the foundation boulders, viewed from the north-east



Plate 16: The east end of the infirmary chapel, showing the removed mouldings, viewed from the south-east

4.1.6 **Additional recording:** at the request of English Heritage photographs were also taken of a collection of loose pieces of moulded stone removed from one of the arches during the renovation work. A section of these is reproduced in Plate 17 and Plate 18.



Plate 17 (left): Loose stones from the arch



Plate 18 (right): Loose stones from the arch

4.1.7 **Finds:** a total of 125 finds were recovered during the watching brief, and these are summarised in *Appendix 2* and a full assessment report on the animal bone is included in *Appendix 3*. A brief discussion of them is given below.

4.1.8 **Stone:** three fragments of roof slate were recovered, all with remnants of the nail hole: one from **601** in Drainage Pit 3 and two from **701** in the Drainage Trench. The example from **601** is very thick and otherwise not noteworthy, except that the type of stone is a very shiny laminate form not the same as the

locally available grey or green Lakeland slate. It is, however, remarkably similar to material recovered during a watching brief in the gatehouse at Calder Abbey on the west coast of Cumbria. This was determined as possibly originating in the Highland Boundary quarries in Scotland (Greenlane Archaeology 2019, 20). Calder Abbey began as a daughter house of Furness, and both had connections and properties in Scotland, including another daughter house of Furness at Saddell on the Mull of Kintyre (Wood 1998, 24). It is possible, therefore, that slate was being imported from this area down the west coast of Cumbria to the abbeys at Calder and Furness as a result of these connections. The two fragments from **701** include a piece of local grey slate, of the same type as that still quarried on Kirkby Moor, and a piece of purple Welsh slate with mortar attached to one side. This is more likely to be post-medieval in date, perhaps as late as the 19th century, when such material was more widely transported across the country following the development of the railways and so probably relates to a post-medieval structure on or near the site. It is perhaps, therefore, noteworthy that part of the moulding of the nearby east wall of the infirmary chapel had been cut away, perhaps to accommodate a building stood against it at some point (see *Section 4.1.5* above).

4.1.9 Medieval pottery: the medieval pottery is described in generic terms (e.g. *sandy ware*) with no attempt to link to specific fabrics or specific sources. Brief descriptions of the sherds are given in *Appendix 3* following *Guidelines for the Processing and Publication of Medieval Pottery from Excavations* (Blake and Davey 1983) and *Pottery in Archaeology* (Orton *et al* 2008). Vessel forms are classified using terminology provided by the *Medieval Pottery Research Group* (1998).

4.1.10 Five much abraded fragments of medieval pottery were recovered from **701** and a similarly worn rim fragment was recovered from **702**. The material from **701** included possible gritty ware and sandy ware fragments and more fully reduced sandy fabrics as well as a possible tile fragment. Vessel sherds were mostly from thin-walled vessels, but vessel forms could not be identified. A thickened (or clubbed) rim fragment was recovered from **701** and an everted rim fragment from **702**, which came from a sandy ware vessel with an opening of c160mm diameter. Gritty and sandy wares dominate 12th and early 13th century assemblages in the region and persist into the 14th century (McCarthy and Brooks 1992, 22; Whitehead *et al* 2013; Bradley and Miller 2009, 664), and their presence presumably relates to monastic activity on the site.

4.1.9 Post-medieval pottery: two fragments of brown-glazed red earthenware were recovered from **201** in Pit 2, fragment of white earthenware was recovered from **501** in Drainage Pit 2, and two refitting fragments of factory-produced glazed buff-bodied earthenware holloware vessel were recovered from **701** in the enlarged drainage pit trench. All are relatively common types of domestic pottery used throughout the post-medieval period and were presumably deposited on the site as rubbish.

4.1.10 Animal bone: 78 fragments of animal bone were recovered during the watching brief from every area of excavation except the area where overhanging vegetation was cut back. The bone was quantified and catalogued and included in the general finds catalogue (*Appendix 2*) and a detailed assessment is presented in *Appendix 3*. The bone fragments were typically well preserved, with few eroded surfaces. Some gnawing by dogs was noted indicating that deposition was not immediate. Butchery marks on cattle and pig bones indicate disjuncting, and the material is likely to be associated with domestic consumption. Certainly, limb extremities and skull fragments, indicative of primary carcass processing were absent. Dating this material was difficult, and while some or all of it could have originated during the medieval period, and therefore derived from food produced for consumption in the Abbey, all of the contexts were disturbed or could only be dated on the basis of other finds to the post-medieval period. If it was post-medieval in origin then the bone was presumably dumped on the site with other material as rubbish.

4.1.11 Marine shell: eight fragments of marine shell were recovered: five from context **201** in Signage Pit 1, one from **501** in Drainage Pit 2, and two from **701** in the Drainage Trench. These were primarily of oyster but also cockle. Both were widely used locally as a food and are still collected from around Morecambe Bay. They cannot be directly dated other than by association with other artefacts from the same contexts, although the presence of shellfish in medieval contexts is becoming more widely recorded in the local area (e.g. Appley 2015, 51; Greenlane Archaeology 2015).

