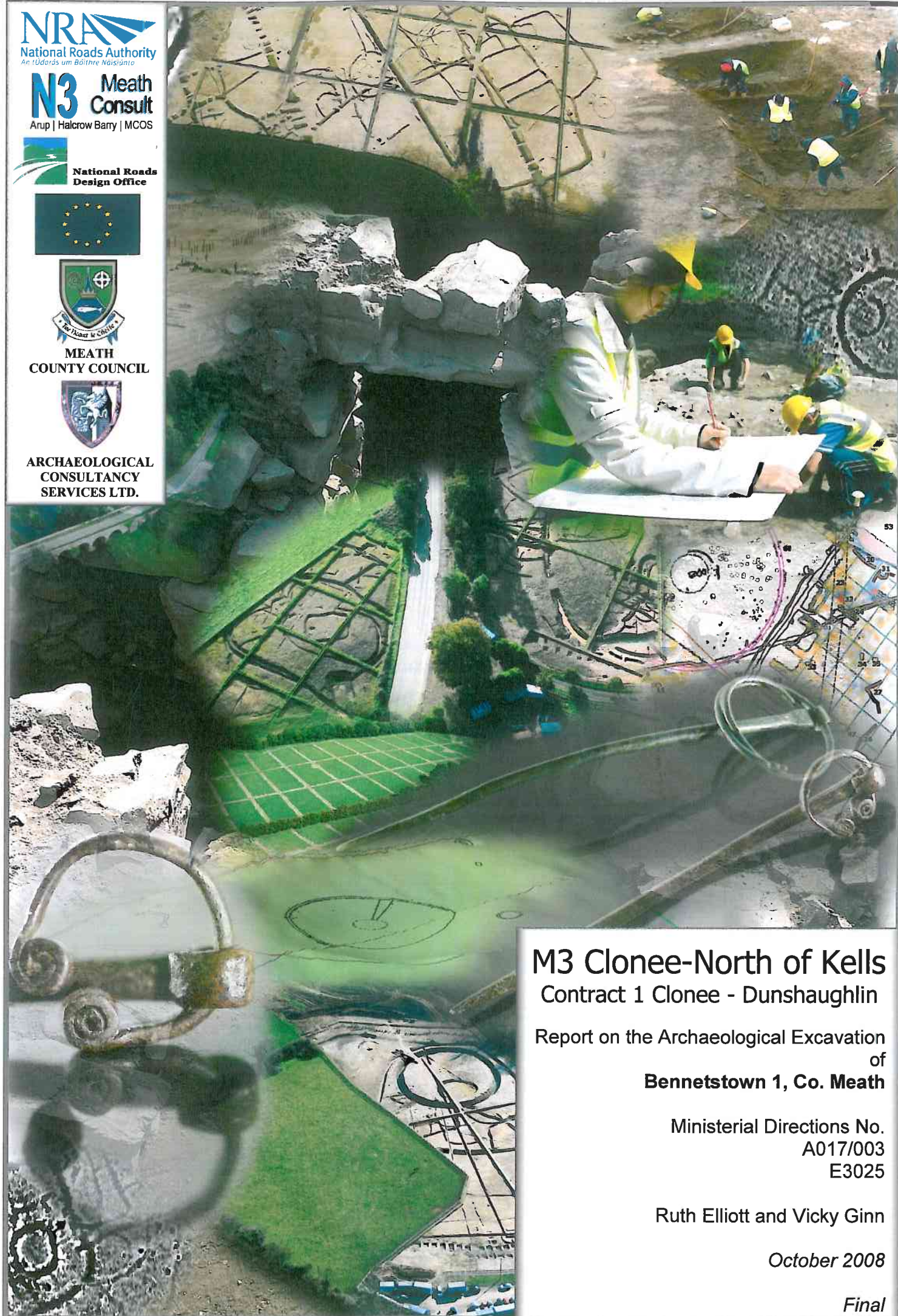




**MEATH  
COUNTY COUNCIL**



**ARCHAEOLOGICAL  
CONSULTANCY  
SERVICES LTD.**



## **M3 Clonee-North of Kells** **Contract 1 Clonee - Dunshaughlin**

**Report on the Archaeological Excavation  
of  
Bennetstown 1, Co. Meath**

Ministerial Directions No.  
A017/003  
E3025

Ruth Elliott and Vicky Ginn

October 2008

*Final*

## PROJECT DETAILS

<b>Project</b>	M3 Clonee–Kells Motorway
<b>Site Name</b>	Bennetstown 1
<b>Ministerial Direction Number</b>	A017/003
<b>Registration Number</b>	E3025
<b>Senior Archaeological Consultant</b>	Donald Murphy
<b>Site Director</b>	Ruth Elliott
<b>Excavated</b>	24 January – 17 February 2006
<b>Client</b>	Meath County Council, National Roads Design Office, Navan Enterprise Centre, Navan, County Meath
<b>Townland</b>	Bennetstown
<b>Parish</b>	Dunboyne
<b>County</b>	Meath
<b>National Grid Reference</b>	301857 243732
<b>Chainage</b>	2350–2400
<b>Height m OD</b>	69.15
<b>Report Type</b>	Final
<b>Report Status</b>	Submitted
<b>Date of Report</b>	October 2008
<b>Report by</b>	Ruth Elliott and Vicky Ginn

## **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**

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### **Meath County Council, National Roads Design Office**

Senior Engineer – John McGrath

Project Archaeologist – Mary Deevy

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### **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 Bennetstown 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 24 January and 17 February 2006 under Ministerial Direction Number A017/003 issued by DOEHLG in consultation with the NMI. The site consisted of a spread of burnt mound material and a number of pits, postholes and stakeholes and was located to the west of the River Tolka and within its floodplain. Bennetstown 1 most likely represents the remains of a burnt mound and is close to the burnt mound excavated at Bennetstown 2 (A017/004).

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### **APPENDIX 5** *Lithics Report: Eimear Nelis*

### **APPENDIX 6** *Medieval Pottery: Clare McCutcheon*

### **APPENDIX 7** *Environmental Report: Archaeology Services, University of Durham (ASUD)*

### **APPENDIX 8** *Faunal Report: Rachel Sloane*

## **FIGURE LIST**

Figure 1: Location of Bennetstown 1

Figure 2: Location of Bennetstown 1 on current OS background

Figure 3: Bennetstown 1, extract from 1st edition OS map, Meath sheet 50

Figure 4: Bennetstown 1, extract from 2nd edition OS map, Meath sheet 50

Figure 5: Bennetstown 1, extract from 3rd edition OS map, Meath sheet 50

Figure 6: Detailed location of Bennetstown 1

Figure 7: Plan of spreads and pre-excavation features

Figure 8: Plan of post-excavation features

Figure 9: Profiles of features at Bennetstown 1

Figure 10: Sections of features at Bennetstown 1

**PLATE LIST**

Plate 1: The site from the south

Plate 2: The waterlogged site from the north

Plate 3: F80, mid excavation, from the north-east

Plate 4: F90, mid excavation from the south-west

Plate 5: Section through F90 from the east

Plate 6: Pit F6 after excavation from the west

Plate 7: Postholes F10 & F12 after excavation from the west

Plate 8: Postholes F93, F85, F113, F111, F88, F104, F106 after excavation from the north-east



## 1 INTRODUCTION

The site at Bennetstown 1 (Figures 1–6, Plates 1 and 2) was identified during archaeological test trenching carried out by Robert O'Hara on behalf of ACS during May 2004 (04E0488; O'Hara 2004). Located in the flood plain of the River Tolka (note the proximity of the site to the River in Figures 1–6), the field was water-logged (Plate 2) and had been modified with low embankments, probably in an attempt to alleviate flooding, which resulted in an undulating landscape. The remains of a burnt mound in the form of a spread comprising heat-fractured stone and charcoal were identified (O'Hara 2004). Resolution of the site occurred in 2006 and, in addition to burnt mound material, a number of pits, postholes and stakeholes were excavated.

### *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 Kells to North of Kells (Contract 5). This section of the scheme (Contract 1) commences at the end of the existing Clonee Bypass, east of Dunboyne (NGR 303385 241281) and proceeds in a north western direction, finishing to the west of Dunshaughlin (NGR 295633 253070).

The archaeological components of the Environmental Impact Statement published in 2002 were 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 24 January and 17 February 2006 under Ministerial Direction Number A017/003. Ruth Elliott of ACS undertook the excavations on behalf of Meath County Council NRDO and the NRA by DoEHLG and in consultation with the NMI. The topsoil (F132) was stripped by machine equipped with a grading bucket. A significant deposit of alluvium was also found overlying the eastern extent of the site and this was also removed by mechanical excavator. A greyish-brown marl comprised the subsoil (F133).

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. All radiocarbon dates are quoted in calibrated form to two sigma. For consistency, the uncalibrated radiocarbon dates were also calibrated using OxCal and these are shown in addition to the lab calibrations.

### 2.1 Results

One hundred and thirty contexts of archaeological interest were identified within the excavation area. Only the principal archaeological features of Bennetstown 1 will be discussed within this report; full details of all these, and further, contexts are located in Appendix 1.

#### 2.1.1 Burnt mound

Excavation revealed the remains of a crescent-shaped burnt mound (F4: 10.00m x 5.00m x 0.20m and F44: 2.80m x 1.30m x 0.30m, Figure 7, Plate 1) situated at the western edge of the River Tolka where the land had dropped steeply into the river's floodplain. The material comprised burnt, heat-shattered stone and charcoal-enriched soil. The spread may have originally covered an area c. 15.00m x 8.50m and would have been deeper than the extant maximum depth of 0.30m. Indeterminate cereal grains, along with uncharred seeds including acmenes of nettle and fruitstones of elder were recovered from F4 (ASUD, Appendix 7). Charcoal was dominated by roundwood alder (*Alnus glutinosa*) (ASUD, Appendix 7), which grows in damp ground and was radiocarbon dated to 1620–1440 BC (Beta 231935: Oxcal: 1630–1440 BC; Appendix 4). The reduction in the size of the spread was caused by a combination of ploughing and flooding. The first evidence of flooding which post-dated the



burnt mound was F16, a washed out spread consisting of burnt spread material and silt (Figure 7). A scraper was recovered from this spread (A017/003:16:1) (Nelis; Appendix 5).

### 2.1.2 Possibly associated features

Various postholes and pits were stratigraphically earlier and later than the spread of burnt material F4. Two postholes (F53: 0.64m x 0.46m x 0.21m and F67: 0.47m x 0.35m x 0.09m, Figure 8) were situated beneath F4 towards the centre of the space demarcated by the crescent shape and it appeared that both posts were removed before the cuts filled with burnt spread material (F52 and F66, respectively). Pit F49 (1.00m x 0.76m x 0.40m, Figure 8) lay in proximity to these postholes but overlay F4. It contained fill F48, in which maloideae charcoal was identified (ASUD; Appendix 7). The stratigraphic relationship between the remaining 15 pits, postholes and stakeholes (F6, F8, F10, F12, F24, F25, F27, F28, F55, F56, F59, F61, F63, F65, and F69, Figure 8) in this area and the burnt spread could not be conclusively determined. Sub-circular pit F6 (0.8m x 0.48m x 0.23m) contained fill F5, a moderately compact, black, silty clay with occasional stones. Probable sycamore fruit, along with a barley grain and uncharred seeds, including nettle and fruitstones of elder were recovered from this fill F5 (ASUD; Appendix 7). Posthole F10 contained fill F9, in which maloideae charcoal was identified (ASUD; Appendix 7). Flint debitage (A017/003:13:1) was retrieved from one of the fills (F13) of a postpipe (F14) located within the posthole F24 (Nelis; Appendix 5).

### 2.1.3 Industrial pits

There were two large pits located in the central part of the site (Figure 8). Both were later than F16 and underlay a deep spread of alluvium (F31) and re-deposited natural (F30). Three, possibly struck, pieces of flint (A017/003:30:1–3) and flint debitage (A017/003:31:1) were recovered from these spreads. These included burnt flake shatter and a core with two flakes (Nelis; Appendix 5). The largest of the pits, F90 (2.80m diameter x 0.25–0.60m depth, Plates 4 and 5), was circular with vertical sides and a flat base. A stepped platform existed in the eastern side at a depth of 0.25m (Figure 9, Plates 4 and 5) which extended into the cut for a distance of 0.96m before descending vertically to the base. The pit contained four fills (F89, F86, F82, and F81), the second of which lay in the northern and eastern side of the pit covering the platform and consisted primarily of charcoal. The third fill, F82, was a moderately compact, reddish-brown, sandy clay possibly representing the remains of a collapsed superstructure. F81, the top fill, contained occasional animal bone fragments. Fragments of burnt bone were recovered from F86, along with wheat (possible bread wheat) and oat grain and indeterminate cereal grains; hazel (*Corylus avellana*) dominated the charcoal material from F86, and was found alongside mature oak (*Quercus* sp) (ASUD;

Appendix 7). Alder from this fill was radiocarbon dated to AD 1050–1260 (Beta 231937; Oxcal: AD 1050–1270; Appendix 4) placing it in the medieval period.

