

Appendix 11.2 – ‘Archaeological Test Trenching Report’, JCA, 2020.

**Archaeological investigations at Ravenswell, Bray
Commons, County Wicklow and Cork Great, County
Dublin**
Archaeological Test Trenching Report



Excavation Licence Number: 20E0482
Detection Device Licence: 20R0179

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PROJECT DETAILS

<i>Project type</i>	Archaeological test trenching
<i>Archaeologist</i>	Padraig Dunne
<i>Excavation Licence</i>	20E0482
<i>Detection Licence</i>	20R0178
<i>Townland(s)</i>	Ravenswell, Bray Commons, Cork Great
<i>Town</i>	Bray
<i>County(s)</i>	Dublin, Wicklow
<i>OS Sheet</i>	DU026. WI004
<i>ITM</i>	726504, 719501
<i>Development Description</i>	Ten archaeological test trenches, totalling 650m in length, were excavated at a land parcel within the northern side of Bray town.
<i>Summary of findings</i>	During archaeological testing of the proposed development site at Ravenswell and Bray Commons, County Wicklow and Cork Great, County Dublin, ten linear test trenches, totalling 650m in length, were excavated across the 7.3ha site. The testing programme sought to investigate a number of areas of limited archaeological potential which were identified during a recent geophysical survey (20R02014) undertaken within the subject lands, as well as the alignment of a recorded linear earthwork (WI005-005--- / DU026-124----), previously postulated to represent a portion of the 'Pale' ditch, which extends across the subject lands in a general east to west direction. No potential archaeological features were uncovered in any of the excavated test trenches. Manual investigation of the recorded linear earthwork revealed it to be a late 19th early or early 20th century landscape feature and not a section of the 'Pale' ditch as had been previously postulated.

1. Introduction

John Cronin & Associates were commissioned to undertake a programme of licenced archaeological test trenching within available areas of lands on the northern side of Bray Town (**Figure 1**). The subject site comprises c.7.03ha of green and brown field areas with the green field area comprising c.4ha. The site straddles the county boundary between Counties Dublin and Wicklow and, as a result, straddles the administrative boundary of Dun Laoghaire Rathdown (DLR) County Council and Wicklow County Council (WCC).



Figure 1: Location of subject site (outlined in red) within the wider area

There is one recorded archaeological monument located within the subject site and this comprises the linear earthwork (WI004-005----/DU026-124---) which defines the boundary between County Dublin and County Wicklow. Following consultation with the National Monuments Service (NMS), the greenfield area of the subject site was subject to geophysical (**Detection Licence Ref. 20R02014**). The linear earthwork was presented in the geophysical data as a curvilinear band of increased magnetic and ferrous response. In addition, a number of features of low archaeological potential were identified within the site. There were no definitive patterns of an archaeological character evident within the survey results and numerous small-scale ferrous responses were evident throughout the survey results.

The archaeological test trenching programme was carried under Excavation Licence **20E0482**. The aim of the testing programme was to identify the nature and extent of the linear earthwork (WI004-005----/DU026-124---) in addition to identifying the existence, location, significance and extent of any unrecorded features, deposits or artefacts of archaeological significance within the

proposed development site. Ten linear test trenches, totalling 650m in length, were excavated across the available areas of the site, including two manual cuttings within *Trench 2* and *Trench 4* which were designed to intersect with the linear earthwork (WI004-005----/DU026-124---). The licensed use of a metal-detector was incorporated into the test trenching investigations to assist in artefact retrieval (**Detection Device Licence ref. 20R0179**).

In summary, **no potential archaeological features were uncovered in any of the excavated test trenches**. Manual investigation of the linear earthwork revealed it to be a late 19th or early 20th century landscape feature which corresponds with the results of previous archaeological investigations of this feature.

2. Context

Location

The site is located in the townlands of Ravenswell and Bray Commons, County Wicklow and Cork Great, County Dublin. It comprises c.7.03ha of green and brown field areas, with the green field component comprising c.4ha. The site encompasses a remnant of the former Bray Golf course with landscaped areas consisting of green areas delimited by tree belts, earthworks and sand bunkers which are enclosed by modern palisade fencing on all sides. The fencing is fronted by a mature tree line to the north and flanked by the railway line to the east. Hard standing areas associated with previous developments are present in the southern and western portions of the site, while drainage features traverse its interior. The natural topsoil in this area consists of fine loamy drift with siliceous stones, while the underlying geology is composed of slate, schist and minor greywacke. The current line of the county boundary within the subject site is defined by a low linear earthwork, a recorded archaeological monument (WI004-005----/DU026-124---) (**Figure 2**), which is located at the summit of a natural rise in the ground level from the river Dargle to the south.



Figure 2: Aerial image centred over the subject site with the recorded alignment of the linear earthwork (WA004-005---/DU026-124---)

Archaeological and historical background

The subject site is located beyond the northern extent of the historic settlement of Bray (WI004-001--) and has been landscaped as a golf club since the late 19th century. Aerial images demonstrate the considerable development of the environs of the subject site from the 1990s onwards. From this time, the former Golf Club lands have been gradually reduced and segmented, firstly by the commencement of a large drainage project and associated infrastructure and more recently by the construction of an adjacent school and associated access roads. There is one recorded archaeological site (as recorded by the *Archaeological Survey of Ireland (ASI)*) located within the subject site and this comprises the linear earthwork (WI004-005----/DU026-124---). There are a further seven recorded archaeological sites located within a 500m wide surrounding study area (**Table 1** and **Figure 3**).

The linear feature is recorded as a 'possible linear earthwork' in the County Dublin edition of the Record of Monuments and Places (RMP); however, it is not recorded in the County Wicklow edition. As detailed below, a number of archaeological investigations of this earthwork, undertaken in conjunction with recent adjacent developments, have produced evidence that the earthwork comprises a probable 19th century landscape feature rather than a section of the 'Pale' ditch as had been previously postulated. The results of the present testing programme detailed in this report corroborate this interpretation, with a late 19th or early 20th century date proposed for the formation of the feature.

