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APPENDIX 6-4

***BIODIVERSITY MANAGEMENT
AND ENHANCEMENT PLAN***

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1. INTRODUCTION

1.1 Background

This Biodiversity Enhancement and Management Plan (BEMP) has been prepared by MKO on behalf of EDF Renewables Ireland Ltd., to accompany an application for planning permission for the Proposed Project to Clare County Council (CCC) as described below in Section 1.2.

The BEMP has been prepared as part of the Proposed Project to mitigate for the loss of approximately 2,104m of native hedgerow (and associated stone walls), 247m of native treeline, 13.35ha of conifer plantation and 0.05ha of mixed broadleaved woodland. Enhancement measures for fauna known to occur within the Proposed Wind Farm site have also been incorporated into the BEMP including native tree planting along waterways for bats. The following documents have helped to inform the establishment, enhancement and management of habitats within the Proposed Project site:

- Pollinator-friendly management of Wind Farms¹, All-Ireland Pollinator Plan²
- Hedgerows for Pollinators, All-Ireland Pollinator Plan, National Biodiversity Data Centre Series No.7³.

1.2 Brief Description of the Proposed Project

This section describes the Proposed Wind Farm and the Proposed Grid Connection Route, collectively referred to as the Proposed Project. A full description of the Proposed Project is included in Chapter 4 of this EIAR: Description of the Proposed Project.

The Proposed Wind Farm comprises the construction of 7 No. wind turbines and all associated works. The proposed turbines will have a maximum blade tip height of 180 metres, above the top of the foundation. The proposed turbines installed on the site will have the following dimensions:

- Total tip height range of 179.5m – 180m,
- Rotor diameter range of 149m – 155m,
- Hub height range of 102.5m to 105m,

The overall layout of the Proposed Project is shown on Figure 4-1 of the EIAR. This drawing shows the proposed locations of the wind turbines, electricity substation, grid connection route, temporary storage area, a temporary construction compound, internal roads layout, the turbine delivery route link road and the main site entrance. The Proposed Project includes for an onsite 38kV electricity substation and underground grid connection cabling, connecting the Proposed Wind Farm to the national electricity grid via the existing Ardnacrusha 110kV electricity substation located in the townlands of Castlebank and Ballykeelaun near Ardnacrusha, Co. Clare. The cabling will be located within the public road corridor or existing tracks for its entire length. The total length of the Proposed Grid Connection Route is approximately 14.7km.

¹ <https://pollinators.ie/wp-content/uploads/2022/12/Wind-Farm-Pollinator-Guidelines-2022-WEB.pdf>

² https://pollinators.ie/wp-content/uploads/2023/12/All-Ireland-Pollinator-Plan_Annual-Review-2023.pdf

³ <https://pollinators.ie/wordpress/wp-content/uploads/2018/04/How-to-guide-Hedgerows-2018-WEB.pdf>

1.3

Objectives of the BEMP

The objectives of this BEMP are as follows:

- To mitigate the loss of linear habitats required for the construction of the Proposed Wind Farm by replanting native hedgerows, treelines within the Proposed Project Site.
- To mitigate the loss of broadleaved woodland habitat required for the construction of the Proposed Wind Farm, enhance watercourses/riparian zones and provide enhancement of foraging areas for bats by broadleaved planting along rivers within the Proposed Project Site.
- To provide biodiversity enhancement by removing third schedule and non-third schedule invasive species within the Proposed Project Site.
- To enhance biodiversity by heathland/peatland management by the removal of conifer trees and manage the area for the regeneration of heathland/peatland.
- To provide a management and monitoring plan to ensure the success of the proposed measures.

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1.4

Statement of Authority

The baseline ecological surveys including bat habitat assessment and activity surveys were conducted by MKO ecologists; Neansaí O'Donovan (B.Sc.), Rachel Walsh (B. Sc), Timothy O'Ceallaigh (B.Sc.), Kieran Sugrue (B.Sc.), Sara Fissolo (BSc) and Stephanie Corkery (BSc, MSc). All surveyors have relevant academic qualifications and are competent in undertaking habitat and ecological assessments. Bat survey scope development and project management was overseen by Aoife Joyce (BSc., MSc.).

This Plan has been prepared by Neansaí O'Donovan. Neansaí is a Project Ecologist at MKO and holds a BSc in Wildlife Biology. Neansaí has over 3 years' consultancy experience. She is an experienced ecologist with skills covering biodiversity net gain assessments and habitat surveys. This report has been reviewed by John Hynes (B.Sc., M.Sc., MCIEEM). John Hynes is the Ecology Director at MKO, with over 12 years' professional experience in the public and private sector. John oversees MKO's Ecology, Ornithology, Forestry, Bats, and GIS teams. John holds a B.Sc. in Environmental Science and a M.Sc. in Applied Ecology. John's key strengths and areas of expertise are in Appropriate Assessment of plans and projects, Ecological Impact Assessment, Flora and Fauna survey methods and design, project management and project strategy. John is experienced as a coordinator or large multi-disciplinary teams on complex ecological projects.

