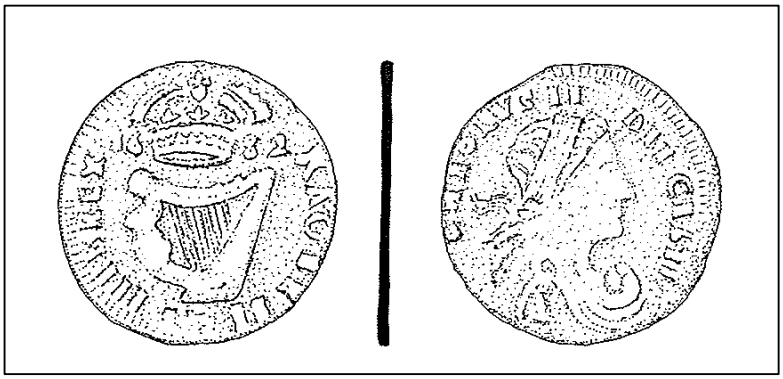
N6 KINNEGAD – ATHLONE SCHEME PHASE 2: KILBEGGAN TO ATHLONE DUAL CARRIAGEWAY



SITE A016/057; E2683: RUSSAGH 2

FINAL REPORT

ON BEHALF OF WESTMEATH COUNTY COUNCIL

15 JULY 2009

IAC Irish Archaeological Consultancy

PROJECT DETAILS

Project Reference No.	WH/00/112
Project	N6 Kinnegad – Athlone Road Scheme: Phase 2, Kilbeggan – Athlone Dual Carriageway
Ministerial Direction Reference No.	A016/057
NMS Registration Number	E2683
Excavation Director	Ellen O'Carroll
Senior Archaeologist	Shane Delaney
Consultant	Irish Archaeological Consultancy Ltd, 120b Greenpark Road, Bray, Co. Wicklow
Client	Westmeath County Council
Site Name	Russagh 2
Site Type	Burnt Mound
Townland	Russagh
Parish	Ardnurcher/Horseleap
County	Offaly
NGR (Easting)	E226348
NGR (Northing)	N237528
Chainage	21565
Height m OD	56.9m OD
RMP No.	N/A
Excavation Start Date	22 February 2006
Excavation Duration	7 days
Report Type	Final
Report Date	15 July 2009
Report By	Ellen O'Carroll

ACKNOWLEDGMENTS

This report has been prepared by Irish Archaeological Consultancy Ltd on behalf of Westmeath County Council and the National Roads Authority in advance of the construction of the N6 Phase 2: Kilbeggan to Athlone Dual Carriageway Scheme.

The excavation was carried out in accordance with the Directions of the Minister for the Environment, Heritage and Local Government (DOEHLG), in consultation with the National Museum of Ireland (NMI) issued under Section 14 of the National Monuments Acts 1930–2004.

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ABSTRACT

Irish Archaeological Consultancy Ltd (IAC), funded by Westmeath County Council (WCC) and the National Roads Authority (NRA), undertook an excavation in the townland of Russagh at the site of Russagh 2 in advance of the proposed N6 Phase 2: Kilbeggan to Athlone Dual Carriageway Scheme (Figure 1). The following report describes the final results of archaeological fieldwork at that site. The area was fully excavated by Ellen O'Carroll under Ministerial Direction (A016/057) and NMS Registration Number E2683 issued by the DOEHLG in consultation with the National Museum of Ireland. The fieldwork took place between 22 February and 2 March 2006.

The excavation at Russagh 2 revealed the remains of a number of features indicating the presence of a heavily disturbed burnt mound. It was truncated by post-medieval agricultural activity. The primary phase of activity consisted of a burnt spread and possible trough containing large quantities of charcoal. A calibrated 2 Sigma radiocarbon date of 1118–923 BC (UBA 9163) was obtained from the burnt spread, indicating a late Bronze Age date for this activity. The post-medieval phase of activity on site included a plough furrow, field boundary and stone-lined field drain, the latter two contained a large quantity of post-medieval pottery. The surrounding burnt spread (C6) contained fragments of red brick indicating large-scale disturbance during the post-medieval period. In total 86 sherds of post-medieval pottery, 12 metal objects, a green glass bottle fragment and a 17th century coin dating to the reign of Charles II were retrieved from Russagh 2.

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1 INTRODUCTION

1.1 General

This archaeological report describes the final results of the excavation carried out at the site of Russagh 2 in the townland of Russagh, Co. Offaly (Figures 1 and 2), as part of an archaeological mitigation programme associated with the N6 Phase 2: Kilbeggan to Athlone Dual Carriageway Scheme. Archaeological fieldwork was carried out under ministerial direction by Ellen O'Carroll for Irish Archaeological Consultancy Ltd (IAC Ltd) and was funded by Westmeath County Council and the National Roads Authority under the National Development Plan 2000–2006, 2007–2013 and the EU Structural fund.

Russagh 2 was identified during a test trenching programme undertaken by IAC Ltd in August 2005 (Ministerial Direction No A016/029; NMS Registration No. E3273). All features identified during the assessment phase (burnt spread and possible trough) were subsequently re-identified and the site was fully excavated between 22 February and 2 March 2006 with a team of 1 director, 1 supervisor and a maximum of 9 site assistants.

This site was located in flat pastureland, at a height of 56.9m OD, within the area defined as Gageborough House Demesne, c. 4.5km north of Clara town, Co. Offaly. The excavation covered an area approximately 15m by 15m totalling approximately 225sqm. Russagh 2 had not been previously identified and was not a Recorded Monument.

The site was assigned the following identification data:

Site Name: Russagh 2; Ministerial Direction No.: A016/057; NMS Registration Number: E2683; Route Chainage (Ch): 21565; NGR: 226348/237528.

1.2 Proposed Development

The proposed N6 Kinnegad–Athlone Scheme is to be constructed in two phases. The Phase 2 Kilbeggan–Athlone scheme will consist of a dual carriageway that will run for a distance of approximately 29km. The location of the route is predominantly to the south of the existing N6 and there will be access to the local road network through the seven grade separated junctions located at Athlone, Farnagh, Moate and Kilbeggan. The cross-section of the mainline consists of 2m wide verges, 2.5m wide hard shoulders, 7m wide two-lane carriageways and a 3m wide central reserve. This central reserve will accommodate 1m hard strips and a safety barrier. In addition to the mainline dual carriageway there is a further 0.3km of standard dual carriageway to the south of Athlone Interchange to connect to the existing N6 and 1.2km to the south of Kilbeggan Interchange to connect to the existing N52.

1.3 Archaeological Requirements

The archaeological requirements for the N6 Kilbeggan to Athlone Dual Carriageway Scheme, are outlined in the Ministerial Directions issued to Westmeath County Council by the Minister for Environment, Heritage and Local Government under Section 14A (2) of the National Monuments Acts 1930–2004 and in the terms of the contract between Westmeath County Council and Irish Archaeological Consultancy Ltd. These instructions form the basis of all archaeological works undertaken for this development. The archaeological excavation works under this contract are located between the townlands of Tully, Co. Westmeath and Cappydonnell Big, Co. Offaly.

The proposed N6 was subjected to an Environmental Impact Assessment, the archaeology and cultural history section of which was carried out by Sheila Lane and Associates and presented in 2003. The Record of Monuments and Places, the Sites and Monuments Record, Topographical files, aerial photography, the Westmeath Archaeological Urban Survey and literary sources were all consulted. One phase of geophysical survey was also conducted at selected sites along the proposed route by Target Archaeological Geophysics. As a result of the paper survey, field inspections and geophysical survey, a number of potential sites were recorded in proximity to this section of the overall route alignment.

Advance archaeological testing was completed by IAC Ltd and excavation of the sites identified during testing was conducted by IAC Ltd on behalf of Westmeath County Council.

1.4 Methodology

The topsoil was reduced to the interface between natural and topsoil using a 20 tonne mechanical excavator equipped with a flat toothless bucket under strict archaeological supervision. The remaining topsoil was removed by the archaeological team with the use of shovels, hoes and trowels in order to expose and identify the archaeological remains. A site grid was set up at 10m intervals and was subsequently calibrated to the national grid using GPS survey equipment.

All features were subsequently fully excavated by hand and recorded using the single context recording system with plans and sections being produced at a scale of 1:50, 1:20 or 1:10 as appropriate.

A complete photographic record was maintained throughout the excavation. Digital photographs were taken of all features and of work in progress.

An environmental strategy was devised at the beginning of the excavation. Where relevant, features exhibiting large amounts of carbonised material were the primary targets.

In the instances where artefacts were uncovered on site they were dealt with in accordance with the guidelines as issued by the NMI and where warranted in consultation with the relevant specialists. All artefacts, ecofacts and paper archive are currently stored in IAC offices, Lismore, Co Waterford and will ultimately be deposited with the National Museum of Ireland.

Radiocarbon dating of the site was carried out by means of AMS (Accelerator Mass Spectrometry) dating of identified and recommended charcoal samples. All calibrated AMS dates in this report are quoted to 2 Sigma.

All excavation and post excavation works were carried out in consultation and agreement with the Project Archaeologist, the National Monuments Section of the DOEHLG and the National Museum of Ireland.

2 EXCAVATION RESULTS

The site was a disturbed burnt mound truncated by modern agricultural furrows. Detailed descriptions of contexts are given in Appendix 1. The site matrix is detailed in Figure 7.

2.1 Phase 1: Natural Drift Geology

The dominant bedrock geology identified along the corridor of the proposed route are Lower Carboniferous rocks, mainly limestone lithologies, which overlay Devonian Old Red Sandstone rocks. Carboniferous volcanic rocks were also identified as being present locally in the form of sills passing through the bedrock sequences (Riada Consult, 2003). The underlying geology of the area is overlain by occasional moraines and small glacial hillocks covered by grey brown podzolic soils.

The subsoil C3, above bedrock, encountered at Russagh 2 was uniform across the site and consisted of mottled grey/brown silty clay with patches of iron panning & pockets of grey sand.

2.2 Phase 2: Late Bronze Age Burnt Mound

2.2.1 Pit/Trough C11 and Spread C6

Context	Fill of	L(m)	W(m)	D(m)	Basic Description	Interpretation
6	N/A	2.3	2.5	0.05	Sub-circular spread with loose charcoal	Charcoal spread
10	C11	1.9	1.1	0.23	Black charcoal-rich clay	Primary deposit
11	N/A	2.2	1.1	0.22	Sub-rectangular cut, steep sides, flat base	Possible trough

Finds: None

Interpretation:
This phase represents the truncated and disturbed remains of a burnt mound. The spread of charcoal rich heat shattered stone (C6) which also contained fragments of red brick was cut by a field boundary (C5) (Figure 4 and 5 and Plate 1 and 3). A probable sub-rectangular trough (C11; 56.95m OD at base) was sealed by the burnt spread (C6) and was cut by a post-medieval plough furrow (C9). The primary fill (C10) of the possible trough was very similar to the burnt spread (C6) which suggested the two were contemporary. Depressions in the southwest and southeastern corners of the trough may represent the remains of corner stakeholes.

A sample of charcoal from burnt spread C6, identified as hazel (*Corylus* sp.), O'Carroll, Appendix 2.3) returned a 2 Sigma date of 2850+/-32 BP (UBA 9163, Appendix 2.4). The 2 Sigma calibrated result of this sample produced a date range of 1118–923 BC, dating it to the later Bronze Age.

2.3 Phase 3: Post-Medieval Activity

2.3.1 Agricultural Activity

Context	Fill of	L(m)	W(m)	D(m)	Basic Description	Interpretation
4	C5	1.15	0.5	0.42	Mottled grey/green/yellow clay	Single fill of C5
5	N/A	1.15	0.5	0.42	Linear cut, slightly concave base	Cut of field boundary
7	N/A	3	1.15	0.46	Linear cut, steep sides, concave base	Cut of drain
8	C7	3	1.15	0.46	Stone lining	Stone lining of C7
9	N/A	1.2	0.3	0.06	Linear cut filled with brown/grey clay	Plough furrow

Finds:

Context	Find Number	Material	Period	Description
5	E2683:5:1–6	Pottery	Post-medieval	18th C glazed red earthenware
5	E2683:5:6	Pottery	Post-medieval	18th C black glazed ware
5	E2683:5:7	Pottery	Post-medieval	18th C glazed red earthenware
7	E2683:7:1	Metal	Post-medieval	Iron Nail
7	E2683:7:2	Metal	Post-medieval	Iron hook
7	E2683:7:3	Metal	Post-medieval	Door/gate latch
7	E2683:7:4–5	Metal	Post-medieval	Tin can fragment
7	E2683:7:6–7	Metal	Post-medieval	Iron bar/stems
7	E2683:7:8	Metal	Post-medieval	Iron object
7	E2683:7:9	Metal	Post-medieval	Tin can fragment
7	E2683:7:10	Metal	Post-medieval	Iron plate fragment

Interpretation:
The drain (C7), which was filled by C8, was the remains of a northeast to southwest aligned stone field drain (Figure 4). The ditch (C5), which was filled by C4, represented the remains of a field boundary running northeast to southwest across the site that cut the burnt mound (C6) and was cut by the plough furrow (C9) representing the last identifiable phase of activity on site. The furrow (C9) also cut through the fill of possible trough (C11).

