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**Assessment of biological remains from  
excavations at Soldiers Hill, Wattstown,  
Coleraine, County Derry, Northern Ireland  
(site code: AE/03/101)**

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**Assessment of biological remains from excavations at Soldiers Hill,  
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by

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**Summary**

*Small quantities of biological remains recovered from deposits encountered during excavations at Soldiers Hill, Wattstown, Coleraine, County Derry, Northern Ireland, were submitted for assessment. The site consisted of four isolated areas of archaeology, each comprising pits and hearth bases. Neolithic and early Bronze Age pottery was recovered from one of the pit fills (Context 102).*

*The recovered charcoal was universally crumbly and brittle and usually difficult to identify. It was certainly not all from one species, however, several taxa being recognised, albeit mainly tentatively. This material almost certainly represents the remains of fuel but is of no further interpretative value. The cereal grains, rather frequent in the samples from Context 114, the basal fill of a feature interpreted as a grain drying kiln, were generally, rather poorly preserved, though a high proportion of the grains could be assigned to one of the main cereal genera. There was very little chaff, though the few fragments present were rather well preserved, and a small component of weed seeds. The charred peat certainly or probably present in all the kiln samples seems likely to represent a fuel additional to wood or timber. A record of the grain-rich material from Context 114 is probably worth making, if it can be dated closely, since assemblages of this kind are rare in the area. Material for radiocarbon dating could certainly be recovered from amongst the cereal grains in Context 114; a date in the Iron Age or later might perhaps be predicted from the presence of free-threshing wheat.*

*Small quantities of material recovered from Context 114 were submitted as 'possible fossilised/burnt bone'. Microscopic examination of the material revealed it to be a mostly mineral concretion with a little organic content – overall rather 'tufa-like'.*

*A small number of cremated bone fragments were recovered from Sample 5 (Context 114) but none were identifiable. The insect remains from Sample 1 (Context 102) were clearly of modern origin and either intrusive or contaminant.*

**KEYWORDS:** SOLDIERS HILL; WATTSTOWN; COLERAINE; COUNTY DERRY; NORTHERN IRELAND; ASSESSMENT; NEOLITHIC; EARLY BRONZE AGE; PLANT REMAINS; CHARRED PLANT REMAINS; CHARRED GRAIN; PEAT; CREMATED BONE; ?TUFA

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## Assessment of biological remains from excavations at Soldiers Hill, Wattstown, Coleraine, County Derry, Northern Ireland (site code: AE/03/101)

### Introduction

An archaeological excavation was carried out by Archaeological Consultancy Services Limited (ACS), at Soldiers Hill, Wattstown, Coleraine, County Derry, Northern Ireland, during 2003.

The site consisted of four isolated areas of archaeology, each comprised of pits and hearth bases. Neolithic and early Bronze Age pottery was recovered from one of the pit fills (Context 102).

Charred plant remains recovered from six samples (from three contexts) at this site were submitted to Palaeoecology Research Services Limited (PRS), County Durham, UK, for examination. The material consisted of fragments of wood charcoal and charred seeds/cereal grains. Small quantities of cremated bone and material described as 'possible fossilised/mineralised bone', were also submitted.

### Methods

The sediment samples were processed by ACS prior to delivery to PRS and only the small quantities of recovered plant remains and the 'bone' were submitted for assessment.

The soil samples were placed onto 1 mm nylon mesh in a sieving tank. The light organic fraction was washed over through a 2 mm sieve into a 500 micron sieve to collect the flots. Each of the soil samples was put through this system twice to ensure that as much material as possible was recovered.

### Results

Small quantities of material recovered from Samples 4, 5 and 7 (all from Context 114) were submitted as 'possible fossilised/burnt bone'. Microscopic examination of the material revealed it to be a mostly mineral concretion containing occasional pollen grains/spores, very poorly preserved ?phytolith fragments and scraps of mineralised plant tissue – overall rather 'tufa-like'.

The insect remains from Sample 1 (Context 102) represented a single, more or less complete, beetle abdomen. An identification to species was not attempted as this was clearly of modern origin and either intrusive or a contaminant.

The results of the examination of the charred plant and cremated bone remains are presented below in context number order. Sediment descriptions were provided by the excavator.

**Context 102** [fill of pit C101, Neolithic/early Bronze Age]  
Sample 1/T

Loose, dark brown, clayey loam, with occasional flecks of charcoal and subangular stones up to 100 mm in length.

The material comprised two charred oat (*Avena*) grains and a little charcoal (to 10 mm). The latter exhibited some staining with iron oxide and was crumbly and brittle; about half the fragments were actually bark. The material included both ring- and diffuse-porous specimens, the former perhaps oak (*Quercus*), the latter probably alder/hazel (*Alnus/Corylus*).

