

Ecological Clerk of Works Report
Kilwex at Coolnabacky ESB site
Pre-construction Ecological Survey

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1. STATEMENT OF AUTHORITY

Cian Ó Ceallaigh (BSc (Hons), MSc) is an Associate member of the Chartered Institute of Ecology and Environmental Management (ACIEEM) who has extensive botanical and habitat knowledge (FISC Level 4, 2018) and has worked as a professional ecologist in Ireland and Britain since 2017. He also holds a Great Crested Newt (GCN) Level 1 (Class Licence). Cian has experience undertaking Appropriate Assessment (AA) screening reports and Natura Impact Statements (NIS's) in Ireland as well as Preliminary Ecological Appraisals (PEAs), Ecological Site Management Plans (ESMP's) and other species-specific survey reports in Britain.

2. INTRODUCTION

Coyle Environmental Ltd. Were instructed by Fintan McKeon of Kilwex Limited in January 2023 to undertake an ecological survey of a site in Coolnabacky, Timahoe, Co. Laois. It is proposed to develop the site into a 400/110kV ESB substation. The site is located approximately 8km southeast of Portlaoise, county Laois (Ordnance Survey Grid Reference: S 53819 92872). The Site comprises mainly grassland and is enclosed by watercourses and hedgerows. A gravel track is present along the southern boundary as well and from the southwest corner of the site up along the western boundary. The wider area is dominated by agricultural land (mainly improved grassland). The location of the site and its boundary is shown in Figure 1 and is hereafter referred to as the **Site**.

The survey aimed to determine habitats on Site and whether there was any evidence of protected species (such as badgers *Meles meles* or otter *Lutra lutra*) as a pre-construction baseline update survey. This was a requirement set out by An Bord Pleanála:

3. SCOPE OF WORKS

The objective of the survey was to identify the habitats present on Site, whether these have changed since last being surveyed (AOS planning Ltd., 2012; Denyer Ecology, 2022), classify them following the standard scheme for classifying habitats in Ireland (Fossitt, 2000) and determine whether habitats qualify, or could qualify, as corresponding Annex 1 habitats. Consideration was also given to species/species groups, such as the protected and/or notable species/species groups outlined below:

- Amphibians
 - Badger *Meles meles*;
 - Bats;
 - Birds;
 - Invertebrates;
 - Otter *Lutra lutra*;
 - Viviparous lizard *Zootoca vivipara*; and
 - Invasive non-native species (INNS), both plant and animal
- The findings of the above are included within this report.

4. NOTES AND LIMITATIONS

The survey was undertaken outside of the optimal period for surveying flowering plants (May – October inclusive). Therefore, there is a chance some species may not have been recorded during the survey for this reason. However, the detail collected is considered sufficient considering the Site has already been surveyed (AOS planning Ltd., 2012; Denyer Ecology, 2022) and the surveyor is also competent in vegetative identification of vascular plants.

The survey was undertaken outside the main breeding bird season (March – September inclusive). As such the survey does not represent the extent the Site would be used for breeding and nesting birds.

The survey was undertaken over the course of a few hours in a single day. This means species identified and recorded are limited to those that were visible and/or audible over the course of this period.

Additionally, where observed and identifiable by the surveyor, taxonomic groups such as bryophytes and invertebrates have been recorded. It should be noted that any lists provided within this report are not exhaustive (i.e. bryophytes listed likely only represent a small proportion of those present on Site).

5. METHODOLOGY

SITE WALKOVER

An ecological survey of the Site was carried out on the 30th January 2023, in cool (9°C), dry conditions with a moderate breeze and a clear sky (1/8 Otkas). Towards the end of the survey conditions became overcast and it began to rain although this did not limit the survey.

Habitats were described following the standard scheme for classifying habitats in Ireland (Fossitt, 2000) (see Figure 1). The dominant plant species were recorded, and habitats were classified according to their vegetation types. Where appropriate consideration was given to whether habitats qualify, or could qualify, as corresponding Annex 1 habitats. Relative plant species abundance was estimated using the DAFOR scale¹. The scientific names for plant species use nomenclature given in An Irish Flora (Parnell, J. & Curtis, T., 2012)

During the walkover observations of birds, whether heard and/or seen, were recorded. Throughout the walkover the surveyor stopped, observed and listened for approximately five to ten minutes to improve the chances of seeing/hearing birds. Incidental sightings of other taxonomic groups were also recorded.

Sections of the watercourse present on Site were also inspected for signs of invasive species and mammals such as otters, where accessible. Although the surveyor has been made aware of tufa formations on Site it was not considered appropriate to re-survey areas that have already been surveyed in 2022 by Ireland's leading Annex I habitat priority petrifying spring specialist (Denyer Ecology, 2022). Increased sedimentation in the streams (which surveyor trampling can create) could alter stream chemistry and affect tufa formation (Denyer Ecology, 2022).

