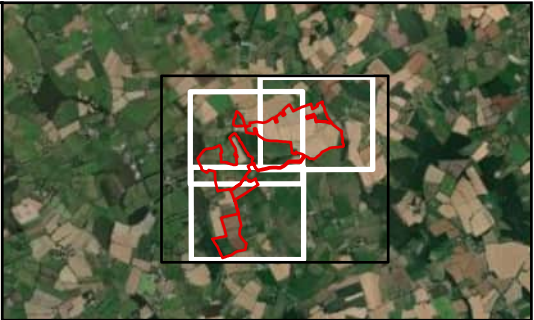
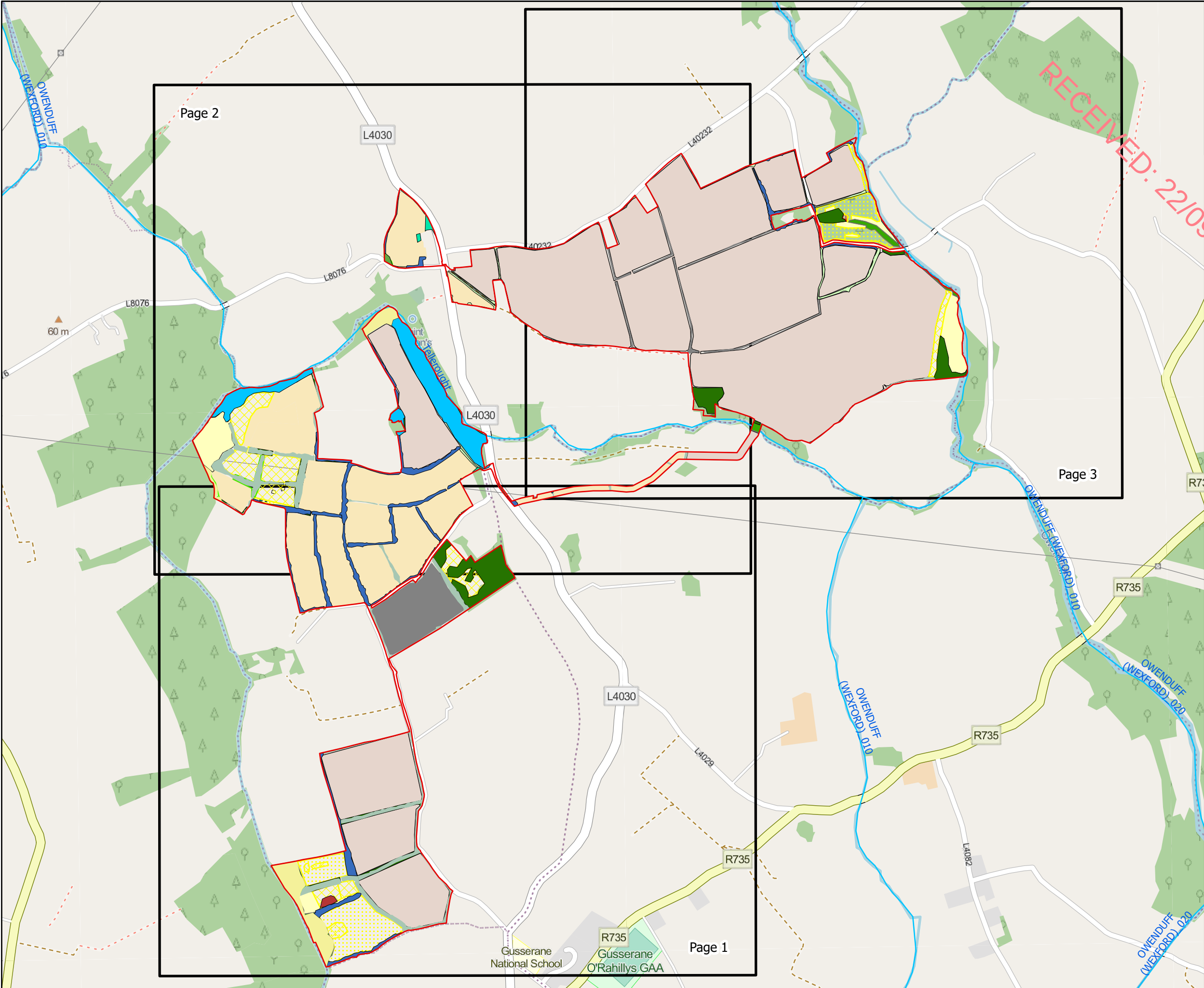


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## Appendix 7.1 – Habitat Map



- Proposed Project Planning Boundary
- Fossit Code
- BC1 - Arable crops
  - BC3 - Tilled Land
  - ED3 - Recolonising bare ground
  - FL8 - Other Artificial Lakes and ponds
  - GM1 - Improved agricultural grassland
  - GM4 - Marsh
  - GS2 - Dry meadows and grassy verges
  - GS4 - Wet grassland
  - HD1 - Dense bracken
  - WD1 - (Mixed) broadleaved woodland
  - WD2 - Mixed broadleaved/conifer woodland
  - WN1 - Oak-birch-holly woodland
  - WN4 - Wet pedunculate oak-ash woodland
  - WN6 - Wet willow-alder-ash woodland
  - WS1 - Scrub
  - WD1 - Broadleaf Woodland
  - BL2 - Earth bank
  - WL1 - Hedgerow
  - WL1 - Hedgerow managed
  - WL1 - Planted\_hedge
  - WS1 - Scrub
  - WL2 - Treeline
  - WN6 - Wet Willow Alder Ash Woodland
  - WD1 - Woodland
  - River Network

Data sources: Earthstar Geographics, Map data © OpenStreetMap contributors, Microsoft, Facebook, Google, Esri Community Maps contributors, Map layer by Esri



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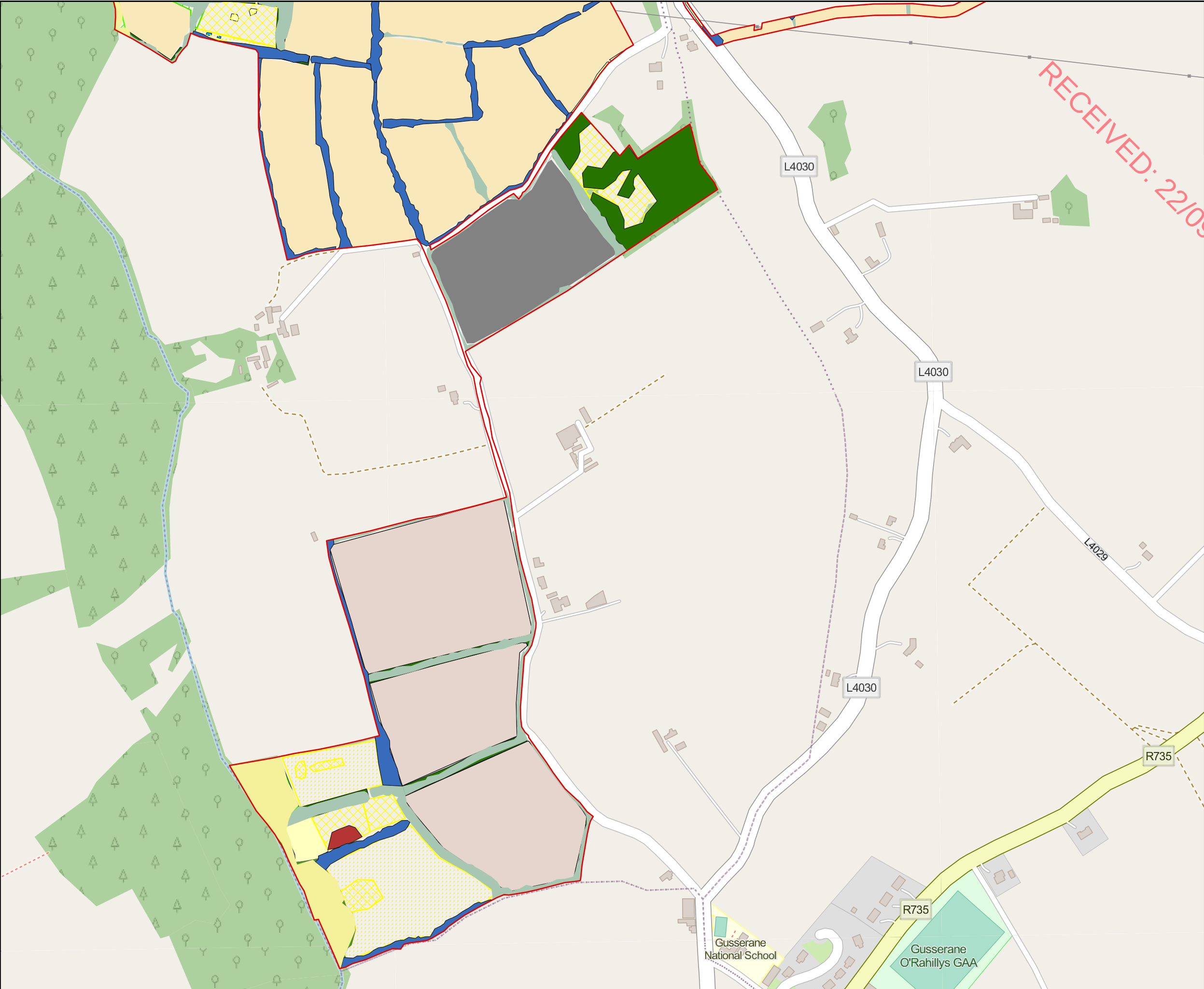


**Shelburne Energy Farm**

**Habitat Map**

|                                |                              |                          |                           |
|--------------------------------|------------------------------|--------------------------|---------------------------|
| Drawn<br><b>E Tiri</b>         | GIS Checked<br><b>E Tiri</b> | Checked<br><b>G Reid</b> | Approved<br><b>G Reid</b> |
| Scale at A3<br><b>1:10,000</b> | Status<br><b>INF</b>         | Revision<br><b>02</b>    | Security<br><b>STD</b>    |

229100682-MMD-GIS-DR-0020



- Proposed Project Planning Boundary**
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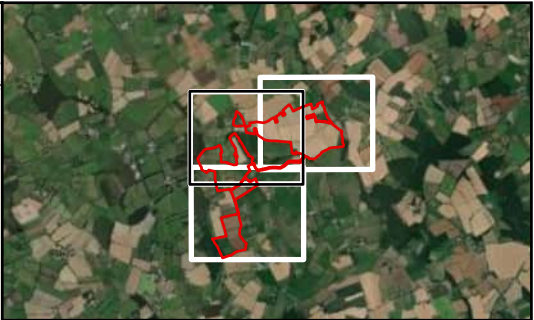
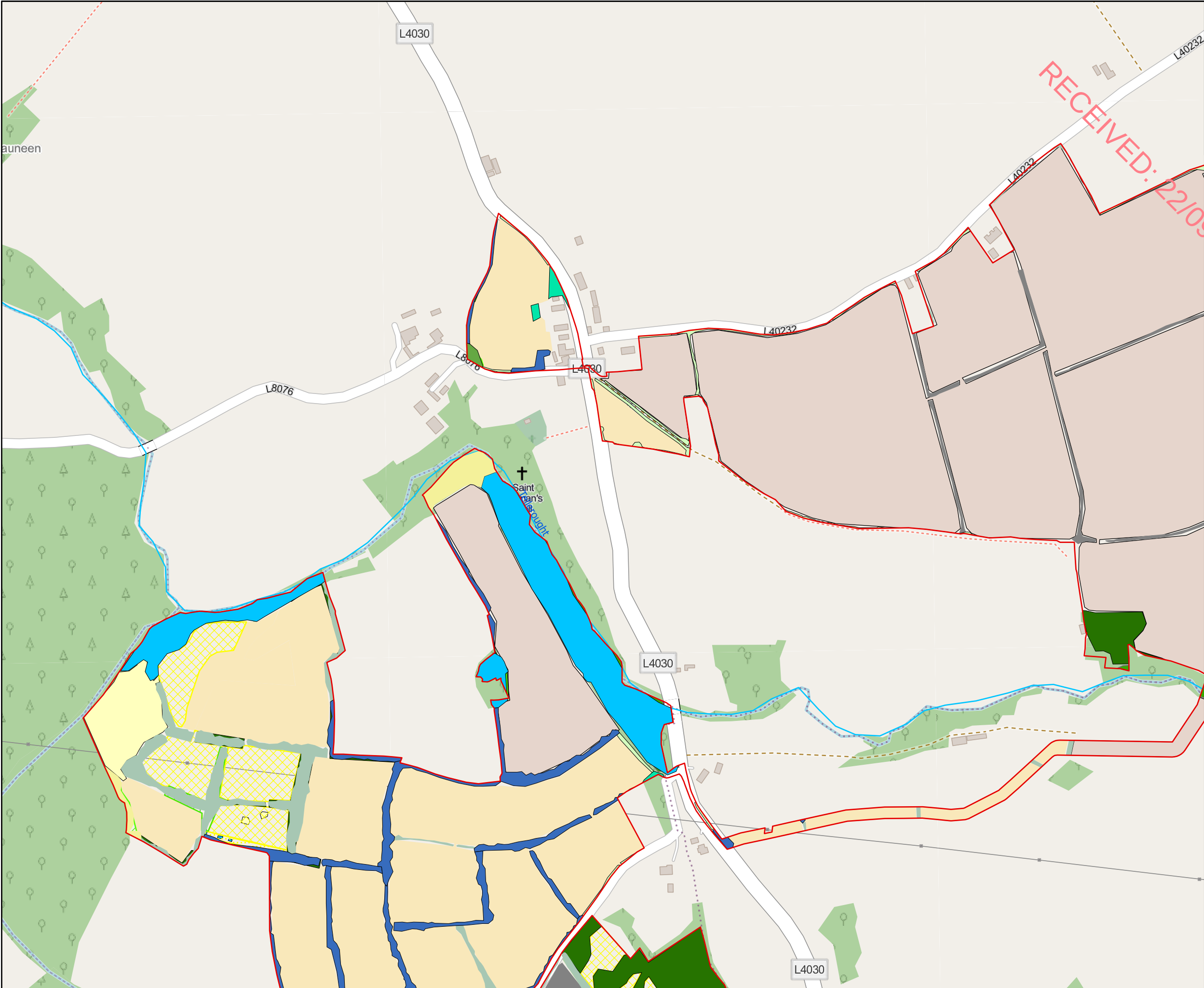


**Shelburne Energy Farm**

**Habitat Map**

Page 1 of 3

|                        |                       |                   |                    |
|------------------------|-----------------------|-------------------|--------------------|
| Drawn<br>E Tiri        | GIS Checked<br>E Tiri | Checked<br>G Reid | Approved<br>G Reid |
| Scale at A3<br>1:5,000 | Status<br>INF         | Revision<br>02    | Security<br>STD    |



- Proposed Project Planning Boundary
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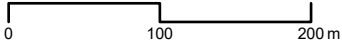
Shelburne Energy Farm

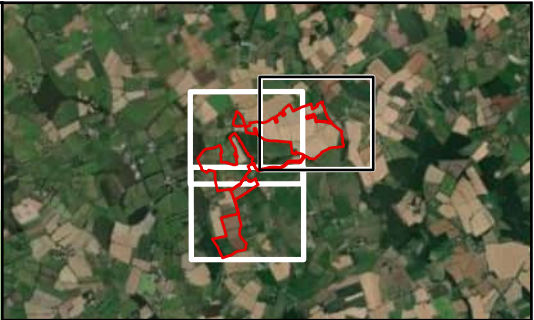
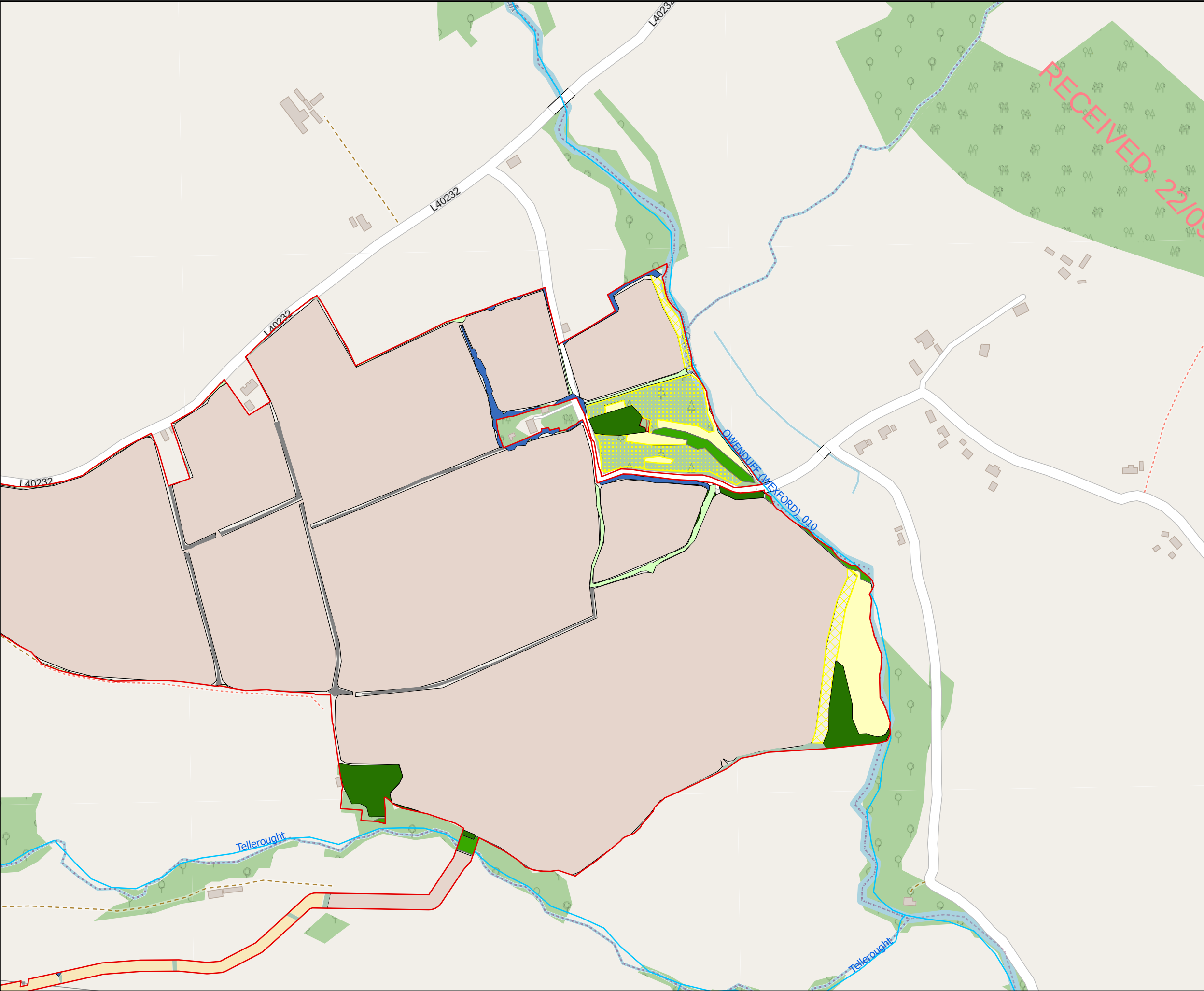
Habitat Map

Page 2 of 3

|                        |                       |                   |                    |
|------------------------|-----------------------|-------------------|--------------------|
| Drawn<br>E Tiri        | GIS Checked<br>E Tiri | Checked<br>G Reid | Approved<br>G Reid |
| Scale at A3<br>1:5,000 | Status<br>INF         | Revision<br>02    | Security<br>STD    |

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**Proposed Project Planning Boundary**

**Fossit Code**

- BC1 - Arable crops
- BC3 - Tilled Land
- ED3 - Recolonising bare ground
- FL8 - Other Artificial Lakes and ponds
- GM1 - Improved agricultural grassland
- GM4 - Marsh
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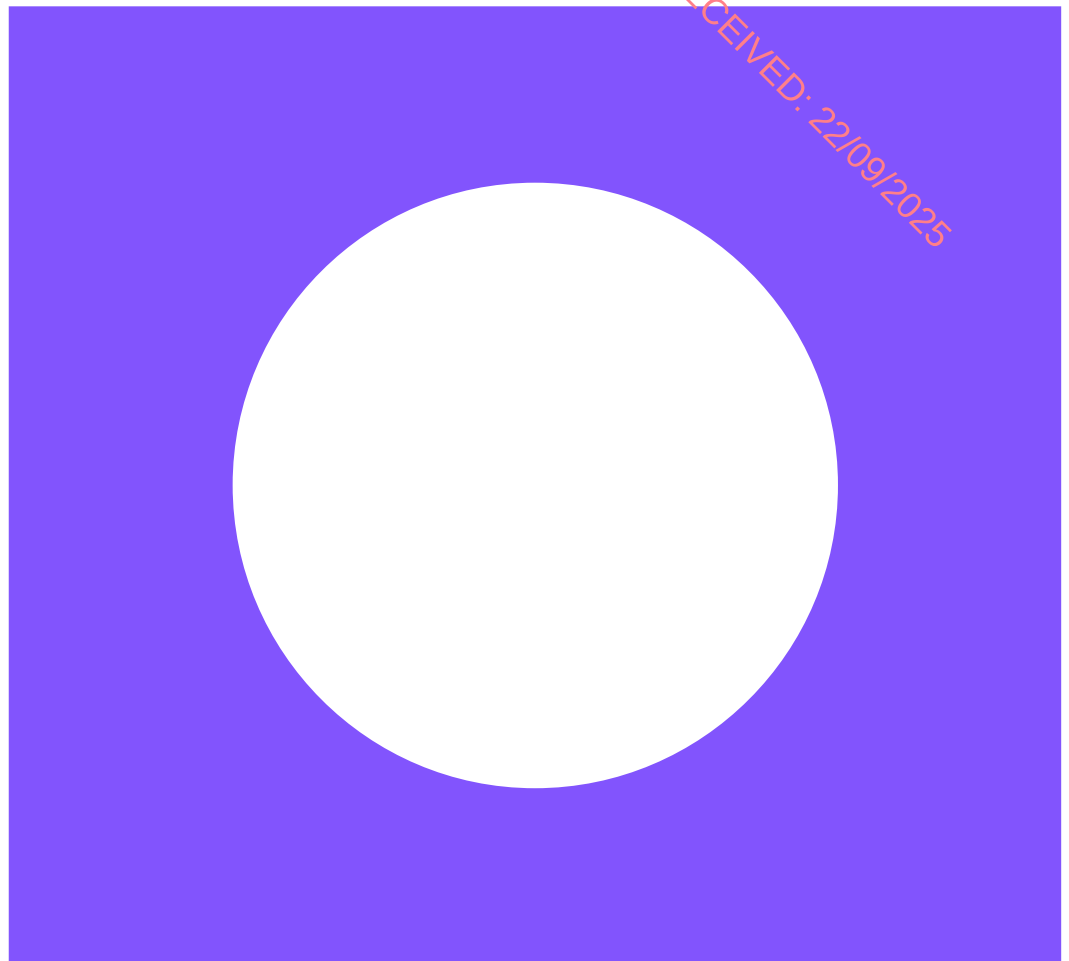


**Shelburne Energy Farm**

**Habitat Map**

Page 3 of 3

|                        |                       |                   |                    |
|------------------------|-----------------------|-------------------|--------------------|
| Drawn<br>E Tiri        | GIS Checked<br>E Tiri | Checked<br>G Reid | Approved<br>G Reid |
| Scale at A3<br>1:5,000 | Status<br>INF         | Revision<br>02    | Security<br>STD    |



## **Appendix 7.2 – Botanic Species List**

## Botanic Species Lists

Refer to Figure 7.1 for Field locations

### Field a species list

| Botanical Name                  | Common Name               | DAFOR scale |
|---------------------------------|---------------------------|-------------|
| <i>Prunella vulgaris</i>        | Selfheal                  | O           |
| <i>Scorzoneroide autumnalis</i> | Autumn hawkbit            | O           |
| <i>Dactylis glomerata</i>       | Cocks foot                | O           |
| <i>Arrhenatherum elatius</i>    | False oatgrass            | F           |
| <i>Carex viridula</i>           | Yellow sedge              | R           |
| <i>Carex echinata</i>           | Star sedge                | R           |
| <i>Persicaria maculosa</i>      | Redshank                  | R           |
| <i>Galium palustre</i>          | Marsh bedstraw            | O           |
| <i>Lythrum salicaria</i>        | Purple loosestrife        | F           |
| <i>Anthoxanthum odoratum</i>    | Sweet vernal grass        | O           |
| <i>Holcus lanatus</i>           | Yorkshire fog             | F           |
| <i>Alopecurus geniculatus</i>   | Marsh foxtail             | R           |
| <i>Carex leporina</i>           | Oval sedge                | R           |
| <i>Juncus effusus</i>           | Soft rush                 | R           |
| <i>Argentina anserina</i>       | Silverweed                | O-F         |
| <i>Plantago lanceolata</i>      | Ribwort plantain          | F           |
| <i>Ranunculus repens</i>        | Creeping buttercup        | O           |
| <i>Ranunculus acris</i>         | Meadow buttercup          | F           |
| <i>Molinia caerulea</i>         | Purple moor grass         | F-A         |
| <i>Luzula multiflora</i>        | Heath woodrush            | O           |
| <i>Carex caryophylla</i>        | Spring sedge              | R           |
| <i>Agrostis capillaris</i>      | Common bent               | F           |
| <i>Potentilla erecta</i>        | Tormentil                 | F           |
| <i>Lotus pedunculatus</i>       | Greater birdsfoot trefoil | F           |
| <i>Juncus conglomeratus</i>     | Compact rush              | O           |
| <i>Ajuga reptans</i>            | Bugle                     | R           |
| <i>Salix cinerea</i>            | Grey willow               | A           |
| <i>Potentilla erecta</i>        | Tormentil                 | F           |

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| Botanical Name        | Common Name               | DAFOR scale    |
|-----------------------|---------------------------|----------------|
| Sphagnum              | Sphagnum                  | A-R            |
| Calluna vulgaris      | Common heather            | R-O            |
| Amagallis tenella     | Bog pimpernel             | R              |
| Pteridium aquilinum   | Bracken                   | D (within HD1) |
| Epilobium tetragonum  | Square stalked willowherb | O              |
| Juncus acutiflorus    | Sharp flowered rush       | A              |
| Angelica sylvestris   | Wild angelica             | R              |
| Filipendula ulmaria   | Meadowsweet               | O              |
| Mentha aquatica       | Water mint                | O              |
| Ranunculus flammula   | Lesser spearwort          | R              |
| Carex panicea         | Carnation sedge           | O              |
| Hypericum elodes      | Marsh st. Johnswort       | R              |
| Alnus glutinosa       | Alder                     | O              |
| Carex flacca          | Blue green sedge          | O              |
| Pedicularis sylvatica | Lousewort                 | R              |
| veronica scutellata   | Marsh speedwell           | R              |
| Dactylorhiza maculata | Heath spotted orchid      | R              |
| Cirsium palustre      | Marsh thistle             | O              |
| Juncus acutifloris    | Sharp flowered rush       | A              |
| Jacobaeca aquatica    | Marsh ragwort             | R              |
| Comarum palustre      | Marsh cinquefoil          | R              |
| scutellaria minor     | Lesser skullcap           | R              |
| Vioa palustris        | Marsh violet              | R              |
| Ulex europeaus        | gorse                     | O              |
| Rumex acetosa         | common sorrel             | O              |

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**Field b species list**

| Botanical Name        | Common Name                | DAFOR scale |
|-----------------------|----------------------------|-------------|
| Ulex europaeus        | Gorse                      | O           |
| Betula pubescens      | Downy birch                | R           |
| Salix spp.            | Willow                     | O           |
| Alnus glutinosa       | Alder                      | R           |
| Prunus spinosa        | Blackthorn                 | R           |
| Jacobaea vulgaris     | Ragwort                    | R           |
| Centaurium erythraea  | Centaury                   | R           |
| Juncus acutiflorus    | Sharp flowered rush        | F           |
| Juncus effusus        | Soft rush                  | F           |
| Carex flacca          | Blue green sedge           | R-O         |
| Anthoxanthum odoratum | Sweet vernal grass         | R           |
| Cardamine pratensis   | Cuckoo flower              | R           |
| Ranunculus flammula   | Lesser Spearwort           | R           |
| Crataegus monogyna    | Hawthorn                   | R           |
| Blechnum spicant      | Hard fern                  | R           |
| Comarum palustra      | Marsh cinquefoil           | R           |
| Luzula campestris     | Field wood rush            | R-O         |
| Lythrium salicaria    | Purple loosestrife         | R           |
| Fillipendula ulmaria  | Meadow sweet               | R           |
| Lotus pedunculatus    | Greater birds foot trefoil | R           |
| Agrostis stolonifera  | Creeping bent grass        | R-O         |
| Ranunculus repens     | Creeping buttercup         | R           |
| Ranunculus acris      | Meadow buttercup           | R           |
| Argentina anserina    | Silverweed                 | R           |
| Juncus conglomeratus  | Compact rush               | R-O         |
| Potentilla erecta     | Tormentil                  | R           |
| Succisa pratensis     | Devils bit scabious        | R           |
| Plantago lanceolata   | Ribwort plantain           | R           |
| Centaurea nigra       | Knapweed                   | R           |
| Pedicularis sylvatica | Lousewort                  | R           |
| Iris psedoacorus      | Flag Iris                  | R           |

| Botanical Name       | Common Name   | DAFOR scale |
|----------------------|---------------|-------------|
| Mentha aquatica      | Watermint     | R           |
| Cirsium palustre     | Marsh thistle | R           |
| Hypochaeris radicata | Cats ear      | R           |

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#### Field c species list

| Botanical Name          | Common Name                | DAFOR |
|-------------------------|----------------------------|-------|
| Carex viridula          | Yellow sedge               | O-R   |
| Succisa pratensis       | Devil's bit scabious       | F     |
| Carex panicea           | Carnation sedge            | O     |
| Anthoxanthum odoratum   | Sweet vernal grass         | O     |
| Scorzonoides autumnalis | Autumn hawkbit             | R     |
| Pedicularis sylvatica   | Lousewort                  | R     |
| Mollinia caerulea       | Purple moor grass          | O     |
| Dactylorhiza maculata   | Heath spotted orchid       | A     |
| Potentilla erecta       | Tormentil                  | R     |
| Lotus pedunculatus      | Greater birds foot trefoil | R     |
| Lythrium salicaria      | Purple loosestrife         | R     |
| Juncus acutiflorus      | Sharp flowered rush        | O     |
| Agrostis calillaris     | Common bent                | O     |
| Holcus lanatus          | Yorkshire Fog              | O     |
| Trifolium repens        | White clover               | R     |
| Fillipendula ulmaria    | Meadow sweet               | R     |
| Ranunculus acris        | Meadow buttercup           | R     |
| Centaurea nigra         | Knapweed                   | R     |
| Hydrocotyle vulgaris    | Marsh pennywort            | R     |
| Trifolium pratense      | Red clover                 | R     |
| Plantago lanceolata     | Ribwort plantain           | R     |
| Juncus conglomeratus    | Compact rush               | A     |
| Luzula multiflora       | Heath woodrush             | F     |
| Cirsium palustre        | Marsh thistle              | R     |
| Carex flacca            | Blue green sedge           | O     |

| Botanical Name        | Common Name        | DAFOR |
|-----------------------|--------------------|-------|
| Mentha aquatica       | Water mint         | O     |
| Pulicaria dysenterica | Common fleabane    | R     |
| Ranunculus repens     | Creeping buttercup | R     |
| Argentina anserina    | Silverweed         | R     |
| Galium palustre       | Marsh bedstraw     | R-O   |
| Persica maculosa      | Redshank           | R     |
| Juncus bufonius       | Toad rush          | R     |
| Cynosurus cristatus   | Crested dogstail   | O     |
| Angelica sylvestris   | Wild angelica      | R     |
| Betula pubescens      | Downy birch        | R     |
| Salix                 | Grey willow        | R     |
| Calluna vulgaris      | Common heather     | R     |
| unknown               | Moss Spp.          | F     |

#### Field d species list

| Botanical Name      | Common Name               | DAFOR |
|---------------------|---------------------------|-------|
| Centaurea nigra     | Knapweed                  | R     |
| Ranunculus acris    | Meadow buttercup          | R     |
| Plantago lanceolata | Ribwort plantain          | O     |
| Festuca pratensis   | Meadow fescue             | F     |
| Dactylis glomerata  | Cocksfoot                 | F     |
| Ranunculus repens   | Creeping buttercup        | O     |
| Potentilla anserina | Silverweed                | A*    |
| Juncus effusus      | Soft rush                 | F*    |
| Lotus pedunculatus  | Greater birdsfoot trefoil | R     |
| Rumex acetosa       | Common sorrel             | R     |
| Cardamine pratensis | Cuckooflower              | R     |
| Filipendula ulmaria | Meadowsweet               | O*    |

*\*In wet areas only*

**Field e species list**

| Botanical Name           | Common Name                | DAFOR scale |
|--------------------------|----------------------------|-------------|
| Juncus acutiflorus       | Sharp flowered rush        | A           |
| Lythrium salicaria       | Purple loosestrife         | F           |
| Ranunculus acris         | Meadow buttercup           | A           |
| Fillipendula ulmaria     | Meadow sweet               | O           |
| Lotus pedunculatus       | Greater birds foot trefoil | A           |
| Holcus lanatus           | Yorkshire Fog              | F           |
| Anthoxanthum odoratum    | Sweet vernal grass         | F           |
| Creeping soft grass      | Holcus mollis              | R           |
| Trifolium repens         | White clover               | O           |
| Rumex acetosa            | Common sorrel              | R           |
| Cynosurus crissatus      | Crested dogtail            | R           |
| Agrostis stolonifera     | Creeping bent grass        | O           |
| Ranunculus repens        | Creeping buttercup         | O           |
| Lolium perenne           | Perennial ryegrass         | R           |
| Cirsium arvense          | Creeping thistle           | R           |
| Argentina anserina       | Silverweed                 | O           |
| Juncus conglomeratus     | Compact rush               | O           |
| Agrostis calillaris      | Common bent                | O           |
| Potentilla erecta        | Tormentil                  | A           |
| Succisa pratensis        | Devils bit scabious        | A           |
| Stellaria media          | Common chickweed           | O           |
| Dactylorhiza maculata    | Heath spotted orchid       | F           |
| Trifolium pratense       | Red clover                 | O           |
| Scorzoneroide autumnalis | Autumn hawkbit             | F           |
| Luzula multiflora        | Heath woodrush             | O           |
| Plantago lanceolata      | Ribwort plantain           | O           |
| Centaurea nigra          | Knapweed                   | F           |
| Carex panicea            | Carnation sedge            | O           |
| Pedicularis sylvatica    | Lousewort                  | R           |
| Galium palustre          | Marsh bedstraw             | O           |
| Iris pseudoacorus        | Flag Iris                  | O           |

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| Botanical Name        | Common Name       | DAFOR scale |
|-----------------------|-------------------|-------------|
| Mentha aquatica       | Watermint         | O           |
| Lathyrus pratensis    | Meadow vetchling  | O           |
| Vicia cracca          | Tufted vetch      | R           |
| Cirsium palustre      | Marsh thistle     | R           |
| Mollinia caerulea     | Purple moor grass | O           |
| Prunella vulgaris     | Self heal         | O           |
| Carex flacca          | Blue-green sedge  | R-O         |
| Pulicaria dysenterica | Common fleabane   | R           |
| Hypochaeris radicata  | Cat's ear         | R           |

#### Field 15 species list

| Botanical Name        | Common Name                | DAFOR scale |
|-----------------------|----------------------------|-------------|
| Jacobaea aquatica     | Marsh ragwort              | R*          |
| Polygala vulgaris     | Common milkwort            | R*          |
| Pedicularis sylvatica | Lousewort                  | R*          |
| Dactylorhiza maculata | Heath spotted orchid       | R*          |
| Lotus pedunculatus    | Greater birds foot trefoil | O           |
| Holcus lanatus        | Yorkshire Fog              | O           |
| Juncus acutiflorus    | Sharp flowered rush        | O*          |
| Vicia cracca          | Tufted vetch               | R           |
| Stellaria media       | Common chickweed           | R           |
| Lathyrus linifolius   | Bitter vetch               | R           |
| Trifolium pratense    | Red clover                 | R           |
| Argentina anserina    | Silverweed                 | R           |
| Gallium palustre      | Marsh bedstraw             | O*          |
| Lythrium salicaria    | Purple loosestrife         | R*          |
| Agrostis calillaris   | Common bent                | O           |
| Carex viridula        | Yellow sedge               | O*          |
| Carex panicea         | Carnation sedge            | O*          |
| Lythrium salicaria    | Purple loosestrife         | R*          |
| Cirsium palustre      | Marsh thistle              | R*          |

| Botanical Name       | Common Name          | DAFOR scale |
|----------------------|----------------------|-------------|
| Fillipendula ulmaria | Meadow sweet         | O*          |
| Plantago lanceolata  | Ribwort plantain     | R           |
| Mentha aquatica      | Water mint           | O*          |
| Prunella vulgaris    | Self heal            | R           |
| Trifolium repens     | White clover         | R           |
| Succisa pratensis    | Devil's bit scabious | O*          |
| Ranunculus flammula  | Lesser Spearwort     | F*          |
| Ulex Europaeus       | Gorse                | O*          |

*\*Absent or rare in dry calcareous and neutral grassland*

#### Field 17 species list

| Botanical Name        | Common Name               | DAFOR |
|-----------------------|---------------------------|-------|
| Mollinia caerulea     | Purple moor grass         | O     |
| Holcus lanatus        | Yorkshire fog             | O     |
| Anthoxanthum odoratum | Sweet vernal grass        | O     |
| Agrostis capillaris   | Common bent               | O     |
| Dactylorhiza maculata | Heath spotted orchids     | A     |
| Salix repens          | Creeping willow           | R     |
| Ulex europaeus        | Gorse                     | R     |
| Lysimachia tenella    | Bog pimpernel             | O     |
| Ajuga reptans         | Bugle                     | R     |
| Potentilla erecta     | Tormentil                 | R     |
| Succisa pratensis     | Devil's bit scabious,     | A     |
| Luzula multiflora     | Heath woodrush            | A     |
| Carex panicea         | Carnation sedge           | F     |
| Agrostis calillaris   | Common bent               | O     |
| Lotus pedunculatus    | Greater birdsfoot trefoil | O     |
| Trifolium pratense    | red clover                | R     |
| Dactylis glomerata    | cocksfoot                 | R     |
| Centaurea nigra       | Knapweed                  | R     |
| Calluna vulgaris      | Common heather            | R     |

| Botanical Name        | Common Name         | DAFOR |
|-----------------------|---------------------|-------|
| Unknown               | Moss species        | A     |
| Pedicularis sylvatica | Lousewort           | R     |
| Cirsium palustre      | Marsh thistle       | R     |
| Jacobaea aquatica     | Water ragwort       | R     |
| Mentha aquatica       | Watermint           | R     |
| Carex panicea         | Carnation sedge     | O     |
| Carex viridula        | Yellow sedge        | O-R   |
| Juncus acutiflorus    | Sharp flowered rush | O     |
| Juncus conglomeratus  | Compact rush        | O     |
| Betula pubescens      | Downy birch         | O     |

#### Field 29 species list

| Botanical Name        | Common Name        | DAFOR scale |
|-----------------------|--------------------|-------------|
| Juncus conglomerata   | Compact rush       | O*          |
| Unknown               | Sedge spp.         | O*          |
| Cirsium palustre      | Marsh thistle      | R*          |
| Rumex acetosa         | Sorrel             | O           |
| Trifolium repens      | White clover       | F           |
| Unknown               | moss spp.          | F*          |
| Ranunculus repens     | creeping buttercup | F           |
| Holcus lanatus        | yorkshire fog      | A           |
| Plantago lanceolata   | Ribwort plantain   | F           |
| Ranunculus acris      | Meadow buttercup   | O           |
| Anthoxanthum odoratum | Sweet vernal grass | F           |
| Stellaria media       | Lesser stitchwort  | R           |
| Taraxacum officinale  | Dandelion          | F           |
| Scorzonera autumnalis | Autumn hawkbit     | R           |
| Ranunculus flammula   | Lesser spearwort   | O*          |
| Cardamine pratensis   | Cuckoo flower      | O*          |
| Angelica sylvestris   | Wild angelica      | R*          |
| Plantago media        | Hoary plantain     | O           |

\*mostly in wet areas

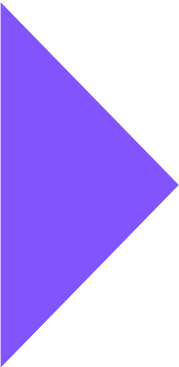
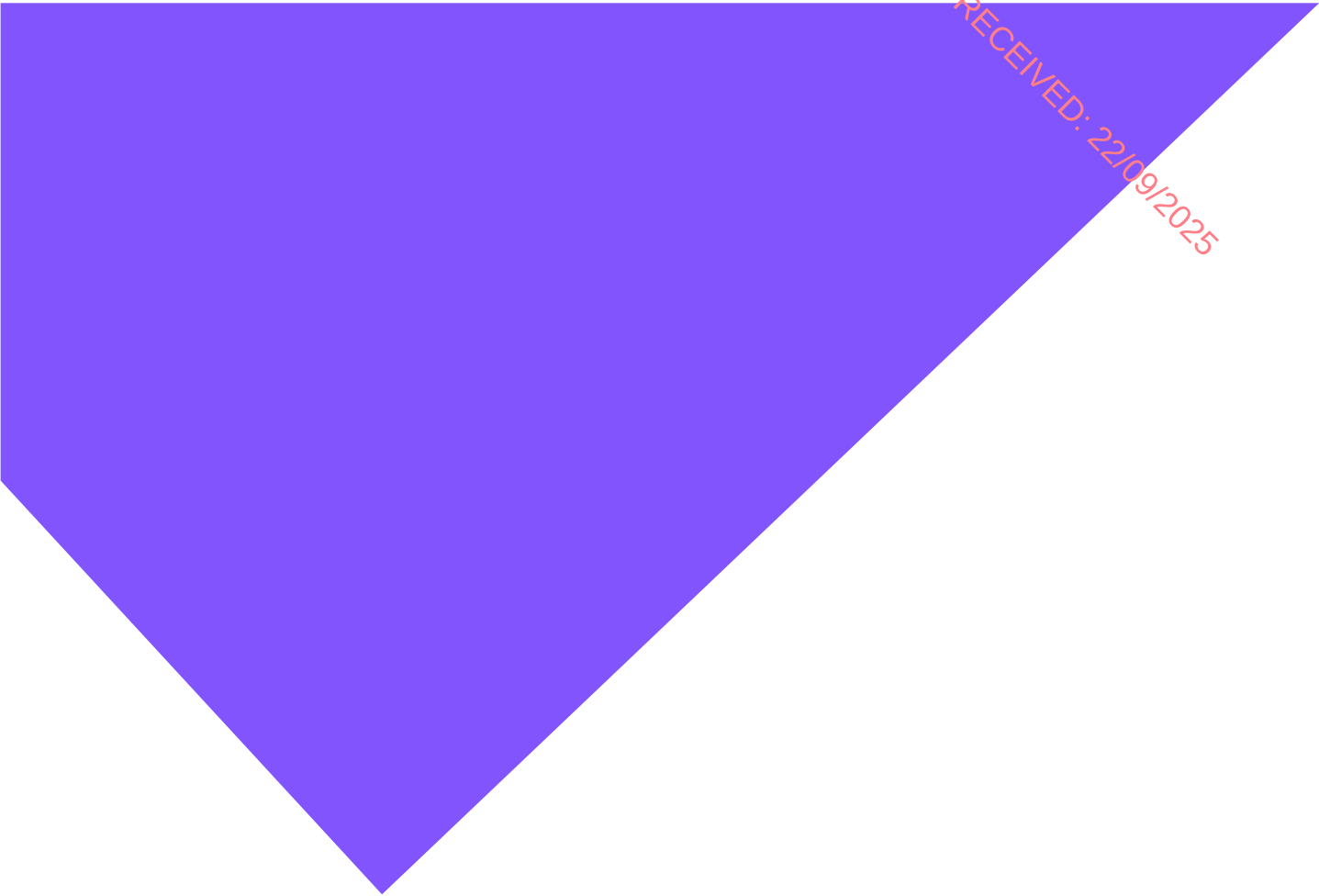
**Field 31 species list**

| Botanical Name        | Common Name               | DAFOR scale |
|-----------------------|---------------------------|-------------|
| Holcus lanatus        | Yorkshire fog             | F           |
| Anthoxanthum odoratum | Sweet vernal grass        | F           |
| Taraxicum officinale  | Dandelion                 | O           |
| Trifolium repens      | White clover              | F           |
| Plantago lanceolata   | Ribwort plantain          | F           |
| Juncus effusus        | Soft rush                 | F*          |
| Rumex obtusifolius    | Broadleaved dock          | O           |
| Argentina anserina    | Silverweed                | A – O*      |
| Lythrum salicaria     | Purple loosestrife        | O*          |
| Juncus conglomeratus  | Compact rush              | F*          |
| Molinia caerulea      | Purple moorgrass          | O*          |
| Ranunculus repens     | Creeping buttercup        | F           |
| Agrostis capillaris   | Common bent               | F           |
| Jacobaea vulgaris     | Ragwort                   | R           |
| Lotus pedunculatus    | Greater birdsfoot trefoil | O           |
| Epilobium parviflorum | Hoary willowherb          | O*          |

*\*Absent in dry meadow*

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## Appendix 7.3 – Arborist Survey



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# **Arboricultural Assessment & Impact Report**

Shelburne Energy Park, Nash,  
Co Wexford

**SEPTEMBER 2025**

Project Name: Shelburne Energy Park, Nash, Co Wexford  
Project Number: TSHEL001

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## 1. Summary

This surveys examined 28 locations across 3 sites at Nash, Co Wexford. The purpose of the survey was to assess the impact of proposed roadways on the hedgerows at these locations. In general, there were no standard trees within the areas surveyed and hedgerow vegetation was limited in arboricultural value. Less than 1% of the total hedgerow across the 3 sites will be impacted by the proposed roadways. The overall impact is not considered significant.

## 2. Client Brief

CMK Hort and Arb Ltd. were contracted by Gen7 Renewable Energy Ltd. to conduct an assessment of hedgerows at Nash, Co Wexford. The survey took place on 26th August 2025. The purpose of the assessment was to provide the client with baseline data on the nature and composition of hedgerows at specific locations. These locations are proposed access/egress routes which may have potential to impact the arboricultural elements of the site's hedgerows.

## 3. Methodology

The survey methodology follows the recommendations contained within BS 5837 (Trees in Relation to Design, Demolition and Construction). Hedgerows were assessed by their average heights and extents, the species present, and comments about the nature of the hedgerow. Survey methodology, along with supporting drawings and documentation, follows the guidance outlined in BS 5837 (2012). Trees were analyzed using the Visual Tree Assessment (VTA) methodology developed by Mattheck and Breloer (1994).

## 4. Site Description

The site at Nash, Co Wexford is currently in agricultural use and comprises a number of fields of mixed use (arable and livestock). The site has been divided into 3 separate site locations - Site A, Site B, and Site C. Occasionally, the site boundaries border domestic dwellings or public roadways but typically border further agricultural lands.



Image 1. Site location (redline boundary indicative only) © Google

## 5. General Description of Hedgerows

### Location 1

Access to public road L40232. There is an existing gap of approximately 6m for access to the field. Hawthorn hedge to 2m with no standard trees. Gorse forms a common component of the hedge with occasional bramble and bracken. Occasional elder present.

| <u>Location #1</u> | Linear Metres Impacted | Species Common name | Species Botanical name     | Occurrence                  |
|--------------------|------------------------|---------------------|----------------------------|-----------------------------|
|                    | 10m                    | Hawthorn            | <i>Crataegus monogyna</i>  | Primary element of hedgerow |
|                    |                        | Gorse               | <i>Ulex europea</i>        | Primary element of hedgerow |
|                    |                        | Bramble             | <i>Rubus fruticosus</i>    | Occasional                  |
|                    |                        | Bracken             | <i>Pteridium aquilinum</i> | Occasional                  |
|                    |                        | Elder               | <i>Sambucus nigra</i>      | Occasional                  |

### Location 2

Field boundary vegetation. No standard trees. 1.5m height. Almost exclusively bramble and bracken atop dilapidated stone boundary wall. An existing gap of 5m is present.

| <u>Location #2</u> | Linear Metres Impacted | Species Common name | Species Botanical name     | Occurrence                  |
|--------------------|------------------------|---------------------|----------------------------|-----------------------------|
|                    | 1m                     | Bramble             | <i>Rubus fruticosus</i>    | Primary element of hedgerow |
|                    |                        | Bracken             | <i>Pteridium aquilinum</i> | Primary element of hedgerow |

## 5. General Description of Hedgerows

### Location 3

Field boundary vegetation. No standard trees. 1.5m height. Almost exclusively bramble and elder atop dilapidated stone boundary wall. An existing gap of 5m is present.

| <u>Location #3</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|--------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                    | 11m                    | Bramble             | <i>Rubus fruticosus</i> | Primary element of hedgerow |
|                    |                        | Elder               | <i>Sambucus nigra</i>   | Primary element of hedgerow |

### Location 4

Field boundary vegetation. No standard trees. 1.5m height. Almost exclusively bramble and elder atop dilapidated stone boundary wall. An existing gap of 5m is present.

| <u>Location #4</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|--------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                    | 10m                    | Bramble             | <i>Rubus fruticosus</i> | Primary element of hedgerow |
|                    |                        | Elder               | <i>Sambucus nigra</i>   | Primary element of hedgerow |

### Location 5

Field boundary vegetation. No standard trees. 1.5m height. Exclusively bramble atop dilapidated stone boundary wall. An existing gap of 5m is present.

| <u>Location #5</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|--------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                    | 8m                     | Bramble             | <i>Rubus fruticosus</i> | Primary element of hedgerow |

## 5. General Description of Hedgerows

### Location 6

A bank which delineates the field boundary. There is no vegetation present.

| <u>Location #6</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence |
|--------------------|------------------------|---------------------|------------------------|------------|
|                    | n/a                    | n/a                 | n/a                    | n/a        |

### Location 7 & 8

Field boundary vegetation. No standard trees. 1.25m height. Elder and hawthorn are the primary vegetation present.

| <u>Location #7 &amp; #8</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                  |
|-----------------------------|------------------------|---------------------|---------------------------|-----------------------------|
|                             | 10m                    | Hawthorn            | <i>Crataegus monogyna</i> | Primary element of hedgerow |
|                             |                        | Elder               | <i>Sambucus nigra</i>     | Primary element of hedgerow |

### Location 9

Roadside boundary with L40232. No standard trees present. Hedgerow is 1.5m height and predominantly Bramble and Elder. There is an existing 6m gap.

| <u>Location #9</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|--------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                    | 12m                    | Bramble             | <i>Rubus fruticosus</i> | Primary element of hedgerow |
|                    |                        | Elder               | <i>Sambucus nigra</i>   | Primary element of hedgerow |

## 5. General Description of Hedgerows

### Location 10

Field boundary hedgerow with x3 standard hawthorn trees present. A mature ash with fair vigour is present to the north of primary hedgerow and the roots are likely within the area of proposed roadway.

| <u>Location #10</u> | Linear Metres Impacted | Species Common name | Species Botanical name     | Occurrence                  |
|---------------------|------------------------|---------------------|----------------------------|-----------------------------|
|                     | 5m                     | Ash                 | <i>Rubus fruticosus</i>    | Primary element of hedgerow |
|                     |                        | Hawthorn            | <i>Sambucus nigra</i>      | Primary element of hedgerow |
|                     |                        | Bramble             | <i>Rubus fruticosus</i>    | Common                      |
|                     |                        | Bracken             | <i>Pteridium aquilinum</i> | Occasional                  |

### Location 11

Field boundary bank of 0.75m height. No standard trees present. Predominantly Gorse and bramble.

| <u>Location #11</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|---------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                     | 5m                     | Gorse               | <i>Ulex europea</i>     | Primary element of hedgerow |
|                     |                        | Bramble             | <i>Rubus fruticosus</i> | Primary element of hedgerow |

## 5. General Description of Hedgerows

### Location 12, 13 & 14

No vegetation of note or arboricultural importance present.

| <u>Location #12, 13 &amp; 14</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence |
|----------------------------------|------------------------|---------------------|------------------------|------------|
|                                  | n/a                    | n/a                 | n/a                    | n/a        |

### Location 15

Roadside hedgerow adjoining L80591. There is an existing gap of 5m. Strong population of Goat Willow present to 8m in height with good vigour. Occasional Gorse and bramble within the understory.

| <u>Location #15</u> | Linear Metres Impacted | Species Common name | Species Botanical name  | Occurrence                  |
|---------------------|------------------------|---------------------|-------------------------|-----------------------------|
|                     | 5m                     | Goat Willow         | <i>Salix caprea</i>     | Primary element of hedgerow |
|                     |                        | Gorse               | <i>Ulex europea</i>     | Occasional                  |
|                     |                        | Bramble             | <i>Rubus fruticosus</i> | Occasional                  |

### Location 16

Roadside boundary hedgerow with L80591. There is an existing gap of 6m. No standard trees are present and the main hedgerow species are Elder, hawthorn, with the occasional young ash and gorse. Heights are to a maximum 4m.

| <u>Location #16</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                 |
|---------------------|------------------------|---------------------|---------------------------|----------------------------|
|                     | 4m                     | Elder               | <i>Sambucus nigra</i>     | Main component of hedgerow |
|                     |                        | Hawthorn            | <i>Crataegus monogyna</i> | Main component of hedgerow |
|                     |                        | Ash                 | <i>Fraxinus excelsior</i> | Occasional                 |
|                     |                        | Gorse               | <i>Ulex europea</i>       | Common                     |

## 5. General Description of Hedgerows

### Location 17

Field entrance roadway with some hedgerow elements and vegetation in surrounding ditches. 2no early mature Ash trees with poor conditions due to Ash dieback disease. 2 mature goat willow also present.

| <u>Location #17</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                  |
|---------------------|------------------------|---------------------|---------------------------|-----------------------------|
|                     | <1m                    | Goat Willow         | <i>Salix caprea</i>       | Primary element of hedgerow |
|                     |                        | Ash                 | <i>Fraxinus excelsior</i> | Occasional                  |

### Location 18

Field boundary hedgerow with an existing gap of 5m. The vegetation present is Gorse and Goat Willow.

| <u>Location #18</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                 |
|---------------------|------------------------|---------------------|------------------------|----------------------------|
|                     | 3m                     | Goat Willow         | <i>Salix caprea</i>    | Main component of hedgerow |
|                     |                        | Gorse               | <i>Ulex europea</i>    | Common                     |

### Location 19

Field boundary hedgerow of hawthorn, gorse and holly to heights of 3-5m. There is an existing gap of 4m present.

| <u>Location #19</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                  |
|---------------------|------------------------|---------------------|---------------------------|-----------------------------|
|                     | 16m                    | Hawthorn            | <i>Crataegus monogyna</i> | Primary element of hedgerow |
|                     |                        | Gorse               | <i>Ulex europea</i>       | Common                      |
|                     |                        | Holly               | <i>Ilex aquifolium</i>    | Occasional                  |

## 5. General Description of Hedgerows

### Location 20

Field boundary hedgerow with an existing gap of 4m. The vegetation present is gorse and mature goat willow to heights of 8m.

| <u>Location #20</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                 |
|---------------------|------------------------|---------------------|------------------------|----------------------------|
|                     | 2.5m                   | Goat Willow         | <i>Salix caprea</i>    | Main component of hedgerow |
|                     |                        | Gorse               | <i>Ulex europea</i>    | Common                     |

### Location 21

Field boundary hedgerow with an existing gap of 5m. The vegetation present is mature birch and goat willow with some early mature oak also. Heights range from 8-10m.

| <u>Location #21</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                 |
|---------------------|------------------------|---------------------|------------------------|----------------------------|
|                     | 6m                     | Goat Willow         | <i>Salix caprea</i>    | Main component of hedgerow |
|                     |                        | Birch               | <i>Ulex europea</i>    | Common                     |
|                     |                        | Oak                 | <i>Quercus robur</i>   | Common                     |

### Location 22

Field boundary hedgerow of early mature goat willow, gorse, holly and mature birch to heights of 4-9m. There is an existing gap of 3m present.

| <u>Location #22</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                  |
|---------------------|------------------------|---------------------|------------------------|-----------------------------|
|                     | 20m                    | Goat Willow         | <i>Salix caprea</i>    | Primary element of hedgerow |
|                     |                        | Gorse               | <i>Ulex europea</i>    | Common                      |
|                     |                        | Holly               | <i>Ilex aquifolium</i> | Occasional                  |
|                     |                        | Birch               | <i>Betula pendula</i>  | Common                      |

## 5. General Description of Hedgerows

### Location 23

A roadside hedgerow of hawthorn, elm and young ash with an existing gap of 5m. Heights range from 3-5m.

| <u>Location #23</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                 |
|---------------------|------------------------|---------------------|---------------------------|----------------------------|
|                     | 7m                     | Hawthorn            | <i>Crataegus monogyna</i> | Main component of hedgerow |
|                     |                        | Elm                 | <i>Ulmus glabra</i>       | Common                     |
|                     |                        | Ash                 | <i>Fraxinus excelsior</i> | Common                     |

### Location 24

Field boundary hedgerow of hawthorn, blackthorn and goat willow all to approximately 5m in height at maximum.

| <u>Location #24</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                  |
|---------------------|------------------------|---------------------|---------------------------|-----------------------------|
|                     | 5m                     | Goat Willow         | <i>Salix caprea</i>       | Primary element of hedgerow |
|                     |                        | Hawthorn            | <i>Crataegus monogyna</i> | Common                      |
|                     |                        | Blackthorn          | <i>Prunus spinosa</i>     | Common                      |

### Location 25

A field boundary hedgerow of goat willow and sycamore with hawthorn occasional. Heights range from 4-6m.

| <u>Location #25</u> | Linear Metres Impacted | Species Common name | Species Botanical name     | Occurrence                 |
|---------------------|------------------------|---------------------|----------------------------|----------------------------|
|                     | 12m                    | Goat Willow         | <i>Salix caprea</i>        | Main component of hedgerow |
|                     |                        | Sycamore            | <i>Acer pseudoplatanus</i> | Common                     |
|                     |                        | Hawthorn            | <i>Crataegus monogyna</i>  | Occasional                 |

## 5. General Description of Hedgerows

### Location 26

Field boundary hedgerow of goat willow and alder to 8-9m in height. There is an existing 4m wide gap.

| <u>Location #26</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                  |
|---------------------|------------------------|---------------------|------------------------|-----------------------------|
|                     | 3m                     | Goat Willow         | <i>Salix caprea</i>    | Primary element of hedgerow |
|                     |                        | Alder               | <i>Alnus glutinosa</i> | Common                      |

### Location 27

A field boundary hedgerow of goat willow and elm with hawthorn occasional. Heights range from 6-9m.

| <u>Location #27</u> | Linear Metres Impacted | Species Common name | Species Botanical name    | Occurrence                 |
|---------------------|------------------------|---------------------|---------------------------|----------------------------|
|                     | 10m                    | Goat Willow         | <i>Salix caprea</i>       | Main component of hedgerow |
|                     |                        | Elm                 | <i>Ulmus glabra</i>       | Common                     |
|                     |                        | Hawthorn            | <i>Crataegus monogyna</i> | Occasional                 |

### Location 28

A field boundary hedgerow of goat willow with a blackthorn base. There is an existing gap of 4m.

| <u>Location #28</u> | Linear Metres Impacted | Species Common name | Species Botanical name | Occurrence                 |
|---------------------|------------------------|---------------------|------------------------|----------------------------|
|                     | 5m                     | Goat Willow         | <i>Salix caprea</i>    | Main component of hedgerow |
|                     |                        | Blackthorn          | <i>Prunus spinosa</i>  | Common                     |

## 6. Image Index



Image 2 - Location 1



Image 3 - Location 2



Image 4 - Location 3

## 6. Image Index



Image 5 - Location 4



Image 6 - Location 5



Image 7 - Location 6

## 6. Image Index



Image 8 - Location 7 & 8



Image 9 - Location 9



Image 10 - Location 10

## 6. Image Index



Image 11 - Location 11



Image 12 - Location 12, 13 & 14



Image 15 - Location 15

## 6. Image Index



Image 16 - Location 16



Image 17 - Location 17



Image 18 - Location 18

## 6. Image Index



Image 19 - Location 19



Image 20 - Location 20



Image 21 - Location 21

## 6. Image Index



Image 22 - Location 22



Image 23 - Location 23



Image 24 - Location 24

## 6. Image Index



Image 25 - Location 25



Image 26 - Location 26



Image 27 - Location 27

## 6. Image Index



Image 28 - Location 28

## 7. Arboricultural Impact Assessment

**7.1 Impact of Developments:** The impact of the roadways at the 28 locations surveyed is deemed to be low. A total of 171.5m will be directly impacted to allow for the construction of roadway. This represents an average impact of 6m per location. The site as a whole has in excess of 11km of linear hedgerow. The overall impact therefor represents approximately 1% of total hedgerows present across sites A, B & C. Removal of vegetation for new internal roadways will mostly occur at locations where there are existing gaps for access. As the continuity of these hedgerows is already interrupted by existing gaps, a widening of gaps at these locations is not seen to be a significant impact.

