

**Strategic Housing Development Application,
Limekilnhill, Navan, County Meath
Archaeological Impact Assessment**



An Bord Pleanála Ref. ABP-304494-19

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ABSTRACT

This report presents the results of a combined program of geophysical survey and archaeological test trenching undertaken within an area of tillage farmland in Limekilnhill townland on the southern outskirts of Navan town, Co. Meath. There are no recorded SMR/RMPs sites within the landholding or within 260m of its boundary. The geophysical survey and test trench investigations were carried out as part of a pre-development assessment of a proposed strategic housing development within the subject lands.

The geophysical survey of the proposed development area was undertaken by J.M. Leigh Surveys Ltd (Licence 18R0084) and the results are presented in Section 2 of this report. In summary, the survey revealed the sub-surface remains of two sub-rectilinear enclosures within the tillage fields and these were located c.50m apart. Both enclosures appear to contain internal features and potential external annex features were also identified. Various other external linear trends within the environs of the enclosures were interpreted as possible remains of associated field systems.

The archaeological test trench investigations were carried out under an excavation licence (18E0499) issued by the National Monuments Service (NMS). A licence for the use of a metal-detector (18R0171) was also obtained in order to assist in artefact retrieval. The aim of this preliminary phase of test trenching was to undertake limited investigations of the enclosing elements of the two enclosures, and their associated potential annex features, as well as examining the various external linear trends.

The program of test trenching demonstrated that the soil profiles within the tillage fields have been extensively impacted by ploughing activity down to the surface of the underlying natural subsoil. This activity has created a mixed layer of disturbed subsoil at the base of the plough zone and the potential that this layer may seal underlying archaeological deposits within areas of the site was noted. The test excavations successfully identified the buried remains of the disturbed, ephemeral upper surfaces of both enclosure ditches as well as traces of two conjoined, sub-circular annexes to the south of the northern enclosure. The surface expression of many of the ditch fills were not clearly defined perhaps due to a combination of plough disturbance, recut activity and the presence of re-deposited subsoil originating from levelled enclosing earthen banks. While a number of linear cut features were noted within the site, including a number to the north of the southern enclosure, no clear pattern was evident within the plough damaged subsoil and the potential exists that some examples may originate from later agricultural activity. Given the amount of plough disturbance it is probable that open areas of excavation would be required to establish the full extent of the remains of any external field systems in the vicinity of the enclosures. A small number of possible archaeological features, including pits and/or postholes, were noted within the fields and the possibility that these were associated with external industrial/structural features was noted.

The proposed development design had not been finalised at the time of 2018 archaeological testing programme and the potential development impacts on the identified archaeological sites could, therefore, not be quantified at the time of submission of a preliminary test trenching report to the NMS in September 2018. In correspondence issued in June 2019 by the Development Applications Unit (DAU) to An Bord Pleanála, in relation to Strategic Housing Development (SHD) consultation for the project (ABP Ref. ABP-304494-19), the Department stated that it had examined the Archaeological Testing Report (Excavation Licence No. 18E0499, September 2018). The Department noted the identification of at least two enclosures and associated features of archaeological interest within the footprint of the development site but that the submitted reporting had not offered any conclusions/recommendations with regard to proposed mitigation of the impacts from the development. The Department recommended that an Archaeological Impact Assessment be submitted with the planning application. The DAU stated that the Impact Assessment should include clear descriptions of the impacts and likely impacts on the archaeological sites and material

that has been identified within the proposed development site. Furthermore the Department recommended that the Archaeological Impact Assessment should include a description of the proposed archaeological mitigation measures that will be carried out.

A proposed layout of the housing development was made available in September 2019 and this final report, which was compiled based on this layout (see **Figure 11**), includes descriptions of development impacts and appropriate mitigation measures. The results of the geophysical survey and targeted test trenching investigations have also been incorporated into the Archaeological and Cultural Heritage Chapter of the EIAR that has been prepared for the proposed development. Further correspondence from the DAU in November 2019 stated that the mitigation measures detailed in this report should be enacted as part of the development and requested that an outline schedule of the mitigation measures be included as part of the planning application. This outline schedule is presented within Section 6 of this report and has also been included in the EIAR chapter.

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1. Introduction

This report presents the combined results of a programme of geophysical survey followed by targeted archaeological test trench investigations which were undertaken as part of a pre-development assessment of a proposed development site which comprises a number of tillage fields located approximately 800m to the south of the historic core of Navan town (**Figure 1**). The town suburbs have expanded into the surrounding lands in recent decades and the subject site now forms a parcel of farmland surrounded by modern housing developments. There are no SMR/RMP sites located within the landholding or within 260m of its boundary.

The geophysical survey of the proposed development site was undertaken by Jo Leigh in May 2018 (Licence 18R0084) and a survey report has been submitted to the NMS. Details of the results are provided in Section 2 of this report but, in summary, two sub-rectilinear enclosures and a number of potential associated features were identified within the landholding (**Figure 4**). The targeted programme of test trenching described in this report was undertaken in order to investigate the outer extent of the enclosures and the potential external features identified within their environs. The testing strategy was designed to interrogate the results of the geophysical survey while minimising excavations within the interior of both enclosures as part of the preliminary phase of investigation. The results of the test trench investigations are presented in Section 3 of this report.



Figure 1: Discovery series map showing site location [OSI Licence ref. 0003318]

2. Context

Setting

The proposed development site is located within tillage farmland on the southern outskirts of Navan town and its eastern boundary is located close to the west of the River Boyne at its nearest point. The ground levels within the subject site are broadly level in the western half which is located on an elevated area above the River Boyne and this area includes the locations of two enclosures identified during the geophysical survey (see below). The eastern half of the site is dominated by gentle to moderate downward slope towards the eastern boundary of the landholding which is bounded by the Dublin road which flanks the west bank of the river. Bedrock in this area comprises marine basinal facies (Tobercolleen and Lucan Fms - "Calp"); dark-grey argillaceous and cherty limestone and shale, with soil profiles of fine loamy drift with limestone inclusions.

The lands within the subject site are currently in use as tillage farmland and the crops had been harvested in the weeks prior to the test trench investigations leaving a low stubble on the surface of the ploughsoil. The internal boundaries are formed by tree-lined hedgerows and no visible traces of undulations in the ground surface at the locations of the two enclosures were observed during an inspection carried out prior to the submission of the licence application. A stand of mature trees is located near the centre of the eastern half of the site while a disused field in the northeast corner is under tall grass growth. These areas were not accessible at the time of the test trench excavations.

The two enclosures identified during the geophysical survey are located within areas of barely perceptibly elevated ground within the generally level terrain in the western half of the landholding. While sited in close proximity to the River Boyne the views directly down to the river are obscured from their locations by the natural terrain slopes. The lands extending in all other directions are broadly level and the setting of the two enclosures afford good views across the landscape in all directions. The central areas of both enclosures have been bisected by single, east-west orientated field boundaries which are present on the 6-inch edition OS map. These boundary features comprise combinations of heavily overgrown hedgerows with mature trees and both contain drainage ditches that have been obscured with brambles and fallen branches. It is probable that the drainage ditches and tree roots have resulted in localised areas of disturbance extending through the centre of both enclosures.

Recorded Archaeological Resource

The Record of Monuments and Places (RMP) and Sites and Monuments Record (SMR) do not list any known archaeological sites within the landholding and the nearest example is the recorded location of a souterrain (ME025-035----), which is now occupied by a modern housing estate, at a distance of 260m to the south (**Figure 2**). While there are a number of other souterrains within the lands located within 300m-400m from the boundary of the proposed development site there are no recorded ringforts within 1km of the site, which indicates the potential for the presence of unrecorded early medieval settlement activity within the general area.



Figure 2: Location of recorded monuments within environs of subject site (www.archaeology.ie)

Excavations Database

The Excavation Database contains a number of entries for previous archaeological investigations within areas located 300m-400m from the site boundary (see Appendix 2 for full descriptions). Monitoring of the construction of the R161-R153 link road in the area to the north of the subject site uncovered nothing of archaeological significance (E. Dennehy; Licence 03E0613). Archaeological test trenching of a sub-circular field boundary within the grounds of Beaufort College, to the west of the subject site, demonstrated that the feature was not archaeological in origin (D. Murphy; Licence 15E0065). Archaeological investigations at a distance of 340m to the southeast of the subject site in Athlumney townland, on the opposite bank of the river, uncovered four souterrains within the environs of a quarry site (C. Jones; Licence 98E0596).

Topographical Files

The topographical files held in the National Museum of Ireland, Kildare Street were reviewed and contain no files recording the discovery of archaeological artefacts within Limekilnhill townland.

