

# MORAY WEST OFFSHORE WINDFARM

## Moray West Onshore Transmission Infrastructure Environmental Impact Assessment (EIA)

Moray Offshore Windfarm (West) Limited

### Technical Appendix 6.4: Scoping Potential Receptors





Table of Contents

1 Introduction .....1

2 Evaluation of Important Receptors .....1

3 Environmental Changes and Zones of Influence .....4

4 Justification for Defining Zones of Influence.....9

List of Tables

Table 2.1: Evaluation of Important Receptors .....1

Table 3.1: Environmental Changes and Zones of Influence .....4

Table 4.1: Justification for Defining Zones of Influence .....10

Acronyms	
Acronym	Expanded Term
BoCC	Birds of Conservation Concern
EIA	Environmental Impact Assessment
GCN	Great Crested Newt
LDP	Local Development Plan
LNCS	Local Nature Conservation Site
OnTI	Onshore Transmission Infrastructure
PAB	Planning Application Boundary
SBL	Scottish Biodiversity List
SESA	Study of Environmentally Sensitive Areas
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
WCA	Wildlife and Countryside Act 1981 (as amended)
ZoI	Zone of Influence



1 Introduction

This report has been produced for the purpose of detailing which biodiversity receptors have been scoped into, or out of the assessment of effects on nature conservation as presented in Chapter 6: Ecology and Nature Conservation of the Moray West Onshore Transmission Infrastructure (OnTI) Environmental Impact Assessment (EIA) Report.

Table 2.1 lists the receptors that are relevant to the assessment because they are either legally protected or potentially of sufficient biodiversity importance that an effect on them could be significant, and which could be affected by the OnTI. A justification is provided for any receptors that are scoped out of further assessment because they are assessed as being of insufficient value for likely effects to be significant.

Potential effects on the receptors scoped in for further assessment are considered in Table 3.1, and subsequently, if still scoped in, within Chapter 6. Receptors have only been assessed against potential environmental changes to which they are likely to be sensitive. For example, “hedgerow” as a receptor would not be sensitive to light, noise and vibration. Whether a receptor is sensitive or not to an environmental change has been determined based on professional judgement, project design, statutory guidance and appropriate relevant literature.

All environmental changes and the associated Zones of Influence (Zoi) in relation to ecological and ornithological receptors are described and defined as appropriate in Table 4.1. At this stage, receptors have again been assessed against potential environmental changes (‘impacts’) to which they are likely to be sensitive, considering the spatial scope of the OnTI. Whether a receptor is sensitive or not to an environmental change has been determined based on professional judgement, project design, statutory guidance and appropriate relevant literature. Proposed construction areas (i.e. areas where direct land take or direct disturbance occurs for the OnTI and associated development, including, but not limited to works compounds, cable trenching, access development, the substation or temporary working areas), as defined in Chapter 2: Project Description, are referenced as appropriate. Operation (including maintenance) and decommissioning phase works have been scoped in or out of the assessment on the basis of those same areas, whilst considering the description and thus likely effects of those works as described in Chapter 2. The Planning Application Boundary (PAB), defined and illustrated in Chapter 2 is referenced as appropriate, and also illustrated in Chapter 6 on Figures 6.1.1-6.1.3.

2 Evaluation of Important Receptors

Table 2.1 lists the receptors that are relevant to the assessment because they are either legally protected or potentially of sufficient biodiversity importance that an effect on them could be significant, and which could be affected by the OnTI.

