

Appendix 16.2 Archaeological Testing Report



Archaeological Test Trenching Report

Kilcarbery Grange,
Clondalkin,
Dublin 22

Prepared for:

South Dublin County Council

Licence Number: 17E0367

5th June 2018

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1 INTRODUCTION

1.1 General

This report has been prepared on behalf of South Dublin County Council to discuss the results of a programme of Licensed archaeological test trenching undertaken at Corkagh Demesne, Deansrath, Kilcarbery and Nangor townlands, Clondalkin, Dublin 22 (figure 1; Licence No.: 17E0367; Ordnance Survey sheet 021).

The writer received a Licence to excavate approximately 16,000 linear metres of test trenches within the proposed development area (Fields 1 – 11, figure 9). Trenching was carried out by Dermot Nelis and Colm Flynn (Licensed archaeologists) between 16th November and 8th December 2017. Excavation was carried out by two machines fitted with 1.8m wide flat buckets, and under constant archaeological supervision.

Test trenching was carried out as per the Licence Application and Method Statement, although a number of test trenches were excavated slightly shorter than outlined in the Method Statement due to the presence of areas used as footpaths within the development area. In addition, one trench (Trench 1) was not excavated in Field 9 due to the presence of standing water at the northern end of the field.

Test trenching revealed in total nine possible archaeological features in three fields (Fields 6, 8 and 9; figure 9).

1.2 The Development

South Dublin County Council proposes to construct approximately 1,000 dwellings over a 5–7 year period on a greenfield site measuring approximately 87.37 acres (35.36 hectares).

1.3 Project Background

Archaeological research and fieldwork have been undertaken in three phases. The first phase consisted of a paper and digital survey of archaeological, historical and cartographic sources, resulting in the preparation of a detailed desk-based assessment (Nelis, 2016). The second phase involved a geophysical survey of the proposed development area (Leigh, 2017; see **Section 3** below), while the third phase involved excavating test trenches within the development area (see **Section 4** below).

A fourth phase of archaeological work is ongoing at the time of writing, and this involves the Licensed excavation of nine possible archaeological features which were discovered during the test trenching programme. The results of these excavations will be presented in a separate report when fieldwork and post-excavation analysis have been completed.

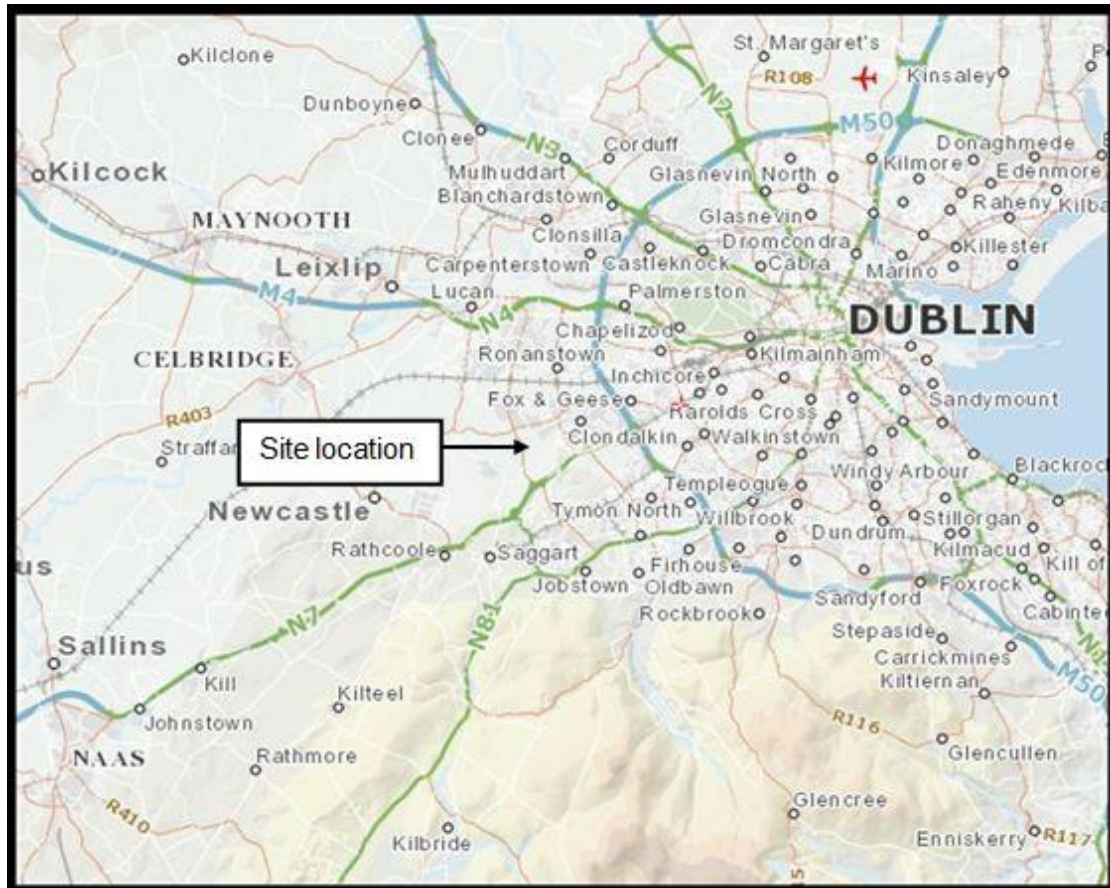


Figure 1: Site location

1.4 Project Team

Dermot Nelis BA ArchOxon AIFA MIAI

Dermot Nelis graduated from Queen's University Belfast, and after gaining extensive fieldwork experience undertook postgraduate studies at the University of Oxford in archaeological consultancy and project management.

Dermot acted as Senior Archaeologist on several road schemes for various County Councils, and Directed large-scale multi-period excavations associated with those developments. He has completed over 150 Licensed fieldwork programmes and

more than 250 archaeological, architectural and cultural heritage desk-based reports and Environmental Impact Assessments.

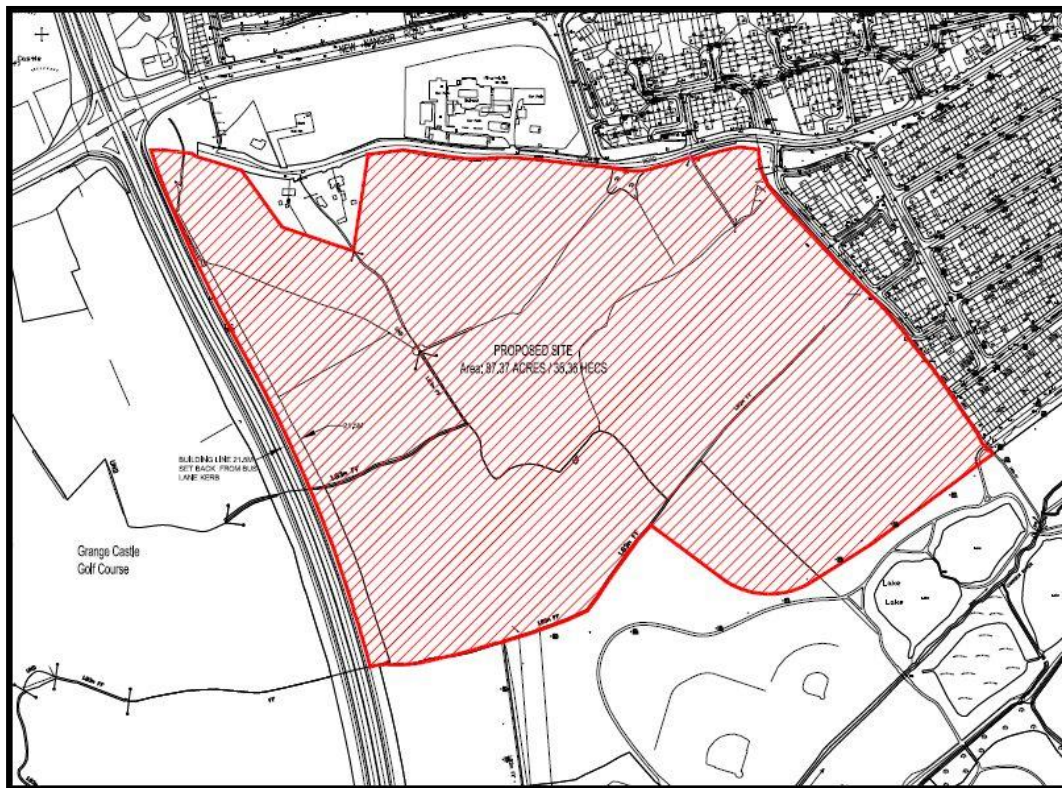


Figure 2: Site layout



Figure 3: Aerial photograph, showing the development area

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Summary of RMP Sites within the 1km Study Area

A ring-barrow (DU017-080) is recorded in Kilmahuddrick townland, approximately 730m north west of the proposed development area (www.archaeology.ie). It was revealed through geophysical survey and test trenching, and consisted of a ditch (2.5m wide x 1.6m deep) which enclosed a maximum area of 13m. Fragments of a human skull were found in the upper fill of the ditch, while a cist-like structure was exposed in the northern quadrant of the ditch. Cremated bone associated with Early Bronze Age pottery and a bead were found within the interior of the enclosing ditch. Soil samples from the ditch contained remains of barley, wheat, oats and evidence for hazel, haw and sloe.

A *fulacht fiadh* (DU017-084) is recorded in Nangor townland, approximately 530m north west of the proposed development area. It is recorded (www.archaeology.ie) that monitoring of topsoil-stripping in 2000 revealed the remains of a small *fulacht fiadh* in this area, consisting of a small pit or trough, a spread of heat-cracked stone and a linear feature to the south west of the trough. The pit/trough consisted of a sub-circular cut into natural geology which measured 1.25m x 0.56m. The spread of stone measured 1.92m north/south x 1.18m with a maximum depth of 0.05m. Approximately 6m to the west of the spread, a linear gully feature was revealed. This consisted of a cut into natural boulder clay measuring 2.57m north/south x 0.28-0.54m. It had a depth of 0.16m with sharply sloping sides and a flat base. The cut was filled with a moderately compact, mid-brown clay containing frequent pieces of oxidised clay and occasional flecks of charcoal. Infrequent fragments of burnt bone were noted in the fill.

A habitation site (DU021-012) is recorded approximately 400m south east of the proposed development area in Corkagh Demesne townland (www.archaeology.ie). Excavations prior to the construction of the North Eastern Gas Pipeline revealed a scatter of stake/post holes in possible association with a gully. Stone implements including a flint leaf-shaped point and a chert end scraper were found.

An enclosure (DU017-040) has been recorded through aerial photography in Bawnoges townland, approximately 600m north east of the proposed development area. This feature no longer survives above-ground.

