



**N O R T H F A L L S**

*Offshore Wind Farm*

# **Environmental Statement Chapter 23 Onshore Ecology Supplemental Information - Technical Note**

Document Reference:	9.37
Volume:	9
Date:	March 2025
Revision:	0

## Environmental Statement Chapter 23 Onshore Ecology Supplemental Information - Technical Note



<b>Project</b>	North Falls Offshore Wind Farm
<b>Document Title</b>	Environmental Statement Chapter 23 Onshore Ecology Supplemental Information - Technical Note
<b>Document Reference</b>	9.37
<b>Supplier</b>	Royal HaskoningDHV
<b>Supplier Document ID</b>	PB9244-RHD-ZZ-ON-TN-ON-0368

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<b>Revision</b>	<b>Date</b>	<b>Status/Reason for Issue</b>	<b>Originator</b>	<b>Checked</b>	<b>Approved</b>
0	March 2025	Deadline 3	RHDHV	NFOW	NFOW

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## Glossary of Acronyms

DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
OWF	Offshore Wind Farm

## Glossary of Terminology

Bentley Road Improvement works	Works involving the widening and improvement of the carriageway along Bentley Road, required to facilitate heavy goods vehicle and abnormal indivisible load access to the onshore cable route and the onshore substation.
Onshore project area	The boundary within which all onshore infrastructure required for the Project will be located (i.e. landfall; onshore cable route, accesses, construction compounds; onshore substation and cables to the national grid substation)
The Applicant	North Falls Offshore Wind Farm Limited (NFOW).
The Project Or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure.

# 1 Introduction

## 1.1 Purpose of this document

1. Amendments have been made to the Tree Preservation Order and Hedgerow Plan **[APP-207]** submitted as part of the Development Consent Order (DCO) application, to accommodate discrepancies identified by the Applicant in relation to:
  - The baseline hedgerow dataset; and
  - The extent of hedgerow removal required to accommodate the Bentley Road Improvement works and construction access visibility splays.
2. An updated version of the Tree Preservation Order and Hedgerow Plan **[5.12 (Rev1)]**, incorporating these changes is being submitted into the Examination at Deadline 3.
3. In order to ensure the impacts assessed within the Project's Environmental Impact Assessment (EIA) have taken account of these amendments, a review of the impacts relating to hedgerows assessed within Environmental Statement (ES) Chapter 23 Onshore Ecology **[APP-037]** has been undertaken, the findings of which are reported within this Technical Note. This Technical Note therefore contains the following:
  - Summary of amendments to the 'worst case scenario' lengths of hedgerow impacted by the Project;
  - Review of the EIA for hedgerows and the ecological receptors they support, in light of these amendments; and
  - Review of the cumulative effects assessment for hedgerows and the ecological receptors they support, in light of these amendments.

## 2 Summary of Changes

4. Table 2.1 below summarises the changes in the length of hedgerow lost under the Project's worst case scenario.

**Table 2.1 Summary of changes in the quantity of hedgerows lost under the Project's worst case scenario.**

Hedgerow impact	Length at DCO submission (km)	New length (km)	Difference in length (km)
<b>Hedgerow retention</b>			
Hedgerow retained	3.128	3.920	+ 0.792
<b>Hedgerow lost</b>			
Hedgerow subject to removal at trenched crossings	0.481	0.481	0.000
Hedgerow subject to small-scale removal for haul road crossing	5.280	5.030	- 0.250

Hedgerow impact	Length at DCO submission (km)	New length (km)	Difference in length (km)
Hedgerow removal to facilitate Bentley Road improvement works	N/A	1.503	+ 1.503
<b>Total hedgerow lost</b>	<b>5.761</b>	<b>7.014</b>	<b>+ 1.253</b>

5. Following amendments to the baseline hedgerow dataset and a review of the extent of hedgerow removal required to accommodate the Bentley Road Improvement works and construction access visibility splays:
  - An additional 0.792 km of hedgerow is being 'retained' by the Project, i.e. it is located within the proposed onshore project area, but does not require removal to facilitate construction; and
  - An additional 1.253 km of hedgerow requires removal during construction, giving a total worst case scenario loss of hedgerow during construction of 7.014 km.
6. The majority of this amendment in hedgerow loss can be attributed to the addition of newly planted hedgerows at Bentley Road, which were not present at the time of baseline survey which informed ES Chapter 23 Onshore Ecology [APP-037].