## 7. Arboricultural Impact Assessment

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| Location      | Linear metres impacted | Significance |
|---------------|------------------------|--------------|
| L1            | 10                     | Moderate     |
| L2            | 1                      | Low          |
| L3            | 11                     | Moderate     |
| L4            | 10                     | Moderate     |
| L5            | 8                      | Low          |
| L6            | 0                      | None         |
| L7 & 8        | 10                     | Moderate     |
| L9            | 12                     | Moderate     |
| L10           | 5                      | Low          |
| L11           | 5                      | Low          |
| L12 & 13 & 14 | 0                      | None         |
| L15           | 5                      | Low          |
| L16           | 4                      | Low          |
| L17           | 1                      | Low          |
| L18           | 3                      | Low          |
| L19           | 16                     | Moderate     |
| L20           | 2.5                    | Low          |
| L21           | 6                      | Low          |
| L22           | 20                     | Moderate     |
| L23           | 7                      | Low          |
| L24           | 5                      | Low          |
| L25           | 12                     | Moderate     |
| L26           | 3                      | Low          |
| L27           | 10                     | Moderate     |
| L28           | 5                      | Low          |
| <b>Total:</b> | <b>171.5</b>           | <b>Low</b>   |

Table 7 - Impact on hedgerows

## 8. Limitations of Survey

This survey should be regarded as a preliminary assessment of the trees and deals with the current condition as identified during this survey only. Every attempt was made to identify hazardous trees in this report however; this survey was carried out from the ground and therefore cannot be held to have identified elements of decay, which may be hidden out of sight within the crown or beneath ivy or other obstructions. To counter this limitation in the survey process it is vital that during tree works any additional defects found by the climbing arborist are communicated to the consulting arborist to allow appropriate action to be taken.

The details within this survey are based on the condition of the trees during the survey period only. The findings in this survey cannot be held to be valid after any site disturbance, man-made or natural, which may have an adverse effect on any trees present.

## 9. Relevant Legislation

The following are policies from Wexford County Council's Development Plan 2022-2028 which relate to trees and hedgerows within development projects:

| Policy             | Content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective GI01 (b) | The retention and enhancement of landscape connections such as trees, hedgerow and water features that provide habitats for species and allow movement between areas as much as possible. This is particularly important for development in rural areas and one-off housing. Such connectivity both within and to features outside the site should be demonstrated in the application. In the event that it is not possible to retain landscape connections, and in order to ensure that there is no net loss of biodiversity, proposals to mitigate and compensate/provide for new connectivity shall be detailed                         |
| Objective GI01 (g) | Landscaping plans shall use species appropriate to the physical and environmental conditions of the site including soil conditions, availability of space and aspect. These plans should use a high diversity of native trees, incorporating a variety of sizes and age classes to improve visual and structural diversity. New hedging and hedge reinforcement in rural areas must comprise native species. Landscaping plans must also incorporate the principles of the 'Pollinator Friendly Planting Code – Professional Planting Recommendations' of the All-Ireland Pollinator Plan 2015 – 2020 and any updated version of this code |
| Objective NH11     | To protect trees or groups of trees and woodlands of particular amenity and nature conservation value and make tree preservation orders where appropriate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 9. Relevant Legislation

| Policy          | Content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Objective NH12  | To protect individual trees, groups of trees, woodlands and hedgerows of amenity and biodiversity value, from damage and/or degradation and work to prevent the disruption of the connectivity of the woodlands and hedgerows of the county. Commercial forestry will generally be exempt, except at peripheries and/or where they have not been maintained for commercial purposes                                                                                                                             |
| Objective ROS19 | To ensure that the design of residential schemes, including open spaces, optimises the existing features and topography of the site such as rivers, streams, rock outcrops, trees and hedgerows, and to ensure that biodiversity and green infrastructure are fully considered and integrated into schemes.                                                                                                                                                                                                     |
| Objective ACA04 | To protect existing buildings, structures, groups of structures, burial grounds, sites, landscapes and features such as trees, street furniture and paving, (including sub surface areas) which are considered to be intrinsic elements of the special character of the Architectural Conservation Area, from demolition or removal and non sympathetic alterations                                                                                                                                             |
| Objective TV17  | To require all significant residential applications of 50 or more dwellings to include a public realm plan and statement. These shall address quality at every level and shall contain a fully detailed and specified plan for the public realm of the scheme. The public realm plan shall include details of the street hierarchy, pavement treatment, permeability, open spaces and meeting places, landscaping and tree planting, boundary treatments, surfacing and street furniture, lighting and signage. |

## 10. Terminology

### Tree categories

A Trees of high quality and value due to their size, age, condition, historical/visual merit and/or conservation potential (a minimum of 40 years).

A1 Mainly arboricultural values. Particularly good examples of species, essential components of groups or of formal or semi-formal arboricultural features.

A2 Mainly landscape values. Trees, groups or woodlands which provide a definite screening or softening effects to the locality in relation to views into or out of site, or those of particular visual importance.

A3 Mainly cultural values, including conservation. Trees, groups or woodlands of significant conservation, historical, comparative or other value (e.g. veteran trees or wood-pasture).

B Trees of moderate quality and value (a minimum of 20 years).

B1 Mainly arboricultural values. Trees that might be included in high categories but are downgraded because of impaired condition (e.g. presence of remedial defects including unsympathetic past management and minor storm damage).

B2 Mainly landscape values. Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal features (e.g. trees of moderate quality within an avenue that includes better A category specimens) or trees situated internally to the site, therefore individually having little visual impact on the wider locality.

B3 Mainly cultural values including conservation. Trees with clearly identifiable conservation or other cultural benefits.

C Trees of low quality and value (a minimum of 10 years).

C1 Not qualifying in higher categories.

C2 Trees present in groups or woodlands but without conferring on them greater landscape value and/or trees offering low or only temporary screening benefit.

C3 Trees with very limited conservation or other cultural benefits.

## 10. Terminology contd.

**U Trees** in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management. Trees that are dead, dying or showing immediate and irreversible decline.

**Comments:** Refers to the tree's condition and suitability for the site.

**Common name:** Most widely used non-botanical name.

**Co-dominant:** Two branches assuming the role of leading shoots. When growing close together may form a weak attachment (included bark) at their point of contact. Trees with this defect may be in danger of splitting at this weak attachment.

**Crown Spread:** Measured in meters north, south, east and west.

**Decay fungi:** Refers to those species of fungi which degrade living wood and which may, depending on the degree of degradation, render the tree structurally unsound.

**Defects:** Refers to cracks, storm damage and any other damage mechanical or biological.

**Diameter:** Diameter of the trunk (millimetres) at 1.5m. M.S. after the measurement refers to the tree being multi-stemmed.

**Genus & Species:** Refers to the botanical names for the tree.

**Height:** Measured in meters.

**Monitor:** Refers to trees which need to be re-surveyed on a yearly basis to assess their condition. This timescale may be sooner where works or adverse weather conditions have impacted negatively on the trees.

**Overhaul:** A reference to standard tree surgery work which consists of the removal of deadwood, crossing branches and balancing where appropriate.

**Recommendations:** Indicates surgery work necessary for the retention or, where necessary, removal of the tree.

**Tree No.** Refers to numbered tag fixed to tree during survey.

## 11. References

BS 5837 (2012). Trees in Relation to Design Demolition and Construction

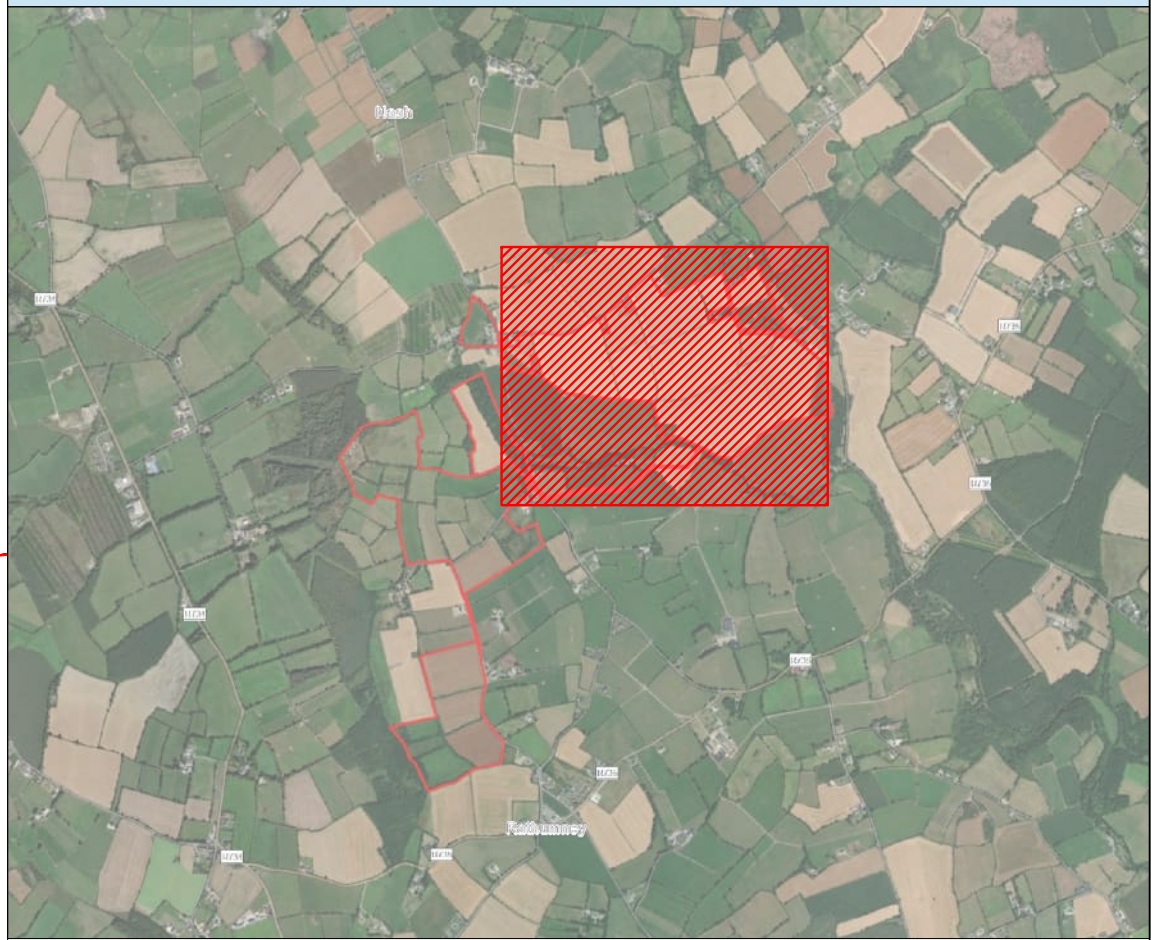
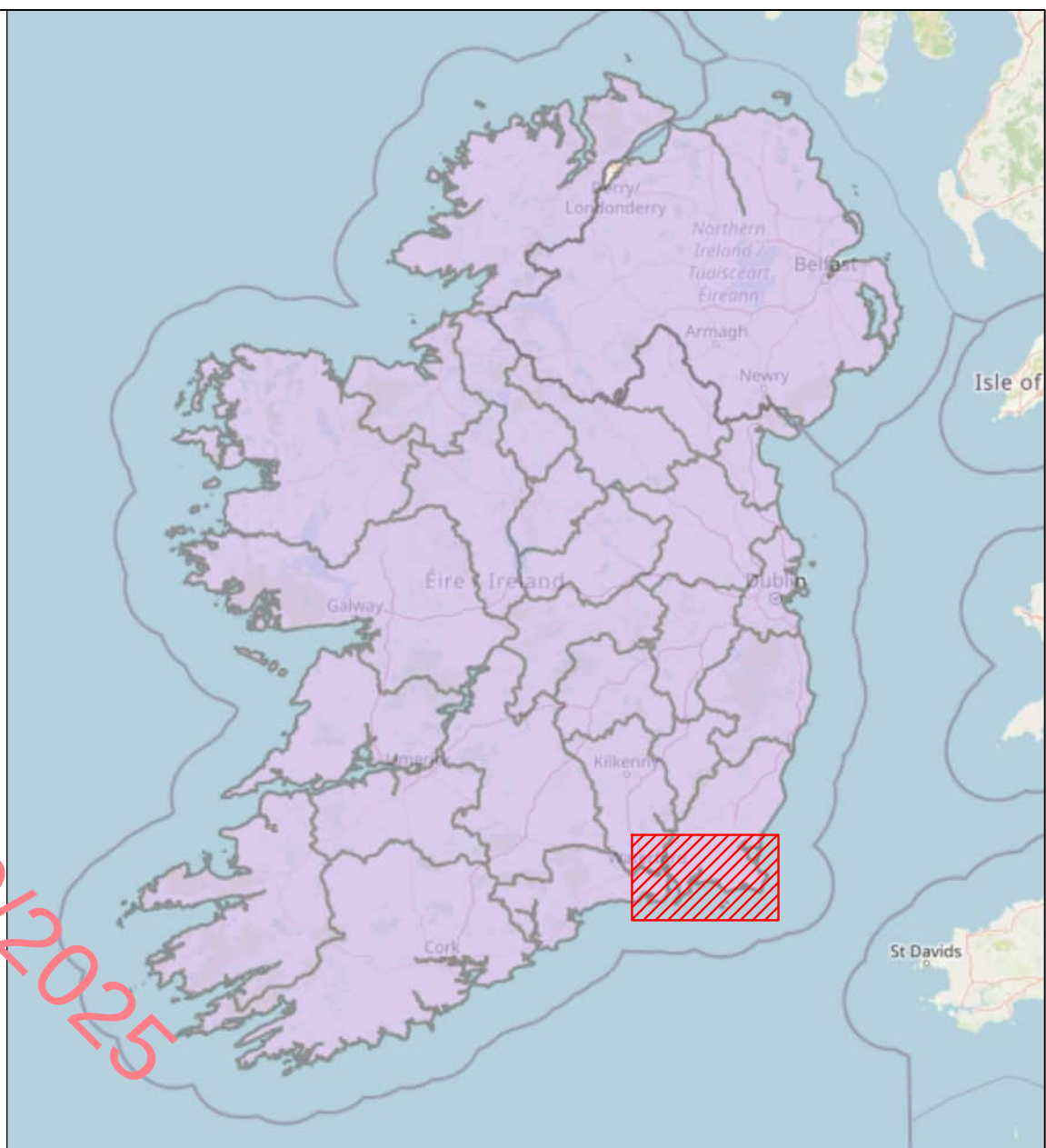
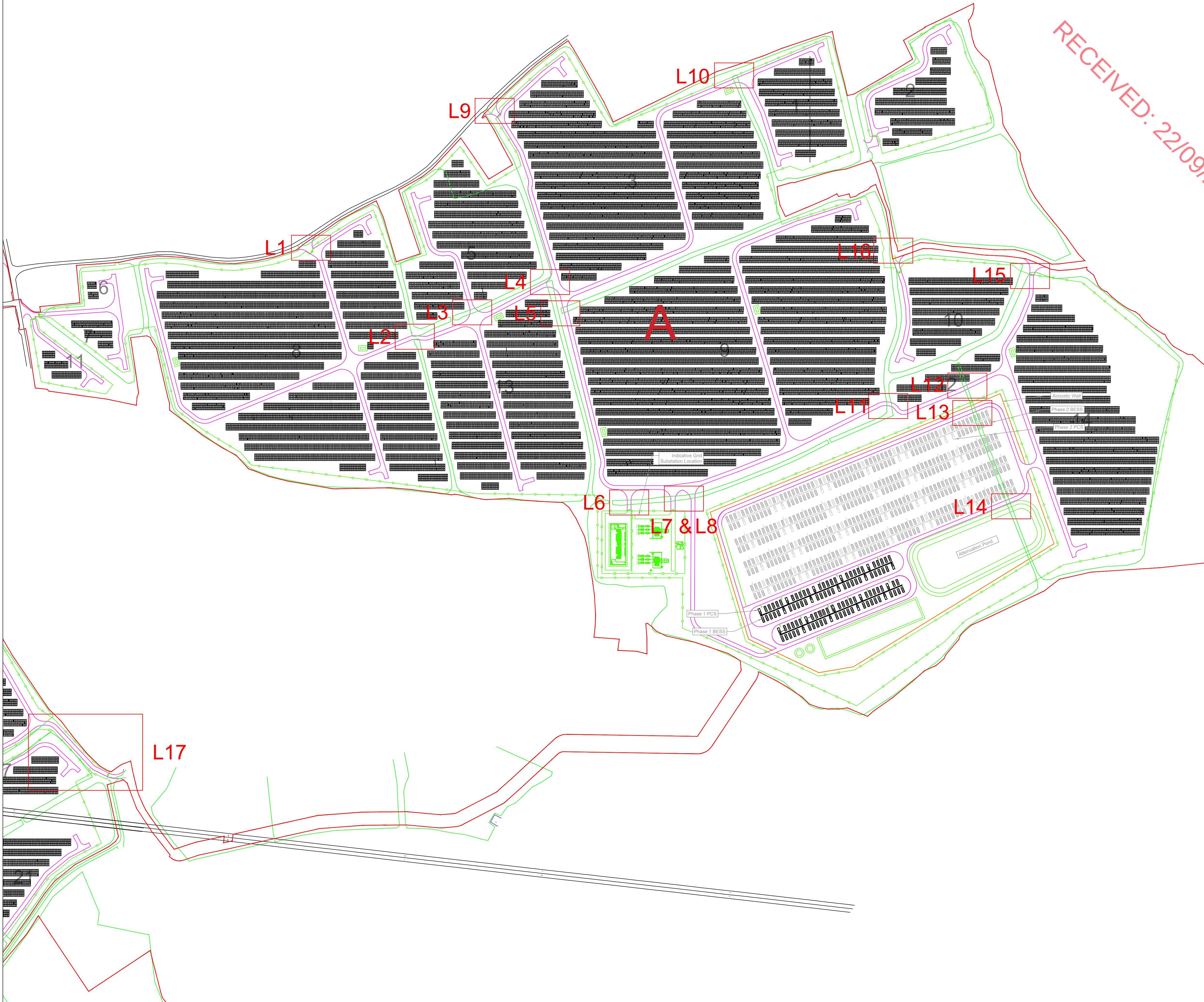
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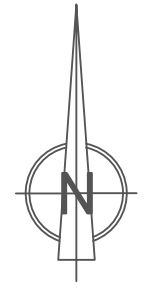
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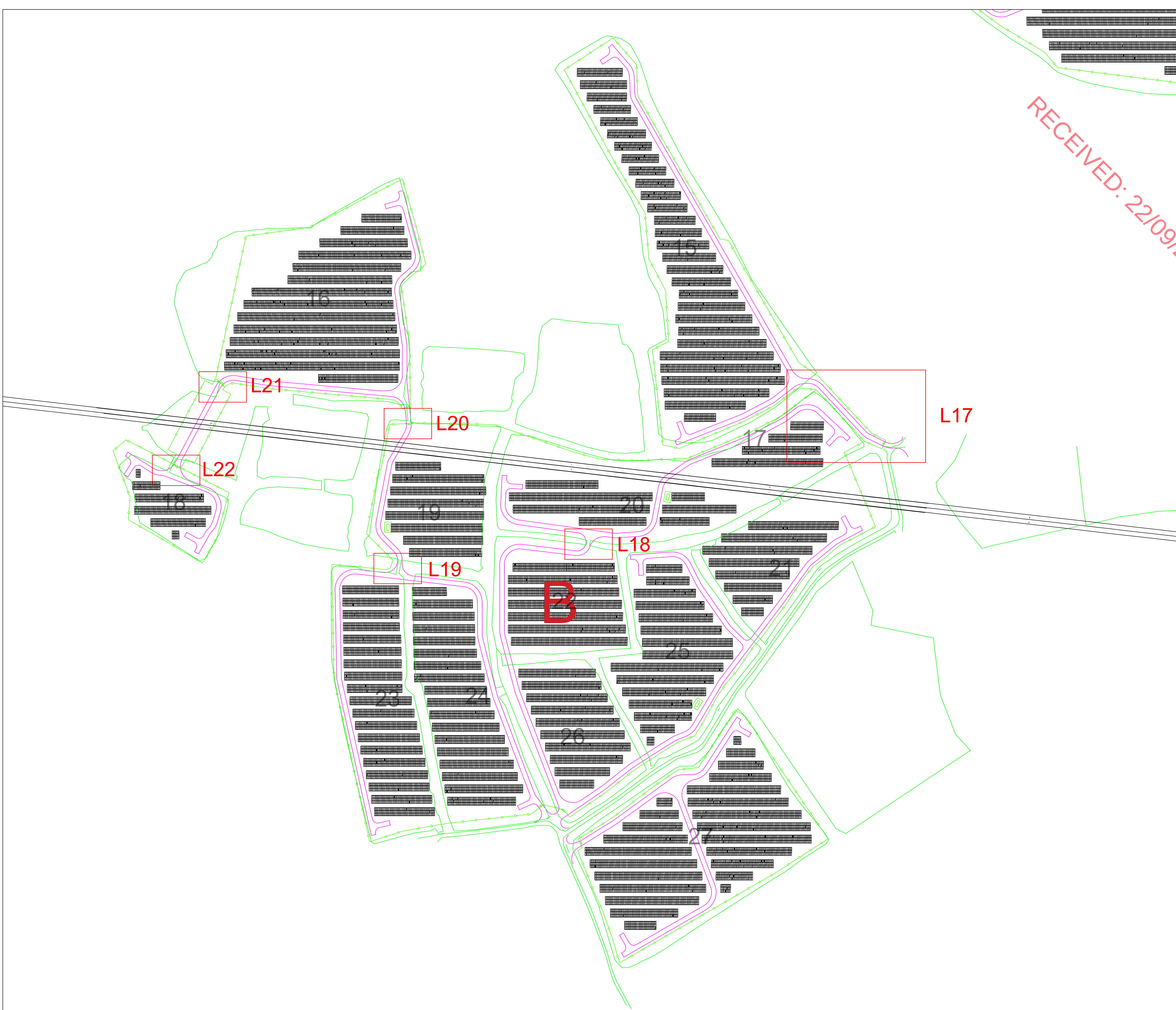
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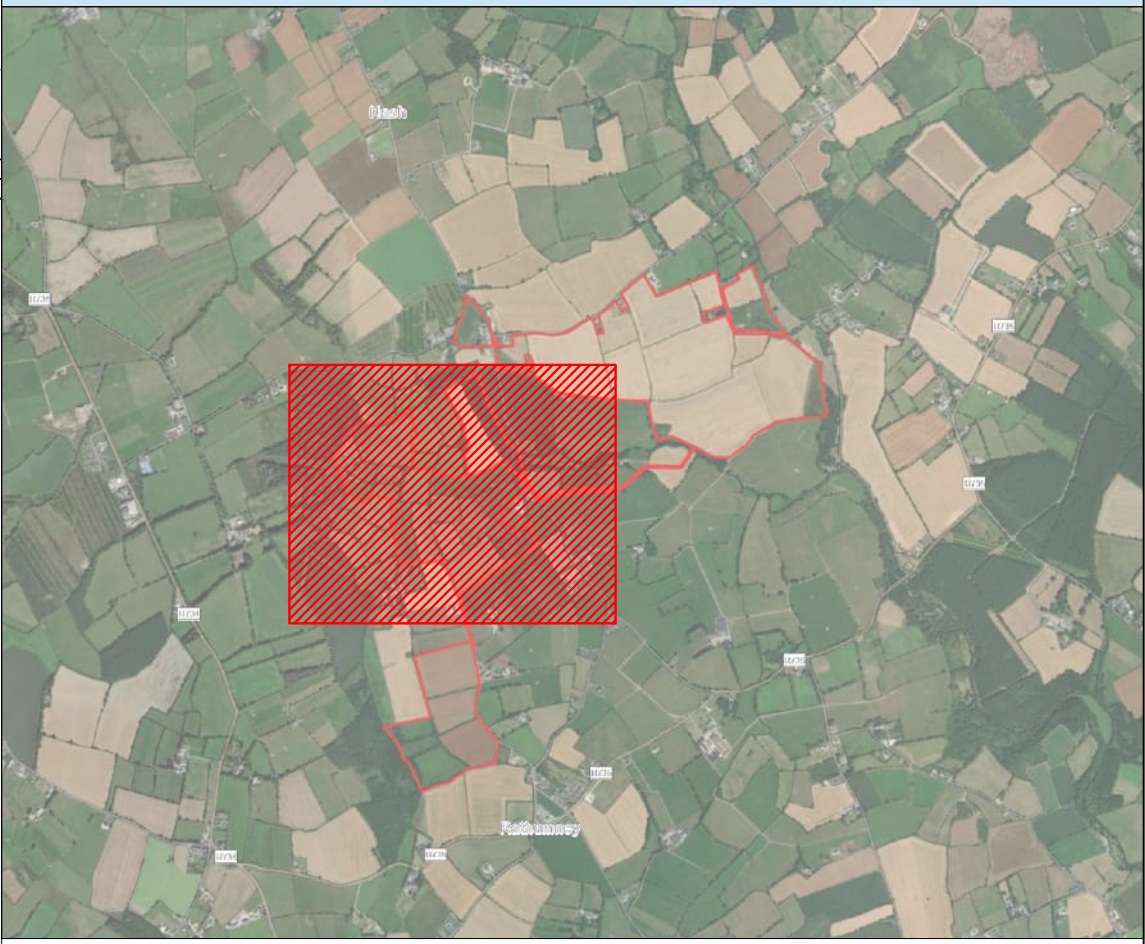
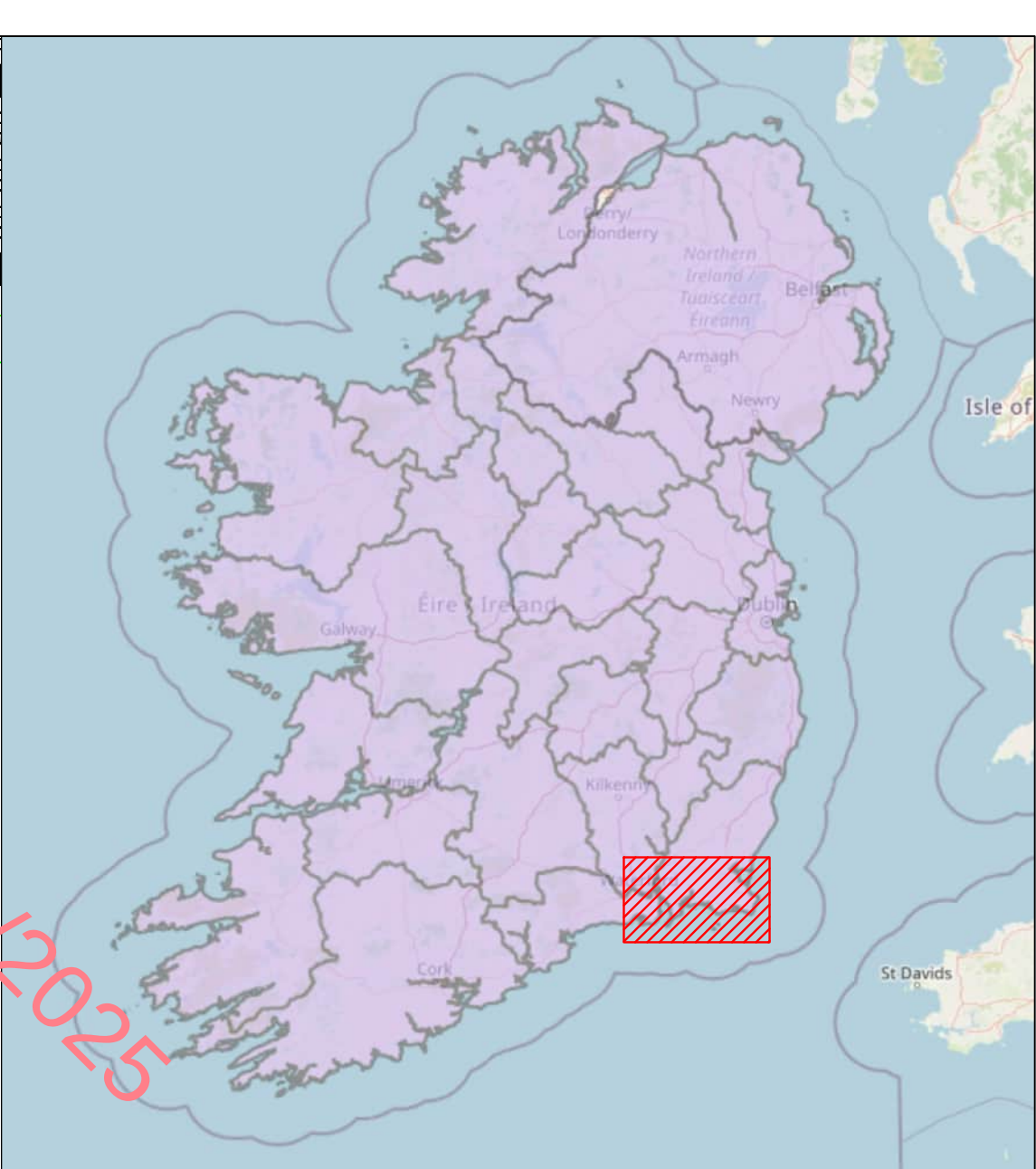


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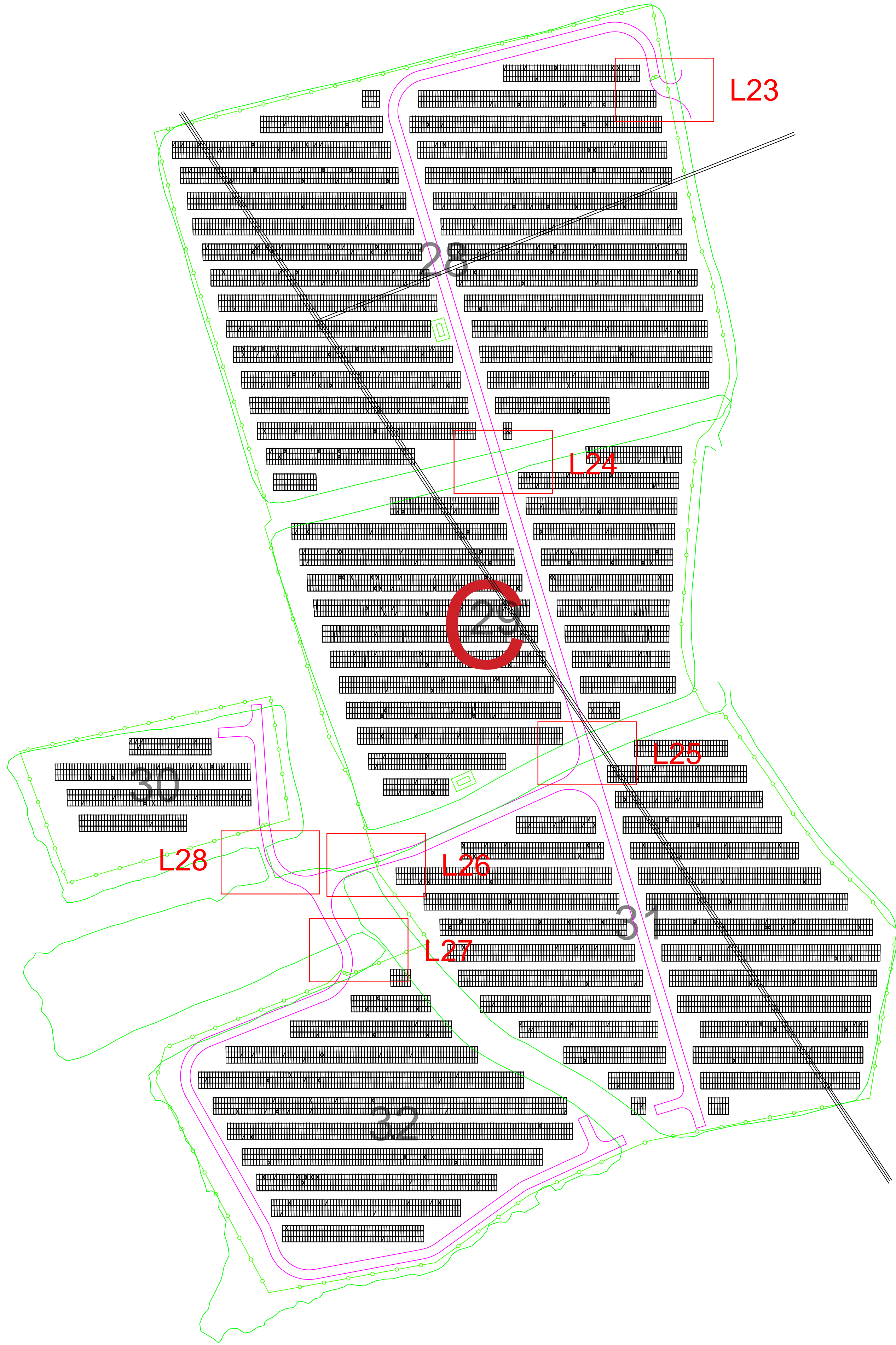
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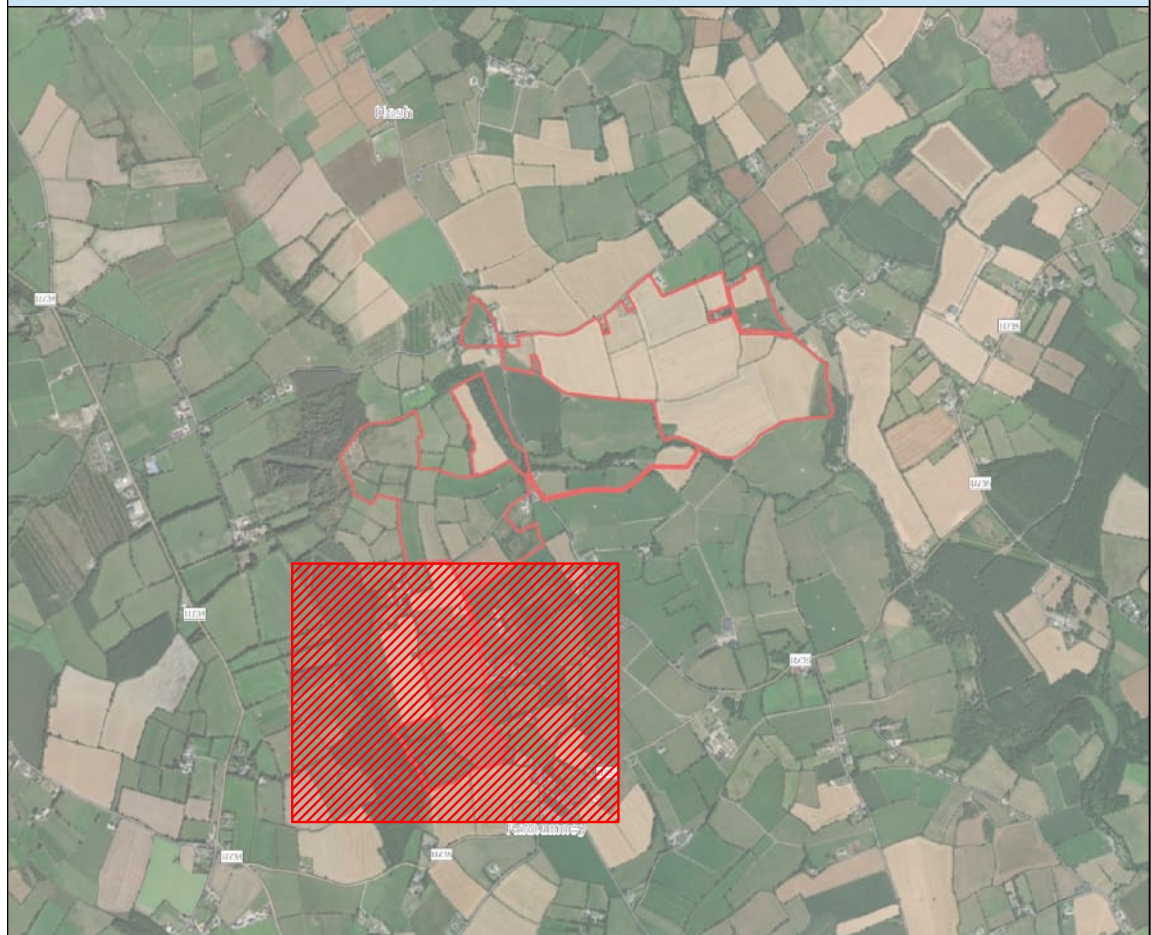
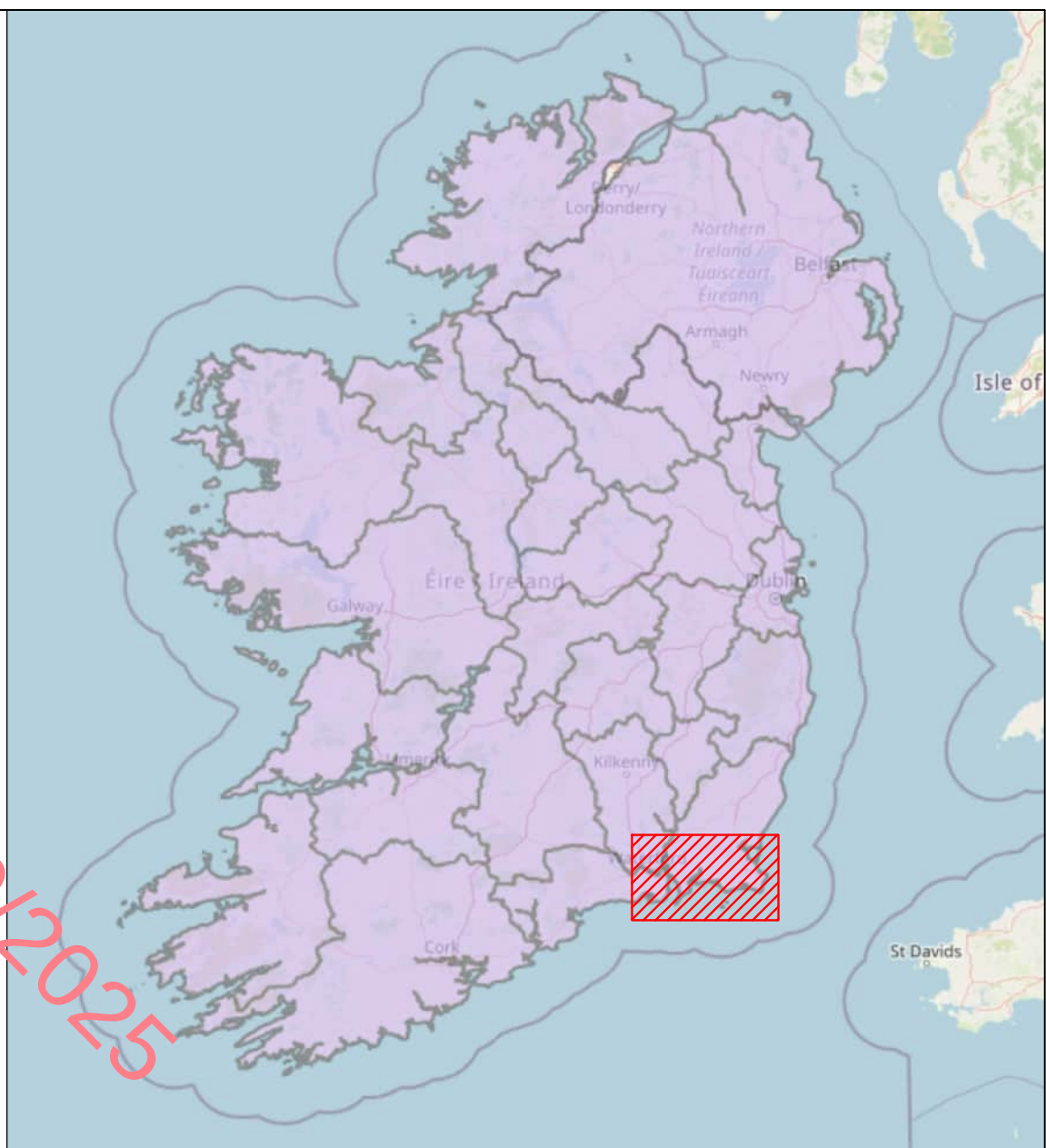


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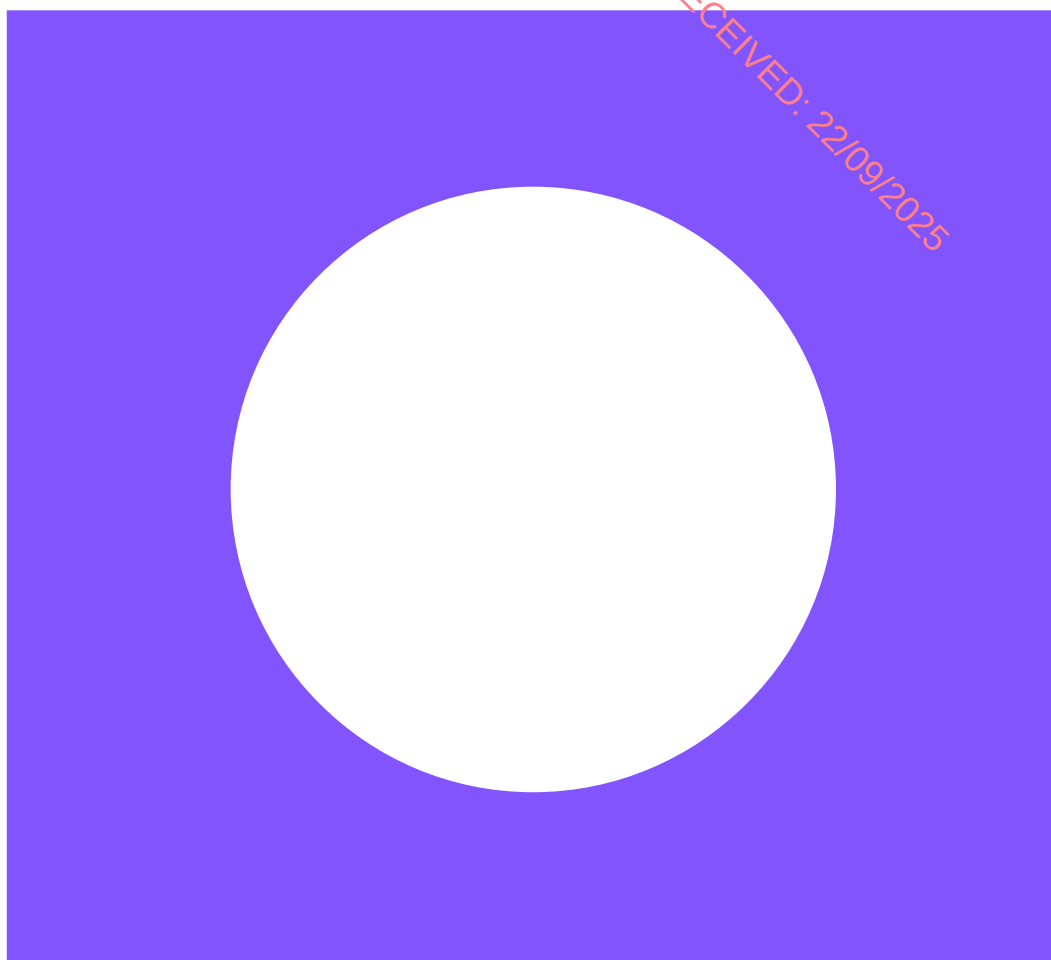
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## **Appendix 9.1 – Flood Risk Assessment (Stage 1)**

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# **Shelburne Energy Farm**

## **Flood Risk Assessment Stage 1**

September 2025

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# Shelburne Energy Farm

## Flood Risk Assessment Stage 1

September 2025

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| Revision | Date       | Originator | Checker  | Approver | Description |
|----------|------------|------------|----------|----------|-------------|
| A        | 17/09/2025 | J Barr     | M Nekula | G Reid   | For Issue   |
|          |            |            |          |          |             |
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The report is a factual assessment of flood risk based on the existing available information. The flood risk assessment has been based on the information available at the time of study, to be used to inform relevant parties, and to assist in the planning process. Mott MacDonald is not liable for, and will not give a warranty against, actual flooding of the site, or damage as a result of said flooding.

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# 1 Introduction

## 1.1 Overview

Mott MacDonald have been appointed by Gen7 Renewable Energy Limited to undertake a Flood Risk Assessment (FRA) Stage 1 (Flood risk identification) for the proposed development of a solar photovoltaic (PV) farm, battery energy storage system (BESS), substation and grid connection in the townlands of Ballygarvan, Cloonagh, and Nash, Gusserane in County Wexford.

The desk-based assessment aims to identify any potential flood risks associated with the solar farm, BESS and substation, collectively referred to as “Shelburne Energy Farm”, and its associated connection to the national grid. Together, these elements are referred to as the “Proposed Project”. The assessment also identifies any requirements for further investigation or mitigation.

## 1.2 The Planning System and Flood Risk Management, Guidelines for Planning Authorities

Flooding is a natural process which can occur in a wide range of locations and can affect people and property at any time. Flooding from sources such as rivers and seas are likely the most known sources of flooding, however flooding can also occur from prolonged, intense, and localised rainfall leading to flooding from sewers, overland flow, and groundwater flooding.

The frequency, pattern and severity of flooding are expected to increase as a result of climate change. Development can also exacerbate the problems of flooding by removing floodplain storage, altering watercourses, and accelerating and increasing surface water runoff.

In November 2009 the Office of Public Works (OPW) published “The Planning System and Flood Risk Management, Guidelines for Planning Authorities”<sup>1</sup> (hereafter referred to as ‘The Guidelines’). The Guidelines aim to integrate flood risk management into the planning process to assist the delivery of sustainable development. It aims to encourage a transparent and consistent consideration of flood risk in the planning process.

The objectives of the Guidelines are given as (Paragraph 1.6, page 2, of the Guidelines):

- Avoid inappropriate development in areas at risk of flooding;
- Avoid new developments increasing flood risk elsewhere, including that which may arise from surface water runoff;
- Ensure effective management of residual risks for development permitted in floodplains;
- Avoid unnecessary restriction of national, regional, or local economic and social growth;
- Improve the understanding of flood risk among relevant stakeholders;
- Ensure that the requirements of EU and national law in relation to the natural environment and nature conservation are complied with at all stages of flood risk management.

## 1.3 Levels of Flood Risk Assessment

The recommended stages of flood risk assessment within the Guidelines are:

---

<sup>1</sup> [2009-Planning-System-Flood-Risk-Mgmt-1.pdf \(opr.ie\)](#).

- Stage 1 Flood risk identification – A desk-based study to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.
- Stage 2 Initial flood risk assessment – A qualitative or semi-quantitative study to confirm the sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information, to provide a qualitative appraisal of the risk of flooding to development, including the scope of possible mitigation measures, and the potential impact of development on flooding elsewhere, and to determine the need for further detailed assessment.
- Stage 3 Detailed flood risk assessment – A methodology to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of flood hazard to a proposed or existing development, of its potential impact on flood elsewhere and of the effectiveness of any proposed measures.

## 1.4 Decision making planning process

Management of flood hazard and potential risks in the planning system should be based on an interpretation of issues of both planning and flood risk set out within the guidelines and primarily, but not solely, based around the use of:

**Sequential Approach** through the use of identified flood zones (see Table 1.1 below: Definition of Flood Zones)

**Justification Test** for development that needs to be in flood risk areas for reasons of proper planning and sustainable development.

The Guidelines categorise the likelihood of flooding in the form of three flood zones. These flood zones each relate to geographical areas at high, moderate or low risk of flooding, depending on if they are Zone A, B or C respectively. Table 1.1 below provides a definition of each flood zone.

The likelihood of flooding is defined as a percentage risk of occurring in any year. For example, a flood event may be described as having an Annual Exceedance Probability (AEP) of 1%. A flood event of 1% AEP is therefore commonly referred to as a 1 in 100-year flood event.

**Table 1.1: Definition of Flood Zones**

| Flood Zone | Description                                                                                                                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A</b>   | The AEP of flooding from rivers and seas is highest (greater than 1% or 1 in 100 years for river flooding, or 0.5% or 1 in 200 years for coastal flooding).                                                                 |
| <b>B</b>   | The AEP of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 years and 1% or 1 in 100 years for river flooding, and between 0.1% or 1 in 1000 years and 0.5% or 1 in 200 years for coastal flooding). |
| <b>C</b>   | The probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 years for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in Zone A or B.                 |

Source: The Office of Public Works, *The Planning System and Flood Risk Management, Guidelines for Planning Authorities* (November 2009).

It is important to note that the flood zones shown in Table 1.1 are indicative of fluvial (river) and coastal flooding only, and do not include other information on the risk of flooding from sources such as pluvial, groundwater or artificial drainage systems.

The determination of the extent of the flood zones should be based on current extreme water levels without any allowance for climate change. The effects of climate change, such as more severe rainfall events and raising sea levels, will increase these risks and put other areas at risk. Therefore, the Guidelines recommend that any site-specific flood risk assessment will also need to take account of the impacts of climate change.

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## 2 Background

### 2.1 Study Area Description

The Proposed Project is located in the townlands of Ballygarvan, Cloonagh, and Nash Gusserane, County Wexford (central grid reference is array area A - ITM grid reference: 678370E, 619934N). The local area abutting and surrounding the Proposed Project is characterised as predominantly rural agricultural lands with residential dwellings occur in low density.

Nearby small settlements include:

- New Ross, approximately 6.5km northwest;
- Ballynaboola, around 4.5km to the north;
- Newbawn, approximately 3.4km to the northeast; and
- Ballycullane, located about 3.5km to the south.

Nearby large settlements include:

- Wexford, approximately 26km to the east; and
- Waterford, approximately 17km to the southwest

**Figure 2.1: Geographical Context of the Proposed Project**

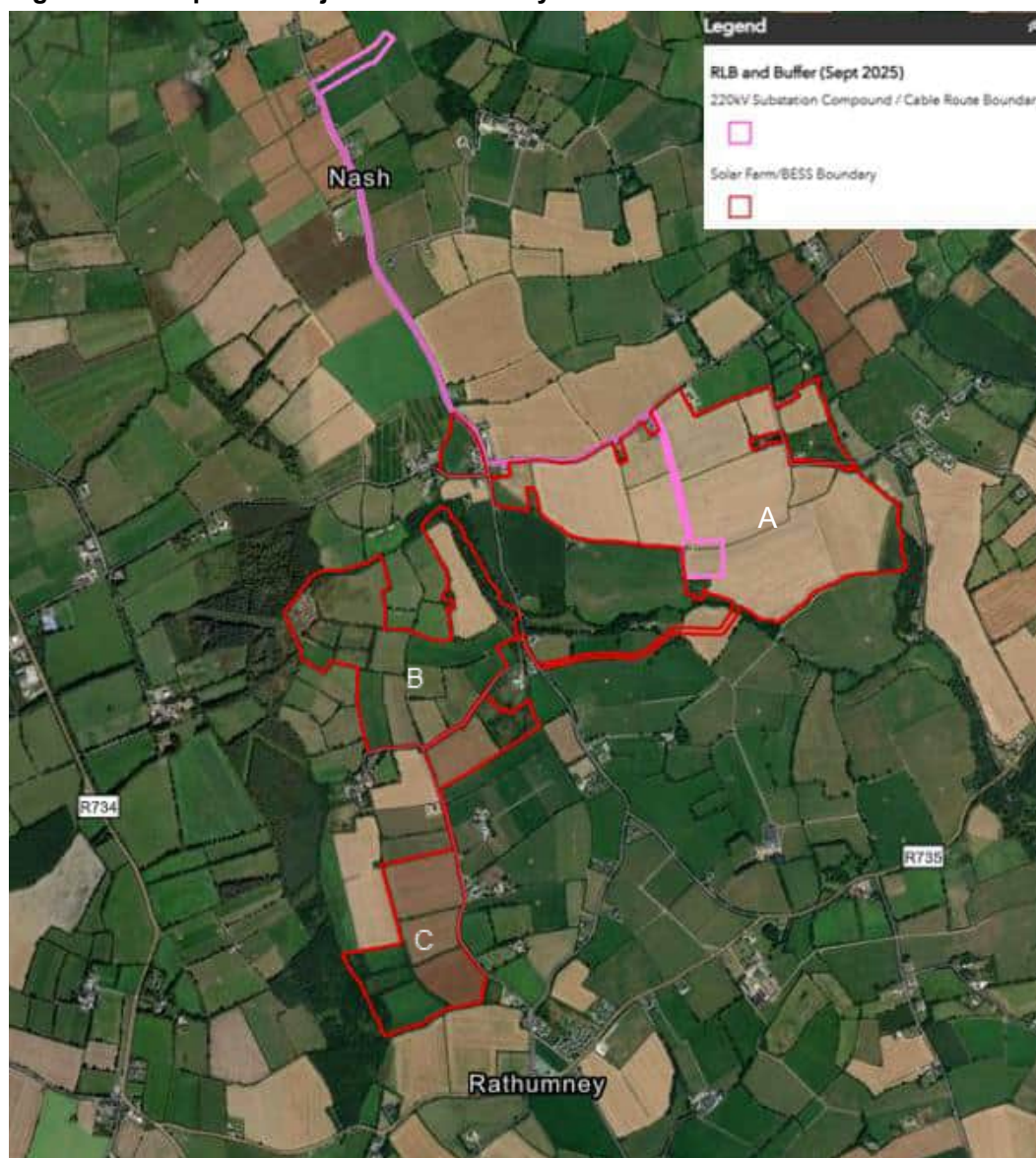


Source: Mott MacDonald Ireland Limited

The Proposed Project is predominantly within agricultural lands with field boundaries delineated by mature hedgerows. A small area of semi-natural woodland is present to the east of the site.

The solar energy farm is divided into three distinct array areas, located on either side of the local public road - L4030, while the L40232 bounds solar array Area A to the north, as illustrated in Figure 2.2. These three array areas connect to the substation compound, from which a 200kV underground cable corridor runs northwards, connecting the site to the national grid.

**Figure 2.2: Proposed Project Site Boundary**



Source: Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS © OpenStreetMap contributor, and the GIS Community

The Owenduff River bounds areas of the development site to the east of solar array Area A, while the Tellarought River is crossed by the inter-array cables connecting solar array Area B and C to the BESS and the proposed 220kV substation compound. The locations of the watercourses are shown in Figure 2.3.

## 2.2 Description of Development

The Proposed Project comprises the construction a solar photovoltaic (PV) solar farm, a co-located Battery Energy Storage System (BESS), 220kV substation compound and 220kV cable

connection to the national grid, the individual elements are further detailed herein and are illustrated in Figure 2.3.

### **Solar Farm**

- Photovoltaic (PV) panels on ground mounted frames with a maximum height of 3.86m above ground level, and a minimum ground clearance of 1.0m above ground level, across three separate land parcels referred to as Array Areas A, B and C
- 17 no. containerised transformer centres each measuring approximately 6.1m length x 2.5m width x 3.0m high, and positioned on a 0.1m high platform
- Underground electrical cable ducting between solar array areas A, B and C, connecting to the future substation, including 2no. overhead electric poles, one placed on either side of the Tellarought River to facilitate its crossing
- 4no. meteorological stations.

