

32 Nicholas St.
King's Island
Limerick

Tel: 061 634375
Fax: 061 310705

N7 Nenagh to Limerick High Quality Dual Carriageway Archaeological Resolution Project E2322: Gortnalahagh Site 3 Final Excavation Report



Licence Eligible Archaeologist: Aidan Harte MA
Report Author: Lee Scotland BA

Townland: Gortnalahagh
Parish: Stradbally
Barony: Clanwilliam
County: Limerick
OS 6" Sheet No.: LI006
NGR: 166739.35/160701.08

Excavation No.: E2322
ÆGIS Ref.: 1-11
Scheme No.: A026/000
Chainage: 3550
Client: Limerick County Council

Date of Field Work: November 2006–January 2007
Date of Report: July 2011



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- Client — Mid West National Roads Design Office, Limerick (Richard O'Brien NRA Archaeologist).
 - Statutory Bodies — Archaeological Planning and Licensing Unit, National Monuments Service and the National Museum of Ireland.
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Please note...

That the archaeological methodology followed in this report was agreed with the NRA Archaeologist and approved by the Archaeological Planning and Licensing Unit National Monuments Service, Room G50, Custom House, Dublin 1. The National Monuments Acts 1930–2004, The Planning and Development Act 2002 and the most recent EPA guidelines were consulted. Guidelines and Plans issued from time-to-time by the statutory bodies have been consulted. These are listed in the reference section of this report. Every effort has been taken in the preparation and submission of this report to provide as complete an assessment as possible within the terms of the brief, and all statements and opinions are offered in good faith. However, ÆGIS cannot accept responsibility for errors of fact or opinion resulting from the data supplied by any third party, for any loss or other consequences arising from decisions made or actions taken on the basis of facts and opinions expressed in this report, (and any supplementary information), howsoever such facts and opinions may have been derived, or as the result of unknown and undiscovered sites or artefacts.

Acknowledgements

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**Report Design and
Template**

This report is based on the ÆGIS Archaeology Limited report template (2008) and follows the NRA archaeological publication style guides (Stanley & O'Sullivan 2010).

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Contents

	<i>Page</i>
I. Abstract	4
II. List of Figures, Tables and Plates	6
III. Abbreviations and Terms Used	7
1. Introduction	8
1.1 Project Background	8
1.2 Location & Existing Environment	8
1.3 Historical and Archaeological Background	10
1.4 Previous Archaeological Investigations	14
1.5 Excavation Methodology	14
2. Context List	16
2.1 Context List	
3. Stratigraphical Sequence	18
3.1 Matrix	19
3.2 Context Descriptions	21
4. Interpretation & Discussion of Stratigraphy	25
4.1 Interpretation of the Archaeological Stratigraphy	25
4.2 Discussion	27
5. Initial Conclusions	29
6. The Quantity of Materials	31
6.1 The Archive	31
6.2 Finds List	32
6.3 Sample List	32
7. Project References	33
8. Signing-Off Statement	35
9. Appendix:	36
9.1 Site Plans & Sections	37
9.2 Radiocarbon Dating	41
9.3 Palaeoenvironmental Analysis	42
9.4 Faunal Remains	44

I. Abstract

This report details the licensed archaeological excavation of features uncovered during Phase 1 test trenching of the N7 Nenagh to Limerick High Quality Dual Carriageway. Phase 1 test trenching was carried out between January and March 2006 by ÆGIS ARCHAEOLOGY Ltd and Judith Carroll and Company under Ministerial Direction Number A026. During the testing within the townland of Gortnalahagh Co. Limerick, the remains of two charcoal rich pit features measuring 1.4 m x 0.6 m and 1.3 m x 1.2 m (Collins 2006) were identified and given the sub-scheme number A026/169.

The excavation, conducted under Registration Number E2322, was carried out by ÆGIS ARCHAEOLOGY Ltd between November 2006 and January 2007 in accordance with the Directions issued by the Minister for the Environment Heritage and Local Government, following consultation with the National Museum of Ireland under the National Monuments Act (1930–2004) and in accordance with the *Policy and Guidelines on Archaeological Excavations* (Dúchas 1999). The site was designated Gortnalahagh Site 3 for reporting purposes.

In addition to the charcoal rich pits identified during the Phase 1 test trenching, the archaeological resolution revealed the remains of a further six pits and a hearth. These features were located in two separate areas, with the pits in Area A and the hearth in Area B. A Preliminary Excavation Report (Stronach 2008) was completed and submitted to the Archaeological Planning and Licencing Unit, National Monuments Service, Department of Environment Heritage and Local Government (DoEHLG) and to the National Museum of Ireland. In this four of the pits were provisionally identified as cremation pits based on the recovery of burnt bone from the fill of the four features. The analysis of the burnt bone identified them as animal and as such these pits have subsequently been reinterpreted as rubbish pits. Based on the radiocarbon dates from two features in Area A, the activity in this area could be seen to be from two periods, with both Early Bronze Age and Iron Age activity recorded. However, no datable material was recovered from Area B during the excavation or through the processing of the samples collected. However, though not conclusive, a

comparative appraisal of the hearth to features excavated on several sites raised the possibility that this feature may have been a charcoal pit kiln.

ÆGIS ARCHAEOLOGY Ltd would like to express their thanks to everyone who aided in the completion of the excavation and reporting of the results of the excavation. In particular, to NRA Archaeologist Richard O'Brien, NRA Assistant Archaeologist Paul O'Keeffe, to the staff and excavation crew of ÆGIS ARCHAEOLOGY Ltd and to the specialists who carried out the post-excavation analysis.

The archaeological dimension of this project was funded in full by the client.

I. List of Figures, Tables, and Plates

FIGURES:	Page
1. Discovery Series Map showing route selection and site location	9
2. Location of Gortnalagh Site 3 and neighbouring sites	10
3. Detail from 1st Edition Map for Limerick	13
4. Detail from RMP Map for Limerick (Sheet 6)	13
5. Post-excavation plan of Area A	37
6. North facing section of pit C135	38
7. North facing section of pit C149	38
8. North facing section of pit C202	38
9. North-east facing section of pit C204	38
10. Post-excavation plan of Area B	39
11. West facing section of hearth C231	40
12. North facing section of drain C235	40
13. South facing section of field boundary C237	40
 TABLES:	
1. Context Register	16
2. Quantity of Materials	31
3. Finds List	32
4. Sample List	32
5. Summary of Radiocarbon Dates	41
6. Charcoal Identification	41
 PLATES:	
1. North facing section of pit C149	25
2. North facing section of pit C135	26
3. East facing section of hearth C231	26

III. Abbreviations and Terms Used

1σ	The one sigma (1 σ) calibrated expressed date range are equivalent to the probable calendrical age of the sampled material with 68% levels of confidence.
2σ	The two sigma (2 σ) calibrated expressed date range are equivalent to the probable calendrical age of the sampled material with 95% levels of confidence.
AODM	This relates to the height above sea level and is given in meters.
Barony, Parish, Townland	These terms refer to land divisions in Ireland. The barony is the largest land division in a county, which is formed from a number of parishes. These parishes are in turn made up of several townlands, which are the smallest land division in the country. The origins of these divisions are believed to be in the Early Medieval/Christian period (AD500-AD1000), or may date earlier in the Iron Age (500BC-AD500).
BP	Before Present where 'present' equals AD 1950
Context	Each feature found during the excavations is allocated a number, commonly termed a 'Context Number' in order to record the archaeology.
Cal. BC/AD	The calibrated radiocarbon dates given in the report are the 2 σ calibrated expressed date range. Details of the radiocarbon dates received and the sampled material are given in Section 9.2 of this report.
DoEHLG	Department of the Environment, Heritage and Local Government. This was the former governmental department whose heritage remit included a range of policy, regulatory, educational and promotional roles. The heritage functions were transferred to the <i>Department of Arts, Heritage and the Gaeltacht</i> with effect from 1 May 2011.
E	East.
First Edition	This relates to editions of the OS 6 inch maps for each county. The first edition map completed for the area dates to the early 1840s and this is referred to in the text as the "first edition".
HQDC	High Quality Dual Carriageway.
LI	This number is the number of the site on the RMP map (see below). It begins with the county code, here LI for Limerick, the 6-inch sheet number, followed by the number of the archaeological site.
M	Metres, all dimensions are given in metres or part of a metre, unless otherwise stated.
N	North.
OS	Ordnance Survey.
Ph	Parish.
RMP	Record of Monuments and Places. An update of the older SMR, (sites and monuments record), on which all known archaeological sites are marked and listed in an accompanying inventory. The sites marked afford legal protection under the National Monuments Acts 1930-2004. The record is based on the 6-inch map series for the country and is recorded on a county basis.
S	South.
Sheet	This relates to the 6-inch map for each county, which are divided into sheets and numbered accordingly.
Td	Townland.
W	West.

1. Introduction

1.1 Project Background

ÆGIS Archaeology Limited was contracted by Limerick County Council to undertake archaeological excavations in advance of the N7 Nenagh to Limerick High Quality Dual Carriageway. The western end of the scheme starts at the existing Newport Junction in the townlands of Carrowkeel and Mountshannon, Co Limerick, and runs northeast. The scheme ends at Nenagh in the townland of Ballintotty, Co. Tipperary, where the existing N7 Nenagh Bypass will be widened to accommodate the new road. The total length of the proposed route is 35.7 km.

