Sites 129 and 154, Burton, Wirral, Cheshire,

Palaeoenvironmental Assessment

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Prepared by:	Elizabeth Huckerby	Denise Druce
Position:	Environmental Manager	Project Officer - Environemental
Date:	January 2014	
Checked by:	Elizabeth Huckerby	Signed: Elizabeth Huckerby.
Position:	Environmental Manager	
Date:	September 2012	
Approved by:	Rachel Newman	Signed.....
Position:	Senior Executive Officer:	
Date:	January 2014	

Oxford Archaeology North
Mill 3, Moor Lane Mills
Moor Lane
Lancaster
LA1 1GF
t: (0044) 01524 541000
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

© Oxford Archaeology Ltd (2014)
Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

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SUMMARY

Oxford Archaeology North (OA North) was commissioned by the National Museums Liverpool, to assess the flots and residues from five environmental bulk samples taken from features recorded during archaeological investigations at Burton, Wirral, Cheshire, in 2010 and 2013. The excavations were part of the ongoing research into the late prehistoric and Romano-British rural settlement in lowland north-west England. The five bulk samples came from Sites 129 and 154 and were from an enclosure ditch (cuts ***104*** in Trench II, ***204*** in Trench XI) from Site 129 and one enclosure ditch (cut ***303***) and a small oven (fills ***104*** and ***122***) from Site 154. The samples were 1-2 litres in volume; those from Site 129 were processed by staff at the National Museums Liverpool and those from Site 154 by OA North for the assessment of palaeoenvironmental remains. Little such material was found, and the assessment demonstrated that there was no potential for further analysis. However, charcoal fragments recorded in three of the samples would provide suitable material for radiocarbon dating.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to thank Rob Philpott for commissioning the work on behalf of the National Museums Liverpool, the client. OA North is indebted to Rob Philpott for providing the background site information, and to the staff at the museums for processing the samples from Site 129. Sandra Bonsall processed the samples from Site 154 at the offices of Oxford Archaeology North, Lancaster, and she and Elizabeth Huckerby carried out the assessment of the plant remains. Denise Druce assessed and identified the charcoal, and she and Elizabeth wrote the report. The project was overseen by Elizabeth Huckerby and Rachel Newman.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 An oval and a sub-rectangular enclosure were first identified in South Wirral by aerial reconnaissance in 1989 and 1990. The enclosure named Site 129 was first identified in 1989 and that called Site 154 in 1990. Archaeological investigations were undertaken at Site 129 in 2010 and at Site 154 in 2013, as part of the ongoing research into the late prehistoric and Romano-British rural settlement in the lowland north-west England (R Philpott *pers comm*). Oxford Archaeology North (OA North) was asked by Rob Philpott, on behalf of the National Museums Liverpool (hereafter referred to as the client), to undertake the palaeoenvironmental assessment of two environmental bulk samples taken during the excavations at Site 129 and three from Site 154.

1.1.2 A later prehistoric sherd of pottery was recovered from the primary fill of the enclosure ditch ditch in Area II at Site 129. Three sherds of Roman pottery from the trench (XI) to the north of this ditch at the same site have a broad date range of AD 120-350 (R Philpott *pers comm*). Roman pottery from the interior of the enclosure at Site 154, as well as from the enclosure ditch and recovered during fieldwalking, confirmed a Roman date for this site.

1.2 QUANTIFICATION

1.2.1 Two of the bulk samples came from the enclosure ditch of Site 129: from fill ***108*** of cut ***104*** in Trench II and fill ***214*** of cut ***204*** in Trench XI. The three remaining samples came from the fills (***104***, ***122***) of a small oven and the primary fill (***309***) of enclosure ditch ***303*** in Trench *III* at Site 154 (R Philpott *pers comm*). A summary of the contexts, sample numbers, and associated features has been completed (Table 1).

Site	*Trench*	Sample No	Context No	Feature
129	*II*	54	***108***	Cut ***104*** of Enclosure ditch fill
129	*XI*	59	***214***	Cut ***204*** of Enclosure ditch fill
154	*III*	1	***309***	Primary fill of enclosure ditch ***303***
154	*III*	8	***122***	Primary fill of small oven
154	*III*	9	***104***	Upper fill of small oven

Table 1: Environmental samples assessed

1.3 METHODOLOGY

1.3.1 The samples were processed using hand flotation, where the flots were collected onto a 250µm mesh, air-dried and examined under a binocular microscope. The residues were also scanned for environmental remains and finds. The contents of each flot, such as charred plant remains (CPR), waterlogged plant remains (WPR), charcoal, coal, heat-affected vesicular material (HAVM), industrial residues or bone, were recorded. The presence of modern contaminants, such as roots, insect eggs and modern seeds, was also noted. Where present, the plant remains and charcoal are quantified on a scale of 1-5, where 1 is rare (less than five items) and 5 is abundant (>100 items). The components of the matrices are recorded as present (+) or abundant (++).

1.3.2 Preliminary seed and fruit identifications were aided by the standard texts (Cappers *et al* 2006; Stace 2010). Plant nomenclature follows Stace (2010).

1.3.3 Any charcoal fragments within the bulk samples were quantified and provisionally identified where possible. In particular, the presence of any short-lived wood species, such as *Alnus glutinosa* (alder), *Corylus avellana* (hazel) or *Prunus* sp (blackthorn-type, which includes blackthorn, wild plum/cherry and bird cherry), was noted, as was the presence of other charred material, such as Poaceae (grass) stems or tuber fragments, since these might provide suitable material for scientific dating. Charcoal identifications were made with reference to Hather (2000), and modern reference material.

