Environmental Impact Assessment Report
Volume 3, Appendix 23.9: Habitat Loss Calculations

MarramWind Offshore Wind Farm

December 2025

MarramWind

Document code:	MAR-GEN-ENV-REP-WSP-000138
Contractor document number:	852346-WEIS-IA-I6-RP-T7-893928
Version:	Final for Submission
Date:	08/12/2025
Prepared by:	WSP UK Limited
Checked by:	WSP UK Limited
Approved by:	MarramWind Limited

Contents

1. Introduction 3
1.1 Purpose of this baseline report 3
1.2 Supporting documents 3

2. Methodology 4
2.1 Estimating habitat loss / potential change 4
2.2 Footprint calculations 4
2.3 Zone of influence for temporary and indirect habitat loss 5
2.3.1 Temporary habitat loss – construction disturbance 5
2.3.2 Hydrological change – indirect effects 5

3. Results 6
3.1 Habitat loss – permanent loss and temporary disturbance 6

4. Abbreviations 9
4.1 Abbreviations 9

Table 2.1 Dimensions and extents of the project 4
Table 3.1 Predicted temporary disturbance effects to phase 1 habitats from infrastructure components 7
Table 3.2 Predicted permanent habitat loss to phase 1 habitats 8

1. Introduction

1.1 Purpose of this baseline report

1.1.1.1 This Appendix outlines the approach and assumptions of the process adopted to quantify onshore habitat loss, temporary disturbance and potential modification as a result of the construction of the Project.

1.1.1.2 This Appendix should be read in conjunction with **Volume 1, Chapter 4: Project Description** for full details of the Project and **Appendix 23.2: Habitats and Vegetation Survey Report** for details on the habitats recorded during the Phase 1 habitat survey.

1.1.1.3 Where there is uncertainty in the design layout (dimensions, extent etc.) various assumptions have been made regarding the construction methodology to arrive at realistic 'worst case' estimates.

1.1.1.4 Direct habitat loss, temporary disturbance and indirect modification has been calculated by overlaying the Geographic Information System footprint of Project infrastructure components on the Phase 1 habitat survey data collected to inform the Environmental Impact Assessment for the Project.

1.1.1.5 This Appendix describes the following:

- approach to estimating habitat loss / potential change;
- dimensions and extents of the onshore infrastructure components;
- rationale for habitat loss calculations; and
- habitat loss calculations.

1.2 Supporting documents

1.2.1.1 This Appendix supports **Volume 1, Chapter 23: Terrestrial Ecology and Ornithology** in addition to **Appendix 23.2**.

2. Methodology

2.1 Estimating habitat loss / potential change

2.1.1.1 Habitat features may be affected during the construction and operational stage of the Project as follows:

- **Direct habitat loss**: to accommodate the onshore infrastructure, such as the substation permanent access roads and attenuation ponds. These losses are considered permanent in the context of this assessment.
- **Disturbance / temporary habitat loss**: the effects of disturbance are variable in their extent, depending on the nature of the disturbance and sensitivity of the habitat feature. Some disturbance types (for example, temporary habitat loss for the creation of construction working areas) result in medium to long-term disturbance which require extended recovery periods. In other cases (for example, installation of onshore cables at the sides of access tracks, presence of a temporary construction compound and traversing of machinery) disturbance is short-term, and some habitat types are able to recover quickly.
- **Indirect effects**: these primarily relate to changes in hydrology of wetland habitats in the context of the onshore infrastructure, including dewatering of habitats, disruption to flow paths and changes to drainage regime.

2.2 Footprint calculations

2.2.1.1 The dimensions and extents of the onshore infrastructure elements for the Project are detailed in **Volume 1, Chapter 4: Project Description** and are summarised in **Table 2.1** below. 'Temporary' refers to the area required during construction works, whilst 'permanent' refers only to onshore infrastructure footprint post construction. Calculations assume the maximum footprint of construction activities for all landfall(s).