### 3 Assessment of Significance

#### 3.1 Scoping of impacts which require review

7. Table 3.1 below provides a summary of the impacts assessed in ES Chapter 23 Onshore Ecology [APP-037], and details which of these require review within this Technical Note in light of the amendments to the lengths of hedgerow affected during the Project's construction presented in Section 2.

**Table 3.1 Impacts assessed in ES Chapter 23 Onshore Ecology [APP-037] and justification for review in this Technical Note.**

Impact	Need for review	Rationale
<b>Construction</b>		
Impact 1: Impacts to Holland Haven Marshes SSSI and LNR	No	No changes have been made to the lengths of hedgerow associated with Holland Haven Marshes SSSI and LNR.
Impact 2: Impacts to statutory and non-statutory designated sites (excluding Holland Haven Marshes SSSI / LNR)	No	No changes have been made to the lengths of hedgerow associated with statutory and non-statutory designated sites.
Impact 3: Permanent and temporary loss of saltmarsh	No	Hedgerows losses are not related to this impact.
Impact 4: Permanent and temporary loss of coastal and floodplain grazing marshes	No	Hedgerows losses are not related to this impact.

Impact	Need for review	Rationale
Impact 5: Permanent and temporary loss of woodland habitat including veteran trees	No	Hedgerows losses are not related to this impact.
Impact 6: Permanent and temporary loss of hedgerows	Yes	This impact directly assesses hedgerow losses and therefore the conclusions drawn at DCO submission need to be reviewed.
Impact 7: Permanent and temporary loss of rivers, ponds, reedbeds and lowland fen	No	Hedgerows losses are not related to this impact.
Impact 8: Permanent and temporary loss of arable field margins	No	Hedgerows losses are not related to this impact.
Impact 9: Permanent and temporary impacts on badgers	No	Hedgerows losses are not related to this impact.
Impact 10: Permanent and temporary impacts on bats	Yes	Bats rely on hedgerows as foraging and commuting and therefore the conclusions drawn at DCO submission need to be reviewed.
Impact 11: Permanent and temporary impacts on water voles and otters	No	Hedgerows losses are not related to this impact.
Impact 12: Permanent and temporary impacts on great crested newts	Yes	Great crested newts utilise hedgerows for shelter and commuting between breeding ponds and therefore the conclusions drawn at DCO submission need to be reviewed.
Impact 13: Permanent and temporary impacts on reptiles	No	Hedgerows losses are not related to this impact.
Impact 14: Permanent and temporary impacts on hazel dormice	Yes	Hazel dormice use hedgerows for nesting, commuting and foraging, and therefore the conclusions drawn at DCO submission need to be reviewed.
Impact 15: Permanent and temporary impacts on fish	No	Hedgerows losses are not related to this impact.
Impact 16: Spread of invasive non-native species	No	Hedgerows losses are not related to this impact.
<b>Operation</b>		
Impact 1: Temporary disturbance to habitats and species during maintenance activities	No	Changes to hedgerow data is experienced within the baseline only and does not affect the proposed
Impact 2: Disturbance to species from onshore substation operational noise and light	No	



Impact	Need for review	Rationale
Impact 3: Habitat improvements arising from biodiversity enhancements	No	operational design of the Project.
<b>Decommissioning</b>		
Decommissioning strategies have not yet been finalised; however, the impacts are expected to be the same as those of the initial construction phase.		

### 3.2 Review of Assessment of Significance

8. Those impacts identified in Table 3.1 have then been subject to further consideration to review whether the impacts assessed within ES Chapter 23 Onshore Ecology [APP-037] remain valid. The outcomes of this review are presented in Table 3.2 below. In particular, the rationale for the updated conclusions is provided within the table. This review has been undertaken in line with the methodology set out in Section 23.4 of ES Chapter 23 Onshore Ecology [APP-037].

