

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

ADDENDUM REPORT (including appended chapters)

To be read as an Addendum to both the Non-Technical Summary and main body of the Environmental Impact Assessment Report

PROPOSED LARGE-SCALE RESIDENTIAL DEVELOPMENT

AT

CONFHEY PHASE 1A, LEIXLIP, CO. KILDARE



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1.0 INTRODUCTION AND METHODOLOGY

1.1 Background and Further Information Request

On the 3rd of July 2026, Vanisland Limited, applied to Kildare County Council for a Large-scale Residential Development (LRD) on lands within the townlands of Newtown and Confey, Leixlip, Co. Kildare (Reg. Ref.: 26/60746) for 272 no. residential units, a childcare facility, 3 no. commercial units, a restaurant / café unit and associated infrastructure and site works. The application site has an area of c. 7.5ha and is bound by the R149 to the east, the L1015 to the north, Paceland and Captain's Hill (residential dwellings) to the north-east, greenfield lands to the west, the Royal Canal, railway line and Leixlip Confey Train Station to the south, and Cope Bridge to the south-east. The application site also includes a section of the L1015 to the north and a section of the R149 to the east and north-east, located within the townlands of Confey and Allenswood, and the associated verges and footpaths.

The application was accompanied by an Environmental Impact Assessment Report (EIAR). After a review of the planning application documentation, Kildare County Council issued a request for Further Information on the 27th of August 2026. The further information request included a total of 14 no. items. It also included a note that the further information request may require revisions to EIAR chapters and that any revisions to the EIAR should be clearly highlighted. In response to Item 13 of the FI request (see FI Cover Letter Response), it was considered appropriate to prepare this Addendum to the EIAR.

1.2 Purpose and Structure of this EIAR Addendum

Directive 2014/52/EU (the 2014 Directive amending the 2011 codifying Directive) defines '*environmental impact assessment*' as a process, which includes the responsibility of the developer to prepare an Environmental Impact Assessment Report (EIAR), and the responsibility of the competent authority (in this case, Kildare County Council) to provide reasoned conclusions following the examination of the EIAR and other relevant information.

The specific objectives of the EIAR submitted with the initial application documents submitted on the 3rd of July 2026 was to identify and predict the likely environmental impacts of the proposed development; to describe the means and extent by which they can be reduced or ameliorated; to interpret and communicate information about the likely impacts; and to provide an input into the decision making and planning process.

The purpose of this EIAR Addendum Report is to summarise the updates to the EIAR in the main body of this report and refer to the updated chapters in Appendix 1 and 2 which are considered necessary to submit in response to the FI Request. The EIAR Addendum Report and Appendices assess the changes to the proposed development arising from the applicant's response to the request for further information from Kildare County Council, having regard to the findings of the Environmental Impact Assessment Report submitted in conjunction with the initial planning application documentation, and in particular to respond to the specific item raised by the Planning Authority in Item 13 of the FI request.

This EIAR Addendum Report the updates the Archaeology chapter (Chapter 4) following the completion of test trenching in response to Item 13 of the Further Information request. In addition, the Mitigation and Monitoring Chapter (Chapter 15) has been updated as a result. Both updated chapters are included in the accompanying appendices and summarised in the main body of the report below.

Furthermore, having reviewed all of the relevant information, JSA Planning and the relevant consultants can confirm that the amendments to the proposed development will not result in any additional significant adverse impacts on the environment.

Please note that this EIAR Addendum Report is not a standalone document and should be read in conjunction with the further information response documentation, the planning application documentation and Environmental Impact Assessment Report submitted to Kildare County Council on the 3rd of July 2026.

4.0 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

The Further Information response is accompanied by an updated Chapter 4 - Archaeology, Architectural and Cultural Heritage prepared by Archaeological Consultancy Services Unit (included as Appendix 2), we provide a summary below for ease of reference.

The Archaeology, Architectural and Cultural Heritage chapter of the EIAR has been updated to incorporate the results of archaeological test trenching undertaken on the site following submission of the original Large-scale Residential Development (LRD) application. While Item 13 of the Further Information request did not specifically relate to archaeology, architectural or cultural heritage, it was considered appropriate and necessary to update the EIAR to reflect the outcome of the post-submission archaeological investigations and to ensure that the assessment is fully informed by the most up-to-date baseline data.

The test trenching was undertaken in accordance with the archaeological mitigation strategy set out in the original EIAR, following an Archaeological Impact Assessment and geophysical survey, and was carried out under licence from the Department of Housing, Local Government and Heritage (Excavation Licence No. 25E0385). The objective of the works was to further clarify the archaeological potential of the site, investigate anomalies identified during geophysical survey, and identify any subsurface archaeological remains that could be affected by the proposed development, in order to inform appropriate mitigation measures.

A programme of 56 test trenches was proposed, of which 41 was excavated across the site. The majority of the site was confirmed to be of low archaeological potential, with no archaeological remains identified in most trenches. Only one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2. It was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest. No other features of archaeological significance were identified. No previously unknown recorded monuments or large-scale archaeological complexes were identified, and no archaeological remains were identified within the footprint of a potential historic road shown on historic mapping.

The updated assessment confirms that the proposed development will not result in any impacts on recorded archaeological monuments, protected structures or architectural heritage assets, as none are located within the site and no indirect or visual impacts on nearby recorded monuments are predicted. However, the proposed development would have a direct, negative and permanent impact on the archaeological features identified during the test trenching if unmitigated.

In accordance with best practice and National Monuments Service guidance, preservation by record is proposed for all identified archaeological features, as preservation in situ is not warranted having regard to the nature of the features identified and not feasible due to the nature and layout of the proposed development. This will involve full archaeological excavation in advance of construction, carried out by a licence-eligible archaeologist under licence from, and in consultation with, the National Monuments Service. In addition, given the scale of the site and the possibility that further isolated or small-scale archaeological remains may be present beyond the areas tested, archaeological monitoring of all topsoil stripping during the construction phase is proposed, including areas not previously accessible for test trenching.

The updated chapter also includes revised figures and mapping illustrating the extent of archaeological investigations, the location of identified features, and the proposed mitigation strategy. All mitigation measures will be incorporated into the Construction Environmental Management Plan, which will be updated and submitted to the Planning Authority prior to commencement of development.

In conclusion, while additional archaeological features have been identified since submission of the original EIAR, the updated Archaeology, Architectural and Cultural Heritage chapter confirms that, subject to the implementation of the proposed mitigation measures, the development can proceed without giving rise to significant residual adverse effects on archaeological, architectural or cultural heritage resources.

Please refer to the updated Chapter 4- Archaeology, Architectural and Cultural Heritage for full details of the test trenching methodology, results and mitigation measures.

16.0 SUMMARY OF EIAR MITIGATION AND MONITORING MEASURES

This section of the EIAR Addendum Report sets out the revised mitigation and monitoring measures arising from the applicant's response to the Further Information request issued by Kildare County Council, together with the findings of post-submission assessments and investigations. The mitigation measures presented herein update, refine and, where necessary, supplement those contained in the original EIAR to ensure that all potential environmental effects associated with the amended development proposals are appropriately avoided, reduced or managed.

Please refer to the updated Chapter 16- Summary of EIAR Mitigation and Monitoring Measures (Appendix 4), for full details of the final updated summary of the proposed EIAR Mitigation and Monitoring Measures.

Revised Mitigation for Chapter 4 – Archaeology, Architectural and Cultural Heritage

Pre-Construction Phase

Mitigation will be required in the form of preservation by record (fully excavated by hand), with the use of a metal detector, of three areas where archaeological activity was identified during test trenching. This must take place prior to any construction works commencing in these areas. Additional archaeological remains may be uncovered when these areas are fully topsoil stripped under direct archaeological supervision.

The excavations will be carried out by a licence-eligible archaeologist in consultation with and under licence from the National Monuments Service of the Department of Housing, Local Government and Heritage.

Adequate time and resources will be provided by the developer for the resolution of any archaeology identified during the excavation of the above areas. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following the archaeological excavation of these sites.

It is required to compile a report on all findings on completion of the excavations, and this will be submitted to the relevant authorities.

Construction Phase

Mitigation will be required in the form of archaeological monitoring, with the use of a metal detector, of all topsoil removal associated with the development during the construction phase. The use of appropriate

machinery to ensure the preservation and recording of any surviving archaeological remains will be necessary.

This monitoring will be carried out by a licence-eligible archaeologist in consultation with and under licence from the National Monuments Service of the Department of Housing, Local Government and Heritage. Accordingly, no ground disturbance will take place in the absence of the Archaeologist without his/her express consent. Should any significant archaeological features be discovered, further archaeological mitigation may be required, such as preservation by record (excavation). Any further mitigation will require approval from the NMS.

Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site during the construction phase and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any excavation that takes place.

It is required to compile a report on all findings on completion of the monitoring and/or excavation, and this will be submitted to the relevant authorities.

Monitoring

Monitoring of climate-related mitigation measures will be undertaken through the implementation of the CEMP during construction and through the ongoing management and maintenance of landscaped areas, SuDS features and building services during the operational phase. This will ensure that climate adaptation and resilience measures remain effective for the lifetime of the development.

APPENDIX 1:

CHAPTER 4 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

4.0 ARCHAEOLOGY, ARCHITECTURAL AND CULTURAL HERITAGE

The Archaeology, Architectural and Cultural Heritage chapter of the EIAR has been updated to incorporate the results of archaeological test trenching undertaken on the site following submission of the original Large-scale Residential Development (LRD) application. While Item 13 of the Further Information request did not specifically relate to archaeology, architectural or cultural heritage, it was considered appropriate and necessary to update the EIAR to reflect the outcome of the post-submission archaeological investigations and to ensure that the assessment is fully informed by the most up-to-date baseline data.

4.1 INTRODUCTION

The following EIAR Chapter was prepared for the proposed Large-scale Residential Development (LRD) at Confey, Leixlip, Co. Kildare (ITM 700629, 737222; see Figure 4.1:). It details the results of an archaeological, architectural and cultural heritage assessment prepared by Magda Lyne (MA, MIAI) and Donald Murphy (MA, MIAI) of Archaeological Consultancy Services Unit Ltd. on behalf of the applicant, Vanisland Limited.

This chapter assesses the impacts of the proposed development on the known and potential cultural heritage resources. UNESCO define the term 'Cultural Heritage' as encompassing several aspects of tangible assets (immovable: archaeological sites and monuments, architectural heritage structures; movable: artefacts; and underwater: shipwrecks, submerged features) and intangible assets (e.g. folklore, oral tradition and language). Based on this assessment, the chapter then identifies appropriate mitigation strategies.

This report includes the results of a geophysical survey under licence 25R0024 (see Section 4.3.7; Figure 4.8) carried out by Donald Murphy of Archaeological Consultancy Services Unit and test trenching carried out by Deirdre Murphy under licence 25E0385, both of Archaeological Consultancy Services Unit (see Section 4.3.8; Figures 4.8-4.11). Both reports are also included as Appendices (Appendix 4.1 and Appendix 4.2).

The recorded and potential cultural heritage resource within the study area, encompassing both the proposed development site and the lands extending for 500m from its boundary, was assessed in order to compile a comprehensive cultural heritage baseline and context.

4.1.1 Competency of Assessor

This chapter / impact assessment was undertaken by Magda Lyne (MA, MIAI) and Donald Murphy (MA, MIAI) of ACSU. Magda is an Archaeologist with over 15 years of experience, having worked in Poland, Ireland, Denmark and Norway. Her primary focus includes preparing Archaeological and Cultural Heritage Chapters for EIARs, Archaeological Impact Assessments (AIA), and Cultural Heritage Impact Assessments (CHIA). She has completed EIARs for numerous projects across Ireland, including housing, pharmaceutical plants, wastewater facilities, and public realm projects. Donald is the founder and Managing Director of ACSU and has over 30 years of experience as an archaeological consultant. He has completed EIARs for a variety of projects across Ireland and has managed the archaeological work

in advance of several large infrastructural schemes, such as the M3 and M4 Motorways. The associated test trenching was directed by Deirdre Murpy (MA, MIAI). Deirdre is a Senior Archaeologist with Archaeological Consultancy Services Unit (ACSU). Deirdre has over 30 years of professional experience across Ireland, specialising in large-scale, infrastructural, commercial and residential developments

4.2 STUDY METHODOLOGY, POLICIES AND OBJECTIVES

This chapter's methodology is guided by a legislative framework that governs how aspects of archaeological, cultural and architectural heritage are protected. This report has been prepared in compliance with all relevant EIAR legislation and guidance, including the EIAR Guidelines from the Environmental Protection Agency (EPA, 2022). Furthermore, it addresses the relevant policies and objectives of *Kildare County Development Plan 2023–2029*, the *Leixlip Local Area Plan 2020-2023 (extended to 2026)* namely:

- *Kildare County Development Plan 2023–2029*

AH O3 In co-operation with the National Monuments Service, Department of Housing, Local Government and Heritage require archaeological impact assessment, surveys, test excavation and/or monitoring and/or underwater archaeological impact assessments for planning applications in areas of archaeological importance and where a development proposal is likely to impact upon in-situ archaeological monuments, their setting and archaeological deposits, based on recommendations of a suitably qualified archaeologist and the Council will seek and have regard to the advice and recommendations of the Department of Housing, Local Government and Heritage

- *Leixlip Local Area Plan 2020-2023 (extended to March 2029)*

Policy BH1 – Protected Structures

BH1 It is the policy of the Council to preserve and enhance the buildings identified on the Record of Protected Structures and to carefully consider any proposals for development that would affect the special value of such structures, including their historic curtilage, both directly and indirectly.

Objectives

It is an objective of the Council:

BH1.1 To ensure the protection of all structures, (or parts of structures) and the immediate surroundings including the curtilage and attendant grounds of structures contained in Leixlip Local Area Plan 2020-2023 63 the Record of Protected Structures (refer to Table 10.1 and Map No. 2 Leixlip Built Heritage and Archaeology).

BH1.2 To acknowledge and promote awareness of the origins, historical development and cultural heritage of the town, to support high quality developments that relate to local heritage and to ensure that new development respects and is responsive to the cultural heritage of Leixlip.

BH1.3 To protect the landscape character, values, sensitivities, focal points and views in Leixlip, including those identified in the Kildare County Development Plan. This will include, inter alia, the following:

- a) the requirement of a Visual Impact Assessment for developments with potential to impact on areas of significant landscape character, value or sensitivity, including both urban and natural features, significant townscapes and historic buildings, as appropriate.*
- b) prohibit development that will block or interfere with a significant focal point or a view. Where it is considered that a development may impact on focal points or views, proposals*

must have regard to the significance of any such impact and any appropriate mitigation measures that should be incorporated.

BH1.4 To support the implementation of the conservation plan for the restoration and management of Leixlip Spa in association with key stakeholders.

BH1.5 To complete a Conservation Study for The Wonderful Barn and its curtilage to inform potential feasibility studies and public consultation for appropriate use, and to support the implementation of the conservation study for the restoration and management of The Wonderful Barn and associated lands in association with key stakeholders.

BH1.6 To promote The Wonderful Barn as an integrated tourism attraction including the restoration of the main features of the complex and its historical landscape:

- (i) The re-arrangement of the existing access way.*
- (ii) The integration of car parking facilities,*
- (iii) The consolidation and eventual restoration of the historic buildings.*
- (iv) The reinstatement of the walled garden and rear courtyard;*
- (v) The insertion of complementary commercial uses to ensure a sustainable future for the project. The feasibility of a Discovery Park including play facilities and a picnic area shall be investigated.*

BH1.7 To seek the protection of burial grounds within Leixlip in co-operation with agencies such as the Office of Public Works and the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht (DoCHG) as appropriate.

BH1.8 To promote the restoration of the Boat House on the River Liffey where it meets the River Rye and to promote the area along the Liffey as a recreational amenity.

BH1.9 To address dereliction, vacancy and promote appropriate and sensitive reuse and rehabilitation of Protected Structures.

Policy BH3 – Archaeological Heritage

BH3 It is the policy of the Council to safeguard the archaeological heritage of the LAP area and avoid impacts on sites, monuments, features or objects of significant historical or archaeological interest. Objectives.

It shall be an objective of the Council:

BH3.1 To prioritise the protection/preservation in situ (or upon agreement preservation by record) of items of archaeological interest as listed in Table 10-2 and shown on Map No. 2 Leixlip Built Heritage and Archaeology from inappropriate development that would adversely affect and/or detract from the interpretation and setting of these sites.

BH3.2 To protect the historic core of Leixlip town and retain where possible the existing street layout, historic building lines and traditional plot widths where these derive from medieval or earlier origins.

BH3.3 To ensure that development proposals contribute towards the protection and preservation of the archaeological value of underwater or archaeological sites associated with the River Liffey and associated features.

Legislation, Guidelines and Policies

On 13 October 2023, the Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023 was enacted by the Oireachtas, which provides for the repeal of the National Monuments Acts 1930 to 2014 and related legislation. The act is now a law, Commencement Orders for certain provisions with enforcement measures are in effect and operational as of 31 May 2024 (S.I. No. 252/2024), 30

September (S.I. No. 492/2024), 12 December 2024 (S.I. No. 663/2024) and 10 December 2025 (S.I. No. 555/2025). When fully enacted it will replace the previous legislation, but until that time, the National Monuments Acts 1930 to 2014 and related legislation remain fully in force, with the exception of the successor provisions that are being fully brought into operation and have been subject to Commencement Orders. The new Act contains transitional provisions to enable certain aspects of the existing National Monuments Acts 1930 to 2014 to continue in operation, such as provisions enabling the Record of Monuments and Places to continue to have effect pending the establishment of the new Register of Monuments (see section 48 of the Act).

Below is a list of the legislation relevant to this assessment:

- Historic and Archaeological Heritage and Miscellaneous Provisions Act 2023.
- National Monuments Acts 1930 to 2014.
- Heritage Act 1995 (as amended).
- National Cultural Institutions Act 1997.
- European Convention for the Protection of the Archaeological Heritage (Valetta Convention, 1997).
- European Convention for the Protection of the Architectural Heritage (Granada Convention, 1997).
- European Landscape Convention (Florence Convention, 2000).
- Planning and Development Act 2000 (as amended).
- UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (Paris Convention, 2003).
- Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU of the European Parliament and the Council (hereafter the EIA Directive).

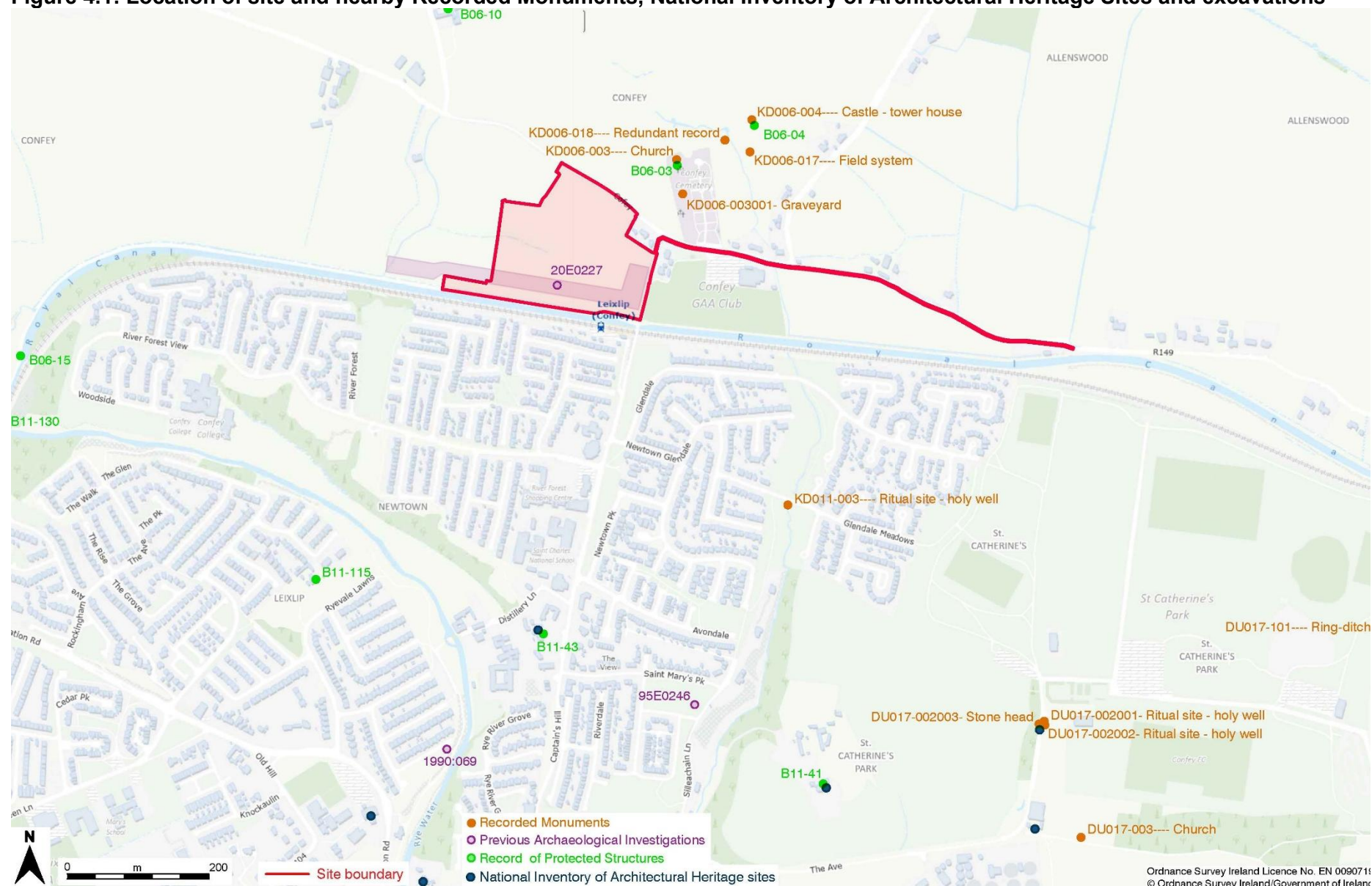
Below is a list of policies, planning documents, codes of practice and frameworks relevant to this assessment:

- Framework and Principles for the Protection of the Archaeological Heritage (Department of Arts, Heritage, Gaeltacht and the Islands 1999).
- Code of Practice for Archaeology agreed between the Minister for Arts, Heritage, Regional Rural and Gaeltacht Affairs and Transport, Infrastructure Ireland (Transport Infrastructure Ireland (TII) and Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs 2017).
- Built & Archaeological Heritage: Climate Change Sectoral Adaption Plan (Department of Culture, Heritage and the Gaeltacht 2019).
- Kildare County Development Plan 2023–2029.
- Leixlip Local Area Plan 2020-2023 (extended to 30 March 2029)
- Confey Lands Masterplan (2024)
- National Development Plan 2021–2030 (Department of Public Expenditure and Reform 2021).
- Archaeology in the Planning Process (Department of Housing, Local Government and Heritage (DHLGH) and Office of the Planning Regulator 2021).
- A Living Tradition: A Strategy to Enhance the Understanding, Minding and Handing On of our Built Vernacular Heritage (DHLGH 2021).
- Places for People: National Policy on Architecture (DHLGH 2022a).
- Heritage Ireland 2030: A Framework for Heritage (DHLGH 2022b).
- National Planning Framework, First Revision (Government of Ireland and National Planning Framework 2025).

Below is a list of guidelines relevant to this assessment:

- Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2022).
- Guidelines for Cultural Heritage Impact Assessment of TII National Road and Greenway Projects (TII 2024).
- Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) (EPA 2003).
- Architectural Heritage Protection: Guidelines for Planning Authorities (Department of Arts, Heritage and the Gaeltacht 2011).
- National Inventory of Architectural Heritage Handbook (2024).

Figure 4.1: Location of site and nearby Recorded Monuments, National Inventory of Architectural Heritage Sites and excavations



Significance Criteria

The main purpose of this chapter is to identify, describe and present an assessment of the likely significant effects of the proposed development on archaeological, architectural and cultural heritage remains (known and unknown if present). An effect can be positive, negative, or neutral/none, direct or indirect. The effect may result from the construction phase and/or the operation phase of the project.

The potential effects are assessed for each component of the development as described above, as well as cumulatively.

This chapter aims to present a precise, concise, accurate and credible description of the likely and significant effects on archaeological, architectural and cultural heritage, and offer mitigation measures where a likely significant effect is predicted. The description of effects follows the EPA Guidelines (2022, table 3.4, fig. 3.4), whereby comparing the character of the predicted effect to the sensitivity of the receiving environment can determine the significance

Consultations

Consultation with the National Monuments Services (NMS) of the Department of Housing, Local Government and Heritage has taken place. The NMS are aware of the project, having approved the submitted method statements and issued licences for the geophysical survey (carried out) and test excavation (scheduled for September 2026) of the site, with the report on the findings of geophysical survey submitted to the statutory authorities. Furthermore, consultation with Kildare County Council had taken place (Ref. LRD2025009; with opinion issued 22 January 2026); In terms of Heritage, KCC Heritage Officer requested that test trenching, including targeting anomalies identified by geophysical survey prior to commencing any groundworks; mitigation (preservation in situ/excavation) of archaeological remains if identified and monitoring of all site clearance works, topsoil stripping and groundworks within the proposed development is to be carried out by licenced archaeologist.

In addition, the National Museum of Ireland, Irish Antiquities Division, was consulted, the topographical files of Ireland were reviewed, and the results are included in this chapter (Section 4.3.10).

4.2.1 Documentary Sources

For the purposes of this report, archaeology, architectural & cultural heritage is considered to include the following elements:

- Sites listed in the Sites & Monuments Record (SMR)
- Record of Monuments & Places (RMP)
- National Monuments
- Archaeological sites listed on the National Monuments Service website
- Sites reported in the Excavations Database
- Any previously unrecorded sites
- A list of protected monuments
- A list of architectural heritage structures (NIAH)
- A list of protected structures (Kildare County Development Plan 2023–2029)

The following sources were consulted in order to identify and map archaeological sites within and adjacent to the proposed development site:

Sites and Monuments Record (SMR) and Record of Monuments & Places (RMP)

A primary cartographic source and base-line data for the assessment was the consultation of the Sites and Monuments Record (SMR) and Record of Monuments and Places (RMP) for County Kildare (1996). All known recorded archaeological monuments are indicated on 6-inch Ordnance Survey (OS) maps ([https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kildare-Map-\(1996\)_0021.pdf](https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kildare-Map-(1996)_0021.pdf)) and are listed in this record ([https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kildare-Manual-\(1996\)-0020.pdf](https://www.archaeology.ie/sites/default/files/media/pdf/Archaeology-RMP-Kildare-Manual-(1996)-0020.pdf)). The SMR/RMP is not a complete record of all monuments as newly discovered sites may not appear in the list or accompanying maps. In conjunction with the consultation of the SMR and RMP, the electronic database of recorded monuments that may be accessed on their website (<https://heritagedata.maps.arcgis.com/apps/webappviewer/>) was also consulted.

National Monuments

A List of Monuments covered by Preservation Orders and a List of National Monuments in the ownership/guardianship of the Minister for Housing, Local Government & Heritage. National Monuments in the ownership/guardianship of the Minister for Housing, Local Government & Heritage are listed on the Department's website (<https://www.archaeology.ie/app/uploads/2025/03/monuments-in-state-care-kildare.pdf>)

Excavations Database

The excavations database (<https://excavations.ie/>) is an annual account of all excavations carried out under license. The database includes excavations from 1970 to present. This database was consulted as part of the desktop research for this assessment to establish if any archaeological excavations had been carried out on or near to the proposed development area.

Topographical Files, National Museum of Ireland

The topographical files of the National Museum of Ireland contain information pertaining to archaeological finds (mainly artefactual) and excavations in numerous townlands throughout the country, which were reported to the museum from the 1920s. While many of these findspots are not recorded monuments, they can provide an indication of archaeological activity in a townland and consequently add to the archaeological potential of an area.

Cartographic Sources

A number of cartographic sources were also consulted as part of the desktop assessment, namely the Down Survey Map of County Kildare, Barony of Salt and Straffan (1656), Keenan and Noble's map of County Kildare (1752) and the Grand Jury map of County Kildare by Taylor (1783) as well as the first edition 6-inch (1836) and the 25-inch edition (1908-10) OS maps and available aerial photography.

Protected Structures (RPS)

The *Kildare County Development Plan 2023-2029* and the *Leixlip Local Area Plan 2020-2023 (as extended to 2029)* were consulted. *Kildare County Development Plan 2023–2029* contains a list of Architectural Conservation Areas and a Record of Protected Structures for the County. Both lists cultural heritage sites, buildings of historic, architectural, cultural, scientific and/or artistic interest. These are protected by the Local Government (Planning and Development) Act 1999 and the Planning and Development Act 2000, as amended, (Part IV Architectural Heritage).

Architectural Heritage Sites (NIAH)

The National Inventory of Architectural Heritage for County Kildare (<https://www.buildingsofireland.ie/>) was consulted to determine if any architectural heritage sites were present within the proposed development site. It contains a record and evaluation of the post-1700 architectural heritage of Ireland, as an aid in the protection and conservation of the built heritage. It provides the basis for recommendations of the Minister for Housing, Local Government and Heritage to the planning authorities for the inclusion of particular structures in their Record of Protected Structures (RPS).

Site Inspection

A site inspection was conducted as a part of the assessment. The aim of which was to assess whether or not the site contained any visible or subsurface evidence of any previously unrecorded areas or features of historical or archaeological significance.

Additional Sources

The following additional sources were and will be consulted once complete, in order to inform the assessment of all aspects of the archaeological resource within and adjacent to the proposed development site and that the assessment is cognisant of all relevant policies and objectives.

Archaeological Impact Assessment Report. Confey, Phase 1a LRD Stage 2 Submission, Leixlip, Co. Kildare (Collins, Lyne 2025)

Archaeological Impact Assessment (desktop) is a report based on the findings of a study of available archaeological, historical, cartographic, and photographic sources as well as a site visit. It aims to identify and describe the known and potential archaeological and cultural heritage constraints within the site and its wider environs and, where present, offer recommendations for mitigation measures. Such reports are prepared usually at pre-planning stage to inform the planning process. In this case, an Archaeological Impact Assessment Report was prepared in 2025.

Geophysical Survey Report Confey, Leixlip, Co. Kildare (25R0024; Murphy 2025)

Geophysical Survey, in the form of magnetic gradiometry, is a non-intrusive method that is used in Irish Archaeology. It is a method for rapidly mapping archaeological objects, structures, deposits and other features, including geological anomalies, that survive beneath the ground surface. The results are presented as a grey-scale map of anomalies detected that are interpreted by an experienced archaeologist. A licence to carry out work is required and is granted by the Department of Housing, Local

Government and Heritage following submission of a licence application for the site in question (in this case Licence Number 25R0024 was granted on the 23th of December 2024 to Donald Murphy). Upon completion of the survey a report detailing the results of the work carried out is submitted to the Department and the National Museum of Ireland (in this case the report was submitted to NMS and the results are included in this report see Section 4.3.7; for the full report see Appendix 4.1)

Test Trenching Report Confey, Leixlip, Co. Kildare

Archaeological test trenches are excavated to facilitate the early identification of archaeological deposits and features. Where test trenching is carried out following a geophysical survey, such as is the case here, the trenches are placed to (1) target anomalies detected in order to assess their significance, extent and depth and (2) access the site overall. The results allow for an informed decision on how best to deal with any discovered archaeological finds or features prior to works on site commencing. A licence to carry out work is required and is granted by the Department of Housing, Local Government and Heritage following submission of a licence application for the site in question (in this case Licence Number 25E0385 was granted to Deidre Murphy on 6 May 2025). Upon completion, a report detailing the results of the work carried out is submitted to the Department and the National Museum of Ireland (in this case the report was submitted to the NMS and the results are included in this report, see Section 4.3.8; for the full report see Appendix 4.2).

4.3 THE EXISTING RECEIVING ENVIRONMENT (BASELINE SITUATION)

Archaeology is considered here to include all recorded monuments listed in the Record of Monuments and Places (RMP) and in the Sites and Monuments Record (SMR), National Monuments (i.e. those in the ownership/guardianship of the state), previously unrecorded sites, sites reported in the Excavations Database if not included in the RMP and find spots or sites listed in the Topographical Files.

A number of policies and objectives of *Kildare County Development Plan 2023–2029* and the *Leixlip Local Area Plan 2020–2023 (as extended to 2029)* are relevant to the site (see Section 4.2). Policy AH O3 of the *Kildare County Development Plan 2023–2029* requires the proposed development be subject to a full archaeological assessment. An Archaeological Impact Assessment (Collins, Lyne 2025) was prepared by ACSU, its findings are included in this chapter. The recommendation for the site included geophysical survey and test trenching at the pre-construction phase. A geophysical survey was since carried out (see Section 4.3.7 and Appendix 4.1 for details) and a programme of test trenching was carried out in early September 2026 (see Section 4.3.8 and Appendix 4.2 for details). Any further mitigation measures necessary are in line with the objectives of Leixlip Local Area Plan 2020–2023 (as extended to 2026), namely BHO 3.1–3. The site is located to the north of Leixlip of Maynooth town and none of the sites shown on Map 2 and listed in Table 10.2 of the Leixlip Local Area Plan 2020–2023 are located within the current site. The site is located within the southwest portion of an area demarcated as Confey Urban Design Framework.

4.3.1 Archaeological Background

The site is located within two townlands in County Kildare. Newtown or An Baile Nua is located within the Civil Parish of Leixlip and the Barony of Salt North. The townland is first mentioned in 1584 as 'Neweton' in the Calendar of Fiants in the reign of Henry VIII. 1510-47 and of Queen Elizabeth, 1558-1603. Confey

or Confai, in the Civil Parish of Confey and the Barony of Salt North. Confey was mentioned as early as 1540-41 as 'Consey' in the Crown Survey of Lands 1540-41.

Newtown is located adjacent to and directly south, east and west of Confey and has only one Recorded Monument listed within the townland – KD011-003---- Ritual site – holy well. However, no visible traces of the well survive in this location. It is annotated as 'St Columb's Well' on both the Ordnance Survey (OS) 6-inch map of 1836 and the Third Edition Ordnance Survey (OS) 25-inch map of 1908.

