



ARCUS

**TORRANCE WIND FARM EXTENSION II**

**TECHNICAL APPENDIX 10.5:  
OUTLINE HABITAT MANAGEMENT PLAN**

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## 1 INTRODUCTION

This Technical Appendix (TA) summarises proposed habitat management measures in relation to the Torrance Wind Farm Extension II (the 'Proposed Development').

The following terminology will be used throughout this TA:

- **The Proposed Development:** the whole physical process involved in the development of the land at Torrance Wind Farm Extension II, including the wind farm construction and operation (not a piece of land);
- **The site:** all land with the potential to support the Proposed Development, as shown by the red line boundary in Figure 10.5.1, Annex A.

The Torrance Wind Farm Extension II Environmental Impact Assessment (EIA) Report did not predict any significant effects on important habitats or protected and priority species that require specific mitigation. Therefore, whilst a Habitat Management Plan (HMP) is not required as part of the EIA process, Infinergy (the Client) has proposed a range of enhancement measures to improve biodiversity at the site.

The measures described within this Outline Habitat Management Plan (oHMP) follow relevant guidance on habitat management<sup>1</sup>; and have been informed by the findings of Chapter 10 (Ecology) and Chapter 11 (Ornithology) to the EIA Report. A final HMP will be written and developed in full following consent, and in consultation with the landowner and North Lanarkshire Council, who may also consult other relevant consultees.

The final HMP will be implemented throughout the operational phase of the Proposed Development, and until the agreed enhancement/restoration measures have been achieved in full. Therefore, a final HMP will be agreed with the landowner(s) and North Lanarkshire Council, prior to the commencement of construction of the Proposed Development.

The final HMP will function as a 'live' document to reflect ground condition surveys undertaken following construction, and prior to the date of final commissioning, to confirm the scope of the final HMP remains appropriate and applicable. Any proposed change to aims, objectives and/or management prescriptions (e.g. a need for adaptive management identified by ongoing monitoring surveys) would only take effect once agreed in writing with North Lanarkshire Council, who may also consult NatureScot.

Measures to mitigate potential effects during construction and decommissioning phases are detailed in a Construction Environmental Management Plan (CEMP) within Chapter 3 (Description of Development) to the EIA Report. Whilst the scope of the oHMP relates primarily to the operational period, some measures may need to be implemented during the construction phase.

Detailed method statements will be developed for the specific prescriptions of the final HMP, such as timing of tree planting, planting density and selection of tree species. Furthermore, the oHMP Management Areas (as shown on Figure 10.5.1, Annex A) are not final and may be changed during the preparation of a final HMP.

The aims, objectives, and indicative management prescriptions of the oHMP are outlined in Section 2.

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<sup>1</sup> SNH (2016) *Planning for Development: What to consider and include in Habitat Management Plans*. Guidance. Version 2 [online]. Scottish Natural Heritage (now NatureScot). Available from: <[https://www.webarchive.org.uk/wayback/archive/20221026161346mp\\_/https://www.nature.scot/sites/default/files/2019-01/Guidance%20-%20Planning%20for%20development%20-%20What%20to%20consider%20and%20include%20in%20Habitat%20Management%20Plans.pdf](https://www.webarchive.org.uk/wayback/archive/20221026161346mp_/https://www.nature.scot/sites/default/files/2019-01/Guidance%20-%20Planning%20for%20development%20-%20What%20to%20consider%20and%20include%20in%20Habitat%20Management%20Plans.pdf)> (accessed December 2022)

### **1.1 Site Description**

The site is located on the edge of an area of distinctive upland moorland and more settled farmland which lies to the north of the M8 transport corridor, between Edinburgh and Glasgow.

The land cover on the site consists of mosaic of conifer plantation, improved and semi-improved grassland, with some areas of broadleaved woodland, scrub, degraded bog, marshy grassland, swamp and acid flush. There are stretches of degraded hedgerow, hedgerow trees and post and wire fences demarcating field boundaries.

The site is adjacent to the original Torrance Wind Park and Torrance Extension, and occupies undulating farmland and a commercial forestry area in the south, rising between approximately 175 to 200 m Above Ordnance Datum (AOD). The existing on-site farming and forestry operations will continue throughout the construction and operation of the Proposed Development.