Sub-circular pit F80 was smaller (1.60m x 1.48m x 0.40m, Plate 3) and located beneath the former waterline of the River Tolka. The base of F80 was beneath the current water table level and remained constantly filled with at least 0.20m of water during excavation (Plate 3). A thick clay lining, F78, with frequent charcoal and burnt clay inclusions covered the base and sides of the pit. Charcoal from this fill, F78, was dominated by non roundwood oak, as well as alder, ash (*Fraxinus excelsior*), hazel, sloe/plum (*Prunus spinosa / domestica*), and willow/poplar (Salicaceae). Alder from this fill was radiocarbon dated to AD 1030–1230 (Beta 231936; Oxcal: 1030–1220; Appendix 4). This fill underlay a firm, grey, silty clay containing occasional inclusions of burnt clay and charcoal (F77).

#### 2.1.4 Northern features

The northern part of the site was covered in a patchy series of 15 spreads (F32–F34, F50, F51, F72, F74–F76, and F120–F122, Figure 7) derived from a variety of combinations of alluvial silt and washed out, burnt spread material. These were located throughout an area c. 15.00m x 15.00m and overlay 14 pits, postholes and stakeholes (F39, F41, F85, F88, F93, F95, F97, F99, F101, F104, F106, F108, F111, and F113, Figure 8). Posthole F85 contained the fill F83, which had two barley grains and alder, which grows in damp ground, charcoal within (ASUD; Appendix 7). A curvilinear feature, F125 (1.00m width x 0.14m depth, Figure 7), may have represented the ploughed out remains of a ditch (probably post-medieval or modern). Two pits, F37 (oval: 2.02m x 1.42m x 0.07m) and F130 (sub-rectangular: 1.00m x 0.60m x 0.21m) were situated within this area (Figure 8). F37 lay approximately 8m southwest from F130 and this latter was located at the edge of the former waterline. Their function was unclear.

#### 2.1.5 Remainder of the site

Two linear features were observed on site (Figure 7). Curvilinear F19 (0.64m width x 0.30–0.39m depth) displayed a U-shaped profile and contained two fills (F17 and F18) formed by natural siltation. The east–west cut F127 (1.24m width x 0.29m depth) also displayed a U-shaped profile and contained two fills (F119 and F126).

### 2.2 Finds

There were few archaeological finds retrieved from the site. Excavation revealed four pieces of flint (A017/003:16:1 and A017/003:132:1–2) and a sherd of green-glazed, medieval pottery (A017/003:132:3) (Appendix 2). The lithic assemblage was of limited quantity and the raw material also appeared limited; however, the execution of the material was of a high

standard; Nelis suggested that it was this combination that may have suppressed any chronologically diagnostic features in the assemblage (Nelis; Appendix 5). The pottery was identified as a body sherd from a 13th-century, Dublin-type ware jug (McCutcheon, Appendix 6). No animal bone or archaeological interest and no identifiable cremated bone was recovered from the excavations.

The environmental evidence suggested that the earlier features, i.e. those associated with the burnt mound, contained charcoal primarily derived from roundwood, such as branches and stems, and may therefore have been associated with domestic activities ASUD; Appendix 7). The association with barley and cereal grains reinforced this theory. The larger pits, which date to the medieval period (Appendix 4), contained mature charcoal, including from oak, which indicated a more industrial than domestic function (ASUD; Appendix 7).

The occurrence of alder and maloideae indicates that the area was damp, also suggested by the proximity of the site to the River Tolka and the episodes of flooding evidenced in the archaeological record, and that there was scrub woodland in the vicinity (ASUD; Appendix 7).

### 3 DISCUSSION

#### **3.1 Form and function**

The crescent-shaped distribution of burnt spread material, located in proximity to water, was characteristic of a burnt mound. Burnt mounds, consisting of heat-shattered stones and charcoal, are by-products of a process using hot-stone technology to heat water (O'Neill 2000, 19). Other characteristic features of burnt mounds include troughs, traces of fire and occasionally a formal hearth (Waddell 1998, 174–77). No such features were located at Bennetstown 1, however, a north–south, modern service trench c. 9.00m wide cut through the central area of the site, immediately east of the mound, and was likely to have destroyed any associated features, such as a trough, which may have been located in this vicinity. Post-built structures and roasting pits located close to or under the burnt mound are common (Herity & Eogan 1977, 232), such as the rectangular hut structure identified beneath a burnt mound along the N52 Nenagh Link Road project, Co. Tipperary (Murphy 2000, 58). Perhaps the pits, postholes and stakeholes identified at Bennetstown 1 adjacent to, and underneath, F4 were indeed associated with burnt mound activity. Beyond the hypothesis that burnt mound areas were used to heat water, the function of these features remains enigmatic. Traditionally perceived as cooking places, these burnt mounds have also been interpreted as potentially having a wide range of functions including as bathing spots or saunas (Buckley 1990, 9).

The majority of the pits, postholes and stakeholes on the site have no clear function though the stakeholes/postholes in the northern area (F106, F111, F113, F85, F93, F95, F97, F41, F39, F99, F101) may have formed a small structure oriented northeast to southwest with the potential for an entrance at either end (Figure 8). In addition some of the postholes around the burnt mound F4 may have acted as a wind break from the prevailing southwesterly winds.

The two largest pits on the site, F80 and F90, merit further consideration. With its thick clay lining (F79), F80 would have been virtually watertight. This lining contained burnt clay along both the base and the sides and therefore high temperatures would have been reached in situ. Located at the original edge of the river, water must have played an integral role in the function of this pit. The function of F90 is no more apparent. Its stepped, eastern side would undoubtedly have facilitated access to the bottom of this relatively deep (0.60m) pit yet the reason for the depth and the need for access is unknown. The fills contained stones but these did not appear to have been burnt and neither the base nor the sides showed clear signs of in situ burning. The third fill, F82, with its large clay inclusions appeared to represent collapsed material from a superstructure. Such a clay-based superstructure covering a wide diameter of 2.80m would undoubtedly have been of a considerable weight and difficult to manage under high temperatures. Nevertheless the pit must represent some type of kiln/oven or other roasting type feature. These larger pits, which date to the medieval period (Appendix 4), contained mature charcoal, including from oak, which indicated a more industrial than domestic function (ASUD; Appendix 7).

### ***3.2 Date and sequence***

Burnt mounds span a wide chronological timeframe from the Bronze Age to the medieval period (Walsh 1990) with the majority featuring in the Bronze Age (Brindley & Lanting 1990, 55–6). A lack of associated artefacts often makes close dating of these features a difficulty and O'Neill advocates a tentative dating system based on the type and shape of troughs uncovered (O'Neill 2000). The lack of troughs at Bennetstown 1 renders this particular type of dating redundant for this site. However, the burnt mound material (charcoal: alder) from F4 was radiocarbon dated to 1620–1440 BC (Beta 231935; Oxcal: 1630–1440 BC; Appendix 4) and it is likely that the surroundings features were slightly earlier. The lack of identifiable variation in the surviving burnt mound material perhaps suggests that activity was only conducted over a short space of time at this site.

A second phase of activity was noted upon the return of the radiocarbon dates and the two large pits, F80 and F90, can now be ascribed to the medieval period. Charcoal (alder) from

each pit was radiocarbon dated to AD 1030–1230 (Beta 231936; Oxcal: 1030–1220; Appendix 4) and AD 1050–1270 (Beta 231937; Oxcal: 1050–1270; Appendix 4).

Heavy ploughing had truncated some of the features while flooding of the River Tolka left various spreads and deposits across the site, obscuring the pre-modern occupation. Modern activity was represented by F30, a spread of re-deposited natural designed to raise the level of the field, the two abovementioned linear features (F19 and F127), and the service trench in the eastern part of the site.

#### 4 CONCLUSIONS

Bennetstown 1, (A017/003), excavated (24 January – 17 February 2006) by Ruth Elliott (ACS) as part of the M3 Clonee–North of Kells Motorway Scheme on behalf of Meath County Council NRDO and the NRA, represented a characteristically crescent-shaped burnt mound. The mound is of prehistoric origin, and was likely to have been used only for a short space of time due to its proximity to the River Tolka which appears to have flooded on several occasions mixing the burnt mound material with alluvial deposits. Various pits, postholes and stakeholes existed in the vicinity of, and underneath, the burnt mound and these may have been associated with the burnt mound activity. To the NNW of the burnt mound was a cluster of similar features, the functions of which could not be determined. An apparently water tight, clay-lined pit existed which filled up naturally with water and a large, circular pit with the possible remains of a clay superstructure was also uncovered. These pits were most likely industrial in function, and both dated to the medieval period.

#### 5 REFERENCES

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Signed:

A handwritten signature in dark ink, appearing to read 'Ruth Elliott', written over a horizontal line.

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Ruth Elliott, Vicky Ginn

October 2008

**APPENDIX 1** *Context Details*

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
1-3	NOT ASSIGNED										
4	spread	N/A	133	16, 31	friable, dark-black, sandy silt with moderate stones. 10.00m x 5.00m x 0.20m	burnt spread					#3 soil and charcoal
5	fill	6	6	132	moderately compact, black, silty clay with occasional stones. 0.85m x 0.48m x 0.23m	fill of pit 6					#1 soil and charcoal
6	cut	5	133	5	sub-circular cut (0.85m x 0.48m x 0.23m) with a sharp break of slope, gradually sloping sides and a gradual break of slope leading to a rounded base	pit					
7	fill	8	8	132	loose-moderately compact, grey-black clay with occasional stones. 0.23m x 0.14m x 0.18m	fill of posthole 8					
8	cut	7	133	7	oval, east-west cut (0.23m x 0.14m x 0.18m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					
9	fill	10	10	132	loose-moderately compact, black, silty clay with occasional stones. 0.33m x 0.27m x 0.22m	fill of posthole 10					#2 soil and charcoal
10	cut	9	133	9	oval, north-south cut (0.33m x 0.27m x 0.22m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					
11	fill	12	12	132	loose-moderately compact, grey-black, silty clay with occasional stones. 0.23m x 0.18m x 0.12m	fill of posthole 12					
12	cut	11	133	11	oval, east-west cut (0.23m x 0.18m x 0.12m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					