Phase I test trenching to determine the character, nature and extent of any archaeological material was undertaken by ÆGIS Archaeology Limited (Contract 1) and Judith Carroll & Co. (Contract 2) between January and March 2006, under Ministerial Direction Number A026. During testing two charcoal rich features were found and assigned scheme sub-number A026/169. ÆGIS Archaeology excavated this site under Ministerial Direction Number A026, Registration Number E2322.

Excavations were conducted in accordance with the Directions issued by the Minister for the Environment Heritage and Local Government following consultation with the National Museum of Ireland under the National Monuments Acts (1930–2004) and in accordance with the *Policy and Guidelines on Archaeological Excavation* (Dúchas 1999).

1.2 Location & Existing Environment (figs 1 & 2)

Gortnalagh Site 3, (NGR 166739.35/160701.08), was located in the townland of Gortnalagh, the parish of Stradbally and in the barony of Clanwilliam Co. Limerick approximately 2 km south of Castleconnell. The site was situated at 41 m AODM within an area of low lying pasture prone to water logging. The underlying geology of the area was identified in the Environmental Impact Statement (EIS) as a variety of rock types (Gowen

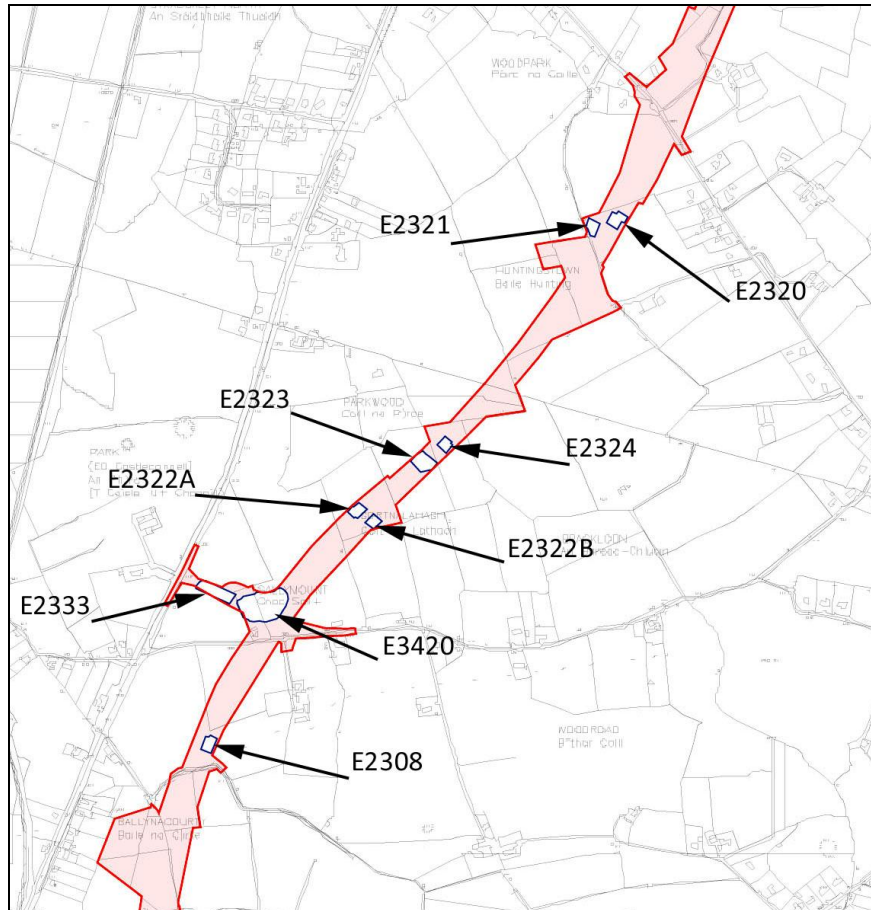


Figure 2. Location of Gortnalagh Site 3 (Areas A and B) and neighbouring sites. North to top

1.3 Historical and Archaeological Background (fig 3 & 4)

(This section has been summarised, with additions, from Margaret Gowen & Company 2003 Archaeological and Cultural Heritage Section in: Environmental Impact Statement.)

A number of archaeological sites ranging from the prehistoric to the post medieval period were identified within the general area of the proposed N7 route. Monuments from the Neolithic (c. 4000–2300 BC), Bronze Age (c. 2300–500 BC), Early Christian/early medieval (AD 500–1100), Medieval and Post-Medieval Periods are particularly well represented in the study area.

The Neolithic Age saw the arrival of the first farmers who left behind them artifactual evidence such as the stone axe heads, examples of which have been found in the townlands of Shower and Annaholty. In Co. Tipperary, Neolithic settlement was most prevalent in the north and west of the county. From archaeological investigations along the Nenagh Bypass in the late 1990's a Neolithic site in Tullahedy (TN020-079---) was revealed and also a habitation site of possible Neolithic date in association with later Bronze Age activity was encountered in

Lahessseragh (**TN020-137---**). The archaeological potential of the bog through Gooig and Annaholty is reflected in a number of stray finds. A Neolithic spearhead and fragments of two polished stone axes were among the items discovered.

The Bronze Age was characterised by a considerable expansion of settlement and in north-west Tipperary extensive Bronze Age occupation is known to have occurred with the discovery during excavations on the Nenagh Bypass of a house site in Lahessseragh (**TN020-136---**) and a possible structure in Lisatunny (**TN021-099---**).

The concentration of burial mounds, standing stones, wedge tombs and *fulachtaí fia* also shows that the Kilmastulla River Valley and its surrounding areas flanked by the Arra and Silvermines Mountains was particularly attractive to Bronze Age settlers. During topsoil stripping along the Nenagh Bypass a number of *fulachtaí fia* were found within the townlands of Tullahedy (**TN020-132001-**, **-002**, **-003**), Lahessseragh (**TN020-135---**) and Ballintotty (**TN021-098---**).

One of the most common monuments in the region is the ringfort which dates from the Early Christian or medieval period. A ringfort generally consists of a circular area defined by one or more banks and external ditches, although examples such as that in Ballyhisky (**TN02-071---**) consist of a raised platform surrounded by a ditch with traces of a bank. Many of the ruined churches visible in the landscape on either side of the route date from the medieval period. There is a church and graveyard at Ballyard (**TN031-010001**), and in Kilmastulla (**TN025-077**) along the existing N7. Originally, many of these churches would have been associated with settlements, but the Reformation, 17th century religious wars and rural reorganisation under the subsequent estate system led to their abandonment.

The Normans came to Ireland and brought new military traditions, fortifications, new languages and social structure. These settlers introduced the Anglo-Norman way of life, founding manors, abbeys, boroughs and towns. The distribution of Anglo-Norman towns and boroughs in Tipperary is largely concentrated in the lowlands east of the River Suir, with Nenagh being the only large town in the north of the county. Some early fortifications include a possible motte site in Ballycahill and a motte and bailey in Tullahedy. A hall-house was also encountered during monitoring on the Nenagh bypass in Ballintotty (**TN021-094**) and was excavated in 1998. The stone castle and tower house are characteristic features of the Anglo-

Norman fortified manor. There are a number of tower houses in the region such as, for example, Ballintotty (**TN020:055001**).

In the seventeenth century the strategic importance of the Shannon waterway assisted in the infiltration of new English settlers, providing a navigable route into Limerick and Tipperary. One of the main features of this period was the stone manor house also referred to as the 'big house'. Big houses were constructed by planter families and they are often found on the sites of older ruined castles or tower houses. They often gave rise to ornamented demesne lands close to the house, such as at Mountshannon, located at the south-western end of the project.

The townland name, Gortnalagh is derived from the Irish *Gort na Lathach* and can be translated to mean 'the field of the muddy place' (Place Names Database of Ireland, www.logainm.ie), with 'Gort' meaning a tilled field, particularly a field producing cereals (Flanagan & Flanagan 1994, 93). The name of the parish, Stradbally comes from the Irish *Sraid-Bhaile* or street town. The Annals record that a second name for the place *Caislean Ui Chonnaig*, which later changed to *Caislean Ui Chonaill*, supposed to mean O'Connell's Castle, though O'Donovan (1840) states that no one of that name ever possessed the castle.

The castle at Castleconnell is situated at the south end of the town in the townland of Coolbaun. Tradition recalls that this castle was built by the O'Briens in AD 1201 (Spellissy 1998, 33) but was destroyed in AD 1690 by General Ginkle. There is also a church of Stradbally at Castleconnell. At the time of writing though, O'Donovan recorded that the church was much ruined, but the graveyard adjacent was still used extensively (O'Donovan 1840). Castleconnell village itself was a popular spa in the late eighteen and nineteenth centuries with waters resembling those in Spa, Germany (Lewis 1837, 293). Lewis also notes that limestone was abundant in the parish, though he does not note whether this was used for industrial or agricultural purposes.

Nothing of historical interest could be found regarding the townland of Gortnalagh with the townland not appearing in the Down Survey maps of 1656 and two small structures the only features of note. In the first edition map of the townland, dated to 1840–1841. Three RMPs are located within the immediate vicinity of Gortnalagh Td, RMP, **LI006-011---** (enclosure), is located within the townland of Sallymount being incorporated into a farmyard,

and a further two enclosures, **LI006-009---** and **LI006-010---**, located within the townland of Park.