Table 2.1: Evaluation of Important Receptors				
Legally protected and/or ‘important’ receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
Moray and Nairn Coast Special Protection Area (SPA)	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SPA (14.1 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Moray and Nairn Coast Ramsar	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the Ramsar (14.1 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Tips of Corsemaul and Tom Mor SPA	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SPA (6.8 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Tips of Corsemaul and Tom Mor Site of Special Scientific Interest (SSSI)	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (6.8 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Bin Quarry SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (5.4 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Craigs of Succoth SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (8.1 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Mortlach Moss SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (5.3 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out

Table 2.1: Evaluation of Important Receptors

Legally protected and/or 'important' receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
Moss of Crombie SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (7.7 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Reidside Moss SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (6.7 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Shiel Wood Pastures SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (4.4 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Whitehill SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (5.1 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Whitehills to Melrose Coast SSSI	YES	NO	The nature of proposed works (temporary and sequential in time and place), distance from the SSSI (7.5 km) and lack of connectivity is such that negative impacts are unlikely and therefore this site can be scoped out.	Scoped Out
Den of Pitlurg SSSI	YES	NO	See Table 3.1.	Scoped In
Mill Wood SSSI	YES	NO	See Table 3.1	Scoped In
Cullen to Stake Ness Coast SSSI	YES	NO	See Table 3.1	Scoped In
SESAs (Logie Head; Redhythe Point; Craibstone Quarry; and Mill Wood)	YES	NO	See Table 3.1	Scoped In
Cullen to Whitehills Local Nature Conservation Site (LNCS): habitats and plants	YES	NO	See Table 3.1	Scoped In
Cullen to Whitehills LNCS: entomology	YES	NO	See Table 3.1	Scoped In

Table 2.1: Evaluation of Important Receptors

Legally protected and/or 'important' receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
Cullen to Whitehills LNCS: breeding coastal seabirds	YES	NO	Data from Seabird 2000 records indicated that breeding coastal seabirds were not recorded in significant numbers. Given the availability of alternative breeding habitat along the coastline, and the lack of connectivity due to the terrestrial nature of the proposed works, breeding coastal seabirds are unlikely to be subject to significant effects and thus are scoped out of further assessment.	Scoped Out
Woodland (ancient woodland; broadleaved woodland - semi-natural; broadleaved woodland – plantation [Lowland mixed deciduous woodland]; mixed woodland – plantation [lowland mixed deciduous woodland])	YES	NO	See Table 3.1	Scoped In
Scottish Biodiversity List (SBL) Habitat: B2.1: Neutral grassland – unimproved (Lowland meadows)	YES	NO	Unimproved neutral grassland (0.08 ha within PAB) is present only in small fragments and associated with scattered and dense gorse - adjacent to the upper reaches of the Burn of Fordyce. It is not considered that this receptor is of sufficient importance within the PAB for effects to be significant.	Scoped Out
SBL Habitat: B5: Marsh/marshy grassland (Purple moor-grass & rush pastures)	YES	NO	See Table 3.1	Scoped In
SBL Habitat: D1.1: Dry dwarf shrub heath – acid (Lowland Heathland)	YES	NO	The quality of habitat is unremarkable being almost totally dominated by common heather with locally-rare bell heather. There are also minor stands of dry dwarf shrub heath located by a more extensive area of wet dwarf shrub heath in the Cotton Hill Wood area. It is not considered that this receptor is of sufficient importance within the PAB for effects to be significant.	Scoped Out

Table 2.1: Evaluation of Important Receptors				
Legally protected and/or 'important' receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
SBL Habitat: G1: Standing water (Ponds): 0.45 ha	YES	NO	See Table 3.1	Scoped In
SBL Habitat: G1: Running Water (Rivers):	YES	NO	See Table 3.1	Scoped In
SBL Habitat: H1, H6 and H8: Coastal grassland and maritime habitats	YES	NO	This habitat is predominantly present in Cullen to Whitehills LNCS and Cullen to Stake Ness Coast SSSI and has therefore been assessed as a part of this receptor and scoped out as a receptor in its own right.	Scoped Out
SBL Habitat: J2: Intact Hedge and Defunct hedge (Hedgerows)	YES	NO	See Table 3.1	Scoped In
Non SBL habitats: A1.2.2: Coniferous woodland – plantation; A2.1: Scrub-Dense/Continuous; A4.1: Recently-felled woodland-broad-leaved; A4.2: Recently-felled woodland-coniferous; B4: Improved grassland; B6: Poor semi-improved grassland; C3.1: Tall ruderal; Hardstanding; I2.1: Quarry; J1.1: Arable; J1.2: Amenity grassland ;J1.3: Ephemeral/short perennial; J3.4: Caravan site; J3.6: Buildings; J4: Bare ground	NO	NO	Impacts upon these habitats (described in Technical Report 6.1) would not be significant in EIA terms.	Scoped Out
Wildlife and Countryside Act	YES	YES	See Table 1.1, Technical Report 6.2.	Scoped in

