Final Excavation Report, Landsdown Old Wesley Grounds, Kilgobbin, Co. Dublin

archaeology plan
HERITAGE SOLUTIONS

SITE NAME

Landsdown Old Wesley Grounds, Kilgobbin, Co. Dublin

CLIENT

Castlethorn Construction Ltd., Usher House, Dundrum, Dublin 16.

RMP

DU025-016--, DU025-017--/DU025-121--

PLANNING

Dun Laoghaire-Rathdown County Council Planning Ref. D12A/0206

LICENCE

14E339

PROJECT REF

AP1412

REPORT AUTHOR

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DATE

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ABBREVIATIONS USED

DoCHG	Dept. of Culture, Heritage and the Gaeltacht
NMI	National Museum of Ireland
NMS	National Monuments Service
OS	Ordnance Survey
RMP	Record of Monuments and Places
NIAH	National Inventory of Architectural Heritage
LAP	Local Area Plan

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Section 1   Introduction

Report summary

The archaeology uncovered during the excavations in 2014 and 2015 at Kilgobbin greatly adds to the wealth of information we have from the area. The range and variety of human activity represented is extensive, from the first Neolithic farmers to the post-medieval occupants. Initial activity at the site occurred around a low-lying hollow and pond in the north that was frequented as a water source.

An increase in activity in the southern portion of the site is apparent in the Early Bronze Age when a well and watering hole were dug into the base of the hollow, formalising the water source. A number of pits and postholes around these features relate to ritual activity and offerings and contained small quantities of cremated human bone as well as single sherds of pottery dating to earlier periods. A small Early Bronze Age barrow and cremation pit were located next to an unusual C-shaped structure surrounding a spit and hearth. This structure was unroofed and may have been a windbreak or visual screen surrounding the hearth. This structure may have provided a setting for burial rites or subsequent commemorations relating to the barrow and cremation pit. The structure was burnt down prior to its abandonment.

A Late Bronze Age or Early Iron Age kiln was used for cereal processing on the site. This discovery is unusual for the period as few corn-drying kilns have been dated to the Early Iron Age in Ireland. Later in the Iron Age a possible pyre pit with a quartz deposit mirroring the latest phase of the barrow, suggests the Iron Age re-use of the Bronze Age funerary monument. This pattern is repeated across the region.

Early medieval and medieval kilns relate to the ecclesiastic settlement at Kilgobbin Church to the south of the site. To the north, water management features and a small pond demonstrate
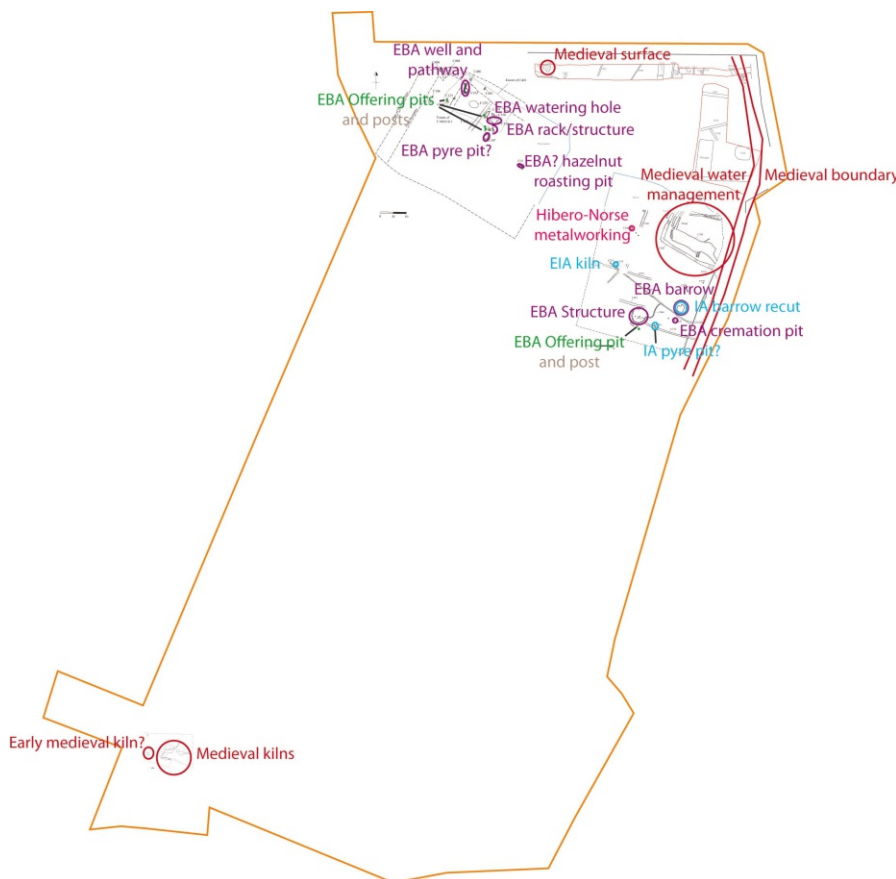
Summary of the archaeological features identified during the excavation

Location of the excavated areas (left)

Satellite image from Google Earth of the completed development from 2017 (right)

medieval settlement in the late 13th or 14th century, prior to the construction of Kilgobbin Castle.

A granite cannonball found in topsoil to the northeast of the site may relate to a small skirmish that took place in the vicinity of Kilgobbin Castle in the 17th century.

Development background

The excavated areas were identified during a programme of archaeological monitoring conducted just prior to the excavation, which was required by the Grant of Planning Permission (D12/0206) Condition No. 25 and was carried out on behalf of Castlethorn Construction. The areas recommended for archaeological monitoring were informed by two programmes of geophysical survey (Nicholls 2002 and Thébaudeau 2008) and a programme of archaeological test-trenching carried out in 2013 (Giacometti 2013). The ensuing archaeological monitoring identified three areas that required archaeological excavation, Area 1 to the southwest, Area 2 to the northwest and Area 3 to the northeast.

The excavation was carried out from the 16th October to the 28th December 2014. The preliminary report was submitted to the National Monuments Service in March 2015 (McGlade 2015), which includes the stratigraphic report of the excavation. The context register for the excavation is included as Appendix L of this report. For any additional information refer to the preliminary report.

This report will discuss the findings of the excavation and post-excavation process, integrating the results of the various specialist analyses carried out since the completion of the excavation.

An additional phase of monitoring was carried out in March 2015, the results of which are included as Appendix M of the report.
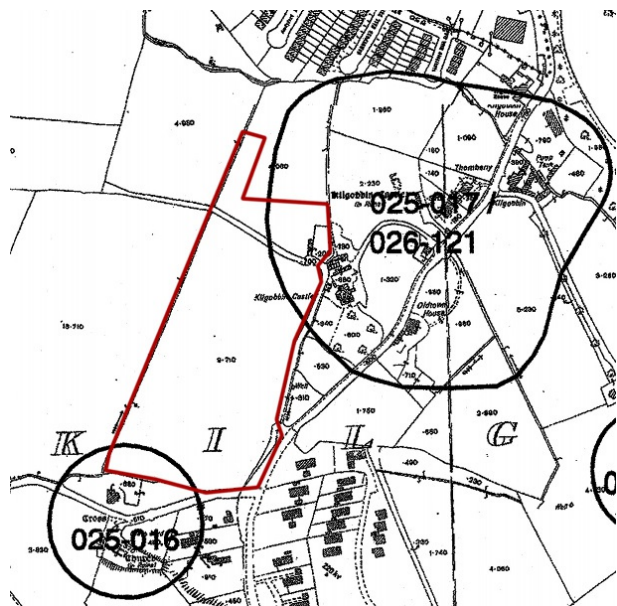
Site description and landscape

The site is on the former Lansdowne/Old Wesley Rugby pitches, Kilgobbin, Co. Dublin (NGR 31915/22460) and covers an area of 4.2 hectares. It comprises a sub-rectangular area formed by the current clubhouse grounds and associated carpark and three contiguous rugby

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pitches (long axes oriented NNE-SSW), which are tiered down the slope from south to north. It also encompasses a further area to the north of the pitches within a field divided from the rugby grounds by a large ditched hedgerow and field access lane. The proposed site area also includes two short lengths of access road at its northwestern and southwestern corners, which will facilitate access from the newly erected Belarmine housing estate immediately to the west and from the new east-west road to the north.

The site is located in the foothills of the Dublin Mountains, which rise gently southwards and which are visible from the site. New residential estates, interspersed by fields of rough sloping pastureland, characterise the wider landscape, and are bounded to the south by the less populated slopes of Three Rock Mountain and of Newtown to the south. The site area is thus situated at the edge of the expanding Dublin suburban area, which is rapidly encroaching upon formerly undeveloped rural lands.

The site is bounded to the north by a new primary school, and to the west by the Belarmine development. The southern boundary of the site is a mature hedgerow and modern wall that separates the rugby grounds from two private houses fronting onto Kilgobbin Lane. The eastern site boundary follows the course of the access lane leading from the Kilgobbin Road to the rear of the Protected Structure known as 'Kilgobbin Castle'.

Location of the site shown on the Ordnance Survey streetview map (top)

Location of the site shown on the printed RMP Constraint map of Dublin, Sheet 025 (bottom)

Radiocarbon dates

For the purposes of this report the features excavated will be discussed chronologically. Radiocarbon dates for the site were acquired from Poznan Radiocarbon Laboratory (Goslar 2015). Other comparative radiocarbon dates used in the report were identified using the catalogue of radiocarbon determinations and dendrochronology dates (Chapple 2018) or from individually referenced texts. All radiocarbon determinations are calculated to 2-sigma with an accuracy of 95.4% unless otherwise stated.

Section 2   Final findings of excavation

Early activity around the hollow

Early Neolithic pond

The earliest phase of human activity detected on the site dated to the Early Neolithic period (c. 4000-3600BC). It was centred around a low-lying hollow at the foot of the Dublin Mountains. A small pond formed in this hollow and was frequented by people living in the immediate vicinity. An Early Neolithic house was excavated to the northwest of the site in 2003, c. 230m to the northwest, and may have been the primary settlement focus in the area. The hollow and pond may have been used as a water source for the nearby settlement. The presence of a flint side scraper, microlith and portion of arrowhead suggests some form of processing may have been carried out here also, perhaps the butchering of animals or the processing of hides.

Sherds of Early Neolithic pottery and flint artefacts dating to the same period were retrieved from a number of features across the site, predominantly in the vicinity of the hollow. A thin deposit (C173) at the base of the hollow appears to date to the Early Neolithic period. Four sherds of Early Neolithic Carinated bowl were identified within this deposit (Grogan & Roche 2018, 6). Another sherd was in the disturbed layer (C108) above this, while a further two sherds were recovered from features dating to the Early Bronze Age (pit C160 and watering hole C136) in the immediate vicinity of the hollow.

The same pottery was retrieved from the fill of a token cremation deposit (C111) and an associated posthole (C113), also in the same area. While these features were not radiocarbon-dated, another nearby cremation pit, also with a post marker, returned a date in the Early-Middle Bronze Age. A cluster of four similar shallow token cremation pits with post markers in the
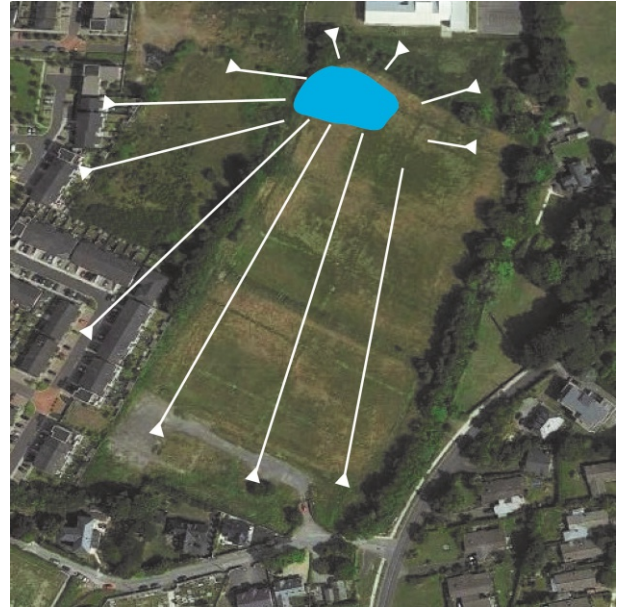
Location of hollow in relation to the site (top)

Early Neolithic Carinated Bowl sherd 14E339:173:1 (centre), with illustration by J. Ryan (bottom)

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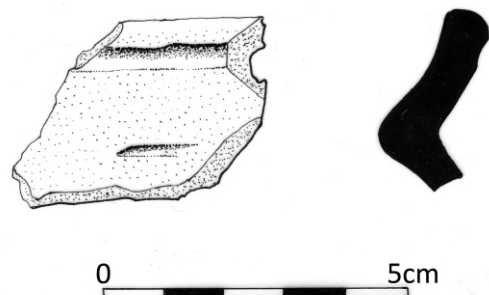
Location of known archaeology in the vicinity of the site from previous excavations (white), the RMP files (orange) and Topographical files (blue) (top)

Locations of excavations that have taken place in the vicinity of the site. The various sites excavated under Licence No. 03E306 for the Belarmine development to the west are located individually and highlighted in yellow (centre)

Roche 2018, 6). This is interpreted as a deposition of earlier pottery fragments in pits during the Bronze Age, a phenomenon noted elsewhere on the site.

A number of Early Neolithic flint tools, including a side scraper, a microlith bladelet and a fragment of leaf-shaped arrowhead (Sharpe 2015, 11) were found within the basal fill of the Bronze Age watering hole (C136), which was cut into the bottom of the hollow. The arrowhead and scraper were both patinated, indicating they had been exposed on the surface for a considerable time before being deposited in the watering hole (ibid., 3). These may have been dropped in the vicinity of the hollow before being washed into the watering hole. Two further Early Neolithic type flint cores from topsoil indicate a presence on the site during this period.

vicinity of the hollow in Area 2 and are likely to be broadly contemporary. It is possible that, as with the Early Bronze Age pit (C160) mentioned previously, sherds of earlier pottery were deposited in these later Bronze Age features.

One sherd of Early Neolithic Carinated Bowl was retrieved from a pit (C290) in Area 3 to the east and was the only Neolithic pottery recovered from this part of the site (Grogan &

Similar Early Neolithic pottery assemblages have been retrieved from a number of sites in

Fragment of leaf-shaped arrow-head 14E339:176:17 (left), with illustration by S. Sharpe (right)
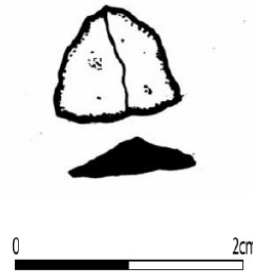
foothills of the Dublin Mountains. This includes two other sites in Kilgobbin townland further to the northwest, as well as the small domestic site at Newtown Little; in the vicinit of the portal tomb, known as the Brehon's Chair, at Taylorsgrange, and a from a pit at Blackglen, Ballaly to the west (Grogan & Roche 2018, 2). Small assemblages were also retrieved from sites to the east and northeast from Jamestown, Carrickmines Great, Glebe and Laughanstown (ibid.). A cluster of passage and portal tombs in South Dublin are also indicative of a significant population during the Neolithic period. This arc of settlement activity along the foothills of the Dublin Mountains extends to the coast and along the southern fringe of Dublin Bay to Dalkey Island (Liversage 1968).

While none of the environmental samples analysed from this site dated to the Early Neolithic period, data from contemporary sites in the surrounding area provide pertinent information. In the nearby Early Neolithic house excavated in 2003 oak was selected for the structural elements of the building (OCarroll 2018, 14). The woodland cover at this time in the Kilgobbin area was dominated by oak, with some yew also present, and with fringing vegetation of hazel, blackthorn and alder (O'Donnell 2005, 16). Pollen analyses across the country indicate that oak was a significant component of the Irish landscape until and during the Neolithic period (Pilcher & Hall 2001, cited in O'Donnell 2005, 16). As the Neolithic period progressed, these primary woodlands were cleared for agricultural purposes and to make way for settlements. The opening of the forest canopy allowed more light-dependant trees to flourish, such as ash. This occurrence has been recognised elsewhere

in the country also, for example at Corlea, Co. Longford, where a sudden expansion of ash was seen at 3000BC (Caseldine & Hatton 1996, cited in O'Donnell 2005, 16; OCarroll 2018, 12). In the Kilgobbin area this occurs during the Chalcolithic period (c. 2500-2000BC) and into the Early Bronze Age (c. 2000-1600BC). It is these clearings, created by their Neolithic predecessors, that Bronze Age and later Iron Age peoples occupied (OCarroll 2018, 12).

