Offshore Wind Power Limited

West of Orkney Windfarm Addendum to Offshore HRA

Addendum to the Report to Inform Appropriate Assessment - All Topics (Excluding Ornithology)

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West of Orkney Windfarm

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West of Orkney Windfarm

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1 INTRODUCTION

Offshore Wind Power Limited (OWPL) ('the Applicant') is proposing the development of the West of Orkney Windfarm ('the Project'), an Offshore Wind Farm (OWF), located at least 23 kilometres (km) from the north coast of Scotland and 28 km from the west coast of Hoy, Orkney.

The Applicant submitted an application for consent under Section 36 of the Electricity Act 1989 and Marine Licences under Part 4 of the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009 to Scottish Ministers in September 2023 ('the Offshore Application') for the offshore components of the Project seaward of Mean High Water Springs (MHWS) ('the offshore Project'). The offshore Project will consist of Wind Turbine Generators (WTGs) and all infrastructure required to transmit the power generated by the WTGs to shore.

In accordance with relevant Environmental Impact Assessment (EIA) Regulations[1], an Offshore EIA Report was submitted to Marine Directorate – Licensing Operations Team (MD-LOT) as part of the Applicant's Offshore Application. In addition, a Report to Information Appropriate Assessment (RIAA) was submitted as part of the Offshore Application to provide the Competent Authority (MD-LOT) with the information required to assist them in undertaking an Appropriate Assessment (AA) for the offshore Project as required under the Conservation (Natural Habitats & c.) Regulations 1994 (as amended), the Conservation of Marine Habitats and Species Regulations 2017 and The Conservation of Habitats and Species Regulations 2017 (as amended) (hereafter referred to as the 'Habitats Regulations'), to ensure compliance with the Habitats Directive (92/43/EEC).

The HRA process for the offshore Project screened out any Likely Significant Effects on European sites designated for Annex I Habitats, European sites designated for diadromous fish and associated features and European sites designated for marine mammal features (as documented within the original RIAA[2]). Following the receipt of representations from consultees, MD-LOT issued Additional Information Requests to the Applicant on 8th February 2024 and on 8th April 2024, requests relevant to the RIAA include an assessment of impacts to otter under the Habitats Regulations Appraisal (HRA) and European Protected Species (EPS) licensing, including in nearshore waters and at the coast, in the absence of assessment in the onshore EIA/HRA[3]. This Addendum to the RIAA has been prepared by HiDef Aerial Surveying Ltd and addresses this specific request.

No additional information has been requested on the conclusions of the RIAA in relation to Annex I Habitats and European sites designated for diadromous fish and associated features. While additional information on these topics is provided on the EIA, none of the information provided changes the conclusions of the HRA process and the RIAA.

Stakeholder consultation was undertaken throughout the Offshore EIA and HRA in relation to marine mammals and megafauna as outlined within section 12.3 of chapter 12: Marine mammals and megafauna. Consultation has

[1] *The relevant EIA Regulations include the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017, and the Marine Works (Environmental Impact Assessment) Regulations 2007.*

[2] *Available here: https://www.westoforkney.com/planning-consent/west-orkney-offshore-application.*

[3] *A separate Addendum to the RIAA - SPA Appropriate Assessment has been produced for the offshore and intertidal ornithology components of the original RIAA submitted as part of the Offshore Application.*

continued following the submission of the Offshore Application and will continue throughout the determination and the post-consent phase of the offshore Project.

The relevant documents previously submitted as part of the Offshore Application and Onshore Application that should be read alongside this document include:

- Offshore EIA Report Volume 1 – Chapter 12: Marine mammals and megafauna;
- Onshore EIA Report Volume 1 – Chapter 10: Terrestrial non-avian ecology;
- Onshore EIA Report Volume 2 - Supporting Study 6: Terrestrial non-avian ecology technical survey report; and
- Onshore RIAA (see Appendix A which provides extracts of this assessment for completeness).

In addition, Marine Mammals and Megafauna Additional Information, which forms part of the Offshore EIA Report Addendum, contains information on otter impacts and informs this Addendum to the RIAA.

2 STRUCTURE OF THIS DOCUMENT

This document has been structured as follows:

- Section 3 – summary of the Additional Information Request;
- Section 4 – additional information in response to the requests outlined in section 2;
- Section 5 – summary and conclusions;
- Section 6 – references; and
- Section 7 – acronyms.

3 REQUEST FOR ADDITIONAL INFORMATION

On the basis of NatureScot responses to the Offshore Application MD-LOT have requested (8th February 2024 and 8th April 2024) that additional information is provided with regards to the marine mammal and megafauna HRA.

