Appendix 13.7

Archaeological Testing Report

COURTNEY • DEERY

ARCHAEOLOGY & CULTURAL HERITAGE

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Archaeological Testing Report

N2 Slane Bypass

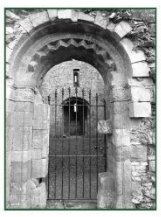
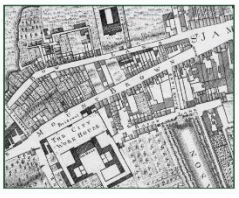
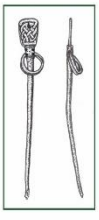
Slane / Fennor / Cashel / Cullen

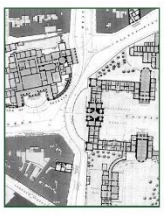
Co. Meath

Excavation Licence No.: 21E0348

Site Director: Níall Garahy

6th December 2021



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EXECUTIVE SUMMARY

This report forms part of an Environmental Impact Assessment Report (EIAR) for the proposed N2 Slane bypass road scheme. The archaeological testing was undertaken to inform the Archaeology and Cultural Heritage chapter of the EIAR, that is being prepared by Courtney Deery Heritage Ltd on behalf of RPS Ltd, for Transport Infrastructure Ireland (TII).

The results of archaeological testing of anomalies that were identified as a result of a geophysical survey (Licence No. 20R0238) of the proposed N2 Slane bypass road scheme are presented in this report. The archaeological testing was carried out under Licence No. 21E0348 in the townlands of Slane, Fennor, Cashel, and Cullen.

Archaeological sites were confirmed in two locations. A probable ring-ditch and associated features were identified in in Area 12 / Fennor townland and a circular enclosure ditch was identified in Area 20 / Cashel townland. Archaeological testing of other anomalies identified during the geophysical survey confirmed the potential features to be non-existent or to be of geological, rather than archaeological, origin.

It is recommended that all archaeological features identified during the testing be fully archaeologically resolved. A detailed mitigation strategy will be provided in the EIAR for the proposed scheme, in consultation with the TII project archaeologist, for the approval of the National Monuments Service, Department of Housing, Local Government and Heritage

1. INTRODUCTION

1.1. General

The results of archaeological testing (Licence No. 21E0348) carried out by Níall Garahy of Courtney Deery Heritage Consultancy Ltd (CDHC) are described in this report. This work has been carried to inform the Archaeology and Cultural Heritage chapter of an EIAR for the proposed N2 Slane Bypass scheme, which is being prepared by CDHC on behalf of RPS Ltd, for Transport Infrastructure Ireland (TII).

1.2. Site Location

The testing locations comprise five geophysical survey areas (Areas 9, 13, 15, 19, 20), located in four townlands (Slane, Fennor, Cashel, and Cullen) to the east and southeast of Slane, Co. Meath and on the proposed route of the bypass (Figure 1). Areas 19 and 20 are located in Cashel townland, Area 9 is located in Slane townland, Area 13 is in Fennor townland and Area 15 is in Cullen townland. Access to a sixth location that was included in the proposed licence application (Area 21 in Cashel townland) was not possible at the time of the archaeological testing.

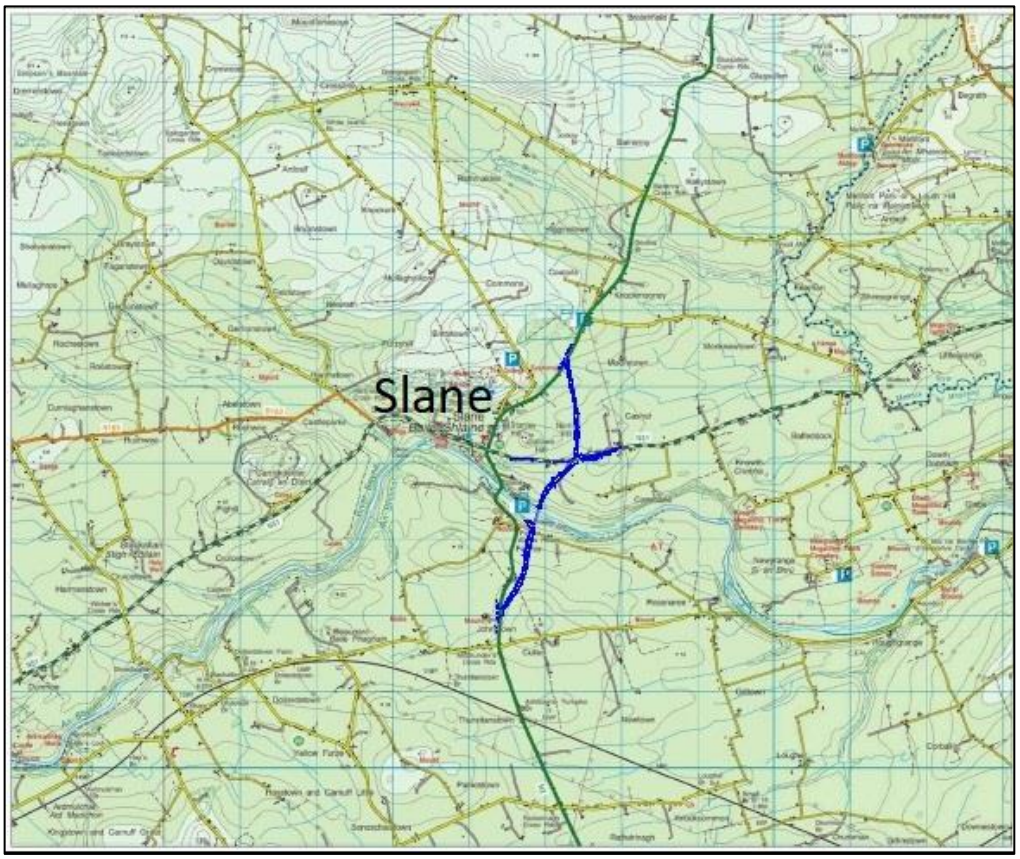

Figure 1 Site location

1.3. The Proposed Development

The proposed N2 Slane Bypass comprises 3.4km of Type 2 dual carriageway with offline roundabouts at the southern and northern tie-ins and at the N51 and involves a Boyne River bridge crossing. The proposed scheme includes N51 route improvements.

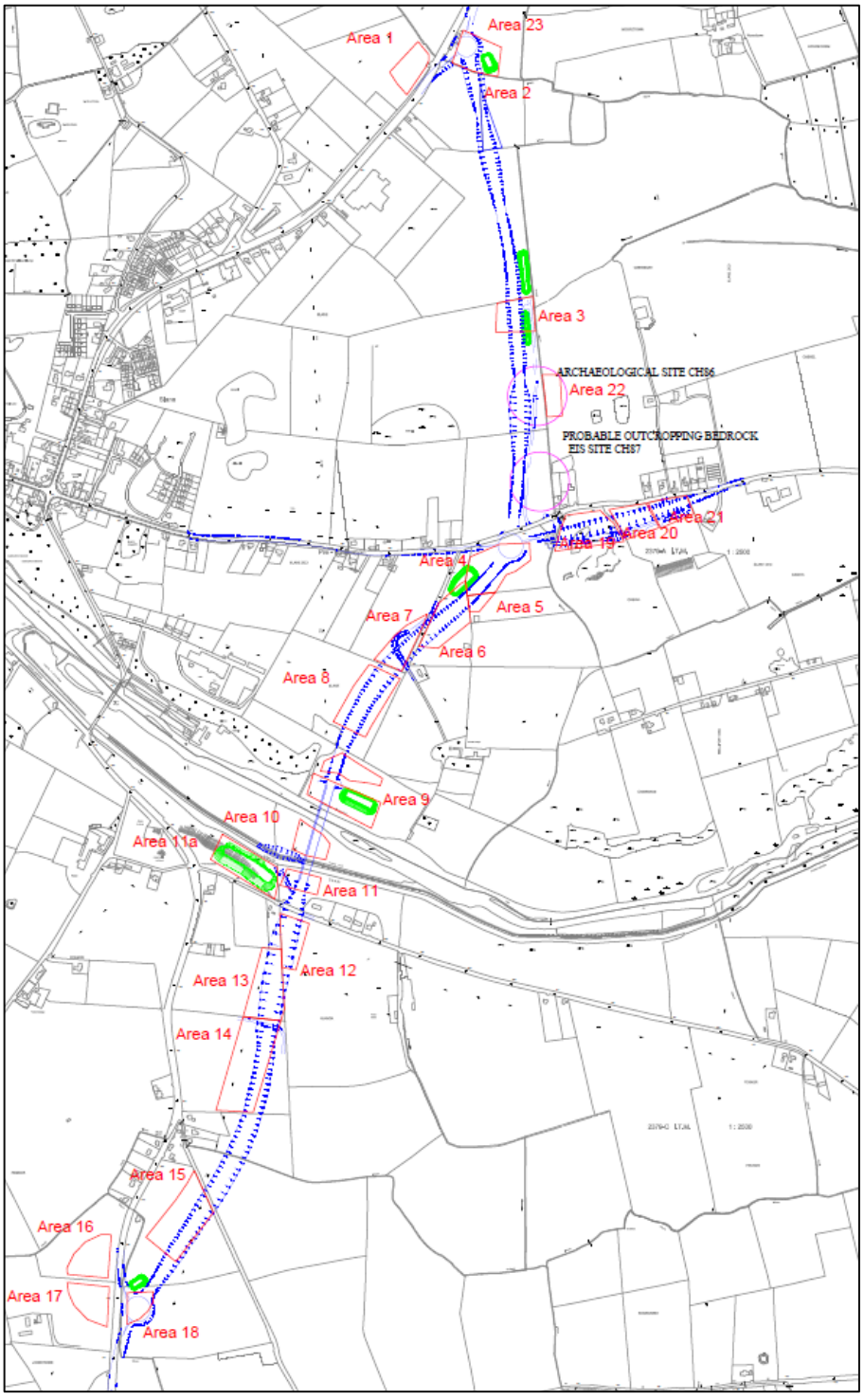

Figure 2 Proposed scheme layout showing location of all geophysical survey areas (Areas 1–23)

2. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1. Introduction

The archaeological and historical landscape of Meath is a rich one. It once formed part of Máigh mBrég (Plain of Brega) and archaeological evidence indicates that it has been occupied since the earliest of times. This can be attributed to the fact that the area contained excellent agricultural lands within an accessible low-lying landscape that had navigable river systems. The environs of Slane have a well-documented archaeological, architectural and cultural heritage record, and the type and nature of the sites within it are described below.

2.2. Prehistoric Period

2.2.1. Mesolithic (c. 7000-4000 BC)

The transitory hunter-gatherer groups of this period predominantly exploited the coastline and river valleys. Given its natural resources, there is every reason to believe that there was a sizeable hunter-gatherer community in the Bend of the Boyne, particularly given evidence of Mesolithic coastal communities nearby in Dublin and Louth (Stout 2002). Mesolithic cultural remains have left no lasting legible trace and have no visible dominance in the modern-day landscape (Courtney & Goucher 2009), with evidence for Mesolithic activity principally being ephemeral archaeological remains such as lithic finds and scatters and shell middens (mounds sometimes referred to as kitchen middens comprising accumulated discarded shells, animal bones, flint implements and sometimes occupation debris). Excavations at Newgrange unearthed flint, including a Bann Flake, characteristic of the later Mesolithic (O'Kelly 1968). More recently, Intensive field-walking studies have led to the discovery of Mesolithic material (Cooney and Brady 1998; Cooney 2000; Brady 2007), including a number of butt-trimmed flakes from fields to the north of the Brú Na Bóinne World Heritage Site (WHS).

2.2.2. Neolithic (c. 4000-2200BC)

The Neolithic saw the transition of the early settlers from a hunter-gatherer lifestyle to a farming economy with the introduction of cattle, sheep, wheat and barley and possibly the introduction of new peoples. This period was characterised by land clearance and the establishment of field systems and settlement sites further inland along river valleys. It also saw new developments in ritual activity. The first permanent monuments (megalithic tombs) were built in the Irish landscape, representing a complex and well-structured social hierarchy. The megalithic tradition is dominated by the Brú na Bóinne World Heritage Site, containing the three large passage tombs of Knowth, Newgrange and Dowth - all three occupying commanding positions overlooking the course of the River Boyne. The construction of this passage tomb

cemetery commenced sometime around 3300BC, by which time the area had developed into an open farmed landscape with evidence for domestic houses and occupation scattered throughout.