2. ECOLOGICAL BASELINE

Multidisciplinary ecological surveys were undertaken by MKO between 2022 and 2024 as detailed within Chapter 6 (Biodiversity) of the EIAR submitted as part of the application.

2.1 Habitats and Flora

A detailed account of the habitats and associated species recorded within the site can be found in Chapter 6 (Biodiversity).

A total of fifteen habitats were recorded within the Proposed Wind Farm site, as listed below:

- > Improved agricultural grassland (GA1)
- > Dry meadows and grassy verges (GS2)
- > Conifer plantation (WD4)
- > Mixed broadleaved woodland (WD1)
- > Hedgerows (WL1)
- > Treelines (WL2)
- > Scrub (WS1)
- > Wet Grassland (WS4)
- > Dense bracken (HD1)
- > Wet heath (HH3)
- > Upland blanket bog (PB2)
- > Stone walls (BL1)
- > Spoil and bare ground (ED2)
- > Earth banks (BL2)
- > Buildings and Artificial Surfaces (BL3)

2.2 Protected Habitats and Flora

No Annex I habitats and/or protected flora were recorded within the Proposed Wind Farm.

2.3 Protected Fauna

A number of protected fauna species were recorded within the Proposed Wind Farm during the field surveys (as listed below).

- > Badger
- > Bats
- > Common frog

Otter was recorded along the Proposed Grid Connection Route during the field surveys. The BEMP has been developed taking into account the protected fauna known to occur within the Proposed Project site.

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3. BIODIVERSITY MEASURES

3.1 Overview

A total of four areas have been selected for the inclusion of biodiversity measures to mitigate the loss of habitat associated with the Proposed Development, to eradicate invasive species and to enhance habitats within the site for species known to occur within the site. The biodiversity enhancement and management plan will remain a live document, following annual monitoring.

3.1.1 Invasive Species Eradication Plan

Biodiversity Enhancement Area 1

Biodiversity Enhancement Area 1 as shown in Figure 3-1. Third schedule invasive species will be removed from this area, actions taken to ensure invasive species are not spread and the area managed to ensure re-growth of invasive species does not occur (discussed in Section 3.2 below).

3.1.2 Treelines and Hedgerow Planting

Biodiversity Enhancement Area 2

Biodiversity Enhancement Area 2 is shown in Figure 3-2. Planting and enhancement of approx. 2,673m of native broadleaved treelines, hedgerows and shrubs along the edge of the conifer plantations and field boundaries (discussed in section 3.3 below). Planting will comprise approx. 544m of new native broadleaved treelines, approx. 1,044m of new native hedgerow planting, with supplementary planting along 553m of treelines and 531m of supplementary planting along hedgerows of field boundaries.

3.1.3 Native Broadleaved Woodland Planting

Biodiversity Enhancement Area 3

Biodiversity Enhancement Area 3 is shown in **Figure 3-3**. Planting and enhancement of approx. 1.4ha of native broadleaved trees along the Kilbane Stream to enhance the watercourse by producing a linear woodland (discussed in section 3.3 below).

3.1.4 Peatland Restoration and Enhancement

Biodiversity Enhancement Area 4

Biodiversity Enhancement Area 4 is shown in Figure 3-4. The management of felled woodland for heathland/peatland regeneration (discussed in section 3.4 below).

3.2 Invasive Species Eradication Plan

Third schedule and non-third schedule invasive alien plant species have been recorded within the Proposed Wind Farm site and along the Proposed Grid Connection Route. Mitigation measures to limit the spread of invasive species are detailed within the EIAR Chapter 6 (Biodiversity) which accompanies this BEMP and should be undertaken in conjunction with the specific measures outlined below in Table 3-1. One young stand Rhododendron (*Rhododendron ponticum*) was recorded within a ditch (FW4), adjacent to a stream and treeline (WL2) which bordered an improved agricultural grassland (GA1) within the north-west of the Proposed Wind Farm site as seen in Figure 3-1. Several immature stands were also recorded beneath the stand indicating the plant was spreading (Plate 3-1). At the time

of the survey on 21st September 2022 the stand was approx. 1m in height, in the interim it is assumed this stand has matured and potentially spread. Eradication measures for this Third Schedule invasive alien plant species are outlined below in Table 3-1.