Table 2.1: Evaluation of Important Receptors				
Legally protected and/or 'important' receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
19819 (WCA) Schedule 1 species: breeding barn owl				
WCA Schedule 1 species: breeding quail	YES	YES	See Table 1.1, Technical Report 6.2.	Scoped in
Breeding bird assemblage: SBL / Birds of Conservation Concern (BoCC) Red or Amber list species	YES	NO	See Table 1.1, Technical Report 6.2.	Scoped in
Breeding birds: nest sites	NO	YES	See Table 1.1, Technical Report 6.2.	Scoped In
Terrestrial / aquatic invertebrates: priority & SBL species	YES	NO	See Table 3.1	Scoped In
Great crested newts (GCN)	YES	YES	Agreed with Scottish Natural Heritage, pre-scoping meeting, March 2017, that GCN could be scoped out due to lack of local records.	Scoped out.
Amphibians (excluding GCN)	YES	NO	See Table 3.1	Scoped In.
Reptiles	YES	YES	See Table 3.1	Scoped In
Bat Assemblages	YES	YES	See Table 3.1	Scoped In
Badger	NO	YES	Badgers are sufficiently common and widespread in the area that an impact upon the local population would not be significant (in EIA terms). However, they cannot be scoped out at this stage due to legal requirements only.	Scoped out (except in relation to legal requirements only)
Otter	YES	YES	See Table 3.1	Scoped In
Water vole	YES	YES	See Table 3.1	Scoped In
Pine marten	YES	YES	See Table 3.1	Scoped In
Red squirrel	YES	YES	See Table 3.1	Scoped In
Scottish wildcat	YES	YES	See Table 3.1	Scoped In



Table 2.1: Evaluation of Important Receptors				
Legally protected and/or 'important' receptors recorded within the study area.	Designated biodiversity sites and priority habitats and species (see Box 6.1 in Chapter 6)	Legally protected and controlled species (see Box 6.2 in Chapter 6)	Justification for scoping conclusion	Scoping conclusion
Brown hare, mountain hare, hedgehog (SBL mammals)	YES	NO	See Table 3.1	Scoped In
Aquatic fauna (salmonids, eels, lamprey, freshwater pearl mussel)	YES	YES	See Table 3.1	Scoped In
Non-native invasive species	YES	YES	See Table 3.1	Scoped In

### 3 Environmental Changes and Zones of Influence

Potential effects on the receptors scoped in for further assessment are considered in Table 3.1, and subsequently, if still scoped in, within Chapter 6: Ecology and Nature Conservation of the EIA Report.

Table 3.1: Environmental Changes and Zones of Influence				
Potential Receptor	Environmental Change ("impact")	Zol (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within Zol	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Den of Pitlurg SSSI: Upland birch woodland Valley fen	Land-take/Land cover change	Within a construction / Operation and Maintenance (O&M) / decommissioning area	No	No – receptor is not in the Zol (i.e. the PAB).
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Mill Wood SSSI: Upland birch	Land-take/Land cover change	Within a construction / O&M / decommissioning area	No	No – receptor is not in the Zol (i.e. the PAB).
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity	Yes	Yes – receptor is in the Zol. Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Cullen to Stake Ness Coast SSSI: lowland dry heath saltmarsh shingle springs (including flushes)	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse)	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).



