

Final

PROJECT DETAILS

| Project | M3 Clonee–Kells Motorway |
|----------------------------------|--|
| Site Name | Chapelbride 1 |
| Ministerial Direction Number | A030/010 |
| Registration Number | E3172 |
| Senior Archaeological Consultant | Donald Murphy |
| Site Director | Ed Danaher |
| Excavated | 16 – 20 October 2006 |
| Client | Meath County Council, National Roads Design Office, Navan Enterprise Centre, Navan, County Meath |
| | |
| Townland | Chapelbride |
| Parish | Burry |
| County | Meath |
| National Grid Reference | 270313 274933 |
| Chainage | 82680-82700 |
| Height | 89.31m OD |
| Report Type | Final |
| Report Status | Submitted |
| Date of Report | December 2008 |
| Report by | Ed Danaher and Vicky Ginn |
| | with contributions by Rob O Hara |

ACKNOWLEDGEMENTS

This report has been prepared by Archaeological Consultancy Services Ltd on behalf of Meath County Council National Roads Design Office (NRDO) and the National Roads Authority (NRA). The excavation was carried out under Ministerial Direction Number issued by the Department of the Environment, Heritage and Local Government (DOEHLG) in consultation with the National Museum of Ireland (NMI).

Consulting Engineers - N3 Meath Consult

Engineer – Peter Thorne and Thomas Meagher

Resident Engineer - Conor Wilkinson

Meath County Council, National Roads Design Office

Senior Engineer - John McGrath

Project Archaeologist – Mary Deevy

Project Liaison Officer - Ambrose Clarke

National Monuments, Department of the Environment, Heritage and Local Government

Archaeologist - Martin Reid

Irish Antiquities Division, National Museum of Ireland

Keeper - Nessa O'Connor

NON-TECHNICAL SUMMARY

This site at Chapelbride 1 was excavated by Archaeological Consultancy Services Ltd (ACS) as part of the M3 Clonee–North of Kells Motorway Scheme on behalf of Meath County Council NRDO and the NRA. The excavation was carried out between 16 and 20 October 2006 under Ministerial Direction Number A030/010 issued by DOEHLG in consultation with the NMI. Very few features were present within this site. Two Iron Age features, one of which contained evidence for ironworking, were recorded at the site as well as a spread and a field drain.

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1 INTRODUCTION

The site at Chapelbride 1 (Figures 1–6) was identified during advanced testing carried out by David Bayley of Irish Archaeological Consultancy (IAC) during June 2004 under licence number 04E1054 (Bayley 2005). Testing revealed the presence of three separate areas of archaeological activity in which a posthole and two pits were discovered. One pit (0.60m x 0.40m x 0.25m) had fire-reddened clay in its base and slag in its fill and the second pit contained both fire-reddened clay and also charcoal-rich clay (Bayley 2005). Full resolution of the site occurred in October 2006 and re-located the majority of these features.

1.1 Development

Meath County Council and the National Roads Authority are constructing 49km of two-lane, dual-carriageway motorway between Clonee and Kells and 10km of single carriageway from Kells to Carnross, north of Kells, along with additional road upgrades, realignments and associated ancillary works. For the purposes of the Environmental Impact Assessment and the subsequent archaeological investigations the scheme was subdivided into five separate sections as follows: Clonee to Dunshaughlin (Contract 1), Dunshaughlin–Navan (Contract 2), the Navan Bypass (Contract 3) Navan to Kells (Contract 4) and and Kells to North of Kells (Contract 5). This section of the scheme (Contract 5) will commence at the N52 Mullingar Road situated to the southwest of Kells in the townland of Calliaghstown (NGR 272828 274647) and runs to the northwest, crosses the River Blackwater at Balgree and terminates in the townland of Derver at the existing border between counties Meath and Cavan (NGR 266012 280943).