The townland of Confey has five Recorded Monuments listed within the townland and one redundant record. Two of these Recorded Monuments are classified as castles; KD006-002: Castle – unclassified & KD006-004---- Castle – tower house. There is no visible trace of KD006-002---- Castle and the location is marked as 'Site of Shaughlins Castle' on the Ordnance Survey (OS) 6-inch map, 1836 and 'Shaughlin's Cas-tle (site of)' on the Third edition Ordnance Survey (OS) 25-inch map, 1908. KD006-004---- Castle – tower house is located within the Recorded Monument KD006-017---- Field system, which also extends around the church and graveyard. The surviving remains of the tower house consist of only three walls in a ruin-ous condition. Manning published an article describing a 19th-century illustration of Confey Castle by George Victor Du Noyer, which 'shows one half of the tower house still standing to full height and a heap of rubble on the site of the other half. The interior of the remaining half is shown with a vault over the first floor, above which there are three storeys and an attic storey.' (Manning, 2017, 144). On the Ordnance Survey (OS) 6-inch map of 1836, the castle location is simply annotated as 'Confey Castle', and on the Third Edition Ordnance Survey (OS) 25-inch map of 1908, the location is annotated as 'Confey Castle (in ruins)'.

The Church at Confey (KD006-003----) consists of a nave and chancel. The church is believed to date to the 12th century, with the chancel added in the 12th or possibly 13th century. (O'Keeffe, 1985-6). The church interior has graves from the 18th and 19th centuries.

4.3.2 National Monuments

The term 'National Monument' is defined by the National Monuments Act (1930) as being 'a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic, or archaeological interest attaching thereto'. The aforementioned Act states that the consent of the Minister is required for archaeological works at or near a national monument in the ownership or guardianship of the Minister or a local authority or to which a preservation order applies. The Minister is required to consult with the Director of the National Museum of Ireland in relation to such an application for consent.

No National Monuments are located on or within close proximity (within 1km) to the proposed development site.

Connolly Folly (KD011-040) is a National Monument in the state Ownership No. 681; and is located over 4.5km to the west from the site.

4.3.3 Recorded Monuments

There are no monuments as listed in the Record of Monuments and Places nor in the Sites and Monuments Record located within the site boundary. Ten such monuments are located within 1km of the

site. Two nearest a Graveyard (KD006-003001----) and a church (KD006-003), are recorded 74m and 147m, respectively, to the north of the site. The remaining three are registered at a distance of 200m or greater from the site and include two monuments a field system (KD006-017----) registered c. 225m to the northeast of the site, however, based on the 2024 aerial imagery (**Figure 4.7**) it extends in the field to the west of the graveyard and church where its elements are visible and located at a distance of c. 91m to the north of the site, a Castle – tower house (KD006-004) located c. 280m to the northeast and at a distance of c. 470m to the southeast of the site is a ritual site – holy well (KD011-003----). The remaining five are located in County Dublin, and include two ritual site – holy wells (DU017-002001-, DU017-002002-) with associated stone head (DU017-002003-) and church (DU017-003----) located c. 750m and 970m to the south of the site, while a ring ditch (DU017-101----) identified on 2018 aerial imagery as a cropmark is located c. 880m to the southeast.

Furthermore, it shall be noted that the zone of archaeological potential associated with Leixlip Historic Town (KD011-004001-) is just over 1km to the south.

The following is a list of the ten monuments (Table 4.1) located within a 1km radius of the site (Figure 4.1). The entry below is derived from the National Monuments Service Archaeological Survey Database.

Table 4.1: Recorded monuments within 1 km of the centre of the development site

RMP/SMR	Classification	Townland	ITM E	ITM N
KD006-003----	Church	CONFHEY	700883	737407
KD006-003001-	Graveyard	CONFHEY	700904	737321
KD006-004----	Castle - tower house	CONFHEY	701044	737476
KD006-017----	Field system	CONFHEY	701031	737413
KD011-003----	Ritual site - holy well	NEWTOWN (Leixlip ED)	701105	736726
DU017-002001-	Ritual site - holy well	ST. CATHERINE'S PARK	701623	736280
DU017-002002-	Ritual site - holy well	ST. CATHERINE'S PARK	701623	736277
DU017-002003-	Stone head	ST. CATHERINE'S PARK	701624	736280
DU017-003----	Church	ST. CATHERINE'S PARK	701680	736053
DU017-101----	Ring-ditch	COLDBLOW	702328	736426

4.3.4 Previously Unrecorded Sites

No above-ground previously unrecorded sites were noted within the proposed development area during the site walkover survey carried out in December 2024 or from an examination of cartographic or aerial imagery. The townland boundary between Confey and Newtown is present and lined with mature trees. The geophysical survey (25R0024; Murphy 2025) did not identify the presence of anomalies that could be interpreted as archaeological monuments; however, anomalies of archaeological potential were detected and require further assessment. A previous archaeological investigation (03E0870; Phelan, 2003) was undertaken in the southern portion of the site, in preparation for a Bord Gáis pipeline in 2003. The investigation did not identify any archaeological features or finds.

4.3.5 Previous Archaeological Investigations

The site was subject to non-invasive archaeological impact assessment (Collins, Lyne 2025) and geophysical survey (25R0024; Murphy 2025; see Section 4.3.7 and Appendix 4.1), furthermore, the southern portion of the site was subject to investigation (03E0870; Phelan, 2003), which was carried out for a Bord Gáis pipeline.

Furthermore, other archaeological investigations and assessments in the environs of the site were carried out previously and resulted in archaeological remains exposed and subsequently excavated. This includes a series of burnt mounds in the neighbouring townlands of Allenswood and Hilltown, discovered during archaeological monitoring undertaken in advance of a proposed sewerage pipeline development (Leixlip Transfer Pipeline) and subsequently excavated (20E0227). While the excavation didn’t uncover any artefacts the identification of the burnt mounds indicates prehistoric settlement and activity in the area (Coughlan & Lacey, 2021). This monitoring included the southern portion of the site, along the Royal Canal, but no archaeological remains or artefacts were uncovered in this area. Test trenching by Walsh (1990) at The Factory on Main Street in Leixlip, nor under licence 95E0246 (Mullins, 1995) at Silleachain Lane did not expose any archaeological features.

Listed below (Table 4.2) are the nearest previous archaeological investigations undertaken in the environs of the site (Figure 4.1:), which further demonstrate the overall archaeological potential of the site and its surrounding townlands. The following information was taken from the Database of Irish Excavation Reports (www.excavations.ie).

Table 4.2: Previous archaeological investigations within the environs of the site

Excavation.ie reference	Licence No.	Site-Type	Investigation Type
2020:475 – Leixlip Transfer Pipeline, Dublin	20E0227	Prehistoric – three burnt mounds	Monitoring and excavation
1995:155 - LEIXLIP: Silleachain Lane, Kildare	95E0246	No archaeology found	Trial trenching
1990:069 - LEIXLIP: The Factory, Main Street, Kildare	N/A	No archaeology found	Test trenching

4.3.6 Archaeological Impact Assessment (Desktop Based)

The Archaeological Impact Assessment Report (desktop based) was prepared in late August 2025 by Adam Collins and Magda Lyne of Archaeological Consultancy Services Unit Ltd. (ACSU). The assessment was carried out to accompany the Confey Phase 1a LRD Stage 2 Submission for a proposed Large Residential Development. The report was based on the findings of a study of available archaeological, historical, cartographic, and photographic sources as well as a site visit. It aims was to identify and describe the known and potential archaeological and cultural heritage constraints within the site and its wider environs and, where present, offer recommendations for mitigation measures.

The report found that the site contains no monuments listed in the *Record of Monuments and Places* (RMP) or the Sites and Monuments Record (SMR) nor Protected Structures, as listed in the *Kildare County Development Plan 2023–2029*, nor any structures listed in the *National Inventory of Architectural Heritage* (NIAH). The site visit did not identify any features or archaeological significance. The site was

deemed to have the potential to contain previously unknown subsurface archaeological remains due to its location within a sensitive archaeological landscape and the proximity to a church (KD006-003----). graveyard (KD006-003001) and afield system (KD006-017---) with associated Castle – tower house (KD006-004----) all to the north and northeast of the site.

The results of the geophysical survey (25R0024; Murphy 2025) were included in the assessment. No anomalies interpreted as archaeological monuments were noted; however, anomalies of archaeological potential were detected and require further assessment.

Further archaeological assessment was recommended to include test trenching of the site, including targeting anomalies identified by the geophysical survey, prior to construction commencing by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage. It was noted that any archaeological material identified may necessitate further mitigation, including preservation in situ/or preservation by record (excavation), following discussion with the National Monuments Service (given the assessments carried out on the lands, preservation by record is considered most likely, hence test trenching was recommended prior to construction commencing).

4.3.7 Geophysical Survey (25R0024; Murphy 2025; Appendix 4.1)

The geophysical survey was conducted by Donald Murphy of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 25R0024 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. A full detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system.

No definite signs of archaeology were identified during the geophysical survey. Potential spread/pit remains of archaeological significance have been recorded across the survey area interpreted as ?Archaeology¹. An archaeological interpretation for responses in these areas is highly tentative, and a natural soil or geological origin or recent land use for these anomalies should be considered (Figure 4.8). A sample of these responses should be assessed through test trenching. Linear anomalies, which are recorded as field boundaries on the Ordnance Survey mapping, were also detected. Linear and curvilinear anomalies that are not recorded field boundaries were also detected and likely represent pre-OS field systems, drains or paths/access routes.

Below is an extract from the geophysical survey report (Murphy 2025) detailing the anomalies identified:

Table 4.3: Geophysical survey results

Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Investigation Type
-	?Archaeology	Small to medium anomalies: pits, posts,	A series of positive anomalies occur sporadically across the survey area. These might represent cut features such as pits, postholes, spreads, kilns, or

¹ ?Archaeology = Anomaly representing a potential archaeology feature; its nature needs to be determined during test trenching.

Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Investigation Type
		spreads, kilns, cut features	other types of archaeological features. May also be natural in origin.
-	Magnetic interference/ increased magnetism	Buried Service - Layout of the Leixlip Transfer Pipeline	Perpendicular lines of magnetic interference in Field 1 that correspond with ground disturbance associated with the Leixlip Transfer Pipeline. Visible on Google Earth aerial imagery in 2018 and 2021.
-	Magnetic interference/ increased magnetism	Magnetic debris	Broad dipolar response of magnetic debris along the eastern boundary of Field 1 generally associated with ground disturbance. It could possibly be in relation to works associated with the Leixlip Transfer Pipeline.
-	Linear features	Former field boundaries	Positive linear anomalies that correspond with former field boundaries depicted on the first edition Ordnance Survey (OS) 6-inch map, surveyed 1836, and the third edition Ordnance Survey (OS) 25-inch map, surveyed 1908.
-	Linear features	Early field systems?	Positive linear and curvilinear anomalies that may represent former field divisions that are not depicted on OS mapping.
-	Ferrous	Magnetic disturbance from modern debris	Bipolar anomalies occur sporadically, often associated with magnetic interference from modern ferrous materials, either in the topsoil or at the surface of the survey area.
-	?Archaeology	Small to medium anomalies: pits, posts, spreads, kilns, cut features	A series of positive anomalies occur sporadically across the survey area. These might represent cut features such as pits, postholes, spreads, kilns, or other types of archaeological features. May also be natural in origin.

4.3.8 Test Trenching (25E0385; Murphy 2026; Appendix 4.2)

The archaeological test trenching was conducted by Deirdre Murphy of Archaeological Consultancy Services Unit (ACSU) in early September 2026, under licence 25E0385. A programme of 56 test trenches was proposed, of which 41 was excavated across the site. The majority of the site was confirmed to be of low archaeological potential, with no archaeological remains identified in most trenches. Only one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2. It was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest. No other features of archaeological significance were identified.

Test excavation was carried out in accordance with the IAI Code of Conduct for Archaeological Assessment Excavation (Institute of Archaeologists of Ireland 2006). All trenches were excavated to natural by a mechanical excavator with a toothless grading bucket under the direct supervision of a suitably qualified archaeologist (Deirdre Murphy).

All spoil from the trenches was also examined for artefacts and metal detected licence No. 26R0552. A small number of features were sectioned by hand using hand mattocks and trowels to investigate their depth.

The test trenches were excavated to target anomalies identified by the geophysical survey (25R0024) to assess their extent, significance and nature.

Trench Number	Length (m)	Trench depth (m)	Description
1	55	0.42	West-northwest- east-southeast aligned trench in Field 2 (Figure 5, Plate 1). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stones throughout. No archaeological structures, features, or deposits were identified in the trench.
2	30	0.40	Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 2). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stone throughout. No archaeological structures, features, or deposits were identified in the trench.
3	25	0.30	Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 3). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stone throughout. No archaeological structures, features, or deposits were identified in the trench.
4	40	0.38	Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 4). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout. No archaeological structures, features, or deposits were identified in the trench.
5	25	0.41	Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 5). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout. No archaeological structures, features, or deposits were identified in the trench.

6	40	0.38	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 6). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
7	50	0.35	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plates 7-8). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p> <p>Contained a stone drain aligned northeast-southwest in the middle of the trench</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
8	40	0.36	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 9). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent angular stone throughout. The natural subsoil changes to a dark grey marl silty clay towards the eastern end of the trench where the ground is wetter.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
9	45	0.40	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plates 10-12). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent angular stone throughout.</p> <p>A small spread of charcoal and fired stone was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest (Plate 10).</p>
10	35	0.38	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 13). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
11	20	0.44	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 14). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
12	35	0.46	<p>West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 15). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown, yellow stoney sandy clay with frequent small angular stone throughout.</p>

			<p>Cultivation furrows were identified running through the trench, aligned east-west on the same alignment as the current crop. Field boundary identified at western end of trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
13	20	0.45	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plates 16-17). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>East-west aligned stone drain identified in trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
14	25	0.40	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plates 18-19). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a yellow/grey sandy clay with frequent angular stone throughout.</p> <p>North-northeast-south-southwest aligned field boundary identified at the western end of the trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
15	30	0.44	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plates 20-21). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light brown, yellow sandy clay with frequent angular stone throughout.</p> <p>North-northeast-south-southwest aligned field boundary identified in western end of trench (as in Trench 14).</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
16	30	0.4	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 22). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light brown/orange sandy clay with frequent decayed stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
17	25	0.30	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plate 23). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light brown, yellow sandy clay with occasional angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
18	25	0.3	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plate 24). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light brown, yellow sandy clay with occasional angular stone throughout.</p>

			<p>A furrow ran the length of the trench, aligned roughly east-west.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
19	55	0.45	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 25). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light grey/yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
20	25	0.42	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 26). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow/grey sandy clay with pockets of angular stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
21	20	0.40	<p>West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 27). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown, orange sandy clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
22	30	0.42	<p>West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 28). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light-brown, sandy stoney clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
23	40	0.43	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plates 29-30). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-brown/yellow sandy stoney clay.</p> <p>A field boundary aligned north-northeast – south-southwest was identified in the middle of the trench, containing a mid-brown silty clay and measuring 0.6m in width.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
24	40	0.40	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 31). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-brown/yellow sandy stoney clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
25	-	-	Not excavated due to proximity of gas pipeline
26	-	-	Not excavated due to proximity of gas pipeline
27	-	-	Not excavated due to proximity of gas pipeline

28	35	0.42	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 32). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a yellow/brown sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
29	-	-	Not excavated due to proximity of gas pipeline
30	25	0.30	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 33). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-dark brown sandy clay with frequent small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
31	25	0.38	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plates 34-35). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a yellow/grey sandy clay with frequent small angular stones throughout.</p> <p>A linear field boundary was identified that is depicted on the first edition Ordnance Survey map. It was aligned east-northeast – west-southwest and measured 0.85m in width.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
32	-	-	Not excavated due to proximity of gas pipeline
33	25	0.60	<p>North-northeast – south-southwest aligned trench in Field 1 (Figure 5, Plate 36). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown sandy clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
34	-	-	Merged with trench 37
35	30	0.43	<p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plates 37-38). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light brown, yellow sandy clay at the western end that changed to an orange/brown sandy clay to the east.</p> <p>Stone filled drain aligned east-west was identified on the eastern side of the trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
36	30	0.48	<p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 39). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow, sandy stoney clay.</p> <p>Pockets of loose clay from decayed stone similar to boulder clay from the middle and eastern portion of the trench. Pockets of</p>

			<p>loose clay may represent geophysical anomalies detected in this area.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
37	50	0.42	<p>Trench realigned to incorporate Trenches 34, 54, 37, and 38 of the initial trench layout. The trench was realigned due to the proximity of a gas pipeline in the southern portion of Field 1.</p> <p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 40). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow sandy boulder clay with occasional fractured stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
38	-	-	Merged with Trench 37
39	-	-	Merged with Trench 40
40	60	0.44	<p>Trench realigned to incorporate trenches 39, 40, and 41 of the initial trench layouts. The trench was realigned due to the proximity of a gas pipeline in the southern portion of Field 1.</p> <p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 41). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow sandy boulder clay with occasional fractured stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
41	-	-	Merged with Trench 40
42	30	0.38	<p>West-northwest- east-southeast aligned trench in Field 1 (Figure 5, Plate 42). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown/yellow with occasional decayed stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
43	-	-	Not excavated due to proximity of gas pipeline
44	-	-	Not excavated due to proximity of gas pipeline
45	-	-	Not excavated due to proximity of gas pipeline
46	-	-	Not excavated due to proximity of gas pipeline
47	-	-	Not excavated due to proximity of gas pipeline
48	-	-	Not excavated due to proximity of gas pipeline
49	-	-	Not excavated due to proximity of gas pipeline

50	-	-	Not excavated due to proximity of gas pipeline
51	60	0.38	Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 43). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout. Area of marl-like clay towards the southeastern end of the trench may indicate recent ground disturbance or standing water. No archaeological structures, features, or deposits were identified in the trench.
52	30	0.41	North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 44). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light grey/yellow sandy clay. No archaeological structures, features, or deposits were identified in the trench.
53	25	0.45	West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 45). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown, yellow sandy clay. Field boundary aligned north-northeast-south-southwest identified in northern portion of the trench No archaeological structures, features, or deposits were identified in the trench.
54	-	-	Merged with Trench 37
55	-	-	Not excavated due to proximity of gas pipeline
56	-	-	Not excavated due to proximity of gas pipeline

4.3.9 Sites Reported in the Excavations Database

There are no sites reported in the excavations database located within the site. However, to the east, the above-noted burnt mounds in the townlands of Allenswood and Hilltown were discovered during archaeological monitoring undertaken in advance of a proposed sewerage pipeline development (Leixlip Transfer Pipeline) and subsequently excavated (20E0227; Coughlan & Lacey, 2021).

4.3.10 Topographical Files

The topographical files of the National Museum of Ireland were consulted.

Artefacts from the townlands of Confey and Newtown are listed below. A decorated, iron prick spur (NMI Reg. No. 1993.3) was located in a field next to Confey Castle and is thought to have belonged to a child. A zoomorphic penannular brooch (NMI Reg. No. 2011:239), decorated with a Maltese Cross, was found not far from the castles' remains on the Confey Road. The artefacts found in Newtown seem to span the Bronze Age through to the medieval period, demonstrating evidence for human settlement close to the area of the proposed development site over several thousand years.

Table 4.4: Archaeological artefacts from the environs of the site recorded in the NMI topographical files

NMI Reg No	Simple Name	Material	Find Place	Townland
1993.3	Spur	Iron	Confey Castle	Confey
2011:239	Brooch	Copper alloy	Confey Road (R149)	Confey
1935:450	Axehead	Bronze	Unknown	Newtown
1936:1897	Ringed pin	Bronze	Temple na Shanagh	Newtown
1936:1898	Brooch	Bronze	Temple na Shanagh	Newtown
1979:71	Spearhead	Bronze	Exposed section face c.14" deep	Newtown
2008C1:726	Weight	Lead	Unknown	Newtown
2008C1:727	Clay pipe	Ceramic	Unknown	Newtown
2008C1:728	Animal remains	Animal remains	Unknown	Newtown
2008C1:729	Glass	Glass	Unknown	Newtown
2008C1:730	Glass	Glass	Unknown	Newtown
2008C1:731	Pottery	Ceramic	Unknown	Newtown
2008C1:732.1	Pottery	Ceramic	Unknown	Newtown
2008C1:732.2	Pottery	Ceramic	Unknown	Newtown
2008C1:732.3	Pottery	Ceramic	Unknown	Newtown
2008C1:732.4	Pottery	Ceramic	Unknown	Newtown
2008C1:732.5	Pottery	Ceramic	Unknown	Newtown
2008C1:732.6	Pottery	Ceramic	Unknown	Newtown
2008C1:733.1	Pottery	Ceramic	Unknown	Newtown
2008C1:733.10	Pottery	Ceramic	Unknown	Newtown
2008C1:733.11	Pottery	Ceramic	Unknown	Newtown

NMI Reg No	Simple Name	Material	Find Place	Townland
2008C1:733.12	Pottery	Ceramic	Unknown	Newtown
2008C1:733.2	Pottery	Ceramic	Unknown	Newtown
2008C1:733.3	Pottery	Ceramic	Unknown	Newtown
2008C1:733.4	Pottery	Ceramic	Unknown	Newtown
2008C1:733.5	Pottery	Ceramic	Unknown	Newtown
2008C1:733.6	Pottery	Ceramic	Unknown	Newtown
2008C1:733.7	Pottery	Ceramic	Unknown	Newtown
2008C1:733.8	Pottery	Ceramic	Unknown	Newtown
2008C1:733.9	Pottery	Ceramic	Unknown	Newtown
2008C1:737	Stirrup	Copper alloy	Unknown	Newtown
2008C1:738	Object	Copper alloy	Unknown	Newtown
2008C1:739	Sheet metal	Copper alloy	Unknown	Newtown
2008C1:740	Mount	Copper alloy	Unknown	Newtown
2008C1:741	Mount	Copper alloy	Unknown	Newtown

4.3.11 Placename Evidence

The database of Irish placenames, www.logainm.ie was consulted for the meaning of the placenames within and surrounding the proposed development site.

The site is located within two townlands in County Kildare. Newtown or An Baile Nua is located within the Civil Parish of Leixlip and the Barony of Salt North. The townland is first mentioned in 1584 as 'Neweton' in the Calendar of Fiants in the reign of Henry VIII. 1510-47 and of Queen Elizabeth, 1558-1603. Confey or Confaí, in the Civil Parish of Confey and the Barony of Salt North. Confey was mentioned as early as 1540-41 as 'Consey' in the Crown Survey of Lands 1540-41.

4.3.12 Record of Protected Structures

The *Kildare County Development Plan 2023-2029* was consulted to determine if any protected structures were present within the proposed development site. In addition, the *Leixlip Local Area Plan 2020-2023* was also reviewed. No such structures were listed within the site boundary.

There are eight such structures located within 1km of the site; these include the above-noted Confey Church in Ruins (RPS Ref. No. B06-03) located 147m to the north, including graveyard, a Tower of Confey Castle (RPS Ref. No. B06-04) located c. 280m to the northeast and Confey Abbey (RPS Ref. No. B06-10) located c. 310m to the northwest.

The remaining four structures are located over 600m from the site and include located c. 640m to the south Newtown Hill House (RPS Ref. No. B11-43), and located c. 670m to the southwest Ryevale House (RPS Ref. No. B11-115), St Catherine's Park (Liffey Valley House Hotel) (RPS Ref. No. B11-41) located c. 980m to the south and finally, two structures associated with Royal Canal and the River Rye, including Collector's House (RPS Ref. No. B06-15) and Rye Water Aqueduct (RPS Ref. No. B11-130) located respectively c.885m and 940m, both to the southwest of the site.

4.3.13 National Inventory of Architectural Heritage (NIAH)

In addition, the database of the National Inventory of Architectural Heritage was also consulted.

There are four such structures within 1km of the site, all are located over 600m to the south and include noted above Newtown Hill House (RPS Ref. No. B11-43; NIAH Reg. No. 11804075), St Catherine's Park (Liffey Valley House Hotel) (RPS Ref. No. B11-41; NIAH Reg. No. 11804073), as well as Saint Catherine's Holy Wells (NIAH Reg. No. 11360003) and a gate lodge (NIAH Reg. No. 11360005) both located 753m and 966m to the south of the site.

While the Royal Canal is present and located just to the south of the site, it is not recorded within the National Inventory of Architectural Heritage database.

4.3.14 Cartographic Sources and Aerial Imagery

Cartographical sources and aerial imagery were examined.

Potential archaeological or cultural heritage features are marked on maps and provide a useful resource in identifying sites particularly if they no longer have any above-ground remains.

A review of the available aerial photography for the area was also undertaken as part of this assessment. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field.

Cartographic Sources

A review of available historic mapping for the area was carried out to include the Ordnance Survey (OS) of Ireland 6-inch (1836; see **Figure 4.5**) and 25-inch (1909; see **Figure 4.6**) maps, as well as pre-Ordnance Survey mapping that includes the Down Survey (1654–57; see **Figure 4.2**), Keenan and Noble's map of county Kildare (1752; **Figure 4.3**) and Taylor's map of County Kildare (1783; see **Figure 4.4**) and the . Potential archaeological or cultural heritage features are often marked on such maps, and they can provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains. Pre-Ordnance Survey mapping gives very little detail in relation to the site. The Down Survey map shows Confey Castle is depicted, as are the neighbouring townlands of Allentown, Leixlip and Walterstown. While Leixlip is depicted on the map, the townland of Newtown is not shown. Into the eighteenth century, the Noble and Keenan map of County Kildare North is equally limited, but does depict the town of Leixlip next to the River Liffey, Confey Castle and Knockmulrooney tower as well as the road

roughly within the footprint of Confey/Dunboyne Road (L1015). Taylor's map of county Kildare (1752) illustrates the road system, the townland boundary and 'Confoy' Castle & Ch.Rs' with the current site to the south of the road.

The OS 6-inch map, surveyed in 1836, shows the location and layout of Confey Castle, Confey Church and Grave Yard, as well as Knockmulrooney Tower approximately 1.3km to the northwest of the church. The road layouts and field boundaries are clearly depicted and these have not changed to the present day. The map also shows the area of Newtown as mostly fields with the fledgling town located on the west side of the road between Newtown and Confey. The Royal Canal is clearly depicted, cutting through the northern section of the townland, with a pull in area for barges on the northern bank next to the Cope Bridge. The site is to the south of the existing road and the townlands of Confey and Newtown are separated by a field boundary that extends roughly east–west through the site.

Griffith's Valuation (1850), records the land (1) just north of the canal, within Newtown, as leased by Bartholomew Meabe from the Duke of Leinster. North of this, within Confey, land, house (a) and offices on either side of the L1015 road (7A and 7B), is leased by John Flanagan from John Wilson Esq., with Rev. Henry Stuart recorded as the 'immediate lessor' of Confey grave-yard (b).

The OS 25-inch map, surveyed in 1908, shows Confey Castle, Church and Graveyard in the same locations but they are noted as being in ruins. Some of the field boundaries in the townland of Newtown have changed by the time of this map, with some of those within the southern extent of the site now removed. The railway is also clearly depicted next to the Royal Canal and the pull in area for barges next to Cope Bridge is still present.

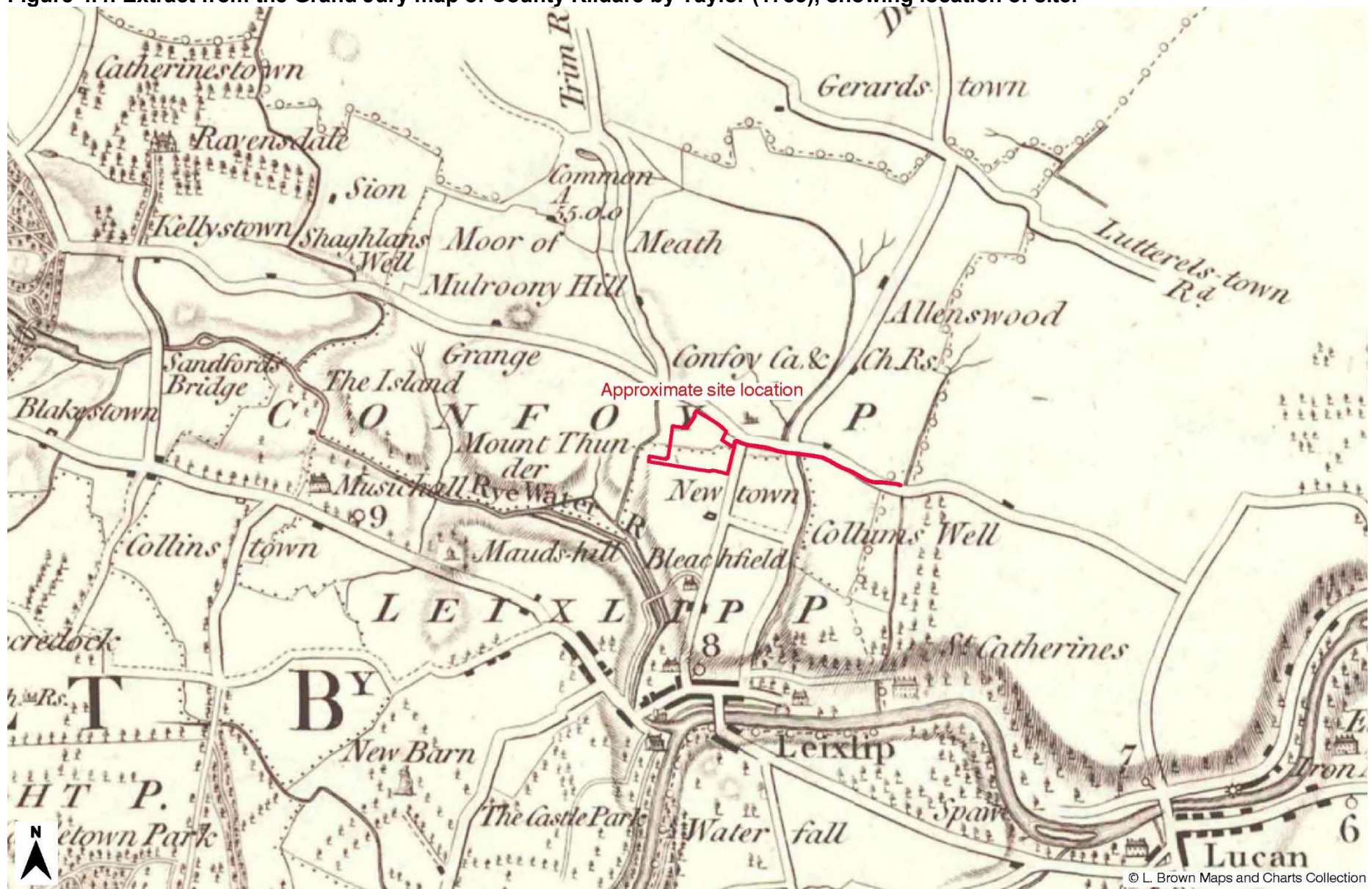
Figure 4.2: Extract from Down Survey map of the County of Kildare, Barony of Salt and Straffan (1656), showing location of site.



Figure 4.3: Extract from Keenan and Noble's map of County Kildare (1752), showing location of site.



Figure 4.4: Extract from the Grand Jury map of County Kildare by Taylor (1783), showing location of site.



[illegible]

Figure 4.6: Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1909 - published 1910), showing location of site.

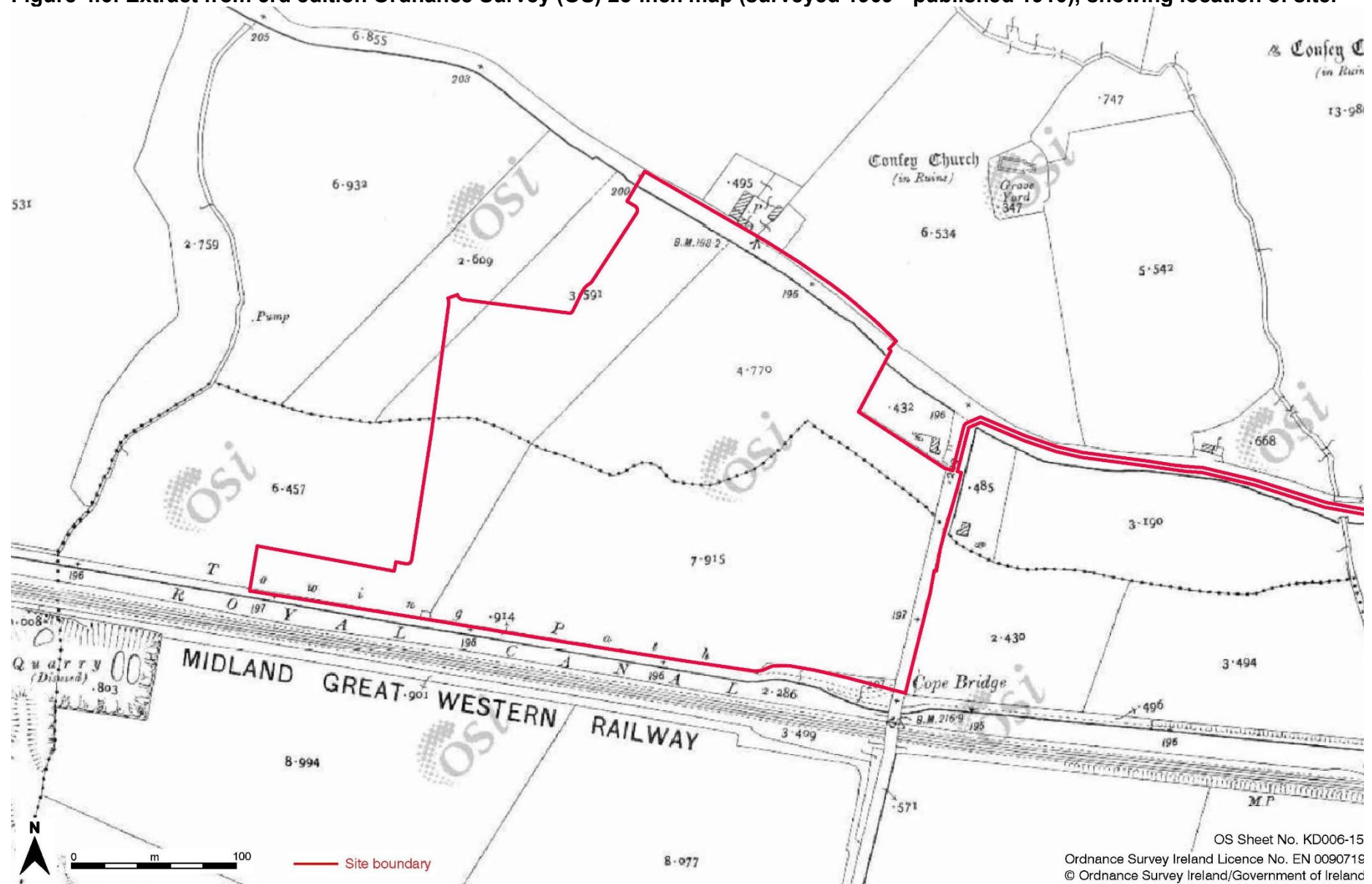


Figure 4.7: Aerial view of site.