Table 3.1: Environmental Changes and Zones of Influence				
Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
		and/or potential hydrological connectivity		
SESAs (Logie Head; Redhythe Point; Craibstone Quarry; and Mill Wood)	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI. Although embedded mitigation measures recommend avoidance during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Cullen to Whitehills LNCS habitats, invertebrates and plant species: Aberdeen Local Development Plan (LDP) describes this LNCS in respect of birds as: <i>'.....Habitats include maritime grassland together with small areas of sand dune and shingle. It is one of the richer areas of the coastline botanically due to the presence of calcareous soils with oysterplant, sea spleenwort and shrubby sea blight'.</i>	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI. Although embedded mitigation measures recommend avoidance during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity	Yes	Yes – receptor / potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).

Table 3.1: Environmental Changes and Zones of Influence				
Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Woodland including Ancient woodland; Broadleaved woodland - semi-natural; Broadleaved woodland – plantation (Lowland mixed deciduous woodland); Mixed woodland – plantation (Lowland mixed deciduous woodland)	Land-take/Land cover change	Within a construction / O&M decommissioning area	Yes	Yes – receptor is in the ZoI. Although embedded mitigation measures recommend avoidance during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
SBL Habitat: B5: Marsh/marshy grassland (Purple moor-grass & rush pastures)	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor is in the ZoI. Although embedded mitigation measures recommend avoidance during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
SBL Habitat: G1: Standing water (Ponds)	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor is in the ZoI. Although embedded mitigation measures recommend avoidance during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of standing water and/or potential hydrological connectivity	Yes	Yes – receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
SBL Habitat: G1: Running Water (Rivers):	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor is in the ZoI. Although embedded mitigation measures recommend avoidance of direct effects

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	Zol (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within Zol	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
	Pollution	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse) and/or potential hydrological connectivity	Yes	during project design this is not a certainty at this stage. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).  Yes – receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
SBL Habitat: J2: Intact Hedge and Defunct hedge (Hedgerows)	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	No - No potential for significant effects in respect of hedgerows due to embedded mitigation measures - avoidance during project design and reinstatement/ compensation/ enhancement if required according to approved Method Statement(s).
WCA Schedule 1 species: breeding barn owl	Land-take/Land cover change	Nest site within 100m of a proposed construction / O&M / decommissioning area	No, but potential for breeding barn owl	Yes, although receptor not recorded within the Zol breeding was confirmed outwith the PAB in similar habitat. Pre-construction verification check surveys would need to be undertaken for schedule 1 species where potential legal breaches could occur otherwise.
	Increased light, noise and vibration	Within 100m of the PAB	No but potential for breeding barn owl	Yes, although receptor not recorded within the Zol breeding was confirmed outwith the PAB in similar habitat. Pre-construction verification check surveys would need to be undertaken for schedule 1 species where potential legal breaches could occur otherwise.
WCA Schedule 1 species: breeding quail	Land-take/Land cover change	Nest site within 100m of a proposed construction / O&M / decommissioning area	Yes	Yes – receptor within the ZOI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	Within 100m of the PAB	Yes	Yes –receptor within the ZOI (Construction phase only; O&M and decommissioning phases scoped out in

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	Zol (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within Zol	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
				consideration of proposed scope of work and embedded mitigation during these phases).
Breeding bird assemblage and nest sites: SBL / BoCC Red or Amber list (passerines and non-passerines)	Land-take/Land cover change	Within 100m of the PAB	Yes	No - No breeding passerines or non-passerines recorded within the PAB were recorded in high numbers. Given the limited actual habitat loss (both permanent and temporary), the availability of extensive breeding and foraging habitat within the vicinity of the PAB, breeding passerines and non-passerines are unlikely to be subject to significant effects.  Pre-construction verification check surveys would be undertaken for all breeding birds to ensure no legal breaches could occur from nest destruction/damage.
	Increased light, noise and vibration			
	Pollution			
Breeding bird assemblage and nest sites: SBL / BoCC Red or Amber list (waders and waterfowl)	Land-take/Land cover change Increased light, noise and vibration Pollution	Within 250m of the PAB	Yes	No - No breeding waders or waterfowl recorded within the PAB were recorded in high numbers. Given the limited actual habitat loss (both permanent and temporary), the availability of extensive breeding and foraging habitat within the vicinity of the PAB, breeding waders and wildfowl are unlikely to be subject to significant effects and thus are scoped out of further assessment.  Pre-construction verification check surveys would be undertaken for all breeding birds to ensure no legal breaches could occur from nest destruction/damage.
Breeding bird nest sites: non-priority species	Land-take/Land cover change Increased light, noise and vibration Pollution	Within 100m of the PAB	Yes	No - No breeding birds recorded within the PAB were recorded in high numbers. Given the limited actual habitat loss (both permanent and temporary), the availability of extensive breeding and foraging habitat within the vicinity of the PAB, non-priority breeding birds are unlikely to be subject to significant effects.  Pre-construction verification check surveys would be undertaken for all breeding birds to ensure no legal breaches could occur from nest destruction/damage.