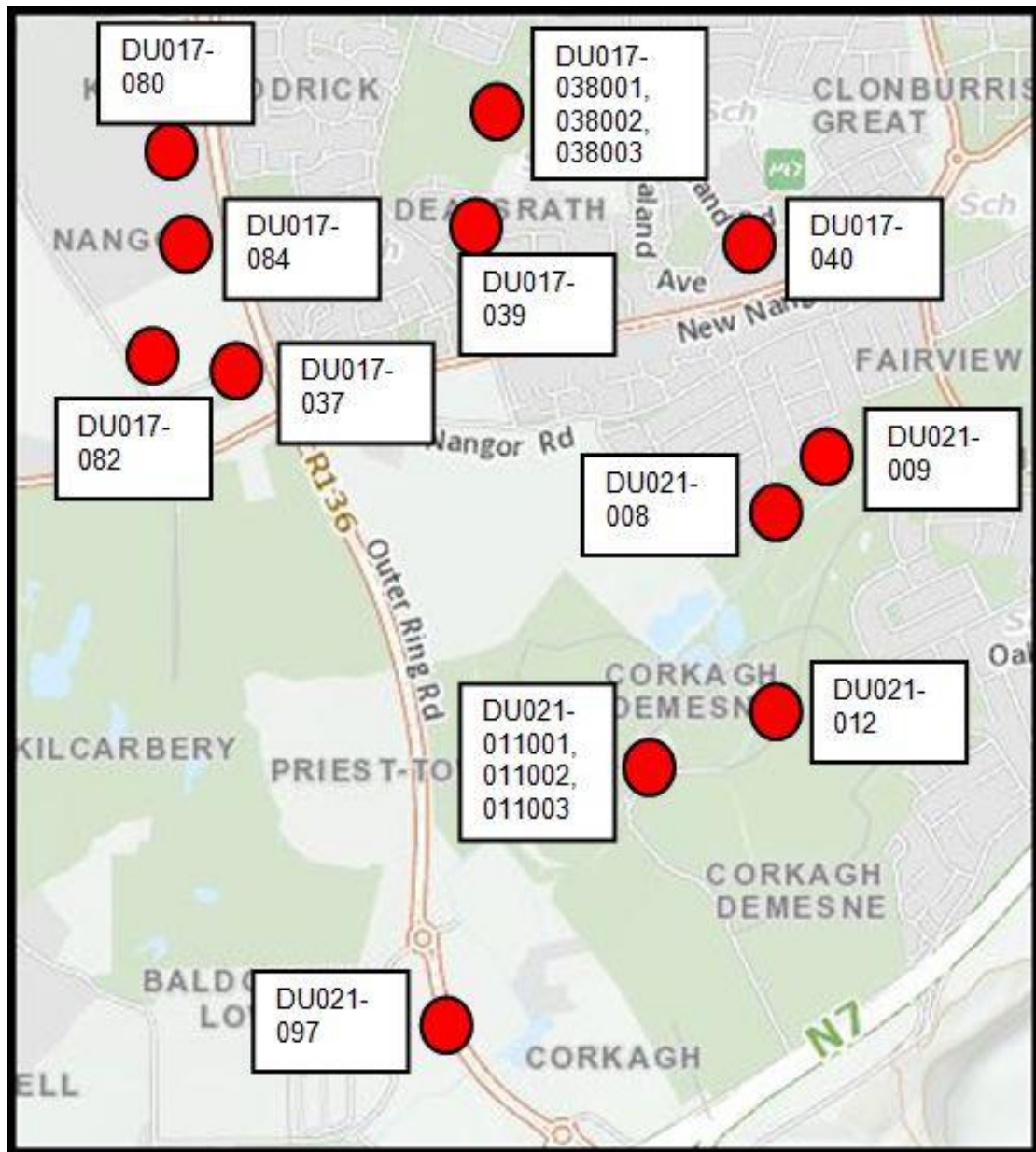


Figure 4: RMP sites within the 1km study area

A church (DU017-038001), graveyard (DU017-038002) and moated site (DU017-038003) are recorded in Kilmahuddrick townland, approximately 750m north of the proposed development area.

An unclassified castle (DU017-037) is recorded in Nangor townland, approximately 200m north west of the proposed development area. It was named “*Nangor castle*” on the First Edition OS 6-inch map and “*Nangor castle on site of castle*” on a later edition, suggesting that it had been incorporated into a 19th century structure. All buildings on the site have been demolished, leaving no surface trace of the earlier structure. There are earthworks in the field to the south of the castle. Pre-

development testing in the vicinity of the castle in 1996 produced evidence for a substantial ditch and an associated shallower linear feature of uncertain date. Test trenching in the field bounding the castle to its south uncovered several lignite cores and slivers, pottery and metal slag, suggesting a date in at least the Early Medieval period. Human skeletal remains were also uncovered, as were numerous charcoal-flecked irregular features (www.archaeology.ie).

An unclassified castle (DU021-011001) is recorded in Corkagh Demesne townland, approximately 330m south of the proposed area of land take. According to Ua Broin (www.archaeology.ie), Corkagh House “stood within the moat of a castle, ruins of which consisted of an arched entrance, portion of a battlemented parapet and eight windows”. Corkagh House was demolished except for the stable yard in the 1960's, and there is no visible surface trace of the castle or the moated site (DU021-011002). A mill (DU021-011003) of uncertain date has also been noted near Corkagh House (www.archaeology.ie).

A tower house (DU017-039) is recorded approximately 450m north of the proposed development area in Deansrath townland. All that survives of Deansrath Castle is part of a stair tower, which rises to two storeys with a partially vaulted over-ground floor. It appears to be part of a gatehouse shown in a drawing by Beranger in 1773 (www.archaeology.ie), and was part of a larger castle complex described in the 18th century as defended by a deep enclosing ditch. The Dean of St. Patrick was proprietor in 1641, but by 1656 it was described as the “*stumpe of a castle*” (*ibid.*).

A Medieval field system (DU017-082) is centered on a point approximately 380m north west of the proposed development area in Nangor townland. An excavation in 2001 revealed a Medieval ditch complex which appears to have represented the remains of field boundaries with associated water management gullies.

A mill (DU021-008) is recorded in Fairview townland, approximately 270m east of the proposed area of land take. No further information is recorded on the National Monuments Service online database.

A well (DU021-009) is also recorded in Fairview townland, approximately 390m east of the proposed development area. Known as Two Sisters well, it no longer survives above-ground (www.archaeology.ie).

A corn-drying kiln (DU021-097) is recorded in Baldonnell Lower townland, approximately 880m south of the proposed development area. Again, no further information is recorded on the National Monuments Service online database.

2.2 Summary of Previous Fieldwork in the General Development Area

Reference to Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie) confirmed that no fieldwork programmes have been carried out within the proposed development area.

Numerous fieldwork projects however revealing extensive archaeological remains have been carried out in townlands surrounding the proposed area of land take.

The following list summarizes sites in which archaeological material has been discovered in close proximity to the proposed development area.

Site name	Corkagh Demesne
Licence No.	Not recorded
Licence holder	Margaret Gowen
Site type	Suspected enclosure
ITM	E 705616m, N 730291m
No further information is recorded on this possible Medieval enclosure.	

Site name	Nangor Castle/Grange Castle, Kilmahuddrick, Clondalkin
Licence No.	97E0116
Licence holder	Cia Mc Conway
Site type	Medieval?
ITM	E 704428m, N 731227m
<p>Test-trenching was carried out along the line of a road leading northwards from the vicinity of the now-demolished Nangor Castle to Grange Castle, within the area of a proposed industrial park. This was the second phase of testing, the first phase having concentrated on the field to the immediate south of Nangor Castle and its general vicinity.</p> <p>An intensive geophysical survey had been carried out along the line of the proposed road and several anomalies were identified. This testing specifically examined the areas of anomalies, as agreed with the National Monuments Service. Trenching was carried out by machine, and halted once <i>in situ</i> archaeological deposits were</p>	

encountered. However, as experienced before, only subsoil-cut features survived-years of ploughing and the fairly shallow ploughsoil led to the removal of any potential archaeological stratigraphy.

Seven trenches were opened. Of these, only three, all located in Grange Field 3, to the east of Grange Castle, produced any significant archaeology. Two linear features 0.5-0.8m wide, of unknown date and function, ran in a north/south direction. However, their proximity both to the 15th century castle and to one another could suggest substantial archaeological potential. Some spreads of brown soil had 20th century pottery inclusions in their upper surface, while other areas, a mix of brown soil and broken slate subsoil, were probably the result of the dragging action of the plough.

Site name	Grange Castle Business Park, Kilmahuddrick, Clondalkin
Licence No.	97E0116ext
Licence holder	Richard N. O'Brien
Site type	Medieval
ITM	E 703948m, N 731830m

Monitoring and excavation were undertaken in advance of the construction of an access road and the excavation of foul sewers for a Business Park at Grange Castle. The excavation work continued until February 1998. Documentary evidence is scarce for Nangor Castle, but it is known that a castle stood on the site in the 16th century. Grange Castle is an upstanding 15th century tower house. It is proposed to develop an industrial park in this area.

Previous archaeological assessment by Cia Mc Conway and geophysical survey by A. Mc Cleary, ADS Ltd, in February 1997 established that the area was archaeologically sensitive.

In advance of construction of a site access road, topsoil was stripped from a 24m wide area by mechanical excavator, under archaeological supervision, for a distance of 480m northwards from Nangor Road. A further strip, 6m wide and 1.3km long, was excavated for sewers. The full 24m wide strip was excavated in the field adjacent to Grange Castle.

All archaeological features uncovered had been truncated by deep ploughing, resulting in the removal of all but sub-surface features cut into natural boulder clay.

A curving ditch was identified in Field 1; it terminated at Nangor Road, and was orientated north east/south west. It was 30m in length, 0.8-0.9m deep and 1.2-2.4m wide. The eastern terminus continued beyond the limits of the excavation. The upper fills contained charcoal, mortar, flint and animal bone, and were aceramic. A

decorated bone comb, stick-pin and knife gave the later ditch phase a terminus *ante quem* of from the 12th to the 13th century AD.

A stone causeway, 0.5-0.6m wide and 0.06-0.1m deep, crossed the ditch. The existence of this ditch had been shown in Mc Conway's assessment.

Field 7 is located between Grange Castle and the Kilmahuddrick Housing Estate. Two curving ditches were identified in this field. One was found under a Post-Medieval stone and brick trackway. It was 51m in length and varied in width from 1.1m to 1.4m, and in depth from 0.3m to 0.4m. A stone causeway, 0.6-0.84m wide, crossed it towards the western side of Field 7. No datable finds came from the primary fills of the ditch, but the secondary fills consisted of charcoal-rich clays with animal bone. It continued beyond the limits of the excavation at its western end.

A second ditch was found 1.6m east of the eastern terminus of the first. No archaeological features or deposits were found in this gap. The second ditch closely resembled the first; it was 22m long, 2m wide and 0.5-0.6m deep. The primary fills were sterile apart from some animal bone. The secondary fills consisted of charcoal-rich clays in which were found animal bone, mortar, two metal knives and a fragment of worked lignite. An incomplete one-sided decorated bone comb and fragments of another in the upper fills gave a terminus *ante quem* of the 12th to 13th century AD. This ditch continued beyond the limits of excavation at its eastern end. The evidence from Field 7 suggests that extensive Early Medieval and Post-Medieval activity survives in this area; the ditches can be interpreted as Medieval field boundaries.

A pit that contained a deposit of iron slag was found in Field 2, north of the site of Nangor Castle; it was associated with post-holes and stake-holes, though no structural pattern could be discerned.

Elsewhere various pits, hearths, furrows and field drains were recorded; some of the hearths may be prehistoric in date.

