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Environmental Impact Assessment Report (EIAR) Volume 3 Appendices - Part 1 Chapter 8 & 9

In respect of

**A Proposed Large-scale Residential
Development at Ratoath, Co. Meath**

On behalf of

Beo Properties Ltd.

June 2025

1 Overview

1.1 Overview Appendices

Chapter 1 Introduction	N/A
Chapter 2 Background to the Scheme	N/A
Chapter 3 Planning Policy Context	N/A
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Chapter 18 Summary of Mitigation Measures	N/A

1.2 Detail Appendices

Appendix 8.1 - Bat Survey

Prepared by: Bryan Deegan (MCIEEM) of Altamar Ltd.

On behalf of: Beo Properties Ltd.

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Appendix I. Bat Fauna Impact Assessment for a Proposed Large-scale Residential Development (LRD) within the Townlands of Jamestown and Commons, Ratoath, Co. Meath.



30th May 2025

Prepared by: Bryan Deegan (MCIEEM) of Altemar Ltd.
On behalf of: Beo Properties Ltd.

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Document Control Sheet			
Client	Beo Properties Ltd.		
Project	Bat fauna impact assessment for a proposed Large-scale Residential Development (LRD) within the Townlands of Jamestown and Commons, Ratoath, Co. Meath.		
Report	Bat Fauna Assessment		
Date	30 th May 2025		
Version	Author	Reviewed	Date
01	Jeff Boyle	Bryan Deegan	30 th May 2025

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SUMMARY

Structure:	The site is currently in use as agricultural grassland. There are some mature hedgerow boundaries defining each field.
Location:	Ratoath South, Co. Meath
Bat species present:	2021/2022: A single soprano pipistrelle was observed emerging from a large ash tree that is covered in ivy in the central/western portion of the site. This tree and the corresponding hedgerow are to be retained. Foraging activity of soprano pipistrelle, common pipistrelle and Leisler's bats were noted along the hedgerows on site. 2023: Lesser Noctule (<i>Nyctalus leisleri</i>), Common Pipistrelle (<i>Pipistrellus Pipistrellus</i>) and Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) noted foraging on site 2024: Common Pipistrelle (<i>Pipistrellus Pipistrellus</i>) and Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>) noted foraging on site 2025: A single Common Pipistrelle (<i>Pipistrellus Pipistrellus</i>) was observed foraging around an Ash Tree. A potential bat roost exists in an Ash tree (<i>Fraxinus excelsior</i>) here which is scheduled for retention as part of the development. Two other individuals were observed foraging along treelines to the east and west of the site.
Proposed work:	The proposed development comprises a Large-scale Residential Development (LRD) on a site of 12.58ha within the townlands of Jamestown and Commons in Ratoath Co. Meath. The proposed development will principally consist of the construction of 364 no. residential units including 250 no. houses and 114 no. apartment / duplex units along with a creche, retail unit and café unit all with associated car and cycle parking and bin stores. Proposed building heights range from 2 no. to 4 no. storeys.
Impact on bats:	The removal of hedgerows will result in the removal of foraging areas and an increase in lighting would be expected to reduce foraging on site. The development will not result in the loss of a bat roost. Impacts: Minor adverse, negative, long term, site, not significant. Mitigation is required in the form of a pre-construction inspection of trees to be felled, the provision of bat boxes and a post construction light spill assessment.
Survey by:	Bryan Deegan (MCIEEM), Jeff Boyle & Gayle O'Farrell of Altemar Ltd.
Survey dates:	24 th May 2020 and 30 th August 2021, 14 th September 2023, 15 th September 2024, 1 st May & 21 st May 2025.

Description of the Proposed Project

The proposed development comprises a Large-scale Residential Development (LRD) on a site of 12.58ha within the townlands of Jamestown and Commons in Ratoath Co. Meath. The proposed development will principally consist of the construction of 364 no. residential units including 250 no. houses and 114 no. apartment / duplex units along with a creche, retail unit and café unit all with associated car and cycle parking and bin stores. Proposed building heights range from 2 no. to 4 no. storeys. Public open space is proposed across the site consisting of a central public park area and pocket parks featuring formal and informal play and amenity areas.

The proposed development also includes the construction of a section of the Ratoath Outer Relief Road (RORR) which will be continued from its current termination point in the northeast of the subject site to the existing Fairyhouse Road (R155) in the southwest. Access to the development is proposed via 2 no. vehicle access points from the new RORR. A series of pedestrian and cycle connections are proposed to site from the Fairyhouse Road (R155), Glascarn Lane and the new RORR.

The Proposed site outline and Site location map are seen in Figures 1-2.

Bat survey

This report presents the results of site visits by Bryan Deegan (MCIEEM) on the 24th May 2020 and 30th August 2021 and Emma Peters on the 14th September 2023 and 15th September 2024. More recently, site visits were carried out by Jeff Boyle & Gayle O'Farrell of Altamar Ltd on the 1st and 21st of May 2025.

Survey constraints

Bat surveys were undertaken during the active bat season in compliance with bat mitigation guidelines for Ireland V2 (2022).

Survey methodology

At dusk, bat detector surveys were carried out onsite using a *Batbox Duet* heterodyne/frequency division detector in 2020 and an Echo Plus Touch 2 Pro bat detector in 2021-2025 surveys to determine bat activity. Bats were identified by their ultrasonic calls coupled with behavioural and flight observations. Surveys were carried out having regard to the following guidelines:

- Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016);
- Bat Mitigation Guidelines for Ireland (NPWS, 2006); and,
- Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes (NRA, 2006).

Competency of Assessor

This report has been prepared by Bryan Deegan MSc, BSc (MCIEEM). Bryan has over 30 years of experience providing ecological consultancy services in Ireland. He has extensive experience in carrying out a wide range of bat surveys including dusk emergence, dawn re-entry and static detector surveys. He also has extensive experience reducing the potential impact of projects that involve external lighting on Bats. Bryan trained with Conor Kelleher author of the Bat Mitigation Guidelines for Ireland (Kelleher and Marnell (2007)) and Bryan is currently providing bat ecology (impact assessment and enhancement) services to Dun Laoghaire Rathdown County Council primarily on the Shanganagh Park Masterplan. The desk and field surveys were carried out having regard to the guidance: Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition (Collins, J. (Ed.) 2016) and Kelleher and Marnell (2007), Bat Mitigation Guidelines for Ireland.

The site survey has been carried out by Jeff Boyle (BSs Environmental Management). Jeff is skilled in bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys. He is also skilled in habitat assessment and has undertaken flora/invasive species surveys and breeding/wintering bird surveys to produce numerous ecological assessments on a range of residential, industrial and commercial projects.

The surveys were also undertaken by Gayle O'Farrell (BSc Agri-Environmental Sciences) has experience carrying out a range of wintering/breeding bird assessments, bat detection through static detector surveys, dusk emergence, and dawn re-entry surveys, flora and habitat mapping.

Legislative Context

Wildlife (Amendment) Act 2000.

Bats in Ireland are protected by the Wildlife (Amendment) Act 2000. Based on this legislation it is an offence to wilfully interfere with or destroy the breeding or resting place of any species of bat. Under this legislation it is an offence to *“Intentionally kill, injure or take a bat, possess or control any live or dead specimen or anything derived from a bat, wilfully interfere with any structure or place used for breeding or resting by a bat, wilfully interfere with a bat while it is occupying a structure or place which it uses for that purpose. “*

Habitats Directive- Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora transposed into Irish Law i.e. European Communities (Natural Habitats) Regulations, 1997 (SI No. 64/1997).

Annex II of the Council Directive 92/43/EEC 1992 on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) lists animal and plant species of Community interest, the conservation of which requires the designation of Special Areas of Conservation (SACs); Annex IV lists animal and plant species of Community interest in need of strict protection. All bat species in Ireland are listed on Annex IV of the Directive, while the Lesser Horseshoe Bat (*Rhinolophus hipposideros*) is protected under Annex II which related to the designation of Special Areas of Conservation for a species.

Under section 23 of SI No. 64/1997 all bats are listed under the first schedule of Section 23 which makes it an offence to:

- deliberately capture a bat
- deliberately disturb a bat,
- damage or destroy a breeding site or resting place of a bat.

Landscape

A Landscape Design Rationale was composed by Studio Glasu to outline the proposed landscape design for the development at Ratoath South. The report states that: *‘Additionally, wherever mature hedgerows or other existing landscape features are present, the masterplan prioritises their retention where feasible. These natural elements help preserve the ecological value of the site, provide biodiversity benefits, and soften the interface between the development and its surroundings. Where boundaries interact with existing hedgerows, supplementary native hedgerow planting will be carried out along these sections to fill any gaps created and to compensate for any failures that may occur in the future. This approach will ensure that the hedgerow will be retained in some form, even at a reduced size, and will regenerate over time.*

The proposed Landscape Masterplan is displayed in Figure 3.



0 100 200 m

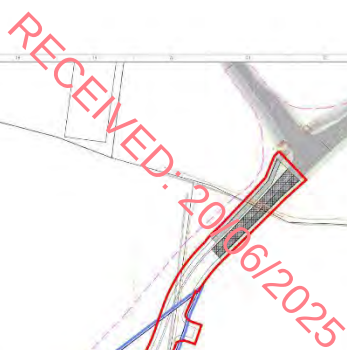


Project: Ratoath LRD
Location: Ratoath, Co. Meath
Date: 14th May 2025
Drawn By: Jeff Boyle (Altamar)

ALTEMAR
Marine & Environmental Consultancy



Figure 1. Proposed site outline



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Arboricultural Assessment

An Arboricultural Assessment of the Tree and Hedge Vegetation on 'LRD Lands' at Ratoath South, Co. Meath was composed by Arborist Associates Ltd. The report sets out to assess the impact of the proposed development on trees on the proposed development site. In summary, the report states that: *'The site area included within this LRD land parcel are currently in agricultural use and are mostly in grass for grazing livestock with some sections gone out of active use and are now becoming overgrown with naturally regenerating scrub vegetation such as Bramble and self-seeding trees. This parcel of land is divided up into a number of fields of varying sizes by typical type hedgerows for this area with the bulk of these growing on the side of drainage ditches that drain these lands. The hedges are predominately made up of Hawthorn with other species such as Elder and Privet present in smaller quantities with the undergrowth being dominated by Bramble and Dogrose and these in particular the Bramble is encroaching out of many of the hedgerows due to lapsed management to create broader hedges and scrub areas on either side. Ash is the main tree species protruding up over the hedge heights along with some Sycamore, Crab Apple and Poplar and these are dispersed along the hedges as individuals are in short groups/lines. These trees range in age from seedlings to those of a mature age class. Many of the trees have established themselves from old coppiced stools having been cut down previously as part of the past hedge cutting works and have now been allowed to establish as multiple-stemmed trees, either from base or near ground level. Ivy is also prevalent within the hedgerows and is growing up through the hedge plants and the trees, and in some places is causing suppression of the hedge plants and trees and may leave some of them more vulnerable to wind/storm damage. The bulk of the Ash are showing infection by 'Ash Dieback' (Hymenoscyphus fraxineus) and this is impacting their health with some trees now either dead or at advance stage of decline and although some trees within their lines/group canopy structures are of some prominence with the landscape, infection or the potential for infection by 'Ash Dieback' is having an impact on their category grading due to the uncertainty associated with the disease and how it will impact on the Ash tree population in the future years. As a result, the Ash trees have been given a category grade of 'C' at most with many due to their declining health being allocated to a category 'U' grade..*

Within the overall site area, 93. No. Trees were tagged individually, with 9No. Trees, 6No. Tree Lines and 21No. Hedges have been numbered numerically.'

In relation to Tree Pruning, the report states that: *'As part of the initiating works, the crowns of some of the trees are to be pruned to remove dead/unstable growth, as well as the pruning of individual limbs/branches or entire crowns to reduce size due to structural weaknesses or to improve their juxtaposition within the built environment. A preliminary list of these works is given within the condition tree assessment in 'Appendix 2' of this report and these are to be reviewed on site prior to being carried out.*

The hedges being retained in most instances will require trimming to bring them back into active management and to incorporate them into the completed landscaped development. This will involve trimming in of their sides, particularly excessive spread of vegetation especially Bramble and the poorer structured sections will need trimming/pruning to address stability issues. The objective of the trimming of the hedges is to help rejuvenate them with the encouragement of lower growth development and once trimmed back; there will be an opportunity to augment poor quality sections with new hedge planting to create better structured sustainable hedges for the future suitable for their new built urban environment. All tree felling and pruning work should be carried out by qualified and experienced tree surgeons before any construction work commences; all tree work should be in accordance with BS3998 (2010) Tree Work – Recommendations. For the stumps of trees that need to be removed, particularly those which are located within the root zone of trees being retained, these are to be ground out using a mechanical stump grinder taking care not to cause root damage to the trees being retained'

In relation to Tree Management the report states that: *'Within the proposed development, as is the current situation, trees will be positioned within close proximity to buildings and usable surfaces such as roads and neighbouring properties. As a result, it will be necessary to continue to review the condition of these trees on a regular basis and to carry out any necessary remedial tree surgery works required to promote health and safety. This will involve the ongoing monitoring of the Ash trees retained for infection and decline as a result of Ash Dieback and the necessary management will need to be undertaken to address safety. Any new tree planting*

carried out will require maintenance to encourage good growth habits and to alleviate any safety concerns that they may present as they grow in size.'

In relation to Tree Protection, the report states that: *'The tree and hedge vegetation being retained will need to be protected from unnecessary damage during the construction process by effective construction-proof barriers that will define the limits for machinery drivers and other construction staff. Ground protected by the fencing will be known as the 'Work Exclusion Zone' and sturdy protective fencing will need to be erected along the points identified in the Tree Protection Plan (DWG No. RORR002) prior to any soil disturbance and excavation work starting on site. This is essential to prevent any root or branch damage to the retained trees. The British Standard BS5837: Trees in relation to design, demolition and construction (2012) specifies appropriate fencing, see appendix 1 for details. All weather notices should be erected on the fences with words such as: "Tree Protection Fence — Keep Out". When the fencing has been erected, the construction work can commence. The fencing should be inspected on a regular basis during the duration of the construction process and shall remain in place until heavy building and landscaping work have finished and its removal is authorised by the project Arboriculturist.'*

The Tree Constraints Plan- Overall Plan and Tree Protection Plan- Overall Plan is seen in Figures 4-5.



Figure 4. Tree Constraints Plan – Overall Plan

Overall Plan

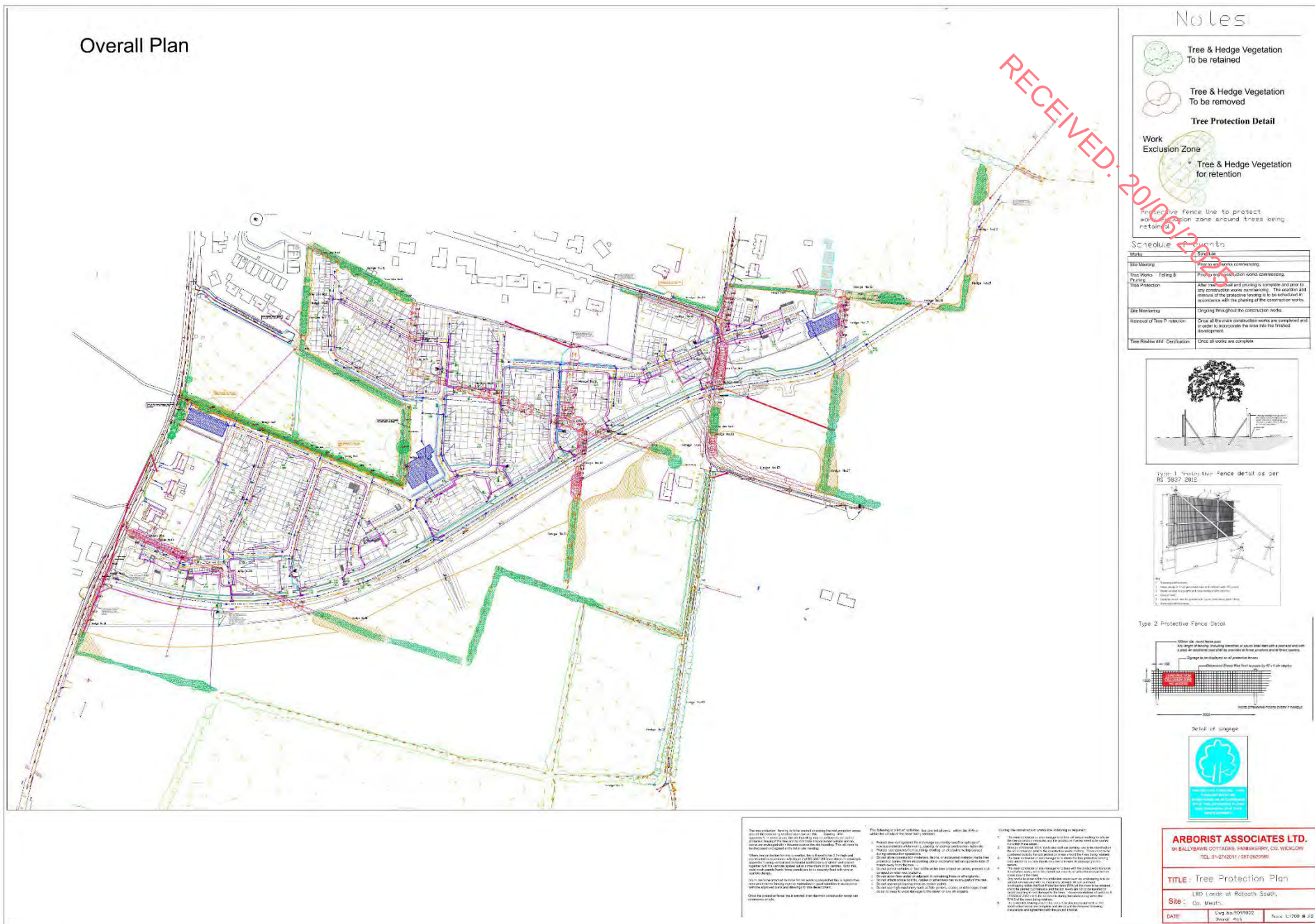


Figure 5. Tree Protection Plan- Overall Plan

Lighting

A Lighting Design Report and Specifications was composed by Redmond Analytical Management Services. The report states that:

“Lighting Impact

We select the luminaire that uses the lowest energy consumption for the specific application. We utilise the most appropriate lumen package (lumen output and distribution optics) to ensure efficient lighting of the target area and to minimise light spill outside of the area. Our energy consumption calculations are based on the requirements of IS EN 13201-5:2015.

We design using full cut off luminaires to ensure there is no direct upward light. We ensure that threshold increment is included in our calculations so that the luminaires are not a glare source.

These measures, along with our general lighting design approach, means that light spill outside the project boundary is minimised. By using a tailored lumen package, we minimise reflected, and refracted light as far as practicable.

We believe our lighting designs utilise the most energy efficient, sustainable luminaires currently available on the market and reflect practises laid out in relevant standards and in guidance notes from the professional bodies of which we are members, the Institution of Lighting Professionals and the Society of Light and Lighting.

Impact on Hedgerow

We have used a low output luminaire with narrow distribution to reduce light spill into the hedgerow. We have kept the spill to a maximum of 0.49LUX, close to the ground on the south side of the hedgerow. There is no light spill on to the tree with the roost.

As the street to the north of the hedgerow is closer, the spill light is slightly higher. In two locations, we have 1LUX at 1m above ground level.

For comparison, we consider light level under a full moon on a clear night to be in the order of 0.6LUX.”

Lighting Temperature

As outlined in the lighting report “The light source shall have a correlated colour temperature (CCT) of 4,000 Kelvin on the Outer Relief Road, and 3,000 Kelvin within the development.” The lighting within the development complies with bat lighting guidelines.

Figures 6-15 display the proposed lighting plans.

Junction with R155



Eav	12.67
Emin	5.10
E _{max}	19.57
E _{min} /E _{max}	0.26
E _{min} /E _{av}	0.40

Figure 6. Horizontal Illuminance (lux) levels for the Outer Relief Road (Sheet 1)

Horizontal Illuminance (lux)

Outer Relief Road 1



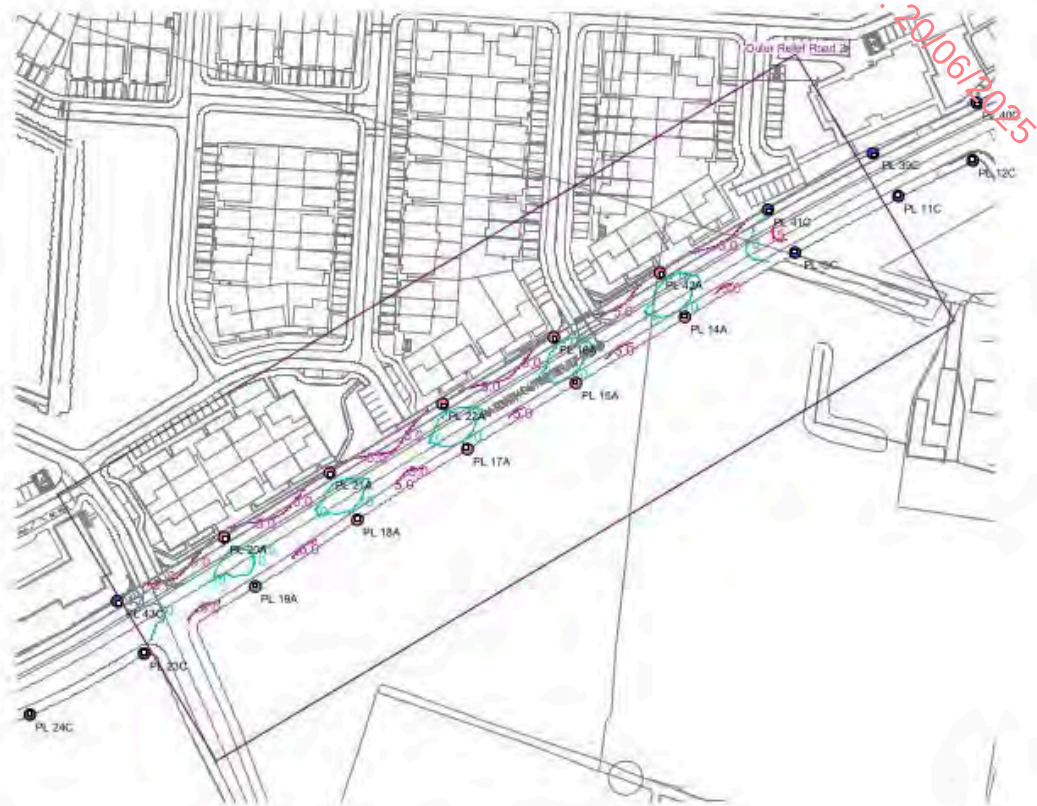
Results

Eav	8.58
Emin	3.46
E _{max}	14.82
Emin/E _{max}	0.23
Emin/Eav	0.40

Figure 7. Horizontal Illuminance (lux) levels for the Outer Relief Road (Sheet 2)

Horizontal Illuminance (lux)

Outer Relief Road 2



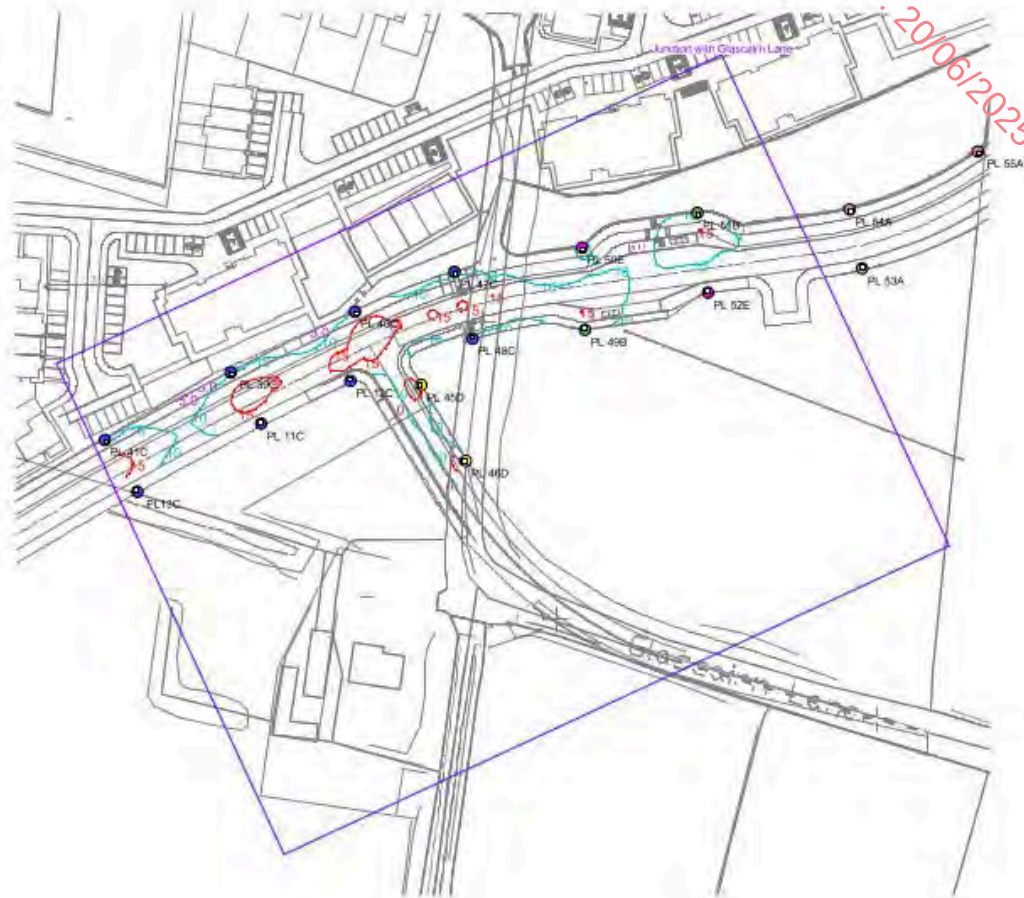
Results

Eav	8.25
Emin	3.34
E _{max}	15.84
Emin/E _{max}	0.21
Emin/Eav	0.40

Figure 8. Horizontal Illuminance (lux) levels for the Outer Relief Road (Sheet 3)

Horizontal Illuminance (lux)

Junction with Glascairn Lane



Results

Eav	11.26
Emin	5.16
E _{max}	17.98
E _{min} /E _{max}	0.29
E _{min} /E _{av}	0.46

Figure 9. Horizontal Illuminance (lux) levels for the Outer Relief Road (Sheet 4)

Horizontal Illuminance (lux)

Outer Relief Road 3



Results

Eav	8.35
Emin	3.30
E _{max}	28.17
Emin/E _{max}	0.12
Emin/Eav	0.40

Figure 10. Horizontal Illuminance (lux) levels for the Outer Relief Road (Sheet 5)

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Horizontal Illuminance (lux)

Tie in to Existing



Results

Eav	15.83
Emin	3.06
Emax	30.83
Emin/Emax	0.10
Emin/Eav	0.19

Figure 11. Horizontal Illuminance (lux) levels for Ratoath LRD (Sheet 1)

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Horizontal Illuminance (lux)

Development 1



Results

Eav	5.82
Emin	1.14
Emax	19.69
Emin/Emax	0.06
Emin/Eav	0.20

Figure 12. Horizontal Illuminance (lux) levels for Ratoath LRD (Sheet 2)

Horizontal Illuminance (lux)

Development 2



Results

Eav	5.22
Emin	1.07
E _{max}	17.43
Emin/E _{max}	0.06
Emin/Eav	0.20

Figure 13. Horizontal Illuminance (lux) levels for Ratoath LRD (Sheet 3)

Horizontal Illuminance (lux)

Development 3



Results

Eav	6.17
Emin	1.22
E _{max}	20.51
E _{min} /E _{max}	0.06
E _{min} /E _{av}	0.20

Figure 14. Horizontal Illuminance (lux) levels for Ratoath LRD (Sheet 4)

Horizontal Illuminance (lux)

Glascairn Lane



Results

Eav	7.78
Emin	1.78
Emax	21.08
Emin/Emax	0.08
Emin/Eav	0.23

Figure 15. Horizontal Illuminance (lux) levels for Ratoath LRD (Sheet 5)

Bat Assessment Findings

Review of local bat records

The review of existing bat records (sourced from Bat Conservation Ireland's National Bat Records Database) within a 2km² grid. The site is located within two 2km² grid references (Reference grid O05A and). The study area reveals that none of the nine known Irish species have been observed locally within Reference grid O05A and two of the nine species were observed within Reference grid O05F (Table 1). The National Biodiversity Data Centre's online viewer was consulted in order to determine whether there have been recorded bat sightings in the wider area. This is visually represented in Figures 16-18. The following species were noted in the wider area: Brown Long-eared Bat (*Plecotus auritus*), Daubenton's Bat (*Myotis daubentonii*), Lesser Noctule (*Nyctalus leisleri*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Pipistrelle (*Pipistrellus pipistrellus sensu lato*) and Nathusius's Pipistrelle (*Pipistrellus nathusii*) (Figures 16-18).

Table 1: Status of bat species within a 2km² grid encompassing the subject site (Reference no. O05F)

Species name	Record count	Date of last record	Note
Pipistrelle (<i>Pipistrellus pipistrellus sensu lato</i>)	15	15/08/2014	National Bat Database of Ireland
Lesser Noctule (<i>Nyctalus leisleri</i>)	3	23/07/2013	National Bat Database of Ireland



Figure 16. Brown Long-eared Bat (*Plecotus auritus*) (yellow), Daubenton's Bat (*Myotis daubentonii*) (purple) and both Brown Long-eared Bat and Daubenton's Bat (orange) (Source:NBDC) (Site – red circle)

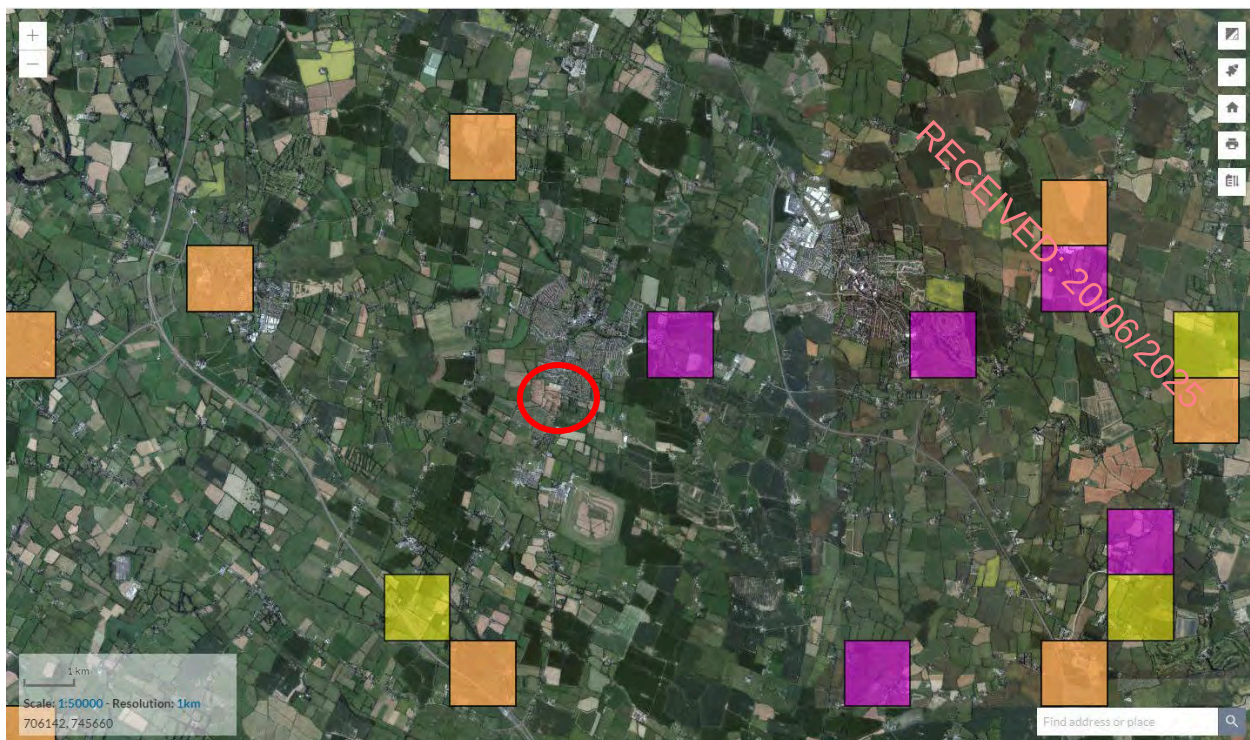


Figure 17. Lesser Noctule (*Nyctalus leisleri*) (purple), Soprano Pipistrelle (*Pipistrellus pygmaeus*) (yellow) and both Lesser Noctule and Soprano Pipistrelle (orange) (Source NBDC) (Site – red circle)



Figure 18. Pipistrelle (*Pipistrellus pipistrellus sensu lato*) (Species Aggregate) (yellow), Nathusius's Pipistrelle (*Pipistrellus nathusii*) (purple) and both Pipistrelle and Nathusius' Pipistrelle (orange) (Source NBDC) (Site – red circle)

Detector survey

Bat detector surveys were carried out on the 24th May 2020 and 30th August 2021. Follow up surveys were undertaken on the 1st and 21st of May 2025. Bat activity on site was not particularly high. A single soprano pipistrelle was observed emerging from a large ash tree that is covered in ivy in the central/western portion of the site (yellow circle Figure 19) during the 2020/2021 surveys. This tree and the corresponding hedgerow are to be retained. Foraging activity of Leisler's bat (Lesser Noctule) (*Nyctalus leisleri*), soprano Pipistrelle (*Pipistrellus pygmaeus*) and common pipistrelle (*Pipistrellus pipistrellus*) were noted on site primarily along the hedgerows on site.

During the 2025 surveys, a single Common Pipistrelle (*Pipistrellus Pipistrellus*) was observed foraging along central treelines as shown in Figure 21. The Common Pipistrelle (*Pipistrellus Pipistrellus*) was noted emerging from an Ash tree (*Fraxinus excelsior*) which is scheduled to be retained as part of the development.

Bat Roosts

The ash tree on site where the soprano pipistrelle was observed emerging would be seen to be tree of greatest potential for roosting on site. This is to be retained. Another Ash tree (*Fraxinus excelsior*) (1478) which is scheduled for retention is a bat roost for a single Common pipistrelle bat as observed in 2025.

Other trees, primarily the larger ash that are covered in ivy are of low-medium potential for bat roosting, primarily as a result of ivy cover. Many of the ash trees are multi-stemmed which results in smaller thinner trunks of lower bat roosting potential.

Potential impacts of proposed redevelopment on bats

The removal of hedgerows will result in the removal of foraging areas and an increase in lighting would be expected to reduce foraging on site. The bat roosts on site are within hedgerow that are to be retained. Should this tree (1478) or tree (0966) be required to be removed a bat derogation licence will be required from NPWS. Additionally, trees (1476/1477) should be inspected for a potential bat roost prior to felling as these are considered to be of moderate bat roosting potential.

Impacts: **Minor adverse, negative, long term, site, not significant.**

Mitigation measures

As outlined in Marnell et al. (2022) "Mitigation should be proportionate. The level of mitigation required depends on the size and type of impact, and the importance of the population affected." In addition as outlined in Marnell et. al (2022) 'Mitigation for bats normally comprises the following elements:

- *Avoidance of deliberate, killing, injury or disturbance – taking all reasonable steps to ensure works do not harm individuals by altering working methods or timing to avoid bats. The seasonal occupation of most roosts provides good opportunities for this*
- *Roost creation, restoration or enhancement – to provide appropriate replacements for roosts to be lost or damaged*
- *Long-term habitat management and maintenance – to ensure the population will persist*
- *Post-development population monitoring – to assess the success of the scheme and to inform management or remedial operations.'*

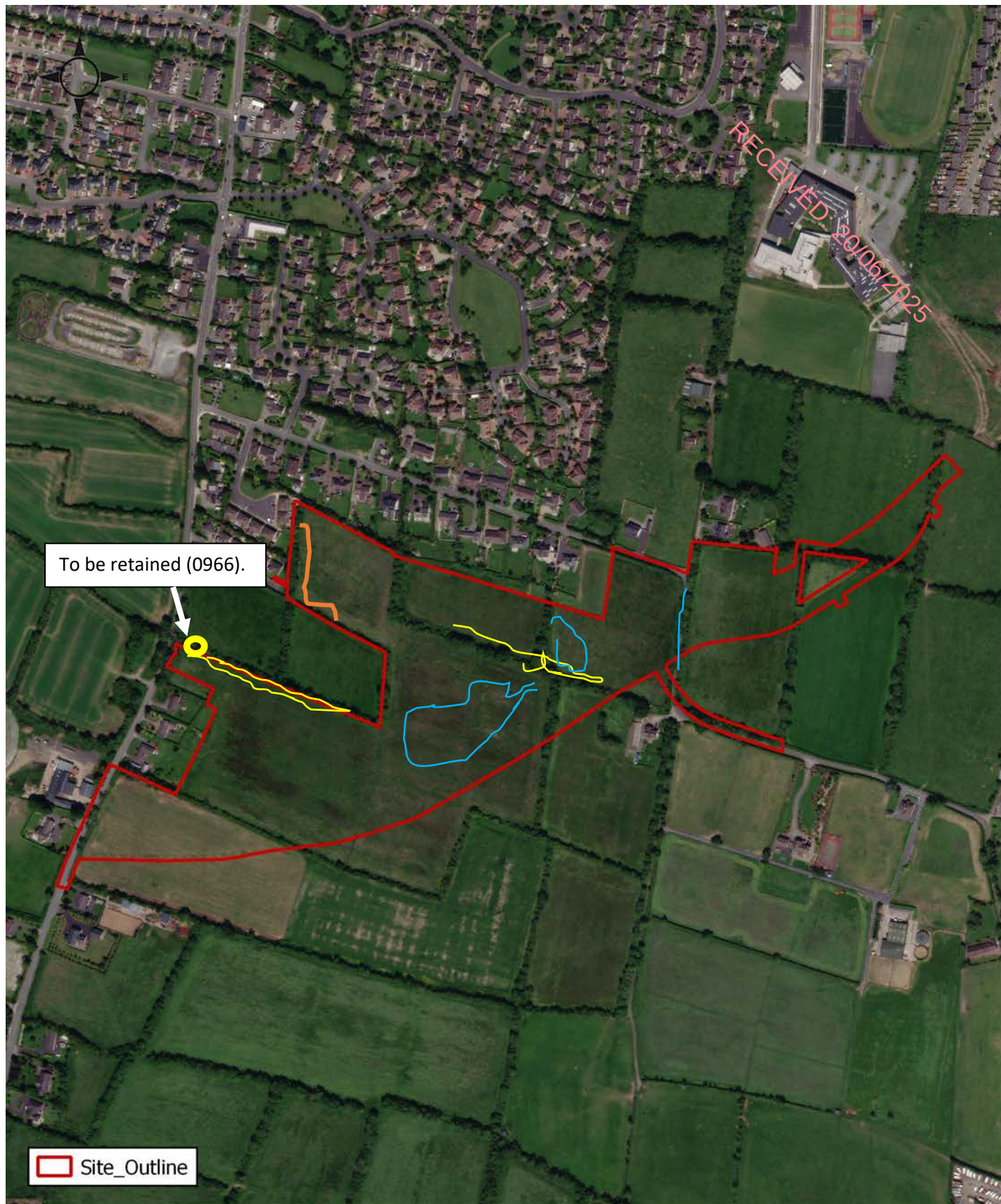
The following mitigation will be carried out:

- Pre-Construction inspection for bats in trees of bat roosting potential.
- During construction, lighting at all stages will be done sensitively with no direct lighting of hedgerows and treelines.
- Lighting during construction should only be used during working hours with no floodlighting of the site.
- All lighting during construction and operation will be carried out to the satisfaction of the project ecologist.