### **Battery Energy Storage System (BESS)**

- 79no. of containerised battery storage modules, measuring approximately 6.82m length, 2.44m wide and 2.89m high, positioned on a 0.3m high platform
- 19no. of containerised transformer and Power Conditioning Units (PCUs) (measuring approximately 6.82m length, 2.44m wide and 2.89m high) and ancillary equipment
- 8.5m high acoustic barrier surrounding the BESS compound

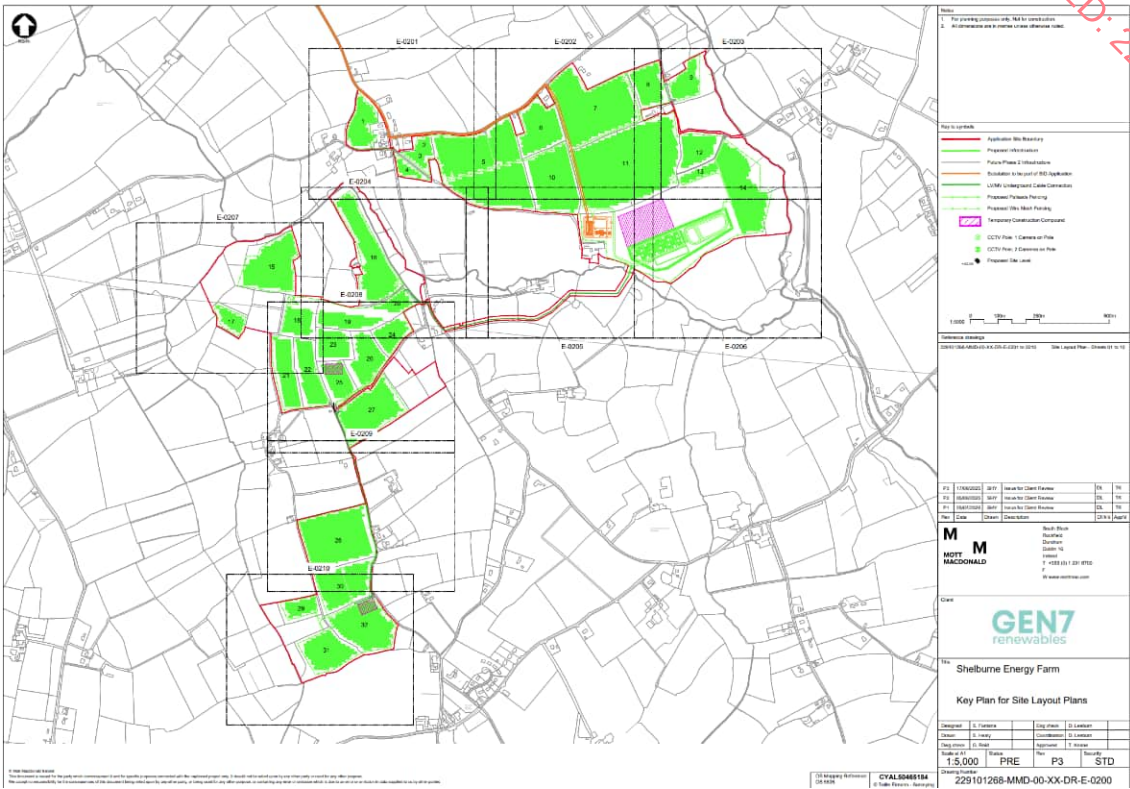
### **Substation Compound**

- The proposed substation compound measures an area of c. 0.72hectare (within the fenced compound) and will comprises the following:
- 1no. Air Insulated Switchgear (AIS) securely fenced compound, which includes 1no. control buildings (9m length x 7.5m width x 4m high) [customer and EirGrid operated], 1no. transformers, cable sealing ends and associated AIS equipment
- 1no. Gas Insulated Switchgear (GIS) securely fenced compound, which includes a 220kV GIS building (49m length x 18.5m width x 17m high)
- Shared infrastructure comprising Lightning Protection Rods, perimeter security palisade fencing/gates, hardstanding and site drainage

### **220kV cable connection**

- The underground cable connection will traverse through the solar farm until it reaches the public road (L-40232)
- 2no. 220kv underground cable circuits measuring c.2.9km in length and a total of 8no. joint bays (four for each circuit)
- 2no. Line Cable Interface Masts (LCIMs) and cable connection to the existing overhead transmission circuit
- Dismantling and removal of 1no. existing 220kV overhead line tower

Figure 2.3: Layout of development



Source: Mott MacDonald Ireland Limited

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## 3 Flood Risk Assessment

### 3.1 Overview

The following section consists of a desk-based study using various available flood risk information sources to assess existing or future flood risk.

#### 3.1.1 Potential Flood Sources

The main potential sources of flood risk to a development are as identified in Table 3.1.

**Table 3.1: Categories of flood risk**

| Category                                  | Mechanism                                                                                                                                                                                                                                                                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fluvial flooding                          | Flooding caused by the exceedance of the flow capacity of the channel of a nearby watercourse. Fluvial flooding is often associated with heavy rainfall and excess water spills onto the river floodplains.                                                                                      |
| Coastal and tidal flooding                | Flooding caused by high astronomical tide, storm surges, wave action and local bathymetric effects, often in combination. In estuaries and watercourses affected by tide locking flooding can occur as a result of high tidal levels and high fluvial levels in combination.                     |
| Pluvial flooding (Overland flow)          | Flooding caused by the flow of water over the ground surface that has not reached a natural or artificial drainage channel. Occurs when intense rainfall exceeds the infiltration capacity of the ground or when the ground is highly saturated and is unable to accommodate any further water.  |
| Groundwater flooding                      | Flooding caused by raised groundwater levels usually following prolonged periods of rain (which may be slow to recede). High groundwater levels may result in increased overland flow flooding. This type of flooding is usually associated with catchments with poor substrate and/or aquifers. |
| Flooding from artificial drainage systems | Flooding caused by blockage or the overloading of pipes, sewers, canals and drainage channels or failure of pumping stations. This flooding typically follows heavy rainfall or as a result of high-water levels in a receiving watercourse.                                                     |
| Flooding from infrastructure failure      | Flooding caused by the structural, hydraulic, or geological failure of infrastructure which retains, transmits, or controls the flow of water. Examples include reservoirs, canals, flood defence structures, underground conduits (e.g., sewers), water treatment tanks and hydropower dams.    |

Adapted from: CIRIA (2004) *Development and Flood Risk*, C624, Box 2.3<sup>2</sup>

#### 3.1.2 Flood Risk Information Sources

The Proposed Project site has been screened for all potential sources of flooding through a desk-based study. A range of publicly available datasets and mapping resources were reviewed to assess both existing and future flood risk. The following data and information were collated and analysed:

- Floodinfo.ie – CFRAM Flood Maps<sup>3</sup>.
- Floodinfo.ie – Coastal Maps<sup>4</sup>.

<sup>2</sup> [Item Detail \(ciria.org\)](#)

<sup>3</sup> [Flood Maps - Floodinfo.ie](#)

<sup>4</sup> [Coastal Map - Floodinfo.ie](#)

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- Historical flooding data<sup>5</sup>.
- Ordnance Survey Maps<sup>6</sup>.
- Geological Survey Ireland Spatial Resources<sup>7</sup>.
- Google Maps<sup>8</sup>.

The primary source of information to determine the existing and future flood risk were the flood maps on the OPW flood information portal, namely Floodinfo.ie. The online flood maps come from different studies as follows:

- CFRAM Flood Maps (2012): Developed under the National Catchment-based Flood Risk Assessment and Management (CFRAM) study, these maps present river and coastal flood extents for the present-day scenarios.
- National Coastal Flood Hazard Maps (2021): Produced as part of the National Coastal Flood Hazard Mapping, these maps provide updated national scale coastal flood extents and depths maps for a range of return periods, covering both present day and future climate scenarios.
- National Indicative Fluvial Mapping (NIFM): a second-generation dataset offering improved accuracy and special resolution for indicative fluvial flood extents.

## 3.2 Fluvial Flooding

### 3.2.1 Review of CFRAM Fluvial Maps

A review of the Flood Maps<sup>9</sup> from CFRAM study has been carried out. The CFRAM Coastal flood extents are available for the following scenarios:

- Low Probability flood events have an indicative 1-in-a-1000 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 0.1%.
- Medium Probability flood events have approximately a 1-in-a-100 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 1%.
- High Probability flood events have approximately a 1-in-a-10 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 10%.

The Owenduff and Tellarought watercourses which are located adjacent to the Proposed Project site, are relatively small and do not appear on the CFRAM flood maps. The nearest mapped river is the River Barrow, which flow approximately 7km to the west. Its floodplain does not extend to the Proposed Project site and therefore does not pose a direct fluvial flood risk.

### 3.2.2 Review of National Indicative Fluvial Maps (NIFM)

A review of the Flood Maps<sup>10</sup> from NIFM study has been carried out. The NIFM River flood extents are available for the following present-day scenarios:

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<sup>5</sup> [Home - Floodinfo.ie](#)

<sup>6</sup> [Ordnance Survey | See A Better Place](#)

<sup>7</sup> [Geological Survey Ireland Spatial Resources \(arcgis.com\)](#)

<sup>8</sup> [Google Maps](#)

<sup>10</sup> [Home - Floodinfo.ie](#)

<sup>10</sup> [Home - Floodinfo.ie](#)

- Low Probability flood events have an indicative 1-in-a-1000 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 0.1%.
- Medium Probability flood events have approximately a 1-in-a-100 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 1%.
- High Probability flood events have approximately a 1-in-20 chance of occurring or being exceeded in any given year. This is also referred to as an Annual Exceedance Probability (AEP) of 5%.

The Owenduff River, a small watercourse flowing along the eastern boundary of the development, is predicted to spill out of bank and flood low-lying sections of Area A of the Nash solar farm. However, no panels are proposed in the 1 in 1000-year (or 0.1% AEP) floodplain. Only minor infrastructure, such as perimeter mesh fencing, is located within areas of high or medium probability flood risk.

The Tellarought River, which flows through the centre of the Proposed Project between Area A and B), is predicted to spill out of bank and flood low-lying areas. The 1 in 1000-year (or 0.1% AEP) floodplain partially overlaps with the application boundary of Area B in the north, however no solar panels are proposed in this area.

A cable crossing of the Tellarought River is required to connect Array Areas B and C to the substation compound. Underground 33kV cabling will run up to the river, then cross via an overhead section strung between two wooden pole sets on either side of the river. Upon reaching Array Area A, the medium-voltage (MV) cabling will once again be undergrounded and will connect to the substation compound.

The two pole sets will be setback a minimum of 15m from the riverbank. The indicative flood extent on the Floodinfo.ie portal suggests a floodplain width of approximately 30m for the 1 in 1000-year (or 0.1% AEP) event. The pole set to the south of the Tellarought River is located within the flood plain extent. No further mitigation is required for the poleset outside the flood plain; however, the exact positioning should be confirmed through hydraulic modelling and technical feasibility.

Figure 3.1 shows the predicted flood extent of the 1 in 1000 year (or 0.1% AEP) fluvial flood for the Owenduff and Tellarought River from the NIFM study.

**Figure 3.1: NIFM Study – 0.1% AEP flooding extent at Nash Solar and BESS**



Source: Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS © OpenStreetMap contributor, and the GIS Community

### 3.2.3 Other watercourses

A review of the Ordnance Survey of Ireland mapping has been conducted to identify additional smaller watercourses in the surrounding area that are not captured in the aforementioned flood studies.

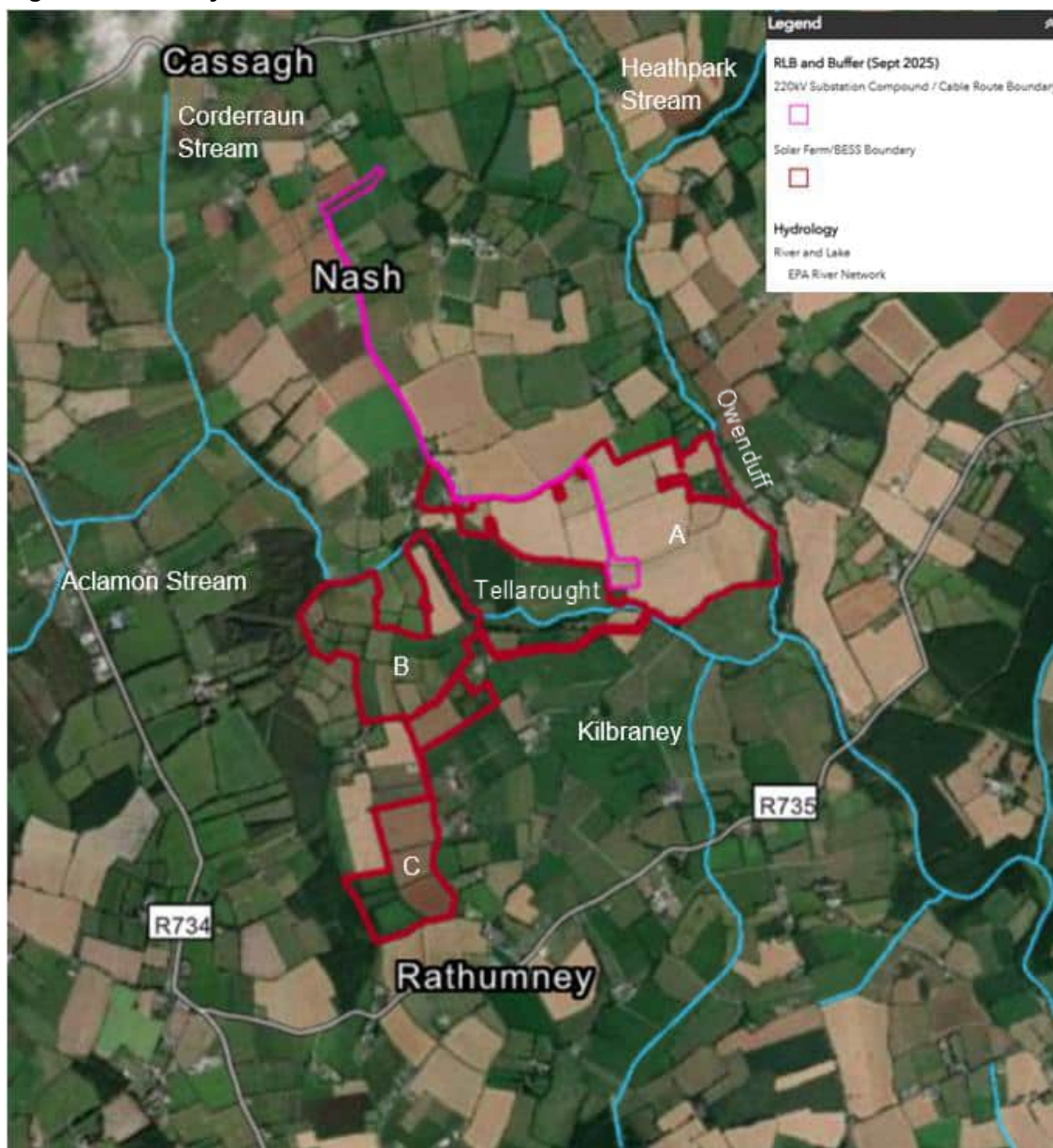
No other watercourses have been identified within the Project boundary (i.e. solar farm/BESS/substation compound boundary or the national grid connection cable route boundary).

The River Kilbraney, which merges with the Owenduff River from the south further downstream, intersects the Project boundary 500m buffer zone, however, does not pose a fluvial flood risk to the Proposed Project.

The 220kV underground cable corridor is not located near any of the small watercourses and is not at risk of flooding from any of these sources.

Other nearby watercourses, such as the Heathpark Stream joining the Owenduff upstream, as well as the Corderraun and Aclamon Streams joining the Tellarought River upstream of the site, do not intercept the Project boundary 500m buffer zone and do not pose flood risk to the Proposed Project (see Figure 3.2).

**Figure 3.2: Nearby Watercourses**



Source: Earthstar Geographics, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS © OpenStreetMap contributor, and the GIS Community

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### 3.3 Coastal and Tidal Flooding

The Proposed Project is located away from the coastline and is not at risk of coastal flooding.

### 3.4 Pluvial (Surface Water) Flooding

Pluvial flood maps for the Proposed Project area are not currently available on Floodinfo.ie. However, a review of the local topography using Ordnance Survey mapping indicates that there are no notable ponding areas that would pose a pluvial flood risk. The ground generally slopes and drains towards nearby watercourses, specifically the River Tellarought and Owenduff.

To manage the on-site rainfall, a dedicated drainage system will be implemented as part of the proposed works. This will incorporate Sustainable Urban Drainage System (SUDS) features to manage the quantity and quality of runoff during rainfall events. It will include a combination of filter drains running along one side of the internal access roads with soakaways located at the endpoints. Additionally, the BESS, part of the substation compound and the solar farm will drain to an attenuation pond located to the northern edge of the BESS site.

Residual risk from pluvial flooding will be mitigated through sufficient freeboard allowances for all flood sensitive equipment.

Eight joint bays are proposed along the 220 kV cable corridor, i.e. four per circuit. Two will be located on the access track to the solar farm, with the remaining six along the public road leading to the grid connection point. Final locations are yet to be confirmed but will avoid known ponding areas. Vulnerable infrastructure will be installed at levels with sufficient freeboard above potential pluvial flood depths.

At the end of the 220kV underground cable corridor two new towers are proposed to connect to the National Grid. Each will have four buried footings, with only the stub above ground. Due to minimal above-ground infrastructure, natural surface water flow will not be altered.

The proposed design does not alter the current flood risk from surface runoff, ensuring that flood risk elsewhere will not be increased.

### 3.5 Groundwater Flooding

Groundwater flooding occurs when the water stored within the ground rises above the land surface. This is normally related to prolonged rainfall causing water table rise in the limestone lowland areas in western Ireland.

An online Groundwater Flooding Data Viewer<sup>11</sup> has been reviewed and there is no area of High, Medium or Low Probability of groundwater flooding along the Proposed Project. This includes the buried elements of the 220kV cable route and foundation of the two National Grid connecting towers.

Therefore, the Proposed Project is not considered at risk of groundwater flooding.

### 3.6 Flooding from Artificial Drainage Systems and Infrastructure Failure

A review of the OSI map identified that there are no reservoirs, natural or artificial lakes around the subject site.

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<sup>11</sup> [Groundwater Flooding Data Viewer \(arcgis.com\)](https://arcgis.com)

Therefore, the Proposed Project is deemed not to be at risk of flooding from artificial drainage systems or infrastructure failure.

### 3.7 Past flood events

The Flood Maps portal offers historical flood data based on specific locations and dates. The review of available information indicates that no previous flood events have been recorded in the vicinity of the Proposed Project.

### 3.8 Summary of Potential Sources of Risk

A summary of the potential flood risk for the Proposed Project detailed in Section 2.2 is presented in Table 3.2.

**Table 3.2: Summary of Flood Risk for the Proposed Project**

| Site                                                                                                                  | Source of flooding                 | Is there a risk to the development? | Risk level | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Proposed Project including: Solar Farm, battery Energy Storage Project, Substation Compound and the 220kV Cable Route | Fluvial flooding                   | Potential                           | Low        | <p>Areas of the site are affected by flooding from the Owenduff River under the 5% AEP event. However, no panels are proposed in the floodplain for the 1 in 1000year (or 0.1% AEP) fluvial flood event. Only some perimeter mesh fencing will remain in high or medium probability flood risk.</p> <p>As the perimeter mesh fencing is considered a water compatible, no further assessment is considered necessary.</p> <p>The cable crossing of the Tellarought River will use underground and overhead cabling, with pole sets placed at least 15 m from the riverbank. Indicative flood extents suggest a 30 m wide floodplain; final pole locations should be confirmed via hydraulic modelling.</p> |
|                                                                                                                       | Coastal and tidal flooding         | No                                  | n/a        | No further assessment considered necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                       | Pluvial flooding and overland flow | Potential                           | Low        | <p>Pluvial flooding for the BESS and substation compound will be addressed through the design of the onsite drainage system and recommended minimum finished levels.</p> <p>The cable route is primarily underground, with limited above-ground infrastructure. Joint bays are planned along the solar farm access track and public roads. Vulnerable infrastructure will be placed outside ponding areas and with minimum recommended finished levels.</p> <p>No further assessment considered necessary.</p>                                                                                                                                                                                             |
|                                                                                                                       | Groundwater flooding               | No                                  | n/a        | No further assessment considered necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Site | Source of flooding                | Is there a risk to the development? | Risk level | Comment                                     |
|------|-----------------------------------|-------------------------------------|------------|---------------------------------------------|
|      | Flooding from artificial drainage | No                                  | n/a        | No further assessment considered necessary. |
|      | Infrastructure Failure            | No                                  | n/a        | No further assessment considered necessary. |

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## 4 Conclusions

A Stage 1 Flood Risk Assessment has been undertaken to identify all potential sources of flooding for Shelburne Energy Farm and its associated grid connection. This desk-based screening reviewed the available data relevant to the site and considered any potential changes to the surrounding land's vulnerability to flooding resulting from the Proposed Project.

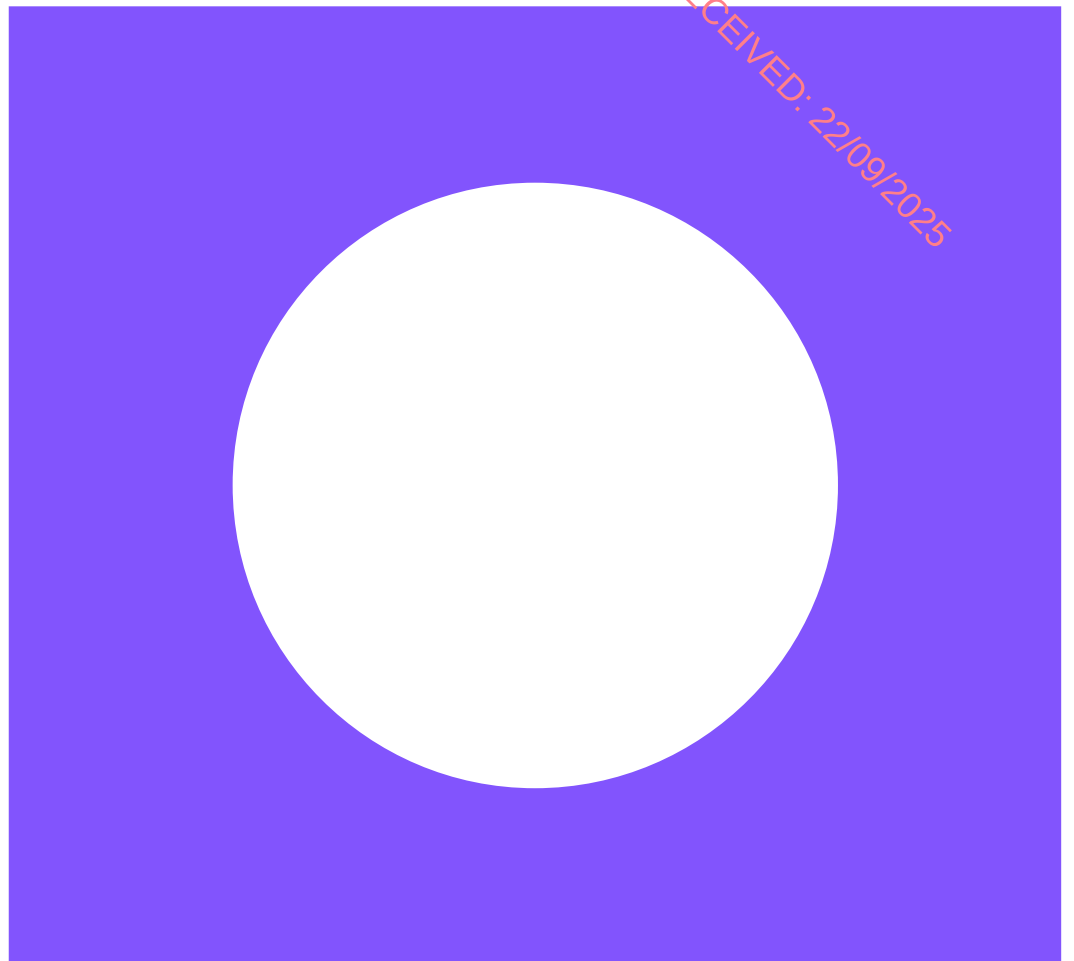
The study concludes that:

- No historical flooding (recorded past flood events) has been recorded at the site.
- The Proposed Project is not considered to be at risk of:
  - Coastal and tidal flooding.
  - Groundwater flooding.
  - Flooding from artificial drainage.
  - Flooding from infrastructure failure.

Therefore, no further assessment of these flood sources is deemed necessary.

- Fluvial flood risk from the Owenduff River affects parts of Array Area A, but no solar panels are proposed within the 1-in-1000-year (0.1% AEP) floodplain. Only water-compatible fence will be located within the areas of high and medium flood risk. The substation compound and 220kV cable corridor are outside the 1 in 1000 year fluvial floodplain. No further fluvial assessment is required. No further fluvial assessment is required for these elements.
- The cable crossing of the Tellarought River will use underground and overhead cabling, with one 38kV pole set located within the BESS fenced compound in Flood Zone C and the other 38kV pole set is placed at least 15 m from the riverbank. Indicative mapping shows a 30 m wide floodplain for the Tellarought River. Final pole locations should be confirmed via hydraulic modelling.
- Pluvial flooding and surface water flooding pose minimal risk and will be managed through the proposed onsite SUDS works and attenuation pond. Finished floor levels and flood sensitive infrastructure will be designed with adequate freeboard to address residual risk. Joint bays for the 220kV cable corridor will be placed outside ponding areas or built with sufficient elevation. No further pluvial assessment is required.
- The access and egress are not at risk as the site lies within Flood Zone C and the Proposed Project does not alter the area's flood vulnerability.

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## Appendix 10.1 – Construction Dust

# Appendix 10.1 Construction dust

**Table A.10.1: Determination of Dust Raising Magnitude**

| Source       | High                                                                                                                                                                                                                                                | Medium                                                                                                                                                                                                 | Low                                                                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Demolition   | Total building volume >75,000m <sup>3</sup> , potentially dusty construction material (e.g. concrete), on site crushing and screening, demolition activities >12m above ground                                                                      | Total building volume 12,000 m <sup>3</sup> – 75,000 m <sup>3</sup> , potentially dusty construction material, demolition activities 6-12 m above ground level                                         | Total building volume <12,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <6 m above ground, demolition during wetter months |
| Earthworks   | Total site area >110,000 m <sup>2</sup> , potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >6 m in height | Total site area 18,000 m <sup>2</sup> – 110,000 m <sup>2</sup> , moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 3m - 6m in height | Total site area <18,000 m <sup>2</sup> , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <3 m in height                                     |
| Construction | Total building volume >75,000 m <sup>3</sup> , on site concrete batching, sandblasting                                                                                                                                                              | Total building volume 12,000 m <sup>3</sup> – 75,000 m <sup>3</sup> , potentially dusty construction material (e.g. concrete), on site concrete batching                                               | Total building volume <12,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber)                                                                           |
| Track out    | >50 HDV (>3.5t) trips in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length >100m                                                                                                                        | 20-50 HDV (>3.5t) outward movements <sup>9</sup> in any one day, <sup>10</sup> moderately dusty surface material (e.g. high clay content), unpaved road length 50 m – 100 m                            | <20 HDV (>3.5t) outward movements in any one day, surface material with low potential for dust release, unpaved road length <50 m                                                                                  |

Source: IAQM (2024)<sup>1</sup>

<sup>1</sup> Institute of Air Quality Management (2024) Guidance on the assessment of dust from demolition and construction

**Table A.10.2 Receptor sensitivity**

| Source                                                            | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Low                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensitivities of people to dust soiling effects                   | <p>Users can reasonably expect (See note A) an enjoyment of a high level of amenity; or</p> <p>The appearance, aesthetics or value of their property would be diminished by soiling; and</p> <p>The people or property would reasonably be expected to be present continuously, or at least regularly for extended periods, as part of the normal pattern of use of the land.</p> <p>Indicative examples include dwellings, museums and other culturally important collections, medium and long term car parks (See note B) and car showrooms.</p> | <p>Users would expect (See note A) to enjoy a reasonable level of amenity, but would not reasonably expect (See note A) to enjoy the same level of amenity as in their home; or</p> <p>The appearance, aesthetics or value of their property could be diminished by soiling; or</p> <p>The people or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land.</p> <p>Indicative examples include parks and places of work.</p> | <p>The enjoyment of amenity would not reasonably be expected (See note A); or</p> <p>Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or</p> <p>There is transient exposure, where the people or</p> <p>Property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.</p> <p>Indicative examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short term car parks (See note B) and roads.</p> |
| Sensitivities of people to the health effects of PM <sub>10</sub> | <p>Locations where members of the public are exposed over a time period relevant to the air quality objective for PM<sub>10</sub> (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for</p>                                                                                                                                                                                                                                                                                                | <p>Locations where the people exposed are workers (See note D), and exposure is over a time period relevant to the air quality objective for PM<sub>10</sub> (in the case of the 24-hour objectives, a relevant location would be one where individuals</p>                                                                                                                                                                                                                                                                        | <p>Locations where human exposure is transient (See note E).</p> <p>Indicative examples include public footpaths, playing fields, parks and shopping streets.</p>                                                                                                                                                                                                                                                                                                                                                                                                              |

| Source                                                        | High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Medium                                                                                                                                                                                                                                                                                                                                    | Low                                                                                                                                                                                |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               | <p>eight hours or more in a day - See note C).</p> <p>Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.</p>                                                                                                                                                                                                                                                                 | <p>may be exposed for eight hours or more in a day).</p> <p>Indicative examples include office and shop workers, but will generally not include workers occupationally exposed to PM<sub>10</sub>, as protection is covered by Health and Safety at Work legislation.</p>                                                                 |                                                                                                                                                                                    |
| Sensitivities of receptors to ecological effects (See note F) | <p>Locations with an international or national designation and the designated features may be affected by dust soiling; or</p> <p>Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List For Great Britain (See note G).</p> <p>Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.</p> | <p>Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or</p> <p>Locations with a national designation where the features may be affected by dust deposition</p> <p>Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.</p> | <p>Locations with a local designation where the features may be affected by dust deposition.</p> <p>Indicative example is a local Nature Reserve with dust sensitive features.</p> |

Source: IAQM (2024)

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- A The public's expectations will vary depending on the existing dust deposition in the area.
- B Car parks can have a range of sensitivities depending on the duration and frequency that people would be expected to park their cars there, and the level of amenity they could reasonably expect whilst doing so. Car parks associated with work place or residential parking might have a high level of sensitivity compared to car parks used less frequently and for shorter durations, such as those associated with shopping. Cases should be examined on their own merits.
- C This follows DEFRA guidance as set out in LAQM.TG(22).
- D Notwithstanding the fact that the air quality objectives and limit values do not apply to people in the workplace, such people can be affected to exposure of PM<sub>10</sub>. However, they are considered to be less sensitive than the general public as a whole because those most sensitive to the effects of air pollution, such as young children are not normally workers. For this reason workers have been included in the medium sensitivity category.
- E There are no standards that apply to short-term exposure, e.g. one or two hours, but there is still a risk of health effects, albeit less certain.
- F A Habitat Regulation Assessment of the Scheme may be required as part of the planning process, if the Scheme lies close to an internationally designated site i.e. SACs, Special Protection Areas (SPAs) designated under the Habitats Directive (92/43/EEC) and RAMSAR sites.
- G Cheffing C. M. & Farrell L. (Editors) (2005), The Vascular Plant. Red Data List for Great Britain, Joint Nature Conservation Committee.

**Table A.10.3 Sensitivity of the Area to Dust Soiling Effects on People and Property**

| Receptor Sensitivity | Number of Receptors | Distance from the source (m) (See note C) |        |        |      |
|----------------------|---------------------|-------------------------------------------|--------|--------|------|
|                      |                     | <20                                       | <50    | <100   | <250 |
| High                 | >100                | High                                      | High   | Medium | Low  |
|                      | 10-100              | High                                      | Medium | Low    | Low  |
|                      | 1-10                | Medium                                    | Low    | Low    | Low  |
| Medium               | >1                  | Medium                                    | Low    | Low    | Low  |
| Low                  | >1                  | Low                                       | Low    | Low    | Low  |

Source: IAQM (2024)

- A The sensitivity of the area should be derived for each of the four activities: demolition, construction, earthworks and trackout.
- B Estimate the total number of receptors within the stated distance. Only the highest level of area sensitivity from the table needs to be considered. For example, if there are 7 high sensitivity receptors <20m of the source and 95 high sensitivity receptors between 20 and 50m, then the total of number of receptors <50m is 102. The sensitivity of the area in this case would be high.
- C For trackout, the distances should be measured from the side of the roads used by construction traffic.

**Table A.10.4: Sensitivity of the Area to Human Health Effects**

| Receptor Sensitivity | Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance from source (m) (See note E) |        |        |        |
|----------------------|--------------------------------------------|---------------------|---------------------------------------|--------|--------|--------|
|                      |                                            |                     | <20                                   | <50    | <100   | <250   |
| High                 | >32 µg/m <sup>3</sup>                      | >100                | High                                  | High   | High   | Medium |
|                      |                                            | 10-100              | High                                  | High   | Medium | Low    |
|                      |                                            | 1-10                | High                                  | Medium | Low    | Low    |
|                      | 28-32 µg/m <sup>3</sup>                    | >100                | High                                  | High   | Medium | Low    |
|                      |                                            | 10-100              | High                                  | Medium | Low    | Low    |
|                      |                                            | 1-10                | High                                  | Medium | Low    | Low    |
|                      | 24-28 µg/m <sup>3</sup>                    | >100                | High                                  | Medium | Low    | Low    |
|                      |                                            | 10-100              | High                                  | Medium | Low    | Low    |
|                      |                                            | 1-10                | Medium                                | Low    | Low    | Low    |
|                      | <24µg/m <sup>3</sup>                       | >100                | Medium                                | Low    | Low    | Low    |
|                      |                                            | 10-100              | Low                                   | Low    | Low    | Low    |
|                      |                                            | 1-10                | Low                                   | Low    | Low    | Low    |
| Medium               | >32 µg/m <sup>3</sup>                      | >10                 | High                                  | Medium | Low    | Low    |
|                      |                                            | 1-10                | Medium                                | Low    | Low    | Low    |
|                      | 28-32 µg/m <sup>3</sup>                    | >10                 | Medium                                | Low    | Low    | Low    |
|                      |                                            | 1-10                | Low                                   | Low    | Low    | Low    |

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| Receptor Sensitivity | Annual Mean PM <sub>10</sub> Concentration | Number of Receptors | Distance from source (m) (See note E) |     |      |      |
|----------------------|--------------------------------------------|---------------------|---------------------------------------|-----|------|------|
|                      |                                            |                     | <20                                   | <50 | <100 | <250 |
|                      | 24-28 µg/m <sup>3</sup>                    | >10                 | Low                                   | Low | Low  | Low  |
|                      |                                            | 1-10                | Low                                   | Low | Low  | Low  |
|                      | <24µg/m <sup>3</sup>                       | >10                 | Low                                   | Low | Low  | Low  |
|                      |                                            | 1-10                | Low                                   | Low | Low  | Low  |
| Low                  | -                                          | >1                  | Low                                   | Low | Low  | Low  |

Source: IAQM (2024)

- A The sensitivity of the area should be derived for each of the four activities: demolition, construction, earthworks and trackout.
- B Estimate the total within the stated distance (e.g. the total within 250m and not the number between 100 and 250m), noting that only the highest level of area sensitivity from the table needs to be considered. For example, if there are 7 high sensitivity receptors <20 m of the source and 95 high sensitivity receptors between 20 and 50m, then the total of number of receptors <50m is 102. If the annual mean PM<sub>10</sub> concentration is 29µg/m<sup>3</sup>, the sensitivity of the area would be high.
- C Most straightforwardly taken from the national background maps but should also take account of local sources. The values are based on 32µg/m<sup>3</sup> being the annual mean concentration at which an exceedance of the 24-hour objective is likely in England, Wales and Northern Ireland. In Scotland there is an annual mean objective of 18µg/m<sup>3</sup>.
- D In the case of high sensitivity receptors with high occupancy (such as schools or hospitals) approximate the number of people likely to be present. In the case of residential dwellings, just include the number of properties.
- E For trackout, the distances should be measured from the side of the roads used by construction traffic.

**Table A.10.5: Sensitivity of the Area to Ecological Effects**

| Receptor Sensitivity | Distance from the source (m) (See note C) |        |
|----------------------|-------------------------------------------|--------|
|                      | <20                                       | <50    |
| High                 | High                                      | Medium |
| Medium               | Medium                                    | Low    |
| Low                  | Low                                       | Low    |

Source: IAQM (2024)

A The sensitivity of the area should be derived for each of the four activities: demolition, construction, earthworks and trackout.

B Only the highest level of area sensitivity from the table needs to be considered.

C For trackout, the distances should be measured from the side of the roads used by construction traffic up to 250m from the site entrance.

**Table A.10.6: Risk of Dust Effects - Demolition**

| Sensitivity of Area | Dust Emissions Magnitude |             |             |
|---------------------|--------------------------|-------------|-------------|
|                     | Large                    | Medium      | Small       |
| High                | High Risk                | Medium Risk | Medium Risk |
| Medium              | High Risk                | Medium Risk | Low Risk    |
| Low                 | Medium Risk              | Low Risk    | Negligible  |

Source: IAQM (2024)

**Table A.10.7: Risk of Dust Effects – Earthworks**

| Sensitivity of Area | Dust Emissions Magnitude |             |             |
|---------------------|--------------------------|-------------|-------------|
|                     | High                     | Medium      | Low         |
| High                | High Risk                | Medium Risk | Medium Risk |
| Medium              | Medium Risk              | Medium Risk | Low Risk    |
| Low                 | Low Risk                 | Low Risk    | Negligible  |

Source: IAQM (2024)

**Table A.10.8: Risk of Dust Effects - Construction**

| Sensitivity of Area | Dust Emissions Magnitude |             |            |
|---------------------|--------------------------|-------------|------------|
|                     | High                     | Medium      | Low        |
| High                | High Risk                | Medium Risk | Low Risk   |
| Medium              | Medium Risk              | Medium Risk | Low Risk   |
| Low                 | Low Risk                 | Low Risk    | Negligible |

Source: IAQM (2024)

**Table A.10.9: Risk of Dust Effects - Trackout**

| Sensitivity of Area | Dust Emissions Magnitude |             |            |
|---------------------|--------------------------|-------------|------------|
|                     | High                     | Medium      | Low        |
| High                | High Risk                | Medium Risk | Low Risk   |
| Medium              | Medium Risk              | Medium Risk | Low Risk   |
| Low                 | Low Risk                 | Low Risk    | Negligible |

Source: IAQM (2024)

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# Appendix 11.1 – Calculation Methodology

# Appendix 11.1 Calculation Methodology

## A.1 Construction Noise

British Standard 5228 has been adopted for the assessment of effects at noise sensitive receptors during construction phase.

The calculation assumptions include:

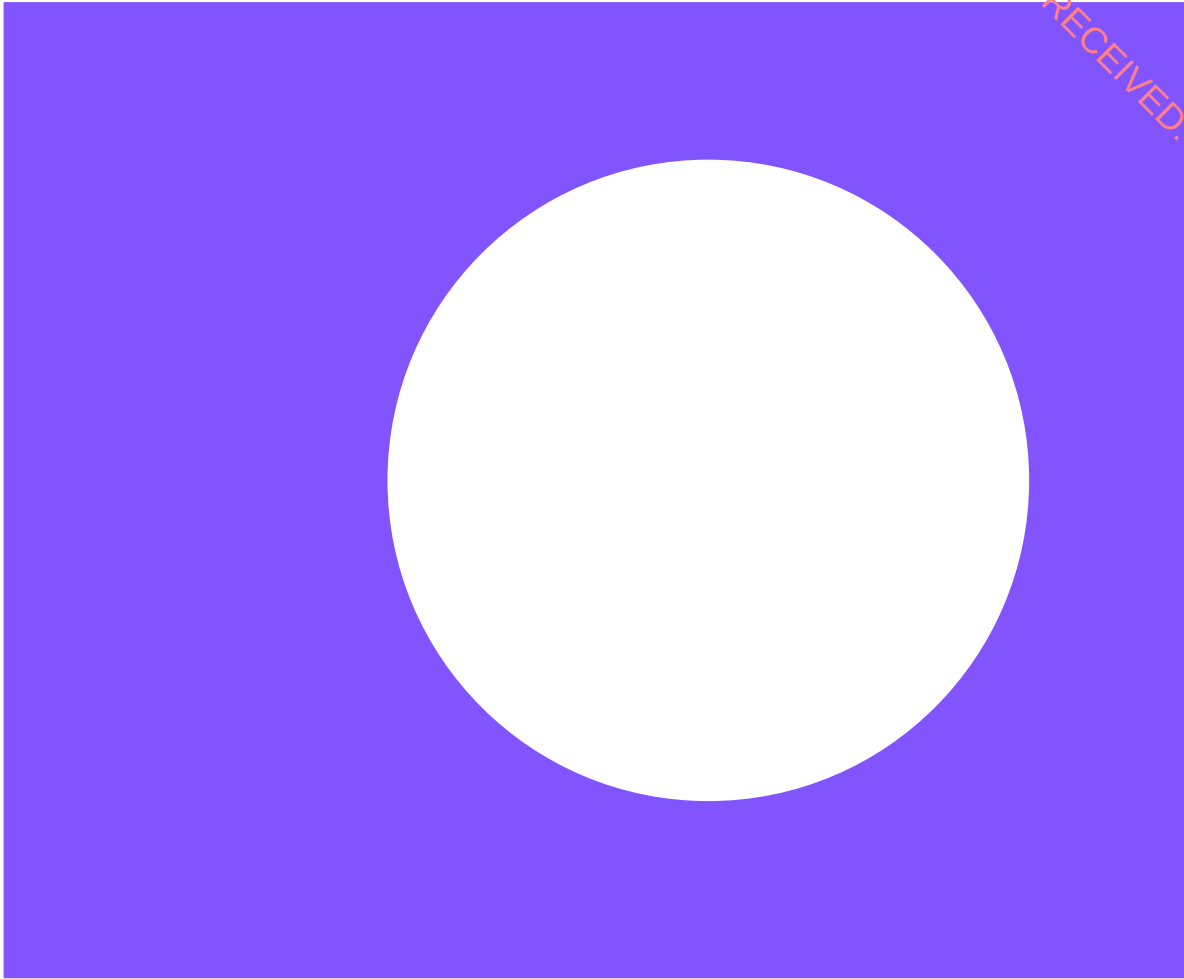
- Method for activity  $L_{Aeq,T}$  in Appendix F.2.2 of BS 5228;
- List of plant for each of the construction activity;
- Quantity and utilisation corrections of the plant;
- Combined noise levels of all plants for each construction activity;
- Distances between the boundary of the construction activities and receptors for the GIS substation and the BESS;
- Distances between the centre of the construction area for the solar farm and the underground 220kV cabling;
- 50% of soft and hard ground attenuation; and
- Stationary plant.

## A.2 Operational Noise

The operational noise assessment implements the procedures of ISO 9613-2 using a three-dimensional acoustic model developed using DataKustik CadnaA software.

The model includes:

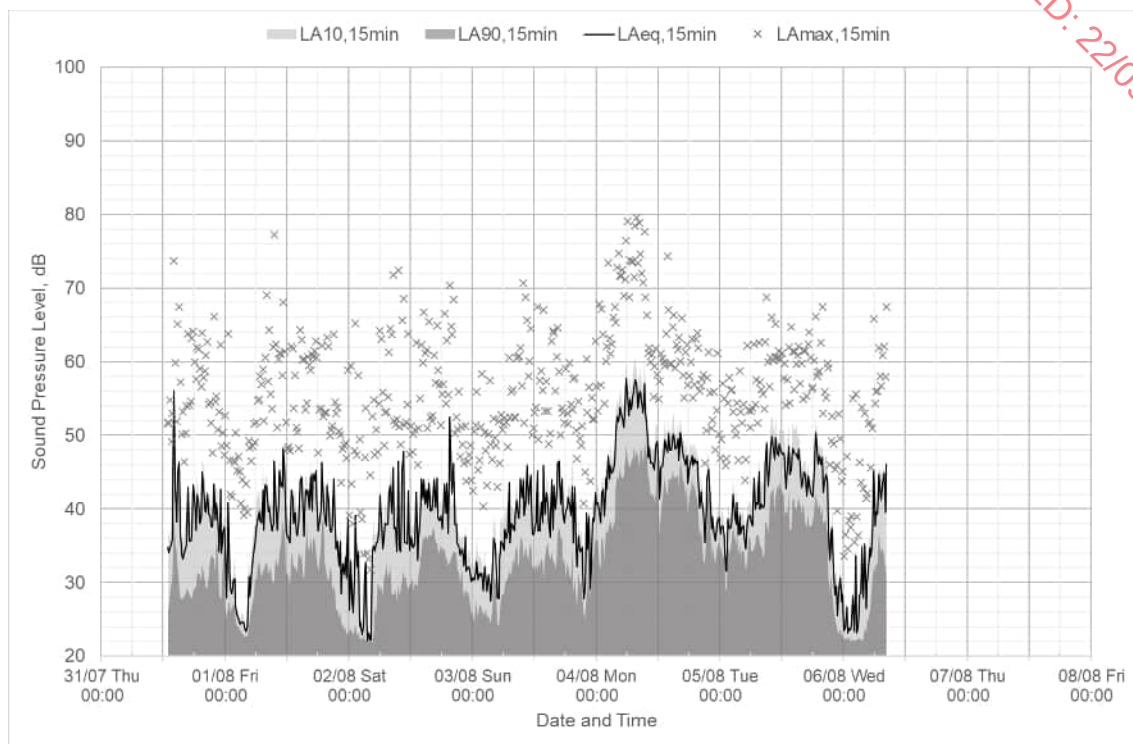
- Noise source elements which represent operational activities;
- Screening elements such as buildings and plant enclosures;
- Downward-curving propagation path (downwind) according to ISO 9613-2;
- Sensitive receptor elements at first floor level;
- Ground absorptive ( $G=0.5$ ); and
- Temperature ( $10\text{ }^{\circ}\text{C}$ ) and Humidity (70%);



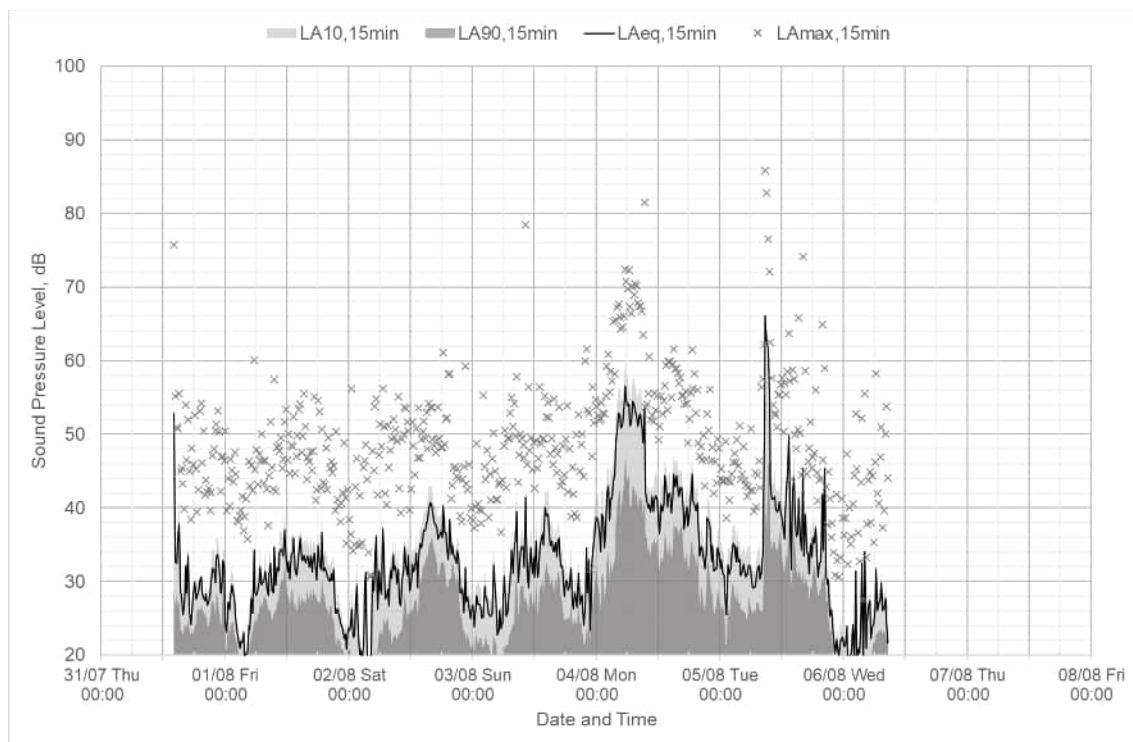
## **Appendix 11.2 – Acoustic Survey Results**

## Appendix 11.2 Acoustic survey results

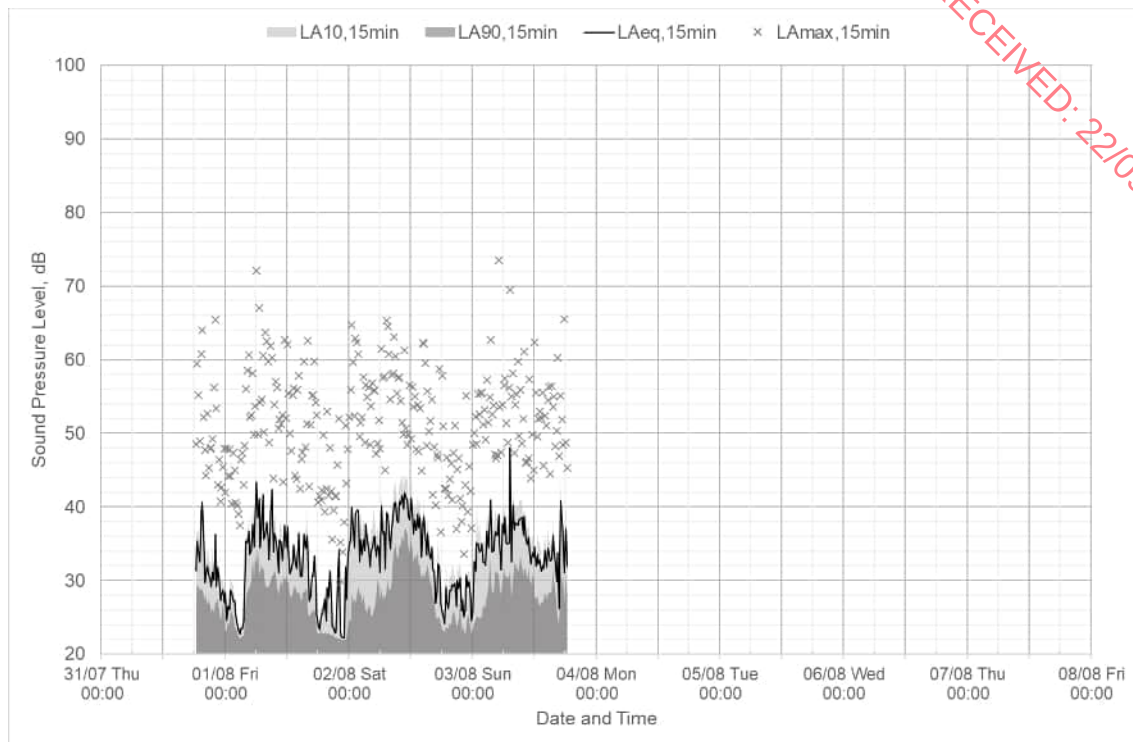
### Logger 1



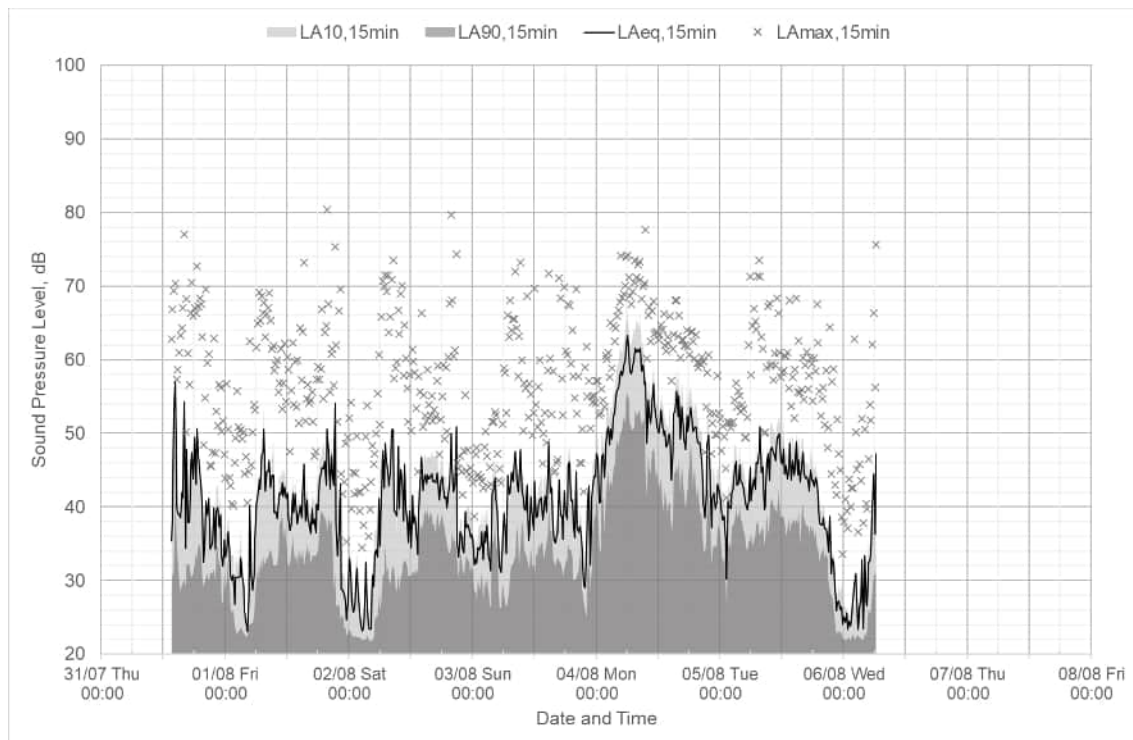
### Logger 2



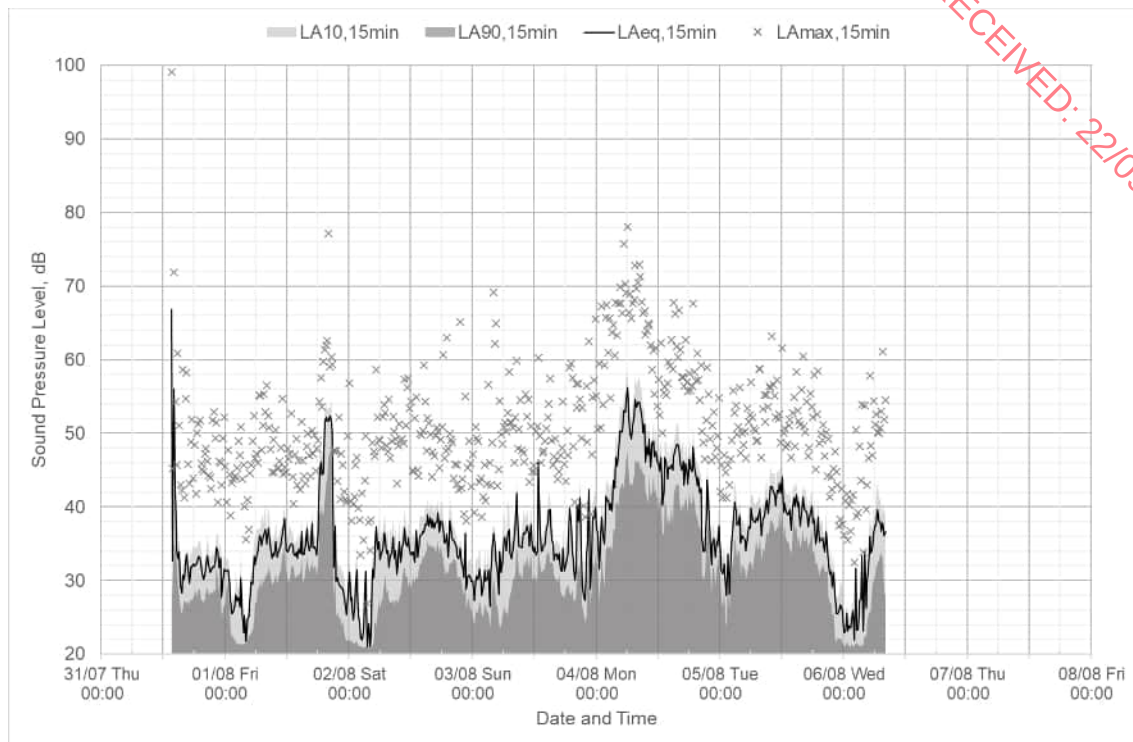
### Logger 3



### Logger 4



## Logger 5



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## Appendix 11.3 – Acoustic Survey Report

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# Technical Memorandum

|                                                      |                          |                        |                  |
|------------------------------------------------------|--------------------------|------------------------|------------------|
| <b>Project:</b>                                      | Nash Solar Farm          | <b>Date:</b>           | 15/08/2025       |
| <b>To:</b>                                           | Gráinne Reid             | <b>Project Number:</b> | D250515          |
| <b>Email:</b>                                        | Grainne.Reid@mottmac.com | <b>Memo reference:</b> | D250515ME1       |
| <b>Copy to:</b>                                      |                          | <b>From:</b>           | Dr Emmet English |
| <b>Subject: Nase Solar Baseline Noise Monitoring</b> |                          |                        |                  |

## 1.1 Introduction

Amplitude were engaged to conducted baseline monitoring prior to the installation of a proposed Solar Farm in Nash Wexford. All loggers were installed on the 31<sup>st</sup> of July and collected on the 6<sup>th</sup> August 2025. This technical memorandum summarises the assessment.

This memo is supported by the following information.

- A .CSV file of the acquired noise data including  $L_{A90}$ ,  $L_{A10}$ ,  $L_{Amin}$ ,  $L_{Amax}$ ,  $L_{Aeq}$ . At each location
- Calibration Certs of each noise logger.

## 1.2 Measurement

- Class 1 sound level meters in accordance with IEC 61672-1:2013 were used for all measurements. Table 1 below summarises the measurement equipment used.
- A calibration check of the sound level meter was conducted prior to and following the assessment using an external acoustic calibrator, with no significant drift in calibration measured.
- For attended measurements the sound level meter was located on a tripod approximately 1.5m from ground floor level.
- For unattended measurements, the microphone was attached to a tripod extending to height of approximately 1.5m from ground level.
- All locations were more than 5m from reflective services and therefore considered to be free field.

For all locations, the noise meters were set to sample every 5 minutes.

## 1.3 Equipment Installed

Table 1: Measurement Equipment and install coordinates

| Description | Manufacturer  | Model          | Serial No. | Cal Due Date | GPS Coordinates |           |
|-------------|---------------|----------------|------------|--------------|-----------------|-----------|
|             |               |                |            |              | Latitude        | Longitude |
| Logger 1    | Sonitus       | EM2030         | 01331      | 17/05/2026   | 52.32563        | -6.86386  |
| Logger 2    | Sonitus       | EM2030         | 00607      | 24/09/2026   | 52.32651        | -6.85398  |
| Logger 3    | Sonitus       | EM2030         | 01477      | 20/05/2026   | 52.32528        | -6.84476  |
| Logger 4    | Sonitus       | EM2030         | 01570      | 19/07/2026   | 52.31379        | -6.86421  |
| Logger 5    | Sonitus       | EM2030         | 01425      | 18/10/2025   | 52.31023        | -6.86651  |
| Calibrator  | Larson Davies | Cal200/(13592) | 18194      | 17/12/2025   | 52.32563        | -6.86386  |
| Rain Gauge  | Hobo          | UA-003-64      | 65536      | -            | 52.32563        | -6.86386  |

## 1.4 Installed Locations

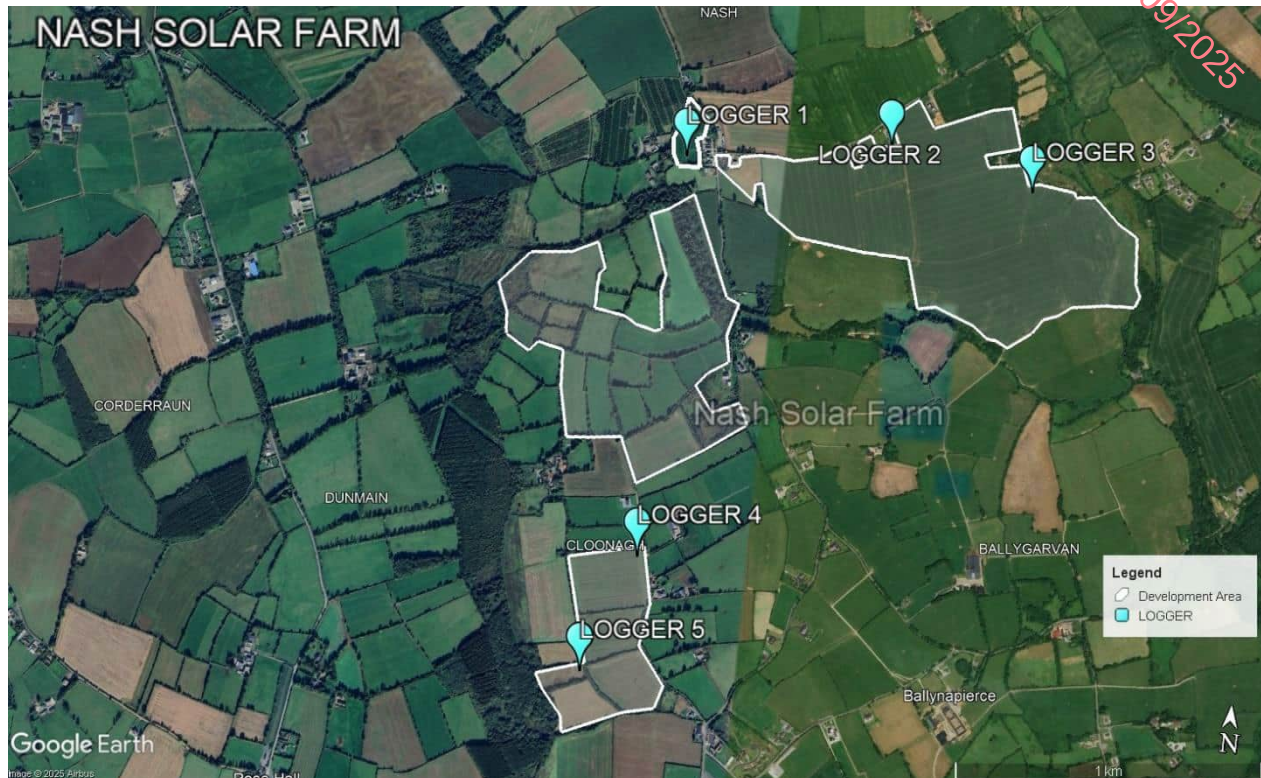


Figure 1 Google Earth Image of Logger Locations

## 1.5 Observations

The observations during the course of the installation and collection of the loggers indicate low level of ambient noise in the area typical of rural agricultural environments at some distance from major transport infrastructure and regional industry.

