

MORGAN AND MORECAMBE OFFSHORE WIND FARMS: TRANSMISSION ASSETS

Outline Sand Lizard Mitigation Plan

Deadline: Deadline 4
Application Reference: EN020028

Document numbers:
MRCNS-J3303-RPS-19162
MOR001-FLO-CON-CAG-PLN-0012

Document reference: S_D4_14

8 August 2025
F01

Document status					
Version	Purpose of document	Approved by	Date	Approved by	Date
F01	Deadline 4	HK	August 2025	AB	August 2025

Prepared by:

**Morgan Offshore Wind Limited,
Morecambe Offshore Windfarm Ltd**

Prepared for:

**Morgan Offshore Wind Limited,
Morecambe Offshore Windfarm Ltd**

Contents

1	OUTLINE SAND LIZARD MITIGATION PLAN	1
1.1	Background	1
1.1.1	Introduction	1
1.1.2	Implementation	1
1.2	Scope of this Outline Sand Lizard Management Plan	1
1.3	Roles and responsibilities	2
1.4	Structure of this document	2
2	BASELINE INFORMATION	2
2.1	Sand Lizard Population	2
2.2	Survey Data.....	3
3	AVOIDANCE AND MITIGATION MEASURES FOR SAND LIZARD	3
4	REVIEW OF EPS LICENSING REQUIREMENTS	10
5	REFERENCES	11

Tables

Table 1	Potential impacts considered and relevant avoidance and/or mitigation measures	5
---------	--	---

Glossary

Term	Meaning
400 kV grid connection cables	Cables that will connect the proposed onshore substations to the existing National Grid Penwortham substation.
400 kV grid connection cable corridor	The corridor within which the 400 kV grid connection cables will be located.
Onshore Order Limits	Onshore Order Limits See Transmission Assets Order Limits: Onshore (below).
Onshore substations	The onshore substations will include a substation for the Morgan Offshore Wind Project: Transmission Assets and a substation for the Morecambe Offshore Windfarm: Transmission Assets. These will each comprise a compound containing the electrical components for transforming the power supplied from the generation assets to 400 kV and to adjust the power quality and power factor, as required to meet the UK Grid Code for supply to the National Grid.
Special Protection Areas	A site designation specified in the Conservation of Habitats and Species Regulations 2017, classified for rare and vulnerable birds, and for regularly occurring migratory species. Special Protection Areas contribute to the national site network.
Transmission Assets	The area within which all components of the Transmission Assets will be located, including areas required on a temporary basis during construction and/or decommissioning.
Transmission Assets Order Limits	The area within which all components of the Transmission Assets landward of Mean High Water Springs will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds). Also referred to in this report as the Onshore Order Limits, for ease of reading.

Acronyms

Acronym	Meaning
CIEEM	Chartered Institute of Ecology and Environmental Management
CoCP	Code of Construction Practice
DCO	Development Consent Order
ECOW	Ecological Clerk of Works
ES	Environmental Statement
EMP	Ecological Management Plan
OEMP	Outline Ecological Management Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Acronym	Meaning
UK	United Kingdom

Units

Unit	Description
%	Percentage
ha	Hectare
kV	Kilovolt
m	Metre

1 Outline Sand Lizard Mitigation Plan

1.1 Background

1.1.1 Introduction

- 1.1.1.1 This document forms the Outline Sand Lizard Mitigation Plan for the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (referred to hereafter as ‘the Transmission Assets’).
- 1.1.1.2 Stakeholders including Natural England, Lancashire Wildlife Trust and the local authorities have indicated that they believe the potential impacts to sand lizard (*Lacerta agilis*) during construction of the Transmission Assets may trigger the requirement for European Protected Species (EPS) licensing.
- 1.1.1.3 This Outline Sand Lizard Mitigation Plan demonstrates that with appropriate avoidance and the implementation of mitigation measures by the Applicants to manage potential impacts to sand lizards during construction, the construction of the Transmission Assets can proceed without the need for an EPS licence.

1.1.2 Implementation

- 1.1.2.1 This Outline Sand Lizard Mitigation Plan forms an appendix to the Outline Ecological Management Plan (OEMP) (document reference J6). Following the granting of consent for the Transmission Assets, detailed Sand Lizard Management Plan(s) will be prepared as a part of the detailed Ecological Management Plan(s) on behalf of Morgan OWL and/or Morecambe OWL, prior to commencement of the relevant stage of works and will follow the principles established in this Outline Sand Lizard Management Plan. The detailed Sand Lizard Management Plan(s) will require approval by the relevant planning authority following consultation with relevant stakeholders. The Applicants and all appointed contractors will be responsible for the implementation of the detailed Ecological Management Plan(s).