The construction of at least 40 passage tombs in the Boyne Valley and in the wider catchment of the river testifies to a sizeable, structured and culturally sophisticated local population in the region more than 5,000 years ago. Indeed, the Brú na Bóinne tombs – particularly Knowth – contain the largest assemblage of megalithic art in Western Europe. These monuments characterise the landscape at the bend of the Boyne and the surviving Neolithic and Bronze Age sites indicate that the banks of the Boyne were favoured in a mortuary context.

There are no megalithic monuments representing ritual activity within the study area. However, systematic plough-zone field-walking carried out by Conor Brady, outside the WHS core, identified a lithic scatter (ME026-024) in Newtown townland. The scatter included a transverse arrowhead, which suggested a Late Neolithic date. The scatter was excavated by opening seventeen 1m2 test pits and sieving the soil, a methodology that resulted in maximum recovery of artefacts (Licence No. 00E0613). Other scatters were located on the floodplain itself in Rossnaree townland, and another group on the eastern slope of the Cullen Ridge (Brady 2002). These findings represent tool production and retouching activity from the Neolithic Period. They indicate that the prehistoric activity in and around the Brú na Bóinne complex also extended beyond the core area, outside which it is represented by more ephemeral surviving remains.

2.2.3. Bronze Age / Iron Age (c. 2400 BC – AD 400)

There is a mound barrow (ME019-059) and an embanked barrow (ME026-004) in Rossnaree. Tradition has it that the mound barrow (ME019-059) in Rossnaree was the burial place of Cormac Mac Airt (Stout 2002). This is suggested in the townland name, which is an anglicisation of the Irish *Ros na Ríogh* meaning 'wood of the Kings'. Tradition has it that a mound in the townland was the final burial place of Cormac MacAirt who died at *Cleiltech*, an early residence of the kings of Tara, which is thought to be where the present site of Rossnaree House lies (Stout 2002). The grave, disturbed during WWII for the construction of a 'pillbox', consisted of a sub-rectangular pile of stones and the burial lay underneath this. In it were the remains of three adult females and an infant. A sample from one of the skeletons yielded a calibrated date of 257-533 AD, placing it in the Iron Age. Two fragments of a silver earring were found on the right-hand side of the upper body of one of the skeletons (Cahill & Sikora 2011) and Stout (2002) suggests that it could be a Viking burial.

The Anglo-Norman motte on Slane Hill (ME019-060001, the seat of the Flemings) is likely to have been founded on an earlier important prehistoric site. It is referred to in early sources as *Dumhach Sláine*, with *dumhach* meaning a burial mound. Low-lying earthworks discovered on the eastern side of the motte have characteristics of other local enclosed barrows. Along with the proximity to the Brú na Bóinne complex and the reference to an earlier burial mound at the site in the medieval sources, this suggests that the motte

may be constructed on an earlier, possibly prehistoric mound and may have a ritual significance given its siting in a prominent location. (Hill of Slane Archaeological Project, Seaver & Brady 2011, Herity 1993, Westropp 1901).

A short cist (NMI 2002:199) containing a cremation was found in the townland of Ardmulchan in 1959 in the garden of a dwelling. It was wedge-shaped in plan, with a long axis aligned northwest-southeast (Dims. L 0.44m, Wth. 0. 44m, H 0.25m) and was covered by a large capstone (Cahill & Sikora 2011) it is likely to have dated to the Bronze / Iron Ages (c. 2400 BC - AD 400).

Stray finds possibly dating to the Bronze Age include a copper alloy axehead in the neighbourhood of Fennor/ Ardcath are recorded in the National Museum files. A group of six bronze latchets, described as serpentine latchets were discovered by workmen digging a drain in Slane Park in 1779 (Wood-Martin 1903, Wilde 1857, NMI no ref). A 'club headed' bronze stick pin found 'near Slane' also suggest Bronze Age activity (Brindley, 1995).

2.3. Early Medieval / Early Christian Period (c. AD 500 – 1100)

2.3.1. Introduction

Major social, settlement and religious changes occurred in the period at the end of the late Iron Age including the introduction of Christianity and the demise of paganism. In the course of the 6th century the sub-kingdom of Brega emerged within the Southern Uí Neíll and was controlled by the Sil nÁeda Sláine. Áed Sláine, who died in 604, is associated with Brú na Bóinne, suggesting that the power centre was focused around Slane. His son Congal (who died in 634) is the first recorded King of Brega (MacCotter 2008). Dynastic conflict led to the battle of Imlech Pich in 688 and the partition of the kingdom into Southern Brega with its royal residence at Lagore and Northern Breaga. The location of the initial North Brega royal residence is not known, though by the 7th century the Fir Chul Breg were at Ráth Airthir beside Teltown and Donaghpatrick. During the 7th century it appears that the 'capital' of North Brega was transferred from Ráth Airthir to Cnogba (Knowth). One member of this dynasty, Congalach, became king of Tara and high king of Ireland from 944 to 956.

According to the saga Cath Ruis na Ríg for Boinne, a sequel to the early Irish epic Táin Bó Cúailgne, Rossnaree was the site of a battle at the end of the 1st century. It describes the triumph of Conchobhor Mac Neassa and his Ulster warriors over the provinces to the south and west of Ireland (Stout 2002, Wadden 2014).

2.3.2. Settlement Activity

There are also two sites classified as cashels (ME019-062 & 063) recorded to the east of Slane on 'Stanley Hill' and 'Gallows Hill'. Test excavation in advance of a residential development at Ledwidge Hall, located

within the zone of archaeological potential associated with the cashels, identified a circular enclosure measuring 52m by 1.22m by 0.53m (Licence No. 07E0804, Kelleher 2008). A north–south extension and the northern terminus of the enclosure ditch were excavated. The enclosure ditch was truncated by two modern stone drains and a north–south linear ditch (19.8m by 1.6–1.08m by 0.41m) that terminated 0.5–0.6m inside the enclosure. The interior of the enclosure was not exposed enough to discuss the presence (or lack thereof) of internal structures. The date of the enclosure was not established.

East of these sites geophysical survey and test excavation has identified an enclosure site dating to the early medieval period (Seaver 2009, Licence No. 06E0341, ME019-085). A complex of sites identified through LIDAR was also found in the vicinity of the recorded cashel sites, including an enclosure (ME019-012, BVLP D3ii) and a field system (ME019-098) which are potentially contemporary with the early medieval sites (Davis et al 2010).

In Rossnaree, a substantial multivallate enclosure (ME019-080) close to the 'bend' of the River Boyne was discovered as a result of a sequence of plough-zone field-walking and geophysical survey (Brady 2011). Research excavation revealed a settlement area with associated burial and on the basis of the artefactual evidence was early medieval in date. Despite the cuttings being located close to the densest part of the lithic scatter originally identified, no features were identified as prehistoric. The initial prehistoric activity, if present, appeared not to involve significant cut features, though it is possible that prehistoric features remain outside the areas of the excavations cuttings and are yet to be found (Brady 2011).

In Crewbane townland a geophysical survey undertaken in 2010 identified a previously unrecorded souterrain, a substantial earthen embankment, a low-relief linear earthwork and a well. In addition to the geophysical evidence there is also a large circular, or sub-circular, enclosure (possibly a ringfort) and an adjacent field system (ME019-090 & -091; Fenwick et al. 2012, Fenwick, Dowling & Schot 2010).

There are two souterrains located east of Slane Hill (ME019-013 & -008, now collapsed), one to the north of Slane Hill in Brittstown (ME019-072), two in Fennor (ME019-034 & -037), one in Rossnaree (ME019-048), another recently identified site in Crewbane (ME019-081). Also, in Crewbane townland, two enclosure sites were recorded using LiDAR and Geophysical survey (Davis et al. 2010). A semi-circular enclosure (ME019-101) on the north bank of the River Boyne, identified in the Boyne Valley Research Project (Site E4-i, Davis et al. 2010) may also date to this period.

2.3.3. Non-secular activity

A complex of possible prehistoric, early Medieval and medieval monuments is sited on the Hill of Slane. St Patrick is said to have founded the city of *Slane Maige Bregh* (Gwynn & Hadcock 1988); legend asserts that he lit the Pascal fire on the Hill of Slane in breach of the High King's (perhaps King Laoghare) decree that no one was to light a fire before he had lit his at Tara, and thus announced the arrival of Christianity in

Ireland. There are suggestions that the pascal fire might have been lit at Knowth instead (Mitchell 1986, Seaver and Brady 2011).

A church was founded in Slane Castle demesne by St Erc, who died in AD 514. The location of this monastery is uncertain, but Manning (2008) posits that sandstone stonework on the wider walls at the east end of the nave of the later medieval structure indicate the presence of antae, a projecting feature common on masonry churches from the early 9th to 11th centuries. A shrine thought to be St Erc's burial tomb (ME019-110) was built on the site of the original chapel he established; this would have contained the disarticulated remains of the saint and would have been a focus for devotion at a very early stage of the church's development (Bradley 1985). The deaths of abbots from the foundation onwards are recorded in the 8th and 9th centuries. The church is known to have been attacked by Vikings in 833, and in 950 its round tower (referred to as a belfry) was destroyed. The monastery went into decline after this but it was probably the burial place of the kings of north Brega. It was raided again in 1156, 1161 and 1170, by which time it had probably ceased to function (Gwynn & Hadcock 1988, Seaver & Brady 2011).

The townland name Fennor may be derived from *Nechtán*, a pagan deity and guardian of the River Boyne. The church site here (ME019-035) may have ecclesiastical origins; Neachtan in a Christian manifestation was a disciple of St Patrick and a tutor of St Cianán of Duleek (Ó Riain 2011). Abbots of Fennor are recorded from 804 to 1024 (Cogan 1862-70). Slane and Fennor were raided by Norsemen in 834 and again in 939 when it was plundered and several monks were slain. Fennor became a grange of Mellifont after 1142 (Gwynn & Hadcock 1988). In the mid-12th century Bru na Bóinne fell under the sway of Tigernan Ua Ruairc, king of Breifne. His hold on this territory may have been weak, however, and this would explain the ease with which so much of it was granted to the newly founded Cistercian monastery of Mellifont in 1142.

2.4. Medieval Period (c. 1169 AD – Early 16th century)

2.4.1. Introduction

The present county of Meath formed the eastern half of the Anglo-Norman Liberty of Meath which, in 1172, was granted by Henry II (King of England) to Hugh de Lacy for the service of fifty knights. De Lacy then set about the subinfudination of the county and these lands were further subdivided into manors by the grantees (Graham 1974). The coming of the Anglo-Normans brought about little change in the landholding patterns on the north side of the River Boyne, where they respected and maintained the lands forming part of the Mellifont estate (Bradley 1997). The barony of Slane was granted to Richard le Fleming who built a motte (castle) at Dumhach Sláine and at Knowth (Cnogba) (Brady, 2011).

There are two motte sites in the general area of Slane, one on the Hill of Slane (ME019-060001) and the other in Thurstianstown (ME019-047) which also has a possible bailey (ME019-047). Mottes were usually located at defendable vantage points, often overlooking fords on rivers and the main axes of movement

along the river valleys or access routes (Graham 1974) and certainly the mottes at Slane, Knowth and Turstianstown had visual presence over the navigable River Boyne valley.

The remains of Fennor Castle (ME019-036) are located south of Slane village and south of the River Boyne. The associated settlement at Fennor is indicated on the Down Survey maps of Fennor Parish (1656), on which – amongst church structures – there is a large castle-like structure which is labelled as 'an old stone house' and a 'brick house in repair' marked to the south of it.

The thirteen-arched stone bridge present at Slane today, with its triangular cutwaters, suggests a date in the mid-14th century and there may have been an earlier bridge present at the site. A bridge is depicted crossing the Boyne at Slane on the Down Survey (1656) map of the Barony of Slane and Fennor, while the Civil Survey (1654-1656) notes '…a stone bridge with an ould castle thereon' (Simington 1940, 343). The line of the road from the bridge was probably altered when the estate town was constructed before 1763 (Seaver 2005).

Slane was not part of the lands of Mellifont, but the sphere of influence of the Cistercians must have affected the surrounding agricultural land; the order owned one of the fish weirs at Fennor at its closure in 1539 (Stout, 2002, 1997). There are two fish weirs recorded in Fennor (ME019-084 & ME019-120) and one at Rossnaree (ME019-068002) in the Civil Survey in 1651.