Predicted and residual impact of the proposal

There are two confirmed bat roosts, within ivy clad trees. These are to be retained on the site as shown in Figure 19. A bat derogation licence will not be required as these trees are being retained.

The likelihood bat collision is not significant as the materials proposed are generally solid and would have good acoustic properties to reflect echolocation signals. Land use change will result in foraging areas being reduced and light spill will be introduced. Works on site will result in a long-term modification of the site. However, the site is deemed to be of low importance to foraging bats considering the scale of the development and low foraging activity recorded over 5 years of surveys. Following implementation of the sensitive lighting strategy to reduce light intensity and the proposed landscape strategy, the species known to occur onsite and in the surrounding area should persist, albeit at a lower level of foraging. The impact of the proposed development on bats will be Low Adverse/Site/Negative/Not Significant/long term.



0 0.2 0.4 0.6 km

Project: Ratoath South
Location: Ratoath, Co. Meath
Date: 12th May 2022
Drawn By: Bryan Deegan (Altamar)

ALTEMAR
Marine & Environmental Consultancy



Figure 19: Survey 2020/2021. Bat roost (yellow circle) Soprano pipistrelle (yellow), Common pipistrelle (orange), Leisler's (blue)



Figure 20: 2023 & 2024 survey Soprano pipistrelle (yellow), Common pipistrelle (orange), Leisler's (blue)



Project: Ratoath LRD
 Location: Ratoath, Co. Meath
 Date: 14th May 2025
 Drawn By: Jeff Boyle (Altamar)

ALTEMAR
 Marine & Environmental Consultancy



Figure 20: Survey 2025. Common pipistrelle foraging (yellow) and potential bat roost within Ash tree (orange)

References

- Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) 1982
- Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979
- EC Directive on The Conservation of Natural habitats and of Wild Fauna and Flora (Habitats Directive) 1992
- European Communities (Birds and Natural Habitats) Regulations 2011 Government of Ireland, Dublin
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Appendix 8.2 - Non-volant Terrestrial Fauna Assessment

Prepared by: Frank Spellman of Altamar Ltd.

On behalf of: Beo Properties Ltd.

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Appendix II-Non-volant Terrestrial Fauna Assessment for a Proposed Large-scale Residential Development (LRD) within the Townlands of Jamestown and Commons, Ratoath, Co. Meath.



22nd May 2025

Prepared by: Frank Spellman of Altemar Ltd.
On behalf of: Beo Properties Ltd.

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Document Control Sheet			
Client	Beo Properties Ltd.		
Project	Non-volant Terrestrial Fauna Assessment for a Proposed Large-scale Residential Development (LRD) within the Townlands of Jamestown and Commons, Ratoath, Co. Meath.		
Report	Non-avian terrestrial mammal impact assessment		
Date	22 nd May 2025		
Version	Author	Reviewed	Date
Final	Frank Spellman	Bryan Deegan	22 nd May 2025

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Summary

Structure/features:	The survey area consists primarily of grassland, scrub, water-holding/dry ditches and hedgerows.
Location:	Townlands of Jamestown and Commons, Ratoath, Co. Meath.
Fauna species present:	Badger (<i>Meles meles</i>) & common frog (<i>Rana temporaria</i>).
Proposed work:	Large-scale Residential Development (LRD)
Impact on non-avian mammals:	The overall impact on the ecology of the proposed development will result in a long term minor adverse, not significant, residual impact on the ecology of the site and locality overall. A NPWS derogation licence is not required.
Survey by:	Frank Spellman.
Survey date:	2 nd April 2024 and 2 nd April 2025.

Receiving environment

Background

The proposed development comprises a Large-scale Residential Development (LRD) on a site of 12.58ha within the townlands of Jamestown and Commons in Ratoath Co. Meath. The proposed development will principally consist of the construction of 364 no. residential units including 250 no. houses and 114 no. apartment / duplex units along with a creche, retail unit and café unit all with associated car and cycle parking and bin stores. Proposed building heights range from 2 no. to 4 no. storeys. Public open space is proposed across the site consisting of a central public park area and pocket parks featuring formal and informal play and amenity areas.

The proposed development also includes the construction of a section of the Ratoath Outer Relief Road (RORR) which will be continued from its current termination point in the northeast of the subject site to the existing Fairyhouse Road (R155) in the southwest. Access to the development is proposed via 2 no. vehicle access points from the new RORR. A series of pedestrian and cycle connections are proposed to site from the Fairyhouse Road (R155), Glascarn Lane and the new RORR.

The proposed site outline, location, and landscape plan are demonstrated in figures 1-4.

Landscape

The landscape strategy for the proposed development has been prepared by Studio Glasú to accompany this planning application.

The proposed landscape plans is demonstrated in figure 4.



Project: Ratoath LRD
 Location: Ratoath, Co. Meath
 Date: 14th May 2025
 Drawn By: Jeff Boyle (Altamar)

ALTEMAR
 Marine & Environmental Consultancy



Figure 1. Proposed site outline.



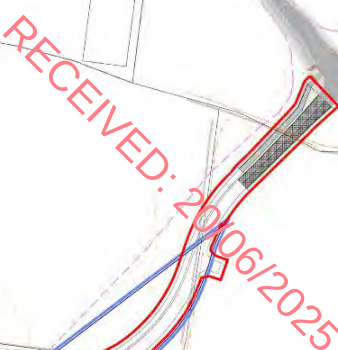
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Project: Ratoath LRD
 Location: Ratoath, Co. Meath
 Date: 14th May 2025
 Drawn By: Jeff Boyle (Altamar)

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Figure 2. Proposed site location



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Competency of assessor

This report has been prepared by Frank Spellman (MSc Zoology, BSc Zoology). Frank has previous experience in carrying out a wide range of fauna surveys as both a sub-contractor and employee for consultancies and organisations in Ireland and the US. These include both roving and static acoustic bat surveys, terrestrial non-avian mammal surveys, breeding/wintering bird surveys, and freshwater ecology surveys. The desk and field surveys were carried out using techniques approved and recommended by CIEEM.

Legislative context

A number of non-avian terrestrial mammal species are protected under the Wildlife Act (1976), Wildlife [Amendment] Acts (2000 to 2012), and Annex IV of the Habitats Directive (transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations, 2011-2021. These include species such as badger, Irish stoat, Irish hare, brown hare, pine marten, red squirrel, otter, hedgehog, all deer species, and pygmy shrew.

The badger is also a Red Data Book species, but it is a relatively common species and ubiquitous through much of the Irish countryside (Smal, 1995).

It is standard best practice to make special provisions for badgers affected by development. Whilst the species is common in much of the Irish landscape, badgers are notable for their practice of constructing large underground tunnel and chamber systems (setts). Provisions are made for their humane removal or for their conservation on site where feasible or practicable. The Wildlife [Amendment] Act (2000-2012) protects all resting places of protected species.

Otters are protected under the Irish Wildlife Acts and are also listed under Annex II and Annex IV of the EU Habitats Directive.

Otters are relatively common in Ireland, and they do occur on most rivers in this country. Protection of this species is important and provisions are made to ensure that holts are not interfered with except under especial circumstances and to ensure the quality of their foraging habitat.

Non-avian mammal survey

This report presents the results of two site visits by Frank Spellman on 2nd April 2024 and 2nd April 2025. A mammal specific transect survey was carried out on each occasion. Surveys were carried out using techniques approved and recommended by CIEEM.

Survey methodology

These non-avian mammal surveys were carried out based on techniques approved and recommended by CIEEM.

Surveys were undertaken in an area that consisted primarily of grassland fields with some pockets of scrub bounded by hedgerows and ditches, most of which contained standing water. A single roving transect following the full perimeter of each field, circumnavigating any notable features within each field was carried out.

The transect began at the northwest access point. The general transect route took a clockwise route, while circumnavigating each field and crossing through each field where grassland had become overgrown or pockets of scrub had developed. Diversions to inspect particular habitats and features, as well as to follow trails were taken where required. Ditches were also investigated along their full length to identify any evidence of amphibians.

Movements were carried out slowly, with pauses to observe open spaces and other features that might attract mammals, further following trails to determine their direction and investigate recipient areas for potential dens/setts/scatt/prints/scrapes/latrines etc. The survey took approximately 3 hours.

Survey results

Habitats of non-avian terrestrial fauna potential

A ground level habitat assessment was carried out and used to examine the structures and vegetation on site for features that could facilitate non-avian terrestrial mammals and amphibians. Potential features include woodland, heavy scrub, hedgerows, margins of waterbodies, waterbodies, piles of vegetative/construction debris, grassland etc. All vegetated areas on site were assessed for evidence of non-avian mammals.

Areas of high non-avian mammal potential in the survey area included the hedgerow and scrub margins of fields. Areas of high amphibian potential were the ditches within some field boundaries.

Non-avian terrestrial mammal surveys.

A total of one mammal species was confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*). These are visually represented in Figure 5. No setts were observed on site or within 50 meters of the proposed development.

An area of high mammal activity was observed along the field boundaries in the northeast of the survey area. Signs of recent and regular foraging were evident, and prints confirmed the presence of badgers utilising this area.

A large multi-entrance badger sett (6 entrances) was recorded to the east of the site. The size, presence of bedding, and level of activity was indicative of a breeding sett. The closest entrance to this sett was located over 200 m from the proposed development.

A sett was observed on the bank of a ditch within a field boundary to the south of the subject site. This was a small single entrance sett with a moderate spoil heap. The entrance was heavily littered with debris and contained cobwebs. No evidence of latrines or foraging by badgers was observed in this area. A camera was placed on this sett both in 2024 and 2025 for a period of one week. No activity was observed by badgers during either period. It is likely that this sett is an unused subsidiary sett.

The entire survey area and any areas that could potentially facilitate badger setts, otter holts, pine martin, hedgehog or deer were fully investigated. One inactive subsidiary sett and one active (likely breeding) sett were observed a sufficient distance from the proposed development so that no exclusion zone or mitigation specifically in relation to badger resting/breeding places is required. Evidence of badgers utilising the proposed site as a foraging area was recorded. No evidence of other terrestrial mammals were observed within the survey area. Evidence of amphibians (spawn) was observed in ditches within the survey area.

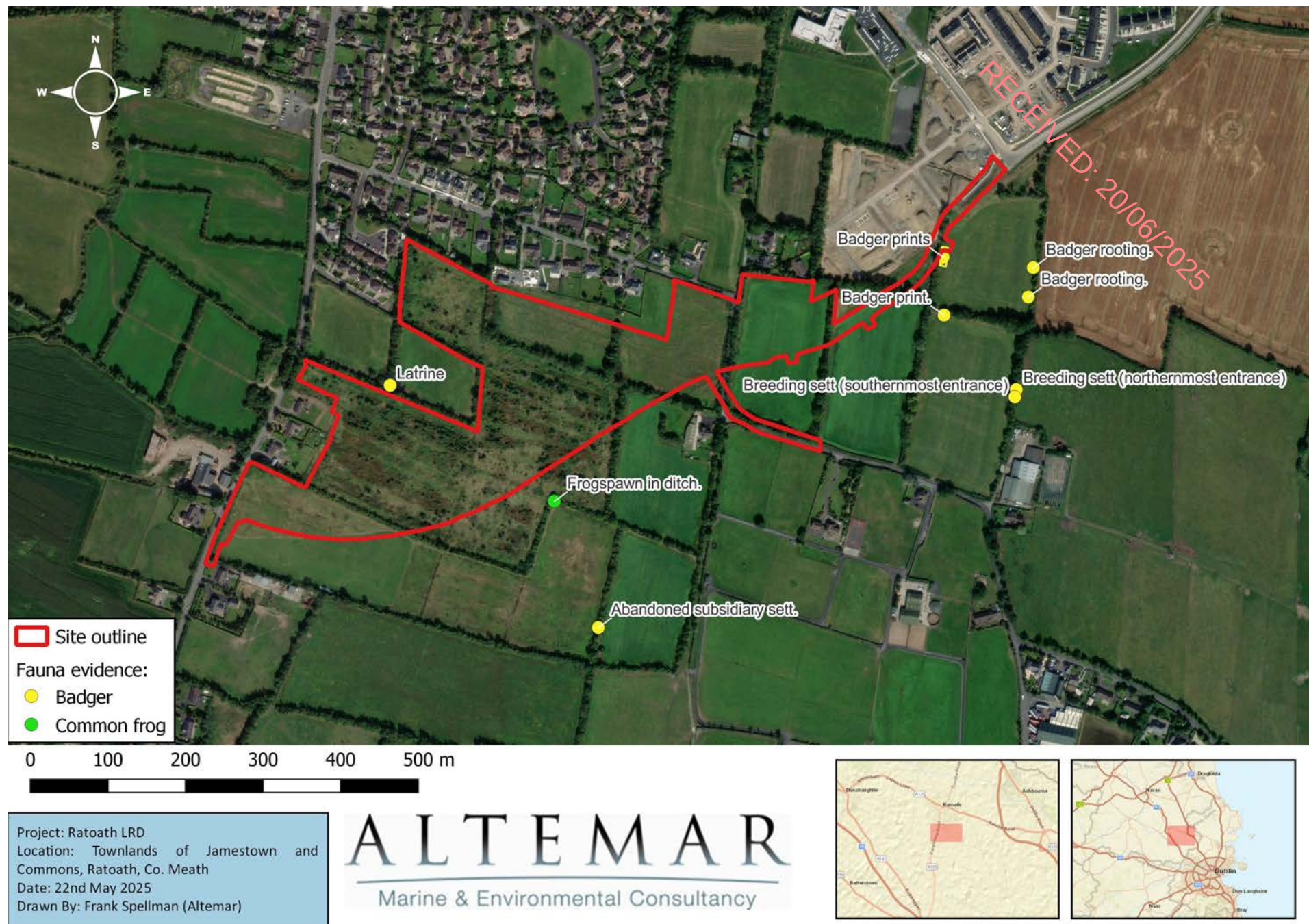


Figure 5: Non-avian fauna activity/evidence/ observed/recorded.

Non-avian mammal assessment findings

Review of local mammal records

The review of existing terrestrial mammal records (sourced from NBDC Database) within a 2km² grid (Reference grids O0150 & O0250) encompassing the study area reveals that three known Irish species have been observed locally (Table 1).

Table 1: Status of non-avian mammal species within the 2km² grid (O22C)

Species Name	Record Count	Date of Last Record	Designation
Eurasian Badger (<i>Meles meles</i>)	1	23/04/2010	Protected Species: Wildlife Acts
Red Fox (<i>Vulpes vulpes</i>)	1	09/09/2014	
West European Hedgehog (<i>Erinaceus europaeus</i>)	3	19/09/2022	Protected Species: Wildlife Acts

Evaluation of results

The mammal surveys comply with CIEEM guidelines.

One mammal species was confirmed within the survey area by visual confirmation and behavioural evidence: badger (*Meles meles*).

One amphibian species was confirmed through spawn: common frog (*Rana temporaria*).

Mammal activity was observed throughout the survey area, with trails circumnavigating and crossing all fields.

An area of high mammal activity was observed along the field boundaries in the northeast of the survey area.

A large multi-entrance badger sett (6 entrances) was recorded to the east of the site. This is likely a breeding sett.

An abandoned subsidiary badger sett was observed on the bank of a ditch within a field boundary to the south of the subject site.

No evidence of other terrestrial mammals were observed within the survey area. Evidence of amphibians (spawn) was observed in ditches within the survey area.

No evidence of fox, otter, pine marten, hedgehog, or deer were observed within the site outline/survey area. The area is used by locals, especially for dog walking, which is likely responsible for many of the trails on site.

A review of existing records revealed that two additional species, red fox (*Vulpes vulpes*) and west European hedgehog (*Erinaceus europaeus*) have been recorded in the vicinity of the survey area. No evidence of these species was observed within the survey area.

Overall, the subject site is of importance to badger foraging and movement and to common frogs. Areas immediately adjacent, but a sufficient distance from proposed works, to the east of the site, is of breeding value to badgers. Although a lack of evidence was observed for other species, there is habitat suitability for a variety of mammals, including fox, hedgehog, and newt, and therefore it is possible that one or more other mammal species (apart from badger) or amphibian utilise an area or establish a territory within the site outline currently or in the future. An additional survey specifically for mammals is recommended if significant delays to the delivery of the proposed project occur.

Potential impact of the development on non-avian fauna

Due to the low levels of mammal activity and lack of evidence to support the presence of any protected species within the proposed site outline, no impact on protected non-avian terrestrial mammals is foreseen as a result of the proposed development.

Limitations

Not all water-holding features were readily accessible to observe for evidence of amphibians. It is assumed that common frog utilises standing water across the site. Accessibility limitations were minor regarding mammal assessment.

Mitigation measures

The proposed site outline within the survey area is of low importance to the local non-avian terrestrial mammal population. However, the impact of the development during construction phase will be a loss of existing habitats and species. Although no badger setts area located within distances from the proposed site that would require buffer zones, the site is used by badgers as foraging habitat. The following mitigation measures relevant to mammals shall be implemented to minimise any potential negative impact on biodiversity:

- An Ecological Clerk of Works (ECoW) will be appointed to oversee the construction phase and to oversee the implementation of all mitigation including compliance with Wildlife Acts and Water Pollution Acts and ensure that biodiversity in neighbouring areas including birds will not be impacted.
- Preconstruction surveys for mammals will be carried out given the high habitat suitability adjacent to the proposed works for a variety of mammal species and the time between the original surveys and possible commencement of works.

Predicted residual impact of development

The overall impact on the ecology of the proposed development will result in a long term minor adverse, not significant, residual impact on the ecology of the site and locality overall.

A pre-construction survey will be carried out for terrestrial mammals of conservation importance. A NPWS derogation licence is not required.

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Appendix 9.1 - Archaeological Impact Assessment (AIA) Report

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Archaeological Impact Assessment Report Large Residential Development at Jamestown, Commons, Ratoath, Co. Meath

Adam Collins and Magda Lyne
May 2025

Report Status: Draft

ACSU Ref.: 2485



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	No:	PM-SF-113	Version:	01	Effective Date:	01.01.24
	Title:	AIA: Large Residential Development, Ratoath, Co. Meath				Page 2 of 47

PROJECT DETAILS

Project Large Residential Development, Ratoath, Co. Meath

Report Type Archaeological Impact Assessment

Townland(s) Jamestown, Commons

RMP/SMR No. N/A

RPS Id./NIAH Reg. No. N/A

ITM Ref. 701928, 750512

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Report Status Draft

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Revision	Date	Description	Status	Author	Reviewed	Approved
1.0	24.04.2025	Archaeological Impact Assessment	Draft	A.C, M.L	D.M	D.M
1.1	21.05.2025	Archaeological Impact Assessment	Draft	A.C, M.L	D.M	D.M
1.2	21.05.2025	Archaeological Impact Assessment	Final	A.C, M.L	D.M	D.M

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NON-TECHNICAL SUMMARY

This report presents the findings of an archaeological impact assessment for a proposed large-scale residential development located to the south of Ratoath town in County Meath. The report was prepared following LRD Meeting with Meath County Council. The site measures 12.58 hectares and is located within the townlands of Jamestown and Commons (ITM 701928, 750512). This assessment is based on the findings of a study of available archaeological, historical, cartographic and photographic sources and includes the results of previously carried out archaeological assessments, that included geophysical survey (20R0026), test trenching (21E0511).

There are no Recorded Monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR), or Protected Structures, as listed in the *Meath County Development Plan 2021-2027*, within the site. However, an enclosure (ME045-066---) is located 180m metres east of the site.

A portion of the site was subject to assessments previously including a geophysical survey (20R0026) and archaeological test trenching (21E0511). The latter identified three areas of archaeological activity: one in Field 1 (Area 1) and two in Field 5 (Area 2 and 3). The features exposed comprise ploughed out pits, post-holes and spreads, likely associated with a prehistoric activity. Area 4, Area 5 (Field 4) and Fields 7-9 were not subject to archaeological investigation at that time. Furthermore, four Cultural Heritage Areas (CHA) were identified as a result of previously carried out archaeological impact assessment; one is a site of a building/structure (CHA1; Area 4), while the remaining three are townland boundaries (CHA 2-4).

The site contains archaeological remains (Area 1-3) and Cultural Heritage Areas (CHA 1-4) furthermore, portions of the site were not subject to archaeological assessment hence have the potential to contain archaeological features.

Consequently, in order to mitigate the impact of the proposed development it is recommended that:

- Three areas of archaeological activity (Areas 1-3) identified during test trenching (21E0511) will be preserved by record (excavated). At the locations of the features identified, in Field 1 an area measuring 37m by 27m and in Field 5 two areas measuring 25m by 25m and 20m by 20m will be stripped of topsoil, features identified including any features associated that might be exposed, will be preserved by record. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist. The appointed archaeologist shall consult with the Licensing Section of the NMS regarding the methodology to be employed in the resolution of all sites. This will be carried out prior to construction works commencing.

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- Prior to the development of the site, an area measuring 20m by 25m around the location of Cultural Heritage Area CHA1 shall be stripped of topsoil to establish if any remains of the structure are present. Further archaeological investigation may be required depending on the results, including a full archaeological excavation of any features and deposits identified by a licensed archaeologist in accordance with a methodology to be agreed with the National Monuments Service.
- Archaeological test trenching of Area 5/Field 4 and Field 7 as well as within the northeast portion of the site will be carried out prior to construction. Should archaeological features be identified, further mitigation, including preservation in situ (if feasible) or by record (excavation), will be required. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist. The appointed archaeologist shall consult with the Licensing Section of the NMS regarding the methodology to be employed in the resolution of all sites. This will be carried out prior to construction works commencing.
- Prior to the development of the site, a photographic and measured survey (including written description, photographic record) will be carried out of Cultural Heritage Area CHA2 – townland boundary between Commons and Jamestown, as well as CHA3 and CHA4 townland boundaries between Commons and Ratoath
- Archaeological features were identified within the site hence monitoring of groundworks during the construction phase is recommended, as the site has some potential to contain isolated archaeological features. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist.

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1. INTRODUCTION

This report presents the findings of an archaeological impact assessment for a proposed large-scale residential development located to the south of Ratoath town in County Meath. The site is located within the townlands of Jamestown and Commons (ITM 701928, 750512, Figure 1), within the Barony of Ratoath and Civil Parish of Ratoath, County Meath. The site extends across approximately 12.58 hectares, on existing agricultural lands located immediately to the south of the existing built area of Ratoath in County Meath. The site is generally bound to the north by Glascarn Lane, the rear of houses on Glascarn Lane, further existing residential dwellings and a permitted strategic housing development to the east and south by existing agricultural fields and by Glascarn Lane (continued) and Bridle Path; and to the west by Fairyhouse Road (R155), the rear of houses at Fairyhouse Road, the Carraig Na Gabhna and Cairn Court developments, and existing agricultural fields.

The assessment is based on the findings of a study of available archaeological, historical, cartographic and photographic sources. The aim of this report was to assess whether or not the site contained any evidence for the presence of known or previously unknown areas or features of historical, built heritage or archaeological significance and what, if any impact the proposed development might have on such remains.

2. THE DEVELOPMENT

The proposed development comprises a Large-scale Residential Development (LRD) on a site of 12.58ha within the townlands of Jamestown and Commons in Ratoath Co. Meath. The proposed development will principally consist of the construction of 364 no. residential units including 250 no. houses and 114 no. apartment / duplex units along with a creche, retail unit and café unit all with associated car and cycle parking and bin stores. Proposed building heights range from 2 no. to 4 no. storeys. Public open space is proposed across the site consisting of a central public park area and pocket parks featuring formal and informal play and amenity areas.

The proposed development also includes the construction of a section of the Ratoath Outer Relief Road (RORR) which will be continued from its current termination point in the northeast of the subject site to the existing Fairyhouse Road (R155) in the southwest. Access to the development is proposed via 2 no. vehicle access points from the new RORR. A series of pedestrian and cycle connections are proposed to site from the Fairyhouse Road (R155), Glascarn Lane and the new RORR.

Please refer to the planning application form and statutory notices (newspaper and site notices) for a full and formal description of the proposed development..

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2.1 Archaeological Condition/Requirement

The report was prepared following LRD Meeting with Meath County Council that recommended that:

... the applicant includes an Archaeological Impact Assessment, and any other archaeological reports completed on or adjacent to the site and proposes a detailed mitigation strategy. The reason for this is as site will attract an archaeological planning condition due to its size and the archaeological remains that appear to be on it. Archaeological remains are best found and mitigated early on in any pre- and post- planning situations to avoid potential construction delays and disruptions.

3. METHODOLOGY

This assessment comprises a literature review and consultation of various written, cartographic and photographic sources. This included the *Record of Monuments and Places* (RMP) and *Sites and Monuments Record* (SMR), 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, which also includes sites listed in the *National Inventory of Architectural Heritage* (see below). The last published RMP for County Meath 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 Topographical Files of the National Museum of Ireland were also consulted to assess the area's archaeological potential. These files list on a townland basis 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 results of previous and ongoing archaeological investigations were also considered in order to evaluate the level of archaeological remains coming to light in the area. This was primarily achieved by searching the *Database of Archaeological Excavations in Ireland* (www.excavations.ie), which contains summaries of all investigations carried out under licence from 1970 to the present.

Historical maps, including Griffith's Valuation, those held by the Map Library of Trinity College Dublin and Ordnance Survey Ireland (OSi) were also consulted, as well as aerial photography and imagery from the Geological Survey of Ireland and Google Earth. These sources can indicate areas of archaeological potential through features like curving field boundaries, crop marks and soil marks, and can provide information

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regarding the nature and extent of recorded archaeological sites that have become denuded since the early 19th century. Historical maps are also useful in identifying other features of cultural heritage significance. Griffith's Valuation, for example, is a property tax survey with accompanying mapping that includes lists and details of every taxable piece of agricultural land or built property in Ireland (published county by county between 1847 and 1864).

The *Meath County Development Plan 2021–2027* was also consulted as this contains, among other things, a Record of Protected Structures. Further buildings and features of architectural interest in the area that are not included on the Record of Protected Structures are detailed in the *National Inventory of Architectural Heritage* (NIAH). The NIAH was developed by the Department of Housing, Local Government and Heritage and identifies, records, and evaluates the post-1700 architectural heritage of Ireland.

As part of the assessment geophysical survey and test trenching were carried out. a site visit was also carried out. The aim of which was to assess whether or not the site contained subsurface evidence of any previously unrecorded areas or features of historical or archaeological significance.

4. ARCHAEOLOGICAL ASSESSMENT

4.1 Archaeological & Historical Background

The site is located within the townlands of Jamestown and Commons within the Barony of Ratoath and Civil Parish of Ratoath, County Meath. The townland of Jamestown is recorded in the AD 1836 Ordnance Survey Name Book (Ibid.). The townland of Commons is recorded in AD 1667 in the Acts of Settlement and Explanation AD 1666-84, translating from the Irish “An Coimín,” which probably referred to the common grazing land of the nearby town of Ratoath (Ibid.). The area of Ratoath appears in the Statute Rolls of the Parliament of Ireland for the year AD 1461-83, translating from the Irish “Ráth Tó,” or the ringfort belonging to Tó (Ibid.). Orpen argues that the early forms of “Ratouth,” simply represents the Irish “ráith tuaith,” or the “north rath,” due to its positioning north of the Broadmeadow River (Orpen, 1921).

Prehistoric period:

Evidence of human activity within the wider environs of the site dates as far back as the prehistoric period. Bronze age features including a large burnt spread, an enclosure (ME044-044001-) with a diameter of approximately 37 metres and an inner circular structure were uncovered at the Steeplechase housing Development, on the Dunshauglin road, Ratoath approximately 1.7-kilometre northwest of the proposed

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development site. Archaeological finds on the site included bronze age pottery, a spindle whorl, worked flint and chert. Two ring-ditches (ME044-044004- , ME044-044005-) were uncovered at the bottom of the southeast facing slope at Steeplechase Hill, approximately 1.5-kilometres northwest of the proposed site.

A single cremation deposit was uncovered in the fosse of the more southernly ring-ditch. A ring-ditch is situated approximately 1.5-kilometres from the proposed site in the southeastern extent of the townland of Legagunia. Ring-ditches are funerary monument found as a near circular enclosure, defined by a ditch, which date to the Bronze Age (O'Sullivan & Downey, 2012). During the clearance work for the M2 Motorway a ring-ditch (ME045-034---) was uncovered, approximately 2.7-kilometres east of the proposed site, containing the cremated remains of an adult male and Beaker pottery which was dated to 2400-2130 CAL. BC. Two crouched inhumations were also found within the funerary monument, one of which produced a radiocarbon date of 2120-1870 BC. Just north of this area, two Fulachta Fiadh (ME045-035---- & ME045-039----) were uncovered approximately 2.5-kilometres east of the proposed development area. These burnt mounds are low-lying man-made mounds of charcoal-enriched soil and heat-shattered stone, typically in a crescent or horseshoe-shape, often located near a water source (O'Sullivan & Downey, 2004). The burnt mounds are associated with a number of functions from the cooking of food to bathing, sweat lodges and textile production (Ibid.). Most of the scientific dating for these features places during the Bronze Age period, between 1800-800 BC, though some have been dated earlier and later than these dates (Ibid.).

Early Medieval period:

The province of Leinster is thought to be an area of low density for ringforts (O'Sullivan & Downey, 2007). Ringforts were predominantly enclosed farmsteads, dispersed throughout the Early Christian landscape. Some may have been built as cattle enclosures, or may have been subsequently used for this purpose, having originally been farmsteads. The management of livestock, especially cattle, was the primary preoccupation of farmers in Early Christian Ireland (Ibid.). There are three ringforts (ME045-002---, ME045-003--- & ME045-067---) located between 2.8- and 4-kilometres northeast of the proposed site. A fourth ringfort (ME044-013) is located in the landscape approximately 2.8-kilometres, southwest of the proposed site. An enclosure (ME045-066---) is recorded in the townland of Jamestown, just 200 metres east of the proposed site, another enclosure (ME045-064---) in the townland of Glascarn is approximately 800 metres southeast of the proposed site and a third enclosure (ME045-011---) is located in the townland of Tankardstown, just 1 kilometre east of the site. While the exact nature of an enclosure is unsure, they may represent previous ringforts now damaged due to

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ploughing over hundreds of years. However, the enclosures can still indicate a level of human activity in an area during the Early Medieval and late prehistoric periods.

Interestingly, a Crannog (ME038-027---) is located approximately 4-kilometres northwest from the proposed site, which dates to the early 7th century. Crannogs were circular or oval-shaped, man-made islands in lakes, built up with layers of stone boulders, cobblestones, branches and timber, with a stony, soil or grass surface (O'Sullivan & Downey, 2005). Crannogs are usually located in the northern half of the country, especially Cavan, Monaghan, Leitrim, Roscommon and Fermanagh (Ibid.). They can date as early as the Late Bronze Age through to the Early Medieval period (Ibid.). The area of Lagore is known to be the royal resident of the Southern Brega Clan from AD 688 onwards after the Battle of *Imlech Pích* which partitioned the Kingdom of Brega in two (Eogan, 2010). During the latter part of the Early Medieval period the Annals of Ulster record that the Kingdom of Brega South came under sustained attack from the Vikings and was finally defeated when the armies of Brega North joined sides with the Vikings to defeat their southern brethren, in the mid-9th century, this resulted in the Southern Brega kings giving up lands to their southern border which became known as Fine Gall or Fingal (Evans, 2010). Due to much infighting and a changing political landscape in Ireland, both Kingdoms of Brega became incorporated into the extended Kingdom of Mide, their long-term competitor to the west (Ibid.), by the end of the 10th century. However, this did not last particularly long with the arrival of the Anglo-Normans in the 12th century.

The Anglo-Normans invaded Ireland in AD 1170 and were in control of Meath by AD 1172. In April AD 1172 the lands of Meath were granted to Hugh de Lacy by King Henry II, for his services (Murphy, 2009). De Lacy retained the areas of Clonard, Duleek, Ratoath and Trim as his own demesne manors and divided the other lands among his followers and loyal knights (Ibid.). By the year of Hugh de Lacy's death in AD 1186, it is recorded in the Annals of Lough Cé that motte castles had been constructed by de Lacy at Trim, Ratoath, Kells, Clonard, Dunshaughlin Drogheda and Duleek. The comparative ease and speed by which de Lacy was able to achieve this level of infrastructure in just 14 years indicates that the Anglo-Normans were operating in an area which had a previously established level of settlement, organisation and infrastructure to graft their manorial system onto (Ibid.). The constant programme of castle building required regular overseeing and as Hugh de Lacy was inspecting a fort at Durrow, a Gaelic warrior "*O'Meyey*," approached de Lacey while he was stooped down and struck his head with an axe removing it with one blow (Thunder, 1889). King Henry seized the lands of Hugh de Lacey (the elder) until they were granted to his son, Walter de Lacey, who by AD 1198 had given all of the land of "*Rathtowth*" to his brother Hugh (the younger, Earl of Ulster) (Orpen, 1921). Ratoath, along with Hugh de Lacey's (the younger), other lands were confiscated by King John in AD 1210 and granted to Philip of Worcester. Later, King John returned "*the castles of Nober and Ratoath*" to Walter de Lacey (ibid.).

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In AD 1224, Hugh de Lacey, with the support of some barons of Meath attempted to take back his lands in Ratoath by force. King John intervened and once again took the castle and lands of Ratoath. Walter was fined 3,000 marks in AD 1225 and was handed back control of the lands, however, King John kept control of the castle. The following year King John gave Walter the castle and lands for a 3-year period. Walter did not hold the castle for the three years as Hugh (the younger) finally took custody of the castle and lands from his brother on the 20th of April, AD 1227 (Ibid.). The manor of "Rathouthe," is sold to the wife of King Edward I, Queen Eleanor in AD 1283, who quickly grants it to Richard de Burgh, Earl of Ulster (Ibid.). Ratoath was the scene of a large ambush on the 16th of February AD 1317, when the Earl of Ulster set upon a force of Edward Bruce's Scottish soldiers, who were rampaging south from Slane. The Earl of Ulster was overcome and had to flee to Dublin (Otway-Ruthven, 1968). There is a grave slab of a knight (ME044-034005-), set into the church tower at Ratoath. Hunt describes the effigy as a, "knight with his head upon a tasselled cushion....armed in mail over which can be seen a surcoat to the knee, belted at the waist. The hands lie one upon the sword grip and the other on the sword below. On the south side of the tapered slab is a badly worn inscription in Lombardic characters," (Hunt & Harbison, 1974, 213) The cross slab has been dated to the 13th/14th century, allowing for the possibility that the knight represented on this cross slab, may well have fallen in the ambush of Edward Bruce's forces in AD 1317. The borough of Ratoath appears to have undergone some shrinkage due to the vicissitudes of time, by AD 1468 a total of thirty-seven burgages were recorded as laying in waste (Graham, 1975). The repeated Bruce invasions, the Black Death and repeated attacks from the disgruntled Gaelic chieftains are some of the factors which initiated this shrinkage (Ibid.). The title of Baron of Ratoath was created in AD 1468 by King Edward IV, for Sir Robert Bold for his loyal service during the War of the Roses. Sir Robert had no male heirs, and the title became extinct upon his death in AD 1479 (Smith, 2012).

Late Medieval period:

A turnpike road was built from Dublin to Curraha (Ratoath), in AD 1795. These roads are noted for their extreme straightness over large parts of County Meath and that they did not deviate around topographical features (Giacometti et al. 2010). Small scale manufacture was noted in Ratoath, the manufacture of sacking and the weaving of linen, the land provided profitable tillage for cultivation and quarrying of good quality stone (Lewis, 1837). A reference to the early church is made in Dopping's Visitation Book, 1682-5, Bishop Dopping noted that the despite the chancel not having a roof the church was in good repair (Ellison. 1971).

A recorded visitation by Bishop Ellis between 1723-33, reported that the medieval church in Ratoath church was still in use. (O'Neill 2002). The Church of Ireland in Meath took on a great rebuilding scheme between

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1799 and 1820, coinciding with the period of the First Fruits Commissioners between 1780 and the 1830s. Over one million pounds was given to the government for the rebuilding of Church of Ireland churches, however, the board stipulated that a church should be unroofed for a minimum of 16 years prior to the allocation of a grant (Ibid.). Samuel Lewis noted that the Parish of Ratoath sent members to the Irish Parliament until the Act of Union, when the borough became disenfranchised (Lewis, 1837). The Church of Ireland parish was united by an Act of Council in AD 1682 and annexed to the vicarages of Greenogue, Killeglan, Creekstown, Donaghmore and Cookestown. Construction of the Church of Ireland church benefited from a loan of £800 from the Board of First Fruits, in AD 1817 (Ibid.). In the Roman Catholic divisions, the parish was united with Cookstown, Killeglan and Rathbeggan. Ratoath Manor was bought by James Anthony Corballis in AD 1813, four generations of the family would live here, owning large amounts of land in the Ratoath area (Parkinson, 1992). James Francis Corballis, the great-grandson of James Anthony, led a colourful life but at the cost of his estate, a certificate of bankruptcy was issued in AD 1936. James Frederick died in AD 1945 passing the estate to his daughter, who sold it to the Presentation Nuns, who established a home for the elderly on the grounds, the current site of the Ratoath Manor Nursing Home, approximately one kilometre north of the proposed site (Ibid.). Fairyhouse Racecourse is located one kilometre to the south of the proposed area, the course is noted for the first time on the third edition OS 25-inch map, where a Grandstand, Pavilion and Flagstaff are all noted. The first race at Fairyhouse Racecourse was held in 1848, with the Irish Grand National steeplechase held since 1870 (hri.ie).

4.2 Previous Archaeological Investigations

Portions of the current site were subject to a number of assessments prior. These included geophysical survey (20R0026; see Appendix 1) and archaeological test trenching (21E0511; see Appendix 2); for the summary of these see Section 6.

Furthermore, an area adjacent to and northeast of the site was subject to investigations under licence 22E0120 including test trenching, excavation and monitoring. Two spreads, with associated troughs, pits and postholes were identified and subsequently excavated (Piera, Murtagh 2022). The southwest portion of the site (Phase 2 area) was subsequently subject to geophysical survey (23R0119; Dowling, 2023), followed by test trenching (22E0120; Piera, Whitaker 2023) with nothing of archaeological significance exposed. Monitoring of groundworks was subsequently carried out and the monitoring report is being prepared (Piera - pers. comm.).

The northeast portion of the Ratoath Outer Relief Road (R125 to R155) was subject to testing and monitoring (18E0136; Roycroft 2018). No features were identified.

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In addition, investigations within and surrounding Ratoath town have uncovered numerous archaeological sites. Archaeological testing (01E0248) took place ahead of a commercial development on Main Street revealing a series of Medieval ditches and two 19th-century buildings. During the installation of a water sewer and electricity cables on the Kentstown Road, archaeological monitoring and excavation (01E1173) uncovered a Late Medieval open drain and associated laneway surface, a later area of rough cobbling, a cistern-type structure, a substantial ditch possibly representing the town boundary, a small V-shaped ditch, an 18th/19th century wall foundation and a further ditch of unknown date.

On the western fringe of the town, excavation (03E1781) at an 18.35-hectare residential development led to the discovery of two ring-ditches, burnt pits, cereal-drying kilns, a possible metalworking area, an early medieval cemetery enclosure. A separate excavation in the same area (03E1632) uncovered a possible field system, as well as a burnt spread and pits, and a possible trough containing small shell fragments.

Monitoring (01E0359) of a four-acre site in the former walled garden of a convent, now the Village Green housing estate in 2001, led to uncovering a medieval field system. Agricultural furrows revealing sherds of medieval pottery were identified, further medieval pottery was found in the topsoil of the site. Further examination of the site identified six burnt spreads and a possible medieval ditch. A series of probable shallow boundary ditches, measuring 12 metres long by 3 metres wide, may represent strip fields from the Medieval or Late Medieval period. The same site was monitored again, and more test trenching (02E1454) took place in 2002. More medieval pottery sherds were found in the topsoil and linear trenches running northwest-southeast representing a ridge and furrow agricultural system were identified.