Table 2.1 Dimensions and extents of the project

Infrastructure component	Nature of infrastructure	Area (hectares (Ha))
Landfall(s)	Temporary access roads / haul roads.	1.2
	Temporary construction compound area (primary and secondary).	6.1
	Temporary working area (onshore export cable corridor).	76.4
Onshore cable 1 (onshore export cable corridor)	Temporary access roads / haul roads.	0.4
	Temporary construction compound area (primary and secondary).	2.6
	Temporary working area (onshore export cable corridor).	37.5
	Temporary access roads / haul roads.	0.3

Infrastructure component	Nature of infrastructure	Area (hectares (Ha))
Onshore cable 2 (onshore export cable corridor)	Temporary construction compound area (primary and secondary).	2
	Temporary working area (onshore export cable corridor).	27
	Temporary working area (primary construction corridor).	3.1
Onshore substation(s)	Temporary construction compound area.	3.1
	Temporary working area (onshore export cable corridor).	10.6
	Permanent substation buildings.	14.9
	Permanent access roads.	0.5
	Permanent attenuation ponds.	2.2

2.3 Zone of influence for temporary and indirect habitat loss

2.3.1 Temporary habitat loss – construction disturbance

2.3.1.1 As well as direct habitat losses there will be areas within the Onshore Red Line Boundary subject to temporary physical disturbance (for example, temporary construction laydown areas, temporary construction access routes and temporary construction compound comprising plant traffic and excavations etc.). Additionally, temporary works will be undertaken along the length of the onshore export cable corridor between the landfall(s) and the onshore substation(s), and from the onshore substation(s) to the Scottish and Southern Electricity Networks Netherton Hub.

2.3.1.2 The majority of soil excavated for cable trenches will be reinstated in the excavation after the onshore export cable corridor installation has been completed. It will be reinstated from the point of origin after the cables have been placed, which will be detailed in an Outline Construction Environmental Management Plan. As such, this will be treated as temporary disturbance figures.

2.3.2 Hydrological change – indirect effects

2.3.2.1 This assessment also considers the presence of wetland habitats that may be particularly sensitive to changes to surface water or groundwater hydrology resulting from construction activities associated with onshore infrastructure. Although there may be some construction disturbance experienced within the surrounding drier habitats, such habitats are expected to recover in the short term. As such, no indirect drainage effects with respect to the quality or composition of dry habitats is expected.

2.3.2.2 However, no wetland communities, blanket mire, wet heath and flush communities that might be subject to hydrological effects were recorded within a Zone of Influence of the Project, therefore calculations are solely permanent and temporary disturbance.

3. Results

3.1 Habitat loss – permanent loss and temporary disturbance

3.1.1.1 Based on Phase 1 habitat categories, **Table 3.1** and **Table 3.2** present the total estimated temporary and direct habitat loss respectively as a result of the construction of the onshore infrastructure.

3.1.1.2 All infrastructure components within **Table 3.1** incorporate temporary access tracks.

Table 3.1 Predicted temporary disturbance effects to phase 1 habitats from infrastructure components

Phase 1 habitat	Temporary disturbance (Ha)				
	Landfall(s)	Onshore export cable corridor 1	Onshore export cable corridor 2	Onshore substation site	Total
A2.1: Scrub- Dense / Continuous	0.08	0.1	0.7	0.1	**0.98**
A2.2: Scrub- Scattered	0.1	0.2	-	0.1	**0.4**
B2.2: Neutral grassland - semi-improved	3.1	0.4	2.6	0.1	**6.2**
B4: Improved grassland	10	29.4	13.7	12.7	**65.8**
B5: Marsh / marshy grassland	-	-	-	-	**-**
B6: Poor semi-improved grassland	5.1	0.1	-	0.2	**5.4**
C3.1: Tall ruderal	-	-	0.1	-	**0.1**
J1.1: Arable	65	9.7	13.1	0.2	**88**
J1.3: Ephemeral / short perennial	-	-	-	0.2	**0.2**
J.3.2: Species poor hedge and trees	-	0.4	-	-	**0.4**
G1: Standing water	-	-	0.1	-	**0.1**
J4: Bare ground	-	-	0.1	-	**0.1**
J5: Other habitat	0.4	0.2	0.1	-	**0.7**

Table 3.2 Predicted permanent habitat loss to phase 1 habitats

Phase 1 habitat	Permanent habitat loss (Ha)				
	Landfall(s)	Onshore export cable corridor 1	Onshore export cable corridor 2	Onshore substation site	Total
A2.1: Scrub- Dense / continuous	-	-	-	0.25	**0.25**
A2.2: Scrub- Scattered	-	-	-	0.1	**0.1**
B2.2: Neutral grassland - semi-improved	-	-	-	0.04	**0.04**
B4: Improved grassland	-	-	-	16.3	**16.3**
B5: Marsh / marshy grassland	-	-	-	0.4	**0.4**
J1.3: Ephemeral / short perennial	-	-	-	0.4	**0.4**
J4: Bare ground	-	-	-	0.12	**0.12**

4. Abbreviations

4.1 Abbreviations

Acronym	Definition
Ha	hectare
ZOI	Zone of Influence

MarramWind