A summary of the key matters raised in the MD-LOT Additional Information Request is included in Table 3-1, alongside the Applicant's response, where suitable, or cross references to where further information has been provided within this document.

Table 3-1 Summary of the HRA aspects of the MD-LOT Additional Information Request which are only relevant to marine mammals and megafauna

REQUEST	RESPONSE
NatureScot has advised that assessment of impacts to otter under HRA and EPS licensing, including in nearshore waters and at the coast, should be captured within the onshore EIA Report. MD-LOT note that it was agreed in the HRA screening response (dated 22 November 2022) that impacts to otter could be screened out on the basis that impacts within the sub-tidal zone would be assessed as part of the onshore HRA. If this is not taken forward in the onshore EIA/HRA then this should be considered within the offshore assessments as additional information.	Potential impacts to otters in the nearshore area and at the coast were not assessed in the onshore HRA. The Offshore EIA Report did not consider impacts to otters in the context of EPS licensing. Assessment of impacts to otter under HRA is provided in section 4.1. Assessment of impacts to otter in the context of EPS licensing is included in the Marine Mammals and Megafauna Additional Information.

4 ADDITIONAL INFORMATION

4.1 Assessment of impacts to otter under HRA

4.1.1 Introduction

MD-LOT and NatureScot responses to chapter 12: Marine mammals and megafauna of the Offshore EIA Report set out further requirements of the Applicant in regard to assessment of otters. It was requested that an assessment of impacts to otter under HRA and EPS licensing, including in nearshore waters and at the coast, to be captured within the Onshore EIA Report or provided within the offshore assessments as additional information.

Further Additional Information Requests were made on the topic of marine mammals and megafauna, in relation to the Offshore EIA Report, including impacts to otters as EPS, and are detailed in the Marine Mammals and Megafauna Additional Information.

This Addendum to the RIAA therefore provides an assessment of otter in nearshore waters and at the coast under HRA. This has been included in support of the Offshore Application and draws from information submitted in support of both the Onshore and Offshore EIA, the Onshore RIAA and the Offshore EIA Report Addendum.

Eurasian otter (*Lutra lutra;* hereafter 'otter') are semi-aquatic mammals which may inhabit rivers, lakes, coastal areas, and marshy areas some distance from open water. Coastal populations utilise shallow, inshore marine areas for feeding but depend on fresh water for bathing and terrestrial areas for resting and breeding holts. Otters particularly utilise waters less than 10 metre (m) deep and within 100 m from shore, where foraging dives are most likely to occur (Kruuk, 2006).

4.1.2 Otter surveys

As presented in the onshore Project application, the levels of otter activity within the onshore Project area were determined during the protected mammal surveys, undertaken as part of the extended Phase 1 habitat survey visits carried out between May and July 2022. This included searching for field signs of otter such as spraint, holts, couches, slides, feeding signs and footprints. Survey methodology followed relevant best practice guidelines (Bang & Dahlstrøm (2006), Chanin (2003) and Scottish Natural Heritage (2002)).

Whilst the figures show that the survey area was clipped to the shoreline, the survey area was comprised of the onshore Project area and a 250 m buffer, in addition to searching for otter activity at sea up to 100 m. No otter activity was recorded in the nearshore area to 100 m. Otter spraint was recorded within the intertidal zone at the onshore project area near Crosskirk, noting that otter signs within this zone would usually be quickly washed away, and indicating that otter are present in this area.

Full details of the survey methodology and results can be found in the Supporting Study 6: Terrestrial non-avian ecology technical survey report of the Onshore EIA Report.

4.1.3 Assessment of impacts to otter under HRA

Otter are listed as an Annex II species, whose conservation requires the designation of Special Areas of Conservation (SACs). Noting the NatureScot HRA screening advice (dated 28/10/2022), otter have been considered as part of the Onshore HRA assessment as a SAC qualifying feature under HRA within the Onshore RIAA. This considers the potential impact to otter landward of MLWS, from onshore Project activities including installation of the offshore export cables through Horizontal Directional Drilling (HDD) at the landfall.

One site, Caithness and Sutherland Peatlands SAC, was screened in for assessment in the Onshore RIAA, as it is within potential otter home range (up to 32 km; NatureScot, 2020) (Appendix A). Otter is the only qualifying feature of the Caithness and Sutherland Peatlands SAC, which was screened into the Onshore RIAA (Appendix A). This assessment concluded that there was no potential for adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.

4.1.3.1 Identification of European sites with connectivity

Considering the home range of otter (up to 32 km; NatureScot, 2020), Caithness and Sutherland Peatlands SAC is the only site with otter qualifying features within range of the offshore Project, located approximately 9.6 km from the landfall area. Therefore, there is no connectivity and no pathway for LSE between the offshore Project and otter from any other SAC.