Plate 3-1 Rhododendron ponticum young stand approx. 1m in height with several saplings sprouting beneath and adjacent.

Table 3-1 Rhododendron Eradication Plan

Proposed Measures for Eradication	Description
Preliminary Steps	A pre-commencement invasive species survey will be carried out to identify the presence of any stands that may have been established in the intervening period. Prior to the treatment of Rhododendron, signage, temporary fencing or tape to be installed around the identified stand by hand. This is to avoid any disturbance to the identified stand until the In-Situ or Ex-Situ treatment works outlined below commence.
Treatment In-Situ	<p>It is advised, to treat the plant in-situ and avoid disturbance and potential for dispersal.</p> <p>Cutting or clearing of vegetation should not occur within bird nesting season (March 1st to August 31st).</p> <p>The following methods should be utilised for the successful eradication of Rhododendron. It is advised to use a combination of the below methods to ensure optimal chance of eradication.</p>

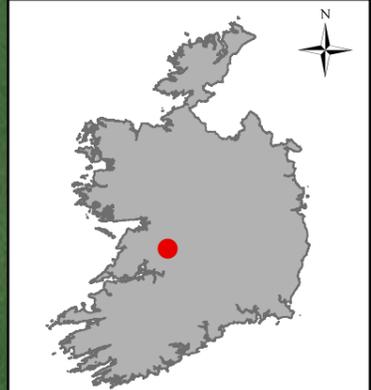
	<p>In the case of older plants (>10 years old, >1m) the following techniques are recommended:</p> <ul style="list-style-type: none"> > The plant to be cut down to the stump, as low to the ground as possible and the stump treated with herbicide. This technique, cutting the plant as close to the ground as possible and immediately treating the entire above ground surface of the plant with herbicide. Cut stumps should be marked with dye as to ensure treatment. > If access to the base of the stump is possible, stem treatment of herbicide can be done. This involves wounding the base of the stem and applying herbicide directly into the plants transport system. Therefore, it is important to make a deep wound into the plants stem. In the case of a multi-stemmed plant, separate treatments of each stem will be needed. > Alternatively, stumps can be treated by the ‘drill and drop’ method, where large stems can be drilled and a plug containing glyphosate can be inserted. This method can be carried out in all types of weather. > If it is the case where the use of herbicide is not possible, the removal of the cut stumps and root system either manually or by mechanical removal is the only other alternative method to kill the plant. Removed stumps to be left on site but roots should be brushed off and stumps should be turned upside down and left exposed to the air, away from bare soil. <p>All works involving the use of herbicides to be carried out by a trained professional, in dry, calm weather conditions of extended periods. Broadcast spraying and foliar spraying to be avoided as it can cause negative impact on the surrounding non target species. Use of herbicides not to be carried out within 5m of any watercourses.</p> <p>When using a handheld applicator for treatment of herbicides to target plant, the use of a hood or a cowl to the application lance is recommended to reduce the likely spraying of non-target native flora.</p> <p>To ensure eradication, the area should be re-surveyed annually, and re-treated until no growth is recorded for two consecutive years.</p>
<p>Ex-situ Off-site removal</p>	<p>If none of the above treatment is not viable, it may be necessary to remove all contaminated plant and soil material to an offsite licenced facility. Transportation off site will require an Invasive Species Licence from the National Park and Wildlife Service. Excavation prior to offsite removal to be supervised by a suitably qualified Invasive species specialist or Ecologist.</p>

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- Map Legend**
- Proposed EIA Site Boundary
 - Biodiversity Enhancement Areas
 - Proposed Turbine Layout
 - Invasive Species
 - Rhododendron

Spatial Reference
Datum: TM75
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title
Figure 3.1 - Proposed Biodiversity Enhancement Area 1

Project Title
**Lackareagh Wind Farm,
Co. Clare**

Project No. 220245	Drawing No. 3.1	Scale 1:1,000
Drawn By MS	Checked By NO'D	Date 09/08/2024

Maxar, Microsoft

Email: info@mkoireland.ie / Website: www.mkoireland.ie

3.3

Linear Habitat Loss and Replanting

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There will be a permanent loss of approx. 2,104.2m of native hedgerow (and associated stone walls), 247.2 of native treeline and 0.05ha of linear broadleaved woodland to accommodate the footprint of the Proposed Wind Farm, including turbines (and associated bat buffers), wind farm roads and other key infrastructure.

This will be mitigated through the establishment and enhancement of approx. 2,673m of planting (see Table 3-2 below) comprising native broadleaved trees, shrubs and hedgerow habitat within the Proposed Wind Farm site.

