N11 Gorey to Arklow Link:

Archaeological Resolution

FINAL REPORT

Ministerial Direction A003/045

Registration Number E3501

Site 41, Ask Townland, Co. Wexford

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Job No.:	05/1177
Client:	Wexford County Council
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Valerie J. Keeley Ltd

SUMMARY

This report comprises the final results of the archaeological excavation of Site 41, in the townland of Ask, Co. Wexford. The excavation was undertaken as part of the archaeological programme for the N11 Gorey to Arklow Link. The excavation was conducted by Eoghan Moore under Ministerial Direction for Valerie J Keeley Ltd from 18th July to 12th August 2005.

Excavations uncovered a horseshoe shaped deposit of burnt mound material together with a trough and pit linked by a channel. Two radiocarbon dates indicate a date range of Cal BC 1612 – 1409 and Cal BC 755 – 402. A small assemblage of domestic lithics, demonstrate technology popular in the Neolithic and Bronze Age periods.

All archaeological work is now complete for this site and this report constitutes the final report on this excavation. A digital copy of the archive is available at the post excavation offices of Valerie J Keeley Ltd., Brehon House, Kilkenny Road, Castlecomer, Co. Kilkenny. The original paper archive for this excavation will rest with the Department Heritage Environment and Local Government.

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1.0 INTRODUCTION

1.1 Project Background

The project comprised of the construction of dual carriageway to replace the existing N11 between Clogh and the Arklow bypass and included a bypass of Gorey Town. The scheme also included the construction of approximately 1.5 km of single carriageway, the Arklow Link Road. The southern section, Clogh to Tinnock opened on 4th July 2007, the remaining section, Tinnock to Arklow was completed in September 2007 and the scheme was officially opened on 13th September, 2007.

An intensive investigation strategy consisting of desk-based archaeological assessment and a walkover study was undertaken to assess the impact of the scheme on the archaeological heritage[1]. The development was designed to avoid all the known archaeological monuments identified within the scheme's proximity. This archaeological assessment was further informed by both a geophysical and an underwater survey. In January 2005, Irish Archaeological Consultancy Ltd undertook test excavations to ensure the investigation and preservation of sites along the route, (A003/002 Mullins G 2005[2].). As a result, a total of 53 previously unknown sites were identified

Full excavation of the site began 18th July 2005, and was carried out by Valerie J Keeley Ltd on behalf of Wexford County Council.

1.2 Aims & Objectives

Valerie J. Keeley Ltd. was appointed by Wexford County Council to excavate archaeological sites first identified during a programme of archaeological testing (Mullins, 2005).

The scope of the archaeological measures was:

- To strip the topsoil from an area measuring approx 913m^2 along the road corridor and locate the previously identified archaeological features and any other archaeological features that may be present in this area.

[1] Sutton, M. (2003) Archaeological Heritage, Architectural Heritage and Cultural Heritage, Environmental Impact Statement (EIS), N11 Gorey–Arklow Link, County Wexford. Unpublished report for Margaret Gowen & Co
[2] Mullins, G. (2005) *Irish Archaeological Consultancy Ltd*. Archaeological Assessment (Site Specific Area 6): N11 Gorey-Arklow Link, Co. Wexford

- Photograph and plan any archaeological features or potential archaeological features.
- Excavate all archaeological features identified, record their contexts and sections; retaining samples where necessary, in order to resolve them by means of preservation by record.
- Reinstatement of excavated areas where required.

The proposed excavation was carried out following the initial archaeological assessment by The Irish Archaeological Consultancy Ltd and completion of the centreline testing (Mullins, 2005). The goal of this project being to preserve by record the archaeological site/s exposed within the take of the proposed route.

These works took place in accordance with the Directions issued by the Minister for Environment, Heritage and Local Government under Section 14A(2) of the National Monuments Acts (1930 – 2004), in accordance with the terms of the Contract between Kilkenny County Council and Valerie J Keeley Ltd and according to the terms of the Code of Practice agreed between the National Roads Authority and the Minister of Arts, Heritage, Gaeltacht and the Islands. The excavations also complied with the Policy and Guidelines on Archaeological Excavation (Govt of Ireland 1999) and were overseen by the Project Archaeologist.

1.3 Site Location & Access

The site was located along the line of the proposed N11 Gorey to Arklow Link. This part of the development consists of the construction of 23 km of high quality dual carriageway, which will link into the proposed Arklow bypass and bypass Gorey town.

The site, (A003/045, E3484, Site 41), was located 0.75km west of the summit of Ask Hill and some 3.7km north northeast of Gorey town, to the east of the main Rosslare to Dublin railway line (NGR 317522, 162769N, chainage 13600-13625, 69m OD, (Figures 1-2 & Plate 1).. The field containing the site was under pasture while the area of the site was boggy. Access was through existing fields.

1.4 Project Timescale

Topsoil was stripped from this site on 18th July 2005. Excavation was completed on the 12th August 2005. The site was made safe following the work.

1.5 Summary of Archaeological Significance

Excavations at this site uncovered a horseshoe shaped deposit of burnt mound material a trough and water pit. Two radiocarbon dates were obtained indicating a date ranges of Cal BC 1612 - 1409 (UBA 8245) and Cal BC 755 – 402 (UBA 8244).

2.0 BACKGROUND

2.1 Geology & Topography

(This information is derived from the archaeological assessment reports prepared by Irish Archaeological Consultancy March 2005). The general topography of the area through which the N11 Gorey to Arklow Link passes can be characterized as coastal lowland. To the west, the area is dominated by the eastern foothills of the Blackstairs and Wicklow Mountains. The route passes between the foothills and some outlying hills such as Ballyminaun Hill to the south of Gorey and Ask Hill / Gorey Hill to the northeast of the town. While much of the route is only 3 - 8 km from the sea the intervening undulating topography does not allow views of the coast.

The N11 Gorey to Arklow Link does not cross any significant watercourses. To the north of Ask Hill / Tory Hill small streams drain into the Inch and Clonough Rivers that flow into the Irish Sea via the Kilgorman River. Land to the east and south of Gorey are drained by the Banoge and Bracken Rivers that flow into the Irish Sea at Courtown via the Owenavorragh River.

Bedrock geology consists of Acid Volcanics which extend in a band from northeast of Gorey to the southwest, away from the study area. Specifically, these are a Campile Formation of Rhyolitic Volcanics with grey and brown slates. Solid geology of Ordovicians occupy most of the study area to the north of Gorey, toward Arklow. The drift geology consists primarily of glacial till from Marine sediments, with pockets around Gorey having little or no Drift cover. The geomorphology is primarily lowlands and high hills (c. > 100m < 300m) of boulder-clay.

The soils in this area consist primarily of gleys and grey-brown podzolics, which derive from glacial muds of Marine origin. These are mostly wet, mineral soils, which occur in flat to undulating lowland. For the most part the land of the study area has limited capability due to the poor drainage characteristic of the soil type and is predominantly used for pasture, however, the south and southwest facing slopes of Ask Hill are suitable for tillage and soft-fruit growing.

2.2 Historical Background

(This information is taken from Sutton, M. (2003) Archaeological Heritage, Architectural Heritage and Cultural Heritage, Environmental Impact Statement (EIS), N11 Gorey–Arklow Link, County Wexford. Unpublished report for Margaret Gowen & Co as part of the EIS, September 2003 (with additions by Freya Smith, Assistant Project Archaeologist)).

Gorey and its environs

The name Gorey is derived from the Irish *Gabhrach*, meaning the place of the goats. The town is a planned one, (WX007:033), built as part of the seventeenth century plantation of Wexford. It received its first charter of incorporation in 1619, when it was called the town of Newborough or Newtown. According to this charter the town was to consist of a sovereign, twelve burgesses and free common, modelled on the town of Cavan, (Hore 1900-11, vi, 611, quoted in Bradley & King n.d.).

The town was laid out on a grid pattern of *c*. 14 acres. The Main Street runs east to west through the centre, and the original town area stretches from Pearse Street to Church Lane, north to south; and Avenue to Church St., west to east. No physical remains of the seventeenth century town survive, although the tomb of Archbishop Ram, which dates to the seventeenth century, (1634), still stands in the graveyard within the town. The graveyard is located on the site of the original plantation parish church, (WX007:033-01; built 1610), in the southwest corner of the planned town; the present church on the site was built in 1861.

Although the town is best known as a seventeenth century planned town, there is some evidence that there was an Anglo-Norman settlement here in the thirteenth century. The evidence relates to a reference in 1296 of the payment of 13s from 'the community of the town (ville) of Gory', (Hore 1900-11, vi, 609, quoted in Bradley & King n.d.). However, nothing further is known of this settlement.

In common with other plantation towns, Gorey was protected by defences which appear, from the references, to be earthen. The fact that the town was captured easily in 1641 suggests that the defences were not particularly strong. The ramparts of the town are mentioned in passing in the Corporation records for 1708, while those of 1713 note the construction of a causeway along the rampart to the churchyard, (Hore 1900-11, vi, 618, 622). A fort at Gorey is also shown on the Down Survey Map of 1655-6 in the parish of Kilmaclogue to the west of the town. It is depicted surrounded by a wall, (Hore 1900-11, vi, 616, 618), which Loeber & Stouthamer-Loeber (1987) suggest was more likely to be made of sod than of stone.

The present parish of Gorey represents the old parish of Kilmakilloge and parts of Kilnahue and Kiltennal, (Grattan Flood 1916). While the towns foundation is non-ecclesiastical, the old parish church of Kilmakilloge or Kilmochilloge, (WX007:034), in Clonatin Upper was founded by St. Sillan or Silog in the Early Christian period, and was originally known as Cill mo Sillog, the church of Sillog. Some documentary sources, (Lewis 1837), claim that the now ruinous church in Clonatin was founded by St. Edan, stating that the placename may be a modification of Cluain-Edan, meaning 'the retreat or cell of St. Edan' or Aedan. However, the church is more likely to have flourished contemporaneously with the Church of St. Aedan of Ferns, and according to Grattan Flood (1916) the true meaning is 'the meadow of the furze'. Apparently, there are many references to furze on an estate map of Clonatin dating from 1786.

The church of St. Sillan was re-dedicated to St. Michael during the thirteenth century when it was attached to the Deanery and abbey of Ferns, and continued as such until 1560. In 1619 Thomas Ram, Protestant Bishop of Ferns and Leighlin obtained a Charter for the new town of Gorey, or Newborough as it then became known. In 1620 Bishop Ram transferred the Episcopal palace from Ferns to Gorey, calling his new residence Ramsfort, which became the seat of the Ram family following the restoration of the Cathedral at Ferns until their departure at the end of the nineteenth century. According to O'Donovan (1840) a second church existed near the Ram's residence at Gorey, but neither it nor its graveyard were visible at that time.

The church in Clonatin, indicated on the first edition six-inch map of the OS (dated 1841) as 'Kilmakilloge Church in ruins' sits close to Clonatin House, which was built as an auxiliary manor by a member of the Ram family in the eighteenth century. The house, burned in 1798 was later rebuilt, and its estate, over 288 acres, extended amongst others into the townlands of Ballyloughan and Kilmurry. According to local history one of the roads that led to the cemetery passed by way of the outbuildings of Clonattin House; a second had its entrance somewhere in the vicinity of Kilmurry Crossroads (FitzPatrick OP). Local tradition also recalls the existence of the 'Butchers Box', a hanging tree situated alongside the roadway amongst an aged group of trees beyond the entrance gates of Clonattin House and beyond a long line of trees that run parallel to the road from the Clonattin House entrance (FitzPatrick OP).

From title deeds connected with the Clonatin Estate it is recorded that William Plunket Esqr. and heirs were granted by King Charles 'the whole manor castles towns lands of the manor of Cloghleskin with the appurtenances and amongst those the said town and lands of Ballinclare, Ballybanogue, Ballyminaun, Coleshill, and Tuberneering…henseforth forever be reputed and called the Manor of Bewley' (FitzPatrick OP). A subsequent deed dated 20th August 1680 records that 'Sir Walter Plunket…(son and heir of the said William Plunket)…did grant bargain, sell, release and confirm onto the said Abel Ram all that and those the several Manors, towns, villages, lands, tenements, and Hereditaments in the Manor of Bewley…including the said lands of Ballinclare etc., to have and to hold to the same Abel Ram his heirs and assigns forever'.

The rebellion of 1798

Gorey figured prominently in the insurrection of 1798 (Harbison 1995). It was strategically placed on the main coast road to Arklow, one of only three routes open to the Wexford insurgents to spread the rebellion from their county (Whelan 1998). While in possession of the town from June 4th to 12th the Irish insurgent camp was on Gorey Hill, just outside the town to the southwest.

The rebellion covered the summer months of 1798, breaking out on 23rd May in the counties immediately around Dublin. News that forces had mobilised first reached Wexford by the 25th, and by the 26th the early stages of rebel mobilisation took place in central Wexford as forces raided the houses of local gentry and yeomanry members to secure arms (Gahan 1998). In a line from New Ross to Enniscorthy north to Gorey the movement was uncharacteristically strong. The organisation here was led on the parish and barony level by the sons of large tenant farmers or gentry (Gahan 1998). The strength of the movement here is reflected in its success, where by May 30th the United Irishmen of Wexford had taken possession of the entire county apart from a number of towns along the northern and western perimeter. These towns included Gorey.

The United Irish movement emerged in opposition to a political system rooted in sectarian privilege, (Whelan 1998), but from the 31st May to the 4th of June the rebellion had become exclusively a Wexford affair, as the rebellion was largely quashed elsewhere. On June 1st the Wexford rebels experienced their first setback as an advance party from Carrigrew marched north toward Gorey. Unexpectedly meeting with a detachment of militia moving south from the town a battle ensued in the fields around Ballyminaun Hill, repulsing the northern division of the Wexford rebel forces.

Taking definite steps to crush the rebellion in Wexford the government resolved to launch a three-pronged attack on north Co. Wexford; one of three columns under General Loftus was to march south through Gorey, which he reached by June 3rd. A combined militia army was led south from Gorey on June 4th under Loftus and Walpole, who had come from central Kildare through Carnew to Gorey, with the intention of attacking the rebel camp on Carrigrew. The rebels also broke camp and marched toward the approaching soldiers. A short distance outside Gorey Loftus and Walpole split forces; the latter was attached and defeated by the rebels who subsequently took control of the unguarded town at Gorey and set up camp on Gorey hill.

On the 5th June the largest government force to be dispatched to Wexford left Loughlinstown camp in south Dublin, under command of Lieutenant-General Needham. Needham took control of Arklow town by the evening of June 6th, while the northern division of the United Irishmen remained at base camp on Gorey Hill waiting for supplies of ammunition. The rebels finally made their attack on Arklow on June 9th, the most crucial battle of 1798, but failed to storm a vital town and returned to Gorey suffering heavy losses (Gahan 1998). They remained at Gorey until the 12th, when the entire unit moved to Limerick Hill further north. A detachment also set up camp at Aske Hill, east of Limerick Hill, to guard the approach to Gorey.

On June 19th Lieutenant-General Needham marched his forces from Arklow and captured Gorey without meeting any rebel opposition, before moving beyond to Oulart. The northern rebel divisions at this stage were retreating southwards to Vinegar Hill where they were defeated on June 21st bringing the Wexford rebellion essentially to an end.

Both houses of the Ram family, Clonatin and Ramsfort, were destroyed in the insurrection of 1798. At Clonatin the house was rebuilt on a new site (as indicated on the first edition map of the OS six-inch series) and the detached out-offices now at Clonatin occupy the site of the old house. The Ram family continued to reside at Clonatin until near the close of the nineteenth century, after which the property was held by the Earls of Courtown, and the lands sold in lots.

Perrymount townland, near Inch, also claims fame as the home of Anthony Perry, a Protestant member and influential leader in the 1798 rebellion. Previously a Lieutenant in the Coolgreany Yeomen Cavalry Corps, Perry resigned in protest against treatment of the people. He was later executed for his role in the rebellion on 12th of July, 1798, at Edenderry, Co. Offaly.

Inch, in terms of military history, was also the scene of a skirmish between the advanced guard of King William's army and the partisans of James II, on their retreat from the battle of the Boyne at which James forces were defeated.

Townland names

Townland names were taken down in the nineteenth century by the Ordnance Survey, at which time some were anglicised, some were translated while others were given entirely different names by the new landowners. The greatest number of townland names traversed by, or in the vicinity of the proposed realignment are anglicised Irish names such as Ballinclay or Kilmurry; examples of translated names include Ashwood and Hollyfort on the county boundary with Wicklow; Ramstown and Fortchester, along with Perrymount, are examples of the introduced English names of seventeenth century plantation or later settlers. By the time the OS collected placenames in the area in the 1840's, both the native Irish and introduced English forms would have been simultaneously in use in the area, although the Irish language itself in Wexford had ceased to be spoken by 1851.

Of the anglised Irish placenames a high ratio are cultural in origin, meaning they relate to human activity. Among generic cultural elements, by far the most numerous is baile (a town) and in Gorey barony over one quarter of the townland names contain baile as a prefix. Ballyloughlan is derived from both baile, meaning town and loch, meaning lake, so that it may translate to the town of the lake. Ballinclare contains the suffix clár, meaning a level piece of land, so that the townland may mean the town of the plain. Ballinclay is probably anglicised from baile na cliath, or the town or place of the hurdles. Ballyminaunhill contains the root word mín, for level; mínán subsequently means a small level place. Ballydermot contains a personal name, the town of Dermot, as may Ballyellin, although ellin may be derived from oileáin, for island. The prevalence of baile in placenames is an expression of the Gaelic influence that prevailed during the medieval period in Wexford. Placenames with the English suffix town, such as Ramstown, are much less common. Other English name elements include land, park (Parkbaun) and mount (Perrymount).

None of the names relate directly to pre-Christian monuments, a fact reflected in the almost complete lack of prehistoric monuments in the area. Names that do indicate archaeological activity in the landscape include those names referring to ringforts, such as Raheenagurren, which includes the root word *raheen*, which means little rath or fort. The gurren element of the townland could be anglicised

from garran, which means a shrubbery or garden. Killybegs is anglicised from *cealla-beaga*, the little churches; Kilmurry is so called from a dedication to the Blessed Virgin, *Cill-Mhuire*, Our Lady's or Mary's Church. Reference to a well exists in the Irish Toberduff, derived from *tobar dubh,* meaning the black well. Anglo-Norman heritage may be represented by the old English name Frankfort, which possibly meaning the fort of the French or Gall. Tinnock is anglised from *Tigh na cnoic*, the house of the hill.

Many townlands are also anglicisations of Irish names that refer to topographical and agricultural aspects of the landscape. Ask, may derive from eisc, an Irish word for water or a stream channel. Courteencurragh, likely includes cúirtín, little court and curragh, meaning marsh. Corcannon, contains cor, meaning a round hill, cannon may derive from cunna, meaning hounds. Clogh is the Irish for stone. Inch derives from Inis, an island of land or low meadow by a river. Boleybawn incorporates buaile, the milking place for cattle, and bawn, meaning green field or grazing place; Parkbaun also contains the suffix bawn, which simply means green field. Clonatin, as mentioned earlier is derived from cluain and aiteann, the meadow of the furze. Coolnaveagh and Coolnastudd contain either cuil, a corner or cul, the back; Coolnaveagh is possibly anglicised from cuil and bheith, meaning birch corner or alternatively from cuil and fiach, the ravens back. Coolroe translates as the red corner or back. Moneylawn and Moneycross also both contain money, which is derived from muine or scrubby place. Knockduff is an anglicised version of cnoc dubh, or black, black hill. Carriganeagh contains the prefix carrig, the Irish for rock; the townland name may simply mean little rock, or alternatively the rock of the deer (from fiadh). Banogehill contains the root work bánóg, the Irish for a meadow. Cronecribbin contains the root word cró, which means a hollow or valley predominantly in the northwest, and a cattle hut elsewhere. However, the prefix crone may derive from crón, for brown.

2.3 Archaeological Background

There is limited evidence of Neolithic activity in County Wexford (Culleton, 1984; Moore, 1996). To date a small number of megalithic structures have been identified in upland areas of the county. There is some evidence to indicate that the uplands of Wexford were settled in the Neolithic, although megalithic tombs are rare in the county with only two examples positively identified (Moore 1996). A cairn (WX007:014) on the summit of Tara Hill over 3.5 km to the northeast of Gorey may enclose a megalithic structure (Stout 1987). A possible megalithic tomb, or 'Dolmen', is also indicated on the Ordnance Surveys 1940 revision six-inch map in Kilcavan Lower (WX007:009). The structure comprises a large stone (2.4m x 1m) resting on further stones at its west end. Megaliths result from the practice of burial in stone tombs of elaborate construction. They were also the first permanent structures to be built in the

Irish landscape. In the Early Bronze Age which followed they were replaced by the adoption of the single burial tradition within a single stone box or cist.

Prior to the commencement of this project the earliest definite evidence of human settlement in this part of Wexford could be traced back to the Bronze Age (c. 2300 – 500 BC). Cist burials, in which a crouched inhumation or cremation was placed, accompanied by a food vessel, in a single stone lined box was the most common mode of burial in Early Bronze Age Ireland, and notable concentrations occur in the sand and gravel soils of the southeast (Stout 1987). Cist burials are generally chance finds retrieved during land reclamation projects, quarrying or construction, and in north Wexford such burials are mainly concentrated above the 200ft contour. A number of examples of Early Bronze Age burials have been uncovered in the vicinity of Gorey. An Encrusted urn (WX006-065 / 007-041), now in the Edinburgh Museum, was found in 1868 in a gravel pit in the townland of Ballowen or Ramsfortpark (Kavanagh, 1973). The precise location of this find is unknown. A vase urn and encrusted urn (WX007-055) were found in a disused sandpit / gravel quarry in the townland of Goreycorporationlands (O'Floinn 1990). The Encrusted urn may originally have been contained in the same sub-circular pit in which the partial remains of the Vase urn were found inverted over cremated bones. A Vase Food vessel was reportedly found near Gorey in 1887 (Ó Ríordáin & Waddell, 1993), it was reportedly found associated with two cists or a double cist, one containing an urn and the other a food vessel under a cairn of earth and stones (JRSAI 1881–2).