A programme of test trenching ahead of a site development on Well Road in Ratoath led to an excavation (20E0438) on the site. On the western side of the site the investigation uncovered a wide ditch, running north-south, from the medieval period with associated linear features. Post-medieval activity was identified in a large field-boundary ditch, field drains and in a recut south of the wide medieval ditch. The site was heavily disturbed from 20th century development at the site, including concrete foundations and the dumping of construction waste. On the eastern side of the site two ditches with a post-medieval recut, three gullies, three pits, a linear feature with a later recut were located. A total of fifty-three sherds of pottery were retrieved on the site, forty-five of the pieces dated between the 12th & 15th centuries placing the site in the Late Medieval period.

Listed below are the nearest previous archaeological investigations undertaken in the environs of the site (see Figure 1), which further demonstrate the overall archaeological potential of the site and its surrounding

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townlands (Table 1). The following information was taken from the *Summary Accounts of Archaeological Excavations in Ireland* (www.excavations.ie).

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

Excavation.ie reference	Licence No.	Site-Type	Investigation Type
2001:1041 - Ratoath, Meath	01E0359	Medieval	Monitoring & Test trenching
2001:1042 - Ratoath, Meath	01E01173	Post-Medieval	Monitoring & Excavation
2001:1046 - Ratoath: Main Street, Meath	01E0248	Post-Medieval	Test trenching
2002:1515 - Ratoath, Meath	02E1454	Medieval	Monitoring & Test trenching
2003:1455 - Ratoath, Meath	03E1781	Multi-period	Monitoring & Excavation
2004:1324 - Ratoath, Meath	03E1781	Multi-period	Excavation
2003:1454 - Ratoath, Meath	03E1632	Medieval	Monitoring & Excavation
2020:505 - Well Road, Ratoath, Meath	20E0438	Medieval	Test trenching & Excavation
2021:152 - Fairyhouse Road, Commons, Jamestown, Ratoath, Meath	21E0511	Prehistoric	Geophysical survey & Test trenching
2022:342 - Jamestown, Ratoath, Meath	20R0026 22E0120	Prehistoric	Geophysical Survey & Test trenching

4.3 Recorded Monuments

There are no Recorded Monuments as listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR) within the site.

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Below (Table 2) is a list of the recorded monuments located in the environs of the site (Figure 1). 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*

ME045-066----	Enclosure	Jamestown, Ratoath
Located on a slight north facing slope. The faint cropmark of a circular enclosure (diameter c. 30m east-west) defined by a slight fosse on west, north and east sides. The monument is visible in satellite imagery. A small enclosure (diameter c. 7m) defined by a fosse is attached to the northwest. Six-Inch First edition: Not indicated Six-Inch Latest edition: Not indicated ITM Coordinates: 702661, 750619 Latitude and Longitude: 53.495549, -6.452775		
ME045-064----	Enclosure	Glascarn, Ratoath
Located on a fairly level landscape. The cropmark of a sub rectangular enclosure (dimensions c. 55m north-east-southwest: c. 50-55m northwest-southeast) defined by fosse or drain features is visible on satellite imagery. It is bisected by the cropmark of a north-south drain. Six-Inch First edition: Not indicated Six-Inch Latest edition: Not indicated ITM Coordinates: 702856, 749917 Latitude and Longitude: 53.489204, -6.450068		
ME045-013----	Ring-Ditch	Glascarn, Ratoath

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Situated on a fairly level landscape with a small west-east stream c. 100m to the north. The cropmark of a small circular enclosure (internal diameter c. 10m) defined by a single fosse is visible on an oblique aerial photograph (CUCAP: AVF 041) from 1968. It is also visible on OSIAP (2005) and satellite imagery.

Six-Inch First edition: Not indicated

Six-Inch Latest edition: Not indicated

ITM Coordinates: 703100, 749268

Latitude and Longitude: 53.483326, -6.446605

ME045-011----

Enclosure

Tankardstown, Ratoath

Situated on a rise in a fairly level landscape. This is depicted as a circular embanked enclosure (external diameter c. 50m) and described as a 'Fort' in gothic lettering on the 1836 edition of the OS 6-inch map. It is depicted as a D-shaped enclosure (external dimensions c. 60m north-northeast by south-southwest; approximately 60m west-northwest by east-southeast) defined by a ditch or drain on the 1908 edition. The monument was planted with wheat in 1970 but the yellow clay of what had probably been an inner bank was then visible (SMR file), and it was probably a rath. A sub rectangular enclosure (dimensions c. 50m north-northwest by south-southeast; c. 50m west-northwest by east-southeast) defined by a wide and curving fosse (width c. 4-5m) is visible on satellite imagery.

Six-Inch First edition: 'Fort'

Six-Inch Latest edition: Hachured

ITM Coordinates: 703383, 750830

Latitude and Longitude: 53.497303, -6.441829

ME044-034015-

Field system

Ratoath

Located on a south facing slope at the eastern extremity of what might have been the medieval extent of Ratoath. It might also be on the grounds of the Manor House, an eighteenth-century mansion just to the northwest. The Manor House is probably on the site of the medieval manor house, which was described in an inquisition of AD 1333, as half an acre surrounded by a square ditch (Orpen 1921) and was probably a moated site. Archaeological testing (01E0359) by J. Ó Neill in a green area of about 4 acres (c. 1.5 ha) identified cultivation ridges (width c. 1m) which produced medieval pottery, while medieval pottery was also

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recovered from the topsoil (excavations.ie 2001: 1041). The furrows survived best at the bottom of the slope close to west-east Broad Meadow River but not on the flat ground immediately adjacent to it. In the same area there were also deeper ditches (width c. 0.6-3m) placed c. 12m apart cut into the subsoil and dividing the area into plots. No house structures or evidence of settlement was recorded in the area.

Further monitoring (02E1454) by M. Fitzpatrick recovered more medieval and post-medieval pottery from the topsoil and identified further north-south or northwest-southeast linear cut features (width 1.4m; depth 0.5m) (excavations.ie 2002:1515). These were placed c. 10-15m apart with some slighter east-west cuts (width 0.5m; depth 0.01m) off-set from them. The latter are probably furrows but the former are probably boundaries delineating burgher plots from the medieval settlement. No house sites were identified. The area was subsequently developed for modern housing.

Six-Inch First edition:

Six-Inch Latest edition:

ITM Coordinates: 702400, 751690

Latitude and Longitude: 53.505221, -6.456358

4.4 Record of Protected Structures (RPS) and National Inventory of Architectural Heritage (NIAH) and

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 structured is recognised as important and is protected from harm under legislation. Every local authority in Ireland must keep a Record of Protected Structures (RPS) in their development plans.

The 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 compiled by local authorities.

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Table 3: List of RPS and NIAH structures located within the environs of the proposed site

RPS NO.:	NIAH NO.:	Name:	Description:	Importance:
	14336001	Fox Lodge	Detached three-bay two-storey house, built c.1800. Hipped artificial slate roof with rendered chimneys. Roughcast rendered walls. Tooled limestone block-and-start surrounds and sills to window openings. Round-arched door opening with tooled stone block-and-start surround and a spoked fanlight. Modern central porch addition, and three-bay single-storey extension to west. Pair of cast-iron gates to site.	Regional
91451	14336002	Ratoath Manor	Detached seven-bay two-storey country house, built c.1780, with two-bay full-height bow to rear elevation. Now in use as a nursing home. Pitched artificial slate roof with rendered chimneys and cast-iron rainwater goods. Roughcast rendered walls. Segmental-arched window openings to ground floor, square-headed window openings to first floor. Round-arched door opening with Ionic columns supporting a fluted frieze with rosettes and a plain fanlight. Multiple-bay two-storey extensions to east and west. Modern extension to rear.	Regional
91451	14336003	Water Pump	Cast-iron water pump, c.1870, with foundry mark, banded shaft, fluted neck, cap and spout, and curved pumping handle. The decorative detailing, such as the banding and fluting, provide artistic detailing to this functional water	Regional

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			pump, which was cast by John Collins of Drogheda. Water pumps played an important social and functional role from the mid nineteenth century onward, providing a communal water source in the village. Makers plaque reads: 'John Collins Shop Street Drogheda'.	
91448	14336006	Holy Trinity Catholic Church	Detached church, commenced c.1820, remodelled and rebuilt c.1868 and c.1874. Comprising five-bay side elevations to the nave, with gabled entrance front c.1868 to the east, single-bay chancel to the west and vestry to the south, c.1874. Replacement pitched slate roof. Rendered walls to the nave. Ashlar limestone entrance façade with gabled bellcote, buttresses and string courses. Pointed arch and Tudor arched openings with ashlar limestone dressings and hood and label mouldings. Pointed arch traceried twinlight windows with hood mouldings to the nave.	Regional
91446	14336007	Holy Trinity Catholic Church	Detached three-bay two-storey parochial house, built c.1869. Hipped slate roof with ridge cresting and red brick chimneystacks. Roughcast rendered walls with red brick string courses. Square-headed and segmental-arched window openings with timber sash windows and decorative rendered surrounds. Brick dressings to pointed arch window opening with twinlights and quatrefoil. Brick dressing to pointed arch door opening with carved limestone hood	Regional

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			moulding, inset trefoil fanlight, approached by flight of stone steps. Extended to the rear.	
91447	14336008	Holy Trinity Catholic Church	Detached six-bay two-storey coach house-cum-stable outbuilding, built c.1870. Hipped slate roof. Squared stone walls. Timber sash windows with yellow brick dressings and granite sills. Timber battened doors with yellow brick dressings. Two-bay single-storey outbuilding to south. This outbuilding and the related parochial house are located on the site of a motte and bailey, which add archaeological interest to the site.	Regional
91449	14336009	Grotto	Freestanding Marian shrine-built c.1955. Comprising of niche with a statue of the Blessed Virgin Mary with canopy above, set against mosaic screen wall, set on mosaic platform and steps, bounded by wrought-iron railings.	Regional
91452	14336010	Glebelands House, Glebe Lane	Detached five-bay two-storey over basement former rectory, built c.1813, with flat-roofed central porch, now in use as a private house. Pitched slate roof with rendered chimneystacks. Roughcast rendered walls with a limestone plinth course. Timber sash windows with stone sills. Round-arched stair light to rear. Round-arched timber doorcase, flanked by sidelights, and with a decorative fanlight. Approached by flight of stone steps and cast-iron railings. Multiple-bay two-storey outbuildings to south, accessed through pair of wrought-iron gates.	Regional

91450	14336011	Holy Trinity Church, Glebe Lane	Detached square-profile three-stage castellated and pinnacled Church of Ireland church tower, built c.1817, with the ruins of the church walls to the east. Rubble stone walls with ashlar limestone pinnacles, cappings to castellations, string courses, and dressings to the pointed-arched openings. Graveyard to site. Dressed stone gate piers with pair of wrought-iron gates set in rubble stone wall. Modern concrete wall and gates to extended graveyard to west.	Regional
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4.5 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.

Table 4: *List of topographical files within the environs of the proposed site*

NMI Reg No:	Location:	Find:	Circumstance:
NMI X 192	Ratoath	Bones and one or two unusual funerary vessels, one described as a double 'sepulchral vessel without internal communication.'	Found in a stone cist during excavation in AD 1864
E551:1294	Grange	A 3.9-centimetre-long fragment of a sandstone axe	Discovered during field walking

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4.6 Cartographic Evidence

A review of available historic mapping for the area was carried out to include the Down Survey map AD 1654-56, the Taylor & Skinner Road Map, the Ordnance Survey (OS) of Ireland 6-inch (1835) and 25-inch (1909) maps (Figures 2–5). Potential archaeological or cultural heritage features are often marked on such maps and they provide a useful resource in identifying sites, particularly if they no longer have any above-ground remains.

The Down Survey map AD 1654-56 (Figure 2), showing the '*Barony of Rattoth*,' give little detail about the proposed site. The '*Commons of Ratoth*,' are visible next to familiar townlands like, '*Big Glasscarne, Newtonne, Big Lagore and Harloekstonne*.' On the Taylor & Skinner Road Map AD 1777 (Figure 3), the site for development is located at the end of tree lined road extending southwest from Ratoath village.

The OS 6-inch 1835 map (Figure 4) shows the proposed site located east of the modern Fairyhouse Road (R155) which is depicted running north to south and south of an east to west aligned Glascarn Lane, which is lined with mature trees. The OS 25-inch map from 1909 (Figure 5) shows a very similar picture. The field boundaries are drawn with a little more precision and the field measurements are now noted. All the fields appear to be in use for pasture or tillage purposes, with the only building depicted in the northwest corner of the field at the intersection of the Fairyhouse Road (R155) and Glascarn Lane.

4.7 Aerial Photography

A review of available aerial photography for the area was also undertaken as part of this assessment. Aerial photographs dating between 1995 and 2018 from the Ordnance Survey of Ireland (OSi) and Google Earth imagery dating between 2006 and 2023 were assessed. 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.

Aerial imagery of the proposed site from AD 1995 shows that most of the field boundaries are still in the same position as the maps from the late 19th century. The boundaries are a mix of hedgerows and mature trees. By now houses are built on either side of Glascarn Lane and a small number of farmhouses have been built facing onto the Fairyhouse Road (R155). A single farmhouse is located at the point of intersection of Commons, Legagunia and Jamestown townland borders. Aerial imagery between AD 1996 – 2000 shows a massive increase in housing developments in the townland of Ratoath with several estates being built between Glascarn Lane and the village of Ratoath. The nearest estates to the proposed development, Cairn Manor and

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Fairyhouse Lodge estates are constructed just north of the Glascarn Lane houses. Most of the fields within the area of the proposed area for development are still used for agricultural purposes.

Aerial imagery from AD 2001-2005 shows the rate of construction around Ratoath continuing unabated. A housing development just south of The Avenue has begun to be built at this point, further south in the development land is being cleared for more construction. Cairn Court is constructed in the northwest corner of the development area at the corner of Glascarn Lane and Fairyhouse Road (R155).

Aerial imagery from AD 2006-2012 shows the completion of the housing development running south from The Avenue which now includes the Ratoath Athletics & Tennis Club and Ratoath College which comes within 100 metres of the northeastern section of the proposed development. The aerial imagery shows that the fields of the proposed area for development continue to be used for agricultural purposes up until at least AD 2018. Trenches excavated within the site are clearly visible on the 2022 Google Earth aerial and thereafter.

Satellite imagery from AD 2018 shows the Broadmeadow Vale housing development and the beginning of the Ratoath Outer Relief Road to the northeast of the site under construction. These works begin next to The Avenue and Main Street respectively and approach the proposed development land from the northeast. Construction of the project continues in various stages right up until AD 2024. The imprint of the land marked out for the continuation of the road can be seen in the landscape from AD 2019 onwards, it is around this time the carefully managed agricultural lands start to look unused as they are no longer in use.

6. ARCHAEOLOGICAL INVESTIGATION RESULTS

Portions of the current site were subject to assessment prior. These included a geophysical survey (20R0026; see Appendix 1) and archaeological test trenching (21E0511; see Appendix 2).

The geophysical survey identified several areas of potential archaeological and recommended test trenching. At that time, the current northeast field was not a part of the application area hence it was not subject to geophysical survey. Subsequently, test trenching was carried out by Caroline Cosgrove of Archaeological Consultancy Services Unit Ltd of a portion of the current site. The area tested measured 10.3ha with 9.3ha found suitable for testing (due to the presence of hedges and field boundaries). A total of 42 test trenches were excavated, totalling 4,486m of linear trenches. This equals to 9.4% of the area suitable for test trenching at that time. This together with the geophysical survey gives a good degree of confidence in the combined results of the geophysical survey and test trenching. While usually 12-14% of trenching of an area is required/recommended, this is usually in the absence of geophysical survey; and as features of archaeological

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significance were identified, following excavation, monitoring of groundworks will be recommended to mitigate the impact on isolated archaeological features that might be present.

The assessments were successful in identifying archaeological features on the site. Archaeological test trenching (21E0511) identified three areas of archaeological activity: one in Field 1 (Area 1) and two in Field 5 (Area 2 and 3). The features exposed comprise ploughed out pits, post-holes and spreads, likely associated with a prehistoric activity. Area 4, Area 5 (Field 4) and Field 7-9 were not subject to archaeological investigation at that time. Furthermore, four Cultural Heritage Areas (CHA) were identified as a result of previously carried out archaeological impact assessment; one is a site of a building/structure (CHA1; Area 4), while the remaining three are townland boundaries (CHA 2-4).

7. IMPACT ASSESSMENT

The purpose of this impact assessment was to establish whether or not the lands for a proposed large-scale residential development in the townlands of Jamestown and Commons Co. Meath, contain any evidence for the presence of previously recorded and/or unrecorded areas or features of archaeological, historical or built heritage significance. The proposed development includes approximately 12.58 hectares, on existing agricultural lands located immediately to the south of the existing built area of Ratoath in County Meath.

There are no recorded monuments withing the site, however an enclosure (ME045-066---) is located less than 200 metres east of the proposed development in the townland of Jamestown. The area surrounding the development site has a long and varied history, with evidence of human activity stretching as far back as the prehistoric period. Bronze age features including an enclosure (ME044-044001-) with a diameter of approximately 37 metres and an inner circular structure were uncovered at the Steeplechase housing Development, on the Dunshauglin road, Ratoath approximately 1.7-kilometre northwest of the proposed development site. Two ring-ditches (ME044-044004- , ME044-044005-) were uncovered at the bottom of the southeast facing slope at Steeplechase Hill, approximately 1.5-kilometres northwest of the proposed site. A ring-ditch is situated approximately 1.5-kilometres from the proposed site in the southeastern extent of the townland of Legagunia. These monuments indicate a strong funerary tradition for the previous inhabitants of this area. Further archaeological evidence in the wider landscape includes additional ring-ditches, fulachta fiá, cremated and crouched inhumations, a crannog, enclosures and ringforts, showing a wide variety of occupation features dating as far as the Neolithic period in Ireland.

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Historical events in the surrounding area shows that the town of Ratoath was an important cog in the machine of the Anglo-Norman settlement of Meath. The town of Ratoath and the surrounding area would have been restructured to accommodate the manorial system introduced by the Anglo-Normans. The Motte and Bailey (ME044-034001-) and the remains of field systems (ME044-034015-) and burgage plots (ME044-034018-) are all indicators of the manorial system having been installed in the environs of the proposed site for development.

An Archaeological Impact Assessment (AIA) report for the site was carried out in June 2020 by ACSU. It recommended that the site be archaeologically assessed by means of geophysical survey followed by test trenching. Subsequently, the geophysical survey was carried out in 2020, under licence number 20R0026, and the report prepared recommended test trenching targeting anomalies identified. Test trenching was carried out in 2021 under licence number 21E0511. It identified three areas of archaeological activity. The features exposed consisted of pits, postholes, and spreads. A further AIA was commissioned in October 2021 to assess the potential impact on the features uncovered during the investigation (21E0511). The report recommended to preserve all the archaeological features by record (through archaeological excavation). The eastern expansion of the proposed site, designated Area 5 or Field 4 (Figure 8) and the northeast portion of the site/the footprint of the link road, has not been subject to archaeological investigation.

The report mentions a number of positive anomalies that may represent cut features such as pits or troughs should be investigated during any future testing of the site (Russell, 2020). A site partially adjacent the northeastern most extent of the proposed development was subject to archaeological excavation (22E0120). Features associated with prehistoric burnt mound activity were uncovered, including pits, post-holes, troughs and spreads of heat-affected material. The fills of the pits included substantial amounts of charcoal rich deposits with burnt stone inclusions.

The site is located within an historically and archaeologically sensitive area that included prehistoric funerary activity, medieval settlement and field systems and post-medieval activity. Archaeological testing previously carried out on the site has identified three areas containing archaeological features which require further archaeological excavation. There are other areas in the northeastern expansion of the site which have not yet been subject to investigation.

The site contains archaeological remains (Areas 1-3) and Cultural Heritage Areas (CHA1-4), furthermore, portions of the site were not subject to archaeological assessment, hence have the potential to contain previously unknown subsurface archaeological remains. Further archaeological mitigation, including

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excavation, additional test trenching and/or monitoring will be required to mitigate the impact of the proposed development on archaeology present and potentially present within the site.

8. CONCLUSIONS & RECOMMENDATIONS

This report presents the findings of an archaeological impact assessment prepared in relation to a proposed large-scale residential development located to the south of Ratoath town in County Meath (Figures 1–10; Plates 1–7). The site is located within the townlands of Jamestown and Commons within the Barony of Ratoath and Civil Parish of Ratoath, County Meath. The site extends across approximately 12.58 hectares, on existing agricultural lands located immediately to the south of the existing built area of Ratoath in County Meath. The site is generally bound to the north by Glascarn Lane, the rear of houses on Glascarn Lane, further existing residential dwellings and a permitted strategic housing development to the east and south by existing agricultural fields and by Glascarn Lane (continued) and Bridle Path; and to the west by Fairyhouse Road (R155), the rear of houses at Fairyhouse Road, the Carraig Na Gabhna and Cairn Court developments, and existing agricultural fields. The assessment is based on the findings of a study of available archaeological, historical, cartographic and photographic sources.

Previous geophysical reporting, in 2020, and archaeological investigations, in 2021, have taken place on the proposed site, in advance of a similar proposed development. The test trenching uncovered the remains of prehistoric pits, postholes and spreads.

A site, adjacent and to the northeast of the proposed development was subject to archaeological excavation in 2022. Features associated with prehistoric burnt mound activity were uncovered, including pits, post-holes, troughs and spreads of heat-affected material. There is a recorded enclosure (ME045-066---) located less than 200 metres east of the proposed development in the townland of Jamestown. Archaeological investigations within the surrounding landscape of the site have identified ring-ditches, fulachta fiá, cremated and crouched inhumations, a crannog, enclosures, ringforts and an Anglo-Norman Motte and Bailey showing a wide variety of occupation features dating as far as the Neolithic period in Ireland. Historical records show the town of Ratoath as an important Anglo-Norman manorial system dating from the earliest part of their invasion into Ireland in AD 1179. The town's importance may have dropped off after this period and little change in the town's layout is recorded in cartographic sources from the late 19th and early 20th centuries. Aerial imagery from the last three decades shows the rapid expansion of many housing projects and the road network in all areas of Ratoath.

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Due to the presence of known archaeological features within the site and the potential for further archaeological features to be uncovered, the proposed development will directly impact the features identified on the site and may impact features potentially present. In line with national policy as set out in the Framework and Principles for the Protection of Archaeological Heritage (1999) there 'should always be a presumption in favour of avoiding developmental impacts on the archaeological heritage' (Part III, 23–25). The features identified consist of ploughed out pits, post-holes, and spreads with no surface expression. Therefore, the most feasible option is to preserve all the archaeological features by record (through archaeological excavation).

The site contains archaeological remains (Area 1-3) and Cultural Heritage Areas (CHA 1-4) furthermore, portions of the site were not subject to archaeological assessment hence have the potential to contain archaeological features.

Consequently, in order to mitigate the impact of the proposed development it is recommended that:

- Three areas of archaeological activity (Areas 1-3; see Figures 8-10) identified during test trenching (21E0511) will be preserved by record (excavated). At the locations of the features identified, in Field 1 an area measuring 37m by 27m and in Field 5 two areas measuring 25m by 25m and 20m by 20m will be stripped of topsoil, features identified including any features associated that might be exposed, will be preserved by record. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist. The appointed archaeologist shall consult with the Licensing Section of the NMS regarding the methodology to be employed in the resolution of all sites. This will be carried out prior to construction works commencing.
- Prior to the development of the site, an area measuring 20m by 25m around the location of Cultural Heritage Area CHA1 (Figure 8) shall be stripped of topsoil to establish if any remains of the structure are present. Further archaeological investigation may be required depending on the results, including a full archaeological excavation of any features and deposits identified by a licensed archaeologist in accordance with a methodology to be agreed with the National Monuments Service.
- Archaeological test trenching of Area 5/Field 4, Field 7 and within the northeast portion of the site will be carried out prior to construction (Figure 8). Should archaeological features be identified, further mitigation, including preservation in situ (if feasible) or by record (excavation), will be required. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist. The appointed archaeologist shall consult with the Licensing Section of the

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NMS regarding the methodology to be employed in the resolution of all sites. This will be carried out prior to construction works commencing.

- Prior to the development of the site, a photographic and measured survey (including written description, photographic record) will be carried out of Cultural Heritage Area CHA2 – townland boundary between Commons and Jamestown, as well as CHA3 and CHA4 townland boundaries between Commons and Ratoath
- Archaeological features were identified within the site hence monitoring of groundworks during the construction phase is recommended, as the site has some potential to contain isolated archaeological features. This will be carried out under licence from the National Monuments Service of the DHLGH by a suitably qualified archaeologist.

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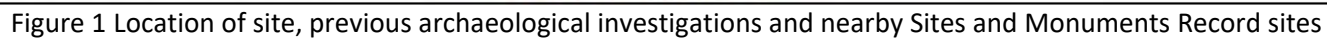




Figure 2 Extract from Down Survey map of County Meath, Barony of Ratoath (1654–56), showing approximate location of site

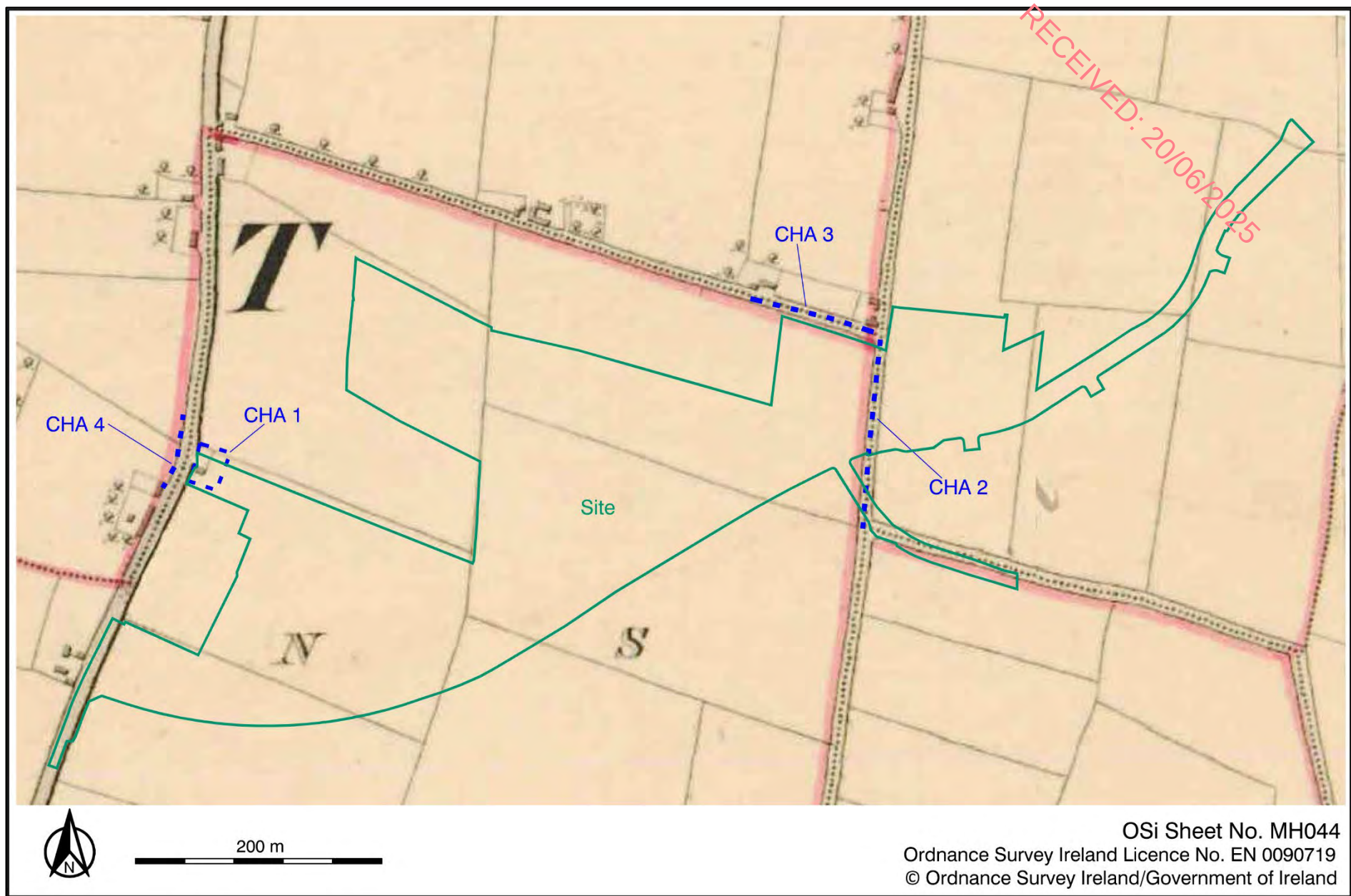


Figure 4 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1835 - published 1837), showing location of study area

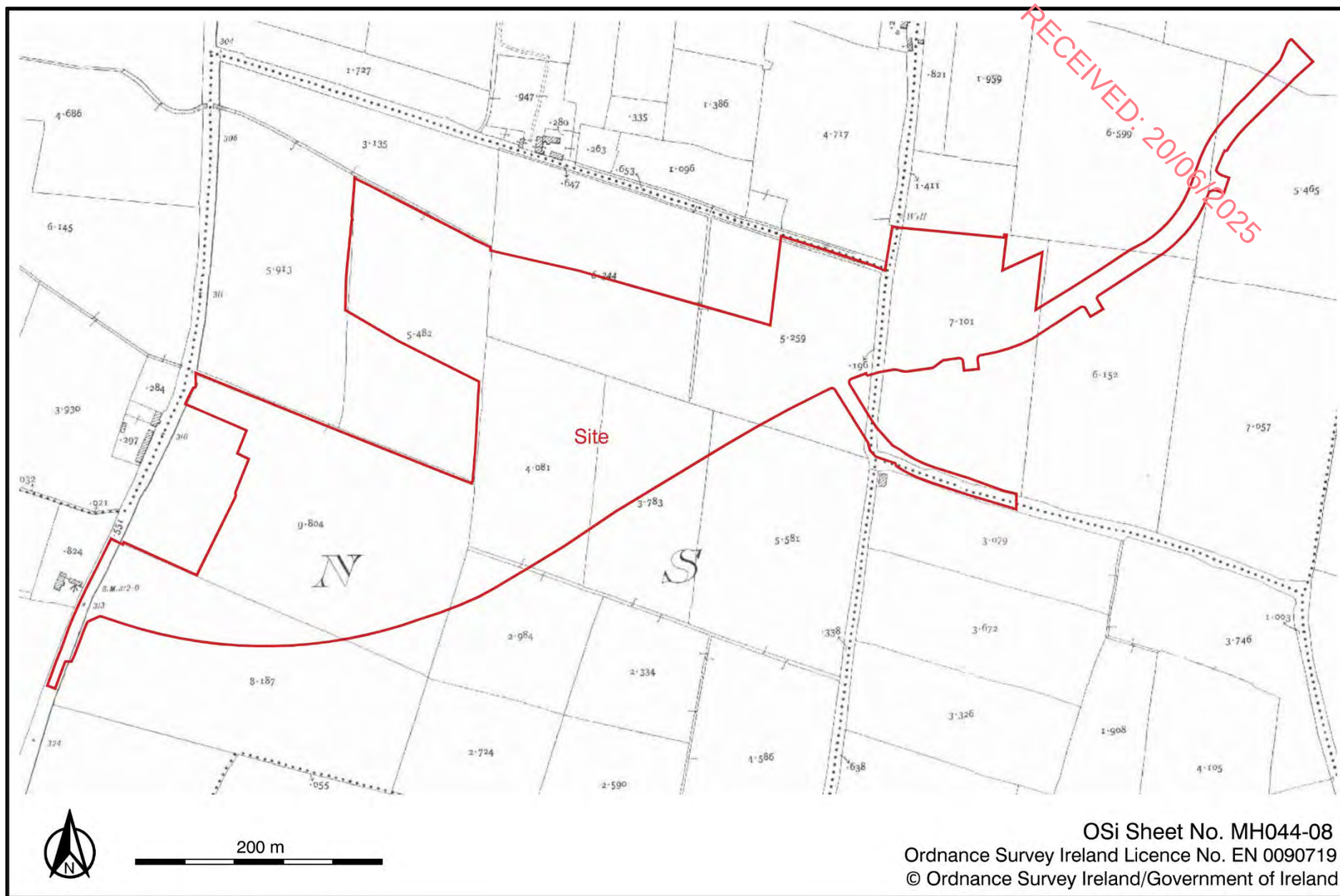


Figure 5 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1909 – published 1911), showing location of study area



Figure 6 Geophysical survey results (grey scale images), showing fields 1 to 7 and field 21 and extent of site

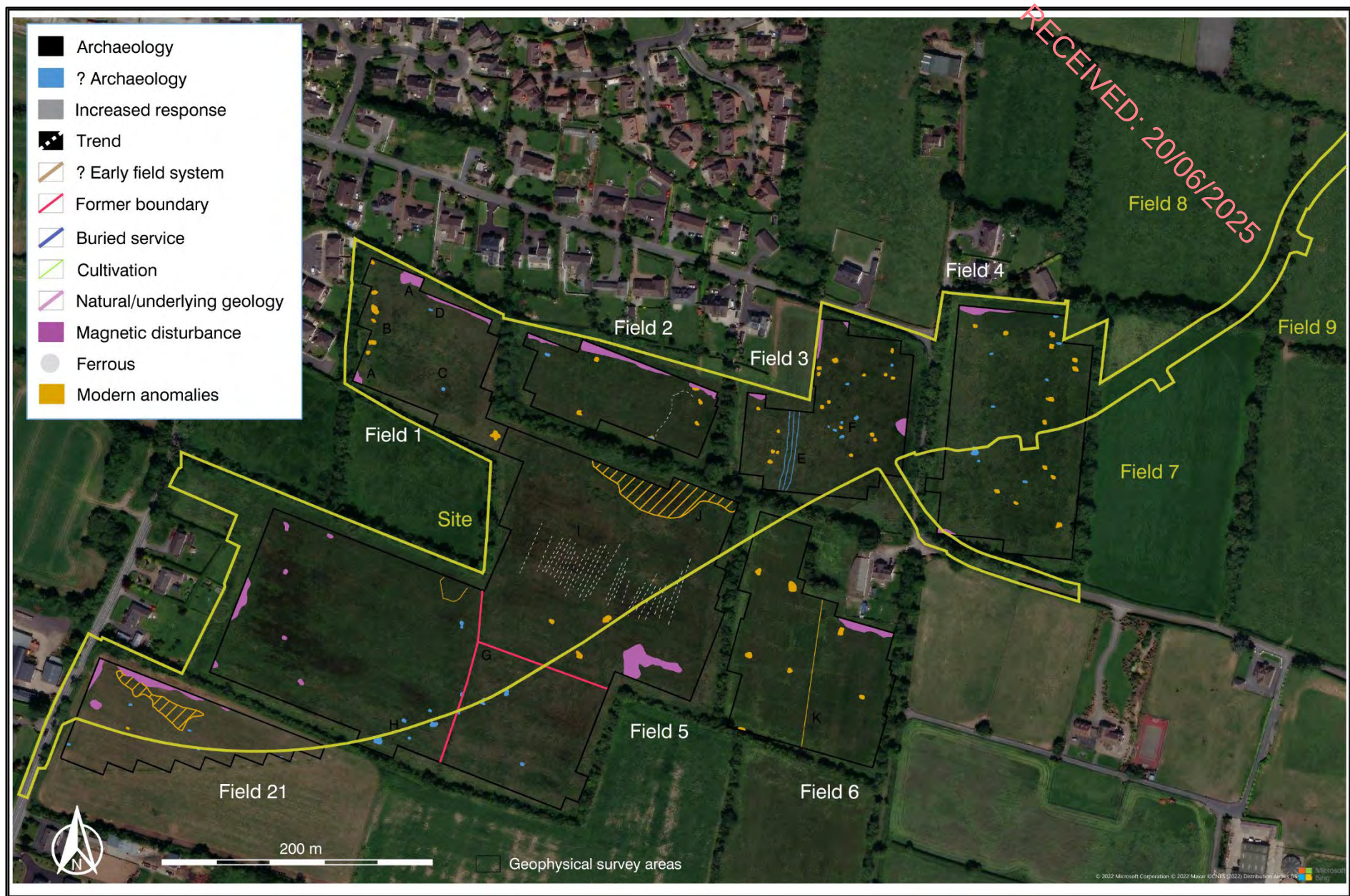


Figure 7 Geophysical survey interpretation, showing fields 1 to 7 and field 21 and extent of site

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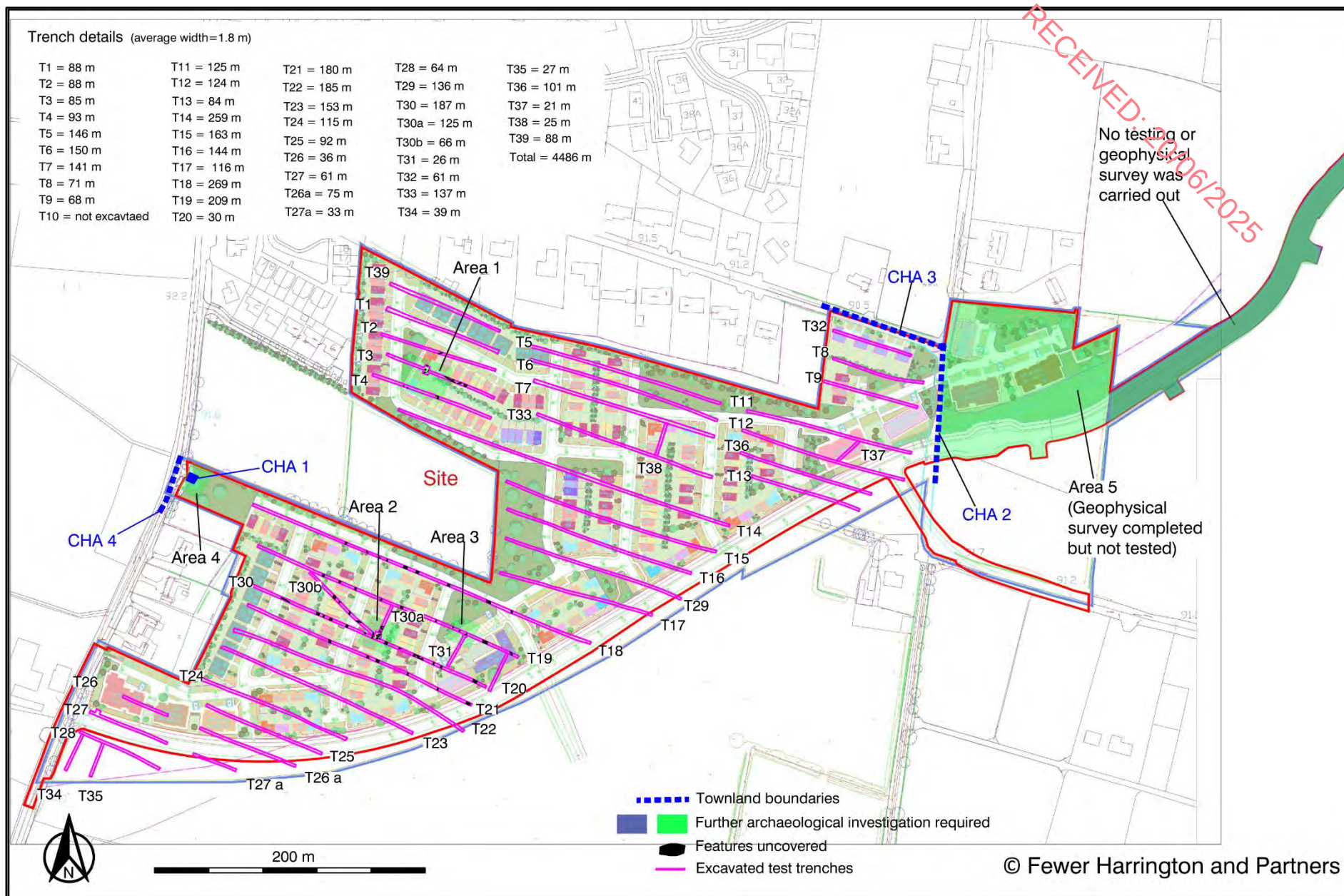