4.1.12 **Metal**: two small strips of lead window came were recovered from **501** in Drainage Pit 2. These were twisted and badly damaged but obviously H-shaped in section, a form that was used from the medieval period onward. Their condition suggests that they originated from windows that were dismantled on site, either to recover the glass or the lead, as seen on similar monastic properties (e.g. Norton Priory: Brown and Howard-Davis 2008, 400, and the Franciscan friary in Preston: Howard-Davis 2020). If this is the case then they were potentially deposited during the Dissolution, when the site was being stripped of any valuable materials. Two iron nails, probably of post-medieval date (Bodey 1983, 21-24) were recovered from context **701**. Two parts of what was undoubtedly a single copper alloy object were also recovered from context **701**. This comprised a narrow tube formed from a single rolled sheet, with one end coming to a fine point, and undoubtedly forms what is commonly known as lace tags, or 'points' or 'aglets' (a very similar example from Perth is recorded; Ford 1987, 124-125). These are relatively common finds on medieval sites, including other monastic establishments (e.g. Norton Priory; Brown and Howard-Davis 2008, 282), and typically date to the late medieval or early post-medieval period. In addition, a 10p coin dated to 1992 was also recovered from context **701**; this is presumably intrusive.

4.1.13 **Post-medieval glass**: a small fragment of a clear, light turquoise glass, most likely from a bottle, was recovered from **401** in Drainage Pit; ten further fragments of light turquoise, dark green and colourless fragments (including one with a stopper marked 'Marsh & Sons Barrow') were recovered from **701** in the extended drainage trench, and one dark brown fragment from deposit **702**. Glass of this type was widely used throughout the later post-medieval period and beyond and these presumably represents a fragment of rubbish accidentally deposited on the site by visitors in the 19th and early 20th century.

4.1.14 **Plastic**: three items in plastic were recovered from the topsoil of the enlarged drainage trench (**700**). Two of these were difficult to identify while the other was a cigarette lighter. All are undoubtedly late 20th century in date or later and represent recent rubbish accidentally lost on site.