This habitat creation will provide an establishment of approx. 890m of new native broadleaved treelines, approx. 1,240m of new native hedgerow and enhancement of approx. 550m of treelines and 530m of hedgerows via supplementary planting. Additionally, broadleaved tree planting will be undertaken along the Kilbane Stream to produce a linear woodland of approx. 1.4 ha to enhance the watercourse. Planting will be of semi-mature specimens to ensure connectivity is immediate and will be of local provenance outlined below. In cases where semi-mature specimens cannot be obtained then fast-growing species such as Willow may be supplemented. A variety of broadleaved species should be considered as outline in Section 3.3.1.2 to ensure a monoculture does not establish.

Table 3-2 Proposed Planting for Biodiversity Enhancement Areas

Biodiversity Enhancement Area	Planting Length/Area
Area 2 (Figure 3-2)	
New native shrub/hedgerow planting	1,044m
Supplementary shrub/hedgerow planting	531m
New native broadleaved treeline planting	544m
Supplementary native broadleaved treeline planting	553m
Area 3 (Figure 3-3)	
Native broadleaved planting to create linear woodland	1.4ha

3.3.1

Proposed Linear Habitat Replanting

Hedgerow, shrub and treelines will be replanted within Biodiversity Enhancement Areas 2 and 3 as shown in Table 3-2 above. There is an extensive network of existing linear landscape features in the wider area that will be retained, and the proposed replanting will enhance connectivity across the Proposed Wind Farm site and wider landscape.

A combination of whips and advanced nursery stock (10cm – 12 cm girth trees) will be used for both tree and hedgerow planting across the Proposed Wind Farm site to increase structure diversity and to ensure connectivity gains are immediate.

3.3.1.1

Hedgerow Planting

Species selected will be indigenous to the local area and will maximise flowering times throughout the year as well as berry availability later in the year as detailed in Table 3-3. For example, species such as guelder rose would be beneficial as this species flowers later in summer. The ideal native hedge is made up of approx. 75% hawthorn and 25% of at least four other species¹. Four other species should be included from the species list provided in Table 3-3 below.

When planting new hedgerows, plants will be closely spaced (a maximum of 50cm apart) and planted in a staggered row. The new hedgerow will need to be protected from poaching by livestock, through the erection of new stockproof fencing, which should be at least 1m away from the hedge, and on each side.

Table 3-3 Hedgerow Species and Flowering Periods⁴

Species	Blossoming Period
Willow	March - April
Blackthorn	March - April
Whitethorn/Hawthorn	May - June
Spindle	May-June
Elder	June
Guelder Rose	May - July

3.3.1.2 Tree Planting

The existing site contains large areas planted with conifer plantation. The site will benefit from the additional planting of broadleaved native species which will add to the overall species diversity across the site. Species selected will be indigenous to the local area. Given the prevalence of ash dieback disease in Ireland currently it is recommended that ash is not planted at this time. Teagasc is currently carrying out research⁵ to establish a gene bank composed of genotypes of ash tolerant to ash dieback which aims to produce planting stock for forests and hedgerows in Ireland. Hopefully such planting stock will be available in the near future. The following native species are recommended for planting:

- **Oak:** Oak trees can grow to a very great size and support hundreds of species of flora and fauna as it matures. Oak is quite a tough tree and will do well in most conditions in Ireland. It is slow growing and needs plenty of light to thrive, give it the sunniest spots when planting and take care not to allow it to be shaded out by other faster growing species.
- **Alder:** Alder is fast growing and loves wet ground. It coppices extremely well. It will quite likely outgrow all the other species in the first few years so watch particularly that it isn't shading out oak. If it gets too big, coppice it in the winter and the surrounding trees will get plenty of light while it is busy re-growing.
- **Birch:** Birch is a pioneer species. In the wild it colonises fallow or unmanaged ground, often along with willow and oak, and is the first stage of a young woodland establishing. It will grow well in most places, coppices well enough when young but can be sensitive on occasion. Another fast-growing tree.
- **Rowan:** Another tough tree which will do well in most places and which coppices well. It produces flowers in spring red berries in late summer providing additional food source for a number of species. The berries in particular provide a food source for birds in the autumn.
- For treelines not yet established add in some fast-growing species, like willow.
- The following measures to be followed when planting trees:
 - Mark out the area for planting so it is clear exactly where planting will be established.
 - Setting back from services infrastructure, roads and boundaries is really important. Keep back 10 metres from power lines and phone cables

⁴ <https://www.teagasc.ie/crops/forestry/advice/forest-protection/ash-dieback/>

and do not plant directly beneath them. Keep back 5 metres from small roads and tracks.