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Terrestrial / aquatic invertebrates: priority species	Land-take/Land cover change Increased light, noise and vibration Pollution	Within a construction / O&M / decommissioning area	Yes	No - Given the limited actual habitat loss (both permanent and temporary), the availability of suitable habitat within the vicinity of the PAB, the PAB is unlikely to be of sufficient value to these species to be subject to significant effects. In addition, embedded mitigation measures would avoid the most important habitats for these species during project design.
Amphibians (excluding GCN)	Land-take/Land cover change Pollution	Within a construction / O&M / decommissioning area	Yes	No – The PAB is not considered to be of high value for amphibians. Given the limited actual amphibian habitat loss (both permanent and temporary), the availability of suitable habitat within the vicinity of the PAB, these species are unlikely to be subject to significant effects. In addition, embedded mitigation measures would avoid the most important habitats for these species during project design as well as incorporate pollution prevention measures. These amphibians are not specifically protected under the WCA.
Reptiles	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased vehicle movement	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Bat Assemblages	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
	Increased light, noise and vibration	100 m from construction / decommissioning area for light, 50-60 m for noise/vibration.	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Badger	Land-take/Land cover change	30 m for sett in 'current use' within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased vehicle movement	Within the PAB and immediate area	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Otter	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	30m from watercourse	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
			Yes	

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	Zol (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within Zol	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
	Increased vehicle movement	Within the PAB and immediate area		Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of a watercourse bank-top and/or potential hydrological connectivity	Yes	Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Water vole	Land-take/Land cover change	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	5m from watercourse	No	No potential for significant effects in respect of water vole due to embedded mitigation measures and because water vole was not recorded in the PAB. The best practice mitigation guidelines used to reduce the risk of disturbance whilst in a place of shelter/protection, would be employed to reduce the magnitude of impacts, to avoid contravening legislation. Other impacts assessed in land take/ land change.
	Pollution	Within 8m of a watercourse bank-top and/or potential hydrological connectivity	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).

Table 3.1: Environmental Changes and Zones of Influence

Potential Receptor	Environmental Change ("impact")	Zol (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within Zol	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Pine marten	Land-take/Land cover change	30 m for active den.	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased vehicle movement	Within the PAB and immediate area	Yes	Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Red squirrel	Land-take/Land cover change	30 m for active drey.	Yes	Yes – receptor/potential for receptor is in the Zol (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased vehicle movement	Within the PAB and immediate area	Yes	Yes – receptor/potential for receptor is in the Zol. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).



Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Scottish wildcat	Land-take/Land cover change	100 m for active den.	Yes	Yes – receptor/potential for receptor is in the ZoI (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased light, noise and vibration	Within a construction / O&M / decommissioning area	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Increased vehicle movement	Within the PAB and immediate area	Yes	Yes – receptor/potential for receptor is in the ZoI. (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
Brown hare, mountain hare, hedgehog	Land-take/Land cover change	Within the PAB and immediate area	Yes	No - Given the limited actual habitat loss (both permanent and temporary), the availability of suitable habitat within the vicinity of the PAB, these species are unlikely to be subject to significant effects. The PAB is not considered to be of high value for these species. In addition, embedded mitigation measures would avoid the most important habitats for these species during project design as well as incorporate pollution prevention measures. These species are not legally protected.
	Increased light, noise and vibration	Within the PAB and immediate area	Yes	
	Increased vehicle movement	Within the PAB and immediate area	Yes	
Aquatic fauna (salmonids, eels, lamprey, freshwater pearl mussel)	Land-take/Land cover change	Within the construction / O&M / decommissioning area	Yes	Yes – receptor is scoped in (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).
	Pollution	Within 8m of a watercourse bank-top and/or potential hydrological connectivity	Yes	

Potential Receptor	Environmental Change ("impact")	ZoI (where receptor is sensitive to the environmental change) – distances defined in Table 1.3.	Receptor within ZoI	Conclusion –Development Effect - is there the potential for significant effect and/or contravention of protected species legislation as a result of the proposed development (Yes/No – if no, a justification is provided on why the effects are scoped out)
Non-native invasive species:	Land-take/Land cover change within 7m of the construction / O&M / decommissioning area	Within 7m of the construction / O&M / decommissioning area	Yes	Yes – receptor is scoped in (Construction phase only; O&M and decommissioning phases scoped out in consideration of proposed scope of work and embedded mitigation during these phases).

#### 4 Justification for Defining Zones of Influence

All environmental changes and the associated Zones of Influence (Zoi) in relation to ecological and ornithological receptors are described and defined as appropriate in Table 4.1. At this stage, receptors have again been assessed against potential environmental changes ('impacts') to which they are likely to be sensitive, considering the spatial scope of the OnTI.

Table 4.1: Justification for Defining Zones of Influence			
Environmental Change ("impact")	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
Land-take/Land cover change	All receptors	Within a construction / O&M / decommissioning area	Land-take/land cover change (and any resulting displacement) will only take place in areas where construction / O&M / decommissioning are planned. Other areas within and outside the PAB will not be affected by land-take/ land cover change.
	Japanese Knotweed/ Himalayan Balsam/Non-native invasive plant species	Within ~7m of a construction/decommissioning area	Rhizomes from Japanese knotweed are considered to extend up to ~7m laterally from the base of the parent plant (Knotweed Code of Practice, Environment Agency 2013). Any ground disturbance within this area may promote the spread of the species.
Increased light, noise and vibration	Designated Sites	Dependent on site qualifying features*	Flora not considered to be affected by light, noise or vibration.  *If any of the species below are listed as a designated feature, the Zoi listed below are implemented. Other qualifying features are not considered sensitive to the scale of environmental change.
	Barn owl	Nest site within 100m of PAB	This zone of influence is based on best practice guidance. A review of Disturbance Distance in Selected Bird Species (Ruddock and Whitfield, 2007, SNH).
	Quail, breeding bird assemblage: priority / BoCC Red or Amber list (passerine and non-passerines)	Nest site within 100m of PAB	This zone of influence is based on best practice and professional judgement.
	Breeding bird assemblage: SBL / BoCC Red or Amber list (waders and waterfowl)	Nest site within 250m of PAB	This zone of influence is based on best practice and professional judgement.
	Terrestrial priority species, invertebrates	~30m from suitable habitat	This zone of influence is based on the maximum limit priority species listed may be affected by light, noise and vibration based on professional judgement.
	Bat Assemblages	Up to 100m from a construction / decommissioning area for light,	Light spill from temporary lighting during the construction and decommissioning periods would be restricted to the working area as far as possible, and there would be no lighting of the cable route during the operational phase; however, headlights