## 2 AIMS

The oHMP has the following four aims:

- **Aim 1: Increase native woodland coverage;**
- **Aim 2: Minimise collision risk to bats around operational turbines;**
- **Aim 3: Enhance habitat for birds; and**
- **Aim 4: Enhance habitat for bats.**

The four aims have related objectives which define quantifiable targets to fulfil the aims. Each objective has associated prescriptions which detail the indicative management works to be implemented to achieve these aims and objectives. These are outlined below in Tables 1-3.

**Table 1: Aim 1 – Objectives and Management Prescriptions**

<b>Aim 1: Increase native woodland coverage</b>	
Objective 1.1	Establish native tree cover within the site
Prescription 1.1	Plant native woodland along the forest edge, field margins and adjacent to the planned cycle track. Particular attention will be focussed on the habitats associated with Barblues Bing Site of Importance for Nature Conservation (SINC) in order to increase the biodiversity value of this non-statutory designated site.  Depending on local ground conditions, tree species will comprise at least some of the following: downy birch ( <i>Betula pubescens</i> ), silver birch ( <i>Betula pendula</i> ), oak ( <i>Quercus</i> sp.), rowan ( <i>Sorbus aucuparia</i> ), alder ( <i>Alnus glutinosa</i> ), aspen ( <i>Populus tremula</i> ), gean ( <i>Prunus avium</i> ), goat willow ( <i>Salix caprea</i> ), grey willow ( <i>Salix cinerea</i> ) and woody shrubs. Exact proportions of species, planting locations and any grazing protection measures (e.g. tree tubes) will be determined by a forester during the construction period and 'on the ground' surveys.  Planting will be carried out during the planting season (e.g. November to March) when trees are dormant and more likely to establish successfully. Planting during days when the ground is waterlogged, frozen and/or when snow is present will be avoided.

**Table 2: Aim 2 – Objectives and Management Prescriptions**

<b>Aim 2: Minimise collision risk to bats around operational turbines</b>	
Objective 2.1	Minimise woodland regeneration within bat buffer zones to reduce habitat suitability for foraging and commuting bats; and minimise potential collision risk with turbines.
Prescription 2.1	Reduce the extent of tree cover within bat buffer zones by regularly removing natural regeneration and self-seed non-native conifers.

**Table 3: Aim 3 – Objectives and Management Prescriptions**

<b>Aim 3: Enhance habitat for birds</b>	
Objective 3.1	Increase the availability of nesting and foraging opportunities for a variety of bird species around the wind farm site.
Prescription 3.1	Install 30 small nest boxes in suitable locations within or adjacent to the wind farm site.
Prescription 3.2	Create a minimum of 4 wader scrapes in suitable habitat within or adjacent to the wind farm site to provide important foraging habitat for breeding waders and their chicks. The areas shown on Figure 10.5.1 have been identified as potentially suitable, however a site walkover will be undertaken to assess the ground conditions and suitability of the proposed area. Scrapes should be created following RSPB guidance <sup>2,3,4</sup> .

<sup>2</sup> RSPB (undated) *Scrape Creation for Wildlife*

<sup>3</sup> RSPB (undated) *Scrape Creation for Waders*

<sup>4</sup> RSPB (2003) *Creating Wader Scrapes and Flashes on Farmland*

**Table 4: Aim 4 – Objectives and Management Prescriptions**

<b>Aim 4: Enhance habitat for bats</b>	
Objective 4.1	Increase availability of roosting opportunities for bats around the wind farm site.
Prescription 4.1	Install at least five four-seasons bat boxes (e.g. Schwegler Hibernation Bat Box – 1FW) on suitable trees within the wind farm site, at least 100 m from any turbines.
Prescription 4.2	Install at least five summer roost boxes (e.g. Schwegler 45-2F or 55-2FN) in the vicinity of each of the four-season bat boxes.

### 3 MONITORING

Monitoring will establish whether the proposed management prescriptions are achieving the various aims and objectives and in turn will inform adaptive management to ensure the aims and objectives are achieved through the life of the HMP.

#### 3.1 Tree Monitoring

Monitoring of the native tree planting will be undertaken to ensure the establishment of the trees planted.

The planted area will be monitored in Years 1-10 following planting, to assess beat up requirements and to monitor damage (e.g. browsing), disease or weed suppression impacts on trees. Failed specimens should be replaced in the subsequent winter-spring (i.e. between November and June) and required maintenance measures identified (i.e. weeding). In addition, bat buffer zones will be inspected to assess levels of natural regeneration.

