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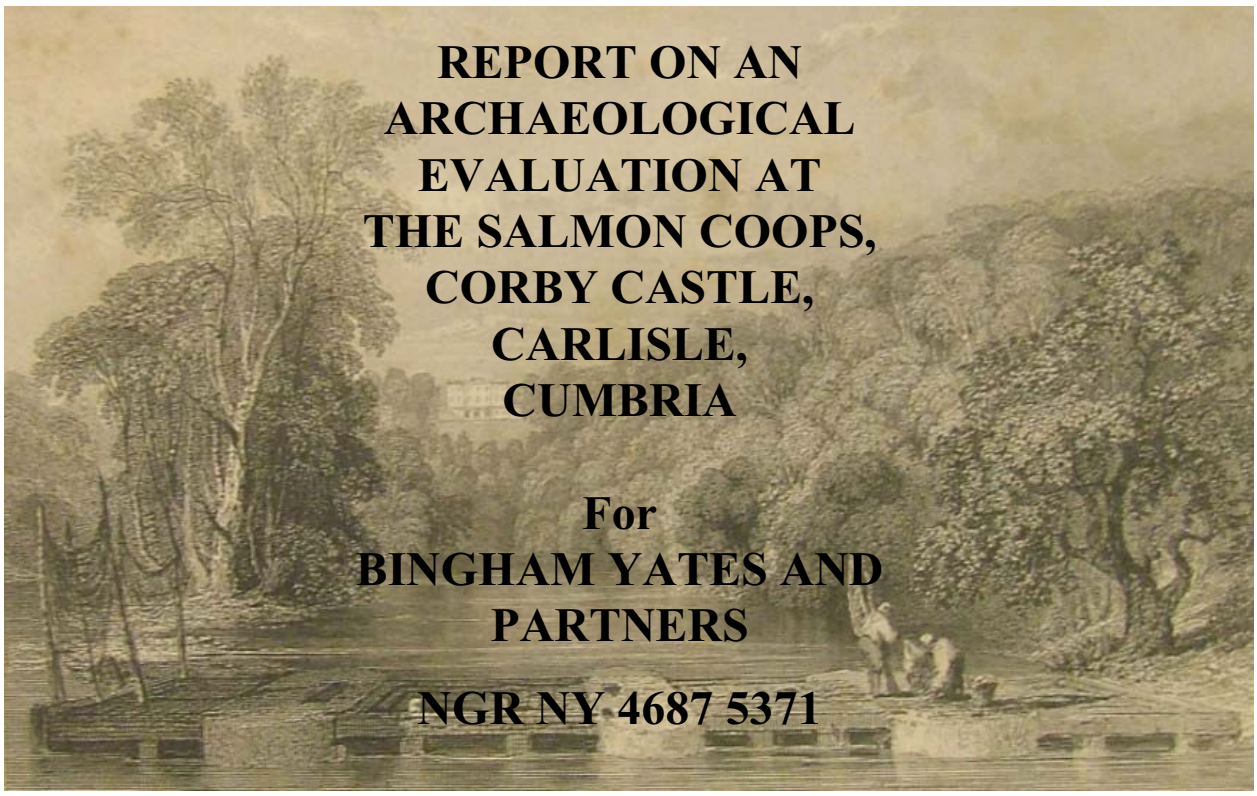

REPORT ON AN ARCHAEOLOGICAL EVALUATION AT THE SALMON COOPS, CORBY CASTLE, CARLISLE, CUMBRIA

For
BINGHAM YATES AND PARTNERS

NGR NY 4687 5371

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NON-TECHNICAL SUMMARY

In September 2005, North Pennines Archaeology Ltd undertook an archaeological evaluation at The Salmon Coops, Corby Castle, near Carlisle (NY 4687 5371). This work was requested following a land drainage consent application for repairs of the area due to flood damage. Because the Salmon Coops are a Grade I listed structure, English Heritage have requested, as a condition of listed building consent, that a scheme of archaeological work be undertaken before repairs commence. It is considered necessary to investigate the eyots to determine their structure and function with a view to possibly having them designated as a scheduled monument.

Initially, a desk-based assessment was carried out. The work involved the consultation of the County Historic Environment Record in Kendal, and the County Record Office and Library in Carlisle, in order to assess the existing information regarding the site's historic, archaeological, topographical and geographical context prior to the commencement of fieldwork. This involved the collection of all readily available information regarding the archaeological landscape of the study area, including the locations and settings of Scheduled Ancient Monuments, Listed Buildings, Parks and Gardens and other, non-designated archaeological remains. This was followed by a visual site inspection in the form of an annotated survey, and the excavation of a series of four test-pits in order to assess the presence/absence, nature, extent and state of preservation of the archaeological remains.

The desk-based research has shown that there was certainly a fishery and/or fishpool associated with Wetheral Priory in existence at Corby by the late eleventh century. It is probable that even at this early date a fixed sluice was in use. By the twelfth century, there was a fixed fishpool, tank and weir at a location closely corresponding to the present coops/eyot location. By the thirteenth century, the word 'coops' is used for the first time in relation to Corby, and in the fourteenth century there were weirs made of stone and timber at Corby.

At the start of the eighteenth century, Thomas Howard extensively remodelled the grounds of Corby Castle. A presently unlocated engraving dating to 1729 may have shown that Thomas Howard planted the northern eyot with trees as part of this remodelling. This suggests that the northern eyot dates to at least the late 1600's, and is probably earlier. The first located depiction of the coops and the northern eyot is on an estate map commissioned by Phillip Howard, and dated 1752. The southern eyot is depicted for the first time on a tithe map of 1843.

An annotated survey of the eyots has demonstrated that all the observed features on both the southern and northern eyots are man-made. In places, the eyots appear to be constructed on top of a natural sandstone island. It has been impossible to say whether the earliest phases of the northern and southern eyots are man-made, but the earliest *observed* deposits in the evaluation test pits were man-made make-up layers probably dating to no later than the very beginning of the eighteenth century or earlier.

The earliest structural features observed during this archaeological evaluation may be 17 east-west aligned timbers at the eastern extent of the southern eyot. Test Pits and measured sketches in Areas 1-5 all observed structural deposits. No secure dating evidence was obtained, but two broad phases of eyot-associated building could be observed. It is tempting to match the earliest structural phase of eyot-related building to the start of the eighteenth century, when Thomas Howard extensively remodelled the grounds of Corby Castle and, due to the similarity in some of the heavy tooled worked red sandstone, it is tempting to match the later phase of building on the northern eyot to the start of the nineteenth century when Corby Castle itself was extensively re-modelled for Henry Howard in 1812-14. In reality, however, we are most likely looking at

repeated builds and repairs that date broadly to the seventeenth, eighteenth, and nineteenth centuries, or possibly earlier.

The Corby Castle eyots may well be a monument without obvious parallel, and because of this, it is suggested that the eyots fall into the category of monument that have been scheduled in the past. The eyots are being gradually destroyed by erosion and vegetation growth. The proposed management of the monument and landscaping of the gravel banks is clearly necessary for the continued preservation of the Coops and the eyots, but should be archaeologically monitored. Any scheme of works that might impact on the eyots would need to be preceded by a full programme of archaeological work. Future work might also seek to further place the Salmon Coop structures into a fuller academic context. It is suggested that further funding might be found in order to bring this piece of work to publication perhaps as an article in the Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society.

ACKNOWLEDGEMENTS

North Pennines Archaeology Ltd (NPAL) would like to thank C J Walters of Bingham Yates and Partners for commissioning the project, and to Jim Clarke at the Corby Castle Estates for his assistance in facilitating the groundworks. NPAL would also like to thank Richard Newman, County Archaeologist, and Jo Mackintosh, Historic Environment Records Officer, both of Cumbria County Council Historic Environment Service, for their assistance on the project. Sue Stallibrass, English Heritage Science Advisor, North West Region, and Michael Heaton, ASI Heritage Consultants, are also thanked for their advice and recommendations.

The fieldwork was directed by Gareth Davies, assisted by Ken Denham and Richard Hewitt. The desk-based research was undertaken by Fiona Wooler and Gareth Davies. The surveying was undertaken by Richard Hewitt and Gareth Davies. The report and drawings were produced by Gareth Davies and were edited by Matthew Town and Juliet Reeves. The project was managed by Frank Giecco, Technical Director for NPAL.

1. INTRODUCTION AND LOCATION

1.1 Circumstances of the Project

1.1.1 In September 2005, North Pennines Archaeology Ltd was commissioned by Bingham Yates and Partners, Consulting Engineers, to undertake an archaeological field evaluation around The Salmon Coops, Corby Castle, near Carlisle, Cumbria. The focus for this evaluation was five small areas around the Salmon Coops and associated eyots within the River Eden. The areas were located over a northeast to southwest aligned stretch of river, roughly 600m long and centred on OS grid coordinate NY 4687 5371.

1.1.2 This work has been requested following a land drainage consent application for repairs of the area due to flood damage. Last winter (January 2005) a major flood damaged the newly replaced timber superstructure of the Salmon Coops and caused extensive damage to parts of the eyots as well as depositing gravel banks within the river channel crossed by the fish trap. Corby Castle estate wish to remove the gravel banks and use the material to repair the damage to the eyots, in addition they want to renew the timber superstructure to the fish trap.

1.1.3 Because the Salmon Coops are a Grade I listed structure, English Heritage have requested, as a condition of listed building consent, that a scheme of archaeological work be undertaken before repairs commence. **It is considered necessary to investigate the eyots to determine their structure and function with a view to possibly having them designated as a scheduled monument.** At English Heritage's request Cumbria County Council Historic Environment Service prepared a brief for an archaeological assessment and evaluation (Newman 2005).

1.1.4 This document sets out the results of a desk-based assessment of the existing archaeological resource, and an archaeological field evaluation in the form of four 2 by 2m test pits (Areas 1,3,4,5), measured sketches (Area 2), and an annotated survey (site visit) of the eyots, in the form of a short report.

1.1.5 The Salmon Coops are a monument of national significance and are purported to be one of the oldest still functioning river fish traps in the United Kingdom. It is popularly believed that they were originally built by the monks of Wetheral Priory, possibly in the 12th century from Roman building stone (Corby Estates *pers comm.*). It is likely that some of the existing fabric is 16th century in date (Newman 2005).

1.1.6 The northern eyot was most likely in existence when the fish trap was first constructed. Pitched stone forming a capping to part if not all of the eyot indicates that it is at least a man enhanced gravel bank in origin. It is possible that it is an entirely artificial island (Newman 2005). The upstream and smaller southern eyot appears to be of a similar nature and origin. Between the two eyots is a ford formed of a pitched stone surface on the river bed (Newman 2005).

2. METHODOLOGY

2.1 Project Design

2.1.1 A project design was prepared in response to a brief issued by Cumbria County Council Historic Environment Service (CCCHES) for an archaeological field evaluation (Newman 2005). This included a detailed specification of works to be carried out, which consisted of a rapid desk-based assessment, the excavation of a series of hand-dug test pits, and a programme of post excavation and reporting.

2.2 Desk-Based Assessment

2.2.1 The desk based assessment of the existing resource consisted of the following:

- a visual site inspection and interpretation in order to assess the survival, nature, extent and potential significance of upstanding archaeological remains on the site;
- a consultation of the Cumbria County Council Historic Environment Record, Kendal. This was in order to obtain information on the location of all designated sites and areas of historic interest and any other, non-designated sites within the study area, which included monuments, findspots, Listed Buildings and Conservation Areas;
- an electronic enquiry of English Heritage's National Monuments Record and the website of the Archaeology Data Service. This was in order to enhance and augment the data obtained from a search of the appropriate repositories;
- further documentary study by Fiona Wooler (NPA Ltd) at the County Record Office, Carlisle, which involved the collection of all relevant historical maps and documents including surveys, Tithe and Enclosure Maps, Acts of Parliament, early Ordnance Survey maps, photographs and newspaper cuttings;
- a consultation of relevant archival material held by the Corby Castle Estate;
- a consideration of general works on fish traps, undertaken in consultation with Michael Heaton, an expert in medieval/post-medieval fish traps.

2.2.2 The desk-based assessment was undertaken in accordance with the Institute of Field Archaeologists Standards and Guidance for Desk-Based Assessments (IFA 1994a).

2.3 Archaeological Evaluation

2.3.1 The field evaluation consisted of a site visit, followed by the excavation of a series of test pits, supplemented by measured sketches and an annotated survey drawn in order to provide a picture of key features detailing zones of relevant importance against known development proposals.

2.3.2 In summary, the main objectives of the evaluation were:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they were observed;
- to establish the character of those features in terms of date, function and sequence;

- to recover artefactual material, especially that useful for dating purposes;
- to recover palaeoenvironmental material where it survived in order to understand the site and landscape formation processes.

2.3.3 Field evaluation and recording were undertaken in the following areas, as set out in the Project Design (Davies 2005).

- Area 1 – northern tip of the southernmost (upstream) eyot (Fig 9)
- Area 2 – the ford between the eyots (Fig 10)
- Area 3 – southern tip of the northernmost (downstream) eyot (Fig 11)
- Area 4 – central area of upstream eyot (Fig 12)
- Area 5 – northern tip of downstream eyot (Fig 13)

2.3.4 *Area 1:* one 2x2m test pit was excavated to the top of the pitched stone capping, planned and photographed. The eyot edges were examined for revetments, photographed and a measured sketch was drawn.

2.3.5 *Area 2:* pitched stone work forming the surface of the river bed was recorded by measured sketch.

2.3.6 *Area 3:* one 2x2m test pit was excavated to a depth of 0.5m, planned and photographed.

2.3.7 *Area 4:* one 2x2m test pit was excavated to the top of the pitched stone capping. The area's edges were examined for revetments, photographed and a measured sketch was drawn. The extent of existing erosion damage was accurately planned and informative exposed sections were recorded photographically and as accurate section drawings.

2.3.8 *Area 5:* one 2x2m test pit was excavated to the top of the pitched stone capping. The area's edges were examined for revetments, photographed and a measured sketch was drawn.

2.3.9 Each test pit was hand-dug and hand-cleaned. All features were investigated and recorded according to the North Pennines Archaeology Ltd standard procedure as set out in the excavation manual (Giecco 2001).

2.3.10 Photography was undertaken using Canon EOS 100 and EOS 300V Single Lens Reflex (SLR) cameras. A photographic record was made using digital photography, 200 ISO Black and White, and Colour Slide film.

2.3.11 All work was undertaken in accordance with the Institute of Field Archaeologists Standards and Guidance for Archaeological Field Evaluations (IFA 1994b).

2.4 Project Archive

2.4.1 The full archive has been produced to a professional standard in accordance with the current English Heritage guidelines set out in the *Management of Archaeological Projects* (English Heritage, 2nd Ed. 1991). The archive will be deposited within an appropriate repository, and a copy of the report given to the County Historic Environment Record, where viewing will be available on request. The archive can be accessed under the unique project identifier NPA 05 CCSC-A.

3. BACKGROUND

3.1 Location, Topography and Geology

3.1.1 The villages of Great Corby and Wetheral lie c7km east of the centre of Carlisle, on the eastern and western banks of the River Eden respectively, at the extreme eastern edge of the coastal plain of northwest Cumbria.

3.1.2 The River Eden, orientated south east to north west, is a major feature running through the eastern part of Cumbria. The river valley is bounded by the North Pennines to the east and the Lake District to the west, providing a watershed of some 2,280 square kilometres of differing geology and landscape (www.en.wikipedia.org). The source of the river is near the North Yorkshire border some 670m above sea level, where a number of streams join together. As the river winds northwards it picks up tributaries, and is joined by the Rivers Lowther and Eamont. As the river passes Great Corby and Wetheral, its course is framed by a steep-sided sandstone gorge. The river then turns north-west towards the flood plain of Carlisle, before meandering onwards through the lessened gradient of the remaining Eden valley, and finally emptying into the Solway Firth (ibid.).