Late Neolithic absence

Late Neolithic period activity was not identified on the site. Indeed Late Neolithic activity has not largely been identified or recognised in the immediate vicinity of the site, with only a pit from the Belarmine excavations to the west returning a Late Neolithic radiocarbon date. While the megalithic tombs and artefacts recorded in the topographical files of the National Museum attest to a Late Neolithic presence in the area, archaeological evidence for this had proved hard to find. This phenomenon has been noted elsewhere, for example in the vicinity of Donabate and Portrane in North Dublin and along the route of the N8 Cashel to Mitchelstown road scheme (McQuade et al 2009), and implies the settlement evidence from this period does not survive as well rather than a population decrease.

Beaker material

The Chalcolithic period, or Copper Age (c. 2500-2000BC) saw the first use of metal in Ireland. This period saw a concentration of settlement along the fringes of the Dublin uplands, similar to that seen in the Early Neolithic period, with frequent evidence for activity on the same sites (Grogan & Roche 2018, 3). This period is associated with the

arrival of the Beaker Tradition in Ireland. On the Continent and in Britain this is associated with the use of Beaker pottery (mainly from burials), single inhumation burial and objects such as copper knives, barbed and tanged arrowheads, stone wrist-guards and buttons with V-shaped perforations (Waddell 1998, 114). By contrast, in Ireland Beaker pottery is frequently associated with settlement and domestic sites (Carlin 2011, 2). Beaker pottery has been retrieved from a number of sites in the foothills of the Dublin Mountains during recent excavations, with assemblages known from sites in Taylorsgrange, Cherrywood, Laughanstown, Carrickmines, Jamestown, Kilgobbin, Newtown Little, Blackglen, Carmanshall and Ballycullen (Grogan & Roche 2018, 3). This has added significantly to the sites previously known to have Beaker pottery in the region, which had been limited to Dalkey Island and Ballyedmonduff (Carlin 2011, 232). The construction of a new form of megalithic tomb, the wedge tomb, was also spreading across the country at this time, with five known from the South Dublin uplands at Ballyedmonduff, Kilmashogue, Killkee, Laughanstown and Shankill (Ó Maoldúin 2014, 202-3).
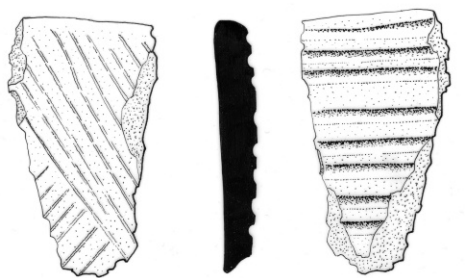
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14E339:228:1

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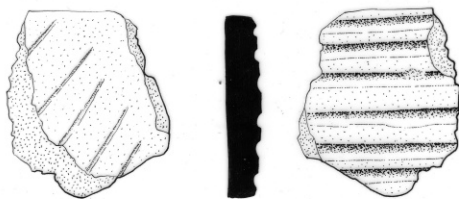
Fine Beaker pottery sherd 14E339:309:1, illustration by J. Ryan (top left, top right and upper centre right)

Fine Beaker pottery sherd 14E339:228:1, illustration by J. Ryan (bottom left, lower centre right and bottom right)

Neil Carlin has recently identified 213 sites with Beaker pottery, also noting a significant growth in numbers in recent years attributable to the large development and road schemes carried out in the 2000s (Mallory 2013, 114). The majority of Beaker finds in Ireland have been in pits with apparent token deposition of single or multiple sherds suggestive of some form of offering rather than accidental breakage (ibid.). The next most common context was in spreads of Beaker material not associated with any features. During excavations at the Belarmine development to the northwest of the site in 2003, a pit containing a massive assemblage of Beaker pottery was uncovered, with a minimum of 38 vessels represented within the pit, and represents the largest Beaker assemblage to come from a single feature in Ireland (Carlin 2011, 87). A radiocarbon date for this feature dated it to 2477-2214BC (UB-6198), firmly in the Chalcolithic period. A large spread of material containing Beaker pottery was also identified during the Belarmine excavations, however no structures or dwellings were identified. Interestingly, Beaker pottery was identified in features relating to the later Early Bronze Age settlement at Belarmine. This is intriguing when considering the current site also as, while no structures or features were found to date to the Chalcolithic period, sherds of Beaker pottery were retrieved from a number of Early Bronze Age features across Areas 2 and 3.

None of the features identified during the 2014-2015 excavations were radiocarbon dated to the Chalcolithic period, however Beaker pottery was uncovered in a number of features. Beaker pottery was identified in a layer (C129) within the hollow in Area 2, and in the Bronze Age watering hole dug into the base of the hollow and in the mixed layer filling the remainder of the hollow. The presence of Beaker pottery in

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14E339:305:5

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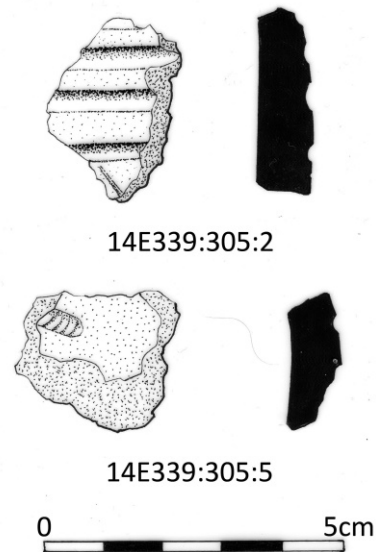
Domestic Beaker pottery sherd 14E339:305:2, illustration by J. Ryan (top and upper centre)

Domestic Beaker pottery sherd 14E339:305:5, illustration by J. Ryan (centre and lower centre)

Late domestic Beaker pottery sherd 14E339:108:3 with incised and whipped cord decoration (bottom)

the latter two is likely to be incidental, possibly disturbed from a Beaker occupational layer relating to the use of the hollow during that period. All the features containing Beaker pottery in Area 3 to the east were dated to the Early Bronze Age. Beaker pottery was retrieved from the barrow, cremation pit, the structure and the drain associated with the structure. A single sherd was present in each of the features other than the barrow, which contained five sherds, and the drain associated with the structure, which also contained five sherds. Both domestic and fine Beaker ware were present, including some interesting late examples. Sherds of fine vessels that may have had all-over decoration are represented, with similar examples known from the wedge tomb at Ballyedmonduff and from Dalkey Island and belong to the end of the Chalcolithic period and should date to c. 2300-2200BC (Grogan & Roche 2018, 2-3). The sherds were not representative of complete or near complete vessels. It is possible these sherds were taken from elsewhere and intentionally deposited here as part of the burial ritual in the Early Bronze Age.

Features radiocarbon dated to the Chalcolithic period from the surrounding area include a burnt mound at Cherrywood to the east, a cremation pit and structure at Kilgobbin to the southeast of the site, the pit with Beaker pottery at Kilgobbin to the west of the site, and further to west from a fulacht fiadh at Oldcourt and a ring barrow at Kilmahuddrick. The ring barrow at Kilmahuddrick returned one Chalcolithic date, with the remainder of the barrow returning dates from the later Bronze Age and Iron Age. The Chalcolithic date may be residual, charcoal from a feature truncated by the barrow, or indicate an early phase of the monument, which also contained a single sherd of Beaker pottery.

Early Bronze Age water and death

The Early Bronze Age (c.2000-1600BC) saw an increase of activity at the site at Kilgobbin. In Area 3 a small barrow (C311) with an associated cremation pit (C226) date to this period. Immediately to the west of these an unusual C-
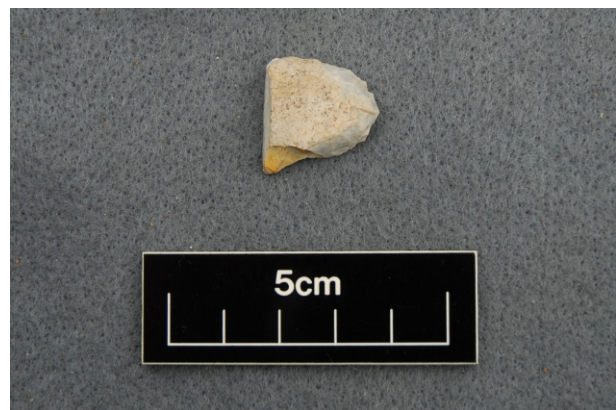
Convex-end scrapers 14E339:137:2 (top), 14E339:132:1 (centre) and 14E339:157:1 (bottom). These are examples of Chalcolithic or Early Bronze Age scrapers and were all found in the vicinity of the hollow in Area 2

shaped structure (C279) had a near-identical date-range, with all three features dating between 1943-1701BC. Sherds of Beaker pottery were retrieved from all three features. Further to the west in Area 2, a well (C163) with an informal pathway (C404) leading to it from the northwest was cut into the base of the hollow and dated to the same period. To the
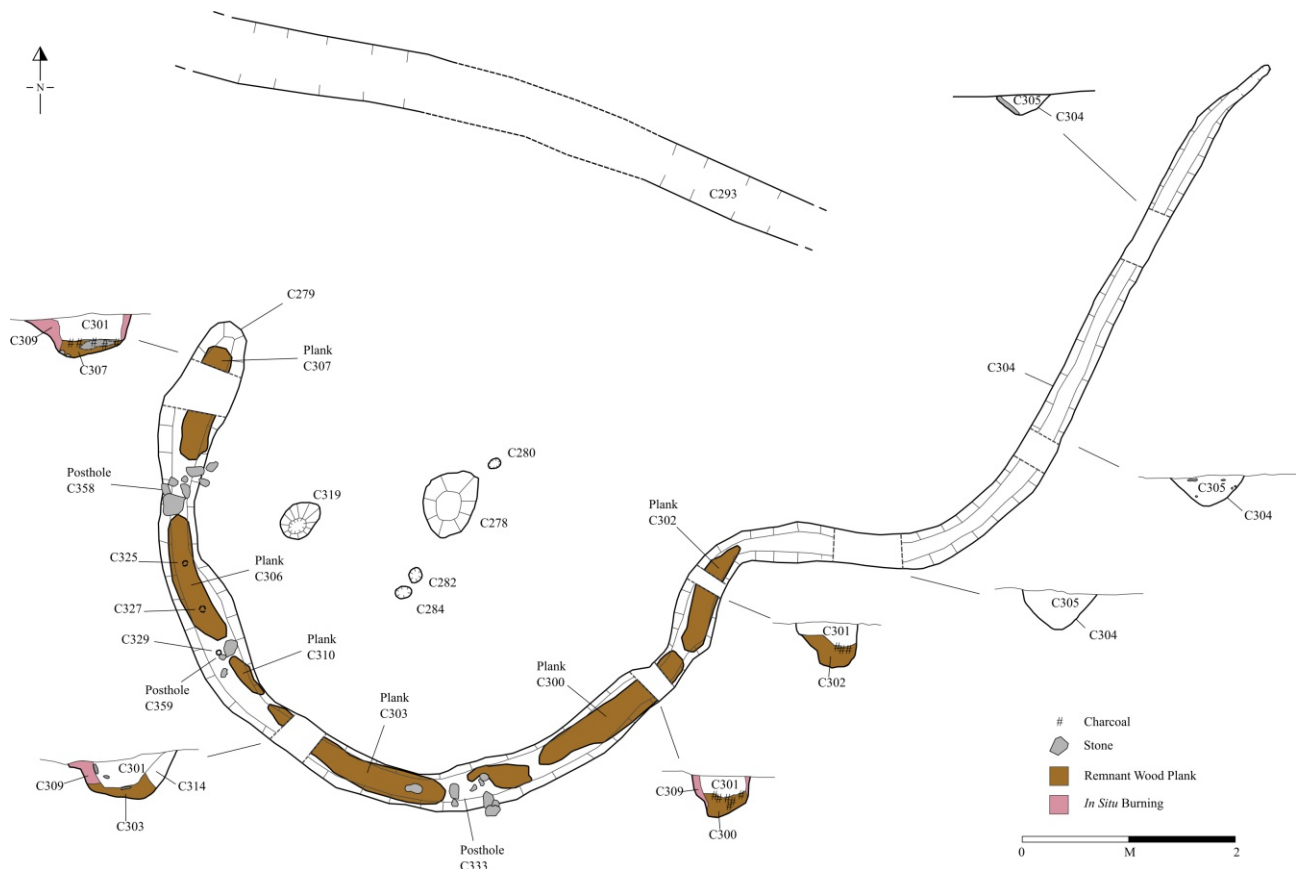
east of this a larger pit (C136), interpreted as a watering hole, was also dug into the base of the hollow. In the vicinity of the well and watering hole a number of pits and postholes were identified that may represent burial or ritual activity. Further burial activity continued to the east into Area 3.

The lithic assemblage from the site also indicates a rise in activity at the end of the Neolithic or beginning of the Bronze Age (Sharpe 2015, 15). Interestingly, the ceramic assemblage does not reflect this as clearly. The ceramics from the Early Bronze Age features all date to earlier periods, with sherds of Early Neolithic and Beaker pottery retrieved and no Early Bronze Age types identified. In a number of cases there was an intentional inclusion of a

small sherd or sherds of earlier ceramics within later features. No complete or near-complete vessels were represented. It is possible that these sherds of pottery were deposited within later features within an intended meaning. This phenomenon was also recorded at other sites in the vicinity and may be a tradition for the Early Bronze Age communities in the area.

Structure

The structure in Area 3 (C279) was defined by a C-shaped slot trench enclosing an area measuring c. 4.5m x 3.5m, which was open to the north. Located centrally within the enclosed space was a hearth, which had stake-holes either

Plan of the structure (top)

View of the hearth and stake-holes relating to the spit or fireplace architecture (bottom right)

View of the slot-trench of the structure mid-excavation, looking north. The drain running off the slot-trench can be seen in the top right (top)

View of slot trench of structure post-excavation, looking west. The drain running off the slot trench can be seen in foreground (centre)

Detail of oak plank burnt to charcoal at the base of the slot-trench. The in situ burning of the natural on both sides of the slot-trench is also apparent (bottom)

contained the remains of six base planks of oak, which ran between upright posts, one of which was identified as alder. These had been burnt in situ. A discrete deposit of indeterminate burnt animal bone (Geber 2015b, 2) was identified beneath the base plank to the south, at the approximate centre of the slot trench. Given the presence of the deposit below the base plank it is tempting to consider it as a foundation deposit, however the tiny quantity of the material may suggest an accidental inclusion.

The postholes along the line of the slot trench were not substantial. They did not extend below the base of the slot and were indicated by the presence of packing stones. They are unlikely to have been load-bearing. Evidence for further uprights of hazel rising up side, suggestive of a spit for cooking. The stakes of the spit were elm, which was present in both stake-holes. The C-shaped slot trench was generally 0.2-0.3m in width and 0.2m in depth, widening near the two termini to 0.5m. The slot

from the oak base planks were identified, signifying these base planks formed part of upright screens or wattle walls tied into the posts. A number of shallow stake-holes along the base of the slot trench to the southwest may relate to the ends of upright stakes set into the timber base plank on that side. There was no evidence for the structure having been roofed, no drip gully was apparent, and only one posthole was evident within the interior, but not in a useful location for a supportive structural post. Interestingly, charcoal from this posthole was identified as alder, the same as the posthole along the line of the slot trench. It is possible a light roof may have been present associated with the structure, however the evidence suggests this was lightweight at best.

To the northeast of the structure a gully (C304) drained from the main structure, possibly intended to drain water from around the wooden foundation base planks and stop them from rotting to prolong the life of the structure. A broader range of charcoal was identified within the gully implying it was an open drainage feature.

Closely comparable structures to that excavated in Kilgobbin are few. In Kilbride, Co. Wicklow an oval foundation trench with a maximum diameter of 7.5m was uncovered (Excavation Licence No. 97E324, Excavations Ref. 1997:616). A range of pottery including late Beaker, Cordoned Urn and Vase vessels suggests the structure is broadly contemporary with the example in Kilgobbin. It could be argued that the slot trench at Kilbride was C-shaped, with a possible drainage gully continuing from one terminus (Kerri Cleary pers. comm. 2018). The open end of the Kilbride structure is much larger than at Kilgobbin due to its oval shape in plan and no hearth was identified within the structure.

