Archaeological Excavation
Final Report

Naul Community Dig 2019
Rear of Graveyard
Naul
Co. Dublin

Excavation Licence No.: 19E0480
Detection Device Ref.: 19R0175

NAUL COMMUNITY DIG 2019

By Christine Baker
Community Archaeologist
Fingal County Council

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An Chomhairle Oidhreachta
The Heritage Council

Comhairle Contae
Fhine Gall
Fingal County
Council

Abstract

This report describes the final results of an archaeological excavation, which was carried out under Licence No. 19E0480 to the rear of Naul graveyard, Naul, Co. Dublin. Excavation of two trenches, took place over 6 days between 17th -23rd August 2019 as part of Naul community Dig for Heritage Week 2019.

The site in the field to the north of Naul Graveyard, Naul Co. Dublin, is within the zones of notification RMP DU004-0045004/005/RPS no. 104, Naul Church and Graveyard and RMP DU004-045002/RPS no.105 and the Black Castle and associated enclosure RMP DU004-045009.

The aim of excavation was to investigate anomalies that indicated the site had been used as a garden and to inform future works including a graveyard extension and community garden. The site proved to be extensively disturbed with activity primarily dating to the nineteenth century.

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1 Introduction

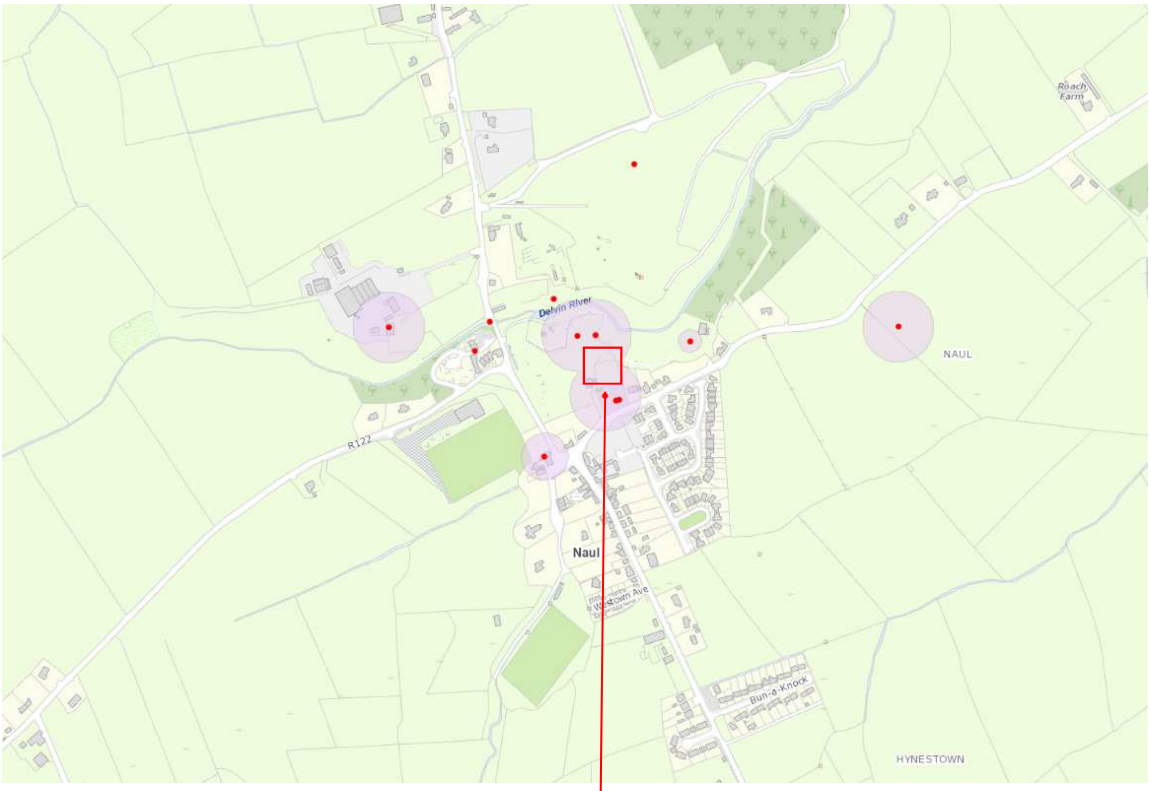
This report describes the final results of an archaeological excavation, which was carried out under Licence No. 19E0480 to the rear of Naul graveyard, Naul, Co. Dublin. Excavation of two trenches, took place over 6 days between 17th -23rd August 2019.

The *Naul Community Dig 2019* was requested by Naul Community Council to take the form of a community excavation during national Heritage Week, in order to engender awareness of the site and engage new members of their growing community with the village's historic past. It was designed to archaeologically investigate the site ahead a proposed graveyard extension and to inform future works including the possibility of a community garden by investigating the remains of possible garden features including paths.

2 Location & topography

The field which forms the new graveyard extension (ITM 713265/764570) is located directly north of Naul graveyard (DU0042-004005-) and just over 40m south of the Black Castle (DU004-045009). Approximately 125m to the east is a chalybeate spring known as Lady well holy well (RMP DU004-045003). The site is situated within the townland of Naul, south of the ravine and River Delvin which forms the county boundary between Dublin and Meath.

The site is substantially lower than the adjacent graveyard and slopes down gently northwards to a well-established hedgerow. To the west is laneway that was formerly the pathway to the quarry to the north-east of the site and now forms the entrance to the site of the Black Castle. Immediately north of the site two lime kilns survive. The east of the site is bounded by the rear garden of a modern house. To the south within the walled Naul graveyard are the remains of Naul Church (DU004-04504) and cross (DU004-010002).



Site Location Map 1:100

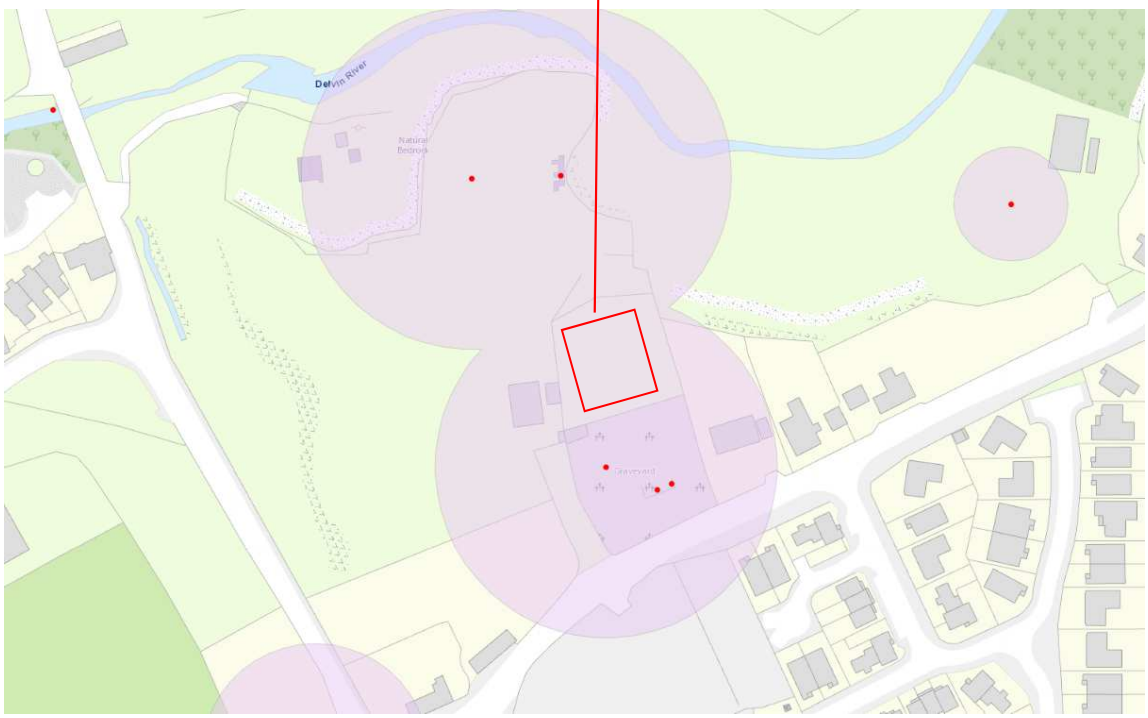


Fig.1: Site Location Map 1:100 and Zones of notification www.archaeology.ie

Plate 1: Aerial Photograph, Google Earth, 2018

3 Historical and Archaeological Background

Naul or the Naul derives its name from An Aill, meaning the cliff, which bounds the River Delvin. Located south of the Dublin-Meath border Naul village is within a prehistoric landscape with the Neolithic ridge of Fourknocks passage tombs c.1.5km to the north-west and the Bronze/Iron Age Knockbrack hillfort and tumuli c.2km to the south-east. The area was apparently the location of a number of battles between the Irish and the Norse in the eleventh century.

Fig 2: Naul Castle c.17783-1791, Thomas Cocking.

Towards the close of the twelfth century the Anglo-Norman manor was established, and the castle was supposedly built by the De Geneville family. However, the structure that survives today appears to be a fifteenth century tower house. Around the year 1200 it passed through marriage to Stephen de Crues to whom construction of the medieval church is attributed.

Glimpses of the extent of the manor of the Naul are evident from documentary sources. Between c.1200 and 1360 AD there were between one and ten cottars on the manor. These represented the lowest rung in hierarchical manorial settlement with a land holding of less than an acre. Arable far outstripped pasture in terms of land use and it was divided into two large fields in 1292-the carrot field containing 140 acres and the mill field containing 120 acres (Murphy & Potterton 2010, 293). There was pasture called la Roche that was said to be useful for sheep as well as moor for oxen and mountain pasture (*ibid*. 326).

The medieval church of the Naul or Naul-Crues as it was recorded in the extents was purportedly built on the site of an 'old Celtic church' (Scully 1975, 102). It formed part of the grant of lands by Archbishop John Comyn to the Priory of Llanthony in Wales (Hogan 2008, 86). The original parish church was burnt down and desecrated in the mid-sixteenth century and was recorded as being ruinous with only the walls standing in the Civil Survey (Simington 1945, 30). The extant building was built as a chantry chapel in 1710 to house the remains of the Hussey family and features a wall plaque dedicated to them (Walsh 1888, 244). Locals hold that the missing north wall was never completed. Elements of the earlier church including an ogee-headed window have been reused and a nineteenth century cross is contained within the building.

There was a documented mill within the manor of the Naul from at least the thirteenth century and in the Civil Survey the Naul has 'one corne mill & one tuck mill in use worth fifteen pounds, buildings are valued by the jury at 200 pounds' (Simington 1945, 30). An Arthur Mervyn was granted a sum of money form the Irish parliament in 1714 to erect granaries and mills at the Naul. The eighteenth century flour mill replaced the earlier mill depicted on the Down Survey map. The Old Mill ceased operations between 1869 and 1906 and was roofless in 1934 when Oliver St. John Gogarty immortalized it in his poem *To the Old Mill at the Naul*

> 'That ruin on the naming Hill
>
> Of Naul, with ivy on the keep
>
> That looks down on a ruined Mill'

Local Memory

The site is known locally as 'the Sexton's' (Ian lennon pers. comm.). The structure depicted on nineteenth century maps in the north-west corner of the graveyard was the Sexton's house. Returns form the 1901 census show it was occupied by Thomas Maguire, a 'Navy Pensioner and Sexton' and by his widow and 'Sextoness' Frances Maguire on the subsequent census of 1911.

The site was known for its large trees surrounding the site, including a 'very old oak'. These trees were felled when local coffin-making family, the Gilsenans acquired the site. The family used it as a fruit-growing garden. It is also held that the row of dwellings along the east side of the main street of the Naul were demolished to make way for four artisan dwelling designed by Sandham Synes and built by James Caffrey c.1866 and the rubble was used to embank the steep slope to the Delvin, including to the rear of the graveyard.

3.1 Cartographic Evidence

The Mill described in the Civil Survey as a 'corne mill' is clearly visible to the north west of the bridge crossing the River Delvin on the Down Survey map. There is no indication of the castles and church at this time.

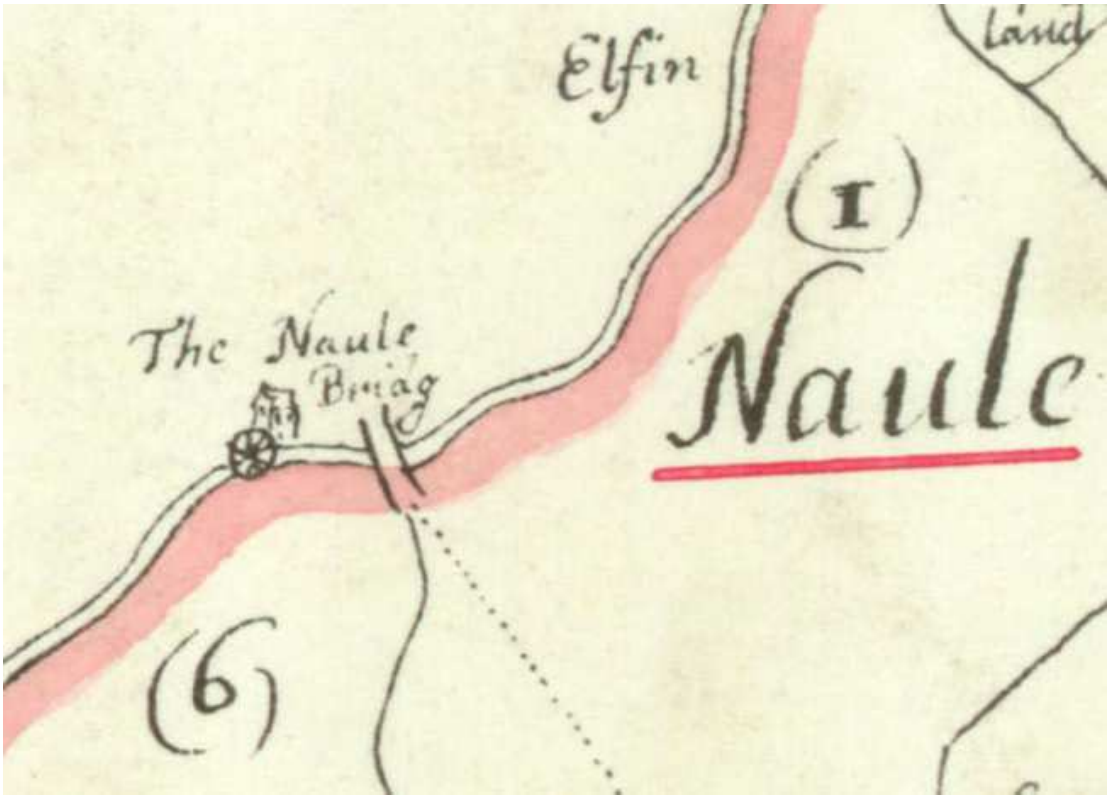


Fig.3: Down Survey Map, c.1656

In contrast Naul Church and walled graveyard are well defined on Rocque's map of 1760. The area between the graveyard and the cliff edge appears as a relatively open sloping area which was subsequently quarried as depicted on the First Edition Ordnance Survey.