Such cist burials were frequently covered with mounds of earth or cairns of stone (Waddell 1990). A cairn site (WX007:014) is situated on the summit of Tara Hill, although in cases like the burials in Corporation Lands and Ballyowen, natural 'monuments' such as gravel ridges performed the same function.

A variety of burial monuments existed in the Bronze Age, including cairns and tumuli. A cairn, as implied above, is a mound of stone often used to cover burials, and a tumulus is a mound of earth used for the same purpose. Monuments of the latter type occur in Ask (WX007:020), in Knockavota (WX007:006) and in Monagarrow Upper (WX007:032), which overlooks the valley of the Clonough River. All three monuments are indicated as 'Tumulus' on OS maps, although the archaeological origin of the 'tumulus' in Ask has been questioned. Described as a flat-topped earthen mound in pasture adjacent to a quarry, the mound may simply be a spoil mound with an advantageous view to the west and north. Toome or

tuaim is also the Irish word for tumulus, and according to O'Donovan (1840) the tumulus in the townland formerly existed in vicinity of the old parish church.

The tumulus in Ask (WX007:020) is nonetheless situated in a region north of Gorey in which a distinct concentration of Bronze Age activity occurs, centred on the Annagh hills to the west and Tara Hill to the east. The most numerous monument type is the standing stone, representing the largest group in the county, such as that in Gorey Corporation Lands (WX007:061). This site is typical of Wexford standing stones in that it is rather short (H. 1.5m), and is of greenish-grey slate. Standing stones very occasionally mark burials. They also may have been used as markers of routeways or territorial boundaries, or to indicate the presence of ritual or sacred places. In the vicinity of Tara Hill standing stones also exist in Ballinacarrig (WX007:027) and Kilcavan Upper (WX007:053), while possible sites exist in Kilcavan Upper (WX007:011), Ballinacarrig (WX007:025, 007:028, 007:029 and 007:054) and in Tinnock Lower (WX007:002). These stones are all located on the Macamores, a badly drained soil formed from drift of the Irish sea. The site in Tinnock Lower is indicated as 'Standing Stone' only on the 1940 edition OS six-inch map, and no above ground trace remains.

Often the most common types of monuments that survive from the Bronze Age, probably because they are largely underground and easily identified, are the unassuming *fulachta fiadh*, or cooking site. This is also a monument that contributes the greatest amount to our knowledge of Bronze Age settlement across the country. *Fulachta fiadh* manifest themselves in the landscape as mounds of burnt stone, often forming a horseshoe-shape. The stones were heated on a fire and then placed in a water-filled pit in order to heat the water. They are usually found close to a water source, close to marshy areas or beside rivers and streams. After each use, the pit (or trough) was presumably cleaned of the heated and cracked stones, and those that were reduced beyond a useable size were discarded around the pit, forming the mound, from which these burnt mound sites get their name. They often appear in groups, and soil stripping in the vicinity of isolated examples frequently reveals additional associated *Fulachta fiadh*. Moreover, the mounds of these features are frequently ploughed out or removed, especially in counties such as Wexford with strong tillage traditions, but top-soil stripping reveals the trough or burnt spreads of disturbed *Fulachta fiadh*. Examples include a *Fulacht fiadh* site in Kilmurry (WX007:058), which consists of two areas of burnt and broken stone in a black matrix that is visible when the area is ploughed.

During the Late Bronze Age there was a revival in gold working using bar gold as well as sheet metal. Among metalworker products was the gold bar torc, or neck ornament, of which thirty are known from Ireland. Their distribution, which shows a concentrated in south Leinster, is possibly due to the presence of gold in the Wicklow Mountains (Stout 1987), and a gold bar torc was found at Tubberduff (Toberduff) in the vicinity of Ask Hill in 1863, northeast of Gorey. According to Mr. Charles Naughter, Kilmurry, in the Courttown Estate Papers the torc was found in a quarry at Ask Hill.

The evidence for Iron Age activity in Wexford remains inadequate, and knowledge on this period within the county is largely dependent on a small number of defensive sites along the southeast coast (Stout 1987).

Christianity was introduced into Ireland in the fifth century AD and brought with it not only writing and recorded history but also a range of new monuments. The best known native monument of this period is the ringfort—the classic Early Medieval (c.500–c.1100 AD) secular settlement type. Ringforts are among the commonest monuments in Ireland, although only around one hundred and fifty survive in County Wexford. They are round or oval enclosures defined by a bank and an external ditch, often situated on gentle hill slopes. Ringforts have traditionally been interpreted as defended farmsteads, including the dwelling house and outhouses of an extended family, occasionally with evidence for small-scale industrial activity. Excavation frequently does not uncover permanent settlement evidence and it is better to regard them as enclosures supporting a variety of roles, often functioning as traditional Ringforts but frequently acting as graveyards, animal pens, meeting places etc. Their relationship to each other and the broader landscape has been demonstrated by Stout. While the relationship to other sites such as Crannogs e.g. at Lough Ennell with Cro Inis and Dún na Sciath, (O'Sullivan forthcoming) is only now being proved. Ringforts in the environs of Gorey include those in Ballinakill (WX012:029), southwest of Courtown, Ballowen or Ramsfortpark (WX007:017), Ballyfad (WX003:002), Huntingtown (WX011:007), Kilcavan Upper (WX007:012) and in Raheenagurren West (WX012:003). The ringfort in the latter townland is indicated on the first or the 1841 edition OS map much as it survives today, although presently the site is densely covered in damp scrub vegetation.

Conversely, many of the monuments classified as enclosures in the environs of the proposed realignment are also undoubtedly ringforts or the sites of ringforts, enclosures can date to various periods and have different functions. Often identified from early OS maps or through aerial photography, where they appear as cropmarks, they are referred to as 'enclosures' until a more precise classification

can be established. Enclosure sites exist in Ask (WX007:060), Ballinglin (WX007:008), Balloughter (WX011:043), Ballybanoge (WX011:017), Ballycanew (WX011:022), Ballydaniel (WX011:018, 011:021; 011:041), Ballylarkin (WX003:020), Ballyloughan (WX007:021), Clonsilla East (WX007:007), Clonsilla West (WX007:059) and in Raheen (WX012:031). Upstanding enclosures in comparison exist in Ballyhast (WX011:012), Ballyscartin (WX007:024), Killowen (WX011:003) and in Raheenagurren West (WX012:001 and 012:030). A large enclosure also exists in Kilmurry (WX007:023), while a rectilinear enclosure survives in Tullabeg (WX011:040). Rectangular enclosure sites are also recorded in Plattinstown (WX003:007), Raheen (WX011:035) and in Toberanierin Upper (WX011:037), which may have been Anglo-Norman moated sites.

Sites that have been disturbed, so much so that they cannot be readily attributed to any class or group of monument are termed simply earthwork. Sites that are marked on OS maps but not identifiable on the ground are termed earthwork sites, and numerous examples of the latter, also likely to have been ringforts, are recorded, including those in Ballykilty Upper (WX003:006), Ballyminaunhill (WX011:008 and 011:009), Coolishal Upper (WX011:006), Coolroe Great (WX003:022), Courteencurragh (WX007:035 and 007:036), Hollyfort (WX003:014), Hydepark (WX003:031), Kilowen (WX001:004), Limerick (WX003:025), Raheenagurren West (WX012:002), Tara Hill (WX007:031) and Whitepark (WX003:015).

Many of the ruinous churches visible in the landscape today date from the medieval period, none of the early churches of the Early Christian or Early Historic period will survive above ground due to their wood construction. Often the Irish word ‘cill’, meaning a church or woodland appears as a root word in townland names where early churches were known to have been founded, as in Kilmakilloge. Many medieval stone churches or church sites were formerly parish churches, such as that in Churchtown (WX011:036), the parish church of Liskinfere, and in Ballinclare (WX011:011), the parish church of Toome. The medieval church in Churchtown is no longer visible above ground, and the site, at Clogh, is occupied by a modern Church of Ireland. Similarly, the site of the parish church of Inch (WX003:028) is now occupied by a nineteenth century Church of Ireland church. Both the earlier parish church site and the present church, built in 1831, were situated adjacent to the to a glebe of seventeen acres, on which the Glebe house was under construction in 1791 (Lewis 1837). The latter building, present in 1841, appears to have been replaced by a new building indicated as the Rectory by the turn of the twentieth century. The church represented the focal point for the village of Inch, which developed on the mail coach road from Dublin to Wexford.

Parish churches also existed in Clonatin Upper (WX007:034), the parish church of Kilmakilloge, and in Kilcavan Lower (WX007:010), the parish church of Kilcavan. The 'Site of Graveyard' (WX003:021) is also indicated on the 1841 edition OS map, with a well, marked 'St Michaels Well', shown nearby close to banks of the Clonough River in Clonough. A graveyard site also existed in Ballowen or Ramsfortpark (WX007:018) close to a natural spring marked 'Holy Well' on OS editions, and locally dedicated to St. Michael, while a D-shaped graveyard presently survives in Toberanierin Lower (WX011:039). None of these three sites are traditionally associated with a church.

It is recorded that the graveyard in Ballinclay (WX011:038, delisted) was given to the 'friends' in 1778 [the Religious Society of Friends, or Quakers, was founded in 1652 as the Friends of the Truth by George Fox. William Edmonds, a former soldier, first introduced the society into Ireland, where its doctrine spread rapidly in the wake of the Cromwellian period.]. However, there was a meeting house at Ballinclay since 1743, and the first recorded burial relates to an Elizabeth Rousom who died in 1767. From the Registry of Deeds an indented deed dated 14 July 1759 outlines the lease made by John Wright of 'Ballinclea' of 'that part of the lands of Ballinclea now walled in and set apart for a graveyard or place of burial for the people called Quakers'. Margaret Wright, wife of John, and residing in Ballinclay House, was buried in the graveyard in 1774; the above said John was buried in 1785. A William Watson Waring, then residing in Ballinclay, was buried in the graveyard in 1836, and reportedly during the Waring's occupation of the House the meeting house was neglected and fell into ruins. The graveyard is currently still in use and burial took place as recently as 2000.

North county Wexford would have been relatively inaccessible until the sixteenth century, and the few Anglo-Norman settlements in the area suggest that the Anglo-Norman infiltration had not been strong (Loeber & Stoutamer-Loeber 1987), although the entire county was sub-infeudated in the early stages of Anglo-Norman activity in Ireland (Colfer 1987). The various elements of society that the Anglo-Normans introduced include boroughs, demesne manors and manorial villages. The introduction of continental monastic orders also followed, including a possible Augustinian friary in Coolgraney Demesne (WX003:011). The reform of the Irish church into a diocesan and parochial system, begun in the twelfth century, was greatly boosted by Anglo-Norman settlement in the thirteenth century (Moore 1996).

Anglo-Norman fortifications include motte-and-baileys and moated sites. Mottes are steep-sided earthen mounds, originally topped with a wooden lookout tower or bretasche, and often associated with a

rectangular enclosure, defended by a bank and ditch, and palisade fencing, known as a bailey. Mottes were usually located at defendable vantage points, often overlooking fords on rivers, and were among the first fortifications constructed by the Anglo-Normans on their arrival in Ireland. Moated sites, in comparison, are defended farmsteads dating from the thirteenth and fourteenth centuries. They are usually square or rectangular areas, defined by banks and external ditches, often built in damp areas where the ditch becomes naturally waterlogged. The distribution of mottes and moated sites in the county indicate that initially the Anglo-Normans intended to occupy and settle all of the county, and examples in the environs of Gorey include a motte in Ballymore Demesne (WX016:014), southeast of Camolin, in Middlemount (WX012:010), on the east coast south of Courtown and in Pallis Lower (WX002:019), west of Inch. A mound site at Kilgorman (WX007:046) may also possibly be a motte. Moated sites occur in Camolin (WX011:014) and in Clones Middle (WX007:003), northeast of Tara Hill. The subsequent building of stone castles, particularly tower houses, examples of which shown a marked southern distribution, highlight the failure of Anglo-Norman settlement in the north of the county (Colfer 1987). The scarcity of medieval tower houses in the region, what became the seventeenth century plantation area, has also led Loeber & Stoutamer-Loeber (1987) to suggest that timber dwellings must have remained common, given an abundant supply of wood from forests of the Leinster hills.

Following the Anglo-Norman invasion in 1169 Gorey was situated within the major Prendergast fief of Ui Mealla and Kynaloh, the largest fief in the county (Colfer 1987), and to which Pallis motte (WX002:019), west of Inch, must have been related. The fief passed to the Roches toward the end of the thirteenth century. As previously alluded to, Gorey may have been a possible borough on Prendergast fief, but would possibly never have been more than just a 'rural borough' with no location or economic advantages. As such, the survival of Gorey in the modern landscape must be owed to the seventeenth century plantation. A borough at Courtown may simply have resulted from the need for a port and ready access to England by sea from the north of the county.

The Wexford Plantation

The plantation of Wexford was the first colonial settlement undertaken by the Dublin government after the massive introduction of British settlers into Ulster at the beginning of the seventeenth century (Loeber & Stouthamer-Loeber 1987). It was initiated in order to settle the northern part of the county, which had never been fully penetrated following the Anglo-Norman conquest of the twelfth century, and where the native Irish sept, the McMurrough Kavanaghs, retained a strong presence. Large tracts of land, ranging from 1000 to 3000 acres, belonging to families of both old Gaelic and Anglo-Norman stock

were confiscated, and colonial strong houses, subsequently destroyed in the rebellion of the 1640s, sprang up throughout the barony of Gorey. To shire the north of the county a fort was built by 1610 as a garrison for troops five miles northeast of Gorey, called Fort Chichester (now named Fortchester). It was built to protect the county against raids from displaced natives, but had passed to private hands by 1618. Access to north Wexford from the Pale was through the pass at Fort Chichester.

The Wexford Plantation was to have a plantation town, and King James I in 1618 gave directions to that effect. The result, as indicated above, was the grant of a charter to Bishop Ram, Protestant Bishop of Ferns and Leighlin, in 1619, and the development of a town, initially called Newborough, and later Gorey. A plantation village and a church also sprang up at Limerick, around the new manor of Sir Lawrence Esmond four miles to the north of Gorey (no trace of this latter village survives). The estate of Lemanagh, anglicised to Limerick, was granted to Sir Lawrence Esmond in 1612 (and again in 1618), who, as a condition of plantation, was required to build a defensible castle or house. Esmond had built on this property by 1617, the largest of known plantation castles of the area (WX003:024). Little of the castle or Jacobean house at Limerick survives; it was burnt in 1649 during the rebellion and the site of the house may coincide with the present farm buildings on site.

Ramsfort, one mile north of Gorey was another plantation site. Thomas Ram, the protestant Bishop of Ferns and Leighlin moved his seat from Ferns to the new plantation town of Gorey in 1620, and when he died in 1634 his body was buried in the chapel built by him in the town. Rebels burned the Bishop's Palace in 1641 when the town was sacked during the rebellion of that year. Rams son had also built a house close to the town called Ramsfort, which was also burnt around this time. It probably stood on the site of the present country house, which built in 1751. The Civil Survey mentions the site as 'a ffort in repaire & a decayed Mill', suggesting that the residence may have been situated in a fortified enclosure.

Additional plantation estates included that at Prospect east of Gorey, granted to Sir Edward Fisher in 1612 as the manor of Chichester, and regranted in 1618 as the manor of Fisherstown. The decayed castle at Prospect (WX007:049) is probably shown on the Down Survey map as a tower-like feature. The estate of Sir Richard Cooke was located at Newtown Lower, close to the county boundary with Wicklow, from 1612, becoming the manor of Cookestown from 1618; a castle stood on site by 1621 (WX003:004). Lands were also granted to Sir Rodger Jones at Middletown on the outskirts of Courtown in 1618. The subsequent defensive house or castle (WX012:018), built by 1621, was in a state of decay by 1654. A plantation castle was also erected in Monaseed Demesne (WX006:071), west of the

Esmond estate at Limerick, on land granted to William Marwood in 1618. A plantation site, which was not government sponsored, also existed at Killybegs, immediately west of Inch. Its Irish owner William Doyle of Fortchester mortgaged it to a merchant Thomas Wakefield, where a brick house was subsequently built following the rebellion.

During the intervening period between the rebellion of the 1640s and the late 1870's landed properties in Wexford became progressively smaller (Gahan 1987). The once extensive Esmond estate, at one time occupying the entire parish of Kilcavcan, had shrunk to an area around the manor of Limerick, to be replaced by the Quinn estate and several smaller properties nearby (Gahan 1987). The Esmonds did however remain a large landowning family in the parish of Kilcavan. The Ram family, with a modest estate around Gorey (expanded in the seventeenth century when the property of an absentee grantee Sir Walter Plunkett, i.e. the Clonatin estate, was incorporated), similarly remained a prominent landed family into the nineteenth century.

Industrial sites

Other monuments, such as watermills, which can date from the medieval period or later, also appear in the archaeological record. Many of these features are noted from the Civil Survey and, in some case, relate to features still extant today or extant on later maps, such as the first edition OS map (1841). However, little is known of the horizontal Mill in Corcannon (WX007:057), discovered during land reclamation in c. 1985, although a dendrochronological felling date of AD 1228±9 was established for timbers recovered. There is also record of timbers from a 'crannog', discovered in c. 1900 in Toberduff, from which a granite quern was also recovered. The site, WX007:052, which is not precisely located may also possibly have been a horizontal mill (Moore 1996).

The first edition map of the OS six-inch series indicates an unnamed 'Corn Mill' on the townland boundary between Clogh and Cain. Its 'Mill Pond' lies slightly to the northwest along the channel of a 'Mill Race' that sources in Moneylawn Upper and travels through the centre of Moneycross Upper townland, thereby dividing the townland in two. A second mill, on the east side of the present Arklow to Gorey road on the Ballylarkin and Ballyellin townland boundaries is indicated as 'Ballylarkin Corn Mill'. The building of water powered corn mills reached a peak in the years immediately preceding the Famine, and took place all over County Wexford in the first half of the nineteenth century.

2.4 Ask Townland

Townland	Electoral Division[3]	County	Irish name / Origin	Translation	Civil parish	Barony	Poor Law Union
Ask	Ballynestragh	Wexford	*Easc*	Quagmire, marsh	Kilcavan	Gorey	Gorey

Table 1 Townland details

3.0 THE EXCAVATION

3.1 Setting

The site was situated gentle sloping ground used for pasture, in Ask townland, Co. Wexford (See Figures 1 & 2; Plate 1). Prior to excavation there was no surface trace of archaeological significance.

3.2 Previous Archaeological assessment

The site was subject to an environmental impact assessment[4] and a archaeological testing[5] (A003/012). The testing uncovered a sub-rectangular deposit of charcoal rich silty clay and heat shattered stone measuring 12m x 11m x 0.3m deep (Mullins 2005, p 14). This deposit, (C4), was fully resolved during the excavation.

3.3 Excavation Methodology

Topsoil from one cutting measuring approx 913m^2 was removed utilising a hydraulic excavator under the direction, supervision and monitoring of a qualified archaeologist. Once the topsoil had been removed, the entirety of the site area was cleaned back to reveal the features identified during the previous testing (ibid) and to try to identify any new features which may have been exposed.

Upon location all archaeological materials were cleaned and excavated by hand using methods appropriate to their composition, nature and date. All archaeological contexts were photographed and planned (in relation to the site grid) prior to excavation. Sections were excavated through all features to

[3] Formerly referred to as District Electoral Division. In 1994, both District Electoral Divisions and Wards (the equivalent of District Electoral Divisions within the five County Boroughs) were renamed as Electoral Divisions (the boundaries and names of the DEDs and Wards themselves remained unchanged).
[4] Sutton, M. (2003) Archaeological Heritage, Architectural Heritage and Cultural Heritage, Environmental Impact Statement (EIS), N11 Gorey–Arklow Link, County Wexford. Unpublished report for Margaret Gowen & Co.
[5] Mullins, G. (2005) *Irish Archaeological Consultancy Ltd*. Archaeological Assessment (Site Specific Area 6): N11 Gorey-Arklow Link, Co. Wexford

obtain profiles and to expose the stratigraphic sequences and then fully excavated. All sections and cut features were photographed and drawn. The position of all finds and samples were recorded in three-dimensions (where appropriate) in relation to the site-grid. The composition, stratigraphic position and interpretation of all contexts were recorded on a context sheet prior to excavation. Contexts have been sampled for palaeobotanical material, radiocarbon dating, micromorphology, petrology and wood identification, where appropriate. Features that proved to be of modern origin were not fully excavated.

3.4 Stratigraphic Description

The site consisted of features cut into the natural subsoil overlaid by a burnt mound. The subsoil, (C2), evidenced intense heat and charcoal staining, washed down from the mound above. The features appear to be contemporary. This type of site is commonly known as a *fulacht fiadh* or burnt mound.

Burnt mound features

These features are located in the centre of the site and are cut into natural subsoil (Plates. 2 & 3, Figures. 3 & 4).