4.1.3.2 Potential pathway for impact

4.1.3.2.1 Pathways for LSE screened out

The distance of Caithness and Sutherland Peatlands SAC from the landfall area (approximately 9.6 km) means there is no potential for direct impact from the offshore Project to otter within the site. However, considering otter are a mobile species, there is the potential for individuals to be affected outside the boundary of the SAC for which they are a qualifying species, such as during foraging or commuting.

In line with the position that embedded mitigation is not to be included for the purposes of determining the potential of LSE, the following potential impact pathways have been screened out for further assessment within this assessment (Table 4-1).

Table 4-1 Potential impact pathways screened out for further assessment of otter

PATHWAY SCREENED OUT	JUSTIFICATION
Impacts associated with the Option Agreement Area (OAA) during all project stages	Given the distance of the Option Agreement Area (OAA) to the north coast of Scotland (approximately 23 km), and that otter primarily only use nearshore habitats up to 100 m offshore (Kruuk, 2006), there is considered to be no potential pathway for impacts on otter from construction, operation and maintenance or decommissioning activities within the OAA.

PATHWAY SCREENED OUT	JUSTIFICATION
Operational stage impacts	During operation, the offshore export cables will be buried or protected at the seabed (e.g. rock protection, concrete mattresses, articulated pipes). The offshore export cables will bypass the intertidal area to the landfall options via HDD, meaning there will be no surface laid infrastructure between these points. Therefore, there will be no pathway for impact on otter.
Underwater noise	There is potential for underwater noise generation from cable installation activities, including geophysical surveys, installation of rock protection and HDD. However, otter hearing structures are not adapted for receiving underwater sound, meaning their hearing sensitivity is significantly reduced underwater, especially compared with other mammals that use the marine environment such as seals (Ghoul and Reichmuth, 2014). Therefore, there is considered to be no risk of injury or disturbance from underwater noise changes from the offshore Project.
Potential for direct loss, damage or disturbance to otter holts	There is no potential for impact to otter holts on land from the offshore works. Any disturbance to otter holts from the onshore Project has been assessed within the Onshore RIAA, which concluded that there was no potential for adverse effects on site integrity from the onshore Project on any SAC, alone and in-combination with other reasonably foreseeable plans and projects (Appendix A).

4.1.3.2.2 Pathways for LSE screened in

Only potential impact pathways from construction, maintenance and decommissioning of the offshore export cable have been screened into this assessment. These have been adapted from the pathways for LSE from the Onshore RIAA to apply to the nearshore environment, and are as follows (see Onshore RIAA):

- Visual/physical disturbance or displacement;
- Vessel collision; and
- Indirect impacts to otter and their foraging and commuting habitats.

There is potential for impacts to otter to occur from offshore Project activities occurring in the nearshore area. This includes cable lay and HDD.

HDD works at the landfall are anticipated to take place for up to six months, which may include limited 24 hour / 7 days working programme during the HDD works. The HDD exit point is expected to be at a water depth of between 10 and 40 m below Lowest Astronomical Tide (LAT) (1,200 m length duct), which is dependent on the location with suitable sediment cover. The detailed trenchless installation design, including the specific location of entry and exit points, is dependent on geotechnical investigations as well as the final location of the offshore export cable route for the offshore Project. Further to this, vessels used for cable lay and bringing the cable into the nearshore area will be temporarily present in the nearshore area during construction. Full details of the proposed activities are given in chapter 5: Project description of the Offshore EIA Report.

Should the cables need to be replaced or removed during maintenance or decommissioning, respectively, any impacts to otter are anticipated to be the same as, or less than those during construction.

4.1.3.3 Embedded mitigation measures

Embedded mitigation measures have been proposed in both chapter 10: Terrestrial non-avian ecology of the Onshore EIA Report (section 10.5.4) and chapter 12: Marine mammals and megafauna of the Offshore EIA Report (section 12.5.4), which reduce the potential for impacts to otter and have been considered within the following assessments.

The embedded mitigation measures detailed in chapter 12: Marine mammals and megafauna of the Offshore EIA Report include production and approval of an Environmental Management Plan (EMP), which will include measures to protect wildlife such as adherence to guidance and protocols supplied in the Guide to Best Practice for Watching Marine Wildlife (SNH, 2017). This guidance includes measures to reduce the potential for harm to otters, thus further reducing the potential for disturbance or interaction with otter.

Specific otter embedded mitigation measures listed in the Onshore RIAA (Appendix A Table 7-3) include appropriate methods of work and exclusion zones which will also reduce potential for impact to otter from the offshore Project. As discussed in section 6.4 (Table 6-5) of the Onshore RIAA (see extract A.3 in Appendix A), this includes the creation and implementation of a c (SHPP) to prevent harm to otter (and other protected species). The implementation of the SHPP will include pre-construction surveys for protected mammals (such as otter) as well as potentially notable habitats and this has been conditioned in the Planning Permission in Principle (PPP).