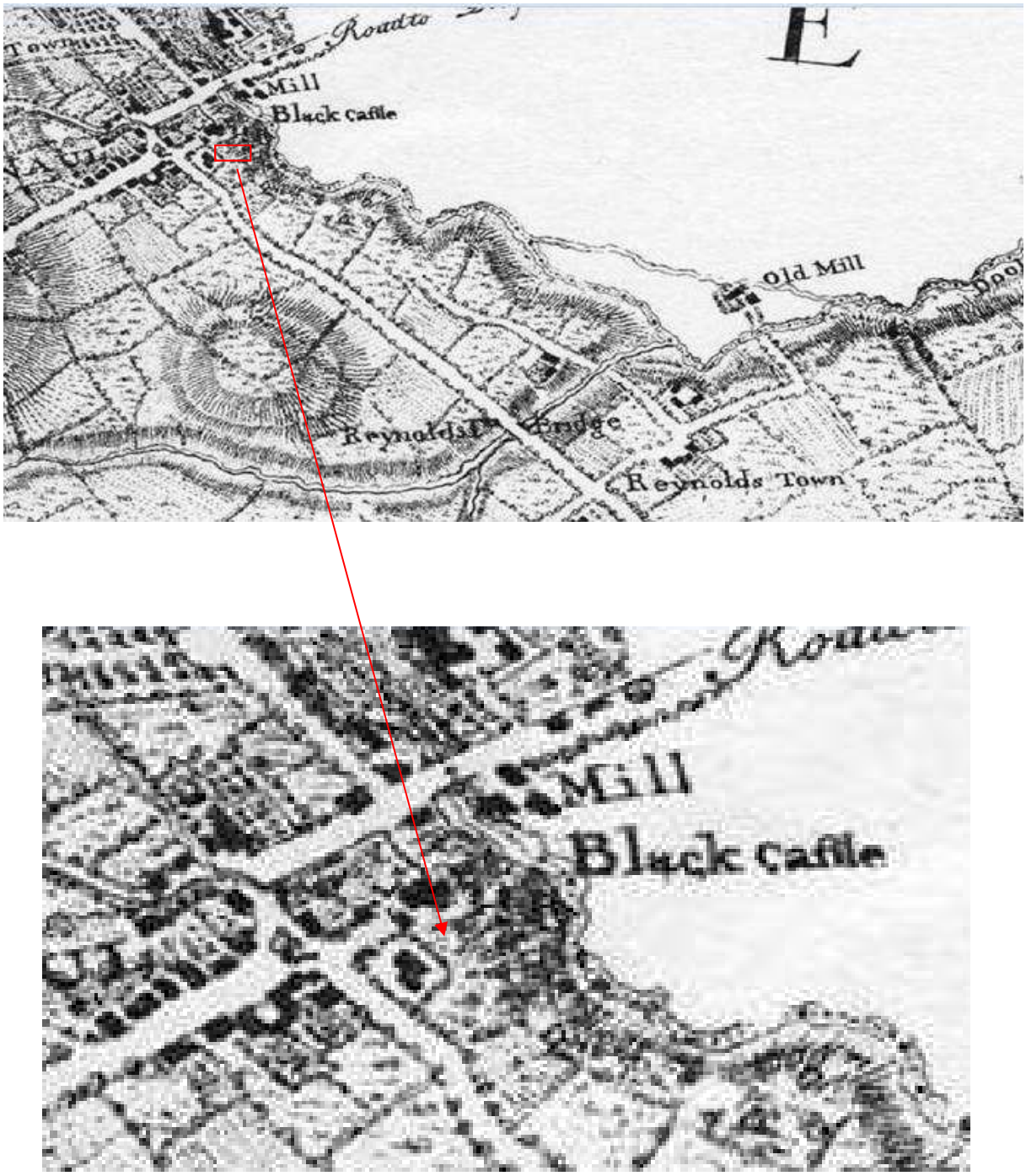


Fig. 4: Rocque's Map, 1760

Site Location

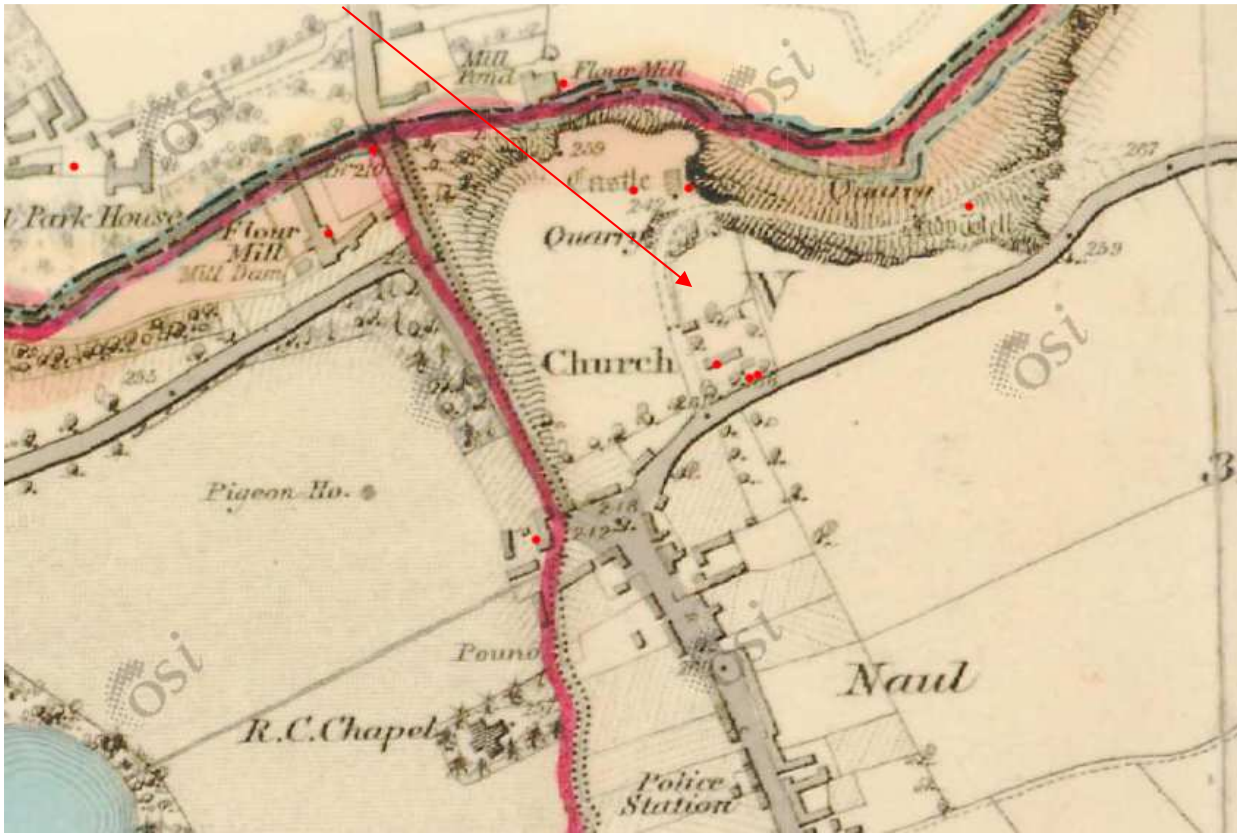
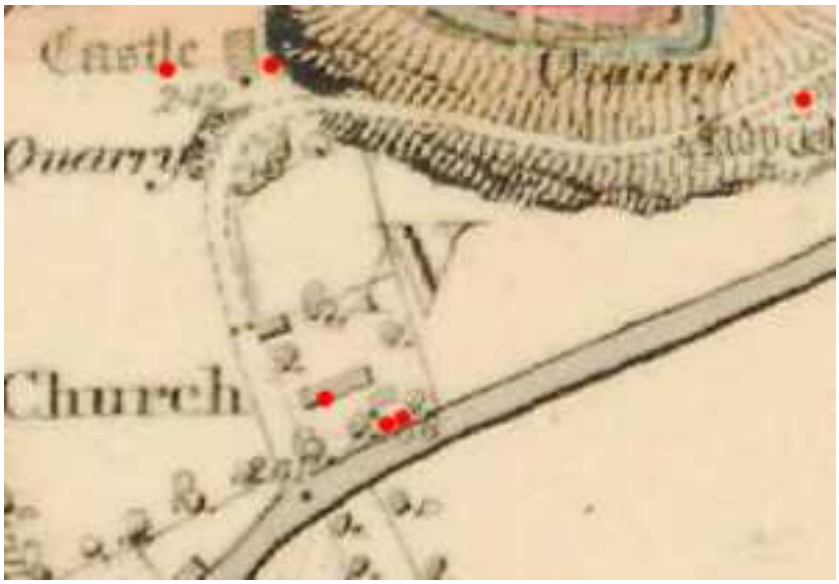


Fig. 5: Ordnance Survey First Edition, historic 6 inch map, 1838-1847

The site is well-defined on the First Edition ordnance survey map, but devoid of features. Notable in the north-east corner of the graveyard, adjacent to the lane to the quarry is a building. This was known as the Sexton's house for the graveyard caretaker who was said to reside there.



The second edition Ordnance Survey map also shows the Sexton's house. The site is depicted as surrounded by trees, especially along its southern boundary and within the site are divisions that can be interpreted as paths, possibly dividing gardens. Subsequent mapping show no other features within the site.

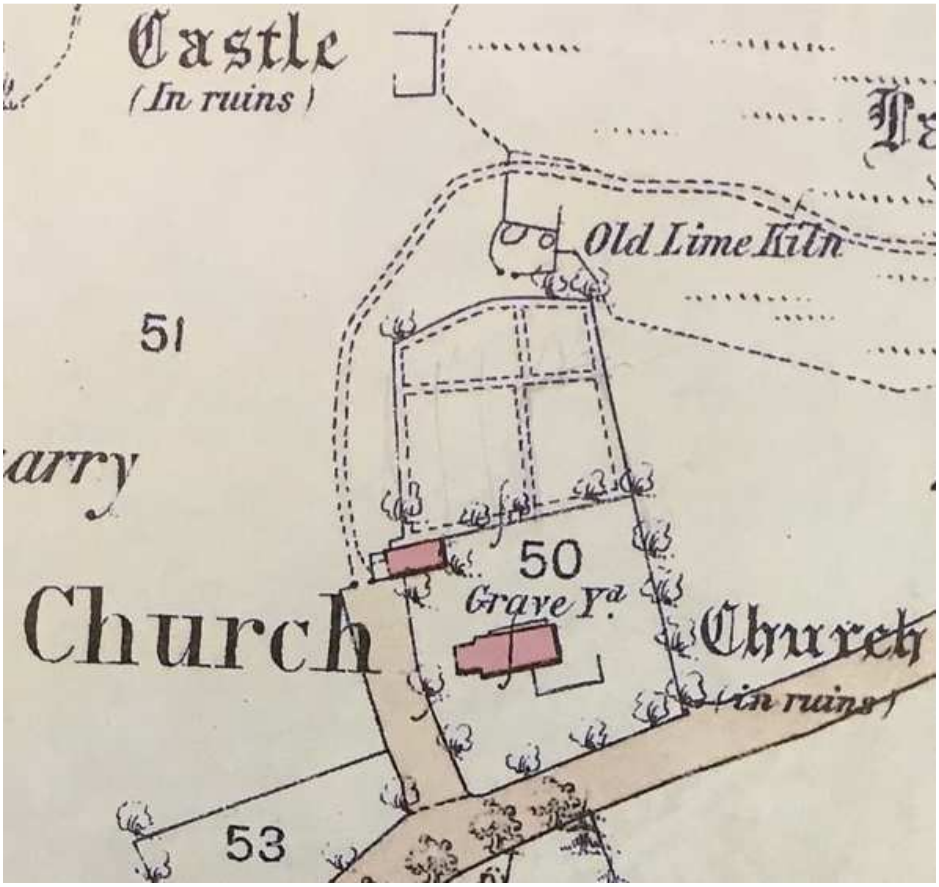


Fig. 6: Second Edition Ordnance Survey map 1869

3.2 Previous excavations:

There were no prior archaeological excavations on the site. An expansion of the graveyard had been undertaken in the 2000s. However, a series of licensed archaeological excavations, have been undertaken within Naul village.

2006/7 (06E0063) Eoghan Kieran of the Moore Group undertook archaeological monitoring at the Delvin Banks development across the road south of the Naul Church and Graveyard. No archaeological material features or deposits were identified.

2004 (04E1261) Rob O'Hara of ACS Ltd undertook an archaeological assessment for the Old Mill, Naul, which determined the development area was not archaeologically significant due to previous construction, landscaping and dumping.

2002 (02E0938) Damian Finn of ADS Ltd undertook archaeological monitoring at the site of the Community Centre. No archaeological remains or artefacts were identified.

3.3. **Metal Detecting Survey** (19R0175)

Prior to excavation, a series of 2m transects were walked across the wider site by the excavation director, and all valid responses marked with tags. This was undertaken in two phases (10m EW x 40m NS) with an average of seventeen hits per phase recorded. There was a generally random pattern of distribution with a concentration of hits in the north-east quadrant and the centre of the site. The exact layout of Trench 1 and 2 took cognisance of these concentrations and endeavoured to encompass them. Where excavated the metal detection hits were of modern material including bar, beer cans and iron building materials such as rebar.

4 Archaeological Excavation

Naul graveyard was partially extended along the eastern limit of the site in the early 2000s. Some landscaping has taken place resulting in a scarped area, measuring at least 10m north-south, adjacent to the northern graveyard wall and a berm surrounding the site. Local residents believe that demolition material from nearby cottages was dumped here and the berms are a result of the spreading of this material.

Plate 2: Drone view of trench layout

Two trenches are located to explore the stratigraphy and land uses of the site; to determine if there are any early surviving archaeological remains relating to the medieval core of the village; to identify the nature of the possible nineteenth century garden features and to inform future works. The excavation took place over six days between Saturday 17th August and Friday 23rd August 2019. Almost 40 volunteers participated.

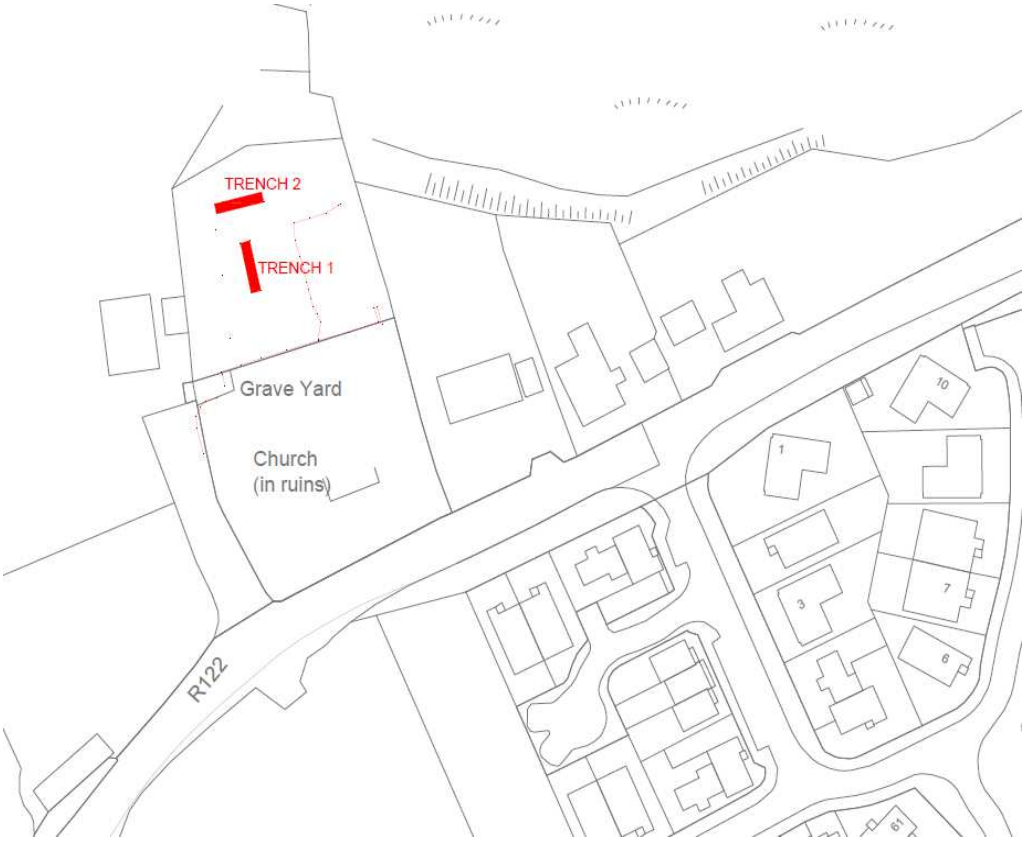


Fig. 7: Trench layout, 1:500@A3

Two trenches were opened as part of the excavation. Trench 1 (10m x 2m) was aligned to ascertain the north-south stratigraphy of the site and reflected the topography sloping down to the north. Trench 1 was excavated to natural subsoil, a maximum depth of 0.6m.

Trench 2 was located c.10m north of Trench 1 and was aligned east-west. Trench 2 measured 10m EW x 2m NS and was excavated to natural subsoil, a maximum depth of 0.80m.

4.1 Excavation Stratigraphy

The overall stratigraphy consisted of grey-yellow stony natural subsoil truncated by the insertion of drainage features and overlain by cultivations soils. A high level of modern disturbance was identified.

Trench 1

Natural subsoil was attained between 0.5m and 0.6m below ground level reflecting the slope down northwards across the site. It was truncated by furrows (F4, F5) and drainage ditch (FF3) and overlain by cultivation soil (F2) which was in turn overlain by topsoil.

Plate 3: Trench 1 post-excavation, facing north

Trench 1-Furrows:

Two shallow linear furrows (F4, F5) were identified cut into subsoil. Although at right angles they contained very similar fills and were both truncated by the insertion of a drainage ditch, suggesting cross ploughing of the site during a cultivation phase.

Feature 4

Aligned east-west this truncated linear furrow was exposed for 2m across Trench 1 and averaged 0.7m in width. Flat-bottomed with sloping sides this furrow (0.1-0.15m in depth) contained soft dark brown silty clay with occasional small stones. A single sherd of brown glazed modern pot was recovered from this feature.

Feature 5

Aligned north-south this truncated linear furrow was exposed for 1.7m and measured form 0.2-0.4m in width. Flat-bottomed with irregular sides this furrow (0.05m in depth) contained soft dark brown silty clay with occasional small stones, identical to that within Feature 4.

Plate 4: Trench 1, mid-excavation, facing east

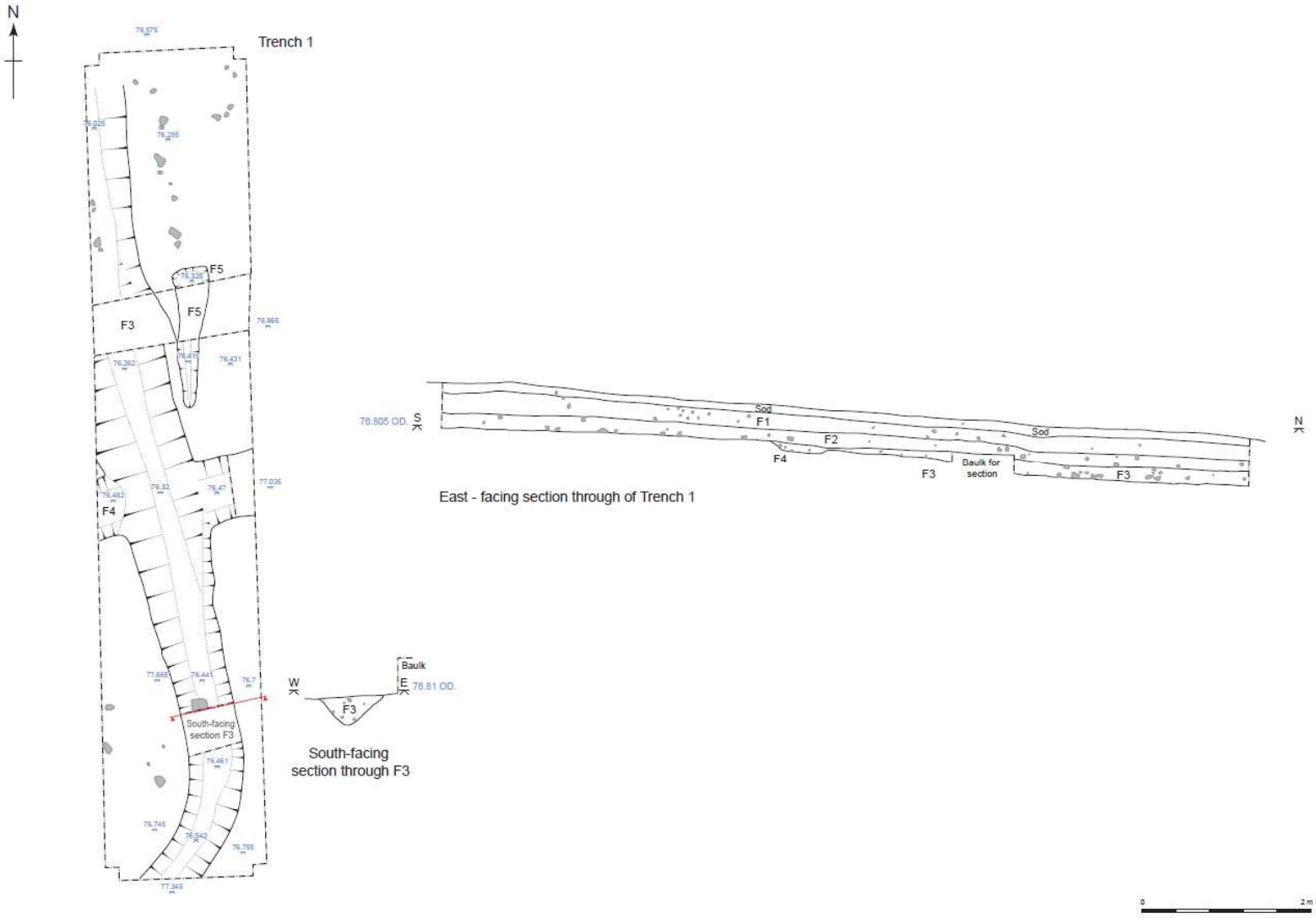


Fig. 8: South facing Section Trench 1; West facing section Trench 1

Trench 1-Ditch:

A single drainage ditch (F3) cut into subsoil and truncating furrows (F4, F5) extended the length of Trench 1.

Feature 3

Exposed for 10m within Trench 1, Feature 3 consisted of a linear V-shaped cut that widened at the base as it extended downslope. Curving towards the southern extent of the trench, Feature 3 measured 0.6m-1m in width and contained compact light greyish brown silty clay (0.4m in depth) with moderate small stone inclusions and occasional charcoal flecks. A sherd of whiteware and two fragments of clay pipe were recovered from this fill.

Plate 6: F3 northern quadrant, post-excavation, facing east

Trench 1-Layers

Overlaying the cut features was a cultivation soil (F2) which was in turn overlaid by topsoil (F1).

Feature 2

This layer consisted of compact mid-brown silty clay with occasional small stone inclusions (0.15m-0.2m in depth). A single plough pebble was recovered from this layer along with a mixed bag of animal bone, modern pottery including a concentration of blackware at the interface with the underlying natural subsoil. Iron nails, a hook, and possible pocket knife as well a frequent fragments of clay pipe were also recovered from this feature.