If browsing and damage by deer or livestock becomes apparent, then measures will be identified to protect the trees. Any measures will be discussed and agreed with the landowner, NatureScot and North Lanarkshire Council.

The Management Area will be monitored again in operational Year 15 to ensure that there are no issues with disease or invasive species and to determine if any thinning at this stage will benefit woodland establishment. Monitoring will be undertaken again in operational Year 20 when some thinning operations may be required in order to encourage growth of better trees and create more open woodland, further new planting may also be considered. This will aid regeneration of seedlings and begin the process of establishing a mixed age structure.

#### 3.2 Bird and Bat Box Monitoring

Bird and bat boxes will be inspected at least once annually at the appropriate time-of-year to minimise disturbance to nesting birds and roosting bats. Damaged boxes will be replaced as soon as practicable.

#### 3.3 Ornithological Monitoring

In order to monitor how key bird species are affected by the Proposed Development, ornithological monitoring will take place during and post-construction. An Ornithological Monitoring Plan will be produced providing details of the methods and survey effort required, and will be agreed with North Lanarkshire Council, who may consult with NatureScot.

In line with NatureScot guidance<sup>5</sup>, the below monitoring prescriptions will take place annually during construction, and after the Proposed Development becomes operational,

<sup>5</sup> NS (2009) *Guidance on Methods for Monitoring Bird Populations at Onshore Wind Farms*. Guidance Note.

during years 1-3, 5, 10 and 15, with the requirement for further surveys to be determined based on previous survey results.

### **3.3.1 Raptor and Owl Monitoring**

Raptor monitoring with a minimum of four survey visits between March and August to identify any breeding raptor territories within 1 km of the turbine locations and associated infrastructure, following methods as described in Hardey *et al.* (2013)<sup>6</sup>.

### **3.3.2 Breeding Wader Monitoring**

Breeding wader monitoring with a minimum of four survey visits between mid-April and early July to identify any breeding wader territories within 500 m of the turbine locations and associated infrastructure, following the methods as described in NatureScot guidance<sup>5</sup>.

### **3.3.3 Scrape Condition Monitoring**

The condition of scrapes and marginal habitats will be recorded one month prior to the commencement of the breeding wader season after the windfarm becomes operational, as well as during the proposed wader monitoring surveys. Further monitoring will be repeated, on the third and fifth years of operation. The information from monitoring surveys will be used to inform the need to modify or amend the HMP, or to carry out maintenance of the scrapes.

## **4 REPORTING AND REVIEW**

Annual reporting of management undertaken, and operational monitoring results, will be carried out towards the end of every year in which management and monitoring is carried out. The Annual HMP Report will summarise the management activities and monitoring results and provide high level recommendations for further management and monitoring. Every five years from the commencement of the HMP, a detailed Monitoring Review Report will be submitted documenting the success of the prescriptions. Within this report, modifications to the HMP and associated prescriptions may be recommended where deemed necessary. These modifications will be agreed by all relevant parties and the landowner.

Once agreed by all relevant parties, the modifications will be incorporated into an updated HMP which will be submitted to North Lanarkshire Council for approval and thereafter will supersede the previous version.

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<sup>6</sup> Hardey, J., Crick, H., Wernham, C., Riley, H., Etheridge, B. & Thompson, D. (2013). *Raptors: a field guide to survey and monitoring*, 3<sup>rd</sup> edition. The Stationery Office, Edinburgh.