Post-medieval and modern finds were recovered from the field boundary and drain.

2.4 Phase 4: Topsoil

2.4.1 Topsoil

Context	Fill of	L(m)	W(m)	D(m)	Basic Description	Interpretation
1	N/A	Site	Site	Site	Vegetation	Sod layer
2	N/A	Site	Site	Site	Soft mid-dark brown clay silt	Topsoil

Finds:

Context	Find Number	Material	Period	Description
2	E2683:2:1–15	Pottery	Post-medieval	18th C glazed red earthenware
2	E2683:2:16	Pottery	Post-medieval	White salt glazed stoneware
2	E2683:2:17	Pottery	Post-medieval	18th C glazed red earthenware
2	E2683:2:18	Pottery	Post-medieval	White slip coated stoneware
2	E2683:2:19–26	Pottery	Post-medieval	18th C glazed red earthenware
2	E2683:2:27	Pottery	Post-medieval	18th C black glazed ware
2	E2683:2:28–76	Pottery	Post-medieval	18th C glazed red earthenware
2	E2683:2:77–78	Pottery	Post-medieval	Staffordshire Yellow
2	E2683:2:79	Metal	Post-medieval	Iron plate fragment
2	E2683:2:80	Metal	Post-medieval	Iron wedge/crowbar fragment
2	E2683:2:81	Metal	Post-medieval	Coin 17th Century
2	E2683:2:82	Glass	Post-medieval	body sherd from a green glass

Interpretation:
Phase 4 represents the topsoil that sealed all of the archaeological deposits and features at Russagh 2. Post-medieval finds were found throughout.

Eight fragments of animal bone were retrieved from the topsoil and sent for analysis. The remains, weighing 79g, although in poor preservation were identified as cattle and sheep/goat species (Lofqvist, Appendix 2.5).

3 SYNTHESIS AND DISCUSSION

3.1 Landscape Setting

The new route of the N6 runs from south of Kilbeggan town to east of Athlone Co. Westmeath, crossing through the northern part of Co. Offaly for approximately 7.5km of its entire length. The landscape of this area is comprised of generally flat to undulating terrain. The underlying geology of the area is dominated by carboniferous limestone and is overlain by occasional glacial features such as moraines and eskers. The eskers dominate to the north and south of most of the route, with moraines featuring along parts of the western section toward Athlone. The soil cover varies considerably across the scheme, passing through soil complexes, grey brown podzols, bogland and alluvial deposits. The area is drained by the River Shannon through its tributaries, the Brosna, Boor, Cloghatanny and Gageborough rivers.

The site at Russagh 2 was located 6.5km east of Moate town and 4.5km north of Clara town in flat pasture land (56.9m OD). The underlying geology of the area is carboniferous limestone, which is overlain with occasional small glacial hillocks, forming a gently undulating low-lying landscape. Soil cover in this area consists of regosols, which would have been subject to occasional flooding. The Gageborough River flows 340m to the north and a small tributary of the river was situated 80m to the northeast. A small marshy area is located 50m south of the site. Dunard/Newtown bog was located 300m to the north and Ballykilleen bog 925m south of the site. Gageborough House was situated 340m to the east.

3.2 Archaeological Landscape (Bronze Age)

Apart from the publication of archaeological inventories in some midland counties – such as Offaly (O'Brien and Sweetman 1997) for example (there is, as yet, no archaeological inventory for Co. Westmeath) – and peatland surveys by the Irish Archaeological Wetland Unit (see below) our knowledge of the prehistoric archaeology of the midlands is limited. We are reliant on data stored at the RMP (see Appendix 3) and information from a limited number of excavations within Westmeath and Offaly. This road scheme joins a number of recent large-scale commercially-driven archaeological excavations, most notably the gas pipeline to the west (Grogan *et al*. 2007) which runs mostly parallel a short distance to the north of the N6, but unfortunately evidence for Iron Age settlement and activity remains relatively minor in this region.

Russagh 2 consisted of a late Bronze Age burnt mound, dated to 1181–923 BC (2 Sigma), that sealed a pit (tentatively identified as a trough). A mound of heat shattered stone that sealed charcoal rich pits was also excavated within the same townland at Russagh 3 and was similarly dated to 1191–939 BC (O'Carroll 2009).

The burnt mound sites at Russagh comprised pits associated with mounds of heat shattered stone. These were simple sites in comparison to many of the neighbouring burnt mound complexes such as those located at Burrow or Glennanummer approximately 2.5km to the west and those at Kilbeg, a similar distance to the east. Burrow or Glennanummer 1 and 2 (Coughlan 2009a, 2009b) both produced troughs that were timber-lined while Burrow or Glennanummer 3 was a complex burnt mound site consisting of a large burnt mound, connecting troughs and a possible sweathouse (Coughlan 2009c). Both Burrow or Glennanummer 1 and 2 were in use earlier than Russagh 2 and were dated to the middle Bronze Age. Burrow or Glennanummer 3 produced radiocarbon dates spanning the early, middle and later parts of the Bronze Age and it is possible that its final phase was contemporary with Russagh 2.

The townland of Kilbeg revealed several Bronze Age burnt mound sites of various complexity. Kilbeg 1 and 2 were the closest in terms of parallels to Russagh 2. The former consisted of a burnt mound that sealed a shallow trough (Coughlan 2009d). A second trough to the south of the mound was dated to 1114–922 BC which is broadly contemporary with Russagh 2. Kilbeg 2 was simply an early Bronze Age burnt mound with no associated features (Walsh 2009).

The vast majority of burnt mound sites date to the Bronze Age and were most commonly utilised during the middle and later parts of the period (Brindley *et al* 1989−90; Corlett 1997), and the radiocarbon date from Russagh 2 is consistent with that assessment. A number of other burnt mound sites have been dated to the late Bronze Age on the scheme and contemporary examples include, other than those already mentioned, Creggan Lower 2 (Lyne 2009a) and Williamstown 2 (Lyne 2009b).

The grouping of the two burnt mounds in Russagh suggests the possible clustering of similar sites. This was also noted in other townlands along the scheme, for example, at Williamstown, Cregganmacar, Burrow or Glennanummer and Kilbeg between Kilbeggan and Athlone and also during excavations elsewhere in Co Westmeath at Newtown (Stevens 2004a, 2004b, and 2004c) and Enniscoffey/Caran (Molloy 2007, 341–2). Archaeological investigation on other sections of the N6 has also uncovered similar burnt mound sites, for example at Stonehousefarm 6.1 and 6.2 (McDermott 2004).

Russagh is located west of the centre of the parish of Ardnurcher/Horseleap within the barony of Kilcoursey, County Offaly. It is known in Irish as *Ros Each*, meaning ‘wood of the horses’. It is also referred to as ‘Roskath’ in the Down Survey of 1654. The townland consists of c. 363 acres and is bisected by the Gageborough River. Gageborough demesne (CHS 81) is situated in the east of the townland and consists of Gageborough house and its associated demesne features which include a courtyard approached through a large stone arch, demesne walls, ruined outbuildings and the remains of mature parklands. The house is thought to date to the 18th century (Riada Consult, 2003).

3.3 Archaeological Typology Background (Burnt Mounds)

Fulacht fiadh or burnt mound sites are one of the most common field monuments found in the Irish landscape. The last published survey (Power *et al*. 1997), carried out over a decade ago, recorded over 7,000 burnt mound sites and in excess of 1,000 sites have been excavated in recent years through development led archaeological investigations. In spite of this no clear understanding of the precise function of these sites has being forthcoming.

Burnt mound sites are typically located in areas where there is a readily available water source, often in proximity to a river or stream or in places with a high water table. In the field burnt mounds may be identified as charcoal-rich mounds or spreads of heat shattered stones, however, in many cases the sites have been disturbed by later agricultural activity and are no longer visible on the field surface. Nevertheless even disturbed spreads of burnt mound material often preserves the underlying associated features, such as troughs, pits and gullies, intact.

Ó Néill (2003–2004, 82) has aptly identified these sites as the apparatus and by-product of pyrolithic technology. This technology involved the heating or boiling of water by placing fire-heated stones into troughs of water. Small shallow round-bottomed pits, generally referred to as pot boiler pits or roasting pits, are often associated with burnt mound sites. The purpose of these pits remains unclear.

Occasionally large pits are also identified and may have acted as wells or cisterns. Linear gullies may extend across the site, often linked to troughs and pits, and demonstrate a concern with onsite water management. Post and stakeholes are often found on burnt mound sites and these may represent the remains of small structures or wind breakers.

Burnt mound sites are principally Bronze Age monuments and reach their pinnacle of use in the middle/late Bronze Age (Brindley *et al*. 1989−90; Corlett 1997). Earlier sites, such as Enniscoffey Co. Westmeath (Grogan *et al*. 2007, 96), have been dated to the Neolithic and later sites, such as Peter Street, Co. Waterford (Walsh, 1990, 47), have been dated to the medieval period. Thus although burnt mound sites generally form a components of the Bronze Age landscape, the use of pyrolithic technology has a long history in Ireland.

Although there is a general consensus that burnt mound sites are the result of pyrolithic technology for the heating or boiling of water, the precise function of these sites has, to date, not been agreed upon. Several theories have been proposed but no single theory has received unanimous support. The most enduring theory is that burnt mounds sites were used as cooking sites. O'Kelly (1954) and Lawless (1990) have demonstrated how joints of meat could be efficiently cooked in trough of boiling water. The use of burnt mound sites for bathing or as saunas has been suggested as an alternative function (Lucas 1965, Barfield and Hodder 1987, O' Drisceoil 1988). This proposal is largely influenced by references in the early Irish literature to sites of a similar character and is very difficult to prove, or disprove. Others, such as Jeffrey (1991), argue that they may have been centres of textile production for the fulling or dyeing of cloth. More recent demonstrations by Quinn and Moore (2007) have shown that troughs could have been used for brewing, however, this theory has been criticised by leading Irish environmentalists due to the absence of cereal remains from most burnt mound sites (McClatchie *et al*. 2007).

Another site was uncovered at Russagh 3 that was similar in form and date to Russagh 2 (O'Carroll 2009). The site comprised of a disturbed burnt spread truncated by a trough and posthole. A charcoal sample from the trough returned a contemporary date range of 1191–939 BC (UBA 8611) providing further evidence for a possible cluster of later Bronze Age activity in the area. Apart from Russagh other notable clusters of burnt mound sites occurred also at Cregganmacar, Williamstown, Seeoge, Burrow or Glennanummer and Kilbeg along the current scheme.

3.4 Discussion

3.4.1 Phase 1: Natural Deposits

The subsoil encountered at Russagh 2 consisted of firmly compacted blue-grey clay in the east of the site, and yellow clay with occasional stones in the west.

3.4.2 Phase 2: Late Bronze Age Burnt Mound

Phase 2 represented the primary activity on site in the form of a possible trough (C11; 56.95m OD at base) and burnt spread (C6). The charcoal rich burnt spread (C6) was cut by field boundary (C5) and contained fragments of red brick indicating heavy disturbance of the site during the post-medieval period (Figures 4, 5; Plates 1–3).

The primary fill (C10) of the trough was very similar to the burnt spread material C6 which suggested the two were contemporary. Depressions in the southwest and southeastern corners of the trough were tentative indications that there may be been corner stakeholes, perhaps representing part of a timber lining. Stakeholes found

within the base of troughs have often been interpreted as possible an indication of wooden or wattle lining.

The results of charcoal analysis suggest that there was a wide variety of woodland types and habitats surrounding the site during the late Bronze Age period at Russagh 2. The inhabitants of the sites had access to young oak trees as well as ash and elm trees. Scrub like taxa such as cherry, blackthorn young hazel and pomoideae were also present in the surrounding landscape and accessible. Wetland areas were also located close to the site as indicated by the presence of birch, willow and alder trees (O'Carroll, Appendix 2.3).

A sample of hazel charcoal (O'Carroll, Appendix 2.3) from the mound (C6) provided the most reliable source material in terms of species for dating and produced a date of 1118–923 BC (UBA 9163), the most period with the most evidence for burnt mound activity.