Feature 1

Topsoil in Trench 1 consisted of compact grey brown silty clay with occasional small stone inclusions (0.22m-0.27m in depth). A range of modern pottery was recovered alongside three sherds of medieval pot and the iron heel of a boot. Building material including slate fragments, brick, mortar, iron nails and building fittings were also recovered from this layer. Fragments of disarticulated human remains were recovered from the topsoil and identified as adult skull fragments (Lynch, Appendix 2).

Plate 7: Trench 1, mid-excavation, facing south

Trench 2

Natural subsoil was attained at a maximum of 0.8m below ground level. Natural subsoil was cut by a drainage ditch (F6) which was overlain by deposits (F7, F8, F9)), cultivation soil (F2) redeposited natural and topsoil (F1). The remains of a tree bowl and dumping were identified in the east of the trench.

Plate 8: Trench 2, post-excavation, facing east

Trench 2-Ditch:

A single drainage ditch (F6) cut into subsoil extended for approximately 8m along the length of Trench 1 before shallowing out to where a tree was once planted.

Feature 6

Aligned west-north-west/east-south-east this irregular linear ditch extended eastwards for c.5m before turning slightly northwards. It measured between 0.7m and 0.9m in width. Cut into subsoil Feature 6 was flat bottomed with sloping sides ((0.01m-0.4m in depth) and contained soft grey brown silty clay with moderate grit and occasional charcoal flecks. Moderate small stones and the occasional large (<0.15m diam.) were noted. Animal bone identified as cattle or cow-sized (Duffy, Appendix 5), but no finds were recovered.

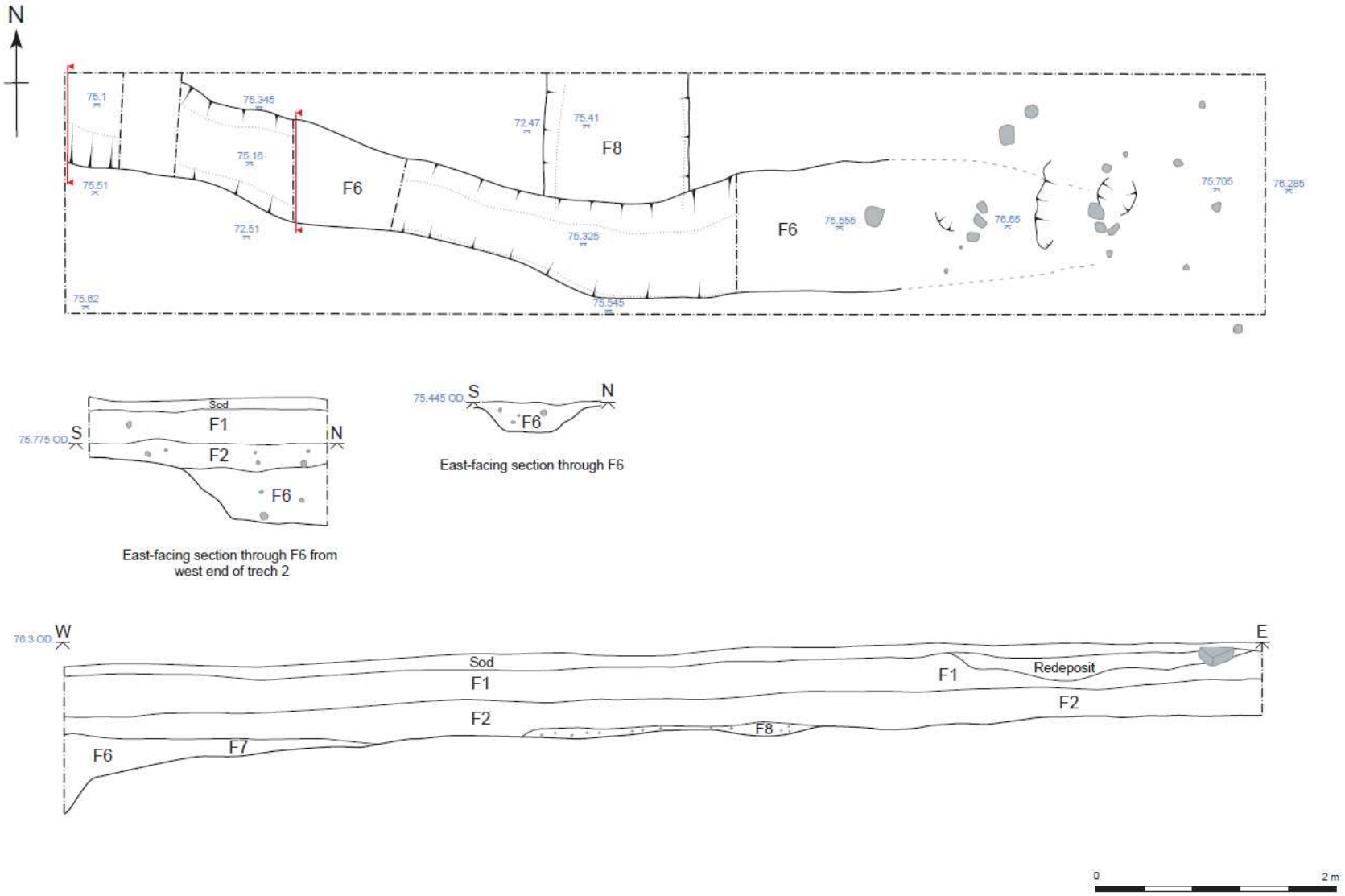


Fig.9: Post-excavation, Trench 2; East and South Facing sections, Trench 2 and F6 section

Trench 2-Layers and Deposits:

Thin ill-defined deposits (F7, F8) overlay the drainage ditch or were associated with later disturbance (F9). Similarly, to Trench 1, the cut features were overlain by cultivation soil (F2) which was in turn overlaid by topsoil (F1).

Feature 7

Located in the north-west corner of Trench 2, Feature 7 was an irregular (2.5m EW x 1m NS) spread of dark brown silty clay with gritty inclusions, that measured 0.02m-0.08m in depth. Animal bone identified as horse and sheep/goat (Duffy, Appendix 5), an iron nail and a sherd of modern pot were recovered from this feature.

Feature 8

Aligned north-south, Feature 8 was an ill-defined linear cut (1.3m EW x 0.8m NS) that partially truncated the northern limit of drainage ditch F6. Adjacent to the northern baulk of Trench 2, it appeared as interface material with the natural subsoil. It consisted of sterile loose orange brown gritty clay (0.01m in depth) and was difficult to define along its eastern limit.

Feature 9

Located in the north-east corner of Trench 2, Feature 9 was a very thin (0.02m-0.05m in depth) irregular deposit of dark brown gritty silt. Particularly ill-defined to the west it may have been associated with the tree bowl in this area.

Feature 2

This layer consisted of compact mid-brown silty clay with occasional small stone inclusions (0.15m-0.3m in depth). Animal bone including gnawed fragments of cattle, sheep/goat, pig and horse (Duffy, Appendix 5), modern pottery as well a frequent fragments of clay pipe were also recovered from this feature. Fragments of disarticulated human remains were recovered from the topsoil and identified as adult skull fragments. Another fragment was identified as a fibula, probably from an adult. Possible rodent gnawing was identified on one edge of this bone (Lynch, Appendix 1).

Feature 1

Topsoil in Trench 2 consisted of compact grey brown silty clay with occasional small stone inclusions (0.25m-0.23m in depth). The eastern 3m of Trench 2 were disturbed by what appears

to be the removal of a tree stump and dump of modern material. This area was characterised by a deposit (2.7m EW) of redeposited subsoil (0.1m-0.2m in depth) and modern detritus including an iron bar and plastic bags. A range of modern pottery was recovered from F1 and some building material including slate fragments and iron nails. Animal bone included cattle bone, an example of which was butchered and subsequently gnawed by a dog (Duffy, Appendix 5). Fragments of disarticulated human remains were recovered from the topsoil and identified as adult skull fragments. Another fragment was identified as a fibula, probably from an adult. Possible rodent gnawing was identified on one edge of this bone (Lynch, Appendix 1).

Plate 9: Trench 2, mid-excavation, facing west

4.2. Samples & Finds

The high level of disturbance and modern nature of the deposits mitigated against soil sampling. Animal bone was retrieved from features and layers by hand and through soil sieving. All layers and features of all trenches and a significant proportion of topsoil were dry-sieved. Artefacts from all layers and features were retrieved.

Plate 10: Rosaleen and Joseph washing samples and finds

Animal Bone Samples

The sampling methodology for bone was to hand-retrieve all bone from all features and layers. Additional retrieval was from dry sieving of the layers. The animal bone was analysed by Siobhan Duffy. A total of 170 bones were examined, 114 of which related to stratified features. Although in generally fair condition the animal bones were highly fragmented, leading to a low rate of identifiable fragments. The range of body-parts identified, and their condition indicates the assemblage is consistent with the agricultural practices of manure-spreading and soil-working in modern times, incorporating both domestic and farm waste. (Duffy, Appendix 5).

Artefacts

A total of 155 artefacts were registered. This can be divided into pottery (12); clay pipe (142) and stone (1). Metal finds were of modern origin and were divided into iron (46) and copper alloy (2).

Medieval Artefacts

Plough Pebble

A semi-ovoid, quartzite pebble recovered from the cultivation soil (F2) in Trench 1, was identified as a plough pebble (19E480:2:1) (Duffy, Appendix 3). Plough pebbles are field stones that have been fitted into the base of timber ploughs to slow down the wearing away of the plough sole and in doing so become distinctively worn themselves. In Ireland they occur consistently in contexts dated to the thirteenth century and are often associated, although not exclusively, with the Cistercian order (Brady 2015). The recovery of a plough pebble suggests this area of the Naul had been tilled in medieval times.

Pottery

Three sherds of medieval pottery were recovered from topsoil (F1) in Trench 1 and another from cultivation soil (F2) in Trench 2. The former are glazed medieval Dublin-type wares datable to the thirteenth century. The latter is an unglazed micaceous sherd which was identified as locally produced, with similarities to Drogheda ware (Kieran Campbell pers. comm.).

Plate 11: Siobhan examining finds in Trench 2

Modern Artefacts

Plate 11: Philip recovering a clay pipe bowl from Trench 2

Clay Pipes

A total of 50 bowl fragment and 92 stem fragments form clay pipes were analysed by Siobhan Duffy. These included one complete and four near-complete bowls, although an overall high fragmentation rate was evident. The clay pipe fragments recovered were predominantly nineteenth century in date. There is some evidence for earlier pipes with two eighteenth century pipes identified, and others considered to date to the years either side of 1800. Somewhat surprisingly given its large pipe-making industry, only one pipe in the assemblage was traceable to Dublin. It appears pipes made in The Netherlands the greatest desirability and influence, with both genuine imports and Irish-made copies of Dutch style pipes present in the assemblage (Duffy, Appendix 4).

Pottery

A range of modern pottery typical of the nineteenth and twentieth centuries was recovered predominantly from the cultivated soils (F2 and F1) across the site. Typical of the period the range included blackware, glazed red earthenware and whiteware. Fragments were small and undiagnostic sherds of plates, cups and storage vessels. Blackware or Black-glazed earthenware (17th-19th century) was manufactured from coal-measure clays and produced in west Scotland and England. Found frequently along the east coast of Ireland, the commonest forms were storage vessels. Glazed red earthenware or brown wares (17th-19th century) were commonly made locally and generally represented by utilitarian vessels such as milk pans, crocks, bowls and jugs. Among the modern pottery retrieved from the Naul was mass produced wares typically fragments of plates, cups and saucers along with the occasional fragment willow pattern. Striped pottery dating from the late1920s and decorated pieces from the 1950s were also noted.

Metal Objects

A total of 46 metal objects were analysed by Siobhan Duffy (Appendix 3). Unusual among the finds was a triangular fragment of red porphyry tile (17E0302:19:14). With the exception of one nail (F7), all metal finds were from the cultivation layers (F1 and F2) and all were considered modern in date. Eight objects were identified as fixture and fittings of a building including a bolt form surface mounted nineteenth century door lock. Personal items included a buckle and part of a heel iron from a boot, both either nineteenth or early twentieth century in date.

Archiving

All digital photographs are indexed. A total of six and section drawings have been scanned. Both have been saved to the Heritage file on the Fingal County Council mainframe. The paper archive is currently with the director and will be scanned and copied for deposition in the both the Fingal Local Studies Archive, Swords and the Collections Resource Centre.

Dissemination

A summary account will be submitted to Excavations.ie. A leaflet on the history of the Naul including the results of the excavation is currently being prepared in liaison with members of the Naul Community Council.

5 Discussion

The focus of the *Naul Community Dig* was to engage the community with their surrounding archaeological heritage and to inform future uses for the site. The level of natural subsoil across the site was attained and the nature and extent of post-medieval and modern disturbance was recorded.

Medieval Naul

Glimpses of medieval Naul were evident in the recovery of a plough pebble and four sherds of medieval pottery from the excavation. All were datable to the thirteenth century which coincides with some of the surviving historical record. It is known from documentary sources that arable far outstripped pasture in terms of land use and in 1292 the land in the Naul was divided into two large fields-the carrot field containing 140 acres and the mill field containing 120 acres (Murphy & Potterton 2010, 29). In 1202 a charter of Richard Cadell for his lord Walter de Lacy concerning the Naul, possibly refers to foldage, whereby the lord of the manor could insist that his tenants must pastures their cattle on his arable land in order to manure the soil subsequently increasing his grain yield (Hogan 2007, 220).

The thirteenth century was a period of economic expansion and agrarian enterprise. The plough pebble and by extension the plough and cultivation techniques were associated with the Anglo-Normans and strongly with the Cistercian order (Brady 2016, 6). The manor of the Naul was associated with an Augustinian foundation. From 1202 Richard Cadell had granted (for the soul of his lord Walter de Lacy), the tithes of the whole of his land at Naul to the prima canons of Llanthony in Wales. He also granted the canons a 'house and messuage' next to the chapel at Naul. However, a dispute - a right to worship, claims of land robbery and the rights of the church- between the canons and Cadell came before the court of Pope Innocent III in 1214. The outcome of the dispute was a grant of 8 acres of land contingent to the chapel at Naul (Hogan 2007, 78).

Despite the historic evidence for a medieval manor and a number of previous investigations within the village (Section 3.2) , no evidence of medieval settlement had been identified through excavation. Although limited to four sherds of medieval pot and a plough pebble the results from the *Naul Community Dig* suggest that the area excavated had been tilled for arable farming in medieval times.

Modern Naul

The archaeological evidence has shown that the tradition of cultivation in this area continued into modern times. The remnants of furrows and cultivation soils indicate the area to the rear of Naul graveyard was ploughed in to the nineteenth century before its use as a fruit garden, in living memory. The Sexton's field as it became known locally required drainage. This was evident on site during the excavation, as despite the sloping nature of the site the clay tended to hold water, suggesting the digging of drainage was a necessity throughout its use.

No evidence for the survival of garden paths as illustrated on the Second Edition Ordnance Survey map of 1862 was uncovered. However, it is likely the paths were comparable to those of a similar date uncovered in the walled garden of Bremore Castle (Baker 2019). The Bremore Castle paths consisted of compacted brick, lime mortar and slate overlain by sandy gravel with crushed shell and small stone. As the Naul paths don't appear on subsequent maps and given the evidence for cultivation on site it is likely the paths were ploughed away. There was evidence for a tree bowl towards the eastern end of Trench 2. The area immediately above it had been disturbed and it appears to correlate with the local memory of trees on and around the site being felled for use as timber by the local coffin makers.

Given the its location immediately adjacent to the graveyard it is unsurprising that disarticulated human remains were recovered during the excavation. These fragments were recovered from the topsoil in Trenches 1 and 2 and may be from one or two adult individuals. The enclosure of cemeteries wasn't formalised until the mid-nineteenth century and given that Naul graveyard is an historic one, dating back to at least he medieval period it is probable that the burials extended beyond the current graveyard walls. Beyond the graveyards walls was also traditionally the place of burial for those apart, such as strangers, suicides, unchurched women and unbaptised children. However, given the ground level of the Naul graveyard is significantly higher that the land surrounding it and there is evidence for cultivation there from the thirteenth century, it was unlikely that formal burials would be uncovered. This was the case with the fragments recovered during excavations that had 'clearly suffered damage since the time of deposition' (Lynch, Appendix 1).

Remnants of building material including slate, mortar and building fittings were recovered cultivations soils from Trenches 1 and 2. It was recorded locally that the row of dwellings along the east side of the main street of the Naul were demolished to make way for four artisan

dwelling designed by Sandham Synes and built by James Caffrey c.1866 and the rubble was used to embank the steep slope to the Delvin, including to the rear of the graveyard. The building material which is of nineteenth century date may reflect this. It is also possible that this material may be from the since demolished church in the graveyard. It was recorded by Walsh that the 'ancient church' of the Naul was ruinous by 1615 and that the church evident on nineteenth century map as described as 'plain, small square building' with a one-arch bell turret was built between 1630 and 1814. Demolished around 1939 it is possible that some of the material was dumped in the field nearby. One of the fittings recovered from the topsoil in Trench 1 belonged to a plate stock lock, dating to the nineteenth century. Its size suggests the lock would have been attached to a substantial outer door, possibly a church building (Duffy Appendix ??). The Sexton's house which is depicted as a small dwelling with two windows and a chimney attached to the graveyard was still standing in 1991. It was described by Egan as a 'shed located in the northwest corner of the graveyard is a very old structure-possibly associated with the nearby castle' (1991, 176-203).

The archaeological evidence has revealed a tradition of cultivation in the Sexton's field to the rear of the graveyard. As such there were few personal items identified. However, the recovered of numerous clay pipe bowls and stem fragments gives an insight into some of the people of nineteenth century Naul. While the number and diversity of clay pipes represented is, perhaps, a reflection of the ubiquity of tobacco smoking, it seems that despite being on the coach route from Dublin, the people of the Naul were not getting their pipes from there. Instead the pipes came from other Irish centres, such as Cork and were imported from Scotland and the Netherlands. The latter appear to have had the greatest desirability with both genuine imports and Irish-made copies of Dutch style pipes present in the assemblage. Also notable was the presence of pipes carrying nationalist slogans of the later nineteenth century. Clay pipes were a popular means of promoting a cause and expressing affiliation with a particular viewpoint or organisation. As such, the pipes present relating to Parnell and Home Rule, and the 1798 rebellion, can be seen to reflect political sentiments present in the Naul in the latter half of the nineteenth century (Duffy, Appendix 4).

6 Conclusions

The *Naul Community Dig 2019* established the land use of the field to the rear of the graveyards, known as the Sexton's field for cultivation from the thirteenth century. The artefacts recovered indicate dumping of building materials and the continued use of the site for cultivation in the nineteenth century. In contrast to previous investigations elsewhere in the Naul a small number of medieval pot sherds and a plough pebble were recovered providing evidence for its medieval origins within the manor of Naul. The site can be considered highly disturbed by nineteenth century furrows and its twentieth century use as a garden.