The archaeological components of the Environmental Impact Statement published in 2002 where carried out by Valerie J. Keeley Ltd (VJK) and Margaret Gowen and Co. Ltd (MGL) in 2000–2001. This included desk-based studies and field surveys of each section (VJK Sections 1 & 3 and MGL Sections 2, 4 & 5). Additionally on behalf of MGL geophysical survey was undertaken on the Dunshaughlin–Navan section and at Nugentstown on the Navan–Kells section by GSB Prospection (2000 & 2001). These studies carried out as part of the Environmental Impact Assessment were augmented by further geophysical survey conducted by Bartlett-Clark Consultancy on the remainder of the scheme (2002). Archaeological testing was completed by ACS and Irish Archaeological Consultancy Ltd (IAC) in 2004 (ACS Sections 1–3 and IAC Sections 4–5). Excavation of the sites identified during testing was conducted by ACS and IAC between 2005 and 2008 (ACS Sections 1–3 & 5 and IAC Section 4).

2 EXCAVATION

Excavation occurred between 16 and 20 October 2006 under Ministerial Direction Number A030/010 issued to Meath County Council NRDO. The work was carried out by Ed Danaher on behalf of ACS. The topsoil (F24) consisted of a mid-brown loam and was removed by machine equipped with a grading bucket. An orange, clay sand with frequent stones formed the subsoil (F25).

All archaeological features exposed were recorded and excavated by hand using the single context method. Each feature was assigned a context number. Where appropriate, samples were retrieved in an attempt to obtain evidence for the date and function of these features (Appendix 3). Unless otherwise stated, the features have been measured length-width-depth. All measurements are in metres. All finds were numbered according to the requirements of the National Museum of Ireland from 1 onwards consistent with licence and feature number.

2.1 Results

Eight contexts of archaeological interest were identified. Full details of all these, and further, contexts are located in Appendix 1.

A small sub-circular cut (F23: 0.73m x 0.69m x 0.11m) contained one fill (F4) comprising black material with pockets of burnt clay, stones and moderate charcoal flecks (Figures 7–9; Plate 1). The pit belonged to the early to mid Iron Age (Cal BC 389–202 BC; Beta 247163; Appendix 5). A second pit was discovered 30m southeast of this feature. F7 (0.68m x 0.57m x 0.11m) was filled with a layer of reddish brown burnt clay (F9) and black clay with frequent charcoal flecks, hammerscale and small quantities of slag (F8) (Figures 7–9; Plate 2). Two radiocarbon dates for this feature both came back with calibrated ranges in the early to mid Iron Age (401–206 BC; Beta 247164 and 386–183 BC; Beta 247165).

An undated ditch/drain (F10: 11.30m length x 2.40m width) contained a stony fill (F11) and extended beyond the limits of excavation to the east and west. A natural depression (F6) contained a loose, brownish-black mottled material with clay, stones and moderate charcoal flecks, possibly derived from the fills of the nearby two pits.

2.2 Finds

Only two sherds of post-medieval earthenware pottery were found (A030/010:11:1–2), both of which were recovered from the fill of a post-medieval field drain.

3 DISCUSSION by Rob O'Hara

3.1 Form and function

Both features showed evidence of burning and were probably the remains of hearths. It is possible further evidence for associated features was removed by later agricultural activities. Though rather ephemeral features, F7 contained sufficient environmental evidence (slag and hammerscale) to indicate its potential function as a smithing hearth. Charred ribwort plantain seeds were also recovered in this context (Appendix 4).

Hammerscale results from small fragments of metal being dislodged by mechanical or thermal shock when iron is forged or by the solidification of small droplets of slag expelled from within iron during hot working, particularly when two components are welded together, but also during primary smiting of bloom. They are generally too small to be recognized during excavation but can be recovered from soil samples as they are strongly magnetic¹. The recovery of such objects from F8 indicates a specific process, the smithing of iron. An industrial function for F7 would seem appropriate, and the similarity in dates to F23 would indicate contemporaenity and may suggest associated settlement or further ironworking features in the vicinity.