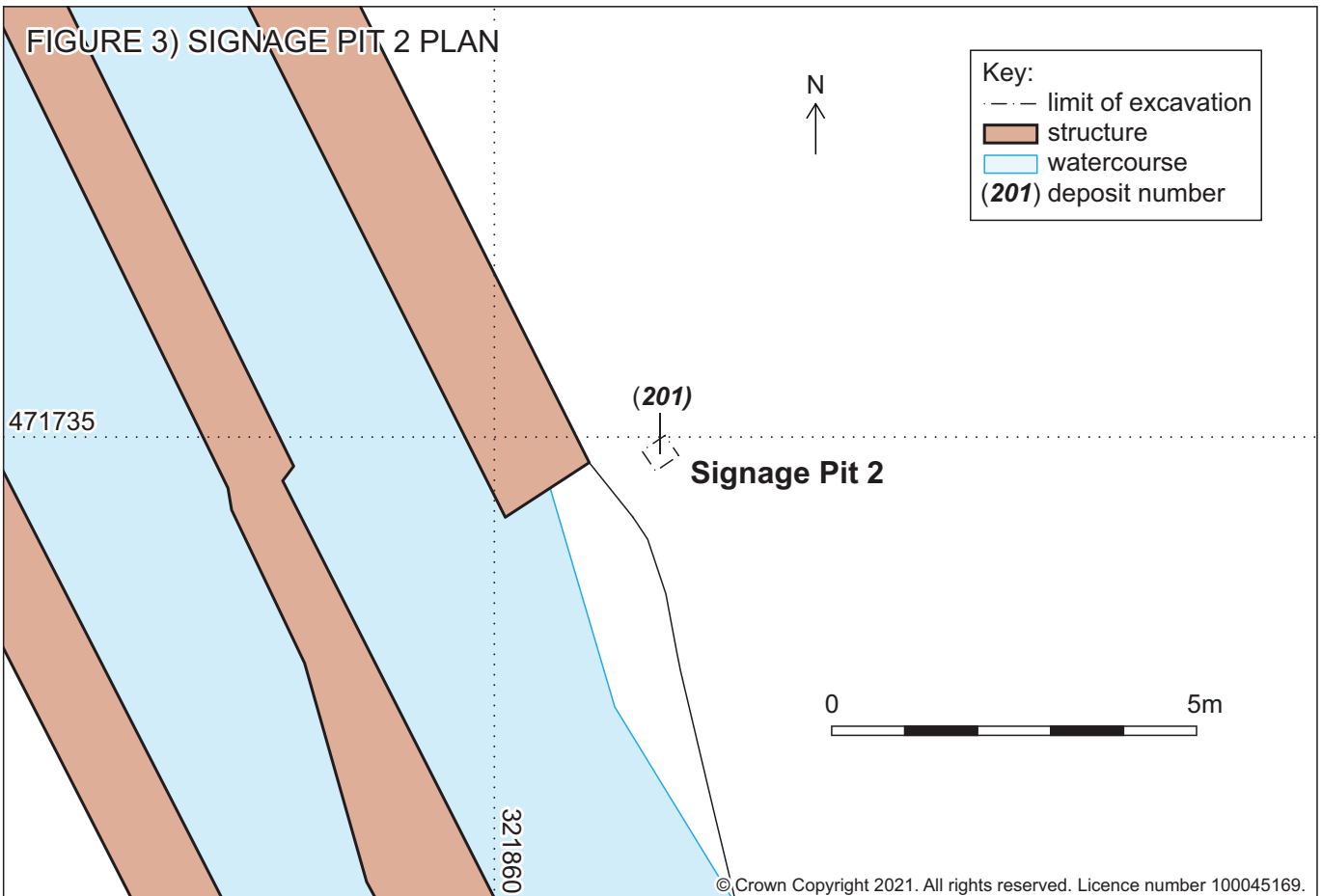
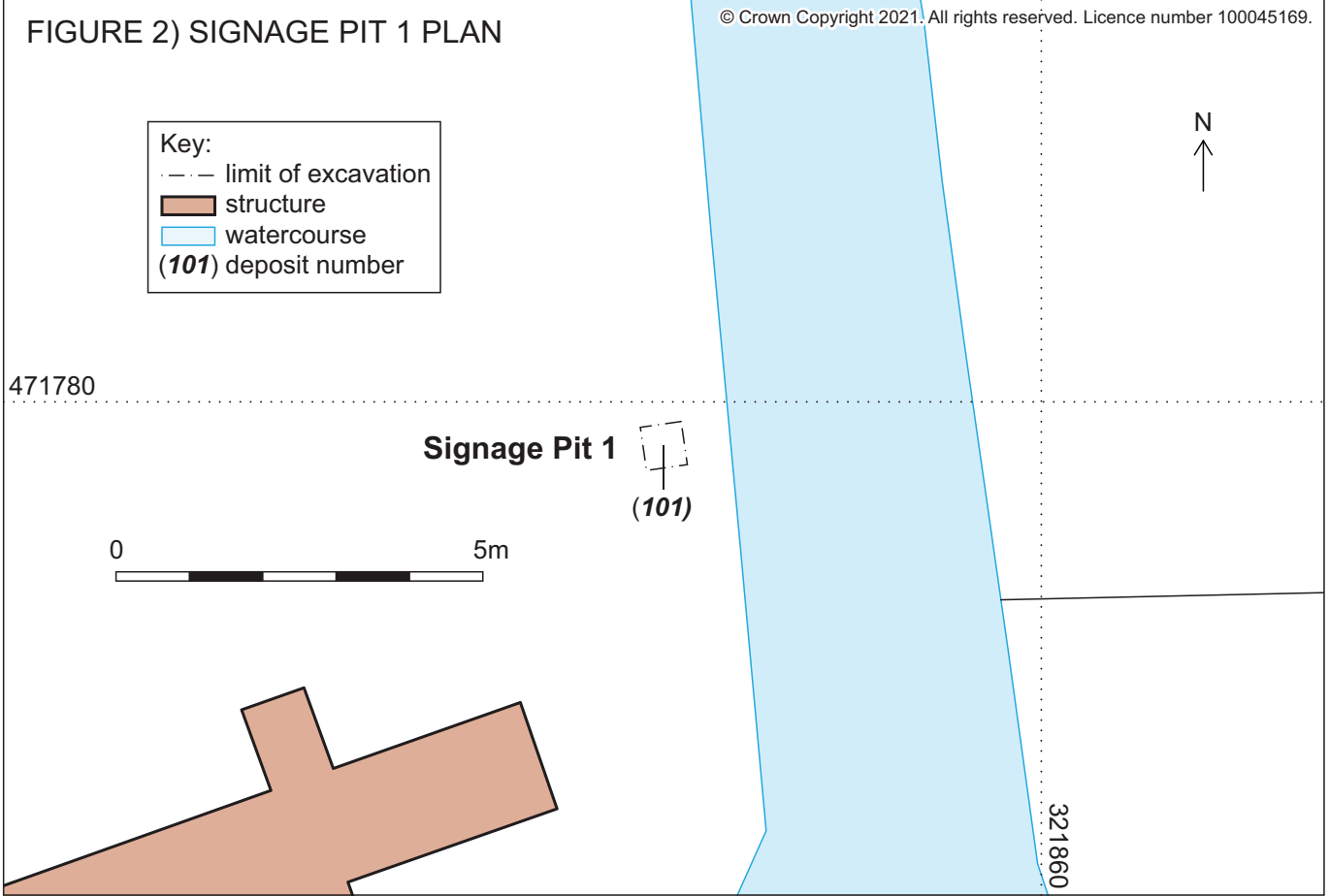