A structure excavated at Newtown Little c. 500m to the west (Ward 2005, 23) is also comparable. Here, a semi-circular slot-trench open to the west surrounded a stone hearth. A radiocarbon date of 1750-1600BC (Wk-17787) was returned for the structure, later than the structure in Kilgobbin. A second small rectangular post-built structure nearby dated to

1920-1740BC (Wk-17786), similar to the Kilgobbin structure date, though not comparable in design. The semi-circular structure from Newtown Little was believed to be flimsy and possibly short-lived, and at c. 3m diameter was smaller than the Kilgobbin structure, though the layout was similar with a hearth protected by an arcing fence or wall. Beaker pottery was found associated with both Newtown Little structures, despite Early Bronze Age radiocarbon dates. This again mirrors the phenomenon seen at Kilgobbin as noted above.

A circular Bronze Age enclosure defined by a 10m diameter slot trench excavated at the Belarmine development (Hagen 2013, 19) was dated to 1699-1528BC (87.8% probability, UB-6201). A semi-circular arrangements of postholes at the southern end of the enclosure formed a possible structure 4m in diameter (ibid.), which is comparable with the size of the Kilgobbin structure. A post-built sub-rectangular structure of probably Bronze Age date at Woodside measured c. 3.8 by 3.5m. While the construction technique of these structures were not similar to the Kilgobbin structure, the techniques used for the Belarmine enclosure, which was presumably unroofed, and the presence of Beaker pottery in later deposits, are comparable.

Bronze Age houses are frequently found close to ring-ditches or barrows in Ireland. Clarke and Carlin (2006, 25) have recorded this at Charlesland, Co.Wicklow, Castleupton, Co. Antrim, Inch, Co. Down, Ballyveelish 3, Co. Cork, Chancellersland, Co. Tipperary and Ardsallagh, Co. Meath, and also note that many British settlement sites also have an associated small cemetery site nearby.

There are a number of indications to suggest the structure at Kilgobbin was not a house. Firstly, the lack of an enclosing element on the northern side of the structure. Secondly, the construction technique used bears a stronger comparison to the unroofed Bronze Age enclosure excavated at Belarmine, as well as the possible windbreaker structure at Newtown Little. If a roof was present it must have been lightweight and possibly only covered a portion of the structure. The lack of ceramics dating to
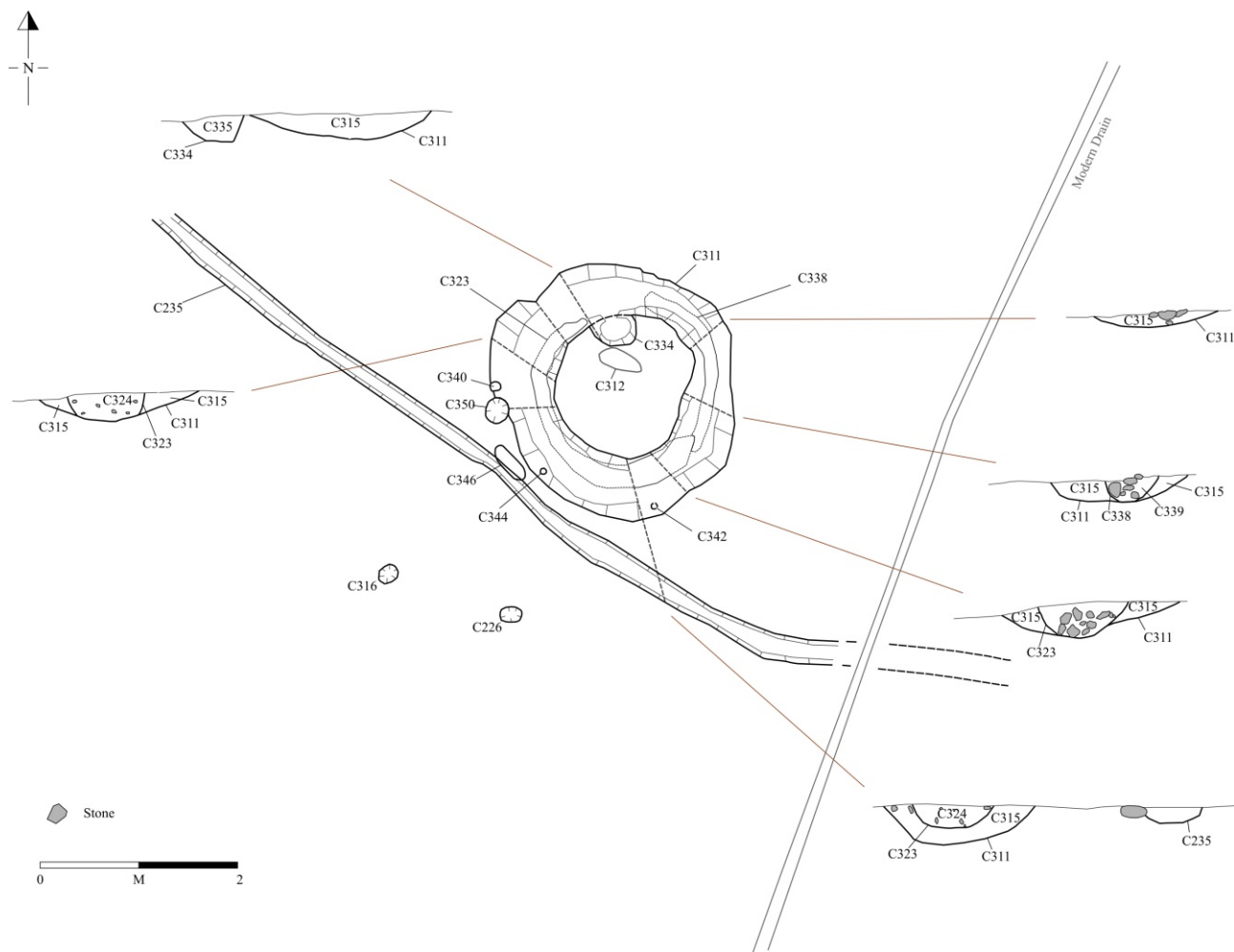
Plan of the barrow and nearby features

the time of the construction of the structure is notable, with only Beaker pottery present. The presence of a similar range of Beaker pottery in the cremation pit and barrow to the east, both of which are contemporary with the structure, suggests they are related, and it is possible the Beaker pottery was intentionally deposited within these features.

The Kilgobbin structure is therefore interpreted as a partially-enclosed cooking place surrounded by a wall of wattle and daub set in oak base planks and secured to alder uprights. The presence of this structure in close proximity to the burial monument of the barrow, and the high quality of the construction, may suggest a special, or specialised, cooking spot. It is possible that this represents a feasting site, associated with burial rites or with commemorations of the dead. The presence of the gully draining the slot trench implies an attempt was being made to prolong the life of

the structure and avoid rot of the wall, suggesting the structure was not intended for a single event and may have stood for some time. Prior to the abandonment of the structure it was set on fire. It is unclear whether this was intentional.

Barrow and cremation pit
The circular ring-ditch of a small barrow (C311) was excavated to the east of the southern portion of Area 3. Severe truncation of archaeology in the immediate vicinity indicated the barrow would originally have been situated on a very slight rise in the landscape at the base of the hillside. The barrow measured c. 2.8m in diameter internally, c. 4.7m externally, and survived to a depth of only 0.1m-0.28m. A patch of scorched natural subsoil in the interior of the barrow suggested that a feature was originally present here. a truncated shallow pit between the scorched patch and the northern

barrow ditch contained nothing.

The initial phase of the barrow contained three pieces of unworked quartz, undiagnostic struck flint and tiny fragments of prehistoric pottery, but no cremated bone. Two separate re-cutting events were evident, one with a relatively sterile stony fill to the east (C338), and another to the south and west (C323). The latter recut contained frequent charcoal as well as a collection of unworked quartz, sherds of Beaker pottery, a small amount of cremated bone, struck flint and chert, and one piece of unburnt animal bone from a large mammal. This represents a ritual deposit inserted into the barrow, possibly grave goods associated with the token cremation deposit, or a more intangible offering at the, by then venerable burial monument. The small quantity of cremated bone retrieved from the initial and recut had been ground down to tiny pieces, and it was not possible to identify, however given the context it is likely to be human. The small quantity of bone indicates only a small portion of cremated remains was deposited within the barrow, representing a 'token' cremation deposit. The Beaker pottery from the barrow recut was a mixed assemblage, including two sherds of undecorated Fine Beaker and three sherds of undecorated Domestic Beaker. The deposition of fragments of different partial vessels may suggest these were included as token offerings or ritual deposits, mirroring the cremated remains.

A sample of the fill (C324) of the re-cut was processed, with only ash charcoal being identified. This is somewhat unusual as oak is more usually associated with cremation burials, however, a variety of wood taxa have been identified from barrow sites elsewhere (OCarroll 2018, 13). The use of ash in the Early Bronze Age has been noted elsewhere in the Kilgobbin area and indicates that clearings had been made in the surrounding landscape to allow ash trees to flourish (OCarroll 2018, 10). The ash from the context was radiocarbon dated to 1943-1751BC (Poz-76174). One of the more intriguing aspects of this fill was the quantity of unworked quartz retrieved from the vicinity of the cremated bone. Fifty seven pieces were retrieved from here, over half of

View of re-cut C323 cutting barrow C315, looking north west (top)

Northeast-facing section through barrow C315 and re-cut C323, looking southwest (upper centre)

South-facing section through barrow C315 and re-cut C323, looking north (lower centre)

Mid-excavation view of barrow demonstrating the difficult digging conditions, looking south (bottom)

the entire assemblage of quartz from the site. Only one other feature contained a significant quantity of quartz, the Iron Age linear pit to the south (C274), which contained almost a quarter of the assemblage. The concentration of unworked quartz in these two features suggests they are related. It is possible that there is an unrecognised Iron Age phase in the barrow. Indeed, it is possible that the re-cutting of the barrow dates to the Iron Age, and that the dated charcoal is residual from the initial phase of use of the barrow. The presence of Beaker pottery may have been disturbed from the earlier fill during the Iron Age.

Three small pits, initially interpreted as stake-holes, cut into the upper fill of the earliest phase of the barrow near the outer edge of the ring-ditch. The fill (C345) of one of these was analysed and was found to contain hazel, oak and ash charcoal as well as two fragments of hazelnut and one orache seed. Orache is a native species that was used as a vegetable or as a herbal drink in the past, as well as being used as a poultice (Vowles 2010, 33, cited in Gilligan 2018, 10). The presence of two potential food sources and a variety of wood taxa not seen elsewhere in the barrow may suggest that these were intentionally placed within this small pit cut into the fill of the barrow near its external edge, perhaps representing an offering.

The feature is interpreted as a ring-barrow rather than a ring-ditch based on the presence of heavily burnt bone. While ring-barrows are burial monuments defined by a circular bank and ditch, frequently when these features are encountered during excavations the bank has been ploughed out with only the ditch surviving, as is the case in Kilgobbin. The term ring-ditch is occasionally used for the surviving ditch, though can also relate to other monument types. The terms are used somewhat interchangeably (e.g. Clarke and Carlin 2006, 23; Waddell 1998, 367; Corlett 2005, 69) to refer to late prehistoric (mostly) burial monuments defined primarily by a circular ditch.

At the Kilgobbin barrow the burial remains were limited. The truncated remains of the central pit in the patch of scorched material may represent the base of an internal pit with in
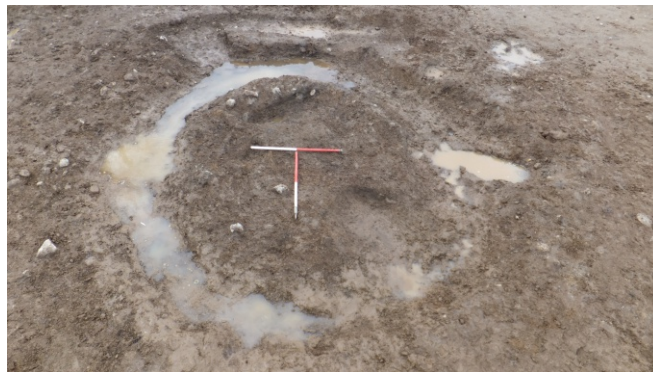
Post-excavation view of the barrow, looking west (top)

Mid-excavation view of the Beaker pottery retrieved from cremation pit C226, looking southwest (centre)

Flint flake 14E339:317:1, possibly an informal blade (bottom)

situ burning, or it could also be the base of a hearth or scorching from a central pyre. The size of the barrow at Kilgobbin is at the lower end of the scale in terms of barrow size (Waddell 1998, 367; Clarke and Carlin 2006, 23). Other small barrows are known, such as the example of 3.5m diameter was excavated at Mullahead, Co. Antrim (Excavation Licence No.

AE/10/99, 2010:069), and one of 4m diameter was excavated at Donacarney Great (Excavation Licence No. 08E0912, 2008:951). A small penannular ring-ditch measuring 2.5m internally was uncovered during testing at Dromcondra, Dublin 9 (Excavation Licence No. 09E437, Excavations Ref. 2009:306). A line of three annular ring-ditches was uncovered on a site at Cashel Quarry, Ouley, Co. Down (Excavation Licence No. AE/10/135, Excavations Ref. 2010:231), with internal diameters of 2.25m, 4.7m and 1.84m, each of which had central cremation burial pits.

Pits associated with the barrow

Two pits were identified in the vicinity of the barrow and appeared to be related. One (C226) contained a deposit of burnt bone and a single sherd of very fine late Beaker pottery (Grogan & Roche 2018, 2), interpreted as an intentional deposition. Comparisons of this form of late Beaker pottery are known from Ballyedmonduff and Dalkey Island (ibid.). The cremated bone was human and had been fully incinerated, though to a lesser degree than other cremated bone encountered on the site, and represents an adult token cremation deposit (Geber 2015a, 2-3). Hazel had been selected for use in the cremation ritual. Also included in the cremation pit was a charred wheat or barley seed and two Rosacea seeds, a plant group that includes blackberry, as well as roses. The inclusion of the latter may indicate a burial time in late summer-autumn. While the seed inclusions may be accidental, it is possible that they were intentionally included with the cremation deposit, with small, token quantities of each deposited material represented. A radiocarbon date from the cremation pit returned a date of 1900-1741 (Poz-76170), almost identical to the date from the barrow.

The second pit (C316) was at a similar distance from the barrow and was of a similar size to the cremation pit. It did not contain any funerary remains, but did contain a long flint flake produced through bipolar reduction, likely to date to the Early Bronze Age (Sharpe 2015, 17). This piece, possibly an informal blade, may represent the intentional deposition of a flint artefact in the vicinity of the barrow.

Intentional deposits

In the case of the cremation pit from Kilgobbin, the inclusion of a single sherd of pottery within a single burial context appeared deliberate. It the case of the offering pits in Area 2, each contained a tiny quantity of burnt bone and a fragment of pottery and/or flint near the base or sides. It is the regularity that this action was carried out that suggests it was intentional rather than accidental. A similar range of artefacts are being deposited in similar features across the site with no obvious function. The artefacts are sherds of broken pottery or expediently created flint tools rather than objects of intrinsic value. It is unlikely that there would have been a desire to retrieve the artefacts at a later point. The presence of broken and possibly redistributed objects in these features combined with the presence of small quantities of cremated bone suggests there is a pattern here. These features appear to indicate ritualistic activities, possibly at a more local or personal level than other more ostentatious examples.

While ceramics and flint were retrieved from other features also, the inclusion of artefacts within these small features appeared to have a meaning, that the act signified something to the people depositing the material.

Archaeological artefacts are usually found due to them being broken, lost, discarded, dumped or intentionally buried. It the latter case this intentional burial can be as storage to be returned to at a later time, which can be termed a cache. Alternatively burial of objects can have other meanings. They can accompany burials as grave-goods, where they can be interpreted as offerings. In other cases they can be deposited as foundation or termination deposits, marking the beginning or end of the life of a feature with a special offering. In these situations there is an implied meaning attributed to the objects deposited, or the act of deposition itself. Elsewhere there is evidence for votive offerings of objects, frequently metalwork or objects of value, in wetland locations such as ponds and rivers. These objects are often decommissioned or broken prior to deposition. Ritual and symbolism and monuments and artefacts associated with cult, ceremony and display are

conspicuous in the archaeological record (Waddell 1998, 7). In the prehistoric past the world and much in it was richly charged with magical and superstitious meaning (ibid.). Symbolic acts and ritual activities, while perhaps difficult to fully comprehend, can be identified in the archaeological record.