The difficulty in identifying Iron Age settlements remains a significant hindrance to the study of settlement patterns and social hierarchies in this period. It is not however an age totally devoid of occupational evidence. On the M3 scheme (excluding Contract 4) 110 radiocarbon dates were returned for various feature types that belonged generally to the Iron Age period (500 BC–AD 500). If the period is broken into five subgroups and the dates distributed based on less extensive ranges, a number of trends are noticeable. The suggested ranges are listed below. An unspecified margin of error is implied in the following tables, which is intended to balance the differences in individual dates and ranges across the set of values. Dates are assigned to ranges based on whether they fall predominantly within a range, and such a system will invariably lead to some overlapping.

- LBA-EIA transition (c.750-450 BC) 11 dates returned for 7 sites
- EIA (c. 550–100 BC) 27 dates returned for 18 sites
- BC-AD transition (sites which span the BC-AD divide) 4 dates returned for 4 sites
- LIA (AD 100–300) 9 dates returned for 9 sites
- LIA-E.MED transition (AD300-650) 59 dates returned for 19 sites

¹ The Historical Metallurgy Society: Archaeology Datasheet No 10.

Available at http://hist-met.org/hmsdatasheet10.pdf [Accessed 9 December 2008]



Chart 1: OxCal calibrated Iron Age radiocarbon dates for the M3 (excluding Contract 4)

| Site | Directions No | Feature | Material | OxCal calibrated date |
|---------------|---------------|-----------------------------------|----------|-----------------------|
| Ardsallagh 1 | A008/035 | 10d:cremation deposit | C/bone | 357-50 BC |
| Ardsallagh 1 | A008/035 | 140: fill of cremation pit | Charcoal | 383-122 BC |
| Ardsallagh 1 | A008/035 | 231: fill of pit | Charcoal | 388-197 BC |
| Berrilstown 1 | A008/009 | 45: fill of pit C44 | Charcoal | 386-183 BC |
| Castlefarm 1 | A017/001 | 328: upper fill of ringditch C327 | Charcoal | 161-68 BC |
| Chapelbride 1 | A030/010 | 4: fill of circular feature C23 | Charcoal | 389-202 BC |
| Chapelbride 1 | A030/010 | 8: charcoal-rich fill of pit C7 | Charcoal | 401-206 BC |
| Chapelbride 1 | A030/010 | 9: burnt clay fill in pit C7 | Charcoal | 386-183 BC |
| Chapelbride 4 | A030/007 | 6: fill of slot trench of house | Charcoal | 396-204 BC |
| Derver 4 | A030/022 | 58: fill of posthole | Charcoal | 392-203 BC |
| Derver 4 | A030/022 | 104: fill of posthole | Charcoal | 514-212 BC |
| Derver 5 | A030/021 | 13: fill of pit from fulacht | Charcoal | 43-126 BC |
| Dunboyne 2 | A017/012 | 80: charcoal layer in C77 | Charcoal | 401-206 BC |
| Garretstown 2 | A008/008 | 120: charcoal-rich fill of kiln | Charcoal | 398-206 BC |
| Garretstown 2 | A008/008 | 140: fill of kiln | Charcoal | 359-55 BC |
| Garretstown 2 | A008/008 | 188: fill of possible kiln | Charcoal | 161-68 BC |
| Garretstown 2 | A008/008 | 240: charcoal-rich fill in C216 | Charcoal | 357-50 BC |
| Johnstown 1 | A017/019 | 371: quarry fill | C/bone | 401-206 BC |
| Johnstown 2 | A017/020 | 8: fill of kiln Area 2 | Charcoal | 401-206 BC |
| Johnstown 2 | A017/020 | 14: primary fill of bowl furnace | Charcoal | 401-206 BC |
| Johnstown 4 | A017/043 | 10: fill of cremation pit | Charcoal | 407-208 BC |
| Kennastown 2 | A023/002 | 39: fill of large pit | Charcoal | 386-183 BC |
| Knockmark 1 | A017/028 | 53: deposit N of C44 | Charcoal | 383-122 BC |
| Macetown 1 | A023/008 | 10: fill of pit | Charcoal | 414-206 BC |
| Pottlebane 3 | A030/017 | 9: fill of pit | Charcoal | 404-207 BC |
| Rath Hill 1 | A017/018 | 91: metalworking spread | Charcoal | 359-55 BC |
| Roestown 4 | A017/024 | 103: fill of pit | Charcoal | 386-183 BC |