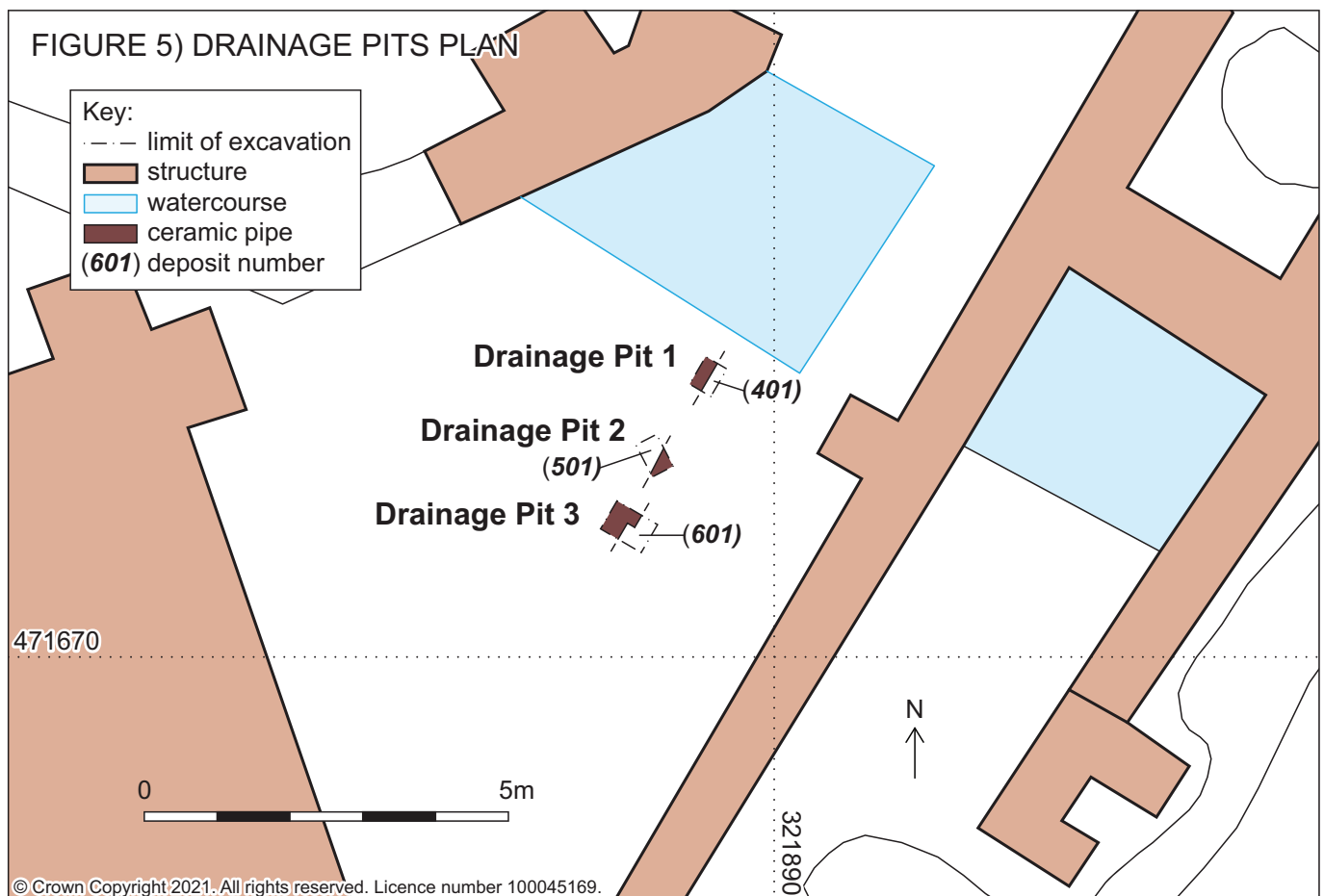
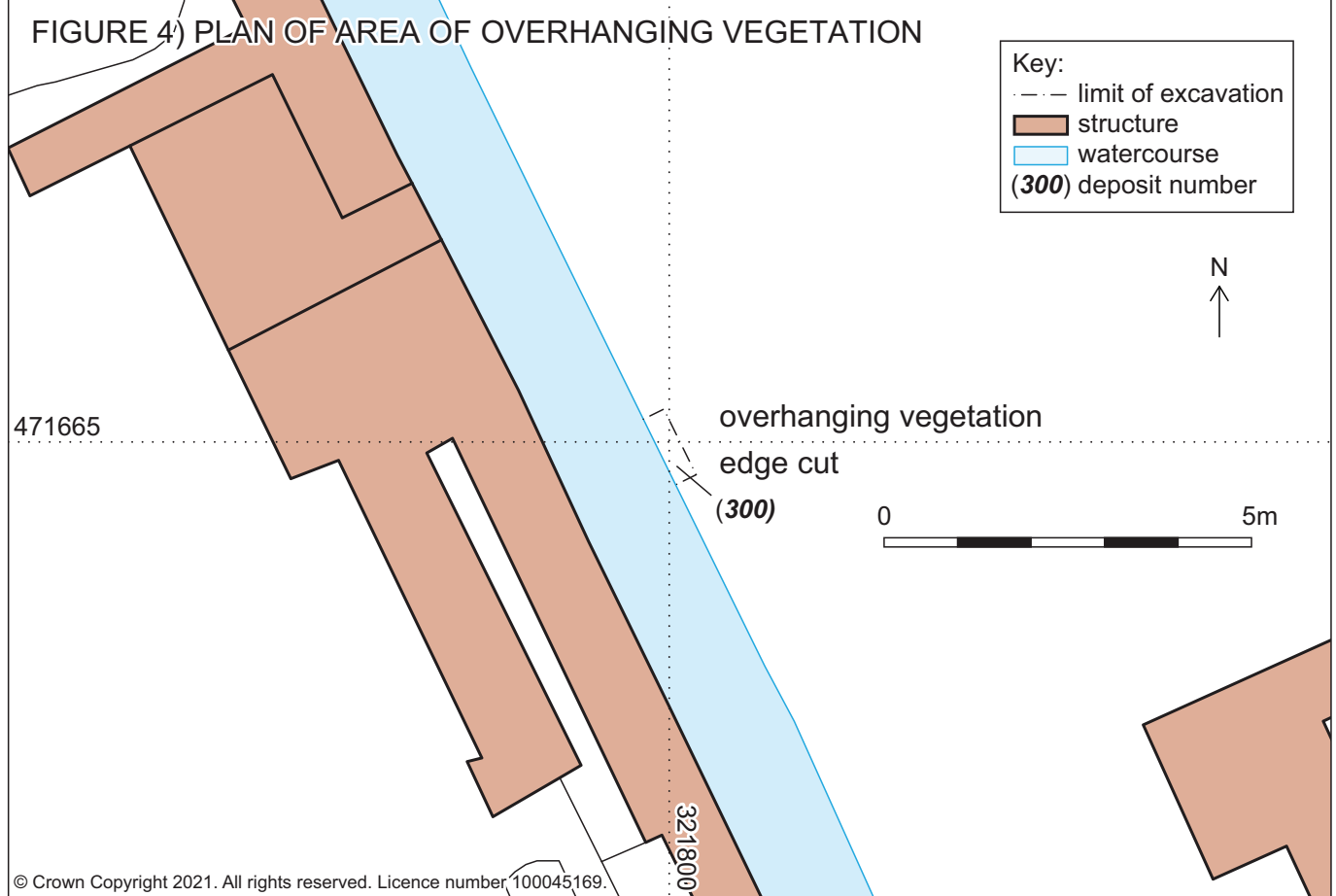