Site name	Grange/Kilmahuddrick/Nangor (Grange Castle International Business Park), Clondalkin
Licence No.	00E0718
Licence holder	Ian W. Doyle
Site type	Monitoring & <i>fulacht fiadh</i>
ITM	E 704228m, N 731827m
Monitoring of topsoil-stripping commenced in early September 2000. In Nangor townland the remains of a small <i>fulacht fiadh</i> were revealed. This consisted of a small pit or trough, a spread of heat-cracked stone and a linear feature to the south west of	

the trough. The pit/trough consisted of a sub-circular cut into natural, 0.56m x 1.25m. The cut was steep-sided, leading to a flat base. It was filled with a mix of silt and compact, stony clays.

A spread of heat-shattered sandstone was located some 0.9m to the west of the trough. This spread consisted of a moderately compact, dark grey, sandy clay with frequent inclusions of heat-shattered sandstone fragments, pieces of burnt clay and charcoal. This spread measured 1.92m north/south x 1.18m with a maximum depth of 0.05m.

Approximately 6m to the west of the spread a linear gully feature was revealed. This gully consisted of a cut into natural boulder clay measuring 2.57m north/south x 0.28–0.54m. This had a depth of 0.16m with sharply sloping sides and a flat base. The cut was filled with a moderately compact, mid-brown clay containing frequent pieces of oxidised clay and occasional flecks of charcoal. Infrequent fragments of burnt bone were noted in the fill. Some 4m to the south of the heat-shattered sandstone spread, a small linear gully feature was excavated. This measured c. 1 m north east/south west x 0.12m with a depth of 0.14m. The fill of this comprised a mid-brown, sandy clay with frequent charcoal flecking. No archaeological objects were recovered.

To the south of the *fulacht fiadh*, a back-filled field boundary was revealed by topsoil-stripping. The alignment of this boundary possibly corresponds with a similar ditch encountered in Field 113.

Site name	Grange Castle International Business Park, Grange and Kishoge
License No.	00E0061
Licence holder	Ian W. Doyle
Site type	Various
ITM	E 604180m, N 732147m

Test-trenching was carried out at Grange Castle International Business Park, Clondalkin, Dublin 22, on a site owned by South Dublin County Council, during February 2001. The greater part of the site was under development as a business park.

The assessment was concerned with the area immediately south of the Grand Canal in Grange and Kishoge townlands. It is intended to construct an attenuation lake in this area, which will aid drainage. The lake structure will measure approximately 250m north west/south east x 90m. An underground 110kV electricity cable will run through this area and towards the west for a length of approximately 1.5km. The terrain in the

areas to be affected is relatively low-lying and the land has been used for agricultural purposes. The centre of the area intended for the attenuation lake was subjected to ground disturbance in the recent past. This disturbance appears to have been associated with the diversion of a stream and ground was stripped to bedrock in places.

Sixteen trenches were opened by mechanical excavator. These were placed in the areas which would be subjected to disturbance by the attenuation lake and the electricity cable way-leave.

Trench 1 was located at the western end of the lake and associated roadway. It revealed a long linear feature cutting natural subsoil. Where sectioned, the cut for this feature, which measured 2.6m east/west x 16.5m with a depth of 0.35m, comprised a sloping-sided flat-bottomed gully. The upper fill consisted of a moderately compact light brown clay silt with occasional inclusions of mollusc shells and small pebbles. The lower fill comprised a moderately compact grey clay with occasional mollusc shell inclusions. A small undated hearth was revealed in Trench 4, which was also located to the west of the lake.

Trench 13 was opened on the line of the electricity cable way-leave, at a point where a mound and masonry wall were observed in the extreme north eastern corner of the field. What is likely to be a modern agricultural feature was revealed, comprised of a mound, a stone wall and a metalled surface. This is likely to represent a watering-hole for livestock formed by excavating a depression, placing the upcast to the west into a mound, which was then revetted with a low masonry wall. A metalled surface was then placed at the point of animal access.

Site name	Corkagh Demesne
Licence No.	00E0935
Licence holder	Ruth Elliott
Site type	Pit furnace
ITM	E 705616m, N 730291m

A nearly circular pit (measuring 1.5m x 1.2m in plan) with sharply sloping sides, a concave base and a depth of 0.17m was uncovered. Although no finds of slag or metal were recovered, it was interpreted as a probable pit furnace. It was lined by a charcoal-rich black silty clay with occasional inclusions of mottled yellow clay. This appears to have been charcoal laid down to fuel the furnace, which was subsequently raked through to retrieve the product. It was overlain by an orange friable silty clay, which may have been the broken-up remains of the furnace superstructure. A small

patch of *in situ* burnt soil was situated 13.87m north west of this and may have been the remains of a feature related to the pit furnace.

The site was situated in a County Council park within the former Corkagh Demesne estate lands. As these parklands were levelled and landscaped in modern or Post-Medieval times, it is possible that features related to the pit furnace were truncated or destroyed. It may also be inferred stratigraphically that the pit furnace was Medieval or earlier in date.

Site name	Grange Castle International Business Park, Grange and Kishoge
License No.	01E0718 ext.
Licence holder	Ian W. Doyle
Site type	Post-Medieval
ITM	E 719482m, N 736542m

The archaeological assessment carried out in this area during February 2001 recommended that an archaeologist be present to monitor the stripping of topsoil.

The initial recognition of archaeological features was compromised somewhat by the contractor stripping a quantity of topsoil before informing the archaeologist. However, several metalled surfaces, field drains, pits and gullies of Post-Medieval and modern date were recognised during the stripping when an archaeological presence was established.

In Kishoge townland, to the south west of the area intended for the attenuation lake, the remains of a sub-rectangular structure, which appears to have burnt down, were detected. This consisted of what appeared to be the remains of slot-trenches cut into natural boulder clay with a fill of oxidised clay and charcoal. The feature measured 5.8m east/west x 4.6m and appeared to have been truncated through intensive ploughing. Access to this area was not available at the time of the assessment owing to dumping and storage of building materials. This area was later excavated by Edmond O'Donovan.

Site name	Grange Castle International Business Park, Grange and Kishoge
License No.	01E0754
Licence holder	Ian W. Doyle
Site type	Medieval field system
ITM	E 704328m, N 731197m

Excavations were carried out in Nangor townland, west of Clondalkin, Dublin 22, during October 2000–January 2001. The excavations revealed a Medieval ditch complex.

Construction of a biotechnology campus commenced in September 2000. The area excavated in Nangor is south of the construction site and outside the immediate area of impact. No detailed development is presently intended for the greater part of this area. However, additional excavation was undertaken to mitigate the impact of a gas pipeline and associated access road in part of the area formerly occupied by the Nangor Castle gardens. Nangor Castle is located immediately outside the southern boundary of the Wyeth Medical Ireland site. References to a castle at this site date from the 15th–16th centuries. All buildings on the site were demolished during the 1970s, but an area of archaeological potential surrounds the site.

Trench 1, which measured 60m north/south x 33m, was located some 90m to the north west of the castle site. Geophysical survey and subsequent test trenching had suggested that the area of Trench 1 held archaeological potential. Excavation in Trench 1 commenced in October 2000 and continued until December 2000. Activity assigned to Phase I in this trench consisted of a linear feature and a pit, both of which cut natural subsoil. These features did not produce pottery or finds. The pit consisted of a rectangular cut into natural subsoil, which contained a series of ash deposits. Areas of oxidised or fire-reddened soil present on the north east and south west sides are indicative of *in situ* burning. This cut was filled with a series of sterile silty layers and dumps of ash.

The Phase I activity was succeeded by a Medieval phase of activity which consisted of further linear features, pits and cobbled surfaces. These were assigned to a single general phase which is capable of further subdivision based on stratigraphic grounds. Finds retrieved from the fills of these features include approximately 1000 sherds of Leinster Cooking Ware and Dublin-type wares, and assorted iron finds including nails, an armour-piercing arrowhead, a buckle, a key and an intact iron sickle.

Trench 2, located to the east, detected a similar sequence of linear features, which contained sherds of Medieval pottery in their fills. Trench 3, to the south of Trench 1, detected shallow linear features running on an east/west axis. These linear features were succeeded by a pit and a metalled surface, both of which were directly associated with Medieval pottery.

Trench 4, located to the west, was excavated to examine a ditch encountered during an earlier assessment. A ditch orientated north west/south east with steep sloping sides and a rounded U-shaped base was revealed. It was 1.05m wide, narrowing to

0.3m at the base, with a maximum depth of 1.1m. Its fill contained occasional fragments of animal bone, from which a radiocarbon date of cal. AD 601–883 was obtained.

Trench 5, located to the south east of Trench 4, uncovered further Medieval linear features. A narrow ditch which ran across the trench on a south east/north west axis is likely to represent a continuation of a similar feature encountered in Trench A to the south. A series of Post-Medieval field boundaries was also detected in Trench 5.

Trench A was excavated to the south of Trench 5 on the line of the gas pipeline and associated roadway. Excavation in this area revealed an undated metalled surface and a series of ditches/gullies. Excavation of these commenced in January 2001. Although there were relatively few finds from these features, their stratigraphic relationship indicates that there were five phases of ditches and gullies in the trench dating from Medieval to modern times.

The excavation of Trench B, an extension of Trench A, revealed one feature of interest, a substantial Medieval ditch which cut into natural subsoil. This was found in the extreme eastern end of the trench. The ditch ran through Trench B, outside the northern and southern limits of excavation. The cut measured 10m north/south x 2.5m, with a depth of 1.1m as exposed, and had sloping sides and a rounded base. The ditch ran on a north/south axis with a slight curve towards the north east. In overall plan the ditch appears to have been sub-circular, enclosing an area to the east of Trench B. The fills of the ditch comprised black sticky silts with organic content. The lower and upper fills contained Medieval pottery. No trace of an enclosing bank was detected in the area opened for examination; however the depth of overburden, composed of cultivated soils, in this area may be in part composed of a levelled bank.

Trench C, to the north east of Trench B, did not detect the ditch. No archaeological material was detected in Trench C, where it was found that modern disturbance had removed the old ground surface.

In total, some 1600 sherds of native Medieval pottery were recovered from the Nangor excavations. It is of some interest that only two sherds of imported Medieval pottery were recovered. The excavated linear features at Nangor may represent the remains of Medieval field boundaries with associated water-management gullies. The presence of such linear features, which can be dated to the Medieval period by the presence of Leinster Cooking Ware and Dublin-type wares, argues for land enclosure during the Medieval period. That cereal production was the purpose of such enclosures may be suggested by evidence from pollen and macro-plant analysis. The examination of a wide range of Medieval samples from the Nangor excavations has shown a

predominance of wheat over other plant remains.

Site name	Grange Castle International Business Park, Grange and Kishoge
License No.	04E0299
Licence holder	Red Tobin
Site type	Burnt Mounds
ITM	E 703396m, N 731729m

Excavations were carried out during works on the Griffeen River realignment, part of ongoing infrastructure works within the precincts of the Grange International Business Park. The works are principally aesthetic in purpose, designed to enhance the appearance of the park and to highlight the river, which otherwise would have flowed behind the Takeda Pharmaceuticals complex. The area stripped will also accommodate the extended road network that will serve the business park when it is fully occupied.