Historical Context

The subject site is located approx. 650m to the south of the historic core of Navan town which developed as an Anglo-Norman settlement in the period following the late 12th century. Navan town and its environs were described as follows during the 19th century (Lewis 1837):

NAVAN, an incorporated market and post-town (formerly a parliamentary borough), and a parish, in the Barony of Lower Navan, county of Meath and province of Leinster, 7 miles from Trim, and 23 from Dublin, on the road to Enniskillen; containing 5292 inhabitants, of which number, 4416 are in the town. It is one of the first boroughs established by the English in the Palatinate of Meath, and appears to have arisen under the patronage of the family of the Nangles Barons of Navan, who, towards the close of the 12th century, founded here an abbey for Canons Regular of the order of St. Augustine. The town is situated in the centre of the county, and at the junction of the rivers Blackwater and Boyne; it consists of three principal streets, from which several smaller branch off in various directions, and contains about 850 houses, many of which are well built; altogether it has a neat, cheerful, and thriving appearance....The chief

trade is in provisions, which is extensively carried on with Drogheda, and seems to have been consequent on the opening of the Boyne Navigation from that part to Navan, a line of 15 miles in extent; and its further extension inland, which has been attempted but not yet carried into effect would contribute greatly to its increase and to the general prosperity of the neighbourhood. There is also a considerable retail trade with the surrounding districts. In the immediate vicinity of the town, and closely connected with its trade, though locally within the limits of the adjoining parish of Athlumney, are flax-mills on the river Boyne, affording regular employment, on the average, to about 260 persons, and in the same parish, but close to the bridge of Navan, are some very extensive flour-mills, the property of Mr. Delany... The parish comprises 349 statute acres, of which 2802 are apportioned under the tithe act. The land is of middling quality, and about two-thirds of it are under tillage; the system of agriculture is much improved, and there is very little waste land or bog. Limestone of good quality abounds, and is quarried both for burning into lime and for building. The principal seats are Boyne Hill, the residence of Lieutenant Colonel T. Gerrard, beautifully situated on the bank of the river; Belmont, of J. Goggan, Esq.; and a handsome residence recently erected, near the road to Dublin, by L. Byron, Esq., M.D., commanding some pleasing views.

The subject site is wholly contained within the townland of Limekilnhill which is listed in the 17th-century Down Survey as being in the ownership of James Dillon at that time¹. The landholding contains a number of fields located adjacent to Belmont House which is located outside the boundary of the proposed development site.² This early 19th-century country house was the residence of J. Goggan in the 1830s when it was described as a 'neat house, with a garden and pleasure ground attached' in the Ordnance Survey Field Name Books (1835-6)³. By the start of the 20th century the house had come into the ownership of the Spicer family, who ran a milling operation in Navan town. The house is listed as a Protected Structure (NT025-177 and NT025-178) and is also included in the National Inventory of Architectural Heritage (NIAH ref. 14013039). The NIAH designates the house as being of Regional significance and describes it as follows:

Detached five-bay two-storey house over basement, c.1825. Re-orientated, enlarged and porch added, c.1910. Windows refitted c.1994. Double-pitched and hipped roof, natural slates, decorative clay ridge tiles, nap rendered chimneys. Rendered ruled and lined, limestone string course - east façade. Stone cills, uPVC casement windows - except for some basement sash windows, balustraded porch, bay window - west façade. Standing in its own grounds.

A farm building located to the north of the house, and outside the proposed development site, is also included in the NIAH (14013035) which describes it as follows:

Detached four-bay L-plan single-storey farm building, c.1825, set in walled cobbled yard. Double-pitched and hipped roof, corrugated iron. Uncoursed rubble walls - whitewashed. T & G deal double doors, brick dressings, narrow vent loops. Cobbled paving to yard. Rubble stone wall to north-east of yard with brick-dressed openings.

Cartographic and Aerial Images

The subject site is shown as enclosed fields around an early 19th-century country house (Belmont House) on the 1st edition 6-inch and 25-inch Ordnance Survey (OS) maps. The layout of the fields shown on both editions is broadly similar to the existing layout albeit showing a number of boundaries that were levelled during the 20th century. There are no potential unrecorded archaeological sites, buildings, demesne features or townland boundaries indicated within the boundary of the proposed development area on either edition. The absence of any traces of features, such as banks or ditches, associated with the enclosures identified during the geophysical survey indicates that they had been levelled prior to the 1840s. No visible traces of the enclosures were noted during a review of available online aerial images.

¹ <http://downsurvey.tcd.ie/landowners.php#mc=53.649282,-6.679152&z=14>

² It is noted that a former avenue associated with Belmont House is to be traversed by a new access road for the proposed development. However, our understanding is that this access is no longer in use by Belmont House, which is accessed from the north.

³ <http://www.navanhistorie.ie/index.php?page=belmount>

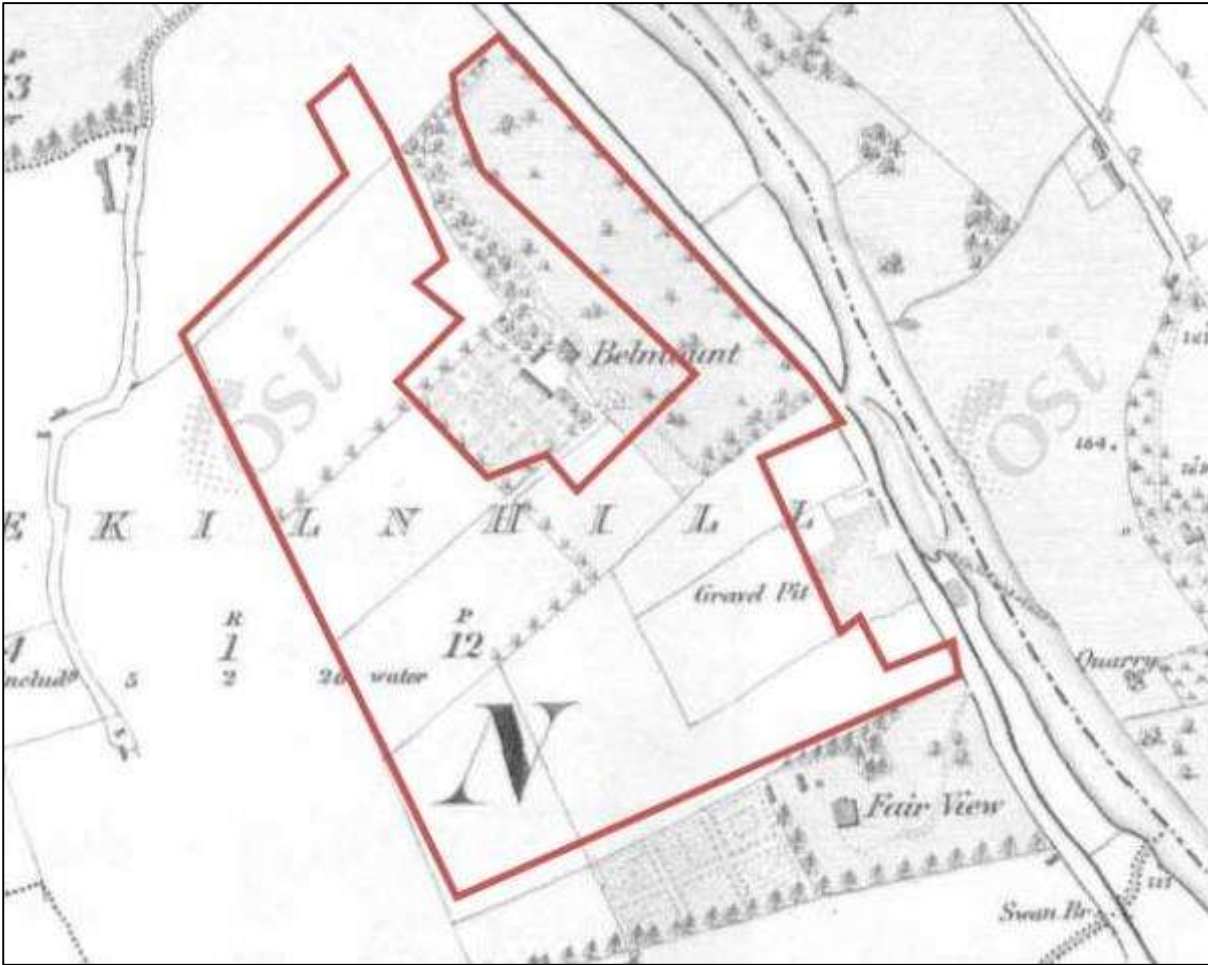


Figure 3: Extract from 6-inch OS map of c.1842 showing approx. layout of subject site