Figure 2: Signage Pit 1 plan;
Figure 3: Signage Pit 2 plan

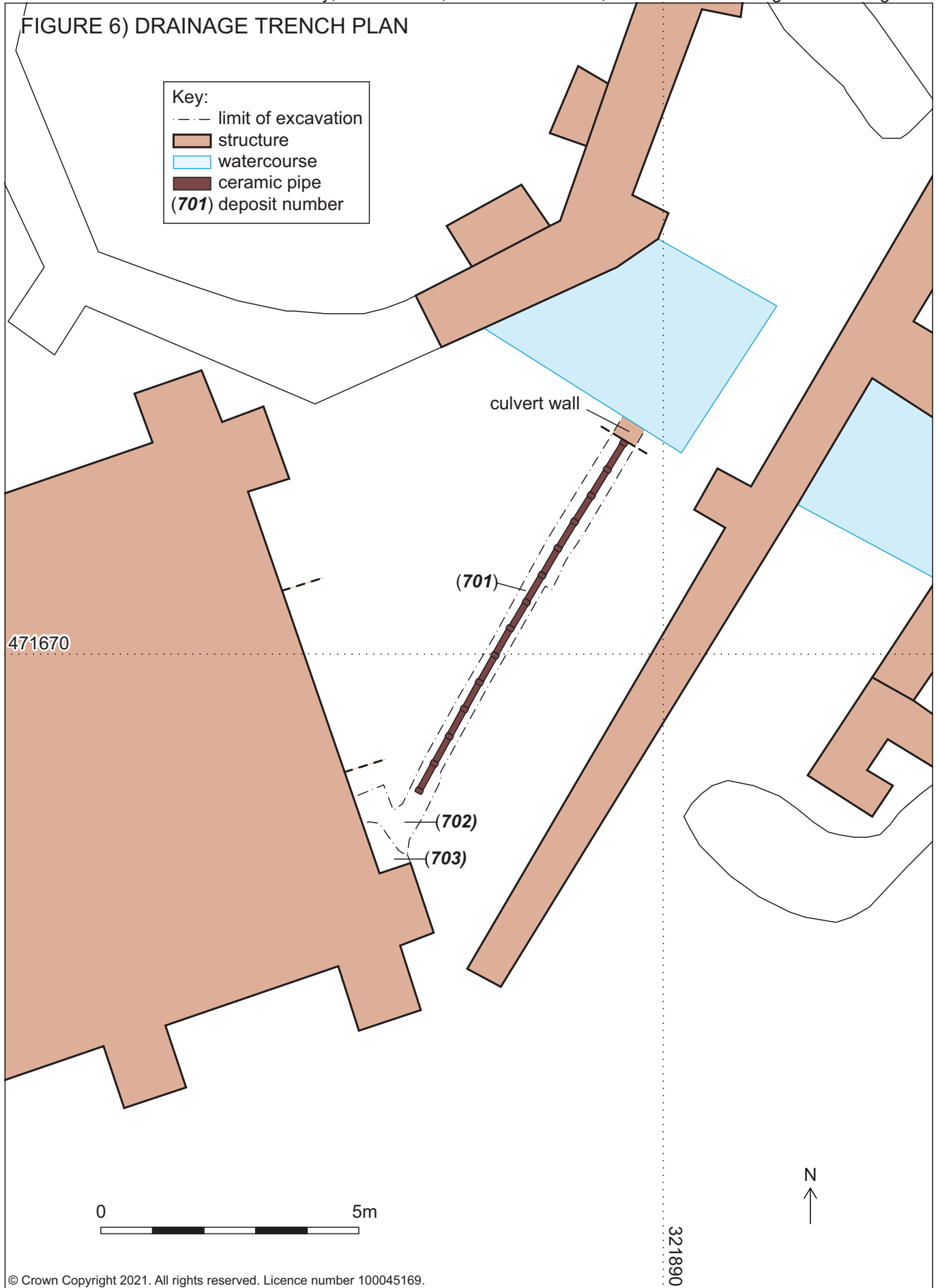


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Figure 4: Plan of area of overhanging vegetation;
 Figure 5: Drainage trial pits plan