3.1.3 Parson and White (1829, 385) state that: '*the river Eden abounds with salmon, trout and eels; and several smaller streams have excellent trout. Red free-stone abounds here*'.

3.1.4 Corby Castle (HER LB 20138), now visible as an early 19th century house, is situated at the southern extent of the present day built up area of Great Corby, above the eastern bank of the River Eden and facing the village of Wetheral. Clearly the setting of Corby Castle was of key importance for its medieval and post-medieval development. The topography and setting of Corby Castle was eloquently described by its owner, Mr. Philip Howard, in 1733;

"*…the house itself stands upon the (sic) promontotory of a rock, 140 foot high, and is as it were, suspended over the River Eden; which with a clear and rapid current, at least 300 feet in width and half a mile in length, comes fore right upon it, and seems to run quite underneath the hill, but immediately showing it self again, continues its course, in sight, near a mile below, which together with the grotesque and uncommon yet beautifull grounds about it, gives the appearance of a finish'd landskip made up of all the scenery of nature, and capable of furnishing a composition of images, for the variety of picture and prospect.*

Within the compass of one view, it presents you with a collection of all the great and agreeable objects of the country; as rivers, woods, fields, rocks, hills and vallies, besides running springs, and falling waters, which as they are ever in motion, doe very much enliven the prospect, and gratifie at once both the ear and eye. Such a variety and assemblage of rural beaties in one prospect, and as it were in one point of view, as is very rare and uncommon, is yet, however, Corby's peculiar distinction; in which it stand[s] singular and without rival" (Prevost 1962, 329).

3.1.5 The Salmon Coops and associated eyots represent the eastern boundary of the designated Historic Park and Garden of the Corby Castle estate (GD 1653, see Fig 3), and are a prominent feature of the view south from Corby Castle.

3.1.6 The solid geology of the River Eden area around Corby consists of Triassic Bunter Sandstone which varies from coarse grained to fine grained, and contains some pebble beds (Dunham *et al* 1969). Throughout the area around the River Eden, well-drained loams of the Wick Association overlie the solid geology (Hodgkinson *et al* 2000).

3.2 *Context* by Michael Heaton *(ASI Heritage Consultants).*

3.2.1 The importance of fish and fishing to pre-modern economies in the UK and abroad is well-understood, having been the subject of many published archaeological and historical works. Fishing rights are a 'profit a prendre' in English Law and have been so since the Norman Conquest at least: all historic estate records detail allowances and returns made against fishing rights and the tendency of the right to be leased and assigned makes analysis of the subject very complex. Being relatively bone-free, salmonids have been the preferred fish for eating purposes. Though Salmon are woefully rare in most UK rivers now and seem to have been in decline since the Industrial Revolution with a catastrophic fall off in the late 1970s associated with the introduction of Organophosphate and pyrethin-based insecticides and pesticides (which includes anti-dandruff shampoo), archaeological evidence indicates they have been abundant throughout the rest of the post-glacial period.

3.2.2 'Coops', as a term for a fish trap, appears to be specific – possibly unique – to Cumbria/Cumberland. The term is used to describe any form of fish trap.

3.2.3 Fish traps are still set on UK rivers, mainly in the estuaries. As most fishing rights above tidal reaches are held by recreational angling interests, traps are now rarely found upstream. However, as the Carlisle Angling Association forbids their use, there must be a lingering practise in the area. They are still used widely throughout America, whose native people retain legal right to set traps in rivers. In Europe, they are less common, now, because of the impedence they caused to river traffic: the most commonly occurring form uses a 'V' shaped weir (pointing downstream) with a basket or net at the apex, over which the fish pass during spates or (in the lower reaches) rising tides, falling back in lower water to be trapped in the baskets. They are suited particularly to the catching of migratory salmonids, which run upstream during spates in large numbers at specific times of the years particular to each river. Indigenous Americans also 'beat' the fish back downstream into the baskets, so this may also have been practiced in Europe. The weirs spanned the entire river channel, or at least the deeper braids, making boat passage impossible, and there are innumerable examples of medieval and post-medieval ordinances forbidding the setting of weirs across rivers. The most common form – and they are the most common archaeological manifestation – comprised rows of closely spaced timber stakes, but in upland rivers with rock beds the weirs were formed of rubble or masonry – 'croys' in Scotland and northern England. The archaeological population of these structures in the UK is certainly in the thousands and, as they are frequently exposed by spates or abnormal tides, probably in the tens of thousands. They are recorded by nearly all SMRs and the coastal counties each have records of 100's of them. The maritime Welsh counties seem to be particularly well-blessed.

3.2.4 Descriptions of the Netherby fish 'coop' suggests it was of this sort, constructed in stone as a solid wall across the river, with a pair of traps in the middle. Hence the protests of the Buccleugh tenants at the effect of the weir in preventing 'spawn' (presumably grilse and salmon as opposed to smolts, which move downstream) moving upstream.

3.3 Historical Background

3.3.1 *Introduction:* this historical background is compiled mostly from secondary sources, and is intended only as a brief summary of historical developments around the study area.

3.3.2 *Prehistoric*: no prehistoric material was located within a 1km radius of the stretch of the River Eden around the Corby Castle Salmon Coops.

3.3.3 *Roman*: during the Roman period there was a heavy military presence in north western Cumbria. Hadrian's Wall, perhaps begun in 122 AD, was built to define the northern limit of the Roman Empire (Breeze and Dobson 1976). The Corby-Wetheral area falls within this broad corridor of activity.

3.3.4 A search of the Cumbria HER shows that two Roman sites are located within a 1km radius of the Salmon Coops. At the western extent of the study area, a stray find of a coin of Antoninus Pius (2nd century AD) has been discovered (see Appendix 1). On the western bank of the River Eden, opposite the Salmon Coops, Roman inscriptions have been discovered immediately south of Wetheral Caves (HER 514, SAM 291b). The inscriptions refer to the 20th legion *Valeria Victrix*, and the HER suggests that they were probably cut by Roman soldiers quarrying stone for Hadrian's Wall. The presence of the Wetheral Cave inscriptions has probably encouraged the popular, though unsubstantiated, tradition that the coops were built by monks using Roman material (Corby Castle Estates, *pers comm.*).

3.3.5 *Early Medieval*: evidence for Early Medieval activity in north Cumbria is extremely limited, the end of the Roman economy depriving the archaeologist of diagnostic artefactual evidence (Higham 1986). Despite this, environmental studies focussing on pollen remains have indicated a continuing arable economy in Cumbria during the Early Medieval period (Hodgkinson et al 2000).

3.3.6 The place-names of Corby (Anglo-Scandinavian for *farmstead of Kori*) and Wetheral (Old English for *land where sheep are kept*) may have originated in the Early Medieval period, and potentially offer a window onto the influences, both Scandinavian and English, upon the form of Early Medieval settlements in the area (Mills 2003).

3.3.7 The only early medieval find from within a 1km radius of the Salmon Coops is a fine silver Saxon strap end (belt ornament), possibly dating to the 9th century (see Appendix 1).

3.3.8 *Later Medieval*: in the 11th century the political situation in Cumbria was volatile, with the emergent kingdom of Strathclyde to the north and the growing power of England to the south competing for political control (Kirkby 1962). Much of the modern county of Cumbria remained outside Norman control (thus not being included in Domesday Book of 1086) until 1092 when William II (William Rufus) marched north to Carlisle and drove out one Dolfin.

3.3.9 From the Later Medieval period onwards, the occupation and settlement of the Corby-Wetheral area becomes much more visible through a combination of standing building, documentary, and, later, cartographic evidence. The quality of the medieval documentary evidence reflects the affluence of Wetheral at this time. In addition, there are also undocumented and less well understood medieval sites in the area such as a moated site at Harbour Wood (HER 12793, see Fig. 2).

3.3.10 The entry for the parish of Wetheral in '*The History and Antiquities of Cumberland and Westmoreland*' (Nicolson and Burn 1777, 330) states that the parish had several manors, suggesting a thriving medieval community of some significance from quite an early date. There are a number of listed buildings in the Wetheral area of Medieval date; these mostly relate to the Benedictine priory of Wetheral, founded in or around 1088 by Ranulph de Meschiens (though many of the observable remains of the priory date to the 14th century**;** see Appendix 2). Ranulph bequeathed the church, mill, wood, fishery*,* the chapel of Warthewick and two bovates of land in Corkeby (Corby) to the abbey of St. Mary's, York. An early charter of King William Rufus (1087-1100) confirms that the abbey had indeed been gifted '*the cell of St. Constantine of Wetheral and the manor there, with the chapel of Warthwyke, and the pond and fishery and mill*' (*ibid*). Nicolson and Burn (1777, 330) go on to note that Ranulph de Meschiens also granted to the monks the water of the Eden towards Corby and the river bank on the side of the water next to Corby '…*wherein their fishpool* [*stagnum firmatum*] *was strengthened and secured*'. This description corresponds closely to the present coops/eyot location, and implies a well-established fishery was present in the area prior to 1088. There are also a great number of Medieval references to the fisheries in the Corby-Wetheral area, to the extent where Prescott *et al* (1897, 25) state that: '*the number and importance of these charters shews the value which was attached to this fishery at that point*'.

3.3.11 Nevertheless, there is no evidence to suggest that the location or style of this fishery corresponds to the present coops/eyot location, or that they are referring to a built structure. In addition, there is also some disagreement over exactly what the special charter granted by Ranulph de Meschiens says. In '*The Register of the Priory of Wetheral*' (Prescott (ed.) 1897, 24) the medieval Latin *stagnum firmartum* has been interpreted as meaning '*the fish pool and sluice*'. The description of the location of the fish pool and sluice is consistent with that of Nicolson and Burn (1777, 330) as being below the monastery (presumably Wetheral Priory) *fixed* in the opposite bank of Corkeby.

3.3.12 However, the use of the word *fixed* suggests that Prescott *et al* are interpreting the medieval fish pool and references as a built structure. What sort of structure they have in mind is less clear, but they go on to state that; "*with the sluice and the 'coffins', or coops, placed there, they* [the monks] *obtained the salmon which formed such a valuable part of the food of the priory*" (*op.* cit). The reference to 'coops' dating potentially to the 11th century is intriguing, but it appears that this interpretation has been gleaned from words found in late 13 century charters (see below).

3.3.13 In 1131-2, Henry I confirmed again to the monks the '*sluice and pool in the land of Chorkeby*' (Graham 1914, 238). A charter written between 1157-67 shows that Osbert, son of Odard, Lord of Corkeby, granted the monks the whole of the fishing in the Eden which belonged to the vill of Corkeby as far as Munchwath (Prescott (ed.) 1897, 24).

This included both sides of the River Eden (Graham 1914, 239), and implies that the fishing rights were becoming an important feature of the priory at Wetheral.

3.3.14 The use of the river was not without dispute: around 1175, Osbert's brother, William, was forced to quit claim to St. Constantine's Cells. He granted that: '*neither he nor his heirs shall hinder the monks to fortify their fish pool, tank or weir (stagnum suum) upon the river bank of Corkeby*' (Nicolson and Burn 1777, 330) and that '*when he or his heirs make the milldam at Warwick* [c.1km upstream] *they will not make it so as to stop the fish from going up the river to his very dear brothers*' *the monks' traps*' (Anon 1924, 368). William's son Robert was also required to confirm these grants (Prescott (ed.) 1897, 24). It is evident that the monks of Wetheral Priory were keen to ensure that fish were not taken from the river before they reached the coops. A further deed of 1208 permits the monks of Wetheral to '*get stone and sticks to repair the dam of their fishgarth*' (Anon 1924, 368). This sentiment is reflected in later charters (see below).

3.3.15 William de Corkeby's charter is important in that it mentions both a *tank* and a *weir* in relation to a described location that matches closely the present coops/eyot location. However, there is no description of how the fish pool complex might have looked or how it would have been constructed. Winchester (1987, 108) suggests that the 'traps' were on the Eden at a place called Wetheral Mill (possibly further north than the present coops/eyot location), and that the traps were wicker boxes, known as 'coffins' or 'coops', which were placed in a sluice. It is clear that Winchester has in mind a wooden structure, stretching across the water, with a wicker basket in the centre and not a fixed sandstone sluice; however, this could be an *additional* structure to that mentioned previously in the location of the study area. The earliest appearance of the word 'coffin' or 'coops' (probably both translating as *basket*) in relation to Chorkeby appears to be in the Assize Rolls of 1278 (Prescott (ed.) 1897, 7). It appears that later commentators such as Prescott *et al*. (1897), and Winchester (1987) have assumed that 'coffins' or 'coops' would also have been the chosen method of catching all of the Wetheral Priory salmon in the 11th or 12th centuries. This need not be the case, and it is equally possible the medieval precursor of the current Salmon Coops was of a different form to that thought to have been in place at Wetheral Mill, and which, in 1208, appears to have included a dam built in timber and stone.

3.3.16 In the 13th or 14th century, Corby Castle (HER LB20138) was built, originally as a pele (defensive) tower guarding a ford across the River Eden, probably by the de Salkeld family. Little is known of this structure and all that is now visible is the thickness of the walls and the spiral staircase (Pevsner, 1967, 110). An indenture dated 5th August 1342 by Richard de Salkeld, Lord of Corkeby, again describes the fishery in terms nearly identical in content to earlier charters:

"...Richard de Salkeld lord of Corkby by his charter grants and confirms to the monks of Wetheral their fishgarth or weir, with liberty to construct, fortify and repair the same, upon the bank as far as a place called Monkwath towards the Brigend, and to make sluices and trunks in the same, and freely dispose of the salmon and other fish therein taken, and also to take stone and branches of trees for making the said wears; and grant to them the whole water of Eden, and the whole fishery, from the upper part of the said wear towards Corkeby unto the said place called Monkwath' (Nicolson and Burn 1777, 330).

3.3.17 his indenture of Richard de Salkeld not only describes a location that includes the present coops/eyot area, it also describes *weirs* made from both stone and branches. This evidence suggests that there may have been reasonably sturdy weirs of some kind at the present coops/eyot location by the mid 14th century. However, there are a number of caveats. Firstly, the 13th century deed that the 'stone and sticks' notion may derive from apparently refers 'dam repair' as opposed to the existence of substantial 'coop' structures (see 3.2.15 above), though clearly stone was an important part of their construction. Secondly, as Winchester implies for the 12th century, it is possible that we are dealing with a largely wooden and wicker fish trap building tradition at this time. These sentiments are reiterated by Summerson (1993, 334) in a discussion of a medieval fishgarth in Carlisle. Summerson describes a weir made of stakes which could be moved up and down within the bounds of the fishery and which stretched across the entire width of the River Eden apart from a small opening. Nets were attached to stakes and the citizens were entitled to repair when they needed mending (*ibid*). Summerson states that *'…there was a considerable demand for fish in Carlisle…in particular for its large ecclesiastical population*' (*ibid*). In the light of the evidence from medieval Carlisle, it seems more than possible that even the prestigious fishgarth of Wetheral priory could have been a moveable structure. It must be stressed that the descriptions of any of the medieval documents cannot necessarily be matched to the actual piers and abutments of the present Corby Castle Salmon Coops, they merely imply a continuity of land use in the broad location. In addition, there is no mention of any eyots.

3.3.18 *Post Medieval and Modern*: by 1541, the priory of Wetheral had been dissolved. When King Henry VIII, acting with '*unusual generosity*' founded the Cathedral church of Carlisle out of the dissolved priories, the endowments of Wetheral, including its fishing rights on the river Eden, went to Carlisle Cathedral (Anon 1957, 42). The manor of Wetheral remained in the hands of the dean and chapter of Carlisle until the mid seventeeth century, when it was sold by Cromwell's commissioners to Richard Banks of Cockermouth. One of the retained customs of the manor, however, was that each of the tenants of Wetheral were required to '*carry wood for the fishgarth and…repair the weir*' (Bulmer 1901, 297). This reference seems to imply that *a* fish trap in the Wetheral-Corby area was fixed and stationary by this time, at least a hundred years before the first cartographic depiction of the Salmon Coops in 1752 (Fig 5).