Trough:

A rectangular trough (C35), was found when all quadrant baulks were removed. It was situated centrally and was sealed by burnt mound deposit (C4). It was orientated along a northeast-southwest line (Plates. 2 & 3, Figures. 6 & 7). The trough measured 2.26m x 1.44m in plan x 0.35m deep. It had overhanging sides, a flat base and was filled with dark grey-black, silty-clay, with frequent charcoal and burnt stone inclusions. Linear bands of sand, (C102), were present at the base suggesting the presence of a lining such as planking. These bands of sand were 0.25m apart, suggesting wooden planks 0.25m in width x approximately 2.26m length, orientated in a northeast-southwest line. There was some limited evidence to suggest clay lining at the base and sides, which would have helped retain water in the trough (Figures.10 & 11) A radiocarbon date from the trough yielded a date range of Cal BC 755 – Cal BC 402, (UBA 8244).

Runoff:

Directly to the west of the trough, lay a large pit (C13), linked to the trough by a channel/runoff. The slope of the runoff, (C124), indicated that water was carried away from the trough and into the pit in a northwest direction. This rectangular runoff measured 1.70m x 1.23m x 0.35m deep with fairly vertical sides and a flat base, sloped slightly downwards, as it approached the pit, (Plates. 2 & 3, Figures.6 & 7).

It was filled by black, firm silty-clay with frequent charcoal and stone inclusions and a softer greyish black silty clay. At the base of the runoff was a mid yellow-grey plastic clay, which probably acted as part of the banking system, separating the runoff from the trough (Figure. 11).

The trough and the runoff appeared to have been constructed as one event, then separated by use of a bank of clay, possibly with a stone acting as a stone sluice-gate, indeed a suitable stone was found in the large pit, (A003/045:106:18). The sluice-gate would have been in operation at the trough-end of the runoff (Figure.7). A date from the bank separating the trough and runoff yielded a date range of Cal BC 1612 – Cal BC 1409, (UBA 8245).

Large Pit:

A large pit, (C13), was present immediately west northwest of the trough and runoff. This sub-circular feature measured 3.70m x 3.30m, depth 1.15m with a flat base and steeply sloping sides, (Plates. 2 & 3, Figures. 6 & 7). The western edge was stepped, (C129), probably to facilitate access. It was banked up on its sides by (C24), a mid bluish grey soft clay with remains of, what appeared to be, wattling. The fills suggest that this feature silted up over time with burnt mound debris falling in from the east. The dark grey, soft silty-clay basal fill (C17), contained substantial wood remains (including a small piece of a diagonally cut Ash plank,) which could have acted to the water, (Figures. 9 & 11).

The pit is interpreted as a collection point for ground water and possibly recycled water from the trough via the runoff, which ran straight down into the pit. It

Burnt mound deposit

These deposits were located in the centre of the site and formed the mound (Plate.1, Figures.8 & 9). Context C4 made up the bulk of archaeological remains on site and covered 10m x 8.50m to a depth of 0.40m in the centre of the site. This oval shaped layer was composed of black soft silty-clay, with frequent inclusions of charcoal and burnt stone.

At the northern edges of the mound under (C4) a deposit (C25) was investigated. This comprised a semi-circular spread of dark brown/black firm silty clay, similar to but lighter in colour and more compact than (C4). It spread out over 6.5m x 0.40m x 0.30m with inclusions of burnt stone and charcoal (Figures. 8 & 9).

Beneath (C25) an irregular oval shaped deposit, (C11), located northeast of the trough measuring 2m x 1.5m in plan and 0.40m deep (Figure 8). This was a yellow/grey soft silty-clay, a damp layer with a

number of large stones and inclusions of charcoal and burnt stone. A radiocarbon date from this deposit yielded a date range of Cal BC 755 – Cal BC 402, (UBA 8244).

A possible naturally formed layer of silt (C31) (Figure 8) was excavated to the north of the trough sealing a post-hole, (C87) and underlying (C4). This irregular, oval feature measured 2.2m x 1.8m x 0.03m and consisted of mid yellow/grey firm silt with no inclusions.

Another possible natural layer, (C32), was investigated north of the trough, it underlay (C25) and filled a natural depression. This east-west linear spread measured 2.0m x 2.0m x 0.15m and was filled with light grey soft silty clay (Figure 8).

Context 127 was excavated northeast of the trough, it underlay (C25) and was seen to be a re-deposited natural layer, perhaps excavated during the construction of the trough and dumped here (Figure.9). It is an irregular oval shaped spread measuring 3.25m x 1.62m x 0.10m with a mid yellowish grey firm clay, with occasional small stones.

An oval, thin lens of material, (C26), was found underneath (C4) and was excavated southwest of the trough at the base of the mound. It measured 5.25m x 4.75m x 0.07m and was a loose blackish-grey silty-clay with occasional burnt stones and frequent charcoal inclusions.

Non-linear features

A layer of grey hill wash, (C3), overlay the burnt mound contexts (Figure.8).

A circular deposit, (C20), was revealed just below the topsoil above the area that held the trough. This material was similar to the topsoil, being a mid brown soft silty clay with occasional small stones. It measured 5.5m x 4.7m x 0.20m. Beneath this layer was a dark greyish brown soft silty clay (C21). This was found to be rectangular in shape measuring 2.5m x 2.0m x 0.12m and had frequent burnt stones and charcoal within it (Figures. 8 & 9). Both of these contexts may have been the result of disturbance of the mound, either for re-use of the trough or of the stone and charcoal.

Context 22 (same as C23) was a deposit of light brown/grey moderately compacted clayey silt with occasional small stones and some charcoal flecking. It was an irregular shaped layer measuring 8.52m x 8.50m x 0.10m (Figure. 9). It underlay (C127), (C25) and the main mound deposit (C4). Contexts 22 and 23 may be the result of water seepage through the charcoal-rich layers above.

A dark grey soft silty-clay irregular oval deposit, (C23), was found and investigated underlying (C33) just east of the trough. It measured 1.6m x 1.10m x 0.08m and had frequent charcoal inclusions and some small stones.

An irregular oval layer, (C86), was excavated beneath (C23) measuring 3.5m x 2.5m x 0.05m. This mid orange-brown, soft to firm silty clay was very rich in iron oxide/iron panning.

Stake-hole Features

The numerous stake-holes excavated were given separate group letters according to location and apparent relationships. Each group: A, B and C cut into (C33) and are below the burnt mound material (C4) (Plates.1, 2 & 3, Figures. 6 & 7).

Groups A (C64-82, 93, 94, 116 and 117,) and B (C38-63, 112-115,) were clustered around the northwest and southeast corners of the trough to suggest they were placed there to create a structural feature directly relating to the trough. Group C was located on the south west side of the trough but did not appear to form a pattern.

Group A are mostly irregular in plan with some occasional circular stake-holes. All have vertical sides with mostly concave bases, although some do have tapered bases. The maximum dimensions were 0.20m in length x 0.14m in width in relation to the smallest, which is 0.06m in length x .0.06m wide. The deepest stake-hole is 0.21m with the shallowest being 0.06m. The fills consisted of dark grey soft clayey sand with charcoal inclusions.

Group B were mostly circular in plan with occasional oval shaped stake-holes and all have vertical sides with concave and irregular concave bases. They ranged from 0.06m in length x 0.05m in width to 0.29m in length x 0.10m in width. The maximum depth was 0.16m and the minimum was 0.04m. All were filled with dark black to dark blackish grey loose silty clay with charcoal inclusions and occasional stones.

Group C (C95-100, 103, 104, 108-111, 120-123) were mostly circular in plan with two exceptions, which were oval and sub circular. The sides were vertical and the majority of bases were tapered with some concave in shape and one being flat. The maximum length and width were 0.07m and 0.06m with the minimum being 0.04m x 0.04m. The depths ranged from 0.06m to 0.13m. The fills were grey soft clayey sand and light greyish black loose silty clay with charcoal and occasional stones as inclusions.

A lone stake-hole (C119) was discovered after deposit (C19), was removed just north/northeast of the large water pit. This measured 0.06m x 0.05m x 0.13m deep with a mid orange-brown soft silty clay and could possibly be in association with the pit.

Pit features

The pit (C37) was excavated 6.10m south-southwest of the trough below layer (C26) and cut into (C33). It was an irregular circular pit with an uneven base, measuring 1.15m x 1.02m x 0.06m. It contained a mid yellowish brown loose clayey sand with iron panning.

A probable tree bowl, (C28), was located 6.2m southwest of the trough and cut into natural subsoil. The feature had irregular edges and base. It measured 2.80m x 1.70m x 0.25m and was filled by a mid orange-brown soft silty clay with poorly sorted sub-angular and sub-rounded stones (Figure.6).

Post-hole features

A post-hole (C87) was excavated to the c.3m north of the trough. This sub-circular post-hole lay beneath (C31) and cut into the natural subsoil. It had straight sides and a concave base measuring 0.24m x 0.18m x 0.38m deep, (Figure.6). It was filled by a light grey loose silty clay and a reddish brown loose sandy clay with inclusions of medium sized stones.

Linear features

Three linear features (C6, C8, C10) were identified on site all running Northeast-Southwest through the upper layer of the mound, (C4), to the west of the site. These all had gradual sloping sides with concave bases and were very shallow measuring from 0.13m to 0.17m deep. Their lengths ranged from 3m to 3.50m with their widths ranging from 0.40m to 1.50m. The fills were consistently the same mid-dark greyish brown loose silty clay with occasional burnt and un-burnt stone. These features are interpreted as modern cultivation furrows.

Context 91 was investigated to the south west of the mound activity, after further hillwash had been removed in this area. It ran northeast-southwest measuring 3.30m x 0.80m x 0.01m and was a grey loose silty clay layer with sub-rounded stones and some charcoal. It was interpreted as the remains of a possible plough furrow.

Field drains 1, 2 and 3 were found running north-south, east-west and northeast-southwest, respectively. Their dimensions ranged from 8.50m to 15m in length and from 0.35m to 0.85m in width (Figure.6). These suggest a waterlogged landscape even in modern times, hinting at a similar landscape, possibly wetter, in the Bronze Age.

3.5 Condition Post-Excavation

Following complete and full archaeological resolution the site was made safe.

4.0 SPECIALIST REPORTS

4.1 Overview

All specialist work has been completed for the site. The lithics assemblage, though small, exhibits technologies common to the Neolithic and Early Bronze Age Examination of the possible sluice stone showed it to be of local provenance. Specialist identification of the single sherd of post medieval pottery confirms a late 17th -18th century date. Both radiocarbon dates are in keeping with the site type, though the separation in date ranges between the two suggests contamination of one sample but whether by residual or later carbon is unknown. The earlier date is more typical of the site type and lithic technologies observed.

4.2 Lithic Report by Dermot G. Moore

Abstract

A small quantity of flint material recovered from A003/045 (Site 41) represents a domestic assemblage which is likely associated with burnt mound activity. The range of lithic implements is not particularly diagnostic with a date range between the Neolithic – Bronze Age being suggested.

Introduction

A total of 16 pieces of flint and a single piece of chert comprising primary knapping debris and a range of modified pieces was recovered from the excavation of a burnt mound and associated features at A003/045 (Site 41 E3501) in Ask townland. The assemblage consisted of small pebble-based industry primarily derived from beach and glacial drift pebbles, of relatively fresh condition. Generally the flint was patinated a cream-buff – brown colour and cortex was either not present or weathered.

The Assemblage

Primary technology

The primary assemblage was relatively small and comprised an irregular pebble core, five small flakes, and seven irregular flint chunks. The core (A003/045:19) was a small fine core portion/spall with at least three flake scars and also cortex remaining (Fig.00.00) and measured 30mm x 26mm x 25mm.

The five flakes (one of which was broken) ranged in size from 17mm x 15mm to a very large 56mm x 47mm. Both the large and small flakes retained planar platforms. The remaining flakes had one pointed and two indeterminate or missing platforms.

The broken specimen was the fine butt end of flake with several dorsal flake scars. The large flake was heavily weathered and patinated white (indicative of immersion in water) which exhibited very crude edge damage along its right lateral dorsal edge. This may have been due to the natural fracturing of edge. Seven irregular flint chunks/spalls were also recovered, including one chert spall.

Secondary technology

The small modified portion of the assemblage consisted of a side scraper and three simple modified pieces. The side scraper (A003/045:16), which measured 49mm x 26mm x 14mm, was manufactured on an irregular flake with relatively fine secondary working on its right dorsal lateral edge and on one area of the dorsal distal end (Fig.00.00).

The first simple modified piece consisted of a fine utilized decortical flake (A003/045:1), which measured 34mm x 30mm x 9mm (Fig.00.00), with the secondary working being formed by semi-invasive flaking some of which is parallel to the dorsal edge. The other simple modified flake (A003/045:3), which measured 15mm x 14mm x 7mm, was a small portion with two areas of secondary working on the dorsal edges. This secondary working is much later than the patination. The final simple modified piece (A003/045:4) consisted of a large crude irregular spall with edge damage on one end and along one lateral edge.

Summary

The small flint assemblage (and the small chert chunk) recovered from this site represents a domestic assemblage which is possibly associated with burnt mound activity. However, only one of the modified pieces was recovered from an in situ burnt mound deposit (from context 26).

Despite the small size of the assemblage, the range of implements recovered would indicate activity during the prehistoric period, particularly the Neolithic – Early Bronze Age. This is confirmed by the type of knapping – hard hammer percussion – as indicated by the planar platforms and the flake/blade scarring of dorsal surfaces.

However, none of the pieces recovered are diagnostic of a particular period as they are common on both Neolithic and Early Bronze Age sites (Woodman and Scannell 1993; Woodman 1994; Moore 1999). Such small scatters of lithic debris are a common feature of the Wexford – Waterford archaeological landscape with a range of sites identified in the Ballylough area (Green and Zvelebil 1990) which produced similar-sized assemblages. As with this site, the material from the Ballylough landscape consisted of several Neolithic – Early Bronze Age sites which cannot be more chronologically defined based on the range of tools recovered.

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Lithic Catalogue

Find No	Cut	(C#)	Find description	mat	char	modified	obj-class	mod-obj-type	coreclass	fresh	cond	col	cort	len	brd	thk	plat	dpl	wpl	wt	broken	draw	notes
1		3	fine utilized decortical flake with the secondary working being formed by semi-invasive flaking some of which is parallel to the dorsal edge	1	1	1	simple modified	flake		1	4	4	1	34	30	9	5					yes	
3		1	small flake portion with two areas of secondary working on the dorsal edges. This secondary working is much later than the patination.	1	1	1	simple modified	flake		1	4	4	3	15	14	7	6					?	found on haul road
4		4	small irregular fresh flint flake portion	1	1	2	flake			1	1	1	2	28	18	6	6						
5		26	crude irregular large spall with edge damage on one end and along one lateral edge. This edge damage may be natural	1	4	1	simple modified	chunk		1	4	6	3	41	25	11	6						
6		4	crude irregular weathered flint chunk - natural	1	4	2	chunk			2	4	4	3	n/a	n/a	n/a	6						
7		4	small crude irregular weathered flint chunk - natural	1	4	2	chunk			2	4	4	3	n/a	n/a	n/a	6						
8		14	fine butt end of flake with dorsal flake scars	1	1	2	flake			1	4	4	3	17	15	2	1	3	6		yes		
9		22	natural chert spall with edge damage and slightly weathered	2	4	2	chunk			2	2	11	2	25	18	9	6						
11		32	large irregular and naturally fractured and weathered flint chunk	1	4	2	chunk			2	4	3	3	49	29	23	6						
12a	13	18	crude irregular weathered flint chunk - natural	1	4	2	chunk			2	4	4	3	n/a	n/a	n/a	6						
12b	13	18	crude irregular weathered flint chunk - natural	1	4	2	chunk			2	4	4	3	n/a	n/a	n/a	6						

Find No	Cut	(C#)	Find description	mat	char	modified	obj-class	mod-obj-type	coreclass	fresh	cond	col	cort	len	brd	thk	plat	dpl	wpl	wt	broken	draw	notes
14		1	heavily weathered and patinated white flake (indicative of immersion in water) which has very crude edge damage along right lateral dorsal edge - natural fracturing of edge	1	1	2	flake			2	4	9	3	56	47	9	1	10	15				
15		1	fine finishing flake with flake removals on dorsal face	1	1	2	flake			1	4	4	3	24	21	3	4							
16		1	side scraper - made on an irregular flake with relatively fine secondary working on right dorsal lateral edges and on one area of dorsal distal end	1	1	1	scraper	side		1	4	4	2	46	29	14	6						yes	
19		1	small and very crude pebble core with at least three flake scars and also cortex remaining	1	3	2	core		6	2	4	4	2	30	26	25	6						yes	
20		1	small irregular heavily patinated flake	1	1	2	flake			2	4	7	3	18	14	5	6							
21		1	crude irregular weathered flint chunk - part of flake portion	1	4	2	chunk			1	4	4	2	n/a	n/a	n/a	6							

Lithic Catalogue Coding

Code	Material	Rock type
1	flint	sedimentary infill mineral
2	chert	sedimentary infill mineral
3	quartz	mineral
4	rock crystal	mineral
5	porcellanite	metamorphic
6	basalt	igneous
7	dolerite (also known as diabase)	igneous
8	gabbro	igneous
9	granite	igneous
10	granodiorite	igneous
11	diorite	igneous
12	rhyolite	igneous
13	serpentinite	igneous
14	tuff	igneous - pyroclastic
15	pitchstone	igneous - volcanic glass
16	obsidian	igneous - volcanic glass
17	quartzite	metamorphic
18	schist	metamorphic
19	gneiss	metamorphic
20	marble	metamorphic
21	slate	metamorphic
22	greywacke	sedimentary
23	limestone	sedimentary
24	chalk	sedimentary
25	sandstone	sedimentary
26	siltstone	sedimentary
27	mudstone	sedimentary
28	shale	sedimentary
29	conglomerate	sedimentary
30	breccia	sedimentary
31	stone unid 1 - igneous	igneous
32	stone unid 2 - metamorphic	metamorphic
33	stone unid 3 - sedimentary	sedimentary
34	stone unid 4 - mineral	mineral

code	character
1	flake
2	blade
3	core
4	chunk/spall (irregular lumps and spalls from cores)
5	pebble
6	nodule (flint)
7	microdebitage (less than 10mm)
8	fragment (< 5mm)
9	crystal
10	large worked stone object
11	fossil

12	natural stone object

code	**modified**
1	yes - piece exhibits secondary working
2	no - no evidence of secondary working
3	edge damage - may not be secondary working

code	**fresh**
1	yes - fresh, sharp edges (incl fresh grey and fresh knapped patinated pieces
2	no - edges worn, weathered, rolled

code	**condition**
1	fresh (fresh grey flint)
2	weathered
3	rolled
4	patinated
5	stained
6	burnt

code	**core class**
1	A1 - full single platform
2	A2 - partial single platform
3	B1 - dual opposed
4	B2 - dual oblique
5	B3 - dual perpendicular
6	C - multi-platform
7	E - keeled
8	indeterminate

code	**colour**
1	grey
2	grey-cream
3	grey-buff
4	cream-buff
5	buff-brown
6	brown-red
7	red
8	pink
9	white
10	grey-white
11	grey black
12	black
13	green
14	clear/semi-transparent
15	colour - purple
16	colour - ?

code	platform type (platy)
1	planar
2	facetted
3	strictly facetted
4	point
5	decortical
6	none evident

code	cortex
1	primary - decortical 50 - 100%
2	secondary - slight 1 - 50%
3	inner - none

4.3 Petrology by R. Unitt

Geological Identification of Stone Artefacts from the N11 Gorey to Arklow Link

Introduction

The region running between Gorey and Arklow Head is underlain by Lower Palaeozoic, Ordovician rocks (488-443 million years old). To the southeast are the older Cambrian rocks of the Cahore Group and to the northwest are the younger Caledonian granites of the Wicklow Mountains.

The Ordovician rocks consist of the older Ribband Group and the younger Duncannon Group. The Ribband Group were deposited mainly in deep waters and consist of grey to black slaty mudstone (some graphitic) and grey-green slate and sandstones. When the rocks are adjacent to the local granite they are altered to phyllites and mica schists. Volcanic activity is represented by andesitic lavas and tuffs some metamorphosed to amphibolites and chlorite schists.

These rocks have been deformed by the Lower Ordovician, Monian Orogeny before the deposition of the Upper Ordovician Duncannon Group.

The Duncannon Group represents a chain of volcanic islands that once extended from Waterford through Wales and on into the English Lake District. The rocks consist of limestone and black mudstone with rhyolitic volcanics (including rhyolites, rhyolitic tuffs andesitic lavas and tuffs, dolerite/gabbro intrusions) and subordinate sandstone. The volcanics and intrusions tend to be harder to weather than the sediments and as a result isolated hills such as Tara Hill tend to be underlain by the volcanic rocks.

Volcanic activity was ended by the collision of continental masses during the Caledonian Orogeny. This resulted in the formation of large mountain ranges cored by granitic masses such as the Leinster Granite.

Stone Artefacts

The stone artefacts found during this project can all be found in local outcrops and in the glacial soils that overlay the bedrock. For example, the broken and shattered stones recovered from fulacht fiadh consist of mainly cobble sized rounded pieces of granite, sandstone, tuff and vein quartz. These could

have been derived from local storm beach deposits but were more likely to have been gathered from nearby soils and glacial sediments. Similarly, hammer stones are made from cobbles of granite. Granite is ideal for this task as it normally has an isotropic fabric i.e. no distinct planes of weakness.

Millstones require the removal and working of relatively large pieces of rock. Typical millstones/quernstones are made from coarse grained rocks which in this study have either consisted of coarse recrystallized tuff (volcanic ash), greywacke (an immature type of sandstone) or diorite (an intrusive igneous rock).