Topsoil stripping for this realignment commenced in early December 2003 and continued intermittently until May 2004. Topsoil stripping revealed the locations of three burnt mounds. Of these three features, two were excavated, as the development was likely to have a total impact on them. The third mound was preserved *in situ*, as it was located outside the development area.

Burnt Mound 1

During monitoring of topsoil removal this site was identified as an irregularly shaped deposit of firing material (heat-shattered stone and blackened soil). The burnt-mound material extended 28m east/west along the northern edge of the stripped corridor and extended to the south x 8m from the northern baulk. The feature lay c. 25m to the west of the Griffeen River on gently undulating pasture sloping to the south. The evidence from initial survey work and subsequent excavation suggests that the main spread of this site remains preserved *in situ* to the south of this location.

The nature and extent of the mound material was exaggerated by plough action, which had dragged it from its original focal point to extend over 28m in length. After the removal of topsoil the F2 mound of firing material extended little more than 0.5m from the limit of the excavation. From this southern extremity, the mound rose to the north to a maximum height of 0.65m at the northern limit of the excavation. No cut features were exposed during the excavation.

Burnt Mound 2

The realigned Griffeen River crosses the course of the old river at two locations. To

allow for the excavation of the first of these crossings it was necessary to divert the Griffeen River into a third channel. During stripping prior to this channel being dug the second burnt mound was found. During the topsoil removal this site was identified as an irregularly shaped deposit of firing material (heat-shattered stone and blackened soil).

The area of excavation measured 13m east/west x 17.5m. A silted-up streambed abutted the southern part of the mound. The stream appears originally to have flowed from east north east to south west. It had a width of 3-5m, but the length could not be discerned as it extended beyond the limit of excavation. The stream fill contained water-rolled stones, pebbles and a dark-grey silt with a minimum depth of 0.1m. Wood residue, possibly alder, was in evidence and was probably indicative of remnants of fen woodland. This stream system is likely to have been the reason for siting the burnt mound at this location.

One of the earliest features on the site was a grouping of stake-holes cut into the clayey peat. These formed a semi-circular band. All were comparable in shape and size and contained the same fill. They ranged in depth from 2mm to 5mm with a diameter of 6-12mm. Small amounts of heat-affected pebbles and small stones around the sides of the stake-holes may be evidence for packing material. The function of the complex is not clear. Some stake-holes are vertical, while others have been driven into the ground at an angle. They follow a vague north/east to south/west pattern, but the angled stakes do not appear to have offered support to each other or to any possible structure.

The burnt mound was situated on the northern bank of the silted up stream. The bank was steep-sided. The main concentration of firing material was in the west. No evidence for a trough was found and the only evidence of activity associated with the burnt mound appears to be the stake-hole complex. The mound measured 11m east/west x 4.5m. It is more likely that the original east/west dimensions were closer to being 6m, with a depth of 0.12-0.25m.

Covering and surrounding the burnt mound was a layer of peat measuring 4.64m from north to south x 14.7m, with a surviving depth of 0.2-0.45m. This was a moist dark-reddish-brown peat of moderate compaction that contained inclusions of sphagnum moss, plants and wood. It was most pronounced to the south of the burnt mound, sloping downwards to the stream.

A third burnt mound was recorded during the course of the topsoil-strip. The site was not fully exposed but was identified by a number of concentrations of the characteristic firing material. This site was not impacted on by the development and it was possible

to preserve it *in situ*. It was first sealed using a double layer of geotextile material and then covered by a soil bund forming the boundary between the business park and the pitch-and-putt course.

Site name	Grange/Ballybane/Nangor
License No.	13E0435
Licence holder	Gill McLoughlin
Site type	Furnace pit (monitoring)
ITM	E 703978m, N 703391m
<p>Monitoring of a proposed central carriageway at Grange Castle Business Park, Co. Dublin was carried out in November 2013. Monitoring followed an archaeological appraisal carried out in September 2013 and geophysical survey was previously carried out throughout the entire area of Grange Castle Business Park.</p> <p>Two features of archaeological interest were identified during monitoring of topsoil stripping in the east of the development area in Nangor townland. These features comprised a small bowl furnace (0.36m x 0.33m x 0.15m) filled with charcoal-rich soil and slag, and a shallow oval pit (0.97m x 0.69m x 0.1m) filled with charcoal, thought to be a charcoal clamp. These features were located approximately 35m apart and may have been associated with each other.</p>	

2.3 Cartographic Analysis

Ordnance Survey Map 1:10,560 First Edition 1844 (figure 5)

The proposed development area is recorded as part of 15 fields on the First Edition map. Three townland boundaries, a parish boundary and a barony boundary are recorded within the area of land take. Research suggests that:

“hoards and single finds of Bronze Age weapons, shields, horns, cauldrons and gold personal objects can all be shown to occur on boundaries” (Kelly 2006, 28).

Two small structures are recorded in the north east corner of the proposed development area on the First Edition map, although neither of these features were noted during the walkover survey or test trenching. A small area of possibly mixed woodland is recorded in the north west corner, although it is not noted on later edition maps. Several tree-lined field boundaries are recorded within the proposed development area.

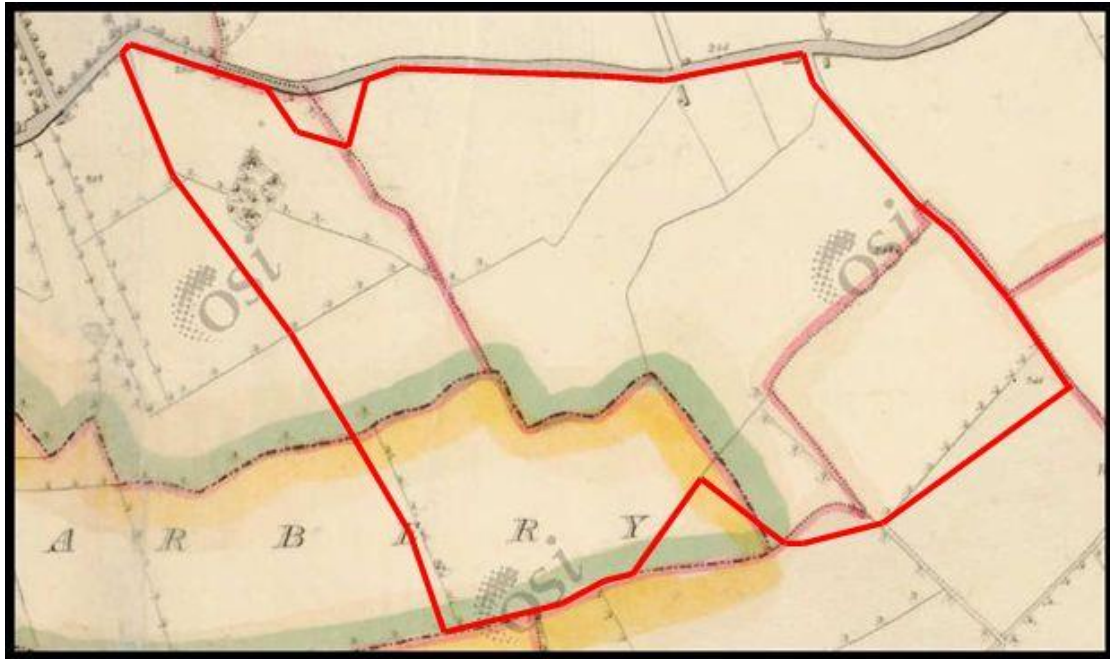


Figure 5: Extract from First Edition 1:10,560 Ordnance Survey Map (1844), showing the development area

With the exception of the above-mentioned two structures, there are no archaeological or additional architectural features recorded on the First Edition 1:10,560 map within the area of proposed land take.

Ordnance Survey Map 1:2,500 First Edition 1863 (figure 6)

Two structures are again noted in the north east corner of the proposed development area. Some townland boundaries have changed between the time of the First Edition 1:10,560 map and the First Edition 1:2,500 map.

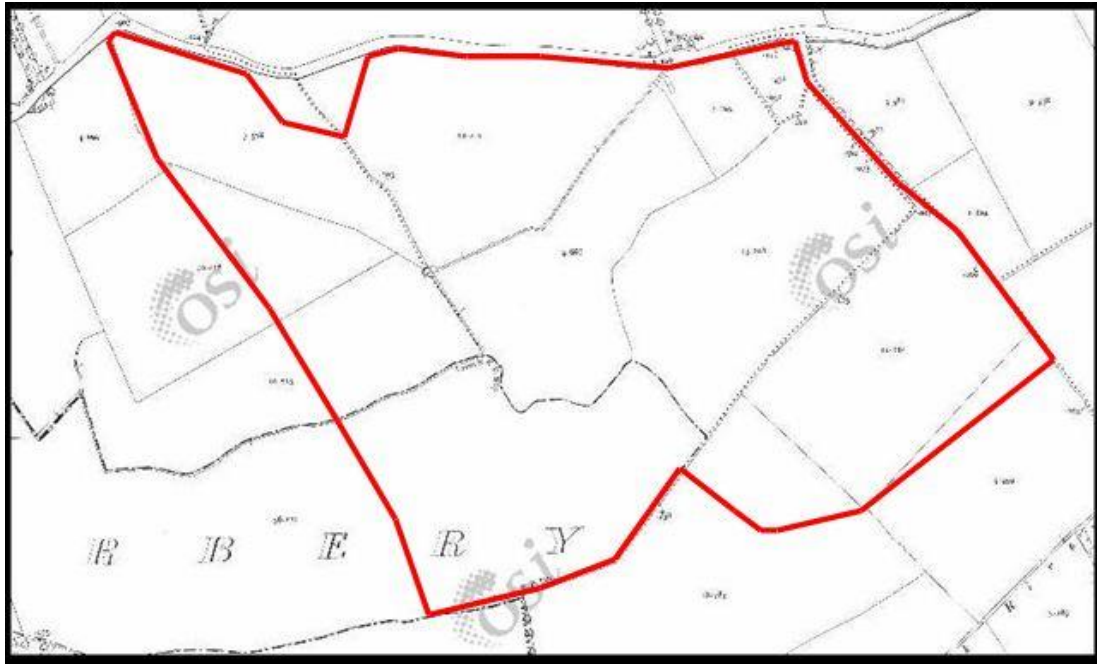


Figure 6: Extract from First Edition 1:2,500 Ordnance Survey Map (1863), showing the development area

With the exception of the above-mentioned two structures, there are no archaeological or additional architectural features recorded on the First Edition 1:2,500 map within the area of proposed land take.

Ordnance Survey Map 1:10,560 Third Edition 1906 (figure 7)

One structure is recorded in the north east corner of the proposed development area where two structures were shown on earlier edition maps. “Nangor Road” is named for the first time on the Third Edition map. A possible spring is recorded towards the north east boundary.