2.4.2. Non-secular Activity

Slane belonged to an intermediate level of smaller unwalled boroughs, which acted as centres for trade, holding regular fairs and markets. The original village, which was located closer to the river, no longer survives above ground and the exact location is unknown; the village was redeveloped at a new location in the 18th century (Graham 1976).

The church on Slane Hill became the medieval parish church of St Patrick, and remained in use until the 18th century when the present Church of Ireland church in the village was constructed in 1712. The church and chancel were in ruins since 1641. The nave was probably built in the 13th century and the chancel was substantially rebuilt. A rectangular 15th century bell tower was added at the west end, which opens into the nave and is vaulted over the third floor. To the north are the ruins of a cloister called 'the College', a set of buildings that surround four sides of a courtyard. In the northern range is the 'priest's house' and the southern range has a two-storeyed hall, refectory and tower house (ME019-060010), which is perhaps the earliest building. Also at the site is a Gatehouse (ME019-060009) and motte (ME019-060001, the seat of the Flemings). A chantry college was built in the later 15th century, with three ranges around a courtyard (ME019-060010; Seaver & Brady 2011, RMP files).

The church at 'Fynowre' (Fennor), south Slane on the opposite bank of the River Boyne (ME019-035), is listed in the ecclesiastical taxation of Pope Nicholas IV for 1302-06 AD (Cal. doc. Ire. 5, 252). In 1622 Ussher describes the church and chancel as ruined (Erlington 1847-64) and according to Dopping's Visitation (1682-5) the church had been a ruin since 1641 and the graveyard was not enclosed (Ellison 1971).

2.5. Post-Medieval Period (Early 16th century – mid 19th century))

Slane village (ACA), is a planned estate village that was laid out on a cross-shaped plan at the junction of roads from Drogheda and Dublin in the 1760s by Viscount Conyngham. A defining design in the village is the four matching houses of squared limestone, facing each other diagonally across the main crossroads. The village setting is complimented by the rubble-stone castellated entrance gates to Slane Castle and, at the Dublin end of the village, by the bridge and entrance gates to Slane Mill (NIAH).

Slane Mill (MH019-260) is a very fine example of a mid-18th century corn mill and is considered to be of national importance. The main mill building displays a level of carved detail that is unusual for an industrial building and more typically found in country houses of the period (NIAH).

Slane Bridge is a thirteen-arch masonry bridge (RPS MH019-250 & RMP ME019-024), built c. 1776 and expanded westwards. The bridge is one of the earliest crossings of the River Boyne and comprises of elements from various periods, from the 14th century to the present day. The original, possible medieval part has three pointed arches at southern bank while these same arches are rounded on the expanded western side. The bridge has played an important role in the economic and social life of the village of Slane (NIAH).

Navan, Kells, Trim, Slane and Athboy are all situated on the Boyne-Blackwater river network, which in turn links these large Meath towns with Drogheda and the Irish Sea. The navigability of the river system, however, was badly compromised over time by milling and fishing constructions along its length, which meant that it could not be navigated by larger vessels. To address this construction of the Boyne Navigation Canal began in 1748. It was completed to Slane (the Lower part) by the 1760s and to Navan (the Upper part) by 1800 and was the most critical canal system for the industrial and infrastructural development of County Meath. The canal allowed those same mills to thrive and transport their goods, and this was particularly true in the case of the Slane Mills (Giacometti *et al*., 2010). The Upper Boyne Navigation comprises four long stretches of canal, including one in Slane (MIHS 019-029), and a short stretch at Slane Castle (MIHS 019-014). Other associated features include locks, lock-keeper's houses, milestones, aqueducts, bridges and mooring posts etc.

2.6. Stray Finds in the Topographical Files of the National Museum of Ireland (NMI)

The topographical files of the National Museum of Ireland (NMI) record stray finds held in the museum's archive. The finds, which have been donated to the State in accordance with National Monuments legislation, are provenanced to townland, and the files sometimes include reports on excavations undertaken by NMI archaeologists earlier in the 20th century. A list of stray finds from the townlands of the testing areas is provided in Table 1 below.

Table 1 Stray find in the Topographical Files of the NMI

NMI Register No.	Simple name	Component	Townland	Find place
1971:1064 - 1078	15 Sherds Pottery	Pottery	Fennor	Mostly green glazed medieval ware with a red temper. Also, a fragment of Early Medieval cooking ware known as 'ham green' ware.
1971:1079	Flake	Flint	Fennor	Small flake with no evidence for retouching
1971:1080	Tusk	Ivory	Fennor	N/a
1971:1081	Tooth	Bone	Fennor	N/a
1971:1082	Strap	Iron	Fennor	Badly corroded iron strap, possibly a loop handle of a bucket, or a medieval spur.
1971:1083	Slag	Iron	Fennor	Badly corroded iron lump, probably just a lump of slag.
1971:1084	Pin	Iron	Fennor	Iron pin with rounded stem and a ring-head forming a 'P'. See 1971: 1085
1971:1085	Ring	Iron	Fennor	Penannular ring, irregular in outline, originally circular, now badly misshapen. Rectangular in section, more of a loop than a ring. Terminals are unevenly finished with no evidence for welding or joining. Ring fits in to the ring-head of 1971: 1084 – probably two parts of the same artefact.
1971:1086-91	Pottery (6 sherds)	Pottery	Fennor	Wheel turned pottery sherd from c. C17 – 19th.Wheel turned pottery sherds with range of glazes from lead glazing to brown, green and translucent green glaze.
1971:1092-94	Glass (4)	Glass	Fennor	Green tinted modern glass fragments.
1971:1095-96	Charcoal	Wood	Fennor	Samples found in context with pottery and human bone
1971:1097	Human remains	Bone	Fennor	Human femur
1971:1098-1103	Bone (6 pieces)	Bone	Fennor	Animal bone
1971:1104	Human remains	Bone	Fennor	Assortment of human shin and arm bones.
1971:1105	Pottery	Pottery	Fennor	N/a
1971:1106-7	Chip-2	Flint	Fennor	Irregular flint chips with no evidence for retouching.
IA104/1998 (1)	Ring Pin	Bronze	Fennor	Topographical files
1982:66	Axehead	Copper alloy	Neighbourhood of Ardcath or Fennor	N/a
No ref.	Bronze Latchets	Bronze	Slane	Six latchets dug up in Slane Park in 1781 (ref. Wilde 1857, 566).

NMI Register No.	Simple name	Component	Townland	Find place
No ref.	Bronze Pin	Bronze	Near Slane	Club headed bronze stick pin from near Slane, April 1948 (ref: Royal Ontario Museum: Sturge - ex.

3. GEOPHYSICAL SURVEY

3.1. Introduction

Geophysical survey was carried out by Earthsound Geophysics in November and December 2020 (Licence ref. 20R0238). Three sites of archaeological interest and a further three sites of possible archaeological interest were identified within the proposed scheme. Summary results are outlined below.

3.1.1. Sites of archaeological interest

- **Area 13:** A ring-ditch (9m x 12m) and possible ring-ditch (7m x 8m) (**Sites 13-1 & 13-8**). ITM 696751, 772932 & 696710, 772835;

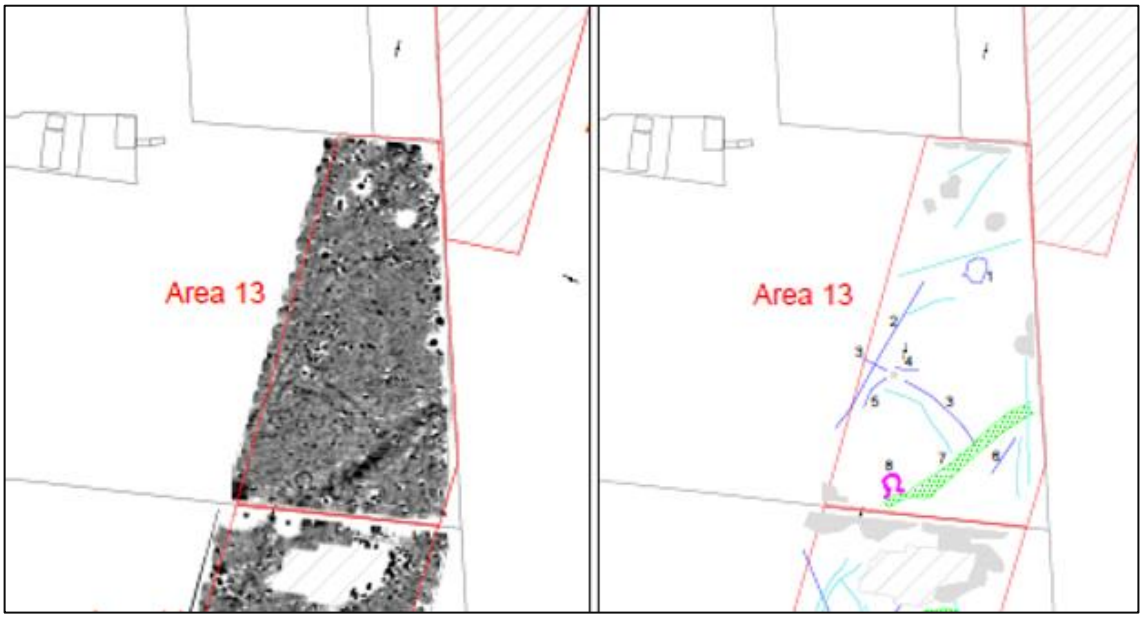

Figure 3 Geophysical survey & interpretation, Area 13

- **Area 20:** An enclosure ditch, c. 27m diameter, containing a pit (**Sites 20-3 & 20-4**). ITM 697745, 774098 for both. The enclosure ditch may contain burnt remains. Only the northern part of the enclosure is within the proposed scheme. Site located on the southern edge of the survey area;

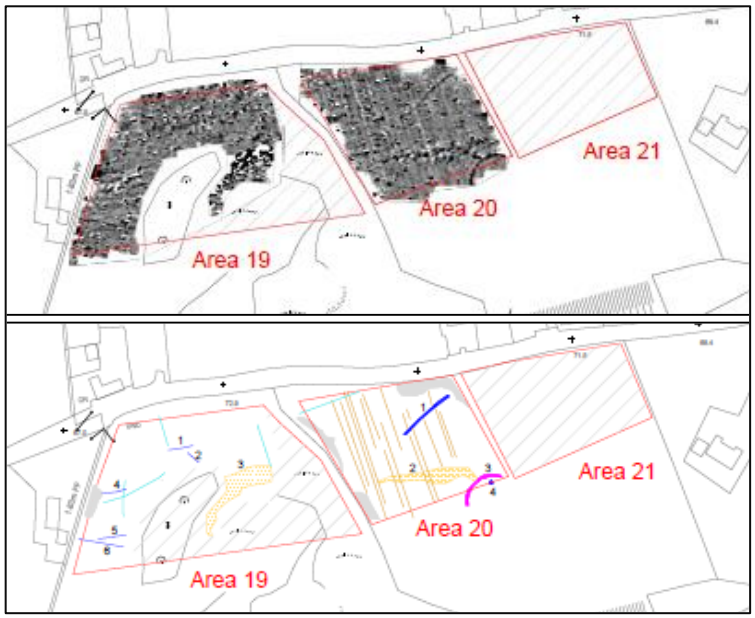

Figure 4 Geophysical survey & interpretation, Areas 19, 20, 21

3.1.2. Sites of possible archaeological interest

- **Area 15:** Large sub-rectangular enclosure (42m x 32m) (**Site 15-7**) ITM 696482, 772238. The ditch appears to contain burnt deposits. This appears to be a continuation of features identified in the 2005 and 2010 surveys to the west and east, and probably represents a relict field system;

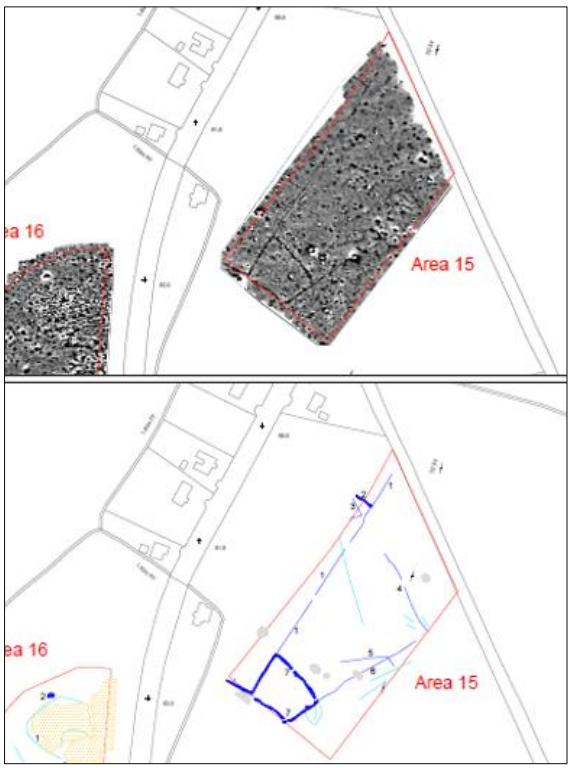

Figure 5 Geophysical survey & interpretation, Area 15

- **Area 9:** Possible sub-circular enclosure (21m x 14m) and rectilinear enclosure (17m x 8m; possible structural remains) (**Sites 9-5 & 9-6**). ITM 696945, 773483 & 696973, 773471.