Figure 8 Details of site development, showing location of excavated test trenches

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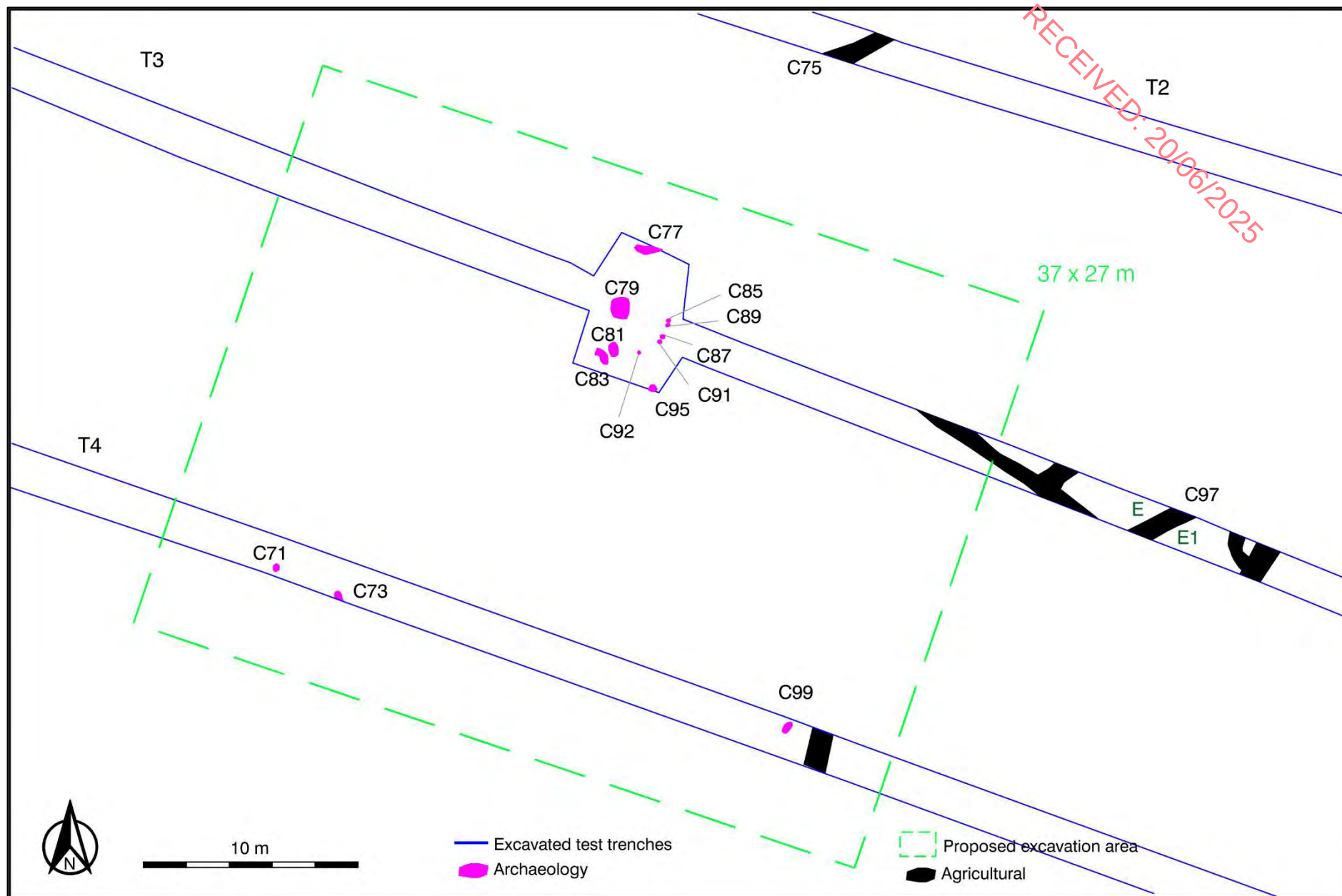


Figure 9 Details of archaeological features uncovered in Trenches 2, 3 and 4

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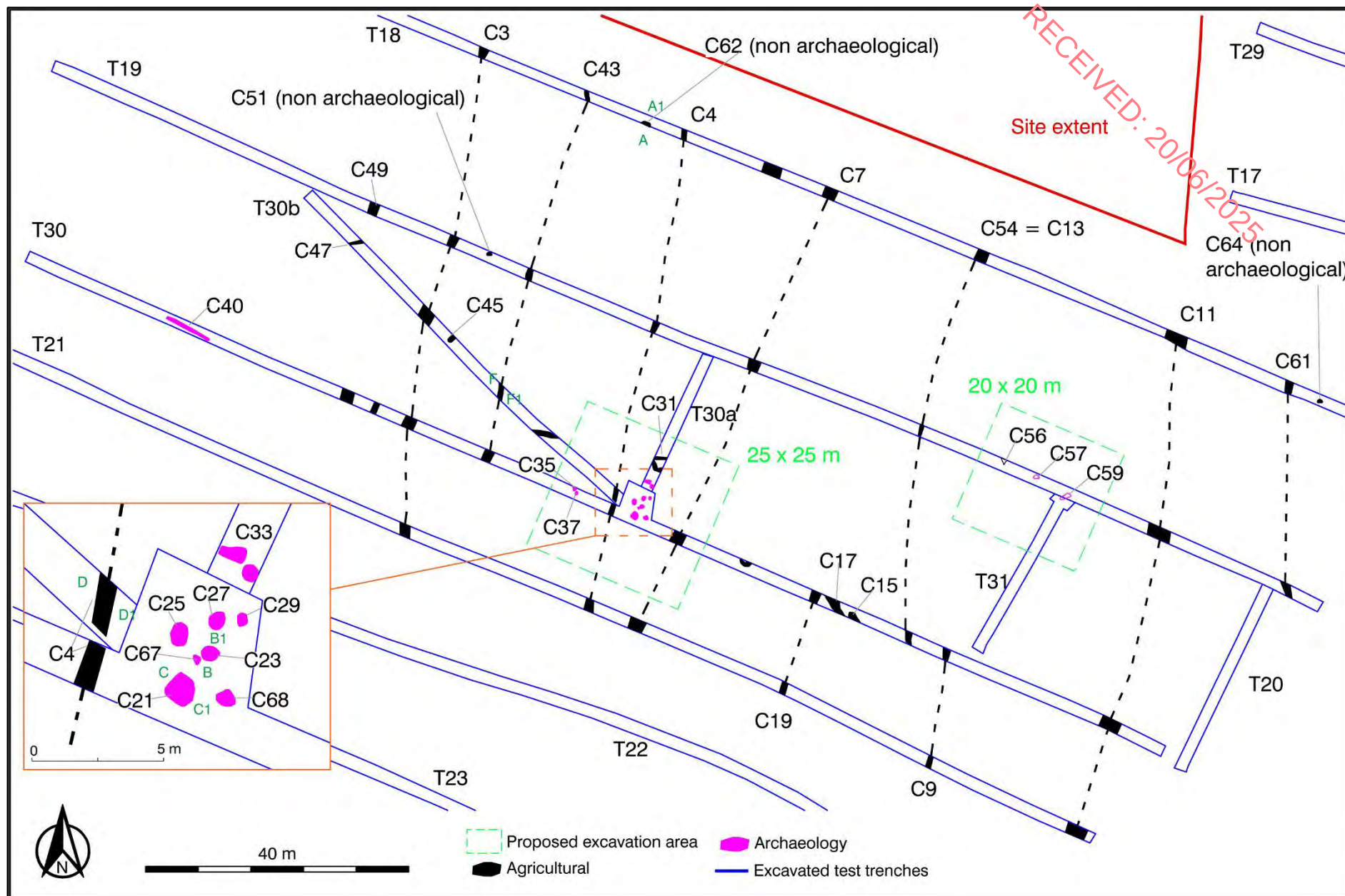


Figure 10 Details of archaeological features uncovered in Trenches 18-21 and Trenches 30-31

11. PLATES

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Plate 1: Overview of the site, with Ratoath town adjacent to the north (drone imagery courtesy of Future Analytics, January 2020)



Plate 2: Field 1, Trench 3: postholes C85, C89, C87, C91, facing west.



Plate 3: Field 1, Trench 3: pit C79, facing north.



Plate 4: Field 1, Trench 3: pits 81 and C83, facing north.



Plate 5: Field 5, Trench 19: pit C59, facing north.



Plate 6: Field 5, Trenches 30: pits C21, C23, C25, C27, C29, C33, C66, C68 facing north.



Plate 7: Field 5, Trench 30: possible pit C37 & feature C37, facing west.

12. APPENDIX 1: GEOPHYSICAL SURVEY REPORT (20R0026)

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past | present | future

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ARCHAEOLOGICAL
CONSULTANCY
SERVICES UNIT

Geophysical Survey of lands at Ratoath, Co. Meath

Client

Rybo Partnership

ITM: 703091,751546 to 702279, 747661

RMP No. ME045-064, ME044-043, ME044-025

Detection Device Licence No.: 20R0026

Ian Russell

22nd April 2020

Report Status: Final

ACSU Ref.: 1913

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PROJECT DETAILS

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Project	Geophysical Survey of lands at Jamestown, Commons, Newtown, Legagunnia, Ratoath, Co. Meath
Report Type	Geophysical Survey
Archaeologist	Ian Russell and Robert Breen
Client	Rybo Partnership
Site	Jamestown, Commons, Newtown, Legagunnia, Ratoath, Co. Meath
Townland	Jamestown, Commons, Newtown, Legagunnia
ITM Ref.	701873, 750056
Planning Ref. No.	N/A
RMP No.	N/A
Protected Structures	N/A
Detection Device Licence No.	20R0026
Report Date	15 April 2020
ACSU Ref.	1913

RECEIVED: 20/06/2025

NON-TECHNICAL SUMMARY

This report details the results of a Geophysical Survey carried out on behalf of the Rybo Partnership, on a proposed development site at Jamestown, Commons, Newtown, and Legagunna, Ratoath, Co. Meath (ITM 701873, 750056). The area contains no recorded monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest such structure is an enclosure (ME045-064) located c. 240m to the north of the sites eastern extent, it has no above ground presence but is clearly visible on aerial photographs as crop marks

The geophysical survey was conducted by Ian Russell and Robert Breen of Archaeological Consultancy Services Unit Ltd. (ACSU) between February and March 2020, under licence 20R0026 issued by the Department of Culture, Heritage and the Gaeltacht in consultation with the National Museum of Ireland. A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual sensor fluxgate gradiometer system. Detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas within the site of the proposed development with variations in the magnetic field (between -100nT to +107.834nT). The site is a greenfield site serving as agricultural pasture lands along the eastern side of the Fairyhouse Rd R155.

No definitive signs of an archaeological site were identified within the survey area. However, a number of faint anomalies in the form of curvilinear features, particularly in fields 9, 18 and 20, will require further investigation prior to any proposed development of the area as they could represent heavily ploughed out archaeological sites. As well as this, a number of the other apparently isolated anomalies should also be targeted in order to assess their archaeological potential. The historic field boundaries identified within the survey should also be tested to confirm their nature, depth and age.

A number of the magnetic anomalies scattered throughout the rest of the site may be the result of smaller features such as kilns, refuse pits or areas of burning. Isolated ferrous anomalies identified throughout the survey area may represent smaller features of archaeological significance or more modern agricultural debris such as iron objects dispersed throughout and within the subsoil. Faint undefined linear responses identified in the greyscale data may simply represent magnetic variations in the subsoil and may not be identified during the later testing phase.

It is recommended that targeted archaeological assessment and general test trenching of the lands be carried out in advance of any proposed development in order to assess the nature and extent of these identified anomalies in order to ascertain their archaeological significance (if any).

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1. INTRODUCTION

This report details the results of a Geophysical Survey carried out on lands at Jamestown, Commons, Newtown, And Legagunnia, Ratoath, Co. Meath (ITM 701873, 750056; Figures 1–2). The surrounding area contains three recorded monuments listed within the Record of Monuments and Places (RMP) and Sites and Monuments Record (SMR). These comprise an enclosure (ME045-064), a ring-ditch (ME044-043) and a second enclosure (ME044-025).

The geophysical survey was conducted by Ian Russell and Robert Breen of Archaeological Consultancy Services Unit Ltd. (ACSU) between February and March 2020, under licence 20R0026 issued by the Department of Culture, Heritage and the Gaeltacht in consultation with the National Museum of Ireland. A full detailed gradiometer survey was undertaken throughout the proposed development area, which is a greenfield site serving as agricultural pasture lands along the eastern side of the Fairyhouse Rd R155

2. METHODOLOGY

A full detailed gradiometer survey was undertaken throughout the application area using a Bartington GRAD 601-2 dual sensor fluxgate gradiometer system. Detailed survey was conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas within the site of the proposed development with variations in the magnetic field between (-100nT to +107.834nT). The survey area consisted of 140.95 acres of open greenfield.

3. THE PROJECT

The client requested a geophysical survey be carried out on the lands in order to assess the archaeological potential of the study area, including the existence of any as yet unidentified monuments. This in turn would allow an assessment to be made of the impact that any potential future development of the site would have on these previously unrecorded monuments.

4. SURVEY OBJECTIVES

The purpose of this geophysical survey is to establish the presence of any archaeological features within this site, and to inform a programme of test trenching to be carried out across the development area in the future.

5. SOILS, GEOLOGY & TOPOGRAPHY

The surrounding landscape is characterised by high ridges, with generally relatively shallow depths to bedrock, and less proportion of deeper subsoils (those greater than 10m). Bedrock is generally indistinct, and similar to the rest of Central Meath. The subsoils are dominated by glacial tills with less sand and gravel deposits than areas to the northwest, west, southwest, with much more bedrock outcropping than any surrounding areas. Soils are dominated by grey brown podzolic soils, well drained.

6. ARCHAEOLOGICAL ASSESSMENT

6.1 Archaeological & Historical Background

The study area under discussion is located south of the town of Ratoath in County Meath, c.18km to the north-west of Dublin City Centre (Figures 1–2). The area extends across c. 141 acres south of Glascarn Lane and to the east of Fairyhouse Rd, incorporating land within the townlands of Jamestown, Commons, Newtown and Legagunnia, all in the Barony and Civil Parish of Ratoath.. An examination of the Placenames Database of Ireland (www.logainm.ie) can reveal important information about the natural and cultural heritage of an area. For example, Commons townland (An Coimin) was first mentioned in 1654 as the 'Comons of Ratooth', and can be translated as commonage, common land; little hollow, glen. Legagunnia was noted by John O'Donovan in 1836 (Ordnance Survey Parish Namebooks) as Lag a' ghainimh, meaning 'hollow of the sand'.

Ratoath gives its name to a town, a townland, a parish and to a barony. The derivation or meaning of the word is, however, uncertain. Gaelicised forms of the name are Rat-tóghand Rath-tachatacta. These placenames occur in Irish manuscripts and scholars say that the writers were referring to Ratoath. Evidently, they were trying to give a phonetic rendering of a name that was unfamiliar to them. Mruigtuaith occurs in the Book of Armagh as the name of one of these places in Meath where St Patrick founded a church and Eoin MacNeill identifies it as Ratoath. If this correct it would seem that the second portion of the word comes from the Gaelic word 'tuath', which means a territory belonging to a family or sept, while 'Mruig' means a grazing plain. The first part of the word 'Ratoath' may be derived from the Gaelic word 'Rath', which means a fort or fortification, but this is unlikely, as the place name probably existed before the Normans erected the 'moat', unless they built it on top of a rath already in existence (Orpen 1921).

Prehistoric period

The wider environs of the study area are well represented in the archaeological record, containing evidence for some prehistoric, early medieval and medieval remains. For example, a ring-ditch (SMRNo.ME044-043) identified as a cropmark on a 2018 aerial image lies to the south-east of the study area, with further examples to the east (ME045-013), south-west (ME044-041) and north (Licence no. 03E1781) (see Figure 2). These monuments represent places of burial, ceremony and ritual practices that can date from the Neolithic to the Iron Age, but also continue in use into the early medieval period. Towards the end of the Neolithic and the beginning of the Bronze Age, features known as 'barrows' emerged and these can be defined as earthen or earth/stone construction mounds with a surrounding ditch or ditches, sometimes with a low external bank, typically less than 30 metres in diameter and most commonly associated with cremation burials (O'Sullivan and Downey 2012). In 2002, in advance of the gas pipeline works from North Dublin to Limerick, ring-ditches/barrows were excavated at Flemington, Co. Meath, Dalystown 1, Co. Westmeath, Knockuregare, Co. Limerick and Rath, Co. Dublin (Grogan et al.2007). All of these sites had substantial ditches, the largest having an external diameter of 38.75m. The excavations provide evidence for this type of funerary site occurring throughout the Bronze Age (2450–800 BC) and highlighted the significance of liminal space for death and burial in the form of ceremonial enclosures. McGarry (2009) states that of all the barrows excavated in Ireland, about half of them have produced the remains of a single person, most commonly found under the mound and central to the barrow. Almost all sites, however, produce cremated human remains spread throughout the fill of the barrow ditches; as can be seen at sites such as Ballybeen, Co. Antrim (Mallory 1984) and Ballydribbeen, Co. Kerry (Dunne 2003). Another interesting feature of barrows is the presence or absence of an 'entrance' or break in the ditch, which provides a causeway into the monument. Entrances are present in a number of ring-ditches and ring-barrows and although the entrance may be orientated in any direction there is a clear preference for them facing either east or south-east. It must be noted, however, that there are also many instances where entrances are not present, such as Donacarney, Co. Meath (Stirland 2017). In 2003, two ring-ditches excavated to the north of the study area in advance of a large-scale residential development were set c. 5.5m apart, with one measuring 15m in internal

diameter and the other 6m (Licence no. 03E1781; Wallace 2003a). The fragmentary remains of one cremation burial was identified in the fill of one ditch, but the other did not contain any burial evidence.

Some burnt pits and spreads/fulachtaí located to the north of the study area were also discovered as a result of archaeological assessments (Licence nos 03E1300, 03E1632, 03E1781). Fulachtaí comprise the most commonly discovered evidence for prehistoric settlement across Ireland and represent the use of pyrolithic technology to boil water, with those noted in close proximity to a trough generally interpreted as cooking/industrial sites (Hawkes 2018). These sites generally consist of a low mound of charcoal-enriched soil mixed with an abundance of heat-shattered stones, commonly forming a horseshoe shape in proximity to a trough, and are found in low-lying marshy areas or close to streams. Often these sites have been ploughed out and survive as a spread of heat-shattered stones in charcoal-rich soil with no surface expression. Field systems are also recorded in the environs of the study area, such as that in Warrenstown to the south-west (ME044-024) and these features can also date from Neolithic times onwards, although they are more likely to be early medieval or medieval in date. Artefacts recorded by the National Museum of Ireland also demonstrate prehistoric occupation of the area, such as a fragment of a stone axe head (E551:1294) found in Grange townland, which probably represents Neolithic activity, and an unusual funerary vessel (NMI X192), described as a double 'sepulchral vessel', found in 1864 in a cist during the excavation of a ditch in Ratoath and most likely dating to the Bronze Age (Waddell 1974; 1990, 129).

Early medieval period

The landscape of the wider surroundings of the area under study also contains a high distribution of early medieval settlement (c. AD 400–1100), as indicated by the presence of enclosures, ringforts and agricultural features including field systems and cultivation ridges. This was a time when settlement occurred as dispersed defended homesteads on lakes and across the wider landscape. (O'Sullivan et al. 2013). Souterrains dating from the same period are often found in association with settlements such as ringforts. The term 'souterrain' derives from the French sous terrain, meaning 'underground'. In archaeological terms, souterrains are artificial underground structures cut into bedrock or, more commonly, built into dug-out trenches with drystone walling and large stone lintels. The primary function of souterrains seems to have been food storage as they maintain constant temperatures (c.10°C). The less well defined 'enclosures' are also generally accepted as being from the same period and may be the remnants of destroyed ringforts or similar associated sites, although the possibility of prehistoric origins cannot be ruled out. Two enclosures are present in the environs of the proposed development area, RMP No. ME044-025 to the south-west, and SMR No. ME045-064, located c. 240m to the east (Figure 2). ME044-025 was marked as a 'Fort' on the first edition Ordnance Survey (OS) 6-inch map, while ME045-064 was identified in the form of a cropmark via aerial imagery from 2018. Furthermore, previous disturbance of enclosure ME044-025 produced human remains, suggesting the area is highly archaeologically sensitive and has significant potential for further human remains. To the east of Ratoath town, in advance of the M2 Finglas - Ashbourne road scheme, a number of important archaeological discoveries were made. Most significant was a large and multi-phased early medieval archaeological complex that was excavated at Raystown (Licence 03E1229) and which comprised enclosures, souterrains, a cemetery, kilns, mills and a mill race complex (Seaver 2005; 2016). A number of excavations have also taken place in recent years in relation to residential developments in the environs, mostly concentrated within the northern and north-western part of the Ratoath town.

Medieval period

The archaeological remains at Ratoath would suggest that the area was settled sometime during the medieval period. The arrival of the Anglo-Normans in Meath in c. 1170 changed the social and political structures in this area. The area of Ratoath was incorporated

into Ratoath manor that was part of the de Lacy Lordship and it retained as a signorial manor of the Earl after the subinfeudation of Meath in the late 12th century (Graham 1975). The most predominant feature at the centre of the town is the motte and bailey (ME044-034001), which is of Anglo-Norman construction. A timber and earthen castle/motte was constructed at Ratoath in the late 12/early 13th century. The motte consists of a flat-topped earthen mound with a diameter of 20m. The base is much wider and measures 62m in diameter, with the mound itself measuring 11m in height. Remains of a fosse are evident and a rectangular bailey is visible to the south-east. Ratoath was incorporated as a borough most likely in the early 13th century as is mentioned in the inquisition of 1333, and was the site of a manor court and a hundred court (Orpen 1921). Within the town, there is the site of an early church, on which now stands the remains of a 19th-century church. Reference to the early church is made in Bishop Dopping's Visitation Book of 1682–85 (Ellison 1971, 37–8). A late 13th or early 14th-century effigy (Hunt 1974, 213) and a 17th-century cross are to be found in the present graveyard attached to the Church of Ireland, built in 1818. The original medieval church was among the possessions of St Thomas' Augustinian abbey in Dublin, but no traces of it remain within the graveyard, apart from some dressed pieces of windows suggesting a 16th-century date. A graveslab of knight with Lombardic letters dates that slab to the 13th or early 14th century (Hunt 1974). Ratoath was classed among the borough towns of County Meath during the reign of Henry VI (15th century).

In 1795, a turn pike road was built between Curragha and Ratoath (Andrews 1964). A suitable infrastructure was needed and introduction of toll roads was the result of economic prosperity under the Protestant Anglo-Irish. These toll roads are easily recognised as they run in straight lines. Lewis (1837) mentions an abbey dedicated to St Mary Magdalene in Ratoath. He also notes manufacture of sacking and the weaving of linen carried out on a small extent. He also remarks that the land is profitable cultivation and stone of good quality quarried. Corballis Esq had his principal seat at the Manor House in town, which is an example of a Protected Structure (Ref. MH044310), as listed in the Meath County Development Plan 2013-2019 (see Section 6.4). Fairyhouse Racecourse, located to the south of the study area, is noted for the first time on the third edition OS 25-inch map, where a Grand Stand, Pavilion and Flagstaff are all depicted (see Figure 4). The first race at Fairyhouse Racecourse was held in 1848, with the Irish Grand National steeplechase held since 1870.

6.2 Recorded Monuments

The study area contains no Recorded Monuments (listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR) (Figure 2). The nearest such monument to the site is an enclosure (ME045-064), located c. 240m to the north of the eastern extent of the study area. The surrounding landscape is rich in recorded monuments, ranging in date from the prehistoric period to post-medieval times. The following is a list of the recorded monuments within the proposed development site. These descriptions are derived from the published Archaeological Inventory of County Meath (Moore 1987). In certain instances, the entries have been revised and updated in the light of recent research and are available in the National Monuments Service Archaeological Survey Database (<http://webgis.archaeology.ie/historicenvironment/>).

Table 1: Recorded Monuments in the environs of the study area

RMP No./ SMR No.	Class/Site Type	Townland	Description
ME045-064----	Enclosure	Glascarn	Located on a fairly level landscape. The cropmark of a subrectangular enclosure (dims c. 55m NE–SW: c. 50–55m NW–SE) defined by fosse or drain features is visible on Google Earth (07/05/2017; 24/06/2018). It is bisected by the cropmark

RMP No./ SMR No.	Class/Site Type	Townland	Description
			of a N-S drain, and was first reported by Jean-Charles Caillière.
ME044-043----	Ring-ditch	Mullinam	Situated on a slight NW-facing slope in a fairly level landscape. The cropmark of a small circular feature (diam. c. 8m) defined by a single continuous ditch feature is visible on Google Earth (24/06/2019). It is also visible on Digital Globe (2017). It was first reported by Jean-Charles Caillière.
ME044-025----	Enclosure	Ennistown (Ratoath By.)	Oval area defined by field fence on E and S. Bank on N and W destroyed exposing human bones (dims. c. 73m NW-SE, c. 30m NE-SW).
ME044-041----	Ring-ditch	Warrenstown (Ratoath By.)	Situated on a fairly level landscape. The cropmark of a small circular enclosure (int. diam. c. 7m) defined by a single continuous fosse feature is visible on Google Earth (24/06/2018). It was first reported by Anthony Murphy.
ME045-013----	Ring-ditch	Glascarn	Cropmark ring (diam. c. 20m) (Cambridge University Collection of Aerial Photographs Ref.: AVF 41). It is also visible on Ordnance Survey Ireland Aerial Photographs (2005).
ME044-024----	Field system	Warrenstown (Ratoath By.)	Rectangular fields, defined by scarps (dims. up to 30m by 20m) covering c. 8 acres.
ME045-011----	Enclosure	Tankardstown (Ratoath By.)	Circular area defined by fosse (diam. c. 60m).
ME044-034----	Historic town	Ratoath	Incorporates 18 recorded monuments, including a motte and bailey (ME044-034001-); a font (ME044-034002-); a church (ME044-034003-); architectural fragments (ME044-034004- & 007-), an effigial tomb (ME044-034005-); a churchyard cross (ME044-034006-); a market cross (ME044-034008-), a cistern (ME044-034011-); cultivation ridges (ME044-034015-); a graveyard (ME044-034017-); and miscellaneous sites uncovered as a result of excavations (ME044-034009-, 010-, 012-, 013-, 014-, 016 & 018-).

6.3 Previous Archaeological Investigations

One archaeological investigation was previously carried out in the immediate environs of the study area (Figure 2). This comprised archaeological monitoring (Licence no. 18E0136) of the former Ratoath Outer Relief Road. There have also been a number of archaeological investigations carried out within Ratoath town, as well as some in the surrounding townlands in the environs of the study area. Listed below are the investigations located in the environs of the study area that further demonstrate the overall archaeological potential of the site and its surrounding townlands. The details are derived from the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie).

Table 2: Previous excavation in the environs of the site

Site	Licence No.	RMP/SMR No.	Director(s)	Site Type	Investigation Type
Tankardstown	99E0581	SMR ME045-011	Finola O'Carroll	No archaeological significance	Archaeological monitoring
Jamestown	11E062	N/A	Robert Lynch	No archaeological significance	Archaeological testing and monitoring
Ratoath Outer Relief Road, Jamestown	18E0136	N/A	Niall Roycroft	No archaeological significance	Archaeological monitoring

While there was a number of archaeological assessments carried out within and in the environs of the study area, no archaeological remains were identified. Investigations within and surrounding Ratoath town, however, have uncovered numerous archaeological sites, including medieval ditches and two 19th-century buildings on Main Street (Licence no. 01E0248) and on the Kentstown Road, a late medieval open drain and associated laneway surface, a later area of rough cobbling, a cistern-type structure, a substantial ditch possibly representing the town boundary, a small V-shaped ditch, an 18th/19th-century wall foundation and a further ditch of unknown date (Licence no. 01E1173). On the western fringe of the town, a 18ha residential development led to the discovery of two ring-ditches, burnt pits, cereal-drying kilns, a possible metalworking area, an early medieval cemetery enclosure and a possible field system (Licence no. 03E1781; Wallace 2003a; 2004), as well as a burnt spread and pits, including a possible trough (Licence no. 03E1632; Wallace 2003b).

6.4 Protected Structures and National Inventory of Architectural Heritage (NIAH)

There are several structures listed within the National Inventory of Architectural Heritage (NIAH) located in the town of Ratoath (Figure 2), several of which are also Protected Structures as listed in the *Meath County Development Plan 2013–2019*. The study area, however, does not contain any such sites, with the nearest example consisting of The Manor House (RPS MH044310; NIAH Reg. No. 14336002), which is located c. 1.05 km to the north, while a house (NIAH Reg. No. 14336014) is located c. 1.1 km to the north of the study area and is included in the NIAH. The following is a description of nearby architectural heritage sites as listed within the NIAH.

Table 4: List of Protected Structures and National Inventory of Architectural Heritage (NIAH) sites in the environs of the study area

Name	Townland	NIAH ID	RPS ID	Description
The Manor House	Ratoath	14336002	MH044310	Though many original features and materials have been replaced, the former Manor House retains interesting architectural detailing, such as the segmental-arched window openings on the ground floor and the bow to the rear. The carved timber doorcase adds artistic interest to the former seat of J.I Corballis.

Name	Townland	NIAH ID	RPS ID	Description
(former)				
House	Ratoath	14336014	N/A	Detached five-bay single-storey house, built c.1800, with gabled central porch. Hipped corrugated fibre cement roof with a red brick chimneystack. Roughcast rendered walls, rendered to porch. Timber sash windows. The modest form and scale of this, is enhanced by the retention of many interesting features and materials, such as the timber sash windows and the corrugated fibre cement roof. The house makes a positive contribution to the streetscape in Ratoath, due the scale and form of the building.
Fox Lodge	Ratoath	14336001	N/A	Though many original features and materials have been removed, the house retains its symmetrical form which is enlivened by the tooled limestone block-and-start surrounds. The fine doorcase also survives, though it is obscured by the porch addition. The setting of the building is enhanced by the pair of cast-iron entrance gates.
Holy Trinity Roman Catholic Church	Ratoath	14336006		Though this church was commenced in the early nineteenth century by Rev. Richard Carolan, it was completed in 1874, and retains many features from the latter phase of construction. The imposing entrance elevation is executed in well finished ashlar and carved limestone, which was clearly executed by skilled craftsmen. The survival of many interesting interior features and materials, such as the stained-glass windows and chancel mosaics add artistic interest to the building. This church is located in the centre of Ratoath village on a site containing a motte and bailey. It was from these two earthwork features that the village derived its name.
Holy Trinity Parochial House	Ratoath	14336007		This parochial house was designed by William Hague for the Rev. Fr. Fulham. This house is enhanced by the retention of many original features and materials, such as the timber sash windows, red brick dressings, slate roof and ridge cresting. The house and related church were built on an archaeological site in the centre of Ratoath village which contains a motte and bailey.
Holy Trinity Parochial House Outbuildings	Ratoath	14336008		The simple form of this outbuilding is enhanced by the retention of many colourful original materials, such as the purple slate roof, grey stone, yellow brick dressings and painted timber windows and doors. This outbuilding and the related parochial house are located on the site of a motte and bailey, which add archaeological interest to the site.
House, Ratoath town	Ratoath	14336014	N/A	The modest form and scale of this, is enhanced by the retention of many interesting features and materials, such as the timber sash windows and the corrugated fibre cement roof. The house makes a positive contribution to the streetscape in Ratoath, due the scale and form of the building

6.5 Cartographic Evidence

An examination of pre-Ordnance Survey mapping in the form of the 'Barony of Rattoth' in the Down Survey of 1654–56, illustrates that the study area is named as 'Ratooth' and depicts 'Newtown'. Taylor and Skinner's Maps of the Roads of Ireland (1777) offers little insight to the study area, although Ratoath town is depicted, as is Fairyhouse Road with a row of mature trees on its eastern side (Figure 4). Ordnance Survey (OS) maps of the area were also examined in order to identify any possible archaeological features and to trace the development of the site during the 19th and early 20th centuries (Figures 3-4). These are far more detailed than the earlier maps. Overall, it appears as if the nature of the lands has not changed significantly since this time, with the study area still comprising

large fields primarily used for tillage and pasture. By the time of the third edition OS 25-inch map (surveyed 1909, published 1911), the biggest change by far is the addition of the Fairyhouse Racecourse south of the study area (Figure 4). On the western edge of the Fairyhouse Racecourse, a Grand Stand, Pavilion and Flagstaff are also depicted and labelled. By this time, a substantial number of fields within the study area also appear to have been divided into smaller fields. The fields are illustrated as bound by hedges, stone walls, streams and some wet ditches. An examination of the Cassini edition of the 6-inch map (1958) shows little difference within the study area from the 25-inch map.

7. METHOD OF DATA INTERPRETATION

The gradiometer survey is conducted with a Bartington GRAD 601-2 dual sensor fluxgate gradiometer system. Detailed survey is conducted with a sample interval of 0.25m and a traverse interval of 1m for all the survey areas. This allows detection of potential archaeological responses. Data is collected in grids 40m x 40m and data is displayed accordingly.

The Bartington GRAD 601-2 instrument is a specifically designed gradiometer for use in archaeological prospection. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.01nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions. The survey is geo-referenced with a Trimble Geo 7X unit accurate to within 1cm. Interpretation of the results was made by examination of the raw data as greyscale images, XY trace, relief and data plots. Archived raw data is presented in Figures 6-8 and an interpretation is presented in Figures 9-11.

8. SURVEY RESULTS

The geophysical survey was conducted by Ian Russell & Robert Breen of ACSU) between February and March 2020 under license 20R0026. A full detailed gradiometer survey was undertaken throughout the application area (Figure 6-11) using a Bartington GRAD 601-2 dual sensor fluxgate gradiometer system. The survey area consisted of 21 separate areas or fields (Figure 5) totaling 140.95 acres along the eastern side of the Fairyhouse Rd R155.

Area 1

Area 1 located in the northwest corner of the development area is an old field; formerly cultivated or grazed it now lies abandoned. Long grasses as well as a mixture of new trees and shrubs have taken over. The field is flanked by housing estates along its northern and western edges (Figure 6, 9).

High magnetic disturbance is present along the northern perimeter of the field as well as the southwest corner (A). This is likely the result of modern ferrous structures such as fencing and or gateways. A number of dipolar anomalies (B) were identified along the western portion of the field are also likely to be the result of modern ferrous objects that may be scattered throughout the subsoil. Two small irregular shaped positive anomalies (C) and (D), may represent cut features and may be archaeological in nature. However, given the lack of a definitive archaeological site with which they may be associated they may also prove to be non-archaeological tree bowls or depressions in the ground. Another dipolar anomaly (E) was identified in the southeast portion of the field. This is likely to be another modern ferrous anomaly within the subsoil.

Area 2

Field 2 was enclosed by deep field boundaries and was accessed from field 3 to the east. A number of properties run along the northern edge of this field (Figure 6, 9).

High magnetic disturbance was identified along the northern boundary as a result of the enclosing fence. One positive anomaly was identified in the western portion of the field and may represent a cut feature of archaeological significance. A number of bipolar anomalies were also identified scattered across the field and may represent modern ferrous anomalies in the topsoil or subsoil. A faint curvilinear identified running north-south through the field may be the result of weak magnetic variations in the subsoil and is likely to be natural in origin such as a dried up stream.

Area 3

Area 3 is located in the northeast of the development area along a corner of the Glascarn Lane which runs along its northern and eastern edges. Currently the field serves as pasture land (Figure 6, 9).

A number of tightly compact positive and negative linear anomalies (E) were identified to the southwest of the field. These may of archaeological origin or may be the result of ploughing activity such as ridge and furrows which would have resulted in a series of cut depressions each flanked by a bank made up of the removed material. The anomaly was not identified in field 6 immediately south on the far side of the field boundary. The anomaly may also be the result of a drain or disturbed ground terminating in the field boundary to the south.

A number of positive anomalies (F) were identified towards the middle of field 3 and may represent cut features such as refuse or storage pits, or may be natural in origin. A number of negative and or bipolar anomalies identified are likely to be the result of modern ferrous debris scattered in the subsoil e.g. plough remains, horse shoes, fencing materials etc.

Area 4

Area 4 is located in the northeast corner of the survey area and currently serves as pasture land (Figure 5, 6, 9).

No definitive signs of archaeology were identified. A number of positive anomalies that may represent cut features such as pits or troughs should be investigated during any future testing of the site. A number of bipolar anomalies scattered throughout the survey area are likely the result of modern ferrous debris within the subsoil or topsoil and so are unlikely to be of archaeological significance.

Area 5

Area 5 continues from the southwest corner of field 1. Much of the survey area is overgrown with a mixture of long grasses and new young trees and heavy shrubs (Figure 5, 6, 9).

Two historic field boundaries were identified (G). One field boundary aligned north-south divides the lower portion of the field while the second field boundary runs perpendicular to the other and continues eastwards into the current field boundary. Both of these field boundaries are visible in the cartographic evidence on OSI 6" and 25" editions. Both of these field boundaries should be archaeologically tested during in order to assess their nature, depths and true age.

A series of positive anomalies running southwest to northeast from the southern boundary of field 5 were identified (H). These are likely the result of cut features and may represent a linear series of pits.

A series of weak linear anomalies aligned north-south (I) in the northeast portion of field 5 may represent further evidence of ridge and furrow activity.

The northeast corner of the field produced an area of high magnetic disturbance which may be the result of churned ground, rubble or modern ferrous anomalies such as scattered fencing (J).

Area 6

Area 6 consists of pasture land and is located towards the northeast of the area (Figure 5, 6, 9). A north-south aligned bipolar linear anomaly was identified running from the private residential property in the northeast corner of the field towards the field boundary that defines the southern boundary of the field (K). This is likely the result of a clay or metallic field drain.

A number of positive and bipolar anomalies identified throughout the rest of the field should be targeted during any future testing of the lands. These may represent either cut features, fired features such as kilns and furnaces or modern ferrous anomalies.

Area 7

Area 7 is located directly south of area 6 (Figure 5, 6, 9). No clear signs of any archaeological significance. A number of positive and bipolar anomalies identified within the survey area should be targeted during any future testing of the lands in order to assess their nature and form.

Area 8

Area 8 consists of a large open field of pasture land (Figure 5, 7, 10). No clear signs of archaeology were present. A number of high magnetic responses were identified along the perimeter of the site in response to fencing or gateways. A number of isolated anomalies were identified throughout the area and may represent cut features. These possible cut features may take the form of pits, storage pits, or natural tree throws. The exact nature of these anomalies should be targeted during any future testing of the lands.

Area 9

Area 9 is located directly south of area 8 along the western boundary of the development area (Figure 5, 7, 10). A couple of historic field boundaries were identified (L). One boundary aligned north-south originally divided the field in half while a second perpendicular boundary running eastwards from the first divided the eastern portion of the field in half North-south. Both of these field boundaries are visible on both the OSI 6" and 25" maps. The field was likely opened up to its current layout sometime in the 20th century.

A faint but positive curvilinear feature (M) was identified towards the northeastern area of the field. This may represent a cut ditch feature or enclosing element however the faint nature of this response may suggest a more natural origin such as soil creep or dried up streams. The exact nature of this anomaly should be targeted during any future testing of the lands.