Table 2: Observed ambient noise environment at each of the logger locations

| Logger   | Observations                                              |
|----------|-----------------------------------------------------------|
| Logger 1 | Rustling Vegetation, Occasional birdsong, distant traffic |
| Logger 2 | Rustling Vegetation, Occasional birdsong, distant traffic |
| Logger 3 | Rustling Vegetation, Occasional birdsong, distant traffic |
| Logger 4 | Rustling Vegetation, Occasional birdsong, distant traffic |
| Logger 5 | Rustling Vegetation, Occasional birdsong, distant traffic |

## 1.6 Weather Conditions

The weather conditions observed during the install and collection indicate the following:

**Wind:** Little (<1m/s) or no wind, observed during installation and collection.

**Rain:** No rain observed or recording during the course of the survey.

**Cloud Cover.** Little or partial cloud observed during installation and collection.

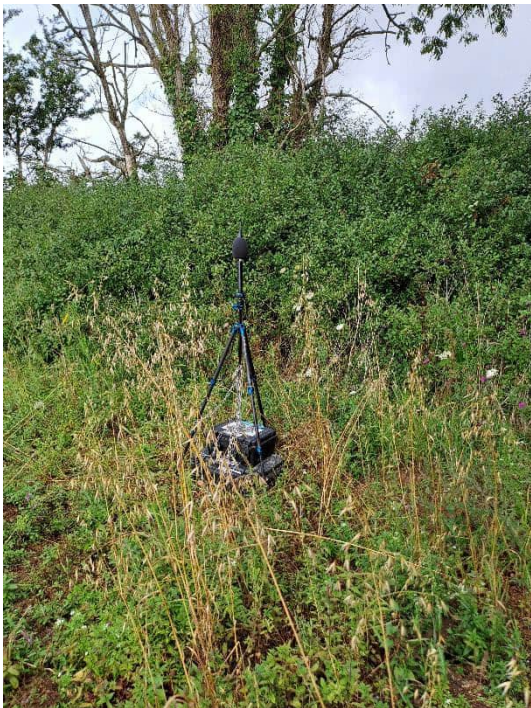
## 1.7 Installation Photos



Figure 2: Logger 1 as installed



**Figure 3: Logger 2 as installed**



**Figure 4: Logger 3 as installed**



**Figure 5: Logger 4 as installed**



**Figure 6: Logger 5 as installed**

Test Date: 18-10-2023

---

**Equipment**

|                             |        |                       |        |
|-----------------------------|--------|-----------------------|--------|
| <b>Sound Level Monitor:</b> | EM2030 | <b>Serial Number:</b> | 01425  |
| <b>Microphone Assembly:</b> | 378B02 | <b>Serial Number:</b> | 333056 |

---

**Calibration Procedure**

The sound level meter was calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), Periodic tests, specification of sound level meters. Tolerances for verification procedures are specified in IEC 61672-1 (2003).

---

**Measurement Results**

| <b>Test</b>                             | <b>Result</b> |
|-----------------------------------------|---------------|
| Self-generated noise                    | PASS          |
| Frequency and Time Weightings           | PASS          |
| Frequency Weighting – A                 | PASS          |
| Frequency Weighting – C                 | PASS          |
| Level Linearity                         | PASS          |
| Toneburst Response                      | PASS          |
| Acoustical Tests of Frequency Weighting | PASS          |
| Peak C Response                         | PASS          |
| Overload Indication                     | PASS          |
| Sensitivity Calibration                 | PASS          |

---

**Signed on behalf of Sonitus Systems:**

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**Equipment Description**

|                         |                 |                                  |        |
|-------------------------|-----------------|----------------------------------|--------|
| <b>Model:</b>           | EM2030          | <b>Microphone Model:</b>         | 378B02 |
| <b>Serial Number:</b>   | 01425           | <b>Microphone Serial Number:</b> | 333056 |
| <b>Microphone Type:</b> | 1/2" free field | <b>Pre-amplifier Number:</b>     | 074556 |
|                         |                 | <b>Pre-amplifier Set:</b>        | 153382 |

**Ambient Conditions**

Measurement conditions were within the tolerances defined in IEC 61672-1 and IEC 60942.

|                             |     |     |
|-----------------------------|-----|-----|
| <b>Barometric Pressure:</b> | 994 | hPa |
| <b>Temperature:</b>         | 20  | °C  |
| <b>Relative Humidity:</b>   | 62  | %   |

**Calibration Equipment**

|                       |                                         |                              |            |
|-----------------------|-----------------------------------------|------------------------------|------------|
| <b>Description:</b>   | National Instruments PXI-4461 (INST-58) |                              |            |
| <b>Serial Number:</b> | 20D2877                                 | <b>Calibration Due Date:</b> | 01-05-2024 |
| <b>Calibrator:</b>    | CR511ES (INST-31)                       |                              |            |
| <b>Serial Number:</b> | 60871                                   | <b>Calibration Due Date:</b> | 15-02-2024 |

The standards used in this calibration are traceable to NIST and/or other National Measurement Institutes (NMI's) that are signatories of the International Committee of Weights and Measures (CIPM) mutual recognition agreement (MRA).

**Results**

Self-generated noise  
SLM Measuring mode: SPL

| SLM Configuration                                                                   | Freq. Weighting Network | SLM Reading |
|-------------------------------------------------------------------------------------|-------------------------|-------------|
| Microphone Installed                                                                | A                       | 19          |
| Microphone replaced<br>by electrical signal device<br>and fitted with short circuit | A                       | 16.7        |
|                                                                                     | C                       | 18.7        |
|                                                                                     | Z                       |             |

Test Result **PASS**

Frequency and Time Weightings at 1 kHz  
SLM Measuring Mode: SPL (dB)

| Time Weighting | Freq. Weighting | Expected Level | Deviation | Tol +/- |
|----------------|-----------------|----------------|-----------|---------|
| Fast           | A               | 94.0           | ref       |         |
|                | C               | 94.0           | 0.0       | 0.2     |
| Slow           | A               | 94.0           | 0.0       | 0.2     |
| LEQ            | A               | 94.0           | 0.0       | 0.2     |

Test Result **PASS**

Electrical tests of frequency weighting (A-weighting)  
SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 250   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 500   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Electrical tests of frequency weighting (C-weighting)  
SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Linearity level on reference range  
 Input frequency: 8 kHz  
 SLM Measuring Mode: SPL (dB)

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| Range  | Expected Level | SLM Reading | Deviation | Tol +/- |
|--------|----------------|-------------|-----------|---------|
| 120 dB | 94.0           | 94.0        | 0.0       | 1.1     |
|        | 99.0           | 99.0        | 0.0       | 1.1     |
|        | 104.0          | 104.0       | 0.0       | 1.1     |
|        | 109.0          | 109.0       | 0.0       | 1.1     |
|        | 114.0          | 114.0       | 0.0       | 1.1     |
|        | 115.0          | 115.0       | 0.0       | 1.1     |
|        | 116.0          | 116.0       | 0.0       | 1.1     |
|        | 117.0          | 117.0       | 0.0       | 1.1     |
|        | 118.0          | 118.0       | 0.0       | 1.1     |
|        | 89.0           | 89.0        | 0.0       | 1.1     |
|        | 84.0           | 84.0        | 0.0       | 1.1     |
|        | 79.0           | 79.0        | 0.0       | 1.1     |
|        | 74.0           | 74.0        | 0.0       | 1.1     |
|        | 69.0           | 69.0        | 0.0       | 1.1     |
|        | 64.0           | 64.0        | 0.0       | 1.1     |
|        | 59.0           | 59.1        | 0.1       | 1.1     |
|        | 54.0           | 54.1        | 0.1       | 1.1     |
|        | 49.0           | 49.1        | 0.1       | 1.1     |
|        | 44.0           | 44.1        | 0.1       | 1.1     |
|        | 39.0           | 39.1        | 0.1       | 1.1     |
|        | 34.0           | 34.2        | 0.2       | 1.1     |
|        | 33.0           | 33.3        | 0.3       | 1.1     |
|        | 32.0           | 32.3        | 0.3       | 1.1     |
|        | 31.0           | 31.3        | 0.3       | 1.1     |
|        | 30.0           | 30.4        | 0.4       | 1.1     |

Test Result **PASS**

Toneburst Response  
 Input frequency: 4 kHz

| Burst Type | Response | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|------------|----------|----------------|-------------|-----------|-------|-------|
| 200 ms     | LAFMAX   | 91.0           | 90.9        | -0.1      | 0.8   | -0.8  |
| 2.0 ms     | LAFMAX   | 100.0          | 100.0       | 0.0       | 1.3   | -1.3  |
| 0.25 ms    | LAFMAX   | 117.0          | 117.1       | 0.1       | 1.3   | -3.3  |
|            |          |                |             |           |       |       |
| 200 ms     | LASMAX   | 91.0           | 91.0        | 0.0       | 0.8   | -0.8  |
| 2.0 ms     | LASMAX   | 110.6          | 110.6       | 0.0       | 1.3   | -3.3  |

Test Result **PASS**

## Acoustical Tests of Frequency Weighting

| Input Level | Freq   | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------------|--------|----------------|-------------|-----------|-------|-------|
| 94          | 1 kHz  | 94.1           | 94.1        | 0.0       | 1.1   | 1.1   |
|             | 125 Hz | 93.9           | 94.0        | 0.1       | 1.5   | 1.5   |
|             | 4 kHz  | 93.3           | 93.3        | 0.0       | 1.6   | 1.6   |

Test Result **PASS**

## Peak C Sound Level

| Pulse Type  | Freq   | Expected Level | SLM Reading | Deviation | Tol +/- |
|-------------|--------|----------------|-------------|-----------|---------|
| 1 cycle     | 8 kHz  | 115.4          | 115.2       | -0.2      | 2.4     |
| Pos ½ cycle | 500 Hz | 117.4          | 117.1       | -0.3      | 1.4     |
| Neg ½ cycle | 500 Hz | 117.4          | 117.1       | -0.3      | 1.4     |

Test Result **PASS**

## Overload Indication

| Test Description      | Overload at | Meas. Diff. (Pos – Neg) | Tol +/- |
|-----------------------|-------------|-------------------------|---------|
| Pos. ½ cycle at 4 kHz | 122.1       |                         |         |
| Neg. ½ cycle at 4 kHz | 122.0       |                         |         |
| Level difference      |             | 0.1                     | 1.8     |

Test Result **PASS**

The microphone sensitivity was tested with a 1 kHz sine tone

| SLM Serial No. | Microphone No. | Signal Level | Sensitivity (dB re 1V/Pa) |
|----------------|----------------|--------------|---------------------------|
| 01425          | 333056         | 94 dB        | -25.98                    |

Frequency response of the microphone across the range 20Hz – 20kHz was within the tolerance limits specified by the manufacturer.

## Calibration Notes

Test Date: 24-09-2024

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**Equipment**

Sound Level Monitor: EM2030  
Microphone Assembly: 378B02

Serial Number: 00607  
Serial Number: 305846

---

**Calibration Procedure**

The sound level meter was calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), Periodic tests, specification of sound level meters. Tolerances for verification procedures are specified in IEC 61672-1 (2003).

---

**Measurement Results**

| Test                                    | Result |
|-----------------------------------------|--------|
| Self-generated noise                    | PASS   |
| Frequency and Time Weightings           | PASS   |
| Frequency Weighting – A                 | PASS   |
| Frequency Weighting – C                 | PASS   |
| Level Linearity                         | PASS   |
| Toneburst Response                      | PASS   |
| Acoustical Tests of Frequency Weighting | PASS   |
| Peak C Response                         | PASS   |
| Overload Indication                     | PASS   |
| Sensitivity Calibration                 | PASS   |

---

**Signed on behalf of Sonitus Systems:**

Frequency and Time Weightings at 1 kHz

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**Equipment Description**

|                         |                 |                                  |        |
|-------------------------|-----------------|----------------------------------|--------|
| <b>Model:</b>           | EM2030          | <b>Microphone Model:</b>         | 378B02 |
| <b>Serial Number:</b>   | 00607           | <b>Microphone Serial Number:</b> | 305846 |
| <b>Microphone Type:</b> | 1/2" free field | <b>Pre-amplifier Number:</b>     | 053980 |
|                         |                 | <b>Pre-amplifier Set:</b>        | 135879 |

**Ambient Conditions**

Measurement conditions were within the tolerances defined in IEC 61672-1 and IEC 60942.

|                             |      |     |
|-----------------------------|------|-----|
| <b>Barometric Pressure:</b> | 1025 | hPa |
| <b>Temperature:</b>         | 20   | °C  |
| <b>Relative Humidity:</b>   | 56   | %   |

**Calibration Equipment**

|                       |                                         |                              |            |
|-----------------------|-----------------------------------------|------------------------------|------------|
| <b>Description:</b>   | National Instruments PXI-4461 (INST-58) |                              |            |
| <b>Serial Number:</b> | 20D2877                                 | <b>Calibration Due Date:</b> | 01-11-2024 |
| <b>Calibrator:</b>    | CR511ES (INST-31)                       |                              |            |
| <b>Serial Number:</b> | 60871                                   | <b>Calibration Due Date:</b> | 23-02-2025 |

The standards used in this calibration are traceable to NIST and/or other National Measurement Institutes (NMI's) that are signatories of the International Committee of Weights and Measures (CIPM) mutual recognition agreement (MRA).

**Results**

Self-generated noise  
SLM Measuring mode: SPL

| SLM Configuration                                                                   | Freq. Weighting Network | SLM Reading |
|-------------------------------------------------------------------------------------|-------------------------|-------------|
| Microphone Installed                                                                | A                       | 19          |
| Microphone replaced<br>by electrical signal device<br>and fitted with short circuit | A                       | 15.7        |
|                                                                                     | C                       | 16.7        |
|                                                                                     | Z                       |             |

Test Result **PASS**

Linearity level on reference range  
Input frequency: 8 kHz

SLM Measuring Mode: SPL (dB)

| Time Weighting | Freq. Weighting | Expected Level | Deviation | Tol +/- |
|----------------|-----------------|----------------|-----------|---------|
| Fast           | A               | 94.0           | ref       |         |
|                | C               | 94.0           | 0.0       | 0.2     |
| Slow           | A               | 94.0           | 0.0       | 0.2     |
| LEQ            | A               | 94.0           | 0.0       | 0.2     |

Test Result **PASS**

Electrical tests of frequency weighting (A-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 250   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 500   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Electrical tests of frequency weighting (C-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.6        | -1.4      | 3.5   | -17.0 |

Test Result **PASS**

Acoustical Tests of Frequency Weighting

| Input Level | Freq   | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------------|--------|----------------|-------------|-----------|-------|-------|
| 94          | 1 kHz  | 94.1           | 94.1        | 0.0       | 1.1   | 1.1   |
|             | 125 Hz | 93.9           | 93.9        | 0.0       | 1.5   | 1.5   |
|             | 4 kHz  | 93.3           | 93.3        | 0.0       | 1.6   | 1.6   |

SLM Measuring Mode: SPL (dB)

| Range  | Expected Level | SLM Reading | Deviation | Tol +/- |
|--------|----------------|-------------|-----------|---------|
| 120 dB | 94.0           | 94.0        | 0.0       | 1.1     |
|        | 99.0           | 99.0        | 0.0       | 1.1     |
|        | 104.0          | 104.0       | 0.0       | 1.1     |
|        | 109.0          | 109.0       | 0.0       | 1.1     |
|        | 114.0          | 114.0       | 0.0       | 1.1     |
|        | 115.0          | 115.0       | 0.0       | 1.1     |
|        | 116.0          | 116.0       | 0.0       | 1.1     |
|        | 117.0          | 117.0       | 0.0       | 1.1     |
|        | 118.0          | 117.9       | -0.1      | 1.1     |
|        | 89.0           | 89.0        | 0.0       | 1.1     |
|        | 84.0           | 84.0        | 0.0       | 1.1     |
|        | 79.0           | 79.0        | 0.0       | 1.1     |
|        | 74.0           | 74.0        | 0.0       | 1.1     |
|        | 69.0           | 69.0        | 0.0       | 1.1     |
|        | 64.0           | 64.0        | 0.0       | 1.1     |
|        | 59.0           | 59.0        | 0.0       | 1.1     |
|        | 54.0           | 54.1        | 0.1       | 1.1     |
|        | 49.0           | 49.1        | 0.1       | 1.1     |
|        | 44.0           | 44.1        | 0.1       | 1.1     |
|        | 39.0           | 39.2        | 0.2       | 1.1     |
|        | 34.0           | 34.3        | 0.3       | 1.1     |
|        | 33.0           | 33.4        | 0.4       | 1.1     |
|        | 32.0           | 32.4        | 0.4       | 1.1     |
|        | 31.0           | 31.4        | 0.4       | 1.1     |
|        | 30.0           | 30.5        | 0.5       | 1.1     |

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Test Result **PASS**

Toneburst Response  
Input frequency: 4 kHz

| Burst Type | Response | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|------------|----------|----------------|-------------|-----------|-------|-------|
| 200 ms     | LAFMAX   | 91.0           | 90.9        | -0.1      | 0.8   | -0.8  |
| 2.0 ms     | LAFMAX   | 100.0          | 100.0       | 0.0       | 1.3   | -1.3  |
| 0.25 ms    | LAFMAX   | 117.0          | 117.1       | 0.1       | 1.3   | -3.3  |
|            |          |                |             |           |       |       |
| 200 ms     | LASMAX   | 91.0           | 91.0        | 0.0       | 0.8   | -0.8  |
| 2.0 ms     | LASMAX   | 110.6          | 110.6       | 0.0       | 1.3   | -3.3  |

Test Result **PASS**

**PASS**

| ation | Tol +/- |
|-------|---------|
| 0.2   | 2.4     |
| 0.3   | 1.4     |

## Test Result

**PASS**

|                       |             |                         |         |
|-----------------------|-------------|-------------------------|---------|
| Test Description      | Overload at | Meas. Diff. (Pos – Neg) | Tol +/- |
| Pos. ½ cycle at 4 kHz | 121.1       |                         |         |
| Neg. ½ cycle at 4 kHz | 121.0       |                         |         |
| Level difference      |             | 0.1                     | 1.8     |

## Test Result

**PASS**

|                |                |              |                           |
|----------------|----------------|--------------|---------------------------|
| SLM Serial No. | Microphone No. | Signal Level | Sensitivity (dB re 1V/Pa) |
| 00607          | 305846         | 94 dB        | -24.77                    |

## Calibration Notes

|  |
|--|
|  |
|--|

Test Date: 17-05-2024

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**Equipment**

|                      |        |                |        |
|----------------------|--------|----------------|--------|
| Sound Level Monitor: | EM2030 | Serial Number: | 01331  |
| Microphone Assembly: | 378B02 | Serial Number: | 329653 |

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**Calibration Procedure**

The sound level meter was calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), Periodic tests, specification of sound level meters. Tolerances for verification procedures are specified in IEC 61672-1 (2003).

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**Measurement Results**

| Test                                    | Result |
|-----------------------------------------|--------|
| Self-generated noise                    | PASS   |
| Frequency and Time Weightings           | PASS   |
| Frequency Weighting – A                 | PASS   |
| Frequency Weighting – C                 | PASS   |
| Level Linearity                         | PASS   |
| Toneburst Response                      | PASS   |
| Acoustical Tests of Frequency Weighting | PASS   |
| Peak C Response                         | PASS   |
| Overload Indication                     | PASS   |
| Sensitivity Calibration                 | PASS   |

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**Signed on behalf of Sonitus Systems:**

Frequency and Time Weightings at 1 kHz

RECEIVED: 22/09/2025

**Equipment Description**

|                         |                 |                                  |         |
|-------------------------|-----------------|----------------------------------|---------|
| <b>Model:</b>           | EM2030          | <b>Microphone Model:</b>         | 378B02  |
| <b>Serial Number:</b>   | 01331           | <b>Microphone Serial Number:</b> | 329653  |
| <b>Microphone Type:</b> | 1/2" free field | <b>Pre-amplifier Number:</b>     | 072458  |
|                         |                 | <b>Pre-amplifier Set:</b>        | 1511446 |

**Ambient Conditions**

Measurement conditions were within the tolerances defined in IEC 61672-1 and IEC 60942.

|                             |      |     |
|-----------------------------|------|-----|
| <b>Barometric Pressure:</b> | 1026 | hPa |
| <b>Temperature:</b>         | 21   | °C  |
| <b>Relative Humidity:</b>   | 56   | %   |

**Calibration Equipment**

|                       |                                         |                              |            |
|-----------------------|-----------------------------------------|------------------------------|------------|
| <b>Description:</b>   | National Instruments PXI-4461 (INST-58) |                              |            |
| <b>Serial Number:</b> | 20D2877                                 | <b>Calibration Due Date:</b> | 01-05-2024 |
| <b>Calibrator:</b>    | CR511ES (INST-31)                       |                              |            |
| <b>Serial Number:</b> | 60871                                   | <b>Calibration Due Date:</b> | 23-02-2025 |

The standards used in this calibration are traceable to NIST and/or other National Measurement Institutes (NMI's) that are signatories of the International Committee of Weights and Measures (CIPM) mutual recognition agreement (MRA).

**Results**

Self-generated noise  
SLM Measuring mode: SPL

| SLM Configuration                                                                   | Freq. Weighting Network | SLM Reading |
|-------------------------------------------------------------------------------------|-------------------------|-------------|
| Microphone Installed                                                                | A                       | 19          |
| Microphone replaced<br>by electrical signal device<br>and fitted with short circuit | A                       | 16.5        |
|                                                                                     | C                       | 18.4        |
|                                                                                     | Z                       |             |

Test Result **PASS**

Linearity level on reference range  
Input frequency: 8 kHz

SLM Measuring Mode: SPL (dB)

| Time Weighting | Freq. Weighting | Expected Level | Deviation | Tol +/- |
|----------------|-----------------|----------------|-----------|---------|
| Fast           | A               | 94.0           | ref       |         |
|                | C               | 94.0           | 0.0       | 0.2     |
| Slow           | A               | 94.0           | 0.0       | 0.2     |
| LEQ            | A               | 94.0           | 0.0       | 0.2     |

Test Result **PASS**

Electrical tests of frequency weighting (A-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 125   | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 1000  | 75             | 75.1        | 0.1       | 1.1   | -1.1  |
| 2000  | 75             | 75.1        | 0.1       | 1.6   | -1.6  |
| 4000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 8000  | 75             | 74.9        | -0.1      | 2.1   | -3.1  |
| 16000 | 75             | 73.8        | -1.2      | 3.5   | -17.0 |

Test Result **PASS**

Electrical tests of frequency weighting (C-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 125   | 75             | 75.1        | 0.1       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.1        | 0.1       | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.1        | 0.1       | 1.6   | -1.6  |
| 4000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 8000  | 75             | 74.9        | -0.1      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Acoustical Tests of Frequency Weighting

| Input Level | Freq   | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------------|--------|----------------|-------------|-----------|-------|-------|
| 94          | 1 kHz  | 94.1           | 94.1        | 0.0       | 1.1   | 1.1   |
|             | 125 Hz | 93.9           | 93.9        | 0.0       | 1.5   | 1.5   |
|             | 4 kHz  | 93.3           | 93.2        | -0.1      | 1.6   | 1.6   |

SLM Measuring Mode: SPL (dB)

| Range  | Expected Level | SLM Reading | Deviation | Tol +/- |
|--------|----------------|-------------|-----------|---------|
| 120 dB | 94.0           | 94.0        | 0.0       | 1.1     |
|        | 99.0           | 99.0        | 0.0       | 1.1     |
|        | 104.0          | 104.0       | 0.0       | 1.1     |
|        | 109.0          | 109.0       | 0.0       | 1.1     |
|        | 114.0          | 114.0       | 0.0       | 1.1     |
|        | 115.0          | 115.0       | 0.0       | 1.1     |
|        | 116.0          | 116.0       | 0.0       | 1.1     |
|        | 117.0          | 117.0       | 0.0       | 1.1     |
|        | 118.0          | 118.0       | 0.0       | 1.1     |
|        | 89.0           | 89.0        | 0.0       | 1.1     |
|        | 84.0           | 84.0        | 0.0       | 1.1     |
|        | 79.0           | 79.0        | 0.0       | 1.1     |
|        | 74.0           | 74.0        | 0.0       | 1.1     |
|        | 69.0           | 69.0        | 0.0       | 1.1     |
|        | 64.0           | 64.0        | 0.0       | 1.1     |
|        | 59.0           | 59.0        | 0.0       | 1.1     |
|        | 54.0           | 54.0        | 0.0       | 1.1     |
|        | 49.0           | 49.0        | 0.0       | 1.1     |
|        | 44.0           | 44.0        | 0.0       | 1.1     |
|        | 39.0           | 39.1        | 0.1       | 1.1     |
|        | 34.0           | 34.2        | 0.2       | 1.1     |
|        | 33.0           | 33.3        | 0.3       | 1.1     |
|        | 32.0           | 32.3        | 0.3       | 1.1     |
|        | 31.0           | 31.3        | 0.3       | 1.1     |
|        | 30.0           | 30.4        | 0.4       | 1.1     |

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Test Result **PASS**

Toneburst Response  
Input frequency: 4 kHz

| Burst Type | Response | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|------------|----------|----------------|-------------|-----------|-------|-------|
| 200 ms     | LAFMAX   | 91.0           | 90.9        | -0.1      | 0.8   | -0.8  |
| 2.0 ms     | LAFMAX   | 100.0          | 100.0       | 0.0       | 1.3   | -1.3  |
| 0.25 ms    | LAFMAX   | 117.0          | 117.1       | 0.1       | 1.3   | -3.3  |
|            |          |                |             |           |       |       |
| 200 ms     | LASMAX   | 91.0           | 91.0        | 0.0       | 0.8   | -0.8  |
| 2.0 ms     | LASMAX   | 110.6          | 110.6       | 0.0       | 1.3   | -3.3  |

Test Result **PASS**

**PASS**

| ation | Tol +/- |
|-------|---------|
| 0.1   | 2.4     |
| 0.3   | 1.4     |

Test Result **PASS**

| Test Description      | Overload at | Meas. Diff. (Pos – Neg) | Tol +/- |
|-----------------------|-------------|-------------------------|---------|
| Pos. ½ cycle at 4 kHz | 122.1       |                         |         |
| Neg. ½ cycle at 4 kHz | 122.1       |                         |         |
| Level difference      |             | 0.0                     | 1.8     |

**PASS**

|                |                |              |                           |
|----------------|----------------|--------------|---------------------------|
| SLM Serial No. | Microphone No. | Signal Level | Sensitivity (dB re 1V/Pa) |
| 01331          | 329653         | 94 dB        | -25.99                    |

## Calibration Notes

|  |
|--|
|  |
|--|

Test Date: 20-05-2024

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**Equipment**

|                      |        |                |        |
|----------------------|--------|----------------|--------|
| Sound Level Monitor: | EM2030 | Serial Number: | 01477  |
| Microphone Assembly: | 378B02 | Serial Number: | 351556 |

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**Calibration Procedure**

The sound level meter was calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), Periodic tests, specification of sound level meters. Tolerances for verification procedures are specified in IEC 61672-1 (2003).

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**Measurement Results**

| Test                                    | Result |
|-----------------------------------------|--------|
| Self-generated noise                    | PASS   |
| Frequency and Time Weightings           | PASS   |
| Frequency Weighting – A                 | PASS   |
| Frequency Weighting – C                 | PASS   |
| Level Linearity                         | PASS   |
| Toneburst Response                      | PASS   |
| Acoustical Tests of Frequency Weighting | PASS   |
| Peak C Response                         | PASS   |
| Overload Indication                     | PASS   |
| Sensitivity Calibration                 | PASS   |

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**Signed on behalf of Sonitus Systems:**

Frequency and Time Weightings at 1 kHz

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**Equipment Description**

|                         |                 |                                  |        |
|-------------------------|-----------------|----------------------------------|--------|
| <b>Model:</b>           | EM2030          | <b>Microphone Model:</b>         | 378B02 |
| <b>Serial Number:</b>   | 01477           | <b>Microphone Serial Number:</b> | 351556 |
| <b>Microphone Type:</b> | 1/2" free field | <b>Pre-amplifier Number:</b>     | 085626 |
|                         |                 | <b>Pre-amplifier Set:</b>        | 165876 |

**Ambient Conditions**

Measurement conditions were within the tolerances defined in IEC 61672-1 and IEC 60942.

|                             |      |     |
|-----------------------------|------|-----|
| <b>Barometric Pressure:</b> | 1029 | hPa |
| <b>Temperature:</b>         | 21   | °C  |
| <b>Relative Humidity:</b>   | 56   | %   |

**Calibration Equipment**

|                       |                                         |                              |            |
|-----------------------|-----------------------------------------|------------------------------|------------|
| <b>Description:</b>   | National Instruments PXI-4461 (INST-58) |                              |            |
| <b>Serial Number:</b> | 20D2877                                 | <b>Calibration Due Date:</b> | 01-05-2024 |
| <b>Calibrator:</b>    | CR511ES (INST-31)                       |                              |            |
| <b>Serial Number:</b> | 60871                                   | <b>Calibration Due Date:</b> | 23-02-2025 |

The standards used in this calibration are traceable to NIST and/or other National Measurement Institutes (NMI's) that are signatories of the International Committee of Weights and Measures (CIPM) mutual recognition agreement (MRA).

**Results**

Self-generated noise  
SLM Measuring mode: SPL

| SLM Configuration                                                                   | Freq. Weighting Network | SLM Reading |
|-------------------------------------------------------------------------------------|-------------------------|-------------|
| Microphone Installed                                                                | A                       | 19          |
| Microphone replaced<br>by electrical signal device<br>and fitted with short circuit | A                       | 16.9        |
|                                                                                     | C                       | 17.1        |
|                                                                                     | Z                       |             |

Test Result **PASS**

Linearity level on reference range  
Input frequency: 8 kHz

SLM Measuring Mode: SPL (dB)

| Time Weighting | Freq. Weighting | Expected Level | Deviation | Tol +/- |
|----------------|-----------------|----------------|-----------|---------|
| Fast           | A               | 94.0           | ref       |         |
|                | C               | 94.0           | 0.0       | 0.2     |
| Slow           | A               | 94.0           | 0.0       | 0.2     |
| LEQ            | A               | 94.0           | 0.0       | 0.2     |

Test Result **PASS**

Electrical tests of frequency weighting (A-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 250   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 500   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Electrical tests of frequency weighting (C-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Acoustical Tests of Frequency Weighting

| Input Level | Freq   | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------------|--------|----------------|-------------|-----------|-------|-------|
| 94          | 1 kHz  | 94.1           | 94.1        | 0.0       | 1.1   | 1.1   |
|             | 125 Hz | 93.9           | 93.8        | -0.1      | 1.5   | 1.5   |
|             | 4 kHz  | 93.3           | 93.5        | 0.2       | 1.6   | 1.6   |

SLM Measuring Mode: SPL (dB)

| Range  | Expected Level | SLM Reading | Deviation | Tol +/- |
|--------|----------------|-------------|-----------|---------|
| 120 dB | 94.0           | 94.0        | 0.0       | 1.1     |
|        | 99.0           | 99.0        | 0.0       | 1.1     |
|        | 104.0          | 104.0       | 0.0       | 1.1     |
|        | 109.0          | 109.0       | 0.0       | 1.1     |
|        | 114.0          | 114.0       | 0.0       | 1.1     |
|        | 115.0          | 115.0       | 0.0       | 1.1     |
|        | 116.0          | 116.0       | 0.0       | 1.1     |
|        | 117.0          | 117.0       | 0.0       | 1.1     |
|        | 118.0          | 118.0       | 0.0       | 1.1     |
|        | 89.0           | 89.0        | 0.0       | 1.1     |
|        | 84.0           | 84.0        | 0.0       | 1.1     |
|        | 79.0           | 79.0        | 0.0       | 1.1     |
|        | 74.0           | 74.0        | 0.0       | 1.1     |
|        | 69.0           | 69.0        | 0.0       | 1.1     |
|        | 64.0           | 64.0        | 0.0       | 1.1     |
|        | 59.0           | 59.0        | 0.0       | 1.1     |
|        | 54.0           | 54.0        | 0.0       | 1.1     |
|        | 49.0           | 49.0        | 0.0       | 1.1     |
|        | 44.0           | 44.0        | 0.0       | 1.1     |
|        | 39.0           | 39.1        | 0.1       | 1.1     |
|        | 34.0           | 34.2        | 0.2       | 1.1     |
|        | 33.0           | 33.2        | 0.2       | 1.1     |
|        | 32.0           | 32.2        | 0.2       | 1.1     |
|        | 31.0           | 31.3        | 0.3       | 1.1     |
|        | 30.0           | 30.4        | 0.4       | 1.1     |

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Test Result **PASS**

Toneburst Response  
Input frequency: 4 kHz

| Burst Type | Response | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|------------|----------|----------------|-------------|-----------|-------|-------|
| 200 ms     | LAFMAX   | 91.0           | 90.9        | -0.1      | 0.8   | -0.8  |
| 2.0 ms     | LAFMAX   | 100.0          | 100.0       | 0.0       | 1.3   | -1.3  |
| 0.25 ms    | LAFMAX   | 117.0          | 117.1       | 0.1       | 1.3   | -3.3  |
|            |          |                |             |           |       |       |
| 200 ms     | LASMAX   | 91.0           | 91.0        | 0.0       | 0.8   | -0.8  |
| 2.0 ms     | LASMAX   | 110.6          | 110.6       | 0.0       | 1.3   | -3.3  |

Test Result **PASS**

**PASS**

| iation | Tol +/- |
|--------|---------|
| 0      | 2.4     |
| 0.2    | 1.4     |

## Test Result

**PASS**

|                       |             |                         |         |
|-----------------------|-------------|-------------------------|---------|
| Test Description      | Overload at | Meas. Diff. (Pos – Neg) | Tol +/- |
| Pos. ½ cycle at 4 kHz | 122.3       |                         |         |
| Neg. ½ cycle at 4 kHz | 122.3       |                         |         |
| Level difference      |             | 0.0                     | 1.8     |

## Test Result

**PASS**

|                |                |              |                           |
|----------------|----------------|--------------|---------------------------|
| SLM Serial No. | Microphone No. | Signal Level | Sensitivity (dB re 1V/Pa) |
| 01477          | 351556         | 94 dB        | -26.35                    |

## Calibration Notes

|  |
|--|
|  |
|--|

Test Date: 19-07-2024

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**Equipment**

Sound Level Monitor: EM2030  
Microphone Assembly: 378B02

Serial Number: 01570  
Serial Number: 336210

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**Calibration Procedure**

The sound level meter was calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), Periodic tests, specification of sound level meters. Tolerances for verification procedures are specified in IEC 61672-1 (2003).

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**Measurement Results**

| Test                                    | Result |
|-----------------------------------------|--------|
| Self-generated noise                    | PASS   |
| Frequency and Time Weightings           | PASS   |
| Frequency Weighting – A                 | PASS   |
| Frequency Weighting – C                 | PASS   |
| Level Linearity                         | PASS   |
| Toneburst Response                      | PASS   |
| Acoustical Tests of Frequency Weighting | PASS   |
| Peak C Response                         | PASS   |
| Overload Indication                     | PASS   |
| Sensitivity Calibration                 | PASS   |

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**Signed on behalf of Sonitus Systems:**

Frequency and Time Weightings at 1 kHz

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**Equipment Description**

|                         |                 |                                  |        |
|-------------------------|-----------------|----------------------------------|--------|
| <b>Model:</b>           | EM2030          | <b>Microphone Model:</b>         | 378B02 |
| <b>Serial Number:</b>   | 01570           | <b>Microphone Serial Number:</b> | 336210 |
| <b>Microphone Type:</b> | 1/2" free field | <b>Pre-amplifier Number:</b>     | 076150 |
|                         |                 | <b>Pre-amplifier Set:</b>        | 155304 |

**Ambient Conditions**

Measurement conditions were within the tolerances defined in IEC 61672-1 and IEC 60942.

|                             |      |     |
|-----------------------------|------|-----|
| <b>Barometric Pressure:</b> | 1030 | hPa |
| <b>Temperature:</b>         | 23   | °C  |
| <b>Relative Humidity:</b>   | 58   | %   |

**Calibration Equipment**

|                       |                                         |                              |            |
|-----------------------|-----------------------------------------|------------------------------|------------|
| <b>Description:</b>   | National Instruments PXI-4461 (INST-58) |                              |            |
| <b>Serial Number:</b> | 20D2877                                 | <b>Calibration Due Date:</b> | 01-11-2024 |
| <b>Calibrator:</b>    | CR511ES (INST-31)                       |                              |            |
| <b>Serial Number:</b> | 60871                                   | <b>Calibration Due Date:</b> | 23-02-2025 |

The standards used in this calibration are traceable to NIST and/or other National Measurement Institutes (NMI's) that are signatories of the International Committee of Weights and Measures (CIPM) mutual recognition agreement (MRA).

**Results**

Self-generated noise  
SLM Measuring mode: SPL

| SLM Configuration                                                                   | Freq. Weighting Network | SLM Reading |
|-------------------------------------------------------------------------------------|-------------------------|-------------|
| Microphone Installed                                                                | A                       | 17          |
| Microphone replaced<br>by electrical signal device<br>and fitted with short circuit | A                       | 16.8        |
|                                                                                     | C                       | 17.9        |
|                                                                                     | Z                       |             |

Test Result **PASS**

Linearity level on reference range  
Input frequency: 8 kHz

SLM Measuring Mode: SPL (dB)

| Time Weighting | Freq. Weighting | Expected Level | Deviation | Tol +/- |
|----------------|-----------------|----------------|-----------|---------|
| Fast           | A               | 94.0           | ref       |         |
|                | C               | 94.0           | 0.0       | 0.2     |
| Slow           | A               | 94.0           | 0.0       | 0.2     |
| LEQ            | A               | 94.0           | 0.0       | 0.2     |

Test Result **PASS**

Electrical tests of frequency weighting (A-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 250   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 500   | 75             | 74.9        | -0.1      | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.7        | -1.3      | 3.5   | -17.0 |

Test Result **PASS**

Electrical tests of frequency weighting (C-weighting)

SLM Measuring Mode: SPL (dB)

| Freq  | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------|----------------|-------------|-----------|-------|-------|
| 63    | 75             | 74.9        | -0.1      | 1.5   | -1.5  |
| 125   | 75             | 75.0        | 0.0       | 1.5   | -1.5  |
| 250   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 500   | 75             | 75.0        | 0.0       | 1.4   | -1.4  |
| 1000  | 75             | 75.0        | 0.0       | 1.1   | -1.1  |
| 2000  | 75             | 75.0        | 0.0       | 1.6   | -1.6  |
| 4000  | 75             | 74.9        | -0.1      | 1.6   | -1.6  |
| 8000  | 75             | 74.8        | -0.2      | 2.1   | -3.1  |
| 16000 | 75             | 73.6        | -1.4      | 3.5   | -17.0 |

Test Result **PASS**

Acoustical Tests of Frequency Weighting

| Input Level | Freq   | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|-------------|--------|----------------|-------------|-----------|-------|-------|
| 94          | 1 kHz  | 94.1           | 94.1        | 0.0       | 1.1   | 1.1   |
|             | 125 Hz | 93.9           | 93.9        | 0.0       | 1.5   | 1.5   |
|             | 4 kHz  | 93.3           | 93.0        | -0.3      | 1.6   | 1.6   |

SLM Measuring Mode: SPL (dB)

| Range  | Expected Level | SLM Reading | Deviation | Tol +/- |
|--------|----------------|-------------|-----------|---------|
| 120 dB | 94.0           | 94.0        | 0.0       | 1.1     |
|        | 99.0           | 99.0        | 0.0       | 1.1     |
|        | 104.0          | 104.0       | 0.0       | 1.1     |
|        | 109.0          | 109.0       | 0.0       | 1.1     |
|        | 114.0          | 114.0       | 0.0       | 1.1     |
|        | 115.0          | 115.0       | 0.0       | 1.1     |
|        | 116.0          | 116.0       | 0.0       | 1.1     |
|        | 117.0          | 117.0       | 0.0       | 1.1     |
|        | 118.0          | 118.0       | 0.0       | 1.1     |
|        | 89.0           | 89.0        | 0.0       | 1.1     |
|        | 84.0           | 84.0        | 0.0       | 1.1     |
|        | 79.0           | 79.0        | 0.0       | 1.1     |
|        | 74.0           | 74.0        | 0.0       | 1.1     |
|        | 69.0           | 69.0        | 0.0       | 1.1     |
|        | 64.0           | 64.0        | 0.0       | 1.1     |
|        | 59.0           | 59.0        | 0.0       | 1.1     |
|        | 54.0           | 54.0        | 0.0       | 1.1     |
|        | 49.0           | 49.0        | 0.0       | 1.1     |
|        | 44.0           | 44.0        | 0.0       | 1.1     |
|        | 39.0           | 39.1        | 0.1       | 1.1     |
|        | 34.0           | 34.2        | 0.2       | 1.1     |
|        | 33.0           | 33.3        | 0.3       | 1.1     |
|        | 32.0           | 32.3        | 0.3       | 1.1     |
|        | 31.0           | 31.4        | 0.4       | 1.1     |
|        | 30.0           | 30.4        | 0.4       | 1.1     |

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Test Result **PASS**

Toneburst Response  
Input frequency: 4 kHz

| Burst Type | Response | Expected Level | SLM Reading | Deviation | Tol + | Tol - |
|------------|----------|----------------|-------------|-----------|-------|-------|
| 200 ms     | LAFMAX   | 91.0           | 90.9        | -0.1      | 0.8   | -0.8  |
| 2.0 ms     | LAFMAX   | 100.0          | 100.0       | 0.0       | 1.3   | -1.3  |
| 0.25 ms    | LAFMAX   | 117.0          | 117.0       | 0.0       | 1.3   | -3.3  |
|            |          |                |             |           |       |       |
| 200 ms     | LASMAX   | 91.0           | 91.0        | 0.0       | 0.8   | -0.8  |
| 2.0 ms     | LASMAX   | 110.6          | 110.6       | 0.0       | 1.3   | -3.3  |

Test Result **PASS**

**PASS**

| ation | Tol +/- |
|-------|---------|
| 0     | 2.4     |
| 3     | 1.4     |

## Test Result

**PASS**

|                       |             |                         |         |
|-----------------------|-------------|-------------------------|---------|
| Test Description      | Overload at | Meas. Diff. (Pos – Neg) | Tol +/- |
| Pos. ½ cycle at 4 kHz | 122.1       |                         |         |
| Neg. ½ cycle at 4 kHz | 122.1       |                         |         |
| Level difference      |             | 0.0                     | 1.8     |

## Test Result

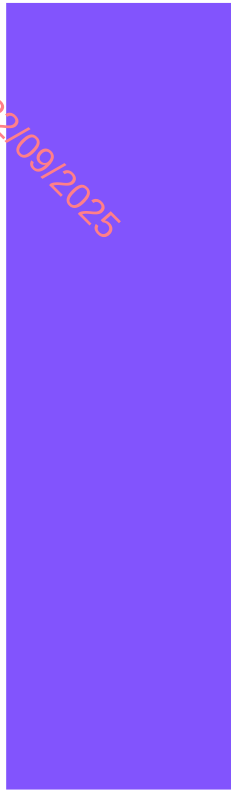
**PASS**

| SLM Serial No. | Microphone No. | Signal Level | Sensitivity (dB re 1V/Pa) |
|----------------|----------------|--------------|---------------------------|
| 01570          | 336210         | 94 dB        | -26.01                    |

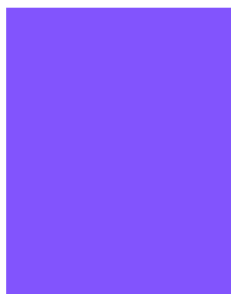
## Calibration Notes

|  |
|--|
|  |
|--|

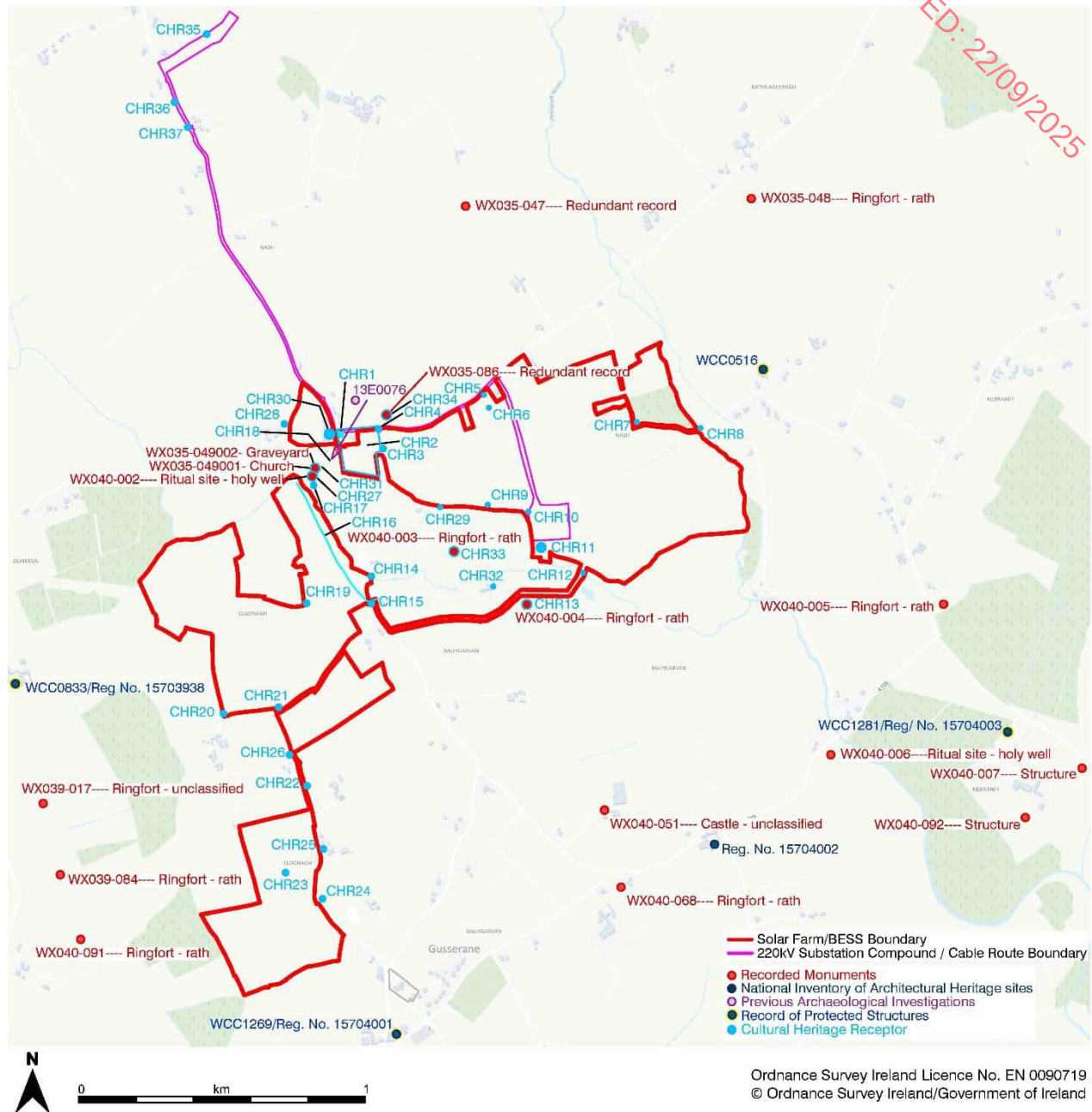
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## **Appendix 13.1 – Archaeological, Architecture and Cultural Heritage Figures**



## Appendix 13.1 – Figures



**Figure 13.1 Location of site and nearby Recorded Monuments, Protected Structures, National Inventory of Architectural Heritage Sites, Cultural Heritage Receptors (CHRs), and previous archaeological investigations.**

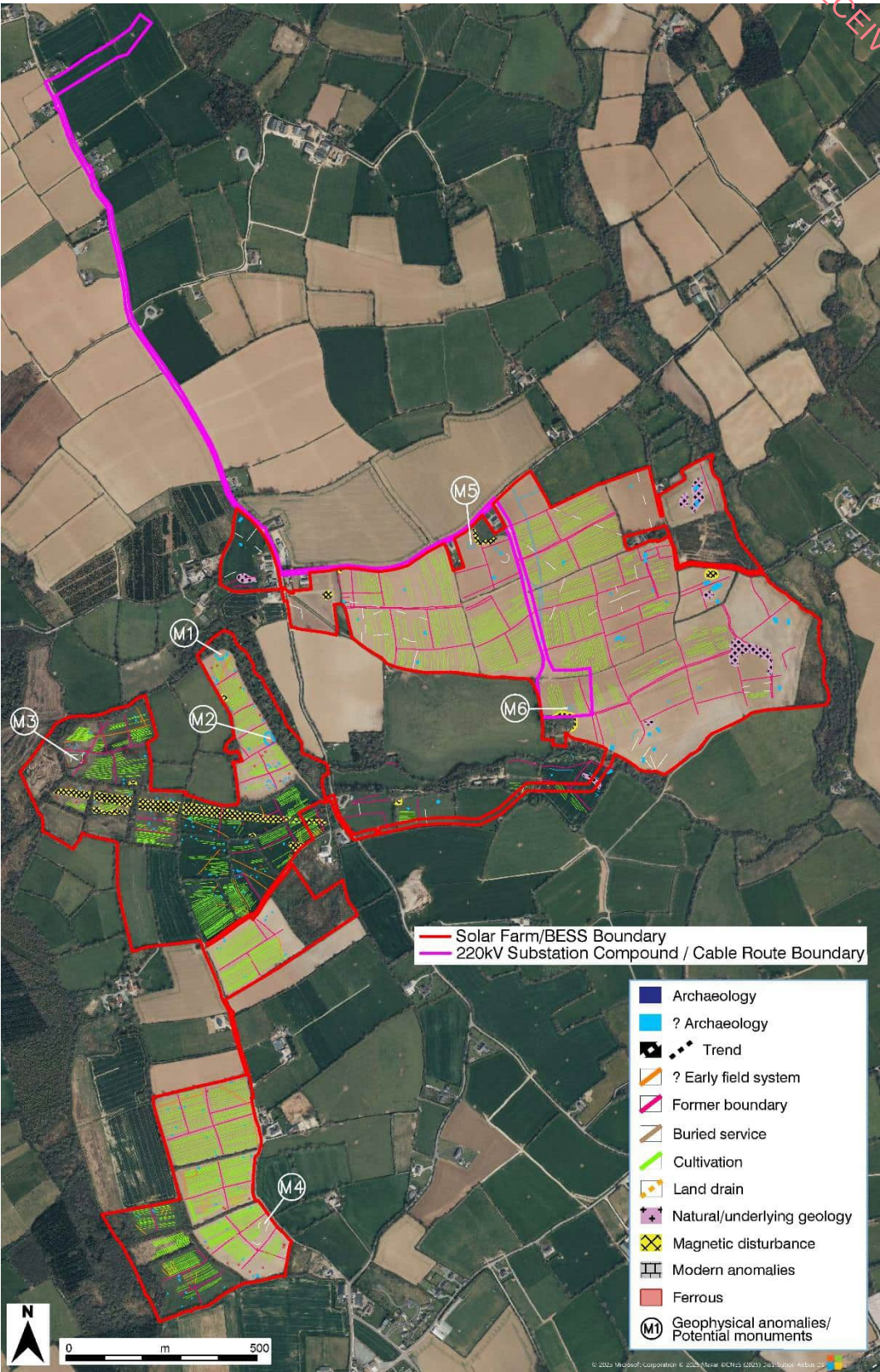


Figure 13.2 Aerial view of site, showing geophysical survey interpretation (licence no. 23R0080)

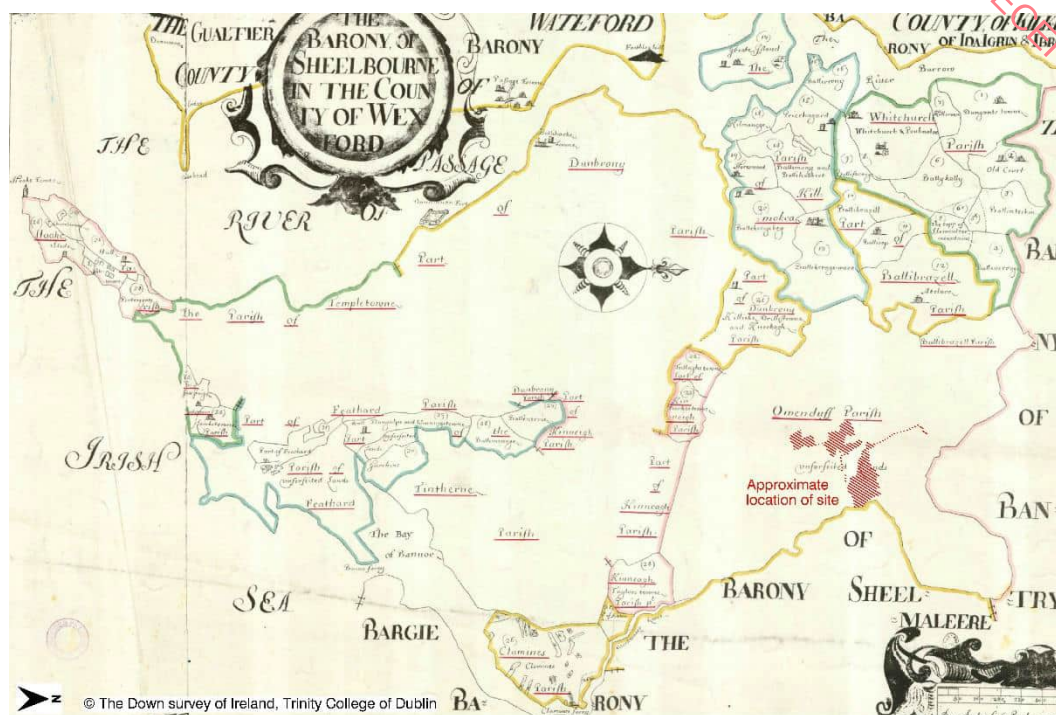


Figure 13.3 Extract from the Down Survey Map of County Wexford; Barony of Sheelbourne, showing approximate location of the site

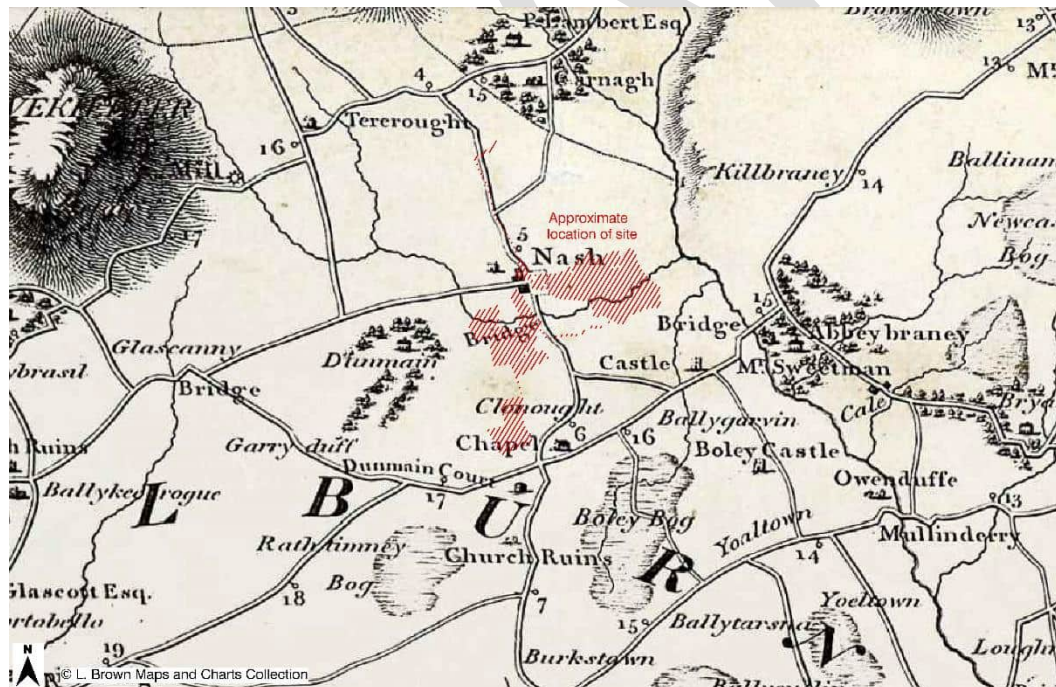


Figure 13.4 Extract from the 1811 Wexford Grand Jury Map by Valentine Gill, showing approximate location of the site.