Plate 12: Some participants of Naul Community Dig 2019

An important aim of the *Naul Community Did* was to engender awareness of the site and engage new members of their growing community with the village's historic past. Almost 40 volunteers took part and included those of different generations from the immediate locality and the growing Fingal community-based archaeology community. The *Naul Community Dig* succeeded in its aims of engaging the local community with the history of the village; addressing knowledge gaps around the use of the site and informing future works.

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Christine Baker MA MSc MIAI

16 December 2019

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Special thanks to the member of Naul Community Council, especially Gill Blackburn and Ian Lennon for their enthusiasm and approach to the opportunity for a community excavation at this site. Particular thanks to Ian Lennon for his work since the dig on tracking down maps and historical references.

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Appendix 1-Feature Register

	Trench	Description	Dimensions	Over	Under	Artefacts
1	T1 - T2	Topsoil. Compact grey-brown silty clay with occasional angular small stone inclusions.	T1-0.22m-0.27m in depth; T2 0.25-0.3m in depth	F2	Sod	T1: DAR, whiteware, 3 sherd medieval pot, post-med and modern pot; iron heel of boot; iron nails, building fittings; slate fragments, mortar and brick frags; T2-Plastic, decorative iron object, beer can, slate, clay pipe, metal bar, whiteware, DAR
2	T1/T2	Cultivation Soil; Mid-brown compact silty clay with occasional small stone inclusions. Occasional charcoal, burnt limestone , cinder inclusion. Sharp break with overlying F1 and underlying F3/Natural	T1: 10m x 2m; 0.15m-0.2m; T2: 10m x 2m 0.15m-0.3m	T1: F3/Natural T2: F6, F7, F8/Natural	F1	T1-plough pebble, 1 sherd post-medieval, clay pipe (45); modern pot whiteware/blackware; iron nails, hook; pocket knife
3	T1	Linear NNW-SSE; V shaped drainage ditch widening at base as it extended downslope. Contained mid-greyish brown compact silty clay with occasional small stone inclusions and charcoal flecks.	10m exposed x 0.6m-1m in width; 0.4m depth	F4/Natural	F2	Whiteware; clay pipe
4	T1	Furrow; Flat bottomed linear cut aligned EW. Fill was soft dark brown silty clay with occasional small stones. Truncated by drainage ditch F3. may represent cross-ploughing.	2m EW x 0.7m width; 0.1-0.15m in depth	Natural	F3	Sherd modern pot
5	T1	Furrow; badly truncated furrow aligned NS. Very irregular with steep sides and a flat base. At right angles to furrow F4 with an identical fill. May represent cross-ploughing.	1.7m NS x 0.2-0.4m in width; 0.05m in depth	Natural	F2	

6	T2	Drainage ditch; Linear aligned WNW/ESE, It extended eastwards form the western baulk for c.5.5m before tuning slightly northwards. Truncated by F8 and by tree root action and redeposited natural in eastern 4m of Trench 2. U-shaped flat- bottomed shallowing as it extended eastwards; fill consisted of soft grey-brown silty clay with moderate grit and occasional charcoal flecks. Occasional large stone inclusions and more frequent small stone. Very occasional animal bone.	8m x 0.7m-0.9m; 0.1m-0.4m in depth	Natural	F8, F2	
7	T2	Deposit; Irregular spread of dark brown gritty silty clay that overlies F6 in the NW corner of Trench 2. This is coincidentally the deepest area of F6.	2.5m EW x 1m NS; 0.02m-0.08m in depth	F6	F2	Iron nail, post medieval/modern sherd pot
8	T2	Linear; aligned NS this was an ill-defined linear cut that partially truncated the northern limit of drainage ditch F6. Along the N baulk it appeared as a differential deposit and the interface with natural subsoil and was difficult to define along its eastern limit. It consisted of loose orange brown gritty clay 0.1m in depth.	1.3m EW x 0.8m NS; 0.1m in depth	Natural/F6	F2	
9	T2	Deposit: Located in the NE corner of Trench 2, F9 was a very thin irregular deposits of very dark brown gritty silt. Particularly ill-defined to the west it appeared to have been spread and may have been associated with the redeposited material in this area	c.0.7m EW x 0.9m NS; 0.02m-0.05m in depth	Natural	F2	

Appendix 2

Osteoarchaeological Report

Naul, Co. Dublin

Licence No. 19E0480

By Dr Linda G. Lynch MIAI, Consultant Human Osteoarchaeologist

5th Nov. 2019

Introduction

Four individual samples of human bone were recovered during recent archaeological excavations to the rear of the graveyard, Naul, Co. Dublin. The excavation was undertaken by Christine Baker, Fingal County Council Community Archaeologist, under licence number 19E0480. In total, twelve fragments of bone were recovered, from Trench 1 and Trench 2. All but one of the four samples were recovered from the topsoil (F.1); one sample was recovered from cultivation soil (F.2) in Trench 2.

Osteoarchaeological Analysis

Trench 1 19E0480:1:108

Four individual fragments of bone (**Plate 1**) were present in this sample; three were from the parietal of the cranium and one was an unidentified cranial fragment. The parietals, of which there is a left and a right, form the sides of the top of the cranium in the human skeleton. It was not possible to identify the original location of any of the fragments in this case. The fragments have been numbered 1-4 for this report (*nota bene*, none of the fragments were actually physically marked). There was some erosion to the ectocranial (external) surface of most of the fragments, with some peeling of the outer cortex also. All of the breaks on the fragments were either ancient (taphonomic factors) or recent in origin. All of the fragments appeared to be from an adult individual or individuals.

Fragment 1 This parietal fragment measured 37.5x16.87mm in size and weighed 1.8g. This fragment refits with Fragment 4 (**Plate 2**).

Fragment 2 This parietal fragment measured 30.82x16.43mm and weighed 1.9g.

Fragment 3 This parietal fragment measured 19.26x18.04mm and weighed 1.3g.

Fragment 4 This parietal fragment measured 16.26x8.62mm and weighed 0.6g. This fragment refits with Fragment 1 (**Plate 2**).

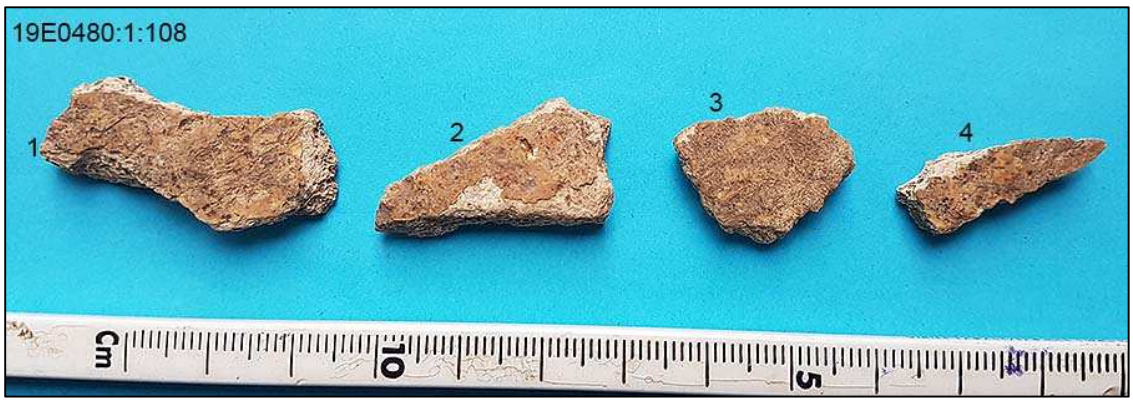

Plate 1. Cranial fragments recovered as 19E0480:1:108 in Trench 1

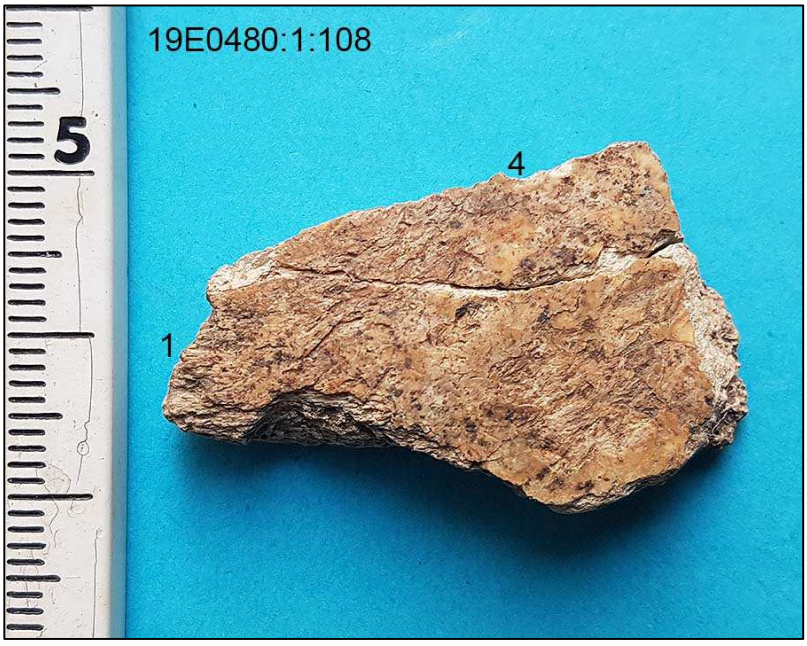

Plate 2. 19E0480:1:108, refitting of two fragments of human adult parietal

Trench 1 19E0480:1:109

Five individual fragments of bone (**Plate 3**) were present in this sample. The fragments have been numbered 1-5 for this report. All were from cranial vault fragments, but it was only possible to confidently identify the actual location of two of the fragments, as indicated in **Figure 1**. All breaks on the fragments were either ancient (taphonomic factors) or recent in origin. Most fragments, especially Fragment 1, exhibited some post-mortem erosion of the ectocranial (outside) surface. All fragments appear to probably be adult in origin.

Fragment 1 This was a fragment of the posterior/superior margin of the left parietal, as indicated in **Figure 1**. It measured a maximum of 31.66x31.06mm in size and weighed 4.5g. The fragment was from an adult individual (18+ years). There was no evidence of fusion in the surviving sagittal and lambdoidal sutures which may suggest an individual aged less than 45 years.

Fragment 2 This was a fragment of the occipital bone of the cranium, containing the internal occipital crest, as indicated in **Figure 1**. The occipital bone, which is a singular element, forms the back of the cranium. The fragment measured 29.61x27.33mm in size and weighed 2.5g.

Fragment 3 This was a fragment of a parietal, but it was not possible to identify precisely where in that bone it originated from. The fragment measured 26.75x21.12mm in size and weighed 1.5g.

Fragment 4 This was a small unidentified fragment from the parietal of the cranium. It measured 20.28x13.19mm and weighed 0.4g.

Fragment 5 This small fragment was from the parietal of the cranium. It measured 14.68x8.47mm and weighed 0.2g.

Plate 3. Cranial fragments recovered as 19E0480:1:108 in Trench 1

Trench 2 19E0480:1:110

Two fragments of bone (**Plate 4**) were represented in this sample. The fragments were numbered 1 and 2, for ease of reference. Both fragments were from the cranial vault and both appeared to be from the parietal. It was possible to accurately identify the location of just one of the fragments (see **Figure 1**). All breaks were either ancient (taphonomic factors) or recent in origin. Both exhibited

some post-mortem erosion of the ectocranial (outside) surface, with peeling of the outer cortex evident in fragment two. Both fragments appear to be adult in origin.

Plate 4. Cranial fragments recovered as 19E0480:1:110 in Trench 2

Trench 2 19E0480:1:111

Just one fragment of human bone was recovered from the topsoil of Trench 2 (**Plate 5**). This was a diaphyseal fragment of an unsided fibula. It measured 55.42mm in length and weighed 7.9g. The fragment itself was well preserved and the breaks at either end occurred in antiquity. The fragment is probably from an adult individual. Possible rodent gnawing was identified on one edge (**Plate 6**).

Plate 5. Diaphyseal fragment of fibula, recovered as 19E0480:2:111 in Trench 2

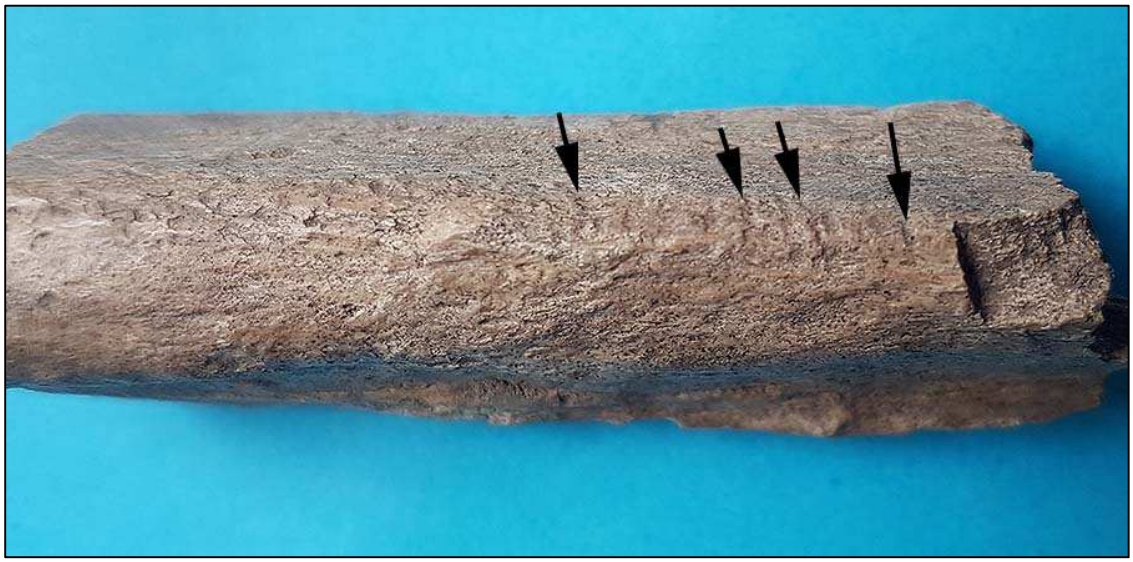

Plate 6. Probably rodent gnawing marks on diaphyseal fragment of fibular, 19E0480:2:111, Trench 2

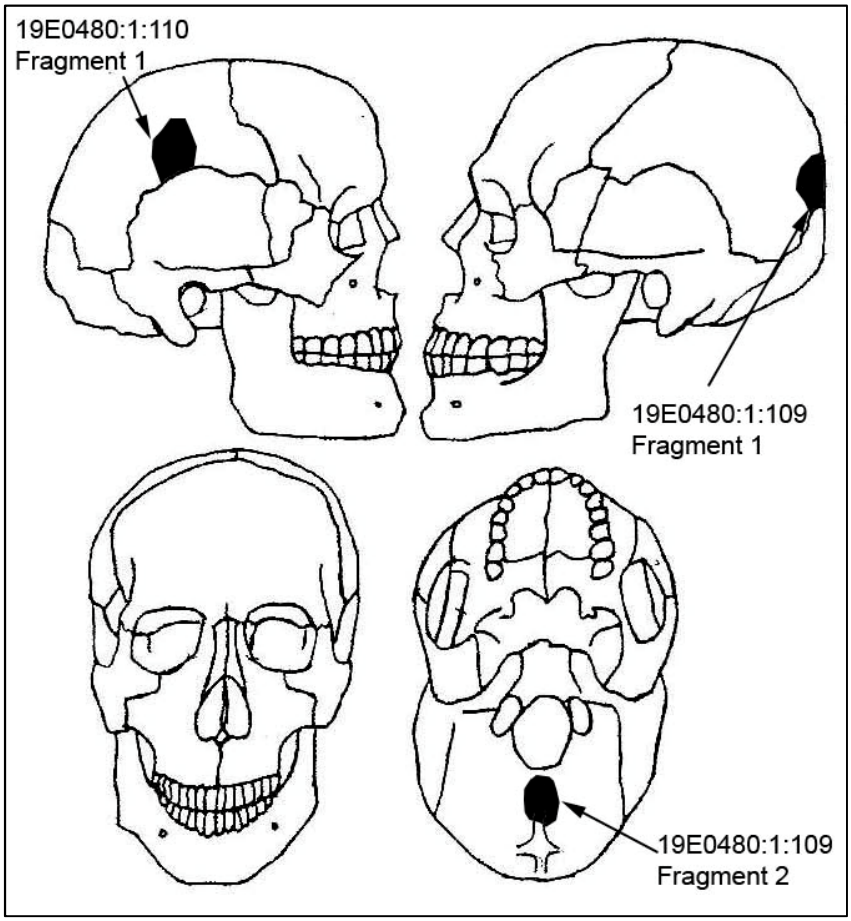

Figure 1. Identified cranial fragments from Naul, 19E0480

Conclusions

In total, 12 fragments of human bones were recovered during archaeological excavations at Naul, Co. Dublin. All appeared to be adult in origin. Eleven of the fragments were from the cranial vault, but it was only possible to specifically identify three of the fragments. Two fragments from 19E0480:1:108 in Trench 1 refitted together; however, none of the remaining fragments appeared to convincingly 'refit' with one another. A minimum of one adult is represented by the twelve fragments, but it is entirely possible that the number is higher. If the two different trenches are taken into consideration, then the minimum number of individuals (MNI) may be interpreted as two adults. The bones are relatively well preserved but clearly suffered damage since the time of deposition, probably both by truncation and by natural erosion. Rodent gnawing was identified on one fragment.

Appendix 3

The Small Finds

from

Naul Community Excavation

Naul, Co. Dublin

Excavation Licence 19E0480

Siobhán G. Duffy, BSc MA

October 2019

Introduction

A single stone artefact and 46 metal objects were recovered during excavations carried out at Naul in August 2019. These are considered briefly in this report.

Plough Pebble

A semi-ovoid, quartzite pebble recovered from F2 was identified as a plough pebble (19E480:2:1; Fig. 1). Plough pebbles are typically rounded, of hard stone, and were used with mould-board ploughs. Complete wooden ploughs recovered in Denmark illustrate their method of use – a series of such pebbles were sunk into the sole of the plough to provide protection from wear, thus lengthening the life of the wooden parts (Sitch 2015, 12; Brady 2015, 2). In this way, the pebbles obviated the need for an iron sole, being no doubt a cheaper, more readily accessible and easily replaceable means to achieve the same ends (Sitch 2015, 12).

Plough Pebble 19E480:2:1

The friction created between the pebbles and soil during the action of ploughing gradually wore one end of the pebbles to a characteristic slightly convex facet, with noticeable wear marks in a single axis (Brady 2015, 4). Over time, pebbles would be replaced as they became too worn, or were lost in the field (Brady 2015, 1). Isolated finds, such as that recovered at Naul, represent this latter. More rarely, clusters of plough pebbles have been recovered and were interpreted as the surviving remains of a wooden plough (*ibid.*, 1).

The use of plough pebbles is generally considered to be a medieval practice, although in countries such as Denmark and France, their use appears to have continued at a low level up until modern times (Sitch 2015, 13; Brady 2015, 4). In Ireland, a much more restricted time-frame has been identified – finds from stratified levels consistently indicate a thirteenth century date (Brady 2015, 4). Brady further suggests that the use of plough pebbles is a practice associated with Anglo-Norman control and ecclesiastical centres (*ibid.*). A restricted adoption of these ploughs may also be indicated by eighteenth and

nineteenth century reports that lighter ploughs, which pre-dated the mould-board, were still in use in parts of the country at that time (Evans 2000, 130-131).