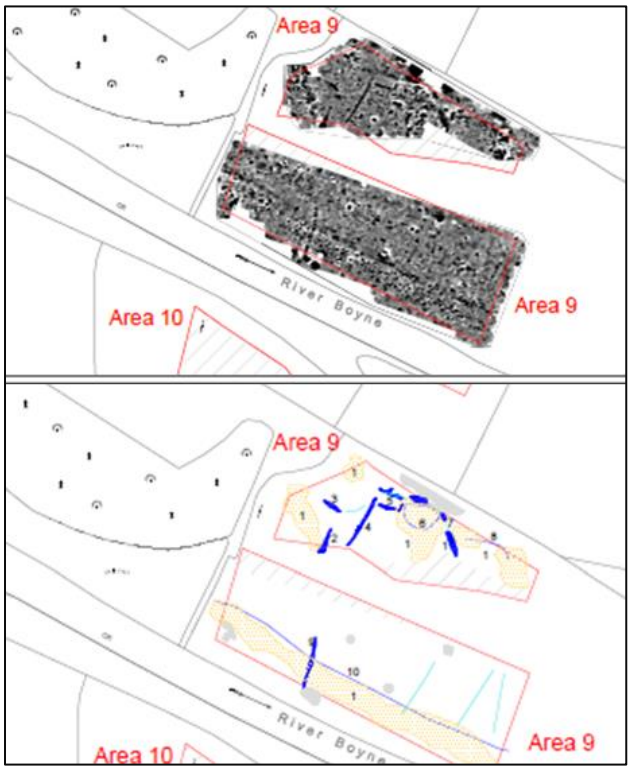

Figure 6 Geophysical survey and interpretation, Area 9

4. ARCHAEOLOGICAL TESTING RESULTS

4.1. Introduction

Archaeological testing was carried out over five days from 27th October to 2nd November 2021 by the author, assisted by one archaeological supervisor. Test trenches were opened using a 20-tonne tracked excavator equipped with a 1.5m-wide toothless grading bucket, under strict archaeological supervision. In total, eighteen test trenches were investigated.

The field numbers referred to in this section are those used in the field walkover survey undertaken for the EIAR and are provided for consistency.

4.2. Methodology

All trenches were excavated to the surface of archaeological or potential archaeological deposits or to the underlying natural subsoil, whichever was encountered first. Any potential archaeological features were cleaned and sectioned where necessary, to establish their nature, extent and character. Photographs, plans and trench recording sheets were used to record any features of potential archaeological interest. Features were assigned numbers according to each trench and fills were assigned numbers according to each

feature. A register with full details of all features and fills is included as APPENDIX 1 FEATURE RECORD to the rear of the report.

4.3. Area 13, Field 8, Fennor townland

Area 13 is in Fennor townland in a relatively level large arable field, bounded by the N2 road along the western side, with modern houses at the northwest corner. The land is gently undulating, with a low-lying area in the northeast corner. A clear view of Knowth is prominent in the view to the east, and the Hill of Slane to the north-northwest. Fennor Castle dominates the near-view to the north-northwest. Two test trenches (T1 and T2) were opened in Area 13 on a day of heavy, sustained rain, to investigate two possible ring-ditches that were identified in the geophysical survey (Figure 7Figure 3).

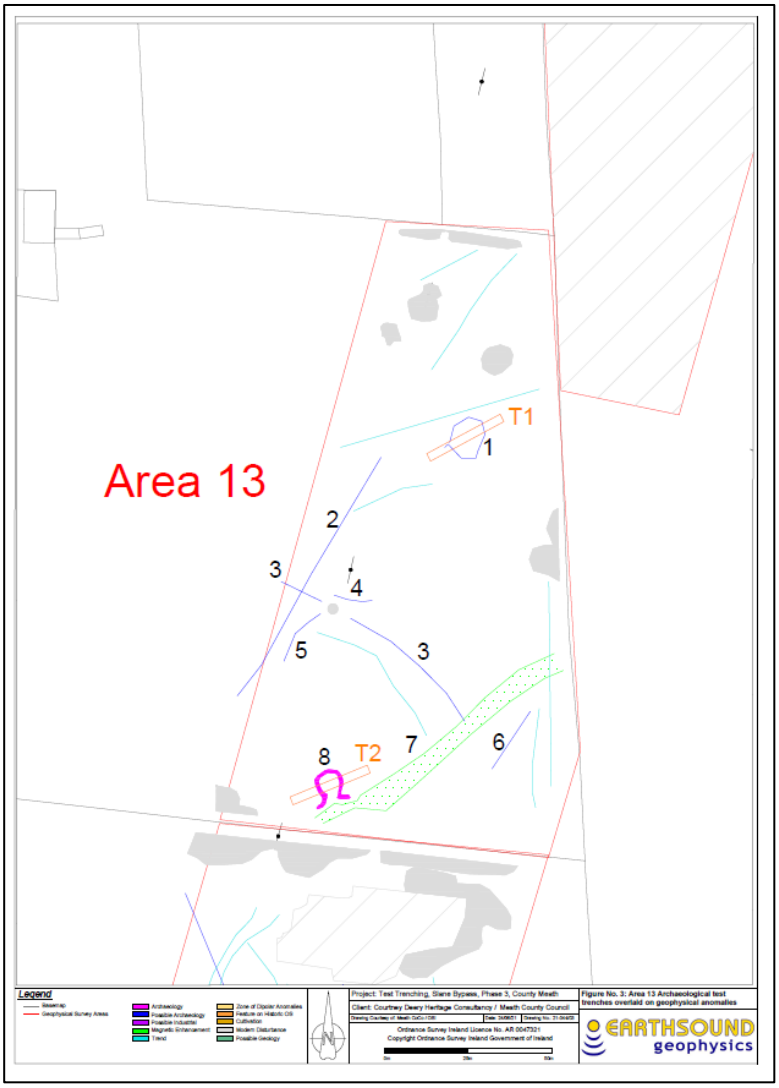

Figure 7 Location of test trenches T1 and T2 in Area 13

4.3.1. Trench 1

Table 2 Summary of Trench 1

GENERAL DESCRIPTION			
Dimensions: 25m long x 2m wide x 0.5m deep Orientation: NE - SW Photos: T1 (1) to T1 (3)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.4m	Loose, dark brown, humic, silty sand.	Sod/topsoil
Natural subsoil	0.4m - base	Greyish brown boulder clay with frequent limestone inclusions.	Natural subsoil

Trench 1 was 25m long and 0.5m deep. Trench 1 was designed to test for a possible ring-ditch (Site 13-1) that had been tentatively identified during the geophysical survey. No such evidence was identified in the trench, nor were any other features of archaeological potential.

Plate 1 Trench 1, facing northeast

4.3.2. Trench 2

Table 3 Summary of Trench 2

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.6m deep Orientation: NW-SE Photos: T2 (1) to T2 (35)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.6m	Loose, dark brown, humic, silty clay.	Topsoil
Natural subsoil	0.4m - base	Orange / brown boulder clay with frequent limestone outcrops.	Natural subsoil
F1	Base -1m	Curvilinear ditch with two fills (F1, Fill 1 and Fill 2) and a re-cut with an additional fill (Fill 3). Both cuts have	Ring-ditch

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.6m deep Orientation: NW-SE Photos: T2 (1) to T2 (35)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
F1	Base -1m	Curvilinear ditch with two fills (F1, Fill 1 and Fill 2) and a re-cut with an additional fill (Fill 3). Both cuts have a sharp break of slope at the top, a slightly less sharp break of slope at the base, steep concave sides and an almost flat base. F1 is 1m wide and 0.65m deep.	Ring-ditch
F2	Base – unknown	Circular feature in plan. 0.6m in diameter. Not sectioned.	Possible posthole
F3	Base – unknown	Circular feature in plan cut by / cutting into F1. 0.6m in diameter. Not sectioned.	Possible posthole
F4	Base – 0.2m height	Clay deposit. Max. 1.7m wide.	Possible bank
F5	Base – 0.6m	Curvilinear ditch of similar cut to F1. F5 has a single fill, F5, Fill 1.	Ring-ditch

Trench 2 was 18m long and 0.6m deep. It was originally designed to be 25m long, but the southwestern limit of the trench was directly beneath overhead powerlines and could not be safely investigated. The trench was designed to test for a possible ring-ditch that had been identified in the geophysical survey.

The trench contained five features of archaeological potential (Figure 8). Features F1 to F4 were close to the southwestern end of the trench (Plate 2). F1 is a curvilinear ditch that corresponded to the western extent of the possible ring-ditch that had been identified in the geophysical survey. A section was opened within F1 (Plate 3). The lower fill (Fill1) is re-deposited natural slump material. It is 0.1m thick. The middle fill, Fill 2 (Soil Sample #1), is a soft, mid-brown silty clay with occasional charcoal flecks. It is 0.2m thick. A re-cut within F1 cut Fill 2. The re-cut contained a single fill (Fill 3), a darker brown silty clay that is 0.35m thick.

F2 is a possible posthole, apparently circular in plan though it was not fully exposed (Plate 2). It is 0.6m in diameter and contains a soft orange / brown silty clay with occasional charcoal flecks and small stones (F2, Fill 1). F2 was not investigated further. It may be cut into the possible bank F4.

F3 is a similarly proportioned possible posthole, apparently cut into or cut by the curvilinear ditch F1 (Plate 2). It is 0.6m in diameter and contains a similar fill (F3, Fill 1) to that of F2. F3 was not investigated further.

F4 is a malleable, sticky orange / brown re-deposited boulder clay and may represent the remains of a bank associated with the ring-ditch (Plate 2). It is 1.75m northeast of the inner curve of the ring-ditch F1. It has a maximum width of 1.7m (though it was discovered at an obtuse angle) and survives to a height of 0.2m.

F5 is a curvilinear ditch that was also identified during the geophysical survey and it likely links with F1 to form a ring-ditch. It is 1.05m wide and 0.6m deep (Plate 4). It contains a single fill (F5, Fill 1); an orange / brown clay with frequent charcoal flecks (Soil Sample #2).

F1 and F5 are likely to form a single ring-ditch. The test trench was opened across what appeared from the geophysical survey to be the centre of the ring-ditch; no central cremation or burial was identified within the trench.