FIGURE 6) DRAINAGE TRENCH PLAN



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Figure 6: Drainage trench plan

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5. Discussion

5.1 Results

5.1.1 Although very limited in scope the watching brief recovered a surprising number of finds and revealed deposits likely to relate to the post-Dissolution period of the site. In the case of Signage Pit 1 and 2 the deposits below the topsoil probably represent demolition material from the Abbey that has collected following the Dissolution and subsequent disturbance. Pottery recovered from Signage Pit 2 certainly demonstrates that rubbish was deposited on the site in the later post-medieval period, although marine shell and animal bone recovered from this pit could be medieval and represent domestic waste from the nearby Abbot's house. It is important to note, however, that this area, amongst others, was subject to excavation in the 19th century, which will have disturbed earlier deposits and moved finds from their original place of deposition (see Plate 19 compared to Plate 20). The single rabbit bone retrieved from Signage Pit 1 might represent domestic waste, but could also be entirely natural and quite recent.



Plate 19 (left): Painting of the area around the Abbot's house during excavation, probably late 19th century (D Elsworth collection)

Plate 20 (right): The present view of the Abbot's house from the location of Signage Pit 2

5.1.2 The area of the overhanging vegetation edge cut did not reveal any finds or evidence for human activity such as demolition material, but it seems likely that the thick deposit that was present represents either alluvial material collected in this area during flooding or material deposited here following its removal from elsewhere on the site. It was observed the ground in this area is slightly raised relative to that to the east, so it is quite likely that this has been built up artificially, hence its height relative to the top of the culvert wall.

5.1.3 The three Drainage Pits and subsequent drainage were successful in revealing the line of the stoneware pipe visible in the side of the culvert, and it is obvious from this that all of the deposits encountered in these pits are essentially the backfill of the original pipe trench. The form of the pipe suggests it was installed in the late 19th or early 20th century – the maker's mark indicates that it was manufactured by the Leeds Fireclay Company, which was established in 1889 and continued to operate until at least the mid-20th century (Grace's Guides 2021; The Leeds Fireclay Co Ltd nd). Although it is not entirely clear what its original function was it is apparent from the finds recovered from context **701** that it was installed in the late 19th century or perhaps early 20th. Finds recovered from these pits and the enlarged trench included lead window came of possible medieval date that might have originated in the nearby chapel, which has a large east window, potentially imported roofing slate that might also be medieval and was presumably from one of the nearby buildings, a copper alloy 'lace tag' of potentially medieval date, and marine shell and large amounts of animal bone. The latter is again difficult to date, but perhaps represents food waste produced during the lifetime of the Abbey; the proximity of these pits and the trench to the Abbey kitchen is therefore perhaps significant in this regard.

5.2 Conclusion

5.2.1 The watching brief revealed that even small-scale and shallow excavation work within the site of Furness Abbey can reveal deposits and finds of archaeological interest, particularly in the area

immediately adjacent to the infirmary chapel and kitchen. These all add to the ongoing investigation of the site, which has recently seen important archaeological excavations in association with the repairs to the presbytery. It is hoped that the results of this watching brief will feed into any subsequent publication that is produced regarding work at the site.

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Appendix 1: Summary Context List

Context	Area	Type	Description	Interpretation
100	Signage Pit 1	Deposit	Loose dark reddish-brown sandy silt, 0.05m-0.1m thick	Topsoil
101	Signage Pit 1	Deposit	Loose dark reddish-brown sandy silt, 30% angular gravel, 10% angular red sandstone cobbles, 0.15m-0.2m thick	Demolition deposit
200	Signage Pit 2	Deposit	Loose dark-reddish brown sandy silt, 0.05m-0.1m thick	Topsoil
201	Signage Pit 2	Deposit	Loose dark-reddish brown sandy silt, 75% angular cobbles, mostly red sandstone, some grey slate (roofing?), 0.2m thick	Demolition deposit
300	Edge cut	Deposit	Firm dark reddish-brown silty clay, 0.5m-0.6m thick	Alluvium/dumped material
400	Drainage Pit 1	Deposit	Loose dark reddish-brown silty clay 0.1m thick	Topsoil
401	Drainage Pit 1	Deposit	Loose dark reddish-brown silty clay with 30-40% angular cobbles, mostly red sandstone, at least 0.4m thick	Pipe trench backfill/disturbed demolition deposit
500	Drainage Pit 2	Deposit	Loose dark reddish-brown silty clay, 0.1m thick	Topsoil
501	Drainage Pit 2	Deposit	Loose dark reddish-brown silty clay with 30-40% angular cobbles, mostly red sandstone, at least 0.4m thick	Pipe trench backfill/disturbed demolition deposit
600	Drainage Pit 3	Deposit	Loose dark reddish-brown silty clay, 0.1m thick	Topsoil
601	Drainage Pit 3	Deposit	Loose dark-reddish brown silty clay with 30-40% angular cobbles, mostly red sandstone, at least 0.4m thick	Pipe trench backfill/disturbed demolition deposit
700	Drainage pipe trench	Deposit	Soft dark-reddish brown silty clay 0.1m thick	Topsoil
701	Drainage pipe trench	Deposit	Soft dark-reddish brown silty clay with 30-40% angular cobbles, mostly red sandstone, at least 0.4m thick	Pipe trench backfill/disturbed demolition deposit
702	Drainage pipe trench	Deposit	Soft dark-reddish brown silty clay with 75% angular cobbles/boulders, at least 0.3m thick	Backfill/soakaway
703	Drainage pipe trench	Deposit	Loose limestone gravel covering an area approximately 0.3m by 0.7m, 0.1m thick	Soakaway