6. RESULTS

HABITATS

The following habitats were identified during the survey:

BL3 – Buildings and artificial surfaces

A gravel track runs along the Sites southern boundary. In addition, and presumably more recently for a related pylon development project, access tracks have been built from the Sites southwest corner up along the Sites western boundary (Plates 1 and 2).

ED2 – Spoil and bare ground

A number of spoil heaps are now present throughout areas of the Site which are being developed. These are mainly located along the Sites southern boundary and another area is located along the western boundary. Silt fencing encloses these heaps presumably to reduce/prevent sedimentation run off in the direction of watercourses along the western and northern boundaries. A number of ruderal species associated within this disturbed ground habitat were recorded. These included

¹ The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant

(D) - >75% cover, Abundant (A) – 51-75% cover, Frequent (F) – 26-50% cover, Occasional (O) – 11-25% cover, Rare (R) – 1-10% cover., The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.

Cardamine sp., scentless mayweed *Tripleurospermum inodorum*, annual meadow grass *Poa annua*, common field speedwell *Veronica persica*, cut-leaved cranes bill *Geranium dissectum*, shephard's purse *Capsella bursa-pastoris*, red dead-nettle *Lamium purpureum*, creeping cinquefoil *Potentilla reptans*, corn spurrey *Spergula arvensis*, and common chickweed *Stellaria media*.

GS1 – Dry Calcareous and neutral grassland

This habitat was previously classified as improved grassland (AOS planning Ltd., 2022). However, due to agricultural abandonment the grassland has since developed into rough grassland with a layer of flattened thatch about 30cm deep in places (Plates 3 & 4). It is dominated by creeping bent *Agrostis stolonifera* with occasional cock's foot *Dactylis glomerata*. The habitat is species poor and the forbs recorded are mainly indicative of high nutrient levels – frequent creeping buttercup *Ranunculus repens*, occasional dandelion *Taraxacum* agg., common mouse-ear *Cerastium fontanum* and rare curly dock *Rumex crispus*. Bryophytes were occasional with common species such as *Rhytidiadelphus squarrosus*, *Kindbergia praelonga*, *Calliergonella cuspidatum*, and *Brachythecium rutabulum* recorded.

Around the field edges scrub (**WS1**) was beginning to develop in places. Here *bramble* *Rubus fruticosus* agg. and blackthorn *Prunus spinosa* became locally abundant.

FW2 - Depositing/lowland rivers

Streams are present along portions of the western boundary as well as the entire northern boundary. These were assessed for the presence of invasive species and protected species such as signs of otter. A detailed habitat assessment was completed in 2022 (Denyer Ecology, 2022) within the optimal survey period. Please refer to this report for further information.

WL1 - Hedgerows

A number of hedgerows are present throughout the Site. They are not considered to have changed significantly since they were surveyed in 2012 (AOS planning Ltd., 2022).

FAUNA

Amphibians

No signs of amphibians were recorded during the survey although the Site has the potential to support species such as common frog *Rana temporaria* and common newt *Triturus vulgaris*.

Badgers

No signs of badgers were recorded during the survey although the Site has potential to support the species.

Bats

Although a detailed preliminary roost assessment (PRA) of the trees on Site none of the trees within the Site are likely to have the potential to support roosting bats due to their size and lack of roosting features (such as cavities or tear outs). However, it is very likely that bats use the Site for foraging

and commuting.

Birds

No nesting birds were identified within the Site. Hedgerows throughout the Site offers suitable habitat for nesting birds. Grassland on Site also offers potential for ground nesting birds such as skylark and lapwing.

During the course of the walkover the following bird species were recorded. These included;

- a single wren *Troglodytes troglodytes* was spotted near the Sites north western corner;
- a blackbird *Turdus merula* was heard from a tree at the Sites southeastern corner;
- multiple wood pigeons *Columba palumbus* were observed flying over the Site; and
- Poo, assumed to belong to a species of geese, was observed in a number of areas throughout the Site.

Viviparous/common lizard

No signs of lizard were recorded during the survey although the Site has potential to support the species.

Otters

No signs of otters were recorded during the survey although the Site has potential to support the species due to the presence of streams and suitable terrestrial habitat.

INNS

No invasive plant or animal species were identified within the Site

Other incidental sightings

Evidence of fox *Vulpes vulpes* was recorded near the Sites north-western corner (**Figure 1 – Target note (TN) 1, Plate 7**). The evidence comprised a large entrance to a den and a strong smell of fox. The den entrance was on the western side of the stream within dense hedgerow/scrub. Additionally a number of mammal trails were present within the Site as well as signs of digging/snuffling, considered likely to be fox.