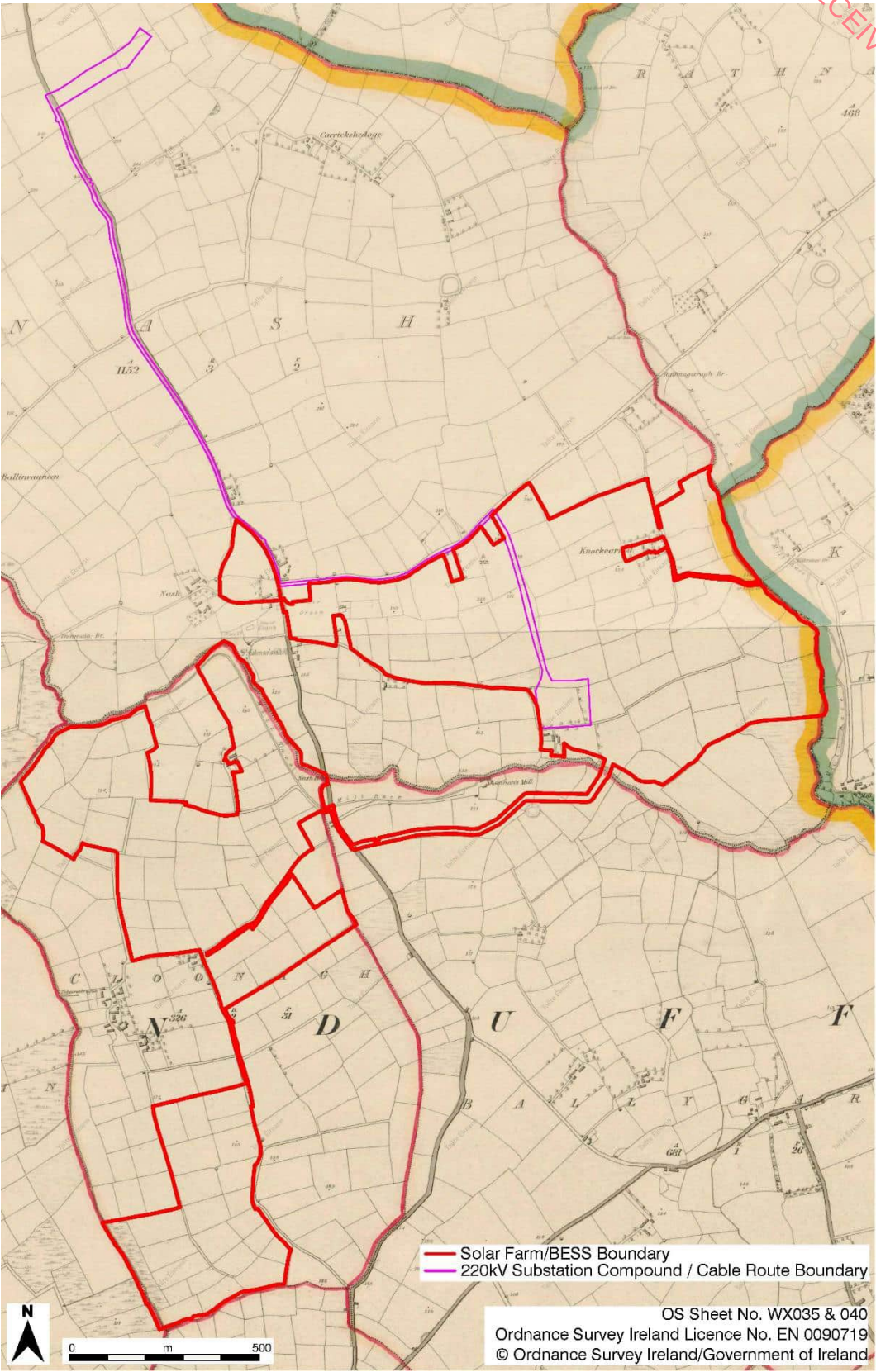
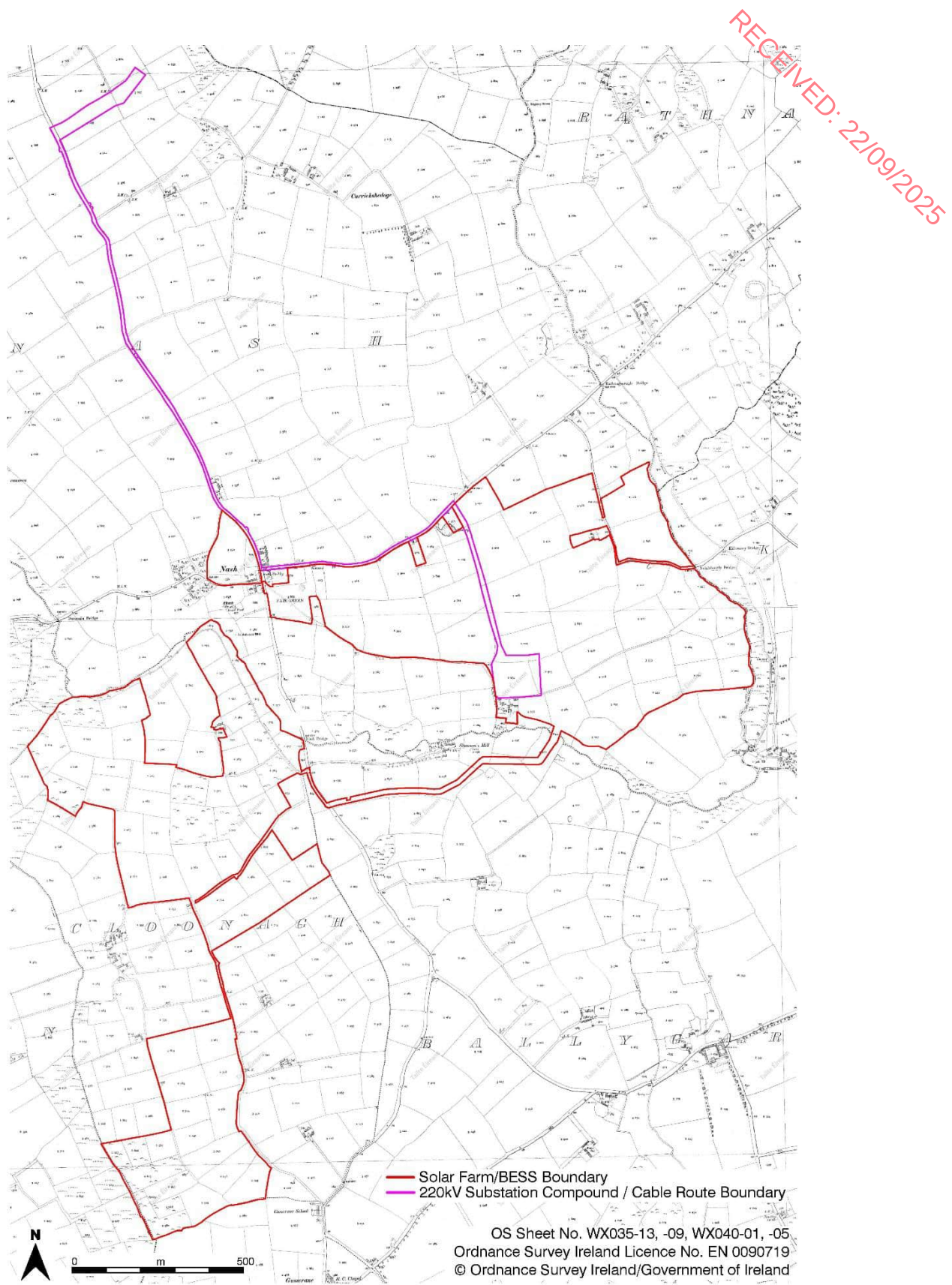


Figure 13.5 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1839 - published 1841), showing location of site



**Figure 13.6 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1902 - published 1904), showing location of site**

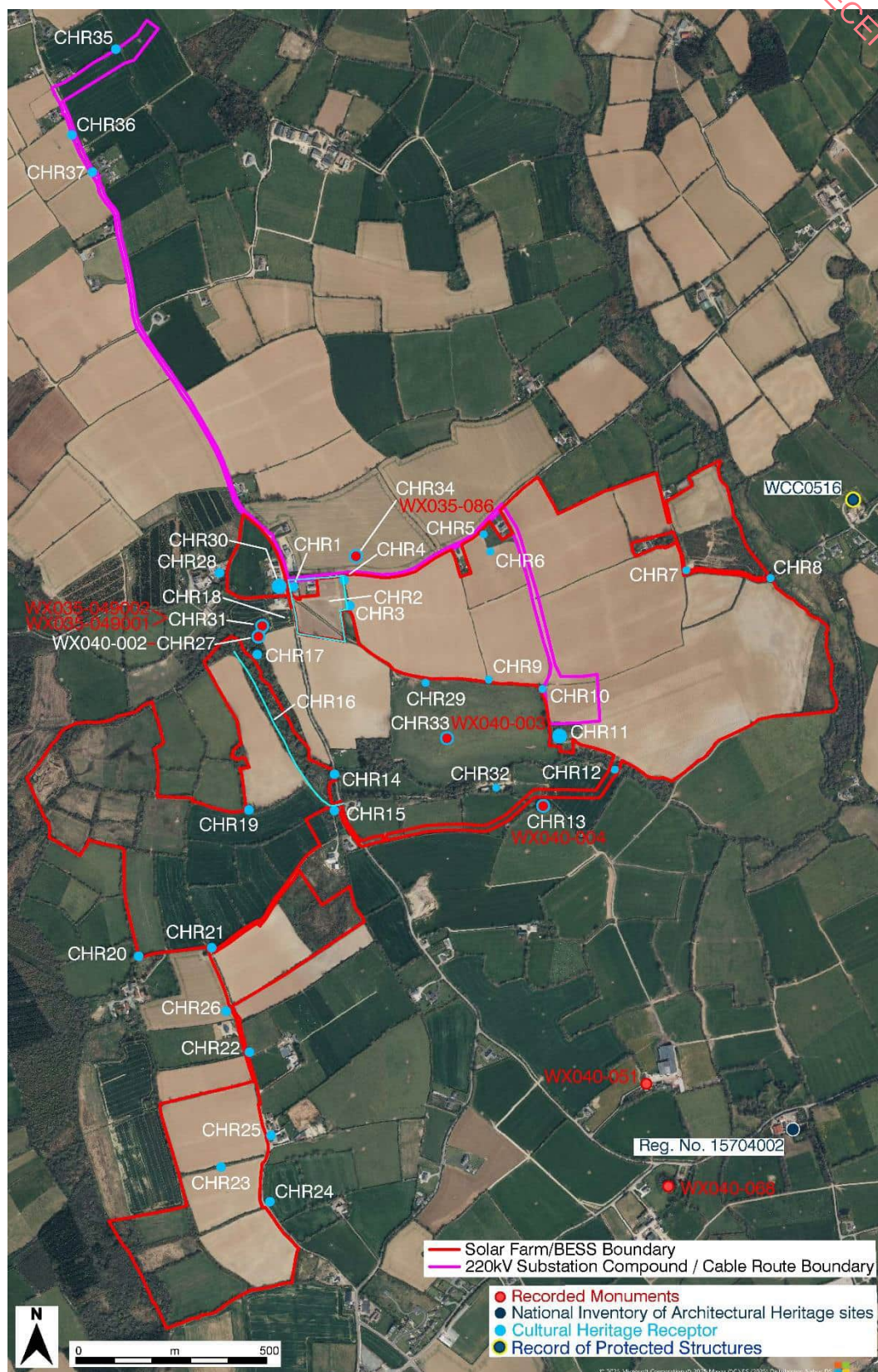


Figure 13.7 Aerial view of site with location of CHRs

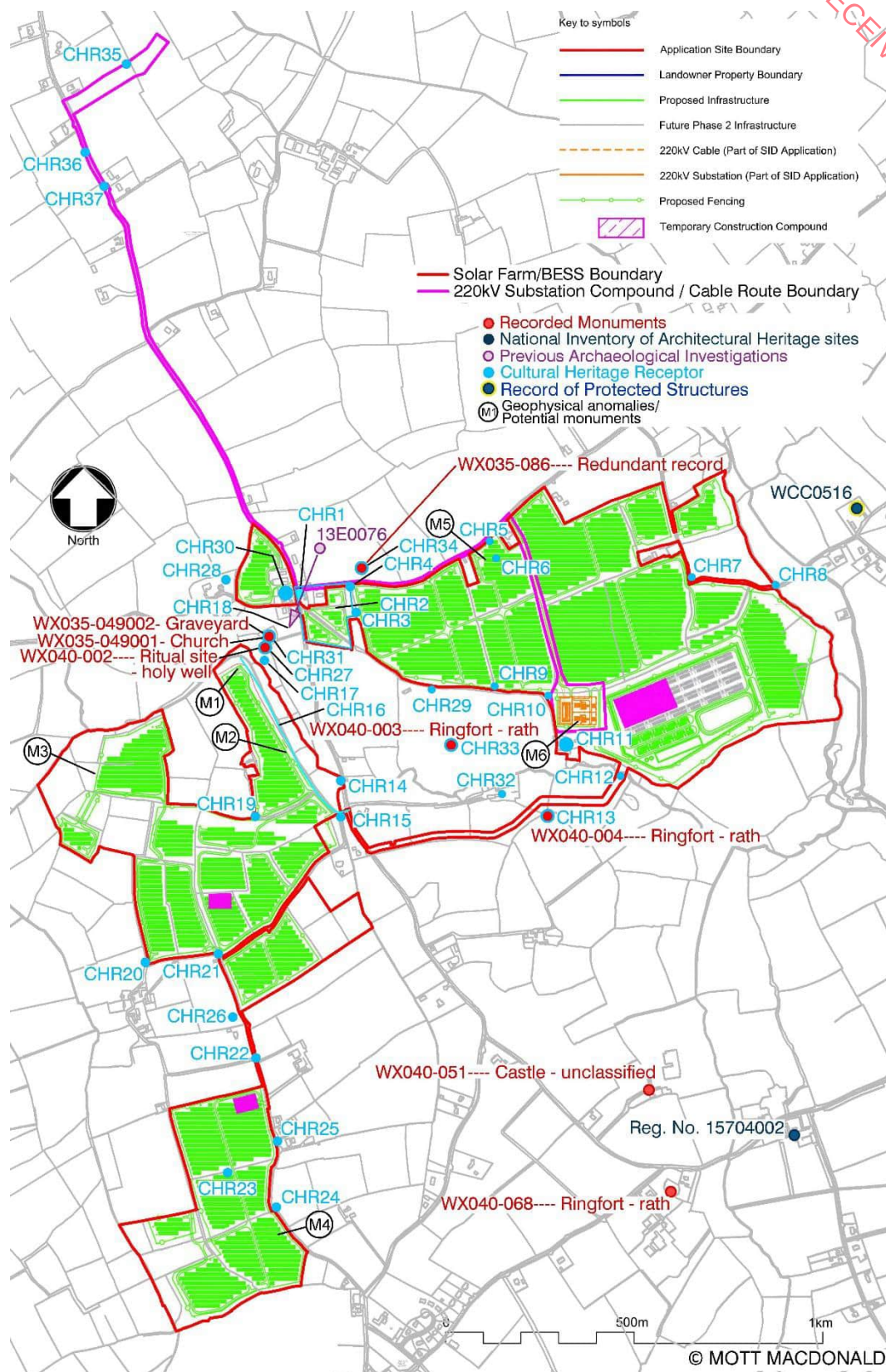


Figure 13.8 Details of the proposed development

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## **Appendix 13.2 – Archaeological Site Visit - Photographic Record**

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## Appendix 13.2 – Plates

**Plate 1 Northwest portion of the east parcel.**



**Plate 2 Northwest portion of the east parcel.**



**Plate 3 North portion of the east parcel; former quarry.**



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**Plate 4 North portion of the east parcel.**



**Plate 5 East portion of the east parcel**



**Plate 6 Northeast portion of the west parcel.**



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**Plate 7 East portion of the west parcel.**



**Plate 8 North portion of the site; proposed underground cable route; pylon in background.**

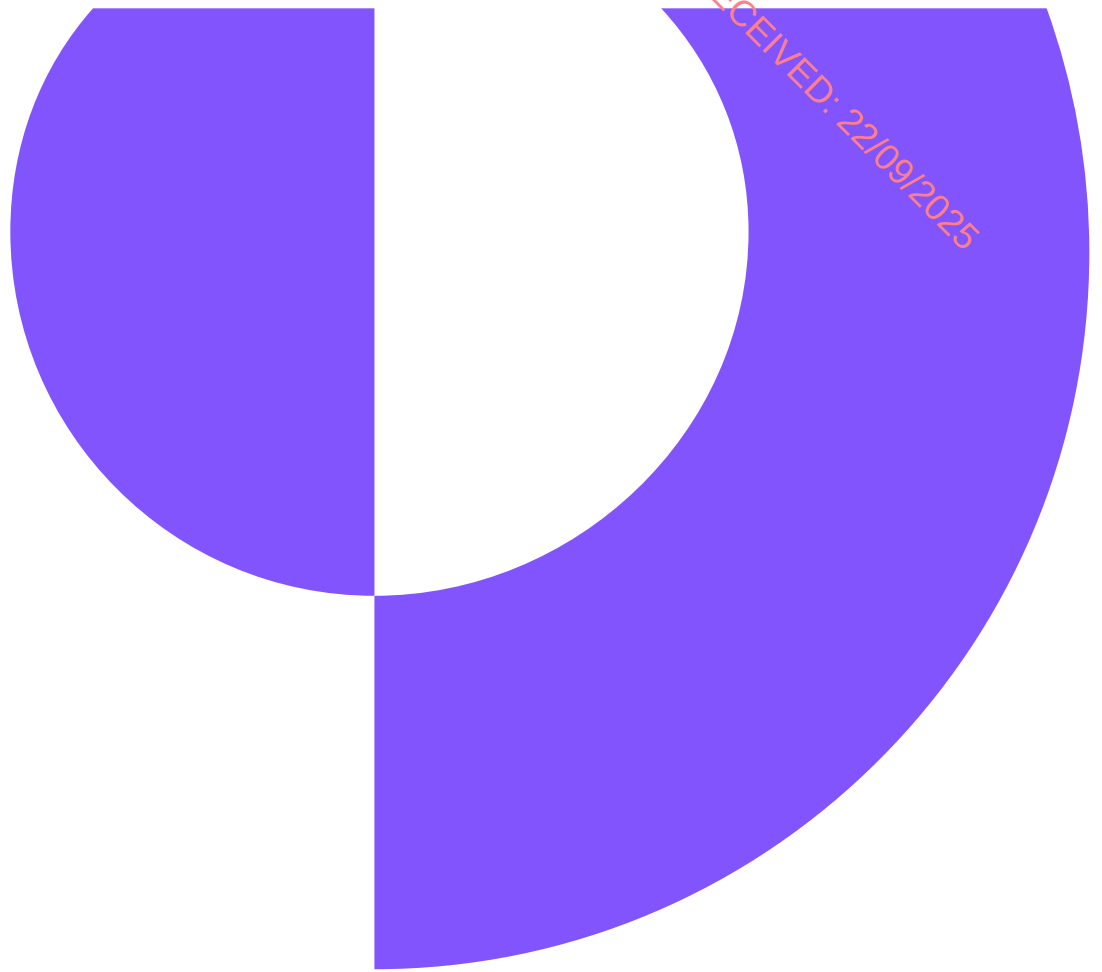


**Plate 9 North portion of the site; proposed underground cable route (Road L4030).**

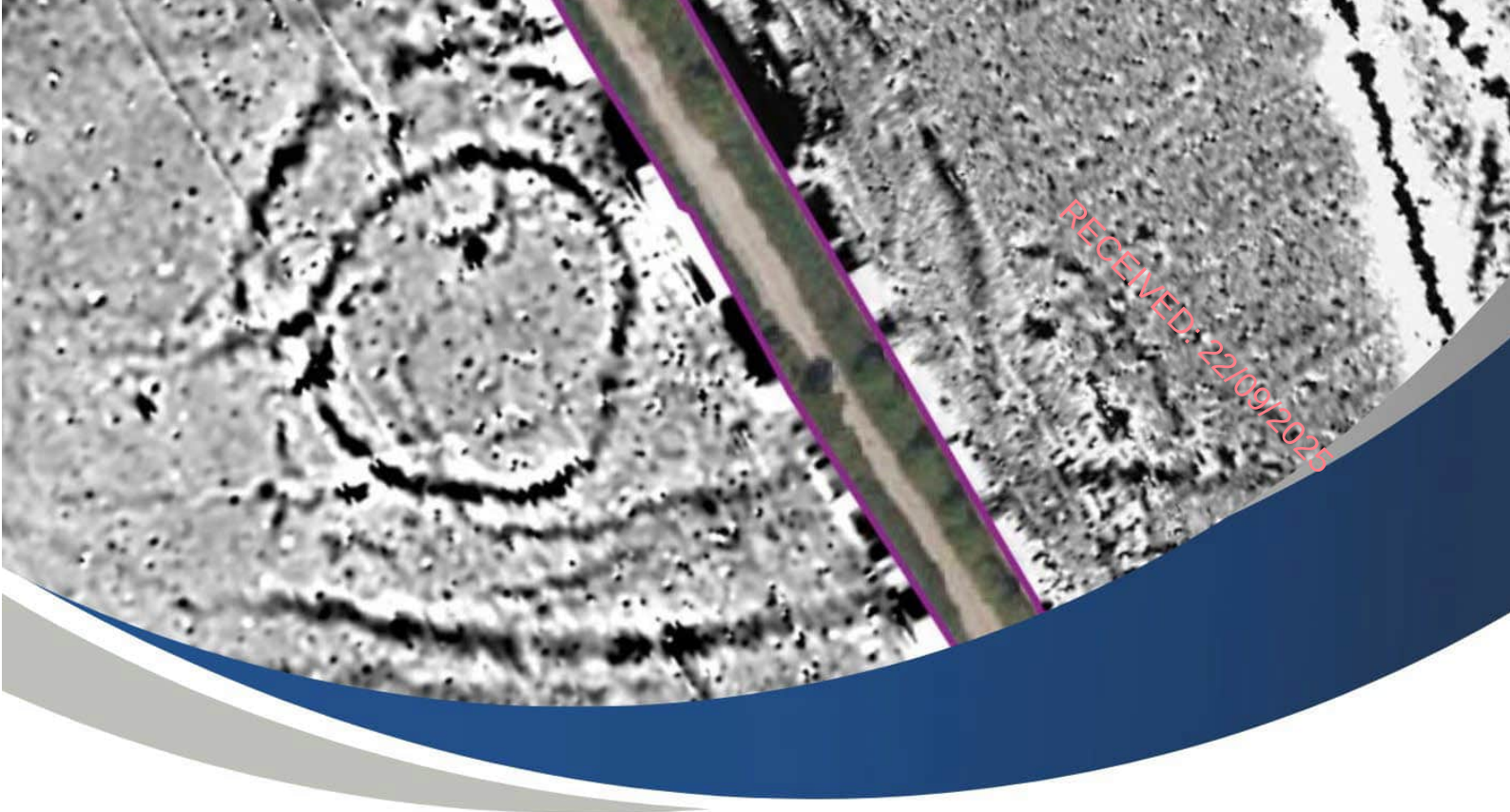


**Plate 10 Proposed underground cable route (junction of road L4030 with L4032).**





## **Appendix 13.3 – Archaeological Geophysical Survey Report (23R0080)**



# Geophysical Survey Report Proposed Solar Farm at Nash, New Ross, Co. Wexford

Detection Device Number: 23R0080

Donald Murphy  
January 2025  
Report Status: Final

ACSU Ref.: 24122



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|                                                                                   |        |                                                 |          |    |                 |              |
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|  | No:    | PM-SF-114                                       | Version: | 02 | Effective Date: | 01.01.24     |
|                                                                                   | Title: | Geophysical Survey: Nash, New Ross, Co. Wexford |          |    |                 | Page 2 of 39 |

## PROJECT DETAILS

**Project** Proposed Solar Farm at Nash, New Ross, Co. Wexford

**Report Type** Geophysical Survey Report

**Licence No.** 23R0080

**Townland(s)** Cloonagh, Ballygarvan & Nash

**RMP/SMR No.** WX040-002----, WX035-049001-, WX035-049002-,

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

**ITM Ref.** 677333,619222

678333, 619888,

**Consultant** Archaeological Consultancy Services Unit,  
21 Boyne Business Park,  
Greenhills, Drogheda, County Louth

**Archaeologist** Donald Murphy

**Report Author(s)** Donald Murphy & Jeanne Rochford

**Report Status** Final

**Report Date** 31 January 2025

**ACSU Ref.** 24122

|                                                                                   |               |                                                        |                 |           |                        |                 |
|-----------------------------------------------------------------------------------|---------------|--------------------------------------------------------|-----------------|-----------|------------------------|-----------------|
|  | <b>No:</b>    | <b>PM-SF-114</b>                                       | <b>Version:</b> | <b>02</b> | <b>Effective Date:</b> | <b>01.01.24</b> |
|                                                                                   | <b>Title:</b> | <b>Geophysical Survey: Nash, New Ross, Co. Wexford</b> |                 |           |                        | Page 3 of 39    |

### VERSION CONTROL

| Revision | Date       | Description                | Status | Author    | Reviewed | Approved |
|----------|------------|----------------------------|--------|-----------|----------|----------|
| 1.0      | 31.01.2025 | Geophysical survey results | Final  | D.M & J.R | M.L      | D.M      |

|                                                                                   |        |                                                 |          |    |                 |              |
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## NON-TECHNICAL SUMMARY

This report details the results of a Geophysical Survey carried out at Cloonagh, Ballygarvan and Nash, New Ross, Co. Wexford. The survey was carried out at the request of the client at a pre-planning stage to support a planning application. This survey was carried out in two phases. Phase 1 was carried out in March 2023. Two areas were surveyed as part of **Phase 1** (ITM 678333, 619888) – O’Connors Land (Fields 1-12, 19) and Maguires Land (Fields 13-18). Maguires Land was located immediately south of O’Connor’s land. These are located in the townlands of Nash and Ballygarvan, respectively and consist of agricultural fields. **Phase 2** (ITM 677333,619222) was carried out in December 2024. This survey area was located on Foleys land (Fields 1-6 and Fields 7-19). Foleys land Fields 7-19 were located immediately west of Maguires land, while Foleys land Fields 1-6 were located further south. These are located in the townlands of Cloonagh and Nash.

The geophysical survey (**Phase 1 and 2**) was conducted by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 23R0080 issued by the Department of Housing, Local Government and Heritage. A complete detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system.

No monuments are listed in the Record of Monuments and Places (RMP) or Sites and Monuments Record (SMR) on O’Connors Land and Maguires Land. However, a ringfort -rath (WX040-004----) is located adjacent to and south of Maguires Land. There are no Protected Structures, as listed in the Wexford Development Plan 2022-2028, nor any sites listed in the National Inventory of Architectural Heritage located within O’Connors Land and Maguires Land or the environs. Several features are depicted on the examined cartographical sources for these lands, including an area labelled as Fair Green, former field boundaries, laneways, wells, lime kilns, buildings, including a small settlement, a mill complex with associated mill race, sluices and a foot stick. Some of these are in ruin, others were removed, and their subsurface remains might survive.

One recorded monument, a ritual site - a holy well (WX040-002) as listed in the Record of Monuments and Places is recorded on Foleys Land. Two monuments, a church (WX035-049001-) and a graveyard (WX035-049002-), are immediately outside the site boundary. The zone of archaeological potential associated with these monuments extends within the northeast portion of the site. There are no protected structures listed in the Wexford County Development Plan 2022 - 2028 or sites listed in the National Inventory of Architectural Heritage (NIAH) located within Foleys Land. No buildings are shown within these lands on the examined mapping. A well, labelled St Collmans Well, is labelled and depicted at the location of the monument WX040-002. The well is connected with a channel to a stream, which is also the townland boundary between Nash and Cloonagh. The Graveyard and Church (Site) are depicted and labelled to the site's northeast. Furthermore,

|                                                                                   |        |                                                 |          |    |                 |              |
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a mill race and four kilns are shown on the 1835 map, with only two depicted and labelled L.K by the 1910 map.

No clear anomalies of archaeological significance were detected in **Phase 1** (O'Connors Land - Fields 1-12, 19 and Maguires Land - Fields 13-18). Two potential monuments were detected. One is a curvilinear anomaly (**M5**) noted in Field 3, and the other is an oval anomaly (**M6**) in the west portion of Field 8 at the location of the proposed substation. While both are faint in nature, these could represent an enclosure and/or a ring ditch. An array of positive responses of potential archaeological significance, but that might equally be geological or modern in nature, were also noted. These include scattered positive responses (?Archaeology) that might represent cut features such as pits/postholes but could also represent iron in the topsoil, while large areas might represent large pits or spreads. Linear features (?Archaeology) recorded that do not correspond with former field boundaries (Fields 6 and 7) could represent historic laneways but could also be associated with recent land use or represent wet ditches. Other linear features (Former boundaries) include some that correspond with boundaries depicted on the Ordnance Survey (OS) maps, which have been removed since then. Linear and curvilinear trends could be associated with access or recent land use/drainage; tentatively, the curvilinear could represent a ploughed-out ring ditch. Areas of disturbances and geology were also recorded. Some areas of disturbance correspond with features depicted on the OS maps, such as buildings, quarries and kilns. Linear anomalies (cultivation) were recorded throughout the site, these are mostly aligned north to south and northeast to southwest and are agricultural.

Two potential monuments (**M1** and **M2**) were detected in Phase 2 (Foleys land - Fields 1-6 and Fields 7-19). These are located in Field 7, which lies adjacent to a Recorded Monument: Ritual site – holy well (WX040-002-) and in close proximity to Recorded Monuments WX035-049001 - (church) and (WX035-049002 - (graveyard). The curvilinear anomaly **M1** is situated in the northeast corner of Field 7 and appears to form the southern portion of a small sub-circular enclosure or unrecorded field system. The second anomaly, **M2**, is located approximately 225m southeast of **M1** along the same field boundary, i.e. mill race. This anomaly consists of a D-shaped curvilinear and possibly represents another small enclosure. The straight side of the D-shaped enclosure runs parallel to the mill race in a southeasterly direction. It measures 32m northwest-southeast and 23m southwest-northeast. The southern portion of this anomaly falls on the same east-west line as a recorded field boundary depicted on both the first edition 6-inch (1839-41) and 25-inch OS map (1902-04). This boundary is not depicted on the last Cassini edition OS map (1922-25). An array of positive responses of potential archaeological significance, but that might equally be geological or modern in nature, were also noted. These include scattered positive responses (?Archaeology) that might represent cut features such as pits/postholes, while large areas might represent large pits or spreads. Linear features recorded that do not

|                                                                                   |        |                                                 |          |    |                 |              |
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correspond with former field boundaries could represent historic field divisions but could also be associated with more recent land use or represent wet ditches. Other linear features (Former boundaries) include some that correspond with boundaries depicted on the Ordnance Survey (OS) maps since removed. Linear and curvilinear trends could be associated with recent land use/drainage or underlying changes in geology. Linear anomalies (cultivation) were recorded throughout the site and are agricultural in nature. An irregular dipolar anomaly (**M3**) in the western extent of Field 16 and one in the eastern extent of Field 1 (**M4**) may represent a change in underlying geology or an area of poor drainage. These anomalies should be assessed during the testing phase to determine their archaeological potential. Linear anomalies (cultivation) were recorded throughout the site and are agricultural.

It is recommended that the area surveyed be subject to archaeological test trenching, targeting the anomalies identified during Phase 1 and Phase 2, particularly linear and curvilinear anomalies (?Archaeology), to assess their nature, extent and depth. In particular, the curvilinear anomaly **M5** (O'Connors Land, Field 3), the oval anomaly **M6** (O'Connors Land, Field 8), and the curvilinear anomalies **M1** and **M2** (Foleys Land, Field 7). The irregular dipolar anomalies **M3** and **M4** (Foleys Land, Field 16 and Field 1, respectively) may represent a change in underlying geology or an area of poor drainage. These anomalies should be assessed during the testing phase to determine their archaeological potential. A systematic test trenching programme shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. Archaeological material identified during the test trenching may necessitate further mitigation, including preservation *in situ*/or preservation by record (excavation) following discussion with the National Monuments Service.

|                                                                                   |        |                                                 |          |    |                 |              |
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|                                                                                   |               |                                                        |                 |           |                        |                 |
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## 1. INTRODUCTION

This report details the results of a Geophysical Survey carried out at Cloonagh, Ballygarvan and Nash, New Ross, Co. Wexford (Figures 1-2). The survey was carried out at the request of the client at a pre-planning stage to support a planning application. This survey was carried out in two phases (Phases 1-2).

**Phase 1** was carried out in March 2023 (ITM 678333, 619888; Figures 21-22). Two areas were surveyed as part of Phase 1 – O’Connors Land (Fields 1-12, 19; Figures 23-28) and Maguires Land (Fields 13-18; Figures 29-30). Maguires Land was located immediately south of O’Connor’s land. These are located in the townlands of Nash and Ballygarvan, respectively and consist of agricultural fields. Most of the site was located south of L40232, east of L4030 and west of Ovenduff River.

**Phase 2** was carried out in December 2024 (ITM 677333, 619222). This survey area was located on Foleys land (Fields 1-6 and Fields 7-19; Figures 11-20). Foleys land Fields 7-19 were located immediately west of Maguires land, while Foleys land Fields 1-6 were located further south. These are located in the townlands of Cloonagh and Nash. The site lies on lands west of L4030 between Nash and Gusserane. The site measures c. 55 hectares, with c. 52 hectares suitable for survey.

The geophysical survey (**Phase 1** and **2**) was conducted by Donald Murphy, Robert Breen and Jeanne Rochford of Archaeological Consultancy Services Unit Ltd. (ACSU) under licence 23R0080 (extended for Phase 2) issued by the Department of Housing, Local Government and Heritage. A complete detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system.

## 2. METHODOLOGY

A complete detailed gradiometer survey was undertaken throughout the application area using a SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system mounted on a GPS-based non-magnetic cart system with four mounted sensors (see also Appendix 1). A 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, with variations in the magnetic field between -100nT to +107.834nT.

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

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### 3. SURVEY OBJECTIVES

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

### 4. SOILS, GEOLOGY AND TOPOGRAPHY

The area subject to the geophysical survey consists of agricultural fields used for pasture and under-crop. The Ovenduff River bounds the site to the east. The site has an elevation of c. 33-66m Ordnance Datum (OD). The underlying geology is rhyolitic volcanic, grey and brown slates and is part of the Campile Formation. This bedrock geology is overlaid by a mixture of soils consisting largely of shallow, well-drained and deep, well-drain mineral soils. The bands of soil along the townland boundary stream and the Ovenduff River are recorded as alluvial shallow and well-drained (Geological Survey of Ireland).

### 5. ARCHAEOLOGICAL ASSESSMENT

#### 5.1 Archaeological & Historical Background

The site is in the townlands of Nash (An Ais) and Cloonagh (Cluanach) in the Barony of Shelburne and the Civil Parish of Owenduff.

Nash townland was mentioned as Naysshe in 1540; by 1576, a rectory of S. Leonard of the Nashe was noted. In the Census of Ireland c. 1659, 37 people are listed in Nash (Ranson, 1949). In Griffiths Valuation of Co. Wexford, the land belongs to the Colclough and Boyse estate (Nash) prior to the land commission.

Cloonagh can be translated as a meadow or lawn and was referenced in 1603 concerning Walter McPadin Branagh of Clonagh.

The land east of Nash Village is described as fertile, gently sloping towards Owenduff River that empties into Bannow Bay. Nash was recorded as a place of fairs and public meetings held at Fair Green, depicted on both Ordnance Survey maps adjacent to the crossroads in Nash. The fair was discontinued only after the railway station in Ballycullane and Campile opened. It is believed by the locals that Nash got its name from a forge or fair green located in the area. Forge has been depicted within Nash Village since the 1839 map, labelled as Smithy by 1911, and is now in ruin. Trades listed for the Nash area in the early 20th century included coopers, nailers, weavers, tailors, blacksmiths shoe-maker, carpenters, dress-maker, tailors, carpenter and one blacksmith (The Schools' Collection, Volume 0871, Page 326). There is a record of the founder's hoard of the

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copper age at Carrickshedoge, Nash, Co. Wexford to the north of the current site. A find of four early Bronze Age copper axes with decorated flanks and two or three cakes of copper – raw material gained by smelting the crude copper ore, retrieved from a ‘cave’ that could be a souterrain was recorded (Bremer, 1926).

There is a monument located within the current site, Ritual site – holy well (WX040-002----) depicted as St. Coleman’s Well to the south of Nash Village with an associated church (WX035-049001-) located within a graveyard (WX035-049002-) outside of the current site. There is also a monument located adjacent to and to the south of one of the areas. This is a ringfort – rath (WX040-004) as well as three ringfort raths (WX040-003----; WX040-005---- WX035-048----), a ringfort – unclassified (WX039-017----), two redundant records (WX035-086----, WX035-047---- ), a ritual site – holy well (WX040-006-----), a structure (WX040-092-----) and a Castle – unclassified (WX040-051-----). Furthermore, field boundaries, a townland boundary formed by a stream, four lime kilns and a mill run are depicted on the Ordnance Survey mapping within the site.

The geophysical survey identified the remains of two possible enclosures along the mill race in Foleys Land Field 7 (**Phase 2**).

### Enclosures and Ringfort – raths

Ditched enclosures are seen in the form of ringforts and non-circular enclosures. As the name suggests, the Ringfort implies a circular enclosure with at least one ditch and possible accompanying banks. They were generally circular, measuring circa. 24 – 60 metres in diameter. Early Irish laws stated that circularity was a feature of the model ringfort (Stout 1997). However, with the increase in development, more and more non-circular enclosures are coming to light. Therefore, the above enclosures will be discussed under the 'ditched enclosures' category. Ringfort – rath (WX040-004) is located adjacent to and south of the site, while four other such monuments are located in the environs of the areas to be assessed. Ringfort – rath (WX040-004) is depicted on the OS mapping and visible on aerial imagery. It is described as a raised circular overgrown area measuring 26m by 28m and is defined by an earthen bank. In comparison, another such monument (WX040-003----) located in proximity was identified as a faint cropmark enclosure measuring 45m defined by a fosse visible on aerial photography.

Most early medieval ditched enclosures date from the sixth–ninth centuries AD, and we see a significant decline in their use in the tenth century (O'Sullivan & Nicholl 2010). Though a site in Laytown, Co. Meath, could have a fourth-century date (McConway 2002), other sites such as Ballynacarriga, Co. Cork (Noonan 2004) and Raystown, Co. Meath (Seaver 2005; 2016) were probably occupied from the fifth century well into the eleventh century.

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Ditched enclosures are generally regarded as enclosed farmsteads, and the defences are thought to have been built to protect against cattle raids (Stout 1997). Some have provided little evidence for structures, suggesting the enclosure was used for storing cattle, known as a bosun. However, the majority provide evidence suggesting they inhabited settlements with houses, farmyards, outbuildings, and animals (O'Sullivan & Nicholl 2010). Excavated items retrieved from ringforts are primarily domestic, craft or agricultural (Monk 1995). Some larger sites, such as Raystown, Co. Meath, fulfilled many functions; there was evidence for animal husbandry, cereal and grain processing, milling, burial and metallurgy (Seaver 2016).

Ditched enclosures are one of the most common field monuments in Ireland. The majority of ditched enclosures were univallate with one bank and fosse. In many cases, the banks do not survive. There are, however, bivallate enclosures, for example, Cloonaboy, Co. Mayo (Gillespie 2010), and multivallate enclosures, such as Garranes, Co. Cork (Ó Ríordáin 1942). As mentioned above, while ringforts were generally 24–60 metres in diameter, most non-circular enclosures were between 50 and 70 metres in diameter. Ditched enclosures tend to be situated on sloping or well-drained hilly ground with good views (Stout 1997), and they are also usually found in clusters within a townland (Edwards 1990). Evidence from excavations shows that enclosing ditches were, in some cases, allowed to silt up and had refuse deliberately dumped into them. Layers of slag were dumped into the ditch at Lisleagh, Co. Cork (Monk 1995).

Ditched enclosures usually have an entrance at the southeast. This is to avoid the prevailing cold, westerly and northerly winds that the enclosure would be exposed to (Stout 1997). The entrance passage at Rath II, Ballypalady, Co. Antrim, ranged from 0.76m at the outer end to 1.5m at the inner opening, suggesting it was not intended for keeping large livestock (O'Sullivan & Nicholl 2010). Many sites, like that at Lissachiggel, Co. Louth, had either cobbles or paving stones providing a dry passage into the enclosure. These entrances were known in early Irish literature and legal sources as the 'airdrocht' and were to be kept clean (ibid.). O'Sullivan and Nicholl (ibid.) wrote that it was not unusual to see pathways within the interior to steer movement towards a particular direction. Upon entering the site, a person was often persuaded by laid pathways to move directly and immediately to the house doorway. The pathway was meant to be kept clean and dry, and ditches and gullies would likely function as drainage features to keep the area dry.

Early medieval houses within ditched enclosures tended to be circular or round, made of stone or post-and-wattle walls. The roofs were thatched with reeds, turf or straw. According to the eighth-century law text Críth Gablach, a typical farmer's house was 6–8 metres in diameter. Archaeological evidence shows that the majority were 4–5 metres in diameter, and some were significantly larger, at 6–10 metres (O'Sullivan & Nicholl 2010). As McCormick et al. (2011) pointed out, any recuts or changes to the early medieval houses are rarely seen in the archaeological record because of the basket-like construction. It was likely that the lifespan of a

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medieval house would have lasted for just a short period (20 to 30 years) with good maintenance; however, a house could have stood for 50 to 60 years (O'Sullivan & Nicholl 2010).

Associated with many enclosures and often found in their environs are fire pits, storage pits, refuse pits, cooking pits and cereal-drying kilns. O'Sullivan and Nicholl (2010) wrote that pits are one of the more enigmatic elements within the enclosure, and their function can be challenging to discern. They suggest that such pits would have been used for various purposes, were probably reused and cleaned out many times, and countless, no doubt, had multiple functions over their lifetime (ibid.). According to McCormick et al. (2011), cereal-drying kilns are generally not associated with ditched enclosures. However, several sites with associated kilns exist, such as Johnstown 1, Co. Meath, Gortygrigane, Co. Tipperary and Camlin, Co. Tipperary.

### Ecclesiastical sites

Archaeological testing (13E0076; McLoughlin 2013 -www.excavations.ie) in the field immediately in proximity to the graveyard (WX035-049002-) identified archaeological features that included pits, gullies and ditches with the late 12th-century or 13th-century date recovered and a ditch interpreted as representing a part of a possible ecclesiastical enclosure.

Ecclesiastical sites in Ireland vary from known monastic complexes such as Glendalough or Clonmacnoise to small, little-known places. These smaller places were early medieval sites, some of which had no surface expression, and the only indication of their presence might be in the townland name that contained Kil, which indicated church. In addition to early monastic foundations, smaller Christian communities functioned. These non-monastic settlements lacked formal monastic attributes. However, the presence of an enclosure or enclosures does not define the site as monastic. Most early ecclesiastical sites originated with a founding saint, with 2000 early ecclesiastical sites recorded in the Irish countryside (O'Sullivan, Downey, 2020). The research suggests that many more exist and that the enclosures survive only in 20% of known sites. The first churches in Ireland were founded in the period 500 – 800, with wooden churches built with stone churches built between the tenth and mid-twelfth centuries. First churches were small, plain, rectangular and single-roomed with doors at western gables. The associated enclosures recorded appear to vary in size from 20m to 500m, with the majority between 90 to 120m.

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## Lime kilns

Five lime kilns are depicted on the 1839 map within the area to be assessed, some of which are gone by the time of the 1902 map, while three are still depicted and labelled as L.K.

Lime kilns are furnace-type structures used to produce lime by heating limestone at high temperatures of up to 1000 degrees. The process is known as quicklime or burnt lime, and the product is used in building, agriculture, and other related purposes. Farm lime kilns were used in the 18th/19th centuries, and these are most common in the countryside. Two types of lime kilns used for agricultural purposes can be distinguished: draw kilns and flare kilns. The former was more popular and burnt limestone continuously, while the latter worked based on a discontinuous batch process. The lime kilns can be between 2–4m high but reach up to 9m in height. Improved draw lime kilns of 19th-century date had a total height of c. 8m. These were built of stone against a bank of rising ground with an opening at the front and top. While largely 18th/19th-century monuments, burning limestone to apply to soil was common practice between the 12th and 17th centuries on a smaller scale (O'Sullivan and Downey 2005).

## Vernacular structures

The examined mapping depicts buildings on the 1839 map, some of which were demolished by the 1902 mapping, that could represent houses abandoned following famine. Furthermore, a forge/smithy is depicted within the northwest corner of Fair Green, in Nash townland. It is indicated as a horseshoe on the 1839 and labelled a Smithy on the 1902 map.

The remains (surface or subsurface) of any of the buildings depicted on the 1839 map located within the site could represent vernacular structures.

The term 'vernacular structures' is used to describe a structure built between 1650 and 1850; however, some structures of early 20th-century date can also be included. The structures represent mostly houses, usually built by the occupants with the help of family and neighbours. They were known as ernhaus (hearth house) and had a main cooking hearth, were rectangular, usually single-story, one room, with a loft; if more rooms were present, these would be entered from adjoining rooms. Door(s) and windows were placed along the long walls, with a fireplace usually set in the middle of the cross walls (O' Reilly 2011). Campbell (1937) identified two house types in Ireland: one with a central hearth and one with a gable heart. Vernacular structures vary regionally and locally.

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While the farm landscape was characterised by unenclosed open field systems and associated settlements in the early 17th century, during the 18th century, a cluster of settlements emerged known as clachans. This resulted in the enclosure of fields, with such field systems characterised by small rectangular fields (O'Sullivan and Downey 2008).

Some of these were labelled, such as Knockarroll and Nash, while others represent a concentration of buildings that could be farm yards or small settlements. There is a mill depicted within the area surveyed, in Nash, with associated mill runs. Wells are often associated with settlements or farmyards. Several wells are depicted on the examined mapping. One is illustrated at the centre of the site (ITM 678058, 619909) but is no longer shown on the 1902 mapping; this could also represent a lime kiln as symbols used for well and lime kiln are somewhat similar and a well is depicted on both maps within the small settlement/farmyard. The wells shown within the area surveyed and in the environs are located in proximity to buildings; some are indicated as springs feeding from waterways, while others could be stone-lined.

## 5.2 Previous Archaeological Investigations

No archaeological investigations have been carried out on this site. One investigation is listed for Nash Townland on excavations.ie. Archaeological testing (13E0076; McLoughlin 2013) in the field immediately to the east of the graveyard (WX035-049002-) identified archaeological features that included pits, gullies and ditches and a late 12th-century or 13th-century date was recovered. A ditch measuring c. 2m in width and more than 0.7m in depth was recorded located c. 50m to the east of the graveyard. It was interpreted as representing a part of a possible ecclesiastical enclosure (2013:503 - Nash, Wexford).

Listed below are the nearest previous archaeological investigations undertaken in the environs of the site (see Figure 3), which further demonstrate the overall archaeological potential of the site and its surrounding townlands (Table 1). The following information was taken from the *Summary Accounts of Archaeological Excavations in Ireland* ([www.excavations.ie](http://www.excavations.ie)).

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

| Excavation.ie reference  | Licence No. | Site-Type                          | Investigation Type                                                                                                                                           |
|--------------------------|-------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2013:503 – Nash, Wexford | 13E0076     | Church enclosure, medieval pottery | Test trenching. Archaeological testing (13E0076) in the field immediately to the west of the graveyard WX035-049002- identified archaeological features that |

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| Excavation.ie reference                         | Licence No. | Site-Type | Investigation Type                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 |             |           | included pits, gullies and ditches and a late 12th century or 13th century date was recovered. A ditch measuring c. 2m in width and more than 0.7m in depth was recorded located c. 50m to the east of the graveyard. It was interpreted as representing a part of a possible ecclesiastical enclosure.                         |
| 2015:422 - BGN Wexford Feeder Gas Main, Wexford | 15E0412     | -         | Monitoring (15E0412) of 17 areas associated with groundworks for BGN Wexford Feeder Main occurred between 2015-2016. Some of the areas monitored were located to the south of the current site. No features were exposed in Area 7 to the north of the ringfort WX040-068 nor in Area 8 to the north of the holy well WX040-006 |

### 5.3 Recorded Monuments

One Recorded Monument is located within the entire survey area (Foleys Land, Field 7). This is a ritual site – a holy well (WX040-002). Located outside the site but near the aforementioned monument and adjacent to the site boundary are two monuments, a church (WX035-049001-) and a graveyard (WX035-049002-). The zone of archaeological potential associated with these monuments extends within the northeast portion of Foleys Land.

A ringfort – rath (WX040-004) was also located immediately south of Maguires Land (Fields 14-15) in Ballygarvan townland. The zone of archaeological potential associated with it extends within the survey area. This monument consists of a raised circular area measuring 28m by 26m, defined by an earthen bank measuring 5.6m in width, with an internal height of 0.51m and an external height of 1.2m. A second ringfort-rath was located north of Maguires Land (WX040-003----). In addition, two ringfort-raths (WX040-005---- WX035-048----), a ringfort–unclassified (WX039-017----), two redundant records (WX035-086----, WX035-047---), a ritual site – holy well (WX040-006-----), a structure (WX040-092-----) and a Castle – unclassified (WX040-051-----) are registered in the surrounding landscape.

|                                                                                   |        |                                                 |          |    |                 |               |
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Below (Table 2) is a list of these monuments (Figure 4). These descriptions are derived from the National Monuments Service Archaeological Survey Database (<https://heritagedata.maps.arcgis.com/apps/webappviewer/>).

Table 2: Recorded Monuments within and in the environs of the site

| WX040-002----                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Ritual site - holy well | NASH |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------|
| <p>Marked on the 1839 and 1925 eds of the OS 6-inch map and described in gothic lettering as St. Coleman's Well on both. It is situated on a steep and overgrown W-facing slope and c. 40m S of the site of the church (WX035-049001-). It could not be identified in 1988. The well is named after one of the many Saint Colemáns (Ó Riain 2011, 183-208). However, there is no record of veneration at the well.</p> <p>Compiled by: Michael Moore</p> <p>Date of upload: 21 February, 2013</p> <p>Six-Inch First Edition: 'St. Coleman's Well'</p> <p>Six-Inch Latest Edition: 'St. Coleman's Well'</p> <p>ITM Coordinates: 677464, 619770</p> <p>Latitude and Longitude: 52.324082, -6.863624</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                         |      |
| WX035-049001-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Church                  | NASH |
| <p>Marked faintly as a rectangular structure (dims. c. 20m NE-SW; c. 10m NW-SE) on the 1839 ed. of the OS 6-inch map, and situated on a gentle SW-facing slope at the point where the land falls away to the valley of a small SW-NE stream at the point where the stream turns SE. John O'Donovan writing c. 1840 (O'Flanagan 1933, vol. 2, 360) records that the foundation courses of a church were then visible. There is no visible traces at ground level of church within a rectangular graveyard (dims. c. 40m NW-SE; c. 30-45m NE-SW) defined by earthen banks and hedges, apart from a cairn (dims. 7m x 3m; H 1m). The site of St Colman's Well (WX040-002----) is c. 40m S of the graveyard. Archaeological testing (13E0076) in the field immediately to the E (McLoughlin 2013) identified many archaeological features including pits, gullies and ditches, and recovered pottery of a late 12th century or 13th century date. A ditch (Wth c. 2m; D 0.7m plus) c. 50m E of the graveyard and apparently centered on it could be an ecclesiastical enclosure.</p> <p>The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore</p> <p>Date of upload/revision: 15 October, 2012</p> <p>Six-Inch First Edition: Site of 'Church'</p> |                         |      |

|                                                                                   |        |                                                 |          |    |                 |               |
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Six-Inch Latest Edition: 'Church' (Site of)

ITM Coordinates: 677470, 619838

Latitude and Longitude: 52.324692, -6.863520

**WX035-049002-**

**Graveyard**

**NASH**

Situated on a gentle SW-facing slope at the point where the land falls away to the valley of a small SW-NE stream at the point where the stream turns SE. There is no visible traces at ground level of a church (WX035-049001-) within a rectangular graveyard (dims. c. 40m NW-SE; c. 30-45m NE-SW) defined by earthen banks and hedges apart from a cairn (dims. 7m x 3m; H 1m). The site of St Colman's Well (WX040-002----) is c. 40m S of the graveyard. Archaeological testing (13E0076) in the field immediately to the E identified many archaeological features, including pits, gullies and ditches, and recovered pottery of a late 12th-century or 13th-century date. A ditch (Wth c. 2m; D 0.7m plus) c. 50m E of the graveyard and apparently centered on it could be an ecclesiastical enclosure. (McLoughlin 2013)

Compiled by: Michael Moore

Date of revised upload: 20 December, 2016

Six-Inch First Edition: Grave Yd.

Six-inch Latest Edition: Grave Yd.

ITM Coordinates: 677470, 619838

Latitude and Longitude: 52.324692, -6.863520

**WX040-004-**

**Ringfort-rath**

**Ballygarvan**

Description: Located on a NE-facing slope with a W-E stream c. 90-100m to the N. This is a raised grass-covered circular area (diam. 28m E W; 26m N S) that is planted with mature coniferous trees and is defined by an earthen bank (Wth 5.6m; int. H 0.51m; ext. H 1.2m). There is no visible fosse, and the entrance cannot be identified.

The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research.

Compiled by: Michael Moore

Date of upload/revision: 18 February, 2013

Six-Inch First Edition: Embanked enclosure

Six-Inch Latest Edition: Indicated

ITM Coordinates: 678210, 619362

Latitude and Longitude: 52.320309, -6.852777

|                                                                                   |        |                                                 |          |    |                 |               |
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| WX040-003-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ringfort-rath           | Nash |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------|
| <p>Situated on a S-facing slope with a W-E stream c. 75-100m to the S. The faint cropmark of a circular enclosure (diam. c. 45m N-S) defined by a single fosse feature that is slightly truncated by a N-S field bank at E is visible on aerial photograph (CUCAP, BDQ 83). It is not visible at ground level in pasture. The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research.</p> <p>Compiled by: Michael Moore Date of upload/revision: 21 February, 2013 Amended: 1 May, 2014</p> <p>Six-Inch First Edition: Not indicated</p> <p>Six-Inch Latest Edition: Not indicated</p> <p>ITM Coordinates: 677955, 619550</p> <p>Latitude and Longitude: 52.322035, -6.856473</p>                                                                                                                                          |                         |      |
| WX035-086-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Redundant Record        | NASH |
| <p>Located on a S-facing slope. Aerial photographs (WX035-086_1 to _4) taken in 2006 show an arc of a ditch feature but the images are too unclear to confirm an antiquity.</p> <p>Six-Inch First Edition: Not indicated</p> <p>Six-Inch Latest Edition: Not indicated</p> <p>ITM Coordinates: 677741, 620032</p> <p>Latitude and Longitude: 52.326397, -6.859501</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |      |
| WX040-006-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ritual site – holy well | NASH |
| <p>Marked on the 1839 and 1925 eds of the OS 6-inch map and described in gothic lettering as Lady's Well on both. It is located at the bottom of an E-facing slope, cut into a natural scarp (Wth 5m; H 2.5m) with the N-S Owenduff stream c. 70m to the E. The well is a circular feature (diam. c. 2.7m) with drystone walling (H 1.4m) retaining the scarp. Water seeps into the wooded valley, but there is no record of veneration, or any evidence of it. Archaeological monitoring (15E0412) of a gas pipeline c. 30m to the N in Area 8 produced no related material (Sutton 2018; excavations.ie 2015:422).</p> <p>Compiled by: Michael Moore Date of upload: 18 February, 2013 Amended: 19 October 2020</p> <p>References: Sutton, B. 2018 Archaeological monitoring along the Wexford feeder main. Areas 1-13. Licence No. 15E0412. Unpublished report, Irish Archaeological Consultancy</p> <p>Six-Inch First Edition: 'Lady's Well'</p> <p>Six-Inch Latest Edition: 'Lady's Well'</p> |                         |      |

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ITM Coordinates: 679268, 618828

Latitude and Longitude: 52.315359, -6.837387

**WX035-047-**

**Redundant Record**

**NASH**

Marked as a subrectangular embanked enclosure (ext. dims. c. 60m N-S; c. 60m E-W) on the 1839 ed. of the OS 6-inch map, and as a subcircular field on the 1925 ed. Located on an E-facing slope with a N-S stream c. 300m to the E. This is subrectangular field (dims. 57m N-S; 54m E-W) defined by a stone wall (Wth 0.7m; H 0.5m) at N and earthen banks (Wth 3m; H 1.2m) elsewhere.

Compiled by: Michael Moore Date of upload: 15 October, 2012

Six-Inch First Edition: Embanked enclosure

Six-Inch Latest Edition: Not indicated

ITM Coordinates: 677990, 620747

Latitude and Longitude: 52.332787, -6.855683

**WX039-017-**

**Ringfort - unclassified**

**Dunmain**

Marked as an oval embanked enclosure (ext. dims. c. 50m E-W; c. 35m N-S) only on the 1839 ed. of the OS 6-inch map and situated on a slight E-facing slope. It is now bisected by a N-S field bank but no features are visible at ground level in a root crop to the W and a cereal crop to the E. The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances, the entries have been revised and updated in the light of recent research. Compiled by: Michael Moore Date of upload/revision: 25 January, 2013

Six-Inch First Edition: Embanked enclosure

Six-Inch Latest edition: Not indicated

ITM Coordinates: 676525, 618671

Latitude and Longitude: 52.314337, -6.877646

**WX040-051**

**Castle - unclassified**

**Dunmain**

Tintern abbey (WX045-027001-) was leasing 30 acres at Ballygarwy to John Power when it was suppressed in 1541 (White 1943, 359). According to the Civil Survey (1654-6) a decayed castle and 240 acres at Ballygarwy was the property of Sir Caesar Colclough in 1640 (Simington 1953, 179). The castle had reputedly been built by the Rossiters of Slevoy (WX041-015001-) (Jeffrey 1979, 135). It is depicted as a ruin on Valentine Gill's 1-inch map of Wexford dated 1811 on display in the Castle Museum, Enniscorthy (WX020-031003-) in 1994. It is situated in a farmyard on a slight E-facing slope, but it is not visible at ground level. The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research. Compiled by: Michael Moore Date of upload/revision: 18 February, 2013.

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References: Simington, R.C. (ed.) 1953 The Civil survey, AD 1654-1656. Vol. IX: county of Wexford. Dublin. Irish Manuscripts Commission. Jeffrey, W.H. 1979 The castles of County Wexford. Typescript prepared by the Old Wexford Society, Ed. E. Culleton.

Six-Inch First edition: Not indicated

Six-Inch Latest edition: Not indicated

ITM Coordinates: 678488, 618637

Latitude and Longitude: 52.313754, -6.848870

| WX040-092 | Structure | Kilbraney |
|-----------|-----------|-----------|
|-----------|-----------|-----------|

Located at the S tip of a N-S spur, at the crest of a S-facing slope and overlooking the meandering NW-SE Owenduff River that is c. 350m to the W and c. 210m to the S. It is also c. 140m SW of the ruins of Abbey Ville House, although the farm buildings of the latter intervene. This is a rectangular structure (dims c. 5m x c. 5m) of two storeys with the first floor recessed externally. It is a pigeon-house associated with Abbey Ville House, and is described as such on a map dated 1822 of the estate of Anthony Cliffe at Abbeybraney by Sherrards, Brassington and Green (pers. com. Damien Murphy, 01/11/2021). Compiled by: Michael Moore Date of upload: 19 February, 2013 Amended: 2 November 2021.