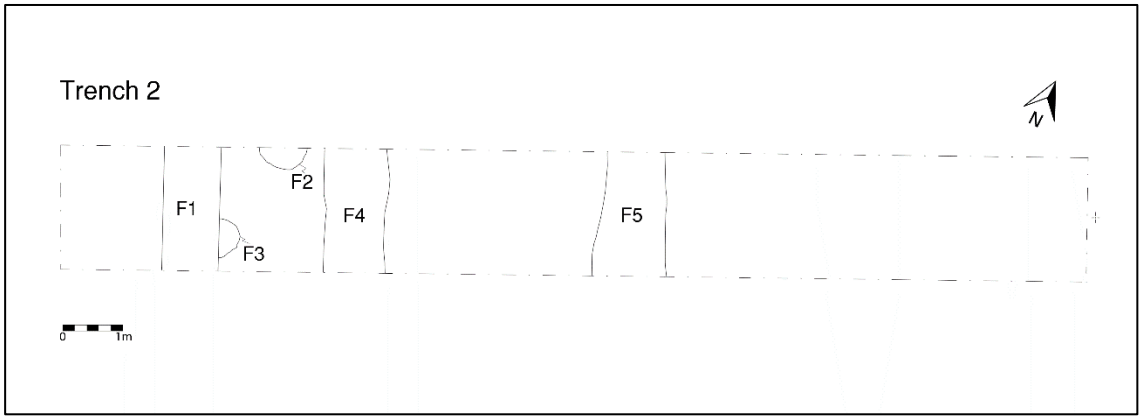

Figure 8 Plan of Trench 2

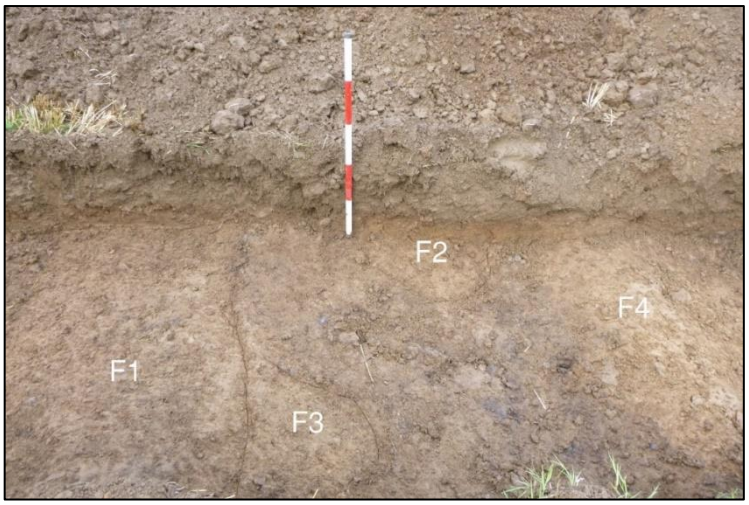

Plate 2 F1, F2, F2 and F4 in Trench 2, facing northwest

Plate 3 Southeast-facing section of F1 in Trench 2

Plate 4 Southeast-facing section of F5 in Trench 2

4.4. Area 9, Field 15, Slane townland

Area 9 in Slane townland is in a field of rough pasture on the banks of the Boyne. The field is relatively level along the northern field boundary, then undulates steeply down to a lower-level area alongside the river. There is a large area of rock outcrop and gorse in the northwest quadrant. The field is bounded by a band of woodland (Mill Wood) and a mature tree boundary along west side. Jeb's Mills is visible beyond the trees from the low ground along the river. A good view of Fennor's Castle is also available from the field.

Area 9 is within the higher part of the field (northwest), where it begins to slope downwards to the south and east. Four test trenches (T3 to T6) were opened in the field to investigate a series of linear anomalies that had been identified in the geophysical survey (Figure 9).

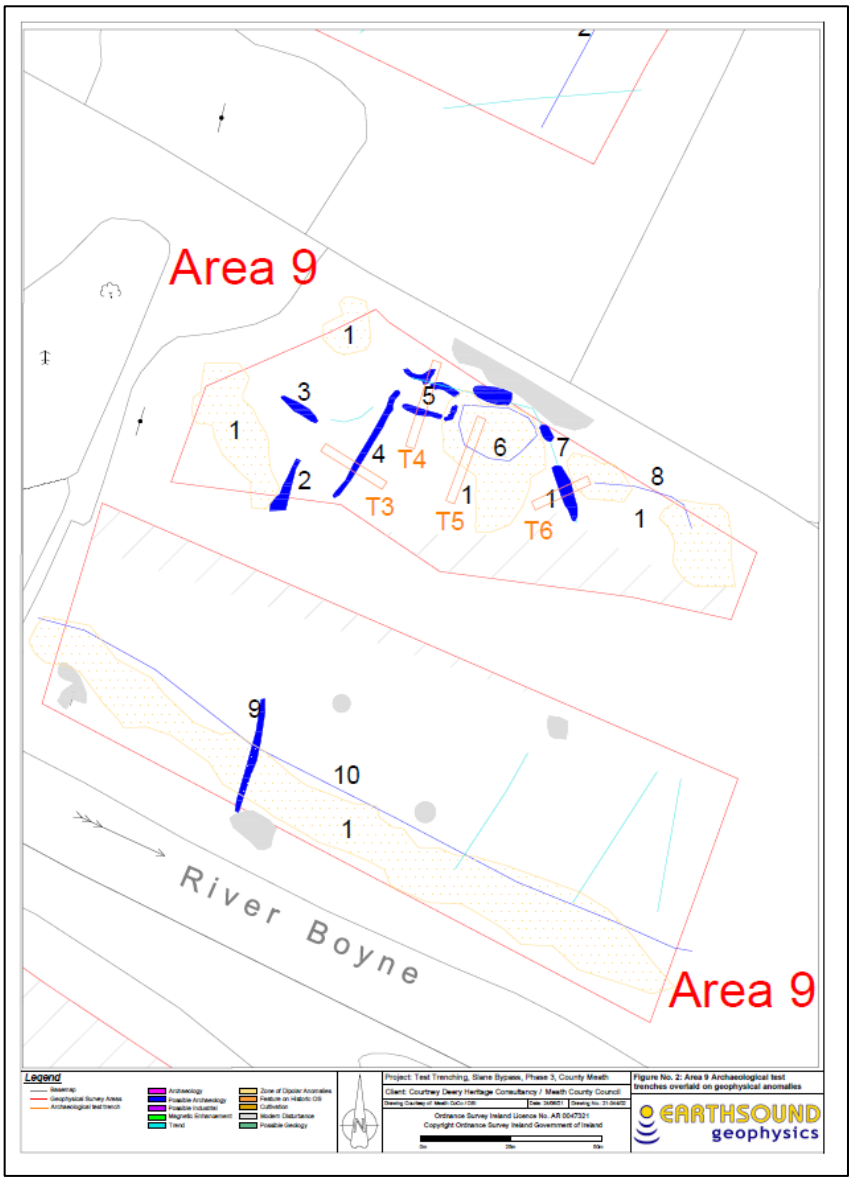

Figure 9 Location of test trenches T3 to T6 in Area 9

4.4.1. Trench 3

Table 4 Summary of Trench 3

GENERAL DESCRIPTION			
Dimensions: 20m long x 2m wide x 0.2m to 0.7m deep Orientation: NW-SE Photos: T3 (1) to T3 (9)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.2m	Loose, dark brown, humic, silty sand	Topsoil
Natural subsoil	0.2m - base	Glacial till. Yellowish grey silty sand with extremely frequent stones and cobbles.	Natural subsoil
F1	Base – 0.4m	A linear feature measuring 0.8m wide and 0.4m deep. It has a sharp beak of slope and a steep, convex to concave side on its northwestern edge	Water channel

GENERAL DESCRIPTION			
Dimensions: 20m long x 2m wide x 0.2m to 0.7m deep Orientation: NW-SE Photos: T3 (1) to T3 (9)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
		and more gradual break of slope and concave side on its southeastern edge. It has an almost flat base, and it contains a single fill (F1, Fill 1).	

Trench 3 was 20m long and up to 0.7m deep (Plate 5). It contained one feature of low archaeological potential. F1 is a linear feature that was identified in the geophysical survey. It had a single fill (F1, Fill 1); a dark brown soft silty clay with frequent small stones and small root activity (Plate 6). The feature is likely a water channel that runs through a sloping area of differing natural subsoils.

Plate 5 Trench 3, facing southeast

Plate 6 Southwest facing section of F1 in Trench 3

4.4.2. Trench 4

Table 5 Summary of Trench 4

GENERAL DESCRIPTION			
Dimensions: 25m long x 2m wide x 0.2m to 0.4m deep Orientation: SSW-NNE Photos: T4 (1) to T4 (16)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.35m	Loose, dark brown, humic, silty sand	Topsoil
Natural subsoil	0.35m - base	Pale yellow boulder clay to the north, changing to a stony glacial till to the south	Natural subsoil
F1	Base – 0.2m	A shallow linear feature orientated east-west. It is 1.2m wide and 0.2m deep and contains a single fill (F1, Fill 1). It has a moderate break of slope at its top and base, concave sides and an almost flat base.	Water channel
F2	Base – 0.15m	A shallow linear feature orientated east-west, 1.4m in width and 0.15m deep with a single fill (F2, Fill 1). It has moderate breaks of slope at the top and bottom, concave sides and a flat base.	Water channel
F3	Base – 0.3m	A narrow and shallow linear feature orientated east-west, 0.8m in width and 0.3m deep. It has a single fill (F3, Fill 1).	Water channel

Trench 4 was 25m long and 0.2m to 0.4m deep (Plate 7). It contained three features of low archaeological potential. F1 and F2 were both identified during the geophysical survey. Each of the features have a single fill. Fill 1, F1 is an orange / brown silty clay with no charcoal inclusions (Plate 8). Fill 1, F2 is of a similar

composition (Plate 9). The narrow linear feature F3 also has a single fill, Fill 1; a light brown silty sandy clay (Plate 10).

All of the features are of geological rather than archaeological origin. They likely formed from water channels that run through a hilly area of varying natural subsoils.

Plate 7 Trench 4, facing south-southwest

Plate 8 F1 in Trench 4, facing northwest

Plate 9 Southeast-facing section of F2 in Trench 4

Plate 10 Southeast-facing section of F3 in Trench 4

4.4.3. Trench 5

Table 6 Summary of Trench 5

GENERAL DESCRIPTION			
Dimensions: 25m long x 2m wide x 0.5m to 0.6m deep Orientation: SSW-NNE Photos: T5 (1) to T5 (6)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.4m	Loose, dark brown, humic, silty sand.	Topsoil
F1	Base – 0.2m	A linear feature measuring 2.2m in width and 0.2m in depth with moderate breaks of slope and a flat base.	Water channel
F2	Base – 0.1m	A narrow linear feature measuring 0.3m in width and 0.1m in depth.	Water channel

Trench 5 was 25m long and 0.5m to 0.6m deep (Plate 11). The natural subsoil was an orange / brown boulder clay that changed to glacial till with gravel and cobbles towards the southern end of the trench at the ridge of a hill. The linear features F1 and F2 were both recorded on the geophysical survey as possible archaeological features. Both F1 and F2 have a single fill each (Fill 1, F1 and Fill 1, F2). Each of the fills are a sandy silty orange / brown clay with occasional charcoals flecks. Each of the features probably formed as water channels in a hilly area with varying types of natural subsoil. The features are of geological, rather than archaeological, origin.

Plate 11 Trench 5, facing south-southwest

4.4.4. Trench 6

Table 7 Summary of Trench 6

GENERAL DESCRIPTION			
Dimensions: 17m long x 2m wide x 0.5m deep Orientation: SW-NE Photos: T6 (1) to T6 (15)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.4m	Loose, dark brown, humic, silty sand.	Topsoil
Natural subsoil	0.4m - base	Yellowish brown boulder clay to the north and glacial till gravels to the south.	Natural subsoil
F1	Base – 0.1m	An irregular shaped feature with a silty clay fill (F1, Fill 1).	Geological anomaly
F2	Base – 1.3m	A 5.7m wide and 1.3m deep linear feature containing a single fill (F2, Fill 1) that contained animal bone. It has moderate breaks of slope, concave sides and an almost flat base.	Water channel

Trench 6 was 17m long and up to 0.5m in depth (Plate 12). It contained two features of low archaeological potential. F1 is an irregularly-shaped feature near the northeastern limit of the trench and is filled with a silty clay. F2 is a large channel that runs between two hills (Plate 13). It has a single fill of washed-in silty

clay with frequent charcoal and some animal bone (Fill 1, F2 – Soil Sample # 3). Both features are of geological, rather than archaeological, origin.

Plate 12 Trench 6, facing southwest

Plate 13 Southeast-facing section of F2 in Trench 6

4.5. Area 15, Field 4, Cullen townland

Area 15 in Cullen townland is in a large field of former arable land that is now under pasture. It rises to the southeast where it borders high mounds of dumped material. It is bounded by the N2 road along its western side. It borders 20th century properties along its southwestern side and at the northern end. The long defunct section of the Dublin to Slane road survives as a farm access track running between the Area 15 field and the neighbouring field to the north. A well is marked at the side of the old roadway on the 25-inch OS map, at the fields boundary with F62. The well is not depicted on the earlier first edition map or the later 1958 OS revision. There were no visible surface remains of it.