It is easier to recognise this activity when it is carried out at monumental locations, or places that hold certain meanings, or when the object being deposited is of obvious value. It is more difficult to identify this activity at a more local level and at a less grandiose scale. The evidence for a cathedral or church is more likely to survive for example, than a miraculous medal or statue of the Virgin Mary or a person's windowsill. It is perhaps this smaller scale ritual action that is being seen with the offering pits from Kilgobbin.

Offering pits and marker posts

Four small, shallow oval pits of similar shapes in Area 2 contained tiny amounts of cremated bone (C111, C125, C131 & C141). In one of these a fragment of hand bone was identified, and the bone in the other three was indeterminate human. All four were located beside a posthole, possibly representing a post-marker. In most cases each pit had one post-marker, however in one case two pits were present. One of the pits (C125) contained an unidentifiable charred seed, while the associated post contained a fragment of unidentifiable prehistoric pottery and a charred barley seed, and the charcoal contained in both pit and post was all oak. Another (C111) contained a sherd of Early Neolithic pottery, with another sherd of the same pottery being retrieved from the associated post. Charcoal from the pit was identified as hazel, as seen in the cremation pit in Area 3. A second pit (C131) associated with this post-marker contained a convex-end scraper, typical of the late Neolithic or Early Bronze Age. The charcoal was predominantly oak, with small quantities of hazel and elm. The fact that a mix of charcoal was present within the pit is unusual in a cremation deposit. The fourth pit had a mix of charcoal present, with oak, ash and hazel identified. There was evidence that one of the post markers (C119), which had been made of oak, was burnt in situ.
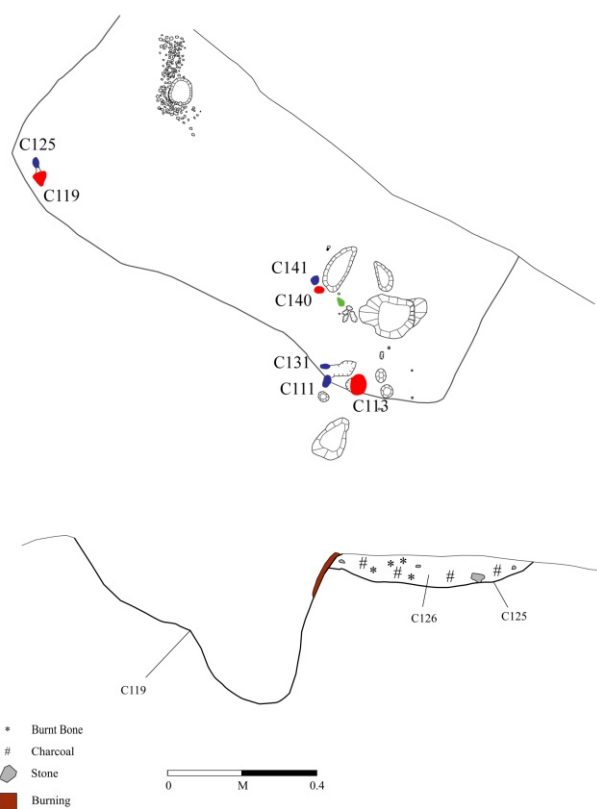
Location of the possible Early to Middle Bronze Age offering pits in Area 2 (blue) with associated marker posts (red). The Early Bronze Age pit with the upright stone C160 is highlighted in green (top)

East-facing section of cremation pit C125 and marker posthole C119 with in situ burning depicted (centre)

East-facing section through possible pyre pit C187 (bottom)

This adds another level of complexity to the feature, perhaps indicating the posts were not intended to mark the pit location, but were burnt as part of the ritual associated with the deposition.

A radiocarbon date of 1746-1603BC (88.4% - Poz-76207) was returned for one of the pits (C131). Given the mixed nature of the charcoal it is possible that some infiltration of material from the layer above occurred, however the end of the Early Bronze Age date is consistent with similar types of deposits excavated elsewhere in Ireland. The location of one of the pits at the base of the hollow indicates these features must post-date the establishment of the well and watering hole in the Early Bronze Age, confirming the radiocarbon date. The pottery and flint within the pits was earlier than the radiocarbon date, however as noted above this phenomenon is noted elsewhere at Kilgobbin and beyond.

A large shallow pit (C187) was identified on the slightly higher ground above the hollow. Although only one burnt bone fragment (which could not be identified) was present in this deposit, the close proximity of this feature with other pits which included cremated bone, and the charcoal rich deposit within it, may suggest that it had a funerary function (Geber 2015a, 2). Similar large features adjacent to burials have been found in Middle Bronze Age cemeteries in Ireland, such as at Templenoe in Co. Tipperary, where they were suggested to represent remnants of possible pyre sites (ibid).

A number of other associated features without cremated bone were also identified in this area. One of these was a pit (C160) containing a possible low upright stone marker that protruded from the pit into the spread above, as well as the sherd of Early Neolithic pottery. It also contained a small amount of ash charcoal, which was dated to the Early Bronze Age (1888-1737BC 90.9%, Poz-76164), and a single charred oat seed was also retrieved from the fill of this pit. The date range for this pit is comparable to the well features.

In Area 3 to the south of the Early Bronze Age structure a posthole was identified with a shallow oval pit beside it. Packing stones were present within the posthole, which also contained a sheep or goat tooth, and a sherd of Early Neolithic pottery was retrieved from the fill of the pit. It is possible that these features also relate to this practice.

The use of the term 'token burial' is problematic, as the term is used to describe different types of deposit containing only small quantities of bone (Tarlow & Stutz 2013, 154). The terms cenotaph, or memento, have been suggested instead (ibid.). The cremated bone deposits at Kilgobbin, which in every case represent only a fraction of the bone from a complete burial, raise a number of questions. Were specific body parts selected for cremation to include in these deposits? Was a scattering of bone all that was required for the burial ritual? Indeed, are these remains related to burial at all? It is also intriguing to wonder where the remainder of the human remains ended up. In the (albeit truncated) cremation deposit near the barrow (C226), a tooth fragment and a fragment of femur were identified, indicating that more than one body part had been selected (Geber 2015a, 6).

The cluster of pits with cremated bone and post-markers could be interpreted as a flat cemetery. Groups of three or more cremation pits related to one another by rite, grave goods, or simply by their proximity to one another and not covered by a mound are classed as flat cemeteries and are likely to date to the Bronze Age (National Monument Service – www.archaeology.ie). The question is whether the pits and markers uncovered at Kilgobbin represent token cremations deposits, or something else. The amounts of cremated bone are so small at Kilgobbin that it is quite possible that it was being used in a non-burial rite, and that this area was utilised for offerings that included small portions of the dead indirectly. The placing of a small sprinkling of burnt bone along with a fragment of pottery, a flint tool, or a sprinkle of seeds may have had a special meaning. The act of deposition itself may have been more important than what was being deposited specifically. Given the paucity of bone within the pits, they may have been intended as offerings rather than burials.

Pits with token quantities of cremated bone and possible marker posts are known from various periods, dating as far back as the Mesolithic period, such as those excavated at Hermitage, Castleconnell (Area A; Excavation Licence No. 01E0319 ext., 2001:763). Pit burials also form one of the burial traditions of the Beaker period, with a number known from the south and east of the country at sites such as Lismullin, Co. Meath, Corbally, Co. Kildare and Brownstown, Co. Kildare (Mount 2011). These are characterised as having small token quantities of cremated bone associated with sherds from one or more Beakers, sometimes associated with large stone artefacts like axes and mace heads, as well as flint and cereal grains (ibid.).

Elsewhere, cremation pits with stake markers were identified at Manor East, Co. Kerry dating to the Middle Bronze Age (Excavation Licence No. E004323, 2011:331). A cluster of cremation pits and possible post markers was excavated at Killoran, Co. Tipperary (Licence No. 97E168, Excavations Ref. 1997:537) dating to 1435-1215BC (Beta-117546) in the Middle Bronze Age (Gowen 2004, 367). There was also a strong suggestion that the flat cemetery burials at Ballynakelly, Co. Dublin had associated posts or markers (McCarthy 2010, 106). Flat cemeteries including a number of cremation pits with varying quantities of cremated bone and post markers are also known from the Early and Middle Bronze Age at Newrath and Rathpatrick, Co. Kilkenny and from the Mid-Late Bronze Age at Croagh and Kiltenan South, Co. Limerick.

At Donacarney Great a pit was excavated, lined with water-rolled stones and containing small amounts of cremated bone and sherds of pottery including a sherd of Late Neolithic Carrowkeel Ware (Giacometti 2010, 29). The form and size of the feature resembled a posthole, however this feature was isolated, and the fragment of Carrowkeel pottery (usually found in ritual contexts) suggests a special function (ibid.). It is possible that this feature represents a combination of what we are seeing at Kilgobbin, with the pit containing cremated bone also functioning as a marker-post.

While these sites indicate a precedence for cremation pits with small quantities of cremated bone and possible above ground markers in the Middle and Late Bronze Age, the tiny quantities of burnt bone in the Kilgobbin pits implies that burial of an individual was not the primary function. At the site in Newtown Little an intact pygmy cup was retrieved from a pit dating to 1930-1660BC along with the base of a Vase Food Vessel (Ward 2013, 40). No cremated bone was retrieved from this pit and while it is possible that the pit represents the remains of a cremation pit, it is also possible that this may be another example of an offering pit from the locality. A shallow pit located beside a posthole was uncovered during the excavation in Jamestown dated to 1091-900BC (93.5% probability, UBA-18656) in the Late Bronze Age (Kyle 2012, 9). Could this be a continuation of a ritual practice? Perhaps organic materials were also included in the pit which has not survived, and this may also be the case with the offering pits from Kilgobbin.

At Kilgobbin the prehistoric dead were treated in a number of different ways. The barrow, though small, is indicative of monumental burial. The placement of the cremation pit to the south of the barrow may have been informed by the barrow itself, however the pit was not marked. The 'token' deposits of human remains in pits marked by posts and artefacts to the west represent a different treatment. While these may represent a flat cemetery, the quantity of cremated bone in the pits is so small they may be better interpreted as offering pits containing human remains, rather than burial pits.

Burials from the surrounding area
A number of Early Bronze Age burial types have been identified in the area around Kilgobbin, some of which are comparable with the burial forms identified on the site and others which show that a variety of burial forms were being used at this time. Immediately to the northeast of the site in the vicinity of Kilgobbin Castle a possible cist containing a human inhumation was uncovered (RMP files No. 025-01703). While undated, the burial of crouched inhumations in stone-lined cists are usually seen as a development of the

Location of Early Bronze Age burial sites (red), barrows (blue) and wedge tombs re-used in the Bronze Age (green) in the vicinity of the site

Chalcolithic and Early Bronze Age. Further to the east in the grounds of Kilgobbin Cottage an urn burial was uncovered (RMP No. 026-123).

Other sites in the vicinity also demonstrate the variety of burial types being used at during the Early Bronze Age. Excavations at Carmenhall in 2002 revealed three burial pits, one of which held a cremation contained in an inverted vase urn and second held cremation deposits contained within two inverted vessels, one a Vase Urn and the other a Vase Food Vessel (Reilly 2005, 32). The third cremation was within a stone-lined pit with no ceramics (Reilly 2013, 37). At Laughanstown a cremation pit was uncovered where the cremated remains were contained within an upright Vase Urn along with a copper-alloy pin and two flint tools (McQuade 2013, 33-34). Another cremation from Laughanstown was identified in a stone-lined pit and may originally have been covered by a stone cairn (Seaver 2013, 27). A further four simple cremation pits with no ceramic inclusions were also uncovering in the townland, one with a token quantity of crushed human bone and two with larger quantities of uncrushed bone (O'Donovan 2001). A food vessel and sherds of an Encrusted Urn, likely to relate to a cremation, were discovered in a quarry in Jamestown (NMI Reg. No. 1927: 45 & 64), and another cist burial (RMP No. DU026-015) was also uncovered in Jamestown accompanied by an Encrusted urn. A burial pit

containing two inverted vessels was excavated at Tiknock, one of which was found to contain a female cremation with uncrushed bone (Cahill & Sikora 2011, 186). At Ballyman to the southeast a pit containing two inverted urns, one a cordoned urn containing a young adult and the other an undecorated urn containing an adult and a juvenile both dating to the Early-Middle Bronze Age (1736-1523BC; Cahill & Sikora 2011, 164). A small cist containing two inhumations, a non-human bone and no ceramics was uncovered in Deansgrange (Cahill & Sikora 2011, 175-6). Another from Stillorgan contained the partial remains of a young adult female, a flint flake and an oyster shell (Cahill & Sikora 2011, 183).

This variation in burial practice is well represented at the Early Bronze Age flat cemetery excavated at Edmondstown to the northwest of the site where four rectangular cists forming the nucleus of nineteen burials, some containing a number of cremated deposits were uncovered (Waddell 1998, 156-7). Two of the cists contained crouched burials and bowls while the other two contained cremated bone, only one of which included a bowl (ibid.). The remaining burials ranged from scatters of cremated bone, pit burials with or without pottery from a range of pottery vessels. All the cist burials were adult males, bar one unsexed adolescent, and these were also the only burials associated with bowls. The adult females and children were all cremated, as well as some of the males (ibid.). The density of burials at Edmondstown allows for analysis of the complexity of burial rites being carried out by communities in the vicinity of Kilgobbin during the Early Bronze Age. The association of certain forms of burial and grave goods with males and females can be identified. The use of both stone-lined cists and cremation pits with or without ceramic vessels within the same cemetery, and the presence of both inhumations and cremations shows that these three burial variations were being carried out by the same community, probably at the same time. The inclusion of multiple cremations within one grave may indicate familial or societal connections. The cremated bone inclusions within the fills of the Edmondstown cist burials may indicate the inclusion of a cremated

ancestor or previous unrelated resident of the cist accidentally, or intentionally, incorporated into the later burial.

The Neolithic practice of megalithic burial also continues into this period, with wedge tombs being built in the Chalcolithic and Early Bronze Age (for example at Ballyedmonduff and Kilmashogue (Corlett 2009, 102-6). At Ballyedmonduff a small amount of cremated bone was identified along with over 140 sherds of Beaker pottery and a stone macehead (ibid., 103), while at Kilmashogue there was evidence for the site being used for an extended period of time, with one grave dated to 2122-1887BC, and another much later to 175BC-AD222 in the Iron Age (Chapple 2018). Barrows are not common in the vicinity of the site, and are generally found more to the southwest and north of the county. There are some examples, however. An unexcavated barrow is recorded in the RMP files at Newtown to the south of the site, and later examples have been excavated from Jamestown, Cherrywood, Laughanstown and Woodside. The Kilgobbin ring barrow is the earliest of these monuments in the area to date.

This overview of Early Bronze Age burial evidence in the surrounding area demonstrates the rich variety of burial types used locally. Individual burials or cremations are known as well as communal burial at the megalithic tomb sites. Burial in pits, cists and barrows, with and without accompanying artefacts and occasionally with

artefacts from an earlier period are all known. Combined with this are the offering pits that include small quantities of cremated bone, which hint at other activities where the treatment of the dead may not relate to burial at all. This could be interpreted as an absence of a single regional or national belief system, and instead very local traditions followed in different areas. However, the evidence from Kilgobbin and several of the sites described above suggests the opposite: that these varied ways of treating the dead – some clearly burials and others perhaps not – were in use contemporarily within the local community, and so must reflect a complex local belief structure and relationship with the dead.