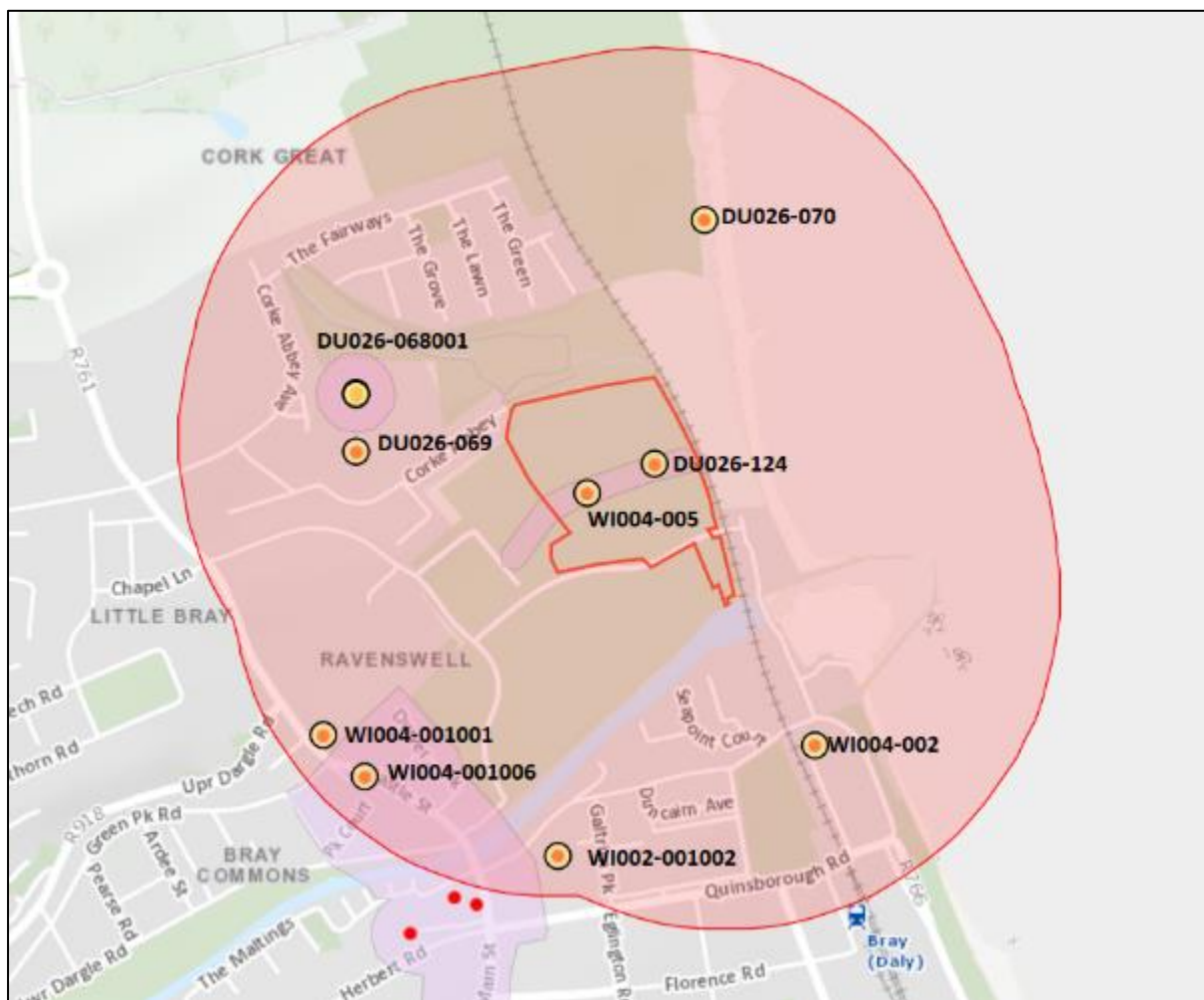


Figure 3: Location of recorded archaeological sites within c.500m of the proposed development site

Table 1: Recorded archaeological sites within 500m of the proposed development site

Monument no.	Class	Townland	ITM
DU026-068001-	Church	Cork Great	726103, 719600
DU026-068002-	Graveyard	Cork Great	726103, 719598
DU026-069----	Ritual site - holy well	Cork Great	726102, 719510
DU026-070----	Martello tower	Cork Great	726637, 719865
DU026-124----	Linear earthwork	Cork Great	726560, 719491
WI004-001----	Historic town	Bray,Ravenswell, Little Bray	726288, 718817
WI004-001006-	Castle - tower house	Little Bray	726115, 719012
WI004-002----	Martello tower	Bray	726807, 719060
WI004-005----	Linear earthwork	Ravenswell	726457, 719446

The discovery of a number of Romano-British burials (WI004-004----) in the shoreline area now occupied by Esplanade Terrace within Bray town to the south demonstrates that cross-sea contacts with Britain existed within the wider area during the 2nd century AD. In the period prior to the Anglo-Norman invasion, the area was shared between Domnall MacCilla Mo-Cholmoc, and the offspring of the Dublin Ostmen Thorkill (Davies 1998). Following the arrival of the Anglo-Normans, the manor of Bre was granted by the Earl of Pembroke, then Lord Deputy, to Walter de Ridlesford in 1173 who shortly afterwards built a motte earthwork castle in the area. The study area surrounding the proposed development site contains the recorded location of a levelled tower-house (WI004-001006-) located c.400m to the west. The Down Survey records that Cork Great townland comprised 134 plantation acres at that time and was in the ownership of James Walsh in 1641 and John Walsh in 1671. No details are provided in the Down Survey for the townlands of Ravenswell or Little Bray. By c.1700, the village extended from Sunnybank in the north to the area now occupied by the west end of Quinsborough Road and the subject site was located within the lands to the north of the developed area. The study area surrounding the proposed development site contains two Martello towers (DU026-070---- & WI004-002----) and a church and graveyard (DU026-068001-/02-) which date to the post-medieval period.

The townland boundary between Ravenswell and Cork Great extends through the subject site and defines the present county boundary between counties Dublin and Wicklow. However, the current iteration of this boundary is of late 19th century date (1897), having historically been defined by the River Dargle to the south. The current line of the county boundary within the subject site is defined by a low linear earthwork which has been designated as a recorded archaeological monument and is included in the Record of Monuments and Places (RMP) for County Dublin (DU026-124----). The designation of this feature as a recorded archaeological monument is largely due to a postulated theory that the earthwork is associated with 'Pale' ditch which surrounded the Dublin region in later medieval times. The available evidence suggests that the feature was formed as a result of the landscaping associated with the northern expansion of the Bray Golf Club into the former grounds of Ravenswell House in the early 20th century. According to landowner/local information the linear earthwork is known as the 'Nuns Walk', recalling the use of the earthwork as a delineated pathway through the golf club to the sea shore from the adjoining Ravenswell Convent to the south. The linear earthwork is currently visible as a low (0.8m high) section of bank (150m long) which runs on an NNE -WSW axis. It comprises a splayed, flat-topped bank (1.60m wide at top; 10m wide at base) and some mature sycamore trees growing along its margins.

Excavations Database

A review of the Excavations Database 1969 – 2020 (www.excavations.ie) has revealed that a number of archaeological investigations have been undertaken within the study area surrounding the subject site and included programmes of advance test trenching and construction phase monitoring undertaken along sections of the linear earthwork (WI004-005---/DU026-124---) within the former golf course. The published Excavation Database summaries of the investigations undertaken within the reviewed study area are contained in **Appendix 3** of this report and a summary of relevant examples follows hereafter.

The excavation of a test trench across the earthwork within the former golf course in advance of a drainage scheme in 2002 revealed no trace of a well-defined ditch and only uncovered modern inclusions which the excavator interpreted as the result of recent disturbance (see Appendix 3: Gowa, 02E1717). Subsequent monitoring of the drainage scheme revealed a 2.5m wide by 0.6m deep ditch associated with the earthwork which contained modern inclusions (see Appendix 3: Moriarty, Licence 02E1717 ext.). The excavator postulated that it might represent a medieval feature that was cleaned out and reused as a field drain at a much later date. A 2004 programme of test trenching across the earthwork found no evidence for a ditch and the low bank was found to overlie 18th/19th century inclusions. The excavator concluded that the earthwork was a late 18th or early 19th-century landscape feature associated with the former Ravenswell House (See Appendix 3: Byrne, Licence 04E0354).

A programme of advance test trenching and subsequent archaeological monitoring was also undertaken along the line of the earthwork at the location of St Philomena's School and Coláiste Ráithín, which were subsequently constructed adjacent to the western boundary of the subject site. These investigations included the excavation of cross-sections across the linear earthwork and revealed 19th-century inclusions at the base of an associated sub-surface ditch. The excavator concluded that the earthwork feature was 19th century in date (see Appendix 3: O'Connell, 14E0225). Nothing of archaeological significance was subsequently identified during archaeological monitoring of the construction of the school development. In addition, monitoring of additional works as part of the Shanganagh-Bray main drainage scheme within the former golf-course revealed nothing of archaeological significance (Appendix 3: Licence 05E0392 ext.)

Cartographic review

The cartographic sources examined for the study area include the 17th-century Down Survey map (**Figure 4**), the first edition 6-inch Ordnance Survey (OS) map (1842) (**Figure 5**) and the 25-inch OS map (surveyed and published 1888-1913) (**Figure 6**). The Down Survey Map for the area depicts the area of the subject site within an underdeveloped area with no structures visible, although Bray is annotated on the Barony of Rathdowne map. No information is provided for the townlands of Little Bray, Bray Commons or Ravenswell on the parish map. The first edition 6-inch OS map depicts the subject site as occupied primarily by enclosed agricultural land associated with Ravenswell House to the west and Cork Abbey to the north. A number of tree belts and drainage boundaries traverse/enclose the field systems and no internal structures are depicted except for Ravenswell House to the west. A tree lined pathway delineates the position of the earthwork on the first edition map.