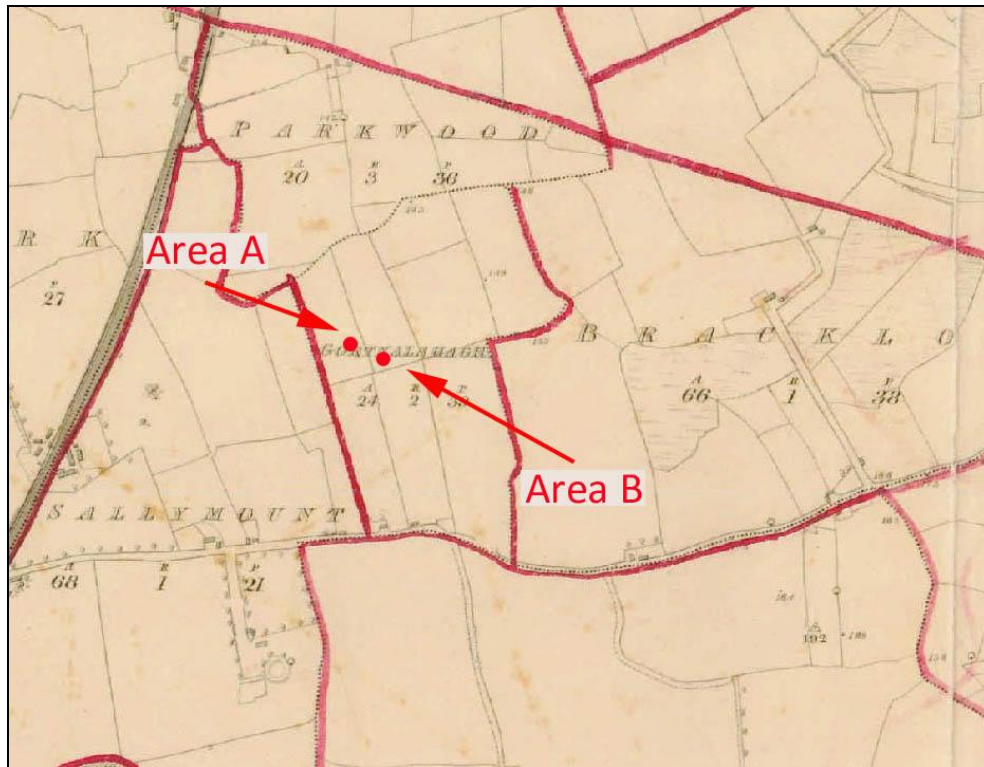


Figure 3. Detail from 1st Edition Map (c. 1840) for Limerick with site location illustrated (north to top, for indication only)

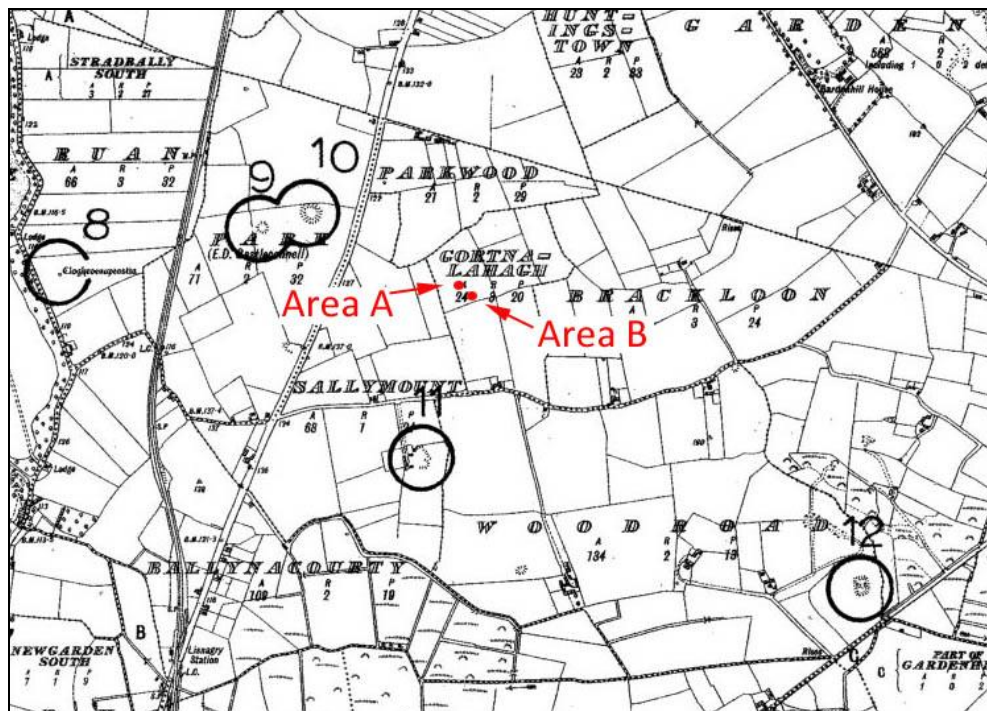


Figure 4. Detail from RMP Map for Limerick (Sheet 6) with site location illustrated (north to top, for indication only)

1.4 Previous Archaeological Investigations

With the exception of the N7 Nenagh to Limerick HQDC programme of archaeological investigations, no previous archaeological investigation have been undertaken within the townland of Gortnalahagh, Co. Limerick or within any neighbouring townlands (as per a search of the archaeological database www.excavations.ie which lists all licenced archaeological investigations to 2007 at present).

As part of the N7 Nenagh to Limerick High Quality Dual Carriageway, a number of archaeological investigations were carried out within the immediate vicinity of the site. The site was identified in 2006 during the Phase 1 test trenching and was described as containing two charcoal rich pit features measuring 1.4 m x 0.6 m and 1.3 m x 1.2 m (Collins 2006). The Phase 1 test trenching also identified a number of other, previously unidentified sites within the immediate area, with Gortnalahagh Site 1 E2324 and Gortnalahagh Site 2 E2323 located within the townland.

1.5 Excavation Methodology

The excavation undertaken at Gortnalahagh Site 3 was carried out in accordance with the agreed method statement submitted with Ministerial Sub-Direction Form 4A-06. The site was excavated by hand using single context recording.

The site was identified during Phase I testing and originally assigned the scheme sub-number A026/169. The subsequent excavation by ÆGIS ARCHAEOLOGY Ltd was conducted under Registration Number E2322, and termed Gortnalahagh Site 3. The site consisted of two areas, Area A and Area B, which were approximately 35 m apart with Area A to the north-west of Area B.

ÆGIS ARCHAEOLOGY Ltd uses a context method of archaeological recording and has standard operating procedures for same (SOPS). This approach is fully detailed in the company's Quality Manual that is available on request. The method provides for pro-forma pre-printed recording sheets for all aspects of recording (written, drawn and photographic), thereby ensuring a smooth transition from on-site resolution to post-excavation reporting. This paper record forms the basis of the site archive. The Registration Number was used in the recording of the archive, as well as artefacts and ecofacts. Any finds recovered during the excavation

were bagged and recorded according to Registration Number, context number, and unique identifier number e.g. 1-infinity within that context (following NMI guidelines).

All resolved sites have been surveyed.

All finds are stored in secure storage at the ÆGIS office, Limerick. All finds requiring conservation will be stored as per specialist advice and packaged as per National Museum of Ireland guidelines.

Upon completion of the excavation all pertinent samples and finds were analysed by the appropriate specialists, the reports of which have been incorporated into this report and inserted as appendices (see Section 9). Arrangements will be made, in consultation with the NRA Archaeologist, to deposit all finds with the NMI and for the long-term storage of the site archive.

2. Context List

2.1 Context List

This is the entire context list for the excavation at Gortnalahagh Site 3 which consisted of eight pits, a hearth/charcoal pit kiln, three furrows, a drain and a possible field boundary excavated within two areas.

Area	Context Number	Description
A	134	Dark grey brown single fill of pit C135
A	135	Pit filled by C134
N/A	136–139	Cancelled
A	140	Mid greyish brown single fill of pit C141
A	141	Pit filled by C140
N/A	142–143	Cancelled
A	144	Mid brown black upper fill of pit C145
A	145	Pit filled by C144 & C156
A	146	Dark brownish black single fill of pit C147
A	147	Pit filled by C146
A	148	Very dark brown middle fill of pit C149
A	149	Pit filled by C148, C159 & C160
A	156	Mid brown lower fill of pit C145
A	159	Mid reddish brown upper fill of pit C149
A	160	Mid brown lower fill of pit C149
A	178	Mid grey brown single fill of pit C179
A	179	Pit filled by C178
N/A	199–200	Cancelled
A	201	Dark grey brown single fill of pit C202
A	202	Pit filled by C201
A	203	Mid greyish brown single fill of pit C204
A	204	Pit filled by C203
B	229	Black upper fill of hearth/pit kiln C231
B	230	Mottled light grey red oxidised natural lower fill of hearth/pit kiln C231
B	231	Hearth/pit kiln filled by C229 & C230
B	232	Mid greyish brown single fill of furrow C233
B	233	Furrow filled by C232
B	234	Mid orangey brown tertiary fill of drain C235
B	235	Drain filled by C234, C255 & C256

Area	Context Number	Description
B	236	Light brown grey single fill of possible field boundary C237
B	237	Possible field boundary filled by C236
B	238	Mid greyish brown single fill of furrow C239
B	239	Furrow filled by C238
B	240	Light brown grey single fill of furrow C241
B	241	Furrow filled by C240
N/A	242–245	Cancelled
B	255	Light orangey brown secondary fill of drain C235
B	256	Light grey primary fill of drain C235