Six-Inch First Edition: Indicated

Six-Inch Latest Edition: Indicated

ITM Coordinates: 679958, 618615

Latitude and Longitude: 52.313345, -6.827320

| WX040-005 | Ringfort - rath | Kilbraney |
|-----------|-----------------|-----------|
|-----------|-----------------|-----------|

Marked only on the 1925 ed. of the OS 6-inch map, it is situated on a broad plateau with a slight S-facing slope. This is a circular area (diam. 33-34m) in mixed woodland defined by an earthen bank (Wth 5-8m; int. H 0.5m; ext. H 1.2-1.8m) with a complete fosse (Wth 6.3-7.7m; D 0.4m at W to 1.1-1.3m generally), and a slight outer bank (Wth 5.5m; ext. H 0.5m) NW-NE that may be a secondary feature. A berm (Wth 4.5m) separates the fosse from a slight outer bank (at W: Wth 5m; int. H 0.5m; ext. H 2.2m) and an outer fosse (at W: Wth of top 6.8m; ext. D 0.7m) that survives SSW-WNW. The entrance and causeway (Wth 3.5m) through both original banks is at SSW. Archaeological monitoring (15E0412) of a gas pipeline c. 20m to the W in Area 9 produced no related material (Sutton 2018; excavations.ie 2015:422). The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research. Compiled by: Michael Moore Date of upload: 19 February 2013 Amended: 19 October 2020

References: Sutton, B. 2018 Archaeological monitoring along the Wexford feeder main. Areas 1-13. Licence No. 15E0412. Unpublished report, Irish Archaeological Consultancy

Six-Inch First edition: Not indicated

|                                                                                   |        |                                                 |          |    |                 |               |
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Six-Inch Latest edition: Hachured

ITM Coordinates: 679666, 619366

Latitude and Longitude: 52.320136, -6.831424

**WX040-005**

**Ringfort - rath**

**Rathnageeragh**

Located on a slight SE to W-facing slope. This is a dished oval, grass and scrub-covered area (dims. 47m WNW-ESE; 33m NNE-SSW) defined by a scarp (H 0.7m at NW to 1.6m at SE), with an external fosse best preserved NE-S-W (Wth of top 4.7 6m; ext. D 0.5m at NW to 1m at SE). There is no visible entrance. It is listed as a possible ringwork (Barry 1987, Fig. 14, 52). The above description is derived from the published 'Archaeological Inventory of County Wexford' (Dublin: Stationery Office, 1996). In certain instances the entries have been revised and updated in the light of recent research. Compiled by: Michael Moore Date of upload/revision: 16 October, 2012.

References: Barry, T.B. 1987 The archaeology of medieval Ireland. London and New York. Methuen.

Six-Inch First Edition: Embanked enclosure

Six-Inch Latest Edition: Hachured

ITM Coordinates: 678988, 620777

Latitude and Longitude: 52.332914, -6.841036

## 5.4 Protected Structures and National Inventory of Architectural Heritage

There are no Protected Structures as listed in the Wexford County Development Plan 2022 - 2028 or sites listed in the National Inventory of Architectural Heritage (NIAH) located within the site.

A Protected Structure, described as Abbey Ville – folly, is located in Kibraney, Gusseane (RPS WCC1281; NIAH Reg. No. 15704003) and lies c. 1.2km to the southeast (of Maguire/Connor Lands).

Two structures are located in proximity to Foleys Land: a church/chapel (RPS WCC1269; NIAH Reg. No. 1504001) located c. 330m to the south of the site and Dunmain House (RPS Id. WCC0883; NIAH Reg. No. 15703938) located c. 0.5km to the west.

## 5.5 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

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provide evidence for human settlement or activity in the absence of physical remains or documentary references.

Table 3: Topographical Files for the townland of Nash

| Reg No.    | Simple Name | Material | FindPlace                                | Townland | County  | Habitat | Details              |
|------------|-------------|----------|------------------------------------------|----------|---------|---------|----------------------|
| RIA1926:7  | Axehead     | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Flat copper axehead  |
| RIA1926:8  | Axehead     | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Flat copper axehead  |
| RIA1926:9  | Axehead     | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Flat copper axehead  |
| RIA1926:10 | Ingot       | Copper   | CARRICKSHEDOGE, 4 MILES S.E. OF NEW ROSS | Nash     | Wexford | B16:15  | Copper ingot         |
| RIA1926:11 | Cake        | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Copper cake fragment |
| RIA1926:12 | Cake        | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Copper cake fragment |
| RIA1926:13 | Cake        | Copper   | Carrickshedoge, 4 miles S.E New Ross     | Nash     | Wexford | B16:15  | Copper cake fragment |

|                                                                                   |        |                                                 |          |    |                 |               |
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## 5.6 Cartographic Evidence

A review of available historical mapping for the area was carried out to include the 6-inch 1839 and the 25-inch 1902 editions of the Ordnance Survey maps (Figures 5-10). Potential archaeological or cultural heritage features are marked on such maps and provide a helpful resource in identifying sites, particularly if they no longer have any above-ground remains.

### O'Connors/Maguire's Lands (Phase 1)

The 1839 map depicts several features, including field boundaries, buildings, settlements, a mill with associated mill runs and other features, kilns, wells, bridges, gravel pits/quarries, and an area labelled as Fair Green in Nash townland. Some of these are not depicted by 1902 mapping, and others are labelled with additional buildings and more details. Fair Green is shown on both OS maps.

The monument, a ringfort rath (WX040-004----), is depicted on the 1839 map as consisting of a bank; the 1902 map shows it as an oval field boundary, in a similar manner, a redundant record (WX035-047----) is shown. Church and Graveyard with St. Colman's Well have been depicted since the 1839 map of Nash townland. A lime kiln is indicated in the wall of the graveyard on the wall of the 1839 map and is no longer shown by the 1902 mapping.

A townland stream and the Owenduff River, with several crossings over the waterways, are shown. These include bridges, fords/footsticks and footbridges. A Flag Ford or Footbridge (1839), later labelled as Neighbourly Bridge, is shown over Owenduff River. A mill in Ballygarvan labelled Shannons Mill was extended with additional buildings, as shown on the 1902 map and labelled corn. Some associated features, including sluices, footstick or footbridge are also shown. The 1839 maps illustrate a forge within a corner of an area labelled as Fair Green. The forge is indicated with a horseshoe symbol and labelled as Smithy on the 1902 map. Two small settlements are labelled Knockcarroll and Nash, both in Nash townland. The 1839 map shows some single buildings and a couple of concentrations of structures that could represent farmyards. Most of the single/lone buildings appear not to be shown on the 1902 map, suggesting these were abandoned due to famine.

Some of the field boundaries depicted on the 1839 map are no longer shown on the 1902 map, while others were added. A few laneways are also shown within the site, usually following the field boundaries.

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## Foleys Land (Phase 2)

No buildings are shown within the site on the examined mapping. However, laneways are depicted traversing and adjacent to the site. A well, labelled St Collmans Well, is labelled and depicted at the location of the monument (WX040-002) on both the 1839 and 1902 maps. The well is connected with a channel to a stream that is also the townland boundary between Nash and Cloonagh townlands on the 1839 map. Both the Graveyard and Church (Site) are depicted and labelled to the northeast of the site. Furthermore, a mill race is depicted and labelled on both maps. On the 1839 map, five kilns are shown within the site, with only three depicted and labelled L.K by the 1902 map. A spring is depicted on the 1902 map within the southwest portion of the site. No monuments or features of archaeological significance were noted on the examined mapping.

## 5.7 Aerial Photography

Aerial photographs dating between 1995 and 2013 from the Ordnance Survey of Ireland were reviewed. Google Earth imagery dating between 2005 and 2024 was also examined. Unrecorded archaeological sites can often be identified in aerial photographs as cropmarks or differential growth in a field.

## O'Connors/Maguire's Lands (Phase 1)

The monument, a ringfort - rath, adjacent to the south portion of the site, appears overgrown and unchanged since the 1995 aerial photograph. Some of the field boundaries were removed by 1995, and some of the laneways depicted previously are no longer visible, while others remain in use as farm access tracks. The settlement and the area where the mill was depicted are used as farmyards. Mill and associated buildings in Kilbraney are visible in the 1995 aerial photograph, with some buildings to the east of the access demolished by the 1999-2003 photographs. The remains of buildings depicted on the OS mapping can still be seen in the 2022 aerial photograph, albeit roofless; however, the area is overgrown so that more buildings may survive. A new house was built west of the former mill area in 2009.

The remains of the small settlement/farmyard in Nash townland, where a substation is proposed, appear to be still in use in 1995, possibly as animal sheds, with buildings roofless and in ruins by the 1999-2003 map. This area can still be accessed via the laneway; however, before the 1995 aerial photograph, the portion of the laneway past the houses was removed with a field boundary. The gravel pit in Nash townland was overgrown by the 1995 aerial photograph, with some groundworks visible in 1999-2003. It was possibly

|                                                                                   |        |                                                 |          |    |                 |               |
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backfilled and reinstated as a field, and a house was built on a plot adjacent to the east by the 2004-2006 aerial photograph. The river, stream and waterway sections have a broad band of trees growing along them. The fields are arable lands, some of which are used for pasture. Some portions, particularly adjacent to the waterways, are overgrown and appear rough ground. Some faint anomalies were noted, primarily linear features corresponding with field boundaries visible on the OS maps and ploughing ridges.

### Foleys Land (Phase 2)

By the 1995 aerial, some field boundaries had been removed, and further boundaries had been removed. By 2006-2012, shrubs were removed from the northwestern portion of the site, while a field in the middle northeastern and southwestern areas was left to grow over.

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

## 6. METHOD OF DATA INTERPRETATION

As outlined above, a detailed gradiometer survey that allows the detection of potential archaeological responses was conducted. The SENSYS MAGNETO MXV3 8-sensor fluxgate is a specifically designed gradiometer for use in archaeological prospection. Extremely sensitive, these instruments can detect variations in soil magnetism to 0.01nT, affording diverse applications throughout various archaeological, soil morphological and geological conditions. The survey was geo-referenced with a Trimble R10 unit that was accurate to within 1cm. The results were interpreted by examining the raw data as greyscale images, X.Y. trace, relief and data plots. Archived raw data is presented in Figure 11, and an interpretation is included in Figure 12.

## 7. SURVEY RESULTS

The geophysical survey was conducted by Donald Murphy, Robert Breen and Jeanne Rochford of ACSU under licence 23R0080 (Figures 11-30). This survey was carried out in two phases. **Phase 1** was carried out in March 2023, and **Phase 2** (ITM 677333,619222) was carried out in December 2024.

**Phase 1:** Two areas were surveyed as part of Phase 1 (ITM 678333, 619888) – O’Connors Land (Fields 1-12, 19; Figures 21-28) and Maguires Land (Fields 13-18; Figures 21-22, 29-30). Maguires Land was located immediately

south of O'Connor's land. These are located in the townlands of Nash and Ballygarvan, respectively and consist of agricultural fields.

**Phase 2:** Two areas were surveyed as part of Phase 2 (ITM 677333,619222) – Both areas were located on Foleys land (Fields 1-6 and Fields 7-19; Figures 11-20). Foleys land Fields 7-19 were located immediately west of Maguires land, while Foleys land Fields 1-6 were located further south. These are located in the townlands of Cloonagh and Nash.

The anomalies identified in **Phase 1** are listed in Table 4 below.

*Table 4: Geophysical survey results – Phase 1 O'Connors Land (Fields 1-12, 19) and Maguires Land (Fields 13-18).*

| Anomaly No. | Form/Nature of Anomaly | Possible Source(s) of Anomaly                                               | Description                                                                                                                                                                                                                                           |
|-------------|------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M5          | ?Archaeology           | Curvilinear anomaly that might represent an enclosure/ringditch             | Curvilinear anomaly in the north portion of Field 3, faint in nature and could represent part of a small, ploughed-out enclosure or a ring ditch. (Figure 26).                                                                                        |
| M6          | ?Archaeology           | Oval anomaly that might represent an enclosure/ringditch or recent land use | Oval anomaly in the west portion of Field 8, at the location of the proposed substation. It is faint in nature and could represent part of a small, ploughed-out enclosure or a ring ditch but could be associated with recent land use. (Figure 28). |
| -           | ?Archaeology           | Laneways, ditches or modern drains                                          | Linears traversing Fields 6 and 7. It could represent historic laneways but could also be associated with recent land use or represent wet ditches. These do not correspond with former field boundaries/features depicted on the OS mapping.         |
| -           | ?Archaeology           | Large pits/spreads or natural geology                                       | Large positive anomalies that might indicate large pits/spreads.                                                                                                                                                                                      |

| Anomaly No. | Form/Nature of Anomaly                | Possible Source(s) of Anomaly                                                                                            | Description                                                                                                                                                                                                                              |
|-------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                       |                                                                                                                          | The possibility that these are of natural origin cannot be excluded.                                                                                                                                                                     |
| -           | ?Archaeology                          | Pits, postholes, cut features or natural geology/iron in topsoil                                                         | Scatter of positive anomalies that may represent cut features of archaeological significance such as pits and postholes. Could alternatively represent modern iron objects within the topsoil or natural underlying geological features. |
| -           | Trends                                | Curvilinear anomaly that might represent enclosure/ring ditch; ephemeral in nature suggesting a geological origin        | A faint, ephemeral curvilinear anomaly in the east portion of Field 3. It might represent the remains of a ploughed-out enclosure or ring ditch. Due to its ephemeral nature, likely to be of geological origin.                         |
| -           | Trends                                | Curvilinear and linear anomalies might be agricultural in nature                                                         | Curvilinear and linear trends, likely associated with former land use, likely agricultural in nature, might represent drainage or field access and not extend to natural.                                                                |
| -           | Magnetic interference/ Modern anomaly | Groundworks/made up ground and reinstated, and some correspond with buildings, quarries and kilns depicted on OS mapping | Areas of magnetic interference, suggesting modern anomalies, some correspond with features depicted on OS mapping, such as buildings, quarries and kilns.                                                                                |
| -           | Former boundary                       | Linears, former field boundaries                                                                                         | Linear anomalies representing former field boundaries. Some appear to represent buried ditches, while others removed field boundaries; some                                                                                              |

| Anomaly No. | Form/Nature of Anomaly     | Possible Source(s) of Anomaly                                     | Description                                                                                                                                                                                                  |
|-------------|----------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                            |                                                                   | correspond with boundaries depicted on OS mapping.                                                                                                                                                           |
|             | Cultivation                | Linears, agricultural in nature, representing cultivation furrows | A series of parallel linear anomalies was recorded throughout the site. These are mostly aligned north to south and northeast to southwest and are agricultural in nature and represent cultivation furrows. |
|             | Natural/underlying geology | Changes in natural/underlying geology                             | Areas manifesting as changes in natural and/or underlying geology.                                                                                                                                           |

The anomalies identified in **Phase 2** are listed in Table 4 below.

*Table 5: Geophysical survey results – Phase 2 Foleys Land Fields 1-19*

| Anomaly No. | Form/Nature of Anomaly | Possible Source(s) of Anomaly | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>M1</b>   | ?Archaeology           | Enclosure ditch               | Curvilinear anomaly M1 is situated in the northeast corner of Field 7 and appears to form the southern portion of a small sub-circular enclosure. It measures c.31m east-west and c.22m north-south to the northern limit of the survey. This monument may have been truncated, adapted by, or indeed part of the adjoining mill race that is visible on all editions of OS mapping. The anomaly lies on a bend in the mill race direction, at the point it turns from a northeasterly direction to a south-southeasterly direction. (Figure 18). |
| <b>M2</b>   | ?Archaeology           | Enclosure ditch               | A D-shaped curvilinear in Field 7 possibly represents another small enclosure. The straight side of the D-shaped enclosure runs parallel to the mill race in a southeasterly direction. It measures 32m northwest-southeast and 23m southwest-northeast. The southern portion of this anomaly                                                                                                                                                                                                                                                     |

|                                                                                   |        |                                                 |          |    |                 |               |
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| Anomaly No. | Form/Nature of Anomaly                | Possible Source(s) of Anomaly                                     | Description                                                                                                                                                                                                                                    |
|-------------|---------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                                       |                                                                   | falls on the same line as a recorded field boundary that is depicted on both the first edition 6-inch (1839-41) and 25-inch OS map (1902-04). This boundary is not depicted on the last Cassini edition OS map (1922-25). (Figure 18).         |
| <b>M3</b>   | Trend                                 | Underlying geology / poor drainage?                               | An irregular dipolar anomaly to the west of Field 16 may represent a change in underlying geology or an area of poor drainage. This anomaly should be assessed during the testing phase to determine its archaeological potential. (Figure 14) |
| <b>M4</b>   | Trend                                 | Underlying geology / poor drainage?                               | An irregular dipolar anomaly to the east of Field 1 may represent a change in underlying geology or an area of poor drainage. This anomaly should be assessed during the testing phase to determine its archaeological potential. (Figure 20)  |
| -           | ?Archaeology                          | Pits, postholes, cut features or natural geology.                 | Scatter of positive anomalies that may represent cut features of archaeological significance, such as pits and postholes. They could alternatively represent natural underlying geological features or stone sockets.                          |
| -           | Former boundary                       | Linears, former field boundaries                                  | Linear anomalies representing former field boundaries. Some appear to represent buried ditches, while others removed field boundaries; some correspond with boundaries depicted on OS mapping.                                                 |
| -           | Cultivation                           | Linears, agricultural in nature, representing cultivation furrows | A series of parallel linear anomalies was recorded throughout the site. These are mostly aligned north to south and northeast to southwest. They are agricultural in nature and represent cultivation furrows.                                 |
| -           | Magnetic interference/ Modern anomaly | Ground works/made up ground and metal fencing                     | Areas of magnetic interference, suggesting modern anomalies.                                                                                                                                                                                   |

|                                                                                   |        |                                                 |          |    |                 |               |
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## 8. IMPACT ASSESSMENT

The purpose of this impact assessment was to establish whether or not the site contained any evidence for the presence of previously unrecorded areas or features of historical, built heritage or archaeological significance and determine the potential impacts the proposed development may have on such features. A geophysical survey of the site was carried out under Licence 23R0080. This was carried out in two phases - Phase 1: O'Connors Land (Fields 1-12, 19) and Maguires Land (Fields 13-18) and Phase 2: Foleys Lands (Fields 1-19). The impact is outlined below;

### Phase 1: O'Connors Land (Fields 1-12, 19) and Maguires Land (Fields 13-18).

No clear anomalies of archaeological significance were recorded. However, two potential monuments were documented. One is a curvilinear anomaly noted in Field 3 (**M5**), and the other is an oval anomaly (**M6**) in the west portion of Field 8 at the location of the proposed substation. While both are faint in nature, these could represent an enclosure and/or a ring ditch. An array of positive responses of potential archaeological significance, which might equally be geological or modern, were also noted. These include scattered positive responses (?Archaeology) that might represent cut features such as pits/postholes but could also represent iron in the topsoil, while large areas might represent large pits or spreads. Linear anomalies (cultivation) were recorded throughout the site and are agricultural. No definite signs of archaeology were identified throughout the rest of the geophysical survey area. However, minor anomalies of archaeological potential were recorded, requiring further assessment.

### Foleys Land (Phase 2 - Fields 1-19)

Two potential anomalies of archaeological significance were identified in Field 7 (**M1** and **M2**), which lies adjacent to the Recorded Monument WX040-002 (ritual site – holy well) and in close proximity to Recorded Monuments church WX035-049001- (church) and WX035-049002-(graveyard). An irregular dipolar anomaly (**M3**) in the western extent of Field 16 and one in the eastern extent of Field 1 (**M4**) may represent a change in underlying geology or an area of poor drainage. These anomalies should be assessed during testing to determine their archaeological potential. Linear anomalies (cultivation) were recorded throughout the site and are agricultural. No definite signs of archaeology were identified throughout the rest of the geophysical

|                                                                                  |        |                                                 |          |    |                 |               |
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survey area. However, minor anomalies of archaeological potential were recorded, requiring further assessment.

## 9. CONCLUSIONS & RECOMMENDATIONS

The geophysical survey at Nash and Ballygarvan, Co. Wexford, was carried out to assess the archaeological potential of the site.

No clear anomalies of archaeological significance were detected in Phase 1 (O'Connors Land - Fields 1-12, 19 and Maguires Land - Fields 13-18). Two potential monuments were documented. One is a curvilinear anomaly (**M5**) noted in Field 3, and the other is an oval anomaly (**M6**) in the west portion of Field 8 at the location of the proposed substation. While both are faint in nature, these could represent an enclosure and/or a ring ditch. An array of positive responses of potential archaeological significance, but that might equally be geological or modern in nature, were also noted. These include scattered positive responses (?Archaeology) that might represent cut features such as pits/postholes but could also represent iron in the topsoil, while large areas might represent large pits or spreads. Linear features (?Archaeology) recorded that do not correspond with former field boundaries (Fields 6 and 7) could represent historic laneways but could also be associated with recent land use or represent wet ditches. Other linear features (Former boundaries) include some that correspond with boundaries depicted on the Ordnance Survey (OS) maps, which have been removed since then. Linear and curvilinear trends could be associated with access or recent land use/drainage; tentatively, the curvilinear could represent a ploughed-out ring ditch. Areas of disturbances and geology were also recorded. Some areas of disturbance correspond with features depicted on the OS maps, such as buildings, quarries and kilns. Linear anomalies (cultivation) were recorded throughout the site, these are mostly aligned north to south and northeast to southwest and are agricultural.

Two potential monuments (**M1** and **M2**) were detected in Phase 2 (Foleys land - Fields 1-6 and Fields 7-19). These were located in Field 7, which lies adjacent to a Recorded Monument: Ritual site – holy well (WX040-002-) and in close proximity to Recorded Monuments WX035-049001 - (church) and (WX035-049002 - (graveyard). The curvilinear anomaly **M1** is situated in the northeast corner of Field 7 and appears to form the southern portion of a small sub-circular enclosure or unrecorded field system. The second anomaly, **M2**, is located approximately 225m southeast of **M1** along the same field boundary, i.e. mill race. This anomaly consists of a D-shaped curvilinear and possibly represents another small enclosure. The straight side of the D-shaped enclosure runs parallel to the mill race in a southeasterly direction. It measures 32m northwest-southeast and 23m southwest-northeast. The southern portion of this anomaly falls on the same east-west

|                                                                                   |        |                                                 |          |    |                 |               |
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line as a recorded field boundary depicted on both the first edition 6-inch (1839-41) and 25-inch OS map (1902-04). This boundary is not depicted on the last Cassini edition OS map (1922-25). An array of positive responses of potential archaeological significance, but that might equally be geological or modern in nature, were also noted. These include scattered positive responses (?Archaeology) that might represent cut features such as pits/postholes, while large areas might represent large pits or spreads. Linear features recorded that do not correspond with former field boundaries could represent historic field divisions but could also be associated with more recent land use or represent wet ditches. Other linear features (Former boundaries) include some that correspond with boundaries depicted on the Ordnance Survey (OS) maps since removed. Linear and curvilinear trends could be associated with recent land use/drainage or underlying changes in geology. Linear anomalies (cultivation) were recorded throughout the site and are agricultural in nature. An irregular dipolar anomaly (**M3**) in the western extent of Field 16 and one in the eastern extent of Field 1 (**M4**) may represent a change in underlying geology or an area of poor drainage. These anomalies should be assessed during the testing phase to determine their archaeological potential. Linear anomalies (cultivation) were recorded throughout the site and are agricultural.

It is recommended that the area surveyed be subject to archaeological test trenching, targeting the anomalies identified during Phase 1 and Phase 2, particularly linear and curvilinear anomalies (?Archaeology), to assess their nature, extent and depth. In particular, the curvilinear anomaly **M5** (O'Connors Land, Field 3), the oval anomaly **M6** (O'Connors Land, Field 8), and the curvilinear anomalies **M1** and **M2** (Foleys Land, Field 7). The irregular dipolar anomalies **M3** and **M4** (Foleys Land, Field 16 and Field 1, respectively) may represent a change in underlying geology or an area of poor drainage. These anomalies should be assessed during the testing phase to determine their archaeological potential. A systematic test trenching programme shall be carried out by a licence-eligible archaeologist working under licence from the Department of Housing, Local Government and Heritage in consultation with the National Museum of Ireland. Archaeological material identified during the test trenching may necessitate further mitigation, including preservation *in situ*/or preservation by record (excavation) following discussion with the National Monuments Service.

|                                                                                   |        |                                                 |          |    |                 |               |
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([www.maps.archaeology.ie/historicenvironment/](http://www.maps.archaeology.ie/historicenvironment/))

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*Wexford Development Plan 2022-2028*

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

**Fluxgate Gradiometer Survey** is a non-intrusive method of archaeological prospection that is most often used in Irish Archaeology. This method allows for rapidly mapping archaeological objects, structures, deposits and other features, including geological anomalies, that survive beneath the ground. It allows the most rapid ground coverage and records a variety of anomalies caused by human activity and changes in the natural subsoil. The results are presented as a greyscale map of anomalies detected that are interpreted by an experienced archaeologist.

Surveys are undertaken using GPS-based lightweight B SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system. Ground cover must be 0.30m or less. The instrument used is operated by an experienced, skilled geophysical survey technician. The data is collected by hand-wheeling the cart over the survey area in evenly spaced parallel transects. The equipment was specifically designed for archaeological prospection. It includes highly stable sensors, minimising 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 a scan or detailed (zig-zag traverse) modes for reconnaissance or high-density mapping. The fluxgate enables reliable flexibility during fieldwork. Regular realignment of the instruments and zero drift correction ensure constant high data quality. These extremely sensitive instruments can detect variations in soil magnetism to 0.01nT, affording diverse applications throughout a variety of archaeological, soil morphological and geological conditions.

The instrument can be employed in both commercial and research-based investigations allowing for the 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 EAC *Guidelines for the use of Geophysics in Archaeology* (Schmidt et al. 2015) and English Heritage's *Geophysical Survey In Archaeological Field Evaluation* (David et al. 2008).

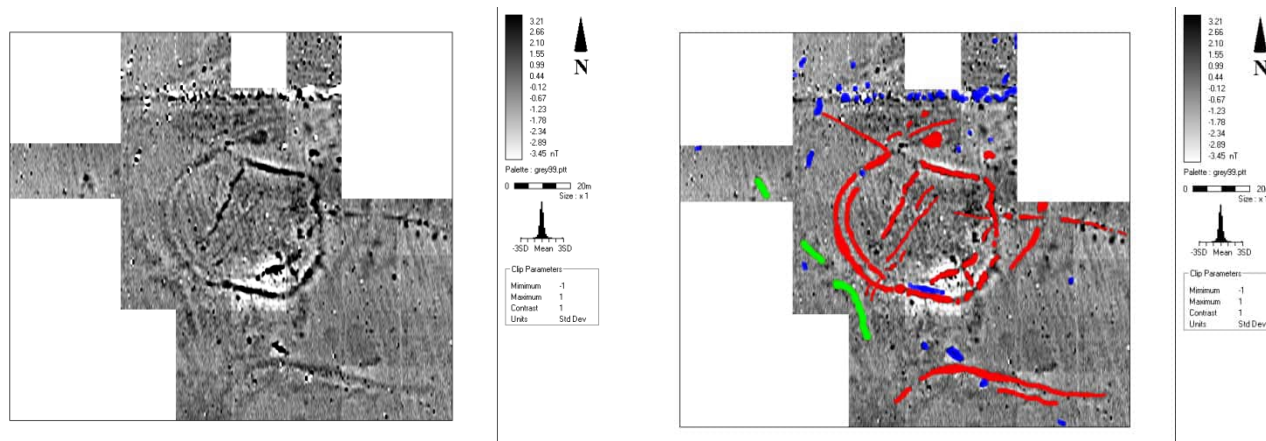


**SENSYS MAGNETO MXV3 8-sensor fluxgate gradiometer cart system**

|                                                                                   |        |                                                 |          |    |                 |               |
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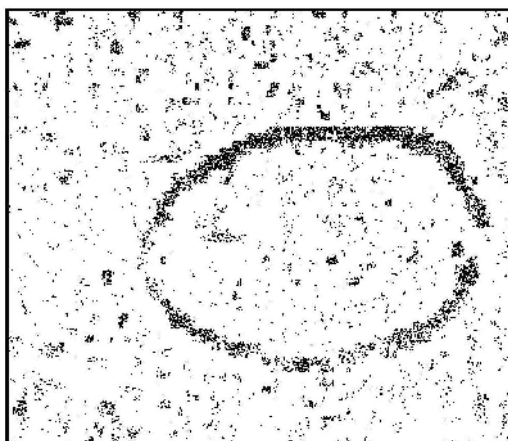
## Data Display Format

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

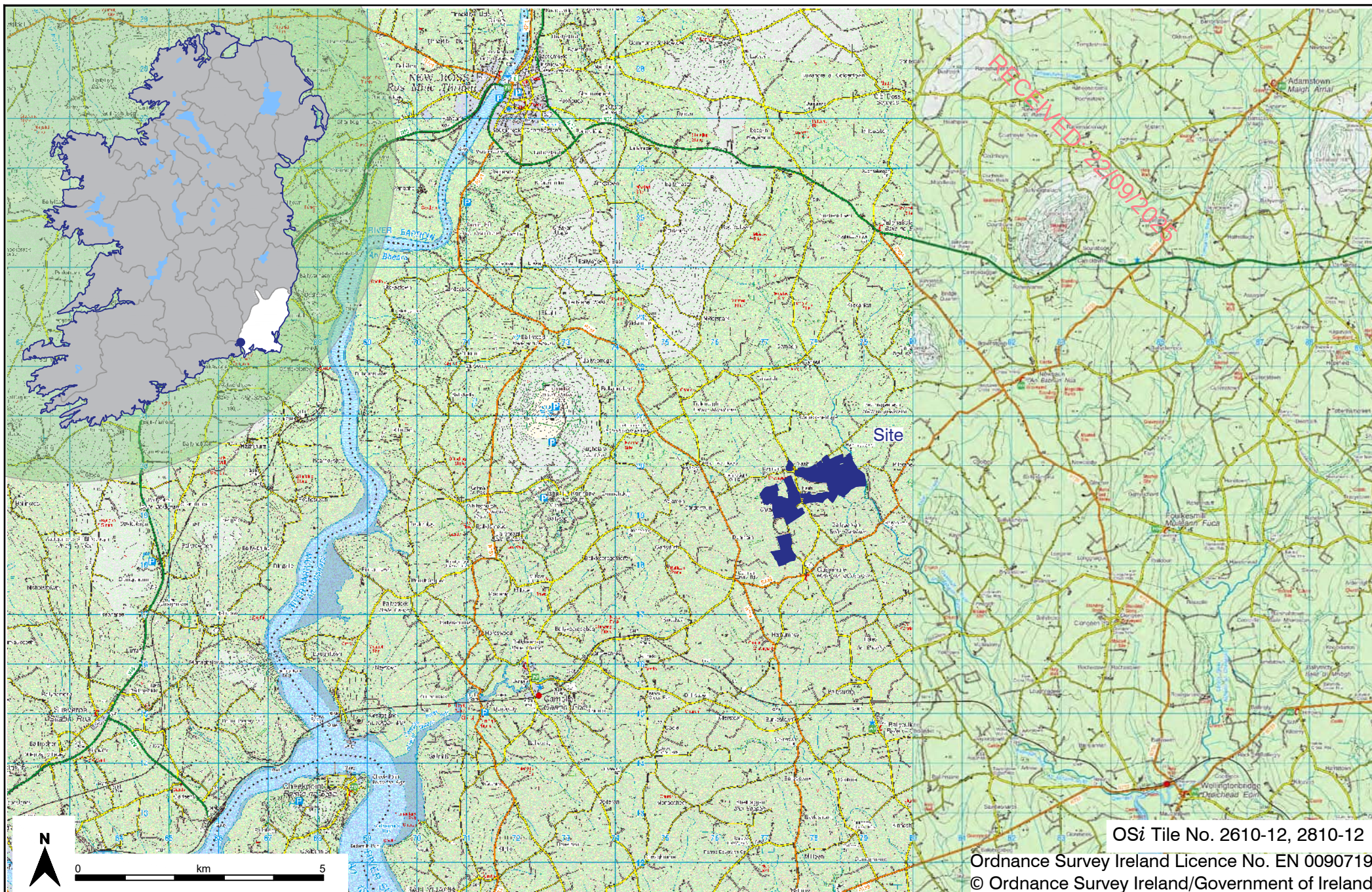


**Early medieval enclosure – greyscale**

**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 a 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 an oval-shaped enclosure**



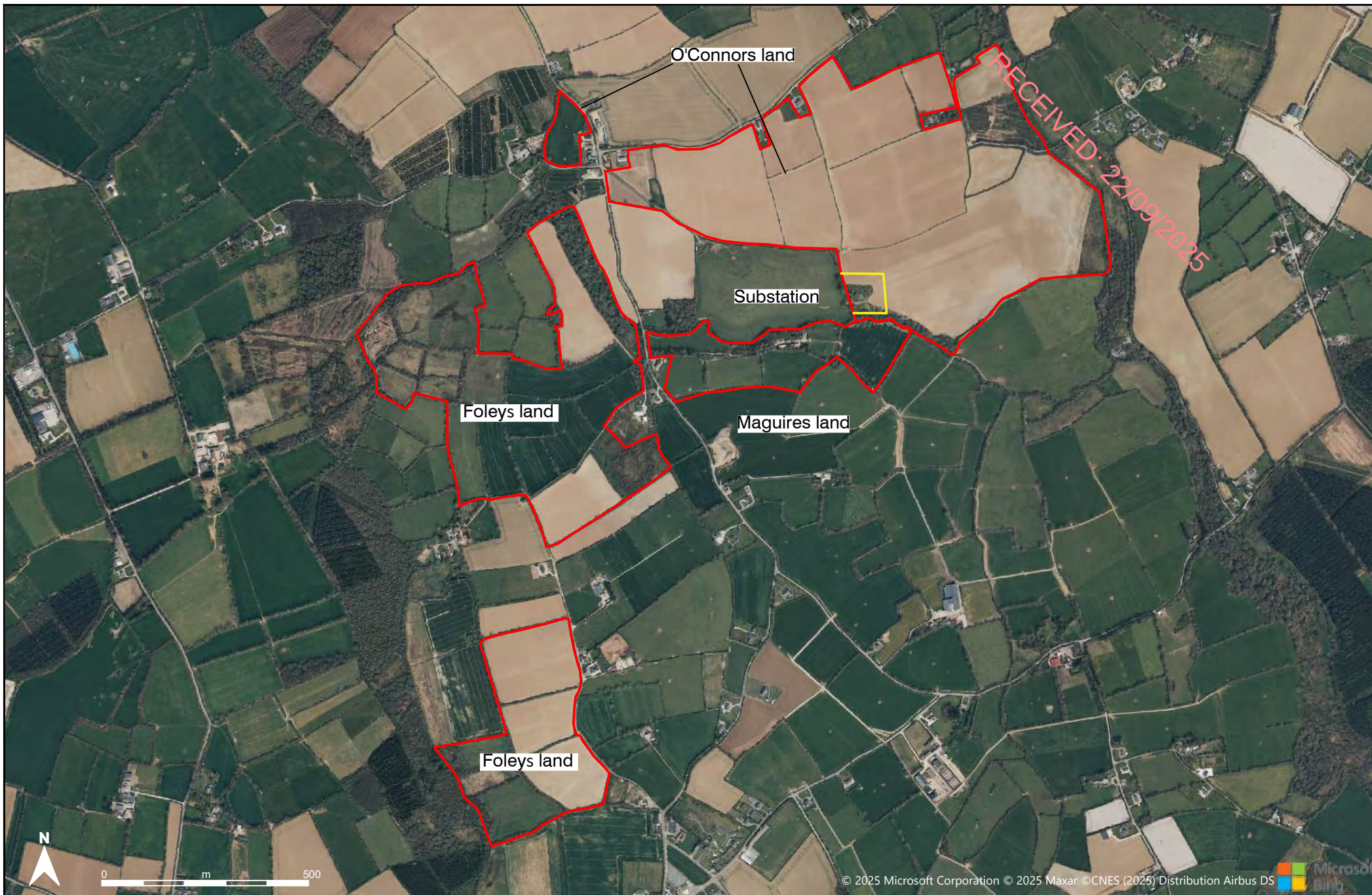
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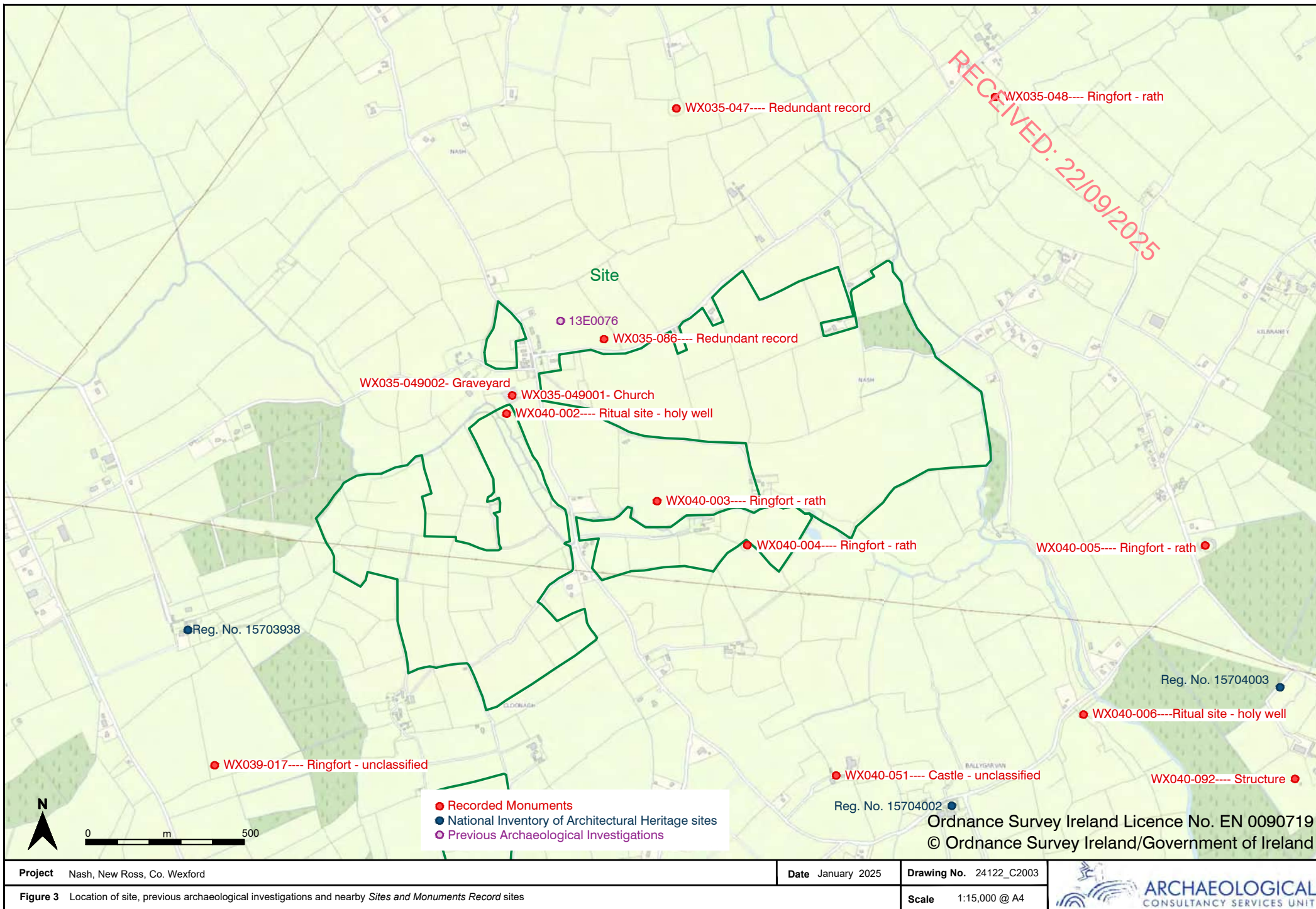
**Drawing No.** 24122\_C2001

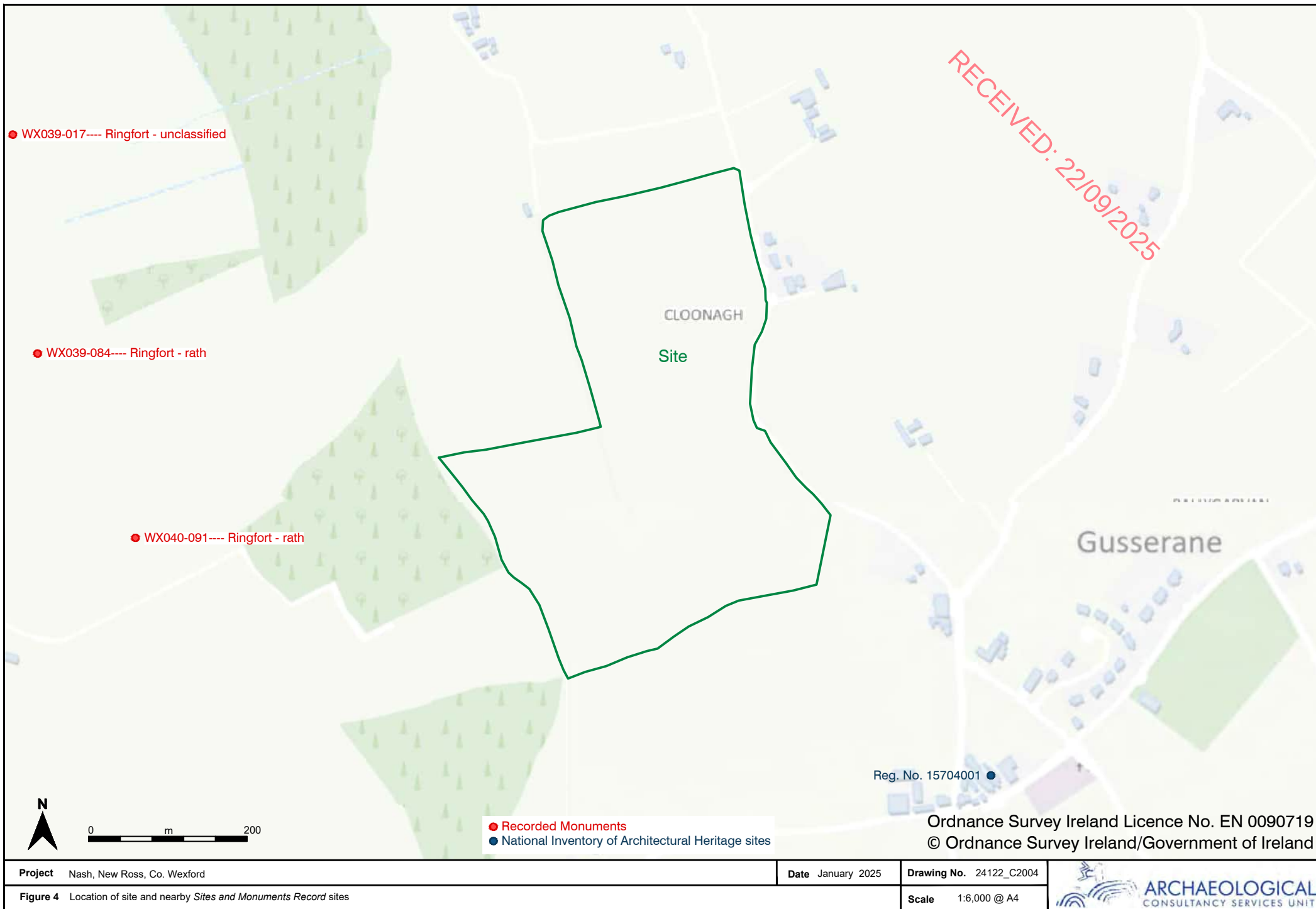
**Figure 1** Location of site

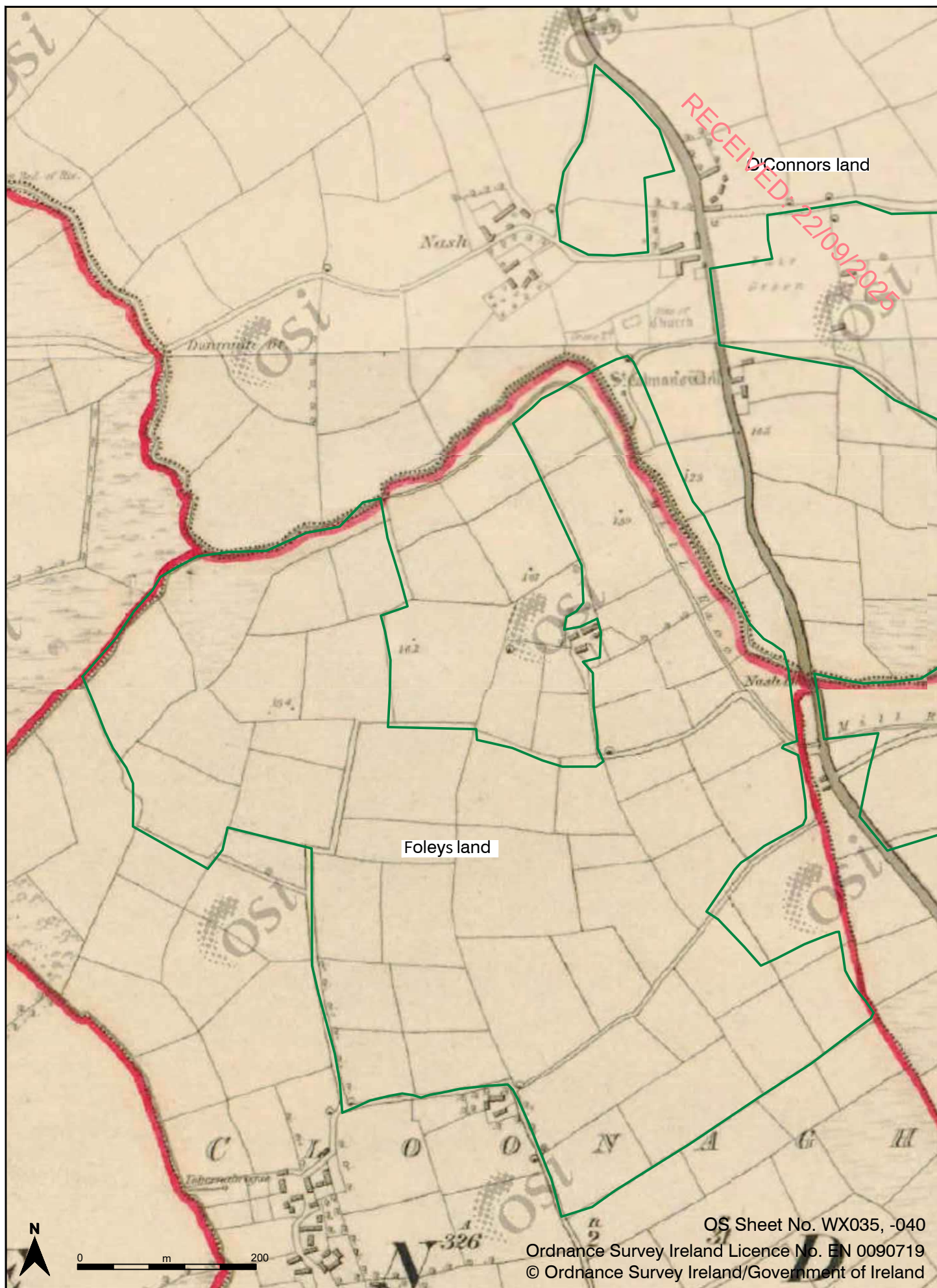
**Scale** 1:100,000 @ A4



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| <b>Project</b> Nash, New Ross, Co. Wexford | <b>Date</b> January 2025 | <b>Drawing No.</b> 24122_C2002 |  <b>ARCHAEOLOGICAL</b><br>CONSULTANCY SERVICES UNIT |
| <b>Figure 2</b> Overall plan of all lands  |                          | <b>Scale</b> 1:12,000 @ A4     |                                                                                                                                          |







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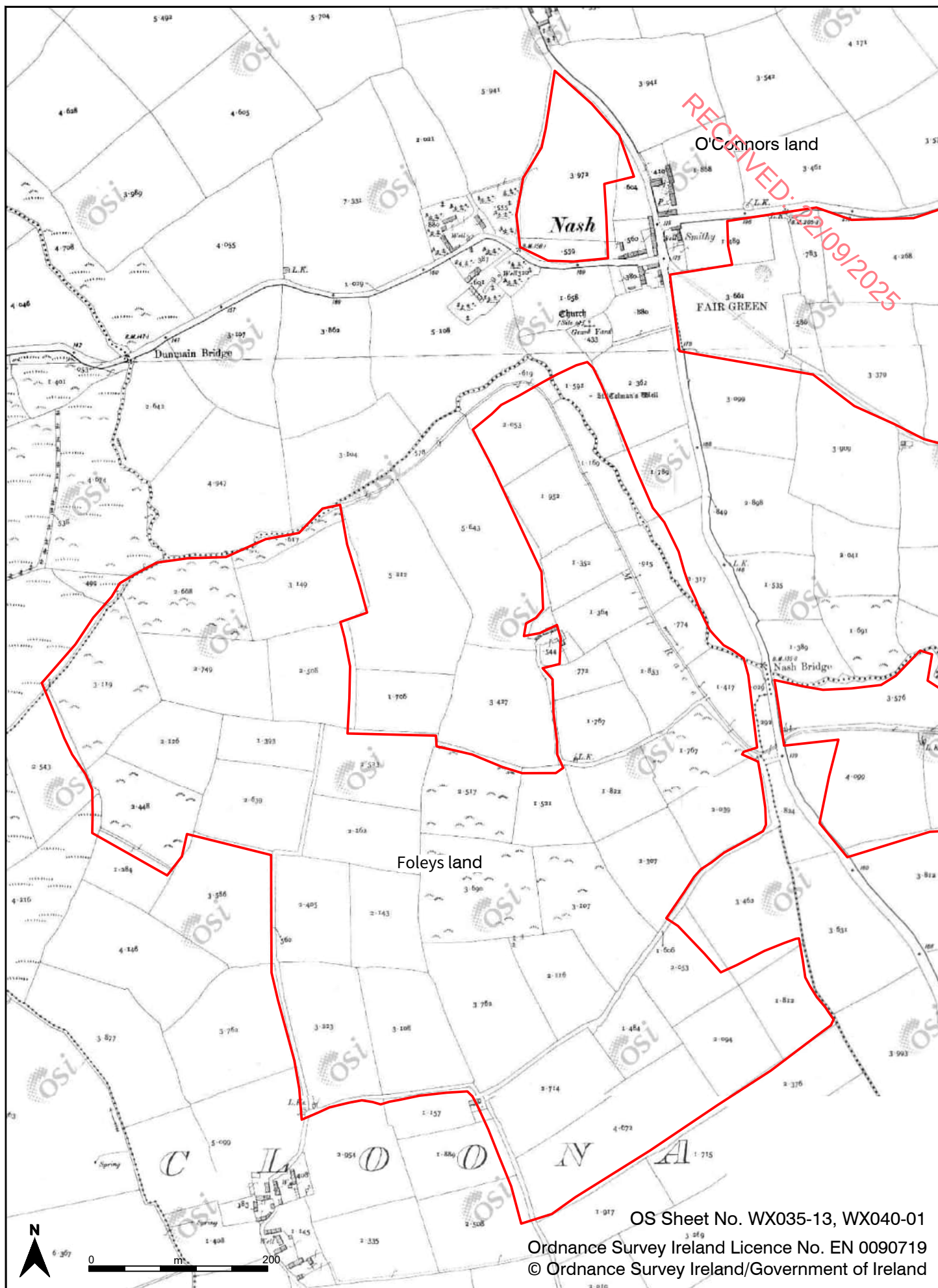
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Figure 5 Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1839 - published 1841), showing location of site

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Scale 1:5,500 @ A4

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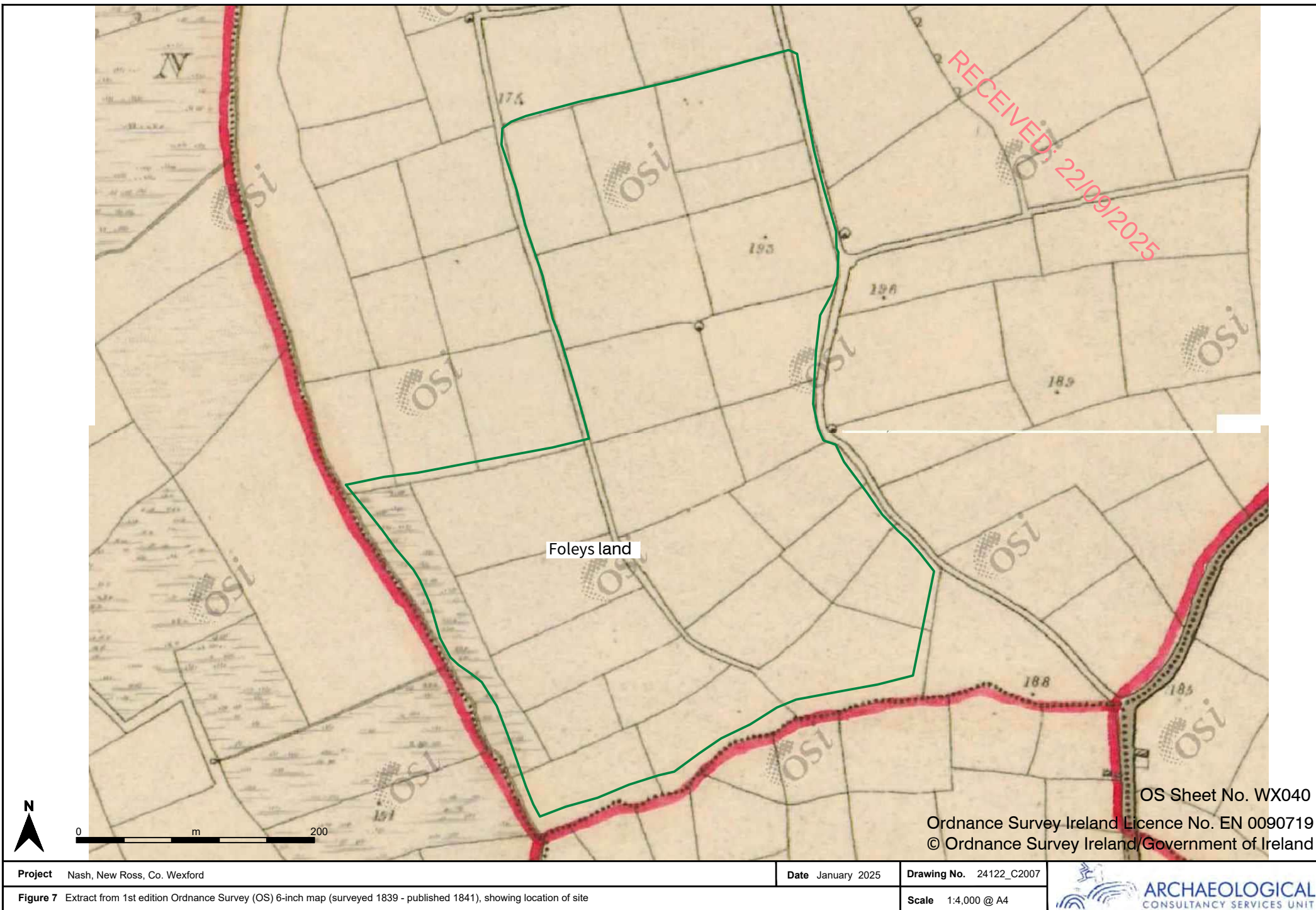
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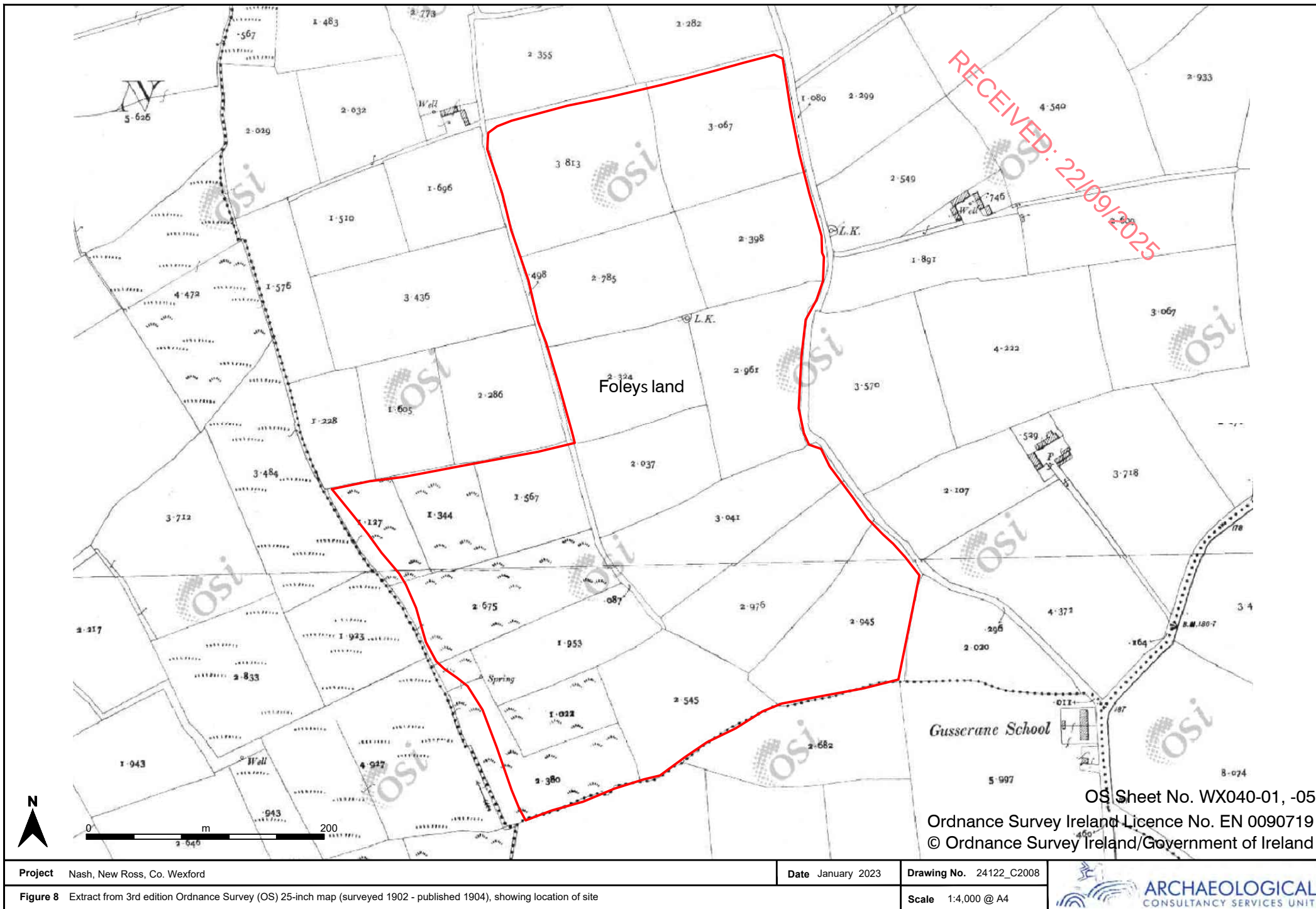
Figure 6 Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1902 - published 1904), showing location of site