**Table 3.2 Review of assessment of significance of effects upon selected onshore ecology receptors**

Construction impact	Magnitude of impact	Importance of receptor	Significance of effect	Additional mitigation measures proposed	Residual effect	Rationale for conclusions
Impact 6: Permanent and temporary loss of hedgerows	Low adverse in the short term ( <b>no change from DCO submission</b> ). Low beneficial in the long term ( <b>no change from DCO submission</b> ).	High ( <b>no change from DCO submission</b> ).	Moderate adverse in the short term ( <b>no change from DCO submission</b> ). Moderate beneficial in the long term ( <b>no change from DCO submission</b> ).	N/A	Moderate adverse in the short term ( <b>no change from DCO submission</b> ). Moderate beneficial in the long term ( <b>no change from DCO submission</b> ).	The additional quantity of hedgerow added to the Project's hedgerow losses are not substantial enough to change the magnitude of impact, and therefore does not change the significance of effect. All hedgerows lost to construction works, including those added to the baseline dataset, will be reinstated and enhanced post-construction. The remaining hedgerows will be retained in full and crossed using trenchless technologies. Following habitat reinstatement, the local hedgerow habitat resource is expected to improve in the long term as it will also incorporate biodiversity enhancements.  Additionally, the majority of the additional hedgerow length lost is associated with newly planted, immature hedgerow. These lengths are not suitably mature to provide wider ecological benefits within the assessed baseline.  Therefore, the assessment of significance remains as assessed at DCO submission.

Construction impact	Magnitude of impact	Importance of receptor	Significance of effect	Additional mitigation measures proposed	Residual effect	Rationale for conclusions
Impact 10: Permanent and temporary impacts on bats	Negligible – Medium adverse in the short term ( <b>no change from DCO submission</b> ).  Negligible – Medium beneficial in the short term ( <b>no change from DCO submission</b> ).	High ( <b>no change from DCO submission</b> ).	Negligible - Major adverse in the short term ( <b>no change from DCO submission</b> ).  Negligible - Moderate beneficial in the long term ( <b>no change from DCO submission</b> ).	Pre-construction surveys will be undertaken in advance of works commencing to identify any new features supporting roosting bats. Roosts requiring removal will be removed under EPS licence, and where appropriate will be replaced by bat boxes. Hedgerow removal and replanting to take place in winter to allow bats to become accustomed to habitat changes before breeding season. Hedgerow planting will be designed to encourage insect biomass. The Project will avoid veteran trees within hedgerows.	Negligible - Moderate adverse in the short term ( <b>no change from DCO submission</b> ).  Negligible - Moderate beneficial in the long term ( <b>no change from DCO submission</b> ).	Of the bat species recorded within the onshore project area, brown long eared <i>Plecotus auritus</i> and barbastelle bats <i>Barbastella barbastellus</i> are most likely to be affected in the short term by temporary hedgerow losses, due to their reliance on linear features for flight lines. In the short term the assessment of residual effects on brown long eared and barbastelle bats remains moderate adverse, as the additional quantity of hedgerow experiencing losses is not substantial enough to change the magnitude of impact, and therefore does not change the significance of effect. Following hedgerow reinstatement and enhancement post-construction, the long-term residual effect on barbastelle and brown long eared bats remains assessed as moderate beneficial.  Additionally, the majority of the additional hedgerow length lost is associated with newly planted, immature hedgerow. These lengths are not suitably mature to provide optimal foraging and commuting resource for bat species within the assessed baseline.