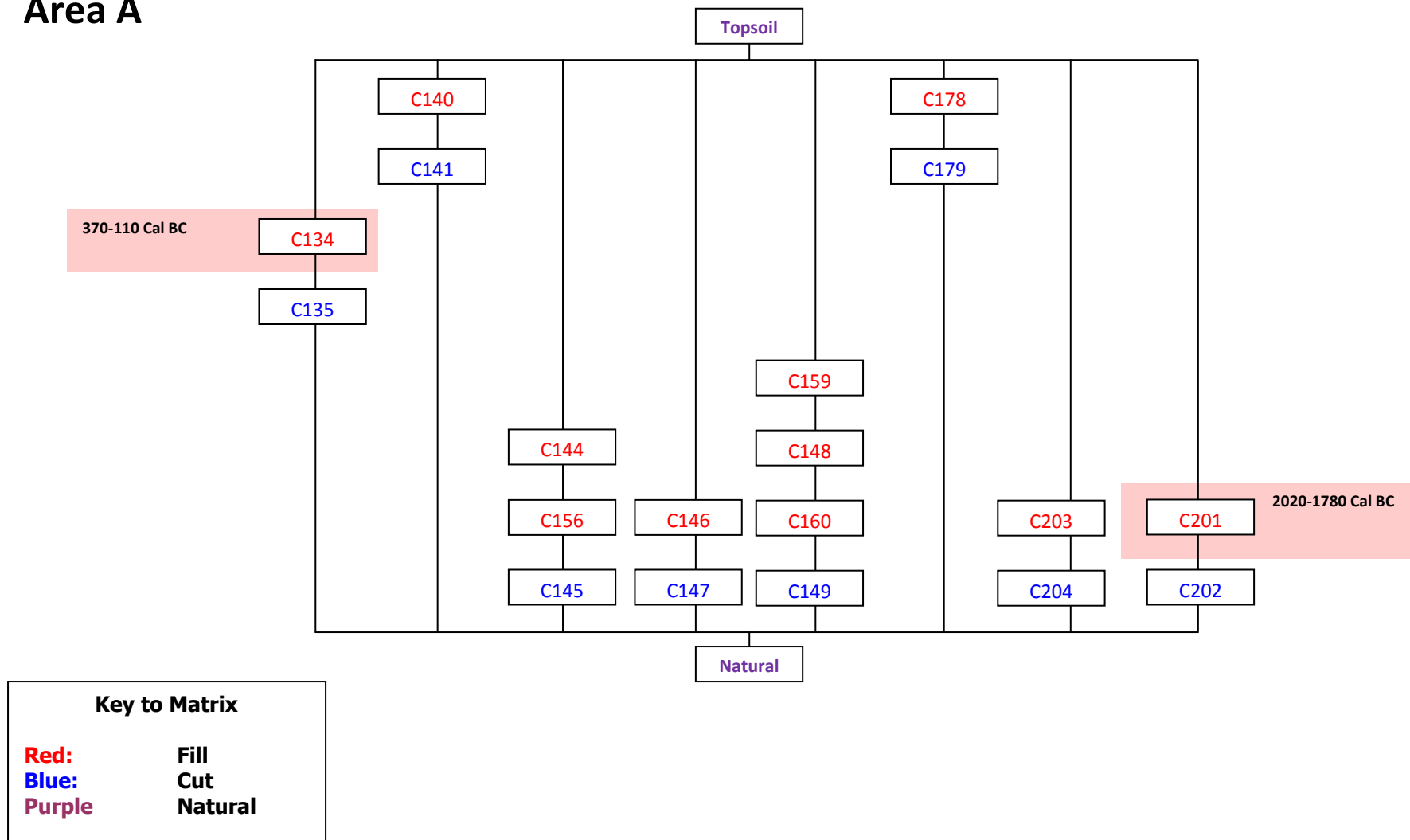
Table 1: Context Register

3. Stratigraphic Sequence

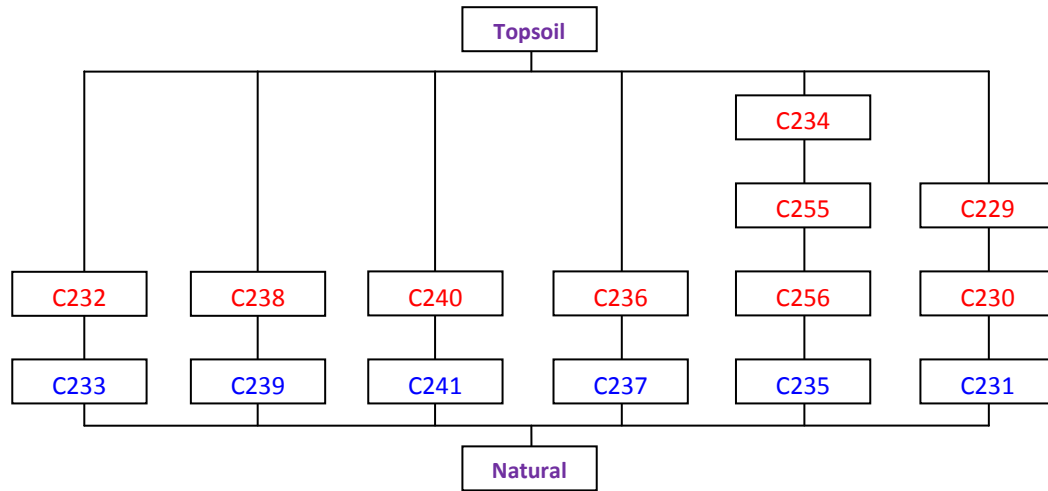
3.1 Matrix

The first stage of report compilation is the formation of the site matrix. This structure collates all the contexts that have been excavated and recorded, and preserves their stratigraphic relationships in flow chart fashion. The interpretation of a site rests on this visual manifestation of the archaeology as excavated. The contexts of the matrix are then grouped and segmented to create features and phases, all of which are described in detail below (Section 3.2 Context Descriptions).

Area A



Area B



Key to Matrix	
Red:	Fill
Blue:	Cut
Purple	Natural

3.2 Context Descriptions

Note: Contexts are grouped into features and are referred to by their cut context numbers. All features were located directly beneath the topsoil and cut/overlay the natural parent material, unless otherwise stated.

Context C135 (Plate 2; Fig. 6)

Context Type: Pit

Fills: C134

This east–west orientated pit was sub-oval in plan, measuring 1.05 m by 0.70 m by 0.22 m deep. It had a sharp break of slope top, moderately sloping sides, a gradual break of slope at base and an irregular base. C135 was filled with dark grey brown friable silty clay C134. It had frequent inclusions of animal bone, small stones, occasional charcoal flecks and small traces of burnt animal bone.

Context C136–139

Cancelled

Context C140

For a description of Context C140 refer to context C141 (Cut)

Context C141

Context Type: Pit

Fills: C140

This north–east–south–west orientated pit was oval in plan, measuring 1 m by 0.73 m by 0.3 m deep. It had a gradual break of slope top, but vertical on the south–east side, gradual sides, but sharp on the south–east side, a sharp break of slope at base and an irregular base. It was filled with mid greyish brown moderately compacted silty clay C140. It had frequent inclusions of small stones and occasional large stones.

Context C142 & C143

Cancelled

Context C144

For a description of Context C144 refer to context C145 (Cut)

Context C145

Context Type: Pit

Fills: C144 & C156

This pit was sub-circular in plan, measuring 0.47 m by 0.4 m by 0.17 m deep. It had a sharp break of slope top, but was gradual on the north side, steep to moderately sloping sides, a gradual break of slope at base and a concave base. The primary fill was mid brown loosely compacted sandy silty clay C156, measuring 0.12 m deep with frequent inclusions of large stones and occasional inclusions of charcoal. The secondary fill was mid brownish black friable clay silt C144, measuring 0.05 m deep with occasional inclusions of small stones.

Context C146

For a description of Context C146 refer to context C147 (Cut)

Context C147

Context Type: Pit

Fills: C146

This north-east–south-west orientated pit was sub-circular in plan, measuring 0.48 m by 0.37 m by 0.17 m deep. It had a gradual break of slope top, gradually sloping sides, a gradual break of slope at base and a shallow concave base. It was filled with dark brownish black moderately compacted sandy silt C146 with occasional inclusions of small stones and charcoal fragments.

Context C148

For a description of Context C148 refer to context C149 (Cut)

Context C149

Context Type: Pit (Plate 1; Fig. 7)

Fills: C148, C159 & C160

This north–south orientated pit was an irregular sub-oval shape in plan, measuring 1.02 m by 0.53 m by 0.32 m deep. It had a steep break of slope top, steep sides, a gradual break of slope at base and an irregular concave base. The primary fill was medium brown moderately compacted silty clay C160, measuring 0.86 m by 0.38 m by 0.12 m deep with occasional inclusions of charcoal flecks and burnt animal bone. The secondary fill was very dark brown moderately compacted silty clay C148, measuring 0.92 m by 0.26 m by 0.12 m deep with occasional inclusions of burnt animal bone. The tertiary fill was medium reddish brown moderately compacted silty clay C159, measuring 1.02 m by 0.27 m by 0.1 m deep.