4.1.3.4 Caithness and Sutherland Peatlands SAC

Site characterisation information and conservation objectives related to otter for the Caithness and Sutherland Peatlands SAC, which are relevant to the following assessment, have been presented in section A.5.1 and A.5.2 of Appendix A).

4.1.3.5 Assessment of adverse effects from the offshore Project alone

4.1.3.5.1 Visual /physical disturbance or displacement

The physical presence of the offshore Project vessels, equipment and/or people may cause some temporary disturbance to otter should they be in the immediate vicinity of the proposed offshore Project activities. This may result in otter temporarily being displaced or avoiding their chosen feeding/resting location in the nearshore or coastal environment.

Otter are highly mobile and are likely to move to another nearby location for foraging whilst construction, maintenance or decommissioning activities are occurring. Signs of otter presence were detected throughout the onshore Project area, with higher activity recorded along the River Thurso and Forss Water, suggesting that these provide alternative suitable habitat for foraging during the landfall works. Additionally, the landfall works will also only affect a small area of the coastline north of the SAC, with access to the nearshore waters possible at other areas nearby. It is expected that otter will quickly be able to return to the area once construction, maintenance or

decommissioning activities are completed. Therefore, any temporary disturbance or displacement is unlikely to result in a permanent reduction in the otter population of Caithness and Sutherland Peatlands SAC.

Embedded mitigation measure for the production and approval of an EMP, which will include measures such as adherence to guidance and protocols supplied in the Guide to Best Practice for Watching Marine Wildlife (SNH, 2017) will reduce the potential for harm to otter, thus further reducing the potential for disturbance.

In conclusion, the proposed offshore Project activities will not have a significant effect on otter, due to their temporary and localised effects. Given the above and the implementation of the embedded mitigation measures, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC during construction, maintenance or decommissioning.

4.1.3.5.2 Collision with vessels

Vessels will be operating in the nearshore environment (<100 m) during cable landfall activities during construction, maintenance (if required) and decommissioning. As such, there is a risk of collision between otter and offshore Project vessels which could cause injury or death.

The key risk factors that contribute to collision are slow-moving, large-bodied animals, and moving vessels travelling at speed (Schoeman *et al.*, 2020). Whilst engaged in any proposed offshore Project activities in the nearshore, any vessel will be either stationary or travelling slowly, allowing otter to predict the movement of the vessels and allowing time to avoid collision. Additionally, it is anticipated that the presence of vessels, work crews and other equipment in the nearshore and coastal areas during the proposed activities will deter individuals from using the nearshore and coastal area during works. Embedded mitigation measures such as production and approval of an EMP, which will include adherence to guidance and protocols supplied the Guide to Best Practice for Watching Marine Wildlife (SNH, 2017), which will also further reduce the potential for interaction between otter and offshore Project vessels.

Therefore, it is highly unlikely for vessel collision with otter during nearshore activities. Given the above and the implementation of the embedded mitigation measures, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC.

4.1.3.5.3 Indirect impacts to otter and their foraging and commuting habitats

Disturbance or displacement of otter prey species in the nearshore area, such as small fish, may occur during nearshore and landfall works, which could affect the availability of prey for otter during foraging in the immediate vicinity of the landfall works.

Otter are highly mobile and are likely to move to another nearby location whilst construction, maintenance or decommissioning activities are occurring. Signs of otter presence were detected throughout the onshore Project area, with higher activity recorded along the River Thurso and Forss Water, suggesting that these provide alternative suitable habitat for foraging during the landfall works. Additionally, the landfall works will also only affect a small area of the coastline north of the SAC, with access to the nearshore waters possible at other areas nearby. Therefore, any temporary disturbance or displacement is unlikely to result in a permanent reduction in the otter population of Caithness and Sutherland Peatlands SAC.

As presented in chapter 11: Fish and shellfish ecology of the Offshore EIA Report, the potential for 'Temporary increases in suspended sediment concentrations and associated sediment deposition' and 'Accidental release of pollutants' effects on fish were both scoped out of the assessment (see Table 11-13 of chapter 11: Fish and shellfish ecology of the Offshore EIA Report for full justification). Increases to suspended sediment concentrations will be temporary (due to strong currents in the area) and localised; fish, and potential prey of otter, are expected to be tolerant to temporary increases. The risk and impact of accidental releases of hazardous substances will be reduced through the implementation of measures and good practice set out in the EMP. Therefore, these impacts will not give rise to an adverse effect on site integrity of Caithness and Southerland Peatlands SAC.