Construction impact	Magnitude of impact	Importance of receptor	Significance of effect	Additional mitigation measures proposed	Residual effect	Rationale for conclusions
						Therefore, the assessment of significance remains as assessed at DCO submission.
Impact 12: Permanent and temporary impacts on great crested newts	Low ( <b><i>no change from DCO submission</i></b> ).	High ( <b><i>no change from DCO submission</i></b> ).	Moderate adverse ( <b><i>no change from DCO submission</i></b> ).	DLL will be sought to ensure that potential indirect effects upon great crested newts are appropriately mitigated.	Minor adverse ( <b><i>no change from DCO submission</i></b> ).	<p>All suitable terrestrial habitats for great crested newts, including hedgerows, will be reinstated following completion of construction, as part of embedded mitigation for the Project.</p> <p>Additionally, the majority of the additional hedgerow length lost is associated with newly planted, immature hedgerow. These lengths are not suitably mature to provide suitable shelter or commuting corridors for great crested newts within the assessed baseline.</p> <p>Therefore, the assessment of significance remains as assessed at DCO submission.</p>
Impact 14: Permanent and temporary impacts on hazel dormice	Low ( <b><i>no change from DCO submission</i></b> ).	High ( <b><i>no change from DCO submission</i></b> ).	<p>Moderate adverse in the short term (<b><i>no change from DCO submission</i></b>).</p> <p>Moderate beneficial in the long term (<b><i>no change from DCO submission</i></b>).</p>	Trenchless techniques will be used to pass under all hedgerows which have confirmed dormice presence and where practicable will also be used under those identified as suitable to support dormice. Two dormice hedgerows will require a 6m swathe to be removed (if an existing gap/gateway in the hedgerow cannot be found) in order to install the haul road. At these hedgerows, clearance will take	<p>Minor adverse in the short term (<b><i>no change from DCO submission</i></b>).</p> <p>Moderate beneficial in the long term (<b><i>no change from DCO submission</i></b>).</p>	<p>None of the changed hedgerows are connected to or have confirmed presence of hazel dormice.</p> <p>Additionally, the majority of the additional hedgerow length lost is associated with newly planted, immature hedgerow. These lengths are not suitably mature to provide a suitable nesting or commuting for hazel dormice within the assessed baseline.</p>

Construction impact	Magnitude of impact	Importance of receptor	Significance of effect	Additional mitigation measures proposed	Residual effect	Rationale for conclusions
				place during the dormouse hibernation period, with temporary hedgerows used during the night time to mitigate habitat fragmentation. Where practicable, additional feeding sites and nesting boxes should be installed in hedgerows and woodland edges outside of the onshore project area, to accommodate for any hazel dormice disturbed by noise (English Nature, 2006).		Therefore, the assessment of significance remains as assessed at DCO submission.

### 3.3 Updated Cumulate Affects Assessment

9. As the review of the assessment of effects presented in Table 3.2 has concluded that there is no change to the effects assessed within ES Chapter 23 Onshore Ecology **[APP-037]**, there will be no change the conclusions regarding cumulative effects presented in ES Chapter 23 Onshore Ecology **[APP-037]**.

## 4 Summary

10. Hedgerow losses experienced by the Project have changed since DCO submission by the following lengths, as detailed in the updated Tree Preservation Order and Hedgerow Plan **[5.12 (Rev1)]**, being submitted into the Examination at Deadline 3:
  - An additional 0.792 km of hedgerow is being 'retained' by the Project, i.e. it is located within the proposed onshore project area, but does not require removal to facilitate construction.
  - An additional 1.253 km of hedgerow requires removal during construction, giving a total worst case scenario loss of hedgerow during construction of 7.014 km.
11. The majority of the additional hedgerow length lost is associated with newly planted, immature hedgerow at Bentley Road. These lengths are not suitably mature to provide wider ecological benefits within the assessed baseline.
12. The additional hedgerow lengths added to the baseline dataset and the subsequent changes in quantities lost to facilitate construction of the Project's Bentley Road improvement works and visibility splays are not substantial enough to change the overall significance of effects upon hedgerows and the ecological receptors they support as assessed in ES Chapter 23 Onshore Ecology **[APP-037]**. All hedgerows affected by construction will be reinstated and enhanced post-construction. Additionally, the local hedgerow habitat resource will improve in the long-term following reinstatement and enhancement. Therefore, the assessment of significance remains as assessed at DCO submission and no changes are required to the conclusions of ES Chapter 23 Onshore Ecology **[APP-037]**.
13. Cumulative effects also remain as assessed in ES Chapter 23 Onshore Ecology **[APP-037]** submitted at DCO, as a result of the assessment of significance remaining unchanged.



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## **HARNESSING THE POWER OF NORTH SEA WIND**

*North Falls Offshore Wind Farm Limited*

*A joint venture company owned equally by SSE Renewables and RWE.*

*To contact please email [contact@northfallsoffshore.com](mailto:contact@northfallsoffshore.com)*

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