3.4.3 Phase 3: Post-Medieval Activity

Phase 3 comprised a field boundary (C5) that cut through burnt spread (C6), and a stone lined field drain (C7). The field boundary ran northeast to southwest through the site. The drain, C7, also ran northeast to southwest. The plough furrow (C9) cut through the top of the probable trough (C11). These later features are probably indicative of agricultural activity and land clearance associated with Gageborough house and its associated demesne in the 18th or 19th centuries.

Pottery recovered from the fill of field boundary, C5, was identified as black-glazed ware and glazed red earthenware, dating to the 18th and 19th centuries, and represents mainly domestic-type ware (McCutcheon, Appendix 2.1). Finds recovered from the drain fills included iron bars, a hook, a latch, a nail, and three fragments possibly from a container made of tin (Johnson, Appendix 2.2).

3.4.4 Phase 4: Topsoil

The topsoil was consistent throughout, and sealed all of the archaeological deposits and features at Russagh 2.

Pottery recovered from the topsoil layer was identified as white slip-coated stoneware, white salt-glazed stoneware, Staffordshire yellow, black-glazed ware, and glazed red earthenware, all of which date to the 18th and 19th centuries, and represents mainly domestic wares, including plates, bowls and jugs (McCutcheon, Appendix 2.1).

A copper alloy halfpenny of Charles II was also recovered from the topsoil, and carries a date of 1682 (Figure 6). Other finds included a rectangular piece of iron with a wedge-shaped profile, a fragment of heavy iron plate, and a body fragment of green bottle glass (Johnson, Appendix 2.2).

A quantity of animal bone was also retrieved from the topsoil and sent for analysis. The remains were identified as representing cattle and sheep/goat species (Lofqvist, Appendix 2.5).

4 CONCLUSIONS

Russagh 2 consisted of a heavily disturbed burnt spread (C6) and a possible trough (C11) containing a charcoal-rich deposit, which were cut by a field boundary (C5), stone lined drain (C7) and plough furrow. Depressions in the southwest and southeastern corners of the possible trough may represent the remains of corner stakeholes. Stakeholes found within the base of the trough have often been interpreted as possible structures or as an indication of wooden or wattle lining. A sample of charcoal from C6 identified as hazel, provided the most reliable source material in terms of species for dating and produced a 2 Sigma date of 1118–923 BC.

The results of charcoal analysis suggest that there was a wide variety of woodland types and habitats surrounding the site during the late Bronze Age period (O'Carroll, Appendix 2.3).

The surrounding burnt spread (C6) contained fragments of red brick indicating large scale disturbance during the post-medieval period; possibly associated with the agricultural activities of Gageborough Demesne. The artefacts recovered from the field boundary and stone-lined field drain deposits indicate a post-medieval date for the Phase 3 activity. Similar material and a 17th century coin (Figure 6) were recovered from the topsoil.

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PLATES

Plate 1: E2683: Pre-excavation of site, facing west

Plate 2: E2683: C11, mid-excavation, facing northeast

Plate 3: E2683: C5, mid-excavation, facing northeast

APPENDIX 1 CATALOGUE OF PRIMARY DATA

Appendix 1.1 Context Register

Context	Fill of	L(m)	W(m)	D(m)	Interpretation	Description	Finds/ecofacts
1	N/A	Site	Site	Site	Sod	Grass / sod layer	
2	N/A	Site	Site	Site	Topsoil	Soft mid-dark brown clay silt, occasional large stones.	PM pottery, Iron, 17th C coin, bone, glass
3	N/A	Site	Site	Site	Natural subsoil	Firmly compacted blue-grey (east) and yellow (west) clay with occasional stones.	
4	5	1.15	0.5	0.42	Single fill of C5	Soft compaction of mottled grey/green/yellow clay with inclusions of stone (<0.05m).	
5	N/A	1.15	0.5	0.42	Cut of field boundary	Linear cut, N–S orientation, sharp break of slope at top, gradual sloping sides, gradual break of slope at base; slightly concave base.	PM pottery
6	N/A	2.3	2.5	0.05	Truncated burnt spread	Sub-circular spread, loose compaction of charcoal.	
7	N/A	3	1.15	0.46	cut of drain	Linear cut, N–S orientation, sharp break of slope at top, steep sloping sides onto pointed concave base, lined with stone (C8).	
8	7	3	1.15	0.46	Stone lining of drain	Stone lining within C7.	
9	N/A	1.2	0.3	0.06	Plough furrow cutting C10	Medium compaction of brown/grey clay, no inclusions. Over C10, fill of C11.	
10	11	1.9	1.1	0.23	Primary deposit of C11	Sub-rectangular in plan, soft compaction of black charcoal-rich clay with inclusions of stone.	
11	N/A	2.2	1.1	0.22	Cut of possible trough	Sub-rectangular in plan, NE–SW orientation, sharp break of slope at top, steep sloping sides, sharp break of slope at top onto flat base.	

Appendix 1.2 Catalogue of Artefacts

Find Registration No.	Context	Item No.	Simple Name	Full Name	Material	No. of parts	Description
E2683:2:1	2	1	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:2	2	2	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:3	2	3	Pottery	Pos-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:4	2	4	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:5	2	5	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:6	2	6	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:7	2	7	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:8	2	8	Pottery	Post- medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:9	2	9	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:10	2	10	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:11	2	11	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:12	2	12	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:13	2	13	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:14	2	14	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:15	2	15	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:16	2	16	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C White salt glazed stoneware
E2683:2:17	2	17	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:18	2	18	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C White slip coated stoneware
E2683:2:19	2	19	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:20	2	20	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:21	2	21	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:22	2	22	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:23	2	23	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:24	2	24	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:25	2	25	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:26	2	26	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:27	2	27	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of black glazed ware
E2683:2:28	2	28	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:29	2	29	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware

Find Registration No.	Context	Item No.	Simple Name	Full Name	Material	No. of parts	Description
E2683:2:30	2	30	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:31	2	31	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:32	2	32	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:33	2	33	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:34	2	34	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:35	2	35	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:36	2	36	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:37	2	37	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:38	2	38	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:39	2	39	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:40	2	40	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:41	2	41	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:42	2	42	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:43	2	43	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:44	2	44	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:45	2	45	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:46	2	46	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:47	2	47	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:48	2	48	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:49	2	49	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:50	2	50	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:51	2	51	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:52	2	52	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:53	2	53	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:54	2	54	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:55	2	55	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:56	2	56	Pottery	Post- medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:57	2	57	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:58	2	58	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware

Find Registration No.	Context	Item No.	Simple Name	Full Name	Material	No. of parts	Description
E2683:2:59	2	59	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:60	2	60	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:61	2	61	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:62	2	62	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:63	2	63	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:64	2	64	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:65	2	65	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:66	2	66	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:67	2	67	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:68	2	68	Pottery	Post-medieval Pottery sherd	Pottery	1	Rim sherd of 18th C glazed red earthenware
E2683:2:69	2	69	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:70	2	70	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:71	2	71	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:72	2	72	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:73	2	73	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:74	2	74	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:75	2	75	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of 18th C glazed red earthenware
E2683:2:76	2	76	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:2:77	2	77	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of Staffordshire yellow
E2683:2:78	2	78	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of Staffordshire yellow
E2683:2:79	2	79	Metal	Post-medieval Iron plate fragment	Fe	1	Trapezoidal fragment of heavy iron plate
E2683:2:80	2	80	Metal	Post-medieval Iron wedge	Fe	1	Object with a rectangular outline and wedge-shaped profile
E2683:2:81	2	81	Metal	Post-medieval Coin 17th Century	Cu	1	1682 Irish copper alloy halfpenny of Charles II, with small lettering
E2683:2:82	2	82	Glass	Post-medieval glass	Glass	1	Body sherd from a green glass
E2683:5:1	5	1	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:5:2	5	2	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of black glazed ware
E2683:5:3	5	3	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of black glazed ware
E2683:5:4	5	4	Pottery	Post-medieval Pottery sherd	Pottery	1	Sherd of black glazed ware
E2683:5:5	5	5	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of black glazed ware

Find Registration No.	Context	Item No.	Simple Name	Full Name	Material	No. of parts	Description
E2683:5:6	5	6	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of black glazed ware
E2683:5:7	5	7	Pottery	Post-medieval Pottery sherd	Pottery	1	Base sherd of 18th C glazed red earthenware
E2683:7:1	7	1	Metal	Post-medieval Iron Nail	Fe	1	Incomplete iron nail, with a flat, circular head, slightly off-centre on the shank, round-sectioned, becoming rectangular below the head and broken above the tip
E2683:7:2	7	2	Metal	Post-medieval Iron hook	Fe	1	Incomplete iron object, probably a hook, broken at both terminals
E2683:7:3	7	3	Metal	Post-medieval Door/gate latch	Fe	1	Flat iron bar with a rectangular section, probably a door or gate latch
E2683:7:4	7	4	Metal	Post-medieval Tin can fragment	Sn	1	Fragments of thin sheet metal
E2683:7:5	7	5	Metal	Post-medieval Tin can fragment	Sn	1	Fragments of thin sheet metal
E2683:7:6	7	6	Metal	Post-medieval Iron bar/stems	Fe	1	Length of bent iron, of uniform thickness and circular section, with blunt (broken?) ends
E2683:7:7	7	7	Metal	Post-medieval Iron bar/stems	Fe	1	Short length of curved, heavy iron bar, with a rectangular section, one blunt and one broken terminal
E2683:7:8	7	8	Metal	Post-medieval Iron object	Fe	1	Incomplete object. Semi-circular shape with triangular section, straight inside edge and flat base
E2683:7:9	7	9	Metal	Post-medieval Tin can fragment	Sn	1	Disintegrating object in numerous pieces
E2683:7:10	7	10	Metal	Post-medieval Iron plate fragment	Fe	1	Rectangular piece of iron plate

The contexts C5 and C7 listed above are cut numbers therefore the finds from each were retrieved from the fills C4 (fill of C5) and C8 (fill of C7).

Appendix 1.3 Catalogue of Ecofacts

A total of two bulk soil samples were taken during the course of excavation at this site. Of these both were processed by means of flotation and sieving through a 250µm mesh. The resulting retrieved samples of this process are listed below. In addition to this one animal bone sample was hand retrieved on-site. Details of this sample can also be found listed below.

1.3.1 Animal Bone

One sample of animal bone (8 fragments) was retrieved on site from the topsoil. It had initially been given a finds number which was later changed to sample number 3 during post excavation analysis.

Context number	**Sample number**	**Feature**	**Sample weight (g)**
2	3	Topsoil	79g

1.3.2 Charcoal

A single sample of charcoal was retrieved as a result of soil sample sieving.

Context number	**Sample number**	**Feature**	**Sample weight (g)**
6	1	Burnt spread	42.3g

1.3.3 Mollusc Shell

Context number	Sample number	Feature	Sample weight (g)
6	1	Burnt Spread	0.1

Appendix 1.4 Archive Checklist

Project: N6 Kilbeggan – Athlone	**Irish Archaeological Consultancy Ltd**	
Site Name: Russagh 2		
NMS Number: E2683		
Ministerial Directive: A016/057		
Site director: Ellen O'Carroll		
Date: February 2006		
Field Records	**Items (quantity)**	**Comments**
Site drawings (plans)	2	Digitised
Site sections, profiles, elevations	3	Digitised
Other plans, sketches, etc.	0	
Timber drawings	0	
Stone structural drawings	0	
Site diary/note books	0	
Site registers (folders)	6	Digitised
Survey/levels data (origin information)	21	Digitised
Context sheets	11	Digitised
Wood Sheets	0	
Skeleton Sheets	0	
Worked stone sheets	0	
Digital photographs	20	On IAC server
Photographs (print)	0	
Photographs (slide)	0	
Finds and Environ. Archive		
Flint/chert	0	
Stone artefacts	0	
Pottery (specify periods/typology)	86	post-medieval
Ceramic Building Material (specify types eg daub, tile)	0	
Metal artefacts (specify types - bronze, iron)	13	12 Iron + 1 Copper Alloy coin
Glass	1	Post-medieval green
Other find types or special finds (specify)	0	
Human bone (specify type eg cremated, skeleton, disarticulated)	0	
Animal bone	8	
Metallurgical waste	0	
Enviro bulk soil (specify no. of samples)	2	
Enviro monolith (specify number of samples and number of tins per sample)	0	
Security copy of archive	1	On IAC Server

Appendix 1.5 Copy of Registration No. Document from DoEHLG

National Monuments
Acts (1930-2004)
Ministerial Directions
Record Number for
archaeological activity

AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS AITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE
AND LOCAL GOVERNMENT

File: Direction No. A16

Registration Number: E2683

Directions have been issued to Murty Hanly on behalf of Westmeath County Council in order to regulate archaeological activities carried out on N6 Kilbeggan to Athlone (Phase 2).