The plough pebble from F2, then, appears to represent a well-worn pebble that fell out of its wooden housing during ploughing. A secondary facet along one face suggests that its position in the plough had shifted at some point, which would have contributing its loosening in position. The recovery of a plough pebble suggests that the area excavated had been tilled for arable farming in medieval times, and probably formed part of the infield of the medieval settlement at Naul.

Catalogue

Find No.	Location	Find Type	Description	Date
19E480:2:1	Trench 1	Plough Pebble	Ovoid, quartzite pebble, worn at one end to form slightly convex facet. Facet extends over part of second side. Linear wear-marks visible on facets. L. 27.1mm; W. 21.8mm; H. 26.6mm	Medieval

Metal Objects

A total of 46 metal objects were recovered from the two Trenches excavated. These were primarily made of iron, with just two copper alloy objects recorded. With the exception of one nail (from F7), all metal finds were recovered from layers F1 and F2. All were modern or early modern in date. A summary of the objects is given below.

Nails

Over half of the items (26) recovered were identified as nails or fragments of nails. These included three modern wire nails from the Topsoil, and at least two cut nails of nineteenth or early twentieth century date, also from Topsoil. The remaining nails were mainly too corroded to identify further, but all appeared to be generic carpentry nails with at least two older, forged nails from F2. These last continued to be made into the nineteenth century, before being supplanted by machine-cut nails.

Fittings

Eight of the items identified were associated with fixtures and fittings of a building or buildings. Among these was an iron bolt from a large lock, recovered from Topsoil in Trench 1 (Fig. 2). Its

morphology indicates it was part of a surface-mounted lock on a door; the bolt would be held in place by a horizontal tumbler – a rotating key would displace this and then slide the bolt to lock and unlock the door (Priess 1979, 6-7). Two notches in the upper edge of the bolt allowed the tumbler to hold the bolt in the open or closed position, while a single notch in the lower edge provided the key with a means of engaging with the bolt in order to move it (*ibid.*). Simple locks of this type were fully or partly contained in wooden housing and known as stock locks. These were used from the fourteenth century and remained in use in the nineteenth century, particularly on outer doors (*ibid*., 8). The example from Naul, with its large, cast-iron head and rectangular lanket hole in the tail, conforms to Priess's category 6 Plate Stock Lock, dating to the nineteenth century (*ibid*., 16). Its size suggests the associated lock would have been attached to a substantial outer door, probably in a larger house or church building.

Bolt from large lock, from Trench 1, F1.

A second item recovered from Trench 1 was also associated with locks and doors; this was a rectangular copper alloy strike-plate for a lock. The strike-plate would have protected the aperture in a door jamb designed to hold the bolt in place in a locked door. Unlike the bolt recovered, the associated lock would be flush with the surface of the door or held within the door casing. The use of copper alloy, its size, and the presence of a single aperture suggests this was probably used on an inner door in a building.

A decorative iron object recovered from Topsoil in T2, was tentatively identified as part of a drop pull-handle from a drawer or cabinet (Fig.3). A ball-end at one end appears designed to allow movement of the handle, close to its attachment to the item of furniture. This suggests it comprises one arm of a swan-necked handle, a form developed in the eighteenth century (antiquesworld.co.uk/), although the use of cast-iron suggests a later, nineteenth or twentieth century date.

The other fittings were too corroded for close identification or consisted of fragments of larger items. One exception to this was a small, C-shaped iron hook recovered from F2 in Trench 1.

Personal and Domestic Items

Five objects, all iron in composition, were associated with dress or portable items. They included a rectangular, cast-iron, utilitarian buckle and a probable button, both recovered from Topsoil in Trench 2. Corrosion and lack of diagnostic features meant the function and date of these could not be closely identified, although their forms indicate a nineteenth or early twentieth century date.

Part of an arm of a heel-iron from a boot or shoe was recovered from Topsoil in Trench 1. Used to reinforce leather soles, heel-irons are typically nineteenth or twentieth century in date (Margeson 1993, 63). Also, from Trench 1, a thin, folded fragment of iron probably represents edging from a mass-produced leather item such as a bag or purse. As such, it too can be regarded as dating to the nineteenth or twentieth century.

Only one item in this category was recovered from F2; this was a partial knife blade from Trench 1 (Fig.4). The shape and size of the blade is consistent with a pocket knife or small kitchen knife, although corrosion does not allow for a more definite identification.

Other / Unidentified

The remaining seven objects were two corroded for identification or consisted of small fragments of larger items.

Summary

Feature	Location	Material	Objects
1	T1	Cu Alloy	Strike Plate; Unidentified.
1	T1	Iron	Bolt from Lock; Shoe Iron; Edging; Fittings x2; Nails x 10; Unidentified.
1	T2	Iron	Buckle; Button; Handle; Fitting; Nails x 3; Unidentified
2	T1	Iron	Knife; Hook; Nails x 8; Unidentified x2
2	T2	Iron	Fitting; Nails x 4; Unidentified x2
7	T2	Iron	Nail

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Appendix 4

The Clay Pipes

from

Naul Community Excavation

Naul, Co. Dublin

Excavation Licence 19E0480

Siobhán G. Duffy, BSc MA

October 2019

Introduction

A total of 50 bowl fragments and 92 stem fragments, from clay pipes, were recovered during the 2019 Community Excavation carried out at Naul, Co. Dublin by Fingal County Council, under the Direction of Christine Baker. These included one complete and four near-complete bowls, although an overall high fragmentation rate was evident: in the case of 24 bowl fragments (almost 50% of the total) only one-tenth or less of the bowl was present, while three of the more complete bowls were fragmented in-situ.

In both trenches excavated, the greater number of fragments was recovered from the topsoil (F1), more than twice that from the underlying layer F2. However, four out of the five complete or near-complete bowls were recovered from the latter. Only one cut feature on the site yielded any clay pipe remains; this was F3 in Trench 1, from which a single small fragment of each of a bowl and a stem was recovered. The bowls identified all appear to date from the eighteenth and nineteenth or early twentieth century. Bore diameters of all recovered stem fragments were assessed where possible, and the results are presented below. Dating of pre-nineteenth century bowls follows the typologies of Oswald (1975) and Ayto (1987).

History

The tobacco plant is native to the Americas, where it was traditionally used for medicinal and ritual purposes (Ayto 1987, 4). It was introduced to Europe by returning settlers and soldiers, who had adopted its use from contact with local tribes, and there are references to the use of a basic pipe to 'drink' or smoke tobacco in Britain as early as 1573 (Oswald 1975, 3-4). Sir Walter Raleigh, a noted advocate of smoking, is credited with its introduction to Ireland in 1588, although returning soldiers may, here too, have played a part (Norton & Lane 2007, 435). Certainly, by the early seventeenth century smoking had become an established practice in both Ireland and Britain, no longer confined to its original medicinal role (*ibid*; Oswald 1975, 5-6). As the popularity of smoking grew, so too did the associated industry of clay pipe manufacturing, and by 1619 some 62 pipe-makers are known to have operated in London (*ibid*., 8).

Ireland, however, appears to have been slower to develop a clay-pipe industry, and initially pipes were imported from Britain, primarily from Bristol, with documented evidence of such imports dating from 1597 onwards (Jackson *et al* 1983, 3). It is uncertain when pipes were first produced in Ireland; these were probably manufactured by migrants from Britain or the Netherlands and would have been indistinguishable from imports of that time (Norton & Lane 2007, 436). The development of a distinct Irish style of pipe in the mid-seventeenth century (*ibid*.) suggests the industry was well established by that time. It is at this time, too, that pipe-makers

begin appearing in records, and are known from Waterford and Dublin (Norton 2013, 32). While imports continued to be traded from England and the Netherlands, until at least the mid-nineteenth century (Jackson *et al* 1983, 36), the domestic industry would have provided the majority of the population with the means of smoking throughout the nineteenth century.

Pipe Bowls

No bowls could be conclusively identified as eighteenth century in date. This was largely due to the high levels of fragmentation, making comparison with known typologies difficult. A stem fragment (19E480:1:74), with a flat pedestal attached, is almost certainly of eighteenth-century date, while the style of one base and spur (19E480:2:11) suggests a similar date. Other spurs present suggest that a further four specimens are of likely late-eighteenth or early-nineteenth century date. In contrast, half of the bowl fragments recovered were deemed to be nineteenth century in date, based on the shape or thickness of the bowl and the morphology or absence of a spur.

Nineteen fragments were identified with some form of stamp or decoration, providing further information relating to their origin and date. Two forms were present: those applied at the end of the manufacturing process using a die, typically comprising a maker's mark or an advertising logo, and those whereby the decoration or maker's logo is integral to the pipe-mould. Political slogans, maker's marks and decorative elements were all identified in the Naul assemblage.

Political Slogans

Political slogans are a common occurrence on Irish clay pipes, particularly in the nineteenth century. Given the ubiquitous nature of pipe-smoking throughout the country at that time, this would have been the most effective means of providing a recognisable visible affiliation with, or support for, a particular cause. Unsurprisingly, such slogans are almost always nationalistic in form, and while many carry a general republican message, some are more specific to a person or cause.

In the case of those identified at Naul, two fragments (19E480:1:23 & 19E0480:1:24) from large, elongate pipes fall into the second category. These carry identical stamped logos, proclaiming them 'The Parnell MP Pipe' A reference to Charles Stuart Parnell, and by extension the political struggle for Home Rule, these typically date from c.1875-1891, during which years Parnell was an MP and leader of the Irish Political Party at Westminster. A partial stamp on a third fragment reads 'Home' (19E0480:1:37), and almost certainly represents part of a 'Home Rule' logo from the same era.

A partial stamp on a fragment, also recovered from topsoil in Trench 2, is less clearly identifiable. An oval stamp on the rear of the bowl carries the as yet undecipherable slogan 'The Du__/_re__/Pr_'. It seems likely, however, that the complete slogan refers to a nineteenth century social or political organisation.

Maker's marks

A partial oval stamp on a fragment from topsoil in Trench 2 bore the logo '__HAM / ____S ST' (19E0480:1:26). This is almost certainly a maker's mark for the Cunningham Family of Francis St., Dublin. The Cunninghams were long-established pipe-makers in Dublin in the nineteenth century, operating out of different locations on Francis St. between 1840 and 1880 (Norton 2013, 32-35). The incomplete survival of the logo means it is not possible to further identify the individual pipe-maker or the address and date of the pipe.

Cloverleaf maker's mark on 19E480:2:11

. Gouda Coat-of-Arms on 19E480:2:11

A second maker's mark identified points to a more exotic origin for one pipe. This comprised a trifoliate leaf stamped on the base of a flat pedestal spur, on a bowl fragment recovered from F2 in Trench 2 (19E0480:2:11). The resemblance of this to a shamrock emblem may suggest a native origin, and indeed shamrock decorations were present on other bowls/spurs (see below).

However, in this instance the sides of the spur bear the coat-of-arms of Gouda (Fig.3), surmounted by the letter 'S'. Gouda was the principal centre of pipe-making in The Netherlands, and was known for the quality of its pipes, which were exported throughout the world. From c.1740 onwards, pipes manufactured in Gouda carried the city's coat-of-arms as a mark of authenticity, with an additional 'S' to denote ordinary (from the Dutch 'slegte') pipes from those of higher quality (Oswald 1975, 118; Caselitz 1986, 3). The large number of pipe-makers based in Gouda were identifiable by their maker's marks, licensed by the Guild which regulated the industry there. Often taking the form of a pictorial symbol, marks changed hands over the years, and from the mid-eighteenth century onwards companies were permitted to hold more than one mark at a time (Duco 2004). A single three-leaved clover, such as that on the Naul example was used by the Danens family for much of the eighteenth century, although it is recorded for Cornelis Zonne, then Abraham van der Spelt for a period mid-century (www.goudapipes.nl; www.claypipes.nl/). At the end of the eighteenth century it changed hands and was thereafter used by Pieter van Geelen, and Jan Scholten (*ibid*.). Although too incomplete for certainty, the form of the spur/bowl from Trench 2 suggests a 1750-1770 date (www.goudapipes.nl), while a similar complete example from Winetavern St., Dublin was dated to c.1740-1760 (Norton 1997, 183-184).

Maker's mark with harp, on 19E480:1:9

A fragment from a well-made bowl from Trench 1 (19E0480:1:9) had a circular logo stamped on the rear of the bowl, comprising a harp with lines radiating outwards from it. As with the stamp discussed above, this may represent the use of a nationalistic emblem, and indeed harps and shamrocks were commonly used to decorate pipes throughout the nineteenth century. However, the mark was clearly applied with the use of a die (and applied upside down), suggesting it represents a maker's mark rather than a political statement. As with the cloverleaf, the harp was used as a maker's mark in Gouda, although no example identical to that from Naul was found. Alternatively, pipe-bowls with circular stamps bearing a harp were recovered in Limerick and identified as originating at the Fitzgerald factory in Cork in the mid-nineteenth century (Lane 1996, 76). This may provide the more probable source for the pipe recovered in Naul.

The Crowned 'L'

Crowned 'L' marks on bowls. From L-R: 19E480:1:25; 19E480:2:5; 19E480:2:6; 19E480:2:9; 19E480:2:10

In addition to the above, a circular stamp with the letter 'L' surmounted by a crown was present on six of the bowls recovered, including all five complete or near complete bowls. Despite this high level of recurrence, however, no two examples were identical in form or design (Fig. 5), and two other partial logos with an 'L' may represent further examples of this type. A regular feature in clay pipe assemblages throughout Ireland, the Crowned 'L' logo has its origins in Gouda where it was used as a maker's mark from the seventeenth century. From about 1730 it was owned by the de Licht family of pipe-merchants, although it may have been used by a pipe-making relative, Franz Verzijl, as a second mark in contravention of Guild rules at the time (Duco 2004). From the mid-eighteenth century, changes in these rules allowed pipe-makers to own a second mark, and the 'Crowned L' mark became openly associated with the Verzijl name (*ibid*). For the rest of the eighteenth, and throughout the nineteenth centuries it was used as a secondary mark, to denote lesser quality pipes, first by Verzijl and later by the Stromman and Van der Want dynasty (*ibid*). These pipes were largely destined for export, and their manufacture was often outsourced to small workshops with the result that the marks appear on a variety of pipe shapes and styles (*ibid*).

The story of the 'Crowned L' in nineteenth century Ireland has a further complication: the high esteem in which pipes from Gouda were held, and the familiarity with the 'Crowned L' mark led to its being copied as a mark on Irish-made pipes in the later nineteenth century (Norton 1997, 183; Norton 2004, 445). Meanwhile, 'Irish style' pipes bearing the mark on the rear of the bowl appear to have also been produced in Gouda in the later nineteenth century, to cater for what was probably a lucrative export market (Duco 2004; Lane 1995, 105). Thus, distinguishing the origins of a pipe with a Crowned 'L' mark is not always straightforward.

The more debased forms of the logo, found on larger, more crudely-made pipes, are generally regarded as Irish made (Norton, 2004, 434), including some which have omitted the crown element (Norton 2009, 78); pipes 19E480:1:17 and 19E480:2:6 from Naul may be considered to fall into this category. Well-finished pipes with a smaller, clear mark are more likely to be of Dutch origin, and the presence of a trifoliate leaf on either side of the spur may indicate pipes specifically destined for the Irish market (Lane 1996, 74; Norton 1984, 204). Pipes 19E480:1:25 and 19E480:2:5 from Naul have characteristics suggesting a Dutch origin. Meanwhile, 19E480:2:9 and 19E480:2:10 both have a shamrock on the sides of the spur and may have also been made in the Netherlands. These last are less certain, however, as shamrocks are also found on the spur sides of otherwise undecorated Irish-made pipes (Atkinson & Oswald 1969; www.pipemuseum.nl/).

Two other pipe bowls deserve inclusion in this category. The first (19E480:1:11), from Trench 1, has a stamp comprising a large 'L' within a beaded circle on a fragment from a large, thick-walled bowl. The similarities in style to the Crowned 'L' stamp suggests this is a later Irish copy, omitting the crown.

The second (19E480:2:18) is a much more finely made bowl, recovered from Trench 2. Recovered in a fragmented state, only part of an oval stamp survives on the rear of the bowl, within which can be seen the lower part of the letter 'L'. In this case a moulded design on the sides of the spur comprises a heart surmounting a vertical band with a zig-zag design on either side. This may represent a stylised copy of the Gouda arms, suggesting a better-quality Irish-made copy of a Dutch pipe. Interestingly, a similar design was used on the spurs of some pipes made in Drammen, Norway in the later eighteenth century, a factory known for copying Dutch and English pipes (Ludvigsen 2009, 110, 114).

Other Decoration

Few other decorative elements were identified on bowls in the Naul assemblage. The bowl fragment recovered from F3 (19E480:3:3) appears to have a moulded decoration below the rim, but this was too heavily abraded to be recognisable in form.

Part of a ribbed or fluted design is visible on a fragment of bowl recovered from Trench 1 (19E480:2:7), along with a branched, foliate design disguising the mould-line on the front of the bowl. Both are commonly used forms of decoration, particularly in the earlier nineteenth century (Coleman 2015, www.dawnmist.org/). As with two of the 'Crowned L' bowls, a

shamrock was present on either side of the spur and it is uncertain whether this relates to an overall design, or to the pipe's origins.

Three other spurs had moulded designs on the sides. Two of these (19E480:1:32; 19E480:1:39) were largely indistinguishable due to fragmentation or abrabion but may represent letters forming the initials of a maker. The third (19E480:2:13) has an eye on either side of the spur; no parallel for this has been located.

Stems

Stem-bore Diameter

Studies in America indicate a correlation between the diameter of the stem bore-hole and the age of the clay pipe. In general, the larger the diameter, the older the pipe; this provides a general date-range for stems, while more precise dates were found to be consistent only for the period 1680-1760 (Noël Hume 1969, 298-300). The bore diameters of 95 stems (including five attached to bowl fragments) were measured and compared. The results ranged from 1.6-2.9 mm, with 73 (77%) stems having bore diameters of 1.6-2.1mm (corresponding to 4/64" and 5/64").

A wide variety of bore diameters has been recorded elsewhere for nineteenth century pipes, and only diameters exceeding 3mm were considered dateable, and likely to be seventeenth century in origin (Duffy 2015; Noël Hume 1969, 298). None of the stems recovered at Naul had bore diameters greater than 3mm, and as such there was no evidence for seventeenth century pipes at the site.

Mouthpieces

Cut mouthpieces from F2 in Trench 1

Mouthpieces were present on nine stem fragments. Of these, two were of button-type, typical of the mid-nineteenth century or later (Higgins 2017), and eight were formed by a straight, horizontal or slightly angled cut at the end of the pipe (Fig.8). In these latter cases, the end of the stem was finished to the same degree as the stem itself, with bevelled edges visible on three examples. A further six stems appeared to have secondary mouthpieces: instances where the pipe continued to be smoked following loss of the end of the stem, resulting in a rounding or smoothing of the otherwise unfinished stem-end.