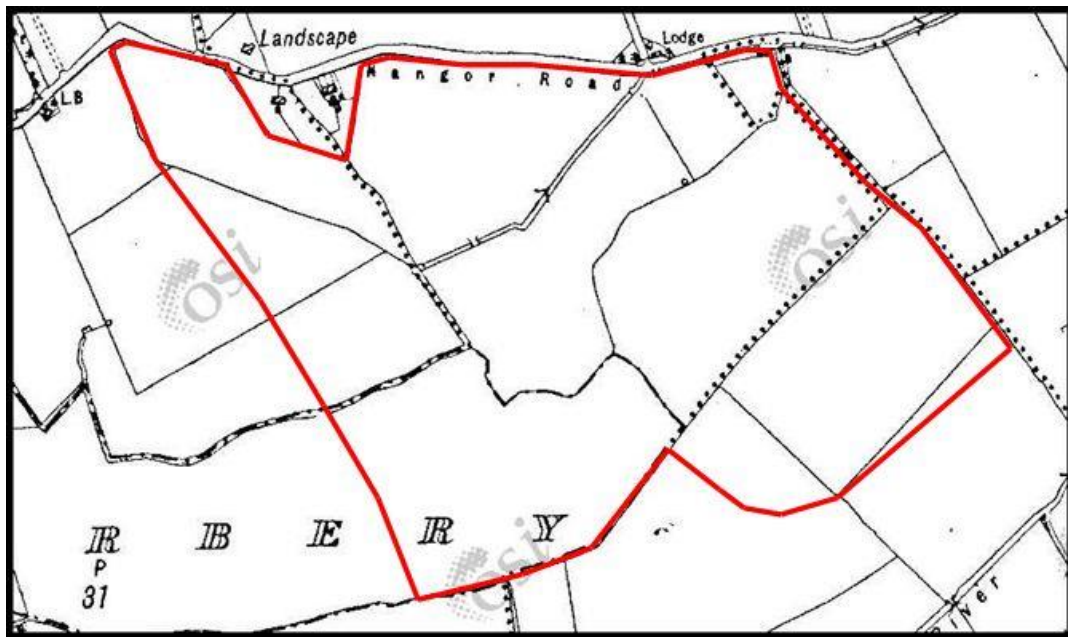


Figure 7: Extract from Third Edition 1:10,560 Ordnance Survey Map (1906), showing the development area

With the exception of the above-mentioned structure, there are no archaeological or additional architectural features recorded on the Third Edition 1:10,560 map within the area of proposed land take.

2.4 Aerial Photographs

Aerial photographs held by Ordnance Survey Ireland (www.maps.osi.ie) and Bing aerial photography (www.bing.com/maps) were consulted to look for the presence of archaeological or architectural features within the proposed development area.

The 1995, 2000 and 2005 Ordnance Survey photographs generally record a similar landscape to what was noted during the test trenching programme, although the R136 Outer Ring Road, which forms the western boundary of the proposed development area, is recorded for the first time on the 2005 aerial photograph.

The north west corner of the area of proposed land take (Field 1, figure 9), along with a field to the south (Field 4, figure 9), are shown as heavily disturbed on the 2005 aerial photograph, and this activity appears to be associated with R136 Outer Ring Road construction works.

Possible previously unrecorded archaeological features of no recognizable form are noted along the western boundary of the proposed development area on the 1995 black and white aerial photograph (Fields 2 and 5, figure 9). These possible features are located in two separate fields, but do not appear to take the form of any standard archaeological features. They were not noted on any additional aerial photographs of the proposed development area, and were not recorded as part of the walkover survey, geophysical survey or test trenching programme.

Bing aerial photography noted the area of proposed land take as being similar to what was recorded at the time of the test trenching programme.

With the exception of the tentative features recorded on the 1995 black and white aerial photograph, there was no evidence of any previously unrecorded archaeological or architectural remains within the area of proposed land take.

2.5 County Development Plan

South Dublin County Council Development Plan 2016–2022

It is an Objective (HCL2 Objective 3) of South Dublin County Council to:

"protect and enhance sites listed in the Record of Monuments and Places and ensure that development in the vicinity of a Recorded Monument or Area of Archaeological Potential does not detract from the setting of the site, monument, feature or object and is sited and designed appropriately" (ibid., 153).

There are no Recorded Monuments within the proposed development area. There are 16 Recorded Monuments within the 1km study area, with the closest (Nangor Castle- RMP DU017-037) being located approximately 200m north west of the proposed area of land take.

2.6 Toponyms

Townland names are an important source in understanding the archaeology, geology, land-use, ownership and cultural heritage of an area.

Table 1: Toponyms

Name	Irish Genitive	Translation
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Corkagh Demesne	<i>Dhiméin Chorcaí</i>	<i>Corcach</i> translates as marsh
Deansrath	<i>Ráth an Deagánaigh</i>	The ringfort of the dean (or Deane)
Kilcarbery	<i>Chill Chairbre</i>	Possibly translates as Carberry's wood
Nangor	<i>Nangair</i>	Possibly translates as place of nettles

2.7 Topographical Files of the National Museum of Ireland

Information on artefact finds and excavations from County Dublin is recorded by the National Museum of Ireland. Location information relating to such finds is important in establishing prehistoric and historic activity in the study area.

There are no entries recorded in the Topographical Files for any townlands located within the proposed development area.

2.8 Summary

There are no Recorded Monuments within the proposed development area. There are 16 Recorded Monuments within the 1km study area, with the closest (Nangor Castle- RMP DU017-037) being located approximately 200m north west of the proposed area of land take. Reference to Summary Accounts of Archaeological Excavations in Ireland revealed that no fieldwork projects have been carried out within the proposed development area. Numerous fieldwork projects revealing extensive archaeological remains have been carried out in townlands surrounding the proposed development area. Three townland boundaries, a parish boundary and a barony boundary are recorded within the area of proposed land take. Two small structures which no longer survive above-ground are recorded in the north east corner of the proposed development area on historic cartographic sources. Possible previously unrecorded archaeological features are noted towards the western boundary of the proposed development area on a 1995 black and white aerial photograph. These possible features are located in two separate fields, but do not appear to take the form of any standard archaeological features. They were not noted on any additional aerial photographs of the proposed development area, and were not recorded as part of the walkover survey, geophysical survey or test trenching programme. There are no entries recorded in the Topographical Files of the National Museum of Ireland for any townlands located within the proposed development area. No archaeological features or artefacts were revealed within any areas of proposed land take as a result of carrying out a pre-test trenching walkover survey.

3 RESULTS OF GEOPHYSICAL SURVEY

3.1 Summary of Archaeological Potential

A geophysical survey was carried out by Joanna Leigh (Licence Number 17R0016) in April 2017. The survey showed the site to contain modern ferrous debris of no archaeological significance, including areas of burnt-out cars, prams, mattresses *etc.* The modern material resulted in a data set comprising of mostly modern ferrous responses.

Although modern disturbance dominated the data some responses of interest were recorded, and testing revealed one of the geophysical features (Area J/Response 12 Leigh 2017, 5) to be of archaeological significance (see Section 4 **Results of Test Trenching** below). The remainder of the geophysical anomalies were revealed to be either geological in origin or the result of modern ground disturbance.



Figure 8: Results of the geophysical survey

4 RESULTS OF TEST TRENCHING

4.1 General

The writer received a Licence to excavate approximately 16,000 linear metres of test trenches within the proposed development area (Fields 1 – 11, figure 9). Test trenching was carried out by Dermot Nelis and Colm Flynn (Licensed archaeologists) between 16th November and 8th December 2017 with two machines fitted with 1.8m wide flat buckets, and under constant archaeological supervision.

Test trenching was carried out as per the Licence Application and Method Statement, although a number of test trenches had to be excavated slightly shorter than outlined in the Method Statement due to the presence of areas used as footpaths within the development area. In addition, one trench (Trench 1) was not excavated in Field 9 due to the presence of standing water at the northern end of the field.

Excavation of the test trenches aimed to determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. Test trenching also sought to clarify the nature and extent of existing disturbance and intrusions and assess the degree of archaeological survival in order to formulate further mitigation strategies designed to avoid, reduce or offset any adverse impacts associated with the proposed development.

Visual inspection for the purpose of artefact retrieval was undertaken of excavated soils after they had been safely removed from the test trenches.

4.2 Results of Test Trenching

Test trenching revealed in total nine possible archaeological features in three fields (Fields 6, 8 and 9; figure 9).



Figure 9: Location of Fields 1 - 11 from the test trenching programme

Field 1 (plates 1 - 2)

Six no. test trenches with a combined approximate length of 450m were excavated in Field 1. On average trenches were spaced 20m apart. Test trenching showed Field 1 to have been heavily disturbed as a result of modern construction activities to the level of geologically deposited strata (see **Section 4.3** below).

On average trenches were 1m deep in Field 1 and consisted of 0.50m of topsoil, a friable dark brown silty clay, sealing 0.50m of modern dumped material containing stone, rubble and concrete. Natural geology was recorded as a compact light brown stoney clay.

No archaeological features or artefacts were revealed in Field 1.

Field 2 (plates 3 - 4)

Five no. test trenches with a combined approximate length of 500m were excavated in Field 2. On average trenches were spaced 20m apart. Test trenching showed Field 2 to have been heavily disturbed as a result of modern construction activities to the level of geologically deposited strata (see **Section 4.3** below).

On average test trenching in Field 2 revealed 0.50m of friable dark brown silty clay topsoil sealing 1m of modern dumped material containing household rubbish, rubble and tyres *etc.* Natural geology was recorded as a compact light brown stoney clay.

No archaeological features or artefacts were revealed in Field 2.

Field 3 (plates 5 - 8)

Ten no. test trenches with a combined approximate length of 1,900m were excavated in Field 3. On average trenches were spaced 20m apart.

Test trenching showed topsoil, a friable to compact dark brown slightly silty clay, to be on average 0.50m deep directly sealing geologically deposited strata which was recorded as a compact mid brown stoney clay with occasional 5cm – 10cm stone inclusions evenly distributed. Occasional stone drains of no archaeological significance were noted in Field 3. Water was noted in some of the trenches on completion of excavation in Field 3.

No archaeological features or artefacts were revealed in Field 3.

Field 4 (plates 9 - 12)

Six no. test trenches with a combined approximate length of 900m were excavated in Field 4. On average trenches were spaced 20m apart. Test trenching showed Field 4 to have been heavily disturbed as a result of modern construction activities to the level of geologically deposited strata (see **Section 4.3** below).

On average test trenching in Field 4 revealed 0.50m of friable dark brown silty clay topsoil sealing 0.50m – 1m of modern dumped material containing household rubbish, rubble and tyres *etc.* Natural geology was recorded as a compact light brown clay. Water was noted in some of the trenches on completion of excavation in Field 4.

No archaeological features or artefacts were revealed in Field 4.

Field 5 (plates 13 - 16)

Eleven no. test trenches with a combined approximate length of 3,100m were excavated in Field 5. On average trenches were spaced 20m apart.

Test trenching showed topsoil to be on average 0.70m deep directly sealing geologically deposited strata. Topsoil was recorded as a friable mid to dark brown silty clay with occasional 3cm – 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light brown clay with occasional 5cm – 10cm and occasional 20cm – 30cm stone inclusions evenly distributed. Frequent stone drains of no archaeological significance were noted in Field 5.

No archaeological features or artefacts were revealed in Field 5.

Field 6 (plates 17 - 19)

Four no. test trenches with a combined approximate length of 600m were excavated in Field 6. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.70m deep directly sealing geologically deposited strata. Topsoil was recorded as a friable mid to dark brown silty clay with occasional 3cm – 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light brown clay with occasional 5cm – 10cm and occasional 20cm – 30cm stone inclusions evenly distributed.