A second smaller positive curvilinear anomaly (N) was identified in the eastern half of the field and may represent a small ring-ditch or large cut feature. An area of magnetic debris (O) was identified to the southeast of the field which may simply be the result of dug or mixed earth, or it may also be a spread of thermoremanent materials such as ash or fired stone.

Area 10

Area 10 was located at the southwest corner of the development along the eastern side of the Fairyhouse Rd R155 (Figure 5, 7, 10). A faint linear anomaly (P) was identified along the western portion of the field aligned north-south which may represent an old field boundary or small ditch, perhaps defining the tree line marked on the OSI 6" and 25" editions.

A number of other positive and bipolar anomalies were identified scattered throughout the field however there are no defining archaeological elements.

Area 11

Area 11 is located directly east of areas 9 and 10 and south of area 8. It consists of green pasture land (Figure 5, 7, 10). A linear anomaly (Q) aligned east-west was identified through the middle of the field. This linear appears on the Historic OSI 6" map as an avenue that originates from the main Fairyhouse Rd. The current field boundary between areas 9 and 10 is a continuation of this original avenue.

A faint linear anomaly (R) running east-west across the lower portion of the field may be the result of a field drain or magnetized disturbance from the use of machinery along the perimeter of the field.

A large portion of magnetic debris was identified in the western half the field (S). This is likely the result of recent ground disturbance. Aerial photography from 1995 (OSI 1995) may indicate the presence of a large shed or other similar structure that has since been demolished. Large sheets of corrugated iron and building rubble were noticed along the western boundary of area 11.

A number of isolated anomalies were also identified throughout the rest of the survey of area 11. These along with the linear anomalies should be targeted during any future testing of the lands in order to ascertain their archaeological potential.

Area 12

Area 12 was located east of area 11 and south of area 8 (Figure 5, 7, 10). No definitive signs of archaeology were found. A number of positive anomalies were identified throughout the area as well as a small number of bipolar anomalies. Some of these anomalies may represent cut features of archaeological interest or may be the result of modern disturbance or natural tree throws. These potential features should be targeted during any future testing of the lands to understand their true nature.

Area 13

Area 13 was located directly east of area 12 (Figure 5, 7, 10). No clear signs of archaeology were present. Very few anomalies were identified. Most anomalies appear magnetically bipolar and may be the result of ferrous debris in the subsoil or topsoil. A number of these anomalies should be targeted during any future testing of the lands.

Area 14

Area 14 is located directly east of area 13 (Figure 5, 8, 11). A large cluster of magnetic debris in the north of the area (T) suggests dug or mixed earth. This could also be the result of a spread of ferrous debris towards the field entrance. A number of positive but irregularly shaped anomalies were identified throughout the rest of the survey area which may represent tree throws or small pits. These should be targeted during any future testing of the lands.

Area 15

Area 15 was located directly east of area 14 and currently serves as pasture land (Figure 5, 8, 11). High magnetic disturbance was identified towards the north of the field, likely due to modern ferrous anomalies such as gateways or fencing. A small scatter of smaller positive anomalies were identified towards the centre of the surveyed area and may represent small cut features of archaeological potential or they have more natural origin in the form of tree throws or natural depressions in the ground.

Area 16

Area 16 is located directly south of area 14 (Figure 5, 8, 11). No clear signs of archaeology were identified. Patches of high magnetic disturbance were identified around the perimeter of the site while a small cluster of positive and bipolar anomalies were identified across the centre of the site. These may represent features of archaeological potential such as refuse or storage pits, small kilns or they may be more modern in origin. A number of these features should be targeted during any future testing of the lands in order to ascertain their archaeological potential.

Area 17

Area 17 was located directly east of area 16 and directly south of area 15 (Figure 5, 8, 11). A small number of positive and bipolar anomalies were identified across the site with no identifiable pattern. These may represent features of archaeological potential such as refuse or storage pits or small kilns. A number of these features should be targeted during any future testing of the lands in order to ascertain their archaeological potential.

Area 18

Area 18 was located directly east of areas 15 and 17 (Figure 5, 8, 11).

Two large field boundaries were identified within area 18. The first field boundary (X) is aligned east-west and is staggered across the field. Two areas of high magnetic disturbance were identified at either end of this field boundary where it terminates into the adjoining modern boundaries. These areas of high magnetic disturbance may be the result of a structural stone element to the boundary or a more modern metallic element. It is possible that the field boundary at these two locations was backfilled with stone to allow the free movement of machinery around the perimeter of the field for continued agricultural purposes.

The second field boundary (Y) identified stems from the first and is aligned north-south towards the eastern half of the area. Both of these field boundaries are visible on both the Ordnance Survey 25" and 6" maps.

A number of faint curvilinear anomalies (Z) were identified as weak trends towards the northern half of the area. These may represent the heavily ploughed out enclosing elements of small enclosures. However, they have a very weak response which indicates they are potentially very shallow.

A large positive anomaly was identified at the junction of these field boundaries and as such may be of archaeological potential or it may be the result of a removed gateway between the two fields.

A number of other positive and bipolar anomalies were identified throughout the survey area. Some of these may be of archaeological potential and should be investigated along with the field boundaries and curvilinear trends during any future testing.

Area 19

Area 19 is located directly east of area 18 and is currently serving as agricultural land (Figure 5, 8, 11). The survey identified a field boundary (U) aligned NNE-SSW which divides the field in two. This field boundary is visible on all historic OSI maps which also makes reference to the fact the land on the western side of this field boundary is marshy ground. Cutting across this field boundary is another north-south aligned weak linear trend. This linear anomaly continues into field 20 and is the likely result of a dried up stream (V).

A number of positive and bipolar anomalies were also identified and may represent small cut features or more natural tree throws and depressions.

Area 20

Area 20 is located north of area 19 (Figure 5, 8, 11). A northeast-southwest aligned weak linear trend was identified running through area 20 and is likely the result of an old stream (V). This linear anomaly continues south into field 19 as stated previously. Area 20 is also depicted as marshy land on the historic OSI 25" and 6" maps (Figure 4).

A second linear anomaly was identified west of this anomaly (W) and may be an internal boundary or a later clay drain. This linear anomaly may also be the result of changes in the natural subsoil.

Further to this, a number of small irregular positive and bipolar anomalies were identified throughout the field and may represent various cut features such as pits and post holes or they may be natural in origin, i.e. tree throws, natural depressions etc.

Area 21

Area 21 is located south of area 5 directly east of the Fairyhouse Rd R155 from which the field is accessed (Figure 5, 6, 9). Areas of high magnetic disturbance were identified along the northern perimeter as a result of a metallic fence along the hedgerow. A large irregular band of magnetic disturbance was also produced across the northern end of the area. This may indicate disturbed ground or the heavy use of farming machinery in the area near the field entrance.

This band of magnetic disturbance along with the small number of positive anomalies identified should be targeted during any testing phase of the project in order to ascertain their archaeological potential.

9. CONCLUSIONS

No definitive signs of archaeology are present within the survey area. However, a number of faint anomalies in the form of curvilinear features in areas 9, 18 and 20 will have to be investigated during any future testing phase of the project. As well as this, all field boundaries identified in areas 5, 9, 11, 18, and 19 will also need to be targeted in order to assess their nature, depths and age (Figure 5-11).

A number of the magnetic anomalies scattered throughout the rest of the site may be the result of smaller features such as kilns, refuse pits or areas of burning. Isolated ferrous anomalies identified throughout the survey area may represent smaller features of archaeological significance or more modern agricultural debris such as iron objects dispersed throughout and within the subsoil. Faint

undefined linear responses identified in the greyscale data may simply represent magnetic variations in the subsoil and may not be identified during any later testing phase.

It is therefore recommended that targeted archaeological assessment in the form of test trenching be carried out in order to assess the nature and extent of the identified anomalies, in particular the nature of the strongest linear anomalies as well as a number of the stronger magnetic anomalies identified elsewhere in order to ascertain their archaeological significance. More general testing of the subject area should also be carried out in advance of any proposed development of the site in order to confirm the results of the geophysical survey.

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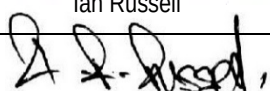
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Report Status:	Final
Issue/Revision:	1
Issue/Revision Date:	15 th April 2020
Prepared by:	Ian Russell & Robert Breen
Signed:	
Approved by:	Ian Russell
Signed:	

11. Appendix 1 - Summary Technical Information & Glossary of Terms

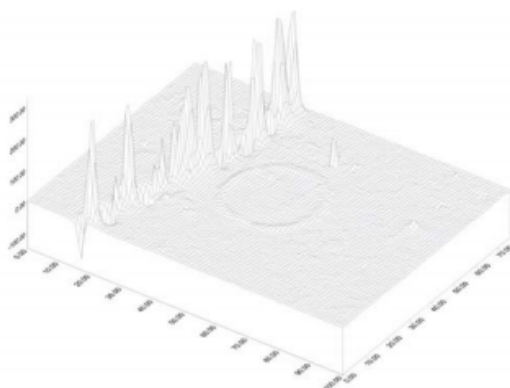
Fluxgate Gradiometer Survey: Surveys are undertaken using the Bartington Grad 601-2 survey instrument which was specifically designed for archaeological prospection. It includes sensors that are highly stable, minimizing requirements for excess data processing. The instrument has a vertical 1 m sensor separation permitting finite resolution of buried archaeological features. Surveys can be undertaken in scan or detailed (zig-zag traverse) modes for reconnaissance or high-density mapping. The fluxgate enables reliable flexibility during fieldwork. Frequent realignment of the instruments and zero drift correction ensure a constant high quality of data. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.1nT, affording diverse application throughout a variety of archaeological, soil morphological and geological conditions. The instrument can be employed in both commercial and research-based investigations allowing for completion of projects within short timescales. Regular grid sample densities from standard 1600 readings to 12800 readings per 20m by 20m grid are permitted. A constant high quality of data is assured by experienced field staff operating in accordance with English Heritage Research & Professional Guidelines No. 1, *Geophysical Survey In Archaeological Field Evaluation* (David 1995).



Bartington Grad 601-single axis dual sensor gradiometer.

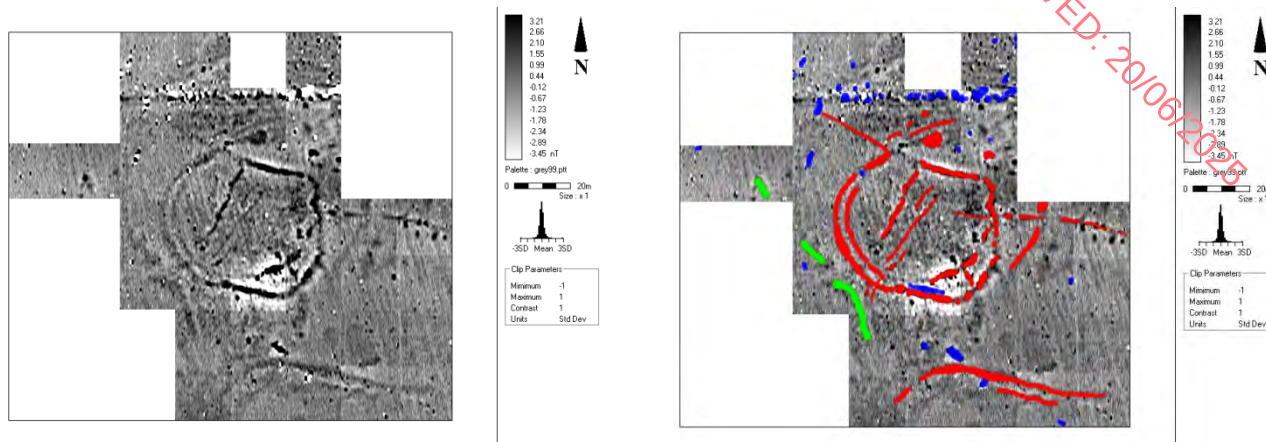
Data Display Formats

XY Trace: The data are presented as a series of linear traces, enabling a semi-profile display of the respective anomalies along the X and Y axes. This display option is essential for distinguishing between modern ferrous materials (buried metal debris) and potential archaeological responses. The XY trace plot provides a linear display of the magnitude of the response within a given data set.



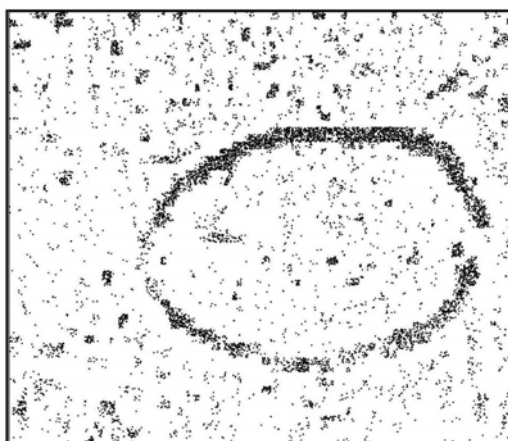
XY Trace of enclosure site

Greyscale: As with dot density plots, 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 instrument detection.



Early medieval enclosure greyscale

Dot Density Plot : Each datum is assigned a cell in which the intensity or number of dots displayed is proportional to the magnitude of the individual response. The visibility or presentation of responses within a given survey area is governed by numeric parameters specific to both soil morphological and archaeological conditions observed on site. Typically, the range of weak to strong responses is manifested by a low to high level of dot density. The format is useful for displaying gradiometer and resistance data particularly for identifying low-level responses.



Dot Density plot of oval shaped enclosure

Glossary of Interpretation Terms

Archaeology: This category refers to responses usually supported by comparative archaeological evidence (i.e., photographic transcriptions, excavation, etc.). The term is generally associated with significant concentrations of former settlement, such as ditched enclosures, storage pits and associated features.

Archaeology ?: This term corresponds to anomalies that display typical archaeological patterns where no record of comparative archaeological evidence is available. In some cases, it may prove difficult to distinguish between these and evidence of more recent activity also visible in the data.

Industrial: Such anomalies generally possess a strong magnetic response and may equate with archaeological features such as kilns, furnaces, concentrations of fired debris and associated industrial debris.

Area of Increased Magnetic Response: These responses often lack any distinctive archaeological form, and it is therefore difficult to assign any specific interpretation. The resulting responses are site specific, possibly associated with concentrations of archaeological debris or more recent disturbance to underlying archaeological features.

Trend : This category refers to low-level magnetic responses barely visible above the magnetic background of the soil. Interpretation is tentative, as these anomalies are often at the limits of instrument detection.

Ploughing/Ridge & Furrow : Visible as a series of linear responses, these anomalies equate with recent cultivation trends.

Natural?: Resulting from localised natural variations in the magnetic background of the subsoil, these responses are often recorded in areas of low-lying land prone to flooding.

Ferrous : These anomalies exhibit a typically strong magnetic response, often referred to as 'iron spikes,' and are the result of modern metal debris located within the topsoil.

Area of Strong Magnetic Disturbance: This term refers to large-scale magnetic interference from existing services or structures. The extent of this interference may in some cases obscure anomalies of potential archaeological interest.

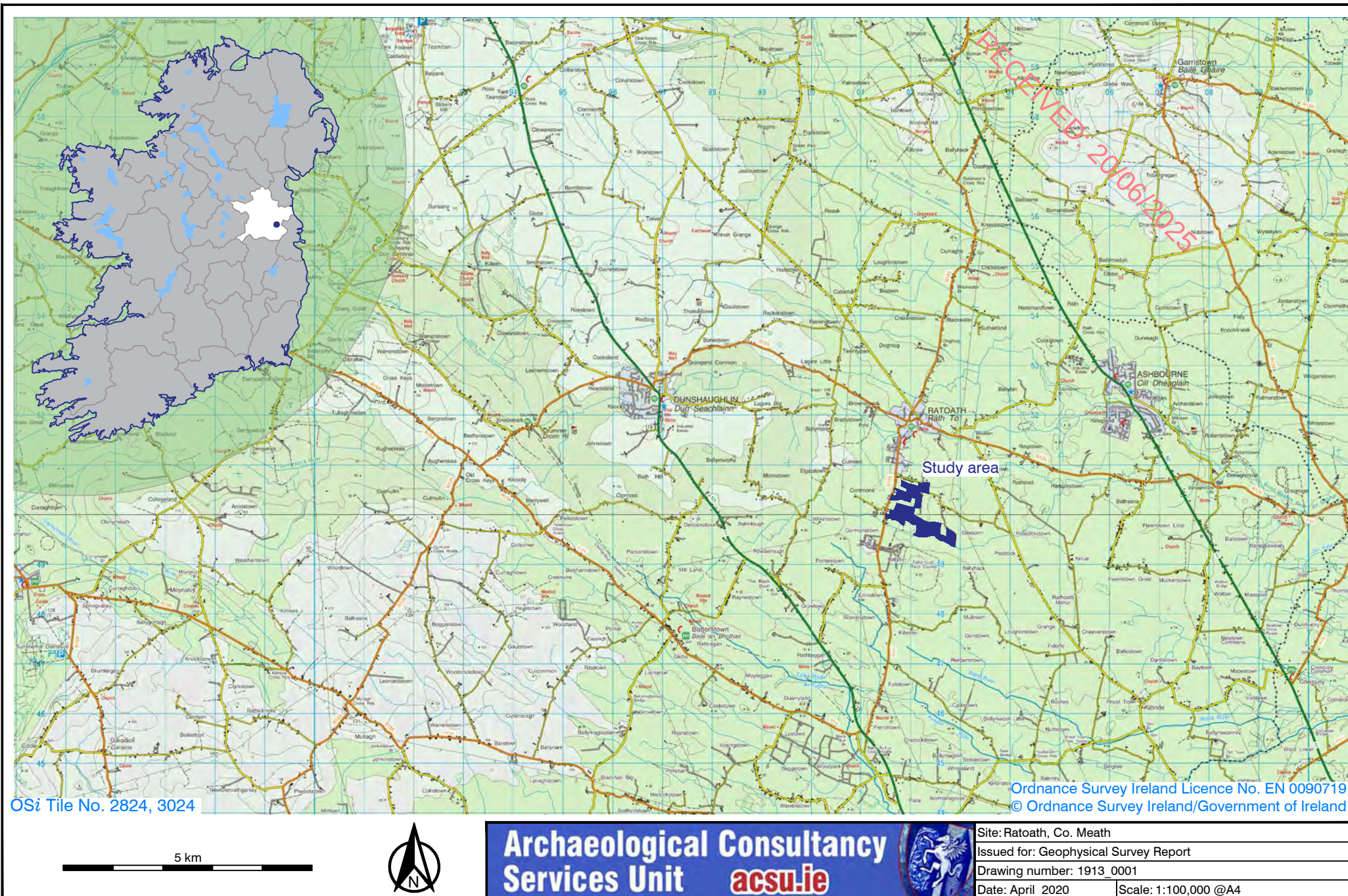
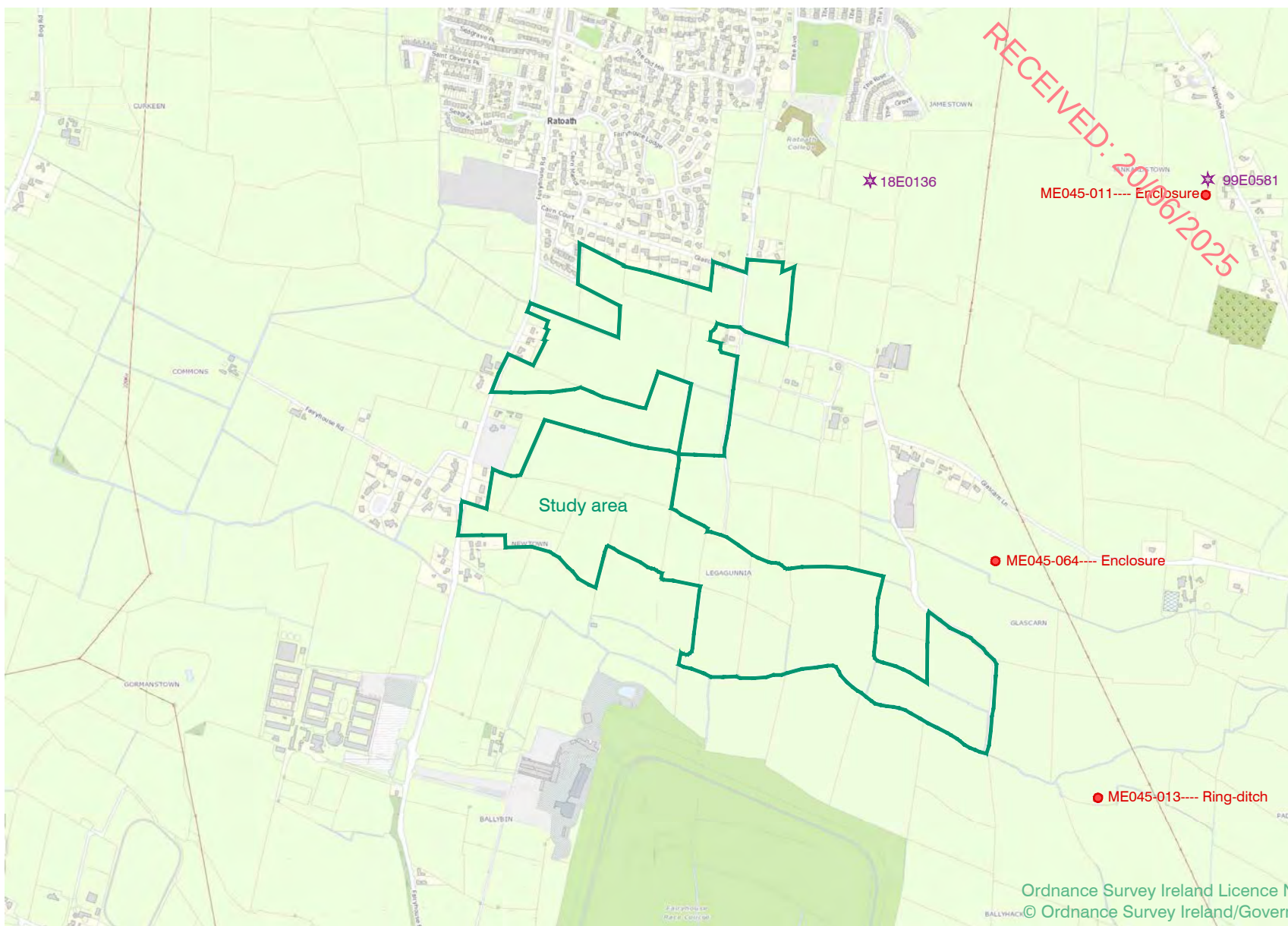


Figure 1: Location of study area



● National Monuments Service site
 ☆ Previous Archaeological Investigations

1 km



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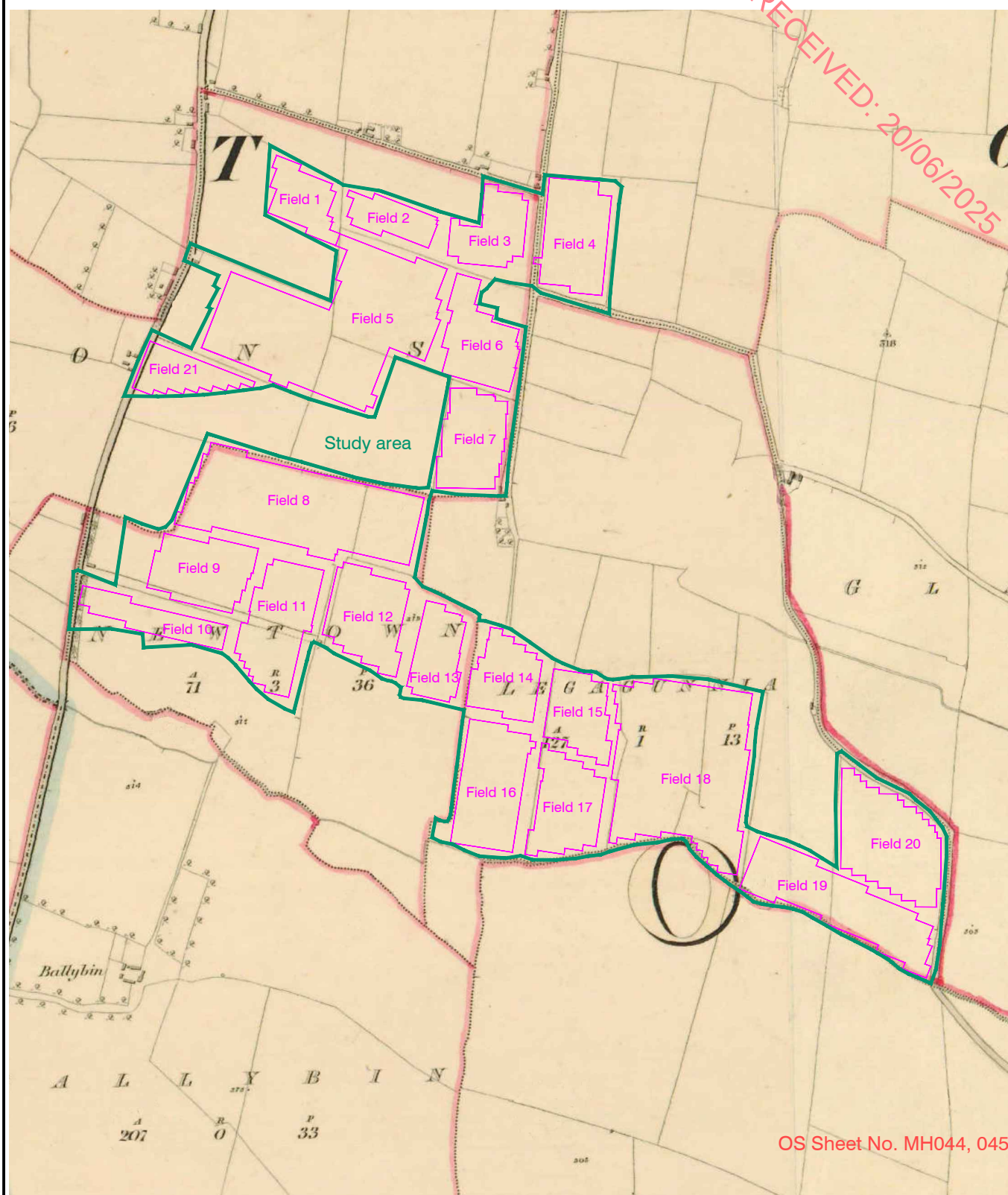


Site: Ratoath, Co. Meath
 Issued for: Geophysical Survey Report
 Drawing number: 1913_C0002
 Date: April 2020 | Scale: 1:15,000 @A4

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Figure 2: Location of study area, previous archaeological investigations and nearby Sites and Monuments Record sites

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Geophysical survey areas

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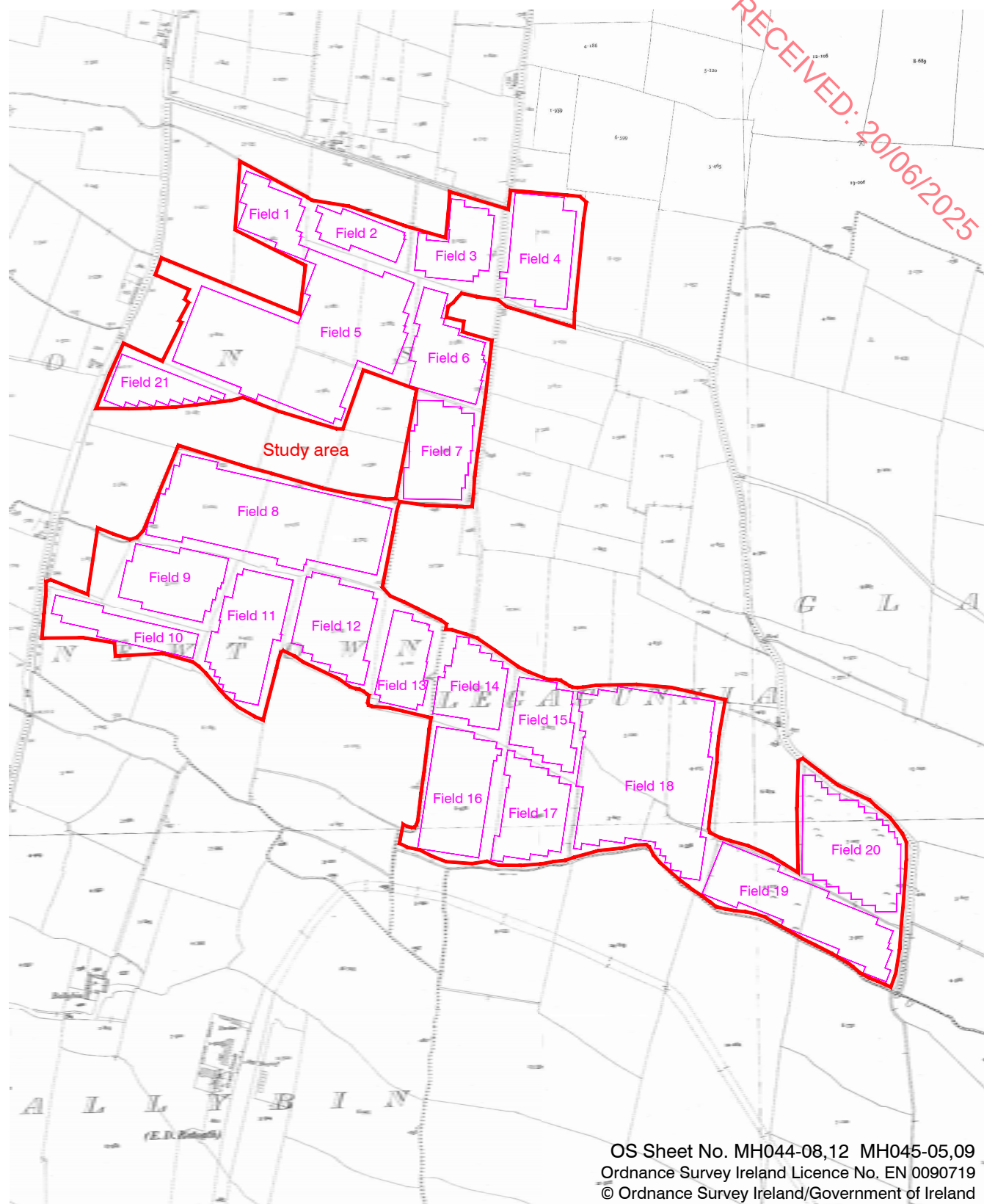
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Figure 3: Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1835 - published 1837), showing location of study area and geophysical survey areas

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Geophysical survey areas

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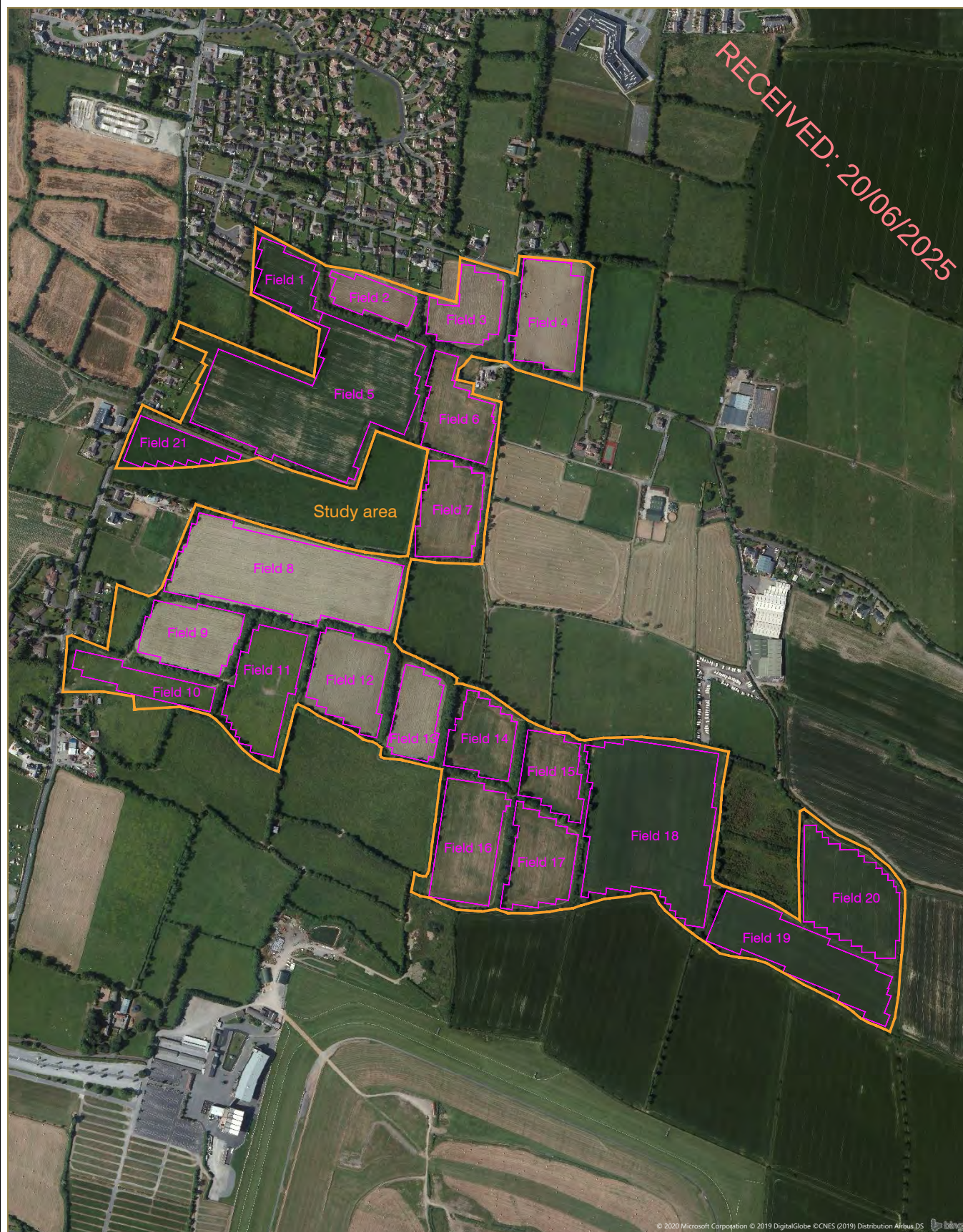


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Figure 4: Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1908 and 1909 - published 1910 and 1911), showing location of study area and geophysical survey areas

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Geophysical survey areas

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Figure 5: Aerial view of study area, showing geophysical survey areas

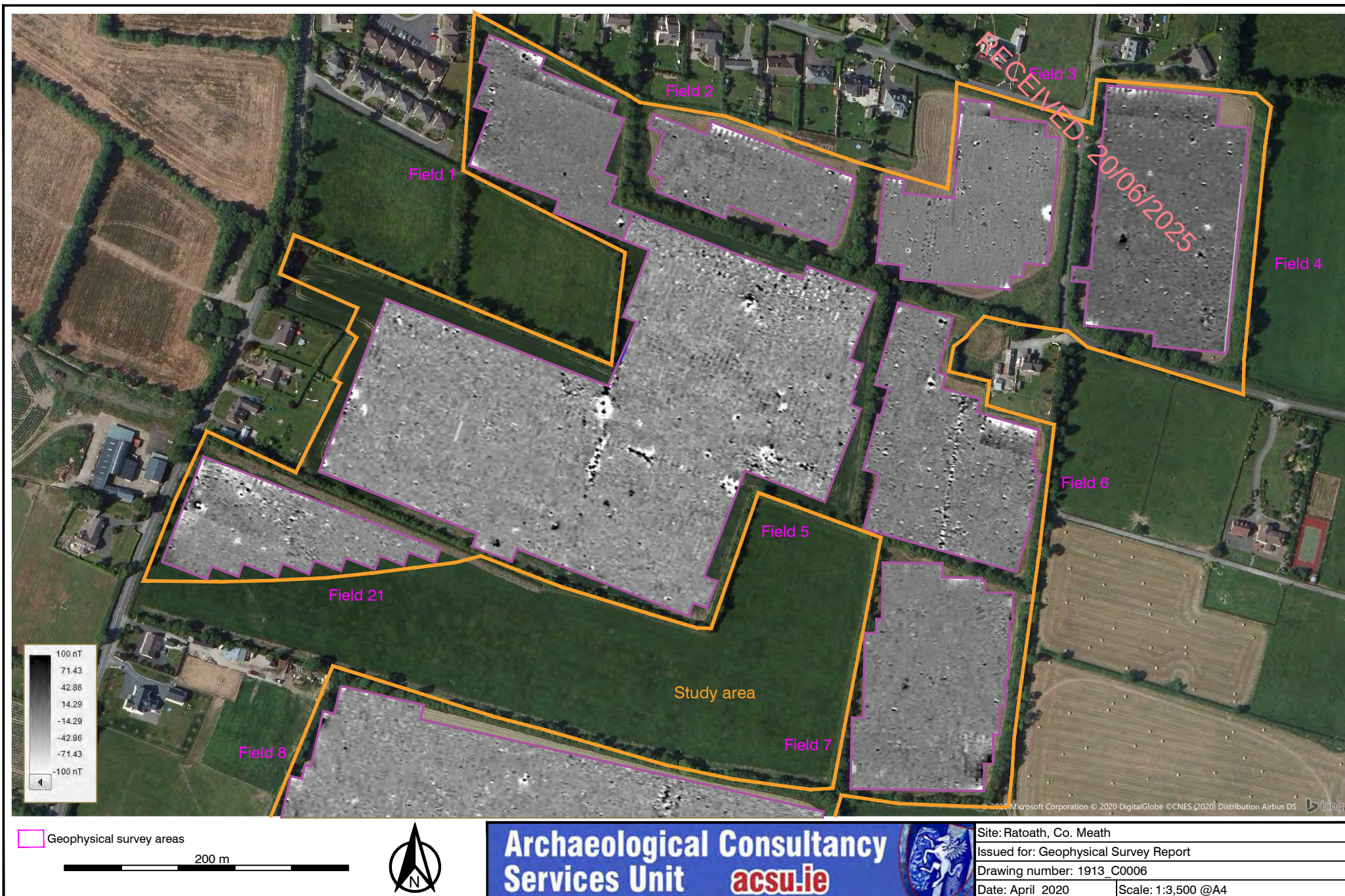


Figure 6: Geophysical survey results (grey scale images), showing fields 1 to 7 and field 21 in the north portion of study area