In such cases the original break may have been accidental or deliberate, as a shorter stem could be held between the teeth leaving the hands free for work (Ayto 1987, 10).

Decorated Stems

The most common form of decoration was a repeating roller-stamped design, identified on 11 stem fragments. This type of decoration involved rolling the stem on a die or stamp, so that the design formed a repeated design or ban wrapping itself around the stem. This type of decoration was commonplace on pipes in the eighteenth and much of the nineteenth centuries (Norton 2004, 442-446; Higgins 2009, 43; Oswald 1975, 32-33), and it was not possible to assign a date to individual designs. Designs on the stems from Naul typically involved lines, geometric shapes and corded bands.

Two fragments from Trench 1 had lettering stamped along the length of the stem. The practice of stamping a maker's name and location on the stem rather than the bowl was commonplace in the nineteenth century, especially where a different logo or design occupied the bowl. Both

fragments from Naul take this form, with a surname on one side and a placename on the other. The partial inscription on one fragment reads '_ghill' on one side and 'Glasg_' on the other, probably a reference to the Coghill family of pipe-makers who operated in Glasgow for most of the nineteenth century (Oswald 1975, 205; Kenyon & Kenyon 2008). The second stem fragment also bore a partial inscription, reading '_exford' on one side and '_v Murphy' on the other. Although taking the form of a maker's mark, this is in fact a patriotic slogan referencing Fr. Murphy and the 1798 uprising in Wexford. The large size of the stem suggests a late nineteenth or early twentieth century date and may have been made around 1898 to commemorate the centenary.

Conclusion

The collection of clay pipe fragments recovered from topsoil and sub-topsoil levels at Naul was predominantly nineteenth century in date. There is some evidence for earlier pipes with two eighteenth century pipes identified, and others considered to date to the years either side of 1800. However, no pipes pre-dating the eighteenth century were identified, suggesting the collection is contemporary with the existence and use of the adjacent church and graveyard.

The number and diversity of clay pipes represented is, perhaps, a reflection of the ubiquity of tobacco smoking in late eighteenth and nineteenth century Ireland. It is somewhat surprising that only one pipe in the assemblage was traceable to a Dublin pipe-maker. Dublin had a large, well-established pipe-making industry in the eighteenth and nineteenth centuries (Norton & Lane 2007; Norton 2013), making it the likely principal source of pipes for a considerable distance. Nonetheless, the pipes recovered at Naul indicate that they were at least equally as likely to come from further afield. This included not only other Irish centres, such as Cork, but also imports from Scotland and The Netherlands. In addition, the absence of milling on a fragment from a fine, well-made pipe (19E480:1:30) suggests it may be English-made; while milling around the rim continued to be a characteristic of Dutch-made pipes throughout the nineteenth century, and was common on Irish-made pipes, it is absent from the majority of English pipes from the early eighteenth century onwards (Oswald 1975, 115).

In nineteenth century Naul, pipes made in The Netherlands appear to have had the greatest desirability and influence, with both genuine imports and Irish-made copies of Dutch style pipes present in the assemblage. The presence of imports in the assemblage, and particularly the highly-regarded Dutch pipes, suggests perhaps a degree of affluence among some of the smoking population of Naul at that time.

Notable also in the assemblage is the presence of pipes carrying nationalist slogans of the later nineteenth century. Clay pipes were a popular means of promoting a cause and expressing affiliation with a particular viewpoint or organisation. As such, the pipes relating to Parnell and Home Rule, or the 1798 rebellion, can be seen to reflect political sentiments present in the Naul in the latter half of the nineteenth century.

Catalogue

Find No.	Find Type	Trench	Description	Date
19E0480:1:9	Bowl	T1	Rear of bowl with part rim present. Milled. Small, well-formed maker's stamp - harp with radiating lines within impressed circle. Stamped upside down.	19th C
19E0480:1:10	Bowl	T1	Part of bowl. Thick-walled, crudely made. Milling present close to rim.	19th C
19E0480:1:11	Bowl	T1	Part rear & side of large, thick-walled bowl. Large stamp on rear - 'L' within beaded circle.	19th C
19E0480:1:12	Bowl	T1	Part of thick-walled bowl. Small part of rim present. Milling present.	19th C
19E0480:1:13	Bowl	T1	Part of thick-walled bowl. Small part of rim present. Milling present. Possible stamp on bowl, but abrasion makes this indistinguishable - suggests large, oval with unknown logo within.	19th C
19E0480:1:14	Bowl	T1	Part of bowl. Rim with milling present.	19th C
19E0480:1:15	Bowl	T1	Part of rear of bowl. Refits with 19E0480:1:9. Broken at top of junction with stem.	19th C
19E0480:1:16	Bowl	T1	Lower part of thick-walled bowl. Pinkish discolouration on both surfaces may be post-depositional.	19th C
19E0480:1:17	Bowl	T1	Part of rear of bowl. Rim present with milling. Medium-large sized circular stamp present - Crown over 'L'; no beading visible.	19th C

Find No.	Find Type	Trench	Description	Date
19E0480:1:18	Bowl	T1	Fragment of bowl. Rim present with milling. Refits with 19E0480:1:19	19th C
19E0480:1:19	Bowl	T1	Fragment of bowl. Rim present with milling. Refits with 19E0480:1:18	19th C
19E0480:1:20	Bowl	T1	Fragment of lower part of bowl. Medium thickness; smoothened exterior. Slight mould line visible on bowl running up from junction with stem.	
19E0480:1:21	Bowl	T1	Fragment of upper part of bowl. Rim present with milling.	
19E0480:1:22	Bowl	T1	Fragment of bowl. Slight mould-line visible although appears filed back.	
19E0480:1:23	Bowl	T2	Rear of elongate, thick-walled bowl, thinning slightly at rim. Rim present, with milling. Large oval stamped logo, enclosing the slogan 'THE / PARNELL / MP / PIPE', with the N and E of Parnell overlapping.	1870-1890s
19E0480:1:24	Bowl	T2	Rear of elongate, thick-walled bowl. Large oval stamped logo, enclosing the slogan '[TH]E / [P]ARNELL / MP / PIPE', with the N and E of Parnell overlapping.	1870s-1890s
19E0480:1:25	Bowl	T2	Near complete well-made bowl with smoothened exterior. Rim present with milling. Circular stamp on rear of bowl - small, well-formed Crown over 'L' within beaded circle.	19th C

Find No.	Find Type	Trench	Description	Date
19E0480:1:26	Bowl	T2	Part of large, thick-walled bowl. Flat-based spur; mould-line visible on spur, but filed off bowl. Rim present with milling. Partial large, oval stamp on rear, containing maker's name - '___HAM / ___S ST'. Suggests pipe made by Cunningham family of Francis St., Dublin	1840 - 1880
19E0480:1:27	Bowl	T2	Part of thick-walled bowl. Rim present with milling. Partial oval stamp on rear of bowl, with part slogan: 'THE DU__ / _RE__ / PR__'. Not yet identified.	19th C
19E0480:1:28	Bowl	T2	Part of thick-walled bowl. Rim present with milling.	19th C
19E0480:1:29	Bowl	T2	Part of thick-walled bowl. Rim present with milling.	19th C
19E0480:1:30	Bowl	T2	Part of well-made, thin-walled bowl. Rim present; no milling. Pared exterior, but mould-line evident as angle in circumference. No decoration. Rim of bowl cut parallel with stem.	18th /Early 19thC
19E0480:1:31	Bowl	T2	Part of rear of thick-walled bowl. Flat-based spur present, with surviving mould-line. Bore D. 6/64".	19th C
19E0480:1:32	Bowl	T2	Base of thick-walled bowl. Short, flat-based spur, with surviving mould-line. Moulded emblem on each side of spur – unidentifiable due to abrasion. May represent maker's initials.	19th C
19E0480:1:33	Bowl	T2	Part of well-made bowl, with burnished exterior.	

Find No.	Find Type	Trench	Description	Date
19E0480:1:34	Bowl	T2	Part of well-made bowl, with pared exterior.	
19E0480:1:35	Bowl	T2	Fragment of well-made bowl, with burnished exterior.	
19E0480:1:36	Bowl	T2	Fragment of thick-walled bowl.	
19E0480:1:37	Bowl	T2	Fragment of thick-walled bowl. Rim present, with milling. Small portion of oval stamp present - incised oval line with inner wording - 'HOME'. Probable 'Home Rule' pipe.	Late 19th C
19E0480:1:38	Bowl	T2	Fragment of base of thick-walled bowl.	
19E0480:1:39	Bowl	T2	Fragment of base of thick-walled bowl. Partial spur present. Moulded mark on LHS side of spur – possible letter.	
19E0480:1:40	Bowl	T2	Small fragment of bowl. Very heavily abraded.	
19E0480:1:41	Bowl	T2	Small fragment of bowl. Rim present, with milling.	
19E0480:1:42	Bowl	T2	Small fragment from base of bowl.	
19E0480:1:43	Bowl	T2	Very small fragment near base of bowl. Pared exterior.	
19E0480:1:44	Stem	T1	Cut Mouthpiece. Length of stem with circular c-s. Mouthpiece cut off in slight spiral, with finish similar to rest of exterior. Bore D. 5/64"	

Find No.	Find Type	Trench	Description	Date
19E0480:1:45	Stem	T1	Secondary Mouthpiece. Fragment of large stem with oval c-s. Straight-ended appears secondary. Bore D. 5/64″	
19E0480:1:46	Stem	T1	Length of large stem with oval c-s; tapering strongly. Partial stamped logo on sides: '[WE]XFORD' & '[RE]V_MURPHY'. Reference to Vinegar Hill in 1798 & probably dating from 1898. Bore D. 6/64″	Late 19th C
19E0480:1:47	Stem	T1	Fragment of narrow stem with circular c-s. Partial stamped logo on sides: 'GLASG__' & '__GHILL'. Possibly A. Coghill of Glasgow, who operated as pipe-makers from 1826-1899. Bore D. 5/64″	19th C
19E0480:1:48	Stem	T1	Decorated. Length of stem; near circular c-s. Roller-stamped decoration extending in spiral around stem: Double corded band and line of circles. Bore D. 5/64″	
19E0480:1:49	Stem	T1	Decorated. Length of stem with circular c-s. Roller-stamped decoration extending in spiral around stem: 4 lines of corded band & line of circles. Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:50	Stem	T1	Decorated. Length of slender stem with circular c-s. Roller-stamped decoration encircling stem: incused circles. Bore D. 4/64″	
19E0480:1:51	Stem	T1	Decorated. Fragment of stem with circular c-s. Roller-stamped decoration encircling stem. Abraded, but appears as raised lines bordering raised ovals/hearts. Bore D. 5/64″	
19E0480:1:52	Stem	T1	Decorated. Fragment of stem with oval c-s. Faint roller-stamped design on stem, in the form of cross-hatching. Bore D. 5/64″	
19E0480:1:53	Stem	T1	Length of stem with oval c-s. Partial spur present, but insufficient for further identification. Bore D. 5/64″	
19E0480:1:54	Stem	T1	Length of large stem with oval c-s. Bore D. 6/64″	
19E0480:1:55	Stem	T1	Length of large stem with oval c-s. Bore D. 6/64″	
19E0480:1:56	Stem	T1	Fragment of stem with oval c-s. Bore D. 6/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:57	Stem	T1	Secondary Mouthpiece. Fragment of stem with near circular c-s. Straight-cut secondary mouthpiece at one end; waisted appearance to stem near this end. Bore D. 5/64″	
19E0480:1:58	Stem	T1	Secondary Mouthpiece. Fragment of stem with circular c-s. Straight-cut secondary mouthpiece at one end. Bore D. 5/64″	
19E0480:1:59	Stem	T1	Fragment of large stem with oval c-s. Bore D. 6/64″	
19E0480:1:60	Stem	T1	Fragment of large stem with oval c-s. Bore D. 5/64″	
19E0480:1:61	Stem	T1	Fragment of stem with circular c-s. Bore D. 5/64″	
19E0480:1:62	Stem	T1	Fragment of large stem with near circular c-s. Bore D. 5/64″	
19E0480:1:63	Stem	T1	Fragment of stem with oval c-s. Bore D. 5/64″	
19E0480:1:64	Stem	T1	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:65	Stem	T1	Fragment of slender stem with circular c-s. Bore D. 5/64″	
19E0480:1:66	Stem	T1	Fragment of stem with circular c-s. Bore D. 5/64″	
19E0480:1:67	Stem	T1	Fragment of stem with circular c-s. Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:68	Stem	T1	Fragment of stem with oval c-s. Bore D. 5/64″	
19E0480:1:69	Stem	T1	Fragment of very slender stem with circular c-s. Bore D. 5/64″	
19E0480:1:70	Stem	T1	Fragment of large stem. Part circumference only.	
19E0480:1:71	Stem	T2	Button Mouthpiece. Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:72	Stem	T2	Button Mouthpiece. Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:73	Stem	T2	Cut Mouthpiece. Fragment of stem with circular c-s. Straight-cut mouthpiece present. Stem narrows abruptly near mouthpiece. Bore D. 5/64″	
19E0480:1:74	Stem	T2	Fragment of large stem. Broken at bowl; flat-based heel present. Mould-line smoothed off heel, but no maker's mark present. Bore D. 6/64″	18th C
19E0480:1:75	Stem	T2	Fragment of stem, broken at bowl; narrow spur with rounded base present. Small circle in relief at junction of bowl and stem suggests moulded decoration on bowl. Bore D. 7/64″	
19E0480:1:76	Stem	T2	Decorated. Length of stem with circular c-s. Broken at junction with bowl. Roller-stamped design in spiral around stem - alternate bands of trifoliate leaves and possible ovals. Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:77	Stem	T2	Decorated. Fragment of slender stem with circular c-s. Roller-stamped decoration covers exterior - basket weave design. Bore D. 5/64″	
19E0480:1:78	Stem	T2	Fragment of slender stem with circular c-s. Burnt with near vitrified appearance and grey to black colour throughout. Bore D. 5/64″	
19E0480:1:79	Stem	T2	Fragment of slender stem with circular c-s. Burnt appearance - purple-brown colour on exterior and at one end. Bore D. 5/64″	
19E0480:1:80	Stem	T2	Fragment of large stem with angular, quadilateral c-s. Pink colour on exterior and one broken end - suggests post-depositional. Broken at junction with bowl. Bore D. 6/64″	
19E0480:1:81	Stem	T2	Length of large stem with oval c-s. Bore D. 5/64″	
19E0480:1:82	Stem	T2	Length of large stem with oval c-s. Bore D. 6/64″	
19E0480:1:83	Stem	T2	Length of stem with oval c-s. Bore D. 5/64″	
19E0480:1:84	Stem	T2	Fragment of large stem with circular c-s. Bore D. 5/64″	
19E0480:1:85	Stem	T2	Fragment of large stem with oval c-s. Bore D. 6/64″	
19E0480:1:86	Stem	T2	Fragment of slender stem with near circular c-s Bore D. 5/64″	
19E0480:1:87	Stem	T2	Fragment of slender stem with near circular c-s Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:88	Stem	T2	Fragment of stem with oval c-s. Bore D. 5/64″	
19E0480:1:89	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:90	Stem	T2	Fragment of large stem with circular c-s. Bore D. 5/64″	
19E0480:1:91	Stem	T2	Fragment of large stem with circular c-s. Bore D. 6/64″	
19E0480:1:92	Stem	T2	Fragment of stem with circular c-s. Well-made, smooth exterior. Bore D. 5/64″	
19E0480:1:93	Stem	T2	Fragment of stem with circular c-s. Bore D. 5/64″	
19E0480:1:94	Stem	T2	Fragment of stem with circular c-s. Bore D. 5/64″	
19E0480:1:95	Stem	T2	Fragment of slender stem with circular c-s. Bore D. 5/64″	
19E0480:1:96	Stem	T2	Fragment of large stem with oval c-s. Bore D. 5/64″	
19E0480:1:97	Stem	T2	Fragment of stem with near circular c-s. Bore D. 7/64″	
19E0480:1:98	Stem	T2	Fragment of slender stem with near circular c-s Bore D. 6/64″	
19E0480:1:99	Stem	T2	Fragment of stem with oval c-s. Bore D. 5/64″	
19E0480:1:100	Stem	T2	Fragment of slender stem with circular c-s. Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:1:101	Stem	T2	Fragment of slender stem with near circular c-s Bore D. 5/64″	
19E0480:1:102	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:103	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:104	Stem	T2	Fragment of stem with oval c-s. Bore D. 6/64″	
19E0480:1:105	Stem	T2	Fragment of large stem with circular c-s. Bore D. 6/64″	
19E0480:1:106	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:1:107	Stem	T2	Fragment of large stem with oval c-s. Bore D. 5/64″	
19E0480:2:5	Bowl	T1	Near complete finely-made bowl, fragmented in-situ (in 6 fragments). Rim present with milling. Small, neat circular stamp on rear of bowl - Crown over 'L' within beaded circle. Est H 37.2mm; D. 22.5mm; Th. 2.2 - 3mm. D. Stamp 8.8 x 7.9mm	19th C
19E0480:2:6	Bowl	T1	Complete thick-walled bowl. Milling present. Break at base of bowl suggests spur may have been present. Large circular stamp on rear of bowl - Crown over 'L' within beaded circle. Large size and imperfect stamp suggest Irish made example. H. 44.4mm; D. 28.8mm x 27.4mm; Th. 4.6mm (at rim); D. stamp 11.6 x 11.3mm	19th C

Find No.	Find Type	Trench	Description	Date
19E0480:2:7	Bowl	T1	Small fragment of base of bowl and stem. Flat-based spur present with mould-line evident. Moulded trifoliate leaf in relief on both sides of spur. Moulded stem and leaf design running along mould-line on front of bowl; evidence for moulded ribbed/fluted decoration on bowl. Bore D. 5/64"	19th C
19E0480:2:8	Bowl	T1	Fragment of bowl. Rim present, with milling.	
19E0480:2:9	Bowl	T2	Near complete small, well-made bowl. Dutch-style. Rim present with milling. Short, forward-projecting, flat-based spur present; mould-line cut off. Partial circular stamp on rear of bowl - 'L' within beaded circle (originally Crown over 'L'). Small size and very clear mark suggest Dutch example. Moulded trifoliate leaf in relief on sides of spur. Transverse striations visible on interior. H. 36mm; D. 23.8mm; Th. 37mm (at rim); D stamp 7.3mm; H spur 6mm; Diam spur 6.7 x 6.3mm	19th C
19E0480:2:10	Bowl	T2	Near complete, thick-walled bowl, in 2 halves. Dutch-style. Milling present; short, forward-projecting, flat-based spur present. Mould line visible on spur, although some attempt to remove it. Circular stamp on rear of bowl - Crown over 'L' within circle (no beading). Small size and neat design suggest earlier example. Moulded, upside-down trifoliate leaf on sides of spur. H. 42.2mm; D. 27.5mm; Th. 4.3mm; D stamp 8.2 x 7.8mm; H spur 5.9mm; D. spur 7.3mm x 6.2mm Bore D. 6/64"	19th C

Find No.	Find Type	Trench	Description	Date
19E0480:2:11	Bowl	T2	Lower part of bowl and partial stem. Smoothened, pared and burnished exterior. Short, flat-based spur present. Maker's stamp on base of spur – trifoliate leaf. Moulded design in relief on sides of spur - 'S' over the arms of Gouda. Bore D. 4/64"	18th C
19E0480:2:12	Bowl	T2	Fragment of bowl. Rim present with milling.	
19E0480:2:13	Bowl	T2	Small fragment of base of bowl; round-based spur present. Moulded design in relief on sides of spur - eye.	18th / 19thC
19E0480:2:14	Bowl	T2	Fragment of thick-walled bowl. Rim present; uncertain if milled due to damage. Burnt appearance - Pinkish grey colour, extending across one broken edge indicating post-disposal.	
19E0480:2:15	Bowl	T2	Small fragment of thin-walled bowl. Rim present; no milling.	
19E0480:2:16	Bowl	T2	Small fragment of bowl. Burnt appearance on exterior.	
19E0480:2:17	Bowl	T2	Small fragment of thick-walled bowl.	