In conclusion, it is deemed that the proposed offshore Project activities will not have a significant effect on otter through indirect impacts to their foraging and commuting habitats, due to their temporary and localised effects and there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC during construction, maintenance or decommissioning.

4.1.3.6 Assessment of adverse in-combination effects

In-combination impacts on Caithness and Sutherland Peatlands SAC from the onshore Project with other developments have been considered within the Onshore RIAA (see section A.5.4 of Appendix A). The developments screened in for in-combination assessment within the Onshore RIAA (Table 7-5) have been reviewed and are also considered to be applicable for the assessment of potential offshore export cable impacts on otter in the nearshore and coastal environment and have been screened in for assessment. This has also been cross-checked with developments considered in the cumulative assessment presented in chapter 12: Marine mammals and megafauna of the Offshore EIA Report (see section 12.7).

Ecology information, including for otter, was available for the following developments:

- ESB Asset Development Synchronous Compensator (TNEI Services Ltd, 2020); and
- Pentland Floating Offshore Wind Farm Onshore Substation and Onshore Cable (Caledonian Conservation Ltd, 2022).

None of these developments identified otter shelters during their associated ecological surveys and no measurable loss of valuable otter foraging habitat was identified. As for this Project, all of these developments are committed to following equivalent best practice measures. Although full ecology information is not available for Scottish Hydro Electric Transmission (SHET) Dounreay West Substation, The Highland Council (THC) documents indicate that with mitigation in place, no impacts on otters were predicted. No mention is made of otter in the documents accompanying the approval for the other developments.

The in-combination assessment in the Onshore RIAA concluded that there was no measurable increase in potential effects upon otter predicted and there would be no adverse impact on site integrity of the Caithness and Sutherland Peatlands SAC.

All impacts of the offshore Project alone have been assessed as being negligible in magnitude, with no adverse effects predicted from any potential impact pathway. There are no impacts on otters predicted at any other development within otter foraging range of the offshore Project, Therefore, there are considered to be no in-combination impacts on otter arising from the offshore Project with any other development.

As in the Onshore RIAA, assuming other developments also follow industry standard practice guidance and implement similar mitigation measures where necessary, no measurable increase in potential effects upon this protected species is predicted. Consequently, the effect of in-combination impacts as a result of disturbance, injury or indirect effects to commuting or foraging otter will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

5 SUMMARY AND CONCLUSIONS

This Addendum to the RIAA has been prepared in response to the MD-LOT Additional Information Requests. The potential for impacts to otter from Caithness and Sutherland Peatlands SAC have been assessed, as the only SAC within foraging range of the offshore Project export cable landfall area. Potential impacts from 'Visual / physical disturbance or displacement', 'Vessel collision' and 'Indirect impacts to otter and their foraging and commuting habitats' were considered. Embedded mitigation measures presented in the Onshore EIA Report, Onshore RIAA and the Offshore EIA Report, including the production of SHPP and an offshore EMP, the latter which will include measures to protect wildlife such as adherence to guidance and protocols supplied in the Guide to Best Practice for Watching Marine Wildlife (SNH, 2017). The SHPP and EMP will include measures to reduce the potential for harm to otter. All assessments concluded that there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC during construction, maintenance or decommissioning activities.

6 REFERENCES

Bang, P. and Dahlstrøm, P. (2006). Animal Tracks and Signs. Oxford University Press, Oxford.

Caledonian Conservation Ltd. (2022). Pentland floating offshore wind farm. Volume 2: Onshore EIAR. Chapter 9: Terrestrial Ecology. Dounreay Tri Limited.

Chanin, P. (2003). *Monitoring the Otter Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No. 10. English Nature, Peterborough.

Ghoul, A. and·Reichmuth, C. (2014). Hearing in the sea otter (*Enhydra lutris*): auditory profiles for an amphibious marine carnivore, *Journal of Comparative Physiology A*. 200(11):967-81.

Kruuk (2006). Otters: ecology, behaviour and conservation. Oxford University Press, USA.

NatureScot. (2020). *Otter*. Available online at: https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/otter [Accessed 23/07/2024].

NatureScot (2022). Caithness and Sutherland Peatlands Special Area of Conservation (SAC), Conservation Advice Package. Available online at: https://sitelink.nature.scot/site/8218 [Accessed 16/10/2023].

OWPL (2023). Onshore HRA: Report to Inform Appropriate Assessment. Available online at: https://www.westoforkney.com/download_file/212/274 [Accessed 23/07/2024].

Schoeman, R.P., Patterson-Abrolat, C. and Plön, S. (2020). A Global Review of Vessel Collisions with Marine Animals. *Frontiers in Marine Science*, 7, 292.