Application having been duly made to me by Ms. Ellen O'Carroll of Archaeological Consultant, 12 St. Peters Terrace, Adelaide Rd, Glenageary, Co. Dublin.

For a registration number to record excavation at the site of Russagh 057 being part of the townland of RUSSAGH in the County of Westmeath.

This registration is not an archaeological licence or consent but it is issued solely for archive purposes and to allow for the material from the activity to be registered with the National Monuments Service and the National Museum.

Signed Aileen Hurte 31 October 2006

Appendix 1.6 Copy of Ministerial Direction Document

Section 14A(2) National Monuments Acts 1930-2004

Directions to Westmeath County Council for the carrying out of archaeological works on the N6 Kinnegad to Athlone dual carriageway road scheme (Phase 2 * Kilbeggan to Athlone).

1. Introduction

The project is an approved road development, having been approved by An Bórd Pleanála on 26th March 2004.

The development will consist of a dual carriageway that will run for a distance of approximately 57.5km.

In line with recommendations in the Environmental Impact Assessment for the scheme, archaeological investigations included site specific testing followed by a centreline test trench with staggered offsets. The request for directions has an attached strategy document that covers the proposed resolution works

These directions relate to Phase 2 works and are issued following the receipt by the Minister of reports on the testing work carried out in Phase 1.

2. Directions

All aspects of the archaeological works should be conducted in accordance with provisions of the policy and advice notes on archaeological excavations issued by the Department and in line with the provisions of the Code of Practice agreed with the National Roads Authority. Archaeological works shall be carried out in accordance with the Strategy for Proposed Works submitted with the application seeking Directions.

3. Project Archaeologist

The Project Archaeologist appointed for the road development should ensure that the archaeological works are carried out in accordance with the terms of the directions.
· Any changes to the agreed method statement for the excavations should be submitted to the National Monuments Section for approval.
· Any proposal to change any named director of a specific excavation should firstly be notified to the National Monuments Section for approval.

4. Conduct of Archaeological Excavations:

a) The archaeological excavations should be carried out in accordance with the specifications set out in the strategy document submitted to the Minister.
b) The National Monuments Section should be notified of the commencement date of the works on site.
c) The names of the archaeological consultants, including site directors should be submitted to the National Monuments Section in advance of the works commencing.

d) Where necessary the layout of the archaeological trenches should be adjusted to include additional archaeological features and deposits or areas of archaeological potential.
e) All archaeological objects recovered in the course of the test excavations should be treated and conserved in line with the advice notes and guidelines issued by the National Museum of Ireland.
f) A report on the progress of the archaeological works shall be submitted to the National Monuments Section every 4 weeks.

5. Record Number for the scheme:

The record number for the recording of archaeological works is A016/000. Sub-numbers may be allocated by the Project Archaeologist to the additonal works. These numbers should be notified to the National Monuments Section for agreement with full details of the archaeological works involved.

6. Detection Device:

Detection devices may be used as appropriate in the course of archaeological works to recover archaeological objects. Details of proposed methodologies should be notified to the National Monuments Section.

7. Reports:

1. A report on the results of the archaeological excavations should be submitted to the National Monuments Section within 4 weeks of the completion of the works on site. Should additional time be required to complete the report the National Monuments Section should be notified before the expiration of the 4-weeks period. A copy of the report should be sent to the National Museum of Ireland.
2. A summary of the excavation results for the site should be published in the Excavations Bulletin for the year when works are undertaken.

8. National Monuments (Subsection 14A(4)):

If during the carrying out of the archaeological excavations a site should prove to be a National Monument within the meaning of the National Monuments Acts (1930-2004) all works should stop and the National Monuments Section should be informed immediately.

9. Inspection of Works

Officers, servants or agents of the Minister may inspect the archaeological works at any time and full co-operation should be given to them in carrying out the inspections.

APPENDIX 2 SPECIALIST REPORTS

Appendix 2.1 Post-Medieval Pottery Report – Clare McCutcheon

Appendix 2.2 Small Finds Report – Catherine Johnson

Appendix 2.3 Charcoal and Wood ID Report – Ellen O'Carroll

Appendix 2.4 Radiocarbon Dating Results – QUB Laboratory

Appendix 2.5 Animal Bone Report – Camilla Lofqvist

THE POST-MEDIEVAL POTTERY FROM RUSSAGH 2, CO. OFFALY (A016/057)

CLARE MCCUTCHEON MA MIAI

A total of 86 sherds of post-medieval pottery were presented for study. Following some reassembly within contexts, this was reduced to 76 of which 66 (86.8%) are of glazed red earthenware. The site is described as a burnt spread with the majority of the material recovered from the topsoil (C2) and the final seven sherds from the fill (C4) of the field boundary (C5).

The pottery has been identified visually and the detailed results are presented in Table 1. This shows the number of sherds in each fabric type, the minimum number of vessels and the minimum vessels represented. The minimum number of vessels (MNV) is an objective number based on the actual number of rim/handle junctions present while the minimum vessels represented (MVR) is based on the variations in shape, rim form and decoration. The probable form of the vessels represented is included along with the date range of distribution in Ireland.

Fabric Type	**Sherds**	**MNV**	**MVR**	**Form**	**Date**
White slip coated stoneware	1	-	1	Plate	18th C
White salt glazed stoneware	1	-	1	Plate/bowl	18th C
Staffordshire yellow	2	-	1	Ointment pot	18th C
Black glazed ware	7	-	2	Bowls	18th–19th C
Glazed red earthenware	66	1	6	Bowl, 2 jugs, 3 storage jars	18th–19th C
Total	**76**	1	11		

Table 1: Pottery quantification, Russagh 2 (A016/057 E2683).

Discussion:
White slip coated and salt glazed stonewares were made in Staffordshire in the earlier part of the 18th century until they were superseded by creamware (Savage & Newman 1985, 253). In addition, white-bodied earthenwares, glazed in clear lead glaze turning yellow on firing, made up a very large percentage of the ointment pots required for the pharmaceutical trade. Many of the other vessels in this ware were slip trailed in brown, resulting in highly decorated tablewares.

Seven sherds of black glazed ware were recovered, six coming from the fill of the field boundary. These vessels were widely available in Ireland and some may also have been made here. The principal source of black glazed ware, however, is Lancashire and north Wales, often loosely termed Buckley ware. The clay can be intermixed with white clay giving a marbled effect, or near stoneware in dark red/brown, or soft red earthenware. The black glaze results from the addition of iron to the overall lead glaze.

Glazed red earthenware, the commonly used dairy and kitchen ware of the time, represents the majority of the pottery on this site. The fabric is sandy earthenware, usually oxidised buff to light orange through to brown. The clear lead glaze takes its colour from the fabric with variations due to firing conditions (Jennings 1981, 157). These are also known as brownwares and were made widely in England and Ireland in the later 17th and 18th centuries (Dunlevy 1988, 24–5). A typical kiln was excavated at Tuam, Co. Galway with milk pans and dishes comprising the majority of the vessels (Carey & Meenan 2004).

The handle attached to the portion of a small jug gives a minimum number of one vessel. The minimum vessels *represented*, however, consist of two jugs, a bowl and three storage jars. Apart from the jug with handle attached, the balance of the material is low-fired red earthenware and has been subject to much post-depositional weathering. An interesting indication of the possible local nature of the pottery includes one base sherd (2:62) in which the centre is cracked pre-firing allowing the

glaze the run through. While quality control would have allowed for cracks in other parts of the vessel, with a hole in the base this jug clearly could not function to carry liquid. Such sherds are known as wasters and the piece may have come on site with a delivery of pots, used as a prop within the transport.

Context:	**Fabric Type:**	**Finds number**
2	White slip coated stoneware	18®
	White salt glazed stoneware	16(B)
	Staffordshire yellow	77+78(B)
	Black glazed ware	27
	Glazed red earthenware	1(B), 2, 3®, 4(B), 5(B), 6–8, 9®, 10–15, 17, 19, 20(B), 21®, 22–25, 26+29(B), 28+31, 30(B), 32, 33, 34+35(B), 36+37®, 38+39, 40®, 41, 42, 43®, 44, 45(H), 46, 47®, 48(B), 49®, 50–61, 62(B waster), 63, 64, 65(B), 66®, 67, 68®, 69–73, 74(B), 75, 76(B)
4	Black glazed ware	2–4, 5(B), 6(B)
	Glazed red earthenware	1(H), 7

Table 2: Pottery identifications with find numbers and diagnostic information.

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THE N6 KILBEGGAN-ATHLONE ROAD PROJECT

THE SMALL FINDS FROM A016-057 RUSSAGH 2

CATHERINE JOHNSON

Russagh 2 consisted of a burnt mound and a series of pits. As well as charcoal the burnt spread had inclusions of pottery and bone fragments. Most of this has been interpreted as post-medieval, because of the typology of the pottery recovered and the agricultural gullies.

Apart from post-medieval pottery, which is discussed elsewhere, the assemblage is a small one, consisting of a glass fragment and thirteen metal objects. The datable finds are post-medieval or later and include a green glass bottle fragment and a 17th century coin.

METAL

Copper alloy

Coin
During the reign of Charles II the old technique of 'hammering' coins was replaced by new methods of machine production, which speeded-up the minting process and produced thicker, more regularly shaped coinage, with milled edges to reduce 'clipping' of coins. Tokens were also banned during this period. Charles II copper halfpennies with small lettering were issued in Ireland in 1681, 82, 83 and 84, while large lettered ones were issued in 1680, 81 and 82 (Colgan 2003, 125). These small denomination coins were issued to meet the need for small change, although the Irish continued to rely on foreign gold and silver coins for larger transactions.

E2683:2:81 *Area 2* is an Irish copper alloy halfpenny of Charles II, with small lettering.
Obverse: bewigged portrait of the king wearing a laurel wreath and facing right and the legend 'CAROLVS II DEI GRATIA' (Charles II by the grace of God).

Reverse: a crowned harp, with a divided date (16 and 82) below the crown, on either point of the harp, with the legend 'MAG BR FRA ET HIB REX (Great Britain, France and Ireland , King).

The coin is in fair condition and is worn on the reverse. D. 26 mms. T. 1.5 mms.

Iron

Identification is based on visual examination but as the objects are coated with grit x-rays have also been used.

Stems/bars
E2683:7:6 *Area 2* is a length of bent iron, of uniform thickness and circular section, with blunt (broken?) ends. Soil coating. Overall L. 130 mms. D. 5 mms.
E2683:7:7 *Area 2* is a short length of curved, heavy iron bar, with a rectangular section. One blunt and one broken terminal. L. 46 mms. W. 9 mms. T. 7.5 mms.

Wedge?
2:80 is likely to be a wedge, of the sort used to secure a hammer or other tool-head to the handle. These objects are still in use and come in different sizes, depending on the size of the tool-head. Alternatively, it could be the end of a crow-bar, which has snapped across the broad end.

E2683:2:80 *Area 2* is an iron object with a rectangular outline and wedge-shaped profile, tapering from 15 to 4 mms. The surface is coated with grit. The x-ray shows that it is curved at one end and straight at the other. L. 55 mms. W. 26 mms. T. 15 mms.

Nail
E2683:7:1 *Area 2* is an incomplete iron nail, with a flat, circular head, slightly off-centre on the shank. The shank is round-sectioned, becoming rectangular below the head and broken above the tip. The object is in fair condition, with light soil encrustation. L. 41 mms. Head D. 10 mms. Shank D. 4.5 mms.

Hook
7:2 is an incomplete hook, similar to those used by butchers to hang meat.
E2683:7:2 *Area 2* is an incomplete iron hook, broken at both terminals. The object has a round section and is almost S-shaped, with one end forming a loop and the other a broken hook. L. 101 mms. Overall W. 48 mms. D. of metal 11 mms.

Latch
The following object is probably a door or gate latch.
E2683:7:3 *Area 2* This object is made from a flat iron bar with a rectangular section 17 by 8 mms. One end curves into a C-shape of uniform width. The other expands into a broad rectangular plate, 36 mms. wide and 4 mms. thick. The plate has a central perforation, 5 mms in diameter. Beside this, there is an 8 mm diameter countersinking, formed by pressing the metal so that a boss is formed on the other side. The object is in good condition. L. 142 mms. Max. W. 36 mms. T. 8mms.

Iron plate
E2683:7:10 *Area 2* is a rectangular piece of iron plate, bent over to give a 15 mm wide fold at both ends. Fair condition, with surface rust and corrosion products. L. 140 mms. W. 50 mms. T. 2 mms.
E2683:2:79 *Area 2* is a trapezoidal fragment of heavy iron plate, with a slightly curved profile. The object has a surface coating of soil. L. 68 mms. W. 55 mms. T. 7 mms.