1.2 Scope of this Outline Sand Lizard Management Plan

- 1.2.1.1 The purpose of this Outline Sand Lizard Management Plan is to provide further evaluation of the potential impacts during construction at landfall to the population of sand lizard at Lytham St Anne's Dunes Site of Special Scientific Interest (SSSI), and details on the avoidance and mitigation measures that will be implemented by the Applicants to protect the population. These measures will be adopted during onshore site preparation works and construction of the Transmission Assets.
- 1.2.1.2 Onshore site preparation works are defined in article 2 of the draft DCO (document reference C1 (REP3-009)). This Outline Sand Lizard Mitigation Plan applies to the onshore site preparation works and construction activities for the Transmission Assets located landward of MLWS.

1.2.1.3 Onshore site preparation works will be undertaken prior to the commencement of construction. These works will be undertaken in accordance with this Outline Sand Lizard Mitigation Plan as certified through the DCO.

1.2.1.4 The scope of this Outline Sand Lizard Management Plan applies to the construction activities of the Transmission Assets located landward of Mean Lower Water Springs (MLWS). The Outline Sand Lizard Management Plan does not consider construction impacts seaward of MLWS on the basis that the species is highly unlikely to be encountered in habitats beyond the footprint of the dunes.

1.3 Roles and responsibilities

1.3.1.1 The key roles and associated responsibilities with regard to this Outline Sand Lizard Management Plan are set out within the outline Ecological Management Plan(s). The Construction (Design and Management) Regulations 2015 also identify the legal duties, responsibilities and obligations of all the major roles within the construction team.

1.4 Structure of this document

1.4.1.1 The structure of this document is as follows:

- Section 2 sets out the baseline information including a description of sand lizard population and data sources
- Section **Error! Reference source not found.** outlines the potential impacts considered in relation to sand lizard from construction activities and the avoidance and/ or mitigation measures that will be adopted.
- **Error! Reference source not found.**Section 44 outlines the approach to EPS licensing.

2 Baseline information

2.1 Sand Lizard Population

2.1.1.1 The sand lizard population at Lytham St Anne's dunes disappeared in the 1960s due to predation and habitat loss along the coastline. A captive-bred release programme resulted in the re-introduction of sand lizard to the dunes between 2017 and 2021, alongside habitat enhancement works (such as the burying of Christmas trees to encourage dune accretion) by the Fylde Sand Dunes Project,. A total of 412 captive-bred sand lizard hatchlings have been re-introduced over this period, and monitoring is undertaken annually¹.

¹ Fylde Sand Dunes Project webpage: <https://www.lancswt.org.uk/our-work/projects/fylde-sand-dunes>

2.2 Survey Data

- 2.2.1.1 Natural England in its response to Examining Authority's Q6.1.5 (REP3-095) states that "*Natural England is unable to advise further on the sufficiency/robustness of the evidence until further metadata is provided to inform the impacts of development on the species.*" Natural England state that this is due to the reliance on data used to interpret sand lizard distribution from a heat map collected from focal observations by the Fylde Sand Dunes Project, and that these data were not included in Annex 3.8: Great crested newt and reptile survey technical report (APP-082).
- 2.2.1.2 The Applicants did not undertake sand lizard surveys to inform the environmental impact assessment. This was on the basis that the dune habitat and the sensitive species they support including sand lizards, would not be significantly affected by the Transmission Assets.
- 2.2.1.3 Data confirming the presence of the species was provided through the desk study (see below).
- 2.2.1.4 The data kindly supplied to the Applicants by the Fylde Sand Dunes Project as part of the desk study for the onshore ecology chapter (APP-067) was gathered as part of its annual sand lizard monitoring programme. This confirmed the presence of sand lizards in the dunes, as expected given that the local population is well known because of the re-introduction scheme. The Fylde Sand Dunes Project surveyors have a survey licence from Natural England to undertake annual visual walkover presence/absence surveys for sand lizard between April and September.
- 2.2.1.5 Further surveys would only serve to continue to confirm the presence of sand lizards in the dunes, which has already been assumed for the purposes of impact assessment and the development of appropriate mitigation. In addition, this could cause there to be further disturbance to the sand lizard community. Collecting further metadata to predict the population size and distribution of sand lizard within the dunes would not change the approach to, or outcome of, the ecological impact assessment, or the approach to mitigation. It has been assumed that all areas of the dunes are equally suitable for and therefore likely to support this species and are equally (highly) sensitive to potential impacts from construction.