**Context 112** [primary fill of truncated hearth base C110]  
Sample 3/T

Stiff, heavily oxidised, red clay, with occasional subangular stones up to 90 mm in length.

There were three oat grains, one of which may perhaps have been wheat (*Triticum*), and one fragment which appeared to be barley (*Hordeum*).

**Context 114** [basal fill of cereal-drying kiln C123]  
Sample 4/T

Soft, blackish brown, silty clay, with frequent charcoal flecks, moderate subrounded to subangular stones to 70 mm in length and occasional lenses of orange-red oxidised clay.

The small quantity of charcoal (to 10 mm) was crumbly and brittle; fragments included unidentified diffuse-porous specimens as well as ?birch (*Betula*) and also oak. There was one charred grass/cereal culm node and several fragments of material which appeared to be charred peat (to 10 mm) as well as a little charred bark.

The sample of charred grain, amongst which there were a few modern roots, consisted of specimens which were mainly rather eroded/damaged, obscured by silt, or distorted (there were perhaps some shrunken grain), though a few rather better preserved specimens were also present. The single specimens of rachis—one each of barley (perhaps 2-row) and wheat (from a free-threshing form)—were well preserved, the barley fragment retaining marginal hairs. Most of the grain was oats (and there was some oat chaff, including awn fragments), with a few barley grains and a very few wheat grains, perhaps bread/club (*Triticum 'aestivo-compactum'*) wheat on grain morphology. Further charred peat was present amongst the grains and there were a few unidentified charred weed seeds.

Sample 5/T

The charcoal (to 10 mm) was brittle and crumbly, and difficult to handle; it was apparently all from diffuse-porous taxa, though one unidentifiable fragment exhibited an unusual combination of some large vessels in a semi-ring-porous pattern with tangential bands of parenchyma.

The cereal grains contained some fragments of modern roots and a little material which may have been peat. Grain preservation was much the same as for Sample 4, and the material was mainly oats (including some spikelets which appeared to be cultivated oat, *Avena sativa* L.), with a few barley and rare wheat (hexaploid form) grains. There were also a few unidentified charred weed seeds.

A small number of cremated bone fragments from this sample were also submitted but none were identifiable.

Sample 6/T

The charcoal (to 10 mm) was crumbly and brittle, and amongst it were some charred peat fragments. Some of the charcoal was tentatively identified as holly (*Ilex aquifolium* L.); other material was perhaps hazel, with some oak.

In terms of the taxa present and state of preservation, the grain was much like that seen in Samples 4 and 5, and again there were some modern roots and a little charred peat.

Sample 7/T

The few fragments of crumbly and brittle charcoal (to 10 mm) included unidentified diffuse-porous material and some oak, as well as bark.

The small assemblage of charred cereal grains also included some modern roots; the grain was similar to that seen in the earlier samples and there was a trace of charred peat. Amongst the oats, barley and wheat grains was a single fragment of rachis of barley, perhaps from the 2-row form, and a few charred weed seeds.

## Discussion and statement of potential

The recovered charcoal was universally crumbly and brittle and usually difficult to handle and thus identify. It was certainly not all from one species, however, several taxa being recognised, albeit mainly tentatively. This material almost certainly represents the remains of fuel but is of no further interpretative value.

The cereal grains, rather frequent in the samples from Context 114 (the basal fill of a feature interpreted as a grain drying kiln), were generally rather poorly preserved, though a high proportion of the grains could be assigned to one of the main cereal genera. There was very little chaff, although the few fragments present were rather well preserved, and only a small component of weed seeds.

The charred peat, certainly or probably present in all the kiln samples, seems likely to represent a fuel additional to wood or timber.

## Recommendations

A record of the grain-rich material from Context 114 is probably worth making, if it can be dated closely, since assemblages of this kind are rare in the area. In particular a closer examination of the cereal rachis would be worthwhile, though the amounts are vanishingly small (any remaining unprocessed sediment from Context 114 should be sieved (to 300 microns) using the utmost care, in order to recover further diagnostic chaff material).

Material for radiocarbon dating could certainly be recovered from amongst the cereal grains in Context 114; care would need to be taken that no modern rootlets and ancient peat were included with the sample(s) submitted, however. (A date in the Iron Age or later might perhaps be predicted from the presence of free-threshing wheat; the structure itself suggests a date in the historic period, to judge from Monk's (1981) comments.)

## Retention and disposal

All of the current material should be retained for the present.

## Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

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## References

Monk, M. A. (1981). Post-Roman drying kilns and the problem of function: a preliminary statement, pp. 216-30 in Ó Corráin, D. (ed.), *Irish Antiquity*. Cork: Tower Books.