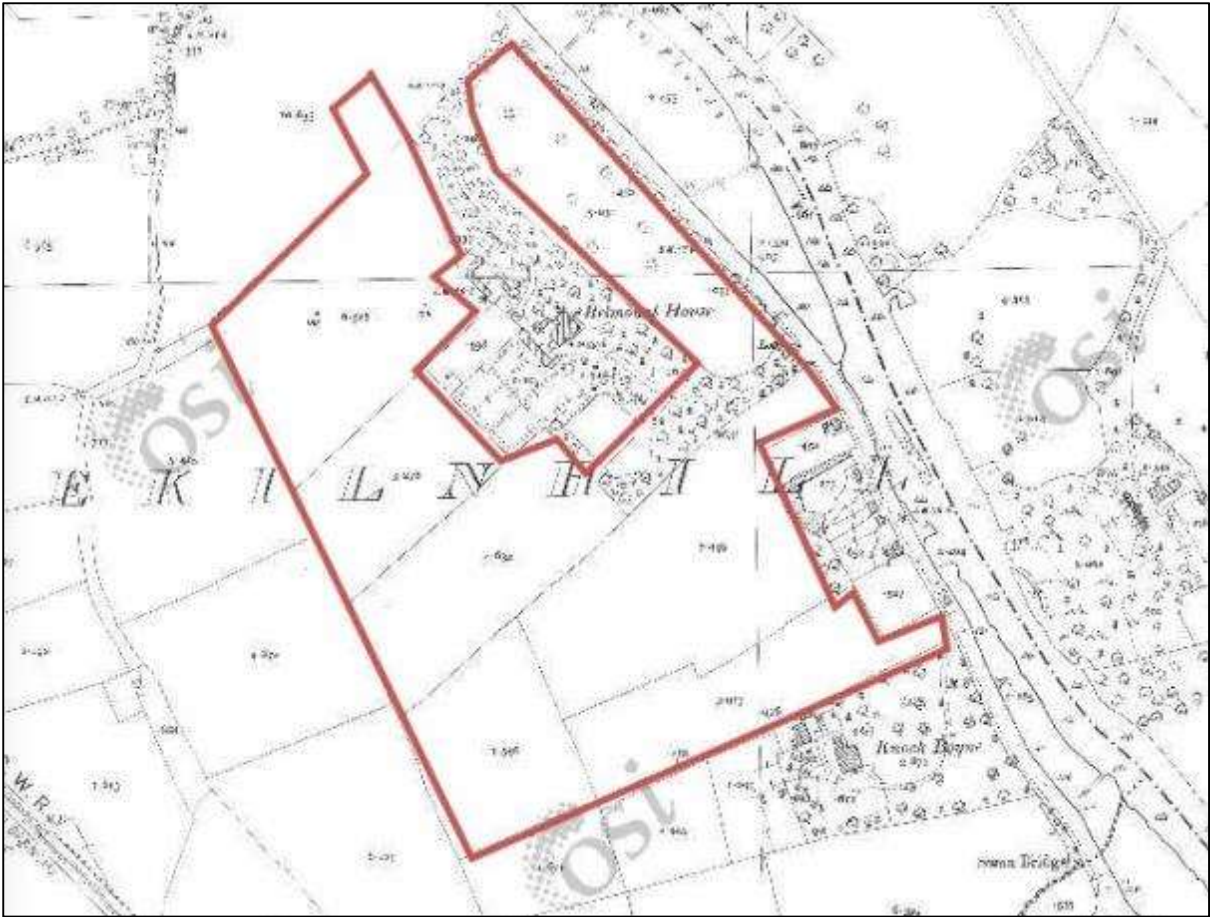


Figure 4: Extract from 25-inch OS map (1888-1913 series) showing approx. layout of subject site



Figure 5: Aerial view of site with locations of enclosures indicated (www.google.com/maps)

Geophysical Survey

The following section presents direct extracts from the geophysical report (Licence 18R0084), compiled by J. M. Leigh and should be read in conjunction with **Figures 6** and **7** (below).

The geophysical survey has successfully identified two enclosure sites within 50m of each other.

Northern Enclosure

The northern enclosure, measuring 45m x 68m, comprises of a clear sub-rectilinear enclosure ditch (1) with a possible entranceway in the west of the site (2). A cluster of responses within the enclosure are indicative of habitation activity, with possible fired features such as hearths (3). Annexes of the enclosure are evident to the east and south and rectilinear responses to the north may represent a small associated field system.

A rectilinear annex to the east of the main enclosure ditches is represented by trends and fragmented responses (4). Plough trends are evident in the data set here and show some correlation with the orientation of the annex responses. Their possible association with the enclosure is unknown. A series of responses (5) to the north-east of the main enclosure form a fragmented rectilinear pattern. This may represent an annex to the main enclosure, or represent associated agricultural plots. Extending north from (5), into Area B, are further trends (6). Although these are magnetically weak they form a pattern indicative of a possible field system, perhaps associated with the enclosure (1). Another possible annex is located to the south and is represented by curvilinear trends and responses (7). The trends are magnetically weak, perhaps indicative of plough damage. Within the annex there are magnetically strong isolated responses (8). These may represent pits or possible burnt features. To the east of the annex (7) there is an area of magnetic disturbance

(9). Although this is typical of modern disturbance, it is also possible that a spread of burnt material of archaeological interest is represented here. It is noted that isolated responses (10) are located to the immediate north. These may represent a cluster of pit-type features. Although interpretation of (9) and (10) is tentative, these responses must be considered to be of archaeological potential.

Southern Enclosure

This enclosure (11) is similar in shape and form to (1). The main enclosure ditches measure c. 48m x 56m. The enclosure (11) appears more fragmented than (1), perhaps suggesting plough damage has occurred. Nevertheless, the responses present a clear enclosure with linear trends extending to the north and south.

Linear trends (12) extend to the south and it is speculated that features associated with the enclosure would have continued to the south, where modern housing is now located. Trends and responses (13) extend from (11) to the north. These form a rectilinear pattern and perhaps represent another annex feature or associated small field system. An isolated response (14) has a broad magnetic signal and may represent a large pit-type feature.

A cluster of responses (15), in Area G, has no clear pattern or form. It is possible that these represent modern material. However, an archaeological interpretation must be considered. These responses may represent plough damaged ditch-type features or perhaps a cluster of pits. Given the proximity to the enclosure site, an archaeological interpretation must be considered. A linear trend (16) crosses through Areas F and G. This is perpendicular with the existing field boundaries and most likely represents a former field division. A further negative trend (17) extends from (16), traversing easterly. This may represent a former trackway or wide field division. Trends (16) and (17) are considered to be agricultural in origin and not related to the enclosure sites.

Other features

Area H is contained within a level field immediately adjacent to the road on the east side of the landholding. Parallel linear trends orientated west to east most likely represent ploughing activity. Within the ploughing there is a broad response (18) of archaeological potential. Although there are no further responses in the vicinity, it is possible that a large pit feature is represented here.