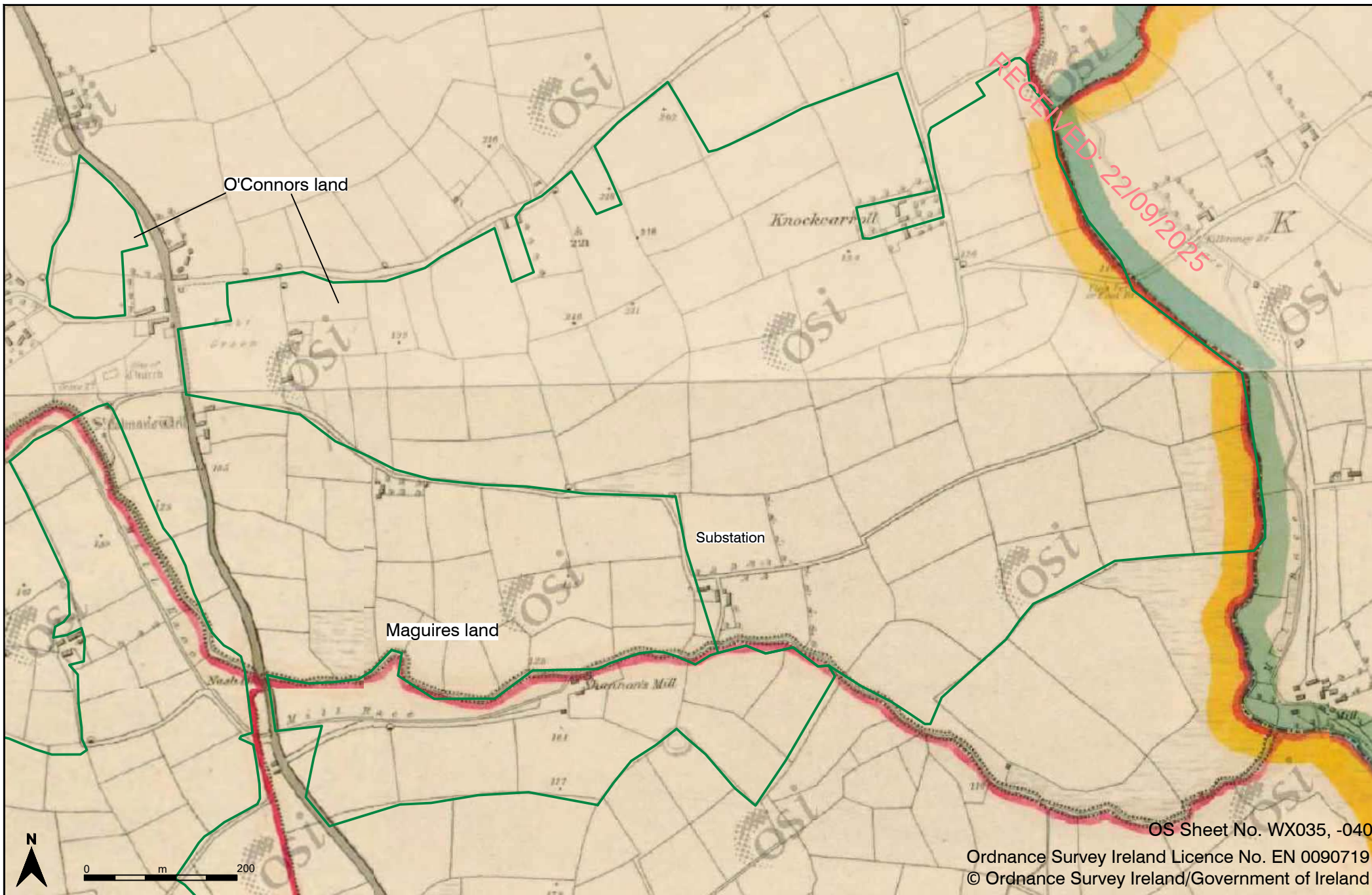


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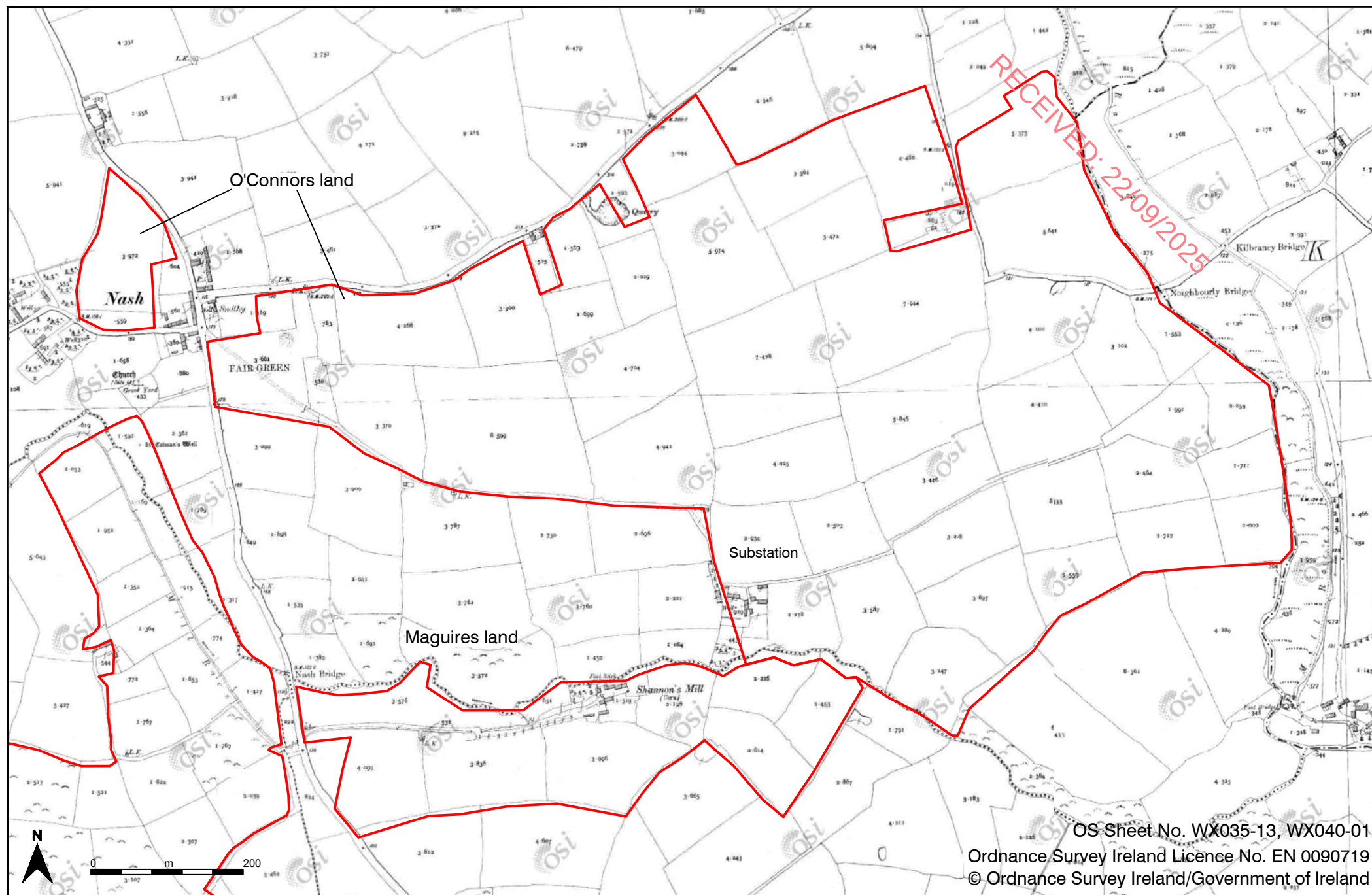
**Date** January 2025

**Drawing No.** 24122\_C2009

**Figure 9** Extract from 1st edition Ordnance Survey (OS) 6-inch map (surveyed 1839 - published 1841), showing location of site

**Scale** 1:6,500 @ A4





**Project** Nash, New Ross, Co. Wexford

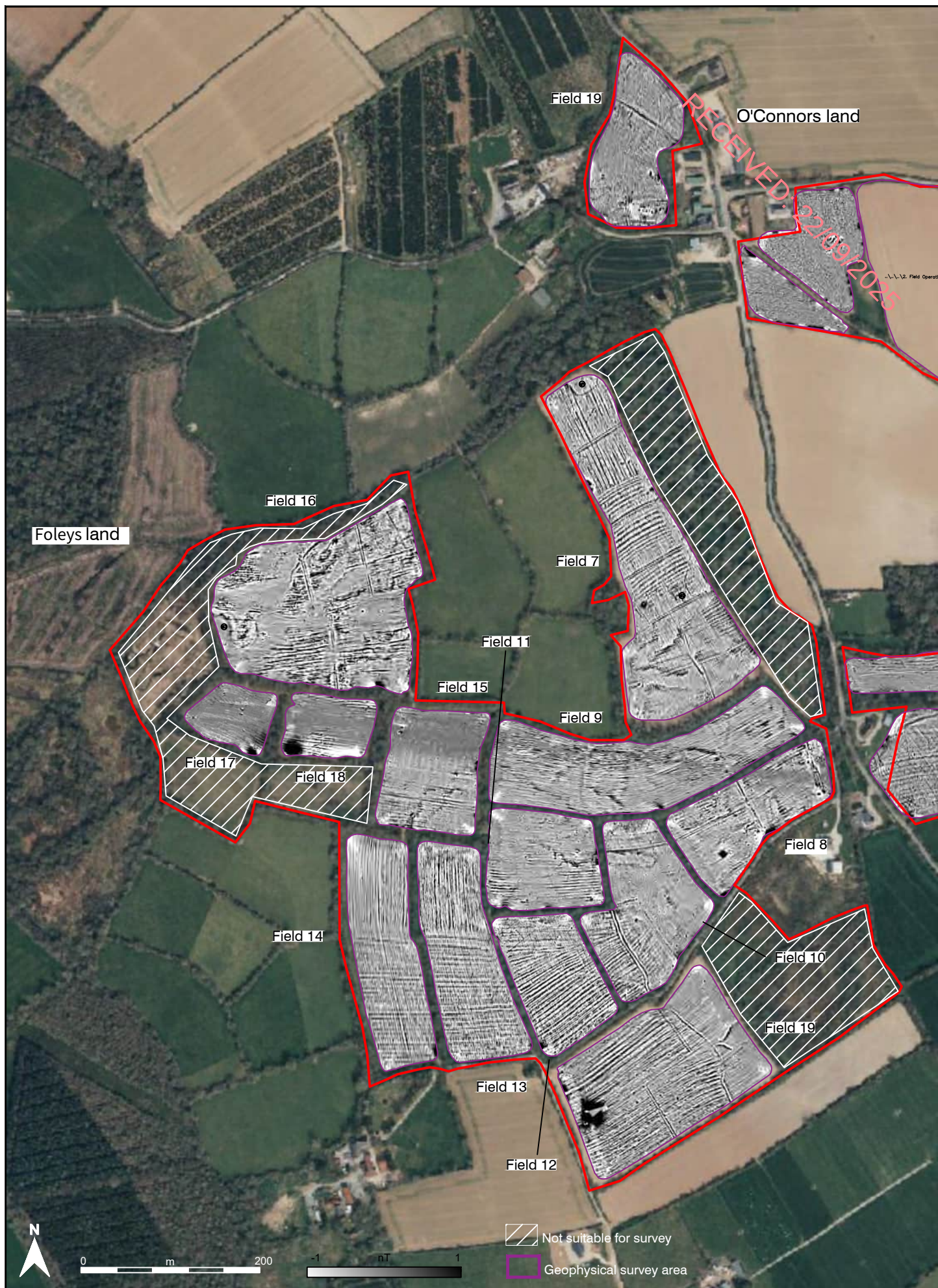
**Date** January 2025

**Drawing No.** 24122\_C2010

**Figure 10** Extract from 3rd edition Ordnance Survey (OS) 25-inch map (surveyed 1902 - published 1904), showing location of site

**Scale** 1:6,500 @ A4

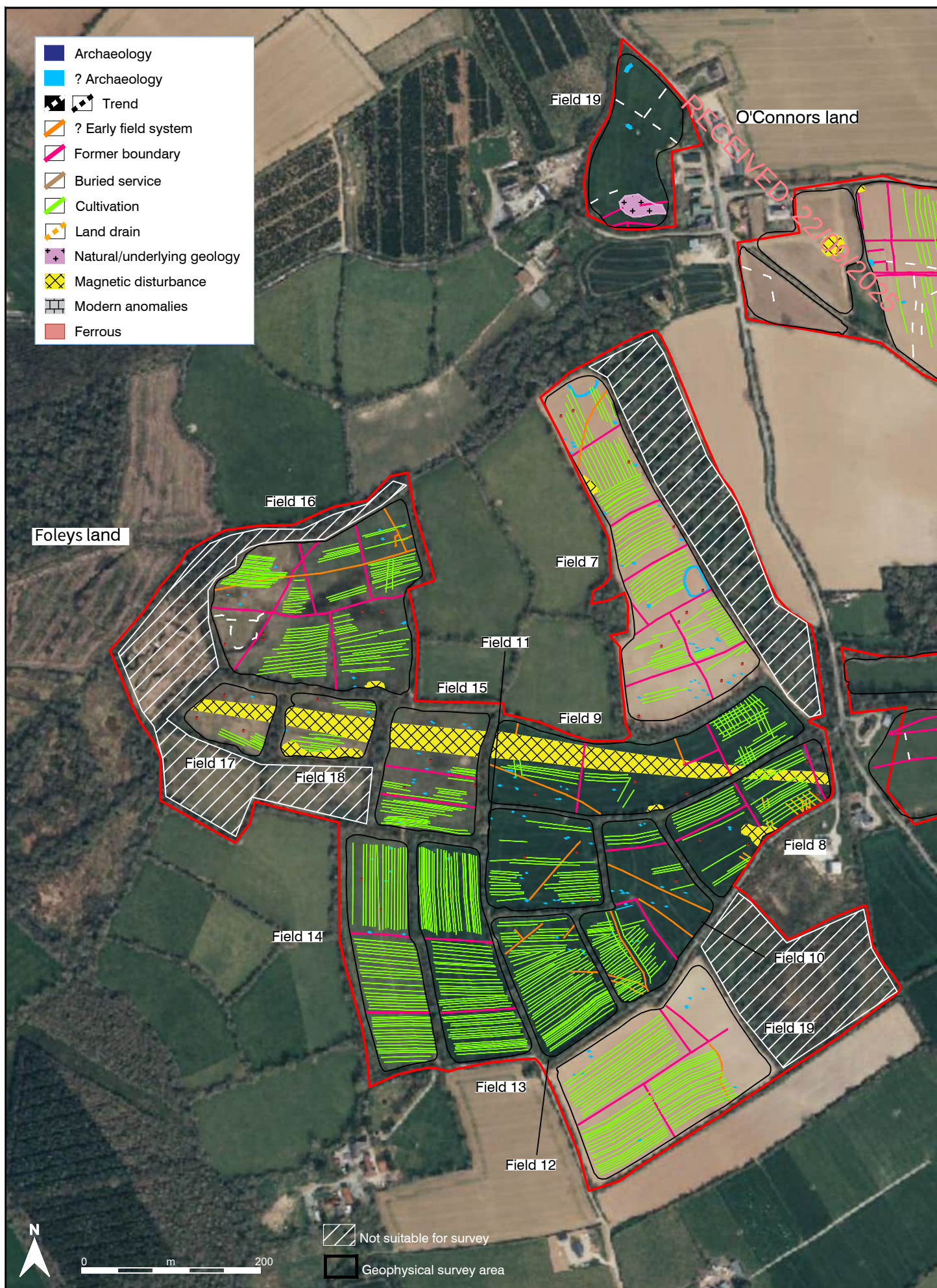




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Figure 11 Aerial view of site, showing geophysical survey results for Foley land (greyscale images)



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Figure 12 Aerial view of site, showing geophysical survey interpretation for Foleys land

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Figure 13 Aerial view of site, showing geophysical survey results for Foleys land (greyscale images) fields 15 to 18

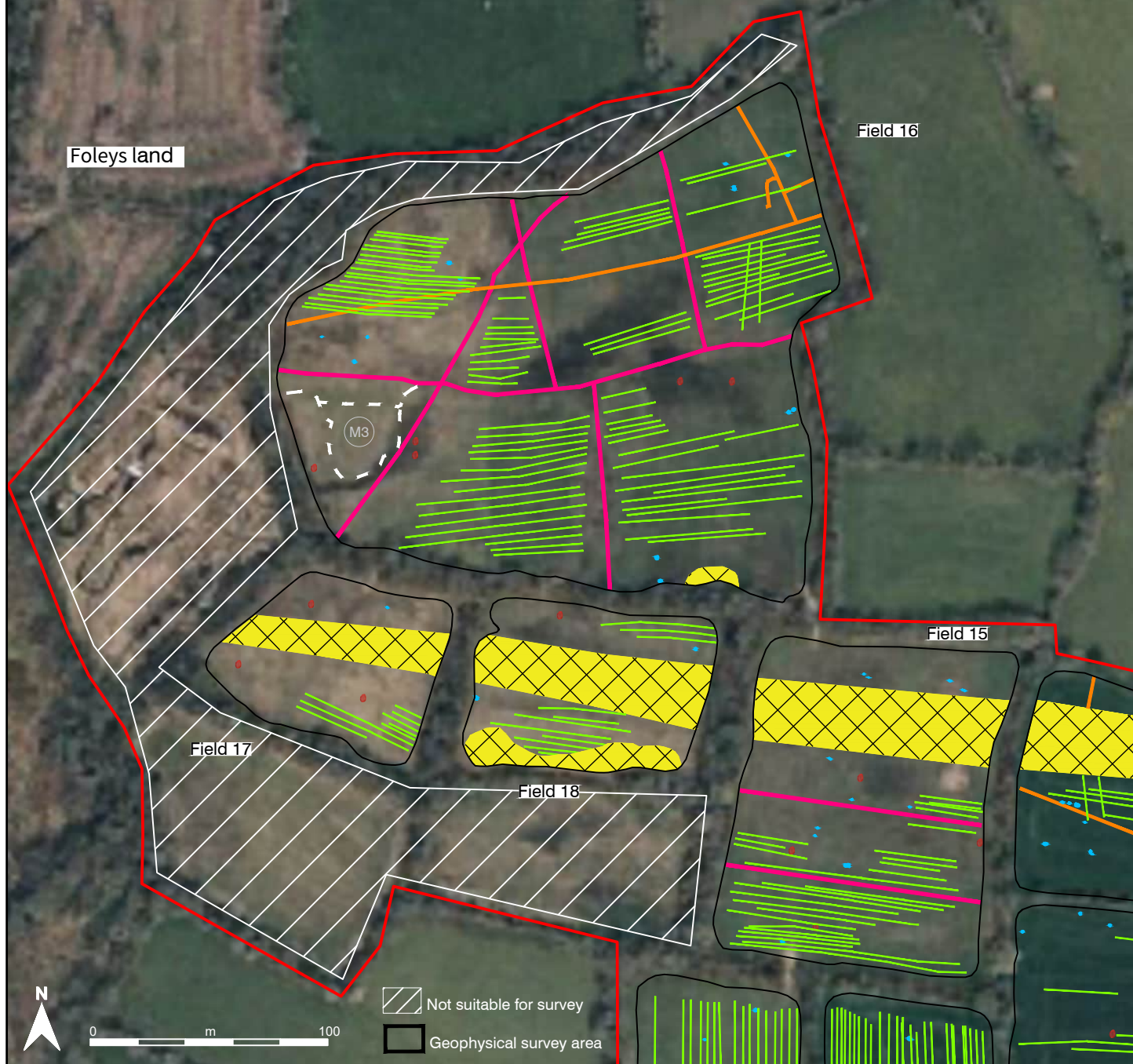
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- Archaeology
- ? Archaeology
- Trend
- ? Early field system
- Former boundary
- Buried service
- Cultivation
- Land drain
- Natural/underlying geology
- Magnetic disturbance
- Modern anomalies
- Ferrous



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Figure 14 Aerial view of site, showing geophysical survey interpretation for Foleys land, fields 15 to 18



Scale 1:2,500 @ A4

Drawing No. 24122\_C2014



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**Date** January 2025

**Drawing No.** 24122\_C2015

**Figure 15** Aerial view of site, showing geophysical survey results for Foleys land (greyscale images) fields 10 to 14 and 19

**Scale** 1:2,500 @ A4



**Project** Nash, New Ross, Co. Wexford

**Date** January 2025

**Drawing No.** 24122\_C2016

**Figure 16** Aerial view of site, showing geophysical survey interpretation for Foleys land, fields 10 to 14 and 19

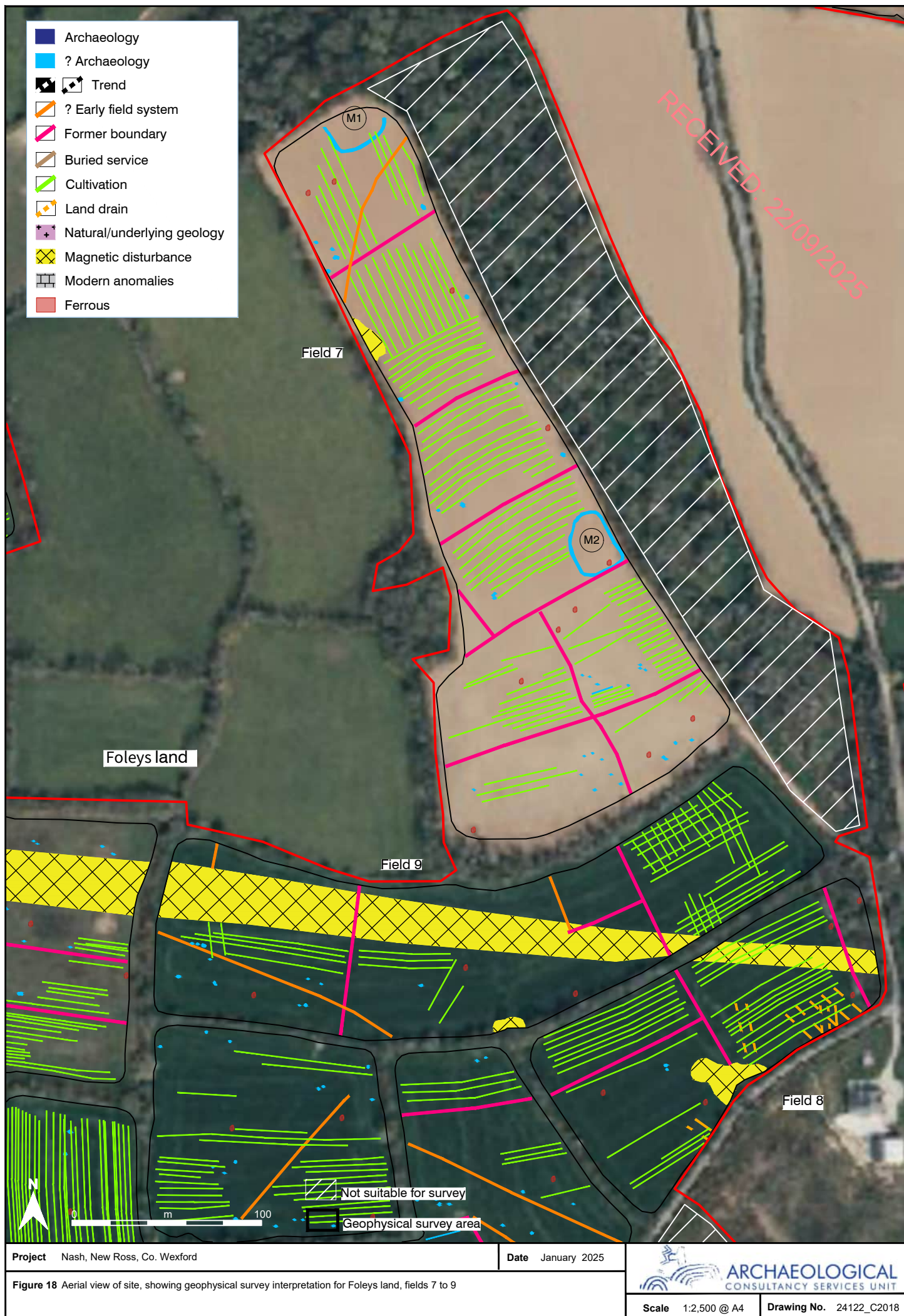
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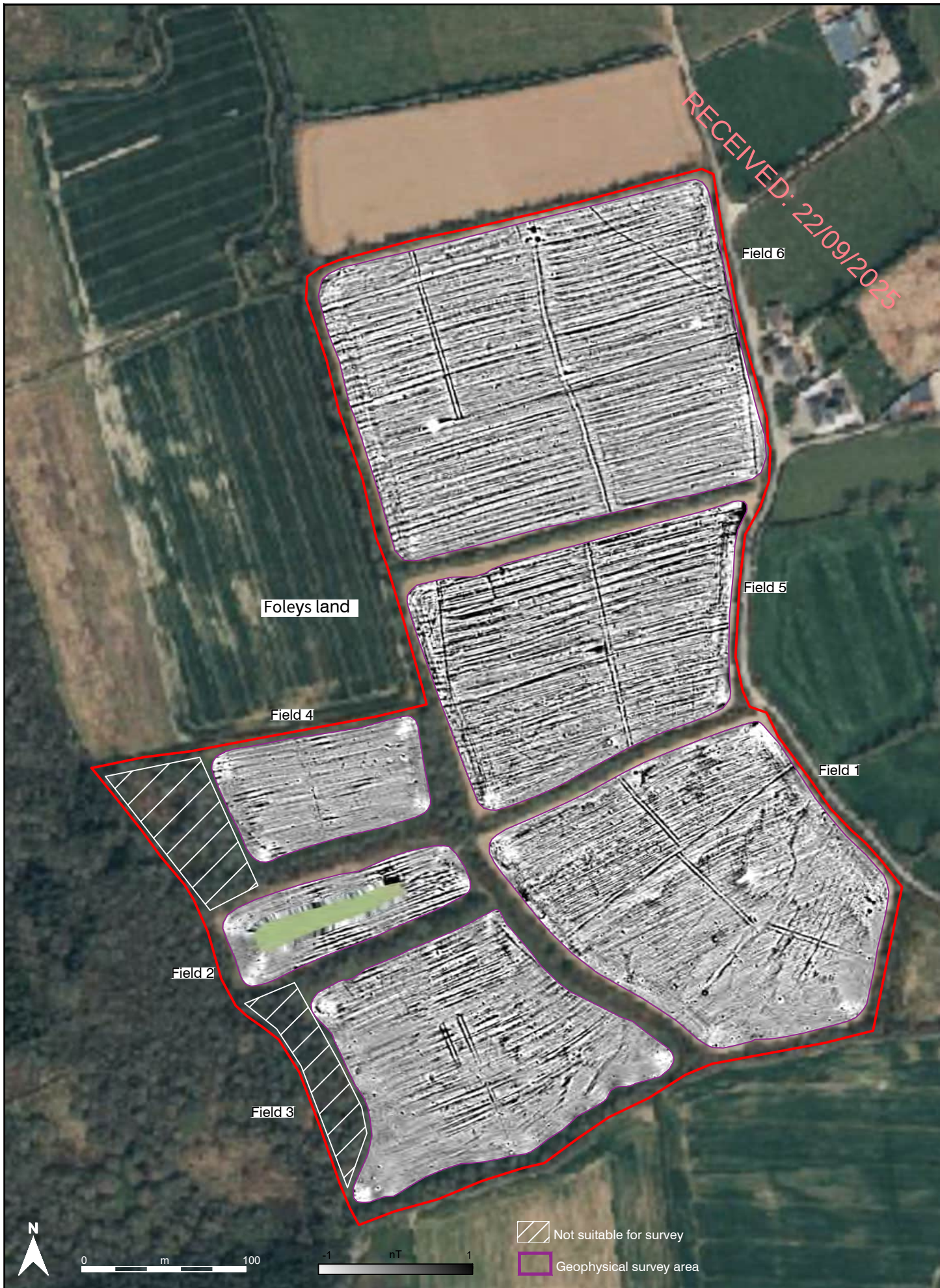


Project Nash, New Ross, Co. Wexford

Date January 2025

Figure 17 Aerial view of site, showing geophysical survey results for Foleys land (greyscale images) fields 7 to 9

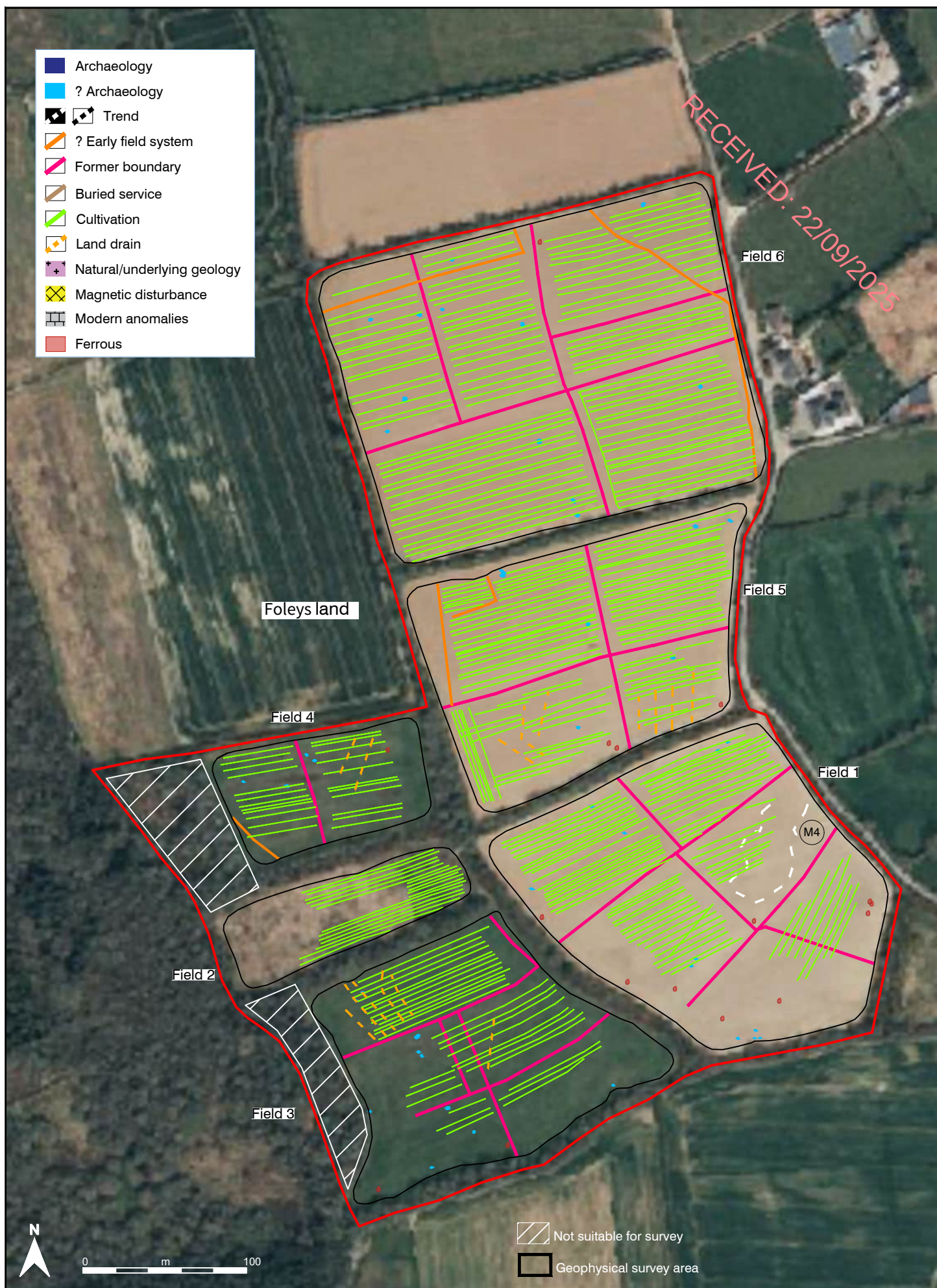




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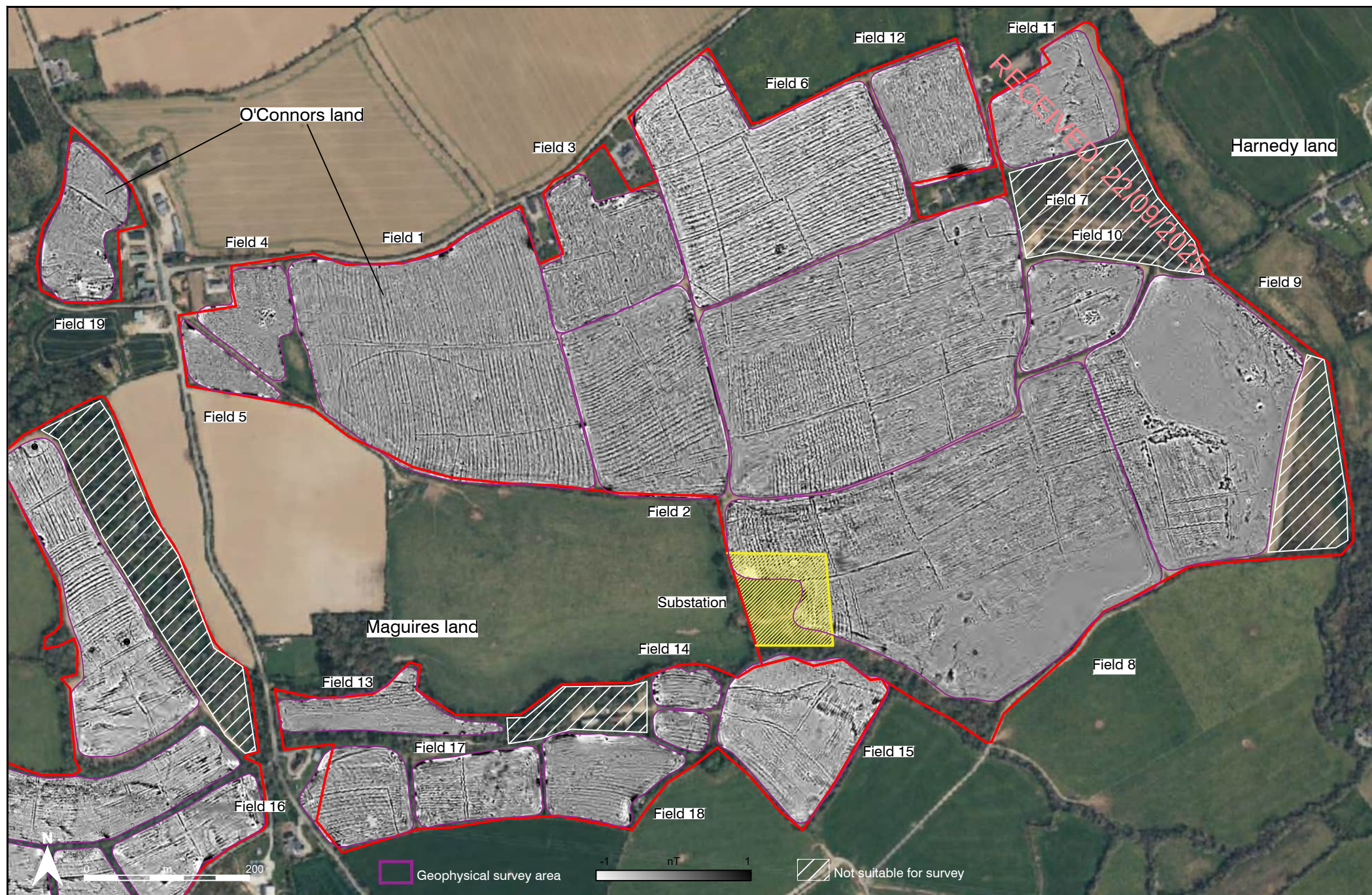
Figure 19 Aerial view of site, showing geophysical survey results for Foleys land (greyscale images) Fields 1-6



Project Nash, New Ross, Co. Wexford

Date January 2025

Figure 20 Aerial view of site, showing geophysical survey interpretation for Foleys land



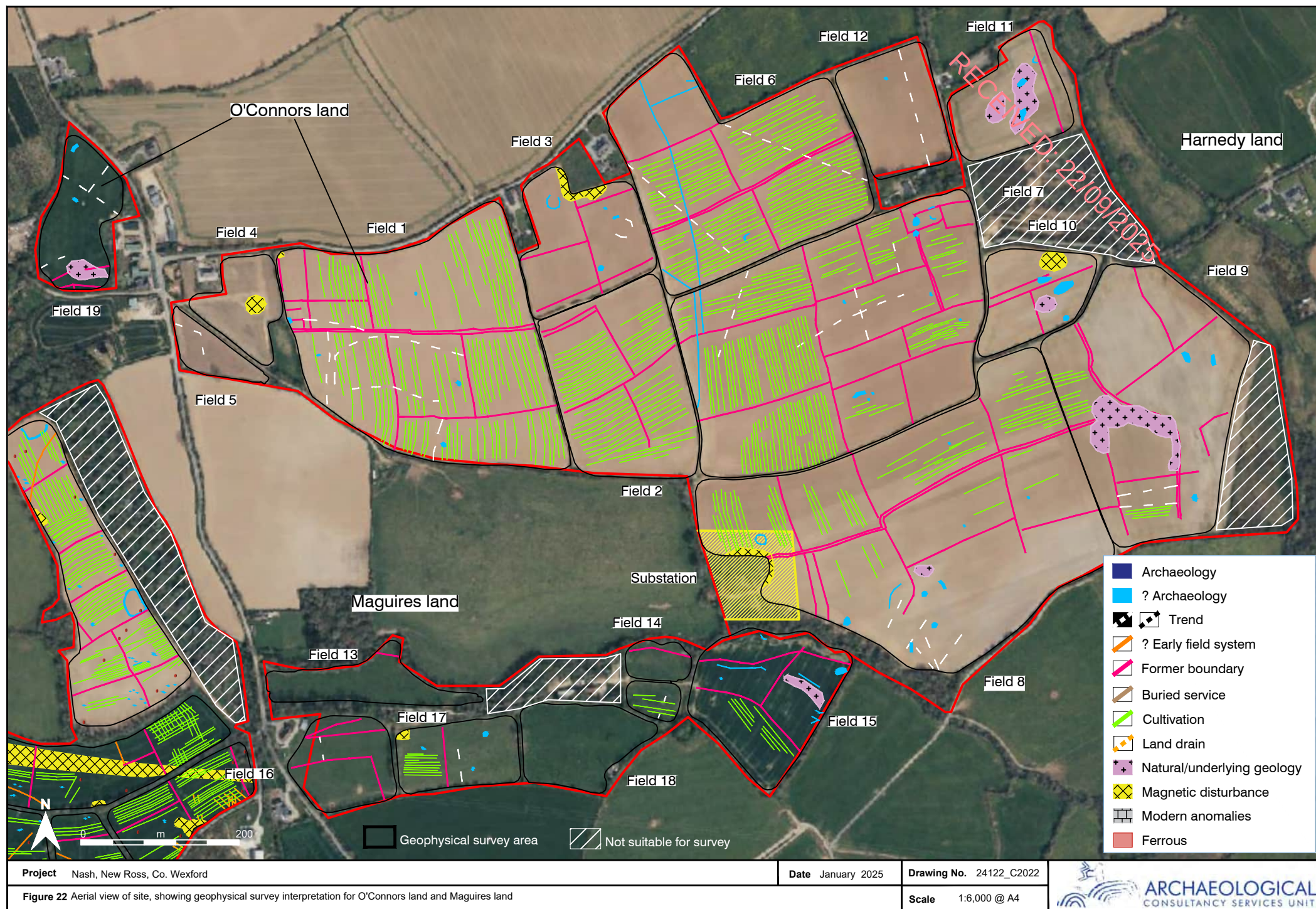
**Project** Nash, New Ross, Co. Wexford

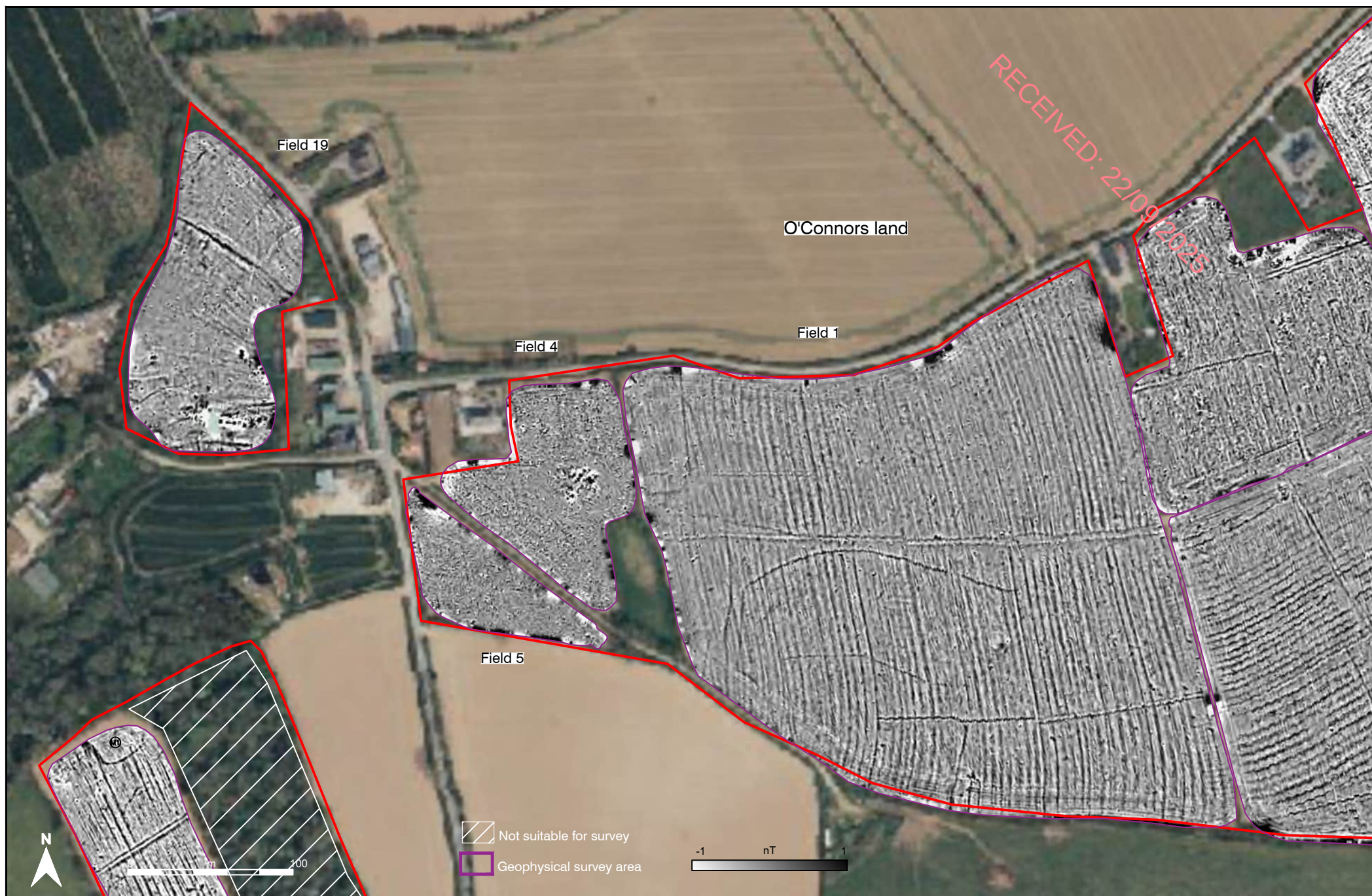
**Date** January 2025

**Drawing No.** 24122\_C2021

**Figure 21** Aerial view of site, showing geophysical survey results for O'Connors land and Maguires land (greyscale images)

**Scale** 1:6,000 @ A4





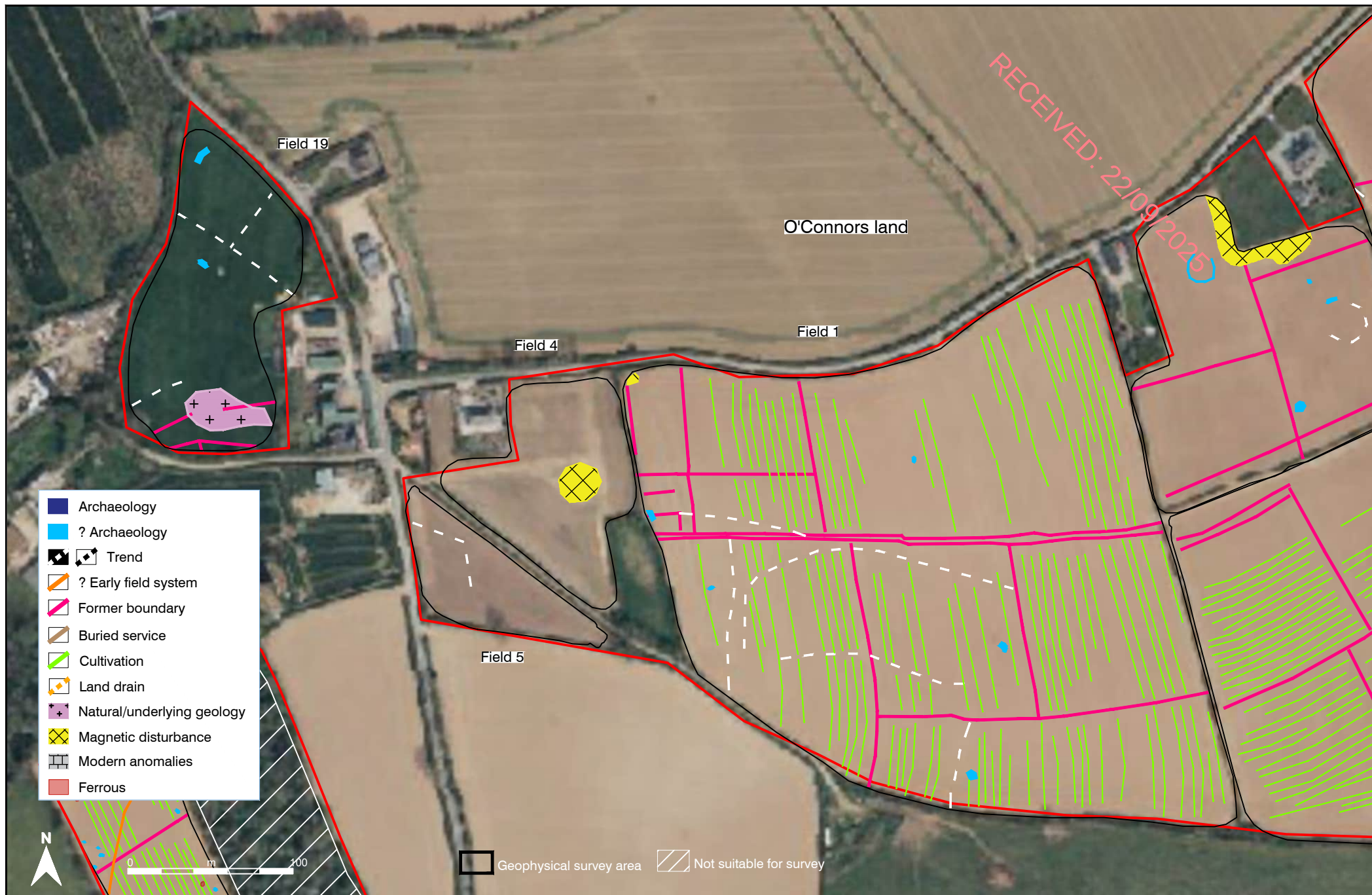
**Project** Nash, New Ross, Co. Wexford

**Date** January 2025

**Drawing No.** 24122\_C2023

**Figure 23** Aerial view of site, showing survey results for O'Connors land (greyscale images) fields 1, 4, 5 and 19

**Scale** 1:3,000 @ A4



Project Nash, New Ross, Co. Wexford

Date January 2025

Drawing No. 24122\_C2024

Figure 24 Aerial view of site, showing geophysical survey interpretation for O'Connors land, fields 1, 4, 5 and 19

Scale 1:3,000 @ A4



**Project** Nash, New Ross, Co. Wexford

**Date** January 2025

**Drawing No.** 24122\_C2025

**Figure 25** Aerial view of site, showing survey results for O'Connors land (greyscale images) fields 2, 3, 6, 7, 10, 11 and 12

**Scale** 1:3,500 @ A4





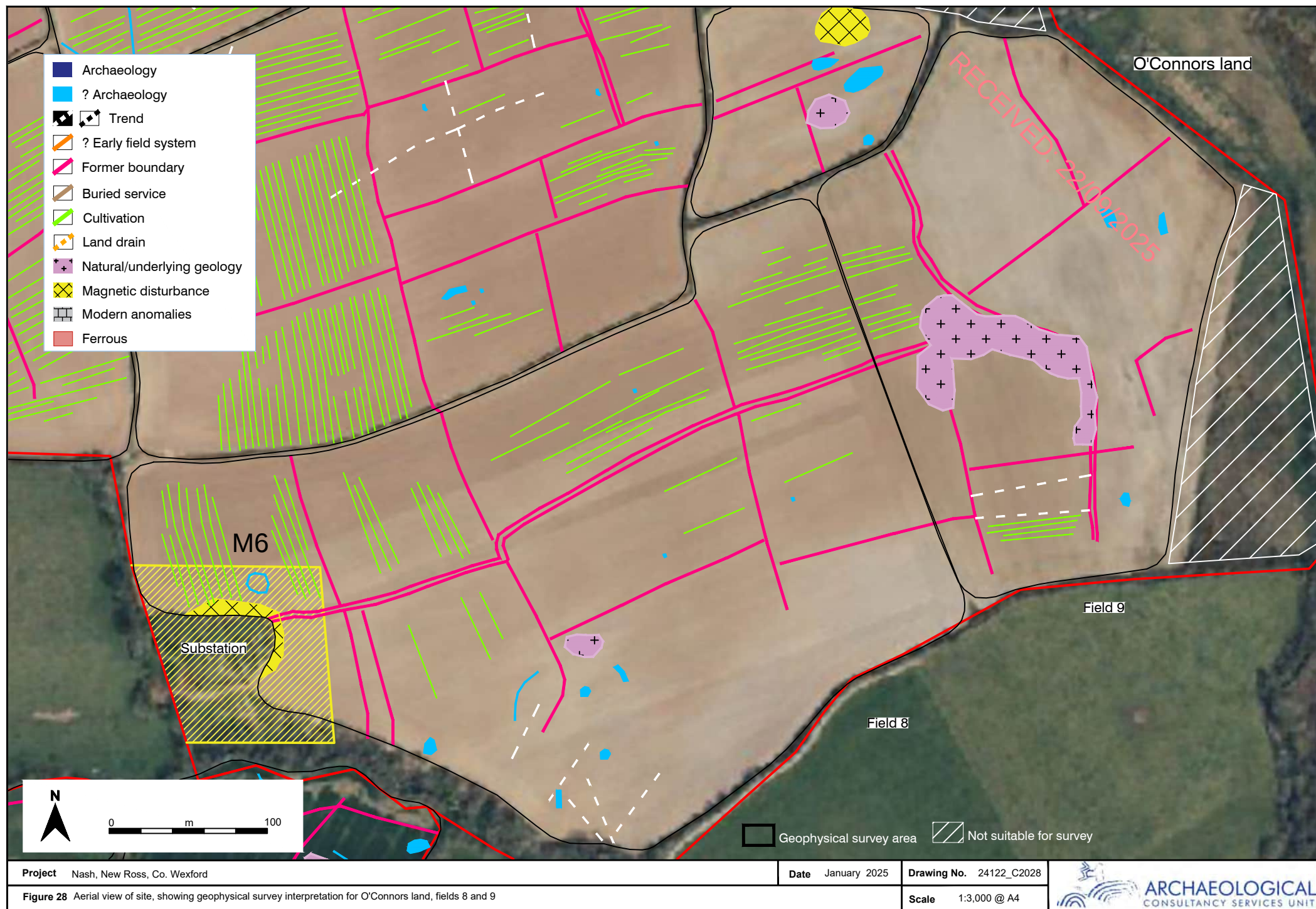
**Project** Nash, New Ross, Co. Wexford

**Date** January 2025

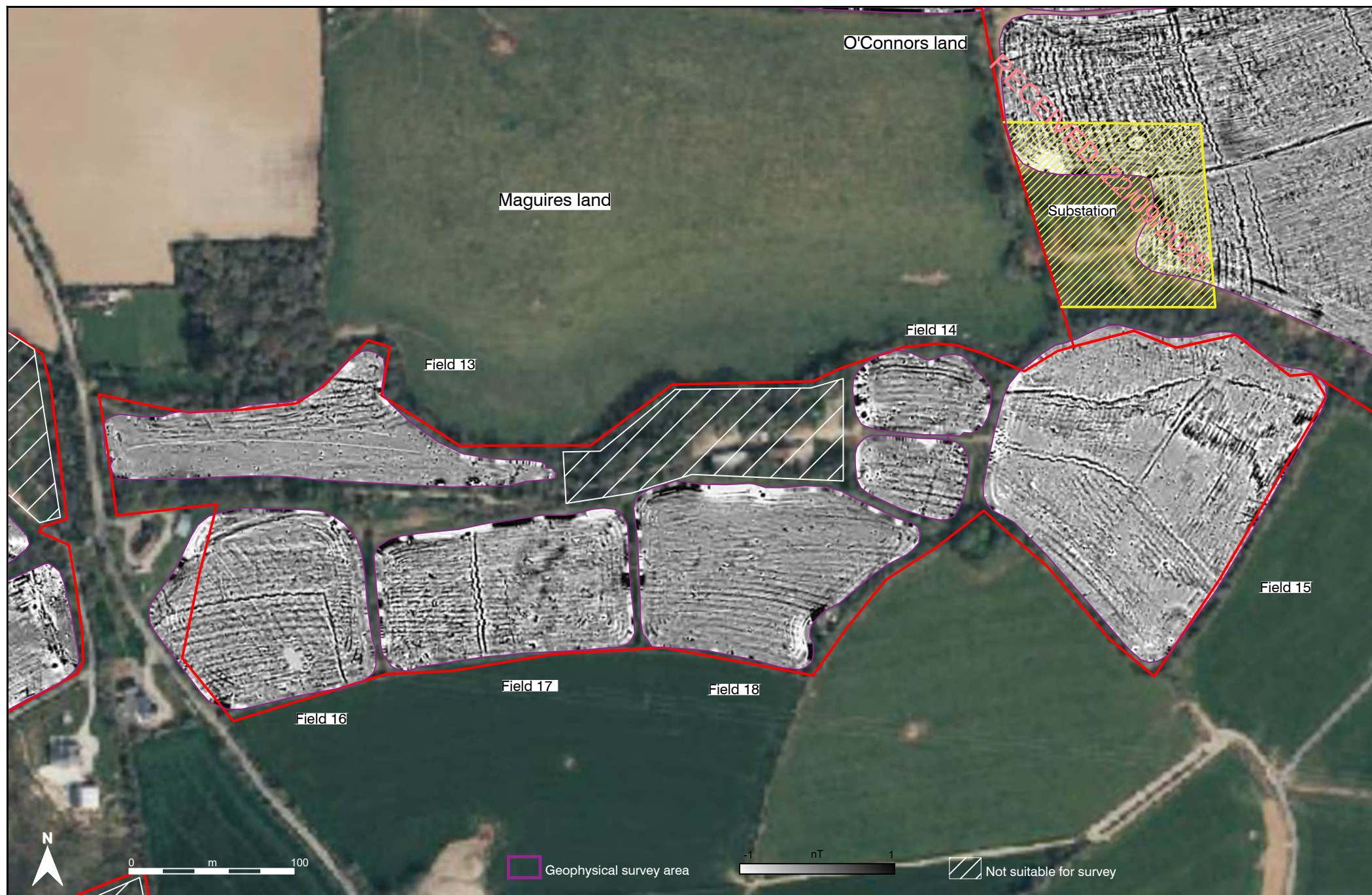
**Drawing No.** 24122\_C2027

**Figure 27** Aerial view of site, showing survey results for O'Connors land (greyscale images) fields 8 and 9

**Scale** 1:3,000 @ A4



**Figure 28** Aerial view of site, showing geophysical survey interpretation for O'Connors land, fields 8 and 9



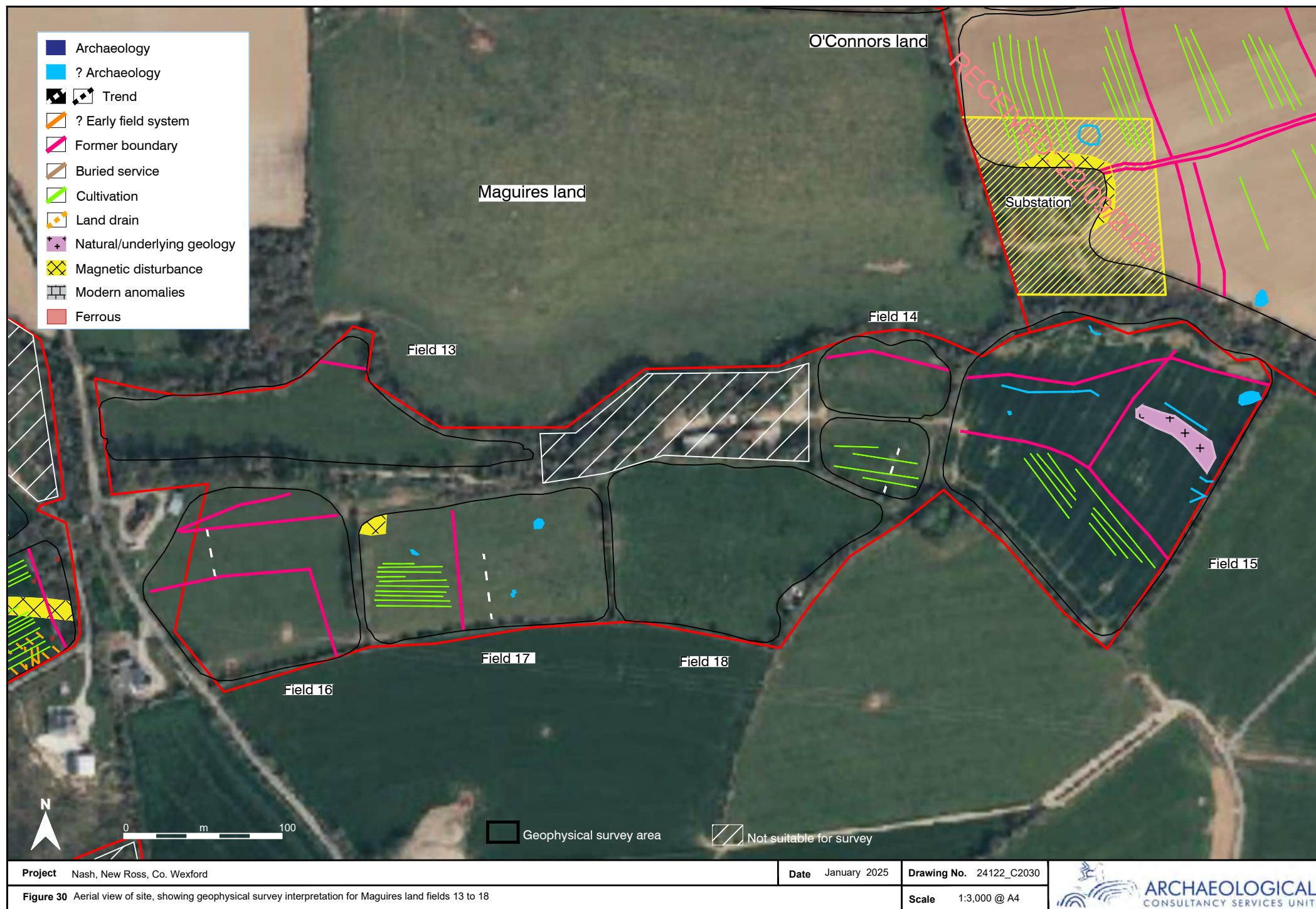
**Project** Nash, New Ross, Co. Wexford

**Date** January 2025

**Drawing No.** 24122\_C2029

**Figure 29** Aerial view of site, showing survey results for Maguires land (greyscale images) fields 13 to 18

**Scale** 1:3,000 @ A4



**Figure 30** Aerial view of site, showing geophysical survey interpretation for Maguires land fields 13 to 18

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## Appendix 14.1 – Review of ‘Other’ Developments