- Use thin stakes or sticks to mark the rows or areas of trees to be planted.
- It is recommended that there are 2m spacings between trees. Shelterbelt planting may be applied by planting up two lines of trees as a staggered row.
- Newly planted trees will need to be protected from poaching by livestock, through the erection of new stockproof fencing which should be at least 2m away from the treeline, and on each side if required. Where new trees are being planted along existing conifer plantation fencing on both sides will likely not be possible. In this case tall tube tree guards would also be required to protect newly planted trees from wild animals such as deer.

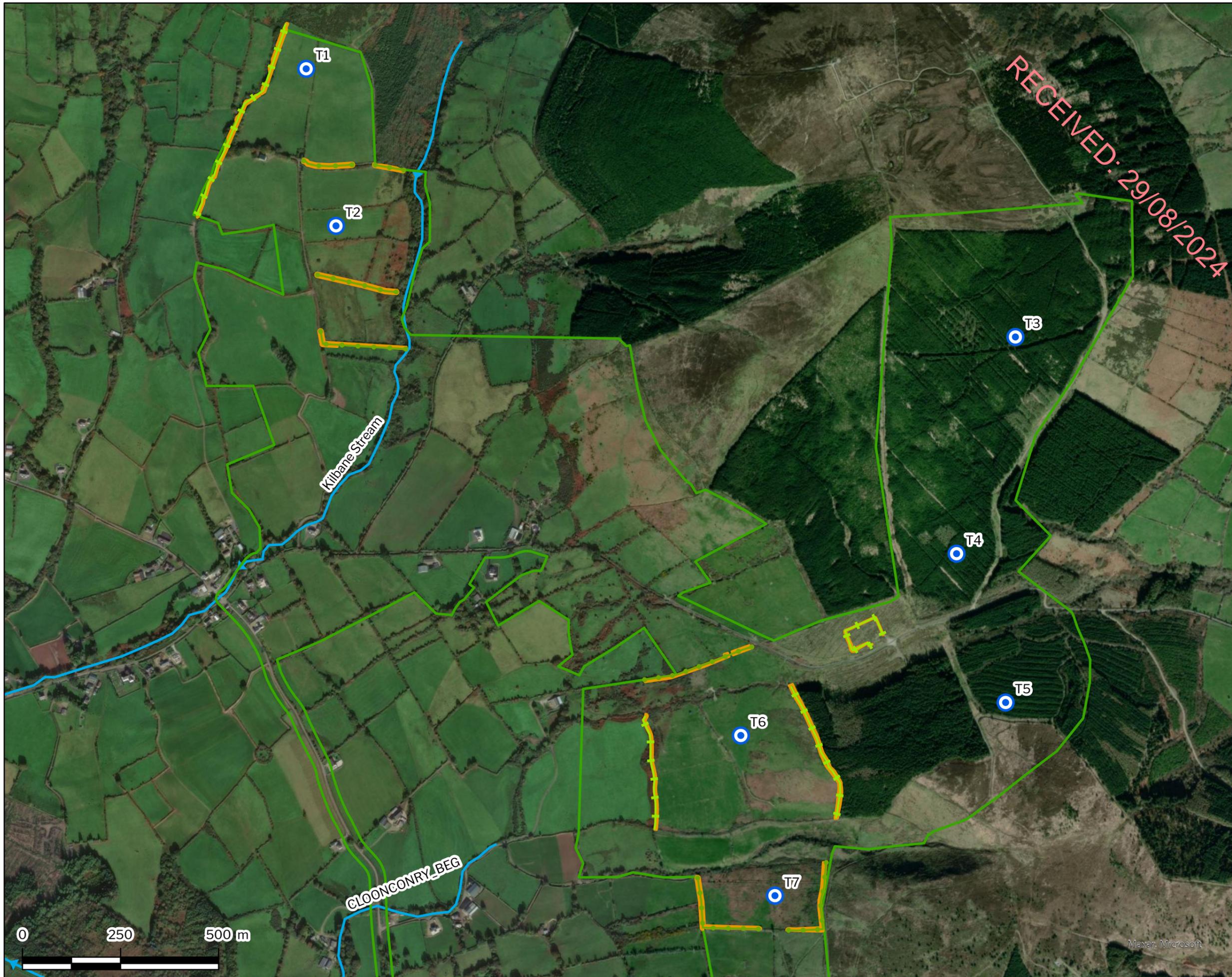
3.3.2 Maintenance of Newly Planted Hedgerow/Treelines

In order to facilitate the successful establishment of the new hedgerow and trees to be planted within the site, and to promote biodiversity value of these the following measures are proposed:

- New hedgerow shrub planting will be kept weed and litter free until the new plants are established, particularly from ruderal weeds. Healthy growth will be maintained by allowing the plant to occupy as much of the planting areas as possible to allow them to achieve as close their natural form as possible.
- During spring and autumn maintenance periods all trees and plants will be checked and adjusted/replaced as required, soil firmed, and any dead wood present removed back to healthy tissue and mulch added if required. Where tree guards are no longer required these will be removed to avoid damage to the tree.
- During the first growing season, all standard trees/ semi-mature trees will be watered regularly during any prolonged dry periods during the growing season (i.e. in April, May, June, July and August). During the second growing season the trees will be kept well-watered as often as required, particularly during June, July and August.
- Cutting hedgerows annually stops the hedgerow flowering and fruiting. For that reason, once hedgerows are established consideration should be given to cutting them on a 3 to 5-year cycle, with cutting only taking place between November and February, thus allowing flowers and fruit to develop. If it is necessary to cut more frequently, alternate which side of the hedge is cut each year to allow parts of the hedge to grow and flower.
- Any tree, hedge or shrub that is removed, uprooted, destroyed or that becomes seriously damaged, defective diseased or dead shall be replaced in the same location with another plant of the same species and size as that originally planted. All such replacements shall be carried out within the first planting season following the loss.

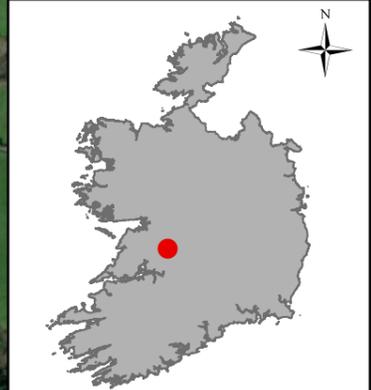
3.3.3 Inspection

Hedgerows and replanted trees will be inspected following the main growing season (i.e. in September) for the first five years of growth, where the requirement for replacement planting will be assessed. If any shrubs are dead or damaged these will be replaced using the same species within the next planting season. The removal of dead/damaged vegetation will be undertaken outside of Bird Nesting Season (March 1st-August 31st, inclusive). Recommendations for ongoing or remedial management required will be specified within an Annual Ecological Report.



- ### Map Legend
- Proposed EIA Site Boundary
 - Biodiversity Enhancement Areas
 - Proposed Turbine Layout
 - Hedgerow
 - Treeline
 - Rivers

Spatial Reference
Datum: TM75
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title
Figure 3.2 - Proposed Biodiversity Enhancement Area 2

Project Title
Lackareagh Wind Farm, Co. Clare

Project No. 220245	Drawing No. 3.2	Scale 1:9,000
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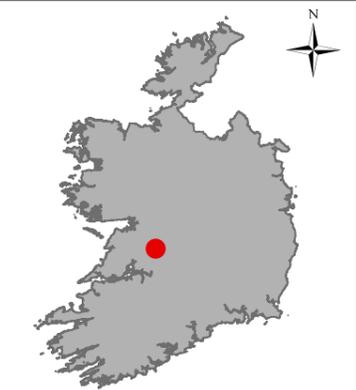


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Map Legend

-  Proposed EIA Site Boundary
-  Biodiversity Enhancement Areas
-  Proposed Turbine Layout
-  Mixed Broadleaved Woodland
-  Scrub
-  Rivers

Spatial Reference
Datum: TM75
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Figure 3.3 - Proposed Biodiversity Enhancement Area 3

Lackareagh Wind Farm,
Co. Clare

Project No. 220245	Drawing No. 3.3	Scale 1:3,500
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Peatland Restoration and Enhancement