No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
13	fill	14, 24	14	132	moderately compact, grey-black, sandy silt with occasional stones and charcoal inclusions. 0.49m x 0.46m x 0.09m	fill of postpipe 14		flint			
14	cut	13, 15	133	15	circular cut (0.49m x 0.46m x 0.09m) with a sharp break of slope (gradual in south), gradually sloping sides (vertical in north) and a sharp break of slope (gradual in south) leading to a flat base	postpipe within posthole 24					
15	fill	14	14	13	moderately compact, black-grey, sandy silt with occasional stones and charcoal. 0.21m x 0.19m x 0.08m. Sealed by charcoal	fill of postpipe 14					
16	spread	N/A	4	19	loose, dark-greyish-black, sandy silt with occasional stones. 0.11m depth	washed out spread		flint			
17	fill	19	18	132	soft, mid-yellowish-brown, clayey silt with occasional stones. 0.21m depth	secondary fill of ditch 19					
18	fill	19	19	17	soft, mid-yellow, clayey silt with occasional stones. 0.12m depth	primary fill of ditch 19					
19	cut	17, 18	16, 31	18	curvilinear, NNE-SSW cut (0.64m width x 0.30-0.39m depth) with a sharp break of slope (gradual in east), steep sides and a imperceptible-gradual break of slope leading to a flat-concave base	linear, possible drainage ditch					
20	fill	21	21	6	loose, black, silty clay. 0.18m diameter x 0.12m depth	fill of postpipe 21					
21	cut	20	133	20	circular cut (0.18m diameter x 0.12m depth) with a gradual-sharp break of slope, vertical sides and a gradual break of slope leading to a rounded base	postpipe within posthole 6					
22	fill	25	25	132	soft, greyish-black, sandy clay with occasional stones. 0.23m x 0.15m x 0.09m	fill of posthole 25					
23	fill	24	24	132	moderately compact, dark-brown-black, clayey silt with occasional stones. 1.19m x 0.40m x 0.05m	fill of posthole 24					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
24	cut	23	133	23	irregular, east-west cut (1.19m x 0.40m x 0.05m) with a vertical break of slope (gradual in east), steep sides (gradual in east) and a gradual break of slope leading to a flat base	posthole					
25	cut	22	133	22	oval, west-east cut (0.23m x 0.15m x 0.09m) with a sharp break of slope, vertical sides and a gradual break of slope leading to a rounded base	posthole					
26	fill	27	27	132	soft, greyish-black, silty clay with occasional stones. 0.12m diameter x 0.13m depth	fill of stakehole 27					
27	cut	26	133	26	circular cut (0.12m diameter x 0.13m depth) with a sharp break of slope, almost vertical sides and a sharp break of slope leading to a flat base	stakehole					
28	fill	29	29	132	soft, brownish-black, silty clay with frequent stones. 0.07m diameter x 0.10m depth	fill of stakehole 29					
29	cut	28	133	28	circular cut (0.07m diameter x 0.10m depth) with a sharp break of slope, vertical sides and a gradual break of slope leading to a pointed base	stakehole					
30	spread	N/A	31	33	firm, light-orangey-yellow, silty clay with occasional stones. 0.23m depth	spread of re-deposited natural		stone			
31	spread	N/A	4, 51	30	soft, light-yellowish-grey, clayey silt with occasional stones. 0.18m depth	spread of alluvial silt		flint			
32	spread	N/A	133	132	loose, black, silty clay with burnt stone inclusions. 2.00m x 0.36m x 0.02m	spread of burnt material					
33	spread	N/A	30	132	loose, greyish-black, silty clay with frequent burnt stone inclusions. 4.00m x 3.20m x 0.20m	spread of burnt material					
34	spread	N/A	39, 41	74, 132	compact, greyish, sandy clay with frequent stones. 2.26m x 1.68m x 0.05m	spread					
35	NOT ASSIGNED										
36	fill	37	37	132	compact, brownish-black, clayey silt with frequent burnt stones. 2.02m x 1.42m x 0.07m	fill of pit 37					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
37	cut	36	133	36	oval, north-south cut (2.02m x 1.42m x 0.07m) with a gradual break of slope, gradually sloping sides and an imperceptible break of slope leading to a flat base	pit					
38	fill	39	39	42	loose-compact, black, silty clay with frequent stones. 0.76m x 0.34m x 0.15m	secondary fill of posthole 39					
39	cut	38, 42	133	42	oval, northeast-southwest cut (0.76m x 0.34m x 0.28m) with a sharp break of slope, vertical sides (gradually sloping in west) and a sharp break of slope leading to a flat base	posthole					
40	fill	41	43	34	moderately compact, black material with frequent stones. 0.60m diameter x 0.10m depth	fill of posthole 41					
41	cut	40, 43	133	40	circular cut (0.60m diameter x 0.20m depth) with a sharp break of slope, gradually sloping sides (vertical in west) and a sharp break of slope leading to an irregular base	posthole					
42	fill	39	38	34	compact, brownish-grey, sandy clay with occasional stone inclusions. 0.15m width x 0.34m depth	primary fill of posthole 39					
43	fill	41	41	40	loose, brownish-grey, silty clay. 0.60m diameter x 0.10m depth	primary fill of posthole 41					
44	spread	N/A	133	132	loose-moderately compact, black, silty clay with frequent burnt stone inclusions. 2.80m x 1.30m x 0.30m	spread of burnt material					
45	fill	46	46	132	friable, greyish-black, sandy clay with frequent stones. 1.00m x 0.90m x 0.11m	fill of pit 46					
46	cut	45	133	45	sub-circular cut (1.00m x 0.90m x 0.11m) with a gradual break of slope, gradually sloping sides and a gradual break of slope leading to a flat base	pit					
47	fill	49	48	132	loose, greyish-black, silty clay with occasional stones. 1.00m x 0.76m x 0.25m	fill of pit 49					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
48	fill	49	49	47	loose, black, silty clay with frequent stones. 1.00m x 0.76m x 0.15m	primary fill of pit 49					#4 soil and charcoal
49	cut	47, 48	133	48	oval, north-south cut (1.00m x 0.76m x 0.40m) with a sharp break of slope, vertical sides (gradually sloping in north) and a gradual-steep break of slope leading to base	pit					
50	spread	N/A	133	51	loose, black, silty clay with frequent stones. 2.50m x 0.80m x 0.10m	spread					
51	spread	N/A	50	31	compact, light-grey clay. 2.00m x 1.60m x 0.10m	spread					
52	fill	53	53	4	loose, black, silty clay with moderate stone inclusions. 0.64m x 0.46m x 0.21m	fill of pit 53					
53	cut	52	133	52	sub-circular, northeast-southwest cut (0.64m x 0.46m x 0.21m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a northeast-southwest inclined base	pit					
54	fill	55, 56	55, 56	132	moderately compact, greyish-black, silty clay with occasional stones. 0.28m x 0.28m x 0.15m	fill of cuts 55, 56					
55	cut	54	133	54	sub-circular cut (0.12m x 0.11m x 0.20m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
56	cut	54	133	54	circular cut (0.17m x 0.15m x 0.30m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
57	fill	59	58	132	loose, brownish-black, silty clay. 0.28m x 0.24m x 0.11m	secondary fill of posthole 59					
58	fill	59	59	58	loose, black, silty clay with occasional stones. 0.28m x 0.24m x 0.15m	primary fill of posthole 59					
59	cut	57, 58	133	58	sub-circular, northwest-southeast cut (0.28m x 0.24m x 0.26m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
60	fill	61	61	4	moderately compact, greyish-black, silty clay with occasional stones. 0.35m x 0.30m x 0.30m	fill of posthole 61					
61	cut	60	133	60	circular cut (0.35m x 0.30m x 0.30m) with a sharp break of slope (gradual in west), gradually sloping-vertical sides and a sharp break of slope leading to a flat base	posthole					
62	fill	63	63	132	compact, greyish-black, silty clay. 0.07m diameter x 0.10m depth	fill of stakehole 63					
63	cut	62	133	62	circular cut (0.07m diameter x 0.10m depth) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
64	fill	65	65	132	moderately compact, greyish-black, silty clay. 0.10m diameter x 0.17m depth	fill of stakehole 65					
65	cut	64	133	64	circular cut (0.10m diameter x 0.17m depth) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
66	fill	67	67	132	loose, black, silty clay with frequent stone inclusions. 0.47m x 0.35m x 0.09m	fill of posthole 67					
67	cut	66	133	66	oval, northwest-southeast cut (0.47m x 0.35m x 0.09m) with a gradual break of slope, gradually sloping sides and a gradual break of slope leading to a flat base	posthole					
68	fill	69	69	132	moderately compact, greyish-black, clay with silt and occasional stones. 0.60m x 0.25m x 0.10m	fill of posthole 69					
69	cut	68	133	68	oval, north-south cut (0.60m x 0.25m x 0.10m) with a gradual break of slope, gradually sloping sides and a gradual break of slope leading to a rounded base	posthole					
70	fill	71	71	132	loose, black, silty clay. 0.25m x 0.14m x 0.10m	fill of posthole 71					
71	cut	70	133	70	oval, east-west cut (0.25m x 0.14m x 0.10m) with a sharp break of slope, steep sides and a sharp break of slope leading to rounded base	posthole					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
72	spread	N/A	133	132	loose, brownish-black, silty clay with occasional stones. 3.60m x 1.60m x 0.03m	spread of burnt material					
73	NOT ASSIGNED										
74	spread	N/A	34	75, 132	loose, light-grey, silty clay with occasional stones. 2.40m x 2.60m x 0.08m	spread					
75	spread	N/A	74	76, 132	loose, dark-grey, silty clay with occasional stones. 2.60m x 2.00m x 0.05m	spread					
76	spread	N/A	75	132	loose, black, silty clay with frequent burnt stone and charcoal inclusions. 1.80m x 1.80m x 0.06m	spread					
77	fill	80	78	132	loose, grey, clay with occasional charcoal and burnt clay inclusions. 1.60m x 0.70m x 0.10m	fill of pit 80					
78	fill	80	80	77	moderately compact, reddish-grey, sandy clay with frequent charcoal inclusions and red brick fragments. 1.60m x 1.00m x 0.35m	lining of pit 80					#5 charcoal
79	NON-ARCHAEOLOGICAL										
80	cut	77, 78	133	78	sub-circular cut (1.60m x 1.48m x 0.40m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	pit					
81	fill	90	82	132	loose, grey, sandy clay with frequent stone inclusions and occasional animal bone fragments. 2.80m diameter x 0.14m depth	fill of pit 90					
82	fill	90	86	81	moderately compact, reddish-brown, sandy clay with frequent burnt clay and red brick inclusions. 2.80m diameter x 0.15-0.35m depth	fill of pit 90					
83	fill	85	84	132	loose, black, silty clay with frequent charcoal and burnt stone inclusions. 0.90m x 0.80m x 0.23m	secondary fill of posthole 85					#6 charcoal
84	fill	85	85	83	loose, blackish, silty clay with occasional charcoal inclusions. 0.24m x 0.08m x 0.08m	primary fill of posthole 85					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
85	cut	83, 84	133	84	oval, southwest-northeast cut (0.80m x 0.42m x 0.17-0.26m) with a sharp break of slope, vertical sides and a gradual break of slope leading to an irregular base	posthole					
86	fill	90	89	82	loose-moderately compact, black, sandy silt with frequent charcoal and occasional stone inclusions. 0.40m depth	fill of pit 90					#7 charcoal
87	fill	88	88	132	loose, black, silty clay with frequent stone inclusions. 0.30m diameter x 0.20m depth	fill of posthole 88					
88	cut	87	133	87	circular cut (0.30m diameter x 0.20m depth) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					
89	fill	90	90	86	moderately compact, blackish-grey, sandy clay with moderate charcoal inclusions and occasional stones. 2.80m diameter x 0.20m depth	primary fill of pit 90					
90	cut	81, 82, 86, 89	133	89	circular cut (2.80m diameter x 0.25-0.60m depth) with a sharp break of slope, vertical sides (stepped in east) and a sharp break of slope leading to a flat base	pit					
91	fill	93	92	132	loose, black, silty clay with frequent burnt stone inclusions. 0.37m x 0.34m x 0.10-0.24m	secondary fill of posthole 93					
92	fill	93	93	91	moderately compact, greyish-black, sandy clay with occasional stone inclusions. 0.37m x 0.34m x 0.14m	primary fill of posthole 93					
93	cut	91, 92	133	92	sub-circular cut (0.37m x 0.34m x 0.24m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	posthole					
94	fill	95	95	34	loose, greyish-black, silty clay. 0.14m diameter x 0.23m depth	fill of stakehole 95					
95	cut	94	133	94	circular cut (0.14m diameter x 0.23m depth) with a sharp break of slope, steep sides and a sharp break of slope leading to a pointed base	stakehole					



No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
96	fill	97	97	132	loose, greyish-black, silty clay with occasional burnt stones. 0.11m x 0.08m x 0.16m	fill of stakehole 97					
97	cut	96	133	96	sub-circular, east-west cut (0.11m x 0.08m x 0.16m) with a sharp break of slope, steep sides and a sharp break of slope leading to a pointed inclined east-west base	stakehole					
98	fill	99	99	132	loose, greyish-black, silty clay. 0.10m diameter x 0.10m depth	fill of stakehole 99					
99	cut	98	133	98	circular cut (0.10m diameter x 0.10m depth) with a sharp break of slope, steep sides and a sharp break of slope leading to an east-west inclined base	stakehole					
100	fill	101	101	132	loose, greyish-black, silty clay. 0.80m diameter x 0.09m depth	fill of stakehole 101					
101	cut	100	133	100	circular cut (0.80m diameter x 0.09m depth) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
102	fill	104	103	132	loose, black, silty clay with occasional stones and charcoal inclusions. 0.48m x 0.46m x 0.11m	secondary fill of posthole 104					
103	fill	104	133	102	loose, greyish-yellow, sandy clay with occasional stone inclusions. 0.48m x 0.34m x 0.11m	primary fill of posthole 104					
104	cut	102, 103	133	103	circular cut (0.48m x 0.44m x 0.17m) with a sharp break of slope, vertical sides (gradually sloping in south side), and a gradual break of slope (steep in west) leading to the base	posthole					
105	fill	106	106	132	loose, greyish-black, silty clay with occasional stone inclusions and charcoal fragments. 0.25m x 0.19m x 0.14m	fill of posthole 106					
106	cut	105	133	105	sub-circular cut (0.25m x 0.19m x 0.14m) with a sharp break of slope, steep sides and a sharp break of slope leading to a flat base	posthole					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
107	fill	108	108	132	loose, greyish-black, silty clay with frequent stone inclusions and charcoal fragments. 0.10m diameter x 0.10m depth	fill of stakehole 108					
108	cut	107	133	107	circular cut (0.10m diameter x 0.10m depth) with a sharp break of slope, vertical sides and a sharp break of slope leading to a pointed base	stakehole					
109	fill	111	110	132	loose, black clay with occasional stone and charcoal inclusions. 0.71m x 0.44m x 0.08m	secondary fill of posthole 111					
110	fill	111	111	109	loose, grey, silty clay with occasional stone and charcoal inclusions. 0.71m x 0.44m x 0.33m	primary fill of posthole 111					
111	cut	109, 110	133	110	sub-oval cut (0.71m x 0.63m x 0.41m) with a sharp break of slope, steep sides and a sharp break of slope leading to a flat base	posthole					
112	fill	113	113	132	loose, black, silty clay with occasional stones and charcoal fragments. 0.20m x 0.19m x 0.21m	fill of posthole 113					
113	cut	112	133	112	circular cut (0.20m x 0.19m x 0.21m) with a sharp break of slope, steep sides and a sharp break of slope leading to a pointed base	posthole					
114	fill	115	115	132	loose, grey, silty clay with moderate stone inclusions. 0.26m x 0.22m x 0.17m	fill of posthole 115					
115	cut	114	133	114	oval, east-west cut (0.26m x 0.22m x 0.17m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a rounded base	posthole					
116	fill	118	117	132	loose, black, silty clay with occasional stone inclusions. 0.37m x 0.31m x 0.12m	fill of posthole 118					
117	fill	118	118	116	loose-moderately compact, greyish-black clay with 2 stones and occasional charcoal flecks. 0.33m x 0.23m x 0.07m	fill of posthole 118					
118	cut	116, 117	133	117	oval, north-south cut (0.50m x 0.35m x 0.10m) with a sharp break of slope, gradual-steep sides and a gradual break of slope leading to a flat base	posthole					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
119	fill	127	127	126	moderately compact, greyish-brown, silty clay with frequent stones. 0.82m width x 0.15m depth	primary fill of linear 127					
120	spread	N/A	121	132	loose, black, silty clay with frequent stone inclusions. 2.40m x 1.80m x 0.11m	spread					
121	spread	N/A	131	120, 122	loose, brown, sandy silt with occasional stone inclusions. 1.80m x 1.60m x 0.10m	spread					
122	spread	N/A	121	132	moderately compact, blackish-grey, sandy clay with occasional stones and charcoal flecks. 1.20m x 0.70m x 0.06m	spread					
123	fill	125	124	132	loose, black, silty clay with occasional stone inclusions. 1.04m width x 0.05m depth	secondary fill of linear 125					
124	fill	125	125	123	loose, greyish-brown clay with occasional stone inclusions. 0.92m width x 0.08m depth	primary fill of linear 125					
125	cut	123, 124	133	124	linear, north-south cut (1.00m width x 0.14m depth) with a gradual break of slope, gradually sloping sides and a gradual break of slope leading to a rounded base	linear, possibly a modern ditch					
126	fill	127	119	132	loose, brown, silty clay with moderate stone inclusions. 1.24m width x 0.29m depth	fill of linear 127					
127	cut	119, 126	133	119, 126	linear, east-west cut (1.24m width x 0.29m depth) with a sharp break of slope, steep sides and a sharp break of slope leading to a pointed base	linear					
128	fill	130	129	132	loose, brown, silty clay with occasional stone inclusions. 1.00m x 0.60m x 0.10m	secondary fill of pit 130					
129	cut	130	130	128	moderately compact, greyish-black, silty clay with frequent stone and charcoal inclusions. 1.00m x 0.60m x 0.10m	primary fill of pit 130					
130	cut	128, 129	133	129	sub-circular cut (1.00m x 0.60m x 0.21m) with a sharp break of slope, vertical sides and a sharp break of slope leading to a flat base	pit					