3 Avoidance and Mitigation Measures for Sand Lizard

- 3.1.1.1 The Applicants have considered the following potential impacts in relation sand lizards in Section 3.13.10 of Volume 3, Chapter 3: Ecology and Nature Conservation (APP-076)
- Damage to dune habitats supporting sand lizards due to construction activities
 - Damage and/ or disturbance to dune habitats due to vibration from construction
 - Disturbance to sand lizards due to noise and vibration from construction

- Damage and/ or disturbance to dune habitats due to increased footfall from construction workers
- Damage and/ or disturbance to dune habitats from increased vehicle movements on the beach and beach access road
- Risk of killing/ injury to sand lizards due to increased vehicle movements on the beach and beach road.

3.1.1.2 **Table 1** sets out the potential impacts and the relevant avoidance and/or mitigation measure to be implemented.

Table 1 Potential impacts considered and relevant avoidance and/or mitigation measures

Construction activity	Potential impacts	Consideration of potential effect on sand lizards and their habitats	Avoidance and/or mitigation measures
Offshore export cable installation between the landfall site at Lytham St Annes and Transition Joint Bays (TJBs)	Damage to dune habitats supporting sand lizards due to construction activities	There will be no direct impacts to the dunes during the construction phase because the Lytham St Annes Dunes SSSI will be crossed utilising trenchless techniques of which the exit pit will be situated 100 m seaward of the western boundary of Lytham St Annes SSSI. The Applicants have made a commitment (CoT44 of Volume 1, Annex 5.3: Commitments Register of the ES (AS-030)) to set out that the installation of the offshore export cables under Lytham St Annes SSSI and the St Annes Old Links Golf Course will be undertaken by direct pipe trenchless installation technique. This is secured by [Requirement 8 within Schedules 2A & 2B] of the draft Development Consent Order (AS-004). Detailed CoCP Plan(s) will be implemented by the Applicants as approved by the Relevant Planning Authority in consultation with relevant stakeholders, as appropriate.	<ul style="list-style-type: none"> The Applicants have made a commitment (CoT44 of Volume 1, Annex 5.3: Commitments Register of the ES (AS-030)) to set out that the installation of the offshore export cables under Lytham St Annes SSSI and the St Annes Old Links Golf Course will be undertaken by direct pipe trenchless installation technique of which the exit pit will be situated 100 m seaward of the western boundary of Lytham St Annes SSSI. This is secured by [Requirement 8 within Schedules 2A & 2B] of the draft Development Consent Order (AS-004). Detailed CoCP Plan(s) will be implemented by the Applicants as approved by the Relevant Planning Authority in consultation with relevant stakeholders, as appropriate. Transition Joint Bays will be located within Blackpool Airport which is at minimum 600 m from the SSSI boundary
Piling associated with the installation of the cofferdam required for the exit pits for the trenchless installation of the export cable beneath Lytham St Annes SSSI	Damage and/ or disturbance to dune habitats supporting sand lizard burrows due to vibration from construction activities	<p>There is potential for disturbance to sand lizard habitats due to piling associated with the installation of the cofferdam required for the exit pits for the trenchless installation of the export cable beneath Lytham St Annes SSSI</p> <p>The trenchless technique installation will be approximately between 10 – 30m below ground level beneath Lytham St Annes SSSI therefore there is no risk of direct contact</p>	<ul style="list-style-type: none"> The Applicants have made a commitment (CoT44 of Volume 1, Annex 5.3: Commitments Register of the ES (APP-037)) to set out that the installation of the offshore export cables under Lytham St Annes SSSI and the St Annes Old Links Golf Course will be undertaken by direct pipe trenchless installation technique of which the exit pit will be situated 100 m seaward of the