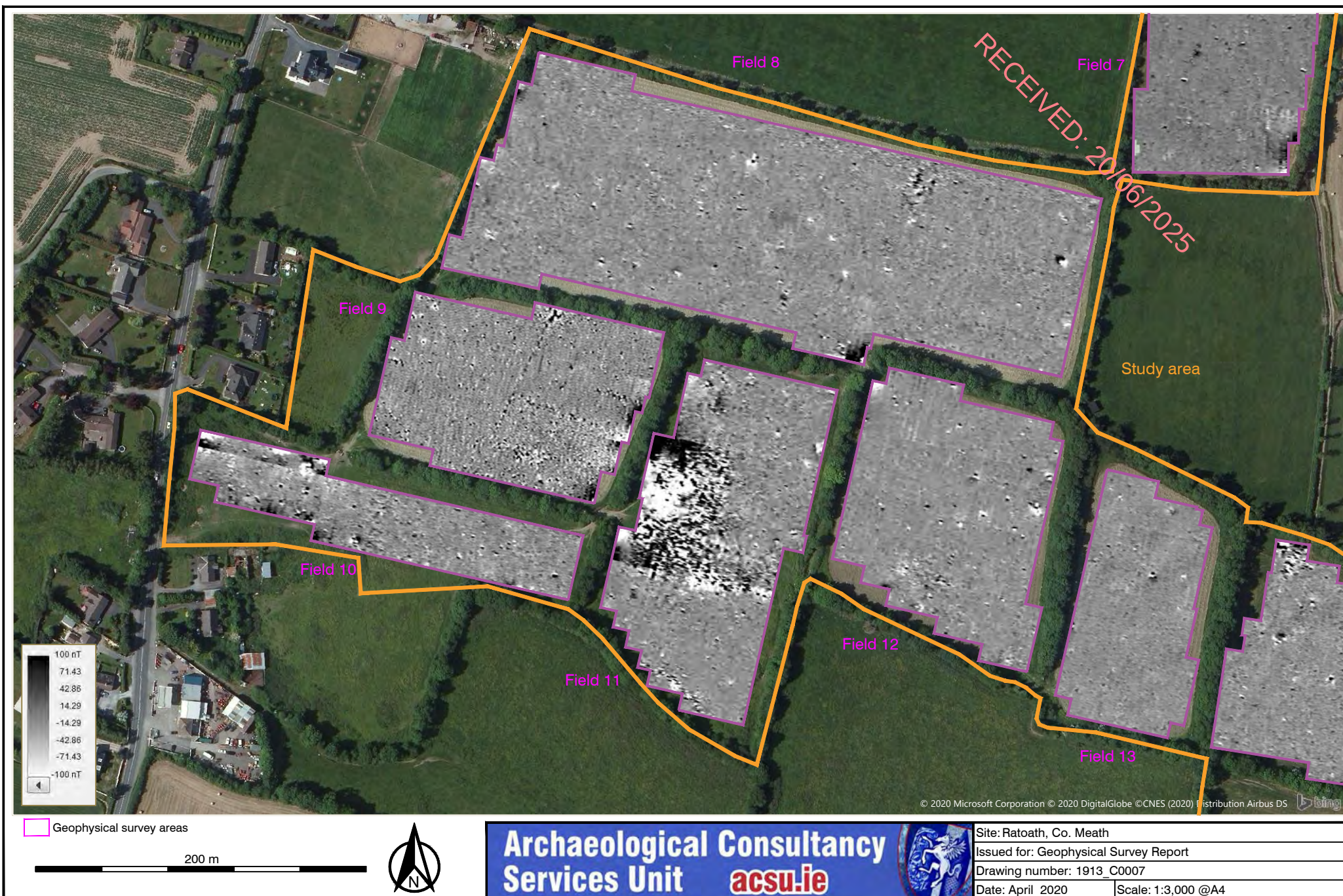


Figure 7: Geophysical survey results (grey scale images), showing fields 7 to 13 in the southwest portion of study area

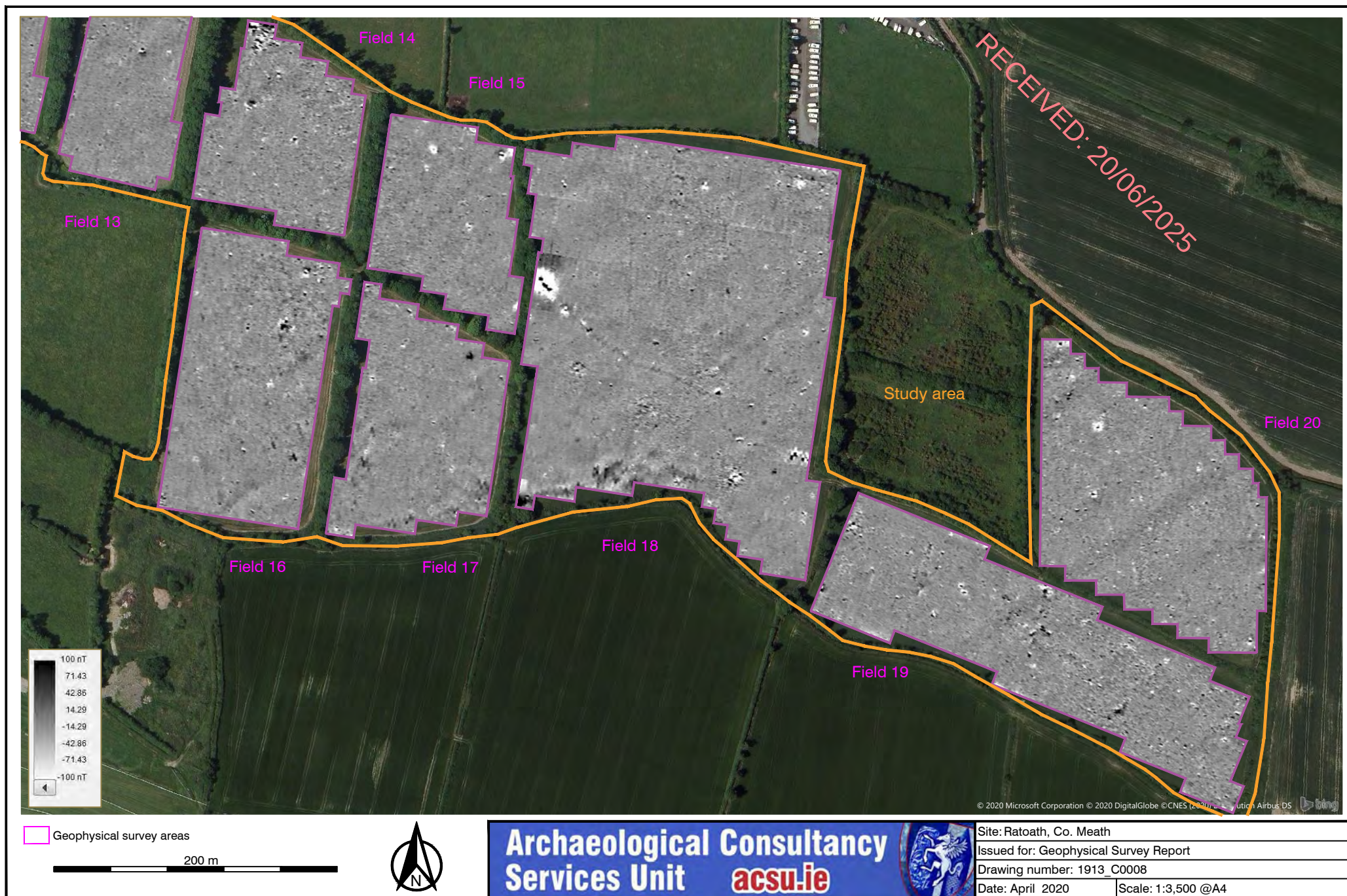


Figure 8: Geophysical survey results (grey scale images), showing fields 14 to 20 in the southeast portion of study area

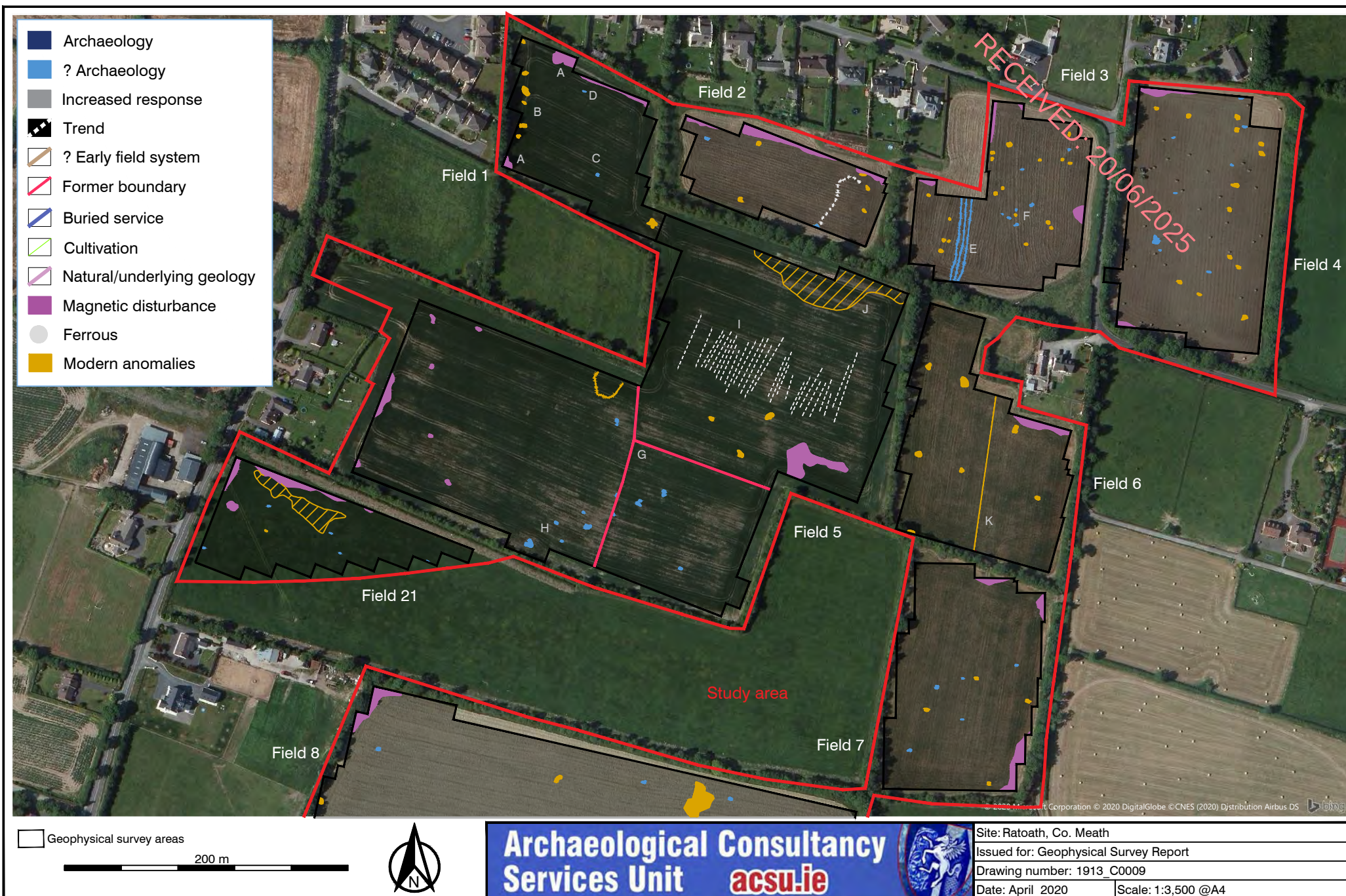


Figure 9: Geophysical survey interpretation, showing fields 1 to 7 and field 21 in the north portion of study area



Figure 10: Geophysical survey interpretation, showing fields 7 to 13 in the southwest portion of study area

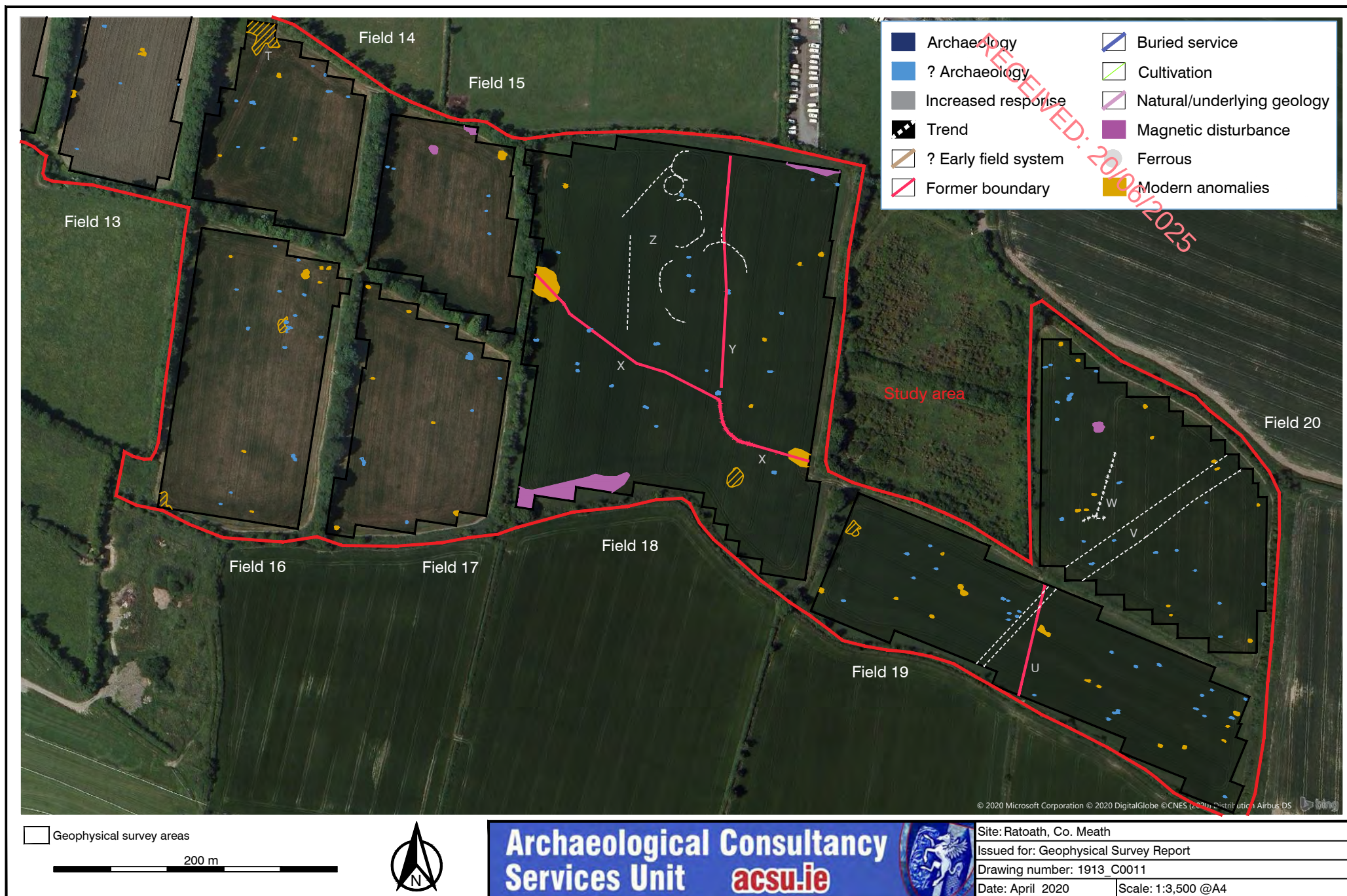


Figure 11: Geophysical survey interpretation, showing fields 14 to 20 in the southeast portion of study area

13. APPENDIX 2: TEST TRENCHING REPORT (21E0511)

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past | present | future

ACS



**Archaeological Test Trenching at
Fairycastle Rd., Jamestown, Commons,
Ratoath, Co. Meath**

Client:

BEO Properties Ltd.

Excavation Licence No.: 21E0511

ITM: 701928, 750512

Planning Ref.: N/A

RMP/SMR Nos: N/A

Caroline Cosgrove

16 September 2021

ACSU Ref.: 2015

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PROJECT DETAILS

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Project	Archaeological Assessment at Commons, Jamestown, Ratoath, Co. Meath
Report Type	Test Trenching Report
Licence No.	21E0511
Townland(s)	Commons, Jamestown.
RMP	N/A
ITM	7019828, 750512
Consultant	Archaeological Consultancy Services Unit, 21 Boyne Business Park, Greenhills, Drogheda, County Louth
Excavation Director	Caroline Cosgrove.
Report Author	Caroline Cosgrove.
Report status	Final
Report Date	16 th September 2021
ACSU Ref.	2015

Revision	Date	Description	Status	Author	Reviewed	Approved
0	17.9.2021	Archaeological Assessment Report	Draft	C.C.	D.M	C.C
1	19.05.2022	Archaeological Assessment Report – figure update	Final	C.C.	D.M	C.C

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EXECUTIVE SUMMARY

This final report details the results of archaeological test trenching carried out in the townlands of Commons and Jamestown, Ratoath, Co. Meath (ITM 7019828, 750512).

An area that the site is a part of was subject to a geophysical survey between February and March 2020. This was carried out by Ian Russell and Robert Breen of Archaeological Consultancy Services Unit Ltd (ACSU) under licence 20R0026. No anomalies representing definite archaeological features were identified; however, a number of magnetic anomalies scattered across the site suggested a potential for archaeological features such as pits, spreads and kilns. The geophysical report recommended test trenching, targeting anomalies identified in order to establish their nature, depth and significance.

Subsequently, between the 16th and 27th of August 2021, test trenching was conducted by Caroline Cosgrove of Archaeological Consultancy Services Unit Ltd. This was carried out under licence 21E0511, issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. Test trenches were arranged in order to target anomalies identified during the geophysical survey (20R0026) and the site overall. A total of 42 test trenches were excavated, totalling 4,486m of linear trenches. Each trench measured 1.8m in width. In general, the topsoil was a dark brown silty clay that measured between c. 0.3m–0.58m in depth. The natural, varied from an orangish-brown boulder clay (exposed in the south most part of the site) to a mottled orange and grey clay in the remaining part of the site.

Archaeological test trenching identified three areas of archaeological activity: one in Field 1 and two in Field 5. The features exposed comprise ploughed out pits, post-holes and spreads, likely associated with a prehistoric activity. These features were exposed in Trenches 3, 4, Trenches 30, 30a and the east part of Trench 19. Furthermore, a number of linears were exposed; these were found to represent field ditches and drains. Field boundaries exposed in Field 5 account for Anomaly G identified during geophysical survey also visible above the ground and are marked on all Ordnance Survey maps (1835, 1909 and 1958). The anomalies identified during the geophysical survey were found to relate to modern agricultural activity.

Test trenching identified three areas with ploughed out, archaeological features (pits, post-holes and spreads) with no surface expression. The proposed development will directly impact the features. Therefore, it is recommended that the features identified be preserved by record (excavated). The three areas shall be stripped of topsoil, and any archaeological features exposed be preserved by record (excavated). All excavation should be carried out by a licence eligible archaeologist at the pre-construction phase in order to mitigate the impact of the proposed development on archaeological features and deposits.

PLANNING INFORMATION



An Roinn Cultúir,
 Oidhreacht agus Gaeltachta
 Department of Culture,
 Heritage and the Gaeltacht

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Site Owner:	BEO Properties
Address:	6 Argus House, Greenmount Office Park, Harold's Cross, Dublin 6.
Planning Authority:	Meath County Council
Planning Reg. No.:	Pre-planning
Excavation Type:	Test Trenching
Contractor/Developer:	As above
Address:	As above

Description of Proposed Development

The development is a strategic housing development that includes 452 residential units on lands located immediately to the south of the existing built area of Ratoath in County Meath.

Archaeological Condition

This assessment was carried out at a pre-planning stage to accompany the planning application.

Impact Statement

Archaeological test trenching identified a number of pits, spreads and post-holes. They were concentrated in two fields, Field 1 and Field 5. The anomalies identified during the geophysical survey targeted during this test trenching were found to represent modern agricultural activity.

Recommendations

Test trenching at Commons, Jamestown, Ratoath, Co. Meath identified three areas with ploughed out, archaeological features (pits, post-holes and spreads) with no surface expression. The features will be directly impacted by the proposed development. Therefore, it is recommended that the features identified be preserved by record (excavated). The three areas shall be stripped of topsoil, and any archaeological features exposed be preserved by record (excavated). All excavation should be carried out by a licence eligible archaeologist at the pre-construction phase in order to mitigate the impact of the proposed development on archaeological features and deposits.

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1. INTRODUCTION

This report details the results of archaeological test trenching carried out in the townlands of Commons and Jamestown, in Ratoath, Co. Meath (ITM 7019828, 750512; Figures 1, 2). The site contains no Recorded Monuments; the nearest monument is enclosure ME045-066, located c. 356m east of the site and is scheduled for inclusion in the next revision of the Record of Monuments and Places.

The site contains no protected Structures listed within the Meath County Development Plan 2013-2019 or any structures listed in the National Inventory of Architecture Heritage. The nearest such structure listed is The Manor House (RPS MH044310; NIAH Reg. No. 14336002), located c. 1.02km to the north, while house (NIAH Reg No 14336014) is located c. 1.1km to the north of the site.

The archaeological test trenching was carried out by Caroline Cosgrove of Archaeological Consultancy Services Unit Ltd (ACSU) under licence 21E0511 issued by the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. The fieldwork took place between the 16th of August and the 27th of August, 2021.

1.1 Site location

The site is located in the north-eastern part of the townland of Commons and southwest part of Jamestown, in the Barony and Civil Parish of Ratoath. in County Meath. It is located south of the town of Ratoath, c. 18km northwest of Dublin City Centre (Figures 1-2). The site is bounded by the Fairy house Road R155 to the west, Glascairn Lane to the East, residential properties to the north and green fields to the south.

2. NATURAL & CULTURAL LANDSCAPE

2.1 Natural landscape

The site is located within an agricultural landscape. The ground is relatively flat and consists of pasture grasslands and arable fields. The site consists of five fields (Figures 8, 9). Fields 1, 2, and 5 were overgrown, and Fields 3 and 21 were recently cut for silage. Fields 1, 3 and 5 have not been used and have become overgrown.

The site has an elevation that ranges between 91 – 95m OD. The site's underlying geology is Carboniferous limestone (Finch, Gardiner, Comey & Radford 1983, 10).

2.2 Cultural landscape

The site is situated in the townland of Commons (An Coimín) in the Barony and Civil Parish of Ratoath. An examination of the Placenames Database of Ireland (www.logainm.ie) reveals that the townland of

Commons (An Coimín) was first mentioned and depicted as the ‘Comons of Ratooth’ on the Down Survey Map of County Meath in the Barony of Ratoath (1654-56). It can be translated as commonage, common land; little hollow or glen.

Ratoath is marked on several historic maps, and the proposed site can be identified on those maps. On William Petty’s Down Survey of the ‘Parish of Rattoth’ (1654-56), the map showed the proposed development site south of the town in the townland of ‘Commons of Ratoth’ (Figure 3). On Taylor and Skinner’s Maps of the Roads of Ireland (1777), the site is located in a greenfield, southwest of a northwest to southeast aligned public road; now known as Fairyhouse Road., with a row of mature trees on its eastern side (Figure 4). On the 1st edition OS map (surveyed 1835, published 1837), the site is located east of a north to south aligned road (the Fairyhouse Rd) and south of an east to west aligned public road (Glascarn Lane). The proposed development site extends across five fields (Figure 5). On the 3rd edition OS map (surveyed 1909 – published 1911), little has changed; the proposed development site now runs across eight fields. One of the fields was divided into two smaller fields with a north to south running boundary, and the most northern field was separated into two by a wet ditch aligned north-south (Figure 6). An examination of the Cassini edition 6-inch map (1958) shows no change within the proposed development site (Figure 7).

In addition to the maps, aerial photographs were reviewed. Photographs, dating between 1995 to 2013, from the Ordnance Survey of Ireland and Google Earth imagery, dating between 2005 and 2020, were examined. Linear cropmarks likely representing removed field boundaries or wet ditches are visible. There were no crop marks noted within the proposed development site.

2.2.1 Archaeological and Historical Background

The site is located to the south of Ratoath. Ratoath is the name of a village, a townland, a parish and a barony in the southeast part of County Meath. The Irish for Ratoath is Ráth Tó translating into Tó’s ringfort. Orpen writes that Ratoath could have come from the Irish ráith tuaith which he translates into the “north rath”, (Orpen 1921, 68-69); however, it is more likely that tuaith is from túatha, meaning territory. In the book of Fermoy, a scribe wrote that when districts were divided into small territories, they became known as túatha (O’Neill 2002, 12). Anglicised forms of Ratoath were Ratouth, Ratour, Rathtowtth and Rathouthe. (Orpen 1921, 68 -70). These words were evidently spelt phonetically by people that were unfamiliar with the name. The historic town of Ratoath (ME044-034) contains a number of Recorded Monuments which are outlined below (section 2.2.3).

Prehistoric Period

The wider environs of the study area are well represented in the archaeological record, dating back to the Prehistoric period. Burnt pits and spreads/fulachtaí fia, located north of the proposed development site, were discovered as a result of archaeological assessments (Licence No.s 03E1300, 03E1632,

03E1781). Fulachtaí fia are one of the most commonly discovered prehistoric site types found in the Irish landscape. They represent the use of pyrolithic technology, involving the boiling of water in troughs with heated stones. These site types were generally interpreted as cooking/industrial sites (Hawkes 2018). These sites generally consist of a low mound of charcoal-enriched soil mixed with an abundance of heat-shattered stones, commonly forming a horseshoe shape in proximity to a trough, and are found in low-lying marshy areas or close to streams. Often these sites have been ploughed out and survive as a spread of heat-shattered stones in charcoal-rich soil with no surface expression.

A multi-phase site was excavated on the Dunshauglin road, Ratoath (04E0218) c 1.3km northwest of the proposed development site. This revealed Bronze age features, which included a large burnt spread, an enclosure with a diameter of c. 37m and an inner circular structure. Finds included bronze age pottery, a spindle whorl, worked flint and chert.

Artefacts recorded by the National Museum of Ireland also demonstrate prehistoric occupation of the area, such as a fragment of a stone axe head (E551:1294) found in Grange townland, which probably represents Neolithic activity, and an unusual funerary vessel (NMI X192), described as a double ‘sepulchral vessel’, found in 1864 in a cist during the excavation of a ditch in Ratoath and most likely dating to the Bronze Age (Waddell 1974; 1990, 129).

Early medieval period

The first half of the name Ratoath suggests a pre-Norman fort or fortification. There is currently no evidence within Ratoath village for such an enclosure. The Normans may have decided to build their motte on the site of an earlier enclosure, completely truncating the earlier fortification. Graham writes that in addition to strategic concerns, other factors that influenced the Normans in settling into an alien environment was their “desire to colonise the best agricultural land and the pre-existing settlement” (Graham 1975, 223). The comparative ease at which the Anglo-Normans colonised and penetrated Ratoath, (fourteen years), suggests that they moved into an area that already had a high degree of settlement and organisation (Murphy 2009, 157). It is possible that the name Ratoath refers to the early Medieval enclosure that was excavated in 2003 (03E1781) and 2004 (04E021), c. 1.3km northwest of the proposed development site. Prior to the construction of a residential housing estate, excavations revealed a multi-period site. This included an Early Christian ‘cemetery settlement’ with an enclosure, with evidence for both settlement and burials which dated to the 6th/7th century AD (Seaver 2016, 6). The landscape surrounding the proposed development site also contains a high distribution of early medieval site types, indicated by the presence of enclosures, ringforts and agricultural features, including field systems and cultivation ridges. In the early medieval period, settlement occurred as dispersed defended homesteads on lakes and across the wider landscape. Souterrains dating from the same period are often associated with settlement sites. These can include open settlements, enclosed settlements, ecclesiastical sites and promontory forts. The term ‘souterrain’ derives from the French

sous terrain, meaning ‘underground’. In archaeological terms, souterrains are artificial underground structures cut into bedrock or, more commonly, built into dug-out trenches with drystone walling and large stone lintels. Souterrains have two basic functions; (i) to provide temporary refuge in times of danger and (ii) to provide a cool storage place for food products (O’ Sullivan and Downey, 2004). Three enclosures are present in the environs of the development area, SMR No. ME045-064 located c. 0.9km to the southeast, RMP No. ME045-011 to the east, RMP No. ME044-025 to the south (Figure 2).

ME044-025 was marked as a ‘Fort’ on the first edition Ordnance Survey (OS) 6-inch map (see Figure 5), while ME045-064 was identified in the form of a cropmark via aerial imagery from 2018. Furthermore, previous disturbance of enclosure ME044-025 produced human remains, suggesting the area is highly archaeologically sensitive and has significant potential for further human remains.

To the east of Ratoath town, in advance of the M2 Finglas-Ashbourne Road scheme, a number of important archaeological discoveries were made. The most significant was a large multi-phased early medieval archaeological complex that was excavated at Raystown (Licence 03E1229), which comprised enclosures, souterrains, a cemetery, kilns, mills and a mill race (Seaver 2005; 2016).

Medieval Period

In April 1172, King Henry II gave Hugh de Lacy a major baron of land in “... Meath with all its appurtenances to hold for the service of 50 knights”. De Lacy divided up the land, which measured almost 325,000 hectares, between himself, his baron and chief followers. This process of division was known as sub-infeudation. De Lacy retained Clonard, Duleek, Ratoath and Trim as his own demesne manors. (Murphy 2009, 156-157). Ratoath was one of seven unwalled settlements that were seen as important centres of the sub-infeudation of County Meath (Graham 1975, 226). Hugh de Lacy (Senior) gave the tithes of Ratoath to the Abbey of St Thomas in Dublin. The grant was confirmed by the Bishop of Clonard in 1183. The manor then was granted to his son Walter de Lacy, who by 1198 had given all of the land of “Rathtowth” to his brother Hugh (Earl of Ulster). Ratoath, along with Hugh de Lacy’s, (junior), other lands were confiscated by King John in 1210 and granted to Philip of Worcester. Later, King John returned “the castles of Nover and Ratoath” to Walter de Lacy. In 1224, Hugh de Lacy, with the support of some barons of Meath tried to forcibly take back his lands in Ratoath. King John intervened and once again took the castle and lands of Ratoath. Walter was fined 3,000 marks in 1225 and was handed back control of the lands, King John kept control of the castle. A year later King John gave Walter the castle and lands for a 3-year period. Walter did not hold the castle for the three years as Hugh finally took custody of the castle and lands off his brother on the 20th of April, 1227 (Orpen 1921, 69 – 70).

The next record we have of Ratoath is in February 1283, where Roger de Clifford and the Countess, his wife, sold the manor of “Rathouth” in Ireland for £500 to queen Eleanor (wife of Edward I). On the

4th of July, 1283, Queen Eleanor granted Ratoath to Richard de Burgh, Earl of Ulster and his wife, Margaret (ibid, 70 – 72). In 1317, Richard de Burgh's successor, as the earl of Ulster, William Donn de Burgh, defeated Edward Bruce's forces in an ambush in Ratoath (Otway-Ruthven 1968, 230). A grave slab of a knight (ME044-034005-), set into the church tower has been described by Hunt as a knight with his head upon a tasselled cushion, wearing chain mail over a surcoat that is belted at the waist. One hand lies upon the sword grip and the other on the sword below. On the back of the grave slab is an inscription in Lombardic characters. The cross slab has been dated to the 13th / 14th century. (Hunt 1974, 213). The knight represented on this cross slab, may well have fallen in the ambush of Edward Bruce's forces in 1317.

The archaeological remains at Ratoath would suggest that the area was settled sometime during the medieval period. The most predominant feature at the centre of the village, is the motte and bailey (RMP ME044-034001) which is of Anglo-Norman construction. We don't know when the motte and bailey were constructed, however, an entry in the 'Annals of Loch Cé' recorded that when Hugh de Lacy, (senior), died in 1186, the Lordship of Meath "from the Shannon to the sea was full of castles and of foreigners". It is believed that by this date, the motte castle at Ratoath had been built. (Murphy 2009, 157). The motte consists of a flat-topped earthen mound with a diameter of 20m. The base, which is much wider, measures 52m in diameter and the mound itself has a height of 11m. Remains of a fosse are visible and a rectangular bailey (c. 30m E-W by c. N-S) is visible to the south-east. The construction of the motte, bailey and castle would have been vital for garrisoning the Anglo-Norman forces and in turn, offering security to the new settlers. The Castle, however, would have quickly developed to being an important centre for non-military activities i.e., economic exploitation (Murphy 2009, 157).

A short distance north-east of the base of the motte is the site of an early church. The church was granted by Hugh de Lacy to the Abbey of St Thomas, who had control of it until the reformation (White 1943, 35). Reference to the early church is made in Dopping's Visitation Book, 1682-5, Bishop Dopping noted that the church was in good repair despite the chancel not having a roof (Ellison. 1971, 37-8). A recorded visitation by Bishop Ellis between 1723-33, reported that the medieval church in Ratoath church was still in use. (O'Neill 2002, 50). The Church of Ireland in Meath took on a great rebuilding scheme between 1799 and 1820, coinciding with the period of the First Fruits Commissioners between 1780 and the 1830s. Over one million pounds was given to the government for the rebuilding of Church of Ireland churches, however, the board stipulated that a church should be unroofed for a minimum of 16 years prior to the allocation of a grant. (ibid, 51). The National Inventory of Architectural Heritage records that the church that stands next to the motte commenced c. 1820 and in 1837. Samuel Lewis noted that the church was "... a neat edifice in good repair" and reported that it benefited from a loan of £800 from the Board of First Fruits (Lewis 1837, 2, 509). In addition to the 13th/14th century grave slab, a 17th century cross can also be found in the present graveyard attached to the 19th century church. The Abbey of St. Mary Magdalen was in existence in Ratoath in the 14th Century, the location of which is unknown. Written documentary evidence from 1388 records that the abbey owned forty acres of land,

worth 6 shillings and 8 pence. The historian, Rev. Cogan believes that the abbey was probably absorbed in the possessions of the abbey of St. Thomas. In the late 1700s. Rev. Mervyn Archdall visited St. Magdalen abbey and recorded seeing “some old walls and the west windows”. Cogan sadly responds that a century later “every vestige has been swept away” (Cogan 1862, 259).

Post-Medieval

In 1795, a turnpike road was built between Curragha and Ratoath (Andrews 1964). A suitable infrastructure was needed, and the introduction of toll roads was the result of economic prosperity under the Protestant Anglo-Irish. These toll roads were easily recognisable as they ran in straight lines. Lewis mentioned that small scale manufacture occurred in Ratoath, through the manufacture of sacking and the weaving of linen and remarked that the land was profitable, allowing for cultivation and the quarrying of good quality stone (Lewis, 1837,2). Corballis Esq had his principal seat at the Manor House in town, which is an example of a Protected Structure (Ref. MH044310), as listed in the Meath County Development Plan 2013-2019 (see below).

Fairyhouse Racecourse, located to the south of the study area, is noted for the first time on the third edition OS 25-inch map, where a Grand Stand, Pavilion and Flagstaff are all depicted. The first race at Fairyhouse Racecourse was held in 1848, with the Irish Grand National steeplechase held since 1870.

2.2.2 Previous archaeological investigations

The site is a part of an area that was subject to a geophysical survey. This was carried out by Ian Russell of Archaeological Consultancy Services Unit Ltd (ACSU) under Licence no. 20R0026. No definitive signs of an archaeological site were identified; however, some of the field boundaries visible on the OS mapping have been detected, as well as an anomaly that may represent an old trackway or ‘boreen’, or possibly the remnants of ridge and furrow ploughing. Additional possible anomalies that may represent areas of archaeological activity, perhaps in the form of burning or pits, were also identified.

In addition, there have also been a number of archaeological investigations carried out within Ratoath town and some in the surrounding townlands.

Listed below (Table 1) are the investigations located in the environs of the proposed development site that further demonstrate the overall archaeological potential of the site and its surrounding townlands. The details are derived from the Summary Accounts of Archaeological Excavations in Ireland (www.excavations.ie).

Table 1: Previous Archaeological Investigations

Site	Licence No.	RMP/ SMR No.	Site Type	Investigation type
Tankardstown	99E0581	ME045-011	No archaeological significance	Archaeological monitoring
Fairyhouse Road, Ratoath	01E0721	N/A	No archaeological significance	Archaeological testing
Jamestown	11E062	N/A	No archaeological significance	Archaeological testing and monitoring
Irish Street/Fairyhouse Road, Ratoath	15E0228	SMR-ME044:034	No archaeological significance	Archaeological testing
Ratoath Outer Relief Road, Jamestown	18E0136	N/A	No archaeological significance	Archaeological monitoring
Well Road, Ratoath	20E0438	ME044-034-	Medieval activity	Archaeological testing and excavation

While there were a number of archaeological assessments carried out within the environs of the proposed development site, no archaeological remains were identified. Investigations within and surrounding Ratoath town, however, have uncovered numerous archaeological sites, including Medieval ditches, two 19th-century buildings on Main Street (Licence no. 01E0248) and Medieval burgrave plots on Well Road (Licence no. 20E0438). On the Kentstown Road, a late Medieval open drain and associated laneway surface, a later area of rough cobbling, a cistern-type structure, a substantial ditch possibly representing the town boundary, a small V-shaped ditch, an 18th/19th-century wall foundation and a further ditch of unknown date were recorded (Licence no. 01E1173). On the western fringe of the town, an 18-ha residential development led to the discovery of a large multi-phase site (03E1781) and (040218). It included Bronze Age features such as a large burnt spread, an enclosure with a c. 37m diameter and inner circular structure; other features included two ring ditches with associated pits and kilns and an early medieval enclosure with 56 burials. Burial 38, an extended supine inhumation, was buried wearing a neck ring with a ring-and-dot motif and simple interlocking clasp. A date from burial 38 fell within the range of AD 580-580 (Wallace & Dehanene in Bennett, 2003, 2004). Excavations along the M2 Finglas to Ashbourne Road, c. 2.8km east of the site, uncovered a number of archaeological sites, including *fulachta fiadh* (03E1237 and 03E1310). A multi-period site (03E1526; ME045-034) with features ranging from the Late Neolithic to the Post-Medieval period included a series of prehistoric pits, a Bronze Age enclosure, cremations and crouched inhumations and a burnt mound. The most significant was a large multi-phased early medieval archaeological complex that was excavated at Raystown (Licence 03E1229), which comprised enclosures, souterrains, a cemetery, kilns, mills and a mill race complex (Seaver 2005; 2016).

2.2.3 Recorded Monuments

The site contains no monuments listed within the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR). The nearest such monument is enclosure ME045-066--- located c. 356m east of the site.

The surrounding landscape is also rich in recorded monuments, ranging in date from the prehistoric period to post-medieval times. The following is a list of the recorded monuments within the environs of the proposed development site. These descriptions are derived from the published Archaeological Inventory of County Meath (Moore 1987). In certain instances, the entries have been revised and updated in the light of recent research and are available in the National Monuments Service Archaeological Survey Database (<http://webgis.archaeology.ie/historicenvironment/>).

Table 2: Recorded Monuments

RMP No	Class/Site Type	Townland	Description
ME045-066--- -	Enclosure	Jamestown	Located on a slight N-facing slope. The faint cropmark of a circular enclosure (diam. c. 30m E-W) defined by a slight fosse W-N-E
ME045-064--- -	Enclosure	Glascarn	Located on a fairly level landscape. The cropmark of a sub-rectangular enclosure (dims c. 55m NE-SW: c. 50-55m NW-SE) defined by fosse or drain
ME044-043--- -	Ring-ditch	Mullinam	Situated on a slight NW-facing slope in a fairly level landscape. The cropmark of a small circular feature (diam. c. 8m) defined by a single continuous ditch
ME044-025--- -	Enclosure	Ennistown (Ratoath By.)	Oval area defined by field fence on E and S. Bank on N and W destroyed exposing human bones (dims. c. 73m NW-SE, c. 30m NE-SW).
ME044-041--- -	Ring-ditch	Warrenstown (Ratoath By.)	Situated on a fairly level landscape. The cropmark of a small circular enclosure (int. diam. c. 7m) defined by a single continuous fosse feature
ME045-013--- -	Ring-ditch	Glascarn	Cropmark ring (diam. c. 20m)
ME044-024--- -	Field system	Warrenstown (Ratoath By.)	Rectangular fields, defined by scarps (dims. up to 30m by 20m) covering c. 8 acres.
ME045-011--- -	Enclosure	Tankardstown (Ratoath By.)	Circular area defined by fosse (diam. c. 60m).

RMP No	Class/Site Type	Townland	Description
ME044-034--- -	Historic town	Ratoath	Incorporates 18 recorded monuments, including a motte and bailey (ME044-034001-); a font (ME044-034002-); a church (ME044-034003-); architectural fragments (ME044-034004- & 007-), an effigial tomb (ME044-034005-); a churchyard cross (ME044-034006-); a market cross (ME044-034008-), a cistern (ME044-034011-); cultivation ridges (ME044-034015-); a graveyard (ME044-034017-); and miscellaneous sites uncovered as a result of excavations (ME044-034009-, 010-, 012-, 013-, 014-, 016 & 018-).

2.2.4 Stray Finds

The topographical files were consulted, no stray finds are recorded for the townland of Commons, Ratoath. Listed below are stray finds found within the environs of the site.