## 5 HMP TIMETABLE

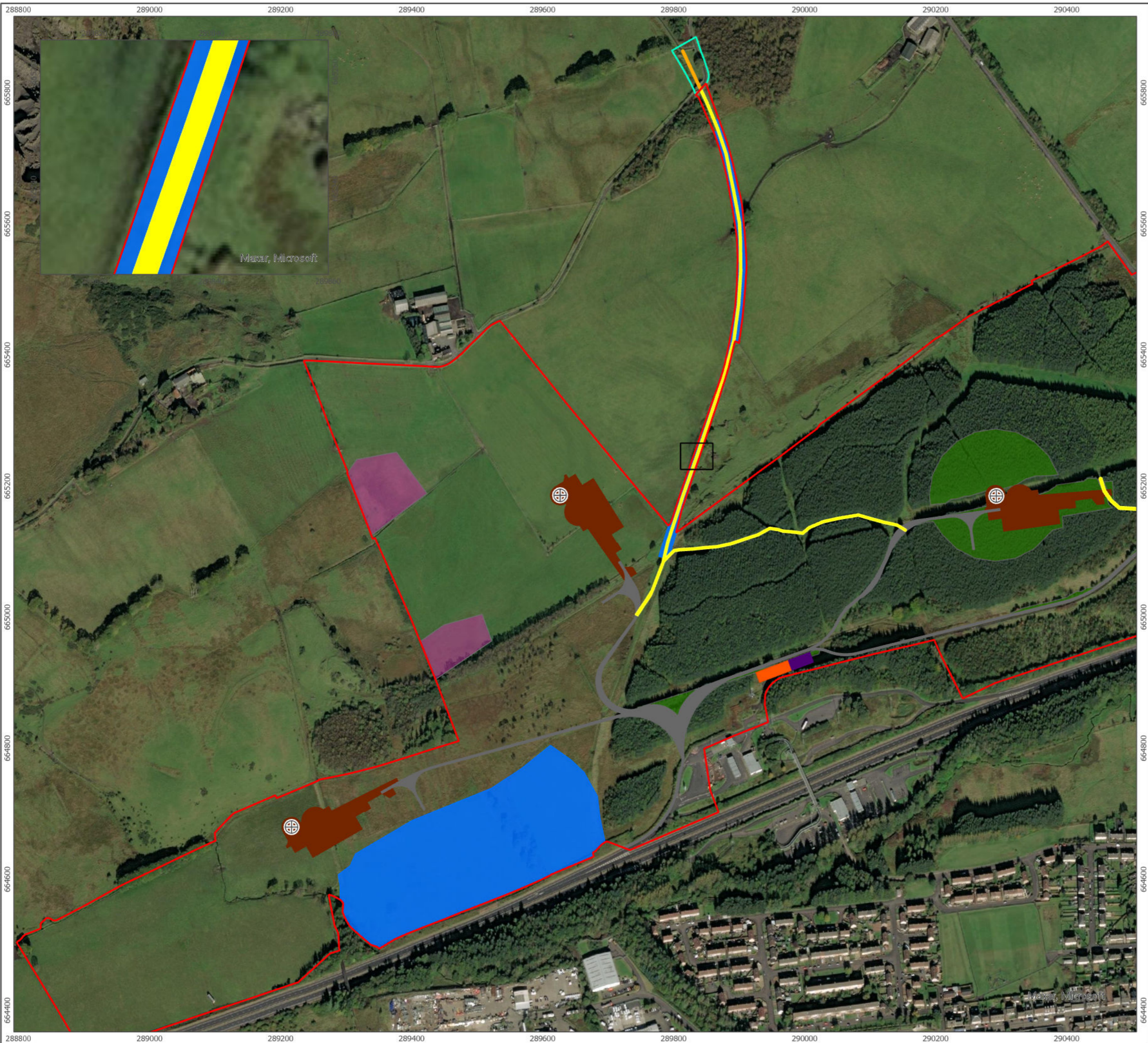
**Table 5: HMP Management & Monitoring Timetable (Year 0 = during construction; Year 1 = first year of commissioning)**

Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Work Item	Year of Implementation															
<b>Management Prescriptions</b>																
Native tree planting	X	X														
Bat box installation	X															
Bird nest box installation	X															
Wader scrape creation		X														
<b>Monitoring</b>																
Forestry growth monitoring & maintenance		X	X	X	X	X	X	X	X	X	X					X
Bat and bird nest box monitoring and maintenance	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ornithological monitoring		X	X	X		X					X					X
<b>Reporting</b>																
Annual HMP report		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5-year HMP review						X					X					X

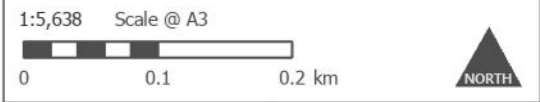
## **ANNEX A: FIGURES**

Figure 10.5.1: Habitat Management Plan Management Areas





- Site Boundary
- Future Application Boundary
- oHMP Indicative Management Areas**
- Proposed Tree Planting Areas
- Proposed Wader Scrape Areas
- Site Infrastructure**
- Access Track
- Turbine Hardstanding
- Forestry Felling
- ⊕ Proposed Turbine Location
- Proposed Recreational Path
- Future Application Recreational Path
- Temporary Construction Compound
- Substation Compound



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**Habitat Management Plan  
Management Areas  
Figure 10.5.1**

**Torrance Wind Farm Extension II  
Technical Appendix 10.5:  
Outline Habitat Management Plan**

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