3.3.19 In a number of purchases dated either 1606 or 1611 (Pevsner 1967, 110) and 1624, Corby Castle passed from the de Salkeld family into the hands of the Howard family, and from this point in time the local wealth shifts from Wetheral on the west bank of the River Eden, to Corby Castle on the east bank; this power shift is reflected in the documentary and architectural evidence. A newspaper dated between 1930 and 1939 apparently refers to the Household Books of Lord William Howard, who acquired Corby Castle in 1606/1611, and cites an entry of April 12th 1625: "*To Hetherington for fitting lij.* [?] *coffins for lij.* [?] *salmon pyes going to London*" (McIntire, 1930-9). Corby Castle Estates could not add any information; this may refer to the *other* area (Cf Winchester 1987), as it also states that *"..this pool survived until 1879 when it was done away with as the mill no longer paid for working*" (McIntire, 1930-9). Seeing as the 'mill' was traditionally situated to the north at Warwick Bridge, it may be that the fishery that went into disuse was situated there.

3.3.20 After the Civil War, the Howards may have rebuilt the pele tower (Nares 1954, 32), and by the last third of the 17th century, the family had added an L-shaped long range to the pele tower. A 1793 drawing shows that this range was three storeys high with all windows pedimented (Nares 1954, 92, Pevsner, 1967, 110). The castle was further re-modelled in 1812-1814 by Peter Nicholson for Henry Howard who made the house a rectangular shape and gave it its neo-classical facades of red sandstone (Pevsner 1967, 110).

3.3.21 The present grounds of Corby Castle are adorned by a number of structures and grottos (HER GD 1653) and were laid out by Thomas Howard (d.1740) between 1709-39. A number of the structures are now important listed buildings: the gate lodge with a Tuscan temple frontage, a sundial dated 1658, a 17th/18th century dovecote with a temple frontage, a cascade and summer house are all Grade I listed structures. Statues of the giant Polyphemus and St Constantine are now also listed (see Appendix 2).

3.3.22 Contemporary references to the Howard family improving and/or remodelling the Salmon Coops during either of the periods 1709-39 or 1812-14 are absent from the documentary record, although a 1752 map commissioned by Philip Howard clearly shows that the Coops were a noted part of the estate (Fig 5). The 1752 map is also certainly the first time that evidence for the existence of an eyot is presented. An article in Country Life Magazine, already referred to above (Nares 1954, 34), states that '*the long narrow island in the Eden is not due to Thomas Howard… although he made use of it*'. Nares attributes the construction of the Salmon Coops to the monks of Wetheral Priory, but then states that '*the island plays an effective part in Thomas Howard's landscape…he planted it from end to end with trees which are depicted only a few feet high in the engraving of 1729, but which have now grown to such a height*' (Nares 1954, 34). This rather throwaway comment is potentially important for four reasons. Firstly, the 'island' is mentioned in the singular, implying that in 1954 no distinction could be made between a northern and a southern eyot. Secondly, an unlocated engraving of 1729 that depicts the 'island' is mentioned. This engraving, if recovered, would push the earliest depiction of the eyots back 23 years. Thirdly, this article suggests that at least the northern eyot was in existence before the time of Thomas Howard and so, if we trust this article, the existence of the eyot can probably be pushed back into the later 1600's. Fourthly, this article suggests that Thomas Howard may have altered the northern eyot in some way, as he certainly planted it with trees. These ideas will be considered more fully after the site visit and evaluation results have been presented.

3.3.23 Soon after the final phase of major remodelling of the house/grounds at Corby Castle, the Corby Castle entry in '*A History, Gazetteer and Directory of Cumberland and Westmoreland*' appears to mention the northern eyot and the salmon coops. It states that; *'…concealed by umbrageous foliage is a singular colossal statue, of unknown origin, standing in a romantic spot beneath a lofty rock, nearly opposite to which are erected wears for catching salmon, and affording an easy communication with a long wooded island in the middle of the river. The walks are continued for a considerable distance up the Eden, and afford a great variety of rich prospects and pleasing solitudes*' (Parson and White 1829, 389)'.

3.3.24 Bulmer and Co.'s '*History and Directory of Cumberland*' (Bulmer 1901, 297) details a number of the features of the Corby estate. Perhaps surprisingly, Bulmer makes no mention of the contemporary condition or ownership of the Corby Salmon Coops even

though an 1899 photograph shows that they were in full working order at this point in time (see Plate 4).

3.3.25 In 1994 the Howard family sold Corby Castle, and since 1997 the house has been used as a private residence.

4. ASSESSMENT RESULTS

4.1 Introduction

4.1.1 The assessment results are based on primary documents, most notably maps and other depictions, and on the secondary sources used in *Section 3.2*. The results are presented according to the archive from which they were consulted. There is only one HER record which is directly affected by the proposed management plan, and extra information was gathered for 21 HER records located in an immediate study area, defined as a 1km radius centred on the site. A full list of the sites identified by the assessment is given in *Section 4.2*. A list of 40 historic buildings is also provided in that section.

4.2 Historic Environment Record (HER)

4.2.1 ***HER:*** there were 21 HER records within the study area, which is defined as a 1km radius around the site (Fig 2). Wetheral Caves/St. Constantine's Cells (HER 411), which are Medieval cave dwellings and Roman Quarries/inscriptions, are Scheduled as SAM 291 (a and b).

4.2.2 Only the Salmon Coops (LB20146) would be directly affected by the removal of the recently accumulated gravel banks to repair the damage to the eyots, and the proposed renewal of the timber superstructure to the fish trap. The Cumbria HER suggests that the Salmon Coops are of 12th century date with later repairs. The entry is listed below:

HER LB20146: **Salmon coops to South of Corby Castle** (formerly listed under Byre Hill Farm), Great Corby

"Salmon coops. C12, with later repairs, for Wetheral Priory. Structure similar to that of a bridge with 3 splayed cutwater piers of dressed red sandstone and 2 abutments built into the bed and bank of the River Eden, between the east bank and Monk's Island, where the river flows in 2 channels (it is thought that the monks created the east channel especially to catch salmon, although it could be a natural feature). Between the piers and abutments are a series of wooden pansand sluice-gates, intended for catching salmon going upstream to spawn, which can be cleared by means of trap-doors above; and a cat-walk extending over the piers as a bridge. It is difficult to date any part of this structure, but it could well retain features of a C12 date: documents relating to the Priory include references to the necessary Royal licenses, requires for the strict control of such a structure. After the dissolution, the coops passed to the Howard family of Corby Castle, who still own them and use them occasionally. There is a wooden crane on the bank, which was probably intended for lifting the pens in and out of the water. Illustrated; Country Life, 7 January 1954, p.34.2"

4.2.3 The remaining sites are summarised in Table 1 (Appendix 1).

4.2.4 ***Listed Buildings:*** the listed building records shows two buildings within a 1km radius of the site. The buildings are summarised in Table 2 (Appendix 2).

4.3 Cumbria Record Office (Carlisle)

4.3.1 The Cumbria Record Office in Carlisle (CRO(C)) was consulted to collate maps for regression analysis of the study area. Information from primary and secondary sources, including archaeological or historical journals, has been incorporated into the historic background (*Section 3.2*).

4.4 Cartographic Sources

4.4.1 As part of the documentary search at the Cumbria Record Office in Carlisle (CRO(C)) and Carlisle Library (CL), an in-depth scan of the early maps for the Corby Castle Salmon Coops was undertaken. A cartographic date range of between 1752 and 1990 was obtained. The area will now be discussed with reference to these early sources, noting any changes to the Salmon Coops and associated eyots area within this period.

4.4.2 ***1752 Estate Map (CL):*** the earliest available source is an estate map dated 1752 (Fig 5). The map is entitled 'Map of Corby Park belonging to Philip Howard' and was made by Mr. G. Smith. Other secondary sources and the Cumbria HER also refer to various works undertaken on the Corby Estate under the patronage of Philip Howard. This map serves as a perambulation and quantification commissioned by the Howard estates, and is therefore particularly useful in assessing what developments had occurred by 1752. The Salmon Coops area is clearly shown and labelled 'Coops', although the map does not detail the individual stone piers of the Coops. The river Eden is clearly divided into two channels with the Coops astride the eastern channel. The main difference between this depiction and the present coops/eyots area is the apparent absence of a southern eyot, or a pitched stone causeway (Area 2). It is possible that the mapmaker chose not to illustrate the southern eyot, but from this evidence it seems more likely that the southern eyot was constructed after 1752.

4.4.3 ***Tithe Apportionment Map for Corby, 1843 (CRO(C) DHC 3/75):*** the second available map is the Tithe Apportionment Map of 1843 (Fig 6), which illustrates the Salmon Coops area in more detail than the 1752 map. The Salmon Coops area is clearly shown and labelled 'Coops'. The map also shows the individual stone piers and timber sluice gates of the Coops themselves. The river Eden is clearly divided into two channels with the Coops astride the eastern channel. The main difference from the 1752 map is that both a northern and southern eyot area now depicted. The size and shape of the eyots is not dissimilar from the present eyots, including the area relating to the causeway (Area 2). No pitched stones are depicted in the possible causeway area, and it might be assumed that the pitched stones were not in existence in 1843. The coops are shown adjoining the southern eyot. The northern eyot depicted on this map may extend further north than the present eyot, although the scale is not completely clear.

4.4.4 ***2nd Edition Ordnance Survey Map, 1901 – 25" to 1 mile:*** unfortunately, no 1st Edition Ordnance Survey Map (25" to 1 mile) for the Salmon Coops area is held in either the Carlisle Record Office or Carlisle Library. Corby Castle estates also do not hold a copy of the document. The Second Edition Ordnance Survey map (Fig 7) shows the Salmon Coops area in detail. The area is still labelled as 'Coops', with the addition of the label 'Weir', where the current weir sits. Steps down to the Salmon Coops are also depicted clearly for the first time. Pitched stones are depicted in the causeway area (Area

2), but otherwise, the layout of the Coops and the eyots is largely similar to the 1843 tithe map and the present-day eyots.

4.4.5 ***Ordnance Survey Map, 1970 – 6" to 1 mile:*** the 1970 edition of the 6" Ordnance Survey map (Fig 8) depicts the Salmon Coops and associated eyots much as they were shown in the 1901 OS map, suggesting that little alteration had occurred to the area during the 20th century.

4.5 Aerial Photography

4.5.1 No aerial photographs directly relating to the Salmon Coops and associated eyots area exist. To the south and west of the Salmon Coops, a number of archaeological sites have been catalogued through the examination of aerial photography. These sites (listed in Appendix 1) lie some distance from the Salmon Coops area and will not be impinged upon by the management scheme for the site.

4.6 Archaeological Investigations

4.6.1 No archaeological investigations have previously been undertaken in the Salmon Coops and associated eyots area. In 2005, a comprehensive survey of the eyots and Coops was undertaken by Bingham Yates and Partners; this forms the base map for Figures 4 and 14. An electronic enquiry was also made of English Heritage's National Monuments Record and the website of the Archaeology Data Service did not list any works not discussed in the background section above.

4.7 Other Depictions

4.7.1 As part of the documentary search at the Cumbria Record Office in Carlisle (CRO(C)) and Carlisle Library (CL), an in-depth scan of any other depictions of the Salmon Coops area was undertaken. Five depictions of the Salmon Coops were located and a date range of between 1832 and 1954 was obtained. The area will now be discussed with reference to these early sources, noting any changes to the Salmon Coops and associated eyots area within this period.

4.7.2 ***1832 Depiction of Salmon Coops, engraving by Anon (CL)****:* the earliest available source is an engraving dated 1832 held in Carlisle Library (Plate 1). Corby Castle, the northern eyot and the eastern channel of the River Eden are depicted in the background. The northern eyot is already wooded as it is today. In the foreground, the three stone piers of the Coops are depicted with its timber sluice superstructure. The depiction is consistent with the 1843 tithe map, with one crucial difference, there appears to be no depiction of a weir or a causeway at the northern extent of a southern eyot; this perhaps implies that the southern eyot was not in existence at this time. However, the water level depicted on the engraving is high, which may mean any causeway or a weir would be submerged. If the southern eyot, causeway and weir were not in existence at the time of this 1832 engraving, it might suggest that they were created sometime between 1832 and their depiction on the 1843 Tithe Map.

4.7.3 ***1832 Depiction of Salmon Coops, engraving by Anon (CL):*** this anonymous engraving (Plate 2) is a copy of the original (Plate 1, see above), but is also dated 1832. The scene is identical to that of the original, with the exception of the people depicted. In the

original engraving, two people are shown, perhaps putting fish into a net. In the copied engraving, five people (both men and women) are depicted apparently engaged in fishing on top of the Coops in a 'gentrified' manner.

4.7.4 ***1862 'The Salmon Coops on the River Eden at Corby Castle' by Sam Bough (oil on canvas):*** the picture of Sam Boughs 1862 painting (Plate 3) was taken from 'The Principal Contents of Corby Castle, Cumbria' (1994, sales catalogue). The depiction is not extremely clear, but appears to show the coops in a similar fashion to the previous depictions, the main significant difference is that to the left of the painting, the weir and causeway may be depicted.

4.7.5 ***1899 'The Salmon Coops, Corby Woods' titled photograph by Anon:*** a low water level at the time of the photograph demonstrates that the coops, timber superstructure, weir and causeway were much as they are today (Plate 4). Combined with the cartographic evidence, this suggests that the only alterations during the 20th century were to the timber superstructure of the coops.

4.7.6 ***1954 Photograph of the Salmon Coops by 'Country Life' Magazine:*** this is the photograph mentioned in the Cumbria HER (Plate 5). The timber superstructure features supporting rails and therefore differs from the superstructure photographed in 1899 (Plate 4), but otherwise the coops and causeway seem to be the same as they are today.

4.8 Corby Estates

4.8.1 Corby Castle Estates were consulted a number of times to see if their archives could supplement this archaeological assessment; unfortunately no further information supplementary to the desk-based research was available. In particular, there are no further maps or records of repairs to the eyots. Corby Castle estates are still making enquiries, however, and any subsequent information can be added to this report.

5. SITE VISIT RESULTS

5.1 Introduction

5.1.1 The archaeological fieldwork undertaken by North Pennines Archaeology Ltd at the Salmon Coops took place between the 12th and the 16th of September 2005. Whilst the test pits were being excavated, the rest of the 'site', defined as the southern and northern eyots, and the coops area was inspected. The aim was to assess the condition of the site from an archaeological point of view and to allow the test pits to be placed into a wider context.

5.1.2 This annotated survey should be read in conjunction with Figures 4 and 14, and Plates 5-22. The results here discuss the site from south-west to north-east.

5.1.3 There are certain limitations to this annotated survey. Firstly, observation conditions, due to water level and vegetation growth, were poor at times. Secondly, due to the fast flowing River Eden the condition of the western extent of the eyots could not be assessed; although it can be assumed that this area is being eroded considerably.

5.2 Results

5.2.1 *Plate 6*: on the request of the Corby Castle Estate, the extreme south western tip of the southern eyot was inspected to see if the storm damage of January 2005 had exposed any man-made structure. A visual inspection observed a large accumulation of storm gravel and an uprooted tree, but no deliberately revetted edges could be ascertained due to the dense vegetation. At the south eastern extent of the eyot an area of shallowly submerged sandstone bedrock was observed. It appears that the eyot if a man-made construction at this point was built directly onto a natural sandstone island. A similar phenomenon was also observed was at the northern tip of the northern eyot (see discussion of Plate 17).