No	Type	Fill of/ Filled with	Strat above	Strat below	Description	Interpretation	Group	Artefacts	Animal bone	Cremated bone	Samples
131	spread	N/A	133	121, 132	loose, yellowish-brown, sandy silt with occasional stone inclusions. 2.40m x 1.80m x 0.03m	spread					
132	topsoil	N/A	133	N/A	Brown grey loam 0.30 – 0.50m in depth			pottery, flint			
133	subsoil			132	greyish-brown marl						
134	fill		133	132	Fill of Linear ditch consisting of brown grey silty clay aligned north to south at east side of cutting 9m in width. Not excavated	Modern ditch fill					

**APPENDIX 2 Finds List**

<b>Find Number</b>	<b>Description</b>
A017/003:13:1	Flint flake with platform shatter proximal
A017/003:16:1	Flint scraper
A017/003:30:1	Flint flake with core trimming
A017/001:30:2	Flint core with single platform partially flaked
A017/003:30:3	Flint flake with core trimming
A017/003:31:1	Flint flake
A017/003:132:1	Flint flake with platform blade shatter distal
A017/003:132:2	Flint flake with small percussion trimming
A017/003:132:3	Medieval pottery green glazed sherd

**APPENDIX 3** *Sample List*

<b>Sample No</b>	<b>Context No</b>	<b>Results</b>
1	5	nothing
2	9	2g charcoal
3	4	9g charcoal
4	48	3g charcoal
5	78	141g charcoal
6	83	7g charcoal
7	86	4g charcoal

**APPENDIX 4 Radiocarbon Dates**

Context	Sample No	Material	Species id/	Lab	Lab Code	Date Type	Date	Conventional Date (BP)	<sup>13</sup> C/ <sup>12</sup> C Ratio ‰	OxCal Date
4: fill of burnt spread	3	Charcoal	Alder (0.066g)	Beta	231935	AMS (Std)	1600-1570 and 1540-1500 BC one sigma 1620-1440 BC two sigma	3260 +/- 40	-25.7	1626-1440 BC
78: fill of industrial feature	5	Charcoal	Alder (2.738g)	Beta	231936	AMS (Std)	AD 1050-1090 and 1130-1140 and 1140-1210 one sigma AD 1030-1230 two sigma	890 +/- 40	-26.5	AD 1034-1220
86: fill under C82	7	Charcoal	Alder (0.208g)	Beta	231937	AMS (Std)	AD 1160-1230 one sigma AD 1050-1090 & 1130-1140 & 1140-1260 two sigma	850 +/- 40	-25.6	AD 1046-1267



## **APPENDIX 5** *Lithics Report: Eimear Nelis*

M3 Batch 2

CHIPPED AND WORKED STONE ASSEMBLAGE

ANALYSIS, CATALOGUES AND REPORTS

Bennetstown 1 (A017/003)

Bennetstown 3 (A017/005)

Knocks 1 (A017/022)

Leshamstown 1 (A017/025)

Knockmark 1 (A017/028)

Merrywell 1 (A017/029)

Drumree 1 (A017/027)

Johnstown 2 (A017/020)

Johnstown 3 (A017/021)

Ardsallagh 1 (A008/035)

Ardsallagh 2 (A008/034)

Ardsallagh 4 (A008/037)

Ardsallagh 5 (A008/038)

Kennastown 1 (A023/001)

Garretstown 2 (A008/008)

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NOVEMBER 2007

## Introduction

During a programme of archaeological testing at the M3 Clonee–North of Kells PPP scheme, an assemblage of chipped, worked and unworked stone was recovered from a total of fifteen sites, namely: Bennetstown 1 (A017/003: 8 pieces); Bennetstown 3 (A017/005: 1 piece); Knocks 1 (A017/022: 45 pieces); Leshamstown 1 (A017/025: 4 pieces); Knockmark 1 (A017/028: 34 pieces); Merrywell 1 (A017/029: 3 pieces); Drumree 1 (A017/027: 5 pieces); Johnstown 2 (A017/022: 10 pieces); Johnstown 3 (A017/021: 16 pieces); Ardsallagh 1 (A008/035: 20 pieces); Ardsallagh 2 (A008/034: 35 pieces); Ardsallagh 4 (A008/037: 2 pieces); Ardsallagh 5 (A008/038: 1 piece); Kennastown 1 (A023/001: 1 piece); Garretstown 2 (A008/008: 17 pieces). For each site assemblage, a similar analytical methodology has been applied (see *Methodology* below). The analysis for each site assemblage is presented individually (Sections 1-15); within each section, the assemblages are quantified and presented in catalogue form, and the composition of the assemblage is discussed in detail; the distribution of the assemblages is discussed, and the assemblages are discussed in their broader analytical context.

## Methodology

All recovered artefacts have been presented for analysis, and have been studied visually and catalogued, and subject to statistical analysis based on the following attributes: contextual information (including context/feature/sample number etc), basic condition, extent of abrasion, material, colour, cortex, basic character and detailed classification, platform and termination type (where relevant for chipped stone), detail of working (where relevant), length (L), breadth (B), thickness (T), fragment size (given in mm) and mass (g). The criteria upon which these attributes have been selected, and the analytical methodology deployed, are presented in further detail elsewhere (Nelis 2003).

## Section 1: Bennetstown 1 (A017/003)

### Introduction

A total of eight chipped flint artefacts were recovered from Bennetstown 1 (A017/003; Table 1.1; Fig 1.1), where features including a burnt spread and a roughly circular setting of posts were excavated. Flint artefacts were recovered from C13 (the fill of a pit), C16 (burnt spread), C30 and C31 (redeposited natural)

and C132 (topsoil). The fill of pit C13 yielded a single piece of micro-flake shatter; from C16, the burnt spread, was recovered the only modified tool within the assemblage (A017/003:16:1: scraper). The redeposited natural deposits yielded a piece of burnt flake shatter from C31, and from C30 a core and two flakes that seem to belong to a single knapping episode. A small trimming flake and the distal fragment of a small blade were found in topsoil (C132).

### ***Analysis and discussion***

The assemblage is mainly comprised of knapping debitage (7/8 pieces): specifically, flake debitage (6 pieces) and a single core were found (1 piece); one modified tool, a well produced scraper, was also found (Table 1.1).

Unique No	Context	Material	Condition	Cortex	Character	Classification	Frag size (mm)	Length (mm)	Breadth (mm)	Thickness (mm)	Mass (g)
A017/003:13:1	13	Flint	Fresh	Tertiary	Flake	Platform shatter proximal	12	-	5	3	0.07
A017/003:16:1	16	Flint	Patinated	Tertiary	Modified	Scraper	-	37	25	11	6.91
A017/003:30:1	30	Flint	Patinated	Secondary	Flake	Core trimming	-	22	14	4	1.01
A017/003:30:2	30	Flint	Patinated	Secondary	Core	Single platform partially flaked	-	22	25	30	15.98
A017/003:30:3	30	Flint	Patinated	Secondary	Flake	Core trimming	-	25	19	6	2.46
A017/003:31:1	31	Flint	Burnt	Tertiary	Flake	Indeterminate shatter flake	12	-	6	2	0.19
A017/003:132:1	132	Flint	Patinated	Secondary	Flake	Platform blade shatter distal	21	-	11	3	0.78
A017/003:132:2	132	Flint	Patinated	Tertiary	Flake	Small percussion trimming	-	15	12	3	0.36

Table 1.1: Bennetstown 1 (A017/003): showing basic attributes of the flint artefacts.

### ***Primary debitage: cores and flakes***

The primary debitage assemblage accounts for all but one artefact within the assemblage, and consists of a core (C30:2) and flake debitage (6 pieces), all of which were produced by platform reduction techniques. The flake debitage assemblage is comprised of three small trimming flakes (C30:1; C30:2; C132:2), as well as three pieces of flake shatter (C13:1; C31:1 and C132:1). All of the flakes and the core are small in scale (the largest complete flake being 25mm in maximum length, and the core measuring just 37mm in maximum length). The beach-rolled cortex found on the C30 debitage show that small-scale beach-rolled flint pebbles were exploited for use.

The core (A017/003:30:2) is a small single platform core formed on what may have been a flake, taken from a small beach-rolled pebble. It is probable that the core had been fully exhausted, given the fact that it was small in scale, but also because its reduction has rendered it heavily overshot and of limited further potential; however, the morphology of the core and flakes found in C30, and the distribution of cortex, suggest that the raw material which was exploited for use had always been small in scale, and so only a few flakes could have been removed from any one core. The platform evident on the core has been faceted by percussion flaking, showing an effort to prepare the platform edge prior to knapping. Such efforts are evidence of an attempt to tightly control the primary technology, and are echoed by the flake debitage assemblage: where the striking platforms have survived (on the trimming flakes C30:1; C30:2; C132:2), all were small planar examples with substantial platform edge trimming.

Unique No	Context	Character	Classification	Platform	Termination
A017/003:13:1	13	Flakes	Platform shatter proximal	Splintered	Not present
A017/003:16:1	16	Modified	Scraper	Planar <5mm with edge prep	Plunging
A017/003:30:1	30	Flakes	Core trimming	Planar <5mm with edge prep	Plunging
A017/003:30:2	30	Cores	Single platform partially flaked	Planar <5mm with edge prep	Plunging
A017/003:30:3	30	Flakes	Core trimming	Planar 5+ with edge preparation	Plunging
A017/003:31:1	31	Flakes	Indeterminate shatter flake	Not present	Not present
A017/003:132:1	132	Flakes	Platform blade shatter distal	Not present	Feathered
A017/003:132:2	132	Flakes	Small percussion trimming	Planar <5mm with edge prep	Feathered

Table 1.2: Bennetstown 1 (A017/003): showing further technical attributes of the flint artefacts.

#### *Cores and flakes: refit groups*

From C30, a core (A017/003:30:2) and two complete flakes (A017/003:30:1 & 3) were found. A successful attempt was made to refit these flakes, with A017/003:30:1 belonging to an earlier stage of the knapping process than A017/003:30:3 (Plate 1.1 and 1.2). While they could not be directly refitted to the core found within the same context, it remains a possibility that they were derived from it. As such, within the excavated assemblage, the refitted flakes are an isolated element of the original production sequence; despite their limitations, however, they appear to derive from a single-platform core.

**Modified tools**

A single modified tool was found (A017/003:16:1; Plate 1.3). This was a small, finely produced scraper with a 'teardrop' shape, minimally modified at its distal end only using fine pressure flaking. It is based on a flake with similar technical attributes to those present on the core and flake debitage assemblage: it was formed on a small flake, with a carefully prepared platform; therefore, while it cannot be conclusively proven, it is probable that this piece was derived from a core similar to that found in C30, and even possible that it was directly derived from it.

**Discussion**

A small but intriguing assemblage of worked flint was recovered from Bennetstown 1. The assemblage was comprised of a platform core, a quantity of platform flake debitage and a single scraper. The water-rolled, crazed cortex found on the C30 debitage shows that small-scale beach-rolled flint pebbles were exploited for use. In order to maximise the potential of raw material, a finely controlled reduction strategy was deployed, wherein small platforms were prepared and trimmed in order to encourage greater control in the production of flakes. Together with the small scale of the raw material (shown by the core and refitted flakes recovered from C30), it is probable that a limited supply of raw material also determined the use of controlled reduction techniques. The finely produced scraper recovered from the burnt spread C16 had not been subject to burning. This piece had been finely retouched, but not elaborately so, using only the minimum of modification required in order to produce a well-made tool. The assemblage as a whole is therefore suggestive of an industry that could draw on relatively skilled knapping abilities, capable of controlling the production of flakes and the subsequent production of quite fine tools.