Whetstones are typically made from fine grained rocks often containing a large percentage of the relatively hard mineral quartz. Whetstones recovered during this project are made from fine or medium grained sandstone, siliceous tuff and graphitic schist.

The siliceous tuffs of the Duncannon Group are also used for making stone axes and a possible scraper. The durable nature of this rock type combined with the ability to create sharp edges makes it a good alternative to flint or porcellanite.

Roofing tiles are usually constructed from any rock type that can be broken into relatively planar units. Only one possible 'failed' roof tile was present in the artefacts and this consisted of a well cleaved siliceous tuff. A small perforated stone was also present, composed from chloritic schist.

Small artefacts include a quartz 'bead', a quartzite gaming piece and a piece of graphitic schist worked to form a point.

Larger artefacts include pieces of the igneous rock dolerite possibly engraved with coarse artwork, a possible pivot stone made from schist and a stone sluice gate made from coarse volcanic tuff.

Catalogue

C106 Find 18

'Stone Sluice Gate' – Grey-green coarse grained volcanic tuff. Provenance: Local, Ordovician.

4.4 Post Medieval Pottery by Fiona White MA

Summary

The ceramic assemblage from the N11 by pass dates between the late 17th century to the late 19th/early 20th century. The assemblage is overwhelmingly of English origin with some possible Irish examples. The variety of wares and in particular table wares, indicates that the early residents of this habitation site were reasonably prosperous, with access to a number of luxury items. The domestic wares indicate that access to a local potter may have been possible.

The contexts (located in drains (C3, 7, 29) in which the ceramic assemblage were discovered were possibly a result of the accumulation of rubbish pits, the remains of domestic fires, post-medieval kitchen middens and possibly the build up of organic material associated with homes. A description of the different wares is provided and a follow up discussion. A catalogue is also provided (but could not be produced in excel format due to time constraints, this can be added again).

Dating

Pottery as an ancient craft has probably been studied more closely than any other.
The rich resource of complete vessels and sherds discovered from stratified contexts are often helpful in establishing a dating sequence for archaeologists. The time period in this case, the post-medieval period is generally set between 1550 –1800. According to Roseanne Meenan this corresponds with a shift towards different centres of production and export as exploration and settlement of the Americas was developed.

In the early 1960's it was becoming clear that pottery from the post-medieval period 1500-1750, and from the later 18th century and 19th century, possessed a potential second only to that of clay pipes (and to a less accurate degree glass) for close dating of deposits, necessary if archaeological and documentary material were to complement each other (Crossley, 1991). The potential for dating a group of material with a post-medieval and early modern ceramic assemblage is considerable, due to relatively rapid changes in styles both of English and imported wares (Crossley, 1991).

The date for this assemblage ranges from the late 17th / early 18th century to the early 20th century. The majority of the sherds date from the 18th and 19th centuries.

Methodology

A description of the different wares and their origins is provided. There were approximately 2600 sherds (some in poor condition). Where post-medieval pottery is evident, it is possible to give a likely date, due to the circulation and rapid changes in style, during this period, both of English and imported wares.

Ceramics form England, Ireland and possibly Germany are represented. The greatest source of imported pottery comes from England; this can be explained by market trends.

The Wares

England & Ireland

The majority of the assemblage is of English representation. The date of the assemblage is mainly between the late seventeenth, eighteenth and nineteenth centuries. This was a phase of great change and rapid development within the ceramic industry in England, with a notable improvement in quality of all types of wares. The fabric of the wares is principally wholly untempered and the method of manufacture is wheel-made with spin and press moulding. The majority of the assemblage can be classed as delfts or tin glazed ware; a ware which was developed during the sixteenth century as a response to the over-riding influence of Chinese porcelain. The forms range from everyday tablewares to large domestic storage vessels.

Tin-glazed earthenware

Origins

Known as delft or majolica today. The ware is a soft earthenware body covered with tin enamel. It was developed in Antwerp and the Low Countries during the sixteenth century. It originated due to the endeavours of potters to find a ware of native production that could compete with the blue-and-white Chinese porcelain, imported by East Indian merchants.

Tin glazed earthenware, earthenwares coated after firing with a moist powdered glaze (of tin-oxide, lead oxide and ground glass) and painted in a small range of high temperature colours before a second firing. Sometimes called delftware was first made in England in the early 16th century and the main centres of manufacture in the 17th were Southwark and Lambeth, London, Bristol. The techniques of tin

glazing were introduced to England from the Continent during the 16th. The smooth white glaze enabled potters to decorate their wares with a range of bright colours for the first time.

Vessel forms

The forms can often change. Mugs, bottles and posset pots were increasingly made of tin glazed earthenware from the 1630's often decorated in imitation of Chinese porcelain. Scenic decorations on dishes of Flemish influence i.e. great religious subjects or flowers or landscapes were also popular.

17th century lighter blues 18th century darker blues more sophisticated copies. Tin glazed was popular up to the end of the 18th century but from the 1750's came under increasing competition from soft paste porcelain and from creamware. New types of teawares were made and new decorative styles evolved. Main centres Lambeth Bristol Liverpool and Glasgow and Ireland. Irelands' production centre's included Dublin, Belfast, and Limerick. The most notable being Henry Delamain's factory in Dublin set up in 1752. Delamain wished to encourage the standard and establishment of native industries. Dunlevy states in Ceramics in Ireland, (1988, p.17): "Delamain's pottery produced dinner services, spirit barrels, wall fountains, small fruit baskets and the mainstay of many delf factories then, apothecary's jars". The ware was exported to Germany, Spain, Portugal and the West Indies. These items were painted in strong blues with Chinese and Japanese motifs, landscapes, coat-of –arms and crests. Delamain used Carrickfergus clay, also used by potters in Liverpool, Glasgow and Bristol. Delamain died in 1757, and the factory failed shortly after this, due to war on the Continent which diminished exports.

Irish delf ware can be distinguished from English delf ware by its makers mark. The Irish normally marked their wares while the English were less likely to mark mass produced delf ware. However, a lot of Irish and English delf ware is similar particular links were made with Liverpool so it cannot be ruled out completely that some of the delf ware may be Irish.

Creamware

Origins

The manufacture of porcelain was well established by 1760 but these were essentially luxury objects being expensive and none too practical. The middle class market for teawares and dinner services was mostly satisfied by the earthenware potters of Staffordshire which developed rapidly in the 18th century local clays being whitened and strengthened by the addition of calcified flints and pipe clay. This mixture which vitrifies at a high temperature was first used for saltglaze stoneware. Fired at a lower temperature

and with an almost colourless lead glaze it made whitish earthenware which came to be known as creamware.

Creamware is the largest group represented in this assemblage.

In the 1740's this clay was often combined with other darker clays producing marbled wares. From about 1750 creamware began to be painted in enamels. Throughout the 1760's Wedgwood was improving his creamware and by 1768 he had made it paler and stronger largely by introducing the porcelain materials of china clay and having received the patronage of Queen Charlotte he called it Queensware and it achieved almost a monopoly of the tableware trade. Wedgwood was also responsible for the development of a new class of highly fired porcellaneous biscuit stonewares known as Jaspers which were in production from 1774 ideally suited fashionable demand for decorative objects in the style of Graeco-Roman antiquities The Grand Tour.
A white ware or queensware was being produced at Doneraile, Co. Cork (Dunlevy 1988, 22) and also in Dublin in 1769 but the most successful producer of cream ware was at the Downshire pottery in Belfast. It is unlikely that the creamware from this assemblage is Irish again due to the lack of marking.

Vessel forms
Vessel forms are mainly tea wares, like cups, saucers, tea pots, dinner plates, large serving platters

Blackware

Blackware classified as red earthenware, black glazed vessels, were made in Britain and Ireland throughout the seventeenth and eighteenth centuries. Traditional blackwares were transformed into Black Basalt superlative black stoneware. Wedgwood's success led his competitors to develop similar wares and by the end of the18th century durable earthenwares and stonewares were gaining new mass markets. The ware's likely origins lie in the Buckley area of North Wales. Successful production centres also existed at Liverpool, Lancashire and Staffordshire. Considerable quantities of the ware were exported to Dublin from North Wales during the seventeenth century and it is generally the largest single group of post-medieval ware discovered in Dublin. As a result of its popularity a local industry developed in Ireland during the middle of the eighteenth century. There are three possible representatives of blackware evident in this assemblage. The first is likely to come from North Wales recognizable from its two clays of different colours and consistencies and dated to the late seventeenth century, the second is likely to be native Irish blackware as it has a softer clay of one colour and one

consistency, probably dated to the mid eighteenth century, the third, likely from the Staffordshire region, as they represent tablewares. The ware is much more delicate than the examples mentioned above.

Vessel forms

Blackware is associated with domestic containers, generally jars, bowls, milk pans, jugs, pipkins and storage vessels. The sherds form this assemblage represent storage vessels, milk pans and a small number of tankards.

Slipware

Origins

Slipware of the seventeenth and eighteenth centuries demonstrated the skill and excellence the ceramic industry had reached in England. Most of the specimens were the show pieces of potters, made for some special occasion. Utility wares were produced although little survives in England. Ireland has produced a significant amount of this slipware (which has been debated in regional contexts may have been local copies (White, 2006)) although again this example is likely to be English. The fast effective and versatile decorative techniques of slip-trailing and incising designs on to a slipped surface enabled potters to develop a range of attractive and marketable items. During the early to mid-seventeenth century (which make it the earliest dated ceramics from this assemblage) a number of distinctive regional slipware styles emerged across the south-east and south-west and in the Midlands.

No attempt has been made to distinguish these wares. Production commenced in Staffordshire circa 1650 and ceased circa 1730, and Bristol production commenced in 1690 and ceased in 1760 (Meenan, 1997).

Vessel forms

The Ware is a buff colour with a clear glaze. The brown and /or white slip, give the ware its characteristic appearance. The forms are mainly of tankards and in this case of dishes.

North Devon

Origins

North Devon was another important centre of pottery production and export to Ireland. Potteries were in operation throughout the medieval period, up until the end of the seventeenth century. They declined due to the rise of the Staffordshire potteries.

Imports into Ireland increased dramatically from the middle of the seventeenth century. Irish butter producers were packing butter in North Devon pots and exporting it to the colonies from the south of Ireland. (Meenan, 1992). The ware is distinguishable by its fabric, which can be very coarse (tempered) to an untempered variety. The ware is highly fired and the glaze usually is a green colour.

There are three distinctive groups from North Devon; ND gravel-tempered, ND gravel-free and ND sgraffitto. Only North Devon gravel-tempered is represented in this assemblage

Vessel forms

The vessel forms of ND gravel-free are mainly tankards, drinking vessels and plates

.

North Devon gravel-tempered: Usually large domestic vessels, with a coarse fabric, glazed on the interior and flat rims. Cooking vessels, jugs and candlesticks were also made from this ware. It is difficult to surmise what vessel form this sherd represents, possibly a storage jar.

Mottled ware

Origins

It was made all over England mainly the Staffordshire and Lancashire regions. It was in circulation from circa 1680-1760.

Vessel forms

This ware mainly consists of tablewares. Its fabric is highly fired and a buff colour. The glaze can range from light to dark brown.

Stonewares

Various types of clay became vitrified at a temperature of around 1300 degrees centigrade and pots fired in this way known as stonewares are impervious to liquids and very strong. A good deal of stoneware was imported from Europe in the 17th and 18th centuries. It was first made in England in

1670's by John Dwight near Fulham and then spread to Nottingham and Staffordshire. They are variously glazed and decorated with grey/brown and red clays.

From the 1730's Staffordshire potters were able to lighten the colour of their stoneware fabric body by adding Devonshire clay and calcite flints which also made it easier to turn and mould the clay. These wares were invariably salt-glazed and have sometimes been painted in enamels and re-fired or have been gilded. They remained popular up to the 1770's when they were gradually superseded by creamware some jugs have silver mounts. Stoneware remained popular up to the twentieth century and continued to be reproduced.

The sherds of English stoneware from this assemblage, suggest that they were made in Staffordshire (from the examination of their form and fabric).

Vessels forms

The sherds represented were probably from tea ware vessels. They may be Staffordshire salt-glazed stoneware, and therefore sherds of tea pots, cups, saucers and dinner plates.

Brownwares

Origns

Also known as glazed red earthenwares. The earthenware body ranges in colour from light red/buff to dark brown or red. The lead glazes include a variety of colours brown, green and yellow. The vessels are usually coarse tablewares, kitchen vessels, dairy vessels and sanitary vessels. The wares are generally assumed to be local to each centre as it would have been uneconomical to import vessels of such size and bulk. In England brown earthenwares were produced all over the country, more intensively in Staffordshire.

Local and native wares from urban contexts in Ireland

A number of the earthenware sherds from this assemblage suggest that they were made locally, because of their size and bulk. There are a number of finer sherds which may have been produced in Ireland.

It is important to differentiate between native and local wares. Irish fine ceramics (excluding finer local earthenwares) are considered to be native wares as their production was concentrated in certain

centres like Dublin and Belfast (Dunlevy, 1988), where the resources and capital were available. They were then exported abroad or sold to the elite Irish clientele. It is difficult to class earthenwares as similar in fabric and form from all centres. They were almost certainly locally made and then transported around the country. The ware is heavy and bulky and created for domestic use and therefore uneconomical for transport over long distances (Meenan, 1997).

The discovery of kiln furniture, saggers and wasters from some excavations like Red Abbey Yard, Cork (McCutcheon, 1995), supports the notion that the wares are local. Earthenware sherds represent domestic vessels, glazed and unglazed, like storage jars, chamber pots, cooking vessels and jugs. The decorated local earthenwares, in comparison to the finer native wares are limited in their style and production. The earthenware collection also includes an Irish version of blackware (Meenan, 1997). Irish blackware and glazed red earthenware were discovered together from a number of excavations, and most significantly the post-medieval kiln discovered from Tuam Co. Galway, where potters were producing both blackware and earthenware simultaneously (Meenan, 1996).

Shell borders

Another version of creamware, with a distinctive shell border, likely to have been produced by Thomas Whieldon mid eighteenth century. Copies of this ware were produced in the north-east of Ireland in the Lagan/Downshire potteries.

Whieldon-type

Thomas Whieldon is known chiefly for his tortoise shell wares. In the case of this ware, colouring oxides were dusted onto transparent glaze. A whole range of colours were used by Whieldon during the mid eighteenth century. The sherds from this collection sport a blue feathered edge. A number of Staffordshire potteries made similar pieces. None of the pieces had signature trade marks.

Industrial slipware

Possible sample of a generic ware produced on mass by a number of Staffordshire potters, during the late eighteenth century and throughout the nineteenth century.

Transfer print

There is a large representation of transfer-printed pottery. These examples were likely produced in Staffordshire originally. Josiah Spode initiated a number of innovative measures to ceramic production. In 1784 Spode perfected a technique for printing patterns from hand-engraved copper plates on to unglazed biscuit, adapting to this to produce the blue and white designs that were to prove the most popular of the factory's wares. (See further discussion on transfer printed pottery in section entitled 'Site 8')

Discussion

This assemblage is from a time period when drastic changes were taking place in ceramic technology and design, which begun from the mid 15th century onwards in both Britain and on the Continent. Closer commercial and cultural links were being forged. The urban mercantile and artisan classes gained greater purchasing power. House design was changing providing more privacy and comfort. There were major refinements in dining habits. Emphasis was placed on individual rather than communal utensils. This ceramic revolution was not confined to the aristocracy. The increase of taverns and eating houses demanded production of appropriate vessels on a wider scale. Many of these vessel forms were contemporary copies of pewter, silver and glass. Vessels were more likely wheel-made and handles and decoration applied using mechanical aids. Potters were encouraged to diverse their wares particularly for the table. Wares imported from the continent had a profound impact on pottery manufactured in Britain and Ireland. Continental wares were superior by virtue of their robust impervious body, glaze technology and diverse shapes and forms. The development of the Luxury ware ensued. On the Continent Rhenish stonewares were popular as were Spanish and Italian Majolica and lusterware. England must follow the fashion and trends. They did so by developing their basic earthenwares.

The majority of this collection dates to the mid/late eighteenth century and early nineteenth century. The industrialisation of Great Britain had started to gather pace, and this was to affect the ceramic industry. As mentioned above heightened commercial activity brought prosperity to various sections of society, which witnessed a rise in living standards. A demand for practical household pottery and tableware emerged, demanding refinement, durability and aesthetic quality. Manufacturers improved their wares with major technological advances in production and design. By the nineteenth century social reforms and progress in science and engineering led to the development of new facets of the ceramic industry.

By the end of the eighteenth/early nineteenth centuries, British potteries were equipping themselves for large scale manufacture. Established techniques like the production of tin-glazed earthenware continued, with improved decorating processes and design production techniques, like transfer-printing.

Traditional brown stonewares and earthenwares continued to be in demand for taverns, food storage in kitchens and due to the bulky nature of these wares, were likely to have been produced locally (including wares in Ireland). The area of Stoke-on-Trent, North Staffordshire, was a particularly enterprising region (and a likely origin for a lot of this assemblages' tin-glazed earthenware). The region had an abundance of clay, skilled local workforce and local coal supply, communication networks were good and the area became known as 'The Potteries'.

Since the late seventeenth century the area had seen the development of a number of small potteries. By the late eighteenth century the region became the largest ceramic manufacturing centre in the British Isles and consequently Europe. This was at a cost, however, North Staffordshire had become extremely polluted from the soot and smoke and local clay pits grew to dangerous sizes. In any case, many advances were made in the diversity of forms, glazes and fabrics. New forms of vessels emerged. Twelve different sizes of dish were recorded in 1770 and prices became fixed. Sauce boats, stool pens (chamber pots) were developed along with butter tubs, tea cups and saucers, plates and tureens.

A number of different innovations were identified with certain potters and some potters emerged as the leaders in the ceramic industry, during the late eighteenth century and into the early nineteenth century. Potters like John Astbury, Ralph Daniel, Thomas Whieldon and Josiah Wedgewood. Wedgwood is most notable for his cream coloured earthenware's which he labelled 'Queensware'. The ware became the most popular in Britain at that time.

By the early nineteenth century Wedgwood's factory continued to develop suitable and sound earthenware, with close rivals like Spode and Minton emerging. Other great names like Copeland and Doulton would also leave their impression on the ceramics period of this period. Terms and techniques like 'maiolica' (meaning the technique of painting coloured oxides onto an opaque white tin glaze and 'lustre ware' (to give the appearance of metal) were employed. Verses and quotations were commonly found on jugs and plates commemorating events and great figures (Ireland's earlier Delamain tinglazed ware is a good example).

However, it was a period that saw the mass production of bone-china which became inexpensive and virtually ousted earthenware for general use right into the modern period.

This assemblage as outlined in section 4 exhibits many examples of this innovative period.

Conclusion

The scheme assemblage is overwhelmingly English (possibly reflected by the population using the vessels?). There are some local wares (large bulky domestic vessels) represented, possibly produced and traded by local potters and an area where future research is vital. Further investigations are needed on the activities of local potters and whether they were producing fine ceramics. Overall the assemblage dates from the late seventeenth century to early twentieth century, with the majority of the assemblage (creamware) dating late eighteenth/early nineteenth.