Appendix 2: Summary Finds List

Context	Location	Type	Qty	Description	Date range
101	Signage Pit 1	Animal bone	1	Rabbit: distal tibia (fused)	Not datable
201	Signage Pit 2	Marine shell	6	5 x small fragments of oyster shell, 1 x fragment of cockle shell	Not dateable
201	Signage Pit 2	Animal bone	13	10 x Rib and 2 x vertebra fragments (cattle-sized), 1 x sheep/goat mandible (no surviving teeth)	Not dateable
201	Signage Pit 2	Pottery	2	Brown-glazed red earthenware coarseware body fragments	Late 17 th – early 20 th century
401	Drainage Pit 1	Animal bone	1	Large mammal long bone fragment (cattle-sized)	Not dateable
401	Drainage Pit 1	Glass	1	Clear, turquoise bottle fragment	19 th – early 20 th century
501	Drainage Pit 2	Lead	2	Fragments of window came, very twisted and damaged, H-shaped section	Medieval – post-medieval
501	Drainage Pit 2	Animal bone	5	3 x large mammal rib fragments (cattle-sized), 1 x gnawed calcaneus fragment and 1 x rib fragment (sheep/goat)	Not dateable
501	Drainage Pit 2	Marine shell	1	Fragment of oyster shell	Not dateable
501	Drainage Pit 2	Pottery	1	White earthenware, fineware plain body fragment	18 th – 20 th century
601	Drainage Pit 3	Slate	1	Small fragment of thick roof slate in shiny grey stone with evidence for nail hole	Medieval – early post-medieval
601	Drainage Pit 3	Animal bone	4	1x gnawed metatarsal fragment (roe deer), 2 x long bone fragments (cattle/sheep sized), 1 x long bone fragment (goose)	Not dateable
700	Drainage pipe trench	Plastic	3	Blue tube, possibly part of a pen, red strip, probably broken from larger object or part of strimmer blade, green cigarette lighter	Late 20 th century
701	Drainage pipe trench	Fired clay	1	Large lump of fired clay, up to 30mm thick; it is a soft (it will mark paper), sandy, pale buff to very light-orange fabric, with abundant very fine inclusions (<0.05mm); no surface remaining; possibly from the base of a thick-walled vessel or possibly a tile fragment?	Medieval?

Context	Location	Type	Qty	Description	Date range
701	Drainage pipe trench	Pottery	5	<p>1x fine, soft, uniform, pale orange/buff, sandy possibly lightly gritted (inner surface is a little bumpy) fabric; the outer surface has a thin slightly pinkish-red ?slip with patches of a thin, light green glaze applied; fragment is a from a thin-walled vessel, up to 4mm thick; possibly <i>gritty</i> ware;</p> <p>1x small thickened (or clubbed) rim fragment from a thin-walled vessel (up to 4mm thick); soft sandy fabric, with frequent fine inclusions (<0.05mm); its outer margins and surfaces are very pale whitish/buff colour and its core is a pale orange (there is possibly some striation in the fabric); its inner surface is a dull light yellow colour and there is a thin, dull greenish-yellow glaze applied externally; <i>sandy</i> ware;</p> <p>1x large fragment of very soft, sandy fabric, with abundant fine, slightly gritty inclusions (generally <0.05mm, but up to 1mm); its bulk is oxidised to a very pale orange / buff colour with a light grey core; a patch of a what may be a small flat edge of an outer surface has a reddish hue, with no glaze apparent; <i>sandy</i> ware;</p> <p>1x a thin flattish fragment of a dry, soft, sandy fabric (c5mm thick), from a thin-walled vessel (vessel form not identified); the section is split almost equally between a light grey from the core to the outer surface and a light orange to the outer surface from the core; small specks of a slightly yellowish glaze are apparent on the outer surface; more fully reduced <i>sandy</i> ware;</p> <p>1x soft, sandy fragment with frequent small inclusions (<0.05mm); its section is dark grey apart from a thin outer margin, which is a pale orange colour, and the outer surface, which is slightly redder, with a patch of light olive-green glaze apparent; the inner surface may be missing, the fragment itself is up to 7mm thick; more fully reduced <i>sandy</i> ware</p>	Probably 12 th – 14 th century
701	Drainage pipe trench	Pottery	2	Refitting fragments of factory-produced glazed buff-bodied earthenware hollowware vessel foot rim with press-moulded/engine-turned decoration	Late 18 th – early 20 th century
701	Drainage pipe trench	Fe	2	Square/rectangular section nails, one very long and heavily corroded, the other broken	Post-medieval
701	Drainage pipe trench	Cu alloy	2	Two parts of a tube formed from a sheet brought to a point at one end, presumably a dress fitting such as a tag used to cover the end of a piece of lace	Late medieval/early post-medieval
701	Drainage pipe trench	Stone	2	Fragments of roofing slate with evidence for peg holes. One local grey slate, the other purple Welsh slate, with lime mortar adhering to it	Post-medieval
701	Drainage pipe trench	Marine shell	2	Fragment of oyster shell	Not closely dateable
701	Drainage pipe trench	Glass	5	Very light turquoise bottle body and rim fragments	19 th century
701	Drainage pipe trench	Glass	3	Dark green bottle body and base fragments, base with edge of punt mark	19 th – 20 th century