Figure 6: Greyscale image of geophysical survey results

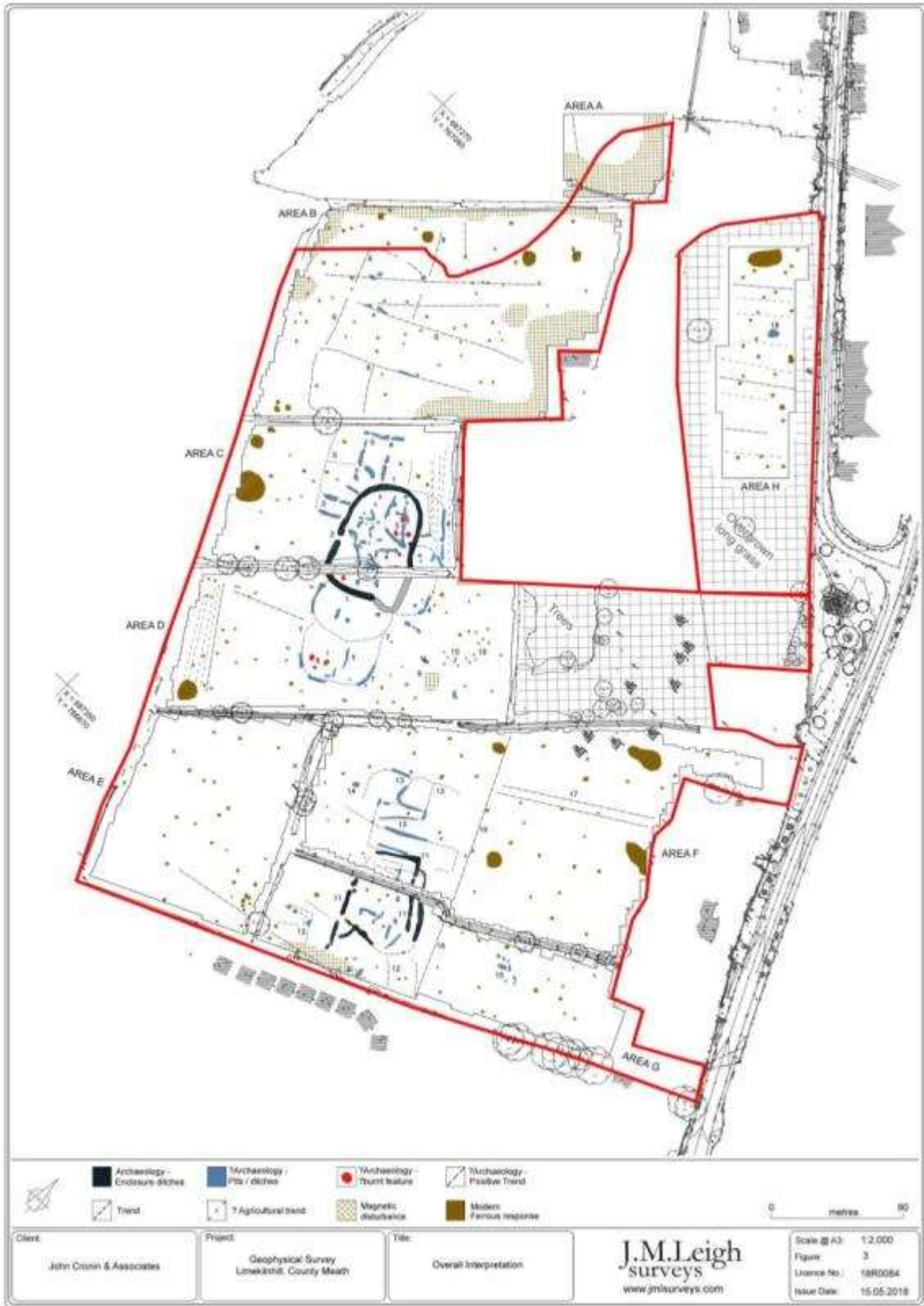


Figure 7: Interpretation of geophysical survey results

3. Test Trench Results

The archaeological test trench investigations were carried out under a licence issued by the National Monuments Service (18E0499) and a detection licence for the use of a metal-detector was also obtained in order to assist in artefact retrieval (18R0171). A total of eighteen test trenches were excavated within the proposed development site by a machine operating with a 1.8m wide toothless bucket and their layout was designed to intersect with various geophysical anomalies of archaeological potential. There was no access permitted to the location of three proposed trenches (Trenches 1, 2 and 3) within an overgrown field within a separate plot to the east of Belmont House. One of the trenches within the southern area of the main section of the site was located under a low overhead electricity wire and was also left unexcavated due to safety issues (Trench 19). All excavations were supervised by the author and the locations of all geophysical anomalies of archaeological potential were then manually cleaned by the project team (Colm Chambers, Pdraig Dunne and Sean Tiffin).

As stated in the methodology submitted to the NMS as part of the licence application, the excavations were undertaken to the surface of potential archaeological features which were then cleaned, recorded and left to remain *in situ*. All of the trenches were backfilled with the upcast soil at the completion of works.

The test trench layout was designed to concentrate investigations on the geophysical anomalies within the areas outside the enclosures that have been identified as being of archaeological potential (annexes, field systems, pits, etc.). The aim of this targeted phase of investigation was to result in a balance of an examination of these potential archaeological features while minimising impacts on sub-surface features or deposits. A limited amount of trenching along the outer edges of both enclosures was also undertaken in order to ascertain the widths of the enclosing ditches, the depth of the overlying ploughsoil (and nature of any cultural inclusions within that layer) and the extent of plough disturbance on the surface of the underlying natural subsoil in order to allow some assessment of the potential for the survival of occupation deposits within both enclosures.

Systematic field-walking to carry out a visual inspection of the ploughsoil surface on the footprint of both of the enclosures (and associated annexes) was also undertaken in advance of excavations. The crops within the fields had been cut in the weeks prior to the commencement of the site investigations and the ploughsoil surface was clearly visible amongst the low stubble. Two sherds of unglazed pottery, both with dark red, gritty fabrics, were identified on the surface of the ploughsoil within the interior of the northern enclosure and are tentatively interpreted as originating from imported early medieval wares. These were both recovered and will be available for specialist analysis as the project progresses. The combination of the visual inspection, and subsequent test trenching, also revealed the widespread presence of pottery and other materials dating from the 18th century onwards with a predominance of inclusions dating to the 19th and 20th centuries. Trenching revealed that these inclusions were present down into the surface of the natural subsoil and clearly demonstrated the extent of disturbance created by ploughing activity. There were occasional metallic inclusions noted during visual inspections and metal-detecting of the upcast ploughsoil from the test trenches and these comprised modern material such as nails and agricultural tool/machine parts. The range of inclusions was consistent with material originating from farmyard manure periodically spread across the tillage fields during recent centuries. The frequency of these inclusions steadily decreased in the fields furthest from Belmont House, indicating that they may have originated from the farmyard located in this area. Despite the townland name, there were no obvious inclusions of lime fragments noted within the soil profiles although the oyster shell fragments noted throughout the fields appears to have originated as an element of spread manure material.

The ploughsoil within all the trenches was composed of a homogenous dark silty clay loam (average 20cm deep) containing moderate inclusions of small stones as well as cultural inclusions such as 18th-20th century pottery sherds and small fragments of coal and clay tobacco pipes, bricks and oyster shells, the latter

perhaps introduced as a manure. The upper ploughsoil overlay a shallow interface layer of disturbed subsoil (average 10cm deep) which formed the base of the plough zone. This interface layer was truncated by frequent thin ploughmarks which were likely the result of the ongoing modern cultivation activity within the fields. The underlying natural subsoil was composed of a yellowish brown silty clay, the surface of which was also truncated by extensive ploughing activity which had introduced frequent inclusions of buried modern glass and pottery sherds down to this level.

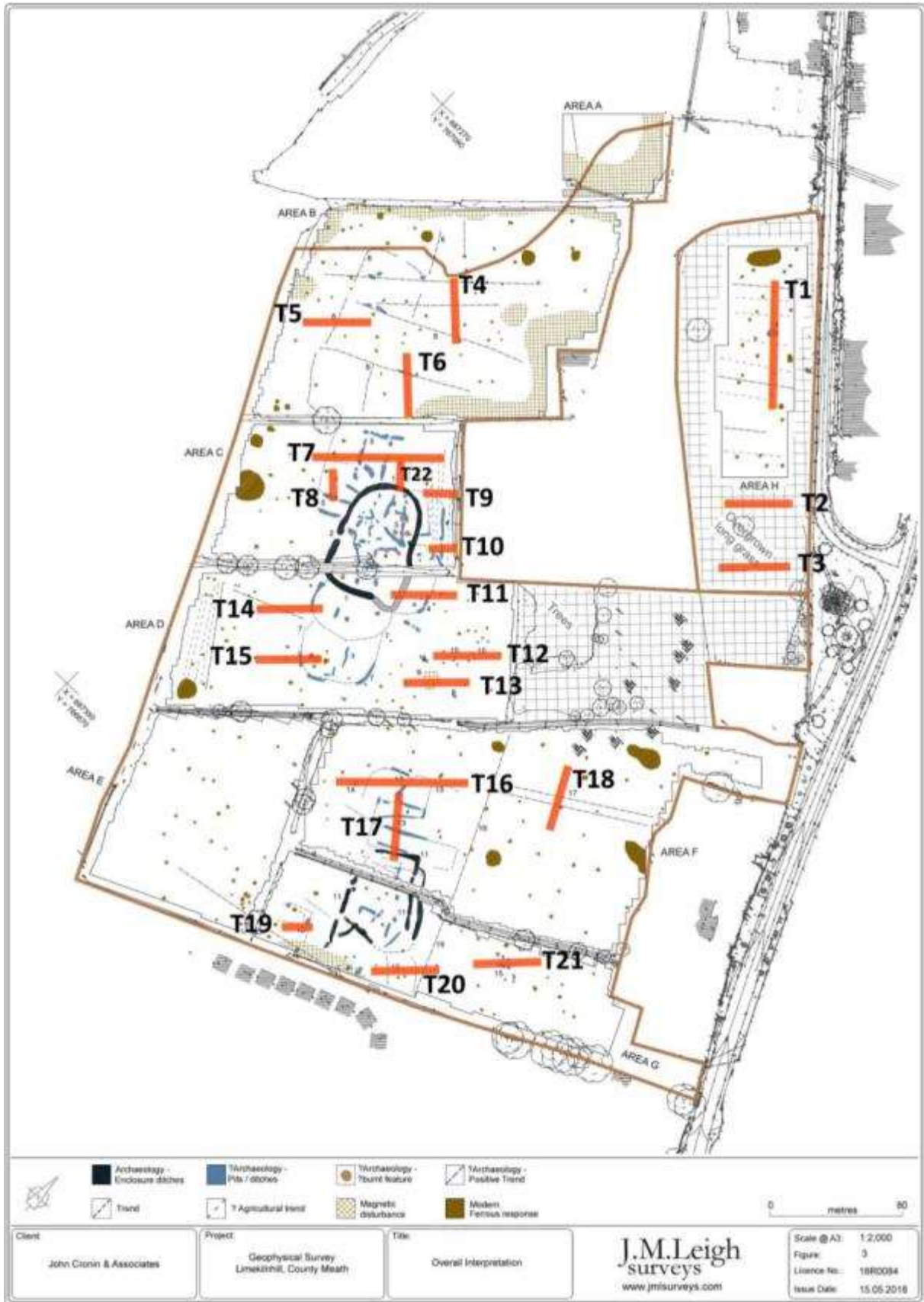


Figure 8: Location of test trenches (red) superimposed on geophysics interpretation