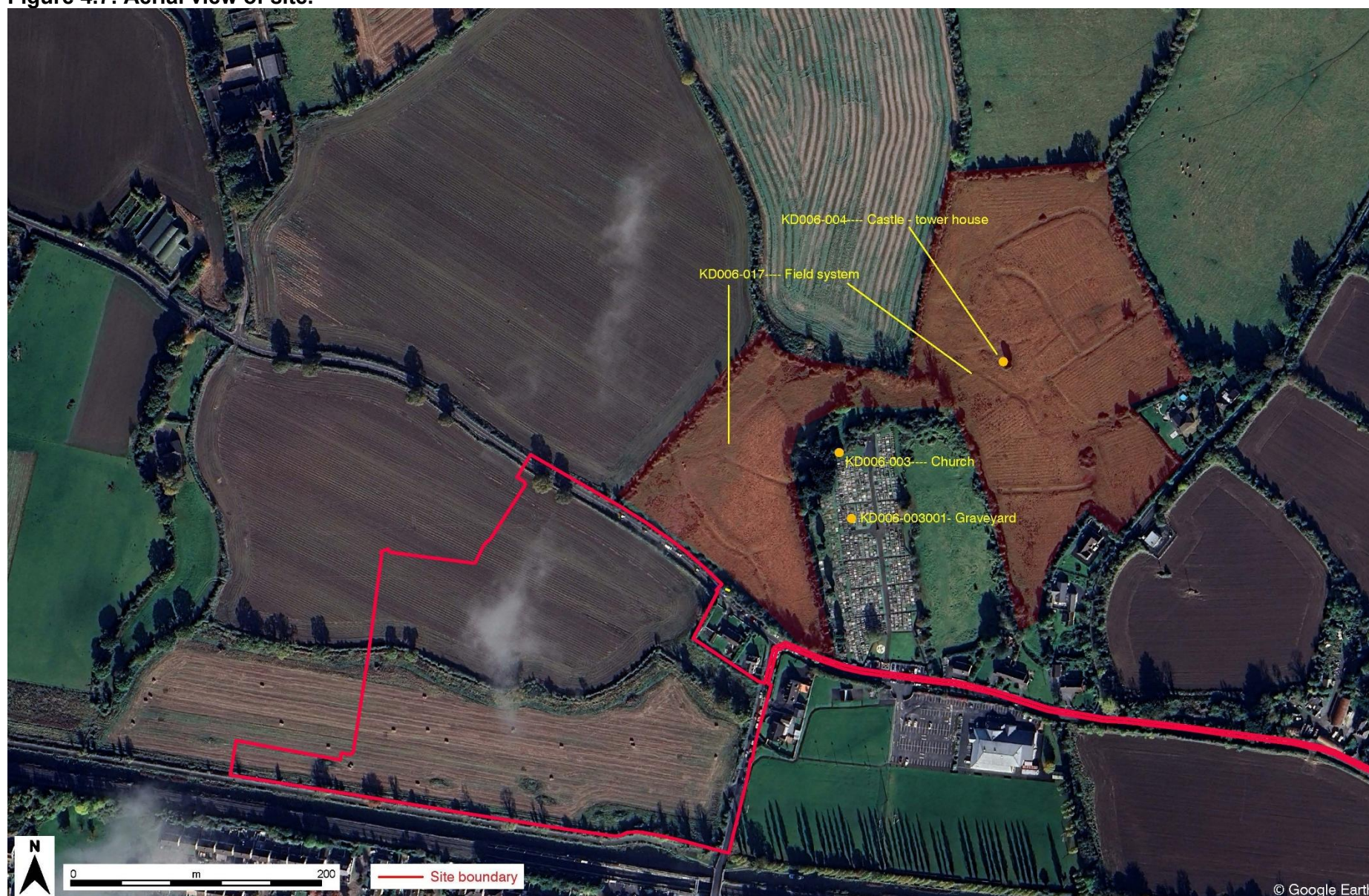


Figure 4.8: Aerial view of site, showing geophysical survey interpretation (25R0024).

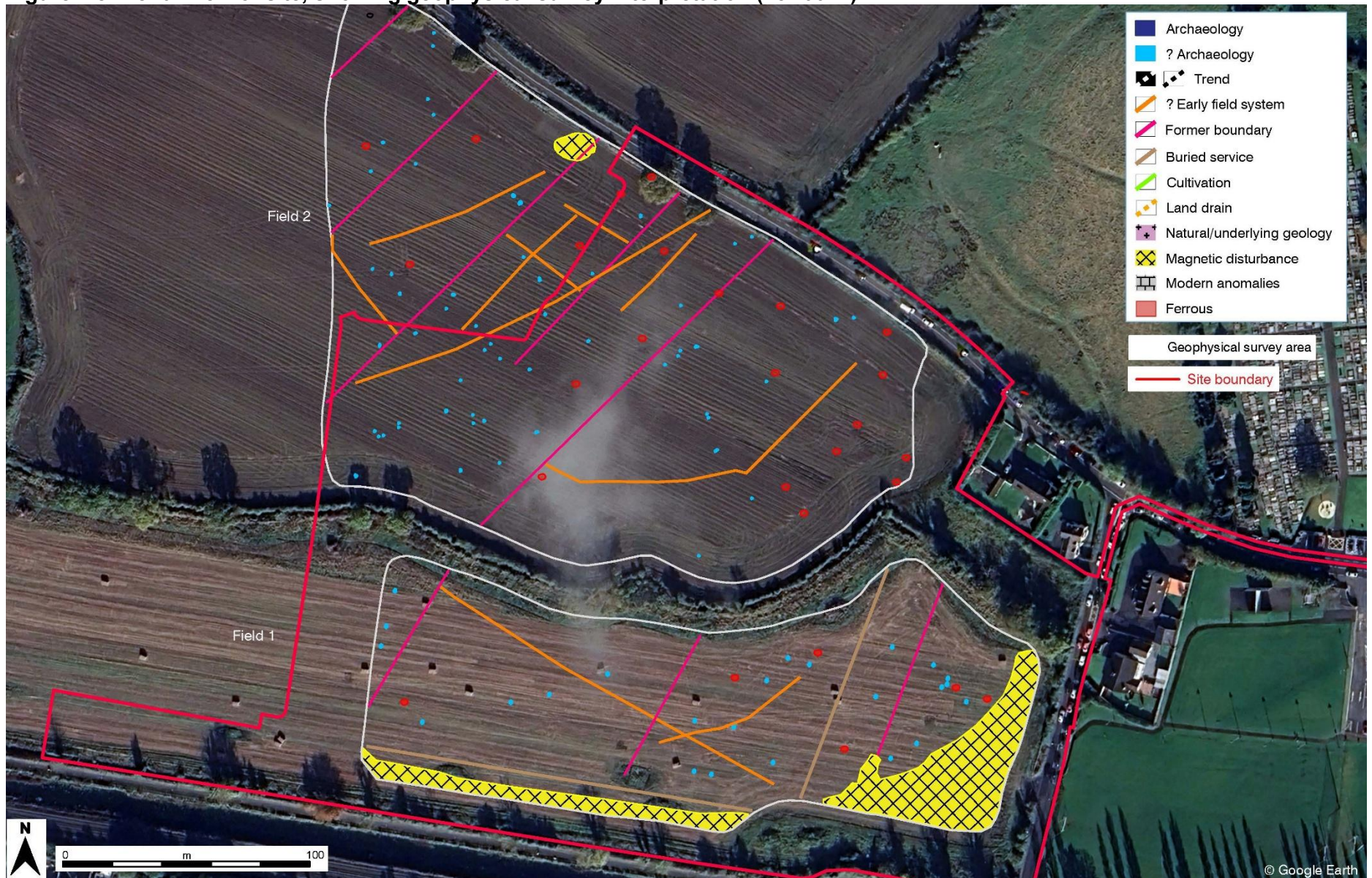


Figure 4.9: Aerial view of site, showing geophysical survey interpretation (25R0024) and excavated test trenches (25E0385).

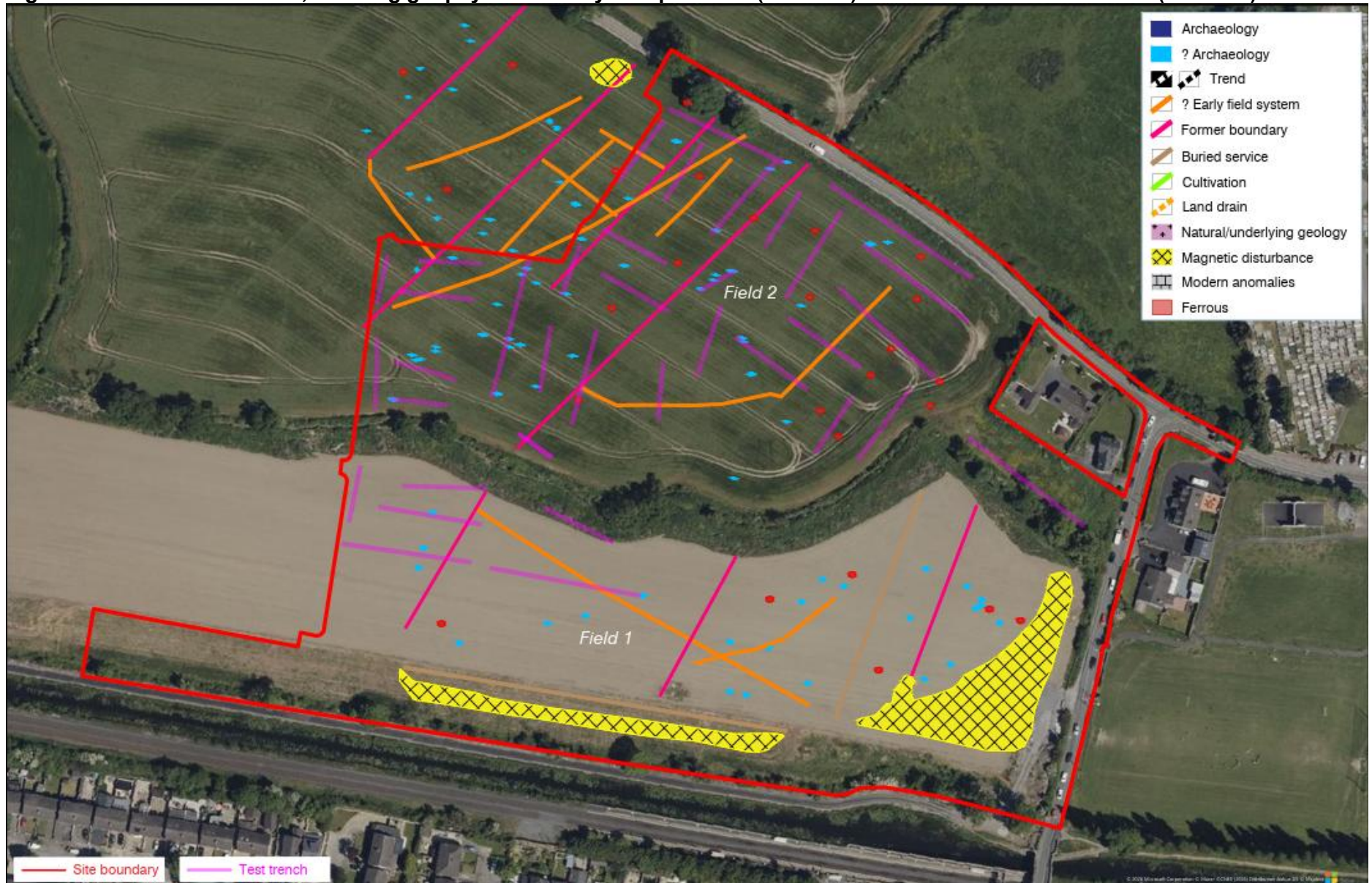
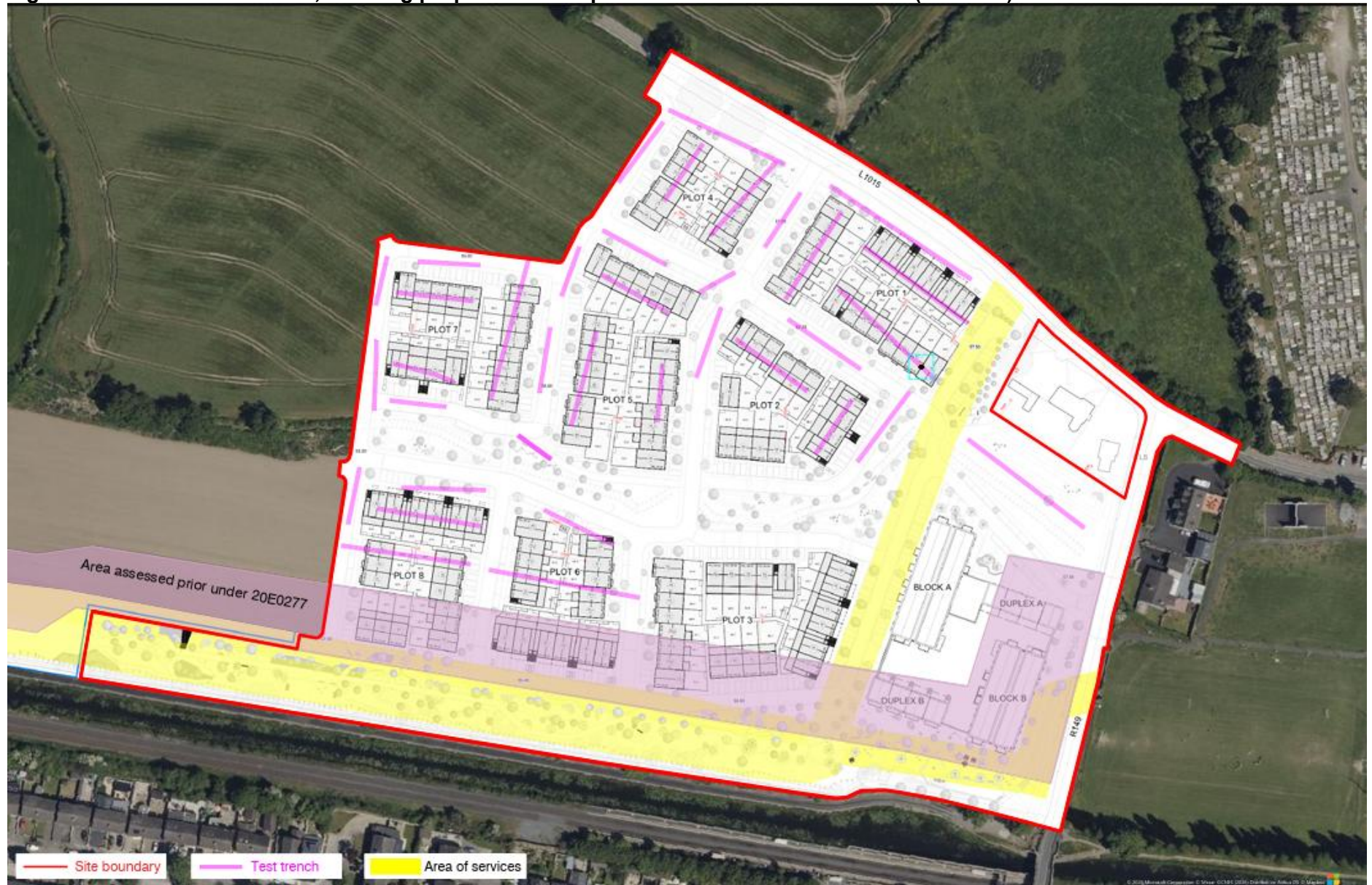


Figure 4.10: Aerial view of site, showing location of trenches (25E0385) and area of excavation



Figure 4.11: Aerial view of site, showing proposed development and location of trenches (25E0385)



Aerial Imagery

The 1995 aerial shows field divisions have been removed since the 25-inch 1908 edition Ordnance Survey map, and these field divisions are visible as cropmarks throughout the aerial imagery. The fields have been in agricultural use throughout the timespan covered by the available aerial imagery.

The site remained largely unchanged, with fields in use as agricultural, and linear cropmarks are apparent in the northern field. By the 2021 aerial a band of land along the southern extent of the site was stripped of topsoil, reinstated by the 2024 aerial, and under crop by 2024.

No features of archaeological significance were recorded on the examined aerial imagery.

4.3.15 Site Inspection

A site inspection was conducted by Glen Gibney of ACSU in December 2024. The site consists of portions of two fields and currently under crop (see **Figure 4.**) with a field boundary lined with mature hedges, trees. No features of archaeological significance were noted during this field inspection.

Figure 4.12: Overview of the site south (Plate 1) and north (Plate 2) fields respectively



4.4 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The proposed development site is located on the south side of Leixlip and the Royal Canal, bounded from east by Captain's Hill (R149) and from north by Confey/Dunboyne Road (L1015).

The site is currently in agricultural use, but forms part of the Leixlip LAP and is within Confey Lands Masterplan.

The character of the land is agricultural. There are boundary hedgerows along the northern and eastern boundaries of the site, the northern hedgerow being the most complete.

The application is for residential development to consists of the following:

- *Construction of 272 no. residential units comprising 101 no. houses and 171 no. apartments/duplex units;*
- *1 no. childcare facility;*
- *3 no. commercial units (for Class 1- Shop, or Class 2- Office / Professional Services, or Class 11 Gym, or Restaurant / Café use, including ancillary takeaway use, or Class 8- Health Centre / Civic, or Cultural Use); and*
- *A Restaurant / Café unit;*
- *Communal open space, landscaping, plant, services and all associated site and infrastructural works.*

For a full description of the proposed development, see Chapter 2 of this EIAR and the application drawings.

4.5 POTENTIAL EFFECTS OF THE PROPOSED DEVELOPMENT

The following outlines the potential impacts in advance of mitigation measures proposed.

4.5.1 Effects On Recorded Archaeological Monuments

There will be no effects, indirect or otherwise, on recorded archaeological monuments (RMPs/SMRs) as no such monuments are located within the proposed development site. The two nearest monuments to the site a Graveyard (KD006-003001----) and a church (KD006-003), are recorded 74m and 147m, respectively, to the north of the site, and no indirect or visual effect on this monument was noted.

4.5.2 Effects On Known and Potential Archaeological Features

A potential effect on the archaeological resource also lies in the uncovering of sub-surface archaeological features during groundworks associated with the proposed works and associated infrastructure. This is because anomalies of archaeological potential were identified as a result of a geophysical survey (25R0024; Murphy 2025; Figure 4.8). Only one feature of archaeological significance was identified during test trenching (25E0385; Murphy 2025; Figures 4.9-4.11): a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2. It was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest. No other features of archaeological significance were identified.

The proposed development will not result in any impacts on recorded archaeological monuments, protected structures or architectural heritage assets, as none are located within the site and no indirect or visual impacts on nearby recorded monuments are predicted. However, the proposed development would have a direct, negative and permanent impact on the archaeological features identified during the test trenching if unmitigated.

4.5.3 Architectural and Cultural Heritage

There will be no effects on architectural heritage as no Protected Structures, sites listed within the National Inventory of Architectural Heritage (NIAH), or vernacular structures, are located within the proposed development site.

4.5.4 Indirect Effects

Indirect effects are those whereby the proposed development may have a negative (or positive) effect on the wider archaeological landscape or surrounding architectural heritage. Indirect effects may include a visual impact on the surrounding archaeological landscape.

The introduction of the proposed development to the area will not result in a change to the general setting of any of the monuments or protected structures as none are present within or in the immediate environs of the site. The site consists of agricultural fields.

The proposed development will therefore have no indirect effects, either temporary or permanent, on the wider cultural heritage of the area.

4.6 'DO-NOTHING' EFFECT

If the proposed development were not to proceed there would be no negative impact on the archaeological, architectural or cultural heritage resource of the proposed development area.

4.7 CUMULATIVE EFFECTS

There are no known cumulative effects on the Archaeological and Cultural Heritage resource of the area as a result of the proposed development.

In recent years, a number of small and large-scale developments were proposed and approved in the environs of the site by Kildare County Council (20982, 2560058, 22784 /ACP.Ref.:315725-23, ACP. Ref.: 314232-22). These include developments for telecommunications, astro turf playing pitch, both grants with no archaeological condition included, Uisce Éireann Infrastructure with Condition 6 attached to ACP.Ref.:315725-23 for monitoring of all ground reductions.

The DART+ West Proposals for Railway Order – Dublin City to Maynooth and M3 Parkway permitted under ACP. Ref.: 314232-22. The EIAR report in respect to Dart + West was issued in July 2022. An archaeological chapter (Chapter 20) was prepared for DART+ West states the following archaeology mitigation measures are to be carried out:

(...) The mitigation measures will be managed and overseen by a Project Archaeologist appointed by Iarnród Éireann.

Mitigation measures that will be undertaken prior to and during the construction phase include:

- *Additional geophysical surveys.*
- *Archaeological test excavations.*
- *Archaeological waste assessments.*
- *Preservation by record (Archaeological excavation).*
- *Archaeological monitoring.*

Dart+ West Project received statutory approval for its design on the 18th July 2024, which became operative in June 2025. The early enabling works are expected to commence in 2026, and the

Compulsory Purchase Order (CPO) process for lands identified within the approved Railway Order will begin.

4.8 AVOIDANCE, REMEDIAL AND MITIGATION MEASURES

4.8.1 Pre-Construction Phase

The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) and further mitigation may be sought by the NMS.

ARCH CONST 1: ARCHAEOLOGICAL PRESERVATION BY RECORD – EXCAVATION

- Only one feature of archaeological significance was identified during test trenching (25E0385; Murphy 2025; Figures 4.9-4.11): a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2. It was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest. Consequently, further mitigation is required in the form of excavation with the use of a metal detector of the areas of archaeological activity identified, prior to work commencing. While preservation in situ is the preferred option in which to conserve the archaeological resource, this is not feasible in this case. Hence, preservation by record of any archaeology identified during testing will be carried out by a licence-eligible archaeologist in consultation with and under licence from the NMS of the DHLGH. Consultation with the NMS will be maintained throughout.
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified during test trenching and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place.
- A report is required to be compiled on completion of any archaeological excavation and will be submitted to the relevant authorities.

The above mitigation will be included in the Construction Environmental Management Plan.

4.8.2 Construction Phase

Archaeological Heritage

There is potential for the presence of additional isolated archaeological features to be present in areas that were not assessed during the pre-construction phase (i.e. between test trenches and outside of the areas that will be stripped for excavation). This includes any areas that were not accessible for test trenching.

The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH) and further mitigation may be sought by the NMS.

ARCH CONST 2: TOPSOIL STRIPPING – ARCHEOLOGICAL MONITORING

- As one feature of archaeological significance was identified during testing (C.090.1 in Trench 9, Field 2), further mitigation will be required in the form of monitoring of topsoil stripping across the site with

the use of a metal detector during the construction phase. This is in relation to all groundworks associated with the proposed development, including any inaccessible areas. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains will be necessary.

- This monitoring will be carried out by a licence-eligible archaeologist in consultation with and under licence from the NMS of the DHLGH. Accordingly, no ground disturbance will take place in the absence of the Archaeologist without his/her express consent. Should any significant archaeological features be discovered, further archaeological mitigation may be required, such as preservation by record. Any further mitigation will require approval from the NMS.
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site during the construction phase and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place.
- A report is required to be compiled on completion of any archaeological monitoring and/or excavation and will be submitted to the relevant authorities.

The above mitigation will be included in the Construction Environmental Management Plan, which will be prepared and submitted to the Planning Authority prior to commencement of development.

Architectural and Cultural Heritage

No mitigation is required.

4.8.3 Operational Phase

Archaeological Heritage

There will be no mitigation required, as the effects of the proposed development on the archaeology will be mitigated prior to the operational phase in line with the mitigation measures outlined in Sections 4.8.1 to 4.8.3.

Architectural and Cultural Heritage

No mitigation is required.

4.9 RESIDUAL EFFECTS OF THE PROPOSED DEVELOPMENT

The residual effects are likely to be neutral and none to imperceptible if the mitigation measures (see Section 4.8) are implemented. Table 4.4 below summarises the residual effects of the proposed development on the archaeological landscape.

Residual impacts are defined as the overall effect of the development on archaeology, on the basis of implementing the mitigation measures recommended in this report.

Table 4.5: Residual effects and mitigation strategies

Potential Effects	Mitigation strategy	Residual impacts
Construction Effects		
Topsoil removal associated with development. Groundworks and service trenches, etc.	Following pre-construction test trenching (Licence No. 25E0385) one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 (Field 2). This feature will be preserved by record (archaeological excavation) at the pre-construction phase and monitoring of topsoil with the use of a metal detector at the construction phase. All procedures mentioned here will be in consultation with the Licensing Section of the National Monuments Service.	None
Effects to recorded monuments - none	No mitigation required.	None
Operational Effects		
Nearby Recorded Monuments and Protected Structures are screened from view.	No mitigation required.	None

4.10 MONITORING

The mitigation measures detailed above would also function as a monitoring system to allow the further assessment of the scale of the predicted impacts and the effectiveness of the mitigation measures.

4.11 REINSTATEMENT

The proposed development does not include a decommissioning or reinstatement phase. Therefore, reinstatement is not applicable to this assessment.

4.12 INTERACTIONS

There are interactions between this chapter and the landscape and visual chapter in view of the visual impacts on the settings of archaeological and cultural heritage sites and the potential for landscaping to mitigate such impacts, and with the water chapter and the drainage / SUDs design.

4.13 DIFFICULTIES ENCOUNTERED IN COMPILING INFORMATION

No difficulties were encountered during the compilation of this chapter.

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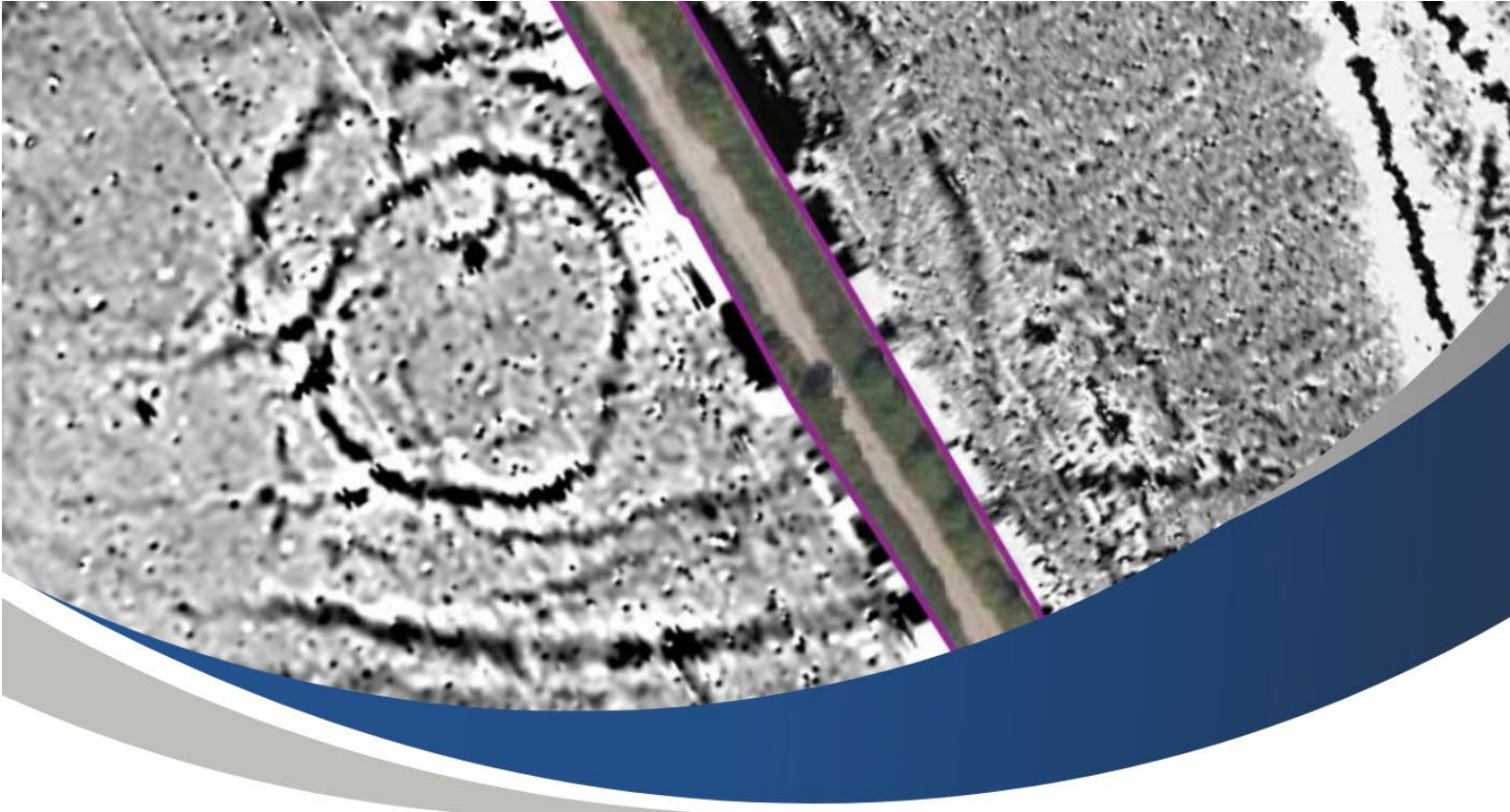
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APPENDIX 4.1

GEOPHYSICAL SURVEY REPORT



Geophysical Survey Report

Confey, Leixlip, Co. Kildare

Detection Device Number: 25R0024

Donald Murphy
March 2025
Report Status: Final

ACSU Ref.: 24178



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PROJECT DETAILS

Project	Confey, Leixlip, Co. Kildare
Report Type	Geophysical Survey Report
Licence No.	25R0024
Townland(s)	Confey & Newtown
RMP/SMR No.	N/A
RPS Id./NIAH Reg. No.	N/A
ITM Ref.	700629, 737222
Consultant	Archaeological Consultancy Services Unit, 21 Boyne Business Park, Greenhills, Drogheda, County Louth
Archaeologist	Donald Murphy
Report Author(s)	Donald Murphy
Report Status	Final
Report Date	19 th March 2025
ACSU Ref.	24178

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VERSION CONTROL

Revision	Date	Description	Status	Author	Reviewed	Approved
1.0	19.03.2025	Geophysical survey results	Final	D.M	L.C	D.M

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NON-TECHNICAL SUMMARY

This report details the results of a Geophysical Survey carried out at a site in the townlands of Confey and Newtown, Co. Kildare (ITM 700629, 737222). The site lies directly north of the Royal Canal, Confey Rail Station and north of the town of Leixlip. It measures c. 6.5ha and consisted of portions of two agricultural fields. The geophysical survey was carried out at the pre-planning phase in relation to a proposed residential development at the request of the client.

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site. There are no Protected Structures as listed in the *Kildare County Development Plan 2023-2029* or sites listed in the National Inventory of Architectural Heritage (NIAH) located within the site. The southern portion of the site, along the Royal Canal, was subject to archaeological investigations previously (20E0227; Coughlan, 2022). This was in relation to the Leixlip Transfer Pipeline, and no features were identified within the current site.

The geophysical survey was conducted by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 25R0024 issued by the Department of Housing, Local Government and Heritage. A full, detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system.

Potential spread/pit remains of archaeological significance have been recorded across the survey area. An archaeological interpretation for responses in these areas is highly tentative, and a natural soil or geological origin or recent land use for these anomalies should be considered. A sample of these responses should be assessed through test trenching. Linear anomalies, which are recorded as field boundaries on the Ordnance Survey mapping, were also detected. Linear and curvilinear anomalies that are not recorded field boundaries were also detected and likely represent pre-OS field systems, drains or paths/access routes.

It is recommended that the anomalies identified be targeted during a future test trenching programme. This must be carried out by a licence-eligible archaeologist prior to commencing any groundwork. Once test trenching is complete, further mitigation might include preservation in situ (avoidance), excavation (preservation by record), and/or monitoring. The Department of Housing, Local Government, and Heritage shall be consulted in this regard.

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1. INTRODUCTION

This report details the results of a Geophysical Survey carried out within the townlands of Confey and Newtown, Co. Kildare (ITM 700629, 737222; Figures 1–2). The geophysical survey was requested in advance of the proposed development and carried out under Licence 25R0044. The site lies directly north of the Royal Canal, Confey Rail Station, and to the north of the town of Leixlip, measuring approximately 6.5 hectares.

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site. There are no Protected Structures, as listed in the Kildare County Development Plan 2023-2029, or sites listed in the National Inventory of Architectural Heritage (NIAH), located within the site.

2. METHODOLOGY

A detailed magnetic survey was conducted using a SENSYS MAGNETO MXV3 modular carrier, which is configured to host eight Sensys FGM650/3 sensors spaced at 0.5m intervals, with a total survey width of 4m. The non-magnetic cart system is towed behind a quad bike, and readings are recorded at 200Hz. Data is captured every 20mm with a position accuracy of ± 1 cm using a Trimble R10 RTK GNSS receiver mounted on the cart at a height of 1.5m. All data is recorded with SENSYS software MonMX v.5.01 on a Panasonic FZ-G1 TOUGH PAD tablet computer in .cfg format.

Data is collected along parallel survey transects using the digital display system in MonMX, which provides a live stream of visual data. This allows for an accurate systematic survey without the need to establish pre-determined grids. Magnetic data is exported from the MonMX software in ASCII format and is imported to DW Consulting's TerraSurveyor64 v4.1.12.1 for processing. The data is initially de-striped (zero median traverse) and then clipped to a range of -1.5nT – +3nT. A TIF file is produced by TerraSurveyor software along with a corresponding world file (.TFW), which allows for automatic georeferencing when using CAD software. Raster images are georeferenced in ProgeCAD 2018 before being interpreted in AutoCAD LT 2025. Graphical interpretations that indicate anomalies identified are numbered so that they can be referenced in the survey results section of the geophysical survey report.

All work was carried out in accordance with the *IAI Code of Professional Conduct* (Institute of Archaeologists of Ireland 2006) and in accordance with the *EAC Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2016), as well as English Heritage's *Geophysical Survey In Archaeological Field Evaluation* (David et al. 2008).

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3. SURVEY OBJECTIVES

The survey aimed to establish the presence of any potentially existing but previously unknown monuments and any other archaeological features within the site and to inform a future programme of test trenching.

4. SOILS, GEOLOGY AND TOPOGRAPHY

The survey area consisted of two agricultural fields, measuring c. 6.5 hectares. The site is located directly north of the Royal Canal and Leixlip Confey railway station, on the Dublin to Maynooth commuter route. The section of the southern field bordering the canal was unsuitable for survey as the ground was rough, and some areas along the townland boundary between Confey and Newtown were also unsuitable for survey.