There are very restricted views except at the highest point, in the southeastern corner of field, which provides clear views of Knowth, a prominent landscape feature to the east.

Five trenches, T7 to T9 and T11 to T12, were opened in Area 15 to investigate anomalies that had been identified in the geophysical survey (Figure 10). Time restrictions in relation to land access meant that a sixth trench, T10, could not be investigated.

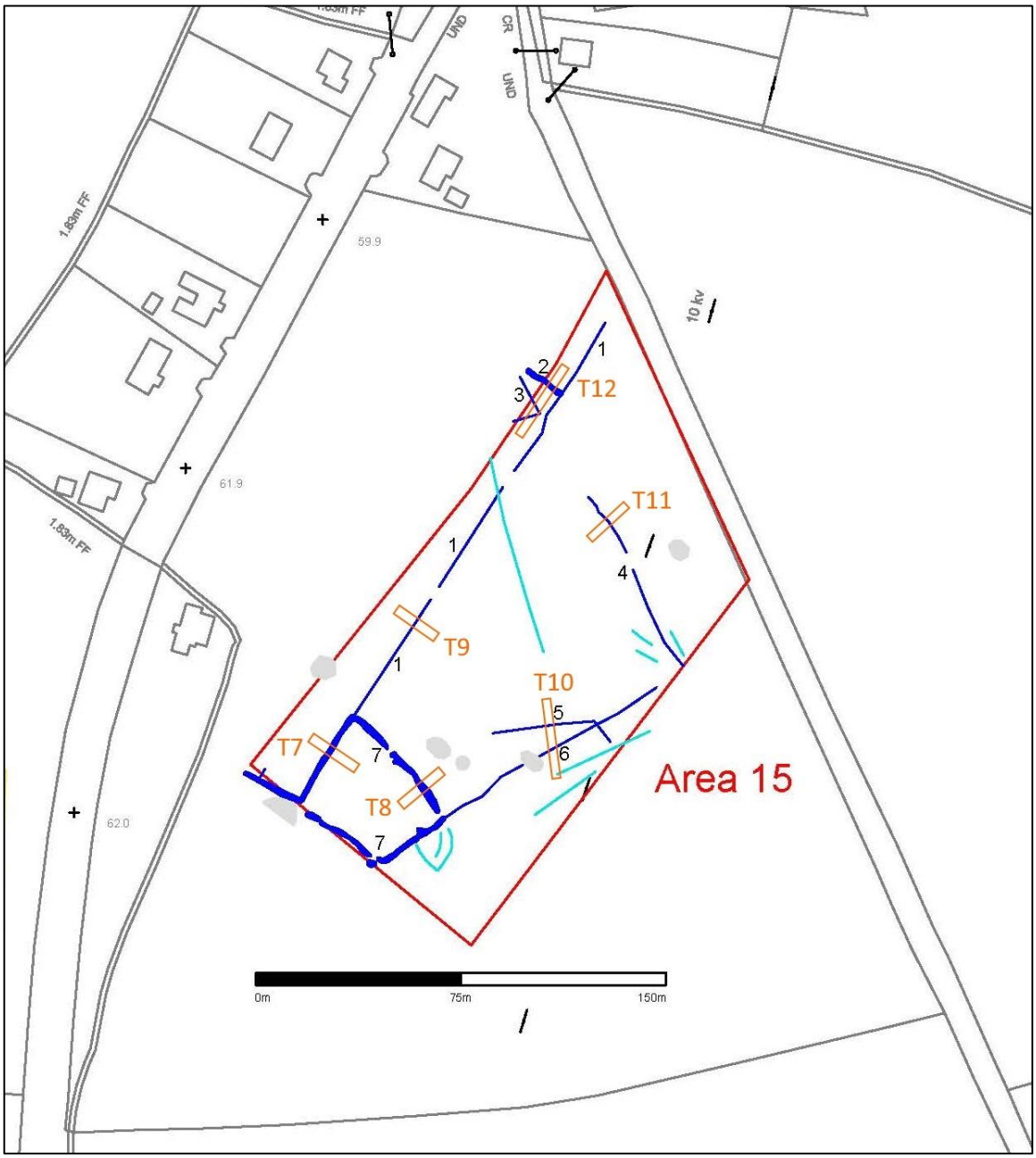

Figure 10 Locations of test trenches T7 to T12 in Area 15

4.5.1. Trench 7

Table 8 Summary of Trench 7

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.55m deep Orientation: NW-SE Photos: T7 (1) to T7 (11)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m – 045m	Mid brown silty clay with frequent small roots.	Topsoil
Natural subsoil	0.45m - Base	Orange brown boulder clay with frequent stone inclusions.	Natural subsoil
F1	Base – 0.4m	A linear feature with moderate breaks of slope at its top and base, concave sides and a concave base. It is 1.3m wide and 0.4m deep. It is orientated southwest-northeast. It has two fills (T7, F1, Fill1 and Fill2)	Water channel

Trench 7 was 18m long and 0.55m deep (Plate 14). It was opened to test for a linear feature that may have formed a rectangular enclosure, with a similar linear feature in Trench 8. The feature, F1, was identified within the trench, corresponding with its location on the geophysical survey results (Plate 15). It has two fills; the lower fill, Fill 1 is a compact, light brown gravelly silty clay that is 0.1m thick. The upper fill, Fill 2 is a mid-brown silty clay of moderate compaction with occasional charcoal flecks. It is similar in composition and colour to the surrounding natural subsoil and likely formed from being washed across the area. F1 is of geological origin and is not of archaeological potential and is of geological origin.

Plate 14 Trench 7, facing southwest

Plate 15 Northeast-facing section of F1 in Trench 7

4.5.2. Trench 8

Table 9 Summary of Trench 8

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.5m deep Orientation: SW-NE Photos: T8 (1) to T8 (13)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.3m	Mid brown silty clay with frequent small roots. Contained modern ceramic sherds and one piece of burnt bone.	Topsoil
Natural subsoil	0.3m - base	Orange brown boulder clay with frequent stone inclusions.	Natural subsoil
F1	Base - 0.1m	Linear feature orientated NW-SE. F8 has moderate breaks of slope at its top and base, concave sides and a U-shaped base. It has two fills (T8, F1, Fill 1 and Fill 2). It is 1.4m wide and 0.4m deep.	Water channel

Trench 8 was 18m long and 0.5m deep (Plate 16). It contained a single feature that had been identified on the geophysical survey. F1 in Trench 8 (Plate 17) is a linear feature of similar shape and dimensions to the linear feature F1 in Trench 7. While the two correspond with what appears to be a rectilinear enclosing feature on the geophysical survey, upon physical investigation, however, both features were found to be of geological, rather than archaeological, origin. F1 in Trench 8 has two fills both of which are similar to those found in T7, F1. The lower Fill 1 is a compact gravelly silty clay with occasional flecks of charcoal. It is 0.1m thick. The upper Fill 2 is a soft, brown silty clay with no charcoal that was likely washed into a lower level of sloping subsoil.

Plate 16 T8, facing northeast

Plate 17 Southeast-facing section of F1 in Trench 8

4.5.3. Trench 9

Table 10 Summary of Trench 9

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.6m deep Orientation: NW-SE Photos: T9 (1) to T9 (2)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.4m	Mid brown silty clay. The heavily disturbed topsoil contained red brick fragments, MDF and flecks of paint.	Topsoil

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.6m deep Orientation: NW-SE Photos: T9 (1) to T9 (2)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Natural subsoil	0.4m - base	Orange brown boulder clay.	Natural subsoil
F1	Base – 0.4m	Linear feature orientated SW-NE. It is 1.6m wide and 0.4m deep. It has moderate breaks of slope at its top and base, concave sides and a U-shaped base. F1 has one fill (T8, F1, Fill1).	Water channel

Trench 9 was 18m long and 0.6m deep (Plate 18). The heavily disturbed topsoil contained relatively recent red brick debris and scraps of MDF. T9 contained one feature that had been identified on the geophysical survey. F1 is a linear feature running SW-NE across the centre of the trench. It has a single fill, Fill 1; a yellow brown silty clay with occasional charcoal flecks and pebbles (Plate 19). F1 is not of archaeological potential. It is in line with F1 in Trench 7, and it is likely that the two form a single channel that runs through Area 9 from northeast to southwest.

Plate 18 Trench 9, facing southeast

Plate 19 Southwest-facing section of F1 in Trench 9

4.5.4. Trench 10

Trench 10 was originally planned to be opened to test two possible archaeological trends that had been identified on the geophysical survey towards the southeastern part of Area 15. Time constraints in relation to land access meant that Trench 10 could not be opened.

4.5.5. Trench 11

Table 11 Summary of Trench 11

GENERAL DESCRIPTION			
Dimensions: 18m long x 2m wide x 0.4m deep Orientation: SW-NE Photos: T11 (1) to T11 (13)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.3m	Mid brown silty clay.	Topsoil
Natural subsoil	0.3m - base	Orange brown boulder clay with frequent stone inclusions.	Natural subsoil
F1	Base - 0.3m	F1 is a linear feature, orientated northwest-southeast. It has a moderate break of slope at its tops and base, concave sides and a U-shaped base. It is 0.8m wide and 0.3m deep. It has a single fill (T11, F1, Fill 1).	Water channel

Trench 11 was 18m and 0.4m deep (Plate 20). It contained a single feature that had been identified on the geophysical survey. F1 is a linear feature with a single fill; an orange brown silty clay with frequent roots and occasional small stone (Plate 21). It has no charcoal. F1 is not of archaeological potential, and it likely formed from a water channel that runs through an area of varying levels.

Plate 20 T11, facing southwest

Plate 21 Southwest-facing section of T11, F1

4.5.6. Trench 12

Table 12 Summary of Trench 12

GENERAL DESCRIPTION			
Dimensions: 29m long x 2m wide x 0.5m deep Orientation: NE-SW Photos: T12 (1) to T12 (6)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.3m	Mid brown silty clay.	Topsoil
Natural subsoil	0.3m - base	Orange brown boulder clay.	Natural subsoil

GENERAL DESCRIPTION			
Dimensions: 29m long x 2m wide x 0.5m deep Orientation: NE-SW Photos: T12 (1) to T12 (6)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
F1	Base - 0.2m	F1 is a narrow, shallow linear feature orientated northwest-southeast. It has moderate breaks of slope at its top and base, concave sides and a U-shaped base. It is 0.9m wide and 0.2m deep.	Channel

Trench 12 was 29m long and 0.5m deep. It was designed to investigate three trends of possible archaeological origin that were identified in the geophysical survey. Only one of the trends, closest to the northeastern limit of the trench, corresponded to an actual physical feature in the trench. F1 is a shallow linear feature with a single fill of well-compacted gravelly silty clay with occasional flecks of charcoal. It is likely a water channel of geological, rather than archaeological, origin.

Plate 22 Trench 12, facing southwest

4.6. Area 21, Cashel townland

Access to Area 21 was not possible at the time of the archaeological testing. Trenches 13 and 14, therefore, were not investigated.

4.7. Area 20, Field 21, Cashel townland

Areas 19 and 20 comprise a single large field that had originally been two fields. A distinct rise in the northern half is Lime Kiln Hill, a natural height composed of rock outcrop. It is very overgrown, with gorse and trees. It was extensively quarried during the 19th century. A lime kiln is marked on the historic OS mapping at the centre of the field. The Slane / Cashel townland boundary runs along the western side of

the field in Area 19, formed by a double earthen bank flanking a broad, shallow dry ditch and mature trees. There are good views over the Boyne from the high ground in the northern half of the field in Area 20, to the World Heritage Site, Hill of Slane and other hills to the north.

Two trenches (T15 and T16; Figure 11) were opened in Area 20 to investigate a possible enclosure ditch and a possible pit that had been identified on the geophysical survey.