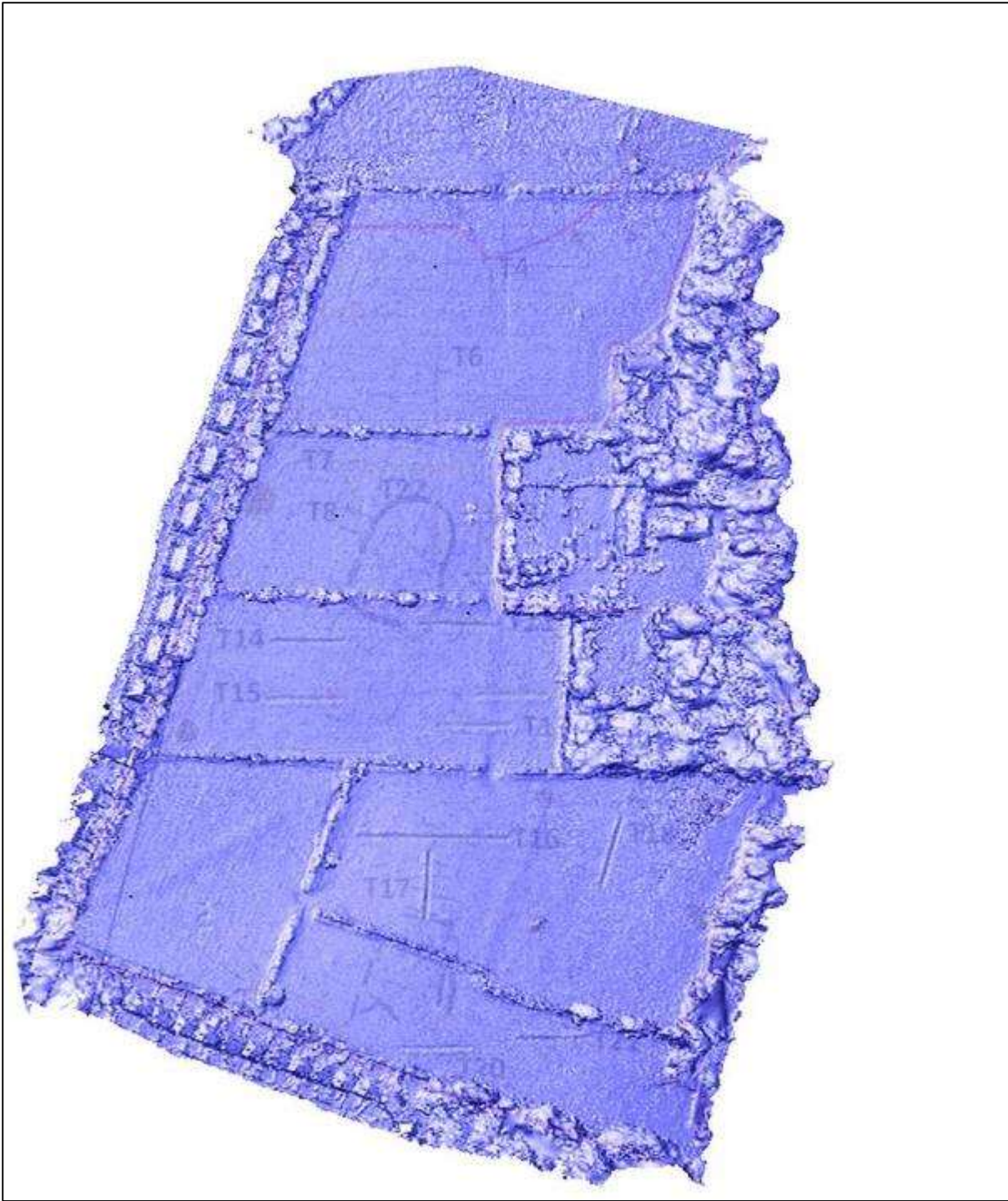




Figure 9: Location of geophysical survey enclosure responses and test trenches on 3D model


Test Trench Results


The following table presents a summary of the results from each trench and includes extracts from the photographic archive.


Table 1: Summary of test trench results (to be read in conjunction with Figure 8)


Trench	Aim of Investigation	Length	Test trenching results
1	To intersect with Geophysical Feature 18 (possible pit) and adjacent area of ploughing	-	Field not accessible at time of investigations
2	Investigate area under tall grass and unavailable for geophysical survey	-	Field not accessible at time of investigations
3	Investigate area under tall grass and unavailable for geophysical survey	-	Field not accessible at time of investigations
4	To intersect with Geophysical Feature 6 (possible field system)	40m N-S	<p>The surface of the natural subsoil was truncated by the base of plough furrows on an E-W orientation and spaced at intervals of 1m-3m apart. These averaged 30cm wide and were filled with ploughsoil. No obvious traces of field boundary features were observed but the potential that they were infilled with re-deposited subsoil or masked by the mixed ploughzone soil was noted.</p>  <p><i>View of Trench 4 from south</i></p>


Trench	Aim of Investigation	Length	Test trenching results
5	To intersect with Geophysical Feature 6 (possible field system)	50m E-W	<p>The general stratigraphy and inclusions noted in this trench were broadly similar to that uncovered in Trench 4 to the east. A 40cm wide N-S field drain filled with dark ploughsoil was noted at the west end of the trench in the area adjacent to the west field boundary.</p>  <p><i>View of Trench 5 from west</i></p>
6	To intersect with Geophysical Feature 6 (possible field system)	40m N-S	<p>The general stratigraphy and inclusions noted in this trench were broadly similar to that uncovered in Trench 4 to the north and Trench 5 to the west. A 40cm wide E-W field drain filled with dark ploughsoil was noted at the south end of the trench in the area adjacent to the south field boundary. The E-W cultivation features were most evident in the southern half of the trench and were set at average distances of 1m apart.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 804 1397 831"><i>View of furrow in south end of Trench 6</i></p>
7	To intersect with Geophysical Feature 5 (possible north annex to northern enclosure or agricultural plots)	60m E-W	<p>The ploughsoil in this area averaged 30cm in depth and contained early modern inclusions such as pottery, small coal fragments, occasional iron nails and one horseshoe. Two small fragments of iron slag were noted within the ploughsoil in the trench section. The subsoil was truncated by E-W plough marks which measured 20cm wide and were spaced 20cm-30cm apart. They were infilled with dark ploughsoil and 19th-20th century pottery inclusions were noted on their surfaces during manual cleaning. No obvious traces of annex or land division features were observed but the potential that they were infilled with subsoil or masked by the disturbed subsoil within the ploughzone was noted.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 879 1608 906"><i>View of Trench 7 from west showing east-west plough marks</i></p>
8	To intersect with Geophysical Feature 5 (possible north annex to northern enclosure or agricultural plots)	15m N-S	<p>The lower 10cm of the ploughsoil consisted of a mottled light-mid brown sand clay, with occasional bands of light yellow clayed sand. This level represented the ploughzone horizon and contained inclusions of modern and post-medieval pottery shreds, animal bone fragments and occasional brick and coal fragments. The bases of evenly spaced E-W ploughmarks were present on the underlying subsoil surface. A linear feature identified by the geophysical survey at the southeast end of the trench was not identified during a manual clean back of this area, perhaps due to an infill with re-deposited subsoil.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 879 1496 906"><i>View of base of disturbed plough zone in Trench 8</i></p>
9	To intersect with Geophysical Feature 4 (possible rectilinear annex to the east of the north enclosure)	12m E-W	The ploughsoil in this area averaged 20cm in depth and contained early modern pottery and glass shards. The subsoil surface within the trench was truncated by N-S ploughmarks set 1m apart. A N-S stone trackway, with modern inclusions, was uncovered beneath the sod layer in the east end of the trench and is on the potential line of a feature interpreted as the potential enclosing element of an east annex to the north enclosure identified on the geophysical survey.