The well and watering hole

In Area 2 of the excavation two large pits were identified at the base of the hollow. As previously discussed, the hollow was frequented since the Early Neolithic period, and it is possible that a small pond existed at this time, which was subsequently formalised in the Early Bronze Age with the construction of a well and watering hole. It is possible that a change in the water table due to a period of drought caused the pond to recede and the well and watering hole were dug to access the lowered water table. Formalising the water sources would have been
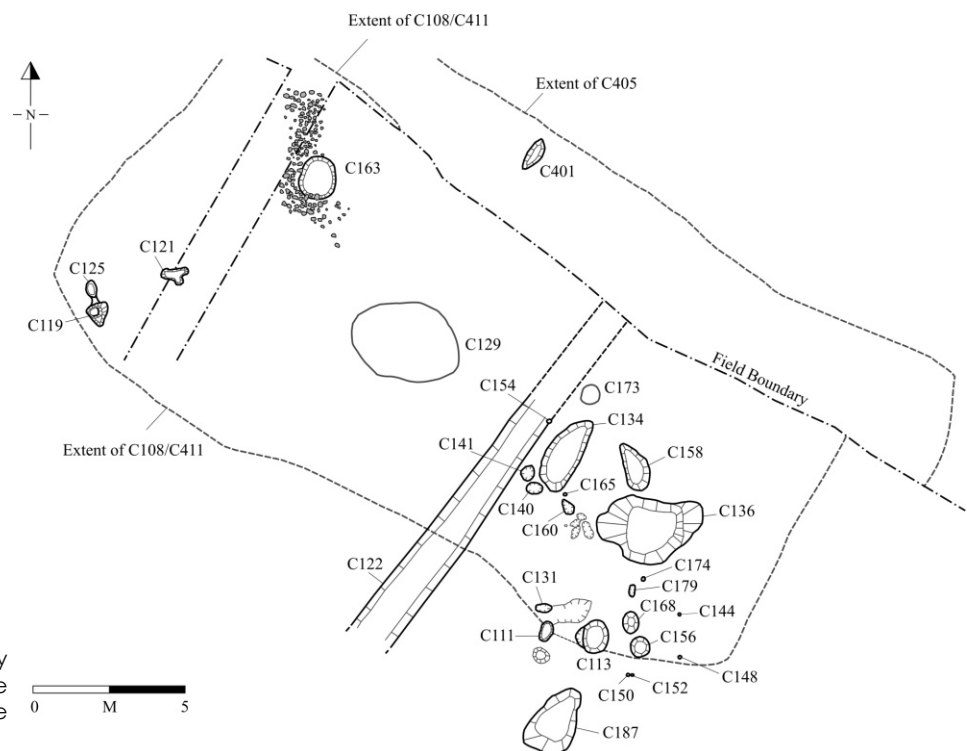
Plan of features in the vicinity of the hollow including the well C163 and watering hole C136

advantageous, as separating animals away from drinking and cooking water would reduce the spread of disease.

The watering hole measured c. 2-3m in diameter and 0.8m in depth, while the well measured c. 1.20m in diameter and 0.47m in depth. Both features extended below the current water table. The watering hole contained cow teeth and other large mammal bones, as well as burnt animal bone, representing the largest animal bone assemblage of any of the prehistoric features on the site. This suggests animals were being processed or consumed in close proximity. As well as the animal bone, a sherd of Early Neolithic pottery, a flint microlith bladelet, a leaf-shaped arrowhead fragment and a side-scraper were found in the fill of the watering hole, all of which are typical of the Early Neolithic period. These are likely to have eroded from the earlier occupation layer within the hollow. A sherd of Beaker pottery, four bipolar flint cores and a bipolar split pebble also found within the watering hole are indicative of Late Neolithic to Early Bronze Age activity, while broken granite grinding stone of unknown date was also retrieved from the feature. Some of these may have been present within the occupation layer associated with the hollow, however the wasteful use of flint in the manufacture of these artefacts is associated with an expedient technology possibly dating to the beginning of the Bronze Age (Woodman et al 2006, cited in Sharpe 2015, 16). A radiocarbon date of 1772-

View of the well with pathway to the south and west, looking southeast (top)

View of the watering hole with ramp sloping down from the west, looking north (centre)

Broken granite grinding stone 14E339:176:12. The worn surface can be seen along the left side (bottom)

1614 (94.4% probability, Poz-76167) was returned from charcoal in one of the lower fills of the watering hole. This Early Bronze Age date is at odds with the sherd of Late Bronze Age pottery from the same context and suggests the watering hole was silting up and filling in over an extended period of time.

The adjacent well, by contrast, contained no finds and appeared to have been filled in by a single event using deposit of angular granite stones. A similar but less substantial deposit of stones was also identified at the bottom of the watering hole. A radiocarbon date for the well was returned as 1894-1732 (88.7% probability, Poz-76166). This dates it to the Early Bronze Age, roughly contemporary with, or slightly earlier than, the watering hole. The straight-sided and circular construction of the well was more regular than the watering. The lack of finds from the well suggests that its use was probably more regulated, and it was kept clean, or regularly cleaned, implying consideration for the cleanliness of the water. It had no evidence for a lining, however an associated informal surface surrounded the well to the south and west and continuing to the northwest. The surface consisted of densely packed rounded and sub-angular stones forming a pathway to the well and to provide a better surface across in this wet and muddy area. The pathway led northwest past the limit of excavation, however previous work at Belarmine (Hagen 2013, 19) excavated a settlement with an enclosure and structure c. 250m from the well, directly along the route of the path. While charcoal from the slot trench of this enclosure was dated to the Middle Bronze Age (1699-1528BC 87.77%, UB-6201) an Early Neolithic house and substantial Beaker deposits uncovered on the same site suggest a settlement was present here at the same period of time as the well and watering hole were in use.

Once the well and watering hole went out of use, a spread of charcoal-rich material representing a mixed occupational layer formed by the continual use and re-use of this low-lying hollow, gradually filled it up over both features. The spread was not a solid sealing event, and instead represents an extended period of activity, a mixed deposit churned up through
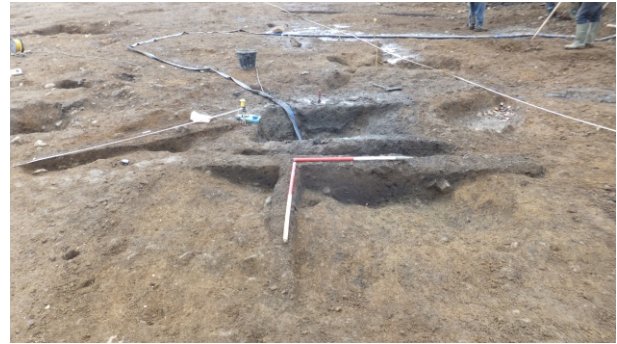
Mid-excavation view of watering hole, looking west (top)

Mid-excavation view of well, looking north (middle)

Mid-excavation view of spread C108 being reduced to reveal features below (bottom)

human and animal action in the wet ground of the hollow. It is possible that separate distinct layers built up within the hollow over time, however the continual use saw the churning up of the deposited layers to form one homogenous spread of material (C108) overlying two surviving patches of earlier occupational layers, the remainder of which has been has been churned into the overlying material. This is also suggested by the wide date range of the pottery contained within the

overlying spread, including Early Neolithic and Beaker pottery identified. Cremated human bone was also retrieved from the deposit, suggesting that underlying or nearby burial contexts were disturbed and mixed into this homogenous layer. Cow and large mammal bones were recorded within spread, mainly teeth due to the poor preservation levels. Oak, hazel and ash charcoal was also identified within the deposit, similar to the range of charcoal seen in the well. The spread overlay both the well and the watering hole, though is likely to have at least partially been created during the use of these features and continued to be formed by activity in the wet ground of the hollow after they had gone out of use.

The nature of the deposit meant that a number of the pits below it were filled with material that was somewhat similar to the spread, which may well have infiltrated the upper levels of the fills of these features. It would seem that at various times a more formalised use of the hollow such as the construction of the wells may have seen access to the area restricted to animals to avoid contamination of the water, however, this restriction clearly did not last forever and it can be suggested that the pock-marked surface exhibited at some points along the base of the hollow are indicative of animal activity. This is also why this spread of material should not be seen as a sealing deposit, more as a mobile and active layer, a combination of hundreds or more years of animal and human activity.

Comparable sites

In the immediate vicinity of the site at Kilgobbin, wells or waterholes have been uncovered at Carrickmines Little, Carrickmines Great and Laughanstown. At Laughanstown three waterholes measuring 4-6m by 1.2m, 3-5m by 1.5m and 1.3-2.6m by 0.68m were identified (Excavation Licence No. 02E1133, 2002:0619), the smaller of which is closely comparable to the watering hole at Kilgobbin. A Middle to Late Bronze Age date was returned for one of the waterholes (1376-1121BC, OxA-12889) and the associated fulacht fiadh was dated to the Middle Bronze Age. A Late Bronze Age date (945-813, 90% probability, UB-33443) was returned for the large waterhole at Carrickmines Little, which measured 3.5m by 1.5m, with an

Locations of prehistoric watering holes and wells in the vicinity of the site

associated fulacht fiadh dating to the Middle-Late Bronze Age (Giacometti 2016). The waterhole at Carrickmines Great, dated to 380-540 AD, was adjacent to a two Iron Age unenclosed structures and evidence for Iron Age iron-working and cereal growing was uncovered on the site (Ó Drisceoil 2007, 18).

A number of sites with very large prehistoric wells or ponds have been uncovered in recent years in Ireland such as Ballynakelly (MBA), Laughanstown (LBA) and Carrickmines Little (LBA) in Co. Dublin; Drumgold, Co. Wexford (LBA); Danesfort 5, Co. Kilkenny (IA?); Boyerstown 2 (LBA), Clonee (LBA and IA), Kennastown (LBA), Muckerstown (MBA-LBA), and Williamstown or Bawn 2 (MBA), all in Co. Meath. Another large well or watering hole was excavated at Camlin 3, Co. Tipperary and while it was undated, it was associated with burnt spreads dated to the Middle Bronze Age. All of these are much larger than the watering hole in Kilgobbin but share a similar morphology in that there is an approach or access to one side. A more comparable waterhole at Camlin 1, Co. Tipperary was of similar proportions to the Kilgobbin example and was dated to the Middle Bronze Age (1521-1417BC, SUERC-3136).

There are also comparative sites to the smaller and more regular well at Kilgobbin, such as the Middle Bronze Age well (1530-1400BC,

SUERC-18469) excavated at Coolfin 3, Co. Laois, where a wooden pathway providing access to the well was identified on one side (Licence No. A015/121, E2230, Excavations Ref. 2006:1146). An informal cobbled surface was also present at one side of the well in Carrickmines Little (Giacometti 2016, 42). Another well at Knockharley, Co. Meath (Licence No. 03E187, Excavations Ref. 2004:1275), while similar in plan to the Kilgobbin well, was shallower, however the Knockharley well was later adapted making it deeper and more funnel-shaped, to access the (maybe decreasing?) water table. A pit cutting the infilled well contained Late Bronze Age pottery.

The Early Bronze Age date for the well and watering hole at Kilgobbin certainly appears early in the sequence, if not the earliest. The majority of these features have been found to be Bronze Age in date and tend to date to the Middle to Late Bronze Age. There is evidence for the use of this type of water access feature extending into the Iron Age with the example from Carrickmines Great, and also one of the two large watering holes identified at Clonee, Co. Meath, which was found to contain an Iron Age wooden bucket (Excavation Licence No. 08E0840, 2008:944). While in should be noted that the use of wells obviously continues into the modern period, this form of unlined watering hole would appear to be prehistoric in date.

Functions of the well and watering hole
The most obvious function of a dug water well is to access the water table and provide a clean water supply. This water supply may then have been used for a range of activities. The variation in form and scale of the two wells in Kilgobbin, which are broadly contemporary, suggests that different activities were carried out at each one.
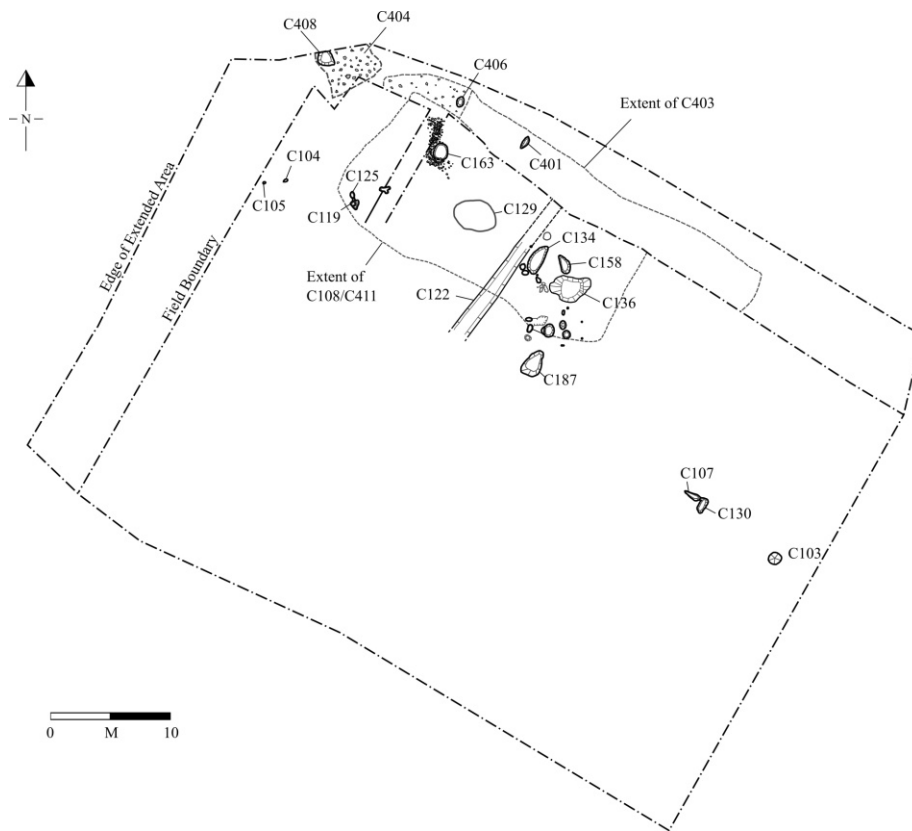
The smaller and more regular well did not have a sloping access point. This implies that access to the water itself was not required, or advantageous for this feature. The smaller size of the feature also suggests that it was not intended to be physically entered. A lack of animal bone and other artefacts from the fill indicates that it was well-maintained and cleaned. It may have served as a clean water supply for drinking and cooking. The presence of the informal pathway providing access to this feature and possibly running towards the settlement site to the northwest indicates that improved access to this feature was important and that it was frequented regularly. The feature had also been kept relatively clean, with no animal bone present within the fill, and the lack of additional artefacts within the fill may imply that processing was not carried out at the well.

The infilling of the well with stone marks a termination of the feature. Possible votive termination deposits have been identified at Donacarney Great, Muckerstown, Ballynakelly and Clogh East, however in these cases artefacts were deposited within the wells perhaps as offerings. The deposit of stone in the well at Kilgobbin appears to have intentionally decommissioned the well. It is unclear why the well was intentionally filled while the watering hole was left to slowly fill in over time. One possibility is that it may have become contaminated due to the proximity of the watering hole and was no longer suitable for drinking water. Given the date of the cremation pit along the edge of the hollow, it is also possible that the significance of the hollow altered over time and it may no longer have been appropriate to have a well here.

The larger and more irregular watering hole had a ramp sloping into the pit from the west. This may have served more functions, including ones where entering the water was required. Various washing and processing activities may have been carried out at the watering hole. A number of flint scrapers were identified within and from pits and postholes in the vicinity of the watering hole, which may indicate that hide processing or wood working was being carried out here. The broken grinding stone also suggests that some food preparation may have taken place nearby.

Perhaps the strongest interpretation is that the watering hole was intentionally created to allow for animal access to the water table. The sloped ramp would have allowed animals to easily access the water. It would not be surprising for prehistoric societies to go to great lengths to provide for their livestock given the importance

Plan of Area 2 showing location of possible hazelnut roasting pit C107 and other outlying features

with fulacht fiadh type activity. Other, admittedly larger, water holes have been suggested to have had a bathing function, for example at Camlin, Co. Tipperary and Ballynakelly, Co. Dublin (McCarthy 2010, 102). This does not appear to be the case for Kilgobbin, which is significantly smaller.

Wells and springs have powerful ritual and cultural significance, from biblical stories, nursery rhymes ('ding dong bell'), 'wishing wells', Holy Wells, Nordic 'wells of wisdom', Greek Myth, and so on (Giacometti 2016, 43) and can be associated with various curative powers. As sources of clean water from underground that can easily become contaminated and spread disease without care and maintenance, and as natural meeting points for wider communities of people, it makes sense that wells and springs are associated with ritual and superstition (ibid.). The presence of the token cremation or offering pits in the vicinity of the wells at Kilgobbin may imply the wells also played a sacred role. It has been suggested that water played a significant role in the burial rite, with the possibility that corpses were purified in water prior to cremation, a ritual still practiced in Eastern countries today (Grogan et al 2007, 105). Ritual washing may have taken place after cremation with the cremated bone being cleansed (and cooled) prior to its deposition (McCarthy 2010, 103).

Features surrounding the watering hole
A semi-circular structure surviving as an arc of stake-holes (C144, C148, C150, C152 & C174) c. 3m in diameter north-south was located immediately south of the watering hole. There was no evidence for this continuing to the west to form a complete circle. This may represent the remains of a semi-circular barrier,

placed upon them. In the Late Bronze Age there is a suggestion that Irish Bronze horns and crotals were musical instruments connected to a cult of the bull, evidence for which is also seen elsewhere in Western Europe (Coles 1965, cited in Herity & Eogan 1996, 210; Waddell 1998, 236). Again in the Iron Age the importance of cattle in pre-Christian Ireland is emphasised in the early literature, such as the Táin bó Cúailnge, which has a bull hunt as its central theme (Raftery 1997, 125).