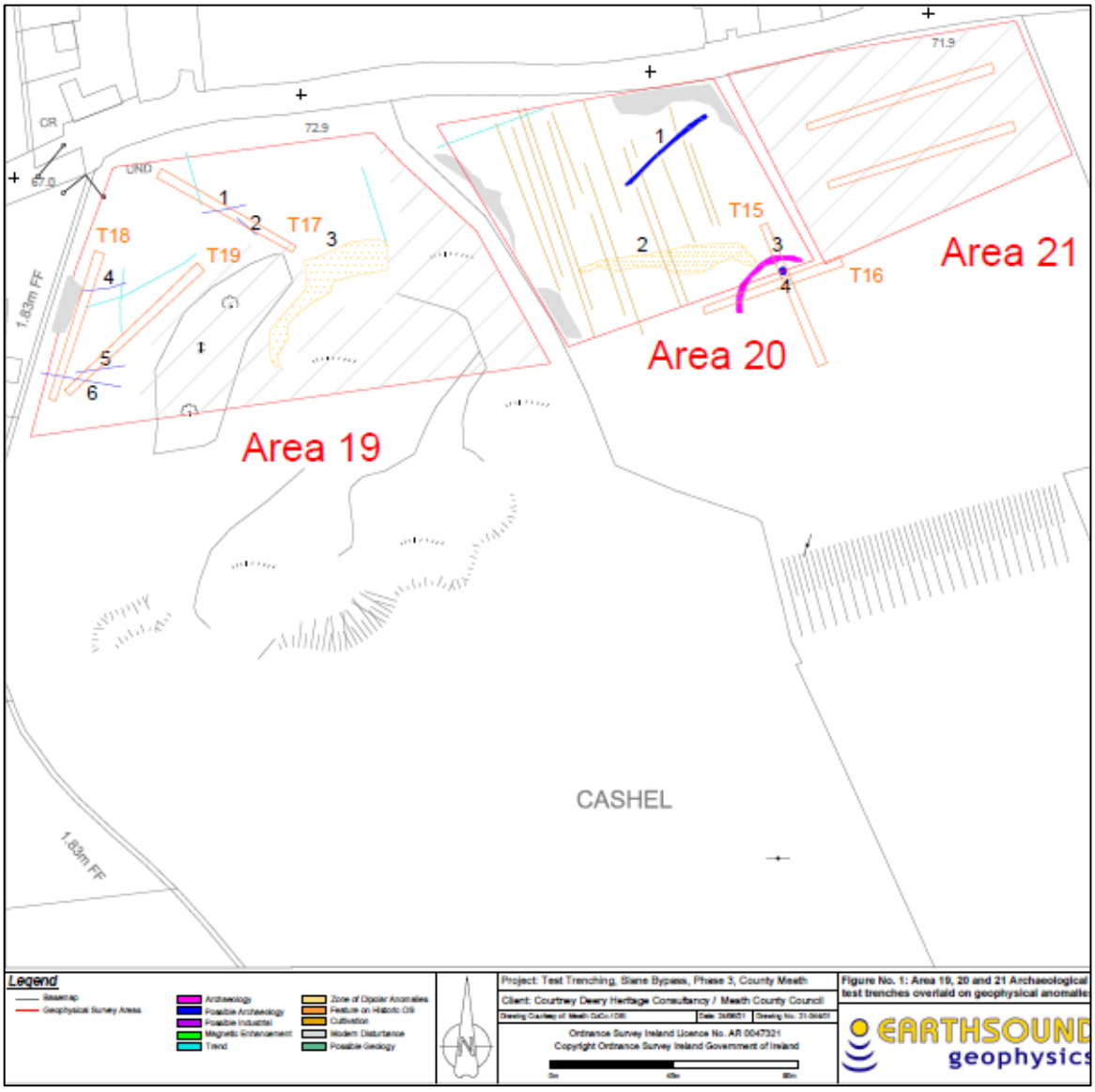

Figure 11 Locations of test trenches T17 to T19 in Area 19 and T15 to T16 in Area 20

4.7.1. Trench 15

Table 13 Summary of Trench 15

GENERAL DESCRIPTION			
Dimensions: 38m long x 2m wide x 0.6m deep Orientation: NW-SE Photos: T15 (1) to T15 (11)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m – 0.5m	Mid brown silty clay.	Topsoil
Natural subsoil	0.5m - base	Orange brown boulder clay.	Natural subsoil
F1	Base – 0.6m	F1 is a wide, curvilinear ditch. It has a sharp break of slope at its southeastern, inner top and bottom and a concave side. It has more gradual breaks of slope and a convex to concave side on its outer, northwestern side. It has an almost flat base. It is 2.3m wide and 0.6m deep. It contains two fills, similar to those found in the curvilinear ditch T16, F1. The upper Fill 2 contains animal bone.	Curvilinear ditch

Trench 15 was 38m long and 0.6m deep (Plate 15). It was originally designed to be 53m long, however, it extended beneath overhead electricity cables and could not be fully opened. The purpose of the trench was to test for a possible curvilinear ditch that had been identified in the geophysical survey. F1 corresponds to the geophysical survey results. It has two fills (Figure 12, Plate 24). The lower Fill 1 is a soft, dark brown and gritty silty clay with frequent small stones inclusions and occasional charcoal flecks. Fill 1 is similar to the lower fill found in the corresponding curvilinear ditch in Trench 16 (T16, F1, Fill 1). The upper Fill 2 is a mid-brown, silty, sandy clay with occasional stones and charcoal flecks. It also contains animal bone. It also is similar to the corresponding fill of the curvilinear ditch in Trench 16 (T16, F1, Fill 2). F1 in T15 is of high archaeological potential. A pit-shaped anomaly that had been identified in the geophysical survey was not discovered in the trench.

Plate 23 Trench 15, facing southeast

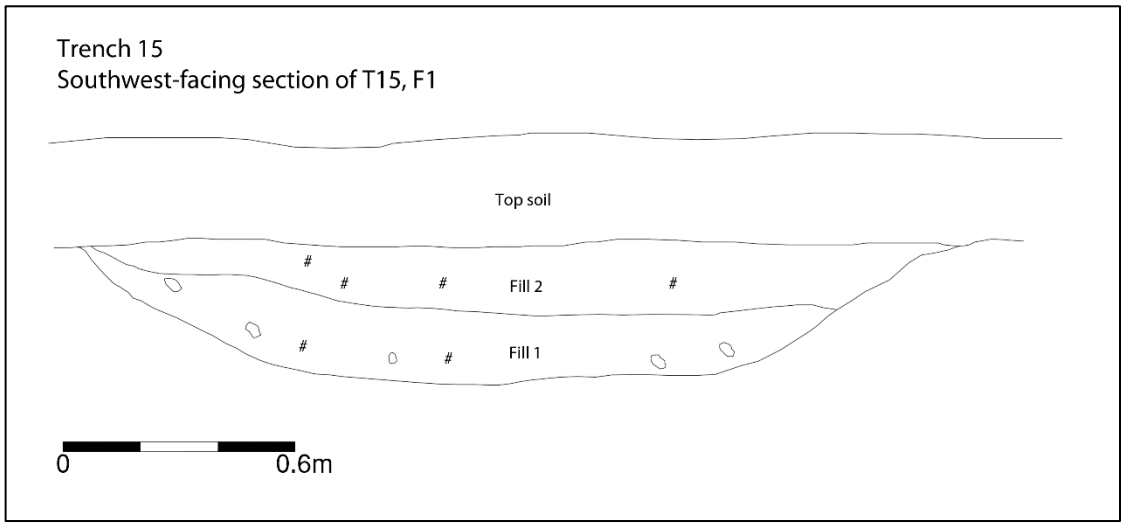

Figure 12 Southwest-facing section of F1 in Trench 15

Plate 24 Southwest -facing section of F1 in Trench 15

4.7.2. Trench 16

Table 14 Summary of Trench 16

GENERAL DESCRIPTION			
Dimensions: 40m long x 2.3m wide x 0.55m deep Orientation: SW-NE Photos: T16 (1) to T16 (18)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.5m	Mid brown silty clay.	Topsoil
Natural subsoil	0.5m to base	Orange brown boulder clay with frequent stone inclusions.	Natural subsoil

GENERAL DESCRIPTION			
Dimensions: 40m long x 2.3m wide x 0.55m deep Orientation: SW-NE Photos: T16 (1) to T16 (18)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
F1	Base – 0.8m	A curvilinear ditch measuring 2.4m in width and 0.8m in depth. It has a moderate break of slope at its outer top and base and a sharper break of slope at its inner top and base. It has a U-shaped base, concave sides and contains two fills, both of which contain animal bone.	Curvilinear ditch

Trench 16 was 40m long and up to 0.55m in depth (Plate 25). It was originally designed to be 51m in length, however, the trench as pegged out extended beyond the field boundary of a barbed-wire fence and a wooden fence into Area 21, where there was no permissible access. The trench was designed to test for a possible curvilinear ditch that had been identified in the geophysical survey. Evidence for the ditch, F1 (Figure 13; Plate 26), was uncovered in the trench and it likely corresponds with the ditch discovered in T15. F1 in Trench 16 is of a similar cut and composition and its two fills are similar to those found in T15, F1. The lower Fill 1 (Soil Sample # 5) is dark brown, soft and gritty sandy clay with frequent large and small stone inclusions and occasional charcoal flecks. It also contains animal bone. The upper Fill 2 is a mid-brown silty, sandy clay with occasional stone and charcoal flecks. It too contains animal bone. The upper layer of Fill 2 contained a charcoal lens (Fill 3) that was 100% sampled (Soil Sample #4).

The results of the geophysical survey suggest that the curvilinear ditches found in Trenches 15 and 16 in Area 20 are one and the same, forming a relatively large circular enclosure that is c. 27m in diameter.

Plate 25 T16, facing northeast

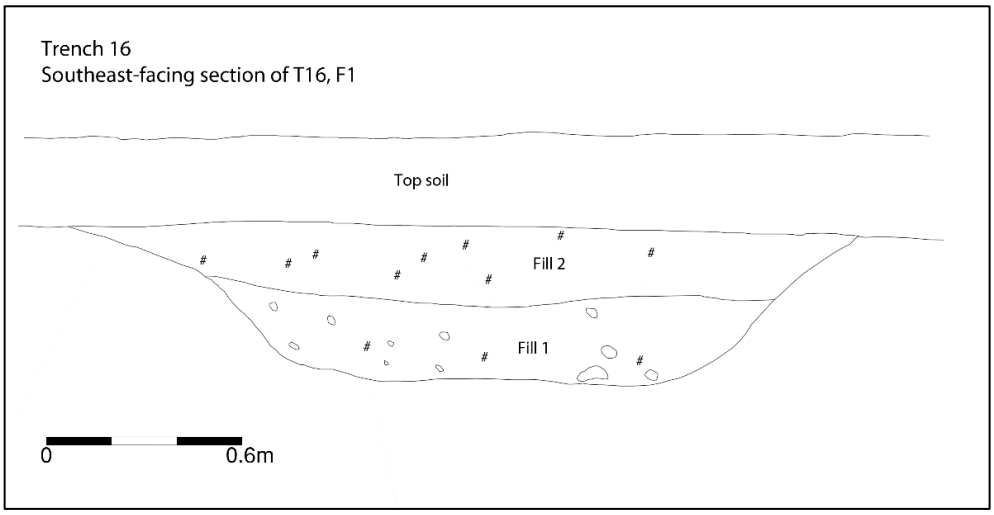

Figure 13 Southeast-facing section of F1 in Trench 16

Plate 26 Southeast-facing section of F1 in T16

4.8. Area 19, Cashel townland

Area 19 is in the northwestern corner of Field 21, in Cashel townland. Three trenches, T17 to T19, were opened in Area 19 to investigate anomalies that had been identified on the geophysical survey.

4.8.1. Trench 17

Table 15 Summary of Trench 17

GENERAL DESCRIPTION			
Dimensions: 54m long x 2m wide x 0.3m to 0.6m deep Orientation: NW-SE Photos: T17 (1) to T17 (2)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.3m	Moderate, mid brown silty sand	Sod/topsoil

GENERAL DESCRIPTION			
Dimensions: 54m long x 2m wide x 0.3m to 0.6m deep Orientation: NW-SE Photos: T17 (1) to T17 (2)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Natural subsoil	0.3m - base	Orange brown boulder clay to the northwest, changing to bedrock towards the southeast.	Natural subsoil

Trench 17 was 54m long and up to 0.6m in depth. It extended up a hillside from northwest to southeast. The upper hill is of natural bedrock and the lower natural boulder clay likely formed from material that washed down the hill. The geophysical survey identified two possible linear features of archaeological potential within the trench. No such features were discovered during testing and the anomalies may correspond to bands of softer natural boulder clay within the natural bedrock.