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 708 1272 735"><i>View of Trench 9 from east</i></p>
10	To intersect with Geophysical Feature 4 (possible rectilinear annex to the east of the north enclosure)	10m E-W	The stratigraphy and inclusions noted in this trench were similar to that uncovered in Trench 9 to the north
11	To intersect with Geophysical Feature 1 (north enclosure ditch) and Feature 4 (possible rectilinear eastern annex to the north enclosure)	40m E-W	<p data-bbox="1003 852 2033 991">This trench extended eastwards from the inner edge of the eastern side of the enclosing element of the northern enclosure and continued through a possible eastern annex identified in the geophysical survey, which noted that this area appeared to have been noticeably plough damaged. The line of the enclosure ditch (F11:01) was encountered in the western end of the trench while a number of potential external postholes and/or pits were also identified in the external area to the east.</p> <p data-bbox="1003 1023 2033 1187">The upper level of the ploughsoil consisted of a 20cm deep mid-light brown silty clay loam and this overlay a 0.1m-0.15m layer of mixed subsoil which represented the base of the ploughzone horizon. Occasional inclusions of modern and post-medieval pottery shreds, animal bone fragments, flecks of burnt bone, modern glass and nails were noted down to the base of the ploughzone. The subsoil consisted of a mottled light yellowish red sandy clay with frequent inclusions of sub-angular stones and pebbles.</p> <p data-bbox="1003 1219 2033 1385">While no enclosing element of a potential eastern annex, potentially infilled with re-deposited subsoil, was identified on the subsoil surface outside the enclosure, a cluster of possible pits and postholes (F11.02-F11.06) was revealed on the surface of the natural subsoil over an area measuring 7m in width in the eastern end of the trench (between ITM 0687478, 0766871 and 0687471, 0766864). The fills of these potential features generally comprised mottled grey-brown charcoal flecked silty clays and the surface of one example (F11.02) contained a modern nail fragment.</p>


Trench	Aim of Investigation	Length	Test trenching results
			<p><i>Feature 11:01 (Enclosure Ditch)</i> This was initially exposed as a 4m wide darkened deposit at the location of the enclosure ditch shown on the geophysical survey. A manual clean back of the surface of the deposit revealed an approx. 2m wide area of re-deposited subsoil on the eastern (outer) side with a noticeably higher gravel content than the surrounding natural subsoil. The initial darkened 4m wide extent of the deposit appeared to be the result of differential moisture retention and the potential that it encompasses a recut of the ditch not which was not clearly evident following the clean back of the deposit. No obvious traces of an internal bank base were identified on the inner (west) side of the enclosure ditch fill. Traces of the bank were noted in Trench 22 (north side of the enclosure) and its absence in Trench 11 may be due to plough disturbance in this area. The trench continued for approx. 5m into the interior of the enclosure. No features were noted in this area during the geophysical survey and no obvious traces of features were noted during a manual clean back of the subsoil surface.</p>  <p><i>View of enclosure ditch fill from west</i></p> <p><i>Feature 11:02</i> Circular deposit (0.4m in diameter) uncovered within centre of trench. A modern nail fragment noted during cleaning of surface.</p>


Trench	Aim of Investigation	Length	Test trenching results
			<p><i>Feature 11:03</i> Circular deposit with charcoal flecks (0.4m in diameter). Located centrally in the trench 1.7m east of F11.02</p> <p><i>Feature 11:04</i> Circular deposit with charcoal flecks (0.5m in diameter). Located centrally in the trench 2.8m east of F11.03</p> <p><i>Feature 11:05</i> Circular charcoal deposit (0.5m in diameter) located against the northern baulk. Small flecks of charcoal and possible burnt bone were noted on the surface</p> <p><i>Feature 11:06</i> Circular charcoal deposit (0.65m in diameter) located against the southern baulk. Small flecks of charcoal and possible burnt bone were noted on the surface.</p>  <p><i>View of external features from east</i></p>
12	To intersect with Geophysical Feature 10 (possible pit cluster)	40m E-W	A farm trackway composed of small stones was uncovered immediately under the sod layer near the centre of the trench on the line of breaks in the field boundaries to the north and south and formed a continuation of the trackway uncovered in Trenches 9 and 10 to the north. The surface of the track


Trench	Aim of Investigation	Length	Test trenching results
			<p>contained a number of modern inclusions and brick fragments were noted within the makeup material. The bases of a number of N-S cultivation furrows were noted on the subsoil surface (at approx. 2m intervals) in the east end of the trench and these averaged 0.1m wide. Two E-W furrows were uncovered in the west half of the trench and these did not extend east of the trackway, perhaps indicating that it formed part of a land division feature in recent centuries.</p>  <p><i>View of from farm track from south</i></p>
13	To intersect with Geophysical Feature 9 (area of magnetic disturbance)	40m E-W	The area of magnetic disturbance corresponded to a 2m wide band of stones, with modern inclusions, which was uncovered beneath the sod layer and extended under the north and south baulks. While not on the same line as the trackway uncovered to the northeast in Trench 12 it was of similar composition.


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 836 1301 863"><i>View of modern stone deposit</i></p>
14	To intersect with west end of Geophysical Feature 7 (west end of south annex to north enclosure)	40m E-W	<p>The ephemeral surface traces of an approx. 2m wide band of potentially re-deposited band of subsoil was noted at the location of the enclosing element of the inner annex to the south end of the enclosure. The potential that this width is the result of soil drift within the base of the plough zone was noted and it is possible that an underlying ditch feature is narrower in extent. The presence of charcoal flecks and a small fragment of slag in the overlying ploughsoil may be the result of some industrial activity within the annex but the presence of inclusions such as chinaware down into the subsoil surface demonstrated the potential for the extent of the intrusion of early modern inclusions within this area.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1697 762"><i>View of annex ditch fill from west (ranging rod located on outer edge)</i></p>
15	To intersect with west end of Geophysical Feature 7 (west end of south annex to north enclosure)	40m E-W	A series of E-W plough marks were found to extent through the trench. A 2.5m wide ephemeral band of mixed subsoil, with a noticeable concentration of more stones inclusions than the surrounding subsoil, was noted at the location of the east side of the potential outer annex. As with Trench 14 to the north, it is possible that this width represents a drift of upper fill material within the ploughzone and that an underlying ditch feature may be narrower in extent. While no internal annex features were observed, the geophysical survey indicates that features displaying evidence for burning, perhaps associated with an industrial activity, are located within the environs of the trench.


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1697 762"><i>View of annex ditch fill from west (ranging rod located on outer edge)</i></p>
16	To intersect with Geophysical Feature 13 (possible north annex to south enclosure) and Feature 14 (possible pit)	80m E-W	<p data-bbox="1003 796 2033 962">This trench was excavated across the north end of a series of linear trends located to the north of the southern enclosure and also extended across the location of a possible pit in the area to the west. The subsoil surface within the trench was found to have been truncated by a series of N-S cultivation furrows. The possible pit (Geo. Ref. 14) in the west end of the trench was identified as a small burnt deposit and assigned Feature No. 16:01. A number of linear deposits and a possible posthole were also uncovered near the centre of the trench.</p> <p data-bbox="1003 994 2033 1246">Feature 16:01 Uncovered 11.5m from the west end of the trench, and adjacent to the south baulk, this comprised the fill of a 90cm diameter circular pit. The upper surface of the fill was composed of burnt stones in a charcoal-rich soil matrix. Manual cleaning revealed the edge of a possible surface of small stones (3cm-5cm) beneath the mixed subsoil at the base of the plough zone adjacent to the southeast side of the pit. This feature appeared to extend under the southern baulk and was only partially exposed within the trench in order to prevent dislodging the loosely packed stones. The pit and stone surface may represent a work external industrial area located approx. 40m to the northwest of the southern enclosure.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1279 762"><i>View of Pit 16:01 from west</i></p> <p data-bbox="1003 794 1151 821">Feature 16:02 A barely perceptible 3m wide band of potentially re-deposited subsoil (extending under the north and south baulks) was noted at the west end of the possible northern annex to the south enclosure, at a distance of 22m from the west end of the trench. The presence of early modern pottery noted on its surface attested to the disturbance created by ploughing and the possibility that the width of the surface expression of this feature may be the result of soil drift was noted.</p> <p data-bbox="1003 991 1151 1018">Feature 16:03 Another barely perceptible 2.5m wide band of potentially re-deposited subsoil of similar characteristics to Feature 16:02 was revealed near the centre of the trench (45m from west end) at the location of a N-S linear trend identified in the geophysical survey.</p> <p data-bbox="1003 1134 1151 1161">Feature 16:04 The fill of a possible posthole/pit was uncovered at a distance of 16.7m from the east end of the trench. It measured 60cm in diameter and was filled with a mid-brown silty clay loam with no evident cultural inclusions or packing material noted on the surface during manual cleaning.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 890 1601 917"><i>View of Feature 16:04 (right of trowel) and adjacent furrow</i></p>
17	To intersect with north end of Geophysical Feature 11 (south enclosure ditch) and Feature 13 (possible annex or field system to north of south enclosure)	40m N-S	<p data-bbox="1003 951 2029 1061">This trench was excavated across the lines of a number of E-W orientated linear trends to the north of the south enclosure and terminated just inside the inner edge of the enclosure ditch. A series of E-W fills, which extended under the east and west baulks, were uncovered at the locations of the linear trends as was the fill of the north end of the enclosure ditch.</p> <p data-bbox="1003 1093 2029 1289">Feature 17:01 Located at the north end of the trench this comprised a curvilinear, 1.1m wide deposit that extended from under the east baulk and then turned at a rounded corner in the centre of the trench before continuing for 3.2m and extending under the north baulk. The surface of the fill comprised a mid brown silty clay and small animal bone fragments were noted, although the possibility that these were introduced by ploughing activity was noted. The location of this feature corresponds to a curved corner of a geophysical linear feature that continues to the east and north.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1339 762"><i>View of Feature 17:01 from north</i></p> <p data-bbox="1003 794 1944 874">Feature 17:02 A 0.7m wide fill, composed of a mid brown silty clay with no evident surface inclusions, was uncovered to the south of F17:01.</p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1339 762"><i>View of Feature 17:02 from north</i></p> <p data-bbox="1003 794 1989 874"> Feature 17:03 An ephemeral c.2m wide deposit of possible re-deposited subsoil with medium-sized stones and occasional charcoal flecks was noted near the centre of the trench. </p> <p data-bbox="1003 906 2020 1018"> Feature 17:04 A 1m wide deposit of mid brown silty clay with moderate inclusions of small stones was uncovered immediately outside the north end of the enclosure. This linear feature is shown intersecting with the enclosure ditch in the area to the east on the geophysical survey. </p> <p data-bbox="1003 1050 2020 1217"> Feature 17:05 This 1.2m wide, dark brown deposit was uncovered at the location of the north end of the enclosure ditch identified in the geophysical survey. It contained surface inclusions of charcoal flecks and was noticeably darker in colour than the external linear features to the north. It was on a slightly different orientation to the adjacent external linear feature (17:04) and their trajectory indicated that the point where they intersect is located just outside the east side of the trench. </p>


Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 746 1592 770"><i>View of Features 17:04 and 17:05 (foreground) from south</i></p>
18	To intersect with Geophysical Feature 17 (trackway or levelled field boundary)	40m N-S	The linear feature identified by the geophysical survey corresponds to the location of a now levelled field boundary shown on the historic OS maps. The base of a levelled field bank was revealed as a 1.5m wide band of re-deposited yellow subsoil with an adjacent infilled field drain on the south side.

Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1301 762"><i>View of Trench 18 from north</i></p>
19	To intersect with Geophysical Feature 12 (linear trends to southwest of southern enclosure)	-	Located beneath line of low-hanging overhead ESB wire and not excavated due to safety concerns
20	To intersect with Geophysical Feature 12 (linear trends to southeast of southern enclosure)		<p data-bbox="1003 852 2033 935">A number of deposits at the locations linear trends extending southeast from the southern end of the south enclosure were identified and all extended into the north and south baulks. A series of E-W cultivation furrows extended along the length of the trench.</p> <p data-bbox="1003 963 1149 987">Feature 20:01</p> <p data-bbox="1003 992 2007 1075">Located 7m from the west end of the trench this comprised a 6m wide deposit of mixed ploughsoil on the subsoil surface which may potentially represent a spread of soil originating from the upper fill of a ditch feature.</p>

Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1330 762"><i>View of Feature 20:01 from west</i></p> <p data-bbox="1003 794 2016 874">Feature 20:02 Located 23m from the west end of the trench this was a 2.5m wide deposit of mid brown silty loam with no evident cultural inclusions on the surface.</p>

Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 735 1568 762"><i>View of Feature 20:02 from south (to left of ranging rod)</i></p> <p data-bbox="1003 794 2018 874">Feature 20:03 Located 30m from west end of trench this 2.5m wide deposit was similar in composition to Feature 20:03</p>
21	To intersect with Geophysical Feature 15 (features of unknown origin to east of southern enclosure)	40m EW	<p data-bbox="1003 908 2002 959">This trench was excavated to investigate a potential cluster of features located approx. 60m to the east of the southern enclosure and three features were uncovered within the excavated area.</p> <p data-bbox="1003 991 2002 1129">Feature 21:01 Located 21m from the east end of the trench and extending under the north and south baulks this comprised a barely perceptible oblong deposit (3.5m wide EW) of loose stones contained in a slightly dark silty soil matrix containing occasional flecks of charcoal and burnt bone. No traces of burn marks on the surrounding subsoil were noted.</p> <p data-bbox="1003 1161 2024 1300">Feature 21:02 Located 19m from east end of trench this comprised a curvilinear deposit extending for 1.2m from the south baulk and measuring 1.3m in width (EW). It was composed of a grey brown, stony deposit with occasional flecks of burnt bone and charcoal. As with Feature 21:01 to the east, there were no obvious traces of burning activity on the surrounding natural subsoil.</p>

Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 804 1223 831"><i>View of Feature 21:02</i></p> <p data-bbox="1003 863 2020 1027"> Feature 21:03 Located 7m from the east end of the trench this circular deposit extended from under the south baulk and its visible extent measured 1.2m in diameter. It was composed of a mid brown sandy clay deposit containing small angular pebbles and, unlike Features 21:01 and 21:02 to the west, there were no inclusions of burnt bone or charcoal noted on the upper surface. Interpreted as fill of possible pit feature. </p>

Trench	Aim of Investigation	Length	Test trenching results
			 <p data-bbox="1003 1038 1413 1066"><i>View of Feature F21:03 (to left of trowel)</i></p>
22	To intersect with Geophysical Feature 1 (north end of northern enclosure ditch)	20m N-S	<p>The general stratigraphy noted outside the enclosure was similar to that encountered in Trench 8 to the east. Three potential archaeological features were recorded towards the southeast end of the trench. The first consisted of the enclosure ditch F22.01 at the location identified by the geophysical survey. The ditch fill was first identified as a spread of mottled dark, moisture-rich soil approximately 4.5m and was sealed by a 10cm deep spread of re-deposited subsoil perhaps originating from the ploughed out bank. Its inner edge was located at ITM 0687415, 0766896 and its outer edge at ITM 0687411, 0766898. A more intensive, manual clean back of the surface of the ditch fill indicated that it may measure 2m in width while the outer 2.5m section (at north) may potentially indicate a recut or a spread of the upper fill created by ploughing activity. A bank of compact re-deposited subsoil (F22.02) measuring 0.6m wide and 0.1m high was located</p>


Trench	Aim of Investigation	Length	Test trenching results
			<p>immediately adjacent to the inner (south) side of the ditch and appeared to represent the basal remains of an internal bank. A possible spread of re-deposited subsoil (F22.03), measuring 1.9m wide, extending south of the identifiable base of the bank may represent a spread of levelled bank material or the lower extent of the plough zone.</p>  <p><i>View of ditch fill and inner bank base from southeast</i></p>



Figure 10: Oblique 3D view of test trenching from southwest with central areas of enclosures indicated

4. Discussion

The combined results of the geophysical survey and test trench excavations have demonstrated the presence of two previously unrecorded archaeological enclosures and potential external features within the subject site. The fields containing the enclosures were found to have been extensively impacted by ploughing activity and the widespread presence of 18th-20th century inclusions noted down to the level of the natural subsoil indicates that this farming practice has been ongoing during recent centuries. The test trenches were excavated to the surface of geophysical anomalies that are located within a plough zone that is still subject to tillage farming and no excavation of identified deposits or features was carried out during this preliminary phase of investigation. Without recourse to full excavation it was not possible to establish the extent of features within the disturbed ploughzone and the following observations are, therefore, based on a combination of their layouts as indicated by the geophysical survey and their visible surface expressions revealed during the test trench investigations.

The North Enclosure

As previously noted, the geophysical survey clearly demonstrates that the northern site comprises an irregularly-shaped sub-rectilinear enclosure, measuring 45m x 68m, with a possible entranceway in the west end and a cluster of internal responses indicative of habitation activity, with possible fired features such as hearths. The presence of two sherds of possible imported early medieval pottery noted on the surface of the plough soil during systematic field-walking of the internal area of this enclosure may suggest the period of its construction. The presence of these sherds on top of the modern ground surface also indicates likely movement of material within the ploughzone and the consequential disturbance of underlying archaeological deposits and features. The geophysical survey indicates that this enclosure is univallate and, while conjectural, it is noted that its layout, and that of the second enclosure to the south, is reminiscent of excavated sub-circular and sub-rectangular enclosures that have been dated to the early medieval period, e.g. Colp West, Co. Meath, Cappydonnell Big Co. Offaly and Killickaweeny, Co. Kildare (Corlett & Potterton 2011). These sites may form variants to the ringfort enclosures of that period and has been recorded that, as appears to be the case with the Limekilnhill enclosures, approx. 88% of ringforts in County Meath were univallate (Stout 1997, 17). It is also noted that the geophysical survey indicates that the northern enclosure has an entrance on the west side while many ringforts have eastern entrances in order to provide shelter from prevailing winds. It may be of some significance that this entrance opens to the south end of the potential field system to the north rather than being orientated to face away from prevailing winds or towards the location of the southern enclosure.