Catalogue

C#	Find#	Description
1	17	Red earthenware with brown glaze (glossy), rim sherd

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4.5 Charcoal Identification by Ellen O Carroll

Licence	Townland	Site	Director	S#	C#	Description	Species
A003/045	Ask	41	Nicholas Bower	15	101	Charcoal	Alder (5g)
A003/045	Ask	41	Nicholas Bower	11	92	Charcoal	Alder (20g) and ash (15g)

4.6 Radiocarbon dating

UB#	c#	s#	Description	14c date	+/-	δ13C	1σ cal BC/AD age range	Probability distribution	2σ cal BC/AD age range	Probability distribution
8244	92	11	Alder	2432	49	-29.2	735 - 690 BC 662 - 649 BC 546 - 408 BC	0.213 0.054 0.732	755 - 684 BC 669 - 607 BC 601 - 402 BC	0.213 0.133 0.654
8245	101	15	Alder	3216	50	-27.9	1526 - 1431 BC	1	1612 - 1409 BC	1.000

Table 2 Radiocarbon dating details

Valerie VJK Ltd
VJK Ltd.
Brehon House
Kilkenny Road
Castlecomer, Kilkenny
Kilkenny
Ireland
VAT No. 8242379B

^{14}CHRONO

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

Radiocarbon Date Certificate

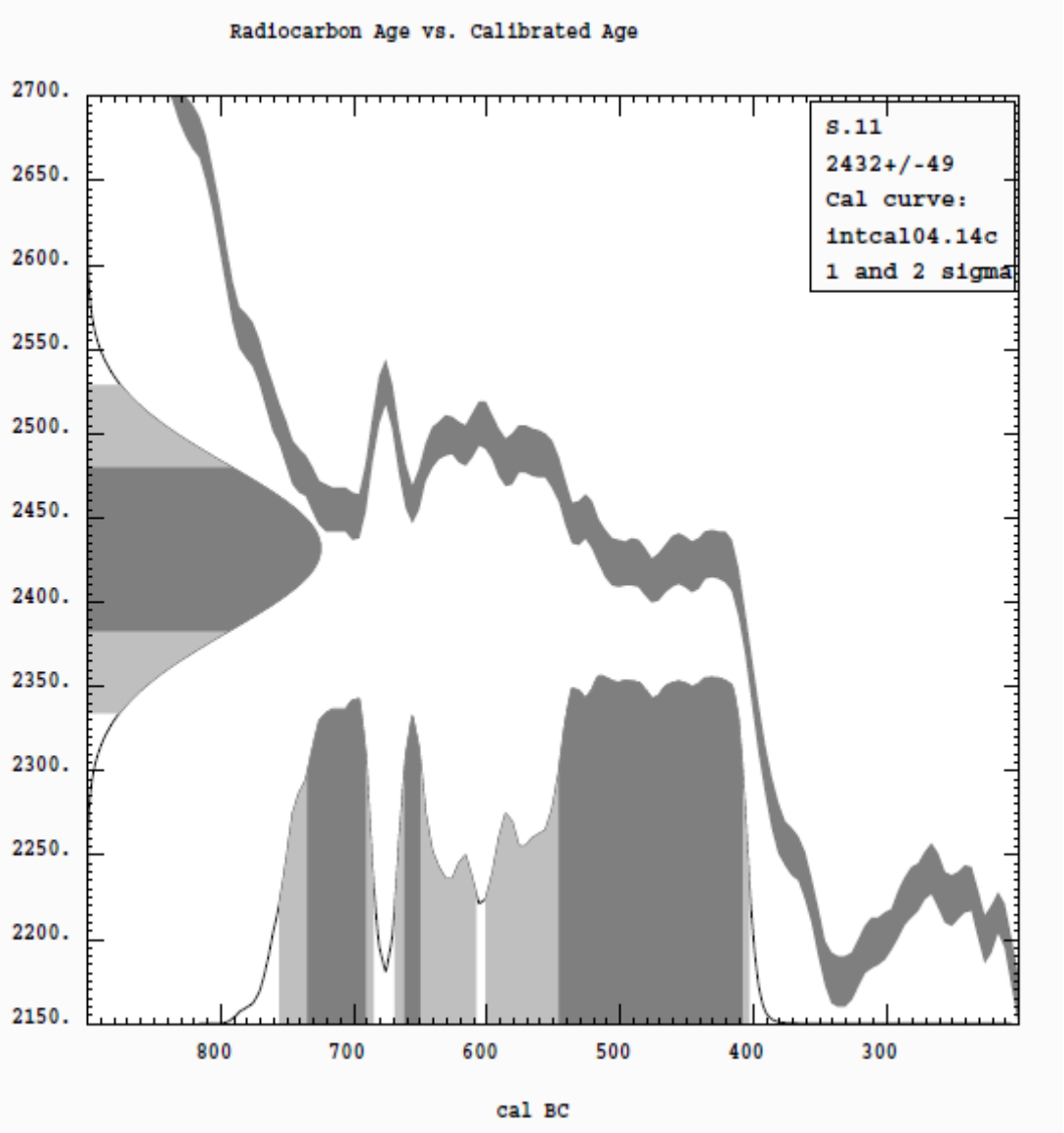
Laboratory Identification: UBA-8244
Date of Measurement: 2007-11-12
Site: E3501/A003 045,Ask, site 41
Sample ID: C.92, S.11
Material Dated: Charcoal
Pretreatment: AAA
Submitted by: Post ex VJK Ltd

^{14}C Date: 2432±49
δ^{13}C: -29.2

```
C.92 S.11
UBA-8244
Radiocarbon Age BP   2432 +/-   49
Calibration data set: intcal04.14c
  % area enclosed       cal AD age ranges

  68.3 (1 sigma)     cal BC 735- 690
                            662- 649
                            546- 408
  95.4 (2 sigma)     cal BC 755- 684
                            669- 607
                            601- 402
```

```
# Reimer et al. 2004
    relative area under
probability distribution
        0.213
        0.054
        0.732
        0.213
        0.133
        0.654
```


Radiocarbon Age vs. Calibrated Age
S.11
2432+/-49
Cal curve:
intcal04.14c
1 and 2 sigma
2700.
2650.
2600.
2550.
2500.
2450.
2400.
2350.
2300.
2250.
2200.
2150.
800
700
600
500
400
300
cal BC

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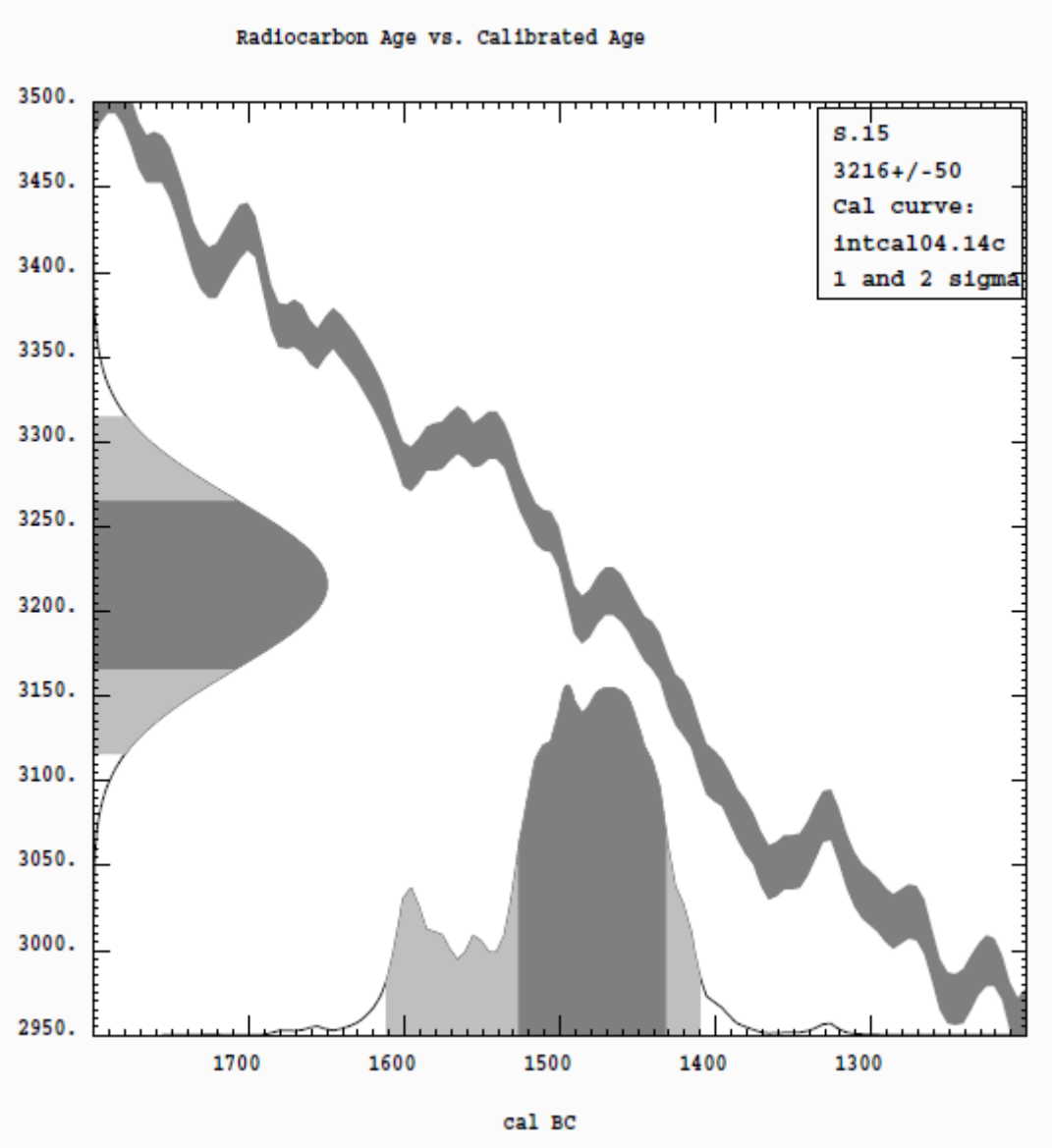
Belfast BT9 6AX
Northern Ireland

Radiocarbon Date Certificate

Laboratory Identification:	UBA-8245
Date of Measurement:	2007-11-12
Site:	E3501/A003 045,Ask, site 41
Sample ID:	C.101, S.15
Material Dated:	Charcoal
Pretreatment:	AAA
Submitted by:	Post ex VJK Ltd

^{14}C Date: 3216±50
δ^{13}C: -27.9

```
C.101 S.15
UBA-8245
Radiocarbon Age BP    3216 +/-    50
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 1526- 1431                       1.000
  95.4 (2 sigma)      cal BC 1612- 1409                       1.000
```


Radiocarbon Age vs. Calibrated Age
S.15
3216+/-50
Cal curve:
intcal04.14c
1 and 2 sigma
3500.
3450.
3400.
3350.
3300.
3250.
3200.
3150.
3100.
3050.
3000.
2950.
1700
1600
1500
1400
1300
cal BC

5.0 DISCUSSION

The features resolved at the site confirm the initial archaeological testing interpretation of a burnt mound / *Fulacht fiadh*. The sophisticated construction, prehistoric stone tool remains, probable timber planking both in the water pit and the trough, (linear bands of sand), suggest an elaborate construction to a traditional design, for repeated use.

The term burnt mound or *Fulachta fiadh* is used to broadly categorise a site type of primarily Bronze Age date encompassing the heating of stone, often associated with impermeable pits and occasional shelters or windbreaks. The monuments have been identified throughout the Irish countryside.

Classically *Fulachta fiadh* appear as kidney or horse-shoe shaped mounds of burnt stone surrounding a wood or stone lined trough set into the ground. However with increased field survey and rescue excavation from the 1980's on, it is clear that there is a much greater variation. Mounds can be circular, oval, D-shaped or irregular. Many sites may not be represented by any mound and are identified by a thin deposit or spread of burnt stone. This was the case with some thirty examples uncovered during the construction of the Cork-Dublin gas pipeline (Buckley). There is a clear preference for *Fulachta fiadh* to be located near a good water source and on marshy/boggy ground, as is the case at site 41. Thus the trough may be easily filled and will retain water, in some cases filling naturally. Some sites, including site 41, feature a large pit close to the trough that has been interpreted as a cistern or pit containing a readily available water supply.

The trough retained water and can be lined with timber or stone or simply dug into the natural clay. Water temperature is raised and controlled by placement of heated stones, from an adjacent fire, into the water filled trough. The temperature variation between fire and water occasioned thermal shock, ultimately shattering the stone which was removed and piled next to the trough. This activity repeated forming a mound or deposit of burnt material. In general these mounds consist of shattered sandstone perhaps indicating a safety concern with the shattering process where other rock types could occasion flying splinters or the presence of splinters within the trough admixture and hence into any trough product.

The excavations bulletin contains data on 421 archaeological excavations in County Wexford, (online search of excavations bulletin conducted 2010). Of these 15 were classified as *Fulachta fiadh* /burnt mounds and none were absolutely dated.

Fulachta fiadh are the most common type of prehistoric site in Ireland (Power et al 1997, 75; Waddell 1998, 174) as well as being known from Scandinavia, Wales, Scotland, Orkney, the Shetland Islands and parts of Cumbria (Buckley 1990). There are over 7000 known examples distributed throughout Ireland and over 3000 of these occur in Co. Cork (Power et al 2000). Notably, examples have even been recorded on islands such as Valentia (Mitchell 1990; Sheehan 1990). It is probable that thousands of more fulacht sites exist, unrecorded and undetected, throughout Irish landscape. Large numbers of burnt mound sites have also been recorded in England, Scotland and Wales (Hodder 1990; Halliday 1990; Williams 1990). *Fulachta fiadh* can occur in groups or clusters, usually with 2-6 examples over a small area (Waddell 1998, 174). In spite of the obvious biases which previous surveys and fieldwork have on *fulachta fiadh* distribution maps, regional studies show that in Cork particular concentrations occur along streams and sandstone ridges and tend to occur below the 250m contour (Power 1990). Particular concentrations and clusters of *fulachta fiadh* sites have also been identified in Co. Kilkenny (again despite the biases of previous fieldwork/ surveys in the area) occurring throughout the county near streams in limestone and sandstone rich areas (Condit 1990).

O'Kelly (1954), carried out a series of experiments which demonstrated that a trough, (similar dimensions to that found at Ballyvourney Co. Cork), containing c. 454 litres or 100 gallons of water could be brought to the boil by fire heated sandstone in 30-35 minutes. Only a few heated stones were required to maintain this temperature. A ten pound joint of meat was wrapped in straw and cooked for three hours and forty minutes, proving perfectly edible. The larger of the *Fulachta fiadh* /burnt mounds can contain over 20 tonnes of burnt stone which points to re-use, perhaps more than 100 times (Roycroft 2006). These sites may have functioned over a few weeks or represent a periodic and/or seasonal activity.

The amount of fire cracked stone at site 41 indicates use on numerous occasions, the extent of stone cracking may evidence multiple heating of individual stones. However, it is impossible to outline a sequence of use or if different areas were used alternatively.

Fulachta fiadh have traditionally been interpreted as cooking places, the Irish word Fulacht denotes a pit used for cooking while fiadh meaning 'of the deer' or 'of the wild', is derived from the early word fian (Ó'Drisceóil, 1988). References to *Fulachta fiadh* survive in early Irish sources, dating from 9th century to 17th century (O'Drisceoil). The text from the Yellow Book of Lecan states "a piece of raw meat and another of dressed meat, and a bit of butter on it; and the butter did not melt, and the raw was dressed and the dressed was not burned, even though the three were together on the spit". An illustration of this

spit is also depicted with the text "fulacht na morrigna inso" below it (O'Neill 2004). Geoffrey Keatings 'The History of Ireland' preserves an early 17th century description of the use of a Fulachta fiadh:

".... and it was their custom to send their attendants about noon with whatever they had killed in the mornings hunt to an appointed hill, having wood and moorland in the neighbourhood and to kindle raging fires thereon and to put into them a large number of emery stones ; and to dig two pits in the yellow clay of the moorland, and to put some of the meat on spits to roast before the fire; and to bind another portion of it with suagans in dry bundles and set it to boil in the larger of the two pits and to keep plying them with the stones that were in the fire. Making them seethe often until they were cooked. And these fires were so large that their sites are today in Ireland burnt to blackness, and these are now call fulacht fian by the peasantry…." Geoffrey Keating The History of Ireland, (17th century).

This interpretation of function has been questioned (Barlfield & Hodder 1987). In particular the frequent lack of associated bone and the general lack of cooking artefacts has been used to postulate other uses, for example: bathing, curing of animal skins, soap production, garment waterproofing and ritual practice (Monk 2000). Other functions consider a possible covering of the trough area by light structures and include use as sauna (Eogan 2008), sweathouse, bathing, washing, dyeing cloth or for dipping hides in hot water as part of the preparation of the leather (Waddell 2000). In recent years brewing has also been suggested as a possible function (Quinn & Moore 2007). They argue, through practical experimentation, that *Fulachta fiadh* were ideal for making beer and should really be referred to as a 'Kitchen Sink'. It is this final view that is the most plausible interpretation, that of an effective technology with well defined archaeological footprint but with a variety of functions.

The groups of stakes at the northern and north-eastern corners of the rectangular trough may relate to a cover for the trough to keep the heat in or to keep contamination out of the trough. The large post-hole, (C87), may represent a single upright butchery post. A similar isolated post-hole was present on this scheme at Site 40 (A003/036, E3500, site 40, context 57). The outlying pits may have been used for temporary storage of foodstuffs, dyes or suitable stones for heating or may have been to dispose of waste.

The rectangular trough, (C.35), with its impermeable clay lining and possible wood planking suggests a reusable structure, where heating of water with hot sandstone would have taken place. The probable sluice system, (C.124), appears to have been used to control water drainage from the trough. This could have been done whilst the water was still hot, separating the hot water from hot stone debris. The water pit, (C.13), appears to be similar to the trough present on Site 40 of this scheme, being oval and

deep, with evidence of planking at the base and perhaps wattle sides. Though this feature has initially been interpreted as a pit for collecting ground water, its similarity to the trough from site 40 may suggest other possibilities. It may be that water was heated to the necessary temperature in the shallower rectangular trough (C.35), then the sluice was opened to allow the water to run into the second lower trough. The upper trough could then be easily emptied of stones and the whole process could start again. Processes which might need a specific temperature (i.e. not boiling water) include a bathing pool, processing and dying wool and beer making as suggested by Quinn and Moore. An alternative may be that a process needed to be concentrated in the upper trough, with the sluice system being used to empty the used water out, so that fresh water could be added simply and quickly. One such process may be the concentration and removal of lanolin from wool, which can be used for waterproofing, skin ointment and would need to be removed from wool prior to the production of textiles.

Similar technology may observed elsewhere, for example at Tirquin, Co. Cavan(04E1173, Channing, Excavations, 2004:0129 Site 2, Tirquin, Co Cavan) and at at Gortafricka 2 (E3898, Nunan J, Blackwater Archaeology, Crusheen, County Clare). The Cavan example used the outlet gully to empty the trough and the associated postholes in the gully suggested a form of attenuation or control of the contents ie a sluice system.

A series of plough furrows and modern field drains present indicate attempts in the recent past to improve the quality of the land and to reduce its waterlogged state.

Phasing

The rectangular upper trough, sluice and lower trough appear to have been constructed in tandem, with stake-hole groups A and B probably commencing when construction of the troughs were finished. No direct link to the post-hole can be made, other than that all these features were under the burnt mound material. Furrows and field drains cut into the uppermost layers of the mound, suggesting the most recent activity at the site.

6.0 CONCLUSION

The site consists of the remains of a burnt mound or *Fulacht Fiadh* used repeatedly from the Bronze Age. The presence of a secondary pit and connecting channel from the main trough add complexity to the standard design of the site type and though present elsewhere, is not common.

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8.0 ACKNOWLEDGEMENTS

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9.0 EXCAVATION RECORD

Appendix A Context Register

Type: L=Layer F=Fill C=Cut

C#	Area	Type	Morphology	Excavators Interpretation
1	1,2,3,4,	L		Topsoil
2	1,2,3,4,	L		Natural
3	1,2,3,4,	L		Grey hill wash
4	1,2,3,4,	L	oval	Burnt mound, this material makes up the majority of the archaeological material on site.
5	3	F	Linear	Fill of modern plough furrow 6,with sloping sides and concave base
6	3	C	Linear	Modern plough furrow, with sloping sides and concave base
7	1,2	F	Linear	fill of furrow (C8)
8	1,2	C	Linear	Cut of furrow
9	2	F	Linear	fill of furrow (C10)
10	2	C	linear	Cut of furrow, with gradual sloping sides and rounded base
11	1	L	irregular oval	this deposit and stones may have been used to fill a wet spot on the site during activity
12	1	C	oval	Due to a slope in the deposit of mound material (C4) this was recorded as a cut. NO CUT IS EVIDENT.
13	4	C	circular	Cut of large pit used for collecting ground water, some small pieces of timber were recovered. It appears likely that this pit had a rough plank base, staked and woven sides. This would have supplied water for the trough to the SE
14	4	F	oval	Upper layer in large pit (C13), formed by silting up of pit.
15	4	F	oval	Stony, silty layer in water pit (C13).
16	4	F	oval	very similar to mound material ((C4)and also (C106), made up of burnt stone and charcoal, appears to be a result of mound material falling into the pit from the east and silting up
17	4	F	oval	First fill of large pit (C13) for water supply.
18	4	F	Rectangular	silted up layer which surrounds water pit/spring (C13), this fill has also collapsed into (C13) on the north northwest side
19	4	L	circular	Sandy-silt spread around water pit (C13), on the north, north-east and north-west side.