The 25-inch map (1909) depicts a similar landscape to the first edition 6-inch OS map, the only changes of note being the conversion of Ravenswell House into Ravenswell Convent and the subdivision of larger fields into smaller plots. It is useful to consider that Bray Golf Club, which was established in 1897, is by the time of the compilation of the 25-inch map in 1909, depicted as being confined to the southern area of the subject site and has not expanded into the northern portion of the site. This area is still portrayed as an agricultural field at this time. In addition, no earthwork is depicted on the current alignment of the monument. Instead a rudimentary field boundary/routeway is depicted as enclosing at the field at this location. This boundary is depicted on the first edition OS map as an accessway to the seafront. By the time of the compilation of the 25-inch map, the beginning of a much grander tree line embankment, on a similar scale to the existing linear earthwork, is depicted as extending from the recently established Ravenswell Convent to the southwest of the site. It could be argued that the current linear earthwork is an extension of this embankment from the convent as it is on the same alignment and of a similar scale and would have provided a pathway from the convent along a pre-existing route to the seafront. The expansion of the Golf Club into the northern field at a later date would have provided the necessary labour for its construction. Likewise, the construction of the earthwork would provide both a landscape feature for the golf club to mark the county boundary and provide the necessary elevation to access and cross the adjacent railway line for pedestrians.



Figure 4: Extract from 17th century Down Survey mapping (Source: Down Survey of Ireland, Trinity College Dublin www.downsurvey.tcd.ie)



Figure 5: Extract from the first edition 6-inch OS map (1829-41) with subject site outline by the thin red line and the recorded alignment of the linear earthwork shaded in purple [OSI Licence ref. 0003320]

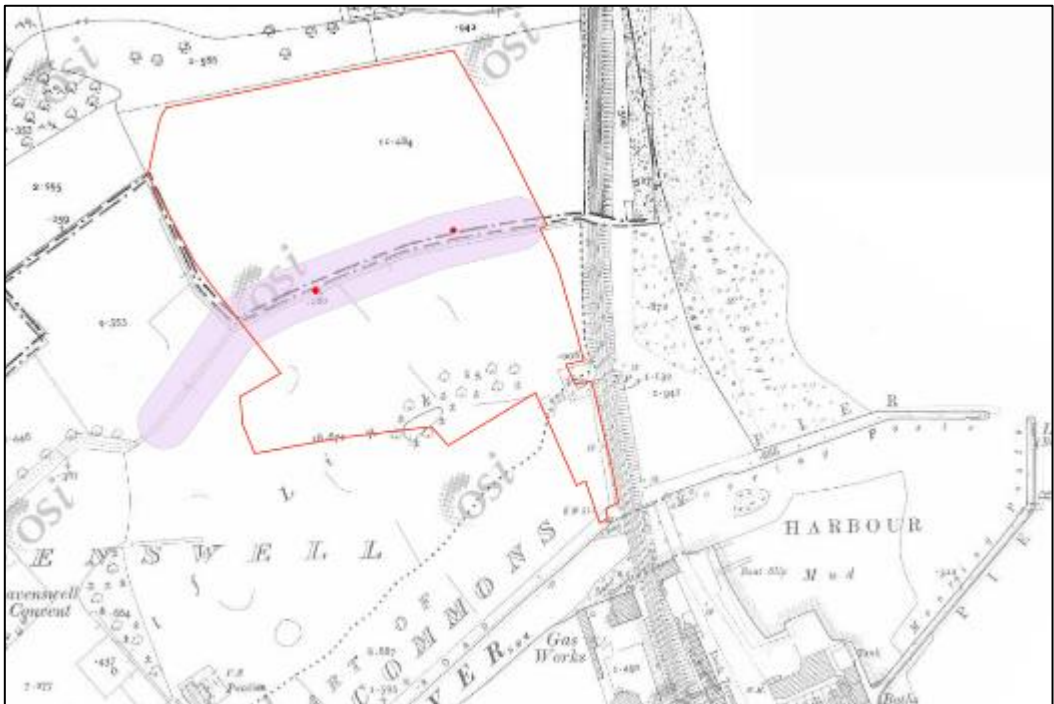


Figure 6: Extract from the 25-inch OS map (1897-1913) with subject site outline by the thin red line and the recorded alignment of the linear earthwork shaded in purple [OSI Licence ref. 0003320]

3. Archaeological test trenching

Overview

The programme of archaeological test trenching was carried out under Excavation Licence **20E0482** and Detection Device Licence **20R00197** between Wednesday 11 and Friday 13 November 2020. Testing was carried out within the available areas of the subject site and targeted geophysical anomalies identified during geophysical survey, as well as available areas not subjected to geophysical survey (**Figure 7**). The test trenches were excavated by a 14-tonne 360° mechanical excavator, fitted with a 1.8m wide toothless grading bucket, which operated under constant archaeological supervision. A total 650m linear metres (**Table 3**) were excavated across the entire footprint of the subject site, including two manual cuttings within *Trench 2* and *Trench 4* which were designed to intersect with the linear earthwork (WI004-005----/DU026-124---). No visible surface trace of any other potential archaeological features were noted on the footprint of the proposed development during an inspection carried out prior to the test trenching programme. An unexcavated 5m wide gap was left in north-western end of *Trench 1* and the northern end of *Trench 3* due to the presence of geotechnical pits and sensors in these areas.

The following section provides a summary of the results of the test trenching programme. A detailed record for each individual excavated trench, including photographs, are presented in **Appendix 2** of this report.

Table 2: Proposed trench data (to be read in conjunction with **Figure 7** below)

Trench	Dimensions	Orientation	Area
1	50m x 1.8m	WSW-ENE	90m ²
2	65m x 1.8m	NW-SE	117m ²
3	75m x 1.8m	N-S	135m ²
4	40m x 1.8m	NE-SW	72m ²
5	90m x 1.8m	E-W	162m ²
6	110m x 1.8m	WNW-ESE	117m ²
7	70m x 1.8m	WNW-ESE	126m ²
8	50m x 1.8m	NW- SE	90m ²
9	50m x 1.8m	NW- SE	90m ²
10	50 x 1.8m	E-W	90m ²