Table 3: Stray finds

NMI Reg. No.	Location	Find	Circumstances
NMI X192	Ratoath	Bones and one or two unusual funerary vessels, one described as a double 'sepulchral vessel without internal communication' (Waddell 1974; 1990, 129)	Found in a stone cist during excavation of a ditch in 1884
E551:1294	Grange	A 3.9cm long fragment of a sandstone axe	Discovered during field walking.

3. ARCHAEOLOGICAL ASSESSMENT

3.1 Site description

The site is located in the northeastern part of the townland of Commons, and south west part of Jamestown, to the south of Ratoath in County Meath. The site is bounded by the Fairy house Road R155 to the west, Glascairn Lane to the east, residential properties to the north and green fields to the south. The ground is relatively flat and consists of pasture grasslands and arable fields. Fields 1, 3 and 5 have not been used for several years and have become overgrown. The site is bounded by mature hedgerows and trees.

3.2 Methodology

Test excavation was carried out in accordance with the *IAI Code of Conduct for Archaeological Assessment Excavation* (IAI 2006). The test trenches were excavated to natural subsoil or the top of archaeological deposits.

Archaeological features were uncovered during testing, a small sample of selected features was excavated in order to determine their depth and extent. The features were cleaned and recorded (by plan, photographs, levels, feature sheets, etc.). No finds were retrieved, and no samples were taken.

All excavated trenches were recorded using digital photography. Digital photography images were taken using a high-resolution digital camera with a minimum resolution of 10 Megapixels.

3.2.1 Finds retrieval

No finds were retrieved during test excavations

3.2.2 Sampling strategy

No samples were taken during test excavations.

3.3 Results

Archaeological test trenching was carried out using a 14-tonne tracked excavator. A total of 42 test trenches (Plates 1-50, Figures 9-10) were excavated across the relevant areas, with each trench measuring 1.8m in width. In total, 4,486m of linear trenches were excavated, targeting anomalies identified during the geophysical survey (20R0026; Figure 8). In general, the trenches revealed dark brown silty clay topsoil, C1, measuring c. 0.3–0.58m in depth, overlying a natural, C2, that ranged from an orangish-brown boulder clay to a mottled grey and orange compact clay.

Archaeological test trenching identified three areas of archaeological activity. One area in the southern end of Field 5, centred around Trench 30 (Plates 38-39, Figure 12), another north-east of that, in Trench 19 (Plate 59, Figure 12) and the third in Field 1, centred around Trench 3 and 4 (Plates 3-10, Figure 11). The three areas comprise pits, spreads and post-holes and appear to represent prehistoric activity. Field boundary ditches positively identified by the geophysical survey were also uncovered, C3 (Plate 28, Figure 12) and C11 (Figure 12) as well as several other field ditches and drains. The clay subsoil was very compact and impermeable, requiring a large number of drains and ditches for drainage.

Table 4: Trench descriptions

Trench No.	Field No.	Length (m)	Trench depth	Description
1	1	88	0.55m - 0.72m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.55m to 0.74m in depth and lay above a mottled orange and grey clay natural (C2). A field drain with a 0.7m width ran north to south at the western end of the trench. No archaeological features were exposed or identified. (Plate 1, Figure 9)).
2	1	88	0.48m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.48m in depth and lay above a mottled orange and grey clay natural (C2). A field drain was identified running southwest to northeast across the trench. No archaeological features were exposed or identified. (Figure 9).
3	1	85.	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.45m in depth and lay above a mottled orange and grey clay natural (C2). Burnt pits were exposed in this trench; therefore it was extended. An area of c. 6m N-S by c. 4m E-W was opened up. In total 9 features were identified. 5 post holes (C85, C87, C89, C91 & C93) 4 pits (C79, C81, C83 & C95) and a linear (C77). To the east of the series of pits, a number of liners were identified, one northwest to southeast field drain, three southwest to northeast field drains and an anomaly that turned out to be natural geology. Field drain C97 was sectioned; it measured 0.82m in width and 0.2m depth. It was filled with C98, a mid-grey silty clay with occasional shell and stone. (Plates 2-6, Figure 9 - 11)
4	1	93	0.43m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.43m in depth and lay above a mottled orange and grey clay natural (C2). In total, 3 pits (C71, C73, C99) were exposed in the trench. C71 was a circular pit with a diameter of 0.4m (Plate 8). C73 measured 0.4m E-W by a min. 0.3m N-S and was filled with charcoal and burnt stones. (Plate 9). Pit C99 was oval-shaped and measured 0.67m length by 0.5m width, and was filled with a grey/brown silty clay with burnt bone and charcoal (Plate 10). A field ditch ran N-S, east of pit C75. (Plates 7-10, Figure 9-11).
5	2	146	0.35 – 0.4m	This trench was orientated WNW-ESE The sod and topsoil (C1) measured 0.35m to 0.4m in depth and lay above the orange boulder clay natural (C2). No archaeological features were exposed or identified. (Plate 11, Figure 9).
6	2	150	0.4 - 0.48m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.4m – 0.48m in depth and lay above the

Trench No.	Field No.	Length (m)	Trench depth	Description
				orange boulder clay natural (C2). No archaeological features were exposed or identified. (Plate 12, Figure 9).
7	2	141	0.3m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.3m in depth and lay above the natural orange clay (C2). No archaeological features were exposed or identified. (Figure 9).
8	3	71	0.56m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.56m in depth and lay above the mottled orangish-brown and grey natural (C2). No archaeological features were exposed or identified. (Plate 8, Figure 9).
9	3	68	0.6m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.65m in depth and lay above the natural orange clay (C2). Stone drains were exposed and ran NW-SE. A tree-hole was identified at the east end of the trench. No archaeological features were exposed or identified. (Plate 14, Figure 9).
10	3	-	-	Due to overhead powerlines running directly above trench 10, it was not excavated for safety reasons. (Plate 15).
11	3	125	0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orangish-brown and grey natural (C2). Three field drains ran N-S across the trench where the geophysical survey identified possible archaeology. They had an average width of 0.5m. No archaeological features were exposed or identified in trench 10. (Plate 16, Figure 9).
12	3	124	0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orangish-brown and grey natural (C2). Three field drains ran across the trench, aligned N-S. No archaeological features were exposed or identified. (Figure 9).
13	3	84	0.46m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.46m in depth and lay above the mottled orangish-brown and grey clay natural (C2). No archaeological features were exposed or identified. (Plate 17, Figure 9).
14	1 & 5	259	0.43m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.43m in depth and lay above the mottled orangish-brown and grey clay natural with frequent mudstone and sandstone (C2). One stone drain aligned SW-NE was at the western end of the trench, and another field drain with a 0.65m width in the centre of the trench. No

Trench No.	Field No.	Length (m)	Trench depth	Description
				archaeological features were exposed or identified. (Plate 18, Figure 9).
15	5	163	0.4 – 0.55m	This trench was orientated WSW-ESE. The sod and topsoil (C1) measured 0.4 to 0.55m in depth and lay above the mottled orange and grey natural (C2). A number of N-S aligned field drains were identified. No archaeological features were exposed or identified (Figure 9).
16	5	144	0.4m	This trench was orientated WSW-ESE. The sod and topsoil (C1) measured 0.4m in depth and lay above the mottled orange and grey natural (C2). There were several field drains identified in the trench. No archaeological features were exposed or identified. (Plate 19, Figure 9).
17	5	116	0.58m	This trench was orientated WSW-ESE. The sod and topsoil (C1) measured 0.58m in depth and lay above the mottled orange and grey clay natural (C2). A field ditch, 1.3m in width, filled with grey/brown clay, was exposed east of the trench and a drain filled with a grey clay at the west end of the trench. No archaeological features were exposed or identified. (Plate 20, Figure 9).
18	5	269	0.48m	This trench was orientated WSW-ESE. The sod and topsoil (C1) measured 0.48m in depth and lay above the mottled orange and grey natural (C2). At the east end of the trench, an oval-shaped pit C64 was identified. It measured 1.54m length by 0.75m width and 0.17m depth. It was filled with C65, a sterile grey clay. It is believed to be non-archaeological. A field drain aligned N-S was identified to the west of C65. Another possible feature, C62, was investigated at the western end of the trench (Plate 22). The terminal of the feature was identified. It measured 0.84m in width. It was filled with C63, a compact grey clay with charcoal flecks. A section in C62 showed that the charcoal resulted from charred roots, and it is believed the feature is not archaeological. Field ditches C49, C4, C7 and C54, were identified at the western end of the trench, and a number of N-S aligned field drains were also exposed. No archaeological features were exposed or identified. (Plates 21 – 22, Figures 9 & 12).
19	5	209	0.5m	This trench was orientated WSW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orange and grey natural (C2). A potential feature C51 was investigated east of ditch C3 and interpreted as non-archaeological (Plate 23). Burnt pit C59 was identified in the centre of the trench (Plate 24). It has an oval shape, aligned E-W and measures 1.72m length by 0.7m width. Field boundary ditches C3 and C11 were identified in the trench. Other ditches exposed in the trench were C4, C7,

Trench No.	Field No.	Length (m)	Trench depth	Description
				C43, C49, C53, C55 and C61 (Plates 23 – 25, Figures 9 & 12).
20	5	30	0.5m	This trench was orientated NNE-SSW. The sod and topsoil (C1) measured 0.5m depth and lay above the mottled orange and grey clay natural (C2). Pit C64, an elongated oval pit situated at the east end of the trench, was investigated and interpreted as non-archaeological. Another feature, C55, west of ditch C4, was sectioned. It was considered to be non-archaeological. Field ditches and drains identified in trench 20 were C3, C5, C7, C11, C43, C54 and C62. No archaeological features were exposed or identified. (Plate 26, Figures 9 & 12)
21	5	180	0.31m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.31m in depth and lay above the mottled orange and grey clay natural (C2), which became more yellow as it ran west. Field boundary ditches C3 and C11 and field ditches C4, C7, C9 and C19 were exposed in the trench as well as an SW-NE aligned stone drain. No archaeological features were exposed or identified (Plates 27 – 29, Figure 9 & 12).
22	5	185	0.4 – 0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.4m to 0.5m in depth and lay above the mottled orange and grey natural (C2). E-W aligned stone drain identified at the centre of the trench. No archaeological features were exposed or identified. (Plate 30, Figure 9).
23	5	153	0.4m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.4m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 31, Figure 9).
24	5	115	0.4m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.4m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 32, Figure 9).
25	21	92	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.45m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 33, Figure 9).
26	21	36	0.49m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.49m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 34, Figure 9).
26 (A)	21	75	0.5	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled

Trench No.	Field No.	Length (m)	Trench depth	Description
				orange and grey natural (C2). No archaeological features were exposed or identified.
27	21	61	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.45m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 35, Figure 9).
27 (A)	21	33	0.6m-0.7m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.49m in depth and lay above the mottled orange and grey natural (C2). A field ditch with a stone drain at the base ran NW-SE at the western end of the trench. No archaeological features were exposed or identified. (Plate 36, Figure 9).
28	21	64	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.45m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 37, Figure 9).
29	5	136	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.49m in depth and lay above the mottled orange and grey natural (C2). A number of field drains were identified in the trench. No archaeological features were exposed or identified. (Figure 9)
30	5	187	0.4m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.4m in depth and lay above the mottled orange and grey natural (C2) that changed to a clayey sand around the identified archaeology. Burnt pits were exposed in the centre of the trench, and an area measuring c. 5m by 5m was opened up. 7 pits were exposed (C21, C23, C25, C27, C29, C66 and C68) – (Plate 38). C21 is 1.2m width by 1.3m length by 0.08m depth. It is filled with C22, a charcoal rich fill with burnt stones (Figure 13). C23 is a circular pit with a diameter of 0.6m. It is filled with C24, a charcoal rich fill with burnt stones. C25 is a sub-circular pit, measuring 0.7m by 0.5m. It is filled with C26, a charcoal rich fill with burnt stones. C27 is an oval-shaped pit measuring 0.8m by 0.55m. It is filled with C28, a charcoal rich fill with burnt stones. C29 is a circular pit, measuring 0.46m in diameter; it is filled with C30, a brown silty clay. C66 is a circular pit, measuring 0.36m by 0.4m. It is filled with C67, a brown silty clay. C68 is a sub-circular pit measuring 0.57m by 0.7m. It is filled with C69, a brown silty clay. A possible circular pit C35 and elongated pit C37 (Plate 39) were situated west of the cluster of pits in the trench. They are filled with a light grey, sterile-looking clay and could be natural. At the western end of the trench WNW-ESE aligned drain C40 was identified. It measured 0.76m in

Trench No.	Field No.	Length (m)	Trench depth	Description
				width. A number of field ditches were also recorded in trench 30; C3, C7, C9, C11, C13, C15, C17. To the east of ditch C7 and west of ditch C17, a possible feature was investigated and interpreted as natural (Plates 38 & 41, Figures 9 & 12).
30 (A)	5	25	0.48m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.48m in depth and lay above the mottled orange and grey natural (C2). A northeast to southwest linear, C31, was identified at the south end of the trench, north of the cluster of burnt pits in trench 30. C31 measured 0.35m in width and was filled with C32, a brown clay. An irregular shape feature with compact grey clay, south of C31 was investigated and interpreted as natural geology. At the southern end of the trench, a subcircular pit C33 is situated. Its located to the east of the terminal of a field drain. It measured 0.38m in diameter and is filled with C34, a brown silty clay. (Plate 42, Figures 9 & 12).
30 (B)	5	66	0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orange and grey natural (C2). Two linears with grey fill were identified in the centre of the trench, C41 and C43. C41 was aligned SW to NE and was filled with C42, a mottled light grey and yellow clay. It measured 0.84m in width. C43 was aligned N-S and measured 0.8m width, min. 141m length and 0.16m depth (Plate 44). It was filled with C44, a mottled grey and yellow clay. To the west of C43, the rounded terminal of a drain, C45, was recorded. It measured 0.9m width and a min. of 1.9m length. It was filled with C46, a grey clay. East of that field, boundary ditch C3 was identified and towards the north-western end of the trench, field drain C47, aligned SW-NE ran across the trench. At the southeast end of the trench, ditch C4 ran north to south across the trench. (Plates 43 -44, Figures 9 & 12).
31	5	26	0.45m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.45m in depth and lay above the mottled orange and grey natural (C2). A field drain was identified in the trench running east to west. No archaeological features were exposed or identified. (Plate 45, Figures 9 & 12).
32	3	61	0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Figure 9).
33	2	137	0.42m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.42m in depth and lay above the mottled

Trench No.	Field No.	Length (m)	Trench depth	Description
				orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 46, Figure 9).
34	21	39	0.48m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.48m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 47, Figure 9).
35	21	27	0.5m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.5m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 48, Figure 9).
36	3	101	0.52m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.52m in depth and lay above the mottled orange and grey natural (C2). A number of field drains were identified in the trench. No archaeological features were exposed or identified. (Figure 9).
37	3	21	0.58m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.58m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 49, Figure 9).
38	2	25	0.39 – 0.52m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.39m to 0.52m in depth and lay above the mottled orange and grey natural (C2). No archaeological features were exposed or identified. (Plate 50, Figure 9).
39	1	88	0.57 – 0.7m	This trench was orientated WNW-ESE. The sod and topsoil (C1) measured 0.57m to 0.7m in depth and lay above the mottled orange and grey natural (C2). A field drain aligned north to south ran across the western end of the ditch. No archaeological features were exposed or identified. (Figure 9).

Context Descriptions:

Table 5: Context descriptions

Context	L(m)	W(m)	D(m)	Basic Description
C1			0.3m-0.7m	Sod and dark brown silty clay topsoil.
C2				Natural. It consisted of an orange boulder clay and compact mottled orange and grey clay.

Context	L(m)	W(m)	D(m)	Basic Description
C3	Min. 156m	3.5m		Field boundary ditch in field 5, aligned north to south. Filled with C5, a dark brownish-grey clay. Exposed in trenches 18, 19, 21, 30 and 30(B). (Plate 28, Figure 12).
C4	Min. 156m	1.3m	0.2m	Field ditch orientated north to south and filled with C6, a mottled grey/brown silty clay. Exposed in Trenches 18, 19, 21, 30 and 30 (B). (Plate 40 – 41, Figures 12 & 13).
C5	Min. 156m	3.5m		Fill of field boundary ditch C3, a dark brownish grey clay. (Plate 28, Figures 12 & 13).
C6	Min. 156m	1.3m	0.2m	Fill of field ditch C4, a mottled greyish brown silty clay. (Plate 40 – 41, Figure 12).
C7	Min. 156m	2.4m		Field ditch, aligned north to south in field 5. Filled with C8, a firm light brown clay. It was exposed in trenches 18, 19, 21, and 30. (Plate 25, Figure 12)
C8	Min. 156m	2.4m		Fill of field ditch C7, a firm light brown clay. (Plate 25, Figure 12).
C9	Min. 31m	0.8m		Field drain, aligned north to south in field 5. Exposed in trenches 21 and 30. Filled with C10, a firm mottled greyish brown clay. (Plate 29, Figure 12).
C10	Min. 31m	0.8m		Fill of field drain C9, a firm mottled greyish brown clay. (Plate 29, Figure 12).
C11	Min. 156m	3.4m		Field boundary ditch aligned north to south in field 5. Marked on the 1 st edition OS map and seen above ground. It was filled with C12, a compact dark brownish grey clay with red brick. Exposed in trenches 18, 19, 21 and 30. (Figure 12).
C12	Min. 156m	3.4m		Fill of field boundary ditch C11, a compact dark brownish grey clay with red brick. (Figure 12).
C13	Min. 1.6m	1.2m		Terminal of field ditch orientated northwest to southeast. (Likely the same as C54). Filled with C14, a light grey clay. exposed in trench 30 (Figure 12).
C14	Min. 1.6m	1.2m		Fill of field ditch C13, a light grey clay.
C15	Min. 1.97m	0.9m		Terminal of field ditch, aligned NW-SE. It was filled with C16, a mid-grey clay. Exposed in trench 30. (Figure 12).
C16	Min. 1.97m	0.9m		Fill of field ditch C15, a compact mid grey clay.
C17	Min. 2.5m	1.6m		Field ditch aligned NW-SE, filled with C18, a mottled light grey and orange clay. Exposed in trench 30. (Figure 12).
C18	Min. 2.5m	1.6m		Fill of field ditch C17, a mottled light grey and orange clay.
C19	Min. 47m	1.6m		Field ditch aligned north to south, filled with C20, a light grey clay. Exposed in trenches 21 and 30. Figure 12).
C20	Min. 47m	1.6m		Fill of field ditch C19, a light grey clay.

Context	L(m)	W(m)	D(m)	Basic Description
C21	1.3m	1.2m	0.08m	Burnt pit, sub-oval in shape. It has a gradual break of slope, gently sloping sides a gradual break of slope at the bottom that leads to a slightly rounded base. It was filled with C22, a charcoal rich deposit with frequent heated reddened stones. Exposed in trench 30. (Plate 38, Figures 12 & 13).
C22	1.3m	1.2m	0.08m	Fill of burnt pit C21. Black charcoal rich fill with frequent red heated stones (Plate 38, Figures 12 & 13).
C23	0.6m	0.6m	0.06m	Burnt pit, circular in shape. It had a gradual break of slope at the top, gently sloping sides, a gradual break of slope at the bottom that leads to a slightly rounded base. It is filled with C24, a charcoal rich fill with burnt stones. Exposed in trench 30. (Plate 38, Figures 12 & 13).
C24	0.6m	0.6m	0.06m	Fill of burnt pit C22, a black charcoal rich silty clay with frequent heat reddened stones. (Plate 38, Figures 12 & 13).
C25	0.7m	0.5m		Burnt pit, sub-circular in shape. It was filled with C26, a charcoal rich fill with frequent heat reddened stones. Exposed in trench 30. (Plate 38, Figure 12).
C26	0.7m	0.5m		Fill of pit C25, a charcoal rich silty clay with frequent heat reddened stones. (Plate 38, Figure 12).
C27	0.8m	0.55m		Sub-oval shaped burnt pit, aligned SW-NE. It was filled with C28 a charcoal rich silty clay with frequent heat reddened stones. Exposed in trench 30. (Plate 38, Figure 12).
C28	0.8m	0.55m		Fill of pit C27, a black charcoal rich silty clay with frequent heat reddened stones. (Plate 38, figure 12).
C29	0.46m	0.46m		Circular shaped pit, filled with C30, a brown silty clay. Exposed in trench 30. (Plate 38, Figure 12).
C30	0.46m	0.46m		Fill of circular pit C29, a brown silty clay. (Plate 38, Figure 12).
C31	Min. 1.8m	0.35m		Field drain, aligned WSW-ENE, filled with C32, a brown clay. Exposed in trench 30 (A). (Figure 12).
C32	Min. 1.8m	0.35m		Fill of field drain C31, a brown clay.
C33	0.38m	0.38m		Circular pit filled with C34 a brown silty clay. Exposed in trench 30 (A). (Plate 38, Figure 12)).
C34	0.38m	0.38m		Fill of circular pit C33, a brown silty clay. (Plate 38).
C35	0.52m	0.5m		Cut of possible circular shaped pit, filled with C36, a compact grey clay. Exposed in trench 30. (Plate 39, Figure 12).
C36	0.52m	0.5m		Fill of possible pit C35, a compact grey clay. (Plate 39, Figure 12).
C37	Min. 0.4m	0.6m		Terminal of possible feature identified 0.2m north of possible pit C35. It is filled with C38 a compact greyish brown clay. Exposed in trench 30. (Plate 39, Figure 12).

Context	L(m)	W(m)	D(m)	Basic Description
C38	Min. 0.4m	0.6m		Fill of feature C37, compact greyish brown clay. (Plate 39, Figure 12).
C39	13.5m	0.5m		Fill of field drain C40, a yellowish grey clay.
C40	13.5m	0.5m		Field drain, aligned WSW-ESE filled with C39, a yellowish grey clay. Exposed at the western end of trench 30. (Figure 12).
C41	Min. 3.3m	0.84m		Field ditch, aligned NW-SE, filled with C42, a mottled light grey and yellow clay. Exposed in trench 30(B) (Figure 12).
C42	Min. 3.3m	0.84m		Fill of linear C41, a compact mottled light grey and yellow clay.
C43	141m	0.8m	0.16m	Linear, aligned N-S, filled with C43, a firm mottled light grey and yellow clay. Exposed in trench 18, 19, 30 and 30(B). (Plate 44, Figures 12 & 13).
C44	Min. 1.8m	0.8m	0.16m	Fill of linear C43, a firm mottled light grey and yellow clay. (Plate 44, Figures 12 & 13).
C45	Min. 1.2m	0.9m		Rounded terminal of field ditch in trench 30 (B). It is filled with C46, a grey clay. (Figure 12).
C46	Min. 1.2m	0.9m		Fill of field ditch C45, a compact grey clay.
C47	Min. 1.8m	0.38m		Field drain aligned SW-NE, filled with C48, a mid-grey clay. Exposed at the western end of trench 30 (B). (Figure 12).
C48	Min. 1.8m	0.38m		Fill of field drain C47, a mid-grey clay.
C49	Min. 1.8m	1.5m		Field ditch aligned north to south field ditch C50, a compact orangish brown silty clay. Exposed at the western end of trench 19. (Figure 12).
C50	Min. 1.8m	1.5m		Fill of field ditch C49, a compact orangish brown silty clay.
C51	Min. 1.8m	0.6m		Possible feature, investigated in trench 19 it is non-archaeological (Plate 23, Figure 12).
C52	Min. 1.8m	0.6m	0.08m	Possible feature exposed in trench 20. It is non-archaeological. (Plate 23).
C53	Min. 1.8m	0.63m		Field ditch aligned north-south, (Possibly the same as C13), filled with C54, a dark grey clay with purplish hue. Exposed in trench 19 and 20. (Figure 12).
C54	Min. 1.8m	0.63m		Fill of field ditch C53, a dark grey clay with purplish hue.
C55	Min. 0.9m	0.8m		Terminal of field ditch, filled with C56 a brownish grey clay. Exposed in trench 19. (Figure 12),
C56	Min. 0.9m	0.8m		Fill of field ditch C55, a brownish grey clay.

Context	L(m)	W(m)	D(m)	Basic Description
C57	0.88m	0.56m		Cut of possible pit, filled with C58 a purplish grey clay. Exposed in trench 19, west of pit C19. (Figure 12)
C58	0.88m	0.56m		Fill of possible pit C57, a purplish grey clay. (Figure 12)
C59	1.72m	0.7m		Elongated oval burnt pit, aligned SW to NE. It is filled with C60 a dark grey charcoal rich silty clay with occasional oxidised stone. Exposed in trench 19 and 30(A). (Plate 24, Figure 12).
C60	1.72	0.7m		Fill of pit C59, a dark grey charcoal rich silty clay with occasional oxidised stone. (Plate 24, (Figure 12).
C61	Min. 70m	0.84m		Field drain aligned SE to NW. It was filled with C70, a greyish brown clay fill. Exposed in trenches 18 and 19. (Figure 12)
C62	1.6m	Min. 0.85m	0.22m	Cut of possible feature in trench 18. It is filled with C63, a grey clay with occasional charcoal. It was sectioned and the charcoal was the result of charred roots and the feature was interpreted as non-archaeological. (Plate 22, Figure 12).
C63				Non-archaeological
C64	1.54	0.75	0.17m	Cut of possible feature in trench 18. It is filled with C65, a grey clay. It was investigated and interpreted as non-archaeological. (Figure 12)
C65				Non-archaeological
C66	0.4m	0.36m		Cut of pit filled with C67, a brown silty clay. Exposed in trench 30, SW of pit C23. (Plate 38).
C67	0.4m	0.36m		Fill of pit C66, a brown silty clay. (Plate 38, Figure 12).
C68	0.7m	0.57m		Cut of pit filled with C68 a brown silty clay. Exposed in trench 30, east of burnt pit C21. (Plate 38, Figure 12).
C69	0.7m	0.57m		Fill of pit C68, a firm brown silty clay. (Plate 38, Figure 12).
C70	Min. 70m	0.84m		Fill of field drain C61, greyish brown clay.
C71	0.46m	0.4m		Sub-circular shaped pit filled with C72, a firm greyish brown silty clay with charcoal and burnt bone. Exposed in trench 4. (Plate 8, Figure 11).
C72	0.46m	0/4m		Fill of pit C71, a firm greyish brown silty clay with charcoal and burnt bone. (Plate 8, Figure 11).
C73	0.35m	Min. 0.23m		Sub-circular shaped pit filled with C74, a firm blackish brown silty clay with frequent stone, including oxidised yellow and orange stone and frequent charcoal. Exposed in trench 4. (Plate 9, Figure 11).
C74	0.35m	Min. 0.23m		Fill of pit C73, a firm blackish brown silty clay with frequent stone including oxidised yellow and orange stone. (Plate 9, Figure 11).

Context	L(m)	W(m)	D(m)	Basic Description
C75	Min. 1.8m	0.60m		Field ditch aligned north to south. It is filled with C75, a light brown clay. Exposed in trench 4. (Figure 11)
C76	Min. 1.8m	0.6m		Fill of field ditch C75, a light brown clay. (Figure 11).
C77	Min. 0.77m	0.36m		Feature (possible gully) situated north of series of pits in trench 3. Terminal exposed. It is filled with C78, a grey and yellow mottled clay. (Figure 11)
C78	Min. 0.77m	0.36m		Fill of C77, a mottled grey and yellow clay.
C79	1.05m	0.97m		Sub-triangular shaped pit, with rounded corners. It is filled with C80, a blackish grey charcoal rich silty clay. Exposed in trench 3. (Plate 5, Figure 11).
C80	1.05m	0.97m		Fill of pit C79, a blackish grey silty clay with frequent charcoal. (Plate 5, Figure 11).
C81	0.4m	0.4m		Circular pit, filled with C82 a black brown silty clay with oxidised stone and charcoal. Exposed in trench 3. (Plate 6, Figure 11).
C82	0.4m	0.4m		Fill of pit C81, a blackish brown silty clay with oxidised stone and charcoal. (Plate 6, Figure 11).
C83	0.64m	0.5m		L-shaped pit, situated south of pit C81 in trench 3. It is filled with C84, a blackish brown silty clay with flecks of oxidised clay. C83 could turn out to be two pits. (Plate 6, Figure 11).
C84	0.64m	0.5m		Fill of pit C83, a blackish brown silty clay with charcoal and flecks of oxidised clay. (Plate 6, Figure 11).
C85	0.22m	0.17m		Posthole, east of burnt pits in trench 3. It is filled with C86, a black silty clay. C85 is 1 of 4 post-holes (C85, C87, C89 and C91) aligned N-S in a slight curve, east of burnt pits in trench 3. (Plate 4, Figure 11).
C86	0.22m	0.17m		Fill of posthole C85, a black charcoal rich silty clay. (Plate 4, Figure 11).
C87	0.2m	0.19m		Posthole, east of burnt pits in trench 3. It is filled with C88, a black silty clay. C87 is 1 of 4 post-holes (C85, C87, C89 and C91) aligned N-S in a slight curve, east of burnt pits in trench 3. (Plate 4, Figure 11).
C88	0.2m	0.19m		Fill of posthole C87, a black charcoal rich silty clay. (Plate 4, Figure 11).
C89	0.2m	0.2m		Posthole, east of burnt pits in trench 3. It is filled with C90, a black silty clay. C89 is 1 of 4 post-holes (C85, C87, C89 and C91) aligned N-S in a slight curve, east of burnt pits in trench 3. (Plate 4, Figure 11).
C90	0.2m	0.2m		Fill of posthole C89, a black charcoal rich silty clay. (Plate 4, Figure 11).
C91	0.2m	0.18m		Posthole, east of burnt pits in trench 3. It is filled with C92, a black silty clay. C91 is 1 of 4 post-holes (C85, C87, C89

Context	L(m)	W(m)	D(m)	Basic Description
				and C91) aligned N-S in a slight curve, east of burnt pits in trench 3. (Figure 11).
C92	0.3m	0.18m		Fill of posthole C91, a black silty clay. (Plate 4, Figure 11).
C93	0.2m	0.18m		Posthole east of C81, in trench 3. Filled with C94, a light brown silty clay (Figure 11).
C94	0.2m	0.18m		Fill of posthole C93, a light brown silty clay.
C95	Min. 0.33m	0.33m		Pit situated SW of pit C83 in trench 3. It is filled with C96 a dark brown silty clay (Figure 11). .
C96	Min. 0.33m	0.33m		Fill of pit C95, a dark brown silty clay.
C97	Min. 2.3m	0.9m	0.21m	Field ditch aligned SW to NE. It is filled with C98, a greyish brown silty clay with occasional snail shell. Exposed in trench 3. (Plate 3, Figures 11 & 13).).
C98	Min. 2.3m	0.9m	0.21m	Fill of field ditch C97, a greyish brown silty clay with occasional shell. (Plate 3, Figures 11 & 13).
C99	0.75m	0.57m		Sub-oval shaped pit, aligned N-S. It is filled with C100. A brownish grey silty clay with charcoal and burnt bone. Exposed in trench 3. (Plate 10, Figure 11).
C100	0.75m	0.57m		Fill of pit C98, a friable brownish grey silty clay with charcoal and burnt bone. (Plate 10, Figure 11).

4. MATERIAL CULTURE

No artefacts were recovered during the programme of test trenching on site. No samples were taken. Burnt bone seen in pits C71 and C99 were not lifted and remained *in situ*.

5. DATING

No dating material was recovered during post-excavation analysis.

6. DISCUSSION

This report details the results of an archaeological assessment (test trenching) that was carried out at Commons, Jamestown, Ratoath, Co. Meath. An Archaeological Impact Assessment report was carried out in June 2020 by ACSU. It recommended that the site be archaeologically assessed by means of a geophysical survey followed by test trenching. Subsequently, the geophysical survey was carried out between February and March 2020, under licence number 20R0026 (Russell, Breen 2020). This recommended test trenching targeting anomalies identified.

The test trenching was undertaken under licence number 21E0511 by the author between the 16th and 27th of August 2021. The test trenches were set out to investigate potential archaeological features identified in the geophysical survey, as well as the site overall. Forty-two test trenches were excavated across five fields (Plates 1-50, Figure 9).

Three areas of archaeology were identified. In the south part of Field 5, in Trench 30 and 30a, a number of burnt pits were exposed in close proximity to each other (Plates 38 – 41, Figure 12). To the northeast of this, an additional pit, C59 (Plate 24), and potential pit C57 were identified in Trench 19 (Figure 12). In Field 1, in Trenches 3 and 4, several pits and post-holes were identified (Plates 4-10, Figure 11).

A large number of field ditches and drains were exposed across the site. Some large field boundaries were exposed in Field 5, also identified during geophysical survey as Anomaly G. Two of these are visible above the ground, and are marked on all the Ordnance Survey maps (1835, 1909 and 1958). The north to south aligned field boundary ditch (C11) contained red brick on the surface. A large amount of linears was identified as field drains and not of archaeological significance. A possible burnt feature in Field 3, Trench 9, turned out to be a tree-bole upon investigation (Plate 14), and another tree-bole was uncovered in Trench 27, field 21 (Plate 35). The anomalies identified during the geophysical survey were found to be related to modern agricultural activity.

The identified archaeology is summarised as follows;

Archaeological features in Field 5

In Trenches 30, 30a a number of burnt pits (C21, C23, C28 and C26) pits (C29, C33, C67 and C69) and possible features (C35, C37 and C41) were uncovered. To the northeast in Trench 19, burnt pit C59 and possible pit C57 to the east were identified (Figure 12).

Archaeological features in Field 1

In Trench 4, three pits, C71, C73 and C99 were identified. To the north, in Trench 3, pits C79, C81, C83 and C95, possible gully C77 and post-holes C85, C87, C89 C91 and C93 were uncovered. (Figure 11).

7. CONCLUSIONS & RECOMMENDATIONS

The site at Commons and Jamestown, Ratoath, Co. Meath was assessed in the form of geophysical survey (20R0026) and test trenching (21E0511).

The test trenching identified three areas with a concentration of ploughed out, archaeological features (pits, spreads and post-holes) with no surface expression. These features will be directly impacted by the proposed development. Therefore, it is recommended that the features identified be preserved by

record (excavated). The three areas shall be stripped of topsoil, and any archaeological features exposed be preserved by record (excavated).

All excavation should be carried out by a licence eligible archaeologist at the pre-construction phase in order to mitigate the impact of the proposed development on archaeological features and deposits.

8. EXCAVATION BULLETIN

Fairyhouse Rd, Commons, Jamestown, Ratoath Co. Meath.

21E0511

ITM. 7019828, 750512

RMP No. N/A

Testing

Poss. prehistoric activity (pits, post-holes, spreads)

The 27th of August 2021

An archaeological assessment in the form of geophysical survey and test trenching was carried out at Fairyhouse Road, Commons, Jamestown, in Ratoath, Co. Meath.

An Archaeological Impact Assessment report was carried out in June 2020 by ACSU and recommended the site should be archaeologically accessed by means of a geophysical survey followed by test trenching.

A program of geophysical survey was carried out in February and March 2020, under licence 20R0026. No anomalies representing definite archaeological features were identified; however, a number of magnetic anomalies scattered across the site suggested that there is a potential for archaeological features such as pits, spreads and kilns. The geophysical report recommended test trenching, targeting anomalies identified in order to establish their nature, depth and significance. Subsequently, test trenching was undertaken in August 2021. In total, 42 test trenches with a width of 1.8m each and measuring a total of 4,886m metres were excavated.

Three main areas of archaeology were identified and consisted of ploughed out archaeological features (pits, post-holes and spreads) with no surface expression. In the south extent of Field 5, a number of burnt pits were exposed in close proximity to each other in Trench 30 and 30a (four burnt pits C21, C23, C28 and C26; four pits C29, C33, C67 and C69 and three possible features C35, C37 and C41). To the northeast, an additional pit, C59, and potential pit C57 were identified in Trench 19. In Field 1, several pits and post-holes were identified in Trenches 3 and 4 (in Trench 3, four pits C79, C81, C83 and C95, a possible gully C77 and five post-holes C85, C87, C89 C91 and C93; in Trench 4, three pits C71, C73 and C99). In addition, a large number of linears were interpreted as field ditches and drains were exposed across the site. There were a small number of large field boundaries in Field 5. Two of these are visible

above the ground and are marked on all the Ordnance Survey maps (1835, 1909 and 1958). The north to south aligned field boundary ditch (C11) contained red brick.

Caroline Cosgrove, Archaeological Consultancy Services Unit, Unit 21, Boyne Business Park, Greenhills, Drogheda, Co Louth.

9. PUBLICATION PLAN

An account of this archaeological assessment and its results will be published online as an excavation bulletin on www.excavations.ie (see Section 8).