Context C156

For a description of Context C156 refer to context C145 (Cut)

Context C159

For a description of Context C159 refer to context C149 (Cut)

Context C160

For a description of Context C160 refer to context C149 (Cut)

Context C178

For a description of Context C178 refer to context C179 (Cut)

Context C179

Context Type: Pit

Fills: C178

This north-west–south-east orientated pit was sub-rectangular in plan with rounded corners, measuring 1.4 m by 0.85 m by 0.37 m deep. It had a sharp to gradual break of slope top, moderately sloping sides, but steep on the north-east side, a gradual break of slope at base, but was sharp on the north-east side, and a flat base. It was filled with mid grey brown friable silty clay C178 with occasional inclusions of and medium to large stones. A number of modern pottery sherds were recovered from C178.

Context C199 & C200

Cancelled

Context C201

For a description of Context C201 refer to context C202 (Cut)

Context C202 (Fig. 8)

Context Type: Pit

Fills: C201

This pit was sub-circular in plan, measuring 1.2 m by 1.05 m by 0.32 m deep. It had a gradual break of slope top, gradual sides, a gradual break of slope at base and a concave base. It was filled with dark grey brown firmly compacted silty clay C201 with occasional inclusions of charcoal flecks, burnt animal bone and small stones.

Context C203

For a description of Context C203 refer to context C204 (Cut)

Context C204 (Fig. 9)

Context Type: Pit

Fills: C203

This north-west–south-east orientated pit was oval in plan, measuring 1 m by 0.95 m by 0.12 m deep. It had a clear break of slope top, sharp sides, a gradual break of slope at base and a stepped, concave stony base. It was filled with mid greyish brown soft silty clay C203 with moderate inclusions of stones, charcoal and burnt bone.

Context C229

For a description of Context C229 refer to context C231 (Cut)

Context C230

For a description of Context C230 refer to context C231 (Cut)

Context C231 (Plate 3; Fig. 11)

Context Type: Hearth/Charcoal pit kiln

Fills: C229 & C230

This north–south orientated feature was sub-rectangular with rounded corners in plan, measuring 1.65 m by 0.7 m by 0.03 m deep. It had an imperceptible break of slope top, very shallow sides, an imperceptible break of slope at base and a flat base. The primary fill was mottled light grey red friable clayey silt C230, measuring 1 m by 0.7 m by 0.01 m deep, which was actually oxidised natural subsoil below the feature created by *in situ* burning or heat. The secondary fill was black friable sandy silty clay C229, measuring 1.65 m by 0.7 m by 0.03 m deep with very frequent inclusions of charcoal and frequent inclusions of small stones.

Context C232

For a description of Context C232 refer to context C233 (Cut)

Context C233

Context Type: Furrow

Fills: C232

This north–south orientated furrow was linear in plan, measuring 4 m by 0.75 m by 0.04 m deep. It had an imperceptible break of slope top, concave sides, an imperceptible break of slope at base and an irregular base. It was filled with mid greyish brown moderately firm clayey silt C232 with occasional inclusions of small stones.

Context C234

For a description of Context C234 refer to context C235 (Cut)

Context C235 (Fig. 12)

Context Type: Drain

Fills: C234, C255 & C256

This north–south orientated drain was linear in plan, measuring 6.5 m by 0.85 m by 0.49 m deep. It had a sharp break of slope top, sharp sides, a gradual break of slope at base and a concave base. The primary fill was light brown grey firmly compacted silty clay C256, measuring 6.5 m by 0.57 m by 0.33 m deep with frequent inclusions of stones and occasional charcoal inclusions. The secondary fill was light orange brown firmly compacted silty clay C255, measuring 6.5 m by 0.68 m by 0.10 m deep with frequent inclusions of medium sized stones. The tertiary fill was mid orange brown firmly compacted silty clay C234, measuring 6.5 m by 0.80 m by 0.05 m deep with frequent inclusions of small stones.

Context C236

For a description of Context C236 refer to context C237 (Cut)

Context C237 (Fig. 13)

Context Type: Field boundary

Fills: C236

This north–south orientated field boundary was linear in plan, measuring 2.7 m by 0.8 m by 0.25 m deep. The feature had a sharp break of slope top, moderate to steep sides, a sharp break of slope at base and a flat base. It was filled with light brown grey loosely compacted silty sand C236 with occasional inclusions of charcoal flecks.

Context C238

For a description of Context C238 refer to context C239 (Cut)

Context C239

Context Type: Furrow

Fills: C238

This north–south orientated furrow was linear in plan, measuring 5 m by 0.95 m by 0.12 m deep. The feature had an imperceptible break of slope top, concave sides, an imperceptible break of slope at base and an irregular base. It was filled with mid greyish brown firmly compacted clayey silt C238 with occasional inclusions of small stones.

Context C240

For a description of Context C240 refer to context C241 (Cut)

Context C241

Context Type: Furrow

Fills: C240

This north–south orientated furrow was linear in plan, measuring 0.75 m by 0.5 m by 0.03 m deep. The feature had a gradual break of slope top, gradual sides, a gradual break of slope base and a concave base. It was filled with light brown grey friable silty clay C240 with occasional inclusions of small stones.

Context C242–245

Cancelled

Context C255

For a description of Context C255 refer to context C235 (Cut)

Context C256

For a description of Context C256 refer to context C235 (Cut)

4. Interpretation & Discussion of Stratigraphy

4.1 Interpretation of the Archaeological Stratigraphy

The 14 features excavated at Gortnalaghagh Site 3 were located within two areas; eight features were located in Area A and six located in Area B. None of the features interacted stratigraphically being located below the topsoil and cut in the underlying natural.

Area A

All of the eight features excavated within Area A were pits with C135, C141, C147, C179, C202 and C204 containing a single fill. Pit C145 contained two fills and pit C149 contained three, suggesting that these two features saw repeated use while the other features saw a single episode of use. The upper fill of C149, C159, appeared to be a thin sealing layer above deposits C148 and C160 and may show silting of the remainder of the cut after the final deposition. Pits C145, C147, C149, C202 and C204 were located within an area measuring approximately 5 m north-east–south-west and 6 m north-west–south-east at the west of the site. This spatial relationship may show these features were contemporary with each other, as charcoal recovered from C201, the fill of pit C202, returned a date of 2020–1780 cal BC (Beta-258953), this activity could be seen to date to the Early Bronze Age.



Plate 1. North facing section of pit C149, Area A

The remaining pits, C135, C141 and C179, were all isolated features being further to the east. As stated above, these features all contained a single fill representing a single episode of use. Two of these features could clearly be seen to be later in date than the Bronze Age pit and the possible related activity at the west of the site. Charcoal from C134, the fill of pit C135,



Plate 2. North facing section of pit C135, Area A

returned an Iron Age date and several fragments of modern pottery were recovered from the fill of C179.

Area B

Of the six features in Area B, only hearth/charcoal pit kiln C231 appeared to be archaeologically significant with the remaining features related to post-medieval or modern agricultural activity. Hearth/charcoal pit kiln C231 contained evidence for *in situ* burning in the form of an underlying layer of oxidised clay natural, as well as frequent charcoal



Plate 3. East facing section of C231, Area B.

inclusions. Though recorded as containing two fills, the lower fill, C230, was the area of oxidised clay. C229, the charcoal rich deposit, was very thin being a maximum of 0.03 m deep.

Drain C235 contained three fills. The lower fill, C256, was a compact, deep and uniform fill suggesting that it was created by a deliberate backfilling of the feature. The upper two fills, C255 and C234, were silty shallow fills that were a result of the natural silting up of the remaining volume of drain C235. Field boundary C237 was located 2.5 m west of drain C235 and had a similar orientation. It contained a single fill C236, also suggesting deliberate backfilling. It is possible that C237 and C235 was the same feature with a break in it, either a drain or a field boundary. The three furrows in Area B all had the same north-south orientation and similar dimension and fills. It is likely that these are all from the same period of agricultural activity.

4.2 Discussion

From the limited number of archaeological features encountered within the two areas constituting Gortnalagh Site 3, it is hard to formulate an in-depth discussion and interpretation of the activity taking place on site. The features in Area A show three distinct periods of use, the earliest was dated to the Early Bronze Age. This date (2020–1780 cal BC; Beta-258953) was obtained from charcoal, identified as hazel, from pit C202. From its location on site this would appear to date features C145, C147, C149 and C204 all of which were located at the northwest corner of Area A. All of these features contained inclusions of charcoal and C149 and C204 also contained fragments of burnt bone. The preliminary interpretation of these features, and C135, described them as cremation pits based on the morphology of the features, their respective fills and the burnt bone content (Stronach 2008). Post-excavation analysis of the burnt bone, carried out by osteoarchaeologist Linda Lynch, identified the fragments as animal. It would therefore appear that the fills of these features are dumps of domestic waste material. In addition, the palaeoenvironmental analysis also identified cereal grains, unfortunately not identifiable to species, from the fill of C202.

An Iron Age date (370–110 cal BC; Beta-258952) was returned from charcoal, identified as hazel, from C135. Like the Bronze Age rubbish pits the fill of pit C135 also contained inclusions of burnt bone and charcoal. The burnt bone was also identified as animal and likely represents the dumping of domestic waste. The latest activity recorded on site was pit C179 which contained several fragments of modern pottery. No date was obtained for pit C141, and from its location on site, being between the Bronze Age activity at the north-west and the Iron Age pit C135, none can be inferred.