Two possible archaeological features were recorded in Field 6:

Test Trench 1: An area with slag and burning, measuring 3m x 3m, was discovered 10m from the south eastern end of Trench 1 (plate 19). This feature was detected during the geophysical survey, where it was recorded as Area J/Response 12 (Leigh 2017, 5).

Test Trench 3: An irregular-shaped feature of possible archaeological significance, oriented north/west x south/east and measuring 1.5m x 1.0m, was discovered 26m from the western end of Trench 3. Water was noted in some of the trenches on completion of excavation in Field 6.

No additional archaeological features or artefacts were revealed in Field 6.

Field 7 (plates 20 - 23)

Ten no. test trenches with a combined approximate length of 2,200m were excavated in Field 7. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.60m deep directly sealing geologically deposited strata. Topsoil was recorded as a friable mid brown silty clay with occasional 3cm – 5cm

stone inclusions evenly distributed. Natural geology was noted as a compact light brown clay with occasional 5cm – 10cm and occasional 20cm – 30cm stone inclusions evenly distributed. Water was noted in some of the trenches on completion of excavation in Field 7.

No archaeological features or artefacts were revealed in Field 7.

Field 8 (plates 24 - 32)

Nine no. test trenches with a combined approximate length of 2,400m were excavated in Field 8. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.60m deep directly sealing geologically deposited strata. Topsoil was recorded as a friable mid brown silty clay with occasional 3cm – 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light brown silty clay with occasional 5cm – 10cm and occasional 20cm – 30cm stone inclusions evenly distributed. Occasional stone drains of no archaeological significance were noted in Field 8.

Five possible archaeological features were recorded in Field 8:

Test Trench 1: A possible area of burning, measuring 0.8m x 0.6m, was discovered 55m from the western end of Trench 1.

Test Trench 1: A possible small pit was located 110m from the western end of Trench 1. It measured 0.65m x 0.5m and was filled with a friable mid-brown silty clay.

Test Trench 3: A possible pit was recorded 19m from the eastern end of Trench 3 (plate 30).

Test Trench 4: A possible hearth with charcoal, measuring 1.3m x 1.0m x 0.2m, was recorded 6m from the western end of Trench 4 (plate 31).

Test Trench 5: An oval pit, measuring 1.3m x 1.0m x at least 0.30m deep, with blackened silt and heat fractured stone, was uncovered near the centre of Trench 5 (plate 32).

No additional archaeological features or artefacts were revealed in Field 8.

Field 9 (plates 33 - 39)

Twelve no. test trenches with a combined approximate length of 1,700m were excavated in Field 9. One trench (Trench 1) was not excavated in Field 9 due to the presence of standing water at the northern end of the field. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.60m deep directly sealing geologically deposited strata. Topsoil was recorded as a friable mid brown silty clay with occasional 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light brown silty clay with occasional 5cm – 10cm and occasional 20cm – 30cm stone inclusions evenly distributed.

Two archaeological features were recorded in Field 9:

Test Trench 3: A pit, measuring 0.7m x 0.65m, with heat fractured stone and charcoal was located 17m from the western end of Trench 3 (plate 38).

Test Trench 4: An east/west oriented articulated possible dog burial of unknown date was recorded 5m from the western end of Trench 4 (plate 39).

No additional archaeological features or artefacts were revealed in Field 9.

Field 10 (plates 40 - 41)

Four no. test trenches with a combined approximate length of 300m were excavated in Field 10. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.40m deep directly sealing geologically deposited strata. Topsoil was recorded as a loose to friable mid brown clay with occasional 3cm – 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light brown clay with occasional angular 20cm – 30cm stone inclusions evenly distributed. Occasional plastic bags and pipes were recorded in the topsoil.

No archaeological features or artefacts were revealed in Field 10.

Field 11 (plates 42 - 43)

Three no. test trenches with a combined approximate length of 150m were excavated in Field 11. On average trenches were spaced 20m apart. Test trenching showed topsoil to be on average 0.40m deep directly sealing geologically deposited strata. Topsoil was recorded as a loose to friable mid brown clay with occasional 3cm – 5cm stone inclusions evenly distributed. Natural geology was noted as a compact light

brown clay with occasional angular 20cm – 30cm stone inclusions evenly distributed. Occasional plastic bags and pipes were recorded in the topsoil. Occasional stone drains of no archaeological significance were noted in Field 11. Water was noted in some of the trenches on completion of excavation in Field 11.

No archaeological features or artefacts were revealed in Field 11.

4.3 Summary of On-Site Contamination

Testing in Field 1 (figure 9, plates 1 and 2) generally revealed dumped material containing concrete, steel, building rubble, household waste (such as plastic, glass *etc.*) to a depth of approximately 1m below the ground surface. This material was recorded in all parts of Field 1.

Fields 2 and 4 (figure 9, plates 3, 4, 9, 10, 11 and 12) also contained modern material such as building rubble, concrete, parts of car engines, household waste such as plastic *etc.* up to a depth of approximately 1.5m. This material was found across most of Fields 2 and 4, although slightly less disturbance was noted along the western boundaries.

Fields 10 and 11 (figure 9, plates 40 - 43) had quite a bit of modern material (such as mattresses, plastic bags containing household waste, car parts *etc.*) on their surface, and some of this material was also noted in the topsoil during excavation.



Plate 1: Modern disturbance in Field 1 Trench 3

Plate 2: Modern disturbance in Field 1 Trench 5





Plate 3: Modern disturbance in Field 2 Trench 2

Plate 4: Field 2 Trench 5, looking south east





Plate 5: Field 3 Trench 1, looking east

Plate 6: Field 3 Trench 4, looking east





Plate 7: Field 3 Trench 6, looking west

Plate 8: Field 3 Trench 8, looking east





Plate 9: Modern disturbance in Field 4 Trench 2

Plate 10: Field 4 Trench 2, looking south west





Plate 11: Field 4 Trench 3, looking south west

Plate 12: Field 4 Trench 6, looking south west





Plate 13: Field 5 Trench 1, looking north east

Plate 14: Field 5 Trench 4, looking north east





Plate 15: Field 5 Trench 6, looking north east

Plate 16: Field 5 Trench 8, looking south west





Plate 17: Field 6 Trench 1, looking north west

Plate 18: Field 6 Trench 4, looking north west





Plate 19: Area of slag and burning in Field 6 Trench 1

Plate 20: Field 7 Trench 1, looking north east





Plate 21: Field 7 Trench 5, looking north east

Plate 22: Field 7 Trench 8, looking south west





Plate 23: Field 7 Trench 10, looking south west

Plate 24: Field 8 Trench 1, looking south west





Plate 25: Field 8 Trench 2, looking south west

Plate 26: Field 8 Trench 5, looking south west





Plate 27: Field 8 Trench 6, looking south west

Plate 28: Field 8 Trench 7, looking north east





Plate 29: Field 8 Trench 8, looking north east

Plate 30: Possible pit in Field 8 Trench 3





Plate 31: Possible hearth in Field 8 Trench 4

Plate 32: Pit in Field 8 Trench 5





Plate 33: Field 9 Trench 2, looking north east

Plate 34: Field 9 Trench 3, looking north east





Plate 35: Field 9 Trench 5, looking north east

Plate 36: Field 9 Trench 7, looking north east





Plate 37: Field 9 Trench 8, looking north east

Plate 38: Pit in Field 9 Trench 3





Plate 39: Detail of possible dog burial in Field 9 Trench 4

Plate 40: Field 10 Trench 1, looking south east





Plate 41: Field 10 Trench 4, looking south east

Plate 42: Field 11 Trench 1, looking north west





Plate 43: Field 11 Trench 2, looking north west

5 MITIGATION MEASURES

Test trenching revealed nine possible archaeological features in three fields (Fields 6, 8 and 9; figure 9). All of these features, along with on average 5m x 5m buffer zones surrounding the features, are being excavated and recorded under Licence at the time of writing. As such, all known archaeological features within the proposed development area will have been fully excavated well in advance of construction works commencing on site. As a result, there will be no known archaeological features within the proposed development area when groundworks commence on site.

It is recommended that archaeological monitoring be carried out on all groundworks associated with the proposed development in Fields 3, 5, 6, 7, 8, 9, 10 and 11 (figure 9). Monitoring will be carried out under Licence to National Monuments Service- Department of Culture, Heritage and the Gaeltacht. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring.

Due to extensive ground disturbance noted in Fields 1, 2, and 4 (figure 9) during the test trenching programme, it is considered that archaeological monitoring of construction works in these areas is not required.

Please note that all recommendations are subject to approval by National Monuments Service- Department of Culture, Heritage and the Gaeltacht

6 NON-TECHNICAL SUMMARY

This report has been prepared on behalf of South Dublin County Council to discuss the results of a programme of Licensed archaeological test trenching undertaken at Corkagh Demesne, Deansrath, Kilcarbery and Nangor townlands, Clondalkin, Dublin 22.

South Dublin County Council proposes to construct approximately 1,000 dwellings over a 5–7 year period on a greenfield site measuring approximately 87.37 acres (35.36 hectares).

There are no Recorded Monuments within the proposed development area. There are 16 Recorded Monuments within the 1km study area, with the closest (Nangor Castle- RMP DU017-037) being located approximately 200m north west of the proposed area of land take.

Archaeological research and fieldwork have been undertaken in three phases. The first phase consisted of a paper and digital survey of archaeological, historical and cartographic sources, resulting in the preparation of a detailed desk-based assessment. The second phase involved a geophysical survey of the proposed development area, while the third phase involved excavating test trenches within the development area.

A fourth phase of archaeological work is ongoing at the time of writing, and this involves the Licensed excavation of nine possible archaeological features which were discovered during the above-mentioned test trenching programme.

Test trenching revealed nine possible archaeological features in three fields (Fields 6, 8 and 9; figure 9). All of these features, along with on average 5m x 5m buffer zones surrounding the features, are being excavated and recorded under Licence at the time of writing. As such, all known archaeological features within the proposed development area will have been fully excavated well in advance of construction works commencing on site. As a result, there will be no known archaeological features within the proposed development area when groundworks commence on site.

It is recommended that archaeological monitoring be carried out on all groundworks associated with the proposed development in Fields 3, 5, 6, 7, 8, 9, 10 and 11 (figure 9). Monitoring will be carried out under Licence to National Monuments Service- Department of Culture, Heritage and the Gaeltacht. Provision will be made for the full excavation and recording of any archaeological features or deposits that may be exposed during monitoring.

Due to extensive ground disturbance noted in Fields 1, 2, and 4 during the test trenching programme, it is considered that archaeological monitoring of construction works in these areas is not required.