2. RESULTS

2.1 INTRODUCTION

2.1.1 The results have been summarised (Table 2), as has the potential of each sample to sustain analysis of the charred plant remains (CPR), waterlogged plant remains (WPR), and for providing suitable material for radiocarbon dating.

Context no	Sample no	Flot size ml	Matrix	Charred plant remains	Potential for analysis	Potential for dating
108	54	<10	Modern seeds +, sand +	Charcoal >2mm and <2mm (2), including positively identified *Quercus* sp	None	None
214	59	35	Modern seeds +, slag? +, sand and gravel +	Charcoal >2mm and <2mm (5), including postively identified *Prunus* sp and *Quercus* sp, *Fraxinus* and *Alnus*/*Corylus*-type	None	Yes
309	1	30	Modern seeds +, modern Poaceae stems +, insect remains +, sand ++	CPR (1) *Prunella vulgaris*, *Persicaria* fragment, Charcoal >2mm and <2mm (2)	None	None
122	8	75	Industrial/slag ++, coal +, sand ++, modern contamination +	Charcoal >2mm and <2mm (5), *Prunus* sp and *Quercus* sp, *Fraxinus* and *Alnus*/*Corylus*-type. Badly preserved	None	Yes
104	9	140	Modern roots +, calcined bone +, sand ++	Charcoal >2mm and <2mm (5), *Prunus* sp and *Quercus* sp, *Fraxinus* and *Alnus*/*Corylus*-type. Some twigs, very poorly preserved	None	Yes

Note: 1=< five items; 5=>100 items

+=present; ++=abundant

Table 2: Results of the assessment of charred plant remains and charcoal

2.2 SITE 129

2.2.1 Although no charred or waterlogged plant remains were recovered, charcoal fragments were recorded in all the samples and were abundant in fill ***214***. The

components in the matrix of the samples from this site included possible slag, modern fruits/seeds, some modern roots and sand/gravel.

2.2.2 The charcoal assemblage in fill ***214*** included positively identified oak (*Quercus* sp), blackthorn-type (*Prunus* sp), ash (*Fraxinus*) and alder/hazel-type (*Alnus*/*Corylus*-type). There were also some small twiggy pieces. Although many of the fragments were encrusted and therefore not ideal for identification, many were large and well-preserved enough to provide material for radiocarbon dating.

2.3 SITE 154

2.3.1 Occasional charred weed seeds/fruits were recorded in the sample from fill ***309***. Charcoal fragments, however, were recorded in all the samples and were abundant in both fills ***104*** and ***122*** from the small oven, although it was very poorly preserved.

2.3.2 Several fragments of calcined bone were recorded in the upper fill (***104***) of the small oven. Industrial debris/slag was also recorded in the same contexts. Other components in the matrices of the samples included modern fruits/seeds, some modern roots, a few fragments of coal and sand/gravel.

2.3.3 The charcoal assemblages from fills ***104*** and ***122*** were similar to those from Site 129, with positively identified oak (*Quercus* sp), blackthorn-type (*Prunus* sp), ash (*Fraxinus*) and alder/hazel-type (*Alnus*/*Corylus*-type). There were some small twiggy pieces. Although many of the fragments were encrusted and therefore not ideal for identification, many were large and well-preserved enough for providing material for radiocarbon dating.

2.4 SITES 129 AND 154

2.4.1 Negative results were recorded from the assessment of the plant remains from both sites. The assessment has, however, identified, that charcoal from short-lived taxa is present, which could be used for radiocarbon dating if required.

3. DISCUSSION AND RECOMMENDATIONS

3.1 DISCUSSION

3.1.1 Although there were large quantities of charcoal from fill ***214*** of ditch ***204*** from Site 129 and from the fills (***104***, ***122***) of the small oven from Site 154, much of it was poorly preserved. However, oak, blackthorn-type, ash and alder/hazel-type charcoal were positively identified.

3.1.2 The presence of some possible slag, together with large quantities of charcoal, in the fills (***104***, ***122***) of the small oven might suggest that the feature may have been associated with some industrial activity. Oak, blackthorn-type, ash and alder/hazel-type wood was probably being used as fuel on the two sites. The pollen data from the Wirral suggest that these taxa are likely to have been growing locally in the prehistoric period, although as far as the authors are aware, no pollen has been analysed from Roman peat deposits in the Wirral (Cowell and Innes 1994, 50-65).

3.2 RECOMMENDATIONS

3.2.1 No further work is warranted on the palaeoenvironmental remains from Sites 129 and 154, but the poorly preserved charcoal from the fill (***214***) of ditch ***204*** (Site 129) and from the upper (***104***) and primary fill (***122***) of the small oven (Site 154) may provide suitable material for radiocarbon dating.

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Oxford Archaeology North
Mill 3
Moor Lane Mills
Moor Lane
Lancaster
LA1 1QD
t: (01524 541000
f: (01524) 848606
e: oanorth@oxfordarch.co.uk
w: www.oxfordarch.co.uk

Chief Executive Officer:
Dr Gill Hey BA PhD MIfA FSA

Private Limited Company Number: 1618597

Registered Charity Number: 285627

Registered Office: Oxford Archaeology Ltd.
Janus House, Osney Mead, Oxford, OX2 0ES