7. CONCLUSIONS, EVALUATION AND RECOMMENDATIONS

HABITATS

The entire Site was walked to assess whether any ecological conditions on Site have changed since the baseline surveys (AOS planning Ltd., 2012; Denyer Ecology, 2022) and if protected species constraints have developed, such as highly mobile species like badger that readily create new setts in previously unoccupied territory.

Although certain habitats have changed on Site such as areas of spoil, dry neutral grassland and gravel tracks now occupying areas that were formerly improved grassland, none of these changes are considered significant considering the former habitat was considered of 'low ecological

importance’ (AOS planning, 2022). The area which has now transitioned into dry neutral grassland, although species poor, offers suitable habitat for mammals, invertebrates, etc. due to the development of a thatch layer. As per Denyer Ecology’s recommendations, alternating late summer cutting of this area would likely boost sward diversity also.

Linear habitats around the Site, hedgerows and streams, are not considered to have changed significantly since the baseline surveys. The stream habitat was noted as having affinities with the **Annex I habitat priority petrifying springs**. Recommendations given in Denyer Ecology’s report should be adhered to in order to benefit the condition of this habitat (Denyer Ecology, 2022).

SPECIES

No major constraints were identified in regard to protected species.

Evidence of fox was identified near the Sites north-western boundary. It is understood no works will be undertaken in this place and considering the den entrance is on the western side of the stream there is likely little chance of disturbance to the species. If any excavation works are to be undertaken in this location an ecologist should be consulted in advance.

The following general precautionary working measures should be adhered to for the below species/species groups:

Table 1 - Summary of further surveys/Precautionary methods of working

Species	Description	Timing
Bats	Removal of hedgerows, sections of hedgerows should be avoided so as to maintain flight corridors. Use of lighting during the night should also be avoided	All-year round
Birds	No vegetation clearance to be undertaken in nesting bird season	Outside of March – September (inclusive)
Badgers, otters, other mammals	Pre-work commencement site walkover for new setts, holts etc.	All-year round

As per An Bord Pleanála’s condition regular ecology surveys should be undertaken prior to and during works to ensure no ecological constraints have developed.

8. ENVIRONMENTAL BEST PRACTICE

General environmental protection measures should be implemented as part of the proposed works. Such measures include best environmental practice guidance outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards should be followed to prevent ecological impacts occurring outside the works area:

- Measures taken to prevent the spread of suspended solids (including vegetative material) into the watercourse from the proposed works;
- Measures should be taken to prevent dust and other emissions from construction affecting land/water beyond the proposed works area;
- Chemicals and fuels should be stored in secure containers located away from watercourses or water bodies. Spill kits should be available;
- Noise and vibration should be controlled and kept to the minimum necessary; and
- Lighting used for construction should be switched-off when not in use and positioned so as not to spill on to adjacent land or retained vegetation within the Site.

Cian Ó Ceallaigh
Ecological Consultant



FIGURES

Figure 1. Site Location

Plan and notes



TN1 – location of fox den; **blue hatch** - approx. extent of works area (spoil mounds, access tracks, pylons and silt fencing)

REFERENCES

AOS Planning Ltd. (2012), Environmental Report for Laois-Kilkenny Reinforcement Project.

CIEEM (2016) Institute of Ecology and Environmental Management Guidelines for Ecological Impact Assessment. (9) EC (2001) Methodological guidance on the provisions of Article 6 (3) and (4) of the Habitats Directive 92/43/EEC

CIRIA (2015) Environmental good practice on site (fourth edition) (C741) Charles, P., Edwards, P (eds). CIRIA, London.

Denyer Ecology (2022), PETRIFYING SPRING SURVEY AND ASSESSMENT COOLNABACKY, CO. LAOIS

Fossitt, J.A. (2000), A Guide To Habitats In Ireland, *The Heritage Council*

Parnell, T. & Curtis, T. (2012), Webb's An Irish Flora, *Cork University Press*, Ed. 8

Wildlife Act 1976 and Wildlife (Amendment) Act 2000.

Websites accessed:

Irish grid reference finder: <https://irish.gridreferencefinder.com/> (accessed 02/03/2023)

APPENDIX A. PLATES

Plate

Plate 1 & 2 access track into Site from SW corner, and pylons



Plate 3 & 4 – dry neutral grassland



Plate 5 – geese poo



Plate 6 – silt fencing around spoil areas



Plate 7 – presumed fox den



Plate 8 – tufa formations (white substrate) within stream along northern boundary