Miscellaneous
E2683:7:8 *Area 2* incomplete object. Semi-circular shape with triangular section. Straight inside edge and flat base. External D. 37 mms. Internal D. 17 mms. T. 8.5 mms.

Tin
Container?
The following appear to be fragments of a large tin can or container.
E2683:7:4–5 *Area 2* two fragments of thin sheet metal, probably tin, which react to a magnet. Both are covered with soil and corrosion products. One has a rolled-over edge, with a C-shaped seam placed perpendicularly to this. L. 42 mms. W. 43mms. T. (seam) 4mms. The larger piece has a similar seam along the long axis. L.78 mms. W. 36 mms. T. (seam) 5 mms.
E2683:7:9 *Area 2* disintegrating object in numerous pieces, with rust, corrosion products and wood fragments adhering to the surface. The metal is very thin. Two pieces are curved, with rolled-over edges and would have belonged to a vessel of approximately 300 mms in diameter.

GLASS

The glass assemblage from this site consists of a body sherd from a green glass bottle dating to the post-medieval period or later.

Bottle glass
E2683:2:78 *Area 2* small body sherd of green bottle glass. L. 37 mms. W. 27 mms. T. 4 mms.

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CHARCOAL IDENTIFICATIONS

N6 KINNEGAD – ATHLONE SCHEME
PHASE 2: KILBEGGAN TO ATHLONE
DUAL CARRIAGEWAY

MINISTERIAL DIRECTION NUMBER: A016/057
NMS REGISTRATION NUMBER: E2683
RUSSAGH 2

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Introduction
One charcoal sample was identified and analysed from excavations from a burnt spread dated to the late Bronze Age and excavated at Russagh 2, Co. Offaly. This site is located in the townland of Russagh, c. 4.5km north of Clara town, Co. Offaly. The archaeological excavation was carried out by Irish Archaeological Consultancy Ltd on behalf of Westmeath County Council and the National Roads Authority in advance of the construction of the N6 Phase 2: Kilbeggan to Athlone Dual Carriageway Scheme.

The analysis of charcoal and wood can provide information on two different levels. The analysis is an important component of any post-excavation environmental work as it can help in re-constructing an environment hitherto lost to us, although this must be done with caution as sufficient sample numbers are required for a complete and full understanding of the immediate environment. Keepax suggest 50 charcoal samples in a European temperate climate. Charcoal and wood are also analysed and identified to determine what species are used and selected for particular functions on site i.e. postholes, wall posts, burnt remains of wattle and so on.

Methods
The process for identifying wood, whether it is charred, dried or waterlogged is carried out by comparing the anatomical structure of wood samples with known comparative material or keys (Schweingruber 1990). A wood reference collection from the Botanical Gardens in Glasnevin, Dublin was also used.

Charcoal
The soil samples were processed on-site. The flots were sieved through a 250 micron or a 1mm sieve, while the retent was put through a 2mm or 4mm sieve. All of the charcoal remains from the soil samples were then bagged and labeled.

The identification of charcoal material involves breaking the charcoal piece along its three sections (transverse, tangential and radial) so clean sections of the wood pieces can be obtained. This charcoal is then identified to species under a universal compound microscope reflected and transmitted light sources at magnifications x 10 - 400. By close examination of the microanatomical features of the samples the charcoal species are determined.

The purpose of the charcoal identifications was two-fold. In some cases the identifications were carried out prior to C14 dating in order to select specific species for dating and in other cases the charcoal was analysed for fuel selection policies and selection of wood types for structural use. Each species was identified, bagged together and then weighed. Insect channels were noted on the charcoal fragments identified as this may indicate the use of dead or rotting wood used for fuel or other such functions. The distinction can sometimes be made between trunks, branches and twigs if the charcoal samples are large enough. This was noted where possible. When charcoal samples showed indications of fast or slow growth this was also recorded. The samples identified for environmental reconstruction and wood usage were counted per fragment and then weighed. The smaller sample amounts with less than 50 fragments were all identified while 50 fragments were identified from the larger samples. In general the fragment count for charcoal was low from these features.

There are inherent problems in re-constructing the environment at the time of use of the site due to the low quantity of samples and charcoal fragments identified from the assemblages. Keepax concludes that, when working in a temperate climate, at least fifty samples should be identified from an archaeological site, to make it a viable

charcoal study, with a minimum of 25 samples (Keepax 1988). Notwithstanding the charcoal sample numbers, it is clear that the charcoal results coupled with the wood analysis throw up some interesting results and trends in relation to wood selection and use and woodland cover in the late Bronze periods in Co. Offaly.

A number of wood taxa cannot be identified to species or sub-species level anatomically. Sessile oak *(Quercus petraea)* and pedunculate oak *(Quercus robur)* are both native and common in Ireland and the wood of these species cannot be differentiated on the basis of their anatomic characteristics. English elm *(Ulmus procera)* and wych elm *(Ulmus glabra)* cannot be separated by their wood structure and identifications of elm are shown as *Ulmus* spp. There are also two species of birch (*Betula pendula* and *Betula pubescens*) and several species of willow therefore the identifications are given as *Betula* spp and *Salix* spp respectively. *Prunus* includes blackthorn (*Prunus spinosa*) and cherry (*Prunus padus/avium*) and sometimes it is difficult to differentiate between the different species of *Prunus* spp.

Description of the feature types

Russagh 2 comprised a burnt mound which overlay a trough. This trough had a post hole in each corner which suggested it had been lined. The burnt spread contained fragments of red brick and which showed it had been heavily disturbed in the post-medieval period. The burnt spread was cut by a field boundary running roughly northeast–southwest and a stone lined drain running roughly parallel. These features suggested that the land had been used subsequently used for agricultural purposes. The spread C6 has been dated to the late Bronze Age (Cal 1118–923BC) (QUB, Appendix 2.4).

Results

Sixty one charcoal fragments were identified from one sample submitted for dating and environmental re-construction and woodland use. The charcoal is related to a spread associated with burnt spread activity and dated to the late Bronze Age. Later agricultural features were also present at the site. The fragment count of each taxon represented in the samples is given below in Figure 1 and Table 1. There was a wide range of taxa identified from the assemblage including hazel, alder, oak, ash, willow, pomoideae, elm, blackthorn, cherry, and birch.

Figure 1: All taxa identified from the charcoal samples analyzed

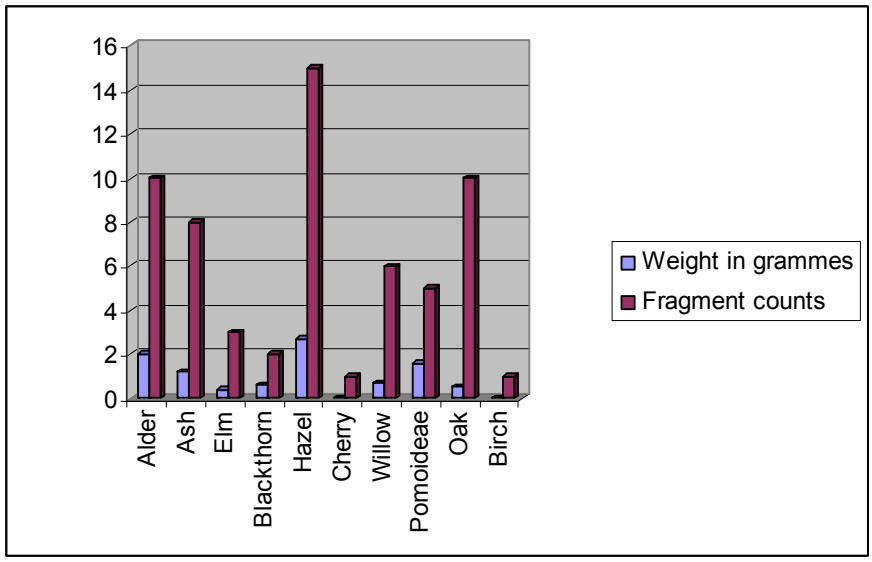

Table 1: Identifications from charcoal from Russagh 2

Site no.	Context no.	Context type	Sample no.	Species	Date & Comment
A016/057	6	Spread	2	Hazel(15f*, 2.7 g*), Oak (10f, 0.5g), Birch (1f, 0.01g), Blackthorn (2f, 0.6g), Pomoideae (5f, 1.6g), Ash (8f, 1.2g), Alder (10f, 2g), Willow (6f, 0.7g), Cherry (1f, 0.01g), Elm (3f, 0.4g)	1181–923BC. Hazel brushwood 13yrs and oak brushwood 10yrs

*g = grammes
* f = fragment count

Discussion and Conclusions of Charcoal and wood assemblage

Wood types identified in the assemblages

There were ten taxa types present in the charcoal remains. The range of taxa identified from the features analysed included large trees such as oak, elm and ash, medium sized trees (alder & birch) and smaller scrub or hedgerow trees (hazel, willow, blackthorn, cherry & pomoideae). Willow, birch and alder trees and shrubs are generally associated with wetland areas.

The charcoal is most likely related to wood selection in relation to firewood used at the site in the late Bronze Age.

The results suggest that there was a wide variety of woodland types and habitats surrounding the site during the late Bronze Age period at Russagh 2. The inhabitants of the sites had access to young oak trees as well as ash and elm trees. Scrub like taxa such as cherry, blackthorn young hazel and pomoideae were also present in the surrounding landscape and accessible. Wetland areas were also located close to the site as indicated by the presence of birch, willow and alder trees.

Further analysis, discussions and comparisons of results will form part of a final integrated charcoal and pollen study of the sites and the surrounding environment on this scheme which is being undertaken as part of the authors PHD thesis. These results will be published accordingly.

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RADIOCARBON DATING RESULTS
RUSSAGH 2

CHRONO LABORATORY, QUEENS UNIVERSITY BELFAST

Colette Rynhart
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Rep. of Ireland
VAT No. IE8288812U

^{14}CHRONO Centre
Queens University Belfast
42 Fitzwilliam Street
Belfast BT9 6AX
Northern Ireland

Radiocarbon Date Certificate

Laboratory Identification: UBA-9163
Date of Measurement: 2008-05-22
Site: A016/057 Russagh Co.Offaly
Sample ID: S1 C6
Material Dated: Hazel
Pretreatment: AAA
Submitted by: IAC

^{14}C Date: 2850±32
AMS δ^{13}C: -29.8

Information about radiocarbon calibration

```
            RADIOCARBON CALIBRATION PROGRAM*
                      CALIB REV5.0.2
        Copyright 1986-2005 M Stuiver and PJ Reimer
*To be used in conjunction with:
Stuiver, M., and Reimer, P.J., 1993, Radiocarbon, 35, 215-230.
          Annotated results (text) - -
          Export file - c14res.csv
```

```
S1 C6
UBA-9163
Radiocarbon Age BP   2850 +/-   32
Calibration data set: intcal04.14c                  # Reimer et al. 2004
  % area enclosed       cal AD age ranges              relative area under
                                                     probability distribution
  68.3 (1 sigma)     cal BC 1053- 972                        0.829
                            959- 937                        0.171
  95.4 (2 sigma)     cal BC 1118- 923                        1.000
```

```
 References for calibration datasets:
PJ Reimer, MGL Baillie, E Bard, A Bayliss, JW Beck, C Bertrand, PG Blackwell,
  CE Buck, G Burr, KB Cutler, PE Damon, RL Edwards, RG Fairbanks, M Friedrich,
  TP Guilderson, KA Hughen, B Kromer, FG McCormac, S Manning, C Bronk Ramsey,
  RW Reimer, S Remmele, JR Southon, M Stuiver, S Talamo, FW Taylor,
  J van der Plicht, and CE Weyhenmeyer (2004), Radiocarbon 46:1029-1058.

Comments:
* This standard deviation (error) includes a lab error multiplier.
** 1 sigma = square root of (sample std. dev.^2 + curve std. dev.^2)
** 2 sigma = 2 x square root of (sample std. dev.^2 + curve std. dev.^2)
where ^2 = quantity squared.
[ ] = calibrated range impinges on end of calibration data set
0* represents a "negative" age BP
1955* or 1960* denote influence of nuclear testing C-14

NOTE:  Cal ages and ranges are rounded to the nearest year which
       may be too precise in many instances.  Users are advised to
       round results to the nearest 10 yr for samples with standard
       deviation in the radiocarbon age greater than 50 yr.
```

OSTEOARCHAEOLOGICAL REPORT
OF
ANIMAL BONES
FROM A016/057 RUSSAGH 2,
N6 ATHLONE TO KILBEGGAN ROAD SCHEME
COUNTY OFFALY

MOORE GROUP

ANIMAL BONE REPORT PREPARED FOR IAC LTD

AUTHOR: CAMILLA LOFQVIST,
OSTEOARCHAEOLOGICAL SERVICES SECTION

DATE: OCTOBER 2007

Non-Technical Summary

This report describes the results of the osteoarchaeological analysis of animal bones retrieved during archaeological work carried out at A016/057 E2683 Russagh 2, along the N6 Athlone to Kilbeggan Road Scheme, Co. Offaly. The author undertook the bone analysis for the Osteoarchaeological Services Section of Moore Group (Moore) on behalf of the client, IAC Ltd.