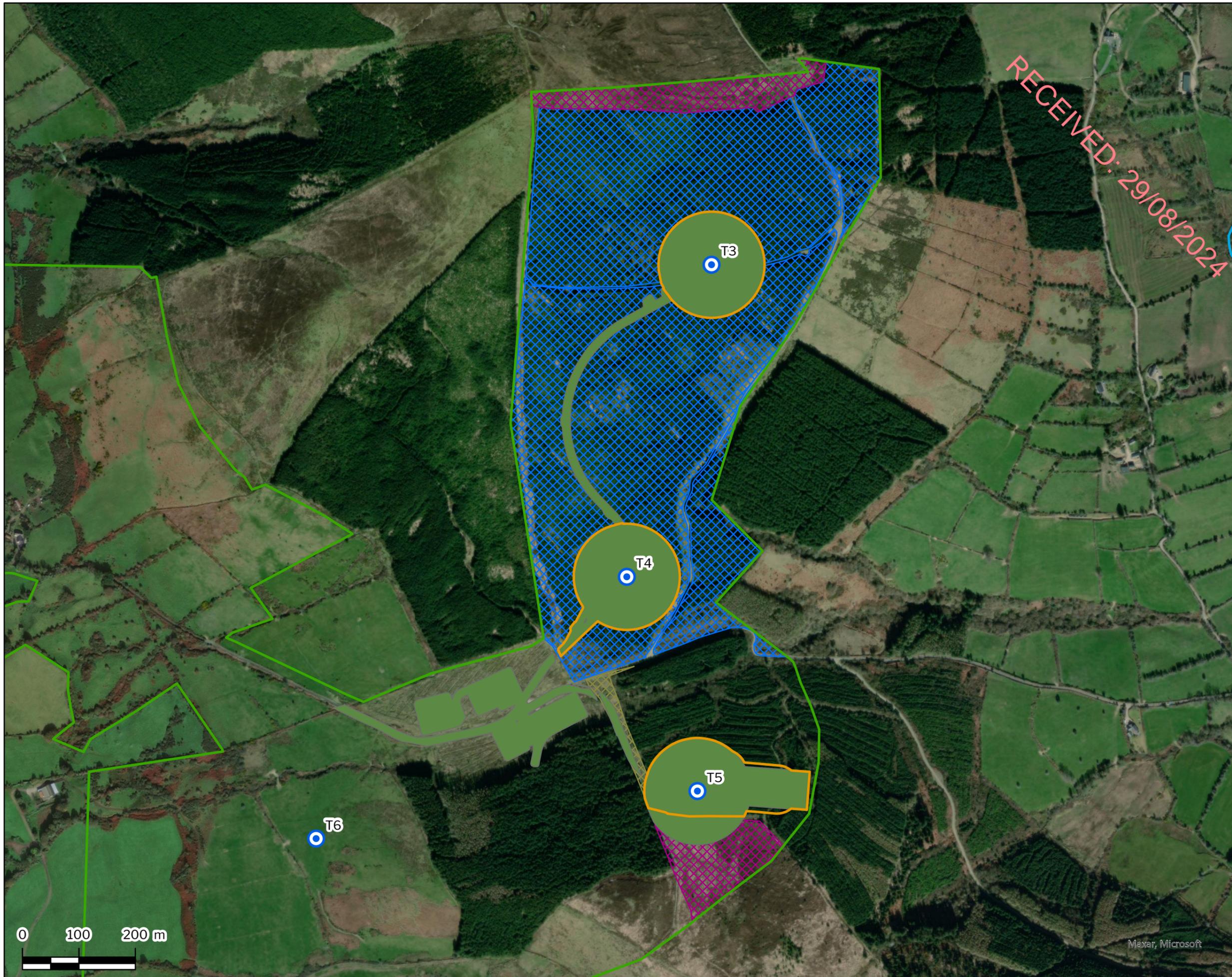
This section provides details where measures will be employed to improve the ecological quality of the peatland habitats such as Wet heath mosaic with Upland Blanket Bog. The measures outlined provides for the restoration of commercial forestry land that has been planted on peatland mosaic habitats, back to peatland habitat. These areas include forestry felling around Turbines 3, 4 and 5 as seen in Figure 3-4. The restoration measures will be implemented in accordance with the published guidelines and best practice such as the guidelines arising from the EU-LIFE/Coillte 'Irish Blanket Bog Restoration Project' (2002-2007)⁶, Scottish Natural Heritage (SNH), 2016. *Planning for development: What to consider and include in Habitat Management Plans* (Version 2, January 2014).⁷

In order to facilitate the reestablishment of peatland vegetation within these areas and maintain an effective hydrological regime, the following management measures are proposed for Biodiversity Enhancement Area 4:

- Following tree felling operations, brash material will be outside of the enhancement area and disposed of appropriately to a suitable location.
- The planting of forestry will not be permitted in Biodiversity Enhancement Area 4.
- Where possible, drains will be blocked to restore the natural hydrology of the peatland in the area, drains can be dammed using peat dams.
- No additional drainage to be installed in proximity to these habitat areas during the lifetime of the proposed windfarm,
- The use of off-road vehicles on the site will be restricted to the existing tracks.
- No application of chemical and organic fertilisers or herbicides and pesticides will be undertaken within Biodiversity Enhancement Area 4.
- Peat extraction within the proposed peatland reinstatement area will not be permitted.
- Burning and dumping will not be permitted
- Self-seeded conifers from adjacent conifer plantation areas or any invasive plants will be cleared and removed (by hand or brushcutter) from Biodiversity Enhancement Area 4 on an annual basis for the lifetime of the Proposed Wind Farm, following the felling of existing forestry.
- If scrub species such as Gorse (*Ulex europaeus*) and Bramble (*Rubus fruticosus* agg.) begin to dominate the habitat they will also be managed by removal (by hand or brushcutter) on an annual basis for the lifetime of the Proposed Wind Farm.
- Biodiversity Enhancement Area 4 will be monitored to assess the success of the restoration and enhancement plan.