Table 1: Early Iron Age features on M3 sites (excluding Contract 4)

Chart 1 presents the sum quantity of Iron Age dates returned for each of the sub-categories outlined above. The category most relevant to the current discussion is EIA, the early Iron Age (c. 550–100 BC). The largest total of sites and dates comes from the final category, which spans the Iron Age and early medieval periods. Many of the dates belonging to this category should be attributed to the latter period and can be discounted from the current discussion. If these values are not considered, the highest number of sites and dates with Iron Age features belong to the to the early Iron Age period.

Broadly contemporary activity to the settlement at Chapelbride 1 has been identified at Ardsallagh1 (A008/035), Berillstown 1 (A008/009), Castlefarm 1 (A017/001), Derver, Dunboyne 2 (A017/012), Garretstown 2 (A008/008), Johnstown 2 (A017/020), Kennastown 2 (A023/002), Knockmark 1 (A017/028), Macetown 1 (A023/008), Pottlebane 1 (A030/019), Rath Hill 1 (A017/018) and Roestown 4 (A017/024).

| Contract | Townlands | | | | | |
|----------|---|---|--|--|--|--|
| 1 | Castlefarm, Dunboyne, Johnstown, Knockmark, Rath Hill, Roestown | 8 | | | | |
| 2 | Ardsallagh, Berrilstown, Garretstown | 3 | | | | |
| 3 | Kennastown, Macetown | 2 | | | | |
| 4 | NO DATA AVAILABLE | | | | | |
| 5 | Chapelbride, Derver, Pottlebane | 5 | | | | |

Table 2: Early Iron Age sites per contract (excluding Contract 4)

The highest incidence of sites with EIA dates was on Contract 1 ($^{8}/_{18}$ or 44%), with slight activity around the outskirts of Dunboyne and a notable concentration on the west side of Dunshaughlin, both areas located quite a distance from Chapelbride 1 (over 20km). The range of activity is quite broad, ranging from settlement sites (Dunboyne 2), burial sites (Castlefarm; Johnstown 4, Knockmark 1), metalworking areas (Johnstown 2, Rath Hill), cereal processing sites (Johnstown 2) and unknown Iron Age activity (Roestown 4). Its clear from this very cursory examination of excavated early Iron Age activity that there were clear concentrations of activity around Dunboyne and Dunshaughlin. The reasons for this are not immediately obvious. The trend however did not continue long into the period, and the data available for the late Iron Age period (AD 100–300) shows a very strong pattern of activity

on Contract 2 in particular, with activity in the townlands of Ardsallagh, Baronstown, Blundelstown, Castletown Tara, Garretstown, Ross and Skreen.

The ceremonial site at Lismullin is not considered in this discussion as radiocarbon dates are currently in preparation. However, two previous radiocarbon dates from postholes forming the enclosure suggested activity in the LBA–EIA period (732–372 BC). Chapelbride 1 is located 500m north-west of Chapelbride 4, and over 5km from Derver 4 and 5 and Pottlebane 3, all of which produced similar Early Iron Age dates.

3.2 Date and sequence

Both pits were dated to the early-mid Iron Age (F23: 389–202 BC; Beta 247163 and F7: 401–206 BC/ 386–183 BC (Beta 247164; Beta 247165).

4 CONCLUSIONS

Chapelbride 1, A030/010, excavated (16 - 20 October 2006) by Ed Danaher (ACS) as part of the M3 Clonee–North of Kells Motorway Scheme on behalf of Meath County Council NRDO and the NRA, represented two pits, one of which may have been a hearth, and a field boundary. Much of the archaeological activity in this area was of such a dispersed nature and an isolated pit was located at nearby Chapelbride 2 (A030/009) and an isolated fire-spot at Chapelbride 3 (A030/008).