The bone analysis was commissioned in order to get an osteoarchaeological aspect of the development site and to see if the bone material could provide additional information on the interpretation of the site. The purpose was also to broaden the understanding of animal consumption and animal husbandry at the site, through the osteological study of the animal remains.

A total of eight fragments from seven anatomical units were retrieved. The bones were in a generally poor condition and had a total weight of 79g. The sample contained bones from two animal species. The animals identified were: cattle and sheep/goat. Due to difficulty in differentiation, sheep and goat bones have been analysed as one group (caprinae).

Introduction

The Osteoarchaeological Services Section of Moore Group was commissioned to undertake an osteoarchaeological analysis of disarticulated animal bones retrieved during archaeological work at A016/057 Russagh 2, N6 Athlone to Kilbeggan Road Scheme, Co. Offaly. The osteoarchaeological analysis was carried out on behalf of IAC Ltd.

The purpose of this report is to broaden the understanding of animal consumption and animal husbandry at the site, through the osteological study of the animal remains. The aim is to use the bones as a means of archaeological interpretation of the site, either to support suggested theories or to point to other possible interpretations of the cultural heritage. As the osteological materials contain a large quantity of information; it is important from the start, to define the type of information that is going to be collected. The data gathered from this report was based on five different variables:

- Species distribution
- Anatomical distribution
- Age distribution
- Sex ratios and size variations
- Cut-/gnaw-marks and disease distribution.

In order to enable comparisons between the different materials it is important to be consistent in the use of analysis methods. If this is not fulfilled, the results would be impossible to compare. The osteological methods used in this report are presented in the section below.

Methodology

Identification of the bones was made by reference to Sisson and Grossman *The anatomy of the Domestic Animals* (Getty 1975), Schmid *Atlas of Animal bones* (1972), Hillson *Teeth* (1996), During´s *Bildkompendium i Animalosteologi* (unpubl) and a comparative collection of bones belonging to the author. A systematic bird bone identification was made by reference to Cohen & Serjeantson *A Manual for the Identification of Bird bone from Archaeological Sites* and where possible, the bones were identified to family level.

During analysis of the material, all fragments were counted and identified to species, anatomical unit, part of anatomical unit, side and fusion stage. Pathology and cut/gnaw marks were also examined. Quantification was based on three methods:

NISP: Number of Identified Specimens. Indicates the total number of fragments found. The NISP is decided by different factors like the age of the animal, the size of the animal and how well the preservation was at the place where the bones were deposited.

MNI: Minimum Number of Individuals. Indicates the minimum number of individuals from every species that were present in the material. The MNI is calculated on the specimen of the most abundant skeletal element present, taking left and right side in consideration, as well as looking at the age of the animal. However, it is important to point out that MNI is only an estimate.

MNE: Minimum Numbers of Elements. Indicates the minimum number of anatomical units that are present and what side they are from. MNE is used to calculate MNI and is used in the Fusion data tables. To allow for a young individual to grow the bones from a juvenile at birth are made up of several different parts. When the individual gets older the different parts grow together and form one bone. The parts of the bone grow together at different age-stages and this makes it possible to estimate the age of an animal. This means that three bone fragments can be part of the same bone element. For example: Proximal and distal epiphyses fused with the diaphysis. To avoid getting a higher MNE all loose epiphyses have to be paired with all unfused diaphysis.

Age is based on fusion data and tooth eruption. Habermehl (1961) and Silver (1969) have been used to determine stages of fusion while Schmid (1972) and Hillson (1996) have been used to determine tooth eruption data. It should be noted that bone elements from juveniles are often under-represented in bone materials, because they are very fragile and very easy to break.

Different formula are used to calculate Estimated Shoulder Heights (ESH) for the different species. Matolsci (1970) and Fock (1966) are used to estimate height of withers for cattle while Teichert (1975) is used for sheep.

The average height of withers and average weight of the meat-producing animals has increased from Bronze Age to Modern time. For example, cattle during medieval times had an average height of 1.05m but by the late 18th century had this increased to an average height of 1.35m (Davis 1987, 178). Along with size, the average weight of the animals had increased. The dressing-out weight for cattle and caprinae is 50% of the animal's total, live weight. The dressing-out weight for pig is 80% of the animal's total weight (McCormick 1997, 200). The size figures of cattle are based on Davis (1987, 178).

The genders of the animals are estimated from measurements of the horncore and the coxae. For cattle, Armitage & Clutton Brock (1976) is used for the estimation based on the horncore and Vretemark (1997) for the estimation based on the coxae. For caprinae Vretemark (1997) is used for the coxae. For pig and horse, the upper and lower Canine teeth are used to determine the sex.

The bones were examined for traces of gnawing, cut marks and pathology. The gnaw marks give information about how exposed the bones were after being discarded. A high percentage of bones with traces of gnawing indicate that the bones were left exposed so animals like dogs, rats and other scavengers had access to the bones.

The cut marks can give valuable information about how the carcasses were butchered. These marks can also give information about if the animals were kept for their milk, as a source of meat, or if they played an important part in industrial production of for example hide or bone objects.

Result
Eight bone fragments with a total weight of 79g were submitted for examination. These were studied and identified to species when possible.

From these, two fragments (25%) were not possible to identify to species as the bones were too fragmented. The remaining six fragments (75%) from five anatomical units (e.g. two fragments of the same femur were counted as a MNE of one) were identified and divided into species (Table 1).

The total number of individual pieces of bone (NISP), anatomical units (MNE) and the total weight identified to species.					
Group	**NISP**	**NISP in %**	**MNE**	**Weight in g**	**Weight in %**
Fragments identified to species	6	75%	5	75	94.9%
Unidentified fragments	2	25%	2	4	5.1%
Total:	8	100%	7	79g	100%

Table 1: Total NISP, MNE and weight identified to species.

Bones from two animal species were identified in the material: *Bos taurus* (cattle) and *Ovis aries/Capra hircus* (sheep/goat) (Table 2, Appendix 1).

Sheep (Ovis) and goat (Capra) are difficult to distinguish from each other. For this reason, and due to the fragmented condition of the bones, these two species have been analysed together as one group (Caprinae). However, it is indicated in old Irish law-texts that the goat was never common and that the animal never played an important roll in the animal husbandry during early Irish farming (Kelly 1998, 78).

Showing the total number of fragments (NISP), total number of anatomical elements (MNE), total number of individuals (MNI) and total weight for all species present.								
Species	**NISP**	**NISP in %**	**MNE**	**MNE in %**	**MNI***	**MNI in %**	**Weight**	**Weight in %**
Cattle	4	66.7%	3	60%	1	50%	65	86.7%
Sheep/ goat	2	33.3%	2	40%	1	50%	10	13.3%
Grand Total:	6	100%	5	100%	2	100%	75g	100%

Table 2: NISP, MNE, MNI and weight for all species.
(*MNI=Minimum Number of Individuals)

The condition of the bone was in general very poor and none of the bones were complete. The average weight per fragment of the six fragments identified to species was 12.5g. The average weight of the unidentified fragments was only 2g per fragment. This illustrates the high fragmentation of the unidentified fragments. Five of the fragments had cut-marks.

Cattle; Bos
Cattle dominated the assemblage at Russagh 2 in terms of bone fragments (NISP), MNE present on the site and weight. In total, four bone fragments from three bone elements were retrieved. The total weight of the cattle bone came to 65g (c. 87% of the bones identified to species) and the MNI was 1; an adults (Table 2).

The fragments identified were a femur, rib and a lumbar vertebra. From a fused trochanter on the femur it can be determined that this individual was older than 3.5 years at time of death, as that is the time of fusion for this bone element.

All four bone fragments (c. 100% of the total number of bone) had traces of cut-marks. The costae and the femur had been chopped up while the lumbar fragment displayed fine cuts across the process.

Cattle were valued for their meat, hides, milk and traction power. They are less adaptable than sheep in areas of sparse, low-quality grazing, or in arid regions, or in mountain regions.

Sheep/goat; Ovis/Capra
Two fragments of caprinae were retrieved from Russagh 2. The total weight of the caprinae bones were 10g. The MNI was 1; a possible adult or semi-adult. This individual was older than 20–24 months at time of death as the distal epiphysis of the mp had fused. Both caprinae fragments were in a bad condition.

Unidentified fragments
Two fragments with a total weight of 4g were not possible to identify to species. One of these fragments displayed traces of having been chopped up. The unidentified fragments were in a generally poor and fragmented condition and the average weight of each fragment was 2g.

Summary
A total of eight fragments from seven anatomical units were retrieved from Russagh 2. The bones were in a generally poor condition and had a total weight of 79g. Two fragments (25%) were not possible to identify to species as the bones were too fragmented. The remaining six fragments (75%) from five anatomical units were identified and divided into species. The sample contained bones from two animal species. The animals identified were: cattle and sheep/goat.

No definite conclusions could be made from the Russagh 2 assemblage due to the limited size of the bone sample.

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Appendix 1 Animal Bone Database

Bag	Sample No	Context	Animal	Element	Part of Element	NISP	MNE	Side	Pr epi	P 1/3	M 1/3	D 1/3	Di epi	J	M / F	C	G	P	Burnt	Description	Meas	Comment	weight
1	3	2	Bos	Ve lumb	Pros cost	1	1	-	-	-	-	-	-	-	-	1	-	-	-	C: fine cuts across	-	-	5
1	3	2	Bos	Costae	Corpus frag	1	1	-	-	-	-	-	-	-	-	1	-	-	-	C: chopped up	-	-	20
1	3	2	Bos	Femur	Pro dia frag	2	1	Sin	-	1	1	-	-	-	-	2	-	-	-	C: chopped up dia	-	-	40
1	3	2	O/C	Mt	Prox dia+epi frag	1	1	Sin	F	1	-	-	-	-	-	-	-	-	-	-	-	In bad cond	5
1	3	2	O/C	Mp	Dist dia+ epi frag	1	1	-	-	-	-	1	F	-	-	-	-	-	-	-	-	In bad cond	5
1	3	2	Unid.	Unid.	frag	2	2	-	-	-	-	-	-	-	-	1	-	-	-	C: one chopped up dia	-	-	4

APPENDIX 3 LIST OF RMP SITES IN THE AREA

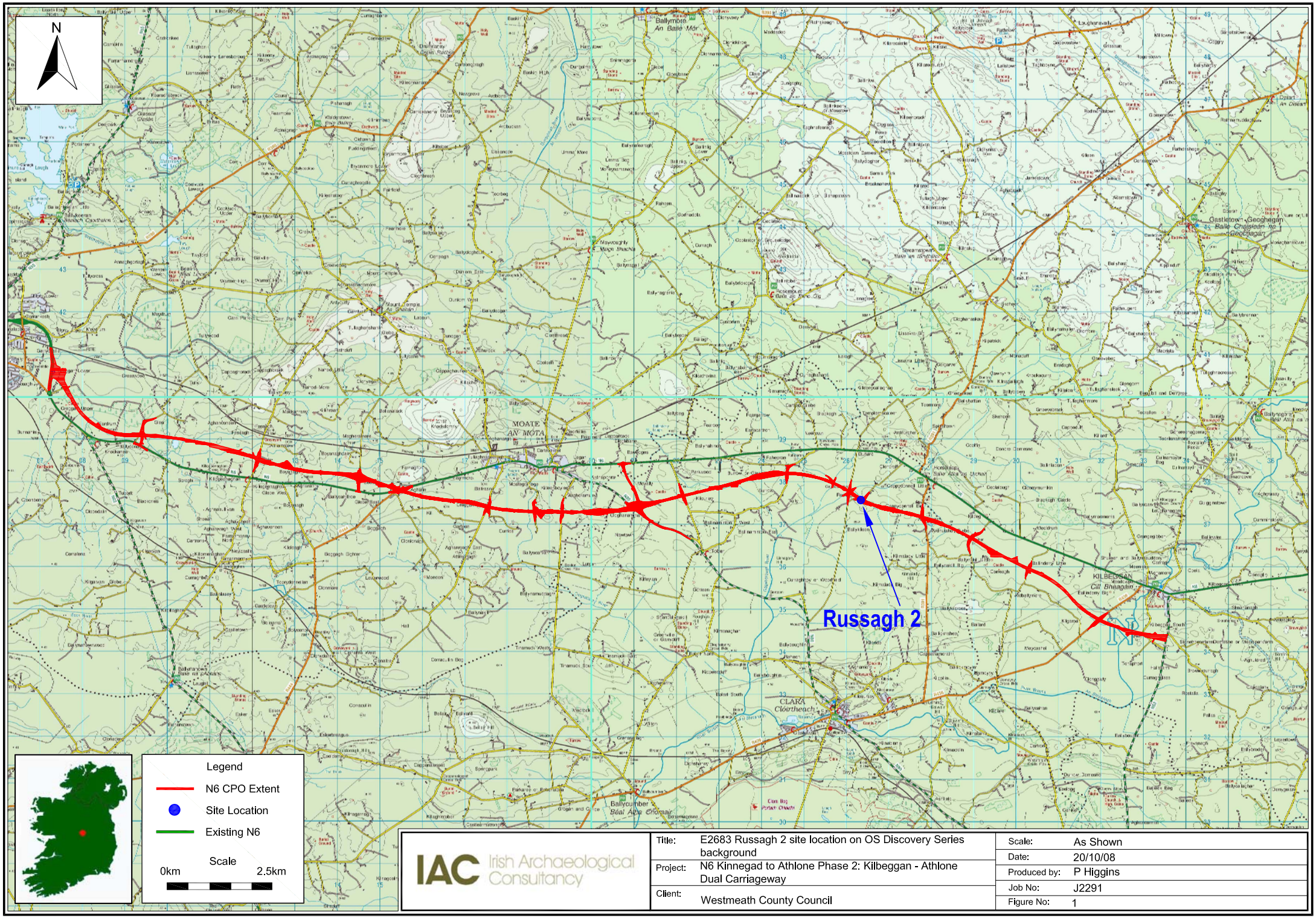
RMP No	Description
OF002-009	Earthwork site
OF002-010	Delisted
OF002-011	Delisted
OF002-012	Enclosure site
OF002-018	Enclosure site
OF002-019	Horizontal watermill site
OF002-020	Delisted
OF002-021	Ringfort - Delisted