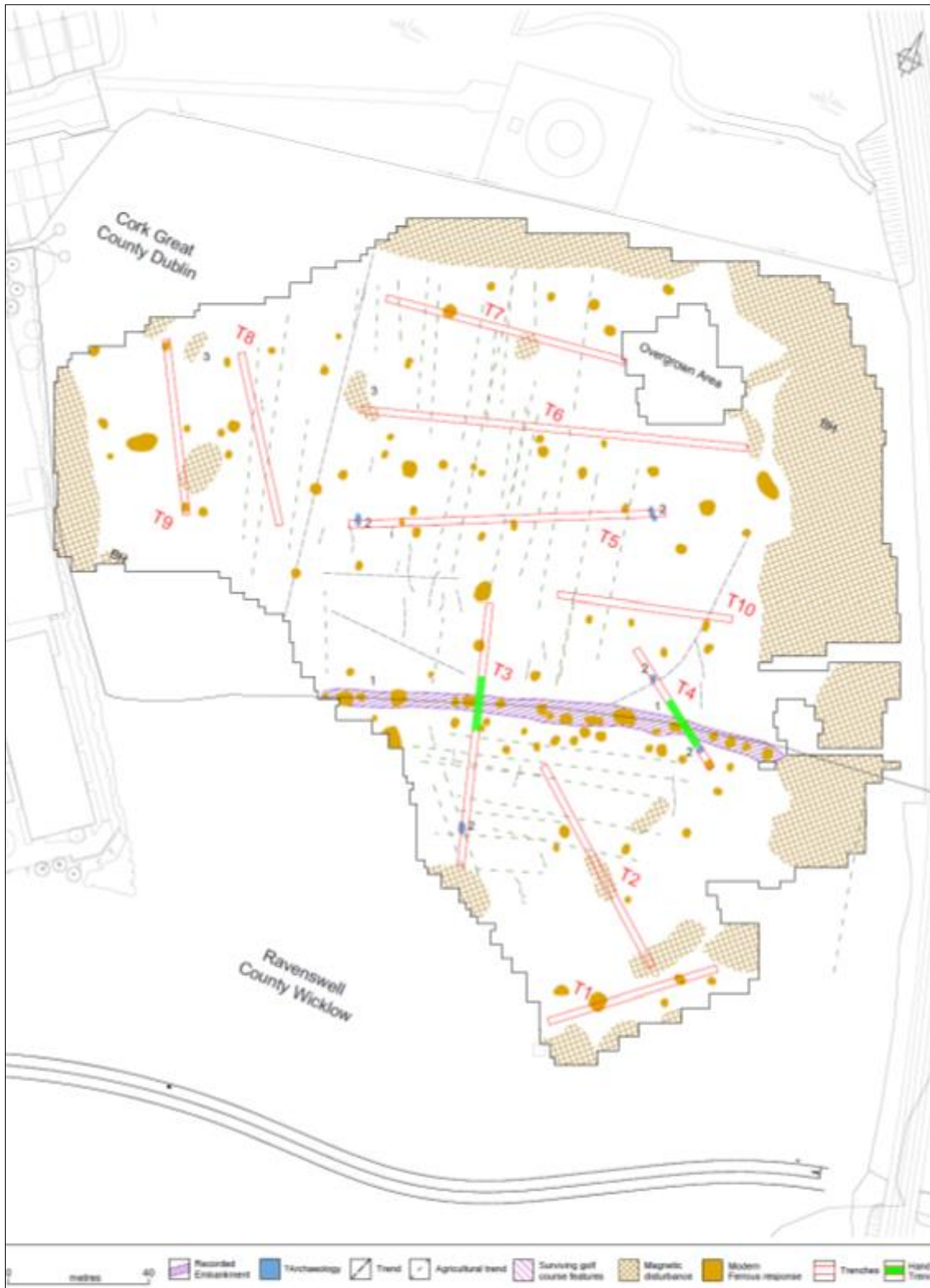


Figure 7: Extract from geophysical report showing trench layout (T.1 – T.10) (red mechanical, green manual) superimposed on interpretation of results

In general, the topsoil within the excavated trenches consisted of a mid-brown sandy clay with occasional modern inclusions present to the base of the topsoil, including sherds of modern ceramics, glass and other modern detritus. The topsoil was up to 0.6m deep and contained numerous modern drainage pipes within its matrix. The revealed subsoil consisted of a mottled, light brown, sandy gravelly silt with frequent small stone and occasional larger stone inclusions. It was highly disturbed in places, presumably due to landscaping works associated with the former golf club. Coarse gravels and fine sand variations were noted throughout the trenches also. Occasional sea shell and natural flint nodules inclusions suggest that the site was mostly likely part of the sea shore in antiquity. The majority of the gravel bands and sandy concentrations encountered were to the east of an unrecorded field boundary (F.01) which was revealed in *Trenches 5, 6 and 7*. This boundary most likely served as the pre-1842 eastern field boundary. Brick fragments uncovered from the shallow basal fill of this feature suggest a formation date no later than the 18th century. The geophysical survey report tentatively interpreted several anomalies in *Trenches 3, 5 and 7* as potential archaeological pit features. The testing programme revealed that these were most likely related to modern burning activity as burnt ferrous material was noted down to the surface of the subsoil in most of these areas.

Spoil from all the excavated trenches was scanned by a discriminating detection device (**20R0179**) and no potential archaeological artefacts were uncovered. Please consult **Appendix 2** for a detailed written and photographic record of all excavated trenches.

Linear Earthwork WI005-005--- / DU026-124----

Two manually excavated cuttings (within *Trench 3 (Cutting 1)* and *Trench 4 (Cutting 2)*) were excavated across the alignment of the linear earthwork (see **Figure 7** and **Appendix 1**). The hand excavated cuttings were spaced significantly apart to allow for greater investigations of the feature's depth and function. It was originally proposed to excavate 1.8m wide cuttings through the extant bank at each location. However, as the excavation progressed, and it became apparent that the earthwork was of early modern construction, both cuttings were reduced to 0.9m in width. In addition, once the nature of the feature became evident, and with adverse weather conditions impeding manual excavation, both cuttings were also reduced in length, with *Cutting 1* reduced to 10m and *Cutting 2* to 6m. The reduction of the width and length of the manual cuttings did not negatively impact on the investigation and interpretation of the feature. The stratigraphy encountered was similar in both sections and suggested that the earthwork was constructed in one phase during the late 19th or early 20th century.

The stratigraphy encountered in both sections suggests that the landscape feature was formed by the demolition of the upper courses of a pre-existing boundary wall (**C.04**) at this location. The rubble from this wall (**C.07**) was primarily heaped on the northern face of the wall where the terrain slightly dips and was subsequently infilled to create a rampart to the elevated terrain to the south. In turn, the lower course of the wall could now function as a retaining wall allowing for additional dumped material (**C.03**) to be spread out on top of the rampart to create a flat-topped earthwork. The ditch cut (**C.05**) uncovered appears contemporary with the construction of the monument and was only present on the northern side of the wall. Likewise, its basal fills (**C.06 & C.08**) also contained late 19th /early 20th cultural inclusions, namely glass and ceramic sherds. In summation, the archaeological evidence, in conjunction with the cartographic evidence and previous archaeological investigations, suggests that the linear earthwork was constructed in the late 19th early 20th century. Thereafter, serving a dual propose as both a landscape feature within the newly established golf club, incorporating the new county boundary between Dublin

and Wicklow, while also providing a continuation of the pedestrian accessway from the adjoining Ravenswell Convent to the coastline to the east. A practice which local information confirms continued throughout the 20th century, thus explaining the local name for the earthwork as ‘The Nun’s Walk’. Please consult **Appendix 1** for detailed records and drawing of each manually excavated cutting.



Plate 1: View of manual Cutting 1, showing wall C. 04 (top of frame) and rubble layer C.03 (bottom of frame)



Plate 2: West facing section of manual Cutting 1(T3)



Plate 3: Aerial view of above -with earthwork to background



Plate 4: West facing section of manual Cutting 2 (T4) -showing wall C. 04 at base

4. Conclusions and Recommendations

Conclusions

During archaeological testing of the site at Ravenswell and Bray Commons, County Wicklow and Cork Great, County Dublin, ten linear test trenches, totalling 650m in length, were excavated across the 7.3-hectare subject site. The testing programme sought to investigate several areas of limited archaeological potential identified during a recent geophysical survey (20R02014). No potential archaeological features were uncovered in any of the excavated test trenches. Manual investigation of the recorded linear earthwork (WI005-005--- / DU026-124----) which extends across the centre of the site in an east to west direction, revealed it to comprise a late 19th or early 20th century landscape feature and not a section of the 'Pale' ditch as had been previously postulated. The evidence garnered from this, and other recent programmes of archaeological investigation, categorically reveals that **the linear earthwork is not an archaeological monument** and, thus, should not be included in the next revision of the RMP.

Recommendations

Although no archaeological features were uncovered within the development site as a result of the geophysical survey and subsequent testing programme, given the scale of the development and its coastal proximity, it is recommended that, should development proceed, all topsoil stripping works undertaken within the subject site be subject to **archaeological monitoring**. Furthermore, due to its cultural significance, it is recommended that the linear earthwork, referred to locally as the 'Nun's Walk', be incorporated in some regard into the design of the proposed development. This could take the form of a placename, boundary marker and/or as feature within an amenity area.

5. References/sources

Published works

Aalen, F.H.A. *et al* (1997) *Atlas of the Irish Rural Landscape*. Cork University Press.

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Lewis, S. (1837) *A Topographical Dictionary of Ireland*, 2 vols, London: Samuel Lewis & Son.