C#	Area	Type	Morphology	Excavators Interpretation
20	1	L	circular	layer settled on top of trough (C35), may have been the result of re-use of the trough
21	1	L	Rectangular	layer settled on top of trough (C35), may have been the result of re-use of the trough
22	1	L	oval	likely from water washing through the charcoal deposits above
23	1	L		thin lens under (C22), likely from water washing through the charcoal deposits above
24	4	F	linear	Packed along the base of cut (C129), at the edge of the pit dug for water collection. This may have been placed to prevent material washing back into the water or to line the western side of the pit (C13), to prevent water loss.
25	1,4	L	semi circular	As water was still seeping through this area from east to west, it is likely that a small stream underground stream has been running through the site, following the contours of the hillside. This material is likely to have washed out from the underside of the mound (C4)
26	3	L	oval	Charcoal rich layer at base of mound, possibly water has seeped through from the mound above settling out the charcoal from the charcoal rich layer above (C4)
27	3	F	irregular	Probably fill of a tree bowl
28	3	C	irregular	Probably a tree bowl
29	3	F	irregular circle	fill of shallow pit, no indication of burning as has been suggested
30	3	C	irregular circle	cut of shallow pit, no indication of burning as has been suggested
31	1	L	irregular oval	Naturally formed silty layer, perhaps it has washed through from the charcoal rich mound above (C4)
32	1	L	linear	Fill of a natural depression. May be similar to (C25), which is interpreted as deriving from E-W water seepage.
33	3	L		Either heated soil from the deposition of stone, or material washed down through the mound (C4)
34	1,2,4	C	oval	Recorded as cut of mound. THERE IS NO CUT TO THE MOUND
35	1,2	C	rectangular	Cut of trough, with a bank to the NW, appears to have contained planking though only linear bands of sand remain at the base (running NE-SW.)
36	N/A	N/A	N/A	N/A
37	N/A	N/A	N/A	N/A
38	1,2	C	circular	cut of stake-hole (C38), one of a series in line with the eastern edge of the trough (C35)
39	1,2	F	circular	fill of a stake-hole (C38), one of a series in line with the eastern edge of the trough(C35)
40	1,2	C	circular	cut of stake-hole (C40), one of a series in line with the eastern edge of the trough (C35)
41	1,2	F	circular	fill of a stake-hole (C40), one of a series in line with the eastern edge of the trough (C35)
42	1,2	C	circular	cut of stake-hole (C42), one of a series in line with the eastern edge of the trough (C35)
43	1,2	F	circular	fill of a stake-hole (C42), one of a series in line with the eastern edge of the trough (C35)

C#	Area	Type	Morphology	Excavators Interpretation
44	1,2	C	oval	cut of stake-hole (C44), one of a series in line with the eastern edge of the trough (C35)
45	1,2	F	oval	fill of a stake-hole (C44), one of a series in line with the eastern edge of the trough (C35)
46	1,2	C	circular	cut of stake-hole (C46), one of a series in line with the eastern edge of the trough (C35)
47	1,2	F	circular	fill of a stake-hole (C46), one of a series in line with the eastern edge of the trough (C35)
48	1,2	C	oval	cut of stake-hole (C48), one of a series in line with the eastern edge of the trough (C35)
49	1,2	F	oval	fill of a stake-hole (C49), one of a series in line with the eastern edge of the trough (C35)
50	1,2	C	circular	cut of stake-hole (C50), one of a series in line with the eastern edge of the trough (C35)
51	1,2	F	circular	fill of a stake-hole (C50), one of a series in line with the eastern edge of the trough (C35)
52	1,2	C	circular	cut of stake-hole (C52), one of a series in line with the eastern edge of the trough (C35)
53	1,2	F	circular	fill of a stake-hole (C52), one of a series in line with the eastern edge of the trough (C35)
54	1,2	C	circular	cut of stake-hole (C54), one of a series in line with the eastern edge of the trough (C35)
55	1,2	F	circular	fill of a stake-hole (C54), one of a series in line with the eastern edge of the trough (C35)
56	1,2	C	circular	cut of stake-hole (C56), one of a series in line with the eastern edge of the trough (C35)
57	1,2	F	circular	fill of a stake-hole (C56), one of a series in line with the eastern edge of the trough (C35)
58	1,2	C	circular	cut of stake-hole (C58), one of a series in line with the eastern edge of the trough (C35)
59	1,2	F	circular	fill of a stake-hole (C58), one of a series in line with the eastern edge of the trough (C35)
60	1,2	C	circular	cut of stake-hole (C60), one of a series in line with the eastern edge of the trough (C35)
61	1,2	F	circular	fill of a stake-hole (C60), one of a series in line with the eastern edge of the trough (C35)
62	1,2	C	circular	cut of stake-hole (C62), one of a series in line with the eastern edge of the trough (C35)
63	1,2	F	circular	fill of a stake-hole (C62), one of a series in line with the eastern edge of the trough (C35)
64	1,2	C	irregular	cut of stake-hole (C64), one of a series in line with the north-eastern edge of the troughZ(C35)
65	1,2	F	irregular	fill of a stake-hole (C64), one of a series in line with the north-eastern edge of the trough (C35)
66	1,2	C	irregular	cut of stake-hole (C66), one of a series in line with the north-eastern edge of the trough (C35)
67	1,2	F	irregular	fill of a stake-hole (C66), one of a series in line with the north-eastern edge of the trough (C35)
68	1,2	C	circular	cut of stake-hole (C68), one of a series in line with the north-eastern edge of the trough (C35)
69	1,2	F	circular	fill of a stake-hole (C68), one of a series in line with the north-eastern edge of the trough (C35)
70	1,2	C	irregular	cut of stake-hole (C70), one of a series in line with the north-eastern edge of the trough (C35)
71	1,2	F	irregular	fill of a stake-hole (C68), one of a series in line with the north-eastern edge of the trough (C35)
72	1,2	C	irregular	cut of stake-hole (C72), one of a series in line with the north-eastern edge of the trough (C35)
73	1,2	F	irregular	fill of a stake-hole (C72), one of a series in line with the north-eastern edge of the trough (C35)
74	1,2	C	irregular	cut of stake-hole (C74), one of a series in line with the north-eastern edge of the trough (C35)

C#	Area	Type	Morphology	Excavators Interpretation
75	1,2	F	irregular	fill of a stake-hole (C74), one of a series in line with the north-eastern edge of the trough (C35)
76	1,2	C	circular	cut of stake-hole (C76), one of a series in line with the north-eastern edge of the trough (C35)
77	1,2	F	circular	fill of a stake-hole (C76), one of a series in line with the north-eastern edge of the trough (C35)
78	1,2	C	irregular	cut of stake-hole (C76), one of a series in line with the north-eastern edge of the trough (C35)
79	1,2	F	irregular	fill of a stake-hole (C78), one of a series in line with the north-eastern edge of the trough (C35)
80	1,2	C	irregular	cut of stake-hole (C80), one of a series in line with the north-eastern edge of the trough (C35)
81	1,2	F	irregular	fill of a stake-hole (C78), one of a series in line with the north-eastern edge of the trough (C35)
82	1,2	C	irregular	cut of stake-hole (C82), one of a series in line with the north-eastern edge of the trough (C35)
83	1,2	F	irregular	fill of a stake-hole (C80), one of a series in line with the north-eastern edge of the trough (C35)
84	N/A			Non- archaeological
85	N/A			Non- archaeological
86	2	L	irregular oval	Iron panning, suggestion that it is burning related is unfounded, no evidence of burning or heated soil.
87	1	C	sub-circular	post-hole, with straight sides and concave base
88	1	F	sub-circular	first fill of post-hole (C87)
89	1	F	sub-circular	second fill of post-hole (C87)
90	1,2	F	L-shaped	Clay lining of NE and NW sides of the trough for waterproofing purposes.
91	west of quad 3	L	linear	linear spread, possible truncated furrow
92	1,2	F	rectangular	Fill of trough 35, likely from last phase of activity in the trough.
93	1	F		fill of a stake-hole (C94), one of a series in line with the north-eastern edge of the trough (C35)
94	1	C	Irregular	cut of stake-hole (C94), one of a series in line with the north-eastern edge of the trough (C35)
95	3	F		fill of stake-hole (C96), one of a series of stake-holes to the southwest of trough cut (C35)
96	3	C	sub-circular	cut of stake-hole (C96), one of a series of stake-holes to the southwest of trough cut (C35)
97	2,3	F		fill of stake-hole (C98), one of a series of stake-holes to the southwest of trough cut (C35)
98	2,3	C	oval	cut of stake-hole (C98), one of a series of stake-holes to the southwest of trough cut (C35)
99	2,3	F		fill of stake-hole (C100), one of a series of stake-holes to the southwest of trough cut (C35)
100	2,3	F	circular	cut of stake-hole (C100), one of a series of stake-holes to the southwest of trough cut (C35)
101	1	F	rectangular	Part of the banking system, to separate the trough (C35), from the run-off (C124)
102	2,3		linear bands	Sand from decaying burnt sandstone falling down between the planks at the bottom of the trough (C35).
103	2,3	F		fill of stake-hole (C103), one of a series of stake-holes to the southwest of trough cut (C35)
104	2,3	C	circular	cut of stake-hole (C104), one of a series of stake-holes to the southwest of trough cut (C35)

C#	Area	Type	Morphology	Excavators Interpretation
105	4	L	linear	very similar to topsoil and is possibly hill wash
106	4	F	oval	second fill of pit (C13) dug for water supply
107	4	F	oval	silting up layer in large water pit (C13)
108	2,3	F		fill of stake-hole (C109), one of a series of stake-holes to the southwest of trough cut (C35)
109	2,3	C	circular	cut of stake-hole (C109), one of a series of stake-holes to the southwest of trough cut (C35)
110	3	C	circular	cut of stake-hole (C110), one of a series of stake-holes to the southwest of trough cut (C35)
111	3	F		fill of stake-hole (C110), one of a series of stake-holes to the southwest of trough cut (C35)
112	1,2	C	circular	cut of stake-hole (C112), one of a series in line with the eastern edge of the trough (C35)
113	1,2	F	circular	fill of a stake-hole (C112), one of a series in line with the eastern edge of the trough (C35)
114	1,2	C	circular	cut of stake-hole (C114), one of a series in line with the eastern edge of the trough (C35)
115	1,2	F	circular	fill of a stake-hole (C114), one of a series in line with the eastern edge of the trough (C35)
116	1,2	C	circular	cut of stake-hole (C116), one of a series in line with the north-eastern edge of the trough (C35)
117	1,2	F	circular	fill of a stake-hole (C117), one of a series in line with the north-eastern edge of the trough (C35)
118	1,2	F	Circular	fill of stake-hole (C119)
119	1,2	C	circular	stake-hole possibly related to water pit (C13)
120	3	F		fill of a stake-hole (C120), one of a series in line with the south-western edge of the trough (C35)
121	3	C	circular	cut of stake-hole (C120), one of a series in line with the south-western edge of the trough (C35)
122	3	F		fill of a stake-hole (C122), one of a series in line with the south-western edge of the trough (C35)
123	3	C	circular	cut of stake-hole (C122), one of a series in line with the south-western edge of the trough (C35)
124	1,2,3	C	rectangular	Cut for the run-off, this was likely part of the cut for the trough (C13), then the banking material was put back in, separating the two features, poss. a sluice gate (find # 18) aided in separating the two
125	2,3	F	rectangular	Part of the banking system, to separate the trough (C35), from the run-off (C124)
126	2,3	F	rectangular	Part of the banking system, to separate the trough (C35), from the run-off (C124)
127	1	L	irregular oval	similar to the natural subsoil (context 2) perhaps this material was dug out during the construction of the trough, run-off or spring
128	1,2,3	F	rectangular	Clay lining for the base of the tough (C35), for water retention.
129	4	C	semi-circular	Platform on western side of cut for water pit/spring, cut (C129) is lower than the western-most edge of cut (C13), as it appears to be used for access to the waters edge.
Field drain 1	3	C	Linear	Modern field drain

C#	Area	Type	Morphology	Excavators Interpretation
Field drain 2	1, 4	C	Linear	Modern field drain
Field drain 3	4	C	Linear	Modern field drain

Appendix B Artefact Register

Works Number	Find Number	Context Number	Material	Type	Identification
A003/045	1	3	Stone	Flint	Scraper
A003/045	2	4	Stone	?	Stone
A003/045	3	1	Stone	Flint	Spall
A003/045	4	4	Stone	Flint	Flake
A003/045	5	26	Stone	Flint	Spall
A003/045	6	4	Stone	Flint	Spall flake
A003/045	7	4	Stone	Flint	Spall
A003/045	8	14	Stone	Flint	Flake / Broken blade
A003/045	9	22	Stone	Chert	
A003/045	10	91	Ceramic	Pottery	Rim-sherd
A003/045	11	32	Stone	Flint	Spall
A003/045	12 & 12A	18	Stone	Flint	Weathered spalls
A003/045	13	1	Glass	Glass	Fragment
A003/045	14	1	Stone	Flint	Blade
A003/045	15	1	Stone	Flint	Flake
A003/045	16	1	Stone	Flint	Scraper
A003/045	17	1	Ceramic	Pottery	Sherd
A003/045	18	106	Stone	Crystal tuft?	Sluice gate?
A003/045	19	1	Stone	Flint	Weathered core.
A003/045	20	1	Stone	Flint	Flake
A003/045	21	1	Stone	Flint	Spall

Appendix C Sample Register

Sample#	Context#	Area	Initials	Description
1	4	1	GMC	Large charcoal chunks
2	20	2,3	MN	Top layer of fulacht
3	21	2,3	MN	Layer on top of trough (C35)
4	15	4	GMC	Grey stony fill of trough (C13)
5	14	4	GMC	Top grey layer of possible trough
6	16	4	GMC	Fulacht type fill in (C13)
7	17	4	GMC	Clay layer with lots of peat and roots
8	18	4	GMC	Silty layer in (C13)
9	19	4	GMC	Grey silty-clay, collapsed layer
10	88	1	CVG	Bottom fill of post-hole/pit (C87)
11	92	2, 3	MN	Fulacht material in trough (C35)
12	90	2, 3	MN	Clay lining in trough (C35)
13	73	1	CVG	Stake-hole
14	65	1	CVG	Stake-hole
15	101	3	GMC	Soft black charcoal material from north side of fulacht
16	118	4	TK	Stake-hole
17	102	1,2	DS	Sandy linear at base of trough
18	56	1,2	TC	Stake-hole
19	58	1,2	TC	Stake-hole
20	112	1,2	TC	Stake-hole
21	114	1,2	TC	Stake-hole
22	116	1,2	TC	Stake-hole
23	62	1,2	TC	Stake-hole
24	24	4	GMC	Possible wattling from fill (C24) in cut (C13)
25	17	4	GMC	Possible split planks in (C17), base fill
26	1	4	TC	Surface clearance flint
27	17	4	GMC	Possible wooden stake
28	112	1,2	TC	Stake-hole

Site	Director	S#	C#	Description	Species	Comment	Batch#
41	Nicholas Bower	15	101	Charcoal	Alder (5g)	All suitable for conventional dating	1

Site	Director	S#	C#	Description	Species	Comment	Batch#
41	Nicholas Bower	11	92	Charcoal	Alder (20g) and ash (15g)	All suitable for conventional dating	1

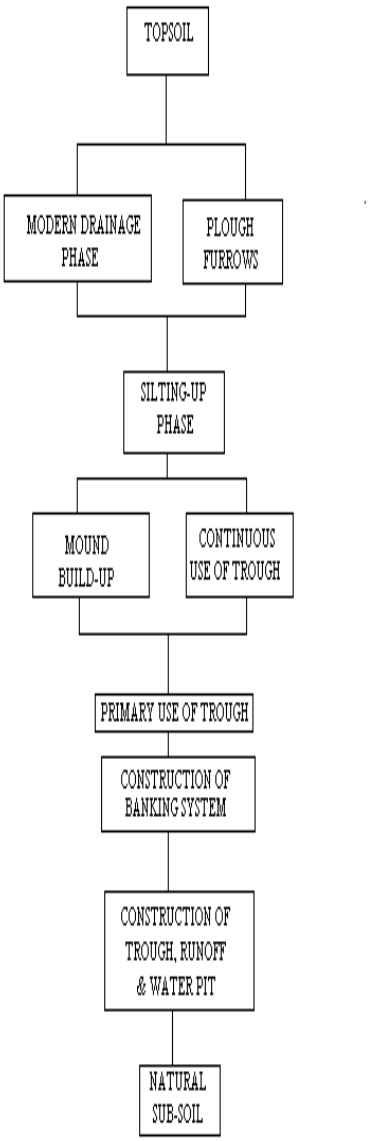
Appendix D List of Quantities

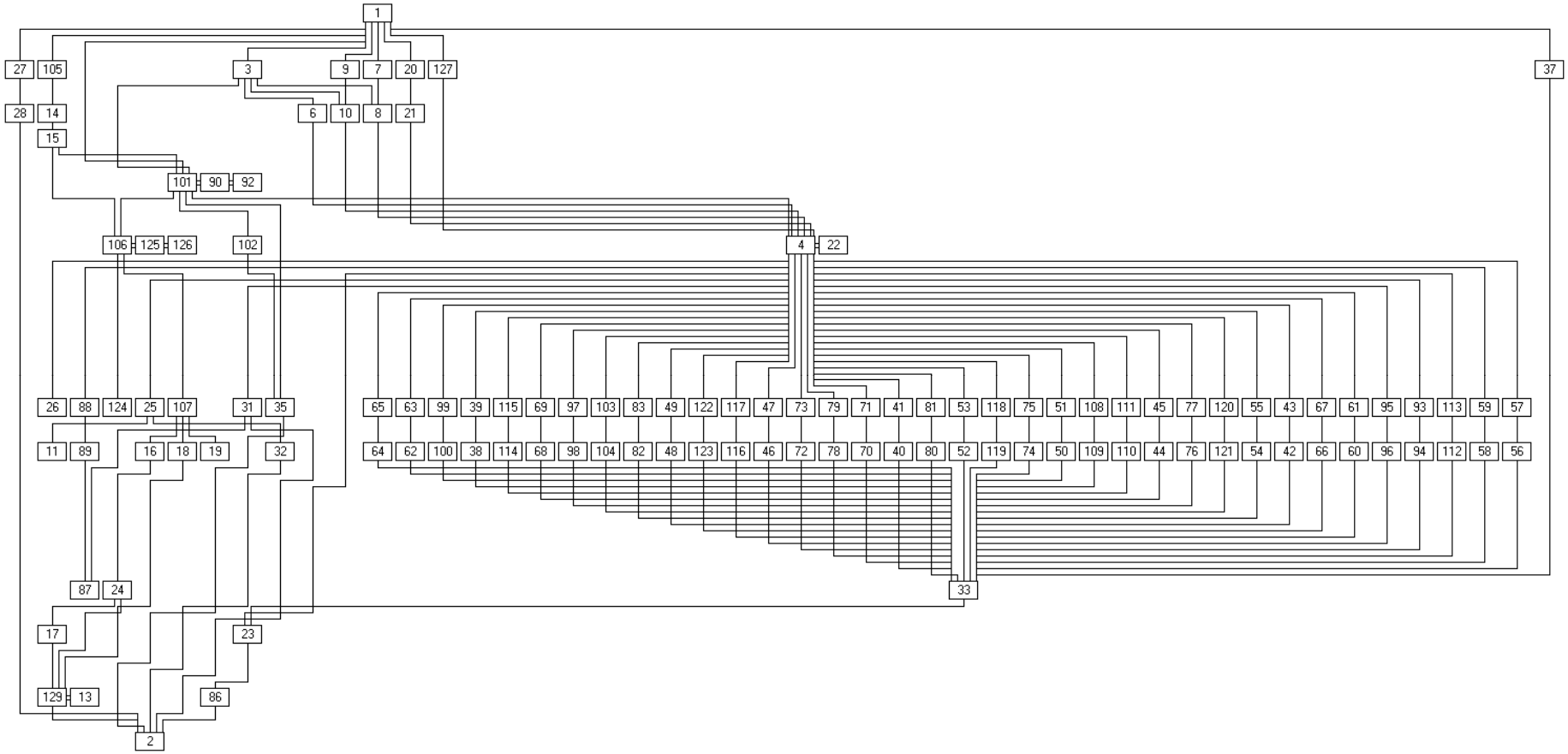
The Site Archive is currently stored in the Valerie J Keeley Ltd. Post- Excavation Facility

Context Sheets	Context Register	Drawing Register	Sample Register	Finds Register	Photo Register
130	1	1	1	1	1

Appendix E Site Matrix

APPENDIX E: SIMPLIFIED MATRIX




1
27 105 3 9 7 20 127 37
28 14 6 10 8 21
15
101 90 92
106 125 126 102 4 22
26 88 124 25 107 31 35 65 63 99 39 115 69 97 103 83 49 122 117 47 73 79 71 41 81 53 118 75 51 108 111 45 77 120 55 43 67 61 95 93 113 59 57
11 89 16 18 19 32 64 62 100 38 114 68 98 104 82 48 123 116 46 72 78 70 40 80 52 119 74 50 109 110 44 76 121 54 42 66 60 96 94 112 58 56
87 24 33
17 23
129 13 86
2

10.0 ILLUSTRATION

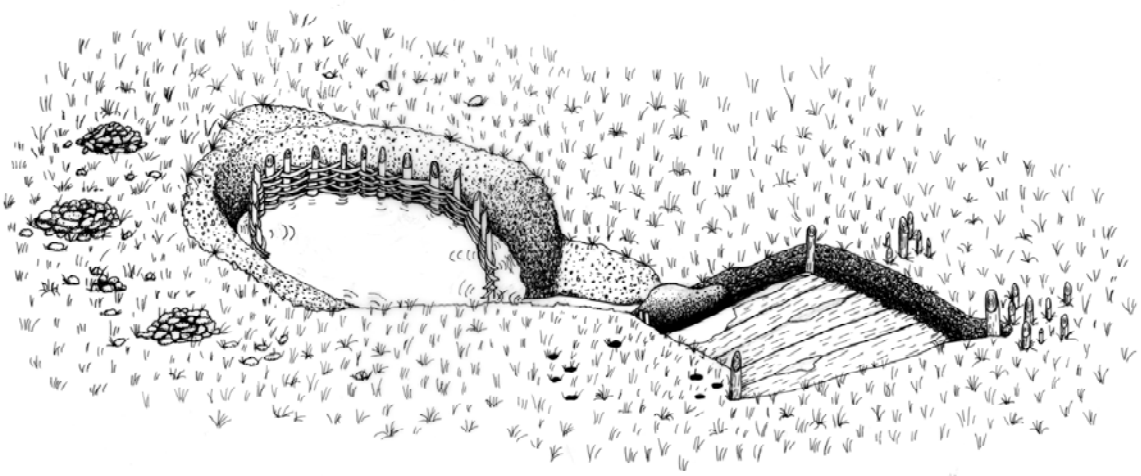
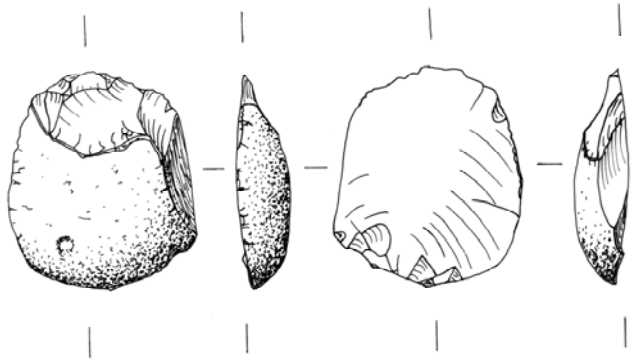


Illustration 1 Site reconstruction



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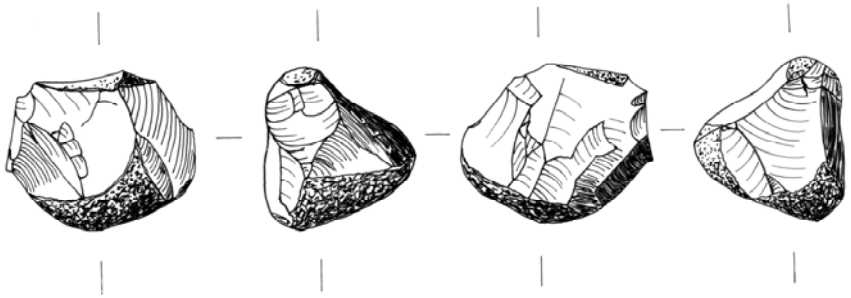

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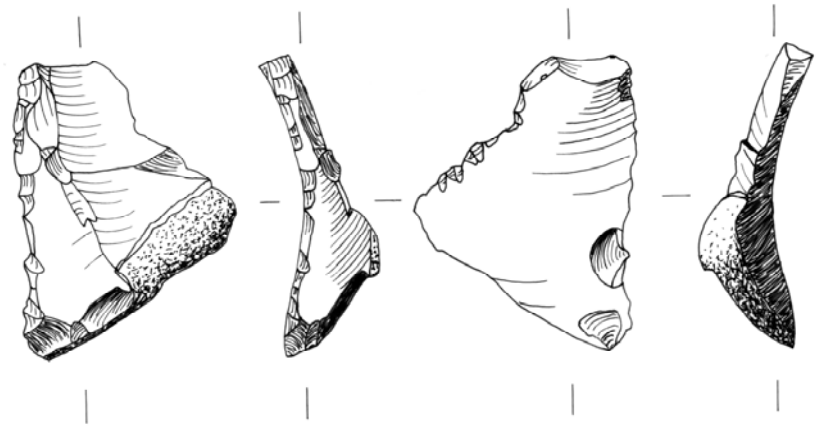
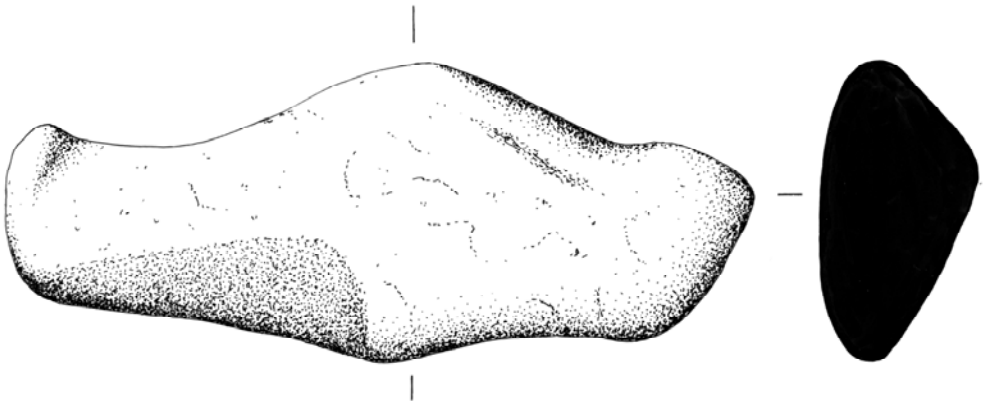


E3501:16

0 5 cm

Illustration 2 Lithic find 1, 19 & 16



E3501:18

Illustration 3 Stone find 18

11.0 PLATES

Plate 1: Pre-excavation aerial view of Site 41, looking to the south.