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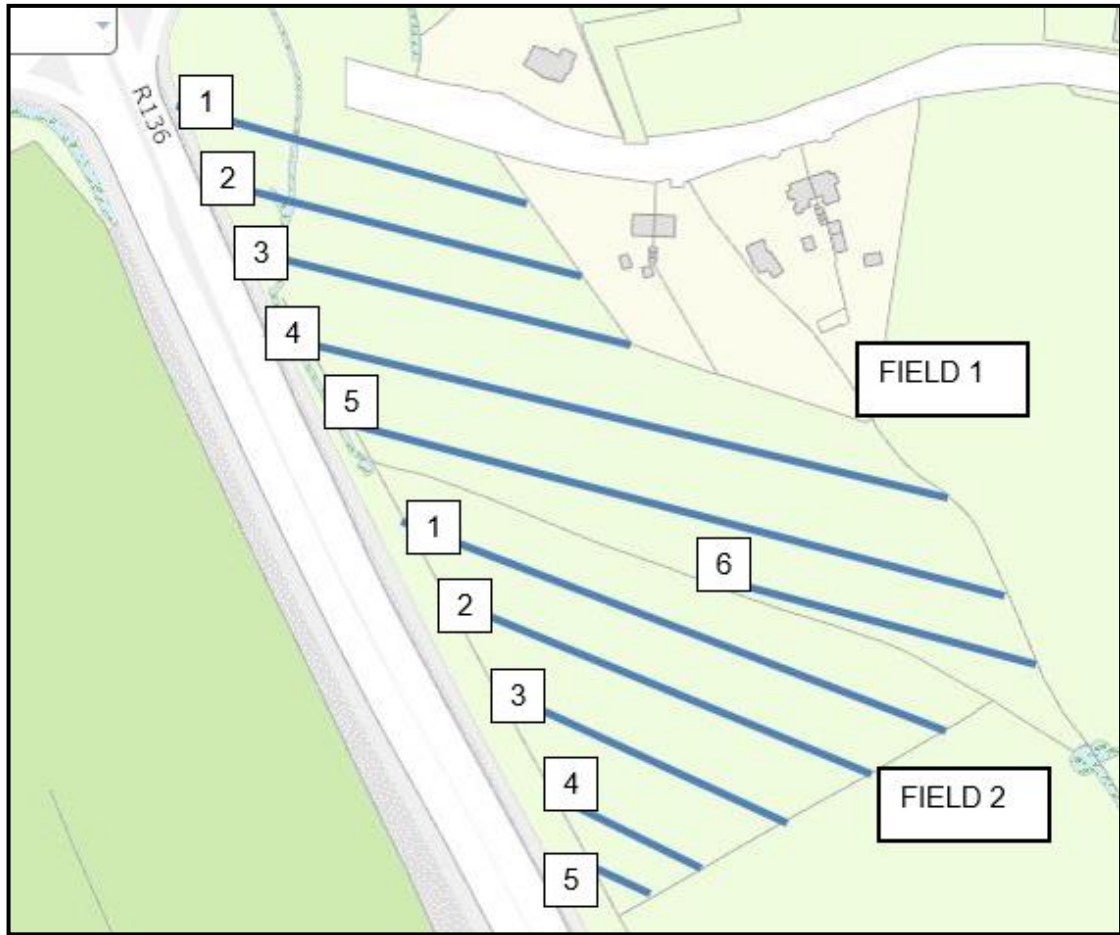
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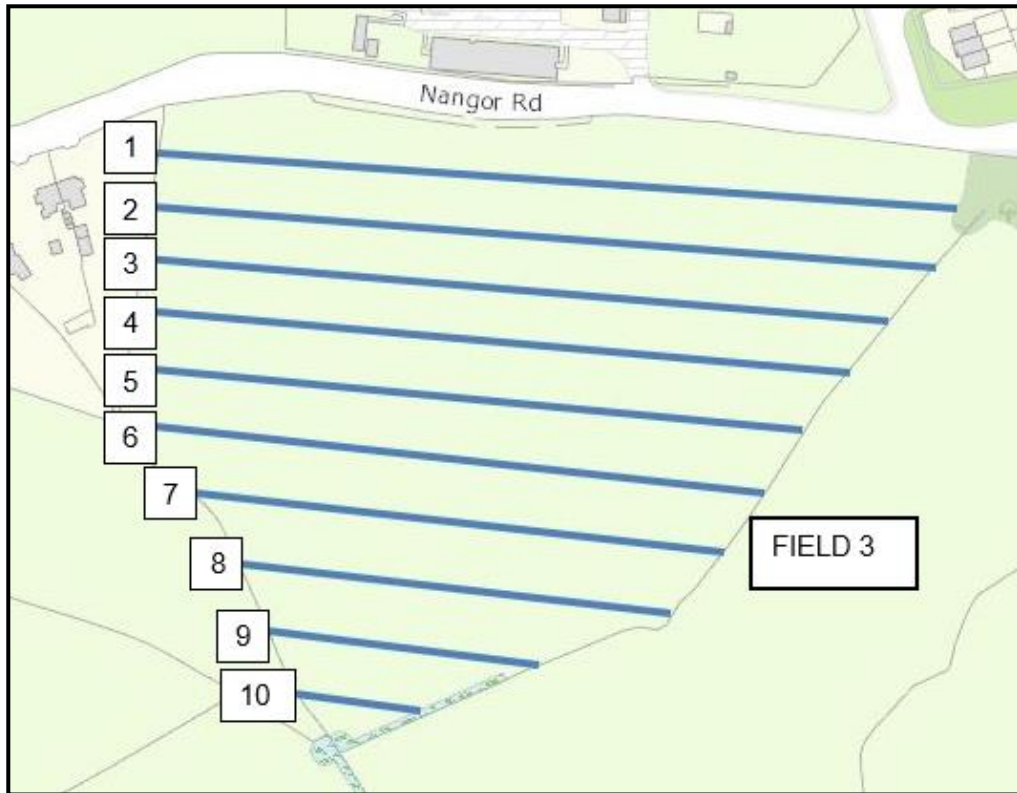
www.maps.osi.ie Ordnance Survey Ireland aerial photographs

www.sdcc.ie South Dublin County Council

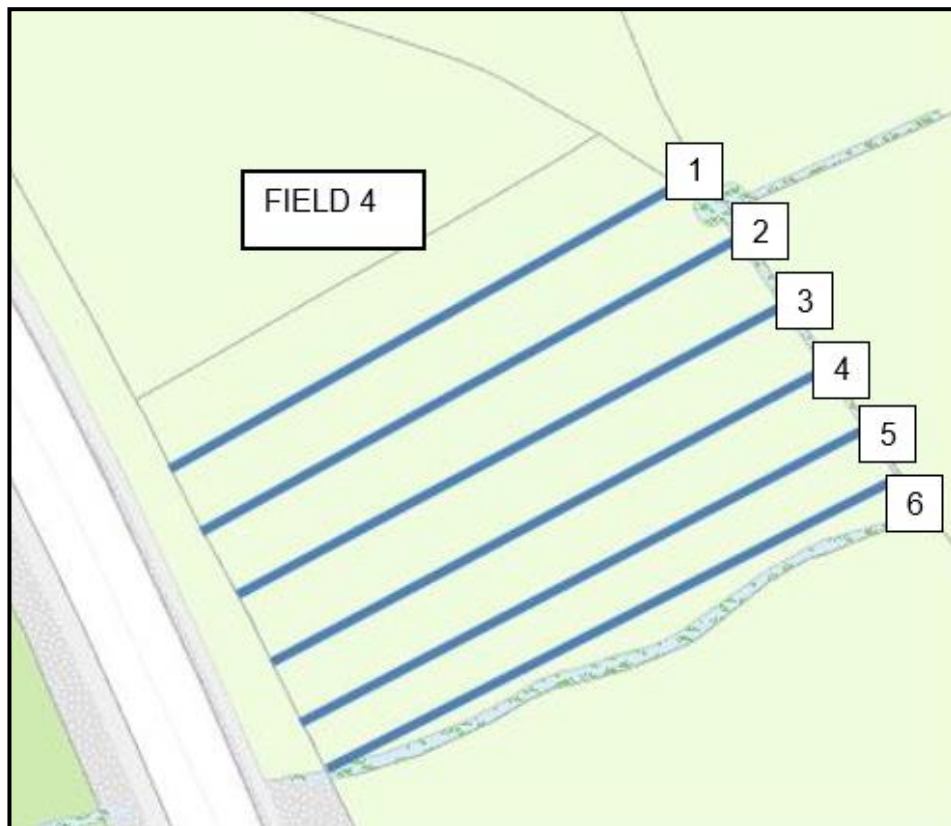
**APPENDIX 1 APPROXIMATE LOCATION OF TEST
TRENCHES IN FIELDS 1 - 11**



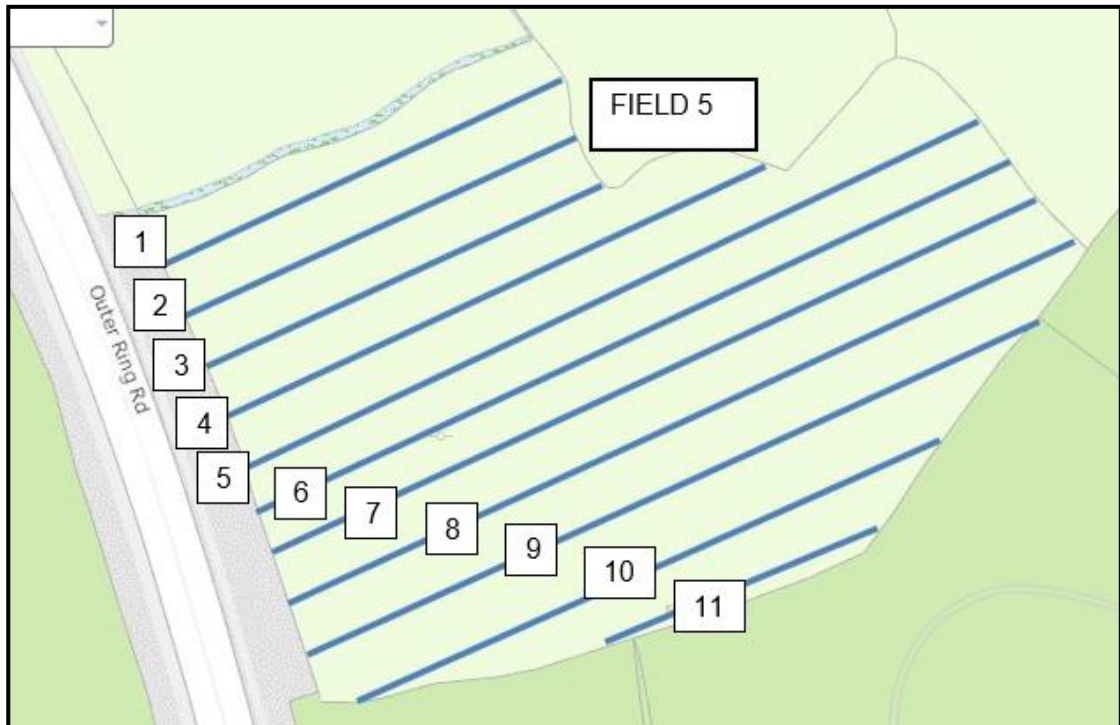
Appendix 1 Figure 1: Approximate location of trenches in Fields 1 and 2