5.2.2 *Plates 7, 8 and 9*: much of the southern extent of eastern side of the southern eyot, was obscured by recently accumulated storm gravel; this, combined with dense vegetation covering the top of the eyot, made it impossible to assess how much of the eyot was man-made. Further north, however, the storm gravels sitting in the eastern river channel had been partially moved away exposing the eastern side of the southern eyot. A visual inspection suggested that the eyot was constructed of large piles of sandstone rubble, certainly man made. Due to vegetation growth, it was not clear how the eyot was revetted in place.

5.2.3 At the base of the sandstone rubble, 17 apparently *in situ* horizontally laid timbers were observed; a further timber,1.3m in length, was observed on the bed of the eastern river channel, possibly eroded from the southern eyot (Fig 4). The cross section of the timbers were generally sub-circular and they had a diameter of up to 0.3m. On a number of examples bark could be observed, suggesting that whole trees had been used. Many of the timbers were hafted into a point, and as this had no obvious function it is possible that the timbers had been re-used from elsewhere. As shown in Plate 9, a number of the timbers had apparent joints cut into them, sometimes at the hafted end, which again suggests re-use. It is not clear whether the observed joints on some of the timbers relate to the eyot construction.

5.2.4 The discovery of the east-west laid timbers suggests that the southern eyot was constructed on a timber 'platform' of sorts. As the timbers are right at the base of the eyot it seems likely that the whole of the eyot is a man made construction. The timbers may be some of the earliest elements to be observed during this fieldwork, and may even be earlier than timbers observed in the causeway area (see Area 2 in evaluation results section).

5.2.5 The condition of the timbers appeared stable, but this may be because they had only recently been exposed from beneath storm gravel, and were therefore still waterlogged. On the advice of Sue Stallibrass (English Heritage Science Advisor, North West region) a sample will be taken from one of these already exposed timbers to see if a dendrochronological (tree ring) date can be obtained. This would not damage the structure of the southern eyot further. Unfortunately, due to the high water level in the winter period, this has been impossible, and will have to be carried out in the summer of 2006. The results will then be added to this report.

5.2.6 *Plate 10*: Moving north of the southern eyot, into the causeway (Area 2) and Salmon Coops area the condition of some of the stonework was examined. Immediately north of the causeway an intriguing feature was noted. This took the form of a stone arch, which may represent a late addition to the causeway/coop area. The construction of stone arches, perhaps as a revetment of sorts, was also noted on the northern eyot (see Plate 16 and Area 5 test pit, evaluation results below). Some of the stone used in the construction of this possibly late strengthening arch may have been re-used from elsewhere. Indeed, some of the sandstone blocks are not dissimilar to the early 19th century stonework on the façade of Corby Castle. Heavy tool marks were observed on some of the sandstone blocks.

5.2.7 The condition of the stone arch north of the causeway is of some concern as it appears to have been made unstable by recent storm and flood activity.

5.2.8 *Plates 11 and 12* show the present condition of the causeway, weir and salmon coops themselves. The stone piers of the salmon coops (Plate 11) and the revetted area to their east can easily be matched to some of the early depictions such as the 1832 engraving (Plate 1) or the 1843 tithe map (Fig 6).

5.2.9 Due to the 2005 flooding, the timber superstructure of the coops is currently in some need of repair. Traditionally the timber superstructure has consisted of two pairs of parallel wooden gates between each gap created by the sandstone pillars. A floor of stone slabs in between each of the gaps is angled to provide a strong rush of water over it. The fish are caught by opening the lower gates slightly, and closing the upper pair (RCHME 1994, 5).

5.2.10 Michael Heaton, ASI Heritage Consultants, has commented on the coop, weir and eyot structures. His comments have been added to the concluding section of this report.

5.2.11 *Plate 13*: Moving north, to the southern part of the northern eyot, the storm gravel accumulations from January 2005 were observed. Due to the flood and storm activity much of the eastern side of the northern eyot was exposed and a number of areas had, along its entire length, apparently suffered from recent damage. Figure 4 notes at least two areas of storm breach where the eyot had been entirely overrun by flood water, and

at least six places where stretches of revetment (timber and stonework) had been exposed.

5.2.12 *Plate 14*: on the top of the southern half of the northern eyot a number of areas of laid sandstone surface were observed. Figure 4 shows the extent of the pitched stone as observed by the Bingham and Yates survey and the North Pennines Archaeology survey. As Plate 14 shows, the construction of these laid stones is perhaps not as fine as the pitched stones in observed in Areas 2 and 4 (see evaluation results below), although it is less clear whether this represents a chronological or a functional distinction. The sandstone surface is certainly well worn, and is not dissimilar stonework to some of the coops stonework itself. It seems likely that this sandstone surface to the northern eyot extends at least as far as Area 4 (see Fig 4), as a small portion of surface was observed north of the test pit in that area. The presence of the sandstone surface demonstrates that much the northern eyot was certainly man-enhanced.

5.2.13 The top of the northern eyot has suffered from severe erosion during the floods of January 2005 (see the results from Area 3 in evaluation results, below).

5.2.14 *Plates 15 and 16*: north of the small area of exposed pitched stone in Area 4, observations suggested that there had been a significant amount of later remodelling of the eyot. Figure 4 shows a number of zones of possible deposits of modern sandstone and concrete rubble, now buried beneath thick vegetation, that have possible been brought in to consolidate areas of the northern eyot during the 20th century. The presence of this rubble has buried any earlier deposits in the central area of the northern eyot.

5.2.15 In the central area of the northern eyot, two canalised breaches of the eyot were observed (Fig 4). As Plate 15 shows, these breaches incorporate stonework and timber revetting, but are also concreted and reinforced with steel bars. It may be that some of the stone and timber observed here has been re-used from elsewhere on the eyot. The reason for the construction of these canalised breaches is unclear, but Corby Castle Estates suggested that they may have been constructed in the earlier part of the 20th century to regulate water level around this part of the northern eyot (Jim Clarke, *pers comm*.). It may be that the breaches were canalised as the easiest way to carry out repairs after they had been inadvertently created by earlier storm damage.

5.2.16 Areas of exposed timber-and-stone revetment, and arched stonework (Plate 16) were all observed in the central part of the northern eyot, suggesting that much of the visible eyot is entirely man made. Some of the structure had been severely damaged by storm and flood erosion.

5.2.17 *Plates 17 and 18*: towards the northern tip of the northern eyot, exposed sandstone bedrock was observed. As Plate 18 shows, some of the timber and stone revetment of the northern eyot seems to have been built directly onto this sandstone bedrock island. If this is the case, it suggests that the built-up eyot is completely man made. A similar sequence was observed during the excavation of the test pit in Area 5 (see evaluation results below).

5.2.18 *Plates 18 and 19*: As Plates 18 and 19 show, much of the northern tip of the northern eyot is currently being destroyed by the flow of the River Eden. It is unclear how much man-made structure has already been lost to the river, but the 1843 tithe map (see

discussion above) of the area suggests that the eyot may have extended further northwards than it does today.

5.2.19 *Plate 20*: Plate 20 shows the 'Green way', as it known by Corby Castle Estates. A number of statues and mock classical ornaments frame this north-south aligned trackway that runs on the eastern bank of the River Eden. The situation of this trackway adjacent to the northern eyot suggests that the eyots were clearly part of a constructed 'pleasant landscape' as well having a real function. It is important to bear in mind that some of the stonework on the eyots may have been constructed to 'be seen' as much as to function as part of a river management complex, a notion enhanced by looking at the gentrified scene on copied 1832 engraving (Plate 2).

5.3 Conclusion

5.3.1 This annotated survey of the site has made a number of general observations about the presence of certain structural features on the eyots, and their condition. The next section presents the results of more detailed test-pit evaluation. It is hoped that the detailed observations made in the next section will be given extra clarity by the contextualisation provided by this annotated survey.

6. EVALUATION RESULTS

6.1 Area 1, Test Pit

6.1.1 A hand-dug test pit was excavated at the northern tip of the southern eyot (Area 1, see Fig 4). This test-pit was positioned to ascertain if a pitched stone capping existed on the southern eyot. The Test Pit in Area 1 had maximum dimensions of 2.1m (northeast to southwest axis), by 1.7m (northwest to southeast axis) and was excavated to a maximum depth of 0.64m (Fig 4, Plate 21).

6.1.2 Two deposits were initially excavated from within the Test Pit in Area 1. The most recent deposit, [102] was a deposit of rounded mid-grey river gravels. Deposit [102] physically overlaid a pitched stone surface [100] (see description below), and abutted the northern tip of the southern eyot. Where excavated in the Area 1 Test Pit, deposit [102] covered a north-south area of 0.6m immediately north of the southern eyot, and extended westwards into Area 2 (see description below). Deposit [102] is interpreted as a recently laid-down deposit of river gravel, and it is probable that the formation of this deposit coincided with the presence of widespread flood waters in the River Eden in January 2005.

6.1.3 On the surface of the northern tip of the southern eyot a single deposit [109] was excavated. Deposit [109] was a friable mid-brown fine sandy silt containing occasional degraded red sandstone (<15cm^2 in size, <1% of the entire soil matrix) and occasional rounded pebbles (<5cm^2 , <1%). Deposit [109] was heavily root disturbed and had a maximum depth of 0.64m. Three lenses of contrasting a soil matrix were observed within deposit [109]; the upper 0.06m of the southern portion of the excavated deposit contained a lens of recently accumulated flood deposit (yellow coarse sand), whilst the basal 0.08m contained two mid-grey-brown silty sand lenses interpreted as initial silting at the interface with earlier deposits and features (see drawn section Fig. 9). Deposit [109] is interpreted as a topsoil formed by a number of episodes of river silting and vegetation growth.

6.1.4 Deposit [102] did not physically overly deposit [109], but abutted it at its southern extent. The excavation of both deposits [102] and [109] recovered no dating evidence.

6.1.5 Once deposits [102] and [109] were removed, a number of features and archaeological deposits could be observed, although further excavation was considered undesirable, as this would have removed deposits integral to the structure of the eyot.

6.1.6 The earliest observed feature was a surface of pitched sandstone blocks [100]. The sandstone blocks were laid in an east-west orientation, and had average dimensions of 0.25m (east-west) by 0.1m (north-south). The sandstone blocks form part of an artificial causeway between the northern and southern eyots, and extended further north into Area 2 (see below). The portion of the pitched stones [100] observed in the Area 1 Test Pit appeared to form a well constructed kerb that at its southern extent housed a north-east to south-west aligned timber [103].

6.1.7 Timber [103] was apparently *in situ* and observed at the northern extent of the Test Pit in Area 1 running over a north-east to south-west length of 2m. The full extent of the timber was not observed as its north-western end was physically overlain by river gravel

deposit [102]. The south-eastern extent of the timber seemed to form a V-shaped joint with no obvious current function, perhaps implying that the timber had been re-used from elsewhere. Timber [103] had a squared-off end section measuring 0.15m x 0.15m. Bark was still visible on the surface of the south-eastern extent of timber [103] demonstrating that the tree from which the timber derived had been used whole and simply squared-off.

6.1.8 At its north-western extent, timber [103] formed a right-angle with a north-east to south-west aligned apparently *in situ* timber, [104]. Timber [104] was observed over a north-east to south-west length of 0.7m and had an observed width of 0.15m. The north eastern extent timber [104] was observed within the Area 1 test pit, but the south western extent of the timber ran under the south western baulk of the test pit.

6.1.9 Timbers [103] and [104] appeared to form a tenon joint where they intersected, although timber [104] had almost completely decayed away at this point. Immediately to the north of timber [104], a round-headed nail with a square cross section (head diameter 0.025m, extant length 0.09m) was observed driven into timber [103]. The nail would probably have secured timber [104] to timber [103]. The extant length of the nail gives some indication of the amount of timber [104] that might have decayed away.

6.1.10 Timbers [103] and [104] were set level into a firm mid-dark grey sandy silt deposit [107], implying that they had been deliberately revetted into this deposit. Deposit [107] contained frequent lenses of redeposited yellow sandy silt, occasional stones (<5cm^2, <1%) and occasional charcoal (<2cm^2, <1%), giving the impression that at least some of the deposit had been deliberately made-up. Deposit [107] was the earliest observed layer in the Area 1 test pit, and is interpreted as the surface of a deliberate make-up layer forming the northern tip of the southern eyot. No relationship between make-up layer [107] and pitched stone surface [100] could be observed.

6.1.11 Bounded by the southern extent of timber [103], the eastern extent of timber [104] and overlying make-up deposit [107], a deposit of large stones [105] was observed sitting within a possible cut [106]. The possible cut [106] ran with the contour of the northern tip of the southern eyot immediately south of timbers [103] and [104], over observed distances of 1.2m (north-west to south-east) and 1.15m (north-east to south-west) and was not excavated. Possible cut [106] is interpreted as a construction cut for a timber-supported stone revetment for the northern tip of the southern eyot. In reality, the creation of this 'cut' may have simply emphasised the existing profile of make-up deposit [107].

6.1.12 The deposit of large stones [105], abutted timbers [103] and [104]. The maximum size of the stones was 0.45m by 0.25m, and the minimum size was 0.05m by 0.05m. The stones comprised of roughly equal proportions of both a grey quartzy sandstone and a degraded red sandstone. Although they were not excavated, it is likely that the dumping of the stones effectively created a level surface between timbers [103]/[104] and the observed high point of the northern tip of the southern eyot, counteracting the probable north-east to south-west aligned slope of make-up deposit [107]. Although deposit [105] was well compacted within possible construction cut [106] (in contrast to pitched stone surface [100]), the construction was not for presentation (i.e. it was felt that this deposit was intended to remain out of sight). The large stones [105] were physically overlain by the topsoil/river silt deposit [109].

6.1.13 At the western extent of timber [104] a further deposit, [108], was observed in plan. Deposit [108], a firm mid-dark grey sandy silt containing occasional sub-rounded stones, partly overlay timber [104] and is best interpreted as natural silting in the form of wash down from the high point of the eyot.

6.1.14 Although all deposits were not excavated to fully clarify relationships, the likely stratigraphic sequence (from earliest to latest) within the Test Pit in Area 1 can be summarised as:

- east west aligned timbers [101] are laid down (see Area 2 discussion);
- pitched stone surface [100] is constructed;
- by the time pitched stone surface [100] is constructed, eyot make-up deposit [107] was most probably in place;
- timber [103], and then timber [104] are 'terraced' into the eyot make-up, respecting the kerb of pitched stone surface [100], and creating a revetment to the northern tip of the southern eyot;
- possible construction cut [106] is created;
- large stones [105] are placed within possible cut [106] to create a more level surface between timbers [103]/[104] and make-up deposit [107], possibly at roughly the same time as pitched stone surface [100] and the timber revetment [103]/[104] are constructed;
- silting [108] occurs to the west of timber [104];
- further silting occurs and a topsoil forms [109];
- flooding washes river gravel into Area 1 [102].

6.1.15 *Discussion*: the excavation of the Test Pit in Area 1 has suggested, at least within this part of the northern tip of the southern eyot, that the construction of a timber and stone revetment to the eyot (timbers [103]/[104], cut [106] and laid stone deposit [105]) occurred at the either same time or slightly later as the pitched stone 'causeway' surface ([100], see Area 2 discussion) was built. The main evidence for this is the apparent kerb at the southern extent of pitched stone surface [100] that timber [103] appears to abut to (see Fig 4). In addition, the alignment of some of the surface coursing of pitched stone surface [100] deliberately respects the north-east to south-west alignment of timber [103] (see Area 2 discussion).

6.1.16 There is no strong evidence to suggest that the revetment to the northern tip of the southern eyot was anything other than a single phase construction. Timbers [103] and [104] do *appear* to overlie make-up deposit [107], but as there is no dating evidence from the test pit, it was not possible to ascertain whether deposit [107] was created significantly earlier than the building of the revetment structure.