The excavation of two trenches (T11 and T22) extending outwards from the inner edge of the enclosure ditch suggested that this feature may measure up to 4m in total width, although the possibility that this width may encompass at least one 2m wide recut of the ditch was noted. Slight traces of the basal remains of an inner bank were noted on the north side of the enclosure (T22) and the presence of re-deposited subsoil within the ploughzone above the ditch may form a spread of material from the levelled bank. No surface traces of an internal bank were noted along the east side (T11) and the geophysical survey indicates that this area has been subject to an increased amount of plough disturbance. Manual cleaning of both exposed surfaces of the upper ditch fill revealed early modern inclusions which provides another demonstration of the extent of the disturbance of the underlying soil profiles created by ploughing activity.

The geophysical survey clearly shows two conjoined, semi-circular annex-type features located outside the southern line of the enclosure ditch and indicates that these contain a far more limited amount of internal features which may suggest that they may have fulfilled some ancillary agricultural function, such as animal stockades or work areas. The extents of these annex features respect each other and the adjoining

enclosure ditch suggesting that they are likely to be contemporary. The excavation of two test trenches extending westwards from the interior of both features (T14 and 15) did not reveal any obvious traces of internal features on the subsoil surface although the caveat that such features may be concealed within the base of the ploughzone applies. The west ends of both annexes were delimited by bands of barely perceptible re-deposited subsoil (2m wide in T14 and 2.5m wide in T15). The potential that the observed surface widths of both features are the result of soil movement within the base of the ploughzone was noted and it is possible that the underlying ditches are narrower in extent. Test trenching immediately to the east of the enclosure did not uncover obvious remains of a potential rectangular annex identified by the geophysical survey in this area.

South Enclosure

While the geophysical survey report notes that the southern enclosure is similar in shape and form to the example to the north it also observes that its responses are more fragmented and are suggestive of more intense plough disturbance in this area. The enclosure ditch encompasses an area measuring c. 48m x 56m and while the survey indicates some internal activity it does not appear to be as widespread as that identified in the northern enclosure, which may perhaps indicate a stockade function. There is also some variance in the layout of the ditch when compared to the broadly curvilinear character of northern example with a sharp right-angled corner in the northeast quadrant and a straight line along the western side. The east side contains both a linear and an (outer) curvilinear response which may be suggestive of at least two phases of ditches in this area.

The trench (T17) excavated northwards from the inner edge of the north line of the ditch revealed the upper fill to be composed of a 1.2m wide dark brown deposit with charcoal inclusions. This was narrower than the ditch feature around the north enclosure and was also quite distinct from the mid-brown fills of the series of east-west orientated ditch features noted within the adjacent potential annex area to the north. The linear layout of the trends forming this potential northern annex is also different to the semi-circular examples identified on the south side of the north enclosure and are more similar in shape to the potential agricultural plots to the north of the northern enclosure rather than an enclosed stockade. While not demonstrable during the preliminary phase of testing, the orientations of the southernmost of the external linear cuts and the adjacent enclosure ditch indicated that they inter-cut in the area to the east of Trench 17 and may, therefore, not be contemporary.

External Features

Settlement enclosures of the early medieval period may often form the visible element of wider agricultural centres known as *Airlise* which may contain sub-surface archaeological features such as associated field systems, souterrains, stockades, barns, mills and drying kilns (e.g. Bolger 2012). The linear trends shown extending outwards from the northwest quadrant of the northern enclosure on the geophysical survey (**Figure 7**; Feature 8) are reminiscent of the petal-shaped fields known to radiate out from ringfort enclosures. It has been suggested that these fields were used as localised areas of tillage within farmlands otherwise primarily devoted to dairy farming (Stout 1997, 37). The test trenches excavated at the locations of the potential field plots in this area did not reveal surface expressions of the boundary features shown on the geophysical survey, perhaps due to a combination of plough disturbance and the potential that they have been backfilled with soils similar in composition to the natural subsoil. While the inclusions within the cultivation furrows noted throughout the site dated exclusively to the 18th-20th century the possibility exists that this is the result of later plough disturbance the potential exists that this area may contain relict remains of earlier agricultural activity associated with the occupation of the enclosure.

Test trenching revealed the presence of various small potential pits/postholes within the areas outside the two enclosures including a cluster to the east of the southeast end of the northern enclosure (T11) as well as examples to the west (T16) and east (T21) of the southern enclosure. The geophysical survey does not indicate the presence of any structural features or enclosures within the proximity of these external features and the potential that they represent isolated areas of archaeological activity, perhaps associated with the occupation of the enclosures, is noted.

Summary

The combined programme of geophysical survey and archaeological test trench investigations described in this report were undertaken as part of a pre-development assessment of the subject site. This assessment has clearly demonstrated the presence of sub-surface remains of two previously unrecorded archaeological enclosures within the landholding as well as potential external associated features. While conjectural in the absence of excavation of the identified features, the potential exists that these sites comprise early medieval enclosures with evidence for conjoined annexes and other external activity associated with their occupation.

5. Impact assessment

Following consultation with the developer it has been concluded it will not be feasible to amend the layout of the proposed housing development, which has been informed by planning requirements for the housing density to be achieved and the attendant layout of the internal road network, in order to avoid the locations of the identified archaeological sites and features (see **Figure 11** below).



Figure 11: Location of identified archaeological sites and features superimposed on proposed development

The ground reduction works required for the construction of the proposed housing development within the subject site will, therefore, have a negative, direct impact on the previously unrecorded, sub-surface archaeological enclosures and associated external features identified as part of this assessment.

6. Mitigation measures

As avoidance or preservation in-situ of the previously unrecorded, sub-surface archaeological sites and features identified as part of this assessment is not considered feasible due to development requirements, it is recommended that if planning is granted for the development that they be preserved by record through a full, systematic archaeological excavation under licence from the National Monuments Service (Department of Culture, Heritage and the Gaeltacht). The extent and methodology of these excavations, and all subsequent post-excavation specialist analyses, will be agreed in advance with the National Monuments Service and will be clearly detailed in a method statement submitted as part of the licence application process.

It is also recommended that a concurrent programme of pre-construction archaeological test trenching be undertaken within the field in the east end of the proposed development site which was inaccessible during the programme of site investigations described in this report (see **Figure 7**: Area H). It is finally recommended that topsoil stripping works within the sections of the proposed development outside the agreed archaeological excavation areas be subject to constant archaeological monitoring during the construction phase. In the event that any archaeological features are encountered during these works, ground works will be halted in their environs while they are cleaned, recorded and then securely cordoned off until the National Monuments Service have been informed of the discovery and consulted in order to determine appropriate further mitigation measures.

There are a number of obligatory processes to be undertaken as part of licence applications for excavation projects and these will allow for monitoring of the successful implementation of the archaeological mitigation measures. All excavations will be carried out under a licence issued by the National Monuments Service following the approval of the detailed method statement outlining all proposed archaeological strategies. A preliminary report presenting a summary of results will be compiled and submitted to the National Monuments Service and National Museum of Ireland within one month of the completion of excavations. This will include details on all proposed post-excavation analyses. A final detailed report, which will include the results of specialist analyses, will be submitted within twelve months of the completion of excavations.

Subject to grant of planning, the following is an *outline/indicative* schedule for the implementation of the proposed archaeological measures:

- Appointment of the services of a suitably qualified archaeologist to co-ordinate the mitigation measures
- Following the grant of planning, archaeological method statements shall be submitted to the Department of Culture, Heritage and the Gaeltacht for review and agreement
- Subject to the approval of the Department, the following mitigation measures will be undertaken under licence from the National Monuments Service:
 - A Archaeological test trenching in the field to the east of Belmont House (referred to as “Area H” in the geophysical survey)
 - B In parallel with site development works, a programme of archaeological excavation (“preservation by record”) of (a) two archaeological enclosures, with associated external features, identified during archaeological test trenching in 2018 (Excavation Licence 18E0499) and (b) any features of archaeological interest that may be found during the testing of “Area H”.
 - C Archaeological monitoring of all site development works. In the event of archaeological features being uncovered they shall, subject to agreement by the National Monuments Service, be fully resolved. A report containing the results of archaeological monitoring and

associated excavations shall be submitted to the Department of Culture, Heritage and the Gaeltacht on completion of site development works.

Please note: the above recommendations and outline schedule are subject to the approval of the National Monuments Service and the Planning Authority.

7. References

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