Scottish Natural Heritage (SNH) (2002). Scotland's Wildlife: Badgers and Development. SNH, Battleby. Available online at: https://digital.nls.uk/pubs/e-monographs/2020/216649951.23.pdf . [Accessed 23/07/2024].

SNH (2017). *A Guide to Best Practice for Watching Marine Wildlife*. Available online at: https://www.nature.scot/doc/guide-best-practice-watching-marine-wildlife-smwwc [Accessed 23/07/2024].

TNEI Services Ltd. (2020). Spittal Synchronous Compensatory, ESB Asset Development (UK) Ltd. Environmental Report.

7 ACRONYMS

ACRONYM	DEFINITION
AA	Appropriate Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPS	European Protected Species
HDD	Horizontal Directional Drilling
HRA	Habitats Regulations Appraisal
km	kilometre
LAT	Lowest Astronomical Tide
LSE	Likely Significant Effect
M	Metre
MD-LOT	Marine Directorate - Licensing Operations Team
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
OAA	Option Agreement Area
OWF	Offshore Wind Farm
OWPL	Offshore Wind Power Limited
PPP	Planning Permission in Principle
RIAA	Report to Inform Appropriate Assessment

ACRONYM	DEFINITION
SAC	Special Area of Conservation
SHET	Scottish Hydro Electric Transmission
SHPP	Species and Habitat Protection Plan
THC	The Highland Council
WTG	Wind Turbine Generator

APPENDIX A EXTRACTS FROM THE ONSHORE RIAA

This appendix provides extracts of the Onshore RIAA in order to ensure the full context of the assessment of otter is available.

Extracts have been provided which cover the Onshore RIAA assessment of otter, text has only been altered where the cross referencing within the Onshore RIAA would not have been correct. The full Onshore RIAA is available here for reference: https://www.westoforkney.com/download_file/212/274

A.1 Introduction

This section provides an assessment of the adverse effects from the onshore Project on SACs and Ramsar sites designated for the conservation of Annex II species which have been screened into the assessment. This section also provides information used to assess adverse effects of the onshore Project on the conservation objectives of the SACs screened in for assessment.

A.2 Summary of onshore HRA Screening

Table 7-1 presents the SACs that have been screened into the assessment, in accordance with feedback in the HRA Screening Response.

Table 7-1 List of European sites designated for Annex II otter considered within the Onshore RIAA

SITE NAME	QUALIFYING INTEREST / FEATURES	DISTANCE TO ONSHORE SUBSTATION SEARCH AREA (KM)	DISTANCE TO ONSHORE EXPORT CABLE CORRIDOR (KM)
Caithness and Sutherland Peatlands SAC / Ramsar	Otter	7.0	5.4

The impact pathways for which potential LSE could not be ruled out during HRA Screening are presented in Table 7-2.

Table 7-2 Impact pathways screened into the Onshore RIAA for Annex II otter

RECEPTOR	ONSHORE PROJECT STAGE	POTENTIAL PATHWAY
Otter	Construction and decommissioning	• Direct loss or fragmentation of suitable otter foraging and commuting habitat due to land-take.

RECEPTOR	ONSHORE PROJECT STAGE	POTENTIAL PATHWAY
		• Potential for direct loss, damage or disturbance to otter holts during construction works. • Potential for direct injury or mortality to otter through the movement of plant and other site vehicles through the site and due to deep excavations and uncapped piping. • Direct disturbance to commuting or foraging otter. • Indirect impacts to otter and their foraging and commuting habitats.
	Operation and maintenance	• Direct loss or fragmentation of suitable otter foraging and commuting habitat through operation and maintenance activities. • Potential for direct loss, damage or disturbance to otter holts during operation and maintenance works. • Potential for direct injury or mortality to otter through the movement of maintenance vehicles through the site during the operation and routine maintenance of the site. • Direct disturbance to commuting or foraging otter. • In-direct impacts to otter and their foraging and commuting habitats.

A.3 Embedded mitigation

As described in the EIA methodology (chapter 7: EIA methodology of the Onshore EIA Report), certain primary embedded mitigation measures have been adopted as part of the Project development process in order to reduce the potential for impacts to the environment. These primary embedded mitigations, relevant to otter and Atlantic salmon, have been accounted for in the assessment of adverse effects on site integrity and are detailed within Table 7-3 below. Additionally, tertiary embedded mitigation measures that apply specifically to otter and Atlantic salmon, such as any management plans to be produced at post-consent for the onshore Project, are also described in Table 7-3.

In accordance with the onshore Planning Permission in Principle (PPP) Application, the embedded primary and tertiary mitigations listed below have been attributed to particular Development Zones within the onshore Project area, these are detailed in Table 7-3 and presented in Figure 7-1 and Figure 7-2.