The site has an elevation of 58m Ordnance Datum (OD). The underlying geology consists of dark limestone and shale and is part of the Lucan Formation. This bedrock geology is overlaid by till soils, derived chiefly from limestone, which are mineral and poorly drained (Geological Survey Ireland).

5. ARCHAEOLOGICAL ASSESSMENT

5.1 Archaeological & Historical Background

The site is located within two townlands in County Kildare. Newtown or *An Baile Nua* is located within the Civil Parish of Leixlip and the Barony of Salt North. The townland is first mentioned in 1584 as 'Neweton' in the Calendar of Fiants in the reign of Henry VIII. 1510-47 and of Queen Elizabeth, 1558-1603. Confey or *Confai*, in the Civil Parish of Confey and the Barony of Salt North. Confey was mentioned as early as 1540-41 as 'Consey' in the Crown Survey of Lands 1540-41.

Newtown is located adjacent to and directly south, east and west of Confey and has only one Recorded Monument listed within the townland – KD011-003---- Ritual site – holy well. However, no visible traces of the well survive in this location. It is annotated as 'St Columb's Well' on both the Ordnance Survey (OS) 6-inch map of 1836 and the Third Edition Ordnance Survey (OS) 25-inch map of 1908.

The townland of Confey has five Recorded Monuments listed within the townland and one redundant record. Two of these Recorded Monuments are classified as castles; KD006-002: Castle – unclassified & KD006-004--- - Castle – tower house. There is no visible trace of KD006-002---- Castle and the location is marked as 'Site of Shaughlins Castle' on the Ordnance Survey (OS) 6-inch map, 1836 and 'Shaughlin's Castle (site of)' on the Third edition Ordnance Survey (OS) 25-inch map, 1908. KD006-004---- Castle – tower house is located within the

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Recorded Monument KD006-017---- Field system, which also extends around the church and graveyard. The surviving remains of the tower house consist of only three walls in a ruinous condition. Manning published an article describing a 19th-century illustration of Confey Castle by George Victor Du Noyer, which ‘shows one half of the tower house still standing to full height and a heap of rubble on the site of the other half. The interior of the remaining half is shown with a vault over the first floor, above which there are three storeys and an attic storey.’ (Manning, 2017, 144). On the Ordnance Survey (OS) 6-inch map of 1836, the castle location is simply annotated as ‘Confey Castle’, and on the Third Edition Ordnance Survey (OS) 25-inch map of 1908, the location is annotated as ‘Confey Castle (in ruins)’.

The Church at Confey (KD006-003----) consists of a nave and chancel. The church is believed to date to the 12th century, with the chancel added in the 12th or possibly 13th century. (O’Keeffe, 1985-6). The church interior has graves from the 18th and 19th centuries.

5.2 Previous Archaeological Investigations

Listed below are the nearest previous archaeological investigations undertaken in the environs of the site (see Figure 2), which further demonstrate the overall archaeological potential of the site and its surrounding townlands (Table 1). The southern portion of the site, located along the Royal Canal, has been subject to archaeological investigations previously (20E0227; Coughlan, 2022). This was in relation to the Leixlip Transfer Pipeline, and no features were identified within the current site.

The following information was taken from the *Database of Irish Excavation Reports* (www.excavations.ie), and associated reports were accessed through the National Monuments Service’s (NMS) Virtual Reading Room.

Table 1: Previous archaeological investigations within the environs of the site

Excavation.ie reference	Licence No.	Site-Type	Investigation Type
2020: 475 – Leixlip Transfer Pipeline, Dublin	20E0227	Pits associated with burnt mound activity	Excavations were carried out across three areas in Alenstown (1 and 2) and Hiltown (1) Co. Dublin as part of a proposed pipeline development. The majority of features recorded contained fills with inclusions of burnt/shattered stones with charcoal and are

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Excavation.ie reference	Licence No.	Site-Type	Investigation Type
			characteristic of burnt mound related activity. They were situated in 3 separate areas, along a length of wayleave measuring roughly 2.5km, located between the north of the Royal Canal and south of the Dublin Docklands – M3 Parkway railway line.
2007:505 – Dublin: St Catherine’s Park, Dublin	07E0775	Structure	Testing was carried out during August 2007 on the northern bank of the River Liffey at St Catherine’s Park, as part of the Leixlip–Ballycoolen water supply scheme. Two areas of possible cobbled surface were revealed at the eastern edge of the pipeline wayleave after it had been stripped of topsoil. Furthermore, the remains of a stone revetting wall were also discovered along the northern bank of the river. A stone feature was also discovered in a trench along a section of the wayleave that was preserved in situ.
1997:277 – Leixlip: St. Catherine’s Park, Kildare	97E0428	Habitation site	Archaeological monitoring works associated with the Lower Liffey Valley Regional Sewerage Scheme exposed a number of features. They consisted of a box drain, a wall and an associated gravel surface, and two associated walls and a cobble surface.

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5.3 Recorded Monuments

The *Record of Monuments and Places* (RMP) and *Sites and Monuments Record* (SMR) are compiled and updated by the National Monuments Service and the National Historic Properties Service. The RMP is comprised of manuals that list all known archaeological sites and monuments in a county with accompanying maps (based on Ordnance Survey (OS) six-inch maps), locating these sites. All sites included in the RMP are protected under the National Monuments Acts (1930–2004). The SMR consists of all records stored in the Archaeological Survey of Ireland national database and is presented in the Historic Environment Viewer. The last published RMP for County Kildare is dated 1996, and as such, many of the sites listed in the SMR are scheduled for inclusion in the next revision of the RMP.

The site contains no monuments listed in the *Record of Monuments and Places* (RMP) and/or the *Sites and Monuments Record* (SMR).

Below (Table 2) is a list of the recorded monuments located in the environs of the site (Figure 2). These descriptions are derived from the National Monuments Service Archaeological Survey Database (<https://heritagedata.maps.arcgis.com/apps/webappviewer/>).

Table 2: Recorded Monuments in the environs of the site

KD006-003----	Church	Confey
<p>O'Neill (2004-5, 416-9), acknowledging previous studies by O'Keeffe (1985-6, 408-17) and Manning (2002, 18-21), argues for three building phases here: he suggests that an original 11th-century, single cell structure (int. dims. L 8.3m E-W; Wth 4.68m) was converted into a nave when a chancel and chancel arch were added to its E end in the 12th-century (when it was a possession of the diocese of Glendalough), with the building being enlarged again, probably in the 15th-century, when the nave was extended, to the W. At the N end of a graveyard (KD006-003001-) within a possible field system (KD006-017----). A fairly poorly preserved, ivy-clad rectangular structure comprising a well-built nave (int. dims. L 14.5m E-W; Wth. 4.7m) of roughly dressed and coursed, limestone blocks, to the E end of which a smaller (int. dims L 5m E-W; Wth 3m) more crudely built chancel was added, but not bonded. The W end of the nave has collapsed, but the inner face of a doorway (Wth 1.7m) with segmented arch survives towards the W end of the S wall, together with traces of a possible opposing, but now blocked, doorway in the N wall. The nave is lit by two very narrow windows at the E end of the S wall; the more westerly of which is lintelled, while the easterly one although round-arched has a tympanum-stone under the arch giving a square-headed ope. Two similar, opposing windows occur in the chancel, near the E end of it's N and S walls, and there is a third in the E gable wall of the nave (with a similar tympanum to the one in the S wall) which was blocked-up when the round-headed chancel arch (Wth. 2m; H 1.8m), which springs from rectangular abacuses, was inserted. The chancel was lit by a window in its E gable wall which is robbed-out, and by a narrow flat-headed window, now blocked,</p>		

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at the W end of the S wall. The interior contains 18th/19th century burials marked by headstones, and piles of collapsed building stones.

KD006-003001-

Graveyard

Confey

In open level pasture, separated from Confey Castle (KD006-004----), c. 160m to the ENE, by a small S-flowing stream which is spanned by a small bridge, and within a possible field system (KD006-017----). A medieval church (KD006-003----) stands at the N end of the graveyard which is shown on the 1st ed. (1838) of the OS 6-inch map as a sub-rectangular area (dims. L c. 40m N-S; Wth c. 30m) which was extended significantly (L plus c. 140m) to abutt the road to the S as shown on the latest ed. (1939) of the OS 6-inch map, and was subsequently extended again, to the E (Wth plus c. 50m) to its present limits. The graveyard is enclosed by a mortared stone wall and the earlier burials occur at the N end, around and to S of the church. Legible gravemarkers date from the 18th century to the present-day and Colgan and Cormack (2004-5, 502-535) have published a survey of the gravestones.

KD006-004----

Castle – tower house

Confey

Manning (2001, 143-5) published a mid-19th century watercolour by Du Noyer which shows one half of the castle standing to full, five story plus attic, height. There is a vault over the first floor, two projecting, parapetted corner towers are depicted and a heap of rubble is shown on the levelled half of the monument. In open, level pasture, drained to the W by a small, S-flowing stream. The castle stands within a field system (KD006-017----) which also appears to extend around a medieval church (KD006-003----) and graveyard (KD006-003001-) c. 160m to the WSW, the intervening stream being crossed by a small bridge c. 50m to the WSW of the castle. The surviving remains comprise an ivy clad, single, small and now only three storeys high, rectangular corner tower (int. dims. L 1.9m; Wth 1.5m), built of roughly coursed, unbattered, limestone blocks (wall T 0.95m) with hammer-dressed quoins. A narrow lintelled loop is visible in the SW wall at first-floor level. The tower appears to have projected to the SW from the SW angle of the tower house (max. projection 2.3m) and does not appear to have contained a stairs. (O'Keeffe 1985-6, 408-17)

KD006-004----

Castle – tower house

Confey

Covering a roughly rectangular area (dims. L c. 450m E-W; Wth c. 280m N-S) in fairly level, wet pasture, bisected by a small S-flowing stream which separates a medieval church (KD006-003----) and graveyard (KD006-003001-) to the SW from a tower house (KD006-004----) to the NE. The remains to the E of the stream, around the castle, comprise a rectangular area (dims. L c. 70m E-W; Wth c. 55m) defined along the S and at the SW corner by a low, broad, earthen bank (Wth 4-5m; int H 0.4m; ext H 1m) and a wide, shallow, outer fosse (Wth 4m; D 0.4-1m) which is crossed mid-way along its length by an earthen causeway (Wth 4m). A shallow, roughly circular pond (diam c. 12m; D 0.5m) occurs at WSW and is fed from the N by a meandering fosse/drain (Wth 4m; D 1-1.5m) which forms the W limits and which angles sharply E at NW and continues in a straight line E to meet a more modern earthen field boundary which runs N-S and forms the E limits of the site. Traces of low, narrow cultivation ridges (Wth 1.4m; H 0.10-0.15m) with narrow furrows (Wth 0.3-0.4m) running N-S survive in the N-third of the pastured interior, while to the S, similar but more denuded ridges run E-W. Abutting the external SW corner and sharing the main field's fosse at SE and

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along the S is a smaller rectangular area (dims. L c. 20m E-W; Wth c. 14m) defined along the W by a narrow, shallow fosse (Wth 1.3m; D 0.2m) and along the N by a low scarp (ext H 0.5m) with lower, wetter ground outside. The interior also contains low, narrow cultivation ridges running N-S. Immediately W of this small field is the low platform marking the levelled portion of the tower house and just beyond to the W there is a small sub-rectangular enclosure (dims. L c. 10m N-S; Wth c. 8m) abutting the S-flowing stream at W and defined along N, E and S by a low earthen bank (Wth 2-3m; H 0.4-0.6m). Across the stream, to the W, the remains survive to the W of the church and graveyard and comprise a long, gently curving chord of fosse (possibly the remains of an ecclesiastical enclosure?), (L c. 93m NE-SW; Wth 4m; D 0.5m) which abuts the stream at its N end and which is truncated by a low WNW-ESE scarp (H 0.6m) at the S end. Mid way along its length a similar fosse runs E to the graveyard wall while near its N end a low scarp (H 0.5m) runs SE towards the church, immediately N of which is a low, oval earthen mound (diams. 10m NE-SW; 6m NW-SE; H 0.3-0.5m) defined by a scarp.

5.4 Record of Protected Structures and National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) identifies, records, and evaluates the post-1700 architecture of Ireland in order to protect and conserve our built heritage. It is under the administration of the Department of Housing, Local Government and Heritage. It also forms the basis of a list for structures that should be included in the Record of Protected Structures (RPS) compiled by local authorities.

A Protected Structure is a structure that a planning authority think is of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social, or technical point of view. The structure is recognised as important and is protected from harm under legislation. Every local authority in Ireland must keep an RPS in its development plans.

The site contains no buildings or features that are Protected Structures, as listed in the Kildare County Development Plan 2023–2029, nor any sites listed in the NIAH (Figure 2). The nearest structure is located c. 670m to the south of the site – a late 18th century house Newtown Hill House, Captain’s Hill, Newtown (Leixlip ED), Co. Kildare (RPS Ref. No. B11-43), which is also listed within the National Inventory of Architectural Heritage (NIAH Reg. No. 11804075).

5.5 Finds listed within the Topographical Files of the National Museum of Ireland

The Topographical Files of the National Museum of Ireland list all artefacts in the care of or known to the museum. Such a record can provide evidence for human settlement or activity in the absence of other physical remains or documentary references.

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Details of these finds are outlined in Table 3 below.

Table 3: Archaeological Artefacts listed in The Topographical Files of the National Museum of Ireland

NMI Register No	Simple Name	Component	Townland	Find Place
1993:3	Spur (Decorated iron prick spur)	Iron	Confey	Confey Castle
2011:239	Brooch (Zoomorphic penannular brooch)	Copper Alloy	Confey	Confey Road (R149)
1935:450	Axehead	Bronze	NEWTOWN	Unknown
1936:1897	Ringed pin	Bronze	NEWTOWN	Temple na Shanagh
1936:1898	Brooch	Bronze	NEWTOWN	Temple na Shanagh
1979:71	Spearhead	Bronze	NEWTOWN	Exposed section face c.14" deep
2008C1:726	Weight	Lead	NEWTOWN	Unknown
2008C1:727	Clay pipe	Ceramic	NEWTOWN	Unknown
2008C1:728	ANIMAL REMAINS	ANIMAL RE-MAINS	NEWTOWN	Unknown
2008C1:729	Glass	Glass	NEWTOWN	Unknown
2008C1:730	Glass	Glass	NEWTOWN	Unknown
2008C1:731	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:732.1	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:732.2	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:732.3	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:732.4	Pottery	Ceramic	NEWTOWN	Unknown

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NMI Register No	Simple Name	Component	Townland	Find Place
2008C1:732.5	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:732.6	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:733.1	Pottery	Ceramic	NEWTOWN	Unknown
2008C1:733.10	Pottery	Ceramic	NEWTOWN	Unknown

5.6 Cartographic Evidence

A review of available historic mapping for the area was carried out to include the Ordnance Survey (OS) of Ireland (now Tailte Éireann) 6-inch (1836) and 25-inch (1908) maps (Figures 3-4). Potential archaeological or cultural heritage features are often marked on such maps, and they can provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains.

The 1836 map illustrates the site with several field divisions that no longer exist. The townland boundary between Confey and Newtown is depicted. The church and graveyard are annotated as ‘Confey Church, Grave Yard’, but the church plan is not illustrated, just the boundary surrounding the site of the church and graveyard.

Several of these field divisions had been removed by the time of the 1908 map. The ‘Midland Great Western Railway’ is also depicted, directly south of the site and the Royal Canal.

No monuments or features of archaeological significance were noted on the examined mapping.

5.7 Aerial Photography

A review of available aerial photography for the area was also undertaken as part of this assessment. Aerial photographs taken between 1995 and 2018 from Tailte Éireann were assessed, along with Google Earth imagery from 2009 to 2024. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field, particularly during periods of drought, such as those experienced in the summer of 2018.

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The 1995 aerial shows further field divisions have been removed since the 25-inch 1908 edition Ordnance Survey map, and these field divisions are visible as cropmarks throughout the aerial imagery. The fields have been in agricultural use throughout the aerial imagery.

Nothing of cultural heritage significance was identified within the site on the examined aerial imagery.

6. METHOD OF DATA INTERPRETATION

As outlined above, a detailed gradiometer survey was conducted to detect potential archaeological responses. The SENSYS MAGNETO MXV3 8-sensor fluxgate is a specifically designed gradiometer for use in archaeological prospection. Extremely sensitive, these instruments can detect variations in soil magnetism between 0.25nT and 10,000nT, affording diverse applications throughout various archaeological, soil morphological and geological conditions. The survey was geo-referenced through the MonMX software with a Trimble R10 RTK GNSS receiver accurate to $\pm 1\text{cm}$. The results were interpreted by examining the raw data as greyscale images that were produced in DW Consulting's TerraSurveyor64 software. Greyscale images are exported as TIFF files along with a corresponding World file (.TFW), which are then imported to progeCAD 2018 for georeferencing and AutoCAD LT 2025 for interpreting. Processed raw data in the form of greyscale images are presented in Figure 5, and an interpretation is included in Figure 6.

7. SURVEY RESULTS

The geophysical survey was conducted in March 2025 by Donald Murphy, Robert Breen and Jeanne Rochford of ACSU under licence 25R0024 (Figures 5-6). The anomalies identified are listed in Table 4 below.

Table 4: Geophysical survey results

Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
-	?Archaeology	Small to medium anomalies: pits, posts, spreads, kilns, cut features	A series of positive anomalies occur sporadically across the survey area. These might represent cut features such as pits, postholes, spreads, kilns, or other types of archaeological features. May also be natural in origin.
-	Magnetic interference/	Buried Service - Layout of the Leixlip	Perpendicular lines of magnetic interference in Field 1 that correspond with ground disturbance associated

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Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
	increased magnetism	Transfer Pipeline	with the Leixlip Transfer Pipeline. Visible on Google Earth aerial imagery in 2018 and 2021.
-	Magnetic interference/ increased magnetism	Magnetic debris	Broad dipolar response of magnetic debris along the eastern boundary of Field 1 generally associated with ground disturbance. It could possibly be in relation to works associated with the Leixlip Transfer Pipeline.
-	Linear features	Former field boundaries	Positive linear anomalies that correspond with former field boundaries depicted on the first edition Ordnance Survey (OS) 6-inch map, surveyed 1836, and the third edition Ordnance Survey (OS) 25-inch map, surveyed 1908.
-	Linear features	Early field systems?	Positive linear and curvilinear anomalies that may represent former field divisions that are not depicted on OS mapping.
-	Ferrous	Magnetic disturbance from modern debris	Bipolar anomalies occur sporadically, often associated with magnetic interference from modern ferrous materials, either in the topsoil or at the surface of the survey area.

8. IMPACT ASSESSMENT

The purpose of this impact assessment was to determine whether the site contained any evidence of previously unrecorded areas or features of historical, built, or archaeological significance, and to assess the potential impacts that the proposed development may have on such features.

A geophysical survey of the site was carried out under licence 25R0024 in February 2025.

No definite signs of archaeology were identified during the geophysical survey. However, anomalies of archaeological potential were recorded, as well as early field systems, and these require further assessment. Therefore, targeted test trenching is recommended.

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9. CONCLUSIONS & RECOMMENDATIONS

The geophysical survey at Confey and Newtown, Co. Kildare, was carried out in advance of the proposed development under Licence 25R0044. The site lies directly north of the Royal Canal, Confey Rail Station and north of the town of Leixlip and measures c. 6.5 hectares (Fields 1-2).

Potential spread/pit remains were recorded across the survey area. An archaeological interpretation for responses in these areas is highly tentative, and a natural soil or geological origin, or recent land-use, for these anomalies should be considered. A sample of these responses should be assessed by means of test trenching.

Linear anomalies, which are recorded as field boundaries on the Ordnance Survey mapping, were also detected. Linear and curvilinear anomalies that are not recorded field boundaries were also detected and likely represent pre-OS field systems, drains or paths/access routes.

It is recommended that anomalies identified are targeted during a future test trenching programme. Features exposed shall be sufficiently sectioned in order to assess their depth, nature, and significance. This must be carried out by a licence-eligible archaeologist prior to any groundworks commencing. Once test trenching is complete, further mitigation might include preservation in situ (avoidance), excavation (preservation by record), and/or monitoring. The Department of Housing, Local Government, and Heritage shall be consulted in this regard.

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10. REFERENCES

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- Institute of Archaeologists of Ireland (2006) *IAI Code of Professional Conduct*. IAI, Dublin.
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- O'Keeffe, T. (1985-1986). The Church and Castle of Confey, Co. Kildare. *Journal of the Co. Kildare Archaeological Society* 16(5), 408-1
- Schmidt, A., Linford, P., Linford N., David A., Gaffney C, Sarris A. and Fassbinder J. (2016) *EAC Guidelines for the use of Geophysics in Archaeology: Questions to Ask and Points to Consider*. EAC Guidelines 2. Europae Archaeologia Consilium (EAC), Association Internationale sans But Lucratif (AISBL), Namur, Belgium.

Other Sources

- Database of Irish Excavation Reports (www.excavations.ie).
- Extract from the First edition Ordnance Survey (OS) 6-inch map, 1836.
- Extract from the Third edition Ordnance Survey (OS) 25-inch map, 1908.
- Geological Survey Ireland Spatial Resources [map viewer](#), Department of the Environment, Climate and Communications.
- Kildare County Development Plan 2023–2029.
- National Inventory of Architectural Heritage (<http://www.buildingsofireland.ie/>).
- National Monuments Service's (NMS) Virtual Reading Room.
- Placenames Database of Ireland, developed by Fiontar & Scoil na Gaeilge (DCU) and The Placenames Branch, Department of Housing, Local Government and Heritage (www.logainm.ie).
- Record of Monuments and Places (RMP) and Sites and Monuments (SMR), the Heritage Service, 7 Ely Place, Dublin 2 (<https://heritagedata.maps.arcgis.com/apps/webappviewer/>).
- Topographical files of the National Museum of Ireland.

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11. APPENDIX 1 – SUMMARY TECHNICAL INFORMATION & GLOSSARY OF TERMS

Detailed magnetometer Surveys offer an effective and efficient way of surveying large areas for anomalies associated with past human activity by mapping and visualising spatial variations in the local magnetic field. Anomalies of archaeological interest can be identified as they emit contrasting magnetic properties to that of the surrounding soil. This allows for the identification of various archaeological features such as kilns, hearths and burnt mounds as they result in strong magnetic responses. Magnetometer surveys also help to identify ditches and pits that usually contain a multitude of deposits of varying magnetic properties that stand out in contrast to the consistency of the surrounding undisturbed soil. This allows for the identification of sites such as enclosures, ring-ditches and field systems that have been over time, ploughed out of the visible landscape.

Survey results take the form of processed greyscale images and interpretation figures that can be georeferenced over satellite imagery or development plans for a full assessment of the archaeological impact of any given project.

A constant high quality of data is assured by experienced field staff operating in accordance with EAC *Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2015) and English Heritage's *Geophysical Survey In Archaeological Field Evaluation* (David et al. 2008).

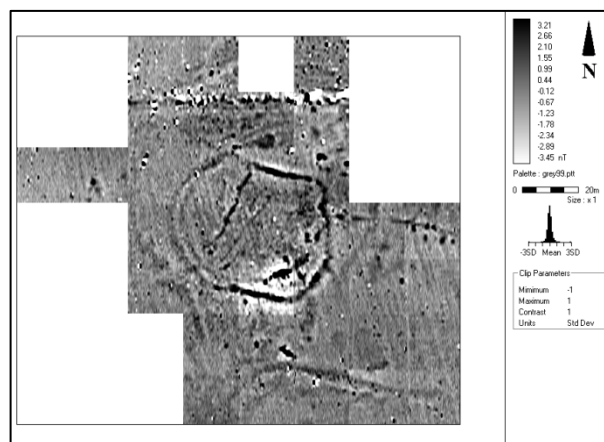


SENSYS MAGNETO® MXV3 modular carrier with 8 SENSYS FGM650/3 sensors spaced at 0.5m intervals

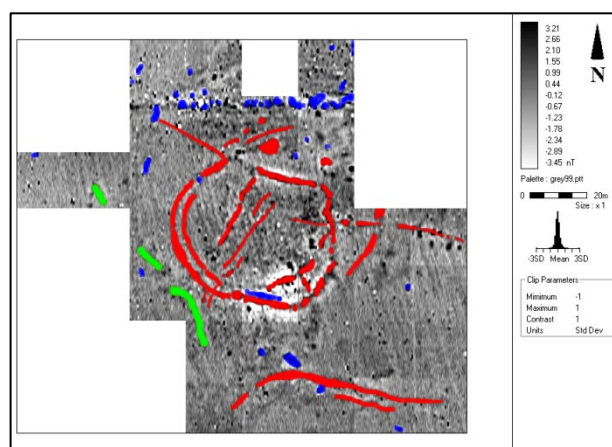
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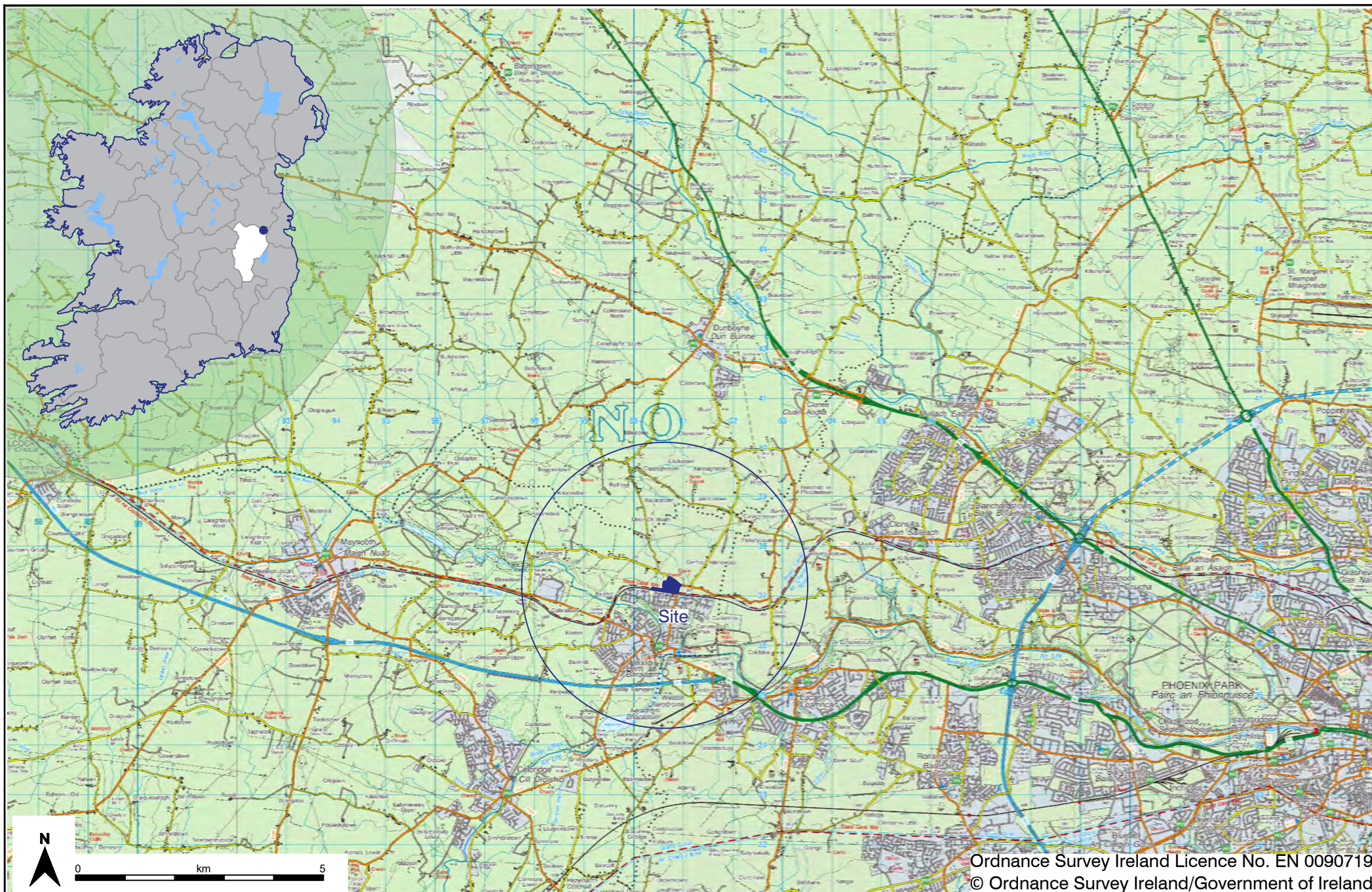
Data Display Formats

Greyscale: The greyscale format assigns a cell to each datum according to its location on the grid. The display of each data point is conducted at very fine increments, allowing the full range of values to be displayed within the given data set. This display method also enables the identification of discrete responses that may be at the limits of instruments detection.



Interpretation: The greyscale images are used to create interpretation drawings of the various anomalies that represent features of archaeological potential, early field systems, trends, cultivation, modern ferrous interferences and underlying geological changes.





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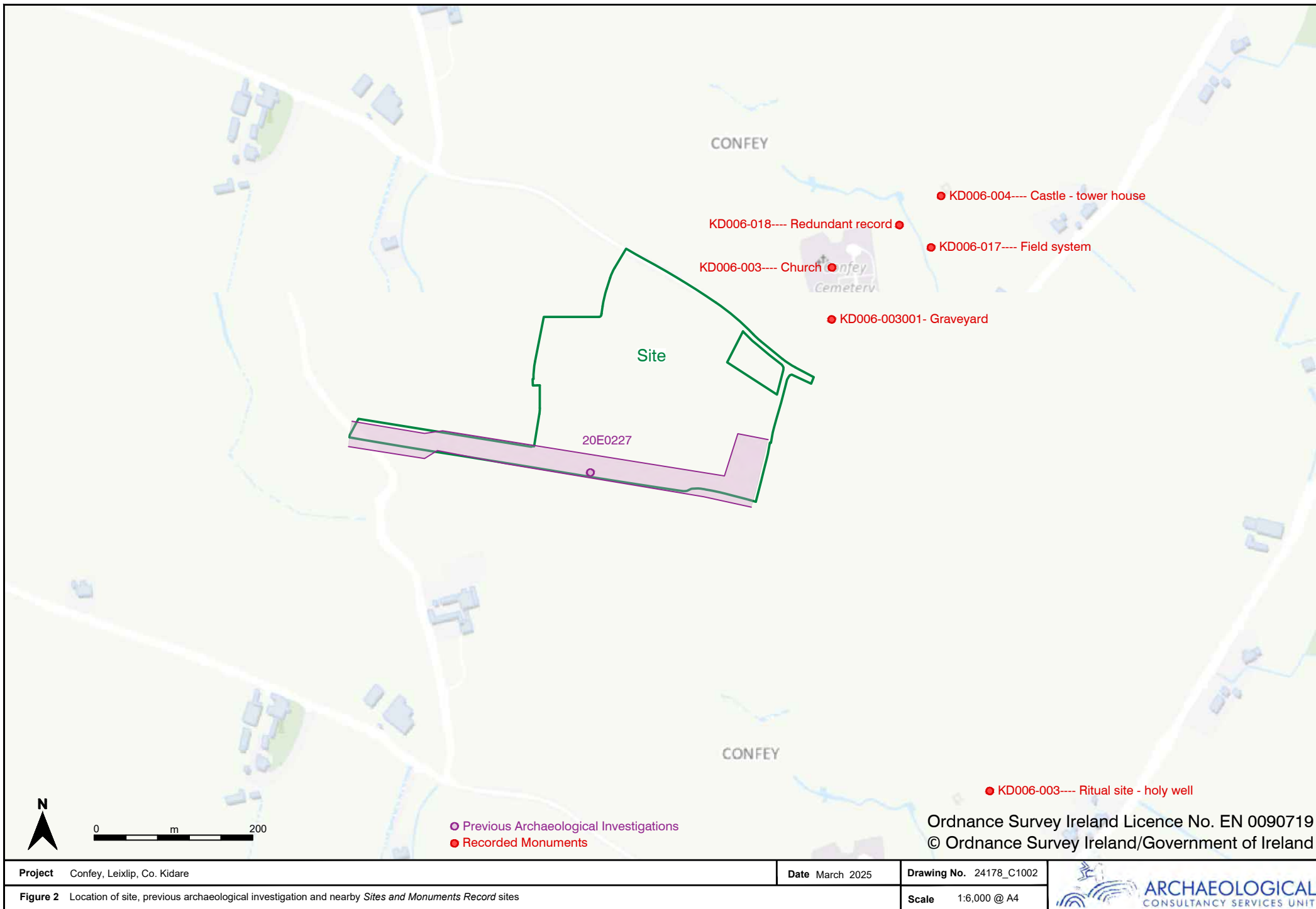
Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1001

Figure 1 Location of site

Scale 1:100,000 @ A4



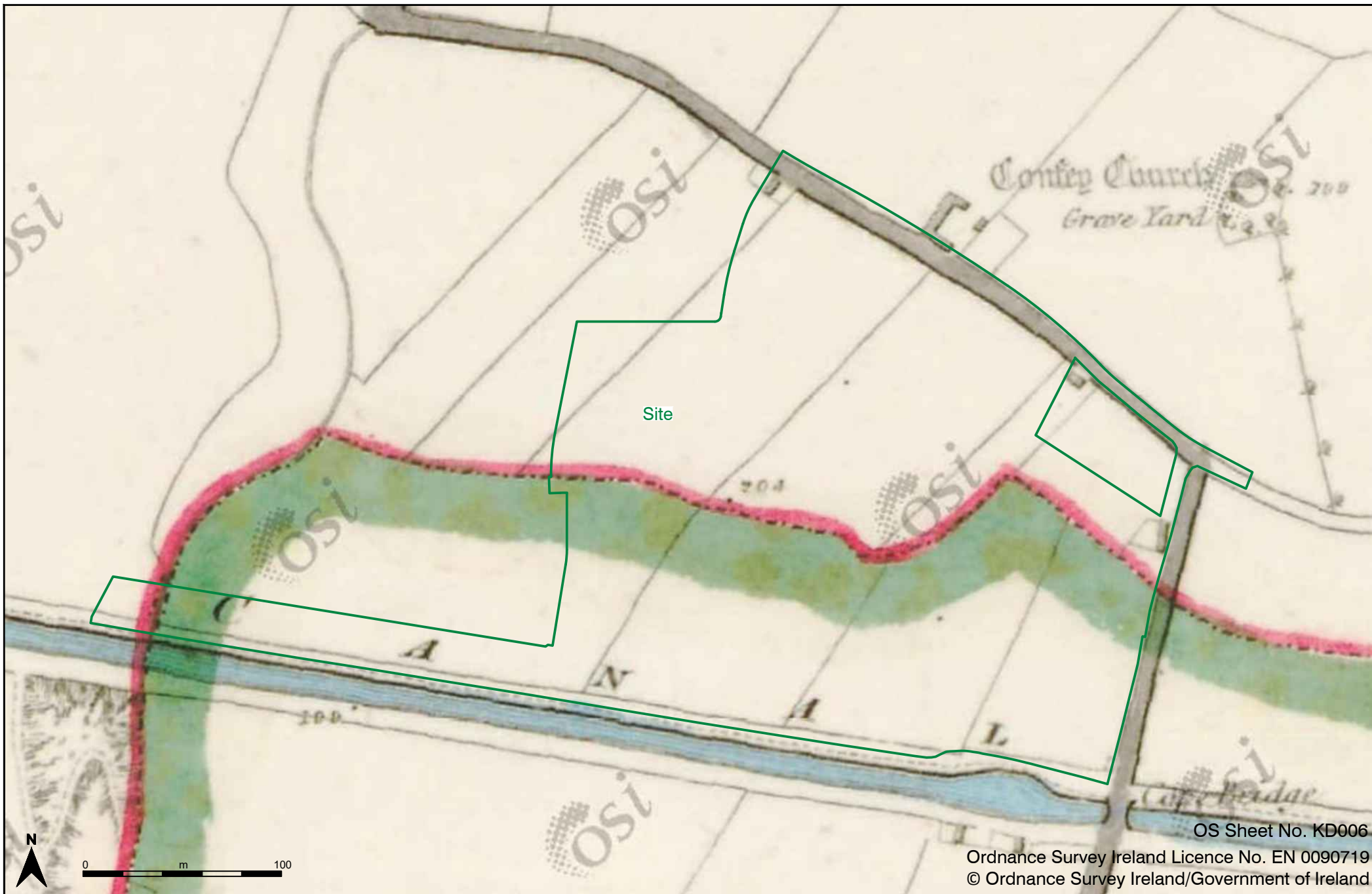
Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1002