Context	Location	Type	Qty	Description	Date range
701	Drainage pipe trench	Glass	2	Colourless bottle fragments: small body fragment and complete mouth with vulcanised rubber stopper marked 'MARSH & SONS BARROW REGISTERED TRADEMARK'	20 th century
701	Drainage pipe trench	Glass	1	Colourless bottle base with embossed lettering around base '...mm Q2...'	Late 20 th – early 21 st century
701	Drainage pipe trench	Metal	1	Elizabeth II 10 pence	1992
701	Drainage pipe trench	Animal bone	54	8 x cattle bone fragments (scapula, humerus, tibia, pelvis, femur), 28 x cattle-sized bone fragments (long bone, vertebra, rib), 15 x sheep/goat bone fragments (tibia, femur, metacarpal, long bone, vertebra, rib), 2 x pig bone fragments (calcaneus, femur), 1 x small gull (humerus)	Not closely dated
702	Drainage pipe trench	Pottery	1	1x everted rim fragment from a thin-walled vessel in a soft, uniform, pale orange sandy fabric, with frequent fine inclusions and a thin patch of reddish slip on the outer surface; the opening would be c160mm diameter; <i>sandy ware</i>	12 th – 14 th century
702	Drainage pipe trench	Glass	1	Dark brown bottle base ridged around rim of base	Late 20 th – early 21 st century

Appendix 3: Animal Bone Assessment

By Jane Richardson

The assemblage has been identified, quantified and described in its entirety in Table 1 below. In total, 78 animal bone fragments were retrieved, of which only eight were identified as diagnostic and non-repeatable bone zones. Given the elements represented, and the presence of some butchery marks, the material is likely to be associated with domestic consumption. Certainly, limb extremities and skull fragments, indicative of primary carcass processing were absent.

The bone fragments were typically well preserved, with few eroded surfaces. Some gnawing by dogs was noted indicating that deposition was not immediate. Butchery marks on cattle and pig bones indicate disjuncting.

Despite the small assemblage, cattle, sheep/goat, pig, roe deer and rabbit are represented. These indicate a varied diet, with roe deer suggesting high status consumption. For the main domesticates (cattle, sheep/goat and pig), limb bones are most commonly recorded, but ribs and vertebrae were also noted. Very limited age data (based on epiphyseal fusion) indicate sub-adult or older cattle and sub-adult pigs are represented. A single small gull bone was also identified.

Given the small assemblage size, the material is of limited significance, and no further analysis is recommended.

Table 1. Animal bones by context

Context	Species	Element	Quantity	Zones
101	Rabbit	Distal tibia (fused)	1	1
201	Sheep/go at	Mandible fragment (no teeth)	1	
	Cattle- size	Vertebra fragment	2	
	Cattle- size	Rib fragment	10	
401	Sheep- size	Long bone fragment	1	
501	Sheep/go at	Calcaneus fragment (gnawed)	1	1
	Cattle- size	Rib fragment	3	
	Sheep- size	Rib fragment	1	
601	Roe deer cf. Goose	Metatarsal fragment (gnawed)	1	1
	Sheep- size	Long bone fragment	1	
	Cattle- size	Long bone fragment	1	
701	Cattle	Scapula fragment	1	
	Cattle	Distal humerus (fused)	1	1
	Cattle	Humerus fragment (butchered - dismembered)	1	
	Cattle	Distal tibia (fused)	1	1
	Cattle	Tibia fragment	2	
	Cattle	Pelvis fragment	1	
	Cattle	Femur fragment	1	
	Cattle- size	Long bone fragment	9	
	Cattle- size	Vertebra fragment (1 butchered)	2	
	Cattle- size	Rib fragment	17	
	Sheep/go at	Tibia fragment	1	
	Sheep/go at	Femur fragment	1	
	Sheep/go at	Metacarpal fragment (gnawed)	1	
	Sheep- size	Long bone fragment	5	
	Sheep- size	Vertebra fragment	2	
	Sheep- size	Rib fragment	5	
	Pig	Calcaneus fragment (not fused)	1	1
	Pig	Femur barrel (butchered)	1	1
	Small gull	Proximal humerus (fused)	1	1