Table 7-3 Embedded mitigation measures relevant to Annex II otter

ID	MITIGATION MEASURE	FORM (PRIMARY OR TERTIARY)	HOW MITIGATION WILL BE SECURED	DEVELOPMENT ZONE APPLICABLE
Otter				
O1	Onshore cable routeing and avoidance of sensitive areas. The boundary of the onshore Project has been developed to avoid sensitive areas (peatland, Groundwater Dependent Terrestrial Ecosystems (GWDTEs), designated areas) wherever possible. Where impacts cannot be avoided, these will be minimised. Consideration of non-avian ecology sensitivities as part of the constraints mapping exercise to inform final cable routes and associated construction infrastructure. If sensitive areas are unavoidable, targeted specific National Vegetation Classification (NVC) surveys as agreed with NatureScot post-consent will be carried out within a 250 m buffer ahead of construction works to allow for the micrositing of the route to avoid particularly sensitive habitats and notable or protected plant species in the onshore Project area.	Primary	Established within the design principles (secured through CMSs.	All zones
O2	Where possible, the following buffers between GWDTEs and excavations will be implemented: • 250 m for the onshore export cable corridor and any other excavations greater than 1 m in depth; and • 100 m for excavations less than 1 m in depth.	Primary	As per Outline Management Plan (OMP) 1: Outline Construction Environment Management Plan (CEMP) of the Onshore EIA Report, these measures will be established within the Pollution Prevention and Control Plan and the final CEMP. Drainage and Flood Risk Plan which will be appended to the final CEMP. Outline provided within SS3: Flood risk and drainage assessment.	All zones

ID	MITIGATION MEASURE	FORM (PRIMARY OR TERTIARY)	HOW MITIGATION WILL BE SECURED	DEVELOPMENT ZONE APPLICABLE
	If the onshore export cable corridor is located within 250 m of any GWDTEs, clay stoppers will be included in the onshore export cable corridor trench to prevent them from acting as preferential pathways for drainage.			
O3	Return location to pre-construction state (all locations). Once an area is no longer required for construction, it will be re-instated, where possible, to ensure it can return to its original use for the remainder of the construction period and operational period. The only exception to this will be permanent infrastructure including the substation and tracks, where habitat loss will be permanent. Where habitat is to be reinstated, turfs will be removed to a suitable storage point where they will be maintained during works. Topsoil and subsoil, where applicable, will also be stored separately, and excavations backfilled with these materials to maintain the original stratification as well as is practical. Turfs will then be replaced as close to their original location as possible. Due to the temporary and short-term nature of most construction activities, this method will allow the reinstatement of habitat immediately after works are completed in a given area.	Primary	Established through design principles (secured through CMSs). These measures will also be established within the Habitat Management Plan (HMP) and the SHPP. These plans will be secured through conditions attached to the PPP. Landowner Agreements.	All zones.
O4	Minimisation of watercourse crossings where possible (i.e., reduce the number of crossings and the impact of each crossing through the implementation of appropriate techniques such as HDD).	Primary	Established within the design principles (secured through CMSs) and secured through conditions attached to the PPP.	All zones.
O5	Ensure appropriately qualified Ecological Clerk of Works (ECoW) presence at sensitive locations and/or sensitive periods. The SHPP will include details of a watching brief which will ensure that the correct procedure can be followed if an otter is found during devegetation or ground-breaking works. When the ECoW is not present on site, works must stop within 30 m of the	Primary	The requirement for ECoW(s) will be secured through a condition attached to the PPP. The SHPP will also include the requirements for ECoW(s). The SHPP will be secured through a condition attached to the PPP.	All zones.