Figure 2 Location of site, previous archaeological investigation and nearby Sites and Monuments Record sites

Scale 1:6,000 @ A4



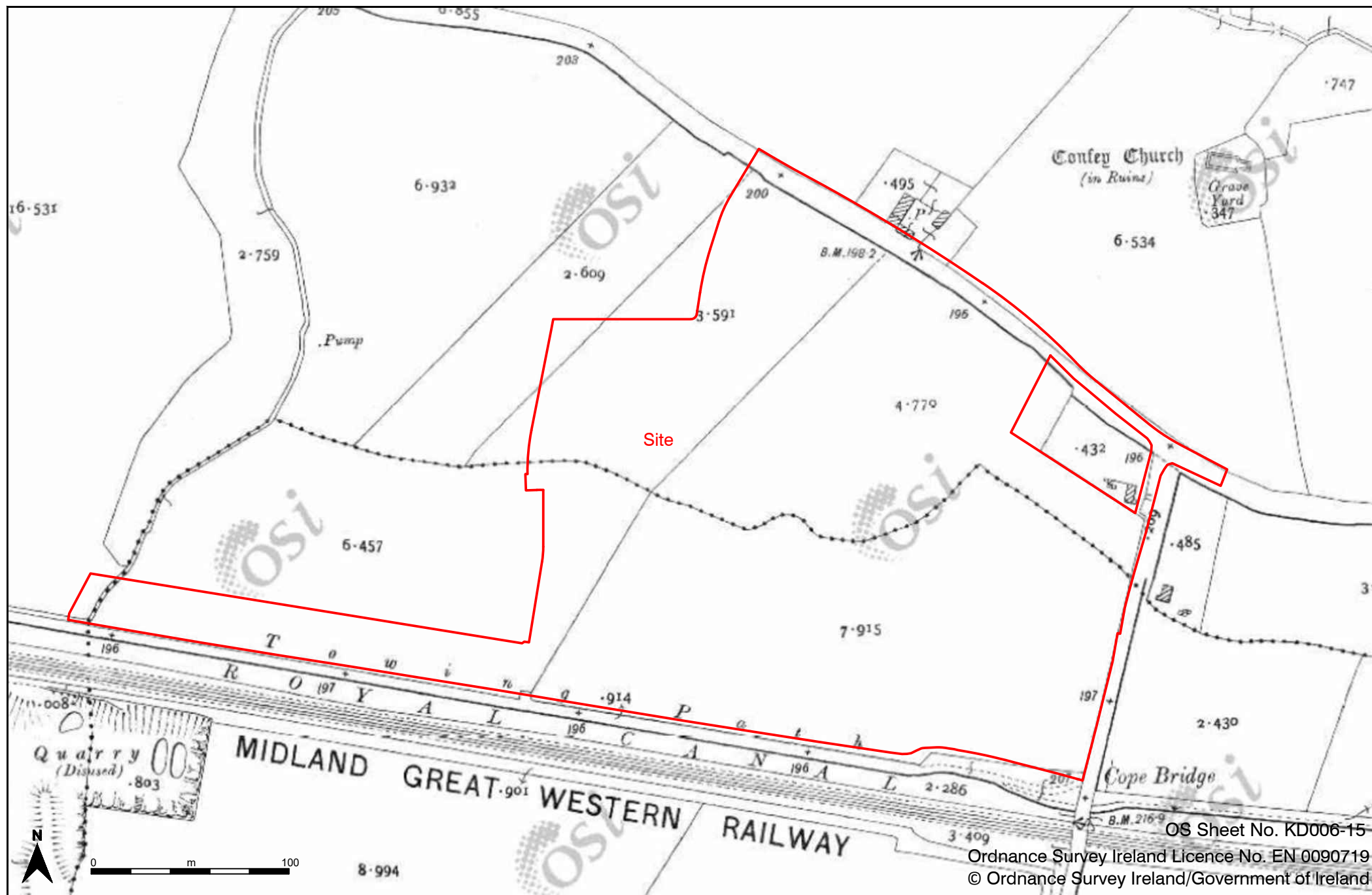
Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1003

Figure 3 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1839), showing location of site

Scale 1:2,500 @ A4



Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1004

Figure 4 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 - published 1910), showing location of site

Scale 1:2,500 @ A4



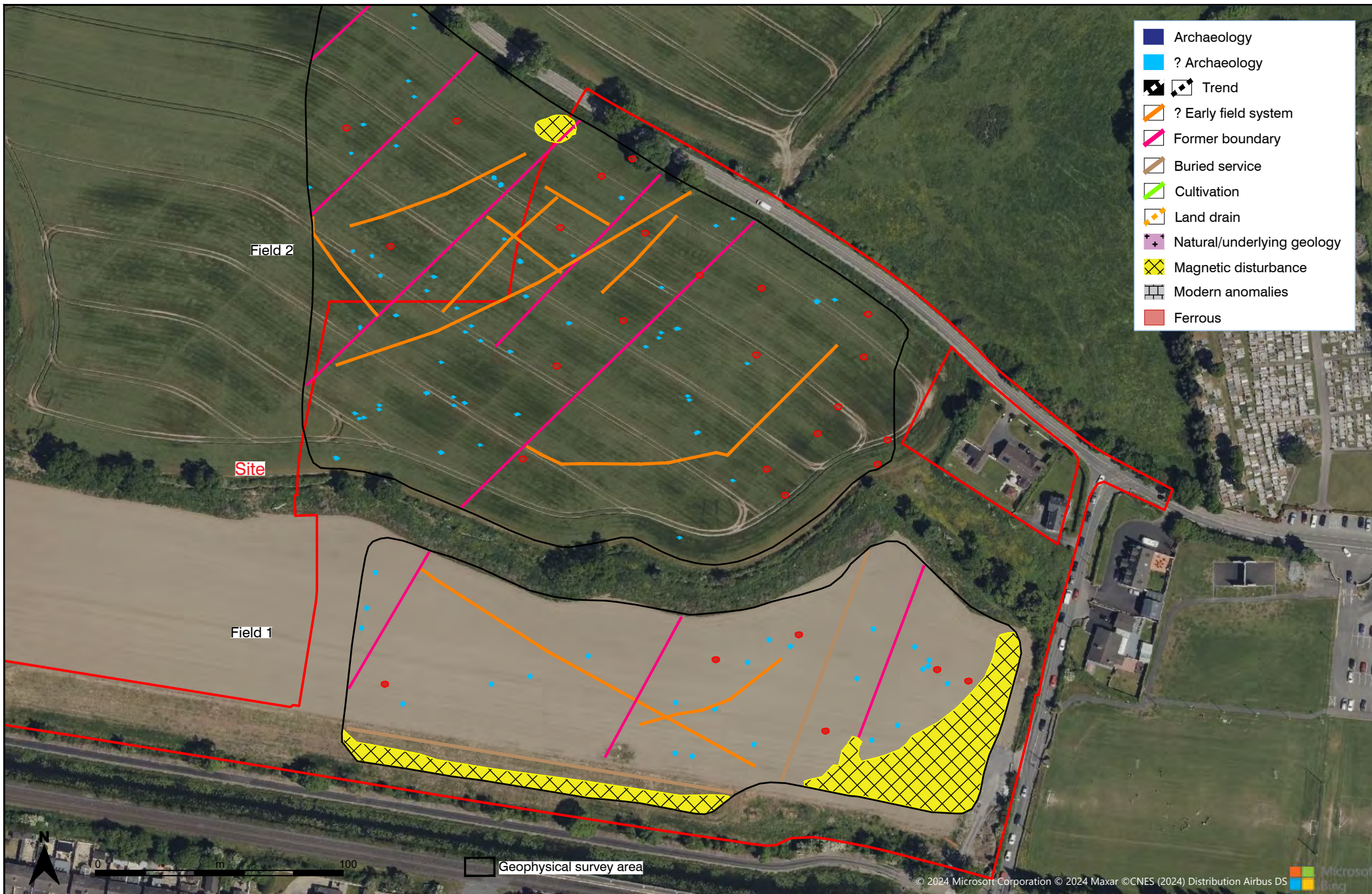
Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1005

Figure 5 Aerial view of site, showing geophysical survey results (greyscale images)

Scale 1:2,000 @ A4



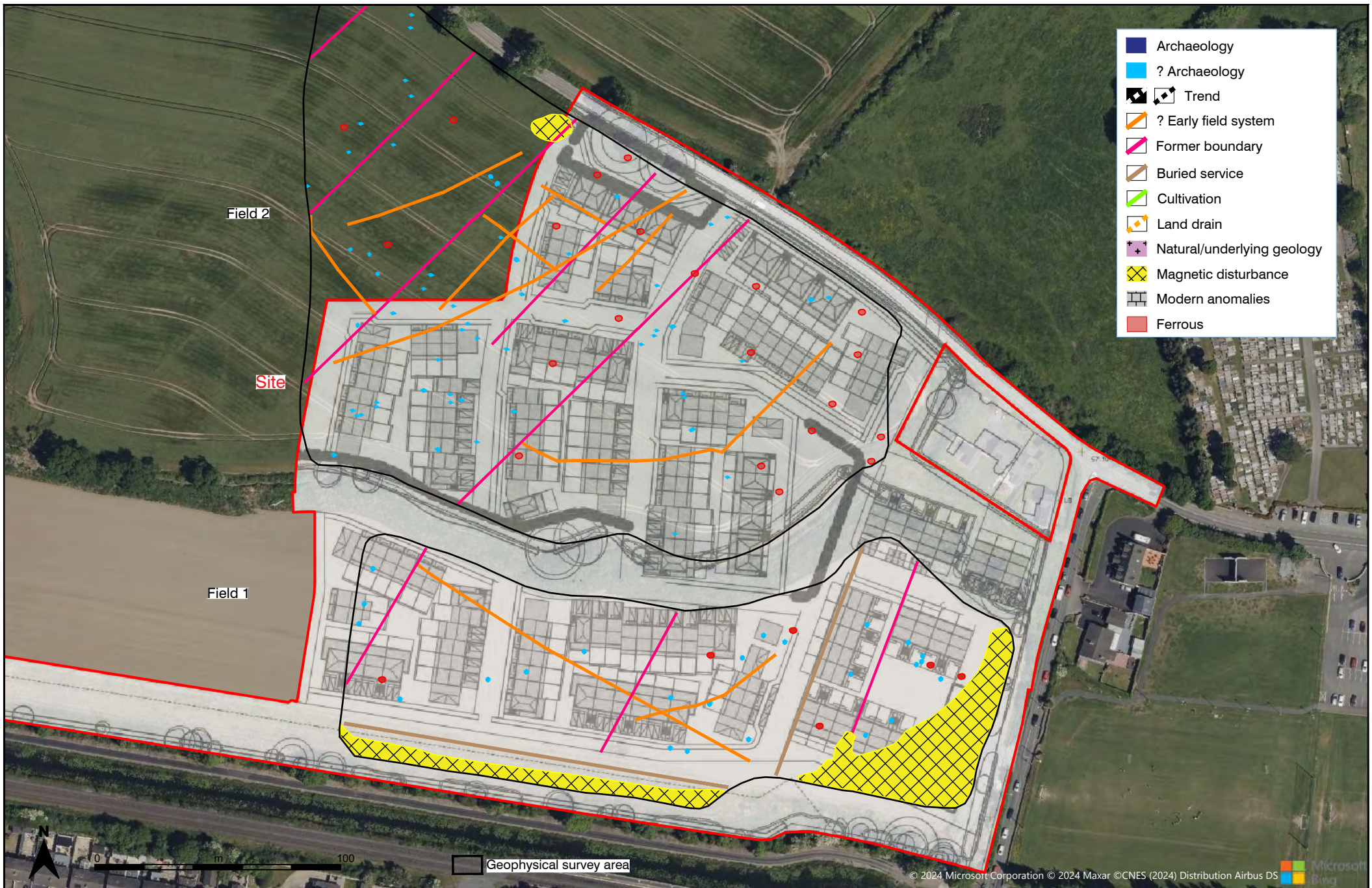
Project Confey, Leixlip, Co. Kidare

Date March 2025

Drawing No. 24178_C1006

Figure 6 Aerial view of site, showing geophysical survey interpretation

Scale 1:2,000 @ A4



APPENDIX 4.2

TEST EXCAVATION REPORT



Archaeological Impact Assessment: Test Excavation Report Confey and Newtown, Co. Kildare

Part 1 – Archaeological Information

Licence Number: 25E0385

Detection Device Licence Number: 26R0552

Deirdre Murphy
October 2026
Report Status: Final



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PROJECT DETAILS

Project	Confey, Leixlip, Co. Kildare
Report Type	Archaeological Test Excavation
Licence No.	25E0385
Detection Device Licence No.	26R0552
Townlands	Confey and Newtown
RMP/SMR No.	KD006-003---- Church & KD006-003001- Graveyard
RPS Id./NIAH Reg. No.	N/A
ITM Ref.	700682, 737446
Consultant	Archaeological Consultancy Services Unit, 21 Boyne Business Park, Greenhills, Drogheda, County Louth
Archaeologist	Deirdre Murphy & Robert Breen
Report Author	Deirdre Murphy & Robert Breen
Report Status	Final
Report Date	13th October 2026
ACSU Ref.	24178

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VERSION CONTROL

Revision	Date	Description	Status	Author	Reviewed	Approved
1.0	13.10.2026	Archaeological test excavation report	Final	D.M. & R.B	L.C	D.M.

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NON-TECHNICAL SUMMARY

This report details the results of test excavations carried out at Confey and Newtown, Co. Kildare (ITM 700682, 737446). The site lies directly north of the Royal Canal, Confey Rail Station and north of the town of Leixlip. It measures c. 6.5ha and consists of a portion of two agricultural fields and a small, overgrown plot along the eastern side.

The test trenching was carried out in fulfilment of Condition 13 attached to Planning Ref. No. 26/60746 by Kildare County Council, and at the request of the client. These conditions were based on the recommendations of an Archaeological Impact Assessment (Collins, 2024), which recommended that a geophysical survey be undertaken, followed by targeted test trenching and general test trenching across the site.

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site. There are no Protected Structures as listed in the *Kildare County Development Plan 2023-2029* or sites listed in the National Inventory of Architectural Heritage (NIAH) located within the site. The southern portion of the site, along the Royal Canal, was subject to archaeological investigations previously in the form of test trenching (20E0227; Coughlan, 2022). This was in relation to the Leixlip Transfer Pipeline, and no features were identified within the current site.

The site was also subject to a geophysical survey conducted by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 25R0024. A full detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system. No monuments of archaeological significance were identified. The survey identified only potential archaeological features throughout the survey area. These consisted of small responses that could represent archaeological features such as pits, post-holes, spreads, and kilns, but could also be of natural origin.

Features depicted on the examined Ordnance Survey mapping were also detected, including linear anomalies corresponding with former field boundaries. Linear anomalies not recorded as field boundaries were also detected and likely represent field systems (potentially pre-OS), drains, or paths/access routes.

It was recommended that the identified anomalies be targeted during a future test trenching programme, and that any features exposed be sufficiently sectioned to assess their depth and nature. This test trenching programme was carried out in September 2026 by Deirdre Murphy of ACSU under licence 25E0385, issued by the Department of Housing, Local Government and Heritage.

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One archaeological feature was identified during testing and will be impacted by the proposed development: a spread of burnt stone and charcoal (C09.01) in Trench 9. This feature may be on the periphery of a larger burnt spread site. These monuments typically date to the Bronze Age.

No other archaeological features or deposits were identified.

Test excavations for Confey and Newtown, Co. Kildare, have concluded. The following mitigation options are recommended;

Mitigation of burnt spread C03 (in Field 2) beneath proposed residential units.

Option - Excavation (preservation by record)

- In this case preservation in-situ is not considered a viable option, therefore it is recommended that the feature be archaeologically excavated. This involves mechanically removing the topsoil surrounding the monument (c.10m x 10m) under archaeological supervision and hand excavating the feature.

Full-time archaeological monitoring of all areas of ground excavation is also recommended. This must be carried out by a suitably qualified archaeologist working under licence from the Department of Housing, Local Government and Heritage. Identification of further archaeological material during monitoring may require further mitigation, including preservation in situ and/or preservation by record (excavation), following consultation with the National Monuments Service.

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1. INTRODUCTION

This report details the results of test excavations carried out at Confey and Newtown, Co. Kildare (ITM 700682, 737446). The site lies directly north of the Royal Canal, Confey Rail Station and north of the town of Leixlip. It measures c. 6.5ha and consists of portions of two agricultural fields and a smaller, overgrown plot along the eastern portion of the site.

The test trenching was carried out in fulfilment of Further Information item no. 13 attached to Planning Ref. No. 26/60746 by Kildare County Council, and at the request of the client. These conditions were based on the recommendations of an Archaeological Impact Assessment (Collins, 2024), which recommended that a geophysical survey (25R0024) be undertaken, followed by targeted test trenching and general test trenching across the site.

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site. There are no Protected Structures as listed in the *Kildare County Development Plan 2023-2029* or sites listed in the National Inventory of Architectural Heritage (NIAH) located within the site. The southern portion of the site along the Royal Canal was previously subject to archaeological investigations in the form of test trenching (20E0227; Coughlan, 2022). This was in relation to the Leixlip Transfer Pipeline and no features were identified.

The test trenching was carried out by Deirdre Murphy of ACSU on the 3rd – 7th September 2026, under excavation licence number 25E0385, issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. The trenches were positioned to assess the archaeological potential across the footprint of the entire site.

1.1 Project Background

The proposed development is to consist of a large-scale residential development (LRD), detailed below:

PERMISSION for (A) the construction of 272 no. residential units comprising: 101 no. terraced houses (54 no. 3-bed 2 no. storey houses, 28 no. 4-bed 2 storey houses and 19 no. 4-bed 3 no. storey houses); 12 no. own door 1-bed apartment units in an end of terrace (3 storey) arrangement in 4 no. locations throughout the site; 78 no. duplex apartment units (33 no. 2-bed and 45 no. 3-bed units) provided in terraced and end of terrace (3 storey) arrangements in 13 no. locations throughout the site; and provision of a mixed use area comprising 81 no. apartments / duplex apartment units (29 no. 1-bed, 36 no. 2-bed, and 16 no. 3-bed units) in 4 no. blocks

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(Blocks A1 to A4) ranging from part 3 no. storeys up to part 6 no. storeys in total, including a podium/ground floor level; (B) The provision at ground floor of Blocks A1 to A4 of a childcare facility (c. 500 sq.m GFA) and associated play area, 3 no. commercial units with a total GFA of c. 615 sq.m (for Class 1- Shop, or Class 2- Office / Professional Services, or Class 11- Gym, or Restaurant / Café use, including ancillary takeaway use, or Class 8- Health Centre / Civic, or Cultural Use); a Restaurant / Café unit (c. 358 sq.m GFA), bike stores, bin stores, plant areas, 1 no. ESB substation and associated switch rooms, and car parking; (C) Block A1 (3 no. storeys and part 4 no. storeys over podium / ground floor level) includes 33 no. apartments (10 no. 1-bed 19 no. 2-bed, and 4 no. 3-bed units [including apartments over 2 levels]) from first floor to fourth floor level; (D) Block A2 (2 no. storeys over podium / ground floor level) includes 4 no. 3-bed duplex apartment units from first floor to second floor level; (E) Block A3 (4 no. storeys and part 5 no. storeys over podium / ground floor level) includes 36 no. apartments (15 no. 1-bed, 17 no. 2-bed units and 4 no. 3-bed units [including apartments over 2 levels]) from first floor to fifth floor level; (F) Block A4 (3 no. storeys over podium / ground floor level) includes 8 no. duplex apartment units (4 no. 1-bed and 4 no. 3 bed units) from first floor to third floor level; (G) All apartments / duplex apartment units and houses are provided with private amenity space in the form of gardens, balconies, or terraces; (H) The development provides public open space and communal open space to serve the residential units, and c. 1 ha of a linear park to the north of the Royal Canal; (I) Provision of 2 no. vehicular and pedestrian / cyclist accesses from the R149 to the east and the L1015 to the north; and proposed upgrades (horizontal widening and minor vertical road alignment) to the R149 to the east and to the L1015 along the northern boundary of the site; (J) The development will provide for a total of 370 no. car parking spaces; a total of 412 no. bicycle parking spaces; internal roads, pedestrian and cycle paths; and the provision of the proposed infrastructure up to the application site boundary to facilitate future connections to adjoining lands; (K) Provision of foul, watermain and surface water drainage, including attenuation system and upgrade works to the existing watermain along the R149; 3 no. ESB substations in total; public lighting; landscaping and boundary treatment works; PV panels; services; bin and bicycle stores throughout the site; and all associated infrastructure and site works to facilitate the development. An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) have been prepared for the development and accompany the planning application. at Lands within the townlands of Newtown and Confey, Leixlip, Co. Kildare greenfield lands to the west, the Royal Canal, railway line and Leixlip Confey Train Station to the south, and Cope Bridge to the south-east. The application site also includes a section of the L1015 to the north and a section of the R149 to the east north-east, located within the townlands of Confey and Allenswood, and the associated verges and footpaths.

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Further Information Item

13 (a)

The Applicant is requested to engage the services of a suitably qualified archaeologist (licenced under the National Monuments Acts 1930–2004) to carry out pre-development testing over the entire site. No sub-surface work shall be undertaken in the absence of the Archaeologist without his/her express consent. The Archaeologist is required to notify the Department in writing at **least four weeks prior to the commencement of site preparations**. This will allow the Archaeologist sufficient time to obtain a licence/consent to carry out the work.

(b) The Archaeologist shall carry out any relevant documentary research and may excavate test trenches at locations chosen by the Archaeologist, having consulted the proposed development plans.

(c) Archaeological testing should be informed and supplemented by licenced metal detection survey.

(d) Having completed the work, the Archaeologist should submit a written report to the Planning Authority and to the Department in advance of the planning decision. Where archaeological material/features are shown to be present, preservation in situ, preservation by record (excavation) or monitoring may be required. If significant archaeological remains are found, refusal might still be recommended, and/or further monitoring or excavation required. It is the Department of Housing, Local Government and Heritage view that a final decision should not be made on this application until the Planning Authority and the Department has had the opportunity to evaluate the Archaeological report and will forward a recommendation based on the Archaeological report to the Planning Authority.

2. SOILS, GEOLOGY AND TOPOGRAPHY

The site consisted of c. 6.5 hectares of agricultural land across the townlands of Confey and Newtown, County Kildare. The site lies directly north of the Royal Canal, Confey Rail Station, and north of the town of Leixlip.

The site has an elevation of 58–60m Ordnance Datum (OD).

The underlying geology consists predominantly of dark limestone and shale and forms part of the Lucan Formation across the site (Geological Survey Ireland). This bedrock geology is overlaid by a fine loamy drift with limestones, typical surface-water gleys (Teagasc Soil Guide).

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3. ARCHAEOLOGICAL ASSESSMENT

3.1 Archaeological & Historical Background

The proposed development lands are within the townlands of Confey (*Confai*) and Newtown (*An Baile Nua*), in the Barony of North Salt (*An Léim Thuaidh*), County Kildare. The townland of Confey is first mentioned in AD 1179, in the Calendar of Archbishop Alen's Register (AD 1172–1534), as 'Letconfi' (McNeill, 1950). A few decades later, it is again mentioned in the Calendar of Ormonde Deeds (AD 1172–1603), where in AD 1202 we see the lands surrounding Leixlip, including 'Cunisi' (Confey), are granted to Adam de Hereford by William Marshal, Earl of Pembroke, under the permission of King John (Curtis, 1932). The townland of Newtown appears much later, in AD 1575, in the Calendar of the Fiants of Queen Elizabeth (www.coblaith.net), which details how the lands of 'Lexlipp' (Leixlip), 'Neweton' (Newtown) and 'Confie' (Confey), in the Barony of 'Sawte' (North Salt) were assigned to Nicholas White, Master of Rolls, who was knighted for his service to the crown.

Prehistoric period

The hunter-gatherers of the Mesolithic period in Ireland (8000-4000 BC) were the first people to leave clues as to their way of life in the Irish landscape (Warren, 2022). While the transitory nature of hunter-gatherers means that little evidence of their dwellings is found in the landscape, it appears that many sites were reused over long periods, leaving significant accumulations of culturally modified occupation soils and worked stone tools (*ibid.*). Large deposits of worked flint, for example, can indicate that human settlement occurred in an area during the Mesolithic. Two such accumulations, located 300m apart, were discovered during excavations in Cooldrinagh, Leixlip, in 1995 and 1997 (Mullins, 1999). This material was dated to the Early Mesolithic, with some possibly later prehistoric inclusions also evident.

Further work on the Cooldrinagh site in 2005 and 2006 revealed more Mesolithic flints in a ploughsoil walkover survey and test trenching, as well as a possible hilltop cairn with deposits of burnt bone and a possible polished stone ball (Mullins, 2005). Charcoal from a series of nearby pits and post-holes also returned Bronze Age dates, suggesting that settlement evidence extended into the early second millennium BC. A series of geophysical surveys and archaeological investigations in 2006 uncovered two large adjacent monuments: the remains of a passage tomb and a small, kerbed cairn with two cists (Turrell, 2006). Fragments of burnt and unburnt human and animal bone were uncovered within the layers of the cairn, and the larger cist contained the remains of a flexed burial. These funerary monuments and evidence of settlement demonstrate repeated use of the land along the River Liffey in the Leixlip area, not far from the proposed site, throughout the Mesolithic, Neolithic and Bronze Age.

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Early Medieval period

Ireland is recorded as being divided into five provinces by the Early Medieval period. While boundaries and borders continually changed due to constant fighting between the early chieftains, the areas south of the River Liffey were generally considered part of the Kingdom of Laigin or Leinster (Ryan, 1949). Ryan (ibid.) argues that the area of Leixlip, near the Rye Water, was a common crossing point for the Meath armies wanting to locate one of the five great roads – the Slige Cualann, to then march on the Leinster men.

While no clear date exists for when the Vikings settled and named Leixlip, it was definitely known to them by the tenth century. A great battle is said to have taken place at *Cenn Fúait* (Confey) in AD 917, in which many notable leaders died, and it was eventually won by the Vikings (Bhreathnach, 1999). Great battles like the one at Cenn Fúait allowed the Vikings to gain an invaluable foothold in the Dublin landscape. By the twelfth century, the Vikings are thought to have controlled the area from Ballygunner and Windgate in Wicklow, to Skerries and Balbriggan in the north, from the coast to Leixlip and Lyon Hill in the east (Bradley, 1988). While we have references to the Church of Confey from AD 1179 onwards, Bhreathnach (1999) posits that the Vikings may have been drawn to the area of Leixlip because of its association with the Columba Church in Confey, suggesting that a church existed here well before the Anglo-Normans arrived in the twelfth century. It can be argued that at least the nave of the church at Confey shares similar construction details as those of St Kevin's Church and Cathedral at Glendalough, which are dated to the ninth and tenth centuries, respectively, placing the construction date before the Anglo-Norman invasion (O'Keeffe, 1985).

Late Medieval period

When the Anglo-Normans arrived and defeated the Irish Chieftains, the cantred of Offelan, nearest to Dublin, was given to Adam de Hereford for his service. De Hereford gave the lands surrounding Celbridge and Clane to his two brothers, keeping the lands around Leixlip and the Barony of North Salt for himself, building a castle (Leixlip Castle) on a high promontory at the junction of the Rye Water and the River Liffey in Leixlip (Orpen, 1968). The castle remains today as the longest continually inhabited castle in Ireland. The castle's importance was recognised by King John when he visited Ireland in AD 1210, staying there as his hunting retreat. When Edward the Bruce invaded Ireland between AD 1315 and 1318, in an effort to weaken the English monarchy, he set his sights on Dublin in AD 1316. When the inhabitants of Dublin resisted the advancing Scots by building walled defences and setting fire to the suburbs, however, Bruce turned his attention to ravaging the lands of Sir Edmund Butler, Earl of Carrick and Ormond. This included a four-day siege of Leixlip Castle, which remained impregnable and kept those within safe (Hore, 1857).

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During the fourteenth century, the Eustace family appears in the records as owning lands in Kildare, including Confey (O’Keeffe, 1985). While it is referred to as ‘Confey Castle’ in records from the seventeenth century onwards, in truth it is much more likely to have been a three-storey tower house (ibid.) The castle was transferred to Nicholas Whyte in AD 1575, after he had bought Leixlip Castle in AD 1567. Whyte’s father was the steward to the Earl of Ormonde and was raised among the wealthy English landowning elite in Ireland at the time. He studied law and had a successful career as a lawyer, judge and politician. Despite working all his life to further English Rule over Ireland, he was accused of treason in AD 1589, arrested and died in the Tower of London in AD 1592. His family retained the ownership of Leixlip Castle until AD 1728, when William Conolly bought it.

Confey Castle was probably constructed in the fifteenth century by the Eustace family, and it appears on the Down Survey Map of AD 1656–58 (Manning, 2001). An illustration of Confey Castle from AD 1836 depicts it in ruins, and the artist notes that not a stone is left standing (ibid.). However, this is not quite true as O’Keeffe (1985) describes how three short walls of a small square or rectangular tower remain. The presence of the tower house does indicate some wealth existed in the townland of Confey during the medieval period; records also suggest the presence of a corn mill in the locale (ibid.).

Early Modern period

The Royal Canal was first proposed in AD 1755 as part of a 1715 Act of Parliament whose main aim was to develop the bogs and waste ground of the Midlands, improve communication throughout the country and increase economic development by joining a number of rivers and channels together (Clarke, 1993). The Royal Canal Company began construction in 1790, appointing Richard Evens as the Head Engineer. The construction project began well; however, it was plagued with financial problems, rebuilds and subpar construction of bridges and locks. One example is a request by the Duke of Leinster to have the canal pass through the town of Maynooth, which necessitated the construction of an aqueduct to carry the canal 100 feet above the Rye Water near Leixlip. Evens estimated the cost of the aqueduct at approximately £8,449; however, after three years of construction, the cost was tallied at approximately £28,230 (ibid.). Trade and transport on the canal opened in 1796, shuttling customers from Dublin to Leixlip at a very reasonable 1s-1d for a first-class ticket, with dining facilities on board (ibid.). The canal struggled to maintain adequate water levels during the nineteenth century, which greatly increased maintenance costs and reduced income.

In 1845, the Midland Great Western Railway Company bought the canal with the intention of constructing a railway within the bed of the canal. However, they were precluded from this and instead constructed the

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railway alongside the canal as a separate transport system (Clarke, 1993). The railway company completed its tracks by 1850 and did its best to diminish canal boat transport; by 1951, it had achieved a full cessation of canal transport. By 1961, the canal was owned by *Córas Iompair Éireann (CIÉ)*, which had dammed it west of Mullingar, allowing it to fall into disrepair. In 1974, the Royal Canal Amenity Group was established to highlight the canal's amenity potential and to save it; it is now once again navigable (ibid.).

3.2 Previous Archaeological Investigations

The southern portion of the site, the strip along the Royal Canal, was subject to investigations (20E0227; Coughlan, 2022). This was in relation to the Leixlip Transfer Pipeline and no features were identified within the current site.

As part of the proposed development at the site, a geophysical survey was conducted by Donald Murphy of Archaeological Consultancy Services Unit, under licence 25R0024. This identified spread/pit remains that could not be conclusively categorised as archaeological. Linear responses were also identified, but again an archaeological origin could not be discerned from the results. It was therefore recommended that these responses be assessed by means of test excavations (test trenching) to determine their nature and extent.

Table 1: Geophysical survey results

Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
-	?Archaeology	Small to medium anomalies: pits, posts, spreads, kilns, cut features	A series of positive anomalies occur sporadically across the survey area. These might represent cut features such as pits, postholes, spreads, kilns, or other types of archaeological features. May also be natural in origin.
-	Magnetic interference/ increased magnetism	Buried Service - Layout of the Leixlip Transfer Pipeline	Perpendicular lines of magnetic interference in Field 1 that correspond with ground disturbance associated with the Leixlip Transfer Pipeline. Visible on Google Earth aerial imagery in 2018 and 2021.
-	Magnetic interference/ increased magnetism	Magnetic debris	Broad dipolar response of magnetic debris along the eastern boundary of Field 1 generally associated with ground disturbance. It could possibly be in relation to works associated with the Leixlip

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Anomaly No.	Form/Nature of Anomaly	Possible Source(s) of Anomaly	Description
			Transfer Pipeline.
-	Linear features	Former field boundaries	Positive linear anomalies that correspond with former field boundaries depicted on the first edition Ordnance Survey (OS) 6-inch map, surveyed 1836, and the third edition Ordnance Survey (OS) 25-inch map, surveyed 1908.
-	Linear features	Early field systems?	Positive linear and curvilinear anomalies that may represent former field divisions that are not depicted on OS mapping.
-	Ferrous	Magnetic disturbance from modern debris	Bipolar anomalies occur sporadically, often associated with magnetic interference from modern ferrous materials, either in the topsoil or at the surface of the survey area.