Construction activity	Potential impacts	Consideration of potential effect on sand lizards and their habitats	Avoidance and/or mitigation measures
		<p>with burrows during drilling activities, and there is a significant depth of substrate that would absorb vibration.</p> <p>The Applicants have made a commitment (CoT44 of Volume 1, Annex 5.3: Commitments Register of the ES (AS-030)) to set out that the installation of the offshore export cables under Lytham St Annes SSSI and the St Annes Old Links Golf Course will be undertaken by direct pipe trenchless installation technique. This technique reduces risks associated with frack out of drilling fluids or the collapse of the drill hole if unsuitable ground conditions are encountered along the drill profile.</p> <p>The sand lizard burrows within the dunes would be expected to at depths no greater than 1 m below ground and therefore would be very unlikely to be at a depth beneath the level of the dunes that would be adversely affected by vibration piling activities of exit pits situated 100 m seaward of the SSSI boundary.</p>	<p>western boundary of Lytham St Annes SSSI. This is secured by [Requirement 8 within Schedules 2A & 2B] of the draft Development Consent Order (AS-004). Detailed CoCP Plan(s) will be implemented by the Applicants as approved by the Relevant Planning Authority in consultation with relevant stakeholders, as appropriate.</p> <ul style="list-style-type: none"> Transition Joint Bays will be located within Blackpool Airport which is at minimum 600 m from the SSSI boundary The Applicants have made a commitment (CoT110 of Volume 1, Annex 5.3: Commitments Register of the ES (REF)) that there will be no works on the beach between November and March inclusive. This will also avoid works being undertaken in the hibernation period for sand lizard.
	Disturbance to sand lizards due to noise and vibration from construction activities	<p>The assessment identified the potential for disturbance to sand lizards occupying the dunes due to piling for cofferdams and cable installation using trenchless techniques.</p> <p>All lizard species have a similar hearing frequency range of approximately 0.1 – 5 kHz (Wever, 1978; Manley 2000; 2004). Research indicates that in all species, the auditory nerve fibres have V-shaped tuning</p>	<ul style="list-style-type: none"> The Applicants have made a commitment (CoT44 of Volume 1, Annex 5.3: Commitments Register of the ES (APP-037)) to set out that the installation of the offshore export cables under Lytham St Annes SSSI and the St Annes Old Links Golf Course will be undertaken by direct pipe trenchless installation technique of which the exit pit will be situated 100 m seaward of the

Construction activity	Potential impacts	Consideration of potential effect on sand lizards and their habitats	Avoidance and/or mitigation measures
		<p>curves with lowest thresholds at 5 dB Sound Pressure Level (SPL) and show phase locking (i.e. informing the direction and pitch of the sound to initiate a response in the auditory system) to low-frequency stimuli below approximately 1 kHz.</p> <p>The potential effects of construction noise and vibration are assessed in Volume 3 Chapter 8: Noise and vibration (APP-117), although this is relating to human health receptors and not to important ecological features. However, predicted noise levels during construction activities at the landfall site do not exceed 59dB at the nearest sensitive residential receptors (Dune Point, Century Care Home and Almond Close, of which both Dune Point and Century Care Home are located immediately adjacent to the dunes where sand lizards have been recorded off Clifton Drive North). This is comparative to noise levels during normal spoken conversation and would therefore not reasonably be expected to disturb sand lizards given that the dunes are already publicly accessible.</p> <p>The Outline Construction Noise and Vibration Management Plan (APP-196) states that it is anticipated that the Peak Particle Velocities (PPVs) from construction operations would be below 1.0 mms⁻¹ and no significant disturbance effects are predicted (Section 1.3). As the sand lizard burrows within the dunes would be expected to at depths no greater than 1 m below ground, they would be very unlikely to be at a depth beneath the</p>	<p>western boundary of Lytham St Annes SSSI. This is secured by [Requirement 8 within Schedules 2A & 2B] of the draft Development Consent Order (AS-004). Detailed CoCP Plan(s) will be implemented by the Applicants as approved by the Relevant Planning Authority in consultation with relevant stakeholders, as appropriate.</p> <ul style="list-style-type: none"> • Transition Joint Bays will be located within Blackpool Airport which is at minimum 600 m from the SSSI boundary • The Applicants have made a commitment (CoT110 of Volume 1, Annex 5.3: Commitments Register of the ES (REF)) that there will be no works on the beach between November and March inclusive. This will also avoid works being undertaken in the hibernation period for sand lizard.