The linear features recorded in Area B appeared to all be related to agricultural activity. From their orientation they appear to respect a previous field boundary removed sometime around 2000; OSi aerial photography of the area showed recently removed boundaries (www.osi.ie). It is unclear when and what activity the hearth/charcoal pit kiln was related to as, unfortunately, no datable material was recovered from its fill. This feature appeared as a thin deposit overlaying an area of heat affected natural or oxidised clay. During the excavation C231 was identified as a hearth however, C231 was comparable in size and shape to a charcoal pit kiln excavated on Gortnalagh Site 1 E2324 (Scotland 2011c); this feature measured 1.67 m by 0.98 m by 0.1 m deep compared to C231 which measured 1.65 m by 0.7 m by 0.03 m deep. Both features also contained charcoal rich fills with the sides and base of

the cuts exhibiting signs of *in situ* burning. Further evidence for charcoal production was recorded on Gardenhill Site 1 E2320 (Scotland 2011a) and Sallymount Site 2 (Scotland 2011d).

The pit kiln was formed by timbers being placed within the pit and covered by earth and timber. Once the kiln had been set and fired it was necessary to continually, and carefully, monitor the process to regulate the heat and repair any cracks in the covering which would occur due to the reduction in size of the wood. Charcoal is created by carefully regulating oxygen levels while wood is smouldered, in essence removing the moisture and carbonising the wood while not completely burning it. The sighting of these features appears to have been carefully chosen, regularly placed near to the source of wood. It should be noted that, as the fills of the features in Area A contained inclusions of charcoal and burnt bone, it is possible that C231 was indeed the remains of a hearth, as recorded during the excavation, and related to one of the periods of activity recorded within Area A.

5. Conclusions

The areas investigated at Gortnalahagh Site 3 under Registration Number E2322 constituted a rurally situated site. Within Area A at least three phases of activity were recorded with both Bronze Age and Iron Age dates received as well as a number of modern pottery fragments from one of the features. The fill of the features would suggest that the pits, though from three different periods, are all rubbish pits. No domestic activity was recorded within the vicinity of Area A, however, an undated possible hearth from Area B may show some form of temporary occupation of the site. This feature may however be seen as a charcoal pit kiln with early medieval examples excavated elsewhere within the vicinity

The site of Gortnalahagh Site 3, when reviewed with the known archaeological monuments of the area shows that this area of Co. Limerick saw extensive prehistoric activity. Generally, the sites excavated as part of the N7 Nenagh to Limerick HQDC within the area of Gortnalahagh Site 3 showed prehistoric activity, dated predominately throughout the Bronze Age, though a Mesolithic polished stone axe head and late Neolithic activity was recorded at Richhill Site 1 E2329 (O'Connell and Thóibín 2009). A number of prehistoric sites have previously been excavated within this area of Co. Limerick. These include the Mesolithic cremations situated within the townland of Hermitage, approximately 2 km to the west on the banks of the river Shannon (Collins 2009). Occupation of the area, extending into the Bronze Age and Iron Age, could also be seen from the results of the other N7 excavations. As stated above the activity recorded within this area was predominately dated to the Bronze Age with nine sites, including Gortnalahagh Site 3, spanning this period. None of these sites shared similar dates to the Bronze Age date received for Gortnalahagh Site 3; however with both earlier and later dates received from these sites continued Bronze Age activity in the area can clearly be seen.

Iron Age activity was recorded at Richhill Site 2 E2311 (Clark and MacLeod 2009) and at Sallymount Site 1 E3420 (Clark and Long 2010), as well as Gortnalahagh Site 3. The radiocarbon dates from the site of Sallymount Site 1 were later than those returned from Gortnalahagh Site 3; however, the radiocarbon dates from Richhill Site 2, 366–116 cal BC

(UBA-12007), were remarkably similar to the 2 Sigma dates of 370–110 cal BC from Gortnalahagh Site 2. Though two dates from two separate sites do not allow for much interpretive discussion, it can certainly be suggested that the wider area was being exploited by a particular group or groups of people, possibly from the same kin group but certainly known to each other. From the date received from Sallymount Site 1 continued occupation and exploitation of the resources available on the banks of the river Shannon into the Late Iron Age can also be inferred. The excavation of a substantial middle Iron Age timber causeway in Annaholty to the north-west (Taylor 2010) highlights this point, and also hints to the size and organisation of the community that needed permanent links to other settlements or centres of resources.

The medieval occupation recorded at Richhill Site 2 E2311 (Clark and MacLeod 2009) and Sallymount Site 1 E3420 (Clark and Long 2010), with more dispersed features recorded at Gardenhill Site 1 E2320 (Scotland 2011a), Gortnalahagh Site 1 E2324 (Scotland 2011c) and Sallymount Site 2 E2333 (Scotland 2011d), would suggest the continued occupation and exploitation of the area into and throughout the medieval period. The early medieval date from Gortnalahagh Site 1 and Sallymount Site 2 were retrieved from a charcoal pit kiln and possible mound kiln, respectively, which would suggest that the production of charcoal was being carried out in several locations within the parish of Stradbally. In addition to the possible charcoal production kiln excavated on Gortnalahagh Site 3, a second possible kiln was located at Gardenhill Site 1; though this feature was not individually dated early medieval activity was recorded on Gardenhill Site 1 as was late medieval activity. Though by no means conclusive, it can be suggested that the wider area was being exploited between the late ninth and early 11th century AD with charcoal production forming part of the activities taking place. As these sites were frequently placed closer to the source of timber than the intended recipient it is possible that the charcoal was for the settlements at Castleconnell or even as far afield as Limerick city.

In conclusion, the site of Gortnalahagh Site 3 consisted of several pits from three different periods and probably related to activity recorded during previous excavations within the area, including those conducted as part of the N7 Nenagh to Limerick HQDC. Though constituting a small site, in conjunction with the excavations carried out within this area, it clearly shows the continued use of the area throughout the prehistoric and historic periods.

6. The Quantity of Materials

6.1 The Archive

Item	Quantity	Condition
Context Registers	1	Average
Drawing Registers	1	Average
Finds Registers	1	Average
Photo Registers	2	Average
Sample Registers	1	Average
Context sheets	24	Good
Notebooks	1	Average
1:10 Sections (A3)	17	Good
1:20 Sections (A3)	0	-
1:10 Plans (A3)	0	-
1:20 Plans (A3)	0	-
1:50 Plans (A3)	4	Good
1:100 Plans (A3)	0	-
Digital Photographs	104	Good
Print Photographs	0	-

Table 2: Quantity of Materials

6.2 Finds List

Find Number	Find Description	Specialist	Condition
E2322:134:01	Animal Bone	Margaret McCarthy	Stable
E2322:148:01	Burnt Bone	Linda Lynch; Margaret McCarthy	Stable
E2322:160:01	Burnt Bone	Linda Lynch; Margaret McCarthy	Fragile
E2322:178:01	Modern Pottery	n/a	Stable
E2322:178:02	Modern Pottery	n/a	Stable
E2322:178:03	Modern Pottery	n/a	Stable
E2322:178:04	Modern Pottery	n/a	Stable
E2322:178:05	Modern Pottery	n/a	Stable
E2322:178:06	Modern Pottery	n/a	Stable
E2322:201:01	Burnt Bone	Linda Lynch; Margaret McCarthy	Stable
E2322:203:01	Burnt Bone	Linda Lynch; Margaret McCarthy	Fragile

Table 3: Finds List

No further specialist analysis was carried out on the modern pottery recovered during the course of the excavations.

6.3 Sample List

Sample Number	Context Number	Context Description	Sample Type	Processes Completed
60	134	Fill of pit C135	Bulk soil	Wet sieving; palaeoenvironmental analysis
68	160	Basal fill of pit C149	Bulk soil	Wet sieving; palaeoenvironmental analysis
79	203	Fill of pit C204	Bulk soil with charcoal	Wet sieving; palaeoenvironmental analysis
100	236	Fill of boundary ditch C237	Bulk soil	Wet sieving; palaeoenvironmental analysis
197	201	Fill of pit C202	Bulk soil	Dry sieving; palaeoenvironmental analysis
203	201	Fill of pit C202	Bulk soil	Wet sieving; palaeoenvironmental analysis

Table 4: Sample List

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www.archaeology.ie

www.excavations.ie

www.logainm.ie

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8. Signing off Statement

Archaeological Firm: ÆGIS ARCHAEOLOGY LIMITED

Writers: Lee Scotland BA
ÆGIS ARCHAEOLOGY Ltd
32 Nicholas Street,
King's Island,
Limerick

Client: Limerick County Council

Signed:

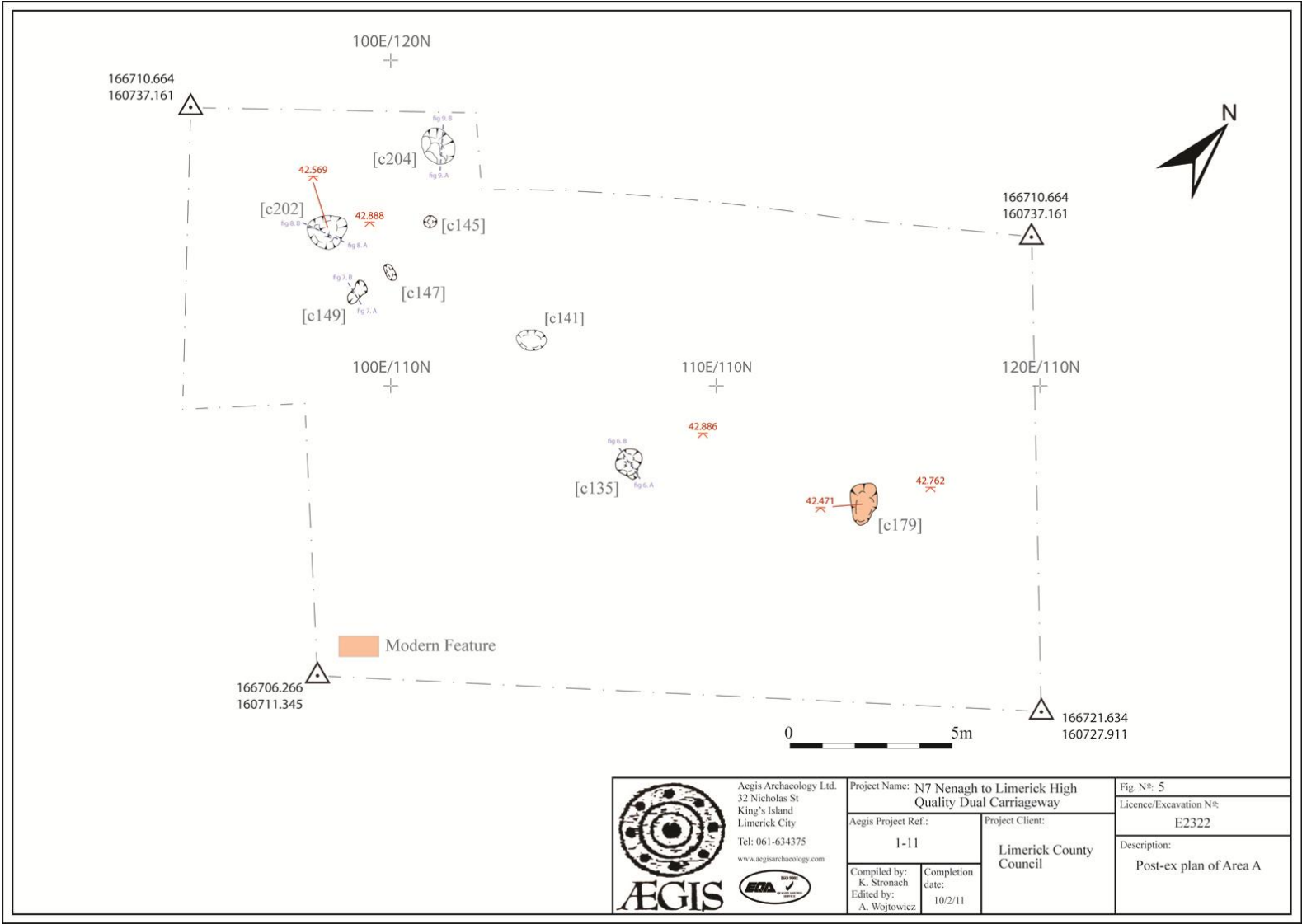


For ÆGIS ARCHAEOLOGY LIMITED

Dated: July 2011

9. Appendices

9.1 Site Plans & Sections



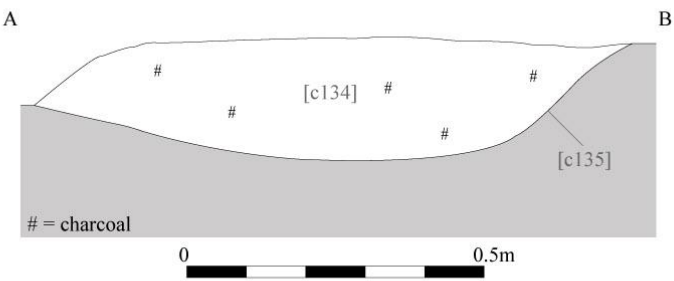


Fig. 6. North facing section of pit C135 (Area A)

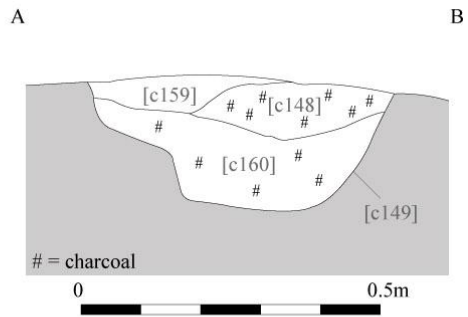


Fig. 7. North facing section of pit C149 (Area A)

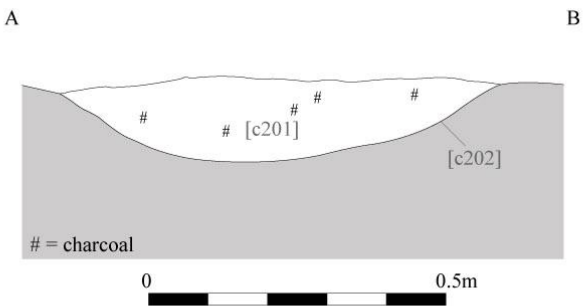


Fig. 8. North facing section of pit C202 (Area A)

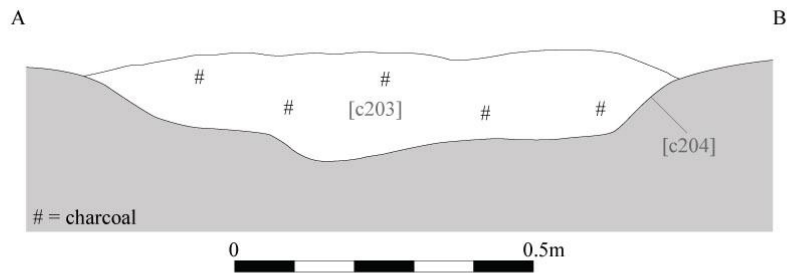
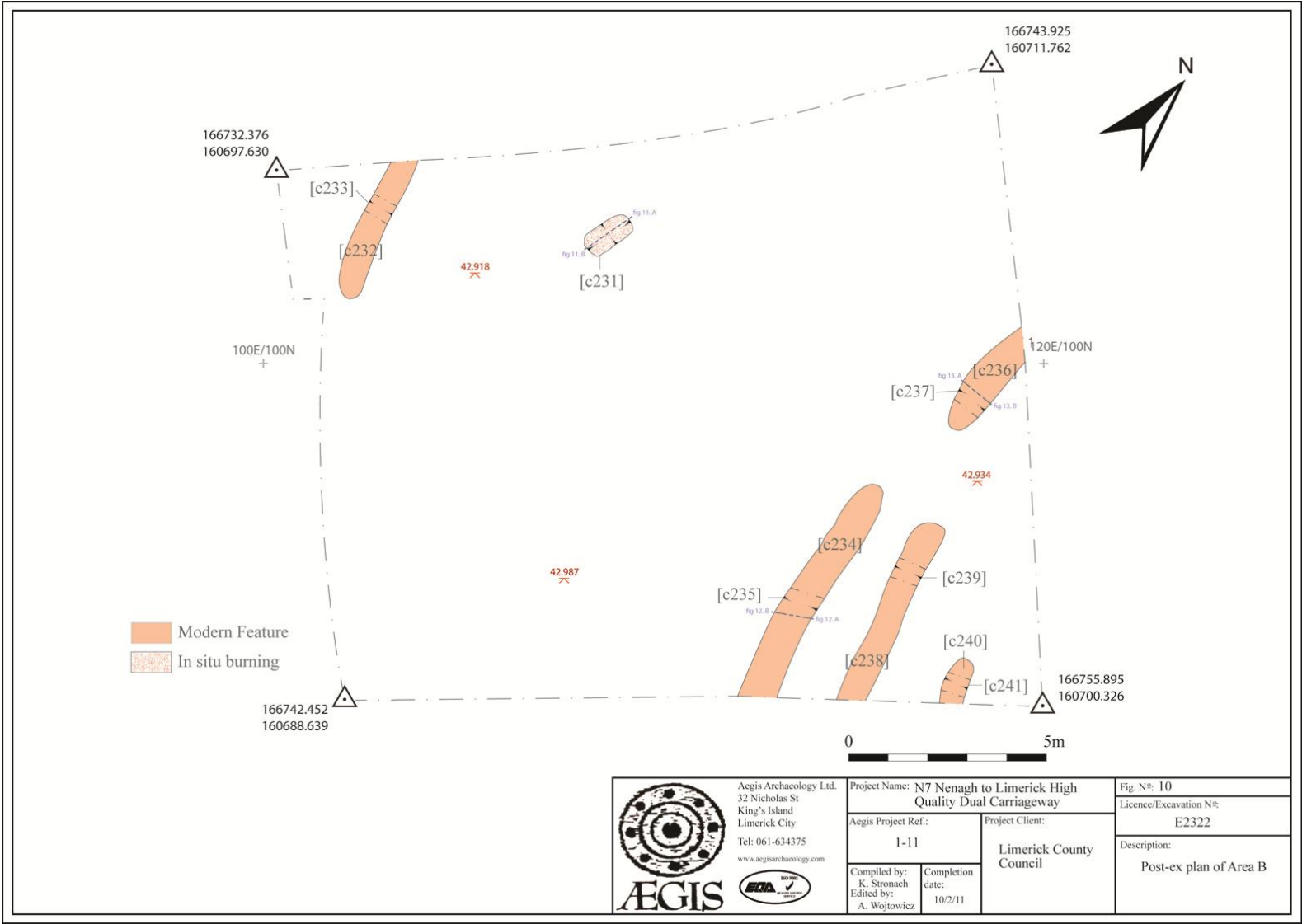