6.1.17 If, as appears likely, the northern tip of southern eyot was made-up and revetted at the same time as the pitched stone causeway (Area 2) was created, this implies a large scale and organised construction of a river management system. However, it is unclear whether the constructional sequence observed within the Area 1 test pit represents the *earliest* phase of eyot associated building. Indeed, evidence from the annotated survey

(see below) suggests that there may have been an earlier phase of east-west aligned timber construction associated with the southern eyot.

6.1.18 The lack of dating evidence from the Area 1 test pit means that the dating of the construction of the revetment is uncertain. The only hints at a construction date come from the hand cut joint observed at the south-eastern extent of timber [103] and the hand forged nail observed within timber [104] suggesting a medieval or, more likely, a post-medieval date.

6.1.19 *Management Observations:* the presence of recently accumulated flood gravels [102] suggest that the northern tip of the southern eyot is occasionally subject to erosion during periods where the water level of the River Eden is particularly high. This would be particularly likely to the west of the eyot where the main channel of the river runs. The fact that the remnant flood gravels had not been moved away from the area between January and September 2005 suggest that this erosion is intermittent.

6.1.20 The presence of a deep topsoil (0.64m) with a relatively well developed vegetation [109], suggests that the top of the northern extent of the southern eyot is quite stable. However, the fact that revetment timber [103] had been exposed prior to the excavation of the test pit in Area 1 suggests that the northern side of the eyot is less stable, and that no deposit can accumulate here because it will occasionally be scoured away by flood water.

6.1.21 The condition of the revetment timbers [103]/[104] is perhaps of the most concern in monument management terms. It appears that repeated periods of waterlogging and then drying have caused severe degrading to the structure of the timbers, to the extent where parts of timber [104] have completely decayed away.

6.2 Area 2, Measured Sketch

6.2.1 A measured sketch of the ford between the eyots was drawn (Area 2, Fig 4). As demonstrated by Plates 22 and 23, a base-line was set out and the pitched stone work was drawn submerged under shallow but rapidly flowing water. The measured sketch is of the 'causeway' between the northern and southern eyots is shown as Fig. 10.

6.2.2 *Observations:* a number of observations were made when the measured sketch of the ford area was undertaken. At the north and south of the sketched area, remnants of a deposit of rounded mid-grey river gravels [102] was observed. As was the case with the Test Pit in Area 1, deposit [102] physically overlaid a pitched stone surface [100] and abutted the northern tip of the southern eyot and the southern tip of the coop (fish trap) structures. Where observed in the Area 2 deposit [102] covered a north-south area of c.2m immediately north of the southern eyot, and extended westwards from Area 1 for c.4m. Isolated patches of deposit [102] were also observed at the extreme south-east and north-east of the sketched area. Deposit [102] is interpreted as a recently laid-down deposit of river gravel, and it is probable that the formation of this deposit coincided with the presence of widespread flood waters in the River Eden in January 2005.

6.2.3 Pitched stone surface [100] was observed over a north-south length of 15m and an east-west width of 5.5m. The average size of the pitched stones observed in plan was 0.6m (east-west) by 0.15-0.2m (north-south). No obvious mortar bonding was observed, but it is assumed that the stones were bonded into underlying stonework. The quality of the

stonework suggests that they were intended to be visible and were probably not a 'foundation' for a now eroded away eyot.

6.2.4 Pitched stone surface [100] was evidently very well constructed, even though many of the stones were now heavily water eroded and in some cases obscured by concretions (see Fig 10)**.** At the southern extent of the causeway**,** the stone coursing appeared to flow around the northern extent of southern eyot, suggesting that the pitched stone surface [100] was perhaps contemporary with the eyot revetment observed in the Area 1 test pit.

6.2.5 Towards the northern extent of the pitched stone surface [100], the angle of the pitched stone work raised up to meet a weir, and other brick vaulting relating to the salmon coop structure itself. At this point the stone work had obviously been repaired a number of times; the latest repair being the laying down of an east-west aligned strip of concrete 0.7m wide (see Fig. 10)**.** It is probable that where the pitched stone work [100] met the weir structure that this was a point of great water pressure and as such was in need of frequent consolidation/repair. At the north-eastern of the pitched stone surface the flooding of January 2005 had evidently destroyed some of the surface and exposed underlying timbers [101] (see below).

6.2.6 The eastern extent of the pitched stones [100] did not appear to terrace into the river bed deeply. Although the recent storms had built up gravel and perhaps destroyed some of the pitched stone structure, the eastern edge of the pitched stones was evidently a real (i.e. constructed) edge.

6.2.7 The western extent of the pitched stones [100] sat on top of at least 1.1m depth of stonework. This stonework was presumably terraced into the western channel of the River Eden so that a near level causeway could be constructed. It was not possible to observe the construction of the stone work at the western extent of the causeway due to it being submerged beneath the fast flowing water of the western river channel, but the potential size of the structure suggests that a masonry construction not dissimilar to the salmon coops could be present beneath the water. The contrasting alignments of masonry edges observed at the western edge of the pitched stones perhaps suggests that either this structure was deliberately constructed this way (perhaps for strength), or that a number of different phases of building are represented.

6.2.8 At the north and western extents of pitched stones [100] some protruding pieces of iron were observed inserted into the stone work. One protruding iron bar seemed to be associated with the later concrete repair to the pitched stone surface, and it is probable that the iron pieces represent the remains some kind of relatively modern fence.

6.2.9 Beneath pitched stones [100], and towards the northeast of the causeway, a number of east-west aligned horizontally laid timbers were observed [101]. At this point the timbers seemed to have been laid down as an initial 'raft' or supporting framework that the pitched stone causeway was then constructed upon. The timbers protruded up to c.1m from the western extent of the present stonework and were typically 0.15 m wide. It was not possible to observe the section profile of the timbers. The timbers appear to be of similar proportions to the revetment timbers observed in the Area 1 test pit, but are quite different in character to those timbers observed further south on the eastern side of the southern eyot (see Visual Site Inspection).

6.2.10 *Discussion*: the measured sketches and observations undertaken in Area 2 have suggested that pitched stone surface [100] and timbers [101] are a single phase construction perhaps contemporary to the revetment to the northern tip of the southern eyot observed in the Area 1 test pit.

6.2.11 The only dating evidence to be retrieved from Area 2 were four sherds of pottery from the surface of the slow moving eastern river channel (see Finds, below) all four sherds were 18th – 19th century in date suggesting some activity contemporary to this date. However, the sherds were all water-worn, implying that the pottery may have been transported from elsewhere and cannot be considered *in situ* in any way. The lack of secure dating evidence from Area 2 means that the dating of the pitched stone surface constructions remain uncertain.

6.2.12 It is unclear whether either of the constructions observed within the Area 2 represents the earliest phase of associated eyot building. The quality of construction, and the stratigraphic association with the Area 1 revetment sequence perhaps suggests an early date (medieval or post-medieval date). The repairs towards the northern extent of the causeway area likely to be relatively recent (post-medieval or modern).

6.2.13 It can be assumed that the pitched stone causeway, for whatever reason, was built to create a drop between the shallow slower moving eastern channel and the deep faster moving western channel of the river Eden. It can also be assumed that the causeway provided by pitched stones [100] gave access between the northern tip of the southern eyot and the weir/salmon coop structures to the north. Why this was deemed necessary is less clear, but a possible reason is that the pitched stone causeway was built to regulate the water level. The construction of the causeway would have meant that in times of flood, water could move from the higher eastern channel into the western channel, thus protecting the downstream salmon coops from serious damage. If the causeway is a contemporary build to the revetment of the southern eyot (as suggested by the test pit in Area 1) then this scheme of works would represent a highly planned and innovative endeavour.

6.2.14 There is also the small possibility that pitched stones [100] were created to provide a footing for an artificial eyot, now eroded away. However, in the light of the sequence observed in the Area 1 test pit and the quality of the pitched stone work construction, this seems unlikely. It seems most probable that the pitched stones surface was designed to be seen.

6.2.15 *Management Observations:* The water erosion evident on the surface of pitched stones [100] indicates that the causeway is constantly subject to water erosion. The presence of gravel layer [102] and the exposed timber [101] suggests that the flood water has damaged some of the structure, and that this could occur again.

6.2.16 The condition of the exposed timber [101] appears reasonably stable, but it is likely that, now exposed, repeated periods of waterlogging and then drying could cause severe degrading to the structure of the exposed timber.

6.3 Area 3, Test Pit

6.3.1 A hand-dug test pit was excavated towards the southern tip of northern eyot (Area 3, see Fig 4). The Area 3 test pit was positioned to ascertain if a pitched stone capping existed

towards the southern tip of the northern eyot. The Test Pit in Area 3 had maximum dimensions of 2.1m (north to south axis), by 2.1m (east to west axis) and was positioned to take advantage of natural sections that had been created by storm damage in January 2005. This meant that, in contrast to the Test Pits in Areas 1 and 5, relationships between a number of the observed deposits could be observed. The test pit in Area 3 was excavated to a maximum depth of 0.66m, although this did not involve removing large amounts of material (Fig 11, Plate 24).

6.3.2 The earliest feature to be observed within the Area 3 test pit was a deposit of three flatly laid large red sandstone slabs [303] in the south east corner of the test pit. The average size of the blocks was 0.8m (north-east to south-west axis), by 0.35m (east-west axis). The depth of the slabs were not investigated as they appeared to be *in situ* and were therefore not excavated out as they were considered integral to the structure of the eyot. The sandstone slabs exhibited laminations similar to some of the natural bedrock observed at the north of the northern eyot (see Area 5 below). The sandstone slabs were located at a depth of 0.62m below the surface of the eyot, and are interpreted as the remnants of a stone capping for the southern end of the northern eyot. Although stone capping [303] could not be fully investigated, the surface appeared to be of a better construction than overlying deposits (see [302]/[304]/309] below).

6.3.3 Overlying stone capping [303] in the northern half of the Area 3 test pit was a loose-friable mid-grey-brown deposit of coarse sand and river eroded cobbles (<10cm^{2,} <45%) [305]. Deposit [305] was a maximum of 0.12m in depth, and did not cover the whole of the test pit in plan due to recent storm truncation (see [301]/[306] below). Sand and cobble deposit [305] is interpreted as a possible backfill, or more likely, a series of riverine storm accumulations signalling the abandonment of stone capping [303].

6.3.4 Overlying storm accumulation deposit [305], and covering the entire extent of the Area 3 test pit, was a friable yellow-brown silty sand deposit, containing occasional gravel and sub rounded-cobbles (<20cm^2 , <2%) [308]. Deposit [308] was a maximum of 0.5m in depth and is interpreted as a gradually formed buried topsoil deposit formed by river deposited silting episodes. Deposit [308] represents a now buried surface to the northern eyot that would have featured, intermittently, periods of scant grass growth and topsoil formation.

6.3.5 Overlying buried topsoil [308] were three discrete zones of large worked red sandstone blocks [302], [304] and [309]. The three areas of stone appeared to be contemporary with each other. Sandstone blocks [302] were located at the north of the Area 3 test pit in a zone measuring 1.8m (east-west) by 0.45m (north-south). The maximum dimensions of the sandstone blocks were 0.3m x 0.2m x 0.1m deep. The blocks were roughly squared with no particular face preferred. Sandstone blocks [304] were located at the south of the Area 3 test pit in a zone measuring 0.7 (east-west) by 0.3m (north-south). The maximum dimensions of the sandstone blocks were 0.4m x 0.2m x 0.1m deep. The blocks were roughly squared with no particular face preferred. Sandstone blocks [309] were located at the north-east of the Area 3 test pit in a zone measuring 0.4 (east-west) by 0.9m (north-south). The maximum dimensions of the sandstone blocks were 0.4m x 0.2m x 0.1m deep. The blocks were roughly squared with no particular face preferred. Deposit [302]/[304]/[309] is interpreted as the remnants of a collapsed stone capping for the southern end of the northern eyot. The sandstone slabs exhibited laminations similar to some of the natural bedrock observed at the north of the northern

eyot (see Area 5 below). The surface appeared to be of a cruder construction than underlying deposit [303], consisting of loosely piled drystone courses; although the subsequent collapse of the surface makes interpretation difficult. Due to recent storm truncation, the sandstone slabs are now located near the present the surface of the eyot.

6.3.6 Overlying the collapsed stone capping [302]/[304]/[309], and covering most of the Area 3 test pit, was a firm mid-brown sandy silt deposit, containing moderate stones and pebbles (<10cm^2 , <5%) [300]. Deposit [300] was a maximum of 0.5m in depth and is interpreted as a gradually formed topsoil deposit formed by river deposited silting episodes and vegetation growth. Deposit [300] was currently stable enough to accommodate scant grass growth, that would enable further topsoil formation.

6.3.7 The western extent of topsoil deposit [300], in common with a number of earlier deposits, had been truncated away by a recent erosion cut [301]. The irregularly shaped erosion cut was observed over a length of c. 3m (north-south) and a width of c.3m (east-west) although the cut clearly extended further to the west of the Area 3 test pit. The erosion cut was not excavated out, but appeared steep sided, and up to c.1m in depth immediately west of the test pit. The erosion cut was created during the flooding of January 2005 when the River Eden to the west of the Area 3 test pit was extremely high.

6.3.8 Erosion cut [301] had been infilled with two deposits. Immediately overlying the erosion cut [301] was a friable mid brown sand containing 30% rounded pebbles [306] interpreted as a deposit of recently accumulated riverborne material. The riverborne deposit [306] was overlain by a dump of river cobbles (<10cm^2) [307] used as a recent repair to the flood damage.

6.3.9 The likely stratigraphic sequence (from earliest to latest) within the Test Pit in Area 3 can be summarised as:

- pitched stone capping [303] is constructed;
- riverine storm accumulation [305] forms, signalling the abandonment of stone capping [303];
- gradually formed buried topsoil deposit [308] is formed by river deposited silting episodes;
- now collapsed stone capping deposit [302]/[304]/[309] is crudely reconstructed;
- topsoil deposit [300] forms;
- erosion cut [301] moves deposits to the west of the southern tip of the northern eyot and then is infilled with river derived deposit [306]. Cobbles [307] are dumped to consolidate the area of erosion cut [301].

6.3.10 *Discussion:* the excavation of the Test Pit in Area 3 has suggested that there were possibly two phases of stone capping construction ([305], and [302]/[304]/[309]) in this part of the northern eyot.

6.3.11 It is unclear whether either of the constructions observed within the Area 3 test pit represents the earliest phase of associated eyot building. Indeed, the large sandstone blocks seem, as opposed to the tightly pitched early stones in Area 4 ([404]) or Area 1-2

(100), crudely constructed, and this may imply a late date for the construction of this part of the northern eyot.

6.3.12 The lack of dating evidence from the Area 3 test pit means that the dating of the stone capping constructions are uncertain. Using the apparent time depth suggested by the stratigraphy observed between the two contrasting stone capping constructions in the Area 3 test pit, it is possible to suggest that the original surface [303] is potentially a medieval/post-medieval construction, and that the later surface is a post-medieval/modern construction.

6.3.13 *Management Observations:* the presence of a large erosion cut [301] to the west of the Area 3 test pit demonstrates that the southern tip of the northern eyot is occasionally subject to severe erosion when the water level of the River Eden is particularly high. In some places the flood waters from the January 2005 storms have evidently completely breached the entire width of the northern eyot.

6.3.14 The presence of a deep topsoil (0.5m) with some vegetation [300], suggests that the top of the southern extent of the northern eyot can be a stable environment when not threatened by flood waters. However, the fact that relatively deeply buried stratigraphy had been exposed by storm damage suggests that the southern part of the northern eyot is in great need of protection and consolidation. This has only been partly remedied by the deposition of river cobbles [307].

6.3.15 The condition of a fragment of jointed timber retrieved from deposit 300 also raises concern (see section 5 below). It appears that repeated periods of waterlogging and then drying have caused severe degrading to the structure of this timber fragment, and it is likely that an *in situ* timbers located within the later deposits (e.g. [300] or [308]) of Area 3 would be similarly preserved.