The chronological context of the assemblage is, however, unclear: the assemblage includes none of the few chronologically distinct technical traits found in flint artefacts in an Irish context. This might be so because of the particular pressure evident within this assemblage: that is, the limited quantity and scale of available raw material and functional requirements, together with skilful execution, have dictated the morphological content of the assemblage, and may have suppressed any distinctive chronological attributes, which in less constrained circumstances may otherwise have been present. The assemblage therefore displays evidence of having been produced in limiting conditions, and therefore it

is these limitations which will largely dictate the content of any given assemblage. In an Irish context, the use of a controlled platform reduction technique in the knapping of small scale pebbles is found throughout the island where raw material availability is limited and where skilful ability is present, and this behaviour is largely confined to the Neolithic period (thereafter, the limitations of small scale raw material tends to be accompanied by the use of bipolar reduction techniques); however, platform reduction and the production of scrapers may continue into the Early Medieval period in Ireland, and therefore the precise dating of these deposits cannot be offered by the lithic assemblage.

**APPENDIX 6 Medieval Pottery: Clare McCutcheon**

**A note on the medieval pottery  
from  
Bennetstown 1, Co Meath (A017/003)**

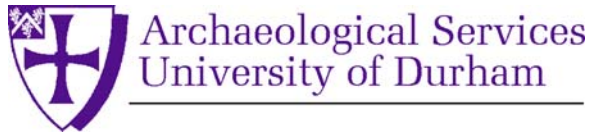
**Clare McCutcheon MA MIAI**

A single sherd of Dublin-type ware was recovered from the topsoil (132:3). This is a body sherd from a jug, decorated with a vertically applied pinched strip, in the same green colour as the body of the jug. Typically there would have been a number of these strips around the body extending from under the neck to round the swell of the lower body. This is slightly earlier than the sherd of Dublin-type fineware recovered from ploughsoil on the previous excavation at this site (04E0488). The designation of a fabric with the suffix *-type* is recommended pottery practice to indicate that a ware has been consistently found in a particular area while evidence for a production centre or kiln which has not yet been discovered (Blake & Davey 1983, 39-40). A fuller discussion of the names of the Dublin-type wares has been detailed elsewhere (McCutcheon 2000, 120-23; 2006, 58-84) but briefly Dublin-type ware is wheel-thrown, glazed and dates broadly to the thirteenth century.

**Bibliography:**

- McCutcheon, C. 2000 'Medieval pottery in Dublin: new names and some dates' in S. Duffy (ed.), *Medieval Dublin 1*, 117-25. Dublin.
- McCutcheon, C. 2006 *Medieval pottery from Wood Quay, Dublin*. Dublin.
- Pearce, J.E., Vince, A.G. & Jenner, M.A. 1985 *A dated type series of London medieval pottery part 2: London-type ware*. London.

**APPENDIX 7** *Environmental Report*



**Bennetstown 1, M3 Motorway Project, Ireland**

**environmental analysis**

*on behalf of*

**Archaeological Consultancy Services Ltd**

**Report 1600**

February 2007

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**Bennetstown 1, M3 Motorway Project, Ireland**

**environmental analysis**

***Report 1600***

February 2007

*Archaeological Services Durham University*

on behalf of

***Archaeological Consultancy Services Ltd***

*Unit 21 Boyne Business Park, Greenhills, Drogheda, Co. Louth, Ireland*



## 1. Summary

### *The project*

- 1.1 An excavation was undertaken by Archaeological Consultancy Services Ltd at Bennetstown 1, Co Meath, Ireland (NGR 301853, 243731). The excavated features included a burnt spread and a number of pits. This report presents the results of environmental analysis of bulk samples collected from the site.

### *Results*

- 1.2 The flots were small and contained charcoal and modern roots. The few charred plant macrofossils included low numbers of barley, oats and wheat grains. Charcoal occurred in varying quantities in all of the contexts and included alder, hazel, ash, Maloideae (apple, pear, whitebeams and hawthorns), sloe/plum, oak, willow/poplar and elm.

## 2. Project background

### *Location and background*

- 2.1 An excavation was undertaken by Archaeological Consultancy Services Ltd at Bennetstown 1, Co Meath, Ireland (NGR 301853, 243731). A burnt spread was located at the edge of the former waterline of the Tolka and overlaid a roughly circular setting of posts. Three pits, from at least two phases, lay central to this enclosed area. Spread material and a number of other pits and postholes occurred in the surrounding area. Two large industrial pits, containing large quantities of burnt clay and charcoal, post-dated this material. This report presents the results of environmental analysis of bulk samples collected from the site.

### *Objective*

- 2.2 The objective was to analyse the plant macrofossils and charcoal from the site and to identify material suitable for radiocarbon dating.

### *Dates*

- 2.3 Samples were received by Archaeological Services Durham University on 8<sup>th</sup> January 2007. Analysis and report preparation was conducted between 8<sup>th</sup> January - 4<sup>th</sup> February 2007.

### *Personnel*

- 2.4 Sample processing was undertaken by Archaeological Consultancy Services Ltd. Environmental analysis and report preparation were by Dr Charlotte O'Brien.

### *Archive*

- 2.5 The licence number is A017/003. The flots and residues are currently retained in the Environmental Laboratory at Archaeological Services Durham University for collection or return.

## 3. Method statement

- 3.1 The residues were examined for plant remains, shells, bones, pottery sherds and metalworking debris. The dry flots were scanned at up to x60 magnification using a Leica MZ6 stereomicroscope for charred and waterlogged plant remains. Identification of these was undertaken 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 all fragments >4mm. 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 modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. The different species were weighed separately. In addition, the largest piece of charcoal from a short-lived tree species was separated from each context, cleaned of adhering roots and other organic material and labelled in preparation for radiocarbon dating.

#### 4. Results

- 4.1 The residues included cracked stones and charcoal. A few small fragments of burnt bone occurred in context (86) and a probable sycamore fruit was present in context (5). The flots were small and contained charcoal and modern roots. The few charred plant macrofossils included a barley grain in context (5) and two in context (83); a wheat and oat grain in context (86); and a few indeterminate cereal grains in context (4) and (86). Low numbers of uncharred seeds were present in contexts (4) and (5), and included achenes of nettle and fruitstones of elder.
- 4.2 Charcoal occurred in varying quantities in all of the contexts and included alder, hazel, ash, Maloideae (apple, pear, whitebeams and hawthorns), sloe/plum, oak, willow/poplar and elm. Most of the charcoal pieces were small roundwood, but the oak was mainly non-roundwood pieces. A few of the >4mm pieces could not be identified due to their poor condition. This may have resulted from damage in the charring process, such as repeated burning, or post-depositional degradation. The results of the environmental analysis are presented in Table 1. The proportions of identified charcoal species from contexts with  $\geq 2$ g charcoal are presented in Figure 1.

#### 5. Discussion

- 5.1 The charred plant macrofossils suggest the cultivation of wheat, barley and oats, although they occurred in very low numbers and therefore some may merely have been growing as weeds or as contaminants of other crops. It was not possible to establish with certainty which varieties of barley and wheat were used, due to the absence of chaff, although the wheat grain in (86) had the characteristic squat shape which often occurs in bread wheat.
- 5.2 Charcoal occurred in varying quantities in all of the contexts. The largest volume was in context (78), the fill of a possible industrial pit. Over 50% was oak, all of which was non-roundwood, suggesting that timber from mature trees was used. The rest of the charcoal from this context comprised alder, hazel, ash, sloe/plum and willow/poplar roundwood. Hazel roundwood dominated the charcoal in context (86), which is also associated with a possible industrial pit. Again, wood from mature oak trees was used, in addition to roundwood of willow/poplar, alder, elm, ash and sloe/plum. It would appear that the charcoal from these contexts is fuel waste from industrial activity, although charred cereal remains in (86) may indicate that fuel from domestic waste is also present.
- 5.3 The charcoal from pit fills (48), (9) and (83) and the burnt spread (4) were dominated by small pieces of roundwood, suggesting that branches and small stems were used. These fills may have accumulated as a result of the disposal of fuel waste from

domestic hearths, particularly as charred cereal grains occurred in (4) and (83). They differed from (78) and (86) in the absence of oak charcoal. Alder was the most abundant species in (4) and (83), which would have grown on areas of damp ground, for example along the banks of the Tolka. Maloideae charcoal was abundant in (9) and (48), and would have formed a scrub woodland with hazel and sloe/plum. Ash occurred in low quantities, and therefore may have formed a minor woodland component. The tiny pieces of charcoal in context (5) were too small to be identified.

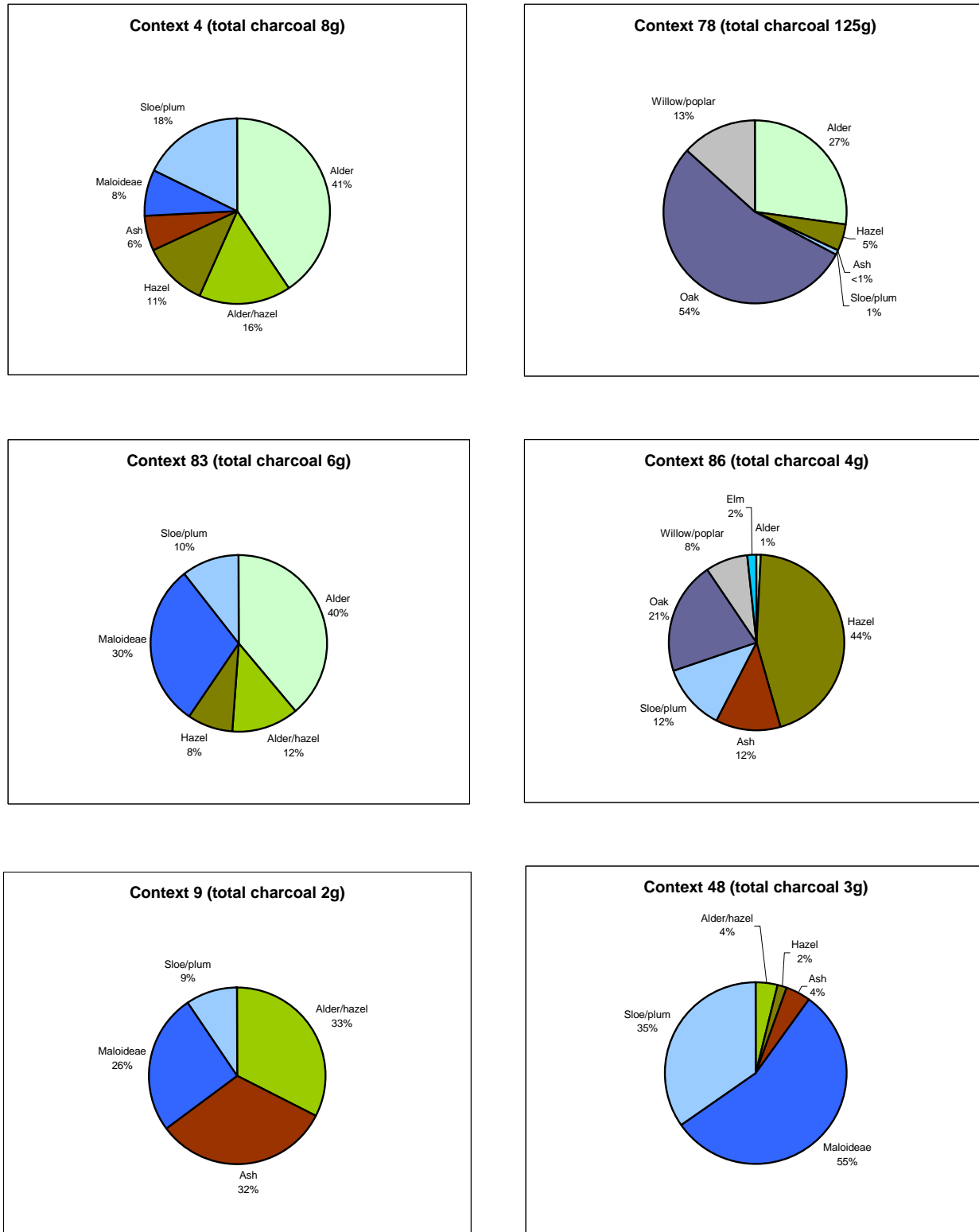
- 5.4 The non-waterlogged nature of the samples and the occurrence of modern roots in the flots, suggests that the few uncharred seeds of nettle, sycamore and elder are modern introductions.