Find No.	Find Type	Trench	Description	Date
19E0480:2:18	Bowl	T2	Part small, elongate, finely-made bowl - recovered in 5 fragments. Rim present, with milling. Short, flat-based spur present; mould-line visible on base. Moulded design in relief on sides of spur - Heart over possible coat-of-arms. Partial stamp surviving on rear of bowl - appears as possible letter 'L' within impressed oval. Small size of stamp suggests die originally for spur base. Est H 38mm; Th. 3.2mm (at rim); H Spur 4.6mm; Diam spur 6.2 x 6.6mm; approx D stamp 5mm; Bore D. 4/64"	19thC
19E0480:2:19	Stem	T1	Cut Mouthpiece. Length of stem with near circular c-s. Straight-ended cut mouthpiece present with slight bevelling around edges. Bore D. 6/64"	
19E0480:2:20	Stem	T1	Cut Mouthpiece. Length of slender stem with oval c-s. Straight-ended cut mouthpiece present with bevelling around edges and slight lip on underside. Slight tapering and arcing of stem close to mouthpiece. Stem blackened towards mouthpiece. Bore D. 5/64"	
19E0480:2:21	Stem	T1	Cut Mouthpiece. Length of slender stem with oval c-s. Straight-ended cut mouthpiece present with bevelling around edges and slight lip on underside. Slight tapering and abrasion of stem close to mouthpiece - latter probably due to use. Bore D. 4/64"	

Find No.	Find Type	Trench	Description	Date
19E0480:2:22	Stem	T1	Cut Mouthpiece. Fragment of very slender stem with oval c-s. Straight-ended cut mouthpiece present, forming slight spiral at end. Mouthpiece sharp-edged but finished as exterior. Bore D. 5/64″	
19E0480:2:23	Stem	T1	Cut Mouthpiece. Fragment of slender stem with oval c-s. Straight-ended cut mouthpiece present, forming slight spiral at end. Mouthpiece sharp-edged but finished as exterior. Bore D. 5/64″	
19E0480:2:24	Stem	T1	Decorated. Fragment of slender stem with oval c-s. Roller-stamped decoration encircles stem – alternating impressed circles and corded bands. Bore D. 5/64″	
19E0480:2:25	Stem	T1	Length of slender stem with oval c-s. Bore D. 5/64″	
19E0480:2:26	Stem	T1	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:2:27	Stem	T1	Fragment of stem with near circular c-s. Bore D. 5/64″	
19E0480:2:28	Stem	T1	Fragment of slender stem with circular c-s Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:2:29	Stem	T1	Fragment of slender stem with circular c-s Bore D. 5/64″	
19E0480:2:30	Stem	T1	Fragment of slender stem with oval c-s Bore D. 5/64″	
19E0480:2:31	Stem	T1	Fragment of slender stem with oval c-s Bore D. 5/64″	
19E0480:2:32	Stem	T1	Fragment of slender stem with oval c-s Bore D. 5/64″	
19E0480:2:33	Stem	T1	Fragment of stem with near circular c-s. Bore D. 7/64″	
19E0480:2:34	Stem	T2	Cut Mouthpiece. Fragment of slender stem with oval c-s. Straight-ended cut mouthpiece present, bevelled at edges; protruding slightly on one side. Very smooth, polished exterior. Mouthpiece finished as exterior. Bore D. 5/64″	
19E0480:2:35	Stem	T2	Secondary Mouthpiece. Length of large stem with oval c-s. Cut secondary mouthpiece present, with rounded edges. Slight narrowing of stem towards mouthpiece. Bore D. 6/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:2:36	Stem	T2	Secondary Mouthpiece; Decorated. Fragment of slender stem with circular c-s. Cut secondary mouthpiece present. Evidence of paring/filing near and on mouthpiece. Faint roller-stamped decoration encircles stem – alternating bands of circles in relief, and incused rectangles. Bore D. 5/64″	
19E0480:2:37	Stem	T2	Decorated. Length of stem with circular c-s. Roller-stamped decoration encircles stem - bands of milling either side of band of triangles containing alternate relief circles and trifoliates. Bore D. 5/64″	
19E0480:2:38	Stem	T2	Decorated. Fragment of slender stem with oval c-s. Roller-stamped decoration encircles stem - bands of dots in relief. Bore D. 6/64″	
19E0480:2:39	Stem	T2	Length of stem with circular c-s. Bore D. 5/64″	
19E0480:2:40	Stem	T2	Length of stem with oval c-s. Bore D. 5/64″	
19E0480:2:41	Stem	T2	Secondary Mouthpiece. Length of slender stem with circular c-s. Evidence of wear on sides near secondary mouthpiece. Bore D. 5/64″	
19E0480:2:42	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	

Find No.	Find Type	Trench	Description	Date
19E0480:2:43	Stem	T2	Fragment of slender stem with oval c-s. Bore D. 5/64″	
19E0480:2:44	Stem	T2	Fragment of slender stem with circular c-s. Bore D. 5/64″	
19E0480:2:45	Stem	T2	Fragment of large stem; partial circumference only.	
19E0480:3:2	Stem	T1	Fragment of slender stem with circular c-s. Bore D. 6/64″	
19E0480:3:3	Bowl	T1	Very small fragment of bowl. Rim present, no milling evident. Faint traces of moulded decoration close to rim - abrasion renders this unidentifiable.	

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Appendix 5

Analysis of the Animal Bone

from

Naul, Co. Dublin

Excavation Licence: 19E0480

Siobhán G. Duffy, BSc MA

Introduction

This report presents an account of the animal bone recovered during the 2019 Community Archaeology excavation at Naul, Co. Dublin (Licence 19E0480). A small amount of animal bone was recovered from the two trenches excavated. Artefactual evidence recovered from features excavated indicate a modern (18th-20th century) date for all the animal bone collected (C. Baker pers. comm.).

Methodology

Mammal and bird bones were examined for species and element identification, age, sex, post-depositional changes, butchery and other modifications, gnawing, non-metric traits, and pathologies. All data were recorded in an MS Excel spreadsheet.

Identification

Bone fragments were examined and identified to skeletal element and species where possible. Identification was carried out with the use of bone atlases (Schmid 1972; Hillson 1992, and Hillson 2005), and the author's own reference collection.

Where it was not possible to identify an element to species level, broader categories were used, e.g. cow-sized mammal, sheep-sized mammal, cat-sized mammal, small mammal, and bird. With the exception of the atlas and axis, vertebrae and ribs were only identified to a size category. This was partly due to difficulties in identification of these elements to a particular species, and partly to negate any biases they would introduce into quantification data due to their higher frequency within the skeleton and a greater tendency to fragment. For similar reasons, carpals, tarsals and sesamoids (other than the astragalus and calcaneus) were only identified to size categories.

The skeletal elements of sheep and goats are notoriously difficult to distinguish (Boessneck 1969, 331; Noddle 1994, 118), with the notable exception of horncores. Where possible post-cranial remains were identified as sheep or goat, following the criteria of Boessneck (1969), with the remaining bones classed as 'ovicaprid'. Considering the uncertainty surrounding criteria used to distinguish between the dentition of sheep and goats (Zeder & Pilaar 2010), mandibles, maxillae and loose teeth were consistently identified as 'ovicaprid'.

Bone fragments that could not be reliably identified to element were classed as 'unidentified'.

Animals are referred to by their common names throughout the text, but are recorded by genus name (or an abbreviated version thereof) in the database.

Quantification

The very small size of the assemblage did not allow for detailed quantitative analysis. With this in mind, quantification of species present was based on a direct count of the Number of Identified Specimens (NISP), i.e. all fragments that could be identified to a specific element were counted as an individual specimen.

Ageing

Age-at-death was estimated from the fusion status of the epiphyseal ends of longbones in mammals, following Silver (1969). In addition, where no articular ends were present but an element was obviously juvenile from its size, development and porosity, it was considered to be juvenile. Dental eruption and wear patterns were recorded for mandibular teeth following Grant (1982) for cattle, sheep and pigs, and Bull & Payne (1982) for pig eruption. Mandibular wear patterns for the main domestic species were correlated with the mandibular wear scores of O'Connor (2003, 160).

Measurements

Measurements were taken where possible on all non-pathological, fully developed bones, following the guidelines of von den Driesch (1976). Measurements up to 15cm were taken with a vernier callipers (to 0.1mm precision) and an osteometric board was used for larger measurements (to 0.5mm precision).

Results

A total of 170 bone fragments were examined, with 114 of these recovered from sub-topsoil levels. Of these latter, 31 (27%) were identifiable to element and species, with a further 6 (5%) identifiable to element and size-category. The remaining 68% could not be identified to a specific element and were recorded as 'unidentified'. The NISP, as used in the analysis hereafter, refers to bone identified to bone element, excluding non-countable fragments, and totalled 37. Bone from Topsoil levels (totalling 56 fragments) was also examined, but not recorded in detail.

Condition of the Bone

Weathering and Erosion

Overall the bone was in fair condition. Post-depositional factors such as soil erosion and root damage were generally mild where present, causing minor surface damage to the bone. Some degree of weathering was evident on six bones, indicating these had been exposed to the elements for some time before its final deposition. However, only one bone (from F2) exhibited a degree of weathering above

stage 1 in Behrensmeyer's classification (Lyman 1994, 355), suggesting any exposure prior to burial was of relatively short duration.

Fragmentation

The assemblage was highly fragmented; this was particularly true of bone from topsoil and the underlying layer, F2, and is consistent with continuing disturbance of the soil and/or inclusion of bone in manure-spreads. Just 12 elements were recovered in a complete or near complete stage, of which seven were loose teeth. With the exception of three loose teeth, these were all recovered from cut features (F6, F7) in Trench 2 and may reflect a lower level of soil disturbance compared to the overlying layers.

Gnawing

Four bone fragments showed evidence of gnawing by dogs, including one from topsoil levels. These were all cattle or cow-sized elements, with a high meat yield. Three of the four were heavily gnawed, and the possibility that these were deliberately buried by dogs at the site must be considered.

Burning

Burning was evident on nine bones from sub-topsoil levels, seven of which were fully calcined and white or grey-white in colour. This suggests that some bone waste was disposed of by fire. An additional ten burnt fragments were recovered from the topsoil, all fully calcined. Calcined fragments were almost all highly fragmented and unidentifiable. The exception to this was a partial radius of a young pig, recovered from F2 in Trench 2. Charring, suggesting limited direct exposure to direct flame, was identified on one fragment from F2. While this can often be an indicator of roasting as a means of cooking, in this instance the charred area is localised to the broken edge of the bone and is more likely to have been accidental, or incidental to disposal.

Species Presence and Abundance

Species	**F2**	**F6**	**F7**	**Total**
Cattle	10	5		15
Sheep/Goat	7		4	11
Pig	1			1
Horse	2		1	3
Cow-sized	4	3		7
NISP	**24**	**8**	**5**	**37**

Unidentified	66		11	77
Total Fragments	90	8	16	114

Table 1. Relative abundance of species in sub-topsoil features

Four species of mammal were identified in the assemblage, namely the main domestic species of cattle, sheep/goat, pig and horse (Table 1). Of these cattle and sheep/goat were predominant, with only one pig bone identified from sub-topsoil levels. Horse was the only non-food animal identified, with three elements recorded from two features (F2 and F7). A single (unidentified) fragment of bird bone was recovered from the main assemblage, although a second bird bone, from a domestic species, was recorded in the topsoil assemblage.

The high level of fragmentation meant that the majority of identified elements were loose teeth (19 out of the NISP of 37). No pattern was visible among the post-cranial elements identified. In the case of cattle, both high-meat (e.g. femur, humerus) and low-meat (e.g. metacarpal, carpal) were present, while sheep/goat and pig were each represented by a single post-cranial element.

Ageing

Age-of-death for animals is calculated from examination of tooth eruption and wear of mandibles and loose lower M3 teeth, and the fusion-state of limb bones. In the case of the former, no mandibles were recovered, although a series of four mandibular teeth recovered from F7 were considered to have originated in a single mandible, based on inter-dental wear facets and morphology. These were identified as from an older adult sheep/goat. A single bovine third molar from F2, was also identified as that of an older adult.

Species	**Fusion Age**	**Element**	**F**	**UF**	**Total**
Cattle	7-8mo	Scapula (D)	1		1
	15-18mo	Humerus (D)	1		1
	24-36mo	Metacarpal (D)	1		1
Horse	20-24mo	Tibia (D)	2		2

Cow-sized	84-108mo	Thoracic vertebra	1	1

Table 2. Fusion of elements from Features 2, 6 & 7 (after Silver 1969)

Fusion data was equally scarce, and confined to cattle and horse remains (Table 2). No evidence was found for the presence of juvenile animals, although a partial pig radius (from F2) was considered to be from a juvenile or immature individual based on its size and development.

The fusion information present is insufficient for further inference or for specific age-profiles to be constructed. Thus, while a partial bovine humerus from F6 indicates an animal greater than one-year old when killed, the absence of the later-fusing proximal end means it is unknown if this was a sub-adult or full-grown adult animal. Likewise, both horse tibiae belong to animals of at least 20 months, but possibly much older. Of greater certainty is the cattle metacarpal from F6, from an adult animal of at least two-years of age.

Sexing

There was no information in the assemblage to allow for identification of sex within species.

Size

No bones were sufficiently complete for withers height calculations. Measurements were taken on bones where possible and recorded in the database.

Butchery

No butchery marks were recorded on bones recovered from sub-topsoil levels. However, eight fragments of bone from topsoil did have evidence of butchery. These all related to the disjointing of carcasses with the use of saws, consistent with a date from the eighteenth century or later (MacGregor 1985, 55).

Pathology

Pathological changes were evident in just one bone, a fragment of cattle humerus recovered from topsoil in Trench 2. An irregular area of grey woven bone indicated infectious pathogens were active at the time of death. Such infections may be caused by overlying infected abrasion, or may indicate an underlying systemic infection (Baker & Brothwell 1980). However, fragmentation of the bone, and the abrasion of part of the surface, meant the original extent and full nature of this infection could not be ascertained. Thus, it is uncertain if the infection was caused by localised trauma or underlying illness.

The sheep/goat molar teeth recovered from F7, all show abnormal, irregular root growth. This is of unknown significance, but may relate to nutritional problems.

Discussion and Conclusion

A small assemblage of animal bone was recovered from layers and cut features in two Trenches excavated at Naul in 2019. The sub-topsoil layer, F2, which was recorded in both Trenches, yielded the greatest amount of bone – more than 1.5 times that recovered from topsoil. In contrast, cut features at the site yielded very few bones and those from just two features in Trench 2. With the exception of bones recovered from F6, a high level of fragmentation was notable across the site, leading to a low rate of identifiable fragments. Indeed, the 32% NISP rate (27-31% excluding F6) is somewhat exaggerated by the presence of a number of loose teeth; for instance, of the five identified elements in F7, four were loose teeth that may have originated from a single mandible. This high level of fragmentation may be the result of repetitive disturbance across the site, or due to specific disposal patterns, such as the inclusion of food and farmyard waste in manure spreads, or a combination of both. Certainly, the near absence of larger fragments and near complete large bones outside of the lower, cut features, F6 and F7, suggests that disturbance was a factor in bone survival. This would be consistent with past agricultural activities on and around the site.

Taphonomic preservation within the assemblage was mixed, especially in F2 and the overlying topsoil. A small number of bones showed little or no mineralisation, suggesting they were of relatively recent origin or subject to an unusual localised environment. In contrast to this, some bones displayed evidence of exposure to the elements for a time prior to final deposition, while others had been initially disposed of in open fire. This range suggests ongoing disturbance at the site and/or more than one origin for the bone. In addition, a small proportion of bone was heavily gnawed and may have been deposited at the site through the action of dogs.

Animal species identified consisted of the main farm animals, with horse the only non-food species present. With the exception of loose teeth, meat-bearing bones were pre-dominant and the assemblage appears to relate to domestic food waste and other farm disposals. All butchered bone recovered exhibited modern butchery techniques, indicating a likely nineteenth or twentieth century date. However, these were only recovered from topsoil and cannot be taken as representative of the overall assemblage.

In conclusion, the small assemblage of animal bone recovered is consistent with the agricultural practices of manure-spreading and soil-working at the site in early modern and modern times, and incorporating both domestic and farm waste. It is not possible to ascertain whether any of the bones pre-date such activity, and later disturbance and mixing of materials preclude any conclusive interpretation of the assemblage.

Statement of Retention

A small faunal assemblage, totalling 170 bone fragments, was recovered during a Community Archaeology excavation at Naul, Co. Dublin in 2019 (Licence No. 19E0480). Analysis of this assemblage was carried out by the author, on behalf of Fingal County Council. The animal bone was primarily retrieved from topsoil, and an underlying mixed layer that extended across the site. A small number of bones was also retrieved from linear features, considered to be of eighteenth / nineteenth century date (C. Baker pers. comm.).

Bone examined was identified as that of the common domestic farm animals (cattle, sheep/goat, pig and horse), and largely represented food waste, with some farmyard disposals.

The assemblage was highly fragmented, with a resultant low identification rate. Taphonomic changes to the bones were not consistent within layers and features, and the preservation of some fragments suggested these were of relatively recent (twentieth century) origin. In light of the fragmentation levels and taphonomy, the assemblage was interpreted as the product of modern agricultural and horticultural practices at the site. As such, the assemblage is considered to be primarily of early-modern and modern origin, and to have been subject to ongoing disturbance over time. Therefore, it is not recommended that the bone covered in this report be retained.

Siobhán G. Duffy, BSc MA
Zooarchaeologist
October 2019.