Other Development (with potential for cumulative traffic and transportation effects)

| Planning Authority                                 | Ref.    | Development Description                                                                                                                                                                                                                                     | Address                                        | Grant Date              | Approx. Distance (km)                 | Developer                                  | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                                                                                                                                                                            |
|----------------------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|-------------------------|---------------------------------------|--------------------------------------------|-----------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Potential future expansion of the Proposed Project | N/A     | Shelburne Energy Farm – Phase 2 BESS within area immediately adjoining the proposed BESS site, and an associated AIS plant/equipment and control building in the undeveloped AIS compound                                                                   | Nash, Co. Wexford                              | N/A                     | Within existing project site boundary | N/A                                        | N/A                                     | No                                 | Potential for a separate planning application would follow within 3 years of a grant of permission for Shelburne Energy Farm. There will be no overlap of construction phases with the Proposed Project. |
| Potential future expansion of the Proposed Project |         | Shelburne Energy Farm – Extension of the solar farm within area immediately adjoining the proposed BESS site.                                                                                                                                               | Nash, Co. Wexford                              | N/A                     | Within existing project site boundary | N/A                                        | N/A                                     | No                                 | Potential for a separate planning application would follow within 3 years of a grant of permission for Shelburne Energy Farm. There will be no overlap of construction phases with the Proposed Project. |
| Waterford City and County Council                  | 221064  | to raise levels of existing agricultural lands using clean inert soil and stones (EU Waste Class 17 0504) in order to improve the quality of said lands . An application for a waste disposal permit will be sought post planning                           | Foxmount Farm<br>Halfway House<br>Co Waterford | 28/03/2023              | 15km                                  | John McNamara                              | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area.                                                                                                                                                       |
| Waterford City and County Council                  | 2460796 | a new Community Scouts Centre to include a communal hall, toilets, meeting room, kitchen, external terrace, storage units, camping facilities, new vehicular entrance, carparking and all associated drainage, site works, landscaping and associated works | Cheekpoint<br>Waterford<br>Co. Waterford       | Due date:<br>24/08/2025 | 12km                                  | 31st Waterford<br>Faithlegg Scout<br>Group | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area.                                                                                                                                                       |
| Waterford City and County Council                  | 2460684 | for the construction of a residential development incorporating 20No. dwelling units comprising of 16 No. 3 Bed semi-detached two-storey dwellings with optional attic                                                                                      | Crooke<br>Passage East<br>Co. Waterford        | Not Observed            | 14km                                  | S & K Carey Ltd                            | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area.                                                                                                                                                       |

| Planning Authority                | Ref.    | Development Description                                                                                                                                                                                                                                                                  | Address                                                  | Grant Date   | Approx. Distance (km) | Developer       | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
|-----------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------|-----------------------|-----------------|-----------------------------------------|------------------------------------|----------------------------------------------------|
|                                   |         | conversion and sunroom extension to the rear, 3 No. 4 Bed detached two-storey dwellings and 1No. 3 bed single-storey dwelling, vehicular entrance, vehicular & bicycle parking, boundary treatments and waste water pumping station, all together with associated site development works |                                                          |              |                       |                 |                                         |                                    |                                                    |
| Waterford City and County Council | 16435   | to construct an agricultural pack-out facility with all associated site works including 20sqm of solar panels to roof                                                                                                                                                                    | Grantstown Nurseries Ltd. Ballygunnycastle Co. Waterford | 16/09/2016   | 14km                  | David Currid    | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Waterford City and County Council | 18217   | to increase annual delivery volumes of inert soil & stones (EU Waste Class 17 0504) in order to continue infilling an existing disused quarry (previously granted under 14/186) on agricultural lands                                                                                    | Foxmount Farm Half-Way-House Cross Co. Waterford         | 04/07/2018   | 15km                  | John McNamara   | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Waterford City and County Council | 2560153 | build 8 no. two storey, semi detached houses and 2 no. single storey, detached houses, together with associated site development works, including entrance from adjoining public road and the installation of the necessary services __ All forming their proposed housing layout        | Crooke Passage East Co. Waterford                        | Not Observed | 14km                  | S & K Carey Ltd | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Waterford City and County Council | 19141   | the installation of oil and grit interceptor and associated site works and Retention of waste segregation facility                                                                                                                                                                       | Halfway House Woodstown Co. Waterford                    | 02/09/2019   | 15km                  | Thomas Phelan   | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Waterford City and County Council | 21189   | development consist of the construction of a new housing development of 19 no. dwellings, comprising (i) 2 no. two storey, 4 bedroom semi-detached units with optional attic conversion (House Type A1/A2; (ii) 6 no. two storey, three bedroom semi-detached                            | Crooke Passage East Co. Waterford                        | 31/08/2021   | 14km                  | S & K Carey Ltd | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority                | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Address                                                       | Grant Date                                 | Approx. Distance (km) | Developer     | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                                                                              |
|-----------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------|-----------------------|---------------|-----------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------|
|                                   |       | units with optional attic conversion (House Type B1/B2), (iii) 4 no. two-storey, three bedroom end of terraced units with option of attic conversion (House Type C1/C23, (iv) 2 no. two-storey, two bedroom mid terraced units (House Type C2), (v) 1 no. single-storey, three-bedroom detached unit (House Type D), (vi) 2 no. two-storey, 4 bedroom semi-detached units (House Type E1/E2); (vii) 2 no. 2 storey, three bedroom semi-detached units (House Type F1/F2), connection to existing public foul and surface water drainage, proposed new vehicular entrance, associated boundary treatments, and all associated site development works |                                                               |                                            |                       |               |                                         |                                    |                                                                                                            |
| Waterford City and County Council | 16682 | a new underground pumping station with storm water retention capacity, within the existing site boundary, and a new underground transfer rising main from the new pumping station in Passage East to the existing wastewater treatment plant in Crooke. The existing septic tank at Passage East is to be demolished. Works are located at                                                                                                                                                                                                                                                                                                          | Passage East & Crooke<br>Co. Waterford                        | Not observed.<br>Appeal date<br>09/05/2017 | 14km                  | Irish Water   | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |
| Waterford City and County Council | 19287 | the erection of a 551.5m2 solar photo-voltaic panel system to the east and west sides of the roof of the existing Pack-Out Facility and all associated site development works                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Grantstown Nurseries Ltd<br>Ballygunnycastle<br>Co. Waterford | 06/08/2019                                 | 10km                  | David Currid  | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |
| Waterford City and County Council | 22923 | the development that will consist of the construction of a new housing development of 27 no. dwelling comprising:<br>(i) 10 no. two-storey, four-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Crooke<br>Passage East<br>Co. Waterford                       | 31/01/2023                                 | 14km                  | S+K Carey Ltd | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area.                                                         |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Address                          | Grant Date | Approx. Distance (km) | Developer                           | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------|-----------------------|-------------------------------------|-----------------------------------------|------------------------------------|----------------------------------------------------|
|                         |       | bedroom semi-detached units with optional attic conversions, (ii) 14 no. two-storey, three-bedroom semi-detached units with optional attic conversions, (iii) 2 no. two-storey, three-bedroom end-of-terrace units, (iv) 1 no. two-storey, three-bedroom mid-terrace unit, new access road via previously granted planning application 21189, connection to existing public foul and surface water drainage, associated boundary treatments, and all associated site development works                                                                                                                                                                                                                                                                                                  |                                  |            |                       |                                     |                                         |                                    |                                                    |
| Kilkenny County Council | 19730 | for the construction of 98 no. residential units comprising of the following: (a) 36 no. 2 storey 3 bed semi-detached dwellings with optional attic conversion and sun room space; (b) 30 no. 2 storey 4 bedroom semi-detached dwellings with optional attic conversion and sun room space; (c) 8 no. 2 1/2 storey apartment block (BLOCK C) containing 16 no. single storey 1 bed apartment at ground floor level and 16 no. 1 1/2 storey 2 bed apartment at first floor level and second floor level. Permission is also sought for new vehicular road access from the existing off Clover Ave. road with pedestrian access points, together with proposed boundary treatment, landscaping, car parking, signage, drainage connections and all associated site development works, all | Abbeylands Ferrybank Co Kilkenny | 06/07/2020 | 15km                  | Michael Doyle Civil Engineering Ltd | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Address                                                   | Grant Date | Approx. Distance (km) | Developer                               | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------|-----------------------|-----------------------------------------|-----------------------------------------|------------------------------------|----------------------------------------------------|
| Kilkenny County Council | 19487 | is being sought for the Construction of 750 sq meters of PV Solar panels on Roofs of Farm Sheds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Aylwardstown Glenmore Co Kilkenny                         | 16/06/2020 | 10km                  | Kelvale Agri Ltd                        | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 20453 | is sought for the construction of 40 no. residential units comprising the following; (A) 27 NO. 2 storey 3 bed semi-detached dwellings (HOUSE TYPE A); (B) 3 NO. 2 storey 3 bed semi-detached dwellings (HOUSE TYPE B); (C) 4 NO. 2 storey 3 bed mid-terrace dwellings (HOUSE TYPE C); (D) 2 NO. 2 storey 3 bed detached dwellings (HOUSE TYPE D); (E) 1 NO. 2 storey 3 bed semi-detached dwelling (HOUSE TYPE E); (F) 2 NO. 2 storey 2 bed mid-terrace dwellings (HOUSE TYPE F); (G) 1 NO. 2 storey 3 bed semi-detached dwelling (HOUSE TYPE G). Permission is also sought for 2 number new vehicular road access and footpaths via the existing Abbeygate estate road with pedestrian access points, together with proposed boundary treatments, landscaping, car parking, new foul & surface water drainage connections and associated infrastructure to include new foul pump station with access, decommissioning existing foul pump station, decommissioning detention basin, 2 no. storm attenuation tanks, diversion of existing water main, new water mains with domestic connections and all associated site development works | Abbeygate townland of Rathculliheen Ferrybank Co Kilkenny | 07/04/2021 | 14km                  | Dunmore Property Development Co Limited | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Address                                                                                 | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                                                             | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------|-----------------------|------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|
| Kilkenny County Council | 21357 | for (A) the proposed Change of use of part of the existing site from truck parking (which was granted permission under Planning reg no 94311) to form a Cold Storage Depot, Hard Standing and yard area together with all associated site works and ancillary services, (B) the proposed installation of a ESB Substation with Switch Room on site, (C) the proposed demolition of an existing building on site and (D) the proposed relocation of the existing Truck Wash Bay area on site                                                                                                                                                                                                                                                                                                                                                                                          | Raheen<br>Rosbercon<br>New Ross<br>Co. Kilkenny                                         | 18/10/2021 | 10km                  | Pallas Foods<br>Unlimited Company  | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Planners Report) | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 19378 | and retention permission for development at the site situated at IDA Science and Technology Park, Gorteens, Belview, Port Road, County Kilkenny. The development will consist(s) of planning permission for a proposed new CHP plant, in lieu of boiler building from previously granted planning permission (ref 17153). Retention permission for reduction in size of Dairy Intake Building No.2 from previously granted planning permission (ref 17153), for mirroring of warehouse layout and partial increase in height of warehouse filling area from level +39.85m to +44.56m, for relocation of warehouse previously granted roof access stairs from north end of warehouse to west side of warehouse and the addition of a second warehouse roof access stairs located on the warehouse roof, for addition of cladding to evaporator stairs (previously an external stairs, | IDA Science and<br>Technology Park<br>Gorteens<br>Belview<br>Port Road, Co.<br>Kilkenny | 23/08/2019 | 10km                  | Glanbia Ingredients<br>Ireland DAC | Not included in application documents.                                                              | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority | Ref. | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Address | Grant Date | Approx. Distance (km) | Developer | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification |
|--------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|-----------------------|-----------|-----------------------------------------|------------------------------------|---------------|
|                    |      | <p>planning ref 17153) and increase in height of stairs from previously approved level +47.05m (planning ref 17153) to +57.32m, for alterations to evaporator building layout including relocation of external silos from east side of building to south side, for relocation of RO Building previously granted under planning ref1419, for relocation of waste yard from the middle of the site to along the southern boundary. Amendment to previously approved planning ref 17153 for removal of extension to phase 1 Wet Process area, Cooling Tower No.2 and additional gas skid adjacent to Phase 1 Warehouse (planning ref 17153) Minor amendments to external plant and machinery, pipe bridges and ingredient silos and refrigeration plant. This application includes minor amendments to landscaping, internal road changes with lighting works, underground services, roof mounted items of plant and equipment with access platforms and ancillary external. The proposed planning permission and retentions and amendments are located within the existing site boundary of 51.01 acres (20.64 hectares approx.) This application relates to development which comprises of an activity which requires an Industrial Emissions Licence in accordance with the First Schedule of the EPA Act 1992 as amended.</p> |         |            |                       |           |                                         |                                    |               |

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| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Address                       | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                                                  | Included in Cumulative Assessment? | Justification                                                                                              |
|-------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------|-----------------------|------------------------------------|------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------|
| Kilkenny County Council | 23145 | development from townland of Marshmeadows, New Ross, Co. Wexford to townland of Raheen, Rosbercon, Co. Kilkenny. The project passes under the River Barrow across the county boundaries of Wexford and Kilkenny. The development consists of (1) Medium Voltage (MV) electricity system improvement by the installation of a new 20kV electricity underground cable (UGC) by means horizontal directional drilling (HDD) under the River Barrow to connect the Lake Region circuit at Marshmeadows, County Wexford to the Beechgrove circuit at Raheen, Rosbercon, County Kilkenny. From end to end the UGC measures approximately 580m. The majority of the circuit, approximately 365m will be installed by HDD under the River Barrow. The remainder of the circuit, approximately 215m will be a UGC installed by traditional trenching and ducting means. Approximately 355m of this UGC will be installed within County Wexford and the remaining 225m will be installed within County Kilkenny. (2) A second "spare" duct will be installed within the HDD to enable a second circuit to be installed at a future date to further enhance and future proof the network. (3) Permission is sought for all associated works including temporary works required. Planning permission is sought for a ten (10)year period. A Natura Impact Statement (NIS) has been prepared and will be | Raheen Rosbercon Co. Kilkenny | 08/12/2023 | 5km                   | The Electricity Supply Board (ESB) | Partly<br><br>(Some relevant TMP / Construction Traffic related information within PECR) | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Address                                                                                  | Grant Date | Approx. Distance (km) | Developer                 | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------|-----------------------|---------------------------|-----------------------------------------|------------------------------------|----------------------------------------------------|
|                         |       | submitted to the planning authority with the application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                          |            |                       |                           |                                         |                                    |                                                    |
| Kilkenny County Council | 19243 | for alterations to an existing mooring dolphin and for a Pontoon System and associated gangway and ancillary works in and adjacent to the River Suir Special Area of Conservation (SAC). The dolphin alterations will provide additional support to the existing dolphin. The pontoon system is required to provide berths for tug boats used to assist in manoeuvring large ships at Belview Port. The application will be accompanied by a Natura Impact Statement (NIS)                                                                      | Belview Port<br>Gorteens<br>Slieverue<br>Co Kilkenny                                     | 05/07/2019 | 10km                  | Port of Waterford Company | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 21989 | for development at this site. The development consists of the installation of a Combined Heat and Power (CHP) unit including a 7.55m high stack, stack access ladder and platform, improvements to the internal estate road and ancillary site works at the permitted cheese manufacturing plant, planning permission reference no. 19/668 (APB-306136-19). An Industrial Emissions Licence is required for the cheese manufacturing plant and the proposed development. A Natura Impact Statement will also be submitted with the application. | IDA Ireland<br>Belview Science and Technology Park<br>Gorteens, Slieverue<br>Co Kilkenny | 08/03/2022 | 10km                  | Kilkenny Cheese Limited   | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.    | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Address                                                      | Grant Date | Approx. Distance (km) | Developer         | Traffic Management Plan (TMP) Produced?                                                   | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------|-----------------------|-------------------|-------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|
| Kilkenny County Council | 19328   | for a change of use at Units 3 and 4 Belview Port. It is intended to change its current warehousing use to allow for the acceptance and processing of non-hazardous waste into Solid Recovered Fuel (SRF) and for the composting of organic fines. The application will allow for acceptance and processing of up to 98,500 tonnes per annum at the facility. The application is accompanied by An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) | Belview Port Gorteens Co. Kilkenny                           | 11/12/2019 | 10km                  | Glanway Ltd.      | Partly<br><br>(Some relevant TMP / Construction Traffic related information within EIAR.) | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 2460656 | for development, at Unit 1, Belview Port, Gorteens, Co. Kilkenny. The development will consist of the amendment of condition no. 3 Pl. Ref. 11/397 to include for the acceptance, unloading and storage of non-hazardous waste including construction and demolition waste, end of life tyres and other non-hazardous bulk wastes for onward export. The application is accompanied by an Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS)          | Unit 1, Belview Port in the townland of Gorteens Co Kilkenny | 26/03/2025 | 10km                  | Glanway Ltd       | Yes<br><br>(Construction Traffic Data within EIAR)                                        | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 2560152 | for the use of an existing storage shed for the storage of selected waste materials in addition to the current storage of bulk port related materials at Shed H4 located at the Suir Shipping site, Belview Port, Co. Kilkenny. The proposal for shed H4 will include for the proposed storage of waste shredded tyres, crushed glass                                                                                                                                              | Gorteens Slieverue Kilkenny X91 R3NF                         | 21/05/2025 | 10km                  | Suir Shipping Ltd | Not included in application documents.                                                    | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.    | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Address                                                                | Grant Date | Approx. Distance (km) | Developer           | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------|-----------------------|---------------------|-----------------------------------------|------------------------------------|----------------------------------------------------|
|                         |         | and non-hazardous waste soil prior to off site transfer or shipment. The combined total weight of the proposed waste materials to be stored at Shed H4 will be up to 24,500 tonnes per annum which will be measured on the existing weighbridge. Suir Shipping also propose that the current storage of bulk port related goods (i.e., bulk break, bulk and unitized products allowed under planning 18/317) is retained                                                                                                                                                                                                                                                                                                                         |                                                                        |            |                       |                     |                                         |                                    |                                                    |
| Kilkenny County Council | 2360274 | Seed Technology Ltd. is applying for Planning Permission for (1) New single storey warehouse, incorporating a 2 Storey office block; (2) Open sided covered goods in-take area from proposed warehouse to existing building; (3) New single storey storage building between proposed building and existing building; (4) Relocation of existing weigh-bridge and associated items; (5) Relocation of existing static water bladder tank; (6) Realignment of existing car parking area on site to include for additional spaces; (7) Realignment of internal site road, together with all associated site development works, all at Gorteens, Slieverue, Co. Kilkenny.<br><br>This application is accompanied by a Natura Impact Statement (NIS). | Seed Technology Ltd<br>Gorteens, Slieverue<br>Co. Kilkenny<br>X91 F5DV | 05/12/2023 | 10km                  | Seed Technology Ltd | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |
| Kilkenny County Council | 2360538 | for (i) to build four detached, two storey, four bedroom houses along Road 6 (Oak View). (ii) to building thirteen                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | OAKRIDGE,<br>BELMOUNT<br>WATERFORD/NEW                                 | 15/10/2024 | 15km                  | FINN HOMES LTD      | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Address                                | Grant Date | Approx. Distance (km) | Developer   | Traffic Management Plan (TMP) Produced?                                                                                                                  | Included in Cumulative Assessment? | Justification                                      |
|-------------------------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------|-----------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|
|                         |       | semi detached and terraced, two storey, two bedroom and three bedroom houses, in an extension and in completion of Road 4 (Heather Grove). (iii) to build 18 detached, semi detached and terraced, two storey, two bedroom, three bedroom and four bedroom houses, in an extension and in completion of Road 8 (Pine Grove). All in a modification of the subject as was granted planning permission under Ref no. 15/89 and parent planning Ref no. 04/860 (both now extinguished). All together with carrying out the associated site development works and the installation of necessary services                                                                                                                    | ROSS ROAD (n25)<br>CO. KILKENNY        |            |                       |             |                                                                                                                                                          |                                    |                                                    |
| Kilkenny County Council | 18573 | for develop at existing Grt Isl-Kk 110kV Overhead Line, approx 49kms long. Approx 46.4km of existing circuit located within functional area of CoKk with approx 2.6km located within CoWex.The uprate works within CoKk will be undertaken betwn structure INT16 in townland of Drumdowney Upr, near admin border betwn Co's Wx&Kk and structure EM258 in townland of Scart(ED Dunbell),east of KkCity. within Co Kk existing circuit extends across townlands of Drumdowney Upr, Murtaghstown, Luffany, Rathpatrick, Treanaree, Carriganurra, Nicholastown, Atateemore orBlackneys, Ballincrea, Fahy,Rathnasmolagh, Knockbrack, Ballinlammy, Haggard, Ballyfasy Lwr & Upr, Ballywairy, Darbystown,Ballallog,Listerlin, | Great Island to Kilkenny Overhead Line | 08/03/2019 | 8km                   | EirGrid plc | Partly<br><br>(Within PECR Appendix E the Outline Traffic Management Plan exists, however there is a lack of construction vehicle traffic data observed) | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority | Ref. | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Address | Grant Date | Approx. Distance (km) | Developer | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification |
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|                    |      | Brabstown, Ballyconnaught, Ballykenna, Garrandarragh, Ballyvool, Firgrove, Bohilla, Ballycocksoost, Coolsillagh, Kilmacshane, Kilcullen, Rappa, Mungmacody, Cloghscregg, Castlegarden, Kilmanaheen, Dungarvan (ED Bennettsbridge), Dungarvan Glebe, Cloghala (ED Bennettsbridge), Ballynaboley, Smithstown (ED Dunbell), Clashwilliam Td (ED Dunbell), Blanchvillestown, Grove (ED Dunbell), Roughfield, Rathcash, Rathgarvan or Clifden, Maddockstown, Ballynamona, Highrath & Scart (ED Dunbell). Uprate of existing circuit within CoWx will be undertaken within townland of Grt Isl, between structure EM1 at Grt Isl Substn & structure INT15 near admin border between Co's Wx&Kk. Development will consist of uprate of Grt Isl-Kk 110kv Overhead Line which will primarily include: re-stringing conductor with higher capacity conductor, replacement of large proportion of existing structures, breaking out & reconstruction of concrete foundation & shear blocks of metal masts, painting of mast structures, replacement of insulators, crossarms, stays and/or fittings on existing structures & fitting/replacement of bird flight diverters. No additional structures proposed along existing circuit. Any replacement structures will be constructed at, or immediately adjacent to existing structures they will replace & will be of generally similar height & appearance. Assoc temp site |         |            |                       |           |                                         |                                    |               |

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| Planning Authority      | Ref.    | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Address                        | Grant Date | Approx. Distance (km) | Developer            | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification                                      |
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|                         |         | develop works to gain access to existing structures incl clearance of vegetation, disassembly & reassembly of stone walls & gate posts & removal & reinstatement of exist fencing. The prop dev includes all other temp assoc & ancillary site dev works reqd for uprate of exist circuit, incl install of silt traps, silt fences, stone rds, bogmats & clearspan bridges. No additional struct, no alteration to nature, extent, alignment, character or voltage of exist elect infrastruc is proposed. A NIS forms part of this application                                                                                                                                                                                                                                                   |                                |            |                       |                      |                                         |                                    |                                                    |
| Kilkenny County Council | 2460504 | for development at a site which extends to 3.61 hectares on lands located at Millbanks Road (L3443). The development will consist of the following: 1. The construction of 75 no. residential units comprising: (a) 63 no. 3-bed houses (b) 12 no. 4-bed houses<br><br>2. The provision of a creche (216.6 sqm) 3. The provision of a new pedestrian and vehicular access to Millbanks Road (L3443). 4. The provision of a 4m wide setback along Millbanks Road (L3443) which includes the provision of a 2m footpath and 2m grass verge extending to the south of the proposed vehicular access. 5. Provision of all associated surface water and foul drainage services and connections, upgrade works to the existing public mains and sewer network, sustainable urban drainage systems, and | Millbanks New Ross Co Kilkenny | 12/08/2025 | 5km                   | Minson Property Ltd. | Not included in application documents.  | No                                 | Affected roads not in Proposed Project study area. |

| Planning Authority      | Ref.  | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Address                           | Grant Date | Approx. Distance (km) | Developer           | Traffic Management Plan (TMP) Produced?                                                                   | Included in Cumulative Assessment? | Justification                                                                                              |
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|                         |       | all associated site works and ancillary services. 6. Provision of communal open space, private open space, site landscaping and boundary treatments, public lighting, resident and visitor car parking, bicycle parking, pedestrian and vehicular links throughout the development, and all other associated site development works. The planning application is accompanied by a Natura Impact Statement (NIS).                                                                                                                                                                                                                                            |                                   |            |                       |                     |                                                                                                           |                                    |                                                                                                            |
| Kilkenny County Council | 20738 | for development at this site address. The development will consist of an ESB medium voltage (MV) Unit Substation and adjoining Customer Switchroom (an external footprint of up to 31m2, gross floor space of up to 19.5m2 and up to 3m in height) and all other associated site development works, including drainage and underground electrical cabling and ducting, required to facilitate the development. The substation development will be contained entirely within the boundary of the existing Belview Port and will use existing access arrangements within the port facility. The application is accompanied by a Natura Impact Statement (NIS) | Belview Port Gorteens Co Kilkenny | 05/02/2021 | 10km                  | Glanway Limited     | Not included in application documents.                                                                    | No                                 | Affected roads not in Proposed Project study area.                                                         |
| Kilkenny County Council | 22569 | to construct 3No wood based, biomass storage bays an ash storage building and associated site works including road widening to an existing internal road and a new concrete yard area. A Natura Impact Statement will accompany the Application.                                                                                                                                                                                                                                                                                                                                                                                                            | Gorteens, Slieverue Co. Kilkenny  | 14/02/2023 | 10km                  | Smartply Europe DAC | Partly<br><br>(Some relevant TMP / Construction Traffic related information within EIAR Screening Report) | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |

| Planning Authority      | Ref.   | Development Description                                                                                                                                                                                                                                        | Address                                                                           | Grant Date      | Approx. Distance (km) | Developer           | Traffic Management Plan (TMP) Produced?                                                               | Included in Cumulative Assessment? | Justification                                                                                              |
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|                         |        | Smartply Europe currently hold an Industrial Emission Licence issued by the EPA.                                                                                                                                                                               |                                                                                   |                 |                       |                     |                                                                                                       |                                    |                                                                                                            |
| Kilkenny County Council | 19221  | for drilling of a temporary trial well and carrying out associated works on a site adjacent to Glenmore Water Treatment Plant. A Natura Impact Statement (NIS) will be submitted to the Planning Authority with the application                                | Glenmore Water Treatment Plant<br>Flemingstown<br>Glenmore<br>Co. Kilkenny        | 01/07/2019      | 10km                  | Irish Water         | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area.                                                         |
| Kilkenny County Council | 20700  | to develop a log yard and associated works. The log yard will extend the area available for stockpiling and handling of logs for use in SmartPLY's oriented strand board mill which adjoins the site. A Natura Impact Statement will accompany the Application | Gorteens<br>Slieverue<br>Co. Kilkenny                                             | 09/04/2021      | 10km                  | SmartPLY Europe DAC | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |
| ABP WEX                 | 300189 | 10 Year Permission for the development of 32.15 hectares of solar panels; new site entrance to the western side of the site, landscaping works and all associated ancillary site development works. (Appeal of Wex CC 20171188)                                | Youngstown,<br>Taghmon, Co.<br>Wexford.                                           | August 14, 2018 | 15km                  | Terra Solar Limited | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Inspectors Report) | No                                 | Affected roads not in Proposed Project study area.                                                         |
| ABP WEX                 | 301309 | 10 Year Permission for a Solar Farm (appeal Wex CC 20180012)                                                                                                                                                                                                   | Growtown Upper and Growtown Lower, Barntown, Co. Wexford.                         | March 14, 2019  | 15km                  | Highfield Solar Ltd | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area.                                                         |
| ABP WEX                 | 302475 | Ten year permission for a solar farm on a site of approximately 152.8 hectares (appeal Wex 20180837)                                                                                                                                                           | Raheenduff, Haresmead, Rosspile, Coolcliffe, Horetown North, Clongeen, Co Wexford | July 5, 2019    | 5km                   | Highfield Solar Ltd | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Planners Report)   | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed. |
| ABP WEX                 | 302731 | Proposed electrical substation and associated 110kV and MV infrastructure required to connect ground-mounted solar                                                                                                                                             | Rosspile, Clongeen, Co. Wexford                                                   | July 5, 2019    | 5km                   | Highfield Solar Ltd | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area in addition to                                           |

| Planning Authority | Ref.   | Development Description                                                                                                                                                                                                                                                    | Address                                                                                       | Grant Date        | Approx. Distance (km) | Developer                                                        | Traffic Management Plan (TMP) Produced?                                                               | Included in Cumulative Assessment? | Justification                                                                                                                                                         |
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|                    |        | PV generation to the electricity transmission and all associated ancillary site development works.                                                                                                                                                                         |                                                                                               |                   |                       |                                                                  |                                                                                                       |                                    | construction being potentially completed.                                                                                                                             |
| ABP WEX            | 313191 | Proposed new 110kV substation to be located within the boundary of the consented Dennistown Solar Energy Development by way of a 110kV underground grid connection to Wexford 110kV substation                                                                             | Dennistown, Co. Wexford and other townlands Co. Wexford                                       | October 12, 2022  | 8km                   | ESB Solar (Ireland) Limited and Harmony Solar Dennistown Limited | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area.                                                                                                                    |
| ABP WEX            | 318914 | 110kV substation and 110kV underground grid connection                                                                                                                                                                                                                     | in the townland of Great Island, Kilmokea, County Wexford. (kilmokeagreatislandsubstation.ie) | June 5, 2024      | 10km                  | Bilmannock Battery Energy Storage Limited                        | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Inspectors Report) | No                                 | Construction periods will not overlap. Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |
| ABP WEX            | 247801 | 130,000 sqm of solar photovoltaic panels on ground mounted steel frames, electrical substation, entrance and associated site works. (appeal Wex Cc 20161110)                                                                                                               | Dennistown, near Murntown, County Wexford.                                                    | February 14, 2018 | 8km                   | Harmony Solar Dennistown Limited                                 | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Inspectors Report) | No                                 | Affected roads not in Proposed Project study area.                                                                                                                    |
| ABP KK             | 306136 | Seven year planning permission for a continental cheese manufacturing plant. Retention of and alterations to the existing construction compound which will be removed on completion of the works. EIAR and a NIS submitted with planning application. (appeal of KK 19668) | IDA Ireland, Belview Science and Technology Park, Gorteens, Slieverue, County Kilkenny.       | June 30, 2020     | 10km                  | JHOK LIMITED                                                     | Yes<br><br>(Construction Traffic Data within EIAR)                                                    | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed.                                                            |
| ABP KK             | 312631 | Construction of two boreholes in milk processing plant. Natura Impact Statement submitted with the planning application. The Glanbia Ireland DAC facility has an Industrial Emissions Licence                                                                              | IDA Science & Technology Park, Gorteens Port Road, Slieverue, Co. Kilkenny.                   | January 22, 2024  | 10km                  | Glanbia Ireland DAC                                              | Not included in application documents.                                                                | No                                 | Affected roads not in Proposed Project study area in addition to construction being potentially completed.                                                            |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                        | Address                           | Grant Date            | Approx. Distance (km) | Developer               | Traffic Management Plan (TMP) Produced?            | Included in Cumulative Assessment? | Justification                                                                                         |
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|                        |          | granted by the EPA (appeal KK 2144)                                                                                                                                                                                                                                                                                                                                                            |                                   |                       |                       |                         |                                                    |                                    |                                                                                                       |
| ABP KK                 | 321962   | Construction of an integrated plasterboard manufacturing facility and all associated works. Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) submitted with application. (appeal KK 2460103)                                                                                                                                                                    | Gorteens, Slieverue, Co. Kilkenny | 01/08/2025            | 10km                  | GABM Ltd                | Yes<br><br>(Construction Traffic Data within EIAR) | No                                 | Affected roads not in Proposed Project study area.                                                    |
| Wexford County Council | 20141012 | Permission for the erection of a water producing and bottling facility to include a main production building, storage building, sewage treatment system and all associated site works                                                                                                                                                                                                          | BALLYCULLANE, TINTERN             | 29th of July 2015     | 10km                  | KIERAN CRONIN           | Not included in application documents.             | No                                 | Affected roads not in Proposed Project study area.                                                    |
| Wexford County Council | 20140392 | Permission for the development of : a solar PV energy development of maximum export capacity 5mw, two electricity control buildings 3.951 m high. Site access road and solar PV panels mounted on steel support structures with associated cabling and ducting                                                                                                                                 | COOLROE, TINTERN                  | 22nd of December 2014 | 10km                  | SARAH O FLAHERTY        | Not included in application documents.             | No                                 | Affected roads not in Proposed Project study area in addition to construction being likely completed. |
| Wexford County Council | 20160442 | 10 year permission for the construction of a solar PV energy development within a total site area of up to 12.7ha , to include one single storey electrical substation building, electrical transformer / inverter station modules, solar PV panels ground mounted on steel support structures, access roads, fencing and associated electrical cabling, ducting and ancillary infrastructure. | Ballymackesy, Clonroche           | 22nd of June 2016     | 15km                  | HIGHFIELD SOLAR LIMITED | Not included in application documents.             | No                                 | Affected roads not in Proposed Project study area.                                                    |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                            | Address                               | Grant Date | Approx. Distance (km) | Developer                                                         | Traffic Management Plan (TMP) Produced?                                                             | Included in Cumulative Assessment? | Justification                                                                                                                  |
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| Wexford County Council | 20160717 | The development will consist of a 10 year permission for the construction of a solar PV energy development within a total site area of up to 19.9ha, to include one single storey electrical substation building, electrical transformer/inverter station modules, solar PV panels ground mounted on steel support structures, access roads, fencing and associated electrical cabling, ducting and ancillary infrastructure       | TOMFARNEY, CLONROCHE                  | 21/12/2016 | 15km                  | HIGHFIELD SOLAR LIMITED                                           | Yes<br><br>(TMP within Archaeological Desk-Based Assessment Report)                                 | No                                 | Affected roads not in Proposed Project study area.                                                                             |
| Wexford County Council | 20191613 | Permission for the proposed erection of an industrial workshop building including all auxiliary accommodation, external signage, the erection of paladin fencing together with all associated and auxiliary site works                                                                                                                                                                                                             | BALLYOWEN (ED CLONGEEN), CLONGEEN     | 25/06/2020 | 7km                   | JOHN HARPUR ENGINEERING LIMITED                                   | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Planners Report) | No                                 | Affected roads not in Proposed Project study area.                                                                             |
| Wexford County Council | 20200124 | Emission for the installation of a liquid natural gas fuel system, complete with associated new storage vessel and plant equipment , the installation of a new plant control container and the necessary alterations to the existing tank-farm to accommodate the works, complete with all associated site works and ancillary accommodation. All the above works to be undertaken at site at Marshmeadows, new ross, co. Wexford. | MARSHMEADOWS , NEW ROSS RURAL         | 23/06/2020 | 10km                  | GREEN BIOFUELS IRELAND LIMITED                                    | Not included in application documents.                                                              | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |
| Wexford County Council | 20210095 | Permission for to fill 4047 sq.m. (part of the existing site) with a clean stone and place a concrete finish thereon, erection of a palisade fence with on site associated drainage, with all associated                                                                                                                                                                                                                           | Marshmeadows & Camlin, New Ross Rural | 30/06/2021 | 10km                  | John Whelan (Director) of O Leary International Unlimited Company | Not included in application documents.                                                              | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Address                 | Grant Date | Approx. Distance (km) | Developer               | Traffic Management Plan (TMP) Produced?                                       | Included in Cumulative Assessment? | Justification                                                                                                                  |
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|                        |          | site works. A Natura Impact Statement (NIS) accompanies this application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |            |                       |                         |                                                                               |                                    |                                                                                                                                |
| Wexford County Council | 20210807 | Permission for development consisting of a ten year permission for a solar farm on a site of approximately 86.6 hectares consisting of the following: solar photovoltaic panels on ground mounted steel frames; IPP electrical control building and associated compound; inverter/transformer stations; battery storage units and associated hard standings; storage containers for spare parts; underground power and communication cables and ducts; boundary security fencing; upgraded internal access tracks; new internal access tracks and associated drainage infrastructure; CCTV cameras and all associated site services and works. A Natura impact statement accompanies this application. | Rochestown, Harperstown | 06/05/2022 | 15km                  | Highfield Solar Limited | Yes<br><br>(Construction Traffic Data within Planning & Environmental Report) | No                                 | Affected roads not in Proposed Project study area.                                                                             |
| Wexford County Council | 20220628 | Permission for development which will consist of grid connection infrastructure to connect the approved Ballyedock Solar Farm (PA Ref:20170330) to the existing Great Island Substation comprising the laying of underground cables, overhead lines, associated infrastructure and Horizontal Directional Drilling. The proposed development will also include upgrades to the substation (previously consented under planning application reference 20170330) to align with the connection route to the national grid. A Natura Impact                                                                                                                                                                | Greatisland, Kilmokea   | 08/08/2022 | 10km                  | Solas Eireann 4 Limited | Yes<br><br>(Construction Traffic Data within Planning & Environmental Report) | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Address             | Grant Date | Approx. Distance (km) | Developer                     | Traffic Management Plan (TMP) Produced?                            | Included in Cumulative Assessment? | Justification                                                                                  |
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|                        |          | Statement has been prepared in respect of the application for planning permission.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                     |            |                       |                               |                                                                    |                                    |                                                                                                |
| Wexford County Council | 20220900 | Permission for a 10-Permission for a 10-year planning permission for development which will consist of the construction of a solar PV farm with an operational life of 35 years consisting of ca. 79,450m2 of solar photovoltaic panels on ground mounted frames within a site area of 12.6 hectares and associated ancillary development including 2 no. inverter / transformer stations (6.10 x 2.45 x 2.90m), 1 no. ESB delivery substation (10.38 x 5.50 x 5.10m), 1 no. MV switchroom module (4.55 x 3.15 x 3.35m), 1 no. spare parts storage container (12.20 x 2.45 x 2.90m), 20 no. CCTV security cameras mounted on poles (3.40m high) and perimeter security fencing (2.40m high), internal post and wire fencing (2.40m high), the construction of an internal hardcore access road, localised improvements to an existing agricultural access from the adjoining R734 road and the creation of an access point adjoining the L7043 to facilitate construction and operational phase access, a temporary site compound, the installation of an underground electricity cable from the onsite ESB delivery substation to the existing ESB Bealstown substation, and all other associated site services, drainage and landscaping works. A Natura Impact Statement has been prepared in respect of the proposed | Ballygowny, Killesk | 28/09/2022 | 5km                   | Ballygowny Solar Farm Limited | Yes<br><br>(Construction Traffic Data within Environmental Report) | Yes                                | Project is in close proximity to the Proposed Project and/or affected roads within study area. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Address                      | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                                                        | Included in Cumulative Assessment? | Justification                                                                                                                                                                          |
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|                        |          | development and is included in the application. planning permission for development which will consist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              |            |                       |                                    |                                                                                                |                                    |                                                                                                                                                                                        |
| Wexford County Council | 20230316 | Permission for the following: Construction of a single-storey Medium Voltage ESN Substation and Associated site works. Also, the reduction of the area of Recycling Facility site boundary, replacing fencing like for like where required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Ballyshannon, Carrickbyrne   | 30/08/2023 | 10km                  | Ballyshannon Recycling Ltd         | Not included in application documents.                                                         | No                                 | Affected roads not in Proposed Project study area.                                                                                                                                     |
| Wexford County Council | 20230651 | Permission for development in the townland of Marshmeadows, New Ross, County Wexford to the townland of Raheen, Rosbercon, County Kilkenny. The project passes under the River Barrow across the county boundaries of Wexford and Kilkenny. The development consists of (1) Medium Voltage (MV) electricity system improvement by the installation of a new 20kV electricity underground cable (UGC) by means horizontal directional drilling (HDD) under the River Barrow to connect the Lake Region circuit at Marshmeadows, County Wexford to the Beechgrove circuit at Raheen, Rosbercon, County Kilkenny. From end to end the UGC measures approximately 580m. The majority of the circuit, approximately 365m will be installed by HDD under the River Barrow. The remainder of the circuit, approximately 215m will be a UGC installed by traditional trenching and ducting means. Approximately 355m of this UGC will be | Marshmeadows, New Ross Rural | 30/08/2023 | 10km                  | The Electricity Supply Board (ESB) | Partly<br><br>(Some relevant TMP / Construction Traffic related information within NIS Report) | No                                 | Roads which come within close proximity to study area are common links only in addition to construction being potentially completed. Any potential impacts would likely be negligible. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Address               | Grant Date | Approx. Distance (km) | Developer                  | Traffic Management Plan (TMP) Produced?                             | Included in Cumulative Assessment? | Justification                                                                                                                  |
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|                        |          | installed within County Wexford and the remaining 225m will be installed within County Kilkenny. (2) A second spare duct will be installed within the HDD to enable a second circuit to be installed at a future date to further enhance and future proof the network. (3) Permission is sought for all associated works including temporary works required. Planning permission is sought for a ten (10) year period. A Natura Impact Statement (NIS) has been prepared and will be submitted with the application.                                                                                                                                                                                                                                                                                                                                                                                                                              |                       |            |                       |                            |                                                                     |                                    |                                                                                                                                |
| Wexford County Council | 20230871 | Permission for development consisting of: A 10 year planning permission for the construction of a Grid Stability Service Development and all associated site clearance and site development works. The proposed grid stability service development consists of the provision of a synchronous condenser within a building circa 13 metres in height; elevated modular containers to house electrical and control equipment and all associated plant/apparatus including: a) a generator circuit breaker, b) transformers, c) outdoor cooler equipment, d) underground cabling (including a connection to the existing substation, e) all associated above ground cabling, piping and electrical connections, f) 1 no. generator and associated diesel tank, g) firewater tank and pumphouse, h) perimeter fencing and 2 no. gates and i) all associated site development works including hardstanding, drainage, gabion wall and landscaping. The | Greatisland, Kilmokea | 15/01/2025 | 8km                   | SSE Generation Ireland Ltd | Yes<br><br>(Construction Traffic Data within Traffic Impact Report) | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Address                | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                                                             | Included in Cumulative Assessment? | Justification                                                                                                                  |
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|                        |          | proposed site clearance works include the removal of a temporary portacabin and construction rubble from the site. The application relates to an establishment which holds an Integrated Pollution Prevention and Control (IPPC) license and to which the major accident regulations apply.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        |            |                       |                                    |                                                                                                     |                                    |                                                                                                                                |
| Wexford County Council | 20231294 | Permission for development, consisting of: Construction of an electrical infrastructure installation and associated underground grid connection (UGC) on lands within the townland of Great Island measuring approximately 2.6Ha. in overall area. The installation will consist of a Battery Energy Storage System (BESS), a 38kV tail-fed substation, underground grid connection (UGC) to connect the proposed substation to an existing ESB substation at Campile and associated ancillary development. The BESS would comprise 16no. individual battery storage units on concrete foundations, each unit measuring 2.60m in overall height, 2.4m in width and 6.00m in overall length with heating, ventilation and air-conditioning (HVAC) units; The 38kV substation compound would consist of a 38kV transformer; diesel generator; house transformer; disconnect; individual current and voltage transformers; combined current/voltage transformer; surge arrestors; circuit breakers; cable sealing end; substation building with an overall footprint of 95.00sqm; a blastwall measuring 8.00m in | Great Island, Kilmokea | 21/03/2024 | 8km                   | Kilmannock Battery Storage Limited | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Planners Report) | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |

| Planning Authority | Ref. | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Address | Grant Date | Approx. Distance (km) | Developer | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification |
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|                    |      | <p>overall height; 2no. lightning masts measuring 18.00m in overall height; palisade fencing measuring 2.60m in overall height; pole-mounted security cameras and lamp posts. The UGC installation would consist of 1 no. trench (0.6m wide; 1.22m deep) measuring approximately 724m in overall length to carry 3 no. 110mm power ducts and 2 no. communication ducts, connecting the proposed substation to an existing 38kv ESB substation at Campile. The typical trefoil trench will need to be adapted to a flat formation to accommodate for any service crossings encountered along the route. A typical width of trench for a flat formation trench would be approx 1.15m with varying depths. Ancillary development consists of a 5.00m wide access road off an existing access road to the Greenlink convertor station; levelling of site to create 2 no. platforms at +16.00m and +12.00m ASL; retaining wall to facilitate reduction of site levels along southern and south-western boundaries; an earthen bund on the north and eastern boundaries and all other associated works, including landscaping proposals. A temporary construction compound would be constructed within the site boundary for construction phase of the development, after which it would be removed.</p> |         |            |                       |           |                                         |                                    |               |

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| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Address                    | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                                                                    | Included in Cumulative Assessment? | Justification                                                                                                                  |
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| Wexford County Council | 20230644 | Permission is sought for the construction of 42 no. residential dwellings comprising of 8 no. 3 bedroom semi detached units, 12 no. 2 bedroom terraced units and 3 no. two storey apartment blocks containing 8 no. 1 bedroom and 14 no. 2 bedroom apartments, together with all ancillary site works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Healysland, New Ross Rural | 18/12/2023 | 10km                  | Liam Neville Developments Ltd      | Not included in application documents.                                                                     | No                                 | Affected roads not in Proposed Project study area in addition to construction being likely completed.                          |
| Wexford County Council | 20240309 | Permission for development consisting of construction of a Battery Energy Storage System (BESS), landscaping works and all other associated ancillary infrastructure on lands measuring approximately 1.34Ha. in overall area within the townland of Great Island. The BESS would comprise 44no. individual battery storage units and 22no. inverter units on concrete foundations, with each battery storage unit measuring approximately 2.60m in overall height, 2.4m in width and 6.00m in overall length with heating, ventilation and air-conditioning (HVAC) units. Ancillary development consists of a 2.6m palisade perimeter security fencing and all other ancillary works. Site works to create a platform at +12.00m ASL, an internal access road, an earthen bund on the north and eastern boundaries and all other associated works, including landscaping proposals, drainage details and a temporary construction compound were granted permission under a previous planning application (Wexford | Great Island, Kilmokea     | 15/07/2024 | 8km                   | Kilmannock Battery Storage Limited | Partly<br><br>(Some relevant TMP / Construction Traffic related information within Planning Documentation) | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible. |

| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Address                                                            | Grant Date | Approx. Distance (km) | Developer    | Traffic Management Plan (TMP) Produced?                                                                    | Included in Cumulative Assessment? | Justification                                                                                                                                                                                                                                                 |
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|                        |          | County Council Ref. 20231294)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                    |            |                       |              |                                                                                                            |                                    |                                                                                                                                                                                                                                                               |
| Wexford County Council | 20240650 | Permission for the development of a long duration energy storage facility located in Knockmullen, New Ross, Co. Wexford. A ten year planning permission is being sought for the proposed development which will consist of the following elements: the installation and operation of 1 no. battery energy storage system compound containing battery energy storage containers, 1 no. electrical substation and compound connected to the national grid system via 300m of underground cable to the ESB Knockmullen 38kV substation, electrical transformers and inverter units, underground cabling and ducting, boundary fencing, security entrance gates, CCTV, internal access road and all associated ancillary site development, landscaping and reinstatement works. The operational lifespan of the development will be 35 years. The site of the proposed has a total area of 1.8 hectares | Knockmullen, New Ross Rural                                        | 23/10/2024 | 10km                  | Gordon Doyle | Yes<br><br>(TMP / Construction Traffic related information within EIAR Screening Report & Planners Report) | No                                 | Roads which come within close proximity to study area are common links only. Any potential impacts would likely be negligible.                                                                                                                                |
| Wexford County Council | 20241230 | Permission for works to uprate the existing Great Island - Kellis 220kV overhead line (OHL). Within County Wexford, the proposed development will take place within the following townlands: Greatisland, Ballykeeroge, Carnagh Lacken, Kilmannock, Ballykeerogebeg, Mylerspark Knockroe, Ballyedock, Ballykeerogemore, Cushenstown, Rathgaroge, Ballynamona, Garryduff                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Townlands of Greatisland, Aclamon, Lacken, Ballywilliam and others | 24/03/2025 | 8km                   | EirGrid PLC  | Yes<br><br>(Construction Traffic Data within PECR)                                                         | Yes                                | Project is in close proximity to the Proposed Project and/or affected roads within study area.<br><br>It is noted the construction periods are likely not to overlap pending on the ability of the developer to undertake the proposed works in March-October |

| Planning Authority | Ref. | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Address | Grant Date | Approx. Distance (km) | Developer | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification               |
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|                    |      | <p>Millquarter, Gobbinstown, Horeswood, Aclamon Dunanore or Goldentown, Ballyleigh, Coolerin Tellarought, Springpark, Ballywilliam, Coolerin South Nash, Robinstown Little, Curraun. The proposed development will consist of works along the ca. 70.3km Great Island - Kellis 220kV OHL between the existing Great Island 220kV substation in the townland of Great Island in southwest County Wexford and the Kellis 220kV substation located in the townland of Kellistown East, central County Carlow. The OHL has a total of 216 no. supporting structures. Within the functional area of Wexford County Council, there is 26.1km of existing OHL circuit, with 81 no. structures. Within the functional area of Carlow County Council there is a 44.2km of the existing OHL, with 135 no. structures. A separate planning application is being lodged with Carlow County Council. The proposed development within Co. Wexford will comprise: - the replacement ( restringing ) of the existing overhead line circuit conductor wires with a new higher capacity conductor; - the strengthening of foundations at 6 no. locations; - shear block remedial works at 55 no. locations; - the strengthening of towers (i.e. member replacement) at 20 no locations; - the painting of all structures; - the replacement of insulating and ancillary hardware at structures; - all</p> |         |            |                       |           |                                         |                                    | 2025 or March-October 2026. |

| Planning Authority      | Ref.    | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Address                                          | Grant Date                                                | Approx. Distance (km) | Developer     | Traffic Management Plan (TMP) Produced?      | Included in Cumulative Assessment? | Justification                                            |
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|                         |         | <p>associated works within the existing Great Island 220kV substation to accommodate the uprated 220kV OHL including uprating of the Kellis bay in the Great Island 220kV substation;</p> <p>- all associated temporary site development works to gain access to the existing structures including vegetation clearance and management, disassembly and reassembly of gate posts/piers and removal and reinstatement of existing fencing; and - other temporary associated and ancillary site development works required for the purpose of the uprate of the existing circuit, including construction compounds, silt traps, silt fences, vegetation clearance and management, stone tracks, ground protection mats, infrastructure crossing support systems (i.e. guard poles) and temporary watercourse crossings. Where required, an aerial catenary stringing system (ACSS) will be used to facilitate stringing operations over major obstacles, e.g. busy national roads, wide rivers, etc. A Natura Impact Statement will be submitted to the Planning Authority with the application.</p> |                                                  |                                                           |                       |               |                                              |                                    |                                                          |
| Kilkenny County Council | 2560195 | <p>sought for the infill and raising of existing ground levels with the importation of 17,250 Tonnes of recovered inert soil and stone under permit and as a by-product under article 27, together with all associated suite development works. This application is accompanied by a Natura Impact Statement (NIS)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Annaghs ,<br>Rosbercon New<br>Ross , Co. Wexford | Not observed.<br>Application on hold<br>as of 12/08/2025. | 10km                  | Nitrofert Ltd | Not included in<br>application<br>documents. | No                                 | Affected roads not in<br>Proposed Project study<br>area. |

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| Planning Authority      | Ref.    | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Address                                                     | Grant Date                                          | Approx. Distance (km) | Developer                 | Traffic Management Plan (TMP) Produced?            | Included in Cumulative Assessment? | Justification                                      |
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| Kilkenny County Council | 2560263 | <p>for development at this site. The development will consist of the importation of less than 200,000 tonnes (total) or less than 50,000 tonnes per annum of uncontaminated soils and subsoils for the purposes of quarry backfill with an agricultural or ecological end use. It is also intended to import up to 3.62 million tonnes of soil and stone (non-waste) construction by-product for quarry backfill. The site area is c. 14.8 ha and the proposed infill area is c. 7.4 ha. The proposed development at Catsrock Quarry also provides for:</p> <ol style="list-style-type: none"> <li>1. Construction of a weighbridge and associated office;</li> <li>2. Use of external paved and hardstanding areas surrounding the existing buildings for support activities related to the quarry backfill;</li> <li>3. The progressive restoration of the backfilled landform to agriculture and/or long-term natural habitat;</li> <li>4. Continued use and retention of established site infrastructure and services including, site office, staff welfare facilities, surface water run-off and passive water treatment systems, garage / workshop, wheelwash, hardstand areas, fuel and water storage tanks to service the proposed development;</li> <li>5. Decommissioning of any</li> </ol> | Catsrock Quarry , Catsrock and Rathaglish , County Kilkenny | Not observed. Application on hold as of 12/08/2025. | 10km                  | M&E Kent Catsrock Limited | Yes<br><br>(Construction Traffic Data within EIAR) | No                                 | Affected roads not in Proposed Project study area. |

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| Planning Authority     | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Address                | Grant Date | Approx. Distance (km) | Developer                          | Traffic Management Plan (TMP) Produced?                         | Included in Cumulative Assessment? | Justification                                      |
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|                        |          | <p>remaining fixed plant and infrastructure associated with former rock extraction activities;</p> <p>6. Implementation of a series of measures to enhance local biodiversity including the retention of habitats and features of biodiversity value, quarry face retention for nesting peregrine falcon, retention of the existing sand martin colony, creation of roost space / deployment of bat boxes for bats, creation of habitat / erection of bird nest boxes for breeding / roosting birds and erection of fence along the site perimeter to include access points for mammals;</p> <p>7. Environmental monitoring of noise, dust, surface water and groundwater for the duration of the restoration works and for a short period thereafter; and</p> <p>8. All ancillary site works, landscaping and perimeter fencing.</p> <p>A permission of 10 years is sought to carry out the proposed quarry restoration works. The Planning Application will be accompanied by an Environmental Impact Assessment Report (EIAR)</p> |                        |            |                       |                                    |                                                                 |                                    |                                                    |
| Wexford County Council | 20250368 | Permission for the proposed construction for a construction waste and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Tomgarrow, Barronstown | 28/05/2025 | 11km                  | Damien Sutton DLM Groundworks Ltd. | Partly<br><br>(Some relevant TMP / Construction Traffic related | No                                 | Affected roads not in Proposed Project study area. |

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| Planning Authority      | Ref.     | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Address                    | Grant Date                                          | Approx. Distance (km) | Developer                         | Traffic Management Plan (TMP) Produced?            | Included in Cumulative Assessment? | Justification                                                                                                 |
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|                         |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                            |                                                     |                       |                                   | information within Planners Report)                |                                    |                                                                                                               |
| Wexford County Council  | 20250414 | Permission for development which will consist of a 10 year permission fo the construction of an energy storage facility within a total site area of up to 3hA, to include an IPP compound with one single storey substation building, transformer and ancillary electrical equipment, containerised battery storage modules and inverter/transformer station modules on concrete support structures, access tracks, associated electrical ducting, cable racking and cabling, security fencing, CCTV security monitoring system, lightning protection poles, communications equipment, drainage, landscaping and ancillary infrastructure. A Natura Impact Statement accompanies this application | Rosspile, Clongeen         | 02/07/2025                                          | 11km                  | Leefarns Limited                  | Not included in application documents.             | Yes                                | Project is in close proximity to the Proposed Project and/or affected roads within study area.                |
| Wexford County Council  | 20250452 | Permission for a proposed single storey ESB substation and switch room building                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stokestown, Oldcourt       | 09/07/2025                                          | 14km                  | O'Brien Building Products Limited | Not included in application documents.             | No                                 | Affected roads not in Proposed Project study area.                                                            |
| Kilkenny County Council | 2560391  | a 10 Year Planning Permission for a solar farm with a total area of circa 189 hectares in the townlands of Atateemore or Blackneys, Ballyhobuck, Ballyrahan, Carriganurra, Charlestown, Davidstown, Drumdowney Lower, Drumdowney Upper, Gorteens, Grogan, Kilmurry, Nicholastown, Rathpatrick, Scartnamoe, Tinvaucoosh and Treanaree in County Kilkenny.<br><br>The solar farm will consist of solar panels on ground                                                                                                                                                                                                                                                                             | Atateemore, Blackneys, etc | Not observed. Application on hold as of 12/08/2025. | 11km                  | Drumdowney Solar Farm Limited     | Yes<br><br>(Construction Traffic Data within CEMP) | No                                 | Affected roads not in Proposed Project study area.<br><br>Bulk of deliveries proposed to be via Belview Port. |

| Planning Authority | Ref. | Development Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Address | Grant Date | Approx. Distance (km) | Developer | Traffic Management Plan (TMP) Produced? | Included in Cumulative Assessment? | Justification |
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|                    |      | <p>mounted frames, 27 no. single storey electrical inverter/transformer stations, 5 no. single storey spare parts containers, 3 no. Ring Main Units, 5 no. weather stations, underground electrical ducting and cabling within the development site, private lands and within the L3429, L7523, L7563, L7469, L3407, L3414, L34144, L7466, L3406, L7483, L3415, N25 and N29 public roads to connect solar farm field parcels, security fencing, CCTV, access tracks, 7 no. watercourse/drain deck crossings and 4 no. horizontal directional drill crossings (under the N25 and N29 public roads and the Luffany River), temporary construction compounds, landscaping and all associated ancillary development and drainage works. Construction and operational access will be via 7 no. existing entrances from the L3429, L7469, L7466, L4783 and L34142 which will be subject to entrance upgrade works. Separate construction phase access options are proposed for Parcel 4 via Port of Waterford and the L4783. The operational lifespan of the solar farm will be 40 years and planning permission is requested for this duration. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application</p> |         |            |                       |           |                                         |                                    |               |

Source: Varies by development

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