**Table 1:** Plant macrofossils and charcoal from Bennetstown 1

Sample	1	2	3	4	5	6	7
Context	5	9	4	48	78	83	86
Fill type	Pit	Pit	Burnt spread	Pit	Modern / pit	Pit	Pit
Residue weight (g)	125	529	122	97	607	446	305
Flot weight (g)	3	N/A	11	N/A	N/A	20	6
Flot volume (ml)	2	N/A	10	N/A	N/A	40	6
<b>Residue contents (relative abundance)</b>							
<i>Acer</i> cf. <i>pseudoplatanus</i> fruit (cf. Sycamore)	1	-	-	-	-	-	-
Angular / cracked stones	4	2	4	1	3	2	2
Burnt bone (number of fragments)	-	-	-	-	-	-	5
Charcoal	✓	✓	✓	✓	✓	✓	✓
<b>Charcoal (g)</b>							
Total charcoal	0.169	2.025	8.121	2.775	124.477	6.062	3.744
<i>Alnus glutinosa</i> (Alder)	-	-	1.308	-	24.447	0.238	0.015
<i>Alnus</i> / <i>Corylus</i> (Alder or hazel)	-	0.207	0.514	0.059	-	0.075	-
<i>Corylus avellana</i> (Hazel)	-	-	0.368	0.024	4.130	0.051	0.725
<i>Fraxinus excelsior</i> (Ash)	-	0.206	0.196	0.065	0.124	-	0.197
Maloideae	-	0.165	0.261	0.812	-	0.183	-
<i>Prunus spinosa</i> / <i>domestica</i> (Sloe or plum)	-	0.060	0.568	0.512	0.706	0.064	0.200
<i>Quercus</i> sp (Oak)	-	-	-	-	48.471	-	0.339
Salicaceae (Willow / poplar)	-	-	-	-	11.900	-	0.124
<i>Ulmus</i> sp (Elm)	-	-	-	-	-	-	0.029
Unidentified >4mm fraction	-	0.245	0.825	0.116	1.830	0.365	0.437
Unidentified <4mm fraction	0.169	1.142	4.081	1.187	32.869	5.086	1.678
<b>Flot matrix (relative abundance)</b>							
Modern roots	1	-	-	-	-	1	1
Charcoal	✓	-	✓	-	-	✓	✓
<b>Charred remains (total counts)</b>							
(c) <i>Avena</i> sp (Oats)	-	-	-	-	-	-	1
(c) <i>Hordeum</i> sp (Barley undifferentiated)	1	-	-	-	-	2	-
(c) <i>Triticum</i> cf. <i>aestivum</i> (cf. Bread wheat)	-	-	-	-	-	-	1
(c) Cerealia indeterminate	-	-	1	-	-	-	5
<b>Waterlogged remains (relative abundance)</b>							
(r) <i>Urtica dioica</i> (Common Nettle)	1	-	-	-	-	-	-
(t) <i>Sambucus nigra</i> (Elder)	1	-	1	-	-	-	-

(c: cultivated plant; r: ruderal; t: trees/shrubs)

Relative abundance is based on a scale from 1 (lowest) to 5 (highest)



**Figure 1:** Proportions of identified charcoal in contexts with total charcoal  $\geq 2g$

- 5.5 Material suitable for radiocarbon dating was present in all of the contexts except (5). The material recommended was all charcoal, as the charred cereal grains weighed less than the recommended 10mg required for AMS radiocarbon dating according SUERC (Scottish Universities Environmental Research Centre). In all cases, a single entity of a short-lived tree species was chosen. Table 2 lists the material recommended.

**Table 2:** Material for radiocarbon dating from Bennetstown 1

Sample	1	2	3	4	5	6	7
Context	5	9	4	48	78	83	86
Suitable material present	X	✓	✓	✓	✓	✓	✓
Type of material recommended	-	Charcoal	Charcoal	Charcoal	Charcoal	Charcoal	Charcoal
Species	-	Ash	Alder	Sloe/plum	Alder	Alder	Hazel
Weight of entity chosen (g)	-	0.102	0.066	0.129	2.738	0.059	0.208

## 6. Sources

Boardman, SJ, 1995 Charcoal and charred macrofossils, in K, Branigan & P, Foster (eds) *Barra: archaeological research on Ben Tangaval, Sheffield: SEARCH* Volume 1, 149-157

Hather, JG, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*, London

Stace, C, 1997 *New Flora of the British Isles*, 2<sup>nd</sup> Edition, Cambridge

SUERC <http://www.gla.ac.uk/suerc/radiocarbon/ams.html> Accessed 20/01/07

## **APPENDIX 8 Faunal Report: Rachel Sloane**

### **04\_01, Bennetstown 1 (A017/003) results of mammal bone analysis:**

#### **1. Introduction**

This report details the results of analysis of the mammalian bone remains recovered from archaeological excavation at the site of Bennetstown 1, Co. Meath, which was carried out in advance of the proposed M3 Clonée to North of Kells Road Scheme. A burnt spread was located at the edge of the former waterline of the River Tolka and overlay a roughly circular setting of posts. Three pits of at least two phases lay central to this enclosed area. There were a number of other pits and postholes in the surrounding area along with patches of washed out spread material. Two large, seemingly industrial pits post-dated this material and contained large quantities of burnt clay and charcoal. A substantial quantity of alluvium overlay the eastern half of the site. This was removed by machine and all underlying archaeological material fully excavated prior to the area filling up with water.

Only one countable animal bone element was recovered from archaeological excavation at Bennetstown 1. This was recovered from F81, the fill of a circular pit. Details of the two relevant features are given in Table 1.

<b>Feature</b>	<b>Description</b>
F81	Fill of pit F90; Loose, grey, sandy clay with frequent stone inclusions and occasional animal bone fragments. 2.80m diameter x 0.14m depth
F90	Pit ; Circular cut (2.80m diameter x 0.25-0.60m depth) with a sharp break of slope, vertical sides (stepped in east) and a sharp break of slope leading to a flat base.

**Table 1 Bennetstown 1: Descriptions of archaeological contexts relevant to countable mammalian bone specimen.**

#### **2. Methodology**

The methodology adopted for the Bennetstown 1 animal bone collection was based on that used for Knowth by McCormick and Murray (forthcoming). A detailed description of the applied methodology has been outlined by the current author in the analysis report for Roestown 2 mammalian bone remains, also excavated as part of the M3 Clonée-North of Kells Road Scheme.

#### **3. Results of Analysis**

The only countable element was identified as a right cattle pelvis although it survived in quite poor condition, as the cortex of the bone was observed to be heavily worn. The area of fusion

between the ilium and ischium of the specimen was fully fused thereby indicating that the animal it belonged to had reached an age of at least 6-10 months before death (Reitz and Wing 1999, 76). No further zooarchaeological information was evident.

#### **4. Conclusion**

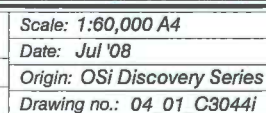
As only one countable mammalian bone specimen was retrieved from this site, the zooarchaeological evidence from Bennetstown 1 is minimal. The fully fused nature of the cattle pelvis indicates that the animal it represents had lived to an age of at least 6-10 months (*Ibid*). This was the only zooarchaeological information it was possible to ascertain from the specimen.

#### **Bibliography**

McCormick, F. and Murray E. (forthcoming). *The faunal material from Knowth, Co. Meath*.

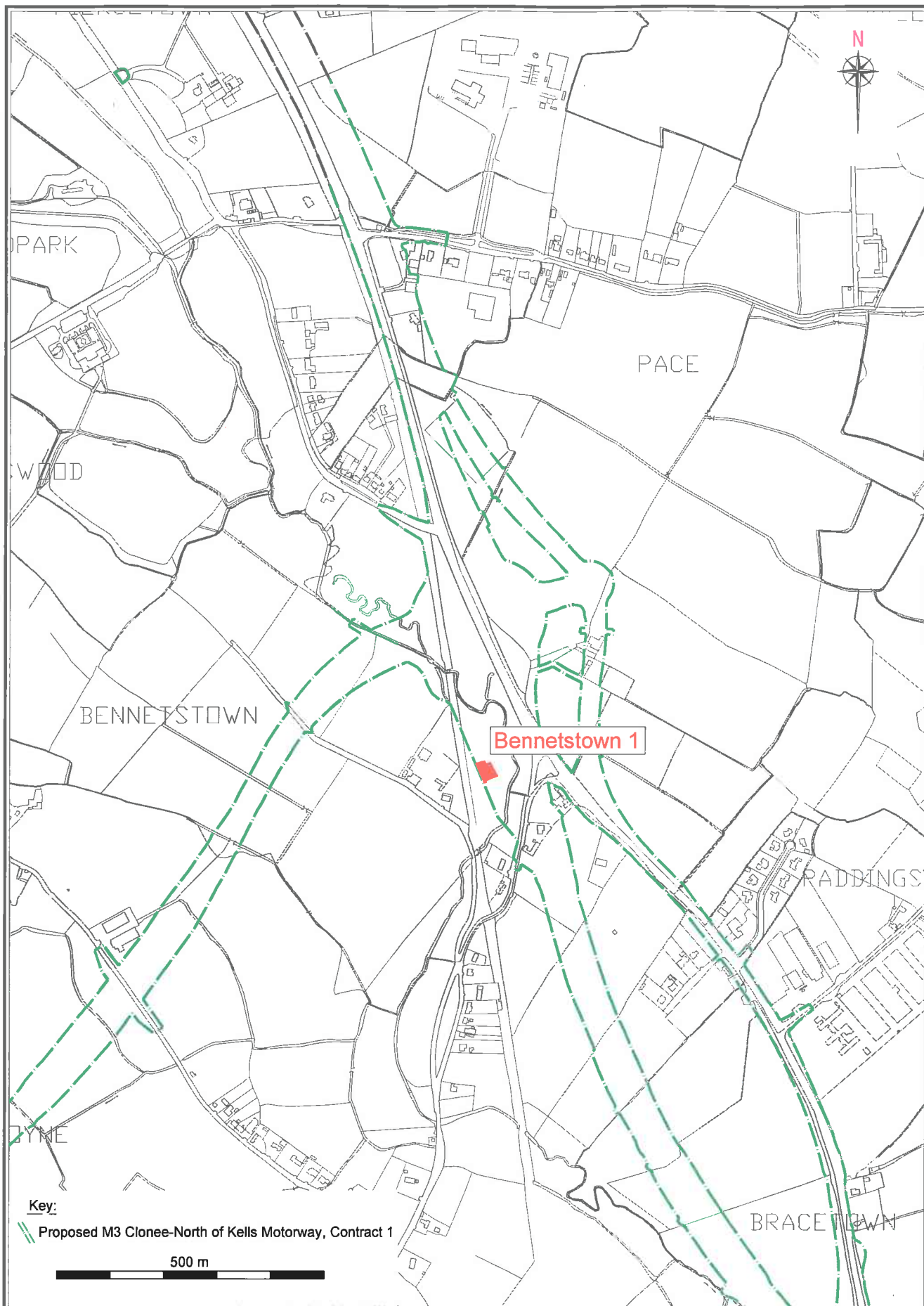
Reitz, E.J. and Wing, E.S. 1999. *Zooarchaeology*. (Cambridge Manuals in Archaeology). Cambridge: Cambridge University Press.





*Figure 1: Location of Bennetstown 1*





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

Site: M3 Clonee-North of Kells PPP Scheme  
Contract 1, Bennetstown 1  
Issued for: Excavation Report  
Client: Meath County Council

Scale: 1:10,000 A4  
Date: Jul '08  
Origin: Client/ACS Ltd.  
Drawing no.: 04\_01\_C3045i