Internet resources

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Database of Irish Archaeological Excavations, accessed 16/11/2020
<http://www.excavations.ie/>

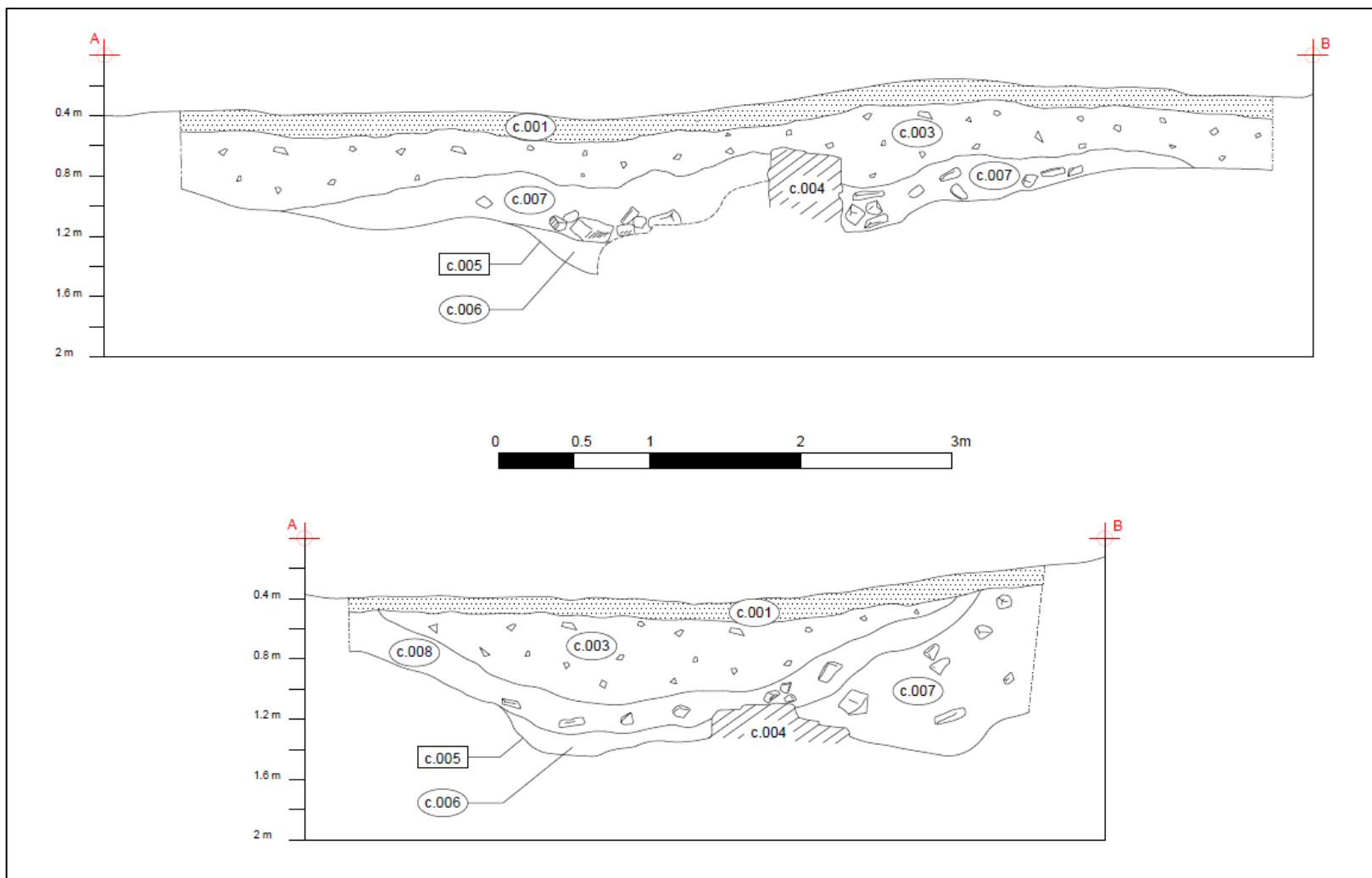
Appendix 1: Linear earthwork - manual cuttings

Record of the contexts comprising the linear earthwork in Trench 3 (Cutting 1)

Context.	Feature type	Description
C.01	Topsoil	Sod layer, 0.1m in depth
C.02	Subsoil	Grey/ brown gravelly sandy clay
C.03	Primary fill of earthwork	Mottled mid/light brown sandy clay with brick inclusions and subrounded beach rolled stones to the top. Bricks are whole and mortared in places. Mortar is a Portland type cement. Occasional inclusion of animal bone and early 20 th century cream wares and glass sherds also. 7.2m wide in section and between 0.2-0.5m deep. Primary mound material with deliberately placed rubble dump at top to create the flat top of the mound.
C.04	Pre-existing wall	Random rubble wall consisting of limestone and beach stones with brick inclusion and bonded with a brittle Portland type cement in places. Single skim, four course high, extends the width of the trench (1.8m), max 0.4m wide and 0.7m in height. Flushed to the north but not dressed suggesting this was the side which it was seen from. Rubble abuts both sides suggesting it was knocked down during the construction of the earthwork the upper layers acting as the footing for the rampart while the lower course served as a retaining wall.
C.05	Cut of ditch	Concave cut of ditch, with gradual slope at the top leading to a rounded base. Only present on the north side of the earthwork. Presence of the wall negates the need for a ditch and therefore it was most likely a remodeled old cut to allow for the construction of the rampart. May be original cut for the wall. Measured 1.5m N-S and 0.3m deep in section.
C.06	Fill of ditch/rampart	Dark brown clayey silt fill of the ditch feature, only discernable from overlying layer by colour. Same late 19 th /early 20 th century inclusions of glass and blue and cream ware pottery shreds, animal bone, brick fragments and rubble stone. 0.3m in depth and 1.5m N-S wide in section.
C.07	Wall collapse	Dark greyish brown layer of wall rubble intermixed with sandy clay, with frequent brick and mortar inclusions and occasional glass and pottery sherds and fragments of animal bone. Collapsed stones from the wall abuts both sides of the wall but are more frequent on the north side where they form part of the rampart. On the north side they overlie c.005, the fill of the ditch cut, and on the south side they overlie the natural subsoil C.002. Rubble layer measures 6m N-S wide in section and was 0.3m deep.

Record of the contexts comprising the linear earthwork in T4 (Cutting 2)

Context.	Feature type	Description
C.01	Topsoil	Sod layer 0.1m in depth
C.02	Subsoil	Grey/ brown gravelly sandy clay
C.03	Primary Fill of earthwork	Mottled mid/light brown sandy clay with brick inclusion which is mortared in places. Mortar is a Portland type cement. Occasional inclusion of animal bone and early 20 th century cream ware and glass shreds also.
C.04	Pre-existing wall	Random rubble wall consisting of limestone and beach stones with brick inclusion bonded with a brittle Portland type cement in places. Wall has been severely truncated by adjacent Sycamore trees root system and survives as a single course of mortared sub-angular and beach rolled stones with brick fragments evident on its northern face. Like <i>Cutting 1</i> , a rubble layer C.007 abuts both sides of the wall acting as the footing for the rampart while the lower course served as a retaining wall for the earthwork. 0.5m wide extending E-W across the cutting.
C.05	Cut of ditch	Concave cut of ditch, with gradual slope at the top leading to a rounded base. Only present on the north side of the earthwork. Similar to cutting one measured 2.1m wide and 0.8m deep in section.
C.06	Fill of ditch/rampart	Dark brown clayey silt fill of the ditch feature only discernable from overlying layer by colour. Same late 19 th /early 20 th century inclusions of glass and blue and cream ware pottery sherds, animal bone, brick fragments and rubble stone. 0.3m in depth and 1m N-S wide in section.
C.07	Wall collapse	Dark greyish brown layer of wall rubble intermixed with sandy clay, with frequent brick and mortar inclusions and occasional glass and pottery sherds and fragments of animal bone. Collapse stones from the wall abut both sides of the wall but are more frequent on the north side where they form part of the rampart. On the north side they overlie c.005 the fill of the ditch cut and on the south side they overlie the natural subsoil C.002. Rubble layer measures 5m N-S in width and was 0.3m deep.
C.08	Fill of ditch	Light black silt clay with frequent brick and mortar inclusions and occasional inclusion of fragments of animal bone, and early 20 th century pottery and glass shreds. Extended 5m NW -SE the width of the section with a max depth of 0.3m.