6.4 Area 4, Test Pit

6.4.1 A hand-dug test pit was excavated on the eastern side of the central area of the northern eyot (Area 4, see Fig 4). The Area 4 test pit was positioned to ascertain if a pitched stone capping existed at this point. The Test Pit in Area 4 had maximum dimensions of 1.8m (north to south axis), by 1.8m (east to west axis) and was positioned to take advantage of natural sections that had been created by the gradual collapse of this part of the northern eyot. This meant that, in contrast to the Test Pits in Areas 1 and 5, relationships between a number of the observed deposits could be observed. The test pit in Area 3 was excavated to a maximum depth of 0.58m, although this did not involve removing large amounts of material (Fig 12, Plate 25).

6.4.2 The earliest feature to be observed was a north-south aligned timber [403]. Timber [403] was *in situ* and observed at the eastern extent of the Test Pit in Area 3 running over a north to south length of 1.8m. The full extent of the timber was not observed as it's north and south ends were obscured by the slumped bank of the northern eyot. Although not fully observed timber [403] probably had a squarish end section measuring c. 0.15m x 0.15m. Bark was still visible on the surface of the timber, demonstrating that the tree from which the timber derived had been used whole and simply squared-off. Due to the water level immediately to the east of the timber [403], and the nature of other overlying deposits (e.g. [405]), it was not possible to explore the relationship between the timber and any potential underlying eyot make-up deposits.

6.4.3 Abutting the western extent of timber [403] was a tightly packed pitched stone deposit [404]. The pitched stones ran in a north-south band 0.5m wide across the entire eastern extent of the Area 4 test pit. The pitched stones were mostly of a grey quartzy sandstone and had a typical measurement of 0.22m (north-south) by 0.05m (east-west). The stones were not apparently bonded by any mortar, although the base of the deposit could not be investigated. The pitched stones were not laid flat and 'arched' slightly from a low point immediately west of timber [403] to a high point 0.5m to its west; this profile presumably reflected the profile of the underlying eyot. Pitched stone deposit [404]was extremely well constructed, and was reminiscent of the pitched stone surface [100] observed in Areas 1 and 2, but appeared to be a revetment feature as opposed to a surface.

6.4.4 Abutting the western extent of pitched revetment stones [404] was a deposit of large stones [405]. The maximum size of the stones was 0.4m by 0.28m, and the minimum size was 0.05m by 0.05m. The stones comprised of roughly mostly grey quartzy sandstone but occasionally degraded red sandstone. Although they were not excavated, it is likely that the dumping of the stones effectively created a level surface between rising up towards the high point of this part of the northern eyot. Deposit [405] was well compacted, but apparently not mortared; in between some of the stones, a mid grey brown sandy silt soil matrix could be observed. The construction was not for presentation (i.e. it was felt that this deposit was intended to remain out of sight). Deposit [405] is interpreted as a revetment associated layer used to consolidate and strengthen the upper part of this area of the northern eyot.

6.4.5 Overlying revetment layer [405], and covering the entire extent of the Area 4 test pit, was a friable mid grey-brown silty sand deposit, containing occasional gravel and sub rounded-cobbles (<5cm^2 , <1%). Deposit [405] was a maximum of 0.2m in depth and is interpreted as a gradually formed buried topsoil formed by river deposited silting episodes. Deposit [405] represents a now buried surface to the northern eyot that would have featured, intermittently, periods of scant grass growth and topsoil formation.

6.4.6 Overlying buried topsoil [405] was a collapsed deposit of large worked red sandstone blocks [401]. The blocks comprised of both grey quartzy sandstone and a degraded red sandstone and were located at the north-west of the Area 4 test pit in a zone measuring up to 0.6m (east-west) by 0.14m (north-south). The maximum dimensions of the sandstone blocks were 0.42m x 0.2m x 0.1m deep. Some of the blocks were roughly squared with no particular face preferred. Deposit [405] is interpreted as the remnants of a collapsed stone capping for this part of the northern eyot. The sandstone slabs exhibited laminations similar to some of the natural bedrock observed at the north of the northern eyot (see Area 5 below). Stone capping [401] appeared to be of a cruder construction than underlying deposit [404], consisting of loosely piled drystone courses. Due to recent storm truncation, the sandstone slabs are now located near to the present the surface of the northern eyot.

6.4.7 Overlying the collapsed stone capping [405], and covering most of the Area 4 test pit, was a friable mid-brown sandy silt deposit, containing moderate stones and pebbles (<10cm^2 , <5%) [400]. Deposit [400] was a maximum of 0.46m in depth and is interpreted as a gradually formed topsoil deposit formed by river deposited silting episodes and vegetation growth. Topsoil [400] was heavily root disturbed. Deposit

[400] was currently stable enough to accommodate scant grass growth, that would enable further topsoil formation.

6.4.8 The likely stratigraphic sequence (from earliest to latest) within the Test Pit in Area 3 can be summarised as:

- north-south aligned timber [403] is laid as a revetment to the eyot;
- pitched stone capping [404], abutting timber [403] is constructed;
- revetment associated layer of large stones [405] is laid to consolidate the side of the eyot;
- gradually formed buried topsoil deposit [402] is formed by river deposited silting episodes;
- now collapsed stone capping deposit [401] is crudely constructed;
- topsoil deposit [400] forms.

6.4.9 *Discussion:* the excavation of the Test Pit in Area 4 has suggested that there were possibly two phases of stone capping construction ([403]/[404]/[405] and [401]) in this part of the northern eyot.

6.4.10 It is unclear whether either of the constructions observed within the Area 3 test pit represents the earliest phase of associated eyot building. However, the timber and stone revetment construction [403]/[404]/[405] seems to be of a similar stylre to possibly early constructional phases observed in Area 1-2 (e.g. [100] and [103]. The large sandstone blocks [401] seem to be more crudely constructed (appearing similar to the late [309]/[304]/[302] surface observed in the Area 3 test pit, and this may imply a late date for the construction of this part of the northern eyot.

6.4.11 The lack of dating evidence from the Area 4 test pit means that the dating of the stone capping constructions are uncertain. Using the apparent time depth suggested by the stratigraphy observed between the two contrasting stone capping constructions it is possible to suggest that the original construction [403]/[404]/[405] is potentially a medieval/post-medieval construction, and that the later possible surface [401] is a post-medieval/modern construction.

6.4.12 *Management Observations:* the presence of eyot bank collapse and exposed stratigraphy (e.g. 401) in Area 4 demonstrates that the eastern side of the northern eyot is subject to moderate occurrences of erosion when the water level of the River Eden is high. In some places flood waters have exposed revetment timbers and pitched stones surfaces (see Site Visit above).

6.4.13 The presence of a topsoil (max depth 0.5m) with some vegetation [400], suggests that the top of the this part of the northern eyot can be a stable environment when not threatened by flood waters. However, the fact that formerly buried stratigraphy had been exposed by storm damage suggests that this part of the northern eyot is in need of protection and consolidation.

6.4.14 The condition of the revetment timber [503] appeared to be more stable than those identified in Area 1. It is possible that this is only because the timbers have been exposed for less time.

6.5 Area 5, Test Pit

6.5.1 A hand-dug test pit was excavated on the eastern side of the northern eyot, towards its northern tip (Area 5, see Fig 4). The river channel at the eastern side of the northern eyot was extremely shallow and slow moving. The Area 5 test pit was positioned to ascertain if a pitched stone capping existed at the northern tip of the northern eyot. The Test Pit in Area 5 had maximum dimensions of 2m (north to south axis), by 1.5m (east to west axis) and was excavated to a maximum depth of 0.92m (Fig 13, Plate 26).

6.5.2 A single deposit was excavated from within the Test Pit in Area 5. Deposit [501] was a friable mid-brown fine sandy silt containing occasional rounded pebbles (<5cm^2 , <1%). Deposit [501] was heavily root disturbed and had a maximum depth of 0.92m. The basal 0.08m of the deposit consisted of a mid-dark grey-brown silty sand lens interpreted as initial silting at the interface with earlier deposits and features (see drawn section Fig. 13). Deposit [501] is interpreted as a topsoil formed by a number of episodes of river silting and vegetation growth. Deposit [501] produced no dating evidence.

6.5.3 Once deposit [501] was removed, four archaeological deposits were observed. Further excavation was considered undesirable, as this would have removed deposits integral to the structure of the eyot.

6.5.4 The earliest observed feature was a portion of exposed mid-red sandstone bedrock [504]. The observed portion of exposed rock measured 1.8m north-south by 0.85m east-west. Although the sandstone was exposed, it appeared to not be highly weathered or eroded. Laminations could be observed in the strata of the natural sandstone outcrop that appeared similar to laminations in the worked stone observed in the test pits in Areas 3 and 4 (deposits [302 etc]/[401]). Further outcropping sandstone was observed to the north and south of the Area 5 test pit (see Annotated Survey below).

6.5.5 Overlying sandstone bedrock two deposits were observed, a layer [505], and a north-south aligned timber [503]. Layer [505] was a firm mid-dark grey sandy silt deposit containing moderate lenses of redeposited yellow sandy silt and occasional stones (<5cm^2, <1%) giving the impression that at least some of the deposit had been deliberately made-up. Deposit [505] was the earliest observed layer in the Area 1 test pit, and is interpreted as the surface of a deliberate make-up layer forming the northern tip of the northern eyot.

6.5.6 Timber [503] was apparently *in situ* and observed at the eastern extent of the Test Pit in Area 1 running over a north to south length of 2.1m. The full extent of the timber was not observed as it's northern and southern ends were obscured by the unexcavated eastern bank of the northern eyot. Although it could not be fully observed, timber [503] seemed to have a squarish end section measuring c. 0.18m x 0.18m. Bark was still visible on the upper surface demonstrating that the tree from which the timber derived had been used whole and simply squared-off; knotting and a chopped-off branch could also be observed (see Fig. 13 and Plate 26). Timber [503] is interpreted as part of a revetment to the eastern side of the northern tip of the northern eyot, similar stretches of exposed timber revetment were observed to the south (see Annotated Survey).

6.5.7 Along the exposed length of timber [503] two deliberately worked holes could be observed, these holes both had dimensions of 0.1m by 0.06m, were 1.02m apart and ran fully through the timber. It is possible that the holes are joints to accommodate some

form of (now destroyed) timber fence running along the eastern side of the northern eyot. It is also possible that these 'joints' have no function within the revetment observed in the Area 5 test pit, implying that timber [503] had been re-used from elsewhere. Immediately south of timber [503], a further north-south aligned piece of wood (0.45 n-s x 0.06m e-w) was observed, but it is this was probably a piece of river flotsam.

6.5.8 As layer [505] or timber [503] were not excavated away, it was impossible to ascertain whether they directly overlaid sandstone bedrock [505], or to observe a stratigraphic sequence between them. It seems most probable, however, that possible make-up layer [505] was thrown-up before the revetment, of which timber [503] was part of, was constructed.

6.5.9 Overlying layer [505] and abutting timber [503] a course of relatively well laid grey sandstone blocks [502] was observed. The sandstone blocks had typical measurements of 0.4m (north-south) by 0.18m (east-west) in plan and approximate depths of c.0.2m. The sandstone blocks [502] tightly abutted north-south aligned timber [503] suggesting that they were part of the same construction. The sandstone blocks did not 'terrace' into possible make-up layer [505], but instead appeared to arch with the contour of the eyot rising from south to north. On the evidence of the Area 5 test pit the laid sandstone blocks [502] did not cap the top of the eyot and only served to reinforce the eastern side of the northern eyot.

6.5.10 Although all deposits were not excavated to fully clarify relationships, the likely stratigraphic sequence (from earliest to latest) within the Test Pit in Area 1 can be summarised as:

- sandstone outcrop [504];
- sandstone outcrop [504] is made up with deposits, including make-up layer [505];
- timber [503] is put in place, creating a revetment to the eastern side of the northern eyot;
- sandstone blocks [502] are laid on top of make-up layer [505] and abutting timber [503];
- silting occurs and a topsoil forms [501].

6.5.11 *Discussion*: the excavation of the Test Pit in Area 5 has suggested, at least within this part of the northern tip of the northern eyot, that the construction of a timber and stone revetment to the eyot (timber [503] and laid sandstone blocks [502]) occurred at the same time.

6.5.12 There is no evidence to suggest that the revetment to the eastern side of the northern tip of the northern eyot was anything other than a single phase construction. This implies a large scale and organised construction of a river management system. However, it is unclear whether the constructional sequence observed within the Area 5 test pit represents an early phase of eyot building. Indeed, the good preservation of timber [503] (in comparison to those in Area 1), and the style of the revetment construction -large arching blocks more similar to the later deposits observed in Areas 3 ([302] etc.) and Area 4 ([401), as opposed to the tightly pitched early stones in Area 4 ([404])- may imply a late date for the construction of this part of the northern eyot.

6.5.13 The lack of dating evidence from the Area 5 test pit means that the dating of the construction of the revetment is uncertain. Using the relative chronology suggested by contrasting constructions observed in the test pits in Areas 3 and 4, a late, possibly post-medieval, date might be suggested for the Area 5 revetment construction.

6.5.14 *Management Observations*: the presence of recently accumulated flood gravels in the river channel immediately to the east of the test pit in area 5 suggests that the eastern side of northern tip of the northern eyot is occasionally subject to erosion during periods where the water level of the River Eden is particularly high.

6.5.15 The presence of a deep topsoil (0.92m) with a relatively well developed vegetation [501], suggests that the top of the northern extent of the northern eyot is quite stable, for example, sandstone blocks [502] were not particularly exposed before the excavation of the Area 5 test pit. However, it was also quite clear that western side and the very northern tip of the eyot immediately north-west of the Area 5 test pit were a lot less stable, being continually scoured by the fast flowing channel of the River Eden to the west. A visual inspection of the extreme northern tip of the northern eyot suggested that it was indeed being slowly destroyed.

6.5.16 The condition of the revetment timber [503] appeared to be more stable than those identified in Area 1. It is possible that this is only because the timbers have been exposed for less time.

7. FINDS AND ENVIRONMENTAL DATA

7.1 Finds by Gareth Davies and Frank Giecco

7.1.1 The finds assemblage from the evaluation at the Corby Castle Salmon Coops consisted of four sherds of pottery (Area 2) and a piece of jointed timber (Area 3 test pit).

7.1.2 *The Pottery*: the only dating evidence to be retrieved from Area 2 were four sherds of pottery from the surface of the slow moving eastern river channel.

7.1.3 Two sherds of pottery were of a domestic red earthenware fabric with a white slip (C19th). Two sherds of pottery were of a salt-glazed stoneware, one sherd had a flat round rim and vertical linear incised decoration (C18th).

7.1.4 The sherds were all water worn, implying that the pottery may have been transported from elsewhere and cannot be considered *in situ* in any way. The lack of secure dating evidence from Area 2 means that the dating of the pitched stone surface constructions remain uncertain.

7.1.5 All four sherds were 18th–19th century in date suggesting some activity in the area contemporary to this date.

7.1.6 *The Timber*: a single fragment of worked timber was retrieved from deposit [300] during the excavation of the Area 3 test pit.

7.1.7 The timber fragment was 0.8m in length, had a flattened sub-square cross section (0.15m in diameter) and was jointed at one end. The joint was similar to others observed elsewhere on both the northern and southern eyots (see plates 9 and 26). It is likely that the timber fragment was originally part of the eyot construction, but that it had been removed from its context by erosion activity.

7.1.8 The condition of the fragment of jointed timber retrieved from deposit [300] raises concern. It appears that repeated periods of waterlogging and then drying had caused severe degrading to the structure of this timber fragment, and it is likely that any *in situ* timbers located within the later deposits (e.g. [300] or [308]) of Area 3 would be also be poorly preserved.