Figure 2: Location of Bennetstown 1 on current OS background

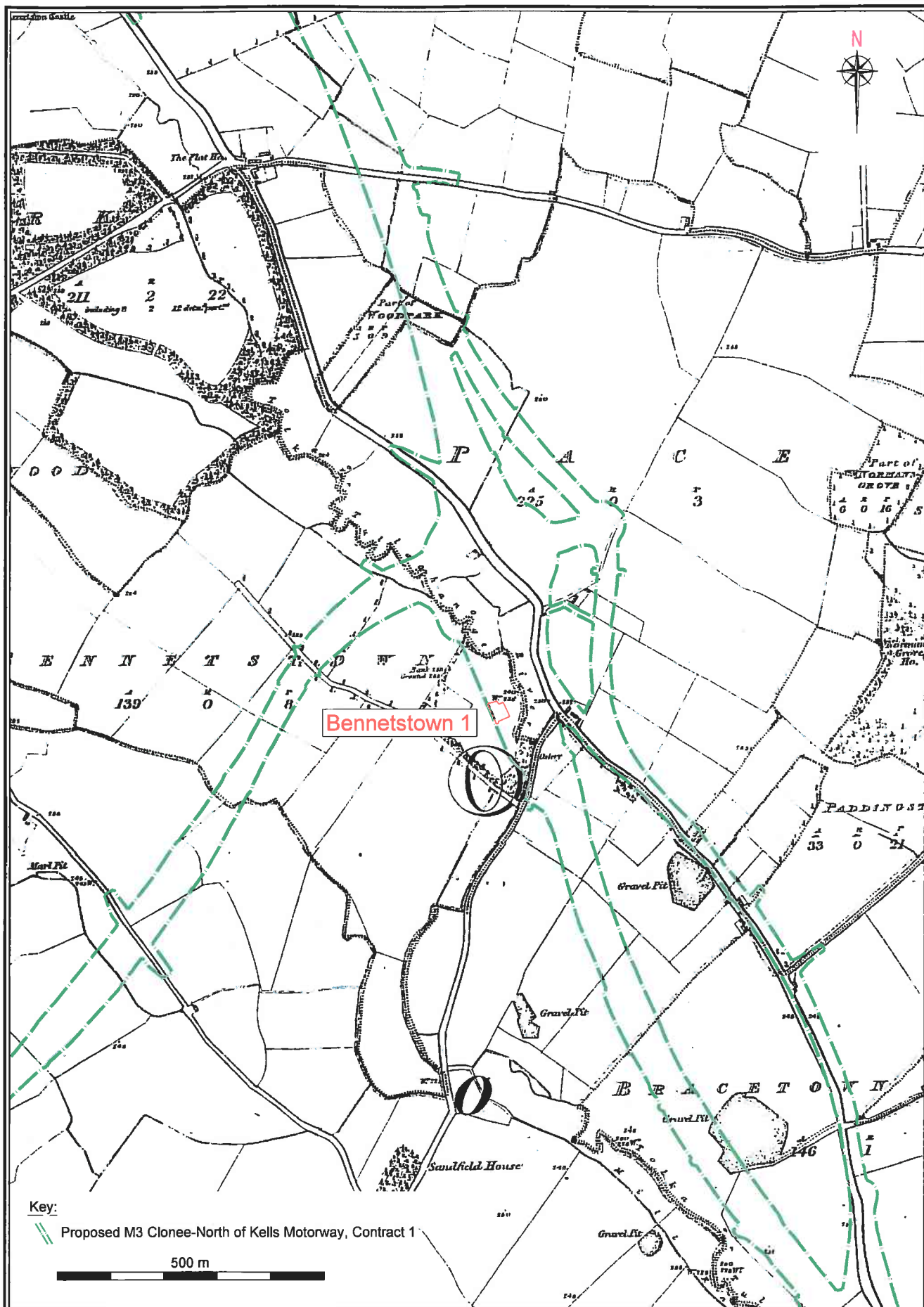
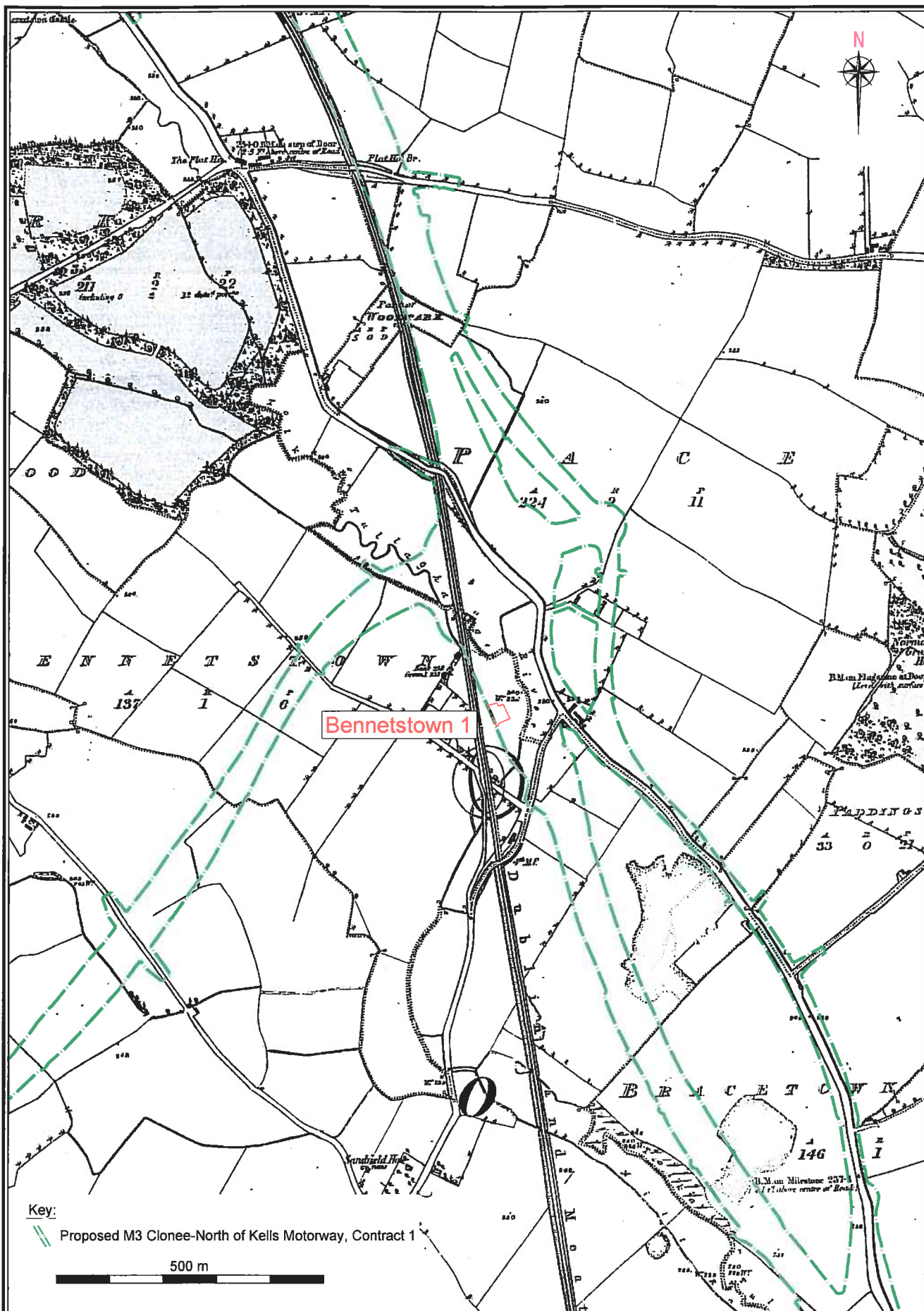


Figure 3: Bennetstown 1, extract from 1st edition OS map, Meath sheet 50



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

Site: M3 Clonee-North of Kells PPP Scheme  
Contract 1, Bennetstown 1  
Issued for: Excavation Report  
Client: Meath County Council

Scale: 1:10,000 A4  
Date: Jul '08  
Origin: OSi (1884)  
Drawing no.: 04\_01\_C3047i

Figure 4: Bennetstown 1, extract from 2nd edition OS map, Meath sheet 50



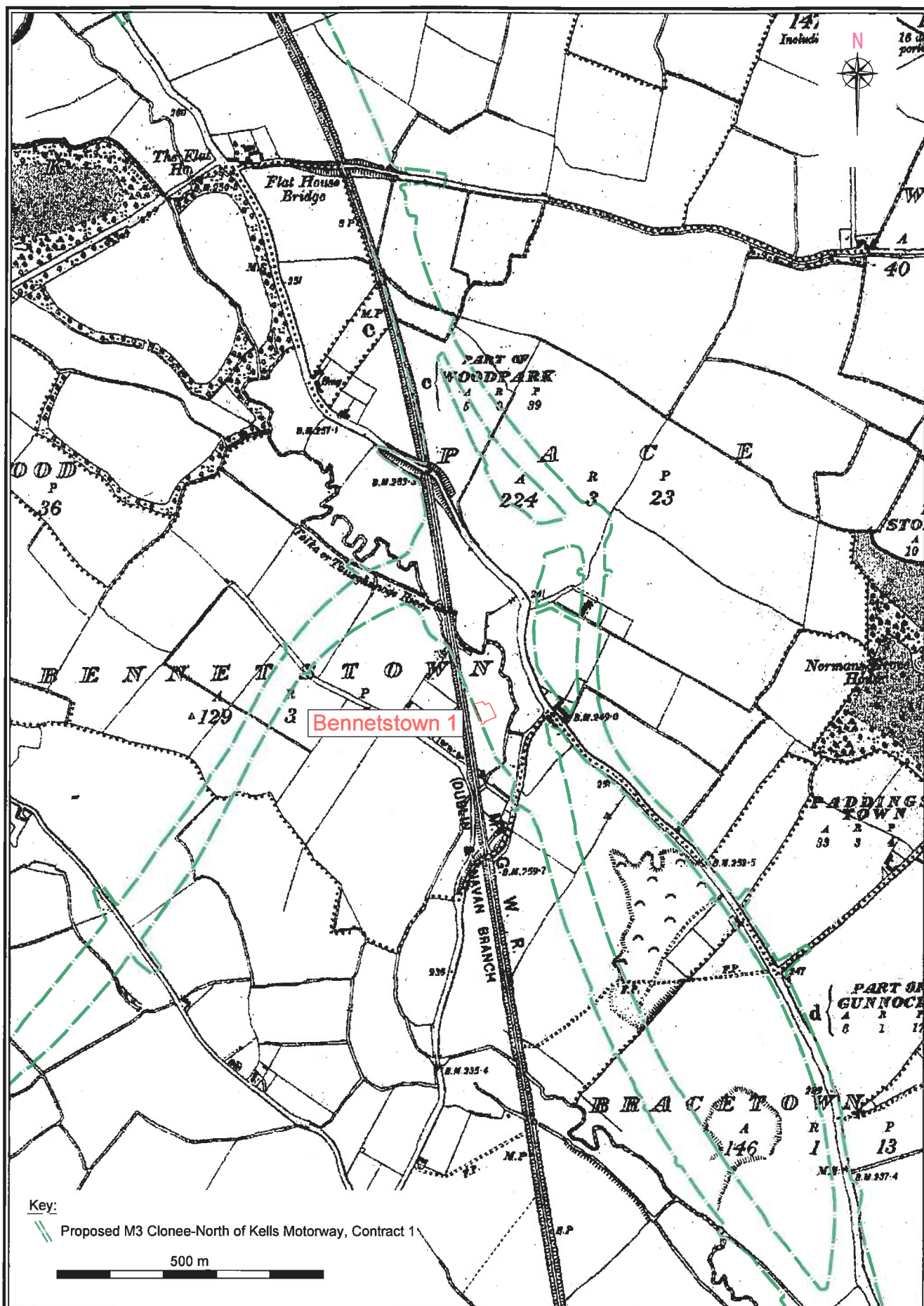
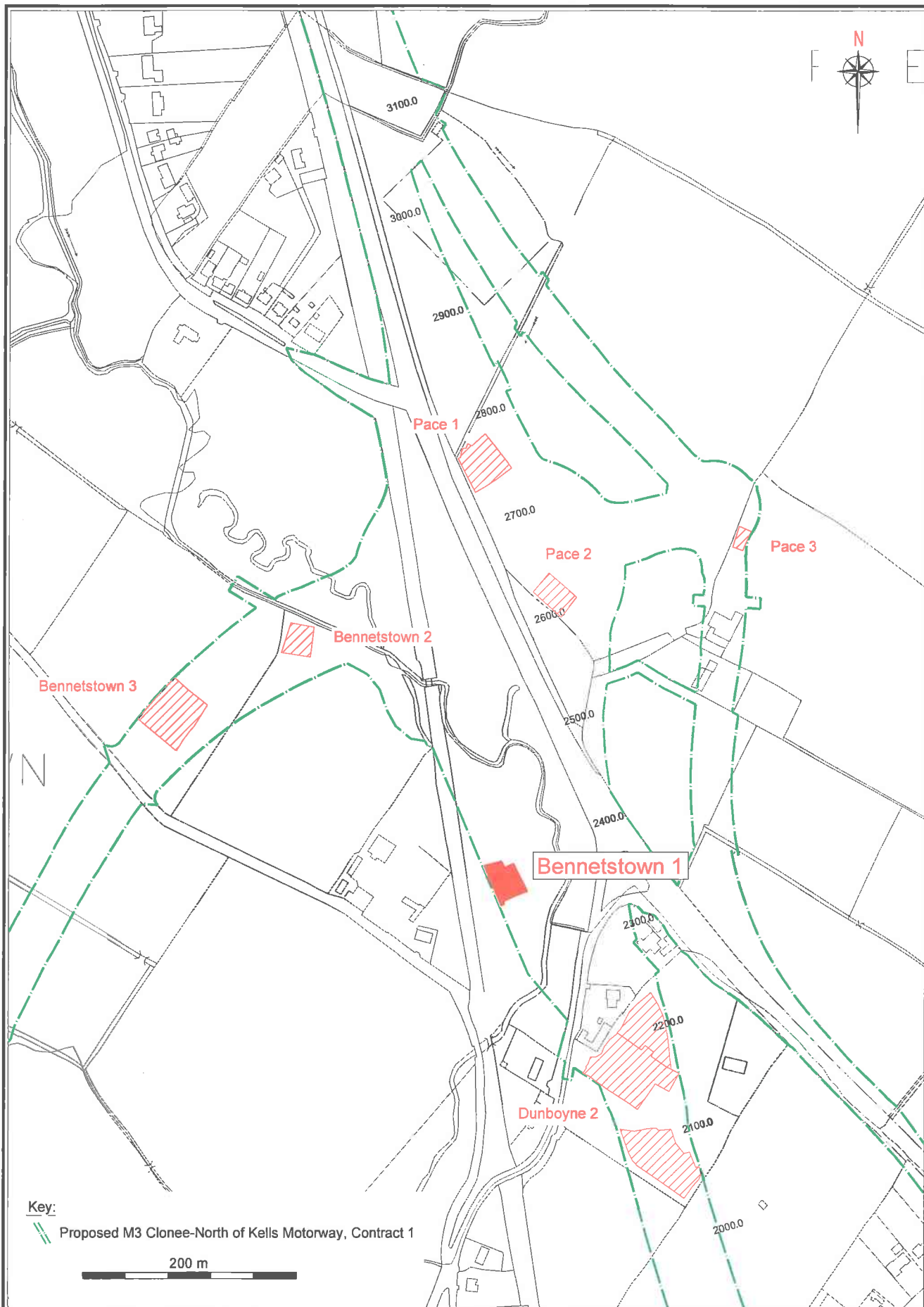