Unlike some of the other large watering holes identified to date (for example Carrickmines Little and Laughanstown and Ballynakelly, Co. Dublin, and further afield at Donacarney Great, Muckerstown, Clonee, Co. Meath; Clogh East, Co. Limerick, and Ballycorick Co. Clare), the watering hole at Kilgobbin was not associated

windbreak or rack. A cluster of pits were also present to the south of the watering hole, with two of the pits enclosed by the arc of the stakeholes (C156 & C168). Given the proximity to the watering hole to the north, it is possible that the structure was associated with activities being carried out within the watering hole, perhaps as a drying rack for processed hides.

A possible hazelnut roasting pit was identified to the east of the hollow in Area 2. It was oval in plan, with scorching along the northwest and west side. The fill (C133) contained patches of scorched sand as well as 41 endocarp fragments of hazelnut (Gilligan 2018, 4). Hazelnut roasting pits consisting of simple pit ovens have been excavated on the Scottish Hebrides and the Isle of Man, while a Neolithic example was excavated at Tullaheddy, Co. Tipperary (OCarroll 2018, 11). The feature remains undated, however it may be contemporary with the Early Bronze Age activity in the vicinity of the well and watering hole, or relate to the earlier Neolithic or Beaker activity around the hollow.

A linear pit (C134) was also uncovered to the west of the watering hole. It measured 2.1m in length, 1.05m in width and c. 0.4m in depth. The location of the linear pit at the base of the hollow in the same general area as the well and watering hole may suggest that this feature was also intended as a method of accessing water table and indeed during the excavation it was found to lie mostly below the water table. The shape was trough or bath-like. A large posthole was located near its southwestern end (C140). The posthole was beside a possible offering pit (C141) and is suggested to be a marker post for the pit, similar to the other offering pits to the south and west. As such, it is possible that the posthole may be unrelated to the linear pit, although its positioning exactly at the end of the linear pit suggests the two were connected in some way. Another smaller linear pit (C158) was uncovered nearby, dug to
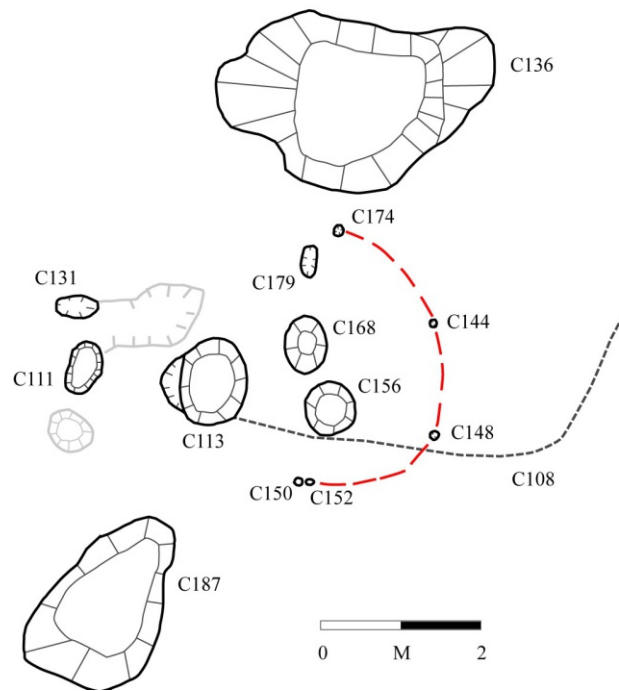
Arc of stake-holes defining structure to the south of watering hole (top)

Post-excavation view of hazelnut roasting pit C107, looking south (centre)

Post-excavation view of linear pit C134 with posthole C140 to the right, looking southeast (bottom)

a similar depth. A convex-end scraper of Late Neolithic-Early Bronze Age style was retrieved from the smaller pit. These pits could have served a variety of functions, perhaps being used for bathing of for processing hides or wood.

Later Bronze Age activity

There is a significant reduction in recognisable activity on the site during the later Bronze Age. It is likely that the hollow and slowly-infilling watering hole in Area 2 are still frequented at this time, however perhaps only by grazing animals, with only a single sherd of pottery from the watering hole dating to this period. To the west, the archaeology carried out for the Belarmine development uncovered a Middle Bronze Age structure as well as some Late Bronze Age features including a cremation pit. A Middle Bronze Age fulacht fiadh was also uncovered at Belarmine. Middle to Late Bronze Age cremation pits were uncovered in Woodside slightly further to the west. No Late Bronze Age structures were identified during the Belarmine development works, which may explain why the use of the watering hole and hollow on the current site decreased. A possible Late Bronze Age structure was uncovered in Jamestown to the east of Kilgobbin, with another fulacht fiadh of similar date also excavated within that townland.

Iron Age farming & ritual

Kiln

A kiln in Area 3 returned a date from the Late Bronze Age – Early Iron Age. The date was retrieved from the fill of the re-cut of the kiln indicating it had been active prior to this.

The kiln (C218) was originally key-hole shaped with a large drying chamber to the north. No firing pit was identified with this phase of the kiln, however the southern end of the flue had been truncated. The kiln measured 1.45m in length with the drying chamber being c. 0.9m in diameter and the flue narrowing to 0.4m. A smaller comma-shaped re-cut of the kiln (C232) 1.4m in length and 0.5m in maximum width ran along the western side of the backfilled earlier kiln. This phase saw the firing pit and drying chamber of the new kiln almost completely located within the drying chamber of the earlier kiln, with intense burning of the fill of the earlier kiln evident in to the south where the new firing chamber had been created.

No seeds were noted within either phase of the kiln, indicating both had been well cleaned out after use. One orache seed, a type of
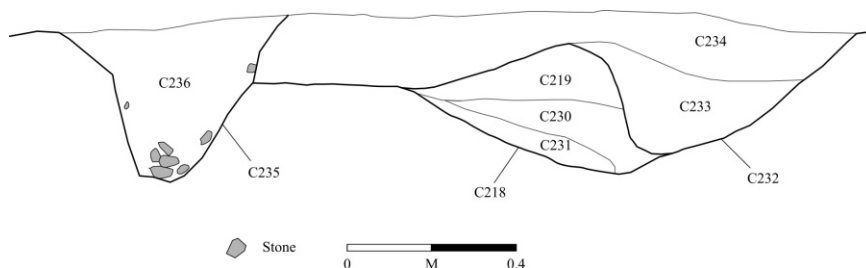
Southeast-facing section of kiln C218 and re-cut C232 (top)

Mid-excavation view of kiln C218 and re-cut C232, looking northwest (bottom)
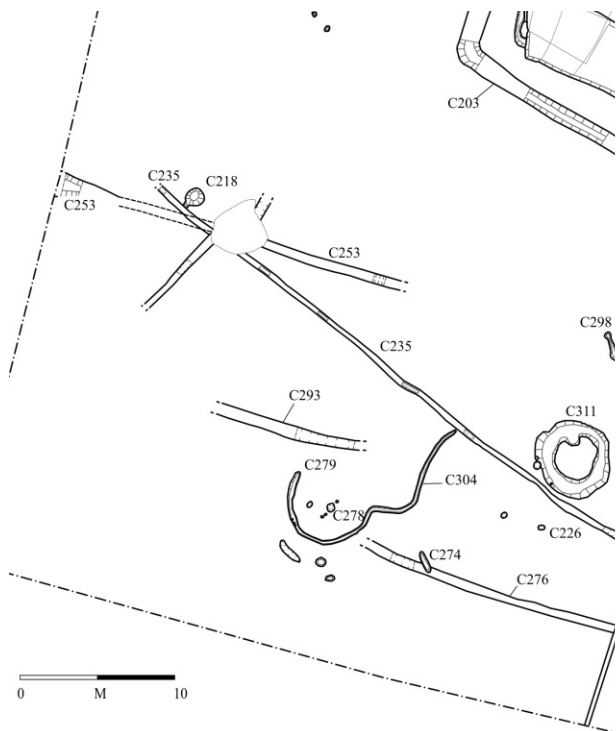
Plan of a portion of Area 3 showing the location of kiln C218 and pit C274 in relation to the other features identified

herbaceous plant, was identified, which is likely to have accidentally ended up in the kiln. Only one taxa of charcoal was identified within the kiln - ash - which would have been suitable for fuel. The fill of the recut kiln contained enough charcoal for radiocarbon dating and returned a date of 756-413BC (Poz-76171), with a 68.9% probability of it dating to 671-413BC. This dates the last use of the kiln to the transitional period between 800-500BC and the emerging Early Iron Age. A cereal-drying kiln at Kilgobbin excavated in 2004, dated to the early medieval period, was also found to have been cleaned out prior to abandonment (Dennehy 2005, 6). This was a required practice according to early medieval documentary sources (Kelly 1997, cited in Dennehy 2005, 6).

The vast majority of corn-drying kilns excavated in Ireland date to the early medieval period, and until recently their use was seen as a development imported from Late Roman Britain (Hackett 2010, 35). However a number of earlier examples from the Middle Bronze Age - e.g. Knockgraffon, Co. Tipperary (McQuade et al 2009, 33) and Carrigatogher, Co. Tipperary (Hackett 2010, 34) - indicate that the use of corn-drying kilns in Ireland is significantly older. Other kilns dating to the Early Iron Age have been excavated in County Dublin, for example at Oldtown, Swords an oval cereal-drying kiln was dated to 402-207BC (Licence No. 13E283, Excavations Ref. 2016:008), and a hearth or kiln from Bay 2 in North Dublin was dated to 160BC-AD50 (Licence No. E003918, Excavations Ref. 2008:371). A figure-of-eight shaped cereal-drying kiln at Grey Abbey, Kildare was dated to 196-4BC (Licence No. 04E233, Excavations Ref. 2004:757). Late Iron Age kilns have been excavated at Mell, Co. Louth (Licence No. 05E072, Excavations Ref. 2005:1084), Marshes Upper, Co. Louth (Licence No. 02E200, Excavations Ref. 2002:1342) and Alexander Reid, Co. Meath (McGlade, forthcoming). An undated kiln of probable Iron Age date was also uncovered at an inland promontory fort site at Knoxpark, Co. Sligo (Licence No. 94E060, Excavations Ref. 1994:206). The significant presence of kilns in Late Roman Britain has been interpreted as the result of a downturn in the climate, or, as there is little evidence for climatic change until after AD400, may relate to an increase in crop production (Monk & Kelleher 2005, 77). The rarer examples of cereal-drying kilns from prehistory in Ireland may relate to bumper harvests or periods of increased crop growing combined with inclement weather conditions. While the artefactual and ecofactual return for the Kilgobbin kiln was low, the presence of a cereal-drying kiln on the site at this time indicates that people were cultivating the land here during the Early Iron Age, and perhaps implies an upturn in crop production combined with a poor harvest season or seasons.

Pyre pit?

A second Iron Age feature was excavated at Kilgobbin. This was a linear pit (C274) that may also represent a small kiln-like feature, though an alternative interpretation as a pyre pit is also a possibility. Small non-continuous patches of burning were noted on the edges of the pit, and
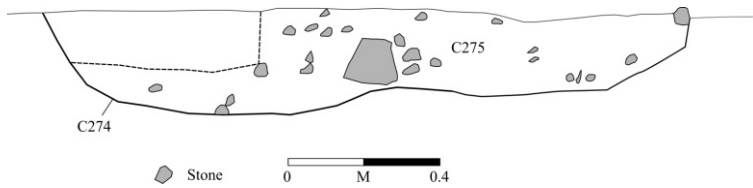
two large stones were found placed on the base of the pit dividing one end from the other and may have acted as baffle stones. A number of pieces of struck flint were found within the fill along with a collection of fractured angular quartz, some burnt bone and burnt clay.

There was no suggestion that the linear pit was a burial pit, although a small amount of un-diagnostic burnt bone was retrieved it. An unburnt large mammal bone was also retrieved from the pit. Unburnt animal bone was rare in this area of the site, and its presence in both the Iron Age pit and the fill of the barrow recut may be significant. Only ash charcoal was identified within the pit, which was also the case with the with the Early Iron Age kiln. The radiocarbon date returned was 195-45BC (Poz-76172), substantially later in the Iron Age than the kiln.

The majority of the quartz collected at Kilgobbin was unworked and therefore would usually be considered archaeologically uninteresting. Less than half of the collected pieces of quartz exhibited evidence of being struck, with only one quartz artefact being identified (Sharpe 2015, 2). Attempts were made during the excavation to collect quartz to assess its distribution across the site and avoid a skewed distribution pattern. Quartz was collected from 14 contexts on the site with 108

pieces of quartz recorded. Most contexts contained less than five pieces of quartz. The barrow contained almost 60% of the quartz recovered during the excavation, comprising a distinct concentration that appeared intentionally deposited within the southeast section of the ditch in the vicinity of the cremated deposit. A second significant concentration of quartz was noted from the linear pit, which contained almost 25% of the assemblage. The proximity of these two features to one another and the presence of quartz and small quantities of burnt bone and unburnt animal bone in both may indicate that they are connected, and imply an Iron Age phase within the barrow.

Quartz has been found (or noted) in a range of sites in Ireland, particularly megalithic tombs, but also barrows, cists and pits (Driscoll 2010, 54). The non-utilitarian use of quartz has played a strong role in interpretations of the archaeological record in considerations of British and Irish prehistory (ibid, 73). For instance, the presence of quartz has been given a ritual significance at the passage tombs of Newgrange, Co. Meath and Knockroe, Co. Kilkenny (Waddell 1998, 61) and it has also been suggested that the presence of quartz pebbles in early medieval burials of a Christian type may be a continuation of an earlier pagan tradition into this period (Ó Donnchada 2007, 10). In the vicinity of Kilgobbin at Carmenhall, a pit containing a substantial number of rose quartz pebbles was found in close proximity to the small Bronze Age flat cemetery (Reilly 2005, 35). At Donacarney Great, Co. Meath a ring barrow of Iron Age date (175 – 45 BC) contained two cremation deposits, both of which had a large unworked quartz pebble associated with them (Giacometti 2010, 28). A

ring barrow excavated in Balbriggan, Co. Dublin, with its earliest phase dating to the Early Bronze Age and latest phase to the Early Iron Age, was found to contain a number of water-rolled quartz pebbles that were possible offerings (McGlade 2016, 74). There is a possibility that the unworked quartz within the barrow at Kilgobbin was intentionally gathered and placed along with the cremation as part of the burial rite. Three of the pieces of quartz were burnt suggesting they may have been burnt with the body as part of the burial ritual (Sharpe 2015).

The connections between the fill of the Iron Age pit and barrow - in terms of the quartz deposits, their similar fills, and their proximity - might suggest the barrow remained in use, or was re-used, in the Iron Age. A ring-ditch at Jamestown nearby was in use at the same time (169-1BC; Kyle 2010, 15), perhaps indicating a renewed interest in ring barrows regionally during the Iron Age. Archaeological evidence for the Iron Age re-use of Bronze Age burial monuments has been identified in the wider area around Kilgobbin. At Cherrywood a Bronze Age ring barrow produced a date of 40BC-AD220 for the final phase (Ó Néill 2013, 42-5). At Kilmahuddrick a Late Bronze Age barrow contained a disturbed cremation deposit possibly from the bank was dated to the Iron Age (393-192BC) while an Iron Age date was also given for one of the upper fills of the ditch (373-111BC) (Doyle 2005, 59-61). This continuity can also be seen at the wedge tomb at Kilmashogue where activity dating from the 174BC-AD222 was identified within the Early Bronze Age tomb, as well as other insertions of ceramics dating to the Middle and Late Bronze Age indicating that the site had been returned to and reused throughout the prehistoric period (Chapple 2018). At Kilgobbin, while the evidence is more tentative, it seems likely that this regional pattern of Iron Age re-use of Bronze Age burial monuments is occurring. Geber notes that similar pits adjacent to burials have been found in Middle Bronze Age cemeteries in Ireland, such as at Templenoe in Co. Tipperary, where they were suggested to represent remnants of possible pyre sites (Geber 2009, cited in Geber 2015a, 2). The interpretation of the linear pit as a possible pyre pit is appealing given the artefactual similarities with the cremation deposit within the barrow re-cut. Both fills also only contained ash charcoal, though the fragment of charcoal dated within the barrow re-cut must relate to the earlier phase of the use of the barrow.