⁶ <https://www.irishbogrestorationproject.ie/downloads/irish-bog-results-booklet.pdf>

⁷ <https://www.nature.scot/sites/default/files/2023-12/160324%20-%20HMP%20guidance.pdf>

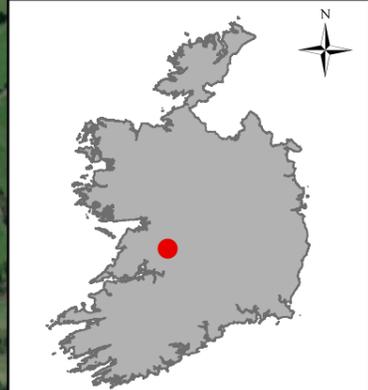


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Map Legend

-  Proposed EIA Site Boundary
-  Biodiversity Enhancement Areas
-  Proposed Turbine Layout
-  Total Felling Area
-  Conifer Plantation
-  Wet Heath
-  Buildings and Other Artificial Surfaces
-  Rivers

Spatial Reference
Datum: TM75
Projection: Transverse Mercator



SITE LOCATION - NOT TO SCALE

Drawing Title
Figure 3.4 - Proposed Biodiversity Enhancement Area 4

Project Title
Lackareagh Wind Farm,
Co. Clare

Project No. 220245	Drawing No. 3.4	Scale 1:6,250
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4. MONITORING

4.1 Invasive Species

The monitoring of Rhododendron will be undertaken annually during the growing season (April to September) by an invasive species specialist or Ecologist for a period of 2 years after no re-growth has been recorded. Monitoring results will be reported by the Project Ecologist within an Annual Ecological Report.

4.2 Hedgerow, Shrub and Tree Planting

Monitoring will be undertaken on a yearly basis over 5 years as prescribed in this report and summarised in Table 4-1 below. This will be undertaken by a suitably trained Ecologist. The proposed management actions will be conveyed to each of the landowners and management alterations implemented as required to achieve the targets of the management plan.

Monitoring results will be reported by the Project Ecologist within an Annual Ecological Report. Any criteria failures identified, and corrective actions will be implemented. Reports detailing the monitoring works carried out, the results obtained and a review of their success, along with any suggestions for amendments to the plan will be prepared. The enhancement plan will be updated and amended where required to improve the efficacy of the enhancement work.

Table 4-1 Monitoring

Feature	Biodiversity Enhancement Area	Frequency	Measure
Hedgerow, shrub and tree planting	All areas (see Figures 3-2 and 3-3)	Every year for 5 years	<ul style="list-style-type: none"> ➤ Hedgerows and replanted trees will be inspected following the main growing season (i.e. in September) for the first five years of growth, where the requirement for replacement planting will be assessed. ➤ If any shrubs are dead or damaged these will be replaced using the same species within the next planting season. ➤ Recommendations for ongoing or remedial management required will be specified within an Ecological Report.

4.3 Peatland

A number of fixed relevé sites (i.e. permanent quadrats 2m x2m) will be set up in areas where active management is proposed of previously forested areas as outlined in Figure 3-4. Baseline data will be recorded post construction, prior to the commencement of habitat management activities set out in this BEMP. The character of each relevé will be recorded (e.g. species proportions present, vegetation structure and height) and photographs will be taken of each relevé from a fixed point. These relevés will then be re-examined during years 1, 2, 3, 4, 5, 10, 15 and 25 following restoration in order to establish the extent of habitat improvement resulting from management practices. Reports detailing the monitoring works carried out, the results obtained and a review of their success, along with any suggestions for amendments will be reported by a suitably trained Ecologist within an Annual Ecological Report.

5.

CONCLUSION

This BEMP sets out the measures to be implemented to ensure that the Proposed Wind Farm will result in biodiversity enhancement; specifically, proposed replanting to mitigate the loss of linear landscape features within the site, the removal of invasive species and the restoration of peatlands which will be of benefit to a number of species including bats, small mammals and pollinator species. This Plan has set out measures to be implemented post construction. To ensure that the measures are successful, regularly monitoring will be undertaken by a suitable trained Ecologist to ensure the success of the measures detailed in the BEMP.

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