Listed below (Table 2) are the nearest previous archaeological investigations undertaken in the environs of the site (see Figure 2), which further demonstrate the overall archaeological potential of the site and its surrounding townlands. The following information was taken from the *Database of Irish Excavation Reports* (www.excavations.ie). Where applicable, associated reports were accessed through the National Monuments Service's (NMS) Virtual Reading Room.

Table 2: Previous archaeological investigations within the environs of the site

Excavation.ie reference	Licence No.	Site-Type	Investigation Type
2020: 475 – Leixlip Transfer Pipeline, Dublin	20E0227	Pits associated with burnt mound activity	Excavations were carried out across three areas in Allentown (1 and 2) and Hiltown (1), Co. Dublin, as part of a proposed pipeline development. The majority of features recorded contained fills with inclusions of burnt/shattered stones with charcoal and are characteristic of burnt mound related activity. They

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Excavation.ie reference	Licence No.	Site-Type	Investigation Type
			were situated in 3 separate areas, along a length of wayleave measuring roughly 2.5km, located between the north of the Royal Canal and south of the Dublin Docklands – M3 Parkway railway line.
2007:505 – Dublin: St Catherine’s Park, Dublin	07E0775	Structure	Testing was carried out during August 2007 on the northern bank of the River Liffey at St Catherine’s Park, as part of the Leixlip–Ballycoolen water supply scheme. Two areas of possible cobbled surface were revealed at the eastern edge of the pipeline wayleave after it had been stripped of topsoil. Furthermore, the remains of a stone revetting wall were also discovered along the northern bank of the river. A stone feature was also discovered in a trench along a section of the wayleave that was preserved in situ.
1997:277 – Leixlip: St. Catherine’s Park, Kildare	97E0428	Habitation site	Archaeological monitoring works associated with the Lower Liffey Valley Regional Sewerage Scheme exposed A number of features. They consisted of a box drain, a wall and an associated gravel surface, and two associated walls and a cobble surface.

3.3 Recorded Monuments

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site.

Below (Table 3) is a list of these monuments relevant to the site (Figure 2). These descriptions are derived from the National Monuments Service Archaeological Survey Database (<https://heritagedata.maps.arcgis.com/apps/webappviewer/>).

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Table 3: Recorded Monuments in the environs of the site

KD006-003----	Church	Confey
<p>O'Neill (2004-5, 416-9), acknowledging previous studies by O'Keeffe (1985-6, 408-17) and Manning (2002, 18-21), argues for three building phases here: he suggests that an original 11th-century, single cell structure (int. dims. L 8.3m E-W; Wth 4.68m) was converted into a nave when a chancel and chancel arch were added to its E end in the 12th-century (when it was a possession of the diocese of Glendalough), with the building being enlarged again, probably in the 15th-century, when the nave was extended, to the W. At the N end of a graveyard (KD006-003001-) within a possible field system (KD006-017----). A fairly poorly preserved, ivy-clad rectangular structure comprising a well-built nave (int. dims. L 14.5m E-W; Wth. 4.7m) of roughly dressed and coursed, limestone blocks, to the E end of which a smaller (int. dims L 5m E-W; Wth 3m) more crudely built chancel was added, but not bonded. The W end of the nave has collapsed, but the inner face of a doorway (Wth 1.7m) with segmented arch survives towards the W end of the S wall, together with traces of a possible opposing, but now blocked, doorway in the N wall. The nave is lit by two very narrow windows at the E end of the S wall; the more westerly of which is lintelled, while the easterly one although round-arched has a tympanum-stone under the arch giving a square-headed ope. Two similar, opposing windows occur in the chancel, near the E end of its N and S walls, and there is a third in the E gable wall of the nave (with a similar tympanum to the one in the S wall) which was blocked-up when the round-headed chancel arch (Wth. 2m; H 1.8m), which springs from rectangular abacuses, was inserted. The chancel was lit by a window in its E gable wall which is robbed-out, and by a narrow flat-headed window, now blocked, at the W end of the S wall. The interior contains 18th/19th century burials marked by headstones, and piles of collapsed building stones.</p>		
KD006-003001-	Graveyard	Confey
<p>In open level pasture, separated from Confey Castle (KD006-004----), c. 160m to the ENE, by a small S-flowing stream which is spanned by a small bridge, and within a possible field system (KD006-017----). A medieval church (KD006-003----) stands at the N end of the graveyard which is shown on the 1st ed. (1838) of the OS 6-inch map as a sub-rectangular area (dims. L c. 40m N-S; Wth c. 30m) which was extended significantly (L plus c. 140m) to abut the road to the S as shown on the latest ed. (1939) of the OS 6-inch map, and was subsequently extended again, to the E (Wth plus c. 50m) to its present limits. The graveyard is enclosed by a mortared stone wall and the earlier burials occur at the N end, around and to S of the church. Legible</p>		

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gravemarkers date from the 18th century to the present-day and Colgan and Cormack (2004-5, 502-535) have published a survey of the gravestones.

KD006-004----	Castle – tower house	Confey
<p>Manning (2001, 143-5) published a mid-19th century watercolour by Du Noyer which shows one half of the castle standing to full, five story plus attic, height. There is a vault over the first floor, two projecting, parapetted corner towers are depicted and a heap of rubble is shown on the levelled half of the monument. In open, level pasture, drained to the W by a small, S-flowing stream. The castle stands within a field system (KD006-017----) which also appears to extend around a medieval church (KD006-003----) and graveyard (KD006-003001-) c. 160m to the WSW, the intervening stream being crossed by a small bridge c. 50m to the WSW of the castle. The surviving remains comprise an ivy clad, single, small and now only three storeys high, rectangular corner tower (int. dims. L 1.9m; Wth 1.5m), built of roughly coursed, unbattered, limestone blocks (wall T 0.95m) with hammer-dressed quoins. A narrow lintelled loop is visible in the SW wall at first-floor level. The tower appears to have projected to the SW from the SW angle of the tower house (max. projection 2.3m) and does not appear to have contained a stairs. (O'Keeffe 1985-6, 408-17)</p>		
KD006-017----	Field boundary	Confey
<p>Covering a roughly rectangular area (dims. L c. 450m E-W; Wth c. 280m N-S) in fairly level, wet pasture, bisected by a small S-flowing stream which separates a medieval church (KD006-003----) and graveyard (KD006-003001-) to the SW from a tower house (KD006-004----) to the NE. The remains to the E of the stream, around the castle, comprise a rectangular area (dims. L c. 70m E-W; Wth c. 55m) defined along the S and at the SW corner by a low, broad, earthen bank (Wth 4-5m; int H 0.4m; ext H 1m) and a wide, shallow, outer fosse (Wth 4m; D 0.4-1m) which is crossed mid-way along it's length by an earthen causeway (Wth 4m). A shallow, roughly circular pond (diam c. 12m; D 0.5m) occurs at WSW and is fed from the N by a meandering fosse/drain (Wth 4m; D 1-1.5m) which forms the W limits and which angles sharply E at NW and continues in a straight line E to meet a more modern earthen field boundary which runs N-S and forms the E limits of the site. Traces of low, narrow cultivation ridges (Wth 1.4m; H 0.10-0.15m) with narrow furrows (Wth 0.3-0.4m) running N-S survive in the N-third of the pastured interior, while to the S, similar but more denuded ridges run E-W. Abutting the external SW corner and sharing the main field's fosse at SE and along the S is a smaller rectangular area (dims. L c. 20m E-W; Wth c. 14m) defined along the W by a narrow, shallow fosse (Wth 1.3m; D 0.2m) and along the N by a low scarp (ext H 0.5m) with lower, wetter ground outside. The interior also contains low, narrow cultivation ridges running N-S. Immediately W of this small</p>		

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field is the low platform marking the levelled portion of the tower house and just beyond to the W there is a small sub-rectangular enclosure (dims. L c. 10m N-S; Wth c. 8m) abutting the S-flowing stream at W and defined along N, E and S by a low earthen bank (Wth 2-3m; H 0.4-0.6m). Across the stream, to the W, the remains survive to the W of the church and graveyard and comprise a long, gently curving chord of fosse (possibly the remains of an ecclesiastical enclosure?), (L c. 93m NE-SW; Wth 4m; D 0.5m) which abuts the stream at its N end and which is truncated by a low WNW-ESE scarp (H 0.6m) at the S end. Mid way along its length a similar fosse runs E to the graveyard wall while near its N end a low scarp (H 0.5m) runs SE towards the church, immediately N of which is a low, oval earthen mound (diams. 10m NE-SW; 6m NW-SE; H 0.3-0.5m) defined by a scarp.

3.4 Record of Protected Structures and National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) identifies, records, and evaluates the post-1700 architecture of Ireland in order to protect and conserve our built heritage. It is under the administration of the Department of Housing, Local Government and Heritage. It also forms the basis of a list for structures that should be included in the Record of Protected Structures (RPS) compiled by local authorities.

A Protected Structure is a structure that a planning authority thinks is of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social, or technical point of view. The structure is recognised as important and is protected from harm under legislation. Every local authority in Ireland must include a Record of Protected Structures in its development plan.

The nearest such structure is Confey Church ruins (B06-03), the Tower of Confey Castle (B06-04), and Confey Abbey (B06-10) as listed in the *Kildare County Development Plan 2023–2029*. None of these structures are included in the NIAH (Table 4; Figure 2).

Table 4: List of RPS sites in the environs of the site

RPS No.	NIAH No.	Name	Description
B06-03	-	Confey Church Ruins	Church ruins
B06-04	-	Tower of Confey Castle	Tower of Castle
B06-10	-	Confey Abbey	Lodge

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3.5 Finds listed within the Topographical Files of the National Museum of Ireland

The Topographical Files of the National Museum of Ireland were requested to assess the area's archaeological potential. These files list all archaeological artefacts in the care of or known to the museum. Such a record can provide evidence for human settlement or activity in the absence of physical remains or documentary references. The topographical files are listed below (Table 5) for the townlands of Confey & Newtown, Co. Kildare.

Table 5: Topographical Files for the townlands of Confey and Newtown, Co. Kildare

Register Number	Simple Name	Material	Find Place	Townland	County	Details
1993: 3	Spur	Iron	Confey Castle	Confey	Kildare	Decorated iron child's spur with possible applied copper alloy. Decoration consists of a child's face on either side, one of which has come detached, and floral motifs. One of the terminals in missing.
2011:239	Brooch	Copper Alloy	Confey Road (R149)	Confey	Kildare	Ring of a zoomorphic penannular brooch, possibly originally enamelled in the terminals. The pin is missing. The ring was cast at one piece with animal heads at each of the terminals, their snouts facing inwards towards the ring. The terminals are flattened

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						and contain a Maltese cross in relief.
1935:450	Axehead	Bronze	NEWTOWN		Kildare	
1936:1897	Ringed pin	Bronze	NEWTOWN	Temple na Shanagh	KILDARE	
1936:1898	Brooch	Bronze	NEWTOWN	Temple na Shanagh	KILDARE	
1979:71	Spearhead	Bronze	NEWTOWN	Exposed section face c.14" deep	KILDARE	
2008C1:726	Weight	Lead	NEWTOWN	UNKNOWN	KILDARE	
2008C1:727	Clay pipe	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:728	ANIMAL REMAINS	ANIMAL REMAINS	NEWTOWN	UNKNOWN	KILDARE	
2008C1:729	Glass	Glass	NEWTOWN	UNKNOWN	KILDARE	
2008C1:730	Glass	Glass	NEWTOWN	UNKNOWN	KILDARE	
2008C1:731	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:732.1	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:732.2	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:732.3	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:732.4	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:732.5	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	

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2008C1:732.6	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.1	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.10	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.11	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.12	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.2	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.3	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.4	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.5	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.6	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.7	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.8	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:733.9	Pottery	Ceramic	NEWTOWN	UNKNOWN	KILDARE	
2008C1:737	Stirrup	Copper alloy	NEWTOWN	UNKNOWN	KILDARE	
2008C1:738	Object	Copper alloy	NEWTOWN	UNKNOWN	KILDARE	
2008C1:739	Sheet metal	Copper alloy	NEWTOWN	UNKNOWN	KILDARE	
2008C1:740	Mount	Copper alloy	NEWTOWN		KILDARE	

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2008C1:741	Mount	Copper alloy	NEWTOWN		KILDARE	
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3.6 Cartographic Evidence

A review of available historic mapping (Figures 3 and 4) for the area was carried out to include the 6-inch 1836 and the 25-inch 1908 editions of the Ordnance Survey maps. Potential archaeological or cultural heritage features are marked on such maps and provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains. No archaeological or cultural heritage features are shown within the proposed development site on the examined mapping.

The 1836 map illustrates the site with several field divisions that no longer exist. The townland boundary between Confey and Newtown is depicted traversing the site. Two structures are also depicted that no longer exist: a larger sub-rectangular house adjacent to what is now the L1015 Dunboyne Road, and a sub-rectangular building along the R149 within the overgrown plot. On the 1908 map, both buildings are no longer depicted. Some field divisions have also been removed, and the Church (KD006-003----), northeast of the site, is depicted as sub-rectangular in plan. The 'Midland Great Western Railway' is also depicted on this map, directly south of the site and the Royal Canal.

No archaeological or cultural heritage features are shown within the proposed development site on the examined mapping.

3.7 Aerial Photography

Aerial photographs dating between 1995 and 2018 from the Ordnance Survey of Ireland were reviewed. The Google Earth imagery dating between 2009 and 2024 was also examined. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field.

The 1995 aerial shows further field divisions have been removed since the 25-inch 1908 edition Ordnance Survey map, and these field divisions are visible as cropmarks throughout the aerial imagery. The fields have been in agricultural use throughout the aerial imagery. The field adjacent to and west of the Recorded Monuments Church & Graveyard has several cropmarks and upstanding banks visible that could represent the remains of an ecclesiastical enclosure. This can be seen clearly extending into the adjacent field as a curving linear cropmark on the Google Earth Aerial Imagery from 2018 and 2022. The field on the eastern side of the

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Church & Graveyard also has very visible banks and ditches that pertain to the Recorded Monument KD006-017---- Field system. KD006-004---- Castle – tower house is also located within this field. These features are most visible in the Google Earth Aerial Imagery 10/2024.

4. METHODOLOGY

4.1 Test Excavation & Metal Detection

Test excavation was carried out in accordance with the *IAI Code of Conduct for Archaeological Assessment Excavation* (Institute of Archaeologists of Ireland 2006). All trenches were excavated to natural by a mechanical excavator with a toothless grading bucket under the direct supervision of a suitably qualified archaeologist (Deirdre Murphy).

All spoil from the trenches was also examined for artefacts and metal detected licence No. 26R0552.

A small number of features were sectioned by hand using hand mattocks and trowels to investigate their depth.

Metal Detection

A metal detector device was also used by the licence holder during the archaeological test excavations. The ground surface and spoil (topsoil) from the excavations were swept with a Garrett ATX metal detector under licence No. 26R0552.

No artefacts were detected during the course of the metal detection.

4.2 Conditions

Weather throughout the duration of the on-site works was dry and sunny. No livestock were present in the fields during the test trenching.

4.3 Constraints on Methods

There were a number of constraints that prohibited the excavation of nineteen trenches. These were;

- Trench 7 (Field 2) – trench cut short due to proximity of gas pipeline
- Trench 8 (Field 2) – trench cut short due to proximity of gas pipeline

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- Trench 9 (Field 2) – trench cut short due to proximity of gas pipeline
- Trench 31 (Field 2) – trench cut short due to proximity of gas pipeline
- Trench 25 – 27 (Field 2) – not excavated due to proximity of gas pipeline
- Trench 29 (Field 2) – not excavated due to proximity of gas pipeline
- Trench 32 (Field 2) – not excavated due to proximity of gas pipeline
- Trench 43 - 50 (Field 1) – not excavated due to proximity of gas pipeline
- Trench 55 - 56 (Field 1) – not excavated due to proximity of gas pipeline
- Trenches 34, 54, 37, and 38 were realigned and excavated as one trench (37) perpendicular to their previous layout in order to avoid the ground disturbance in the southern portion of the field.
- Trenches 39, 40, and 41 were realigned and excavated as one trench (40) perpendicular to their previous layout in order to avoid the ground disturbance in the southern portion of the field.

4.4 Palaeo-environmental Sampling

No palaeo-environmental samples were collected.

4.5 Finds Retrieval

No artefacts were retrieved during the excavation

5. TEST EXCAVATION RESULTS

The test trenches were excavated to target anomalies identified by the geophysical survey (25R0024) to assess their extent, significance and nature.

Only one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2 (Figure 5).

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Table 6: Trench descriptions

Trench Number	Length (m)	Trench depth (m)	Description
1	55	0.42	<p>West-northwest- east-southeast aligned trench in Field 2 (Figure 5, Plate 1). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stones throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
2	30	0.40	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 2). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
3	25	0.30	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 3). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
4	40	0.38	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 4). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
5	25	0.41	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 5). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
6	40	0.38	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 6). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p>

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Trench Number	Length (m)	Trench depth (m)	Description
			No archaeological structures, features, or deposits were identified in the trench.
7	50	0.35	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plates 7-8). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with occasional small angular stone throughout.</p> <p>Contained a stone drain aligned northeast-southwest in the middle of the trench</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
8	40	0.36	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 9). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent angular stone throughout. The natural subsoil changes to a dark grey marl silty clay towards the eastern end of the trench where the ground is wetter.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
9	45	0.40	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plates 10-12). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow brown sandy clay with frequent angular stone throughout.</p> <p>A small spread of charcoal and fired stone was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest (Plate 10).</p>
10	35	0.38	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 13). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
11	20	0.44	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 14). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
12	35	0.46	West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 15). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was

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Trench Number	Length (m)	Trench depth (m)	Description
			<p>a mid-brown, yellow stoney sandy clay with frequent small angular stone throughout.</p> <p>Cultivation furrows were identified running through the trench, aligned east-west on the same alignment as the current crop. Field boundary identified at western end of trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
13	20	0.45	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plates 16-17). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout.</p> <p>East-west aligned stone drain identified in trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
14	25	0.40	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plates 18-19). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a yellow/grey sandy clay with frequent angular stone throughout.</p> <p>North-northeast-south-southwest aligned field boundary identified at the western end of the trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
15	30	0.44	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plates 20-21). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light brown, yellow sandy clay with frequent angular stone throughout.</p> <p>North-northeast-south-southwest aligned field boundary identified in western end of trench (as in Trench 14).</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
16	30	0.4	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 22). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light brown/orange sandy clay with frequent decayed stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
17	25	0.30	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plate 23). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was</p>

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Trench Number	Length (m)	Trench depth (m)	Description
			<p>a light brown, yellow sandy clay with occasional angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
18	25	0.3	<p>West-northwest - east-southeast aligned trench in Field 2 (Figure 5, Plate 24). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light brown, yellow sandy clay with occasional angular stone throughout.</p> <p>A furrow ran the length of the trench, aligned roughly east-west.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
19	55	0.45	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 25). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light grey/yellow sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
20	25	0.42	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 26). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow/grey sandy clay with pockets of angular stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
21	20	0.40	<p>West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 27). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown, orange sandy clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
22	30	0.42	<p>West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 28). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light-brown, sandy stoney clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
23	40	0.43	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plates 29-30). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-brown/yellow sandy stoney clay.</p>

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Trench Number	Length (m)	Trench depth (m)	Description
			<p>A field boundary aligned north-northeast – south-southwest was identified in the middle of the trench, containing a mid-brown silty clay and measuring 0.6m in width.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
24	40	0.40	<p>North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 31). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a mid-brown/yellow sandy stoney clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
25	-	-	Not excavated due to proximity of gas pipeline
26	-	-	Not excavated due to proximity of gas pipeline
27	-	-	Not excavated due to proximity of gas pipeline
28	35	0.42	<p>Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 32). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a yellow/brown sandy clay with frequent angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
29	-	-	Not excavated due to proximity of gas pipeline
30	25	0.30	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plate 33). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-dark brown sandy clay with frequent small angular stone throughout.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
31	25	0.38	<p>Northeast - southwest aligned trench in Field 2 (Figure 5, Plates 34-35). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a yellow/grey sandy clay with frequent small angular stones throughout.</p> <p>A linear field boundary was identified that is depicted on the first edition Ordnance Survey map. It was aligned east-northeast – west-southwest and measured 0.85m in width.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
32	-	-	Not excavated due to proximity of gas pipeline

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Trench Number	Length (m)	Trench depth (m)	Description
33	25	0.60	<p>North-northeast – south-southwest aligned trench in Field 1 (Figure 5, Plate 36). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown sandy clay.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
34	-	-	Merged with trench 37
35	30	0.43	<p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plates 37-38). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a light brown, yellow sandy clay at the western end that changed to an orange/brown sandy clay to the east.</p> <p>Stone filled drain aligned east-west was identified on the eastern side of the trench.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
36	30	0.48	<p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 39). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow, sandy stoney clay.</p> <p>Pockets of loose clay from decayed stone similar to boulder clay from the middle and eastern portion of the trench. Pockets of loose clay may represent geophysical anomalies detected in this area.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
37	50	0.42	<p>Trench realigned to incorporate Trenches 34, 35, 36, and 38 of the initial trench layout. The trench was realigned due to the proximity of a gas pipeline in the southern portion of Field 1.</p> <p>West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 40). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow sandy boulder clay with occasional fractured stone.</p> <p>No archaeological structures, features, or deposits were identified in the trench.</p>
38	-	-	Merged with Trench 37
39	-	-	Merged with Trench 40
40	60	0.44	<p>Trench realigned to incorporate trenches 39, 40, and 41 of the initial trench layouts. The trench was realigned due to the proximity of a gas pipeline in the southern portion of Field 1.</p>

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Trench Number	Length (m)	Trench depth (m)	Description
			West-northwest - east-southeast aligned trench in Field 1 (Figure 5, Plate 41). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a brown, yellow sandy boulder clay with occasional fractured stone. No archaeological structures, features, or deposits were identified in the trench.
41	-	-	Merged with Trench 40
42	30	0.38	West-northwest- east-southeast aligned trench in Field 1 (Figure 5, Plate 42). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown/yellow with occasional decayed stone. No archaeological structures, features, or deposits were identified in the trench.
43	-	-	Not excavated due to proximity of gas pipeline
44	-	-	Not excavated due to proximity of gas pipeline
45	-	-	Not excavated due to proximity of gas pipeline
46	-	-	Not excavated due to proximity of gas pipeline
47	-	-	Not excavated due to proximity of gas pipeline
48	-	-	Not excavated due to proximity of gas pipeline
49	-	-	Not excavated due to proximity of gas pipeline
50	-	-	Not excavated due to proximity of gas pipeline
51	60	0.38	Northwest - southeast aligned trench in Field 2 (Figure 5, Plate 43). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-yellow sandy clay with frequent angular stone throughout. Area of marl-like clay towards the southeastern end of the trench may indicate recent ground disturbance or standing water. No archaeological structures, features, or deposits were identified in the trench.
52	30	0.41	North-northeast – south-southwest aligned trench in Field 2 (Figure 5, Plate 44). Topsoil (C1) was a mid-brown loamy clay. Natural (C2) was a light grey/yellow sandy clay. No archaeological structures, features, or deposits were identified in the trench.

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Trench Number	Length (m)	Trench depth (m)	Description
53	25	0.45	West-northwest - East-southeast aligned trench in Field 2 (Figure 5, Plate 45). Topsoil (C1) was a dark brown loamy clay. Natural (C2) was a mid-brown, yellow sandy clay. Field boundary aligned north-northeast-south-southwest identified in northern portion of the trench No archaeological structures, features, or deposits were identified in the trench.
54	-	-	Merged with Trench 37
55	-	-	Not excavated due to proximity of gas pipeline
56	-	-	Not excavated due to proximity of gas pipeline

Table 7: Context descriptions

Context	L(m)	W(m)	D(m)	Basic Description
C1	-	-	0.2-0.4	Topsoil
C2	-	-	-	Natural
C09.01	0.80m	0.5m	-	A small spread of charcoal and fired stone identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest (Plate 10).

6. MATERIAL CULTURE

No archaeological objects or finds were recovered, and no palaeo-environmental samples were taken.

7. CHRONOLOGY/DATING

One feature (C09.01) was identified during the test excavations and consisted of a spread with similar inclusions of burnt stone and charcoal to a burnt spread or fulachtaí fia. These are common archaeological monuments that typically date to the Bronze Age (2200-700 BC).

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8. IMPACT ASSESSMENT

The proposed development of this site has the potential to impact features of archaeological significance identified at the following locations, if not adequately mitigated:

- Spread of burnt stone and charcoal C09.01 (Trench 9, Field 2)

9. CONCLUSIONS & RECOMMENDATIONS

Test excavations for Confey and Newtown, Co. Kildare have concluded. The following mitigation measures are recommended;

Mitigation of burnt spread C03 (in Field 2) beneath proposed residential units.

Option: - Excavation (preservation by record)

- In this case preservation in-situ is not considered a viable option, therefore it is recommended that the feature be archaeologically excavated. This involves mechanically removing the topsoil surrounding the monument (c.10m x 10m) under archaeological supervision and hand excavating the feature.

Full-time archaeological monitoring of all areas of ground excavation is also recommended. This must be carried out by a suitably qualified archaeologist working under licence from the Department of Housing, Local Government and Heritage. Identification of further archaeological material during monitoring may require further mitigation, including preservation in situ and/or preservation by record (excavation), following consultation with the National Monuments Service.

10. POST-EXCAVATION PROGRAMME

No samples or artefacts were collected. No post-excavation programme is required.

11. EXCAVATION BULLETIN

County: Kildare

Site name: Confey and Newtown

Sites and Monuments Record No.: N/A

Licence number: 25E0385

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Author: Deirdre Murphy

Site type: Test Trenching

Period/Dating: Bronze Age

ITM: 700682, 737446

Date of completion: September 2026

Summary:

Test excavations were carried out at Confey and Newtown, Co. Kildare (ITM 700682, 737446). The site lies directly north of the Royal Canal, Confey Rail Station and north of the town of Leixlip. It measures c. 6.5ha and consists of a portion of two agricultural fields and a small, overgrown plot along the eastern side. The test trenching was carried out in fulfilment of Condition 13 attached to Planning Ref. No. 26/60746 by Kildare County Council, and at the request of the client. These conditions were based on the recommendations of an Archaeological Impact Assessment, which recommended a geophysical survey (25R0024), followed by targeted test trenching and general test trenching across the site.

The site contains no monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). KD006-003---- Church & KD006-003001- Graveyard are located directly northeast of the site. There are no Protected Structures as listed in the *Kildare County Development Plan 2023-2029* or sites listed in the National Inventory of Architectural Heritage (NIAH) located within the site. The southern portion of the site, along the Royal Canal, was subject to archaeological investigations previously in the form of test trenching (20E0227). This was in relation to the Leixlip Transfer Pipeline, and no features were identified within the current site.

The test trenches were excavated to target anomalies identified by the geophysical survey (25R0024) to assess their extent, significance and nature. Only one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 in Field 2. It was identified at the western end of the trench (C09.01). It measured 0.8m northeast-southwest and 0.5m northwest-southeast. It extended beyond the limits of the trench to the southwest. No other features of archaeological significance were identified.

Deirdre Murphy, Archaeological Consultancy Services Unit Ltd, Unit 21 Boyne Business Park, Greenhills, Drogheda, Co Louth A92 DH99

12. PUBLICATION PLAN

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An account of this archaeological assessment and its results will be published online as an excavation bulletin for the *Database of Irish Excavation Reports* (see Section 11).

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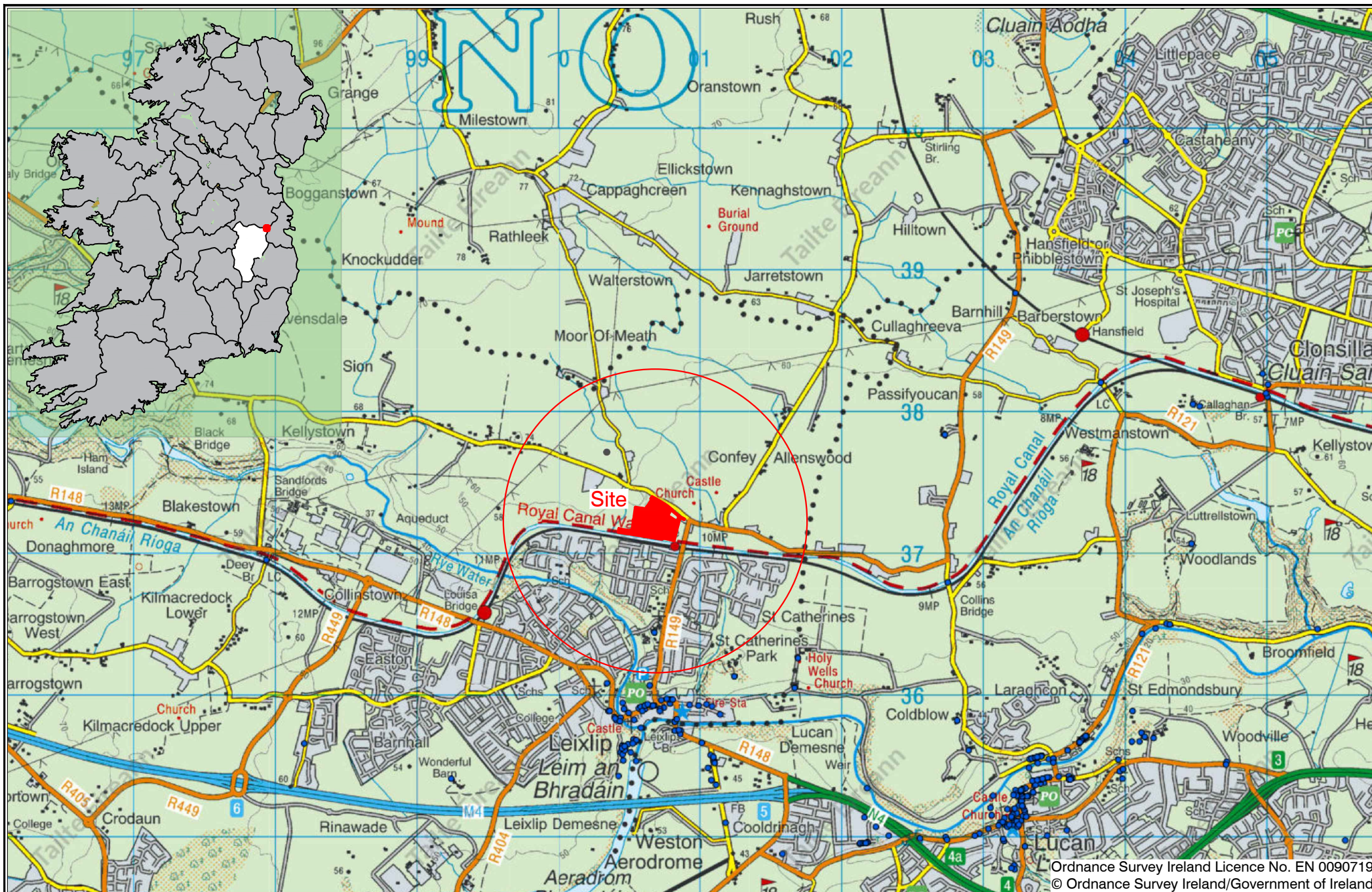
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Project: Confey and Newtown, Co. Kildare (24178)