See Figure 2 for location.

APPENDIX 4 LIST OF N6 SCHEME SITE NAMES

Site Name	Ministerial Direction No.	NMS Registration Number
Seeoge 2	A016/007	E2635
Moyally 7	A016/015	E2643
Kilcurley 1	A016/019	E2647
Cappydonnell Big 1	A016/025	E2653
Ardballymore 2	A016/028	E2656
Creggan lower 1	A016/030	E2658
Creggan lower 2	A016/031	E2659
Williamstown 1	A016/032	E2660
Williamstown 3	A016/033	E2661
Williamstown 4	A016/034	E2662
Boyanaghcalry 1	A016/035	E2663
Seeoge 1	A016/036	E2664
Aghafin 1	A016/037	E2665
Cregganmacar 1	A016/038	E2666
Cregganmacar 2	A016/039	E2667
Cregganmacar 3	A016/040	E2668
Curries 1	A016/041	E2669
Curries 2	A016/042	E2670
Culleenagower 1	A016/043	E2671
Moyally 2	A016/044	E2672
Moyally 1	A016/046	E3274
Moyally 3	A016/047	E2674
Moyally 5	A016/048	E2675
Moyally 6	A016/049	E2676
Tober 1	A016/051	E2677
Burrow or Glennanummer 1	A016/052	E2678
Burrow or Glennanummer 2	A016/053	E2679
Burrow or Glennanummer 3	A016/054	E2680
Russagh 4	A016/055	E2681
Russagh 1	A016/056	E2682
Russagh 2	A016/057	E2683
Russagh 3	A016/058	E2684
Kilbeg 1	A016/059	E2688
Kilbeg 2	A016/060	E2689
Kilbeg 4	A016/062	E2691
Kilbeg 5	A016/063	E2692
Kilbeg 6	A016/064	E2693
Kilbeg 7	A016/065	E2694
Correagh 1	A016/066	E3374
Ballinderry Little 1	A016/067	E2695
Ardballymore 1	A016/068	E2696
Kilgaroan 1	A016/069	E2697
Kilgaroan 2	A016/070	E2698
Kilgaroan 3	A016/071	E2699
Kilgaroan 4	A016/072	E2700
Kilgaroan 6	A016/074	E2702
Ballinderry Big 1	A016/076	E3275
Ballinderry Big 2	A016/077	E3276
Ballinderry Big 3	A016/078	E3277
Tonaphort 1	A016/079	E3278
Tonaphort 2	A016/080	E3279
Tonaphort 3	A016/081	E3280

Site Name	Ministerial Direction No.	NMS Registration Number
Kilbeggan South 1	A016/082	E3281
Kilbeggan South 2	A016/083	E3282
Kilbeggan South 3	A016/084	E3283
Cregganmacar 4	A016/085	E2703
Williamstown 2	A016/086	E2704
Kilbeg 8	A016/087	E3966



IAC Irish Archaeological Consultancy

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Project:	N6 Kinnegad to Athlone Phase 2: Kilbeggan - Athlone Dual Carriageway
Client:	Westmeath County Council

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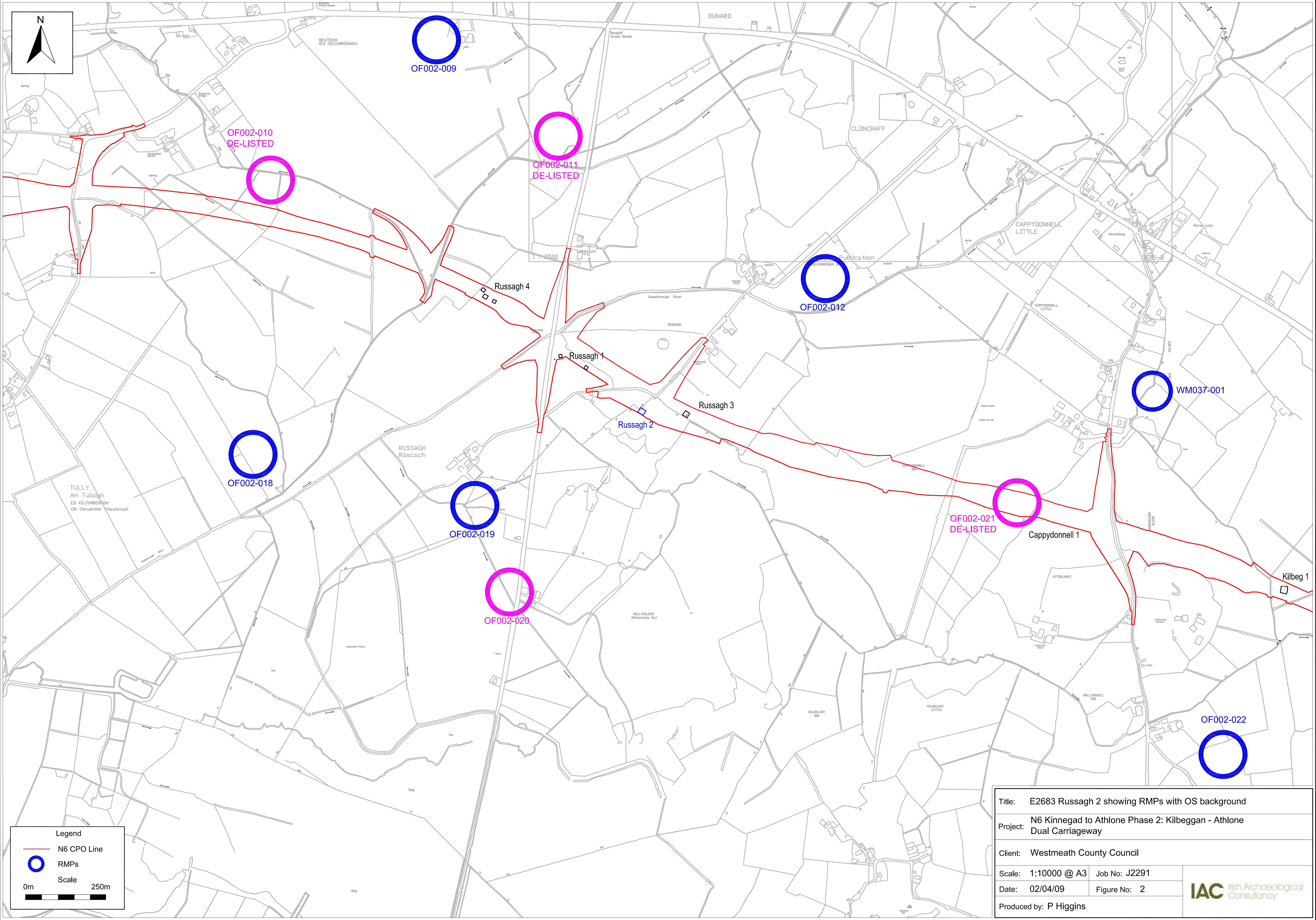
Produced by:	P Higgins
Job No:	J2291
Figure No:	1



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Project: N6 Kinnegad to Athlone Phase 2: Kilbeggan - Athlone Dual Carriageway

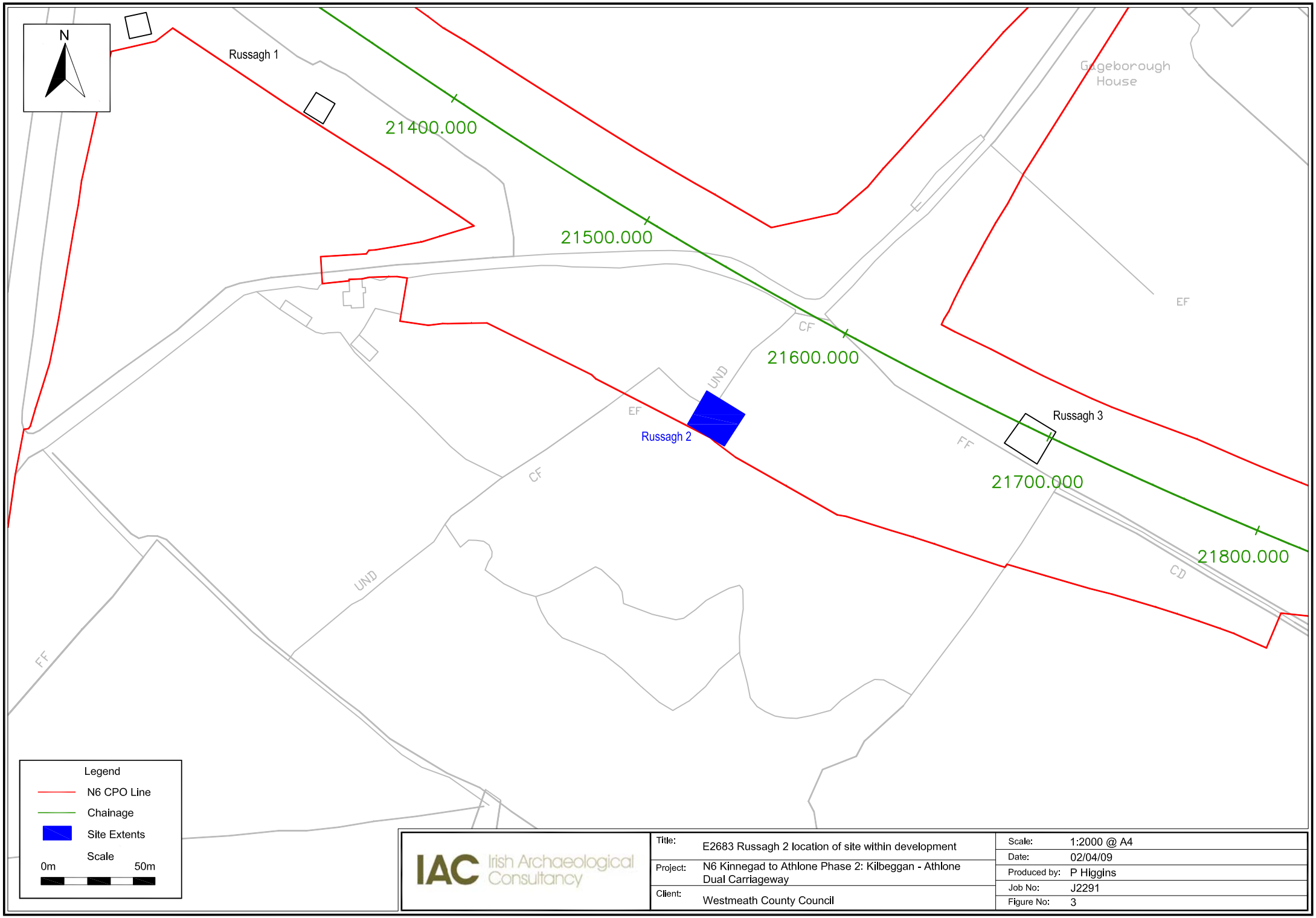
Client: Westmeath County Council

Scale: 1:10000 @ A3 | Job No: J2291

Date: 02/04/09 | Figure No: 2

Produced by: P Higgins

IAC Irish Archaeological Consultancy



IAC Irish Archaeological Consultancy

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Client:	Westmeath County Council