Section drawing for Cutting 1 (top) ditch and mound in T.03 and Cutting 2 (bottom) ditch in T.04



Plan of Cutting 1 in T.03

Appendix 2: Test trench descriptions

<i>Trench</i>	<i>Date</i>	<i>Depth to Natural (m)</i>	<i>Observations</i>
T1	12-01-02	0.3- 0.5m	<p><i>Test Trench 1 (T1) was orientated WSW-ENE and measured 90m long by 1.8m wide and was excavated to a maximum depth of 0.5m below the existing surface level. The presence of a geotechnical test pit and sensor constrained the trench by 5m at the WSW end. The topsoil consisted of a mid-brown sand clay with occasional inclusions of re-deposited natural subsoil. Occasional modern inclusions were present to the base of the topsoil including modern detritus such as wire, plastic, string, etc. The underlying natural subsoil consisted of a light brown sandy silt with small angular pebbles and stones inclusions. The subsoil was highly disturbed with coarse gravel and sand bands intermingled throughout the trench. In addition, several modern service trenches relating to the previous golf club truncated the subsoil throughout the trench. Nothing of archaeological significance was encountered in this trench</i></p>



Plate 5: View of Trench 1, facing east-north-east



Plate 6: View of Trench 1, facing west-south-west



Plate 7: View of modern service pipe within the topsoil matrix of T1



Plate 8: View of WSW end of T1 -note irrigation pipe truncating the subsoil to the right of frame

Trench	Date	Depth to Natural (m)	Observations
T2	13-11-20	0.3-0.5m	<i>Test Trench 2 (T2) was orientated NW-SE and measured 115m long by 1.8m wide and was excavated to a maximum depth of 0.5m below the existing surface level. The topsoil consisted of a mid-brown sandy clay with frequent subrounded small and occasional large stone inclusions. Modern ceramics and plastics were present within its upper levels. The subsoil consisted of light- brown sandy silt at the southeast and centre , which turned to coarse gravel and loose stone towards the northwest end of the trench. Three small pits all containing modern pottery sherds truncated the subsoil towards the centre of the trench and a modern service trench was present at the southeast end of the trench. Nothing of archaeological significance was encountered in this trench</i>



Plate 9: View of T2, facing east-north-east



Plate 10: View of T2, facing west-south-west



Plate 11: View of modern pit revealed towards the centre of T2



Plate 12: View of modern service trench revealed towards the centre of T2

Trench	Date	Depth to Natural (m)	Observations
T3	13/11/20	0.4-1.2m	Test Trench 3 (T3) was orientated N-S, measured 75m long by 1.8m wide and was excavated to a maximum depth of 1.2m below the existing surface. A 10m long portion of the trench which intersected liner earthwork (WI004-005 / DU026-124) was manually excavated (see Section 3 above). The stratigraphy noted in this trench was similar to that noted in Trench 2 to the east, although the subsoil had a higher gravel content, especially towards the top of the ridge and along the southern edge of the linear earthwork. A number of shallow cultivation furrows truncated the subsoil at the top of the ridge. A modern pit feature truncated the subsoil at southern end of the trench, which contained burnt plastic which may explain why it was detected as a geophysical anomaly. Nothing of archaeological significance was encountered in this trench.



Plate 13: View of T3, facing northeast



Plate 14: View of T3, facing southwest



Plate 15: Basal remnants of a cultivation furrow truncating the gravelly subsoil to the south of the Linear earthwork W1004-005 / DU026-124



Plate 16: Mid-excitation view of the manually excavated Cutting 1



Plate 17: Mid-excavation view of Cutting 1



Plate 18: View of wall C.04 within Cutting 1



Plate 19: View of the front face wall C.04 uncovered in Cutting 1

Trench	Date	Depth to Natural (m)	Observations
T4	13/11/20	0.8-1m	<i>Test Trench 4 (T4) was orientated NE-SW, measured 50m long by 1.8m wide and was excavated to a maximum depth of 1m below the existing surface. A 6m long portion of the trench, which intersected liner earthwork (WI004-005 / DU026-124), was manually excavated (see Section 3 above). The stratigraphy noted in this trench was similar to that noted in Trench 3 to the west. Burning activity was noted in the upper levels of the topsoil matrix at the proposed location of 2 geophysical anomalies and a number of golf clubs were recovered from the topsoil also. Nothing of archaeological significance was encountered in this trench.</i>



Plate 20: View of Trench 4 facing northwest



Plate 21: View of Trench 4 facing southeast



Plate 22: Mid-excavation view of manual Cutting 2 within T4



Plate 23: View of the basal remnants of Wall C.04 in Cutting 2



Plate 24: Golf paraphernalia recovered from the metal detecting survey of the topsoil of T4



Plate 25: Aerial view of the southern and manual section of T3 and T4 facing north

Trench	Date	Depth to Natural (m)	Observations
T5	12/11/20	0.35-0.5m	<p><i>Test Trench 5 (T5) was orientated E-W, measured 90m long by 1.8 wide and was excavated to a maximum depth of 0.50m below the existing surface level. The topsoil consisted of a mid-brown sandy clay which was deepest (0.5m) to the east. The underlying subsoil was a heavily disturbed, light brown, sandy silt with frequent gravel content. The gravel content had frequent sea shell and occasional natural flint nodule inclusions. A number of drainage feature truncated the subsoil. They were between 0.5-0.9m wide and 0.2m deep and filled with modern inclusions, including glass and plastics.</i></p> <p><i>In the centre of the trench the remnant basal remains of a field boundary/ drainage ditch (F1) were uncovered at a depth of 0.4m below the existing surface level. It measured 2m wide and 0.3m deep and contained a single fill of light brown sandy clay with occasional animal bone, charcoal and brick fragments. The presence of brick fragments within the fill suggests an early modern date for this feature, which is most likely the remnants of an old field boundary as it also extended through T6 and T7 further to the north.</i></p> <p><i>Two isolated potential pit features recorded at both ends of the trench during the geophysical survey represented modern burning activity. Nothing of archaeological significance was encountered in this trench.</i></p>



Plate 26: View of Trench 5 facing east



Plate 27: View of Trench 4 facing east



Plate 28: Field boundary truncating the subsoil within the centre of T5



Plate 29: Localised are of slightly scorched subsoil at the western end of T8- burnt ferrous material was recovered in the overlying topsoil matrix at this location indicating the burning is modern

Trench	Date	Depth to Natural (m)	Observations
T6	12/11/20	0.6m	<i>Test Trench 6 (T6) was orientated WNW-ESE, measured 110m long by 1.8m wide and was excavated to a maximum depth of 0.6mm below modern ground level. The stratigraphy noted in this trench was similar to that noted in Trench 5 to the south with the eastern portion of the trench containing gravel and sand variations most likely associated to the adjoining beach. F1, the old field boundary identified in T5 and T7, was revealed towards the centre of the trench. Nothing of archaeological significance was encountered in this trench.</i>



Plate 30: View of Trench 6 from the WNW



Plate 31: View of Trench 6 from the south



Plate 32: Aerial view of T5-T10 showing T5 & T6 excavated facing west

Trench	Date	Depth to Natural (m)	Observations
T7	12/11/20	0.6	Test Trench 7 (T7) was orientated WNW-ESE, measured 70m long by 1.8m wide and was excavated to a maximum depth of 0.6m below modern ground level. A linear feature, orientated N-S extended through the WNW end of the trench. Investigation showed it to have a U-shape profile, measuring 0.9m wide and 0.25m deep. It was filled with a mottled grey brown, sterile, clayey silt with occasional inclusion of decayed stone, indicative of a field drain. A modern glass shred was recovered from the base of the fill. Nothing of archaeological significance was encountered in this trench.