Figure 5: Bennetstown 1, extract from 3rd edition OS map, Meath sheet 50



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

Site: M3 Clonee-North of Kells PPP Scheme  
 Contract 1, Bennetstown 1

Issued for: Excavation Report

Client: Meath County Council

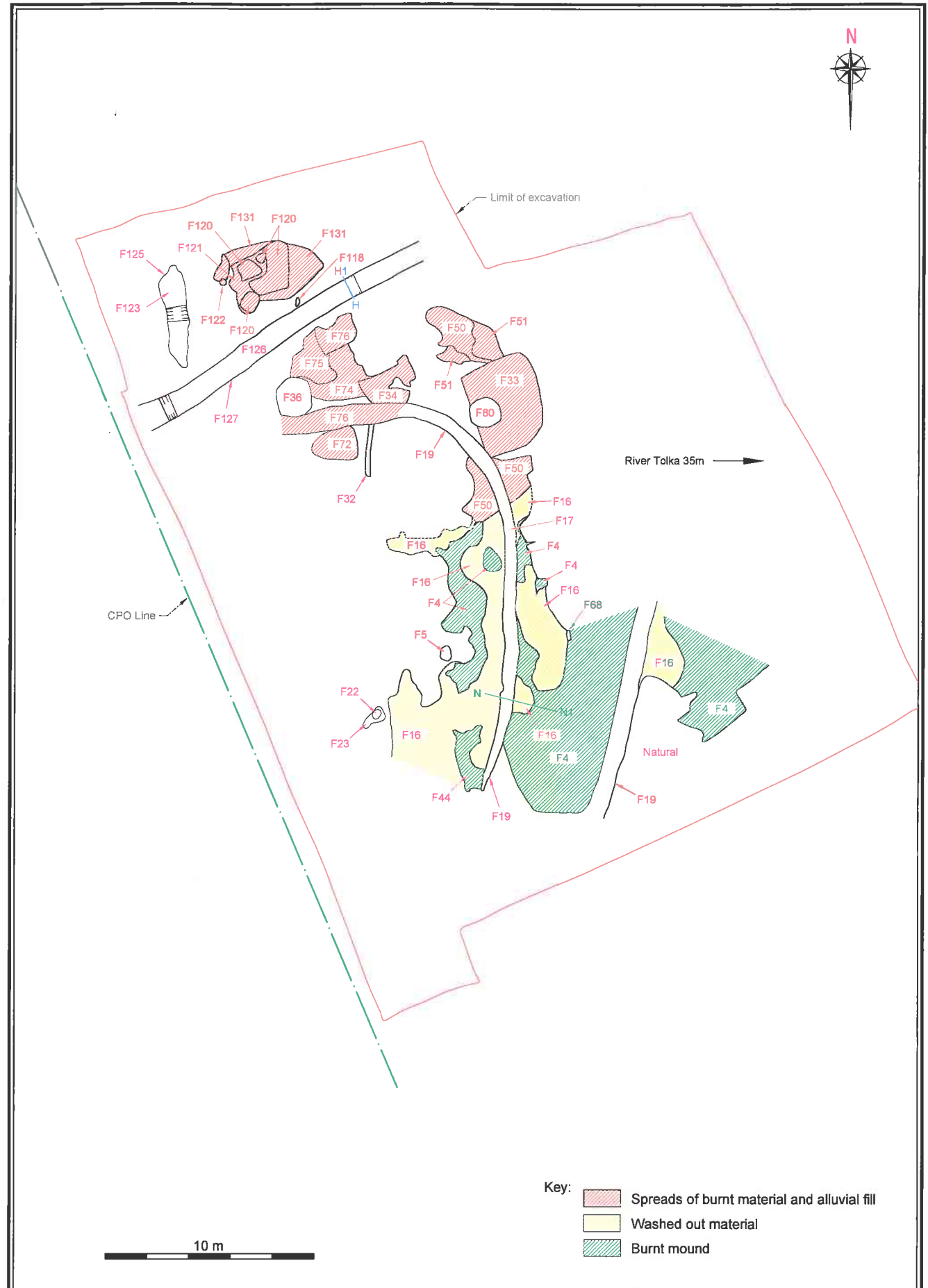
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Date: Jul '08

Origin: Client/ACS Ltd.

Drawing no.: 04\_01\_C3049i

Figure 6: Detailed location of Bennetstown 1



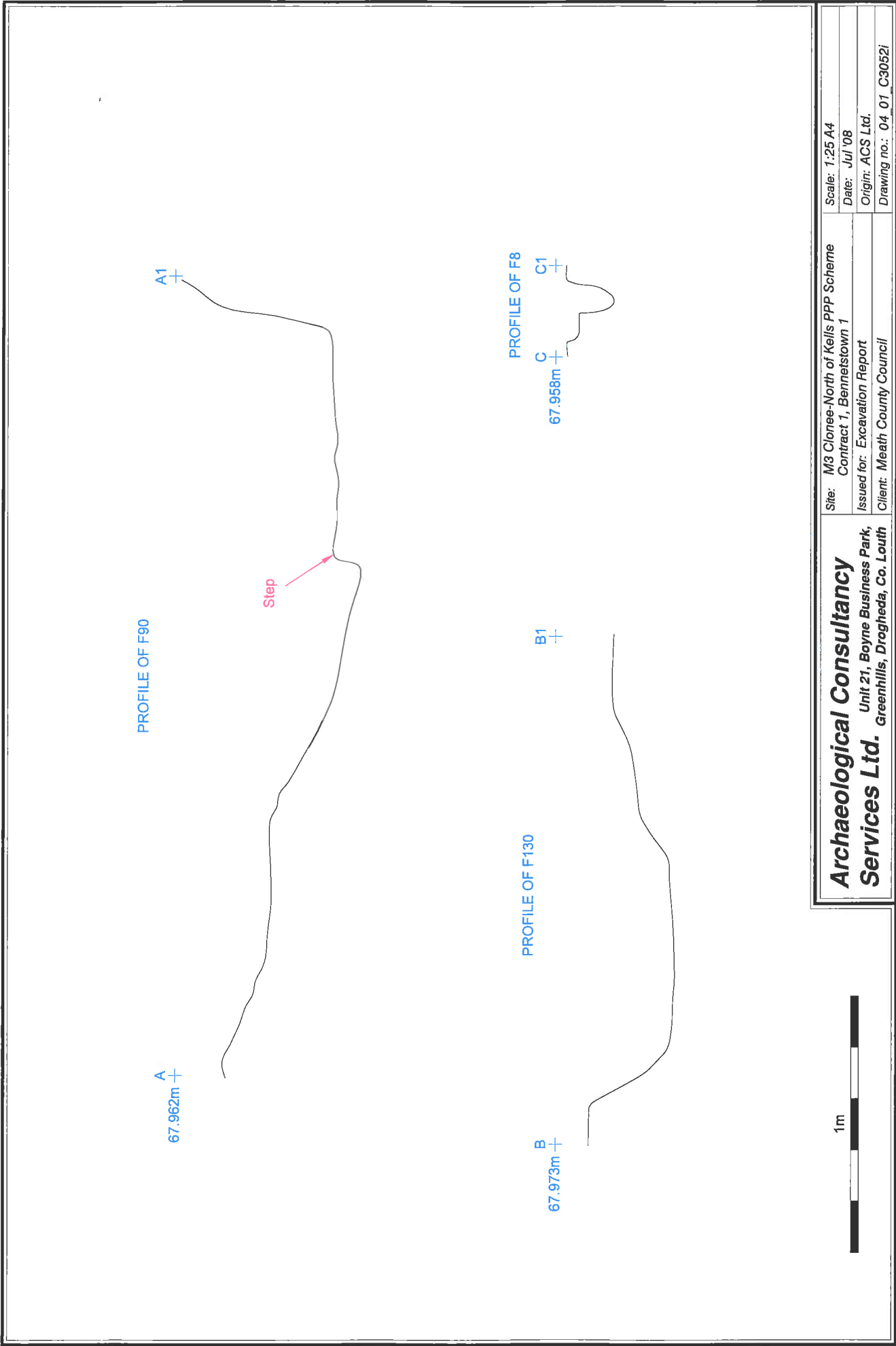
**Archaeological Consultancy  
Services Ltd.** Unit 21, Boyne Business Park,  
Greenhills, Drogheda, Co. Louth

Site: M3 Clonee-North of Kells PPP Scheme  
Contract 1, Bennetstown 1  
Issued for: Excavation Report  
Client: Meath County Council

Scale: 1:200 A4  
Date: Jul '08  
Origin: Client/ACS Ltd.  
Drawing no.: 04\_01\_C3050i

Figure 7: Plan of spreads and pre-excavation features

Scale: 1:200 A4
Date: Jul '08
Origin: Client/ACS Ltd.
Drawing no.: 04 01 C3051i



<b>Archaeological Consultancy</b>		Site: M3 Clonee-North of Kells PPP Scheme	Scale: 1:25 A4
<b>Services Ltd.</b>		Contract 1, Bennetstown 1	Date: Jul '08
Unit 21, Boyne Business Park,		Issued for: Excavation Report	Origin: ACS Ltd.
Greenhills, Drogheda, Co. Louth		Client: Meath County Council	Drawing no.: 04 01 C30521

Figure 9: Profiles of features at Bennetstown 1



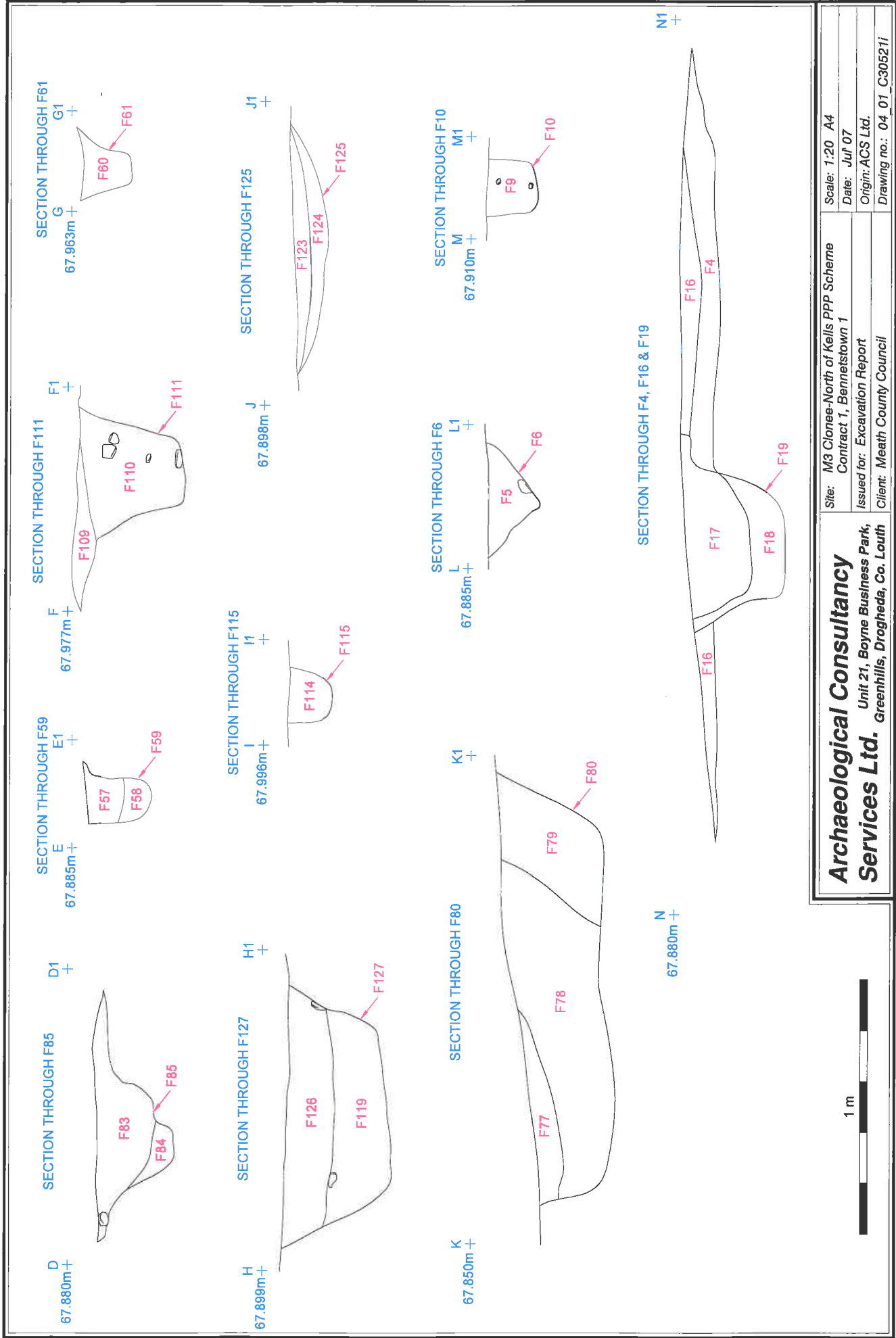


Figure 10: Sections of features at Bennetstown 1



Plate 1: The site from the south (04\_01\_Bennetstown 1\_CP02\_03)



Plate 2: The waterlogged site from the north (04\_01\_Bennetstown 1\_CP06\_16)





Plate 3: F80, mid excavation, from the north-east (04\_01\_Bennetstown 1\_CP04\_10)



Plate 4: F90, mid excavation from the south-west (04\_01\_Bennetstown 1\_CP05\_25)





Plate 5: Section through F90, from the east (04\_01\_Bennetstown 1\_CP05\_26)



Plate 6: Pit F06 after excavation, from the west (04\_01\_Bennetstown 1\_CP01\_12)





Plate 7: Post-holes F10 & F12 after excavation from the west (04\_01\_Bennetstown 1\_CP01\_15)



Plate 8: Post-holes F93, F85, F113, F111, F88, F104, F106 after excavation from the north-east (04\_01\_Bennetstown 1\_CP05\_6)