These Iron Age pits extend the evidence for prehistoric utilisation of this landscape into the Iron Age. The Iron Age is still a poorly understood period in terms of its settlement patterns and the excavation of Iron Age features at Chapelbride makes a small contribution to on-going research into this period. A significant number of Iron Age features were discovered along the M3, most spectacularly at Lismullin 1, but that site was set within a densely populated Iron Age landscape, if the radiocarbon dates from the scheme can be applied to the wider landscape setting.

5 REFERENCES

Bayley, D 2005 Report on Archaeological Assessment at Testing Area 3, Chapelbride, Co. Meath, Licence Number: 04E1054. Unpublished report prepared for Irish Archaeological Consultancy Ltd.

Signature:

Conoto the

Ed Danaher and Vicky Ginn with contributions by Rob O'Hara December 2008

| APPENDIX 1 | Context Details |
|-------------------|-----------------|
|-------------------|-----------------|

| No | Туре | Fill of/ Filled with | Strat above | Strat below | Description | Interpretation | Group | Artefacts | Animal bone | Cremated bone | Samples |
|-----------|-----------------|----------------------------|----------------|----------------|--|----------------------------|-------|------------------------------|----------------|---------------|---------|
| 01- 03 | | | | | Used previously during topsoil metal detecting | | | | | | |
| 04 | Fill | 23 | 23 | 24 | Loose, black material with pockets of burnt clay, moderate (20%) angular, rounded, medium sized stones and moderate charcoal flecks. 0.73m x 0.69m x 0.11m | Fill of pit 23 | | | | | #1 soil |
| 05 | Not assigned | | | | | | | | | | |
| 06 | Deposit | N/A | 25 | 24 | Loose, brownish-black mottled with orange clay with moderate charcoal flecks and occasional small and medium size stones. 3.10m x 2.76m x 0.25m | Natural depression | | | | | |
| 07 | Cut | 08, 09 | 25 | 08, 09 | Sub-circular cut (0.68m x 0.57m x 0.11m) with a sharp break of slope (imperceptible in northwest), varied sides and an imperceptible break of slope leading to an irregular base | Possible hearth | | | | | |
| 08 | Fill | 09 | 07 | 24 | Loose, black material with frequent charcoal flecks. 0.45m x 0.42m x 0.11m | Fill of hearth 07 | | | | | #2 soil |
| 09 | Fill | 08 | 07 | 24 | Reddish-brown clay. 0.10m x 0.09m x 0.06m | Fill of hearth 07 | | | | | #3 soil |
| 10 | Cut | 11 | 25 | 11 | Curvilinear cut (11.30m length x 2.40m width) with rounded corners, a gradual break of slope (sharp in north) and a concave base | Possible boundary ditch | | | | | |
| 11 | Fill | 10 | 10 | 24 | Loose, mid-brown, silty clay with frequent small stones and pebbles. 11.30m length x 2.40m width | Fill of ditch 10 | | Post- medieval pottery | | | |
| 12– 22 | Not assigned | / Non-archae | eological | | | | | | | | |
| 23 | Cut | 04 | 25 | 04 | Sub-circular cut (0.73m x 0.69m x 0.11m) with a gradual break of slope (sharp in south), gently sloping, irregular sides and an imperceptible break of slope leading to an irregular, stony base | Shallow pit | | | | | |
| 24 | Topsoil | N/A | 25 | N/A | Mid-brown loam 0.30 – 0.40m in depth | Topsoil | | | | | |
| 25 | Subsoil | N/A | N/A | 24 | Orange, clayey sand with frequent stones | Subsoil | | | | | |

APPENDIX 2 Finds List

| Find No | Description |
|-----------------|----------------------------------|
| A030/010:11:1–2 | Post-Medieval earthenware sherds |

APPENDIX 3 Sample List

| Sample No | Context No | Results |
|--------------|---------------|--------------------|
| 1 | 4 | 10g charcoal |
| 2 | 8 | 35g charcoal, slag |
| 3 | 9 | 2g charcoal |