Plate 33: View of Trench 7 from the WNW



Plate 34: View of Trench 7 from the ESE



Plate 35: Section through linear feature/field drain at the WNW end of T7

Trench	Date	Depth to Natural (m)	Observations
T8	11/11/20	0.5m	<i>Test Trench 8 (T8) was orientated NW-SE, measured 60m long by 1.8m wide and was excavated to a maximum depth of 0.5m below modern ground level. The topsoil consisted of a loose sandy clay with frequent modern inclusions of glass and pottery sherds and refuse at its upper levels. The underlying subsoil was a light greyish brown sandy silt with frequent medium and small sub-rounded stone inclusions. The subsoil was truncated towards the northwest end of the trench by a sub oval shaped tree bole. Nothing of archaeological significance was encountered in this trench.</i>



Plate 36: View of Trench 8 from the northwest



Plate 37: View of Trench 8 from the southeast



Plate 38: View of sub-oval truncation at the northwest end of T8



Plate 39: View of sondage through the above showing it to be a tree bole

Trench	Date	Depth to Natural (m)	Observations
T9	11/11/20	0.6m	<p>Test Trench 9 (T9) was orientated NW-SE, measured 5m long by 1.8m wide and was excavated to a maximum depth of 0.6m below modern ground level. The topsoil consisted of a mid-brown sandy clay which was thickest (0.6m). Occasional inclusions of re-deposited natural subsoil were present towards the base of the topsoil matrix. The underlying subsoil consisted of a disturbed gravely silty sand with occasional patches of light brown sand. A large linear ditch feature measuring 3.5m N-S traversed the trench at its north-western end. This feature was filled with modern refuse and corresponds to a boundary feature depicted on the Cassini -6inch OS map. Nothing of archaeological significance was encountered in this trench.</p>



Plate 40: View of Trench 9 from the southeast



Plate 41: View of Trench 8 from the northwest



Plate 42: View of Modern boundary ditch at the southeast end of T9



Plate 43: Aerial of T8 (right) and T9 (left) facing north

Trench	Date	Depth to Natural (m)	Observations
T10	07/07/20	0.5m	<i>Test Trench 10 (T10) was orientated E-W, measured 50m long by 1.8m wide and was between 0.4m-0.5m deep. The topsoil consisted of a mid-brown sandy clay with frequent modern inclusions of glass and pottery sherds at its upper levels and redeposited natural mixed throughout. The underlying subsoil was a light greyish brown clayey silt with frequent medium and small sub-rounded stone inclusions. The subsoil was variable throughout and with noticeable gravel bands to the centre. A number of modern linear drainage features truncated the subsoil throughout the trench. Nothing of archaeological significance was encountered in this trench.</i>



Plate 44: View of Trench 10 from the west



Plate 45: View of Trench 8 from the east



Plate 46: View of Modern boundary ditch at the southeast end of T9



Plate 47: View of Modern boundary ditch at the southeast end of T9



Plate 48: View of drainage feature extending through the centre of T10



Plate 49: Section through above



Plate 50: View of Metal Detecting the spread topsoil in T8

Appendix 3: Excavation Summaries

Site Name	Licence No.	Summary
Ravenswell, Bray, Wicklow	16E0340	Monitoring of groundworks was carried out at the site of the proposed St Philomena's School and Coláiste Ráithín, on a green-field site in Bray, Co. Wicklow. No archaeological material was recorded in the course of monitoring.
Ravenswell, Bray, Wicklow	14E0225	Test trenching was carried out at the site of the proposed St Philomena's School and Coláiste Ráithín, on a 3.9 ha green-field site in Bray, Co. Wicklow. Five test trenches totalling 250m were excavated within the site following a geophysical survey. Trench locations were targeted on the supposed location of a Pale Boundary Ditch which was also located in the course of a geophysical survey. Testing revealed the ditch as a 19th-century feature. 19th-century glass and pottery finds were uncovered at the base of the trenches across the ditch. Subsoil varied between a compact orange, brown stony clay and natural gravel. Topsoil was consistently deep across the majority of the site, ranging from 0.28-0.35m deep. There were no archaeological features recorded in the course of testing
Ravenswell/Cork Great/Cork Little/Shanganagh, Dublin	11E0304	Monitoring was carried out as part of the construction of a 6km pipeline and 5,000m ³ storm-water storage tank as part of the Shanganagh-Bray Main Drainage Scheme. The pipeline wayleave was 14m wide and ran through the townlands of Ravenswell, Cork Great, Cork Little and Shanganagh. The work was carried out for Roadbridge on behalf of Dun Laoghaire-Rathdown County Council. No features of archaeological potential were discovered during the course of the works.
Shanganagh/Cork Little/Cork Great/Little Bray/Bray Commons, Dublin	05E0392	Monitoring of geotechnical investigations in advance of the Shanganagh Bray main drainage scheme was carried out in March and April 2005. A preliminary assessment found that the proposed scheme runs through an area of archaeological importance, with a number of monuments recorded in the vicinity. While only one known monument, a linear earthwork thought to be part of the Pale ditch, will be directly impacted on by the scheme, it will skirt the constraint ring of SMR 26:68, an abbey church and graveyard site, and traverse a number of areas of archaeological potential; no trial pits were excavated at the archaeological monuments. A total of 37 trial pits were monitored. They varied in size from 2-3m long and 1-1.2m wide. For the purpose of the geotechnical investigations, the trial pits were excavated to a depth of up to 4m into the natural subsoil. No features of archaeological significance were discovered. Monitoring of the pipe trench will be carried out in 2006.

Site Name	Licence No.	Summary
Bray, Wicklow	05E0392 EXT.	<p>Monitoring was undertaken as part of the Shanganagh Bray main drainage scheme (Contract 1), which involves the expansion and replacement of the existing treatment plant in order to improve the seawater quality of the Shankill area. In addition, a network of pipes stretching from Bray to Shankill will be laid to feed the upgraded plant.</p> <p>A small area of the Old Bray Golf Course at Ravenswell Road, beside the rail line and the River Dargle, was stripped of topsoil to facilitate the erection of a works compound. The soil-strip was monitored, and no archaeology was observed.</p>
Corke Great, Dublin	04E0354	<p>Testing was undertaken across the line of a possible linear earthwork which runs through the lands of the present Bray Golf Links. The feature consists of a low bank (max. dimensions c. 3.5m wide by c. 0.3m high), which is barely discernible in places and is more readily identified by a line of relatively mature trees which grow along its length. The OS 6-inch map of 1840 indicates that the feature was part of a network of footpaths leading west from the adjacent former Ravenswell House (now the Sisters of Charity Convent) to the sea and indicated as 'footpath on top of bank'. In addition, part of the feature marks the line of the present county boundary between Dublin and Wicklow, although this is of late 19th-century date, having previously been located along the River Dargle to the south of the site.</p> <p>Two trenches were excavated across the feature. No evidence for a fosse or construction material, other than topsoil, associated with the bank was revealed. Pottery sherds and a fragment of glass, of late 18th- or 19th-century date, were recovered from the interface between topsoil and subsoil. A section of the bank was previously investigated by Margaret Gowen (Excavations 2002, No. 1960, 02E1717).</p> <p>Given the cartographic evidence, coupled with the results of the testing, it is suggested that the feature is of late 18th- or early 19th-century date and is a landscape feature associated with the former Ravenswell House. Furthermore, it is also likely that the feature was much higher and narrower and may have originally served as a field boundary, which was subsequently almost fully levelled. This would explain why it is located along the line of a townland boundary, which was subsequently used as a county boundary.</p>
Corke Abbey, Bray	02E1717	<p>One test-trench was opened in November 2002 on the grounds of Bray Golf Club, north of Bray town. The area under investigation is recorded in the SMR as part of the Pale boundary, SMR 26:124, although this identification is not supported by the historical evidence, which points to a possible association with Corke Abbey and to lands outside the Pale and held by the</p>