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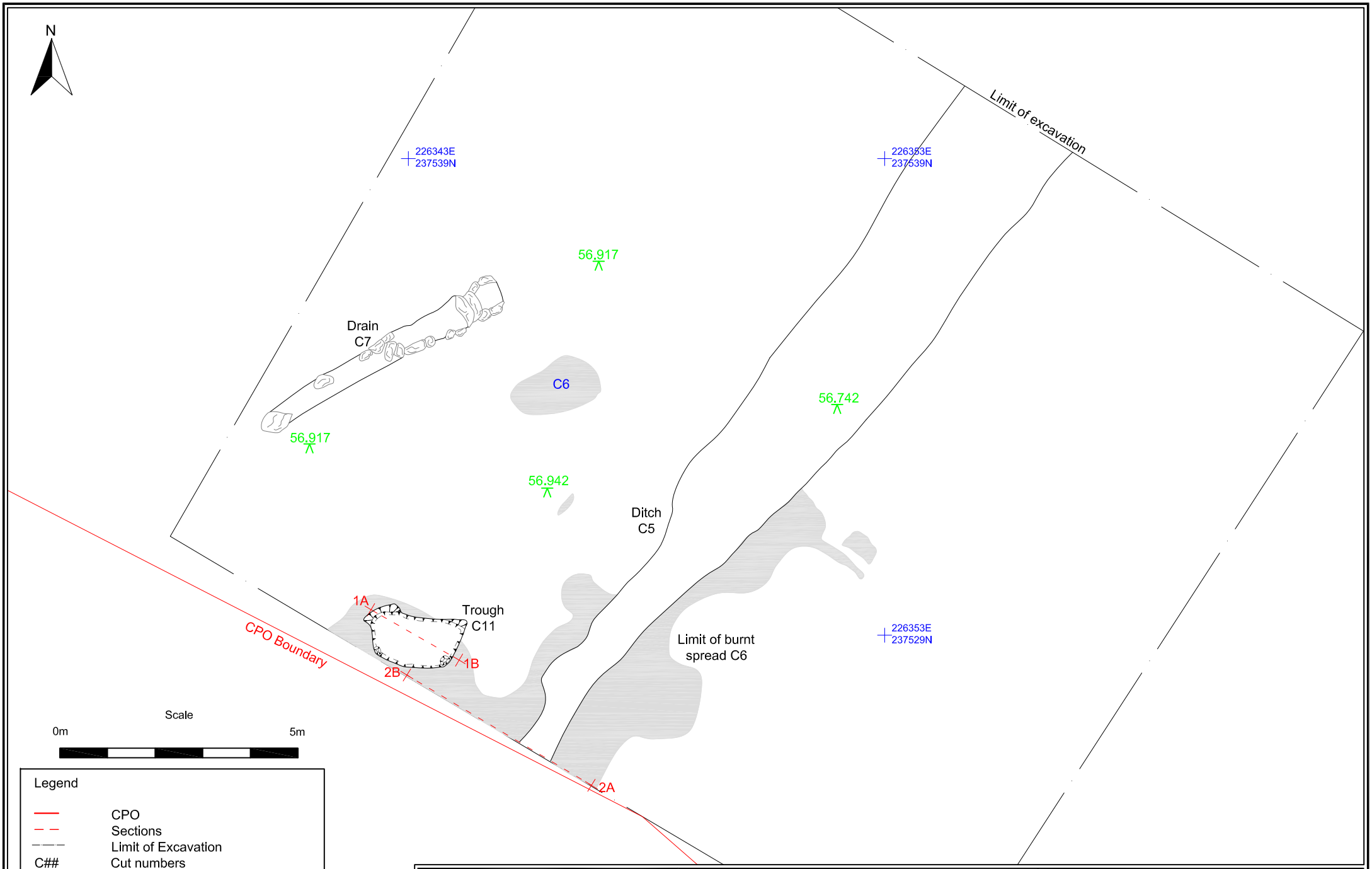
Job No:	J2291
Figure No:	3



IAC Irish Archaeological Consultancy

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Project:	N6 Kinnegad to Athlone Phase 2: Kilbeggan - Athlone Dual Carriageway
Client:	Westmeath County Council

Scale:	1:100 @ A4
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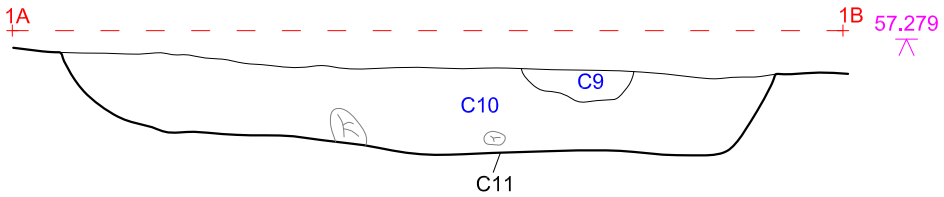
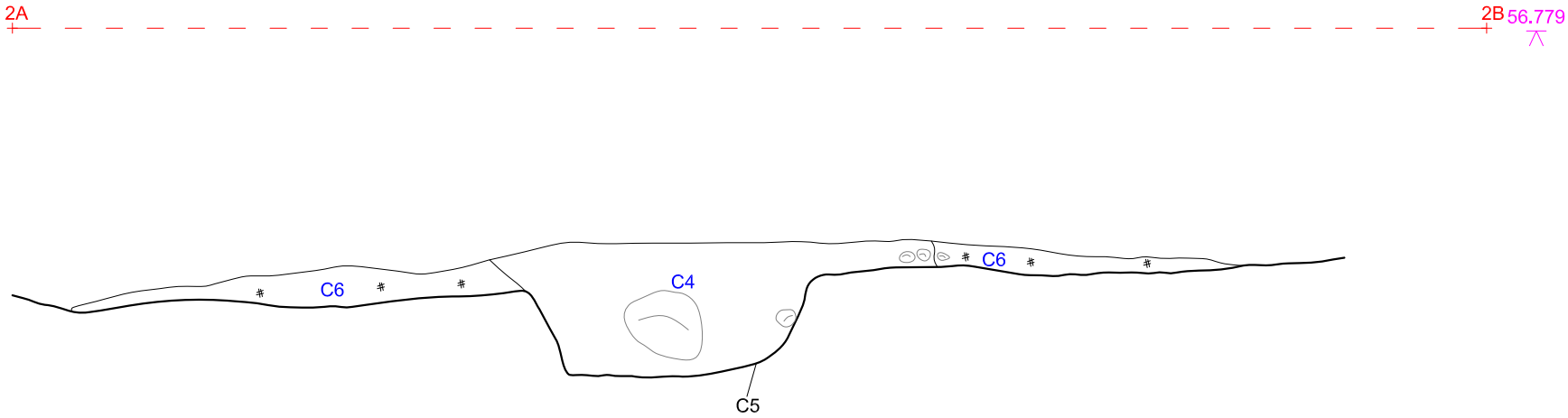
Job No:	J2291
Figure No:	4

Russagh 2
Southwest facing section of C11



Russagh 2
Northeast facing section of C5 & C6



Scale

0m 1m

Legend

C##	Cut numbers
C##	Fill Numbers
	Stone
#	Charcoal
###.##	Reduced Levels

IAC Irish Archaeological Consultancy

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Project:	N6 Kinnegad to Athlone Phase 2: Kilbeggan - Athlone Dual Carriageway
Client:	Westmeath County Council

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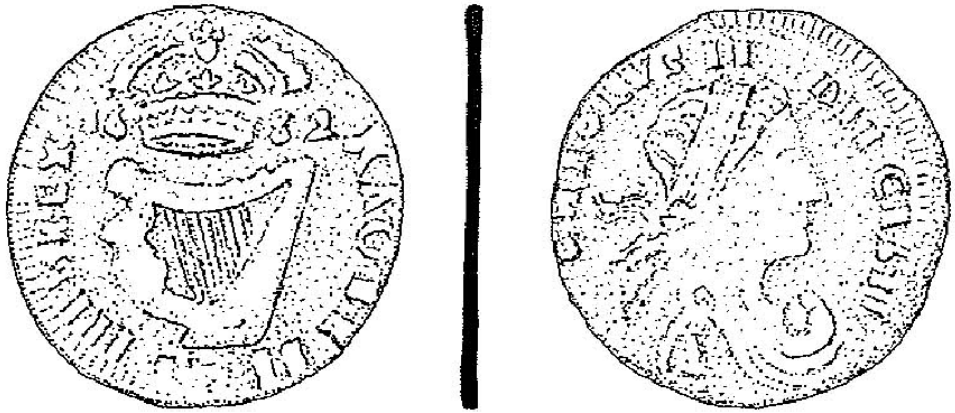
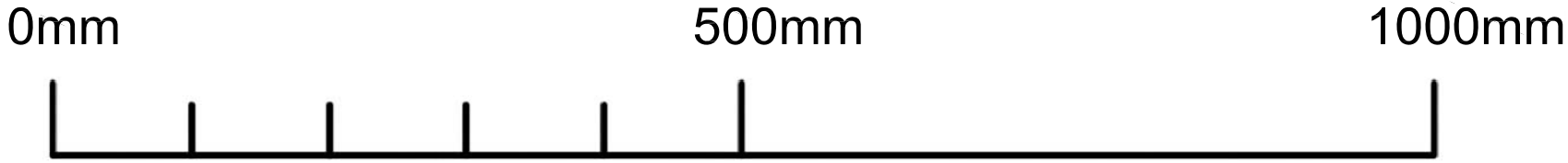
Figure No:	5

E2683:2:81





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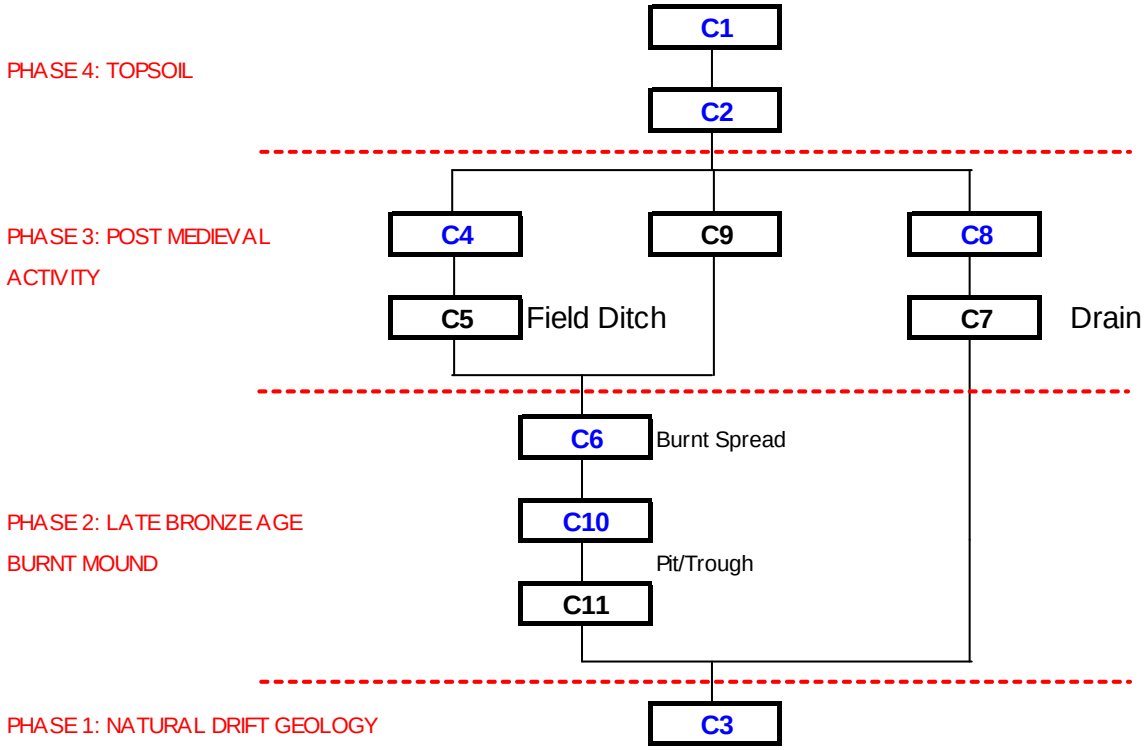

CXXX = SPREADS AND FILL CONTEXTS
CXXX = CUT CONTEXTS

IAC Irish Archaeological Consultancy

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Client:	Westmeath County Council

Scale:	N/A
Date:	23/04/09
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