Plate 27 Trench 17, facing southeast

4.8.2. Trench 18

Table 16 Summary of Trench 18

GENERAL DESCRIPTION			
Dimensions: 54m long x 2m wide x 0.2m – 0.8m deep Orientation: NNE-SSW Photos: T18 (1) to T18 (4)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.4m	Mid brown silty clay.	Topsoil
Natural subsoil	0.6m - base	Mid-orange / brown boulder clay with outcrops of bedrock to the north of the trench.	Natural subsoil

Trench 18 was 54m long and up to 0.8m in depth (Plate 28). No features of archaeological potential were identified in the trench. Bedrock was found close to the surface towards the northern part of the trench.

Some softer areas of boulder clay may account for the anomalies that were identified in the geophysical survey. Some sherds of modern pottery were found in the topsoil.

Plate 28 Trench 18, facing north-northeast

4.8.3. Trench 19

Table 17 Summary of Trench 19

GENERAL DESCRIPTION			
Dimensions: 64m long x 2m wide x 0.35m-0.8m deep Orientation: NE-SW Photos: T19 (1) to T19 (3)			
FEATURE	**DEPTH**	**DESCRIPTION**	**INTERPRETATION**
Topsoil	0m - 0.35m	Mid brown silty clay.	Topsoil
Natural subsoil	0.35m - base	Orange brown boulder clay.	Natural subsoil

Trench 19 was 64m long and up to 0.8m in depth (Plate 29). It ran from northeast to southwest down a hill side where the natural boulder clay had likely formed from material that had washed down the hillside. No features of archaeological potential were identified in Trench 19. The anomalies that were identified within Trench 19 in the geophysical survey may have corresponded to areas of softer boulder clay within the trench.

Plate 29 T19, facing northeast

5. DISCUSSION OF RESULTS

5.1. Summary

The results of the archaeological testing largely confirmed those of the geophysical survey. Archaeological sites were confirmed in Area 13 and Area 20. Geophysical anomalies that had been identified in the geophysical survey as being of possible archaeological interest were confirmed to have been of geological rather than archaeological origin in Areas 9, 15 and 19.

5.2. Archaeological sites

5.2.1. Ring-ditch, T2, Area 13, Fennor townland

A probable ring-ditch and associated features were identified in Trench 2 in Area 13. Based on the combined evidence of the geophysical survey and the archaeological testing, the probable ring-ditch is subcircular- or Ω-shape in plan, with an internal diameter of 7m to 8m, comprising a curvilinear ditch that is 1m wide and 0.65m deep. The ring-ditch has one fill at its eastern side; an orange-brown clay with frequent charcoal flecks. It is similar to the main fill of the western side. The western side had been re-cut, suggesting some sort of maintenance of the ring-ditch.

The remains of a possible inner bank consisting of re-deposited natural boulder clay and measuring up to 1.7m in width were identified within the southwestern limits of the probable ring-ditch. Two possible post-holes, each 0.6m in diameter, were identified adjacent to the ring-ditch and possible bank.

No central cremation or burial was identified within the test trench T2. Specialist analysis of a soil sample taken from the single fill of the northeastern side of the probable ring-ditch may yield further information on dating.

5.2.2. Circular enclosure, T15 and T16, Area 20, Cashel townland

A large circular enclosure ditch with an internal diameter of c.27m that had been identified in the geophysical survey in Area 20 was confirmed by archaeological testing. The ditch was identified in Trenches 15 and 16, where it was 2.3m to 2.4m wide and 0.6m to 0.8m deep. It has two main fills, the lower of which is a soft, dark brown, gritty silty clay with frequent small stone inclusions and charcoal flecks. The upper fill is a mid-brown, silty, sandy clay with occasional charcoal flecks. Both fills contain animal bone. Soil samples from the lower fill and a charcoal lens in the upper fill may yield more information on dating. No evidence of a possible pit that had been identified within the enclosure on the geophysical survey was found during testing.

5.3. General results

5.3.1. Area 9, Slane townland

Features of geological origin were identified in four test trenches in Area 9. The features corresponded to anomalies first identified on the geophysical survey. Linear in nature, the features likely formed from water channels that run through a hilly landscape of natural boulder clay subsoil and glacial tills.

5.3.2. T1, Area 13, Fennor

A possible ring-ditch was identified on the geophysical survey in the northern part of Area 13. No physical evidence for a corresponding feature was identified in test trench T1.

5.3.3. Area 15, Cullen townland

Features of geological origin were identified in five test trenches in Area 15. The features corresponded to anomalies first identified on the geophysical survey. Linear in nature, the features likely formed from water channels that run down a sloping field of natural boulder clay subsoil.

5.3.4. Area 19

No physical features corresponding to anomalies identified on the geophysical survey were discovered during archaeological testing of Area 19. Bands of softer boulder clay on the steep hillside may have been the source of the geophysical anomalies.

6. RECOMMENDATIONS

It is recommended that all archaeological features identified during the testing be fully archaeologically resolved. A detailed mitigation strategy will be provided in the EIAR for the proposed scheme, in consultation with the TII project archaeologist, for the approval of the National Monuments Service, Department of Housing, Local Government and Heritage.

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8. APPENDIX 1 FEATURE RECORD

Trench No.	Feature No.	Feature Type	DESCRIPTION
All	Topsoil	Topsoil	A soft mid-brown silty clay that is on average 0.3m to 0.6m deep.
All	Natural subsoil	Natural subsoil	Boulder clay in most areas, with stone inclusions and occasional outcrops of bedrock. A mix of boulder clay and glacial tills in Area 9 / Slane townland.
T2	F1	Ring-ditch	Curvilinear ditch with two fills (F1, Fill 1 and Fill 2) and a re-cut with an additional fill (Fill 3). Both cuts have a sharp break of slope at the top, a slightly less sharp break of slope at the base, steep concave sides and an almost flat base. F1 is 1m wide and 0.65m deep. The lower fill (Fill1) is re-deposited natural slump material. It is 0.1m thick. The middle fill, Fill 2 (Soil Sample #1), is a soft, mid-brown silty clay with occasional charcoal flecks. It is 0.2m thick. A re-cut within F1 cut Fill 2. The re-cut contained a single fill (Fill 3), a darker brown silty clay that is 0.35m thick.
T2	F2	Possible posthole	Circular feature in plan. 0.6m in diameter.
T2	F3	Possible posthole	Circular feature in plan cut by / cutting into F1. 0.6m in diameter.
T2	F4	Possible bank	Clay deposit. Max. 1.7m wide
	F5	Ring-ditch	Curvilinear ditch of similar cut to F1. F5 has a single fill, F5, Fill 1, an orange brown clay with frequent charcoal flecks (Soil Sample #2).
T3	F1	Water channel	A linear feature measuring 0.8m wide and 0.4m deep. It has a sharp beak of slope and a steep, convex to concave side on its northwestern edge and more gradual break of slope and concave side on its southeastern edge. It has an almost flat base, and it contains a single fill (F1, Fill 1), a dark brown soft silty clay with frequent small stones and small root activity.
T4	F1	Water channel	A shallow linear feature orientated east-west. It is 1.2m wide and 0.2m deep and contains a single fill (F1, Fill 1 - an orange brown silty clay with no charcoal inclusions). It has a moderate break of slope at its top and base, concave sides and an almost flat base.
T4	F2	Water channel	A shallow linear feature orientated east-west, 1.4m in width and 0.15m deep with a single fill (F2, Fill 1 - an orange brown silty clay with no charcoal inclusions). It has moderate breaks of slope at the top and bottom, concave sides and a flat base.
T4	F3	Water channel	A narrow and shallow linear feature orientated east-west, 0.8m in width and 0.3m deep. It has a single fill (F3, Fill 1 - a light brown silty sandy clay).
T5	F1	Water channel	A linear feature measuring 2.2m in width and 0.2m in depth with moderate breaks of slope and a flat base. It has a single fill, F1, Fill1 - a sandy silty orange brown clay with occasional charcoals flecks.
T5	F2	Possible channel	A narrow linear feature measuring 0.3m in width and 0.1m in depth.
T6	F1	Geological anomaly	An irregular shaped feature with a silty clay fill (F1, Fill 1).
T6	F2	Water channel	A 5.7m wide and 1.3m deep linear feature containing a single fill (F2, Fill 1 - washed-in silty clay with frequent charcoal and some animal bone). It has moderate breaks of slope, concave sides and an almost flat base.
T7	F1	Water channel	A linear feature with moderate breaks of slope at its top and base, concave sides and a concave base. It is 1.3m wide and 0.4m deep. It is orientated southwest-northeast. It has two fills; the lower fill, Fill 1 is a compact, light brown gravelly silty clay that is 0.1m thick. The upper fill, Fill 2 is a mid-brown silty clay of moderate compaction with occasional charcoal flecks. It is similar in composition and

Trench No.	Feature No.	Feature Type	DESCRIPTION
			colour to the surrounding natural subsoil and likely formed from being washed across the area.
T8	F1	Water channel	Linear feature orientated NW-SE. F8 has moderate breaks of slope at its top and base, concave sides and a U-shaped base. It is 1.4m wide and 0.4m deep. It has two fills. The lower Fill 1 is a compact gravelly silty clay with occasional flecks of charcoal. It is 0.1m thick. The upper Fill 2 is a soft, brown silty clay with no charcoal that was likely washed into a lower level of sloping subsoil.
T9	F1	Water channel	Linear feature orientated SW-NE. It is 1.6m wide and 0.4m deep. It has moderate breaks of slope at its top and base, concave sides and a U-shaped base. F1 has one fill, Fill 1, a yellow brown silty clay with occasional charcoal flecks and pebbles.
T11	F1	Water channel	F1 is a linear feature, orientated northwest-southeast. It has a moderate break of slope at its tops and base, concave sides and a U-shaped base. It is 0.8m wide and 0.3m deep. It has a single fill, Fill 1, an orange brown silty clay with frequent roots and occasional small stones.
T12	F1	Water channel	F1 is a narrow, shallow linear feature orientated northwest-southeast. It has moderate breaks of slope at its top and base, concave sides and a U-shaped base. It is 0.9m wide and 0.2m deep. It has a single fill, Fill 1, a single fill of well-compacted gravelly silty clay with occasional flecks of charcoal.
T15	F1	Curvilinear ditch	F1 is a wide, curvilinear ditch. It has a sharp break of slope at its southeastern, inner top and bottom and a concave side. It has more gradual breaks of slope and a convex to concave side on its outer, northwestern side. It has an almost flat base. It is 2.3m wide and 0.6m deep. It contains two fills. The lower Fill 1 is a soft, dark brown and gritty silty clay with frequent small stones inclusions and occasional charcoal flecks. Fill 1 is similar to the lower fill found in the corresponding curvilinear ditch in Trench 16 (T16, F1, Fill 1). The upper Fill 2 is a mid-brown, silty, sandy clay with occasional stones and charcoal flecks. It also contains animal bone.
T16	F1	Curvilinear ditch	A curvilinear ditch measuring 2.4m in width and 0.8m in depth. It has a moderate break of slope at its outer top and base and a sharper break of slope at its inner top and base. It has a U-shaped base, concave sides and contains two fills. The lower Fill 1 (Soil Sample # 5) is dark brown, soft and gritty sandy clay with frequent large and small stone inclusions and occasional charcoal flecks. It also contains animal bone. The upper Fill 2 is a mid-brown silty, sandy clay with occasional stone and charcoal flecks. It too contains animal bone. The upper layer of Fill 2 contained a charcoal lens (Fill 3) that was 100% sampled (Soil Sample #4).

9. APPENDIX 2 SOIL SAMPLE REGISTER

Sample No.	Context No.	Type	Feature	Area	Volume	Type of analysis
1	T2 / F1 / Fill 2	Charcoal	Middle / main fill of poss. ring-ditch F1	13 / Fennor	1l	C14
2	T2 / F5 / Fill 1	Charcoal	Sole fill of poss. ring-ditch F5 (same as F1)	13 / Fennor	2l	C14
3	T6 / F2 / Fill 1	Charcoal	Wide, linear prob. water channel F2	9 / Slane	1l	C14
4	T16 / F1 / Fill 3	Charcoal	Charcoal lens in upper fill of ditch F1	20 / Cashel	3l (100%)	C14
5	T15/ F1 / Fill 1	Charcoal	Lower fill of ditch F1	20 / Cashel	2l	C14

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