Construction activity	Potential impacts	Consideration of potential effect on sand lizards and their habitats	Avoidance and/or mitigation measures
		level of the dunes that would be adversely affected by vibration piling activities.	
Construction workers moving on foot between construction activities on the beach and temporary Compounds 1, 2 and 3 (As shown on Figure 4 and 5 of REP1-040)	Damage and/ or disturbance to dune habitats due to increased footfall from construction workers	<p>The beach and sand dunes are publicly accessible, and therefore subject to existing potential damage/ disturbance pressure from users.</p> <p>Construction workers will only be on the beach/ beach access road commuting between the temporary site compounds and working areas on the beach, and will not be walking across or through the dunes. Similarly, construction workers will only be present within the beach working areas and in the temporary construction compound on the beach (compound 2). Construction workers will not need access to the dunes or the dune edge habitats during construction. The seaward boundary of the accreting dunes is already fenced with chestnut paling fencing at this location to discourage pedestrian access from the most sensitive areas of dunes</p> <p>The additional footfall from construction workers would not result in any significant increase in pedestrian activity along either the beach road or the beach itself, given the current baseline usage of this part of the coastline by recreational users.</p>	<ul style="list-style-type: none"> A toolbox talk will be provided by the ECoW to highlight the sensitive nature of the dunes and the flora and fauna species they support. Construction workers will be briefed as part of the toolbox talk not to walk on any part of the dunes, and foot access from the temporary site compound to the beach during construction will be restricted to the existing beach road to minimise the risk of disturbance to sand lizard. Appropriate waste disposal in the temporary site compound to ensure that there is no littering of the beach or dunes by construction workers. Any sightings of sand lizard will be reported to the ECoW.
Use of temporary compound 3 and access track from Clifton Drive North to Lytham St Annes	Damage and/ or disturbance to dune habitats	Temporary compound 3 already exists as a 'works compound', having been previously used for operations associated with the sand winning operations on the beach. The area is hard surfaced (although becomes covered	<ul style="list-style-type: none"> A toolbox talk will be provided by the ECoW to highlight the sensitive nature of the adjacent dunes and the flora and fauna species they support.

Construction activity	Potential impacts	Consideration of potential effect on sand lizards and their habitats	Avoidance and/or mitigation measures
beach during the construction period		<p>in wind-blown sand) and is periodically used for storage of materials and vehicles including the tractor and trailer used for beach maintenance.</p> <p>The compound (and beach road) is outside the boundary of the SSSI.</p>	<ul style="list-style-type: none"> • An ECoW will be present on site for any activities undertaken within the compound. • The ECoW supervising the works will hold a Natural England survey licence for sand lizards so that they have the necessary experience with the species to provide advice and guidance. • Any lizards encountered will be recorded and re-located to a place of safety away from the compound by the ECoW. • Where significant numbers of sand lizards are encountered, construction activities within the compound will be suspended and the advice of a licensed ecologist sought. • In the event that significant numbers of sand lizards are encountered, a European Protected Species (EPS) mitigation licence from Natural England may be required.

- 3.1.1.3 As outlined in Section 2.3, avoidance measures will predominately be used to ensure there is no impact to sand lizards. Where avoidance measures are not relevant, mitigation measures will be implemented. The final avoidance and/or mitigation measures to be implemented will be agreed with Natural England, Lancashire Wildlife Trust and the local authorities through discharge of the final sand lizard mitigation plan(s) as part of the ecological management plan(s).

4 Review of EPS Licensing Requirements

- 4.1.1.1 It is considered that any potential risks to sand lizard can be adequately managed through the adoption of the Sand Lizard Mitigation Plan(s), on the basis that there are no direct impacts from the Transmission Assets to the dunes themselves. Therefore, the risk of killing/ injury and/ or disturbance to sand lizards, and damage to the dunes is negligible with appropriate avoidance and mitigation measures.
- 4.1.1.2 However, the requirement for an EPS mitigation licence will remain under review as part of the pre-construction survey programme (along with requirements for any other EPS licences secured through requirement 13 of Schedules 2A and 2B of the draft DCO). Further surveys would be undertaken in the relevant survey season prior to the commencement of construction by a suitably licensed ecologist.
- 4.1.1.3 In the event that a Natural England EPS licence were to be obtained for the construction phase, this may necessitate the installation of temporary exclusion fencing around the working areas (including the beach access road) to prevent sand lizards from entering areas where people and/ or vehicles would be moving, and the capture and translocation of individuals.
- 4.1.1.4 If an EPS licence for sand lizard was subsequently determined to be necessary for construction activities on the beach, beach access road and/ or temporary compounds 2 and 3, it is likely that the mitigation strategy secured by the licence would follow that set out in this outline mitigation plan. This is because the installation of exclusion fencing, and the undertaking of a sand lizard capture and translocation programme, would be considered to result in a level of disturbance to the species and its sensitive habitats that would be disproportionate to the risks posed by the works.

5 References

Manley, G. A. (2000) *"The hearing organs of lizards", in Comparative Hearing: Birds and Reptiles*. Edited by Dooling, R. J., Fay, R. R., and Popper, A. (Springer-Verlag, New York), pp. 139 – 196.

Manley, G. A. (2004) *"The lizard basilar papilla and its evolution", in Evolution of the Vertebrate Auditory System*. Edited by Manley, G. A., Popper, A., and Fay, R. R. (Springer-Verlag, New York), pp. 200 – 223.

Wever, E. G. (1978) *The reptile ear: its structure and function*. Princeton University Press.