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Cartographic and Photography Sources

Down Survey Map of County Meath, Barony of Ratoath (1654-56)

Taylor and Skinner's Road Maps of Ireland – Map 44 Dublin to Ballyshannon, Donegal and Killybegs (1777)

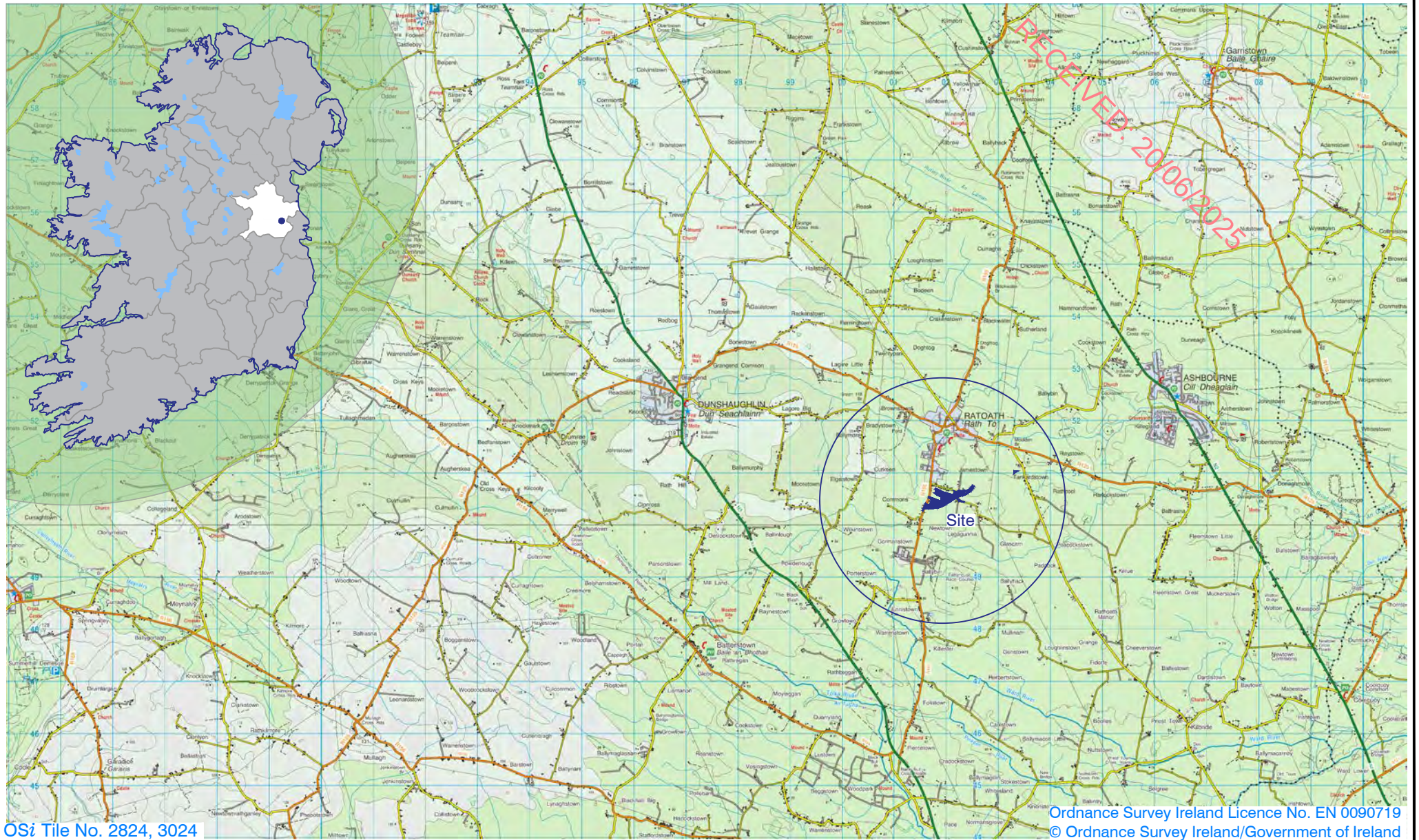
First edition Ordnance Survey (OS) 6-inch map (surveyed 1835 – published 1837)

Third edition Ordnance Survey (OS) 25-inch map (surveyed 1909 – published 1911)

Ordnance Survey Ortho (aerial photography) series, 1995-2013

Google Earth Pro (aerial photography) 2005-2020

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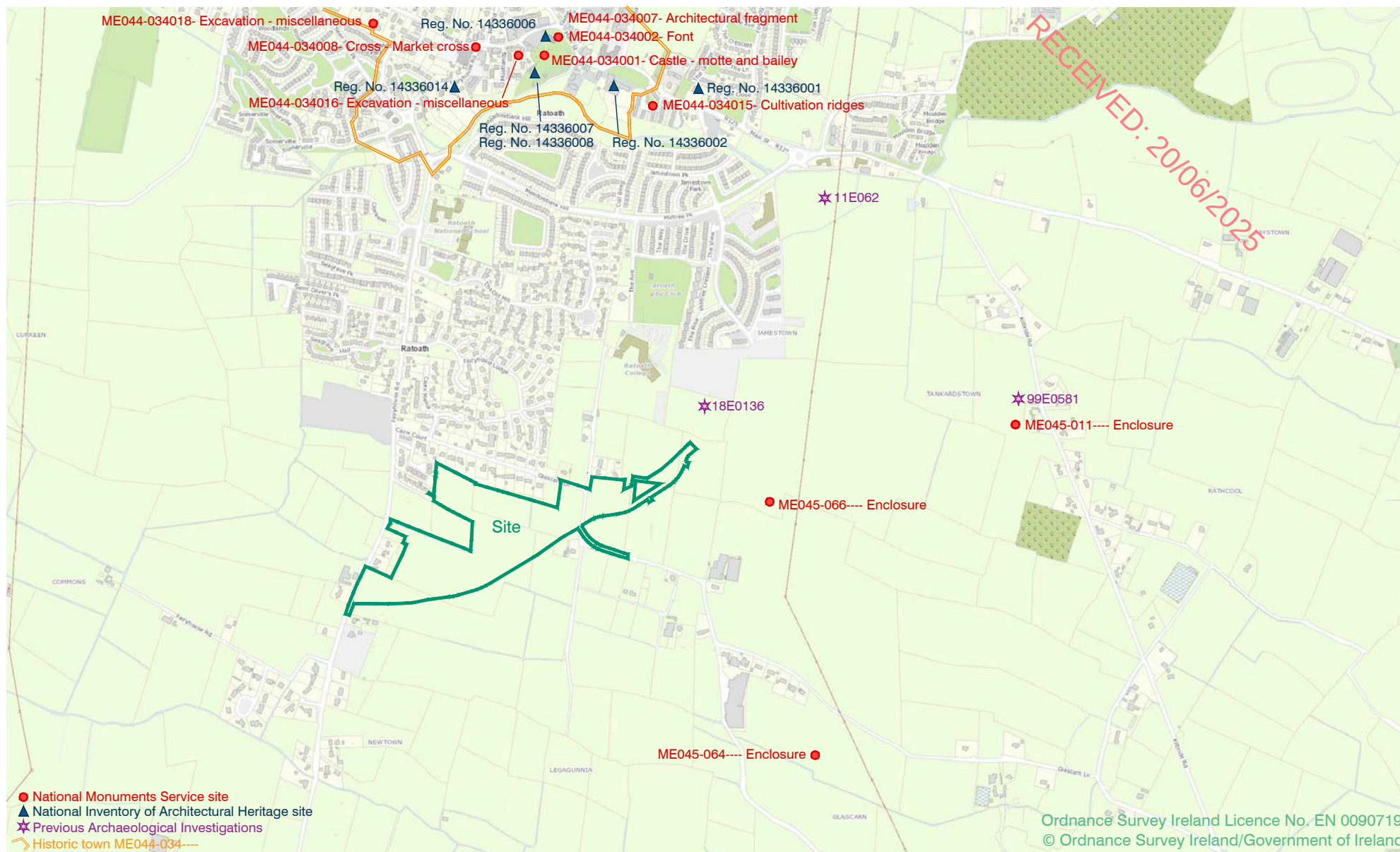
Site: Fairyhouse Road Housing, Ratoath, Co. Meath

Issued for: Archaeological Test Trenching Report

Drawing number: 2015_C1001

Date: September 2021 | Scale: 1:100,000 @A4

Figure 1: Location of site

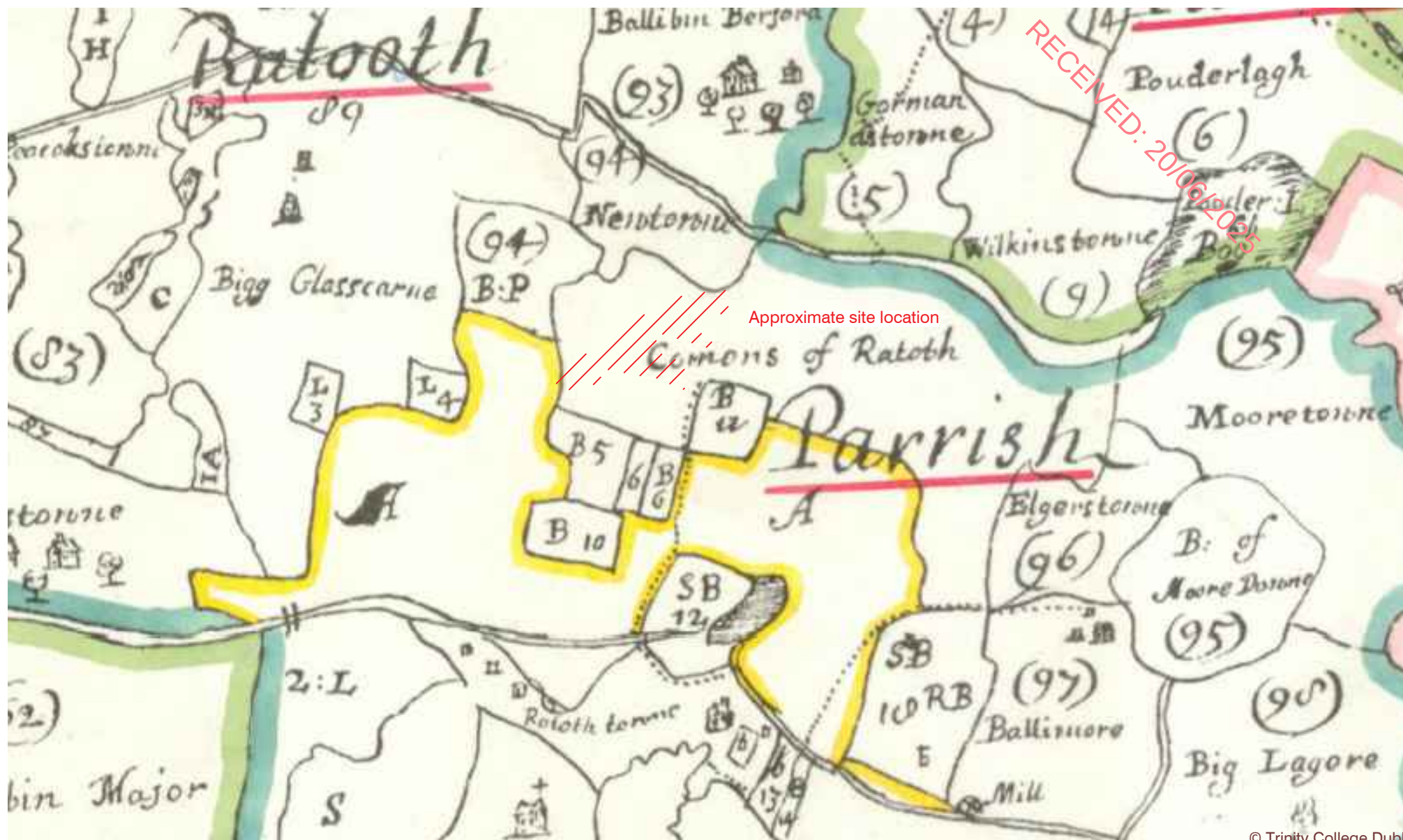


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 Date: September 2021 | Scale: 15,000 @A4

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



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Date: September 2021 | Scale: Not to scale

Figure 3: Extract from Down Survey map of County Meath, Barony of Ratoath (1654-56), showing approximate location of site



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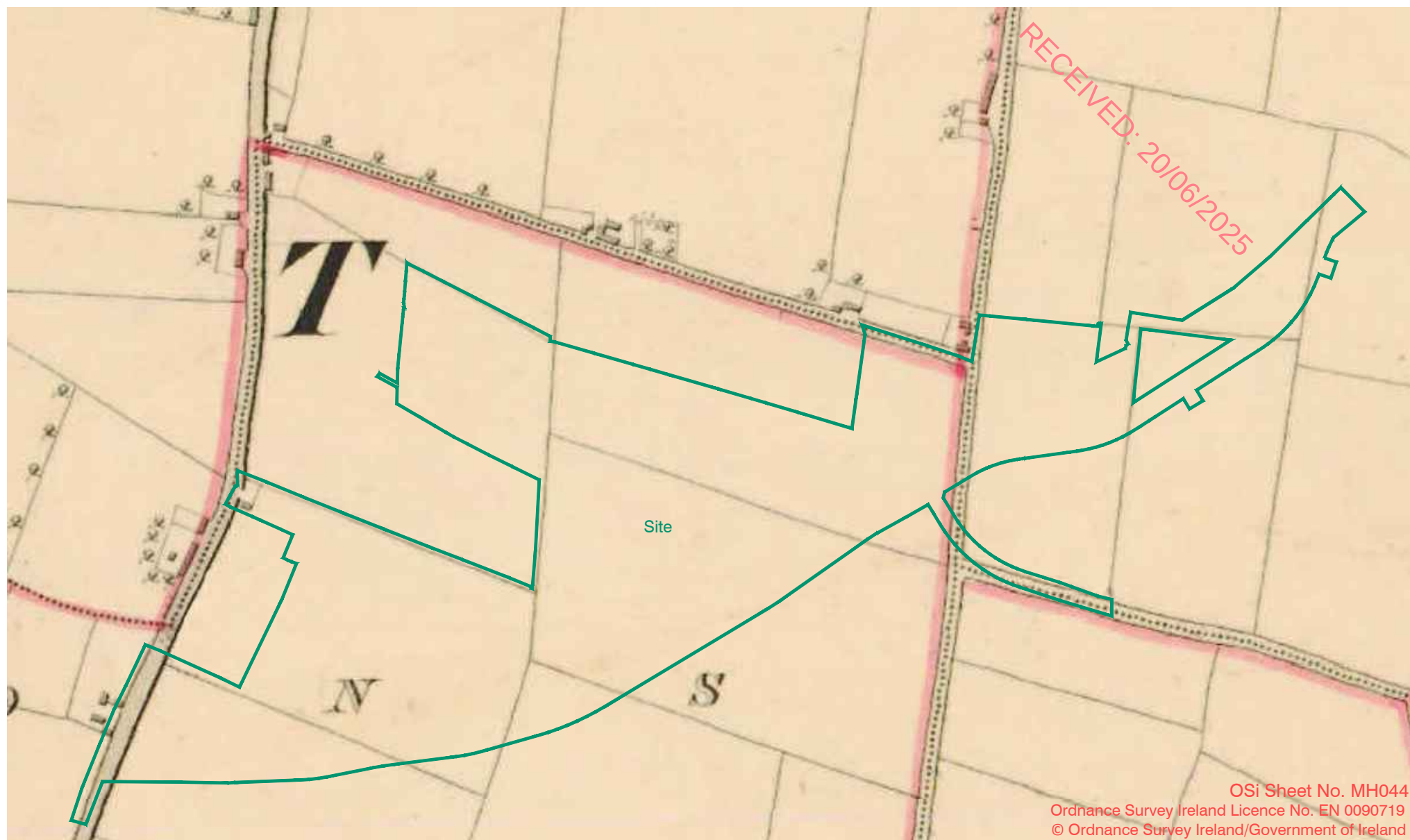
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Issued for: Archaeological Test Trenching Report

Drawing number: 2015_C1004

Date: September 2021 | Scale: Not to scale

Figure 4: Extract from Taylor and Skinner's 'Maps of the roads of Ireland' - Map 44 Dublin to Killybegs (1777), showing approximate location of site



200 m



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Drawing number: 2015_C1005

Date: September 2021 Scale: 1:4,000 @A4

Figure 5: Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1835 - published 1837), showing location of site

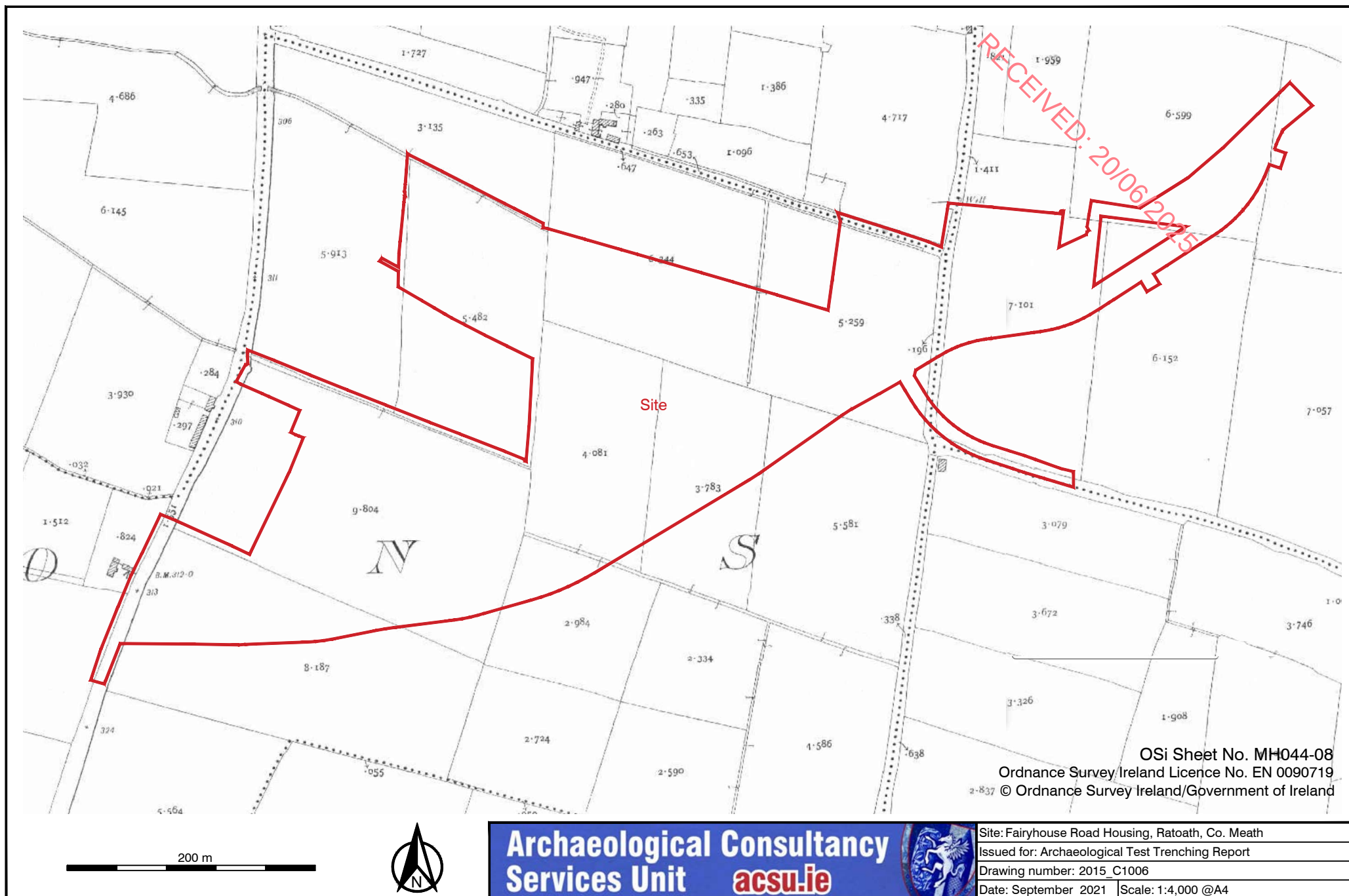


Figure 6: Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1909 - published 1911), showing location of site

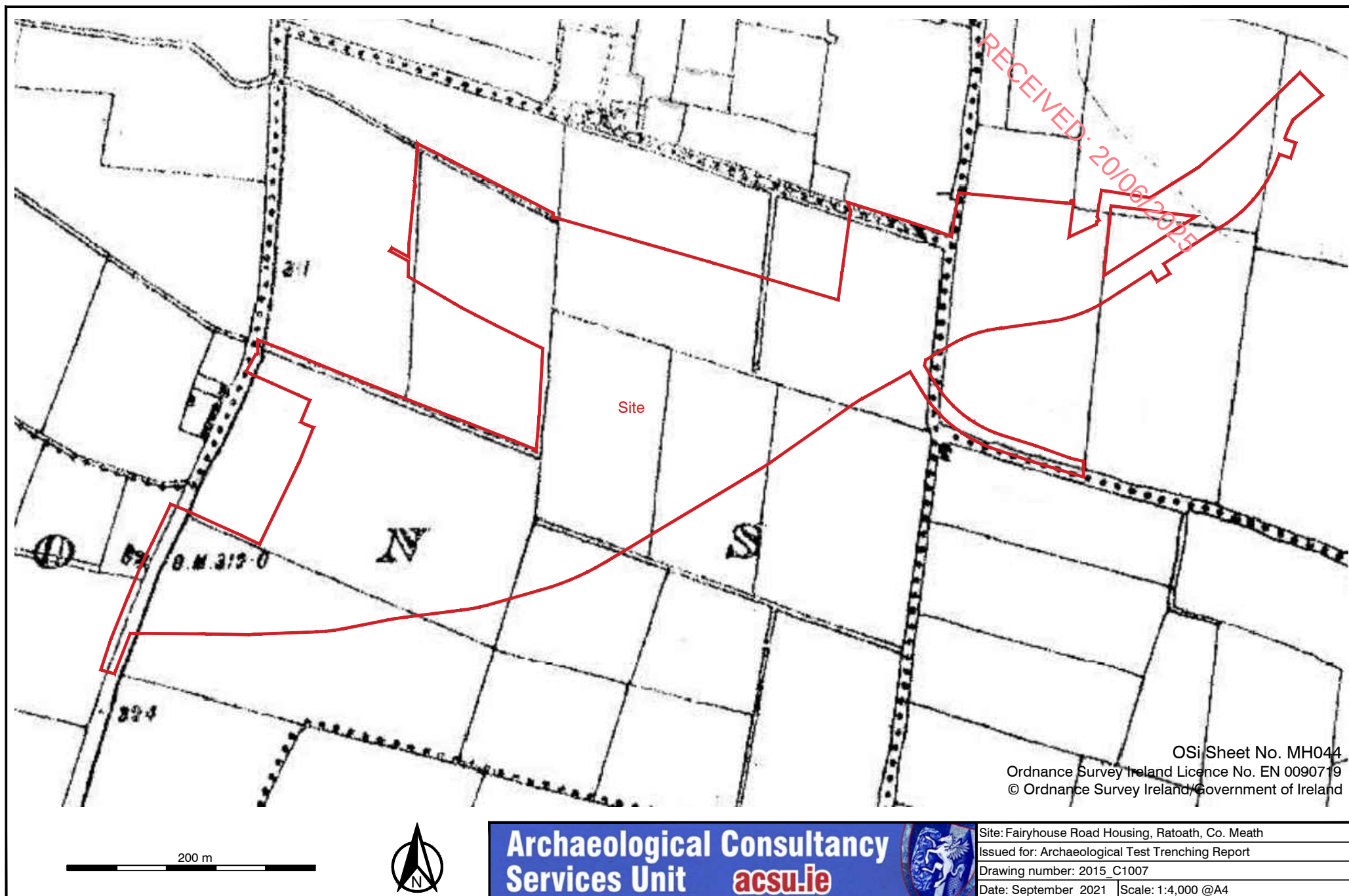


Figure 7: Extract from Cassini edition Ordnance Survey (OS) 6-inch map (1958), showing location of site



Geophysical survey areas



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Site: Ratoath Outer Relief Road, Ratoath, Co. Meath

Issued for: Archaeological Test Trenching Report

Drawing number: 2015_C1008

Date: September 2021 Scale: 1:3,500 @A4

Figure 8: Geophysical survey results (grey scale images), showing fields 1 to 6 and field 21 and extent of site

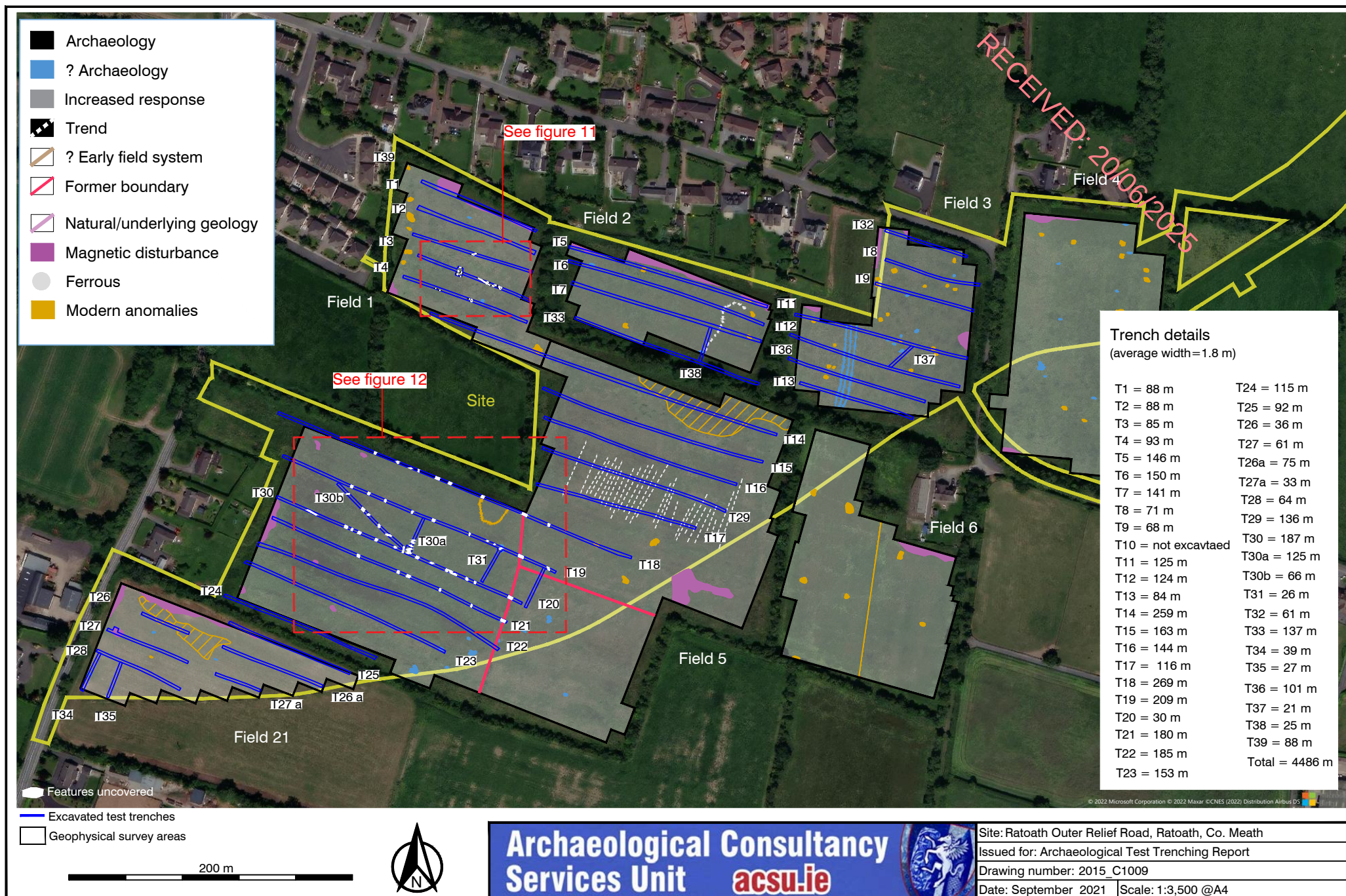
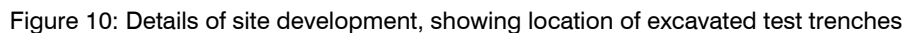


Figure 9: Geophysical survey interpretation, showing fields 1 to 6 and field 21, extent of site and excavated test trenches

T1 = 88 m	T24 = 115 m
T2 = 88 m	T25 = 92 m
T3 = 85 m	T26 = 36 m
T4 = 93 m	T27 = 61 m
T5 = 146 m	T26a = 75 m
T6 = 150 m	T27a = 33 m
T7 = 141 m	T28 = 64 m
T8 = 71 m	T29 = 136 m
T9 = 68 m	T30 = 187 m
T10 = not excavated	T30a = 125 m
T11 = 125 m	T30b = 66 m
T12 = 124 m	T31 = 26 m
T13 = 84 m	T32 = 61 m
T14 = 259 m	T33 = 137 m
T15 = 163 m	T34 = 39 m
T16 = 144 m	T35 = 27 m
T17 = 116 m	T36 = 101 m
T18 = 269 m	T37 = 21 m
T19 = 209 m	T38 = 25 m
T20 = 30 m	T39 = 88 m
T21 = 180 m	Total = 4486 m
T22 = 185 m	
T23 = 153 m	



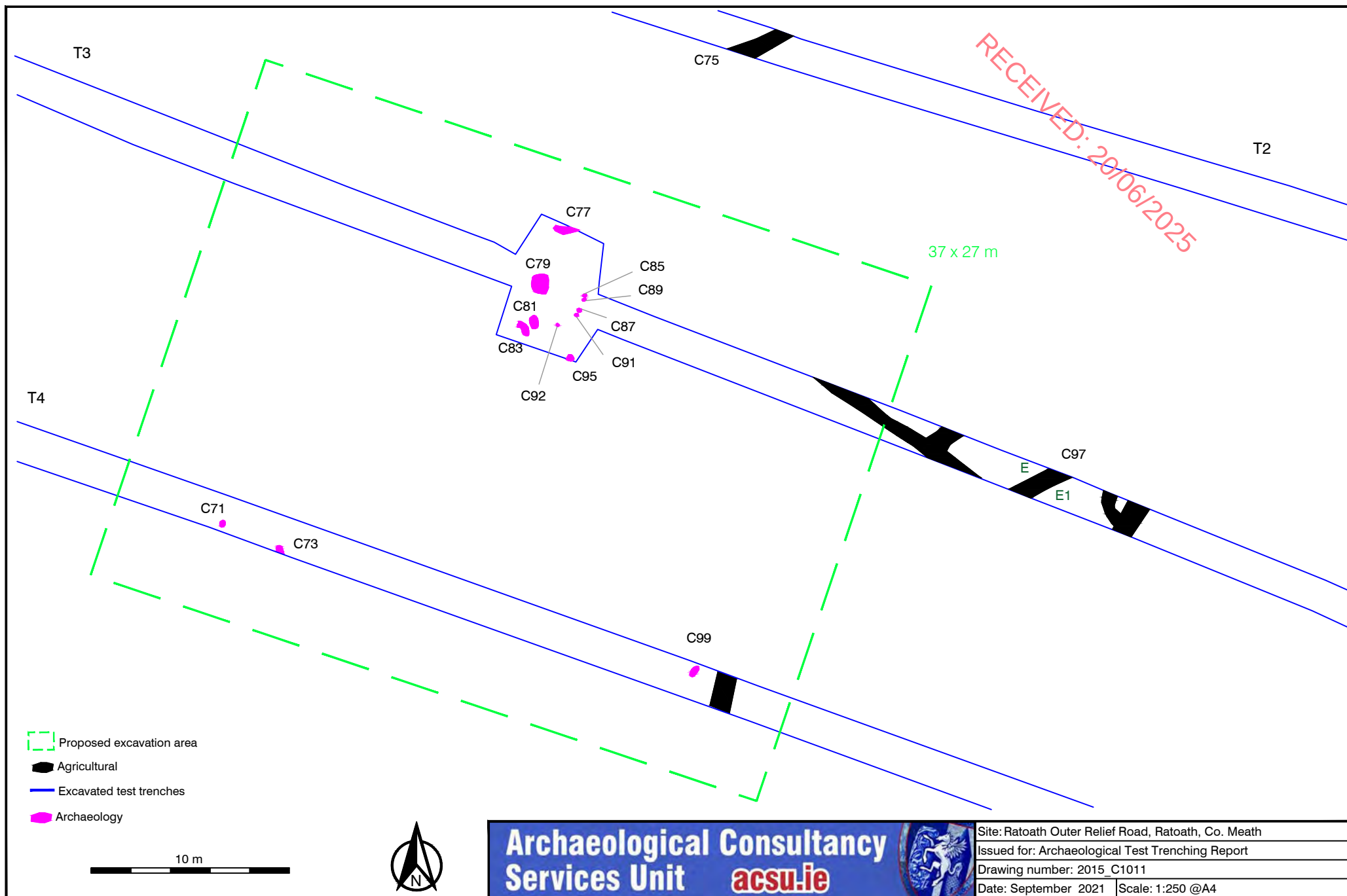


Figure 11: Details of archaeological features uncovered in Trenches 2, 3 and 4

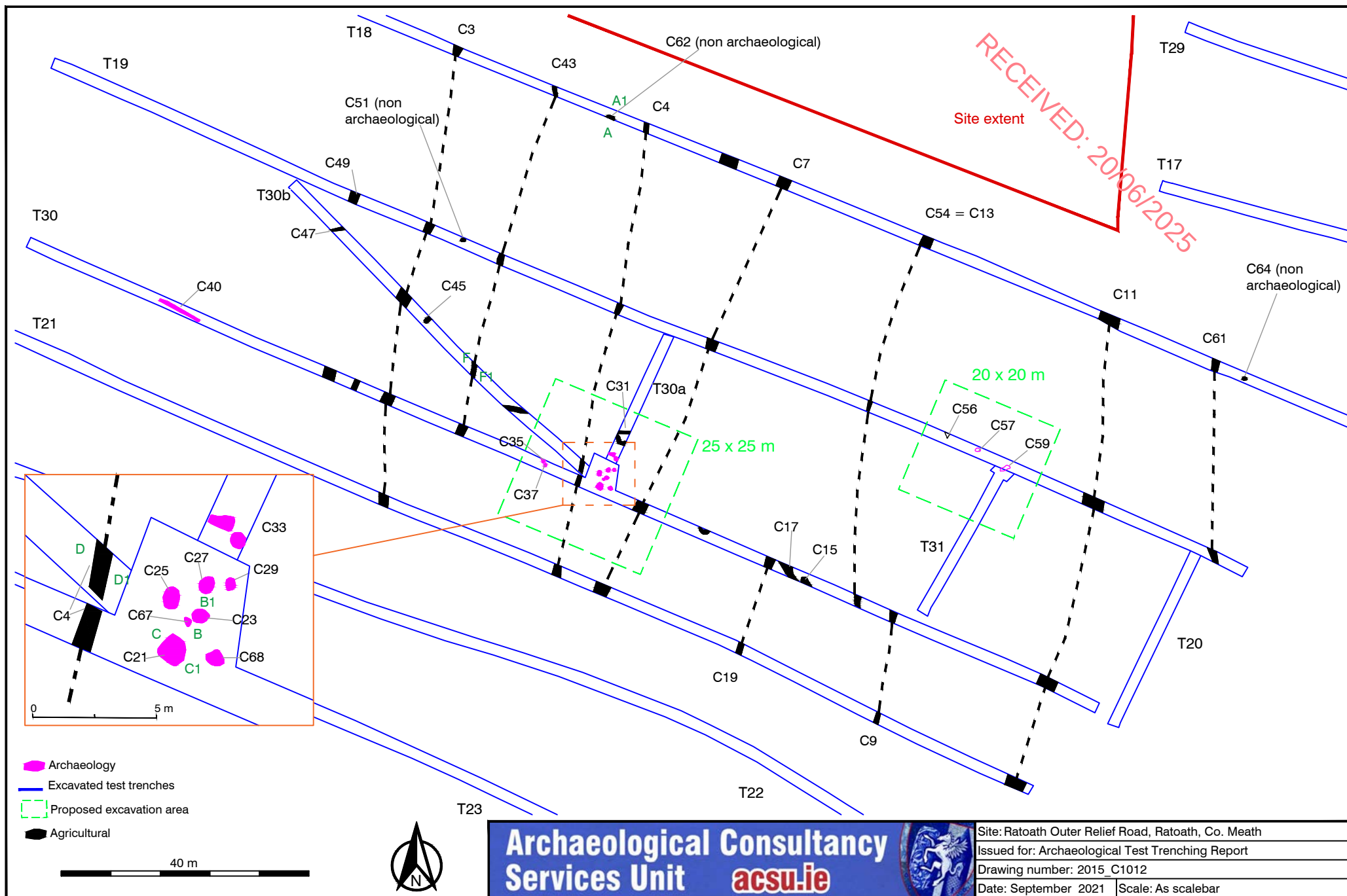


Figure 12: Details of archaeological features uncovered in Trenches 18-21 and Trenches 30-31



Plate 1: Trench 1, looking west.



Plate 2: Trench 3, with field ditch in foreground, looking west.



Plate 3: SW facing section of field ditch C97, Trench 3.



Plate 4: Postholes C85, C89, C87, C91 looking west in Trench 3.

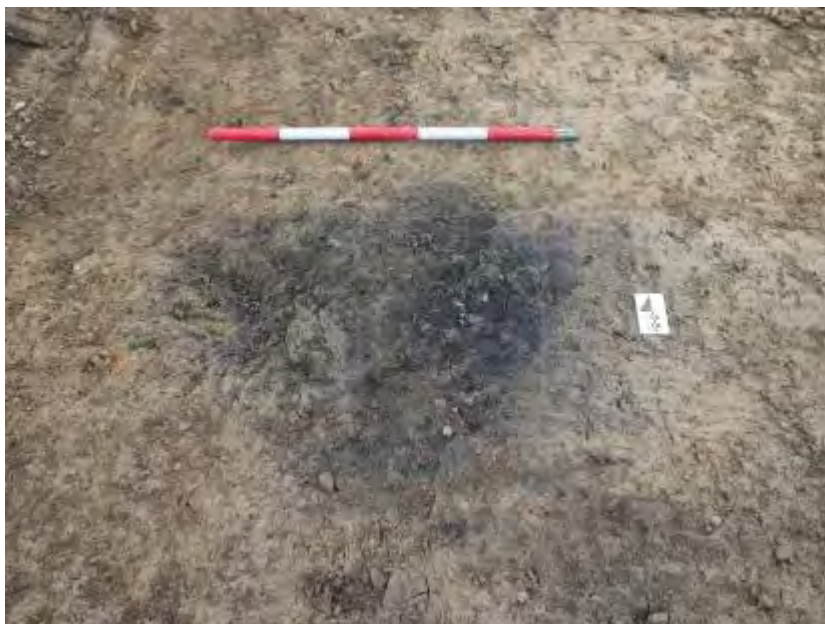


Plate 5: Pit C79, looking north, Trench 3



Plate 6: Pits 81 and C83, looking north, Trench 3.



Plate 7: Trench 4, looking west



Plate 8: Pit C71, looking east, Trench 4



Plate 9: Pit C73, looking southwest , Trench 4



Plate 10: Pit C99, looking east, Trench 4.



Plate 11: Trench 5, looking west



Plate 12: Trench 6, looking west



Plate 13: Trench 8, looking west



Plate 14: Tree bole in Trench 9



Plate 15: Overhead powerlines, directly over planned trench 10.



Plate 16: Trench 11, looking west



Plate 17: Trench 13, looking east



Plate 18: Trench 14, looking west



Plate 19: Trench 16, looking east



Plate 20: Trench 17, looking east



Plate 21: Trench 18 looking east



Plate 22: East facing section of possible feature C62, Trench 18



Plate 23: Section through possible feature C51, Trench 19.

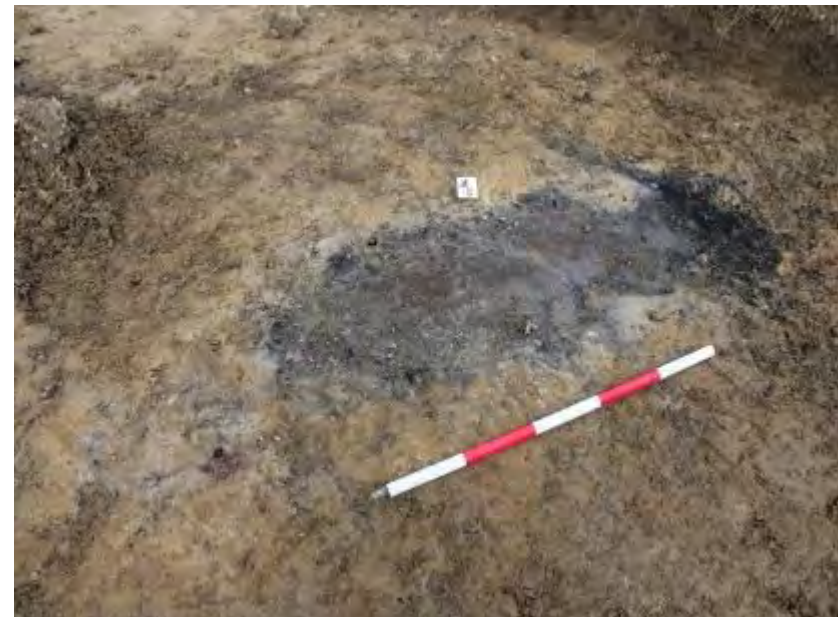


Plate 24: Pit C59, looking north, Trench 19.



Plate 25: Ditch C7, looking east, Trench 19



Plate 26: Trench 20, looking NNE



Plate 27: Trench 21, looking east .



Plate 28: Field boundary ditch C3, looking east in Trench 21



Plate 29 : Ditch C9, looking east, Trench 21.



Plate 30: Trench 22, looking west



Plate 31: Trench 23, looking west.



Plate 32: Trench 24, looking west



Plate 33: Trench 25 , looking west



Plate 34: Trench 26, looking west



Plate 35: Trench 27, with tree bole in foreground looking east. .



Plate 36: Trench 27 (A), looking east



Plate 37: Trench 28, looking west



Plate 38 : Pits C21, C23, C25, C27, C29, C33, C66, C68 looking N, Trench 30



Plate 39: Possible pit C37 & feature C37, looking west, Trench 30



Plate 40: Field ditch C4, looking west, Trench 30



Plate 41: SW facing section of ditch C4, Trench 30



Plate 42: Trench 30 (A), looking NNE



Plate 43: Trench 30 (B) looking NW



Plate 44: Field ditch C43, looking NNW, Trench 30 (B)



Plate 45: Trench 31, looking NNE



Plate 46: Trench 33, looking west



Plate 47: Trench 34, looking NNE



Plate 48: Trench 35, looking NNE



Plate 49: Trench 37, looking NE



Plate 50 : Trench 38, looking NE