Fig. 9. North-east facing section of pit C204 (Area A)

 AEGIS	Aegis Archaeology Ltd. 32 Nicholas St King's Island Limerick City Tel: 061-634375 www.aegisarchaeology.com		Project Name: N7 Nenagh to Limerick High Quality Dual Carriageway		Fig. N ^o : 6, 7, 8 & 9
	Aegis Project Ref.: 1-11		Project Client: Limerick County Council		Licence/Excavation N ^o : E2322
	Compiled by: K. Stronach Edited by: A. Wojtowicz	Completion date: 8/2/11	Description: North facing sections of pits C135, C149, C202 and north-east facing section of pit C204		
					



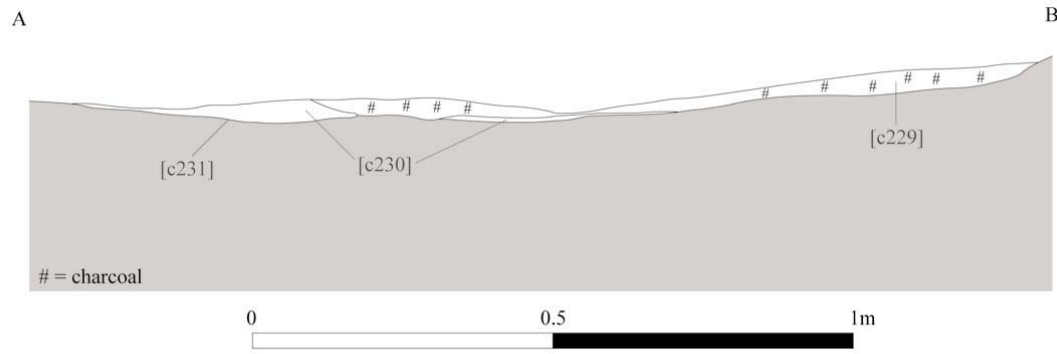


Fig 11. West facing section of hearth C231 (Area B)

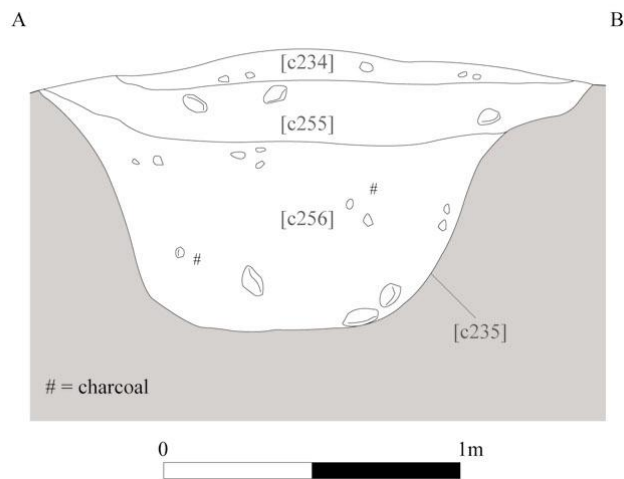


Fig 12. North facing section of drain C235 (Area B)

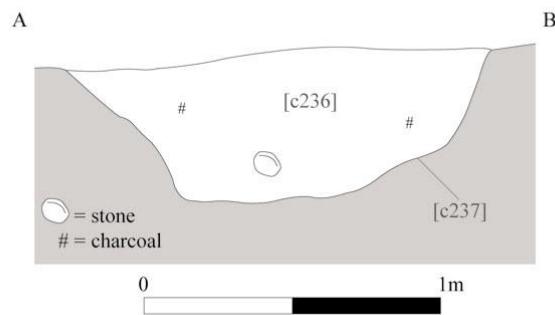




Fig 13. South facing section of field boundary C237 (Area B)

 AEGIS	Aegis Archaeology Ltd. 32 Nicholas St King's Island Limerick City Tel: 061-634375 www.aegisarchaeology.com		Project Name: N7 Nenagh to Limerick High Quality Dual Carriageway		Fig. N°: 11, 12 & 13
	Aegis Project Ref.: 1-11		Project Client: Limerick County Council		Licence/Excavation N°: E2322
	Compiled by: K. Siromach Edited by: A. Wojtowicz	Completion date: 8/2/11	Description: West facing section of hearth C231, north facing section of C235 & south facing section of C237		
					

9.2 Radiocarbon Dating¹

Aegis Ref: Townland/County: Excavation No: Site Name:			1-11 GORTNALAHAGH, LIMERICK E2322 GORTNALAHAGH SITE 3				
Sample No.	Context No	Material	Beta No.	Conventional Radiocarbon Age	$\delta^{13}C^2$	1 Sigma Calibration	2 Sigma Calibration
60	134	Charcoal (Hazel)	258952	2180±40 BP	-25.2‰	360–290 Cal BC (Cal BP 2300–2240) and 240–180 Cal BC (Cal BP 2180–2130)	370–150 Cal BC (Cal BP 2320–2100) and 140–110 Cal BC (Cal BP 2090–2060)
197	201	Charcoal (Hazel)	258953	3570±40 BP	-25.4‰	1960–1880 Cal BC (Cal BP 3910–3830)	2020–1870 Cal BC (Cal BP 3970–3820) and 1850–1780 Cal BC (Cal BP 3800–3730)

Table 5: Summary of Radiocarbon Dates

In advance of the radiocarbon process the charcoal sub-samples, retrieved from samples 60 and 197, were identified by Ellen O’Carroll MA to species:

Sample No.	Context No.	Context Description	Quantity	Weight	ID	Comments
60	134	Fill of pit C135	40 fragments	3 g	Hazel (<i>Corylus sp.</i>)	0.11 g extracted
197	201	Fill of pit C202	10 fragments	3 g	Hazel (<i>Corylus sp.</i>)	0.04 g extracted

Table 6: Charcoal Identification

¹ The radiocarbon dates were obtained from Beta Analytic, Florida USA. Calibrations were calculated using the IntCal04 calibration dataset (Reimer *et al.* 2004)

² Measured $^{13}C/^{12}C$ ratios (delta ^{13}C) were calculated relative to the PDB-1 standard

9.3 Palaeoenvironmental Analysis

Palaeoenvironmental samples assessment for Gortnalagh Site 3, E2322

By: Karen Stewart

Introduction

This site was excavated as two Areas, Areas A and B. Four samples from Area A are here discussed, and one sample from Area B. The Area A samples were taken from fills of four rubbish pits, while the sample from Area B was taken from a linear feature interpreted as a field boundary (Scotland forthcoming). The flots of these samples have been assessed for palaeoenvironmental potential and the results of this assessment are discussed herein

Methodology

All plant macrofossil samples were analysed using a stereomicroscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications were confirmed using modern reference material and seed atlases including Cappers *et al* (2006).

Results

All preservation of plant material was the result of charring. In all cases the volumes of archaeological material were low, with sample 68, at 10 ml of material being the largest flot. The charcoal recovered from samples 60 and 68 was of a size and quality suitable for section and thus wood species identification and radiocarbon (AMS) dating.

Wood charcoal

Wood charcoal was recovered from all of the processed samples. In all cases the charcoal was very fragmented and abraded.

Other material

Very low concentrations of cereal grain were recovered from sample 79. The grain was much abraded and thus the characteristics required for species identification were occluded. The grain has thus been recorded as 'cereal indeterminate'.

Discussion

Area A

The fragmentation and abrasion of the charcoal recovered from the pit fills would suggest that it was unlikely to have been created or buried *in situ* supporting the view of these features being rubbish pits. The presence of cereal grain, alongside charcoal from sample 79, would seem to indicate a domestic origin for the material.

Area B

Sample 100 from 236 contained very low concentrations of charcoal in very small fragments. This would seem to indicate that the presence of charcoal was the result of natural action such as wind or rain-wash depositing anthropogenic material in the field boundary feature, rather than human action such as waste dumping which might lead to higher concentrations.

Recommendations

From Area A, species identification of the suitable charcoal is recommended as it may give some indication of fuel selection patterns or enable study of the nature of the contemporary environment and so this is recommended, particularly in association with similar data from across the scheme.

Regarding the sample from Area B, no further work is recommended on the sample as the concentrations of material are too low for any meaningful study.

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Table 1: Composition of flots

Area	Sample number	Context number	Total flot vol. (ml)	Cereal grain	Charcoal		
					Quantity	Max size (cm ³)	AMS
A	60	134	5		+	0.8	*possible
A	68	160	10		+++	0.5	*
A	79	203	2	+ cereal indeterminate	+++	0.5	
B	100	236	2		+	0.1	
A	197/203	201	5		++	0.4	

Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant

* = sufficient sized charcoal for identification and AMS dating

9.4: Faunal Remains

Margaret McCarthy

GORTNALAHAGH SITE 3 E2322

The small sample of animal bones from this site was recovered from various pits in Area A. The fill (C134) of pit (C135) contained three indeterminate fragments of bone. Two fills (C148, C160) of another pit contained 10 animal bones. One of these belonged to a medium-sized animal such as sheep/goat or pig and the remainder of the sample was not determinate to species. The fill of pit (C202) contained 12 animal bones, four from a medium-sized animal and eight indeterminate fragments. A fourth pit (C204) contained two indeterminate fragments of burnt bone.