Table 4.1: Justification for Defining Zones of Influence			
Environmental Change ("impact")	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
		~50-60m for noise/vibration.	from vehicles would typically cast light up to a distance of approximately 100m.  There is little research on the effects of noise and vibration on fauna; however, recent studies indicate that bats' foraging ability can be adversely affected by road noise up to a distance of at least 50-60m (Berthinussen, A. and Altringham, J. (2012). The effect of a major road on bat activity and diversity. Journal of Applied Ecology, 49: 82–89.) Human levels of bat sensitivity to noise are assumed (55dB); professional judgement in the absence of relevant research.
	Badger	Sett ~30m from construction / maintenance / decommissioning area	This zone of influence is based upon guidance from Scottish Natural Heritage "Badgers and Development" (2001).
	Otter	~30m from watercourse to a construction / maintenance / decommissioning area for disturbance, 100 - 200m along connected watercourses for displacement	This zone of influence is based on professional judgement. 200m is a maximum distance and dependent on the severity of impact.
	Water vole	Minimum ~5m from watercourse/body to construction / maintenance / decommissioning area for disturbance, up to 200m along connected water courses for displacement	This zone of influence is based on professional judgement and best practice guidance. Water vole conservation handbook 3rd edition 2011. 200m is a maximum distance and dependent on the severity of impact.
	Pine marten	30 m for active den.	This zone of influence is based on best practice and professional judgement.
	Red squirrel	30 m for active den.	This zone of influence is based on best practice and professional judgement.
	Scottish wildcat	100 m for active den.	This zone of influence is based on best practice and professional judgement.

Table 4.1: Justification for Defining Zones of Influence			
Environmental Change ("impact")	Receptor (sensitive to environmental change or scale of environmental change)	Zone of Influence	Justification
Dust deposition/Air quality	Designated sites, (containing watercourses, waterbodies, Priority habitat and Priority plant species.)	Within ~50m of PAB.	The zone of influence is based on usual deposition distances for dust from construction sites. The air quality assessment (EIA Report Chapter 11: Air Quality) has concluded no significant effects in respect of air quality changes following the implementation of embedded environmental measures, and therefore this impact is scoped out of significant effects.
Increased vehicle movement	Barn owl	Nest site within 100m of PAB	This zone of influence is based on best practice guidance. A review of Disturbance Distance in Selected Bird Species (Ruddock and Whitfield, 2007, SNH).
	Quail, breeding bird assemblage: priority / BoCC Red or Amber list (passerine and non-passerines)	Nest site within 100m of PAB	This zone of influence is based on best practice and professional judgement.
	Breeding bird assemblage: SBL / BoCC Red or Amber list (waders and waterfowl)	Nest site within 250m of PAB	This zone of influence is based on best practice and professional judgement.
	Badgers, bats, otter, reptiles, otter, water vole, pine marten, red squirrel, Scottish wildcat.	Within the PAB and egress points	This zone of influence is based on an increase in vehicle movement within the PAB during construction/decommissioning and risk of direct collision.
Pollution	Statutory sites, watercourses, waterbodies, otter, water vole, aquatic BAP / Priority species	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse)	Distance represents a precautionary approach for ditches i.e. non main river. Based on potential inputs of pollution to watercourses and waterbodies from construction related surface run off (in the absence of environmental measures).
	Downstream or adjacent statutory sites designated for aquatic habitats or with other direct water dependence/hydrological connectivity.	Potential hydrological connectivity	EIA Report Chapter 5: Hydrology, Hydrogeology and Geology has determined that protection of the upstream/immediate receptor would avoid the propagation of any significant direct or indirect effects further downstream. This has been assessed from a biodiversity perspective in respect of the features present in those sites, and is not limited to consideration of water quality standards only.
	Breeding bird assemblage: SBL / BoCC Red or Amber list (waders and waterfowl)	Within 8m of a watercourse bank-top (15m for a tidally influenced watercourse)	Distance represents a precautionary approach for ditches i.e. non main river. Based on potential inputs of pollution to watercourses and waterbodies from construction related surface run off (in the absence of environmental measures).



# MORAY WEST

## OFFSHORE WINDFARM

### Contact

Moray Offshore Windfarm (West) Limited  
4<sup>th</sup> Floor, 40 Princes Street  
Edinburgh EH2 2BY  
Tel: +44 (0)131 556 7602