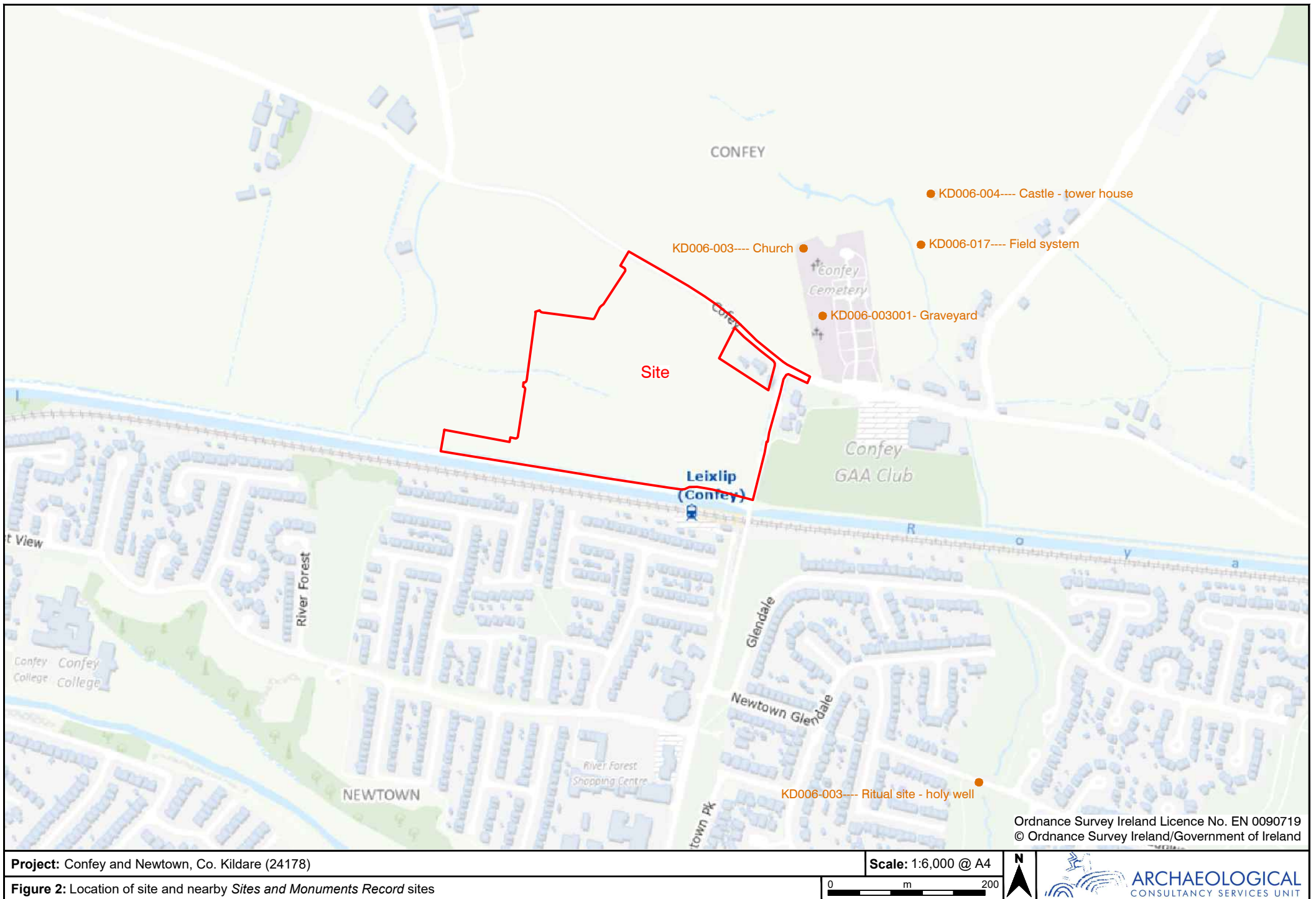
Figure 1: Location of site

Scale: 1:35,000 @ A4

0 km 1



ARCHAEOLOGICAL
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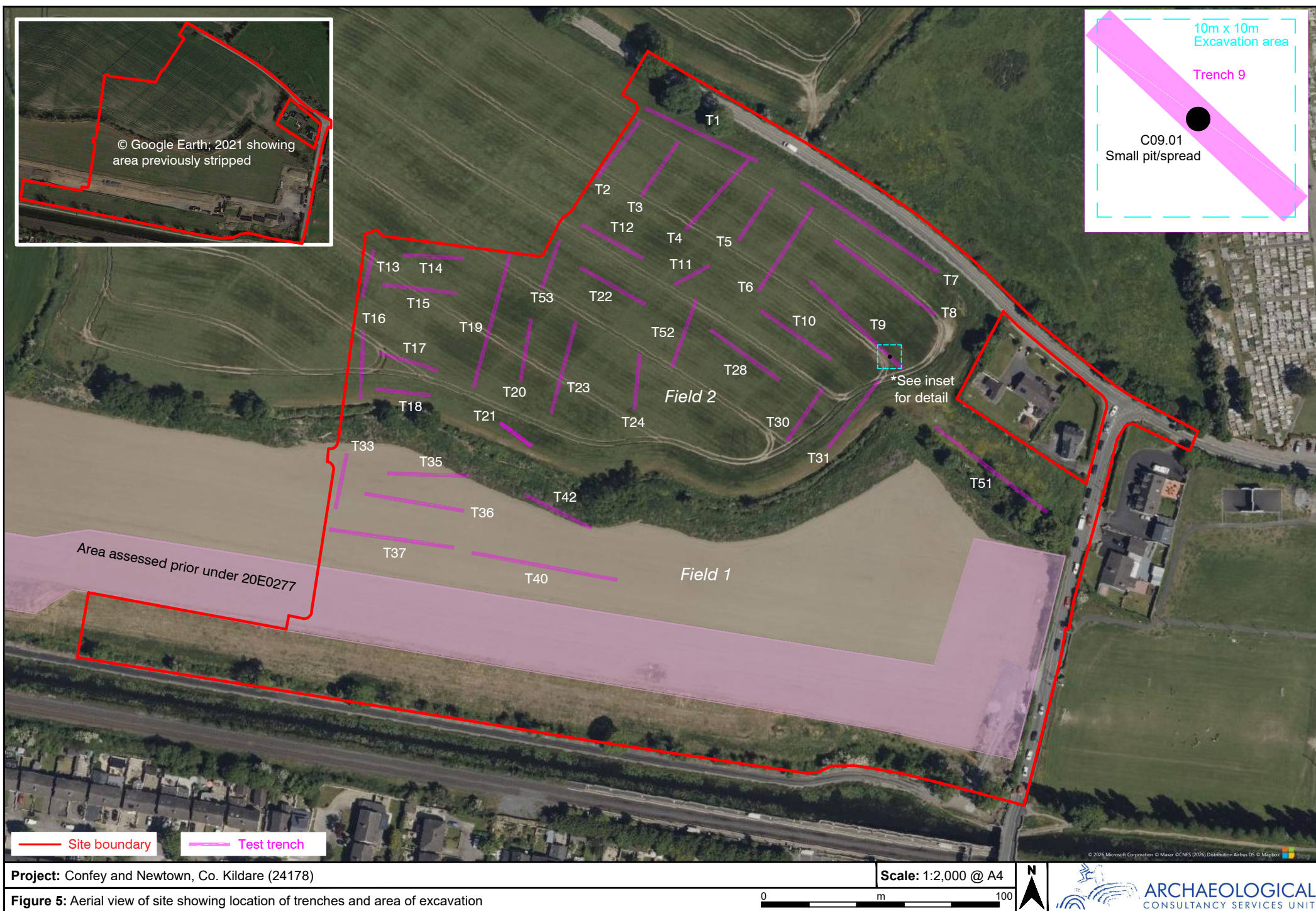


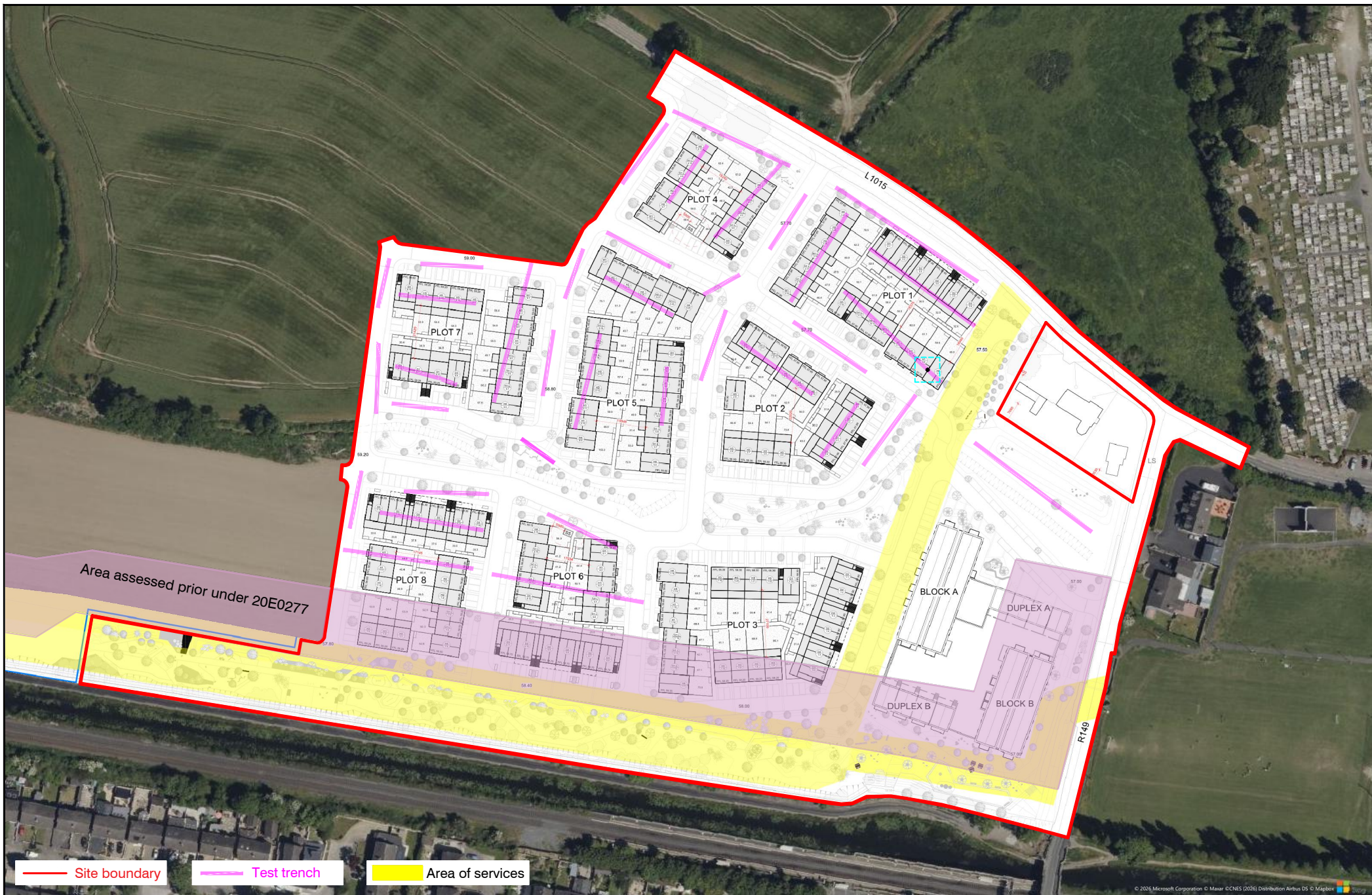


Project: Confey and Newtown, Co. Kildare (24178)

Figure 3: Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1836 - published 1839), showing location of site







Project: Confey and Newtown, Co. Kildare (24178)

Figure 6: Aerial view of site showing proposed development and location of trenches

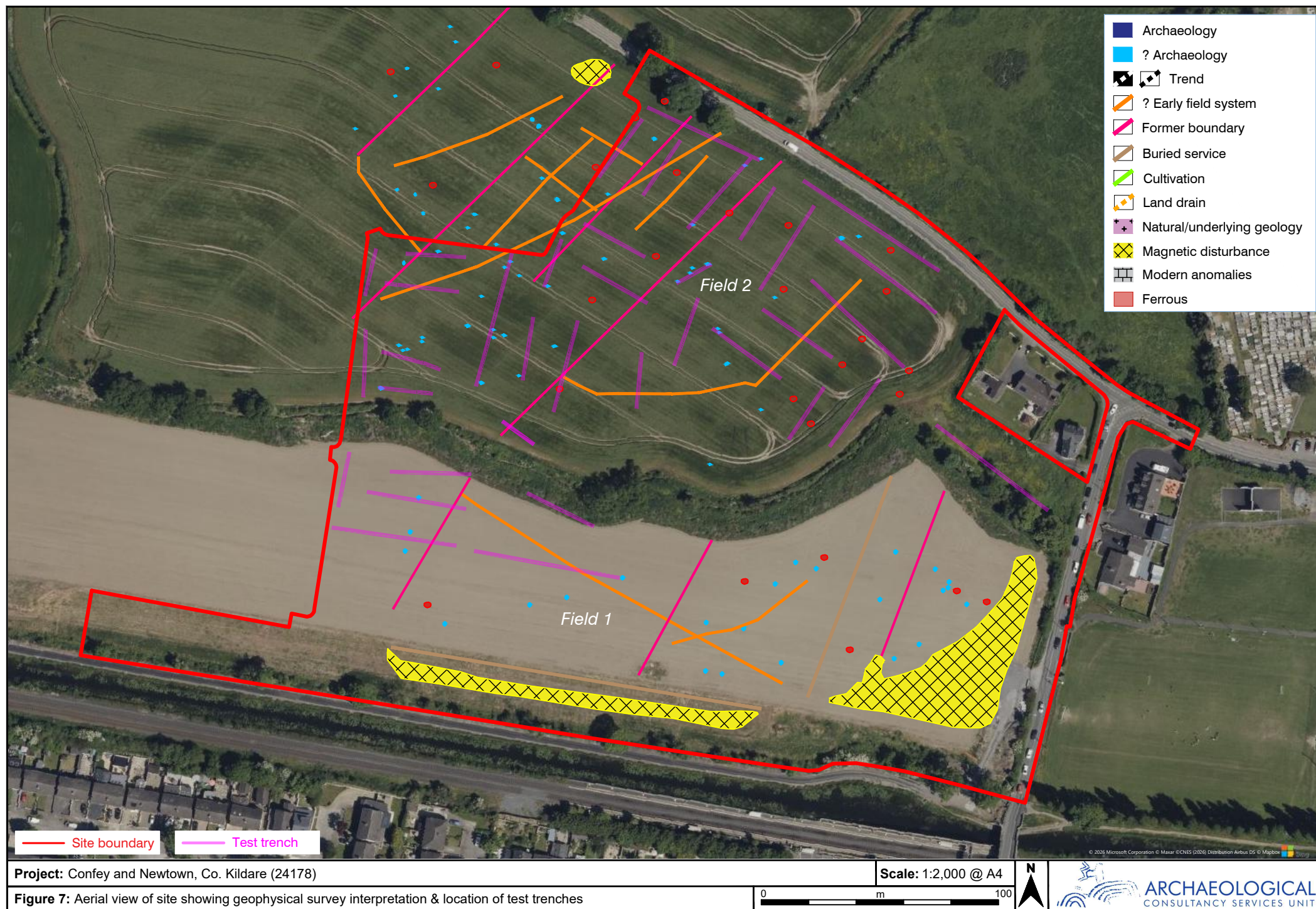




Plate 1: Trench 1, looking east



Plate 2: Trench 2, looking southwest



Plate 3: Trench 3, looking south



Plate 4: Trench 4, looking south



Plate 5: Trench 5, looking south



Plate 6: Trench 6, looking south



Plate 7: Trench 7, looking northwest



Plate 8: Stone drain in Trench 7, looking northwest



Plate 9: Trench 8, looking northwest



Plate 10: Trench 9, looking northwest



Plate 11: C09.01 spread in Trench 9, looking southwest



Plate 12: Cultivation furrows in Trench 9, looking northwest



Plate 13: Trench 10, looking southeast



Plate 14: Trench 11, looking northeast



Plate 15: Trench 12, looking northwest



Plate 16: Trench 13, looking north



Plate 17: Trench 13, drain looking west



Plate 18: Trench 14, looking east



Plate 19: Trench 14, recorded field boundary, looking north-northeast



Plate 20: Trench 15, looking west



Plate 21: Trench 15, recorded field boundary, looking northwest



Plate 22: Trench 16, looking south



Plate 23: Trench 17, looking west



Plate 24: Trench 18, looking east



Plate 25: Trench 19, looking north



Plate 26: Trench 20, looking south-southwest



Plate 27: Trench 21, looking southeast



Plate 28: Trench 22, looking west-southwest



Plate 29: Trench 23, looking south



Plate 30: Trench 23, field boundary looking north-northeast



Plate 31: Trench 24, looking south



Plate 32: Trench 28, looking northwest



Plate 33: Trench 30, looking southwest



Plate 34: Trench 31, looking northeast



Plate 35: Trench 31, linear in trench looking northeast



Plate 36: Trench 33, looking south



Plate 37: Trench 35, looking west



Plate 38: Trench 35, drain looking northwest



Plate 39: Trench 36, looking west



Plate 40: Trench 37, looking west



Plate 41: Trench 40, looking west



Plate 42: Trench 42, drain looking northwest



Plate 43: Trench 51, looking northwest



Plate 44: Trench 52, looking south-southwest



Plate 45: Trench 53, looking south

APPENDIX 2:

CHAPTER 15

SUMMARY OF EIAR MITIGATION
AND MONITORING MEASURES

15.0 SUMMARY OF EIAR MITIGATION & MONITORING MEASURES

This Chapter has been revised and updated to take account of updated mitigation and monitoring measures outlined in the revised Chapter 4 which have been updated in response to the Request for Further Information issued by Kildare County Council dated 27th of August 2026 in respect to KCC Reg. Ref.: 26/60746.

15.1 INTRODUCTION

The central purpose of EIA is to identify potentially significant adverse impacts at the pre-consent stage and to propose measures to mitigate or ameliorate such impacts. This chapter of the EIAR document has been prepared by JSA Planning and sets out a summary, for ease of reference, of the range of measures described within the individual chapters of this EIAR document which are proposed for mitigation and monitoring during the construction and operational phases of the proposed development. It is intended that this chapter of the EIAR document will provide a useful and convenient summary to the competent / consent authority of the range of mitigation and monitoring measures proposed.

EIA-related conditions are normally imposed by the competent / consent authority as part of the conditions of planning consent and form a key part of the impact anticipation and avoidance strategy. Conditions are principally used to ensure that undertakings to mitigate are secured by explicitly stating the location, quality, character, duration and timing of the measures to be implemented. A secondary role of EIA-related conditions is to ensure that resources, for example bonds / insurances, will be available and properly directed towards mitigation, monitoring or remedial action in the event that the impacts exceed the predicted levels.

Monitoring of the effectiveness of mitigation measures put forward in the EIAR document, both by the competent authorities and the developer, is also an integral part of the process. Monitoring of environmental media and indicators arises either from undertakings or from conditions.

In the case of mitigation and monitoring measures, it is important for all parties to be aware of the administrative, technical, legal and financial burdens that can accompany the measures proposed. It is also important to ensure that, where monitoring is provided for, it is clearly related to thresholds which, if exceeded, cause a clearly defined set of actions to be implemented.

The 2018 EIA Guidelines published by the Department of Housing, Planning and Local Government state:

“While not a mandatory requirement an EIAR can very usefully include a summary table of features and/or measures envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects of the proposed development, and a timescale for the implementation of proposed mitigation measures.”

Given the complexity of the proposed development and the detail provided within this EIAR, this chapter seeks to provide a complete overview of the mitigation and monitoring measures proposed, in the spirit of the above statement contained within the EIA Guidelines, albeit not formatted as a table.

15.2 MITIGATION STRATEGIES

15.2.1 Introduction

There are three established strategies for impact mitigation: avoidance, reduction and remedy. The efficacy of each is directly dependent on the stage in the design process at which environmental considerations are taken into account, i.e. impact avoidance can only be considered at the earliest stage, while remedy may be the only option available to fully designed projects.

15.2.2 Mitigation by Avoidance

Avoidance is generally the fastest, cheapest and most effective form of impact mitigation. Environmental effects and the consideration of alternatives have been taken into account at the earliest stage in the project design process. The consideration of alternatives with respect to the development of the subject lands has been described in Chapter 2, which included design changes to mitigate against environmental impacts.

15.2.3 Mitigation by Reduction

This is a common strategy for dealing with effects which cannot be avoided. It concentrates on the emissions and effects and seeks to limit the exposure of the receptor. It is generally regarded as the “end-of-pipe” approach because it does not seek to affect the source of the problems, as avoidance strategies do. As such, this is regarded as a less sustainable, though still effective, approach.

15.2.4 Reducing the Effect

This strategy seeks to intercept emissions, effects and wastes before they enter the environment. It monitors and controls them so that acceptable standards are not exceeded. Examples include wastewater treatment, filtration of air emissions and noise attenuation measures.

15.2.5 Reducing Exposure to the Impact

This strategy is used for impacts which occur over an extensive and undefined area. Such impacts may include noise, visual impacts or exposure to hazard. The mitigation is affected by installing barriers between the location(s) of likely receptors and source of the impact (e.g. sound barriers, tree screens or security fences).

15.2.6 Mitigation by Remedy

This is a strategy used for dealing with residual impacts which cannot be prevented from entering the environment and causing adverse effects. Remedy serves to improve adverse conditions which exist by carrying out further works which seek to restore the environment to an approximation of its previous condition or to a new equilibrium.

15.3 MITIGATION AND MONITORING MEASURES

The following provides a list, for ease of reference, of the mitigation and monitoring measures recommended in each chapter of the EIAR.

15.3.1 Project Description & Alternatives Examined

Construction Phase

Not applicable.

Operational Phase

Not applicable.

Monitoring

Not applicable.

15.3.2 Population and Human Health

Construction Phase

A range of construction related remedial and mitigation measures are proposed throughout this EIAR document with reference to the various environmental topics examined and the inter-relationships between each topic. These remedial and mitigation measures are likely to result in any significant and likely adverse environmental impacts on population and human health during the construction phases being avoided. The following mitigation measures are intended to mitigate the identified potential impacts on population and human health, in addition to the specific mitigation provided in relation to other environmental topics within the other chapters of this EIAR.

P&HH CONST 1: Construction and Environmental Management Plan

It will be necessary for the appointed contractor to prepare and implement a construction and environment management plan (including traffic management) to reduce the impacts of the construction phase on local residents and ensure the local road network is not adversely affected during the course of the construction project. The measures incorporated into the Outline Construction and Environmental Management Plan and this EIAR will inform the CEMP, which can be agreed with the Planning Authority prior to commencement of development.

P&HH CONST 2: Construction Waste Management Plan

The measures outlined within the Construction Waste Management Plan submitted with the application will be carried out in full during the construction stage in accordance with the requirements of the Best Practice Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects.

Operational Phase

The operational phase is considered to have likely positive impacts on human beings in relation to the provision of additional residential units and mixed uses in accordance with the principles of sustainable development and zoning objectives pertaining to the site, therefore no additional operational stage mitigation measures are proposed having regard to the mitigation measures within other chapters of this EIAR.

Monitoring

In relation to the impact of the development on population and human health it is considered that the monitoring measures outlined in regard to the other environmental topics such as water, land and soils, and noise and vibration sufficiently address monitoring requirements.

15.3.3 Archaeology, Architecture and Cultural Heritage

Pre-Construction Phase

The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH), and further mitigation may be sought by the NMS.

ARCH CONST 1: ARCHAEOLOGICAL PRESERVATION BY RECORD – EXCAVATION

- Following pre-construction test trenching (Licence No. 25E0385) one feature of archaeological significance was identified: a spread of burnt stone and charcoal (C09.01) in Trench 9 (Field 2)., Therefore, further mitigation is required in the form of excavation with the use of a metal detector of the areas of archaeological activity identified, prior to work commencing. While preservation in situ is the preferred option in which to conserve the archaeological resource, this is not feasible in this case. Hence, preservation by record of any archaeology identified will be carried out by a licence-eligible archaeologist in consultation with and under licence from the NMS of the DHLGH. Consultation with the NMS will be maintained throughout.
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified during test trenching and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place.
- A report is required to be compiled on completion of any archaeological excavation and will be submitted to the relevant authorities.

The above mitigation will be included in the Construction Environmental Management Plan.

Construction Phase

Archaeological Heritage

There is potential for the presence of additional isolated archaeological features to be present in areas

that were not assessed during the pre-construction phase, for example, between test trenches and outside of the areas that will be stripped for excavation. This includes any areas that were not accessible for test trenching.

The following mitigation measures will be carried out subject to the approval of the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH), and further mitigation may be sought by the NMS.

ARCH CONST 2: Topsoil Stripping – Archaeological Monitoring

- Should significant archaeological features be identified during test trenching, further mitigation will be required in the form of monitoring of topsoil stripping across the site with the use of a metal detector during the construction phase. This is in relation to all groundworks associated with the proposed development, including any inaccessible areas. The use of appropriate machinery to ensure the preservation and recording of any surviving archaeological remains will be necessary.
- This monitoring will be carried out by a licence-eligible archaeologist in consultation with and under licence from the NMS of the DHLGH. Accordingly, no ground disturbance will take place in the absence of the Archaeologist without his/her express consent. Should any significant archaeological features be discovered, further archaeological mitigation may be required, such as preservation by record. Any further mitigation will require approval from the NMS.
- Adequate time and resources will be provided by the developer for the resolution of any archaeology identified within the development site during the construction phase and which will be directly impacted by groundworks. Time and resources will also be allowed for any post-excavation work and specialist analysis necessary following any archaeological excavation that takes place.
- A report is required to be compiled on completion of any archaeological monitoring and/or excavation and will be submitted to the relevant authorities.

The above mitigation will be included in the Construction Environmental Management Plan, which will be prepared and submitted to the Planning Authority prior to commencement of development.

Architectural and Cultural Heritage

No mitigation is required.

Operational Phase

Archaeological Heritage

There will be no mitigation required, as the effects of the proposed development on the archaeology will be mitigated prior to the operational phase in line with the mitigation measures outlined above.

Architectural and Cultural Heritage

No mitigation is required.

Monitoring

No separate monitoring measures are specified beyond the archaeological monitoring requirements.

15.3.4 Biodiversity

In addition to the mitigation measures outlined in Chapter 8 (Hydrogeology and Hydrology), Chapter 7 (Land, Soils and Geology), the Biodiversity Management Plan, CMP and the Natura Impact Statement (NIS) submitted as part of this application, the following mitigation measures will be implemented for the protection of biodiversity on and adjacent to the site:

Construction Phase

The following mitigation measures are recommended:

Bats

- An application for a derogation licence was submitted to NPWS and granted in relation to the single common pipistrelle bat roost. Compliance with the licence conditions will be overseen by the project ecologist.
- Lighting during construction will be managed sensitively, with no direct illumination of treelines, hedgerows, or the Royal Canal.
- All construction-phase lighting will comply with Bat Lighting Guidance and be implemented to the satisfaction of the project ecologist.

Birds

- Vegetation clearance will be undertaken in accordance with relevant guidelines and legislation (Section 40 of the Wildlife Acts 1976–2012). Where clearance during the bird nesting season cannot be avoided, a pre-works inspection will be undertaken by a suitably qualified ecologist to confirm the absence of active nests.
- During construction, light spill onto habitats used by breeding birds will not exceed 3 lux to minimise disturbance. All lighting will be directed inward toward the site, be downward-facing, and be implemented to the satisfaction of the project ecologist.
- Retained trees, hedgerows and treelines will be protected throughout the works.
- Procedures will be implemented during construction to minimise disturbance to bird species using the Royal Canal and its banks.

Mammals

- A pre-construction inspection will be undertaken to confirm the absence of badger setts and otter holts within, or in close proximity to, the proposed development site.
- Construction lighting will be managed sensitively, with no direct illumination of treelines or riparian corridors.

Amphibians

- A pre-construction survey for common frog and smooth newt will be carried out by a suitably qualified ecologist prior to the commencement of works.

Operational Phase

The following mitigation measures are recommended:

Bats

- Operational lighting will comply with Bat Lighting Guidance and be designed to avoid direct illumination of treelines, hedgerows, and the Royal Canal, to the satisfaction of the project ecologist.
- A post-construction lighting assessment will be undertaken and reviewed by the project ecologist.
- Five bat boxes will be installed on site in locations agreed with the project ecologist.

Birds

- Fifteen nest boxes will be installed on site to compensate for the loss of nesting resources, in consultation with the project ecologist.
- Landscape planting will be undertaken in consultation with the project ecologist to provide nesting cover and promote insect diversity that supports bird populations.
- Meadow areas within the development will include plant species that provide foraging opportunities for red- and amber-listed Birds of Conservation Concern in Ireland (BoCCI) species. Seed mixes will be reviewed by the project ecologist to ensure suitability.
- The northern hedgerow used by the red-listed yellowhammer will be retained.
- Existing hedgerows and treelines will be retained where feasible, with compensatory planting provided where habitat loss is unavoidable.
- Operational lighting adjacent to habitats used by breeding birds should be designed to minimise disturbance and unnecessary light spill.

Mammals

- Operational lighting will be designed to avoid direct illumination of treelines and riparian corridors to maintain habitat connectivity for mammals.

Monitoring

Construction Phase

A project ecologist will be appointed to oversee construction works on site. Pre-construction surveys will be carried out for terrestrial mammals and bats.

Operational Phase

Post-construction bat surveys and monitoring will be carried out by the project ecologist.

15.3.5 Landscape and Visual Impact

Construction Phase

The negative landscape and visual impacts of construction are an unavoidable consequence of development and there is limited potential for mitigation. Site hoarding would screen ground level activity, (low) stockpiles, vehicles, etc. but once the buildings grow above ground floor level, they would be visible

above the hoarding, as would cranes, scaffolding and construction activity on the buildings themselves. No landscape or visual-specific mitigation is recommended other than standard best practice construction site management, which should include the erection and maintenance of hoarding on the site boundaries.

The above assumes that the tree protection measures recommended in the Arboricultural Report (June 2026) by Charles McCorkell Arboricultural Consultancy will be fully implemented. The retention of certain trees and hedgerows on the site is an important part of the proposed development, and any loss of these features would constitute a negative landscape impact. The McCorkell report states: “All retained trees and hedgerows can be successfully protected during the proposed development works by using robust fencing measures which comply with the recommendations outlined within BS 5837:2012”. The Arboricultural Method Statement of the CM Arbor Ltd report sets out the method by which the trees and hedgerows would be protected during construction.

Operational Phase

The potential landscape effects of the proposed development have been classified ‘significant positive’. The urban design criteria (within the Confey Urban Design Framework principles adopted by the Confey Masterplan) place considerable emphasis on a proposed developments’ responsiveness in layout, built form, architecture and landscape design to the landscape context and sensitivities in the receiving environment. Such responsiveness is effectively ‘embedded mitigation’ in design. The analysis in Table 6.7 above shows that the proposed development responds appropriately and effectively to the site and its context. No further mitigation measures are required/recommended.

The potential landscape effects during the operational stage have been classified ‘Significant positive’. The potential visual effects for all 19 no. viewpoints have been classified as neutral or positive. Therefore, no mitigation measures are required/recommended.

Monitoring

No monitoring of landscape or visual impacts is proposed.

15.3.6 Land, Soils and Geology

Construction Phase

L&S CONST 1: Construction & Environmental Management Plan

A Construction & Environmental Management Plan (CEMP) has been prepared in respect of the proposed development. The CEMP outlines and explains the construction techniques and methodologies which will be implemented during construction of the proposed development, and these should be reflected in the CEMP at construction stage:

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

- Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from

- Construction Sites, Guidance for Consultants and Contractors (C532);
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016);
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741);
- Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).
- Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board);
- Central Fisheries Board Channels and Challenges – The enhancement of Salmonid Rivers;
- CIRIA C532 Control of Water Pollution from Construction Sites Guidance for Consultants and Contractors;
- CIRIA C648 Control of Water Pollution from Constructional Sites;
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA 2008); and
- Inland Fisheries Ireland (IFI) – A Guideline on Planning for Watercourses in the Urban Environment.

The CEMP will set out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The CEMP will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as “Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001) will be complied with.

During the project planning phase, a comprehensive emergency response plan will be developed by the construction contractor. This plan will outline a well-defined procedure for effectively managing emergencies as they arise. Furthermore, it's imperative to disseminate this emergency protocol to all site personnel during the site induction process. This plan will include for events such as:

- Pollution incidents: These may involve spillages, the malfunction of temporary structures, embankment collapse, acts of vandalism, fires, and other related events.
- Extreme weather occurrences: Events such as heavy rainfall, flooding, are important factors to consider due to their potential impact on the construction process.

All mitigation measures outlined here, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

L&S CONST 2: Soil Excavation, Removal & Infill

Material that is exported from site, if not correctly managed or handled, could impact negatively on human beings (onsite and offsite) as well as soil environments. Given the previous site uses, there is low potential to encounter contaminated material. All excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

Stockpiles have the potential to cause negative impacts on air and water quality. The effects of soil stripping and stockpiling will be mitigated through the implementation of an appropriate earthworks handling protocol during construction. No stockpiling will be permitted within the riparian zone or within the 20 m buffer zones around any waterbodies.

Dust suppression measures (e.g. damping down during dry periods), vehicle wheel washes, road sweeping, and general housekeeping will ensure that the surrounding environment is free of nuisance dust and dirt on roads.

To minimise dust during construction the following mitigation measures will be implemented during the construction phase.

- During earthworks and excavation works care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the main excavation site which limits the potential for any offsite impacts.
- Silt reduction measures on site will include a combination of silt fencing / silt traps (or equivalent) and settlement measures.
- It is proposed to maintain 20m buffer zones (work free zone) from the onsite open channel drainage ditches during construction.
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate,
- The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection.
- Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination.
- Movement of material will be minimised to reduce the degradation of soil structure and generation of dust.
- Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.
- Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.
- Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to directly discharge to any stormwater sewer, drainage ditch or watercourse.

L&S CONST 3: Cement / Concrete Works

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil.

No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within any riparian or buffer zone. Wash-outs will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker

or discharged to foul sewer subject to agreement with Uisce Éireann (Irish Water).

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. Relevant personnel working on the site will be suitably trained in the implementation of the procedures.

L&S CONST 4: Hydrocarbons & Other Construction Chemicals

The following mitigation measures will be implemented during the construction phase in order to prevent any spillages to ground of fuels and other construction chemicals and prevent any resulting to surface water (and groundwater) systems:

- Designation of bunded refuelling areas on the site;
- Provision of spill kit facilities across the site;
- Where mobile fuel bowzers are used, the following measures will be taken:
 - Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;
 - The pump or valve will be fitted with a lock and will be secured when not in use;
 - All bowzers to carry a spill kit and relevant operatives must have spill response training;
 - Portable generators or similar fuel containing equipment will be placed on suitable drip trays.

In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:

- Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
- Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be stored within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal.
- Clear labelling of containers so that appropriate remedial measures can be taken in the event of a spillage;
- All drums to be quality approved and manufactured to a recognised standard;
- If drums are to be moved around the Site, they will be secured and on spill pallets; and
- Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.

In addition to the measures above, all excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in designated bunded refuelling areas, which will be away from surface water gulleys or drains. In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double

skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as “Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001) will be complied with.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

L&S CONST 5: Human Health & Population

As there is no source pathway linkage, thus no mitigation is required.

L&S CONST 6: Environmental Procedures

There will be comprehensive emergency response procedures and standard operating procedures to respond to chemical spillage of all types. All employees will be provided with such equipment, information, training and supervision as is necessary to implement the emergency response procedures and standard operating procedures.

Operational Phase

During operation measures there is no requirement for bulk storage of petroleum products. Due to the nature of the Proposed Development in operation there is no risk of potential leaks and spillages of fuel and oil.

The proposed additional hardstanding at the proposed development location will result in increased surface water generation which will naturally attenuate flows on the proposed site and discharge them to the Oranstown Stream post treatment at a controlled rate.

The proposed incorporation of hardstand area at the proposed development site and the use of SUDs design measures i.e. attenuation, and oil / hydrocarbon interceptors installed will have a minor effect on local recharge to ground; however, the impact on the overall groundwater regime will be insignificant considering the proportion of the site area in relation to the total aquifer area. Therefore, the risk of accidental discharge has been adequately addressed through design. No further mitigation is required. Refer to Chapter 8 (Hydrology and Hydrogeology) of the EIAR for further information on the proposed SUDs design measures at the proposed development site.

As there is no source pathway linkage, thus no mitigation is required for human health and population.

Monitoring

Construction Phase

During construction phase the following monitoring measures will be implemented:

- Regular inspection of water run-off and sediments controls (e.g., silt traps/silt fences);

- Soil sampling to confirm disposal options for excavated soils to ensure correct disposal
- Regular inspection of construction / mitigation measures (e.g., concrete pouring, refuelling, etc) to minimise potential for discharge to ground.

Operational Phase

Maintenance of the surface water drainage system, including interceptors, is recommended to minimize any accidental discharges to the underlying soils.

15.3.7 Hydrogeology and Hydrology

The design has taken account of the potential impacts of the development on the hydrological environment local to the area where construction is taking place and containment of sources during operation. Measures have been incorporated in the design to mitigate the potential effects on the surrounding water bodies.

These specific measures will provide protection to the receiving water (and soil) environments during the construction phase. These are work practices that are industry best practice measures that will be applied during the construction phase, and they are in no way included to avoid or reduce potential harmful effects to European sites.