APPENDIX 4 Plant macrofossil and charcoal analysis by Durham University



Chapelbride 1, M3 Motorway Project, Co Meath, Ireland

plant macrofossil and charcoal analysis

on behalf of **Archaeological Consultancy Services Ltd**

> Report 2078 November 2008

Archaeological Services

Durham University South Road Durham DH1 3LE Tel: 0191 334 1121 Fax: 0191 334 1126

archaeological.services@durham.ac.uk

www.durham.ac.uk/archaeological.services

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1. Summary

The project

1.1 An excavation was undertaken by Archaeological Consultancy Services Ltd at Chapelbride 1, Co Meath, Ireland. This report presents the results of plant macrofossil and charcoal analysis of the fills (context 8 and 9) of pit C7, and the fill (context 4) of circular feature C23.

Results

1.2 The charcoal was entirely composed of oak timber, which is likely to have been used for fuel for metal-working activities. Charred food plant remains were absent from the contexts.

2. Project background

Location and background

2.1 An excavation was undertaken by Archaeological Consultancy Services Ltd at Chapelbride 1, Co Meath, Ireland (NGR 270313 274933). Features on the site included pits, small charcoal spreads and a linear field drain. This report presents the results of plant macrofossil and charcoal analysis of the fills (context 8 and 9) of pit C7, and the fill (context 4) of circular feature C23. Radiocarbon dating indicated a prehistoric date for the site.

Objective

2.2 The objective was to analyse the plant macrofossils and charcoal from the fills, in order to provide information about activities on the site, and to identify material suitable for radiocarbon dating.

Dates

2.3 Samples were received by Archaeological Services Durham University in April 2008.Analysis and report preparation was conducted between April – November 2008.

Personnel

2.4 Sample processing was undertaken by Archaeological Consultancy Services Ltd. The residues were sorted by Dr Charlotte Henderson and Mr Bryan Atkinson. The plant macrofossil and charcoal identifications were carried out by Mr Lorne Elliott. Report preparation was by Dr Charlotte O'Brien.

Archive

2.5 The licence number is A030/010. The flots and charcoal samples are currently at the Environmental Laboratory at Archaeological Services Durham University awaiting collection or return.

3. Methods

- 3.1 The residues were examined for plant remains, shells, bones, pottery sherds and metalworking debris. The charred remains were scanned at up to x60 magnification using a Leica MZ7.5 stereomicroscope and charred seeds were identified by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant taxonomic nomenclature follows Stace (1997).
- 3.2 Charcoal was collected from the residues and flots and added to pre-sorted material. Following Boardman (1995), identifications were made on fragments >4mm. At least 100 fragments were identified from each context, where available. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Hather (2000) and Schweingruber (1978), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Where possible, radiocarbon dating of oak timber should be avoided, due to the potential longevity of the heartwood. However, this was the only material available from these contexts, and therefore a fragment of oak timber charcoal, was provided for dating from contexts (4), (8) and (9).

4. Results

4.1 Charcoal was present in all of the samples and was entirely composed of oak timber fragments. Iron slag (including hammerscale) was present in context (8), and a few possible heat-shattered stones were recorded in context (4). The only charred plant macrofossils were 4 ribwort plantain seeds in context (8). The results of the environmental analysis are presented in Table 4.1.

| Context | 4 | 8 | 9 |
|---|---------------------|---------------|------------|
| Sample | 1 | 2 | 3 |
| Feature | Circular feature | Pit | Pit |
| Volume of flot (ml) | 60 | 180 | 3 |
| Residue matrix (relative abundance) | | | |
| Charcoal | 2 | 3 | 3 |
| Cracked/angular stones | 1 | - | - |
| Hammerscale | - | 2 | - |
| Iron slag | - | 2 | - |
| Flot matrix (relative abundance) | | | |
| Charcoal | 2 | 3 | 1 |
| Iron slag | - | 1 | - |
| Roots (modern) | 1 | 1 | - |
| Charcoal (g/number of fragments) | | | |
| Total charcoal (g) | 23.761 | 94.360 | 1.894 |
| Percentage of sample analysed | 100 | 45 | 100 |
| Total charcoal analysed >4mm (g) | 4.816 | 15.825 | 0.354 |
| Number of analysed charcoal fragments >4mm | 84 | 194 | 7 |
| Quercus sp (Oak) | 4.816 (84F) | 15.825 (194F) | 0.354 (7F) |
| Unidentified <4mm fraction | 18.945 | 58.928 | 1.540 |
| Charred remains (total number) | • | | |
| (r) Plantago lanceolata (Ribwort plantain) seed | - | 4 | - |