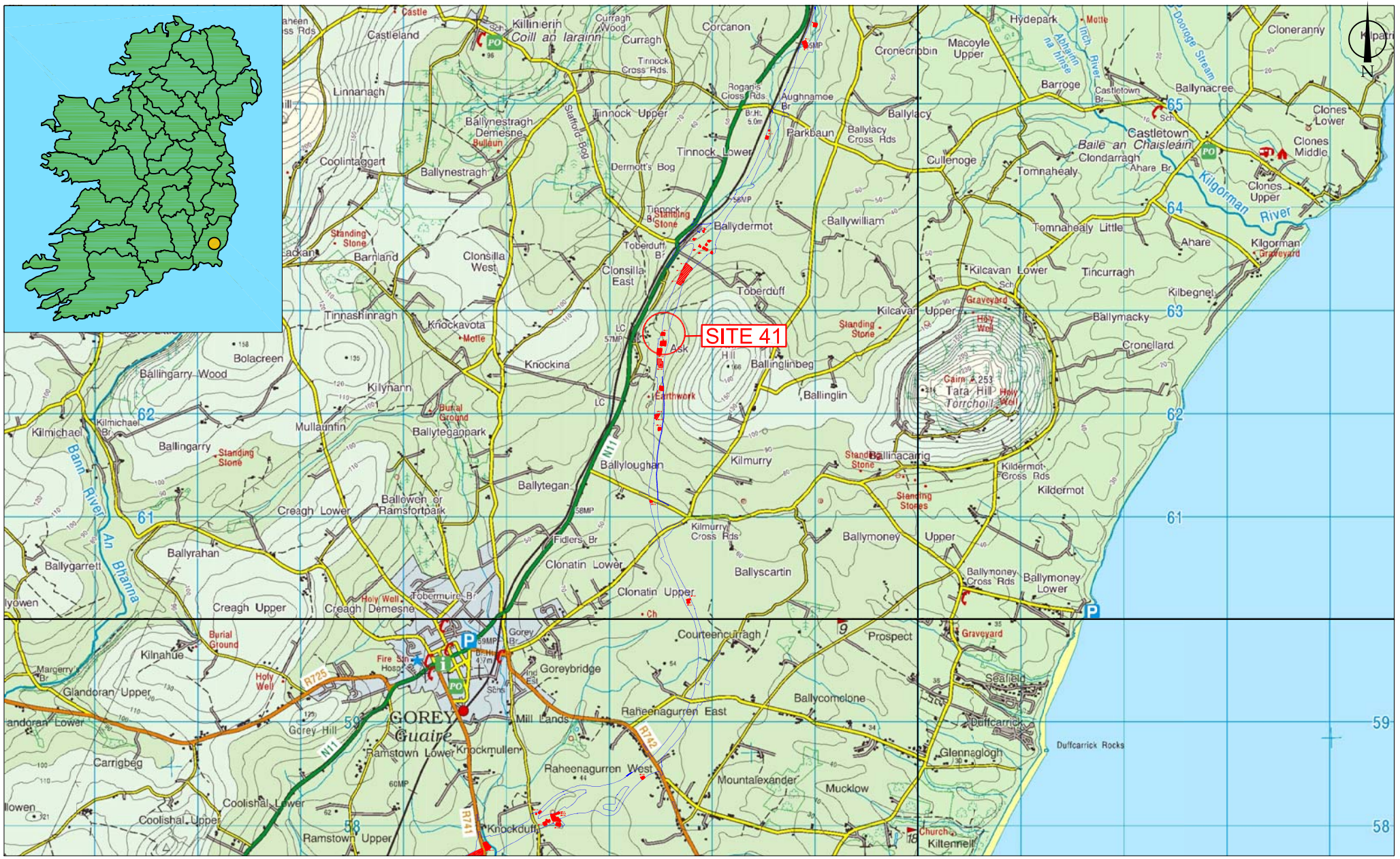
Plate 2: Post-excavation aerial view of Site 41, looking to the south.

Plate 3: Post-excavation view of Site 41, looking to the west.

12.0 FIGURES

NRA DATABASE CONTENTS SHEET

Database entry	Comment
Excavation number	Ministerial Direction: A003/045 Registration No.: E3501
Townland	Ask
Site name	Site 41
County	Wexford
Project reference	N11 Gorey – Arklow Link
Year of excavation	2005
Grid reference (Easting)	317522E
Grid reference (Northing)	162769N
OD Height (m)	69m OD
Landscape setting	Pasture on western side of Ask hill
Project Archaeologist	James Eogan
Site Director	Nicholas Bower
Archaeological consultancy	Valerie J. Keeley Ltd
Identification technique	Test Trenching (Mullins, G. (2005) Irish Archaeological Consultancy Ltd. Archaeological Assessment: N11 Gorey-Arklow Link, Co. Wexford)
Site type	Burnt mound
Site activity	Horseshoe shaped burnt mound with trough and water pit
Dating period	Bronze Age
Radiocarbon dates **(2 Sigma Cal BC)**	QUB Cal BC 1612 – Cal BC 1409 (Lab ref: UBA-8245) QUB Cal BC 755 – Cal BC 402 (Lab ref: UBA-8244)
Dendro-chronological dates	n/a
Descriptions	Excavations uncovered a horseshoe shaped deposit of burnt mound material together with trough and pit with linking channel. Two radiocarbon dates indicate a date range of Cal BC 1612 – 1409 and Cal BC 755 – 402.
Artefacts	A small assemblage of domestic lithics, demonstrate technology popular in the Neolithic and Bronze Age periods. A single sherd of early modern pottery also present
Environmental evidence	none
Additional information	none
Publication	None to date



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Location of Site 41 on the Ordnance Survey Discovery mapping		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date August 10	**Scale** 1:50000	**Drawing No.** Figure 1	**Project** N11 Gorey - Arklow Resolution

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Tel: (+353) 056 4440236
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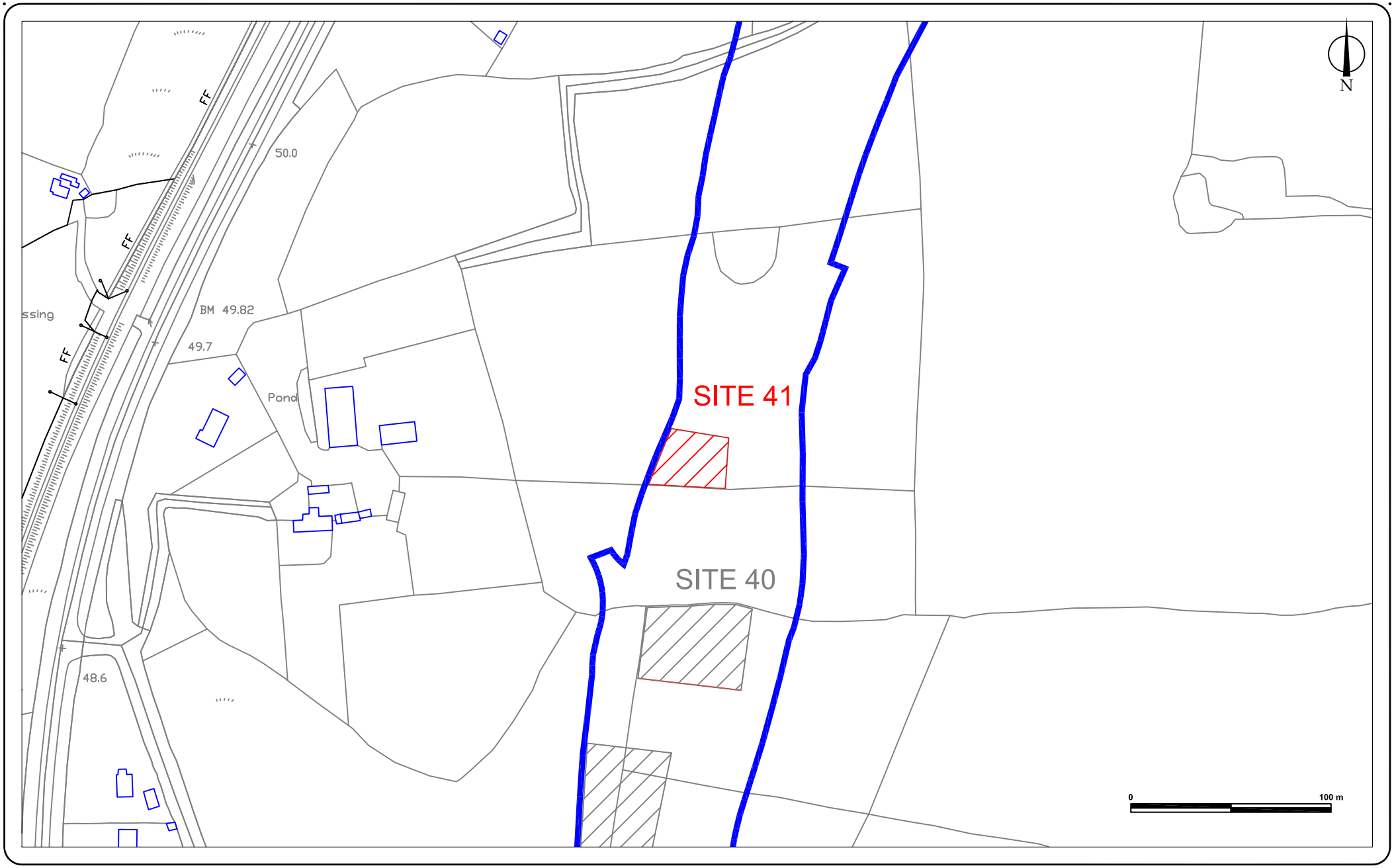

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Ordnance Survey map showing the location of Site 41		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date: August 10	Scale: 1:2500	Drawing No.: Figure 2	Project: N11 Gorey - Arklow Resolution

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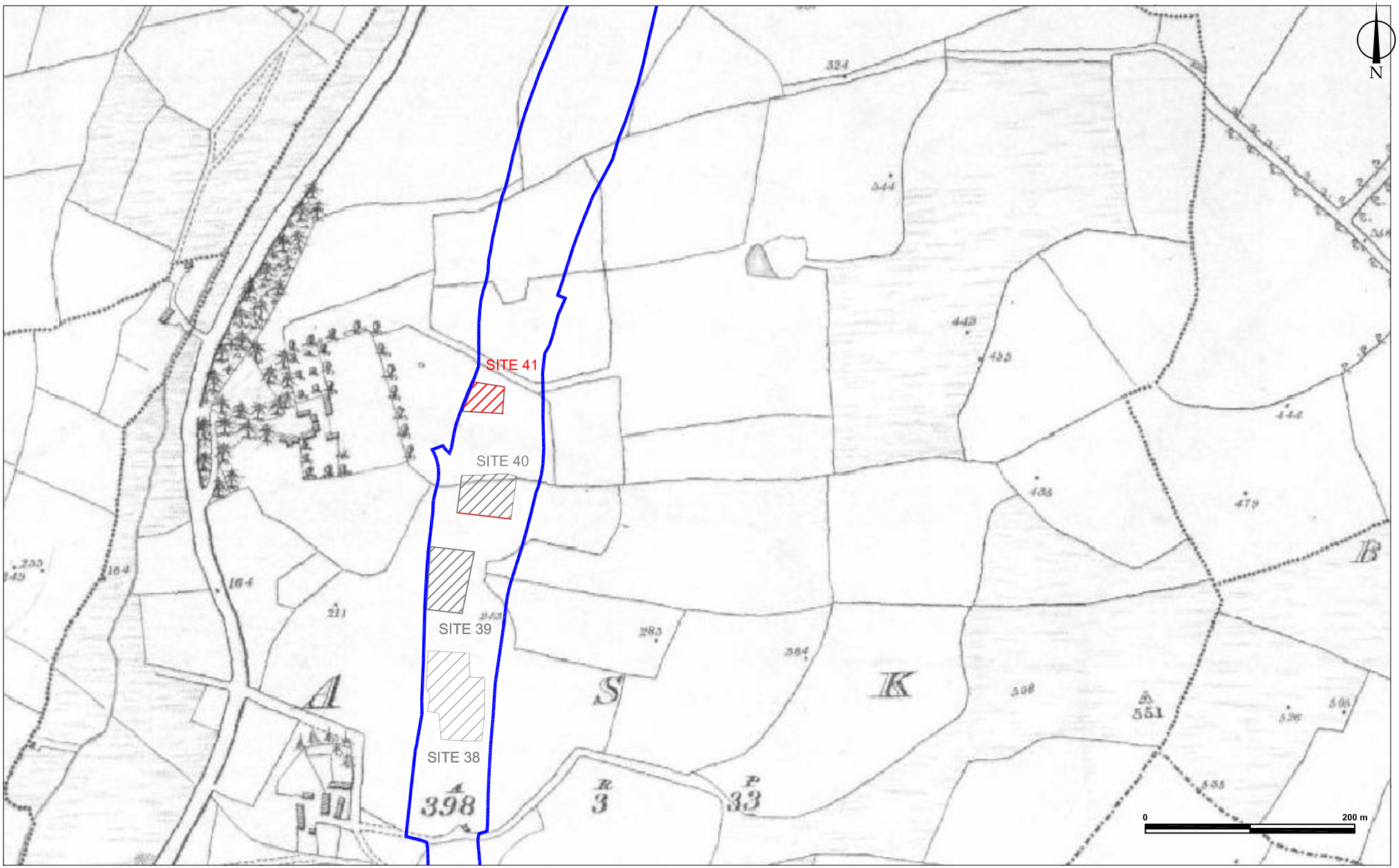

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
1st Edition Ordnance Survey map showing the location of Site 41 and route of scheme		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date August 10	**Scale** 1:5000	**Drawing No.** Figure 3	**Project** N11 Gorey - Arklow Resolution

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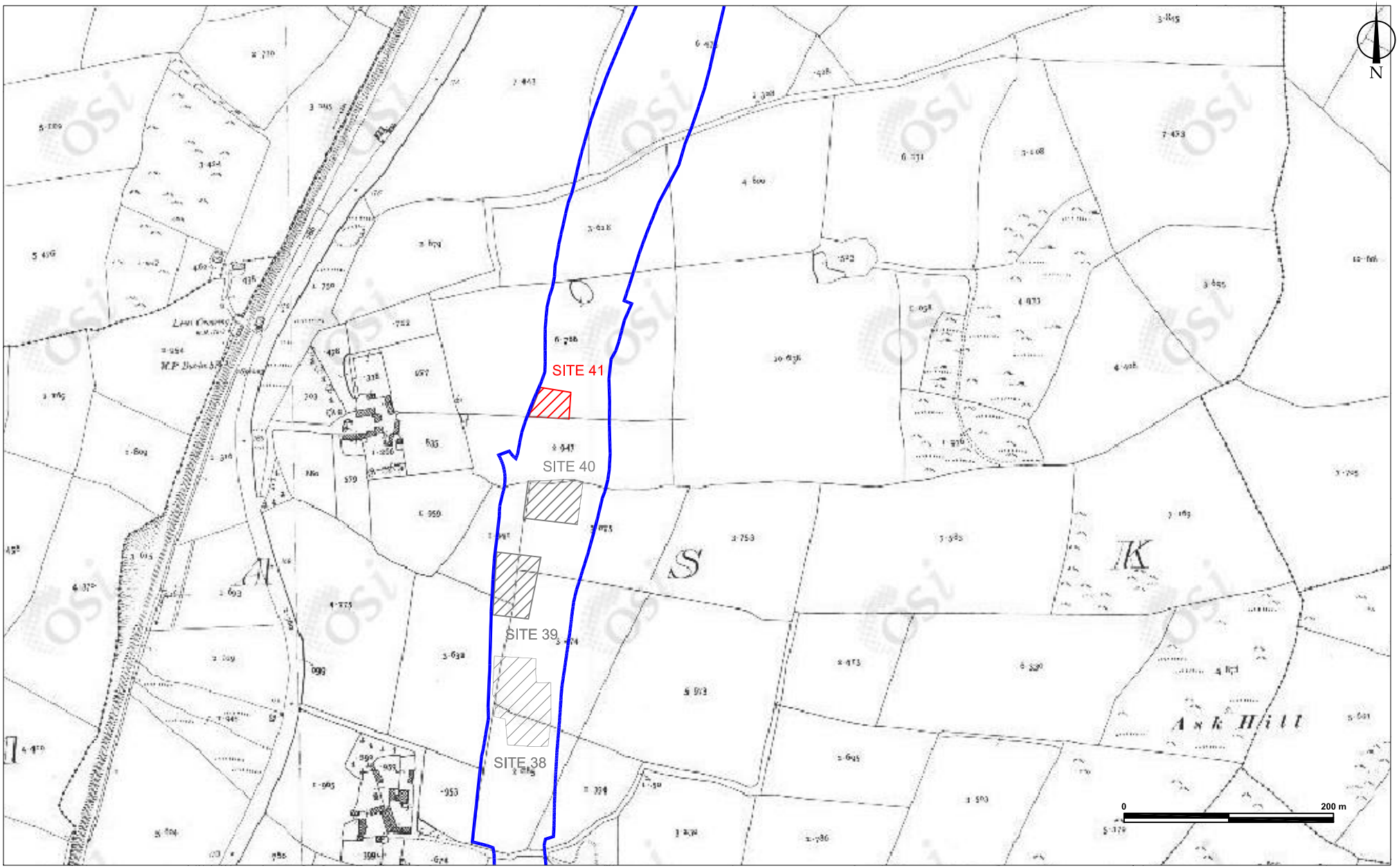

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
2nd Edition Ordnance Survey map showing the location of Site 41 and route of scheme		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date August 10	**Scale** 1:5000	**Drawing No.** Figure 4	**Project** N11 Gorey - Arklow Resolution