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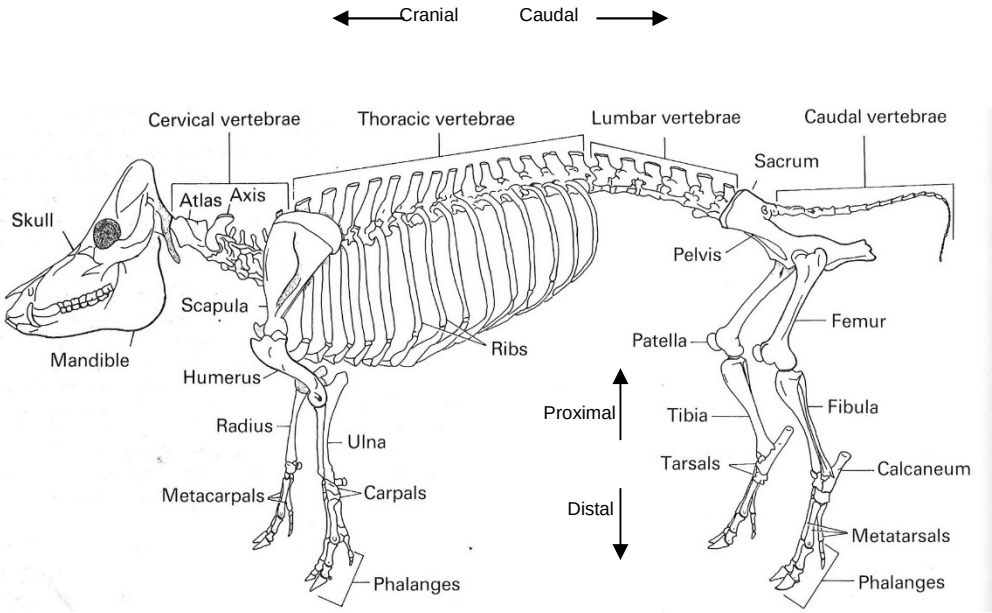
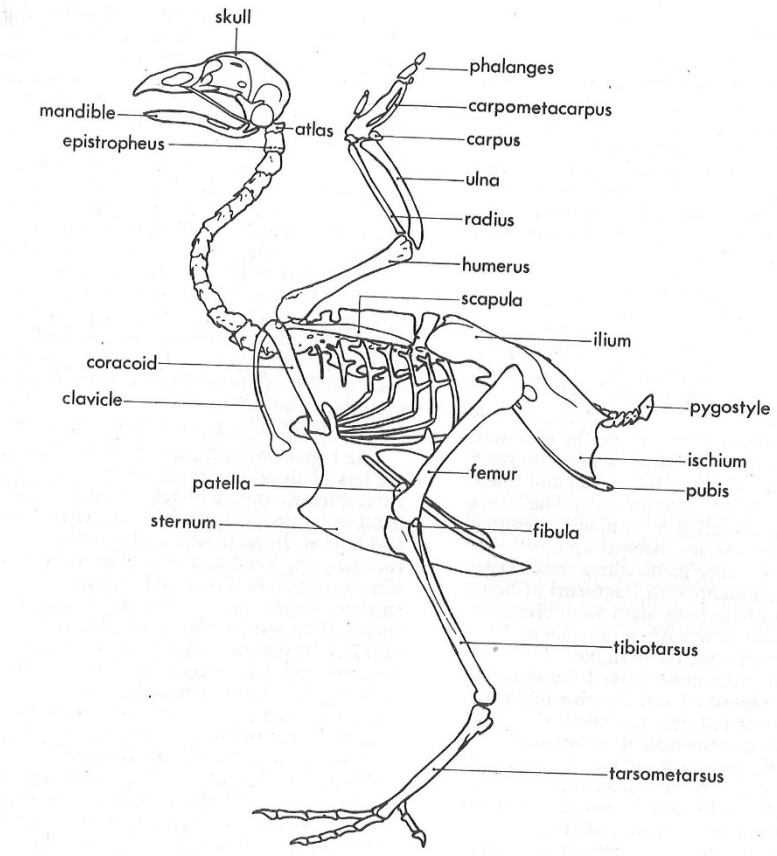
Appendix A - Skeletal Diagrams showing the principal bones for mammals and birds



Skeleton of Pig (Davis 1987[1]).



Skeleton of Chicken (O'Connor 1982[2]).

Species referred to in the text

Order	Family	Latin Name	Common Name
Artiodactyla	Bovidae	*Bos taurus*	Domestic Cattle
		Ovis aries	Domestic Sheep
		Capra hircus	Domestic Goat
	Suidae	*Sus scrofa*	Domestic Pig
Perissodactyla	Equidae	*Equus caballus*	Domestic Horse

[1] Davis, S.J.M. 1987 *The Archaeology of Animals* London; Routledge

[2] O'Connor, T. 1982 *Animal Bones from Flaxengate, Lincoln c870-1500* The Archaeology of Lincoln, 18 (1) London; Council for British Archaeology.

Appendix B – Skeletal Representation

All Features below F1

Element	Cattle	Horse	Sheep/Goat	Pig	Cow-sized	Unidentified	Total
Skull	1		1				2
Mandible			1				1
Scapula	1				1		2
Humerus	1						1
Femur	1		1				2
Radius				1			1
Tibia		2					2
Carpal					2		2
Metacarpal	1	1					2
Thoracic vertebra					1		1
Rib					2		2
Incisor	1						1
Premolar	3		1				4
Molar	6		7				13
Tooth					1		1
Unidentified						77	76
Total	15	3	11	1	7	77	114

Feature 2

Element	Cattle	Horse	Sheep/Goat	Pig	Cow-sized	Unidentified	Total
Skull			1				1
Mandible			1				1
Scapula	1				1		2
Femur	1		1				2
Radius				1			1
Tibia		1					1
Metacarpal		1					1
Rib					2		2
Incisor	1						1
Premolar	3						3
Molar	4		4				8

Tooth					1		1
Unidentified						66	65
Total	10	2	7	1	4	66	90

Feature 6

Element	**Cattle**	**Cow-sized**	**Total**
Skull	1		1
Humerus	1		1
Carpal		2	2
Metacarpal	1		1
Thoracic		1	1
Molar	2		2
Total	5	3	8

Feature 7

Element	**Horse**	**Sheep/Goat**	**Unidentified**	**Total**
Tibia	1			1
Molar		3		3
Premolar		1		1
Unidentified			11	11
Total	1	4	11	16

Appendix C – Toothwear

(*Mandibular teeth only*)

Cattle

Feature	Trench	Species	Element	dp4/m3	P4	M1	M2	M3	O'Connor stage
2	T1	BOS	MO			k			
2	T1	BOS	MO	m					
2	T2	BOS	MO					g	A3
6	T2	BOS	MO	k					

Sheep

Feature	Trench	Species	Element	dp4/m3	P4	M1	M2	M3	O'Connor stage
2	T1	O/C	MO			g			
7	T2	O/C	PM		g				
7	T2	O/C	MO			g			
7	T2	O/C	MO				g		
7	T2	O/C	MO					g	A3

Appendix D – Metrics

(All measurements in mm)

Cattle

Metacarpal

Feature	Species	Element	Bp	Dp	SD	Bd	Dd	GL
6	BOS	MC	50.9	31.1	28.3			

Horse

Tibia

Feature	Species	Element	Bp	SD	Bd	Dd	GL
7	EQUUS	TIBIA		41.4	68.8	46.8	

Area	Feature	Species	Element	Side	Quantity	% Element	Fusion P	Fusion D	Taphonomy	Weathering stage	Gnawing	Burning Colour	Burning Location	Breaks	Pathology	Measured	Comments
T1	2	BOS	MO	L	1	3			G	0				OB			Very worn. Loose upper molar. Taphonomy suggests modern
T1	2	BOS	MO	R	1	3			C	0				OB FB			Loose lower molar. Some calculus remaining
T1	2	BOS	MO	R	1	3			C F D	0				OB			Loose lower deciduous m4.
T1	2	BOS	PM	U	1	1				0				FB			Upper crown of lower PM.
T1	2	O/C	MO	R	1	3				0				OB			Loose lower molar.
T1	2	O/C	MAND	R	1	1				0				OB			
T1	2	O/C	SKU	R	1	1			G	0				OB			Fragment frontal/parietal. Retains ivory colour, greasy appearance.
T1	2	EQUUS	TIB	R	1	1		F	C D	0				OB FB			
T1	2	COW-SZ	RIB	U	1	1			D	0				OB FB			
T1	2	UNID	UNID	U	1	1			G	0				OB FB			Retains greasy appearance
T1	2	COW-SZ	TOOTH	U	1	1			D	0				OB			
T1	2	UNID	UNID	U	4	1			D B	0		GY W	ALL	OB			Small fragments, fully calcined
T1	2	UNID	UNID	U	1	1			D B	0		BN W	ALL	OB FB			Small fragment. Partly calcined - pinkish-brown colour
T1	2	UNID	UNID	U	38	1			SE D	0				OB			
T2	2	BOS	IS	R	1	4			C F	1				OB			Loose incisor.

Area	Feature	Species	Element	Side	Quantity	% Element	Fusion P	Fusion D	Taphonomy	Weathering stage	Gnawing	Burning Colour	Burning Location	Breaks	Pathology	Measured	Comments
T2	2	BOS	PM	L	1	2				0				OB			Loose upper premolar. Some calculus.
T2	2	BOS	MO	R	1	4			C	0				OB FB			Loose lower M3. Some calculus.
T2	2	O/C	MO	R	1	4			D	0				OB			Loose upper molar. Light calculus.
T2	2	O/C	MO	U	1	2			D	0				OB FB			Grey discolouration on
T2	2	BOS	PM	U	1	1				0				OB FB			Part crown lower premolar.
T2	2	O/C	MO	U	1	1				0				OB			Part crown lower molar - unworn.
T2	2	BOS	SCAP	L	1	2		F	F SE D	0				OB FB			In 4 fragments.
T2	2	O/C	FEM	U	1	1			D	0				OB			
T2	2	BOS	FEM	R	1	2			C D B	0	C	BN	BREAK	OB FB			Small area light scorching on broken edge towards proximal. Heavily gnawed at distal - possible loss of articular end as result.
T2	2	SUS	RAD	R	1	2			C D B	0		GY W	ALL	OB			Size and development suggests young animal. Fully calcined with slight warping/cracking.
T2	2	EQUUS	MC	L	1	1			C D	1				OB FB			
T2	2	COW-SZ	SCAP	R	1	1			D	0	C			OB FB			Gnawed at edge by dog.
T2	2	COW-SZ	RIB	U	1	1			C F	1				OB FB			In 2 fragments.
T2	2	UNID	UNID	U	1	1			C F D	2				OB FB			

Area	Feature	Species	Element	Side	Quantity	% Element	Fusion P	Fusion D	Taphonomy	Weathering stage	Gnawing	Burning Colour	Burning Location	Breaks	Pathology	Measured	Comments
T2	2	UNID	UNID	U	1	1			G	0				OB			Small fragment longbone of bird
T2	2	UNID	UNID	U	20	1				0				OB FB			
T2	6	BOS	MO	U	1	3			D	0				OB FB			Light build up calculus on upper crown
T2	6	BOS	MO	L	1	3			D	0				OB FB			Loose lower dm4.
T2	6	BOS	SKU	R	1	1			D	0				OB FB			
T2	6	BOS	HUM	L	1	1		F	D	0	C			OB			Heavily gnawed by dog at distal end, with some loss of bone.
T2	6	COW-SZ	CARP	R	1	4			SE D	0				C			
T2	6	COW-SZ	CARP	U	1	4			SE D	0				OB			
T2	6	BOS	MC	L	1	4	F	F	C SE D	0-1				OB		Y	
T2	6	COW-SZ	TH	A	1	4	UF	UF	SE D	0				OB FB			In 2 fragments
T2	7	O/C	PM	L	1	4				0				FB			Mild calculus build-up. Loose lower P4. Taphonomy and wear patterns indicate N040-N043 are from single mandible.
T2	7	O/C	MO	L	1	4				0				C	D		Mild calculus build-up. Loose lower M1. Roots notably wrinkled with spicules of bone towards apex, with no narrowing of root to apex.

Area	Feature	Species	Element	Side	Quantity	% Element	Fusion P	Fusion D	Taphonomy	Weathering stage	Gnawing	Burning Colour	Burning Location	Breaks	Pathology	Measured	Comments
T2	7	O/C	MO	L	1	4				0				C	D		Mild calculus build-up. Loose lower M2. Shortened roots notably wrinkled with spicules of bone towards apex, with no narrowing of root to apex.
T2	7	O/C	MO	L	1	4				0				OB FB	D		Mild calculus build-up. Loose lower M3. Shortened roots notably wrinkled with spicules of bone towards apex, with no narrowing of root to apex.
T2	7	EQUUS	TIB	L	1	4		F	C F SE D	1				OB FB		Y	
T2	7	UNID	UNID	U	1	1			D B	0		GY W	ALL	OB FB			Small fragment. Fully calcined, with pink-brown discolouration on surfaces.
T2	7	UNID	UNID	U	10	1				0				OB FB			

Appendix F – F1 Record

Area	Context	Species	Element	Quantity	Comments
T1	1	BOS	PM	1	Loose upper premolar
T1	1	BOS	MO	1	Loose upper molar
T1	1	O/C	MO	1	Loose lower molar
T1	1	SUS	IS	1	Partial loose lower incisor
T1	1	SUS	MO	1	Partial loose molar
T1	1	EQUUS	MO	1	Fragment loose molar
T1	1	COW-SZ	TOOTH	1	Fragment loose tooth
T1	1	UNID	UNID	1	Butchered cut from cow-sized limb-bone - Sawn.
T1	1	UNID	UNID	4	Butchered fragments from cow-sized bones - all sawn
T1	1	UNID	UNID	6	Fully calcined fragments.
T1	1	UNID	UNID	12	
T2	1	BOS	MO	1	Loose upper molar
T2	1	BOS	MO	1	Partial loose lower molar
T2	1	O/C	MO	1	Partial loose upper molar
T2	1	O/C	MO	1	Loose lower molar
T2	1	BOS	HUM	1	Shaft fragment; sawn. Areas grey woven bone on surface - extent unknown due to abrasion in parts.
T2	1	COW-SZ	PEL	1	Sawn both ends & 1 side. Very heavily gnawed by dog.
T2	1	COW-SZ	TH	1	Sawn at top of neural arch.
T2	1	GSE-SZ	CARP	1	Radial carpal of bird - goose / fowl?
T2	1	UNID	UNID	5	Fully calcined fragments.
T2	1	UNID	UNID	1	Small fragment; retains some greasy appearance
T2	1	UNID	UNID	12	
			Total	**56**	

Appendix G – Database Codes

Species	Element	Quantity	% Element	Proximal Fusion	Distal Fusion	Taphonomy	Gnawing	Burning	Butchery	Breaks	Pathology
BOS - Cattle	SKU - Skull	Straight count of fragments	1=<25%	UF	UF	C - Cracks	C - Carnivore	BN - Brown	SAW - sawn	OB - old break	I - Infection
OVIS - Sheep	MAND - Mandible		2=25-50%	F	F	F - Flaking		GY - Grey		FB - fresh break	D - Dental
CAPRA - Goat	SCAP - Scapula		3=50-75%	Fusing	Fusing	SE - Soil Erosion/ Abraded		W - White		COMP - complete	
O/C - Sheep/Goat	PEL - Pelvis		4=75-100%			D - Discolouration					
SUS - Pig	HUM - Humerus					B - Burnt					
EQUUS - Horse	FEM - Femur					G - Greasy					
Cow-sz - Cow-sized	RAD - Radius										
Gse-sz - Goose-sized	TIB - Tibia										
UNID - Unidentified	CARP - Carpal										
	MC - Metacarpal										
	TH - Thoracic Vertebra										
	RIB - Rib										
	IS - Incisor Tooth										

	PM - Pre-molar Tooth										
	MO - Molar Tooth										

Appendix 6

Metal Detecting Survey Report

Rear of Graveyard
Naul
Co. Dublin

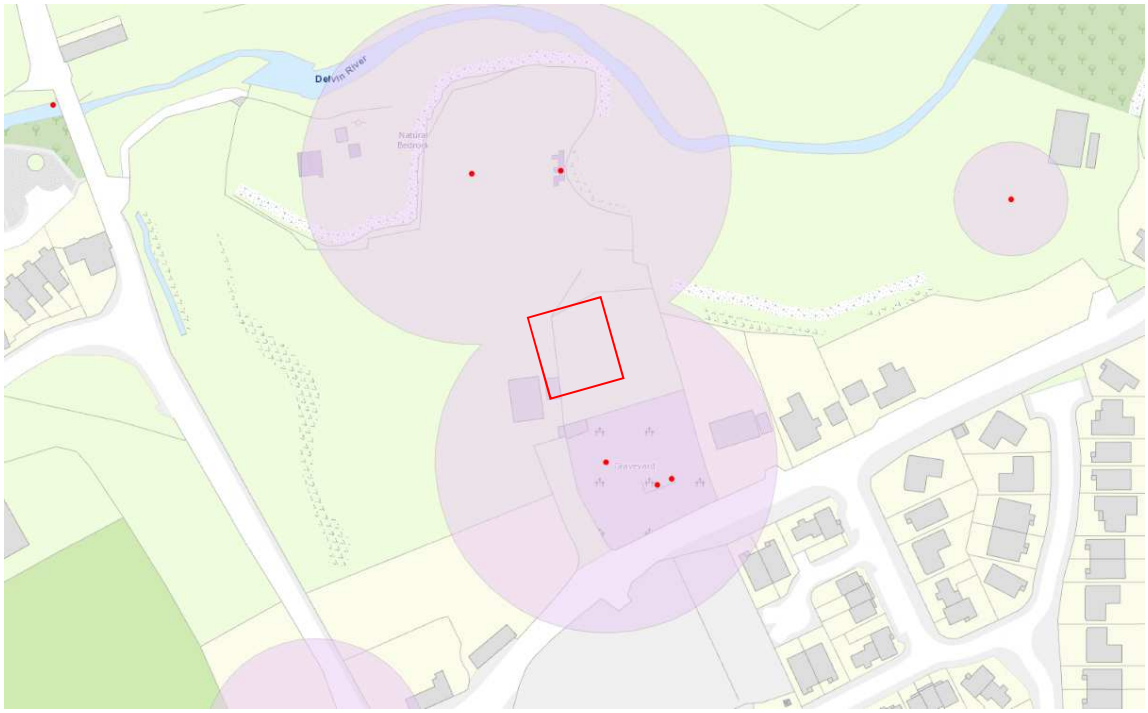
Excavation Licence No.: 19R0175

1 Introduction

This survey was undertaken on Friday 16th August, in advance of excavation of two trenches as part of the Naul Community Dig 2019. (Licence Ref. 19E0480).

2 Location

The field which forms the site of the proposed detection survey and excavation (ITM 713265/764570) is located directly north of Naul graveyard (DU0042-004005-).



Zones of notification www.archaeology.ie

3 Archaeological Background

Approximately 40m north of the site are the remains of the Black Castle (DU004-045002) and to the south within the walled Naul graveyard are the remains of Naul Church (DU004-04504) and cross (DU004-010002). Cartographic evidence shows the site remained as a field except for the mid-19th century when it may have been laid out as a garden. In recent times the site has been partially scraped and demolition material from elsewhere spread within the site boundary.

4 Objective

The objective of the detection survey was to map any metal material that may be present across the site.

5 Methodology

Prior to excavation, a series of 2m transects were walked across the wider site by the excavation director, using a WASP II detection device. All valid responses marked with tags. This was undertaken in two phases (10m EW x 40m NS) with an average of seventeen hits per phase recorded.

6 Results

There was a generally random pattern of distribution with a concentration of hits in the north-east quadrant and the centre of the site. The exact layout of Trench 1 and 2 took cognisance of these concentrations and endeavoured to encompass them. Where excavated, the metal detection hits were of modern material including bar, beer cans and iron building materials such as rebar, reflecting the disturbed nature of the site.