7.1.9 No further work is required on the finds assemblage from the evaluation. The artefacts were discarded.

7.2 Environmental Data by Patricia Crompton

7.2.1 *Introduction – Environmental Remains*: on the advice of Sue Stallibrass (English Heritage Science Advisor, North West Region), a single environmental sample was taken from context [107]. The whole earth sample was selected for processing in order to assess its environmental potential.

7.2.2 *Methodology:* once the sample had been removed from the ground, the whole earth sample was broken down and split into its various different components. This was achieved by a combination of water washing and flotation. Flotation separates the organic, floating fraction of the sample from the heavier sand, silt and, produces a 'flot' and a 'residue' for examination. The residue may contain artefacts, whilst the flot will

contain organic material such as plant matter, fine bones, cloth, leather and insect remains. A rapid scan at this stage will allow further recommendations to be made as to the potential for further study.

7.2.3 *Results*: the recovered remains were then assessed for content. The make-up of the processed sample is give below :

SAMPLE [107]

SAMPLE NUMBER	CONTEXT NUMBER	SAMPLE SIZE (litres)	FLOT SIZE (cm^3)	RETENT SIZE (cm^3)
1	107	4	200	1000

The soil matrix was a dark brown silt with inclusions of small pebbles and gravel. The residue was made up of stones and gritty gravel with organic root matter present. The flot contained mainly root material and wood fragments. Coal and charred wood were present in small quantities.

7.2.4 *Discussion:* the flot sample recovered yielded no seeds. In all aspects the soil matrix removed from the context was sterile, other than the fact it contained organic plant matter, mainly roots. All the organic plant matter is to be expected in the environment from which it was removed. The eyot can be expected to gradually build up layers of decaying plant matter and roots from opportunist colonisers. It is slightly unusual that no seeds were recovered from these waterlogged conditions.

7.2.5 *Conclusion and Recommendations:* the potential for further information being gained from the examination of this material is limited and so it is recommended that no further work be carried out. No vertebrate or mollusc remains were recovered from the site.

7.2.6 On the advice of Dr Sue Stallibrass (English Heritage Science Advisor, North West Region) a sample will be taken from one of exposed timbers on the southern eyot to see if a dendrochronological (tree ring) date can be obtained. During a site visit it was felt that the timbers may be of Oak, as opposed to Elm, and as such may produce a dendrochronological date (although this species identification would need to be confirmed by a dendrochronologist). This process would not damage the integrity of the structure of the southern eyot further. Due to the high water level in the winter period, this will have to be carried out in the summer of 2006. The results will then be added to this report.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

8.1.1 The desk-based research has shown that there was certainly a fishery and/or fishpool associated with Wetheral Priory on the Corby side of the River Eden in existence by the late 11th century. It is probable that even at this early date a fixed sluice was in use. However, caution should be exercised in matching these early fish traps to the exact location of the present coops/eyot location, as there was probably at least one other, possibly wicker, fish trap in existence further north at Wetheral mill by the 12th century.

8.1.2 The documentary evidence suggests that in the 12th century, the fishing rights on the River Eden were very important to the monks of Wetheral Priory. By this time, there was a fixed fish pool, tank and weir at a location closely corresponding to the present coops/eyot location.

8.1.3 By the 13th century, the word 'coops' is used for the first time in relation to Corby, and in the 14th century, there were weirs made of stone and timber at Corby.

8.1.4 From the start of the 17th century, the Howard family came into possession of Corby Castle, and at the start of the 18th century (1709-39), Thomas Howard extensively remodelled the grounds. A presently unknown engraving dating to 1729, but referred to in a later secondary source (Nares 1954), suggests that Thomas Howard planted the northern eyot with trees as part of his remodelling of the Corby Castle grounds. This suggests that the northern eyot dates to at least the late 1600's, and is probably earlier.

8.1.5 Corby Castle itself was extensively re-modelled in 1812-14 by Peter Nicholson for Henry Howard.

8.1.6 The first depiction of the coops and the northern eyot is on an estate map commissioned by Phillip Howard, and dated 1752. The southern eyot is probably not shown in an engraving of 1832, but is depicted for the first time on the tithe map of 1843. By 1901, the weir and pitched stone causeway is depicted on the OS map. This cartographic evidence suggests that at the latest the northern eyot existed in the early 18th century, and the southern eyot by the early 19th. A later secondary source mentions only one island, but it is not clear why (McIntire, 1930-9).

8.1.7 The annotated survey (site visit) of the eyots has demonstrated that all the observed features on the both the southern and northern eyots are man-made. At the southern tip of the southern eyot, and the northern tip of the northern eyot, the eyots appear to be constructed onto a natural sandstone outcrop. This implies that a natural island or shallow area was utilised for the construction of the eyots.

8.1.8 As no excavation work that compromised the integrity of the eyots was undertaken, it is impossible to say whether the earliest phases of the northern and southern eyots are man-made. However, the earliest observed deposits in the evaluation test pits were probably man-made eyot make-up deposits ([107] in Area 1 and [505] in Area 5). Deposits [107] and [505] are undated, but it is extremely unlikely that they date to later than the very start of the 18th century, and they could be somewhat earlier.

8.1.9 The annotated survey has suggested that the stratigraphically earliest structural features observed during this archaeological evaluation are the 17 east-west aligned timbers at the eastern extent of the southern eyot. However, the relatively late first depiction of the southern eyot (1843) suggests that these timbers need not be as early as features on the northern eyot , and a positive dendrochronological date would be most useful.

8.1.10 The stratigraphic sequences observed in the Area 1,3,4,and 5 test pits and the Area 2 measured sketch, all comprised structural, and man-made deposits. Unfortunately, no dating evidence was obtained, but two broad phases of eyot associated building could be observed.

8.1.11 The earliest observed structural phase appears to be represented by the east–west aligned timbers [101], pitched stones [100] and stone/timber revetment [103]-[106] sequence observed in Areas 1 and 2. This may possibly equate to the early pitched stone and timber revetment sequence [403]-[405] observed in Area 4. These features may relate to the 17 east-west aligned timbers observed further to the south at the eastern extent of the southern eyot, although it is felt that the 17 timbers may be of an earlier date still. The early sandstone surface in Area 3 [303], and the arched stone and timber revetment sequence in Area 5 [502]-[503] may also relate to this early structural phase.

8.1.12 It is tempting to match the broad phase of eyot related building discussed above to the start of the 18th century, when Thomas Howard extensively remodelled the grounds of Corby castle. In reality, however, we are most likely looking at repeated builds and repairs that date broadly to the 17th or 18th centuries.

8.1.13 A later, cruder, structural phase is represented by the possible abandonment of the earlier structural features as represented by soil layers in Area 4 [402] and Area 3 [308]. This is followed by the laying of a now-collapsed sandstone surface [302], [304], [309] in Area 3 and [401] in Area 4. The pitched stone surface observed at the southern extent of the northern eyot may be attributed to this phase (Plate 14). The stonework arch observed in Area 2 (Plate 10) may also be attributed to this phase.

8.1.14 Due to the similarity in some of the heavy tooled worked red sandstone, it is tempting to match the later phase of building on the northern eyot to the start of the nineteenth century when Corby Castle itself was extensively re-modelled for Henry Howard in 1812-14. In reality, however, we are most likely looking at repeated builds and repairs that may even be earlier than the early 19th century.

8.1.15 Finally, it seems that although the Corby Castle eyots may be a monument without obvious parallel, a search of relevant sources has offered three possible parallels for the coops themselves:

8.1.16 *The Fishgarth at St. Bees, West Cumbria*: at St. Bees a mile south of the Priory Church there is a 'walled structure' that was used as a *fishgarth*. An article from the 1920's suggests that there was no local memory of the structure having been built, and that '*...it is suggested that it is ancient...*' (Anon 1924, 368)'. There is no documentary evidence for a *fishgarth*, although the priory had the right of fishing. The 1924 article goes on to mention that only at Wetheral was there definite documentary evidence for salmon-traps, although the dates seem somewhat confused.

8.1.17 *The Cruive at Dupplin, River Earn, Perthshire, Scotland*: another potential parallel to the Corby Salmon Coops can be found in Scotland. On the River Earn, there were three

'cruives' at Colquhalzie (NN916174), Strathallan (NN 925167) and Dupplin (NO068196), which belonged to the Earls of Kinnoull (Robertson 1998, 29). Apparently the Earls were flaunting the law by building permanent constructions and by fishing in the closed season (*ibid*). The Dupplin 'cruive-dyke' consisted of a rubble dam with a gap or 'slap' in the centre into which could be fitted a cruive box to trap the ascending salmon. There was a further gap in the dam known as the 'kings slap' which was kept permanently open so that the river was never completely dammed. If the cruive boxes were not removed and the 'kings slap' was infilled, then the cruive would easily trap any salmon in the river and it appears that this happened at Dupplin. Dating of the site is again problematic and could be anywhere from 'very ancient' to the early 19th century (*ibid*).

8.1.18 *The Salmon Coops at Netherby, River Esk, Cumbria*: finally, at Netherby there are a series of at least sixteen salmon coops and a fish ladder adjacent to the southern bank of the River Esk. It is reputed that the Reverend Robert Graham obtained advice from a Mr. Howard of Corby (probably Philip Howard) on the salmon management at Netherby. Indeed, there are many similarities between the Netherby and Corby coops (RCHME 1994, 1-4). At Netherby, the coops comprise of parallel-aligned sandstone bases with stone grooves for wooden hurdles that would have acted as holding tanks for the salmon. More importantly, there is also a coursed sandstone revetment forming a retaining wall between the bank and the river terrace, that is remarkably similar in construction to the pitched stone causeway (Area 2) at Corby Castle. At Netherby there was a 'Coophouse' probably built by Graham as a folly between 1772 and 1782 during landscaping of the grounds of Netherby Hall. The Coophouse provided a vantage point overlooking the salmon coops. The Royal Commission on the Historical Monuments of England (RCHME 1994, 1-4) suggest that the coops were built a short time before the folly in the eighteenth century. The implication is that the Salmon Coops at Corby Castle, or at least some of the present structure, might also date to this period.

8.2 *Form, function, chronology and management of the Salmon Coops by Michael Heaton* (ASI Heritage Consultants).

8.2.1 *Form and Function*: The Corby Castle 'coops' appear to be unique, in that they do not rely on the weir principle.. The 'coops' rely on the fish moving upstream through the piers and getting trapped in the venturii created by the timber baffles, from which they are gaffed out. As such, they facilitate fish capture irrespective of the state of the river and, more importantly, without impeding the flow or traffic of the main channel (is there any record of an attempt to navigate the Eden). The artificial island creates a holding pool in which the upstream-bound fish would naturally congregate. Upstream-bound fish follow the deeper water found on the outside of meanders and the downstream end of the artificial island appears to have been positioned to channel the fish from the meander into a long holding pool with the coops at the top end.

8.2.2 The island may also have had a secondary purpose: The island creates a parallel-sided channel narrow enough to be netted by a pair working upstream, the pitch stone paving providing a usable walking surface (NPA staff will have found, like all anglers do, that the sandstone beds of upland rivers are difficult to move safely across. The channel bed may be filled with gravel now, but it will not always have been so). Using nets, the 'coops' need not have been anything more than a barrier against which the fish could be

driven: It is possible, therefore, that the present coop structures are a relatively late addition to a net-based fishery.

8.2.3 The variations in paving may simply reflect the intermittent repair that would have been necessary, whilst the variations in the island's outline, and possibly the break between the two parts, may simply reflect the adjacent river bed and flow dynamics.

8.2.4 The timber lacing in the island is very curious. Whilst this form of construction was widely used in military engineering of the 16th - late 19th centuries, it is not the obvious way of constructing an island in a fast-flowing river. Here, given the sandstone bed, the easier method would have been to have laid rubble or roughly-faced blocks into foundations set into the river bed. Similarly curious is the arched construction, which is designed to withstand an equally-spaced vertical load, not a varying lateral load.

8.2.5 *Chronology*: It is inconceivable that the masonry piers are medieval or even post-medieval . The Eden is a highly dynamic 'acid' spate river in which dressed sandstone blocks would rapidly loose their tooling marks and arises. Tight joints such as are present now would rapidly open-up though frost action and the faces would quickly spall off. Some of the 18th/19th century masonry in the village is more eroded than the piers. Also, much of the embedded metalwork appears to be of steel – rather than wrought iron – which is unlikely to have been widely used before the 19th century. The 18th century date suggested by NPA for construction of the coops is probably correct: the absence of supporting detail on the 1752 and 1843 maps is not significant, as neither would have been commissioned to record that level of detail. NPA are also undoubtedly correct that the structures were designed as part of the planned landscape of Corby Castle: it is not wholly beyond the bounds of probability that the piers were constructed, initially, as a bridge folly (see above, arched construction) to be seen from the house.

8.2.6 The islands were probably constructed earlier (see above) as separate structures. However, whilst there are abundant references to 'fisheries' etc. at Weatherall Priory and Corby Castle during the Middle Ages, it does not follow that these are related to them: A 'fishery' was simply a convenient place in which to fish, geomorphologically disposed towards the holding of large natural fish stocks: there need not have been any form of structure or enhancement. Similarly, the dynamic nature of the Eden makes it highly unlikely that artificial islands would survive long: the affects of recent erosion are evident and there is no reason to suppose the river has been any more benign in the past. Notwithstanding that, dendrochronological analysis may provide a definitive answer.

8.2.7 *Management*: Rivers are dynamic and constantly changing environments, highly hostile to the long term survival of built-structures. Though undoubtedly necessary, excavation of trial pits has created weak points in the protective deposits on the islands that will be quickly exploited by the force of the river. Restoration works should address these new weak points and proceed as soon as possible, preferably with design input from a Fluvial Geomorphologist.

8.2.8 NPA's trial works have demonstrated the coops and islands to be archaeologically complex and fragile. Being based on a sample, the results should be taken to indicate the minimum in terms of spatial extent and structural and stratigraphic complexity. No restoration work of any sort should proceed without constant archaeological observation and recording.

8.2.9 The site should be subject to regular monitoring in conjunction with the Environment Agency.

8.3 Recommendations by Gareth Davies

8.3.1 A combination of documentary research and archaeological excavation has demonstrated that certainly the northern eyot, and perhaps the southern eyot, at the Corby Castle Salmon Coops are largely man-made and that the existing remains probably date back to the late 17th century or earlier. These observations can hopefully be supplemented by a dendrochronological date when conditions are appropriate in the summer of 2006. It is also most probable that the present coops are situated on the site of permanent medieval fish traps that might have not left any archaeological trace. In the light of this, it is suggested that the eyots, as largely unparalleled features, certainly fall into the category of monument that have been Scheduled in the past.

8.2.1 From the evidence presented above, it is clear that further archaeological deposits survive on and around the eyots, and that the eyots are being gradually destroyed by erosion and vegetation growth. The proposed management of the monument and landscaping of the gravel banks should is clearly necessary for the continued preservation of the Coops and eyots, but any works should be constantly monitored archaeologically. Any scheme of works that would impact on the eyots would need to be preceded by a full programme of archaeological work.

8.2.2 Future work might also seek to further place the Salmon Coop structures into a fuller academic context. The input of Michael Heaton has started this process. An initial search for parallels has already obtained some interesting results.

8.2.3 Finally, if there is to be no further archaeological work at the Corby Castle Salmon Coops, and a positive dendrochronological date can provide this existing analysis with a real chronological handle, it is suggested that further funding (beyond the scope of this evaluation report) might be found in order to bring this piece of work to publication; perhaps as an article in the Transactions of the Cumberland and Westmoreland Antiquarian and Archaeological Society.