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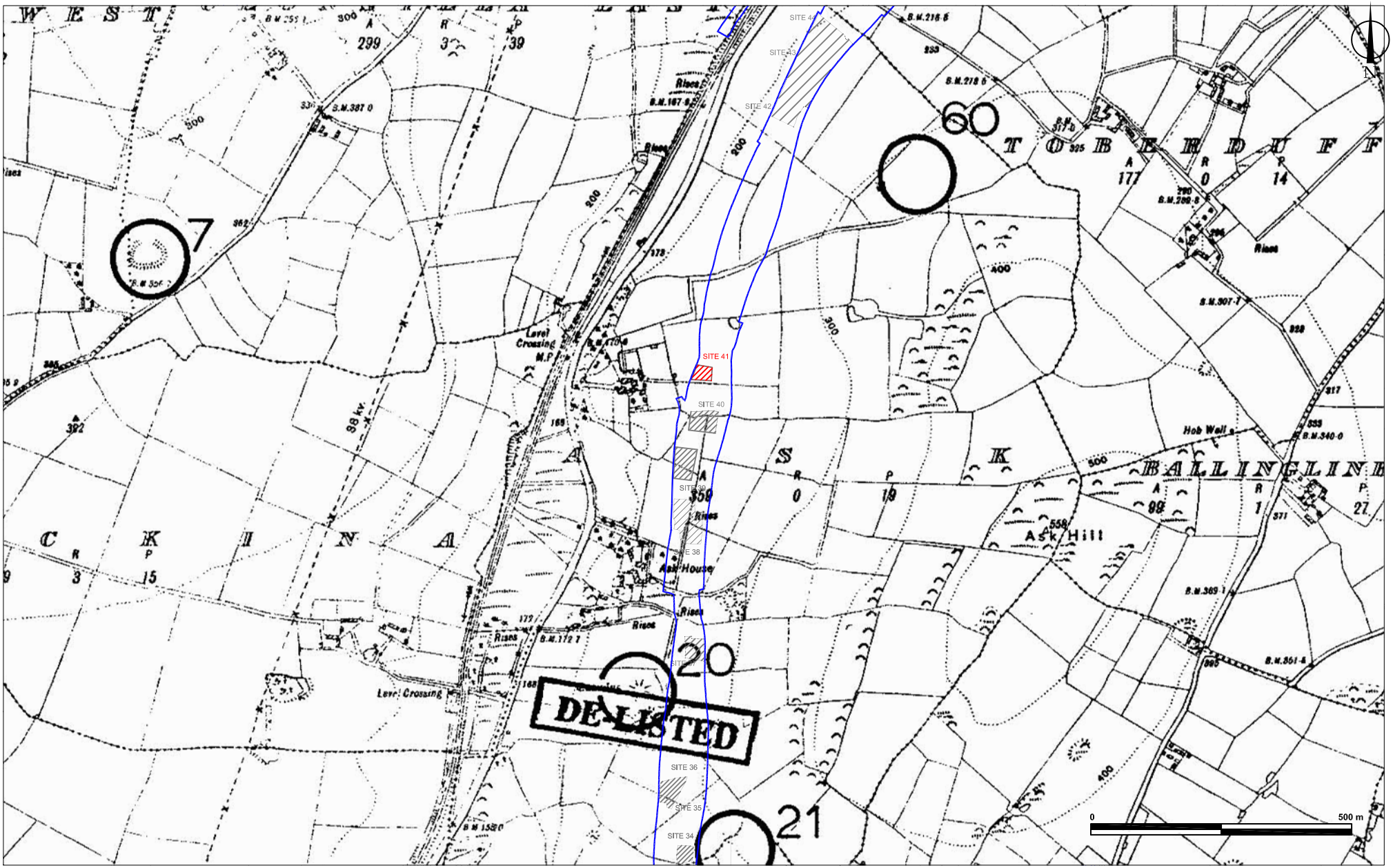

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
RMP map showing the location of Site 41 and route of scheme		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date August 10	**Scale** 1:10000	**Drawing No.** Figure 5	**Project** N11 Gorey - Arklow Resolution

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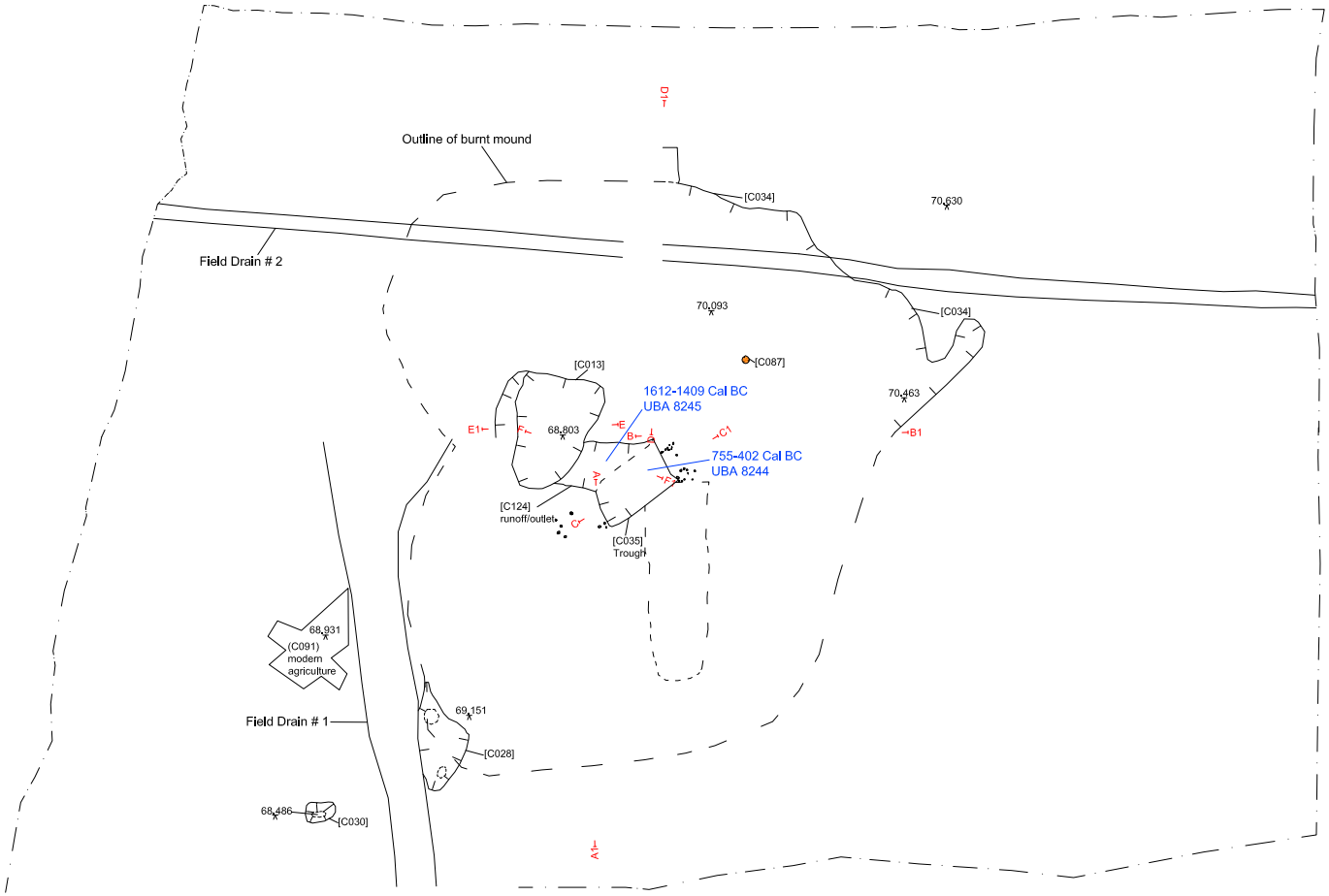

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
Post-excavation plan of Site 41	Post hole	A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date: August 10	Scale: 1:200	Drawing No.: Figure 6	Project: N11 Gorey - Arklow Resolution

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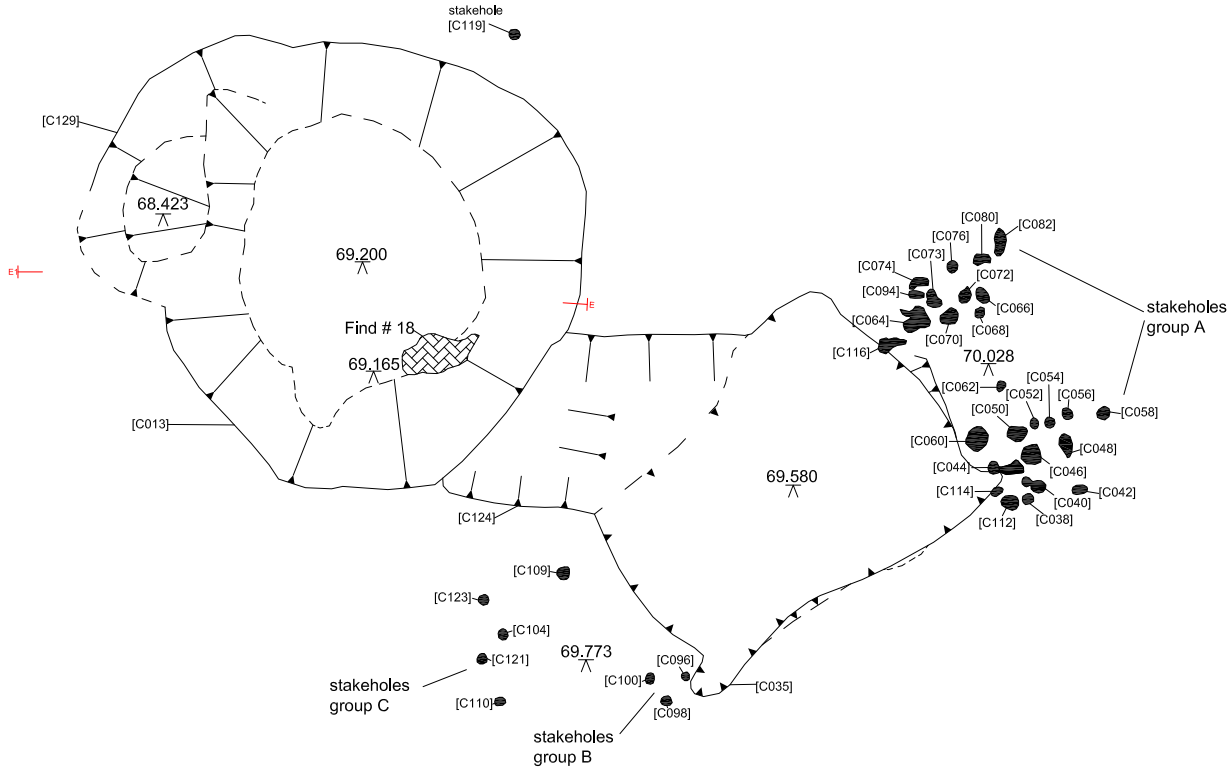

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
Expanded post-excavation plan showing the relationship between trough, stake-holes,run off & spring.		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date: August 10	Scale: 1:50	Drawing No.: Figure 7	Project: N11 Gorey - Arklow Resolution

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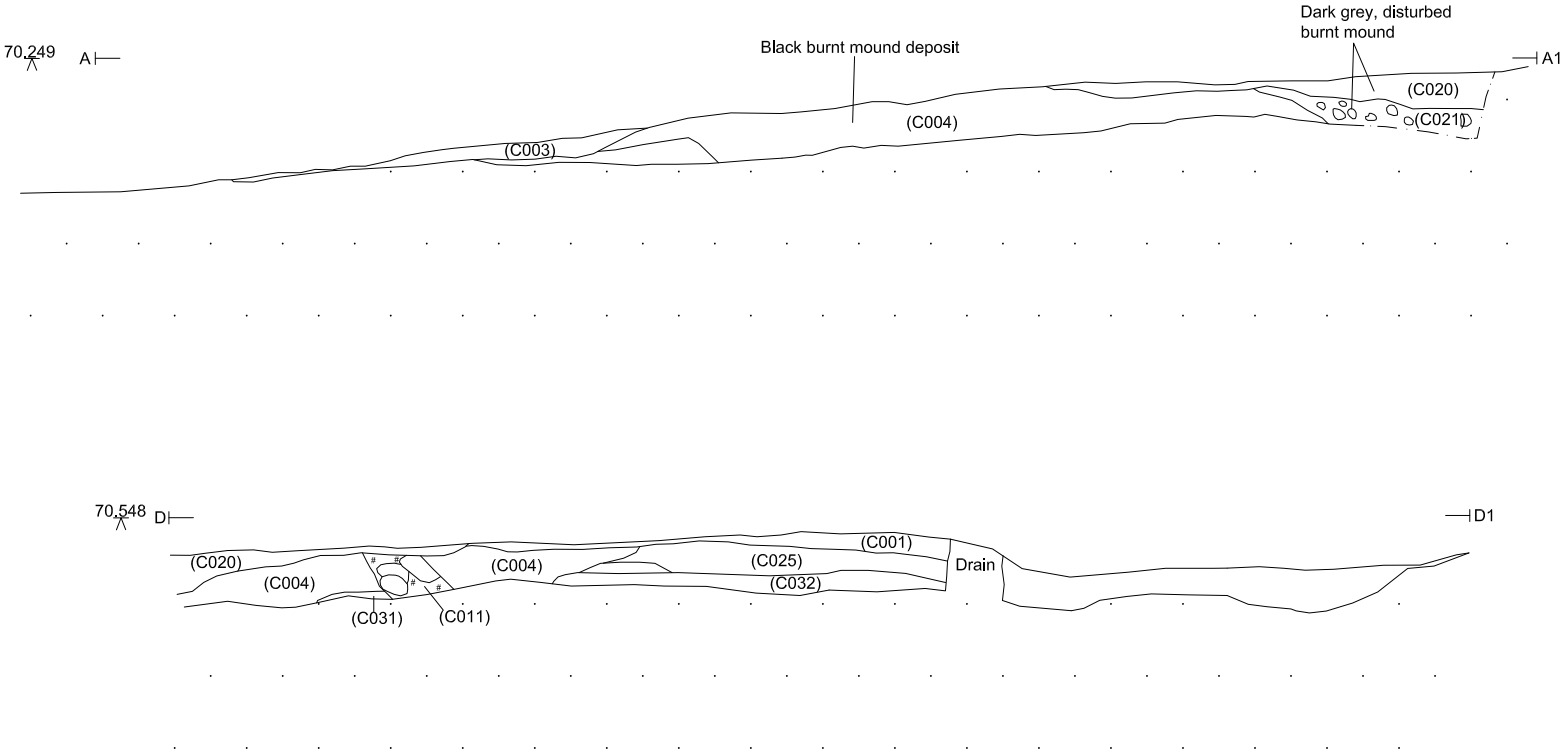

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client		
East facing sections through burnt mound		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council		
		Date	Scale	Drawing No.	Project		
		August 10	1:50	Figure 8	N11 Gorey - Arklow Resolution		

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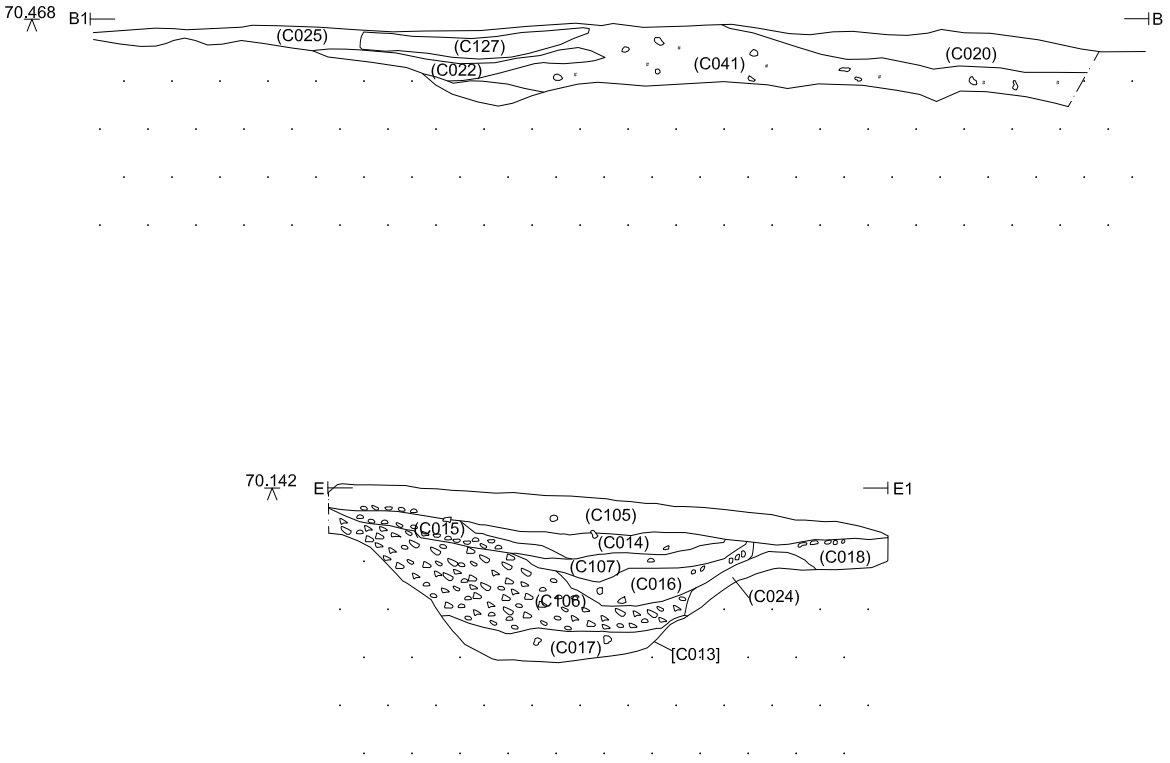

Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client		
North facing section through mound		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council		
		Date	Scale	Drawing No.	Project		
		August 10	1:50	Figure 9	N11 Gorey - Arklow Resolution		

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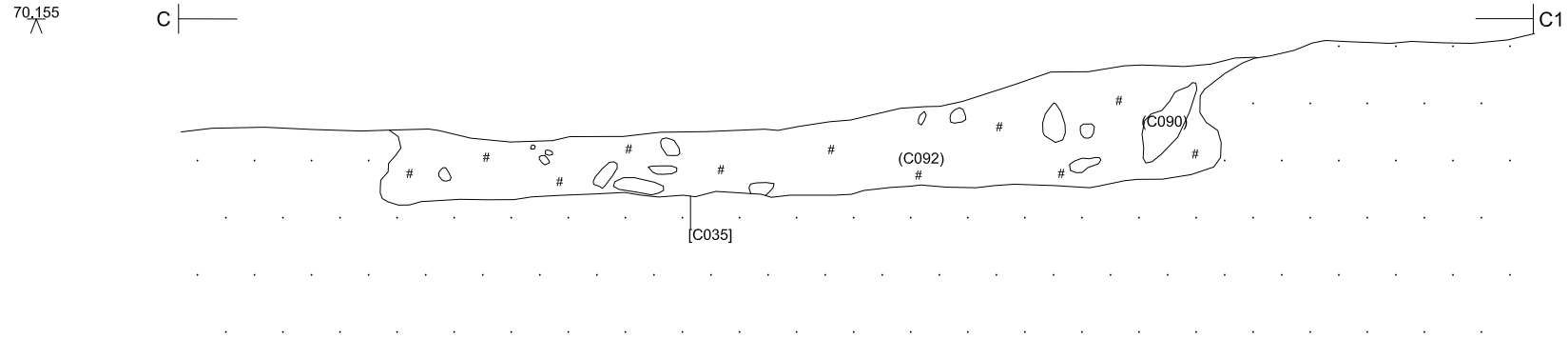

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Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client
Southeast facing section through trough [C035]		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council
		Date: August 10	Scale: 1:20	Drawing No.: Figure 10	Project: N11 Gorey - Arklow Resolution

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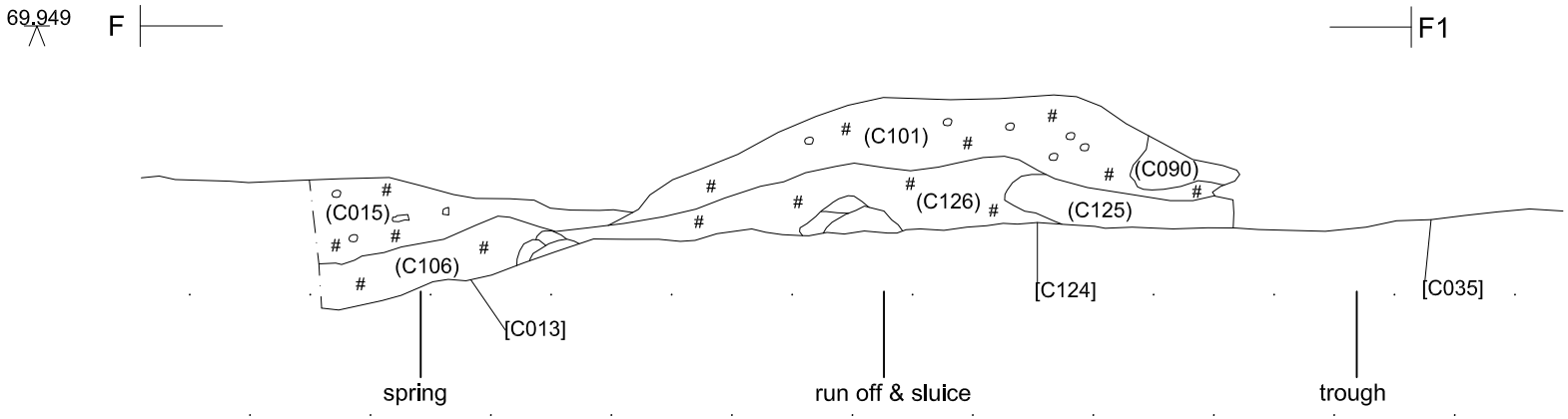

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Title	Notes	Job/Exc No.	Compiled by	CAD reference	Client		
Southwest facing section through trough [C035], run off [C124], pit [C103] & spring, showing banking material for sluice (C101), (C125) & (C126)		A003/045 E3501	GW	1177-05-400/Tera3	Wexford County Council		
		Date	Scale	Drawing No.	Project		
		August 10	1:20	Figure 11	N11 Gorey - Arklow Resolution		

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