Construction Phase

Hydrogeology and Hydrology CONST 1: Construction & Environmental Management Plan

A Construction & Environmental Management Plan (CEMP) has been prepared in respect of the Proposed Development. The CEMP outlines and explains the construction techniques and methodologies which will be implemented during construction of the Proposed Development, and these should be reflected in the CEMP at construction stage:

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

- Construction Industry Research and Information Association (CIRIA), Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors (C532);
- Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016);
- Construction Industry Research and Information Association (CIRIA) Environmental Good Practice on Site (4th edition), (C741);
- Enterprise Ireland Best Practice Guide, Oil Storage Guidelines (BPGCS005).
- Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites (Eastern Regional Fisheries Board);
- Central Fisheries Board Channels and Challenges – The enhancement of Salmonid Rivers;
- CIRIA C532 Control of Water Pollution from Construction Sites Guidance for Consultants and Contractors;
- CIRIA C648 Control of Water Pollution from Constructional Sites;
- Guidelines for the Crossing of Watercourses during the Construction of National Road Schemes (NRA 2008); and
- Inland Fisheries Ireland (IFI) – A Guideline on Planning for Watercourses in the Urban Environment.

The CEMP sets out the proposed procedures and operations to be utilised on the proposed construction site to protect water quality. The CEMP will be implemented and adhered to by the construction contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Manager and Ecological Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as “Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001) will be complied with.

During the project planning phase, a comprehensive emergency response plan will be developed by the construction contractor. This plan will outline a well-defined procedure for effectively managing emergencies as they arise. Furthermore, it's imperative to disseminate this emergency protocol to all site personnel during the site induction process. This plan will include for events such as:

- Pollution incidents: These may involve spillages, the malfunction of temporary structures, embankment collapse, acts of vandalism, fires, and other related events.
- Extreme weather occurrences: Events such as heavy rainfall, flooding, are important factors to consider due to their potential impact on the construction process.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained and informed in the implementation of the procedures.

All mitigation measures outlined here, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

- The primary risk is runoff containing sediment /accidental release during construction. As such the CMP includes mitigation measures to address sediment and surface water management.
- A buffer zone of minimum 20 metres along the onsite open channel drainage ditches. will be retained at all times.

Hydrogeology and Hydrology CONST 2: Management of Suspended Solids

As there is potential for run-off to indirectly discharge to a watercourse (onsite open channel drainage ditches, Confey / Rathleek Stream, Oranstown Stream, River Rye or River Liffey), in order to manage the potential impact associated with sediment and sediment runoff the following mitigation measures will be implemented during the construction phase.

- During earthworks and excavation works care will be taken to ensure that exposed soil surfaces are stable to minimise erosion. All exposed soil surfaces will be within the excavation site which limits the potential for any offsite impacts.
- Silt reduction measures on site will include a combination of silt remediation techniques (silt traps/fences) and settlement measures.
- A riparian zone of minimum 20 m will be maintained along the onsite open channel drainage ditches.
- Any hard surface site roads will be swept to remove mud and aggregate materials from their surface while any unsurfaced roads shall be restricted to essential site traffic only.
- A power washing facility or wheel cleaning facility will be installed near to the site compound for use by vehicles exiting the site when appropriate,
- The temporary storage of soil will be carefully managed. Stockpiles will be tightly compacted to reduce runoff and graded to aid in runoff collection.
- Aggregate materials such as sands and gravels will be stored in clearly marked receptacles within a secure compound area to prevent contamination.

- Movement of material will be minimised to reduce the degradation of soil structure and generation of dust.
- Excavations will remain open for as little time as possible before the placement of fill. This will help to minimise the potential for water ingress into excavations.
- Weather conditions will be considered when planning construction activities to minimise the risk of run-off from the site.
- Any surface water run-off collecting in excavations will likely contain a high sediment load. This will not be allowed to directly discharge to any stormwater sewer, drainage ditch or watercourse.

Hydrogeology and Hydrology CONST 3: Cement / Concrete Works

Where feasible all ready-mixed concrete will be brought to site by truck. A suitable risk assessment for wet concreting will be completed prior to works being carried out which will include measures to prevent discharge of alkaline wastewaters or contaminated storm water to the underlying subsoil and aquifer.

No wash-down or wash-out of ready-mix concrete vehicles during the construction works will be carried out at the site within 10 meters of an existing surface water drainage point. Wash-outs will only be allowed to take place in designated areas with an impervious surface where all wash water is contained and removed from site by road tanker.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. Relevant personnel working on the site will be suitably trained in the implementation of the procedures.

Hydrogeology and Hydrology CONST 4: Management of Hydrocarbons and Other Construction Chemicals

The following mitigation measures will be implemented during the construction phase in order to prevent any spillages to ground of fuels and other construction chemicals and prevent any resulting to surface water (and groundwater) systems:

- Designation of bunded refuelling areas on the site;
- Provision of spill kit facilities across the site;
- Where mobile fuel bowers are used, the following measures will be taken:
- Any flexible pipe, tap or valve will be fitted with a lock and will be secured when not in use;
- The pump or valve will be fitted with a lock and will be secured when not in use;
- All bowers to carry a spill kit and relevant operatives must have spill response training;
- Portable generators or similar fuel containing equipment will be placed on suitable drip trays.

In the case of drummed fuel or other potentially polluting substances which may be used during the construction phase, the following measures will be adopted:

- Secure storage of all containers that contain potential polluting substances in a dedicated internally bunded chemical storage cabinet unit or inside a concrete bunded area;
- Oil and fuel storage tanks shall be stored in designated areas, and these areas shall be stored within temporary bunded areas, doubled skinned tanks or bunded containers to a volume of 110% of the capacity of the largest tank/container. Drainage from the bunded area(s) shall be diverted for collection and safe disposal.
- Clear labelling of containers so that appropriate remedial measures can be taken in the event of a

spillage;

- All drums to be quality approved and manufactured to a recognised standard;
- If drums are to be moved around the Site, they will be secured and on spill pallets; and,
- Drums will be loaded and unloaded by competent and trained personnel using appropriate equipment.

A dedicated, purpose-built storage unit will be used for all fuels, oils and chemicals, with storage volumes kept to a minimum. All tanks on site will be located away from drains and watercourses.

In addition to the measures above, all excavated materials will be visually assessed by suitably qualified persons for signs of possible contamination such as staining or strong odours. Should any unusual staining or odour be noticed, samples of this soil will be analysed for the presence of potential contaminants to ensure that historical pollution of the soil has not occurred. Should it be determined that any of the soil excavated is contaminated, this will be segregated and appropriately disposed of by a suitably permitted/licensed waste disposal contractor.

Refuelling of construction vehicles and the addition of hydraulic oils or lubricants to vehicles will take place in designated bunded refuelling areas, which will be away from surface water gulleys or drains. In the event of a machine requiring refuelling outside of this area, fuel will be transported in a mobile double skinned tank. An adequate supply of spill kits and hydrocarbon adsorbent packs will be stored in this area. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as “Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001) will be complied with.

The construction contractor will be required to implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the Site will be suitably trained in the implementation of the procedures.

Hydrogeology and Hydrology CONST 5: Surface Water and Ground Flow and Quality

Surface water discharge from the site will be managed and controlled for the duration of the construction works until the surface water drainage system of the Proposed Development is complete.

The construction contractor will be required to manage silt and suspended solids during the construction phase. There is no likely discharge from the site (without settlement and treatment) as surface water runoff from and surface water collected in excavations and from designated vehicle areas will be directed to an on-site proprietary settlement tank where measures will be implemented to capture and treat sediment laden surface water runoff with a proprietary ‘silt bag’ to intercept bulk silt volumes prior to discharge of surface water at a controlled rate. The proposed collection point is the settlement tank unit. This will provide additional silt settlement treatment for any remaining suspended silts. The water and silt within the unit is to be emptied into a water vacuum tanker and is then to be disposed of off-site to a licenced facility.

The construction activities will require surface water management to prevent pollution and degradation of habitats from a chemical spill or run off containing excessive suspended solids that complies with guidelines and best practices such as “Control of Water Pollution from Construction Sites and Guidance for Consultants and Contractors” (CIRIA 532, 2001).

A specific method statement will be prepared for approval of the OPW and Local authority prior to commencement of construction works to ensure protection of water quality during construction works. The method statement will include best practice measures as outlined in the “Control of Water Pollution from Construction Sites, Guidance for Consultants and Contractors” (CIRIA 532, 2001) and “Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters (2016)”

Hydrogeology and Hydrology CONST 6: Wastewater Management

Foul wastewater arising from the site will be managed and controlled for the duration of the construction works.

Foul water from the offices and welfare facilities on the site will be collected in portable sanitary facilities and disposed of appropriately by licenced contractor.

The construction contractor will implement emergency response procedures, and these will be in line with industry guidance. All personnel working on the site will be suitably trained in the implementation of the procedures.

Hydrogeology and Hydrology CONST 7: Human Health and Population

It has been established (refer to Section 8.3.2 above) that there are no recorded Recreational Waters, Bathing Waterbodies located in the immediate vicinity of the site or downstream in the Confey / Rathleek Stream, Oranstown Stream, River Rye or River Liffey or the Rye Water Valley/Carton SAC (and Dublin Bay Natura 2000 designated areas). In addition, there are no recorded Public Supply Source Protection Area or Group Scheme Preliminary Source Protection Areas defined by the GSI within which development is limited in order to protect drinking water supplies from potential pollution located in the vicinity of the Proposed Development site.

However, a portion of the River Liffey (LIFFEY_150) is listed as a river drinking water abstraction area and is classified as an ‘Article 7 Abstraction for Drinking Water’ (EU_PA_Code: IEPA1_EA_09L011900) and is located c. 1.4km to the south, hydrologically downstream and connected to the site via the Confey Stream (and onsite open drainage channel) which discharges to the River Rye (Rye Water) and subsequently merges with the River Liffey (LIFFEY_150). Given the downstream hydrological distance to this abstraction area (2.1 km hydrological distance downstream) and dilution / mixing factor downstream in the catchment, coupled with the lack of surface water abstractions proposed for the subject development, there are no potential impacts on the existing surface water regime.

hydrologically upstream/upgradient of the site. This classification of drinking water river lines has been delineated in accordance with the European Communities (Drinking Water) (No. 2) Regulations 2007 (SI No. 278/2007). This regulatory framework aims to ensure the protection of water resources utilised for human consumption, thus safeguarding public health and the environment. Given the upgradient location of this area relative to the site and the lack of surface water abstractions proposed for the subject development, there are no potential impacts on the existing surface water regime.

As there is no source pathway linkage, no mitigation is required.

Hydrogeology and Hydrology CONST 8: Water Framework Directive

It has been established (refer to Section 8.5.2 above) that there is a potential of accidental discharges during the construction phase. However, these are temporary short-lived events that will not impact on the status of the RYE WATER_040 (Rathleek Stream, River Rye), LIFFEY_150 (Oranstown Stream), the downstream Rye Water / Carton SAC or the underlying Dublin groundwater body (GWB) in the long-term. As such the Proposed Development will not cause any significant deterioration or change in water quality status or prevent attainment, or potential to achieve the WFD objectives or to meet the requirements and/or objectives in the third cycle river basin management plan (2022-2027) i.e. Water Action Plan 2024 - A River Basin Management Plan for Ireland.

On a precautionary basis, the mitigation measures set out in Section 8.8.1 will be implemented during the construction works for the protection of surface water and groundwater quality.

Operational Phase

Surface Water and Groundwater Quality

The design has taken account of the potential impacts of the development on surface water quality; measures have been incorporated in the design to mitigate these potential impacts.

The proposed surface water management design establishes a direct hydrological connection to the Confey / Rathleek Stream, Oranstown Stream (via onsite open channel drainage ditches) and downstream / downgradient River Rye and River Liffey, located near the site, during the operational phase.

To mitigate potential contamination from surface water runoff, which may originate from roads and hardstanding areas, a sustainable drainage system (SuDS) will be implemented. This system is designed to minimize the risk of contaminants, such as hydrocarbons, entering the stormwater drainage network and subsequently impacting the aforementioned surface water bodies, which discharges to the River Rye (and associated Rye Water / Carton SAC) and River Liffey (which ultimately discharges to the Dublin Bay and designated Natura 2000 sites therein), as well as groundwater body, including Dublin groundwater body (GWB) underlying the site.

The surface water drainage strategy integrates various measures, including permeable paving, bioretention areas, bioswales, tree pits, unlined tree pits-trenches, filter drains, bioswales, lined underground attenuation tank, and the inclusions of petrol interceptors. These features will effectively manage surface water flows, directing them to an attenuation system and infiltration tanks to maximize their storage potential. Flow control devices will be installed downstream of the pond outlet pipes to ensure that surface water runoff is stored efficiently before entering the receiving environment.

SuDS design measures will provide a surface water treatment train and promote source control throughout the development while also providing attenuation storage at source. Surface water discharge will also pass via a petrol / oil interceptors prior to discharge (sized in accordance with permitted discharge from the site). So as not to disrupt the natural regime of the existing surface watercourse and flow rate/quantity from the development, flow restriction is achieved by means of a vortex flow control device

(Hydrobrake) installed at the outfall of the surface water catchment within the development and associated underground attenuation systems.

Surface Water and Groundwater Flow and Quantity

The proposed surface water management design establishes a hydrological connection to the Oranstown Stream, located east of the site, during the operational phase. The proposed development includes no discharge or hydrological connect to the Rye River (Rye Water) during the operational phase, as surface water / rainfall runoff will be intercepted and directed east to the Oranstown Stream and subsequently outfall to the River Liffey downstream.

The proposed incorporation of hardstand areas and SuDS design measures may slightly reduce local groundwater recharge and increase runoff if not properly managed, potentially causing flooding and affecting downstream environments. However, the overall impact on the groundwater regime is expected to be insignificant considering the site is underlying a “locally important Aquifer” (LI) and given the site's area relative to the total aquifer area to the site's small area relative to the total aquifer.

To mitigate these risks, the design of the development and its drainage infrastructure will ensure that runoff rates are restricted to those of greenfield conditions. Surface water runoff from the development will be attenuated to greenfield runoff rates (Q_{bar}) in accordance with the Greater Dublin Strategic Drainage Study (GDSDS). The development will incorporate SuDS and the attenuation systems are designed to accommodate the 100-year critical storm event plus an additional 30% allowance for climate change and discharged into the local drainage network (and ultimately the Oranstown Stream) at the equivalent greenfield Q_{bar} rate. The lowest proposed floor level is set at a minimum 500mm above the highest water level in the attenuation. A high-level overflow has been proposed to facilitate a free-flowing discharge in the event of a storm exceeding a 1:100 Year plus 30% Climate Change and 10% Urban Creep and/ or the outfall becoming blocked for protection and negate risk of flooding.

Furthermore, there are no proposed surface water or groundwater abstractions, eliminating potential impacts on the quantity of surface water or groundwater resources.

Human Health and Populations

It has been established (refer to Section 8.3.3 above) that there are no recorded Recreational Waters or Bathing Waterbodies located within the Confey / Rathleek Stream, Oranstown Stream (via onsite open channel drainage ditches) and downstream / downgradient River Rye and River Liffey. In addition, there are no recorded Public Supply Source Protection Area or Group Scheme Preliminary Source Protection Areas defined by the GSI within which development is limited in order to protect drinking water supplies from potential pollution located in the vicinity of the Proposed Development site.

The proposed surface water drainage design / strategy will provide treatment and attenuation which will have the effect of mitigating impacts on the portion of the River Liffey (LIFFEY_150) is listed as a river drinking water abstraction area and is classified as an ‘Article 7 Abstraction for Drinking Water’.

As there is no source pathway linkage, no mitigation is required.

Water Framework Directive Status

There is a potential minor risk of accidental discharges during the operational phase from car parking areas or roads (as detailed in Section 8.5.2). However, these events are temporary and short-lived, with no long-term impact on the status of the RYE WATER_040 (Rathleek Stream, River Rye), LIFFEY_150 (Oranstown Stream), the downstream Rye Water / Carton SAC, or the underlying Dublin groundwater body (GWB).

Consequently, the Proposed Development will not lead to any significant deterioration or changes in water quality status, nor will it hinder the achievement of the Water Framework Directive (WFD) objectives or the goals outlined in the third cycle river basin management plan (2022-2027), specifically the Water Action Plan 2024 for Ireland.

Limited surface water discharges during the operational phase will occur to the Oranstown Stream (and downstream River Liffey), located the east of the site's. However, these discharges will be effectively managed through Sustainable Urban Drainage Systems (SuDS) measures, including bioretention areas, bioswales, tree pits, unlined tree pits-trenches, filter drains, bioswales, lined underground attenuation tank, and the inclusions of unlined permeable paving, which will provide a surface water treatment train and promote source control throughout the development while also providing attenuation storage at source.

The foul discharge from the site will join the public sewer and will be treated at the Leixlip Wastewater Treatment Plant (WWTP EPA Licence: D0004-02) prior to subsequent discharge the River Liffey downstream. This WWTP is required to operate under and in compliance with the associated EPA licence and meet environmental legislative requirements as set out in its licence. There is no 'direct' pathway for foul sewage to any receiving water body (as identified above).

No further mitigation is required.

Monitoring

Construction Phase

During construction phase the following monitoring measures will be considered. Monitoring will be undertaken in accordance with planning conditions and undertaken by the contractor in compliance with the project CEMP.

Contractors will carry out regular inspections to confirm compliance with the CEMP. Daily inspections by contractors will address potential environmental impacts including dust, litter, waste management and general housekeeping.

During construction phase the following monitoring measures will be undertaken:

- Weekly checks will be carried out to ensure surface water drains are not blocked by silt, or other items.
- During excavation works, regular (Regular inspection of surface water run-off and sediments

- controls (e.g., silt traps/fence or equivalent) measures will be undertaken.
- Daily inspections by contractors will address potential environmental impacts including dust, litter, waste management and general housekeeping.
- A buffer of minimum 20m will be maintained along the existing open channel drainage ditches traversing the site, in accordance with Kildare County Council Development Plan 2023-2029.
- Regular inspection of construction / mitigation measures (e.g., concrete pouring, refuelling, etc) to minimise potential for discharge to ground.

Operational Phase

No future surface water monitoring is proposed for the proposed development due to the low hazard potential at the site.

Hydrocarbon/petrol interceptors and containment measures will be maintained and cleaned out in accordance with the manufacturer's instructions.

Maintenance of the surface water drainage system as per normal urban developments is recommended to minimise any accidental discharges to surface water and ensure system functionality.

15.3.8 Air Quality

Construction Phase

Based on the assessment results in Section 9.5.2.1.3, mitigation associated with a medium risk of construction dust impacts is required. The relevant mitigation measures for medium-risk sites as recommended by IAQM construction dust guidance (2024) are outlined below. These measures shall be incorporated into the Construction Environmental Management Plan (CEMP) prepared for the site, and these should be reflected in the CEMP at construction stage:

Air Quality CONST 1: Construction and Environmental Management Plan

A Construction & Environmental Management Plan (CEMP) has been prepared in respect of the proposed development. The CEMP outlines and explains the construction techniques and methodologies which will be implemented during construction of the proposed development, and these should be reflected in the CEMP at construction stage.

Construction works and the proposed mitigation measures are informed by best practice guidance on the prevention of pollution during development projects including but not limited to:

- Guidance on the Assessment of Dust from Demolition and Construction v2.2 (IAQM, 2024);
- The CEMP will set out the proposed procedures and operations to be utilised on the proposed construction site to protect air quality. The CEMP will be implemented and adhered to by the construction Contractor and will be overseen and updated as required if site conditions change by the Project Manager, Environmental Clerk of Works where relevant. All personnel working on the site will be trained in the implementation of the procedures. All relevant personnel will be fully trained in the use of this equipment. Guidelines such as "Guidance on the Assessment of Dust from Demolition

and Construction v2.2 (IAQM, 2024) will be complied with.

- All mitigation measures outlined here, and within the CEMP will be implemented during the construction phase, as well as any additional measures required pursuant to planning conditions which may be imposed.

Air Quality CONST 2: Communications, Site Management and Preparing and Maintaining the Site

To minimise dust during construction the following mitigation measures will be implemented:

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.
- Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager.
- Display the head or regional office contact information.
- Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.
- Make the complaints log available to the local authority when asked.
- Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the logbook.
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Avoid site runoff of water or mud.
- Keep site fencing, barriers and scaffolding clean using wet methods.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below.
- Cover, seed or fence stockpiles to prevent wind whipping.

Air Quality CONST 3: Operations

To minimise dust during operations the following mitigation measures will be implemented:

- Ensure all vehicles switch off engines when stationary – no idling vehicles.
- Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 25 kph on surfaced and 15 kph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).
- Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car sharing).
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.

- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
- Bonfires and burning of waste materials are legally prohibited.

Air Quality CONST 4: Earthworks

To minimise dust during earthworks the following mitigation measures will be implemented:

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable.
- Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as is practicable.

Air Quality CONST 5: Construction

To minimise dust during construction the following mitigation measures will be implemented:

- Only remove the cover in small areas during work and not all at once.
- Avoid scabbling (roughening of concrete surfaces) if possible.
- Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.
- Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.
- For smaller supplies of fine powder materials, ensure bags are sealed after use and stored appropriately to prevent dust.

Air Quality CONST 6: Trackout

To minimise dust from trackout the following mitigation measures will be implemented:

- Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.
- Avoid dry sweeping of large areas.
- Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.
- Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable.
- Record all inspections of haul routes and any subsequent action in a site logbook.
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).

- Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits.
- Access gates to be located at least 10 m from receptors where possible.

Operational Phase

The effect of the operational traffic associated with proposed development on air quality is predicted to be not significant with respect to the operational phase in the long term. Therefore, no site-specific mitigation measures are required.

Monitoring

Construction Phase

The following monitoring measures are proposed to ensure the dust mitigation measures are working satisfactorily:

- Undertake daily on-site and off-site inspections, where receptors (including roads) are nearby, to monitor dust, record inspection results in the site inspection log. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100 m of site boundary, with cleaning to be provided if necessary.
- Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.
- Monitoring of construction dust deposition along the site boundary to nearby sensitive receptors during the construction phase of the proposed development is recommended to ensure mitigation measures are working satisfactorily. This can be carried out using the Bergerhoff method in accordance with the requirements of the German Standard VDI 2119. The Bergerhoff Gauge consists of a collecting vessel and a stand with a protecting gauge. The collecting vessel is secured to the stand with the opening of the collecting vessel located approximately 2m above ground level. The TA Luft limit value is 350 mg/m²/day during the monitoring period of 30 days (+/- 2 days). Monitoring shall ensure that the dust mitigation measures are working satisfactorily as construction works progress.

Operational Phase

There is no monitoring recommended for the operational phase of the proposed development as impacts to air quality are predicted to be not significant.

15.3.9 Climate

Construction Phase

CLIMATE CONST 1: GHGA

During the construction phase embodied carbon of materials and construction activities will be the

primary source of climate impacts. The following best practice measures shall be implemented on site to prevent significant GHG emissions and reduce impacts to climate:

- Appointing a suitably competent contractor who will undertake waste audits detailing resource recovery best practice and identify materials can be reused/recycled.
- Prevention of on-site or delivery vehicles from leaving engines idling, even over short periods.
- Consolidation of delivery loads to/from the site and management of large deliveries on site to occur outside of peak periods.
- Ensuring all plant and machinery are well maintained and inspected regularly.
- Minimising waste of materials due to poor timing or over ordering on site will aid to minimise the embodied carbon footprint of the site.
- Encouraging the use of HVO fuel, which is required near by the site. All machines are to (where possible) use HVO fuel at construction stage.
- Sourcing materials locally where possible to reduce transport related CO2 emissions.
- Re-use of materials on site e.g. excavated material from our and other sites stripped topsoil and subsoils.
- Use of mains electricity or batteries during construction to reduce diesel generators.
- Procurement of low carbon materials, such as Timber frame houses.

CLIMATE CONST 2: CCRA

In terms of impact on the proposed development due to climate change, during construction the Contractor will be required to mitigate against the effects of extreme rainfall/flooding through site risk assessments, method statements and good site management practise. The Contractor will also be required to mitigate against the effects of extreme wind/storms, temperature extremes through site risk assessments, method statements and good site management practise. All materials used during construction will be accompanied by certified datasheets which will set out the limiting operating temperatures. Temperatures can affect the performance of some materials, and this will require consideration during construction. During construction, the Contractor will be required to mitigate against the effects of fog, lighting and hail through site risk assessments and method statements.

Throughout detailed design and construction phase, guidance documents will inform design detail decisions e.g. the EU Commission Technical Guidance on Adapting Buildings to Climate Change (European Commission, 2021a), LETI emergency design guide (LETI, 2020), and the latest IPCC report.

Operational Phase

In relation to operational energy usage, information as detailed in the Climate Action and Energy Efficiency Report prepared by EDC, has been used to inform this assessment.

The development has been designed in line with the requirements of Nearly Zero Energy Buildings (NZEB) Standards and the requirements of the Kildare County Council Climate Action Plan 2024–2029 objectives for energy efficiency, greenhouse gas reduction, and increased renewable energy integration. The incorporated design measures as part of the proposed development's sustainability strategy are outlined below:

- Renewable energy technologies such as roof-mounted photovoltaic panels will serve landlord

areas to be located on suitable roof areas.

- Limiting the heat loss and, where appropriate, availing of heat gains through the fabric of the building.
- Providing and commissioning energy-efficient space heating systems, water heating systems, and ventilation systems, with effective controls.
- Sustainable drainage systems (SuDS) will be implemented across the site to manage surface water runoff and support climate resilience.
- Landscaping will prioritise native planting species and the development will promote sustainable transport through pedestrian and cycle infrastructure and connections to nearby Confey Train Station.

These above identified measures will aid in reducing the impact to climate during the operational phase of the proposed development in line with the goals and relevant policies including the Climate Action Plan 2025 and objectives of the Kildare County Council Climate Action Plan 2024–2029.

Monitoring

Monitoring and reporting of the embodied carbon in the construction phase will be conducted. The aim of monitoring will be to seek further ways to minimise climate impacts. Monitoring will include contractual obligations, in line with the most recent Climate Action Plan and sectoral targets, for the successful tenderer to ensure that the proposed development stays in line with updated aims. Commitments to monitor GHG emissions during the construction phase will also be secured through the final Construction Environmental Management Plan (CEMP). Monitoring will include embodied carbon of construction materials, water usage, power and fuel usage, and waste generation (including reuse and recycling rates). Where monitoring shows that the proposed development is not meeting its targets, further mitigation will be put in place.

Monitoring should also include reviewing potential for extreme weather events which may cause damage during construction. Contractors' Environmental Management System (EMS) will include measures to address risks during such events i.e. flooding.

15.3.10 Noise & Vibration

Construction Phase

Best practice noise and vibration control measures will be employed by the contractor during the construction phase in order to avoid significant impacts at the nearest sensitive buildings. The best practice measures set out in BS 5228 (2009 +A1 2014) Parts 1 and 2 will be complied with. This includes guidance on several aspects of construction site mitigation measures, including, but not limited to:

- Selection of quiet plant;
- Noise control at source;
- Screening; and
- Liaison with the public.

Further comment is offered on these items in the following paragraphs. Noise control measures that will be considered include the selection of quiet plant, enclosures and screens around noise sources, limiting

the hours of work and noise monitoring, and also by referring to the preliminary Construction Environmental Management Plan (CEMP).

N&V CONST 1: Selection of Quiet Plant

This practice is recommended in relation to static plant such as compressors and generators. It is recommended that these units be supplied with manufacturers' proprietary acoustic enclosures. The potential for any item of plant to generate noise will be assessed prior to the item being brought onto the site. The least noisy item will be selected wherever possible. Should a particular item of plant already on the site be found to generate high noise levels, the first action will be to identify whether said item can be replaced with a quieter alternative.

N&V CONST 2: Noise Control at Source

If replacing a noisy item of plant is not a viable or practical option, consideration will be given to noise control at source. This refers to the modification of an item of plant or the application of improved sound reduction methods in consultation with the supplier. For example, resonance effects in panel work or cover plates can be reduced through stiffening or application of damping compounds; rattling and grinding noises can often be controlled by fixing resilient materials in between the surfaces in contact.

The following best practice migration measures will be considered:

- The use lifting bulky items, dropping and loading of materials within these areas will be restricted to normal working hours.
- For mobile plant items such as cranes, dump trucks, excavators and loaders, maintaining enclosure panels closed during operation can reduce noise levels over normal operation. Mobile plant will be switched off when not in use and not left idling.
- For steady continuous noise, such as that generated by diesel engines, it may be possible to reduce the noise emitted by fitting a more effective exhaust silencer system.
- For percussive tools such as pneumatic breakers, a number of noise control measures include fitting muffler or sound reducing equipment to the breaker tool and ensuring any leaks in the air lines are sealed.
- Erecting localised screens around breaker or drill bit when in operation in close proximity to noise sensitive boundaries.
- For concrete mixers, control measures will be employed during cleaning to ensure no impulsive hammering is undertaken at the mixer drum.
- For all materials handling, ensure that materials are not dropped from excessive heights, lining drops chutes and dump trucks with resilient materials.
- For compressors, generators and pumps, these can be surrounded by acoustic lagging or enclosed within acoustic enclosures providing air ventilation.
- All items of plant will be subject to regular maintenance. Such maintenance can prevent unnecessary increases in plant noise and can serve to prolong the effectiveness of noise control measures.

N&V CONST 3: Screening

Screening is an effective method of reducing the noise level at a receiver location and can be used

successfully as an additional measure to all other forms of noise control. Standard construction site hoarding (2.4 m in height) with a mass per unit of surface area greater than 7 kg/m² can provide adequate sound insulation.

N&V CONST 4: Liaison with the Public

A designated Project Supervisor Construction Stage (PSCS) will be appointed to site during construction works. Any noise complaints will be logged and followed up in a prompt fashion by the PSCS. In addition, prior to particularly noisy construction activity (e.g. piling), the PSCS will inform the nearest noise sensitive locations of the time and expected duration of the noisy works.

Operational Phase

N&V OP 1: Building Services and Plant

The assessment outlined previously has specified noise limits at the nearest noise sensitive properties that must be achieved in order to ensure the impact is acceptable.

To achieve these noise limits, consideration will be given, at the detailed design stage, to a variety of mitigation measures and forms of noise control techniques. Some examples of these measures are as follows:

- Duct-mounted attenuators on the atmosphere side of air moving plant;
- Splitter attenuators or acoustic louvres providing free ventilation to internal plant areas;
- Solid barriers screening any external plant; and
- Anti-vibration mounts on reciprocating plant.

In addition to the above, the following measures will be adopted to minimise potential noise disturbance for neighbours:

- All mechanical plant items (e.g. motors, pumps etc.) shall be regularly maintained to ensure that excessive noise generated by any worn or rattling components is minimised;
- Any new or replacement mechanical plant items, including plant located inside new or existing buildings, shall be designed so that all noise emissions from site do not exceed the noise limits outlined in this document; and
- Plant items will be selected such that site noise emissions do not contain tonal or impulsive characteristics at nearby noise sensitive locations.

N&V OP 2: Inward Noise Impact

Glazing specifications for identified façades are presented in Section 12.5.4.4.3. These specifications will ensure that the internal noise criteria is achieved. However, the calculated glazing and ventilation specifications are preliminary and are intended to form the basis for noise mitigation at the detailed design stage. There are a number of combinations of glazing and ventilation systems that may also meet the internal noise requirements.

Monitoring

Construction Phase

During the construction phase, noise monitoring will be undertaken at sample locations representative of the nearest sensitive locations to ensure construction noise limits outlined in Table 1 are not exceeded. Noise monitoring will be conducted in accordance with the International Standard ISO 1996: *Acoustics – Description, measurement and assessment of environmental noise* Part 1 (2016) and Part 2 (2017). The selection of monitoring locations will be based on the nearest sensitive buildings to the working areas. It is recommended that noise control audits are conducted at regular intervals throughout the construction programme in conjunction with noise monitoring. The purpose of the audits will be to ensure that all appropriate steps are being taken to control construction noise emissions and to identify opportunities for improvement, where required.

Operational Phase

There is no monitoring recommended for the operational phase of the development as impacts to noise and vibration are predicted to be not significant.

15.3.11 Traffic and Transport

In order to mitigate the potential effect of the proposed development on Traffic and Transport, the following measures will be implemented:

Construction Phase

T&T CONST 1: Construction & Environmental Management Plan and Construction Traffic Management

Prior to the construction phase, the appointed contractor will develop a Construction Traffic Management Plan (CTMP) in order to mitigate any potential impacts that could arise in relation to construction traffic during the proposed works. This will be developed by the appointed contractor in advance of the works in agreement with Kildare County Council and An Garda Síochána.

Operational Phase

T&T OPERA 1: Mobility Management

A Mobility Management Plan (MMP) is included with the application. The measures identified in the MMP form part of the specific mitigation of this EIAR and a dedicated resident-specific Mobility Management Plan (MMP) is to be compiled with the aim of guiding the delivery and management of coordinated initiatives by the scheme promoter. Resident-specific MMPs include specialised plans and associated implementation strategies for the subject development proposals. The MMP ultimately seeks to encourage sustainable travel practices for all journeys by residents and visitors travelling to and from the proposed development. It involves the incorporation of a wide range of possible “hard” and “soft” tools from which to choose, with the objective of influencing travel choices.

Monitoring

Construction Phase

Planned monitoring activities during the construction phase, in relation to traffic and transport, will include:

- Ensuring contractors comply with the Construction Environmental Management Plan (CEMP).
- Inspecting the cleanliness of nearby roads, applying dust control measures, and providing facilities for cleaning vehicle wheels.
- Overseeing the implementation and effectiveness of Temporary Traffic Management (TTM) arrangements.
- Monitoring road safety measures for construction personnel.

Operational Phase

No regular monitoring will be necessary during the operational phase.

15.3.12 Material Assets

Construction Phase

The following mitigation measures are proposed for the construction phase of the proposed development with reference to Material Assets:

MA CONST 1: Resource and Waste Management Plan

The proposed development will comply with the provisions of the Resource and Waste Management Plan (RWMP) with respect to construction waste. Following detailed design, a Final Resource Waste Management Plan will be prepared prior to commencement of development and will be implemented to ensure maximum reuse and recycling of excavated materials.

MA CONST 2: Outline Construction and Environmental Management Plan

The Outline Construction and Environmental Management Plan, including measures for construction traffic management, will be implemented in order to protect local amenities and the integrity and operation of the local road network during the construction phase.

MA CONST 3: Provision of Utilities

Provision of utilities will be carried out in accordance with the recommendations of the relevant statutory bodies and providers (ESB, Gas Networks Ireland, Uisce Éireann, EIR, Kildare County Council etc.).

Operational Phase

MA OPER 1: Water Metering

Water Metering will be included in each unit to record consumption.

No further mitigation measures are considered necessary during the operational phase.

Monitoring

Monitoring measures will be in accordance with provisions outlined elsewhere in this EIAR document.