Site Name	Licence No.	Summary
		<p><i>Crown that were leased in the 15th and 16th centuries to the Harrolde and Walshe families, the latter of which held extensive lands in south Dublin incorporating Carrickmines (L. Simpson, pers. comm.). The levelled boundary runs from the railway line north-eastward across part of the golf-course. The remains consist of a linear, flat-topped, tree-lined bank with shallow depressions on either side. The south-western end is the best-preserved section of this feature; the north-eastern end is barely detectable on the ground and is almost level.</i></p> <p><i>A section of the proposed Shanganagh and Bray Main Drainage Scheme wayleave passes through the eastern limit of the Pale boundary, at its most poorly preserved point. The excavation focused particularly on assessing the impact of the creation of haul roads during the laying of a new sewer.</i></p> <p><i>The test-trench was 14.2m long, 1m wide and 0.8–1m in maximum depth. The cross-sections exposed the levelled and reworked remains of the boundary bank but no evidence of well-defined ditch cuts on either side of the levelled bank. There is a possibility, therefore, that the remains of a ditch or ditches exist below the level excavated. All of the material exposed either was sterile or had modern inclusions as a consequence of golf-course development. A full topographical survey and terrain modelling of the levelled bank through the area of the proposed wayleave and for a distance of 20m beyond it were undertaken as mitigation. Trench excavation for pipe laying will be monitored during the construction phase, although it may not reach a level at which greater definition will be gained</i></p>
<i>Corke Great, Bray, Wicklow</i>	<i>01E0220</i>	<i>Testing took place in advance of construction in March 2001. Five test-trenches were excavated across the development area. One ditch was noted in Trench 2. No artefacts were recovered from it to suggest a date.</i>
<i>Bray Little/Ravenswell/Bray Commons/Killarney/Bray, Wicklow</i>	<i>12R0053</i>	<i>A wade survey and a magnetometry survey by hand-held metal detection were carried out at the site out along a 4km stretch of the River Dargle at Bray, Co. Wicklow. The work was carried out in advance of a flood defence scheme that includes widening and deepening of the river channel. Where possible, metal detector hits were examined and logged. These were logged with a high frequency at over 1 per square metre. A large number of the hits were visible and consisted of modern dumped material. No archaeologically significant material was encountered.</i>
<i>Bray Little/Ravenswell/Bray Commons/Killarney/Bray, Wicklow</i>	<i>12E123</i>	<p><i>Monitoring is being undertaken for a flood defence scheme on 4km of the Dargle River. This works include widening and deepening the river and including a new culvert at Bray Bridge. Works uncovered a number of features at Bray Bridge.</i></p> <p><i>The earliest bridge recorded in Bray in 1666 crossing the River Dargle was replaced by a four-arch bridge in 1736. This</i></p>

Site Name	Licence No.	Summary
		<p>bridge collapsed in a storm and was replaced by another four-arch bridge in 1741. The current bridge was constructed in the middle of the 19th century. Two buttresses of the earlier bridge are visible at low tide under the southern arches of the existing bridges; these will be excavated in the summer of 2013.</p> <p>Underneath the existing bridge an earlier stone structure was uncovered; this was an amalgam of the 1736 and the 1741 bridges. The eastern section of the bridge consisted of two parallel walls in-filled with sand and gravel. This was part of the 1736 bridge. The second wall at the west was constructed in 1741; it was a large wall with a culvert. A cobblestone surface was also uncovered in places.</p> <p>To the west of the stone bridge on the Lower Dargle Road, a section of an earlier wooden bridge was uncovered. This was uncovered within what was the river bed. The bridge consisted of a large base plate (T101) with three upright timbers inserted into it (T102, T103 and T104). Two timbers were initially visible crossing horizontally but these collapsed upon exposure. The timbers appear to have been laid directly onto the river bed. There was no evidence of an excavated trench. The base plate was orientated south-west to north-east. The base plate was 6.9m in length, 0.42m in width and was 0.25m thick. At the south-west it was partially damaged by the insertion of metal piles. Three sub-rectangular mortice joints and a cross-shaped double mortice were recorded in the timber. The rectangular mortises were cut through the timber to support the upright timbers. These measured 0.3m x 0.2m on average. The upright timbers or "tenons" were cut for insertion into the timber. This method of using mortise and tenon joints creates a very strong joint.</p> <p>An interesting double cross-shaped mortise joint contained two through mortises, at the north. This would have held an upright timber and contained the remains of a wooden wedge. The second mortise may have been a splayed joint. These can often be held in place with a brace but this was not visible. A timber was recovered (not in context) which would have been placed in this joint and splayed towards the south. This would have given extra support to the upper level of the bridge. The tenon was held in place using a wooden wedge, the remains of which were removed.</p> <p>Analysis of the timbers by Ellen O'Carroll has show that the larger timbers are oak and the timber wedges are alder and holly. Dendrochronology dates for T101 indicate a felling date range of AD1116 ± 9 years or later. The date for T102 is AD1100 ± 9 years or later, or after AD1100. This would indicate a late 12th century or early 13th-century date for the bridge.</p> <p>Further works will be undertaken during 2013 within the river bed and further remains of this bridge may be uncovered.</p>

Site Name	Licence No.	Summary
Bray Little, Bray, Wicklow	130121	<p>A flood defence scheme is being undertaken along 4km of the River Dargle. This work includes widening and deepening the river and including a new culvert at Bray Bridge. As part of the E.I.S. for the works two arches of an earlier bridge were recorded within the arches of the existing bridge over the Dargle in the centre of the town. It was recommended that these be excavated.</p> <p>The earliest bridge recorded in Bray in 1666 crossing the River Dargle was replaced by a four-arch bridge in 1736. This bridge collapsed in a storm and was replaced by another four-arch bridge in 1741. The current bridge was constructed in the middle of the 19th century. Two buttresses of the earlier bridge are visible at low tide under the southern arches of the existing bridge a third arch was uncovered as a result of excavation under the northern arch. All these features and associated works were fully excavated.</p> <p>Under the arch of the bridge at the northern bank of the river a buttress of a bridge was uncovered (Area A). This was surrounded by a thick layer of concrete up to 1.2m in depth which had been poured into the area after Hurricane Charlie (1986), to secure the existing bridge. This layer was removed by a rock breaker. The main section of the feature was random rubble walling with a lime mortar. Ashler walling was visible at the south and east. This consisted of large limestone blocks held together with a lime mortar. At the north this had been removed during the construction of the existing bridge. When the stone was removed a wooden raft, foundation was uncovered. This consisted of seven interlocking timbers. Only two wooden dowels were recorded, the timbers were laid into notches in the base timbers. This would have formed a stable layer in clay base of the bridge and avoided subsidence.</p> <p>The buttress under the central northern arch of the bridge was also surrounded by a thick layer of concrete (Area B). This buttress was visible at low tide. The main section of the feature was random rubble walling with a lime mortar. Ashler walling surrounded the feature on all sides. This consisted of limestone blocks held together with a lime mortar; the blocks were narrow and may have been added to finish the bridge as a cladding rather than for strength as in the previous buttress. When the stone was removed a wooden raft, foundation was uncovered. This consisted of one timber at the centre and a large number of wooden stakes. These were concentrated at the west and north with some also visible at the east. The highest concentration of the stakes was at the apex of the buttress, this is the area with the fastest flow of water and the greatest possibility of erosion of</p>

Site Name	Licence No.	Summary
		<p><i>the bridge. This timber frame is quite different from the foundation layer in Area A.</i></p> <p><i>The southern arch of the bridge contained a buttress also visible at low tide. This was surrounded by sand and silt from the river. The main section of the feature was random rubble walling with a lime mortar. Ashler walling was visible at the south, east and north. This consisted of large limestone blocks held together with a lime mortar. The buttress was on a foundation layer of stone. This feature was truncated at the west by earlier works in the river. Unlike the other two buttresses there was no timber foundation in this area. This arch is out of the main flow of the river and is only used during high tides or periods of flooding.</i></p> <p><i>The stone bridge exposed as part of the works appears to be an amalgam of two earlier bridges on the site, the 1736 bridge and the 1741 bridge. The buttress in the northern arch (Area A) is of a different construction than the two others that were recorded. It has larger dimensions; the limestone blocks are larger and the foundation layer is of a different construction. This feature was reused as part of the 1741 bridge. The buttresses in the remaining areas are of a similar size and the materials used are of similar dimensions. The buttress in Area B was laid on a foundation of wooden piles. This was concentrated at the west of the pier. There was no wooden foundation of the buttress in Area C, at the southern extent of the bridge, and this arch is drier.</i></p>