9. BIBLIOGRAPHY

9.1 Primary Sources

Anon, 1832 Copy of Depiction of Salmon Coops, engraving (CL)

Anon, 1832 Depiction of Salmon Coops, engraving (CL)

Anon, 1899 *'The Salmon Coops, Corby Woods'* titled photograph

Bough, S 1862 *'The Salmon Coops on the River Eden at Corby Castle'* painting (oil on canvas)

Corby Tithe Apportionment Map and Schedule, 1843 (CRO(C) DH3/75)

Dunham, KC 1969 *Geological Map of the British Isles. Based on the work of the Geological Survey,* 5th ed.

McIntire, W.T. 1930-9 '*Ancient Fisheries of Cumberland'* in Lakeland and Border County, Vol 1, Cumberland News Articles 1930-39

Nares, G 1954 '*Corby Castle, Cumberland*' Parts I (7th Jan 1954) and II (14th Jan 1954) in Country Life Magazine

Ordnance Survey Map, 1901 *Second Edition 25" to 1 Mile*

Ordnance Survey Map, 1970 *Sixth Edition 6" to 1 Mile*

Smith, G 1752 *'Map of Corby Park belonging to Philip Howard'*, Estate Map of Corby Castle (CL)

9.2 Secondary Sources

Anon, 1924 'Proceedings' in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, n ser, **24**, p.366-367

Anon, 1957 'The Salkeld Screen in Carlisle Cathedral: Its Date and Motive' in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, n ser, **57**, 42-43

Breeze, DJ and Dobson, B, 1976 *Hadrian's Wall*, London

Bulmer, T, and Co 1901 *History, Topography and Directory of Cumberland*

Davies, G, 2005 *Project Design for an Archaeological Evaluation at the Salmon Coops, Corby Castle, near Carlisle, Cumbria*, NPA unpublished document

English Heritage 1991 *Management of Archaeological Projects*, 2nd Edition

Giecco, F, 2001 *North Pennines Archaeology Ltd Excavation Manual*, NPA unpublished document

Graham, THB, 1914 'The Manor of Corby' in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, n ser, **14**, p.238-252

Higham N, 1986 *The Northern Counties to AD1000*, London

Hodgkinson, D, Huckerby, E, Middleton, R and Wells, CE, 2000 *The Lowland Wetlands of Cumbria*, Lancaster Imprints **8**, Lancaster.

IFA 1994a *Institute of Field Archaeologists Standards and Guidance for Desk-Based Assessments*

IFA 1994b *Institute of Field Archaeologists Standards and Guidance for Archaeological Field Evaluations*

Kirkby, DP, 1962 'Strathclyde and Cumbria: a survey of historical development to 1092', *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, n ser, **62**, 77-94

Mills, AD, 2003 *Oxford Dictionary of British Place Names*, Oxford

Newman, R, 2005 *Brief For An Archaeological Evaluation at the Salmon Coops, Corby Castle, Near Carlisle, Cumbria*, Cumbria County Council Historic Environment Service, Unpublished

Nicolson, J, and Burn, R, 1777 *The History and Antiquities of the Counties of Westmorland and Cumberland*, London

Parson, W, and White, W, 1829 *History, Directory and Gazetteer of the Counties of Cumberland and Westmorland*, Leeds

Pevsner, N, 1967 *The Buildings of England-Cumberland and Westmorland*, Yale University Press ed. (2002), London

Prescott, JE (ed.) 1897 The Register of the Priory of Wetheral, *Cumberland and Westmorland Antiquarian and Archaeological Society*, Record Series, Vol **I**, London

RCHME, 1994 '*Coophouse Netherby, Arthuret, Cumbria*' Royal Commission on the Historical Monuments of England, Rpt. 1/94/100

Robertson, IA, 1998 *The Tay Fisheries since the Eighteenth century*, Cruithne Press, Glasgow

Summerson, H, 1993 'The City and the Borders from the Late Eleventh to the Mid-Sixteenth Century', Vols. I-II, *Cumberland and Westmorland Antiquarian and Archaeological Society*, Extra Series **XXV**

Winchester, AJL, 1987 *Landscape and Society in Medieval Cumbria*, Edinburgh

Wikipedia The Free Encyclopaedia (www.en.wikipedia.org)

10.APPENDICES

10.1 Appendix 1 - List of Sites

No.	*HER No.*	*Site Name*	*Site Type*	*Period*	*NGR*
1	411 (Scheduled as SAM 291 a)	Wetheral Caves/St. Constantine's Cells, Wetheral	Cave Dwellings/?Roman Quarries and inscriptions	Medieval Roman	NY 346680E, 553530 N
2	512	St. Anthony's Chapel, Wetheral	Unlocated Chapel; from documentary evidence	Medieval	NY 346700E, 554400N
3	513	Wetheral Chapel	Unlocated Chapel	Medieval	-
4	514 (Scheduled as SAM 291 b)	Wetheral Caves Roman Inscriptions, Wetheral	3 Roman quarry inscriptions	Roman	NY 346670E, 553500N
5	2910	Wetheral Benedictine Priory, Wetheral	Earthworks of Benedictine Monastery, Findspot, and standing Gatehouse	Medieval	NY 346800E, 554100N
6	3817 (LB GI, NPGR G1)	Corby Castle, Pele Tower and Garden, Wetheral	Buildings and Earthworks	Medieval-Post Medieval	NY 347080E, 554190N
7	4534 (LB G2)	Wetheral Churchyard Cross and Sundial	Cross and Sundial	Medieval and Post Medieval	NY 346830E, 554360N
8	4535 (LB G2)	Wetheral Cross and Former Maypole	Cross and site of maypole	Medieval and Post Medieval	NY 346650E, 554370N
9	4536 (LB G2*)	Church of Holy Trinity/St. Constantine, Wetheral	Church	Medieval	NY 45SE
10	5883	Wetheral Sub-rectangular Enclosure Cropmark	Cropmark (CCC 2520 21-24)	Unknown	NY 346200E, 553300N
11	5886	Wetheral Trackway Cropmark	Cropmark (CCC2520,29)	Unknown	NY 346990, 552660E
12	5887	Wetheral Trackway Cropmark	Cropmark (CCC2520,30)	Unknown	NY 346600E, 553000N
13	6925	Wetheral Cropmark Feature	Cropmark (CC 2400, 1-5)	Unknown	NY 346100E, 554300N
14	10194	Wetheral Mill	Site of Mill Complex	Post Medieval	NY 346850E, 554580N
15	12459	Brick Kiln Wood, Wetheral	Earthwork of ?claypits	Post Medieval	NY 347800E, 553500N
16	12461	Quarry Cottages	Place-name	Unknown	NY 346060 553440N
17	12793	Moated Site at Wetheral Harbour Wood	Earthwork of Moated Site	Medieval	NY 346150E, 553760N
18	17972	Wetheral Strap End	Silver metalwork find	Early Medieval	NY 346150E, 553760N
19	18918	Wetheral Priory Gathehouse Drinking Trough	Drinking Trough structure	Unknown	NY 346790E, 554123N
20	18919	Wetheral Priory Ridge and Furrow	Ridge and Furrow Earthworks	Medieval	NY 346880E 554250N
21	19107	Coin, Wetheral	Coin find	Roman	NY 346000E, 554000N

Table 1: HER sites within a 1km radius of the Salmon Coops (shown on Figure 2)

10.2 Appendix 2 - Listed Buildings

No.	*HER No.*	*Building Type*	*Grade*	*Period*	*NGR*
1	LB20108	Wetheral Cross	II	C19th	NY 346656E, 554370N
2	LB20109	Green Farm Farmhouse	II	L C18th	NY 346620E, 554336N
3	LB20116	Crown Hotel, 2 Houses	II	E C19th	NY 346718E, 554596N
4	LB20117	The Grange, House	II	E C19th	NY 346668E, 554498N
5	LB20130	Orchard House, House	II	L C18th	NY 347298E, 554471N
6	LB20131	The Forge, Blacksmiths workshop	II	C19th	NY 347202E, 554394N
7	LB20132	Orchard Lodge, Lodge to Corby Castle	II	E C19th	NY 347360E, 554461N
8	LB20133	Myrtle/Holly Cottage, 2 houses	II	E C19th	NY 347270E, 554393N
9	LB20134	Hawthorn Cottage, cottage	II	E C18th	NY 347252E, 554393N
10	LB20135	Clematis Cottage, Cottage	II	L C17th-C18th	NY 347227E, 554369N
11	LB20136	Sunny Nook, Cottage	II	L C17th-C18th	NY 347234E, 554361N
12	LB20137	Milford and Grove cottages, 2 houses	II	C19th	NY 347242E, 554349N
13	LB20138	Corby Castle, C13th Tower house and later buildings (17th/C19th)	I	C13th/C17/C19th	NY 347098E, 554209N
14	LB20139	Kitchen Garden walls, Corby Castle	I	E C19th	NY 347150E, 554297N
15	LB20140	Lodge East of Corby Castle	I	C19th	NY 347284E, 554276N
16	LB20141	Wall and gate piers, Corby Castle	I	C19th	NY 347313E, 554272N
17	LB20142	Cascade and Summer House, west of Corby Castle	I	E C18th	NY 347086, 554109N
18	LB20143	Statue of Polyphemus	II*	E C18th	NY 347059E, 554035N
19	LB20144	Dovecote S-E of Corby Castle	I	L C18th	NY 347174E, 553916N
20	LB20145	Byre Hill Farmhouse, Corby Castle Estate	II	Mid C17th	NY 347199E, 553846N
21	LB20146	Salmon Coops, south of Corby Castle	I	?C12th with later repairs	NY 346854E, 553687N
22	LB20147	Tempietto, Garden Folly, Corby Castle	I	E C18th	NY 346817E, 553561N
23	LB20148	Statue of St Constantine	II	C 19th	NY 346759E, 553509N
24	LB20177	Corby Bridge, Wetheral	I	C 19th	NY 346880E, 554668N
25	LB20178	Station Masters house and offices	II	C 19th	NY 346773E, 554664N
26	LB20179	Footbridge at Wetheral Station	II	C 19th	NY 346762E, 554649N
27	LB10181	Church of Holy Trinity and St Constantine	II*	C13th/C16th-18th	NY 346811E, 554404N
28	LB20182	Howard Tomb in Wetheral Church	II	C17th	NY 346831E, 554411N
29	LB20183	Dixon Monument in Wetheral Churchyard	II	C19th	NY 346781E,

					554411N	
30	LB20184	Sundial south of Wetheral Church	II	C18th	NY 554371N	346841E,
31	LB20185	River House, House	II	C 19th	NY 554575N	346820E,
32	LB20186	Edenside Cottage and The Cottage, 2 houses	II	C18th-C 19th	NY 554528N	346828E,
33	LB20187	Acorn Bank, House	II	C 19th	NY 554560N	346466E,
34	LB20188	Greystones, House	II	C18th-C19th	NY 554320N	346585E,
35	LB20189 (SAM 310)	Wetheral Priory Gatehouse	I	C14th	NY 554122N	346804E,
36	LB20190	Walls of east range of Wetheral Priory	I	C14th	NY 554180N	346896E,
37	LB20197	St Constantines Cells, cave dwelling	I	? C 14th	NY 553531N	346680E,
38	LB23607	The Shrubbery, former farmhouse and barn	II	C18th	NY 554315N	347173E,
39	LB23614	Birkhill, Farmhouse	II	M C18th	NY 553982N	347778E,
40	LB27275	Eden Mount, House	II	C 19th	NY 554397N	346545E,

Table 2: Listed Buildings within a 1km radius of the Salmon Coops (shown on Figure 3)

10.3 Appendix 3 - List of Contexts

Context	Type	Description
100	Surface	Pitched sandstone blocks (Area 2)
101	Timber	Platform of E-W aligned timbers (Area 2)
102	Layer	Modern river gravels (Area 1)
103	Timber	E-W aligned timber (Area 1)
104	Timber	N—S aligned timber (Area 1)
105	Masonry	Stone revetment (Area 1)
106	Cut	For revetment (Area 1)
107	Layer	Make-up of eyot (Area 1)
108	Layer	Silt accumulation (Area 1)
109	Layer	River silt/topsoil (Area 1)
300	Layer	River silt/topsoil (Area 3)
301	Cut	Erosion cut (Area 3)
302	Masonry	Collapsed sandstone blocks (Area 3)
303	Masonry	Pitched Sandstone blocks (Area 3)
304	Masonry	Collapsed sandstone blocks (Area 3)
305	Layer	Sand and cobble deposit (Area 3)
306	Fill	Of Erosion cut [301] (Area 3)
307	Fill	Modern cobble dump (Area 3)
308	Layer	Sand deposit (Area 3)
309	Masonry	Pitched Sandstone blocks (Area 3)
400	Layer	River silt/topsoil (Area 4)
401	Masonry	Collapsed sandstone blocks (Area 4)
402	Layer	Sandy silt deposit (Area 4)
403	Timber	N-S aligned timber (Area 4)
404	Masonry	Pitched stone revetment (Area 4)
405	Masonry	Rubble make-up of eyot (Area 4)
501	Layer	River silt/topsoil (Area 5)
502	Masonry	Arched stone revetment (Area 5)
503	Timber	N-S aligned timber (Area 5)
504	Natural	Exposed sandstone bedrock (Area 5)
505	Layer	Make-up of eyot (Area 5)

Table 3: Index of Contexts

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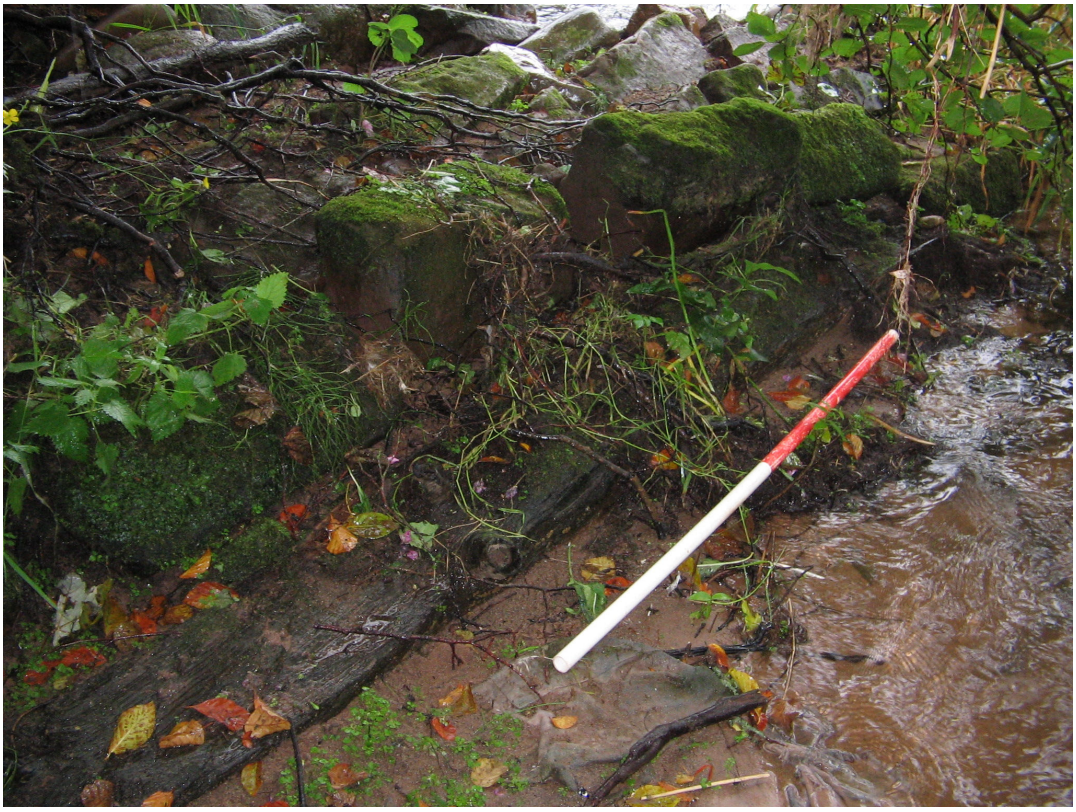

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