Nearby settlement

The presence of Iron Age activity on the site implies settlement was located nearby. This is particularly the case with the kiln as these tend to be located in the vicinity of settlements. There was no indication of Iron Age structures on the site, however a small post-built structure measuring 3.2m in diameter at Belarmine was dated to 390-174BC (Hagan 2013, 20), somewhat later than the kiln identified on the current site. Further to the west at Newtown Little a posthole was dated to 770-410BC, which is directly comparable to the date of the Kilgobbin kiln. This posthole was part of a roughly rectangular cluster of postholes 10m in length and 3m in width that may relate to a structure and a nearby arc of postholes (Ward 2015, fig. 13). Another posthole with a broadly similar date range (793-512BC) was uncovered at Belarmine and was part of a cluster of postholes spread over an area measuring 5 by 3.5m that possibly relates to a structure (Cryerhall 2004, fig. 11). While a clear building design is difficult to identify at the latter two sites, it is probable that they represent Iron Age dwellings. With all three of these possible dwellings located under 350m from Kilgobbin, they suggest that a non-clustered settlement was present to the west of the site.

Location of nearby Iron Age settlement sites

In the wider area, an Iron Age structure at Carrickmines Great was dated to the middle of the Iron Age (380BC-AD10) and was associated with iron-smelting and charcoal production (Ó Drisceoil 2013, 51-2). A nearby cremation pit was dated to the very end of the Iron Age at AD340-540 and represents a very late example of this form of burial rite. A watering hole or well at Carrickmines Great was also assigned to the Iron Age phase (ibid). At Jamestown to the east of the site a possible rectangular structure represented by four postholes was uncovered and dated to 404-235BC in the Early Iron Age (Kyle 2012, 18). A Late Iron Age hearth was also identified on the site indicating an extended period of occupation.

Environs of Kilgobbin Church

Excavations by Bolger (2008) identified the remains of an important ecclesiastical site at Kilgobbin Church directly south of the Kilgobbin site. It is from this church that the townland got its name – Cell Gobain, or the Church of Goban. The exact identity of the St. Goban the church was associated with is not known (O'Reilly 1901, 255). Ball (1995, 71) identified this saint with a similarly named individual whose festival fell on the first day of April, and whose name appeared in the Martyrology of Tallaght. Goodbody (1993, 11), however, points out that there may have been traditions which associated the foundation of this site with the semi-mythological figure of the Gobán Saor, or the Kerry saint who 'established Kilgobbain [sic] near Tralee'. Bolger notes that there are a number of St. Gobbáns referred to in the Martyrologies of Tallaght and Donegal, including one who was nephew to St. David of Wales (2008, 87). Interestingly, Kilgobbin is first referred to as Tech Bretnach, translated as 'the church of the Welshmen' (ibid., 86). This may be a reflection of the possible origins of the founder, or relate to the growing evidence for the transplantation of Welsh settlers into the Dublin hinterland towards the end of the early medieval period under Scandinavian patronage (ibid.).

The recovery of 'Rathdown [grave] slabs' - with their implications of Viking influence - from the graveyard of the church suggests the presence of Scandinavians in the wider area. It is also perhaps significant that the first recorded holders of Kilgobbin in the aftermath of the Anglo-Norman incursion were the descendants of a prominent south Dublin Viking family who had taken the surname Harold, and from whom Harold's Cross takes its name (Ball 1995, 66).

The lands of Kilgobbin (or at least those lands associated with the church) appear to have formed part of grant made to the Archbishopric of Dublin shortly after the Norman incursion, and it is possible that the abbots or clerical office-holders of the pre-Norman ecclesiastical site controlled much of the present parish of Kilgobbin. Ronan (1930, 71, footnote 77) places Kilgobbin and 'Kilsallaghan' within the lands of Rathsalchan, which along with large tracts of what is now County Dublin, were granted to Laurence, Archbishop of Dublin by Pope Alexander III in 1179. The degree to which the lands then came under the control of the See of Dublin in the decades following this grant is unclear, as it would appear that the grant was, to some degree, an opportunistic annexation of lands of the Diocese of Glendalough which were not at that time under Anglo-Norman control (ibid., 60). Later documents record that Kilgobbin was subsequently a 'chapelry in the Deanery of Bray, dependent on the mother church of Taney, and consequently united therewith in the corps of the Archdeaconry of Dublin' (D'Alton 1976, 415).

Bolger identified a sequence of enclosures surrounding the ecclesiastic settlement dating from AD650-950 (Bolger 2008, 107). A later phase of activity associated with metalworking waste forming the upper fill of one of the enclosure ditches dated to AD1015-1158 indicating activity continued at the settlement into the period of Hiberno-Norse influence on the Kilgobbin area, which is further implied by the presence of Rathdown slabs associated with the church (ibid.). While it is clear from documentary sources that Kilgobbin Church continued in use throughout the medieval period, there was limited further evidence for this from the excavation, with only one large ditch to the south identified as medieval and it

Plan of Area 1 showing location of
possible early medieval kiln C32
and later medieval kilns C2 and
C10 (top)

Post-excavation view of possible
early medieval kiln C32, looking
south (bottom)

was believed that the later
settlement focus lay beyond
the area excavated.

The features identified in
Area 1 at Kilgobbin are
components of the missing
later medieval settlement in
the vicinity of the church,
likely to have been an area of semi-industrial
activity that would have been located at a
distance from the main settlement. This
comprised three kilns. An 11th-12th century
metallurgical pit found further north may have
been indirectly connected with the ecclesiastical
site.

Early medieval kiln?

The earliest of the three kilns (C32) was a small
figure-of-eight shaped kiln that produced no
finds or seeds. Figure-of-eight kilns are
sometimes suggested as the predecessor to key-
hole kilns and are tentatively ascribed to the
early medieval period, with caveats relating to
dating any kiln based on morphology alone
(Monk & Kellagher 2005, 106). Similar kilns
were identified at Belarmine, one of which was
c. 100m from Artea 1 and dated to AD339-536
(UB-6190), earlier than the settlement around
Kilgobbin Church. A second early medieval kiln
was excavated in the same development further
to the north. It is possible that this kiln
represents an earlier phase of industrial features
at the edges of the early medieval settlement
associated with Kilgobbin Church. Further kilns
were identified to the southwest and southeast
of the ecclesiastic enclosure during the previous
excavations (Bolger 2008, 105). In addition to
this one of the metalworking associated with
the settlement was identified to the southeast of
the main enclosure. This suggests that much of
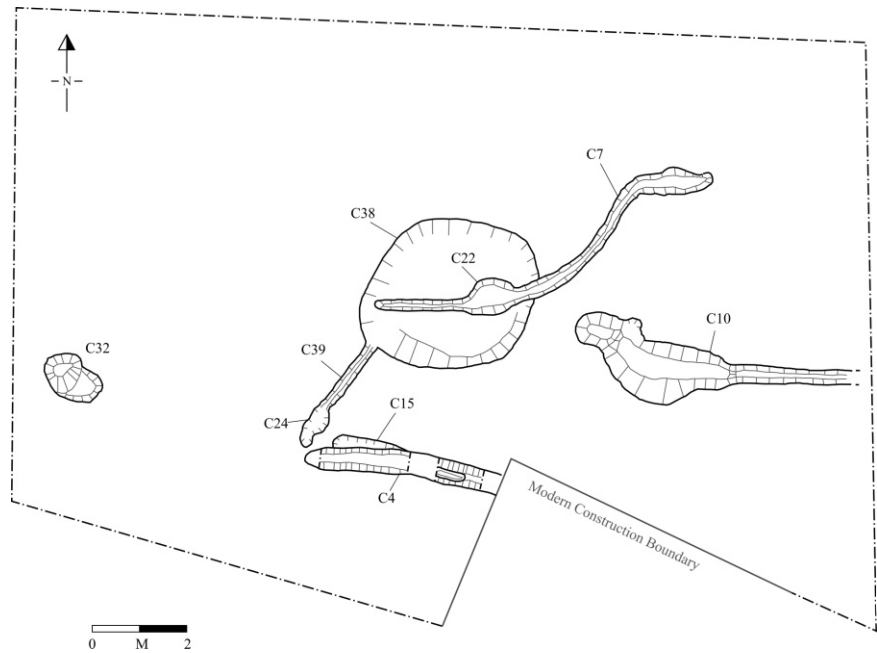
the industrial activity carried out at the
ecclesiastic settlement was taking place near the
edges. The western kiln in Area 1 may relate to
this earlier phase of activity around the edges
of the early medieval settlement.

Medieval kilns

The other two kilns in Area 1 were significantly
larger than the possible early medieval example
and indicate the practice of constructing kilns
and fire-related activities at the edges of
settlements continued into the later medieval
period. The ceramics from the two kilns and the
drain to the south indicated they were in use
during the first half of the 13th century (Scully
2015a).

The easternmost kiln (C10) had been adapted
so that it could function in two directions. This
kiln had a drystone masonry wall (C11) running
along the south side of the drying chamber,

Plan of the medieval kilns in Area 1 showing the drystone masonry components of both medieval kilns (top)

Post-excavation view of masonry along souithern side of drying chamber of kiln C10, looking south (bottom)
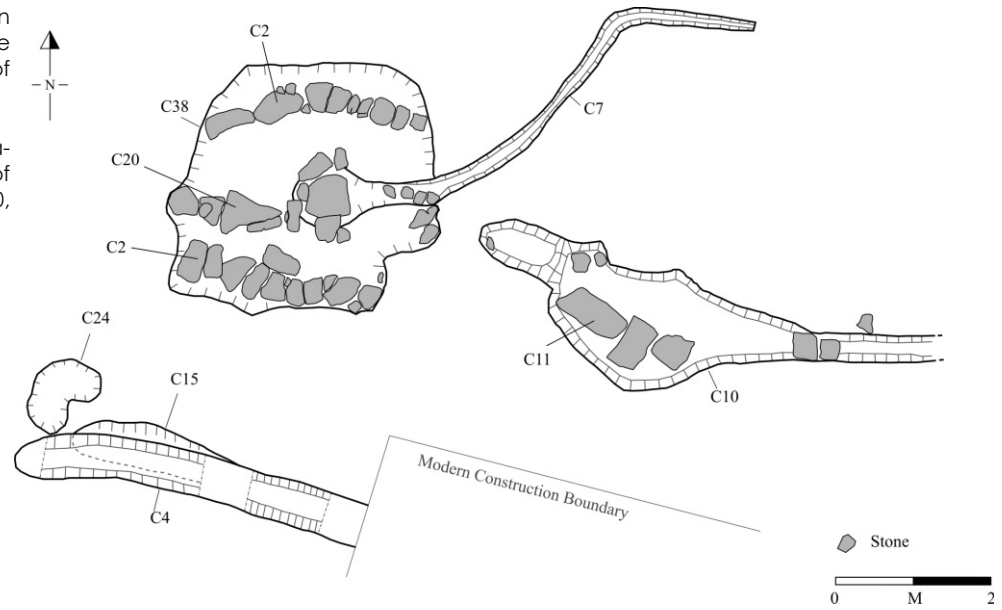
possibly to provide support along that side, although it is strange that this was the only masonry associated with the kiln. A long flue ran from the kiln to the east, however it was not possible to identify a fire pit at the end of the flue as the eastern end had been truncated by modern activity. A second phase of the kiln was much more compact, with a small firing pit located directly to the west of the drying chamber. A number of stones set onto the base between the firing pit and the main chamber would have acted as baffle stones and the connection between the two chambers was somewhat waisted. This set up seems to have been intentional, possibly allowing the kiln to be used from two different directions, dependant on wind direction. It appeared that the eastern flue was the last to be used, however both may have been used interchangeably during the period of use of the kiln. As with the Early Iron Age kiln in Area 3, the medieval kilns in Area 1 appear to have been well cleaned out prior to abandonment, which was a required practice according to early medieval documentary sources (Kelly 1997, cited in Dennehy 2005, 6). It also suggests that the kilns were abandoned after use rather than failing during the cereal-drying process. Small quantities of free-threshing wheat, oat and barley were retrieved from the drying chamber while a higher quantity of seeds was retrieved from the western firing chamber. As it appeared that the last firing of the kiln was from the east, this drying chamber may have needed to be sealed prior to the use of the kiln and the additional material within the fill may be waste

from the vicinity of the kiln. A range of medieval ceramics were retrieved from the fills of the kiln including fragments of jug, cooking pot and storage jars. Both phases of the kiln were roughly key-hole shaped, though the shape in plan was not overly distinctive.

The largest kiln on the site was originally interpreted as a small structure. The reason for this was its greater size and the presence of granite foundations for what was the drying chamber. While various alternative interpretations were explored in the preliminary report (McGlade 2015, 43-5) the evidence indicates that the feature represents a much larger and more structural kiln. The sub-rectangular drying chamber was constructed above ground with stone foundations to the north and south, and the suggestion of a return to the east. The internal dimensions of the chamber were c. 2.7m by 2.4-2.6m. The superstructure of the drying chamber did not survive, though some baked clay was retrieved

from the fills associated with the kiln.

A fire-pit was located to the off-centre in the base of the drying chamber connected to two flues. There was a setting of granite slabs around the fire-pit and a large rounded granite slab over the fire-pit itself. One of the flues ran to the west stopping almost in line with the western end of the drying chamber wall foundations. This flue was overlaid by stone paving slabs. The second flue ran to the east, curving to the northeast after exiting the drying chamber before turning again to the east. Some stone was present over the eastern flue also, though it did not have a slab covering as seen in the western flue. The flues ran approximately across the centre of the drying chamber. The flues would have allowed the kiln to be used from two directions. The fills of the flues, as well as in situ burning from the fire-pit suggested the eastern flue was in use later. It is also possible that the flues doubled as drains when the drying chamber needed to be cleaned out. The lack of a western enclosing element for the drying chamber implies the entrance was at that end, with the paving over the western flue possibly to protect the flue from being damaged due to trample and to contain the airflow blowing through it and ensure it reached the fire-pit, which was located slightly closer to the eastern side. There was also evidence for some constriction of the eastern flue before it entered the fire-pit, likely to control the flow of air to the kiln.

The sub-rounded granite slab overlying the fire-pit was interesting, given that it was incorporated well into the stone setting around the pit and capping the western flue. Could this have have marked the end of the use of the kiln and a levelling of the interior of the drying chamber to serve a different purpose? This is unlikely as the eastern flue remained uncapped, which would be unusual if the purpose was to change function of the

Mid-excavation view of kiln C10, looking west. Flue can be seen running to bottom right corner (top)

Mid-excavation view of structural elements of kiln C2, looking northwest (bottom)

structure. The central stone may also originally have been placed outside the fire-pit, possibly offering a work surface within the drying chamber before being placed within the central pit to mark the end of the use or termination of the structure. Alternatively it may have been placed over the fire-pit to dampen down flames, acting as a baffle stone.

Various other functions for the structure were considered previously, such as a smokehouse or bakehouse, however seeds retrieved from the fire-pit and a larger number from the flue to the west indicate that the interpretation as a kiln is more appropriate. Free-threshing wheat, oat and barley was retrieved from fills within the fire-pit and western flue of the kiln. One rye seed was also present within the western flue (Gilligan 2018, 18). Leinster Cooking Ware was the predominant pottery type identified from the various components of this kiln with some Dublin Coarseware and Dublin Ware retrieved from the material overlying the kiln (Scully 2015a). A broken sandstone spindle whorl was also retrieved from the fire-pit, which exhibited some burning (Sharpe 2015, 12).