Table 4.1: Plant macrofossils and charcoal from Chapelbride 1

[r-ruderal]. F = number of charcoal fragments. Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

5. Discussion

- 5.1 The presence of iron slag in pit fill context (8), suggests that the features may relate to metalworking activity. The oak charcoal is therefore likely to represent the main fuel used for the process, and some of the fragments of charcoal contained iron residues. The presence of timber (stemwood) fragments rather than roundwood (branchwood), suggests that mature trees were felled to provide the wood. The use of oak is unsurprising as it burns slowly, achieving high temperatures (O'Donnell 2007), and for this reason was often used for industrial activities. For example, oak dominated the metal production sites Kiltenan South, Aghamore, Dollas Lower and Doohylemore, along the route of the gas pipeline to the west (ibid.). In addition, oak timber fragments were abundant in a kiln which was probably used for metal working at Johnstown 2, Co Meath (Archaeological Services 2008).
- 5.2 The absence of charred food plant remains also reflects the industrial, rather than domestic, use of the features. A few charred seeds of ribwort plantain, a weed commonly found in meadows and pastures (Preston *et al* 2002), were recorded in

context (8). The seeds may have been introduced with dried grass etc used for kindling, or may have come from plants growing beside the features.

6. Sources

Archaeological Services 2008 Plant macrofossil, charcoal and cremated bone analysis; Johnstown 2, M3 Motorway Project, Co Meath, Ireland, Archaeological Services Durham University report **1928**, for Archaeological Consultancy Services Ltd

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Stace, C, 1997 New Flora of the British Isles, 2nd Edition, Cambridge

1

| Context | Sample No. | Material | Species I.D. | Lab | Number | Date Type | Lab Calibrated Date | Conventional Date (BP) | Oxcal Calibrated Date | 13C/12C Ratio ⁰ / ₀₀ |
|---------|---------------|----------|-----------------|------|--------|--------------|---------------------------------|---------------------------|--------------------------|---|
| 4 | 1 | Charcoal | Oak | Beta | 247163 | AMS (Std) | Cal BC 390-190 | 2230 +/ 40 | 389-202 BC | -26.6 |
| 8 | 2 | Charcoal | Oak | Beta | 247164 | AMS (Std) | Cal BC 400-340 & Cal BC 320-210 | 2270 +/ 40 | 401-206 BC | -24.7 |
| 9 | 3 | Charcoal | Oak | Beta | 247165 | AMS (Std) | Cal BC 390-170 | 2210 +/ 40 | 386-183 BC | -24.6 |

APPENDIX 5 Radiocarbon dating by Beta Analytic



Figure 1: Location of Chapelbride 1



Figure 2: Location of Chapelbride 1 on current OS background



Figure 3: Chapelbride 1, extract from 1st edition OS map, Meath sheet 16



Figure 4: Chapelbride 1, extract from 2nd edition OS map, Meath sheet 16



Figure 5: Chapelbride 1, extract from 3rd edition OS map, Meath sheet 16



Figure 6: Detailed location of Chapelbride 1









Plate 1: Mid-excavation photograph of F23 (04_01_Chapelbride 1_CP01_10)



Plate 2: Mid-excavation photograph of F7 (04_01_Chapelbride 1_CP01_23)

 Archaeological Consultancy Services Ltd.
 Unit 21, Boyne Business Park, Greenhills, Drogheda, Co. Louth

 M3 Clonee-North of Kells PPP Scheme Contract 5, Chapelbride 1
 Issued for: Excavation Report Client: Meath County Council
 Date: Jul '08 File No. 04_01_PS3013i