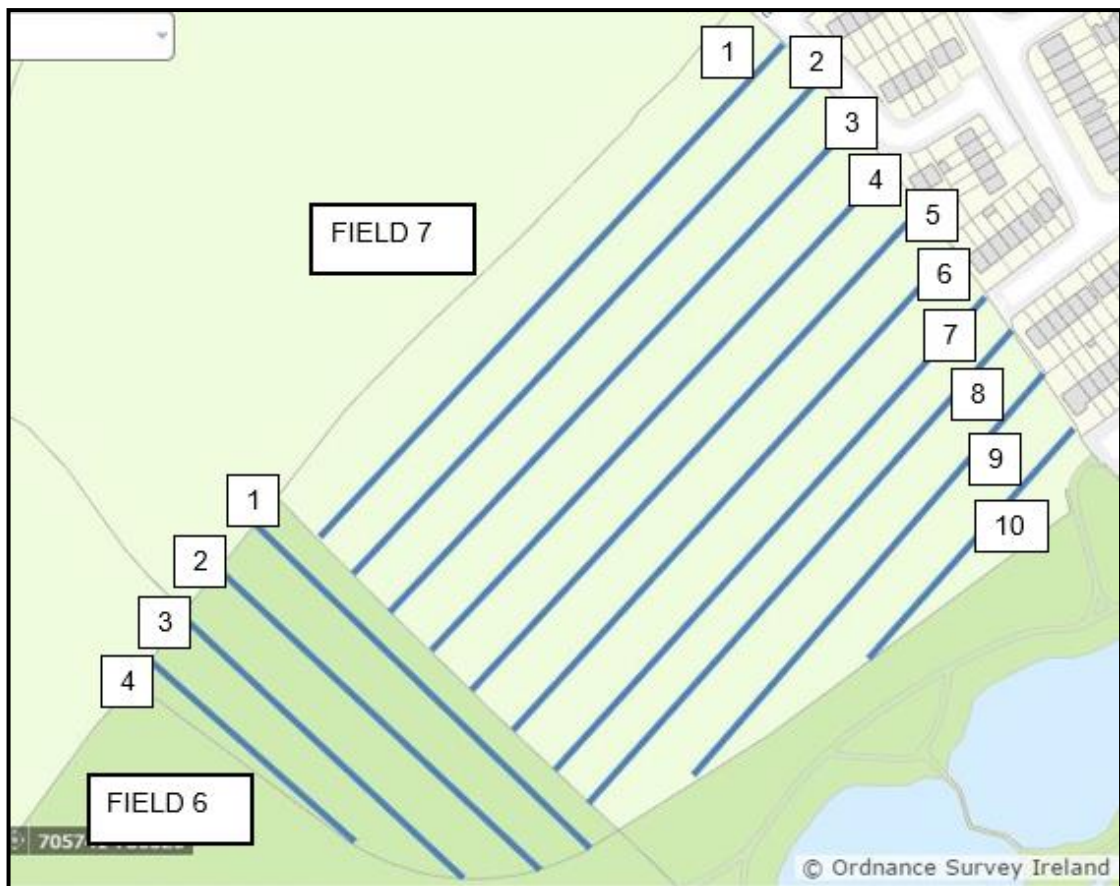
Appendix 1 Figure 2: Approximate location of trenches in Field 3



Appendix 1 Figure 3: Approximate location of trenches in Field 4



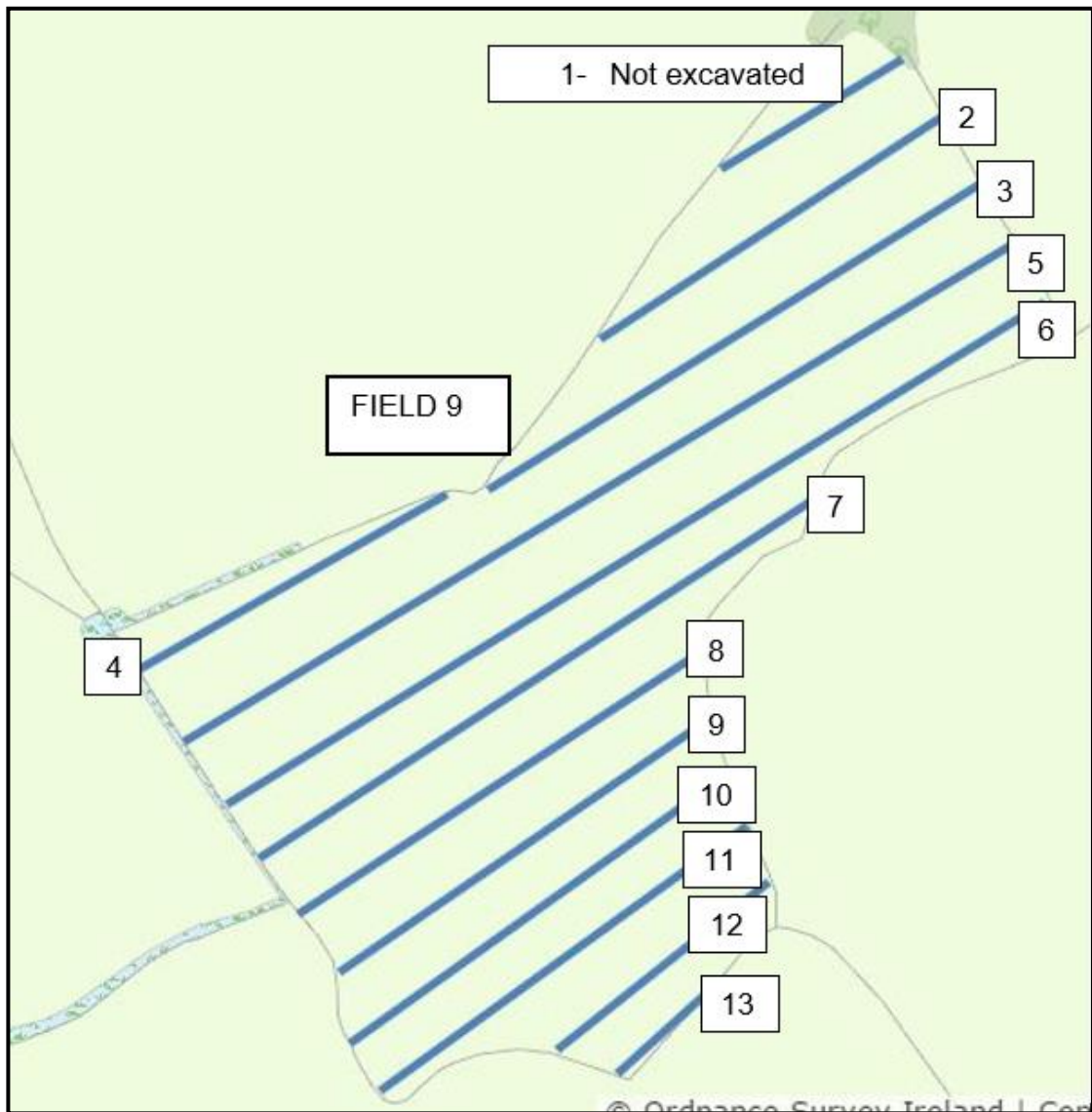
Appendix 1 Figure 4: Approximate location of trenches in Field 5



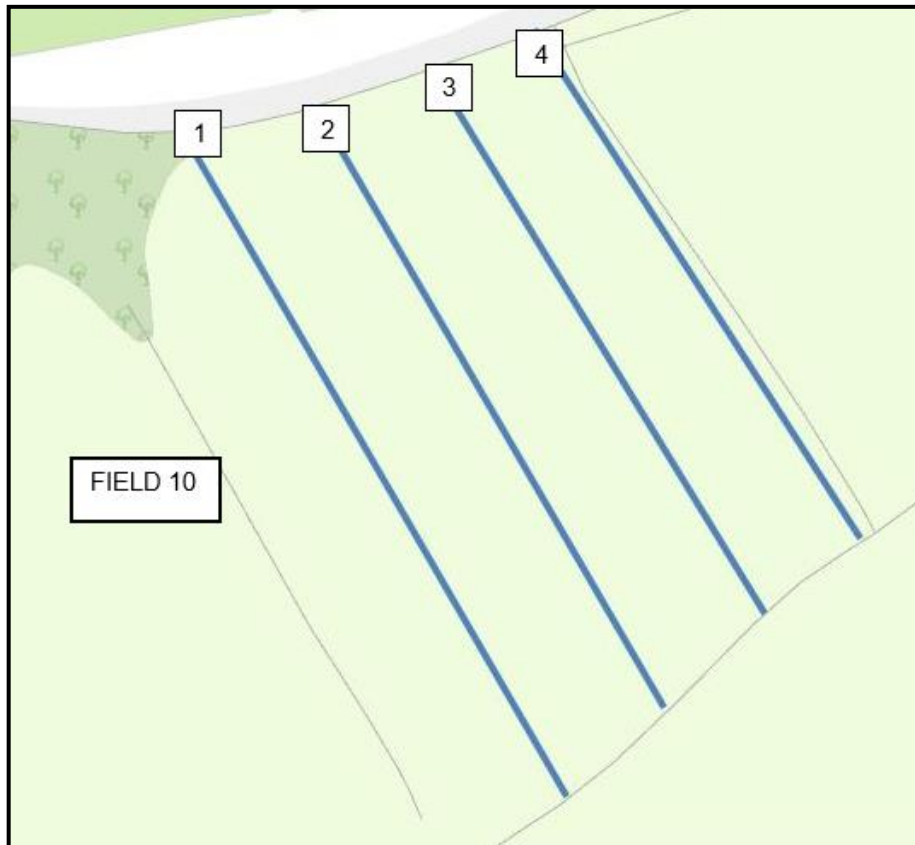
Appendix 1 Figure 5: Approximate location of trenches in Fields 6 and 7



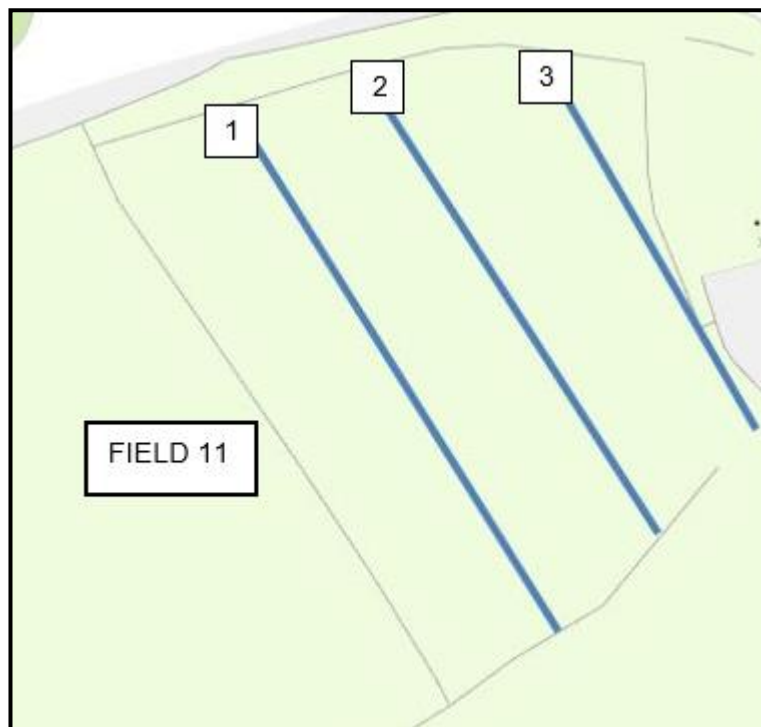
Appendix 1 Figure 6: Approximate location of trenches in Field 8



Appendix 1 Figure 7: Approximate location of trenches in Field 9



Appendix 1 Figure 8: Approximate location of trenches in Field 10



Appendix 1 Figure 9: Approximate location of trenches in Field 11