Some fragments of animal bone were also recovered from the medieval features in Area 1 with cow and other indeterminate
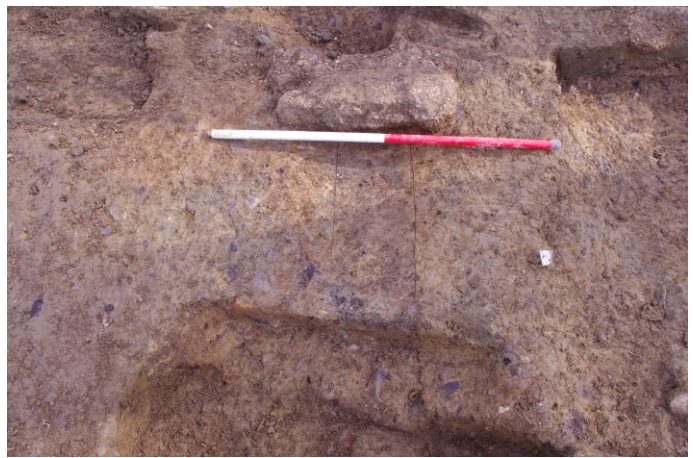
Mid-excavation view of the firing chamber following the removal of the sub-rounded granite slab, looking north (top)

Pre-excavation view of the western flue following the removal of the granite slabs covering it within the drying chamber of the kiln (upper centre)

Post-excavation view of the kiln with the northeastern flue in the foreground, looking southwest (lower centre)

Burnt and broken sandstone spindle whirl 14E339:23:1, found within the firing chamber of the kiln (bottom)

large animals identified. The presence of animal bone and broken ceramics suggests the kilns were located in close proximity to the settlement itself. A variety of wood taxa were identified from the kilns in Area 1 with ash, hazel and alder present in the easternmost kiln and ash, hazel, blackthorn and willow present in the large central kiln. Ash, hazel and blackthorn have good burning qualities, with hazel commonly selected as it burns well and can be managed through coppicing producing a steady supply of wood (OCarroll 2018, 14). Lower quantities of primary woodland trees such as oak, ash and elm is to be expected during the medieval period as pollen studies from sites throughout Ireland suggest that large-scale destruction of the major woodlands had taken place during the later Iron Age to provide land for arable and pastoral farming (ibid., 15). By this time at Kilgobbin, there appears to be a reliance on scrub type woodlands and trees when compared with the prehistoric periods.

The other features to the south of the structure and kilns in Area 1 are generally more ephemeral and specific functions were unclear, asides from the successive shallow ditches to the south. The foreman of the development site informed the archaeologists that a natural spring was identified in the southwest corner of the site prior to the archaeological works taking place. It is possible that the ditches were intended to channel the waters of this spring near to the industrial area both to avoid flooding and to provide a controlled water source for use in the area. Unfortunately little more can be said about these features as so little of them survived.

Metalworking pit

A metalworking pit containing almost 1kg of tap slag was uncovered in the northern portion of Area 3 during the excavation (Scully 2015b). This was radiocarbon dated to AD1026-1170 (94.5% probability, Poz-76168), just before the arrival of the Anglo-Normans in Ireland. Baked clay from the furnace lining was also identified within the pit and in the immediate vicinity. A number of other undated pits in the vicinity of the metalworking pit may also date to this period and indicate some activity in this part of the site at this time. Interestingly the latest

phase of activity uncovered during the excavation beside Kilgobbin Church to the south, including the final backfilling of the enclosure ditch was dated to AD1015-1158 and produced evidence of metalworking including fuel ash slag, ferric slag, crucible fragments and copper-alloy artefacts (Bolger 2008, 94). The known archaeological remains of early medieval date from the church, the Rathdown slabs and the stone cross, indicate that the ecclesiastical site was in existence during the period of Scandinavian control (ibid., 87). The settlement around the church largely dated between AD650 and AD950, despite documentary evidence for continuity into the later medieval period.
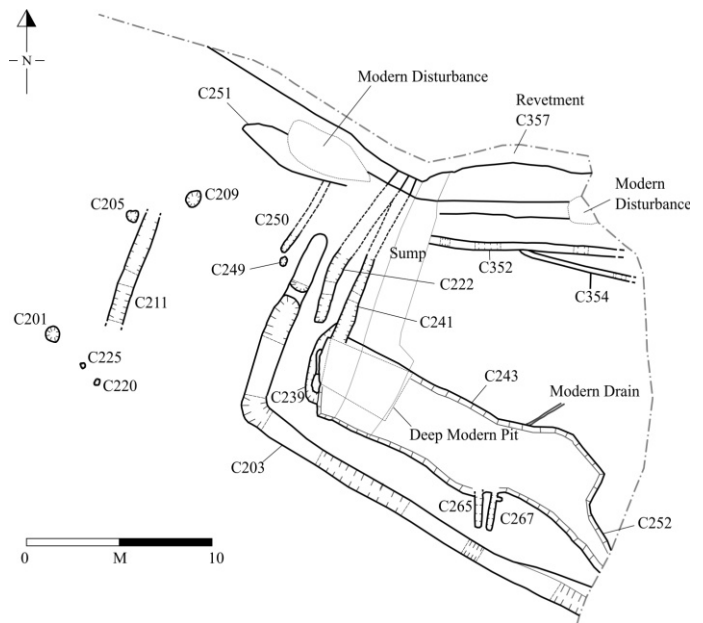
During excavations at Belarmine, a charcoal production pit was uncovered dating to AD884-1006 (UB-6364). Hazel charcoal was identified within the charcoal production pit and while oak is the preferred material for charcoal production, hazel is also able to retain high
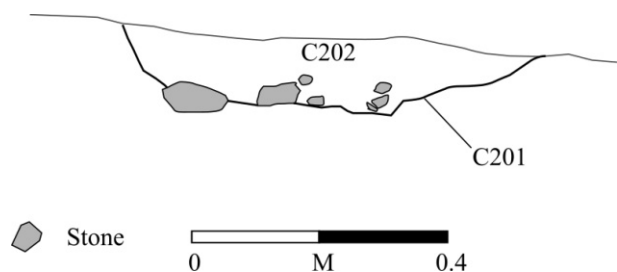
Mid-excavation view of metalworking pit C201, looking south (top)

North-facing section of metalworking pit C201 (bottom)

temperatures (Dennehy 2005, 6). The environmental analysis of a number of sites in the Kilgobbin area suggests that there were no surviving oak forests in the area by this time (O'Donnell 2005, 17). Interestingly, hazel coppice or brushwood was used in the metalworking pit from Area 3 also. Hazel brushwood (possibly coppice) similar to Kilgobbin have been identified from Viking Waterford (Woodstown) and in relation to metalworking pits (OCarroll 2018, 12). Hazel was also the most frequent charcoal identified from the latest phase of the site at Kilgobbin church also, though oak and small quantities of ash and alder were also present (Bolger 2008, 111).
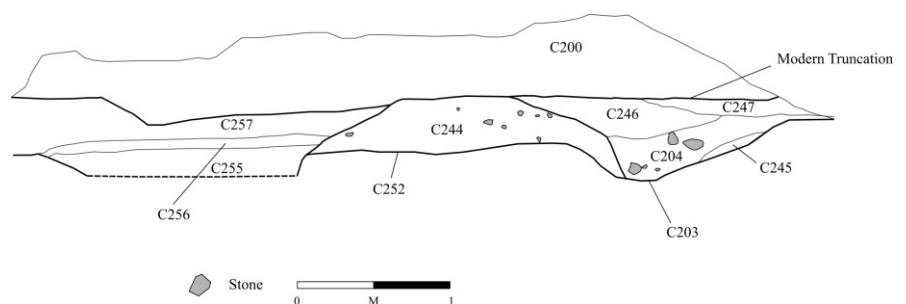
An isolated hearth was also at Belarmine that dated to AD1024-1192 (UB-6293). These more isolated features in the Kilgobbin area provide a picture of various activities being carried out away from the main settlement focus, possibly still in and around Kilgobbin Church to the south, or be glimpses of more dispersed settlement throughout the area.

Medieval activity to the north

The evidence from the excavation indicates that a settlement was established in the vicinity of Kilgobbin Castle prior to the construction of the castle in the 15th century.

Medieval water management features

A system of medieval water management features represent outlying features of the medieval village of Kilgobbin. Pottery retrieved from the features dated to the 13th to 14th centuries, pre-dating the castle, which was constructed in the later 15th century by the Walsh family. This suggests that a

Plan of northern end of Area 3 showing the location of metalworking pit C201 in relation to later medieval water management features. The majority of the features to the east relate to later medieval activity though some of the other pits near the metalworking pit may also date to 11th-12th century (top)

West-facing section of water management ditches C252 and C203 divided by medieval bank C244 (centre)

Mid-excavation view of bank C244 with watermanagement ditches C203 to right and C252 to left, looking east (bottom)

settlement, farmstead, or earlier defensive structure was present, at Kilgobbin Castle prior to the building of the current structure. The metalworking pit of 11th-12th century date may indicate a settlement was present before the Anglo-Norman period. Further evidence of small-scale medieval presence was identified in 2015, in the form of a medieval metalled surface to the north of Area 2. Medieval ditches and kilns have been noted in excavations to the north of the castle and to the west of the current development (Licence Nos. 02E1173 ext., 04E566, 05E322).

The pond was fed via the channel from the east, that would have linked it to the stream running along the eastern boundary of the site. Two additional channels leading from the ditch running around the pond to the south and west also possibly fed into the pond, and would have served as overflows for the ditch rather than feeding water into the pond. There was slight rise in the base of the ditch along the southern side as it flowed from east to west, possibly intended to raise the level of the water in the ditch to the point that water fed into the two channels running into the pond. No outlet for the pond was identified.

The pond measured 17 by c. 4.75m and c. 0.55m in depth. This depth may have been increased to a minimum of 0.75m if the bank (C244) was present the whole way around the pond. This would have given the pond a volume of c. 44.4m3, or c. 60.6 m3 including the bank. The purpose of the pond is unclear. It does not appear to have had an industrial function as it was too small to have functioned as a millpond, and had no associated outlet or millrace. Another possibility is that it was a fishpond, with a number of these known from Ireland dating to the medieval period. While on the smaller size for such a feature, it is comparable to examples in England, for example at Breckland, Norfolk, where three ponds were known measuring c. 10 x 4m (Filery-Travis 2007). Fish ponds, mainly for introduced species such as carp, pike and perch, were a regular feature of Anglo-Norman manors (Duffy 2016, 8), and were also associated with the expanding medieval religious houses (Lynch 2008, 427-8). The pond at Kilgobbin was not

particularly well-formed or picturesque, suggesting it was a purely functional feature. The presence of a sherd of Dublin Fine Ware and Dublin-type Ware jugs in the pond could indicate it was used as a drinking water source. It may also have served as an animal trough at the southwestern corner of the village of Kilgobbin, with the ditch (C203) enclosing the southern and western sides of the pond possibly also marking the edges of the settlement. The paucity of medieval settlement evidence within Area 3 of the site would suggest that these features were at the edge of any such settlement.

Medieval boundary

A bank was identified running along the western side of the stream forming the eastern boundary of the site. This may be contemporary with the medieval bank (C244) associated with the water management ditch, which extended into Area 3. Directly to the north a medieval ditch was also identified following the same alignment as the stream in archaeological investigations carried out by Ines Hagan in 2002 (Licence No. 02E1173ext., Excavations Ref. 2003:615) and by Colm Moriarty in 2005 (Licence No. 05E322, Excavations Ref. 2005:527). The ditch was seen to extend north of the western boundary around Kilgobbin Castle. This boundary, which forms the eastern boundary of the Kilgobbin

Medieval boundary bank along eastern side of site

site, appears to be of medieval date, and is associated with a number of other field boundary ditches also identified to the north of the castle.

Additional medieval features

Further to the west in Area 5 a medieval metalled surface and drain was uncovered. Two fragments of iron horseshoe were retrieved from the surface along with a number of sherds of medieval pottery. No structural remains were identified, however the surface suggests that some form of settlement may have been located nearby.

A small flint plough pebble was also retrieved from topsoil in Area 3. Plough pebbles in Ireland are found in the later medieval period, specifically in 13th century contexts, and are associated with Anglo-Norman and Cistercian agricultural practices (Brady 2015, 103-5). They represent a period of enterprising ploughing devices used to exploit the boom associated with the expansion and economic prosperity of that century (ibid.). While the plough pebble from Kilgobbin comes from the ploughsoil, it is further indication of activity, and specifically intensive agriculture, in the 13th century in the vicinity of Kilgobbin Castle. This supports the idea set out above that a settlement was present here prior to the construction of the castle in the late 15th century.

An undated charcoal production pit (C298), lying to the south of the pond, was heavily truncated by the levelling off of the field to create the playing pitches in the 1970s. The charcoal produced in the pit was all oak, which is at odds with the nearby metalworking pit dated to AD1026-1170 (94.5%, Poz-76168), which used hazel charcoal. It is likely therefore that these features are not contemporary, as if oak charcoal was being produced nearby it would have been preferred to hazel. It is possible that the oak charcoal production pit dates to the later medieval period.

Where is Kilgobbin village?

It is interesting to note that neither the current excavation, nor excavations to the north (Hagan

Flint plough pebble 14E339:100:6. The tell-tale striations are visible on the curved worn surface (top)

Extract from John Rocque's Map of County Dublin 1760 showing the approximate location of the site (bottom). The field layout in the vicinity of the site is different to that seen in the Kilgobbin prior to development. Rocque's map may be seen as more representative of the lands being undeveloped fields at this time. Rocque depicts a cluster of buildings to the east and southeast of Kilgobbin Castle, with only a small number of these being on the werstern side of Kilgobbin Road. It is possible that this cluster of buildings represents Kilgobbin Village and that it did not extend to the west of the castle. The features idenitifed at the north of Area 3 appear to have been at the edge of this settlement.
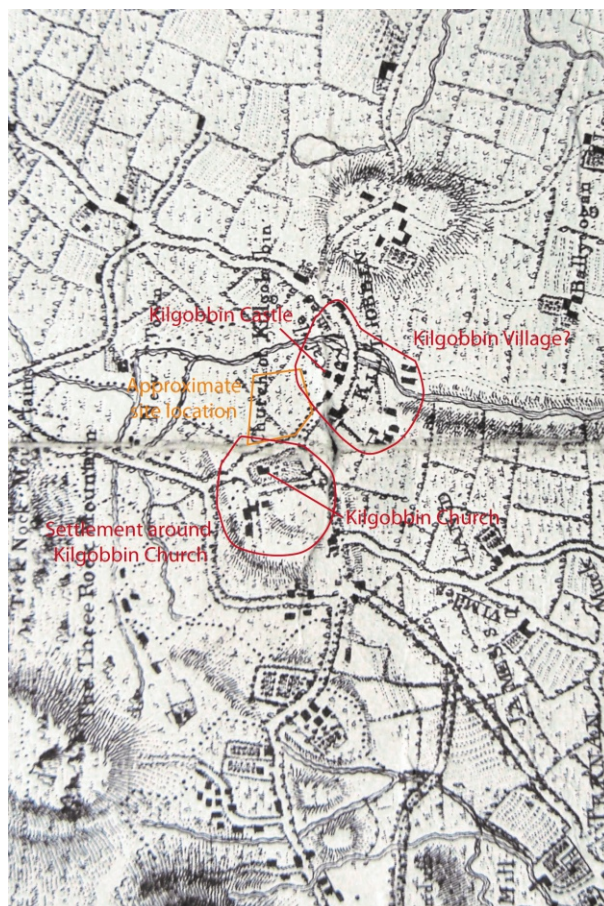
in 2002 and Moriarty in 2005) or west of the castle (Connell in 2007; Licence No. 07E413, Excavations Ref. 2007:520), have identified the settlement (RMP No. DU026-12101) associated with Kilgobbin Castle. While some medieval ditches and features indicating agricultural processing, such as a corn-drying kiln, were found to the north of the castle (Moriarty 2005, 11), no medieval activity was identified to the west during the development of the school to the north of the current site. The excavation in 2014 and 2015 found a medieval water management system and pond at the northern end of Area 3. To the north of this an 18th -19th century lane, farm and associated yards had truncated the continuation of these medieval features, which were not identified again at the southern end of Area 5. A metalled surface and drain identified at the western end of Area 5 indicates that medieval activity extended to the west also. It is possible that the medieval settlement associated with the castle was centred to the east in closer proximity to the castle itself. It is also possible that some evidence for this medieval settlement extends into the unexcavated section of the current site to the north of Areas 2 and 3 and south of Area 5, which has been preserved in situ as a green space within the development.

17th century battlefield

One of the more unusual finds on the site was a granite cannonball recovered from topsoil in Area 3. In January 1642, while Kilgobbin Castle was occupied by Matthew Talbot, a rebel and tenant of Adam Loftus or Rathfarnham Castle, a party of horse approaching Kilgobbin were fired upon by the castle's occupants, resulting in the death of one soldier and the mortal wounding of another time' (Goodbody 1993, 34). This action gave rise to the later designation of a field to the north of the castle as 'The Battlefield' from which 'cannonballs are said to have been dug up from time to time' (ibid). It is possible that the cannonball uncovered during the excavation is related to this 17th century skirmish.

Pecked granite cannonball 14E339:200:16, phot taken by S. Sharpe (top)

Satellite image of the site indicating the location of phases of activity on the site: Early Neolithic and Chalcolithic (red), Early Bronze Age (white), Iron Age (green), early medieval (orange), Hiberno-Norse (purple) and medieval (blue)

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