ID	MITIGATION MEASURE	FORM (PRIMARY OR TERTIARY)	HOW MITIGATION WILL BE SECURED	DEVELOPMENT ZONE APPLICABLE
	protected species; as soon as it is safe to do so. Advice must then be sought from the ECoW and an approach agreed upon with NatureScot (if appropriate) prior to works recommencing.		Where appropriate Derogation (EPS) Licences will be obtained from NatureScot.	
O6	Create and implement SHPP - Measures to prevent harm to otter. Pre-construction surveys for otter will be undertaken to identify any animals making use of the onshore Project area ahead of any works occurring within 200 m of a watercourse. In the event that otter are likely to be impacted by the works, specific mitigation would be developed in consultation with NatureScot. For example, in the event that the onshore Project cannot be sited to avoid potential effects on an otter shelter, works would only be carried out under a NatureScot otter Derogation (EPS) Licence, with appropriate mitigation and compensation measure implemented to ensure that otter are maintained at a favourable conservation status within the onshore Project area.	Tertiary	Establish within design principles and these measures will also be established within the SHPP. The SHPP will be secured through a condition attached to the PPP. Where appropriate Derogation (EPS) Licences will be obtained from NatureScot.	All zones
O7	The CEMP will outline how the onshore Project will ensure the suitable implementation and control of the mitigation measures during construction. An outline CEMP (OMP1: Outline CEMP) is provided alongside the Application for PPP.	Tertiary	As per OMP1: Outline CEMP of the Onshore EIA Report, the final CEMP will be provided at post-consent. The final CEMP will be secured through a condition attached to the PPP.	All zones.
O8	Control of diffuse and point source pollution. Pollution prevention and control measures will be implemented in accordance with the latest legislation and guidance from SEPA. This includes utilisation of best practice sediment management techniques and employment of best practice pollution prevention techniques.	Tertiary	As per OMP1: Outline CEMP of the Onshore EIA Report, these measures will be established within the Pollution Prevention and Control Plan and DAQMP which will be appended to the final CEMP.	All zones

ID	MITIGATION MEASURE	FORM (PRIMARY OR TERTIARY)	HOW MITIGATION WILL BE SECURED	DEVELOPMENT ZONE APPLICABLE
	The final CEMP will include a Pollution Prevention and Control Plan in accordance with SEPA's Pollution Prevention Guidelines. A Dust and Air Quality Management Plan (DAQMP) will also be produced within the final CEMP.		The CEMP will be secured through a condition attached to the PPP. These measures will also be secured through conditions of CAR authorisations, if required.	
O9	Decommissioning, Restoration and Aftercare Plan A Decommissioning, Restoration and Aftercare Plan will be prepared for the onshore Project and agreed with the Planning Authority prior to decommissioning works being undertaken. The plan will include any measures required to protect otter during decommissioning which are likely to be similar to those proposed within the CEMP.	Tertiary	Established within the design principles (secured through CMSs) and the Decommissioning, Restoration and Aftercare Plan which will be secured through a condition attached to the PPP.	All zones

A.4 Otter baseline

When considering the potential effects of a project on otter as a qualifying interest of an SAC, it is important to consider the high mobility of the species. Such mobility results in the potential for individuals to be affected outside the boundary of the SAC for which they are a qualifying species. In accordance with chapter: 10: Non-avian ecology of the Onshore EIA Report, an initial approach is adopted which considers the Caithness and Sutherland Peatlands SAC where there is a potential impact pathway between the qualifying interest (i.e., otter) and the onshore Project. The assessment takes into account records of otter within 2 km of the onshore Project area, evidence of otter activity within the onshore Project area and the suitability of the habitats present for this species.

The levels of otter activity within the onshore Project area were determined during the protected mammal surveys, undertaken as part of the extended Phase 1 habitat survey visits carried out between May and July 2022. The onshore study area, comprising the onshore Project area and a 250 m buffer area, were searched for field signs of otter including spraint, holts, couches, slides, feeding signs and footprints. Survey methodology followed relevant best practice guidelines (Bang & Dahlstrøm (2006), Chanin (2003) and Scottish Natural Heritage (2002)). All signs of otter, and habitat meeting the ecological requirements of otter, were recorded as descriptive target notes. Locations were recorded using a hand-held Global Positioning System (GPS) device and photographs were taken where appropriate. A desk study was also undertaken. For otter, this encompassed the onshore Project area plus a 2 km buffer.

The methodology for assessing impacts is as per the chapter 10: Non-avian terrestrial ecology of the Onshore EIA Report.

A.4.1 Survey findings

The field surveys identified evidence of otter activity along named watercourses and drains throughout the onshore study area, with higher levels of activity recorded along the River Thurso and Forss Water and no evidence of activity at the onshore substation search area. Evidence of otter activity included spraint sites, paths, slides and couches, with two holts located within the onshore Project area along Forss Water.

The highest quality habitat for otter was assessed to be along the River Thurso and Forss Water. Habitats of moderate suitability included tributaries of the River Thurso and Forss Water, whilst habitats of a lower suitability included field drains. Although it is expected that otter more frequently utilise the higher suitability habitats, it is expected otter could utilise any riparian areas within the onshore Project area; as indicated by the baseline survey results.

Figure 7-1 and Figure 7-2 show the location and nature of the evidence of otter activity identified within the onshore study area.

The subsequent SAC-specific assessments included an evaluation of the Caithness and Sutherland Peatlands SAC conservation objectives and the potential adverse effects of the onshore Project upon the SAC and qualifying otter features of interests. Full details of the survey methodology and results can be found in Supporting Study 6: Non-avian ecology technical survey report of the Onshore EIA Report.

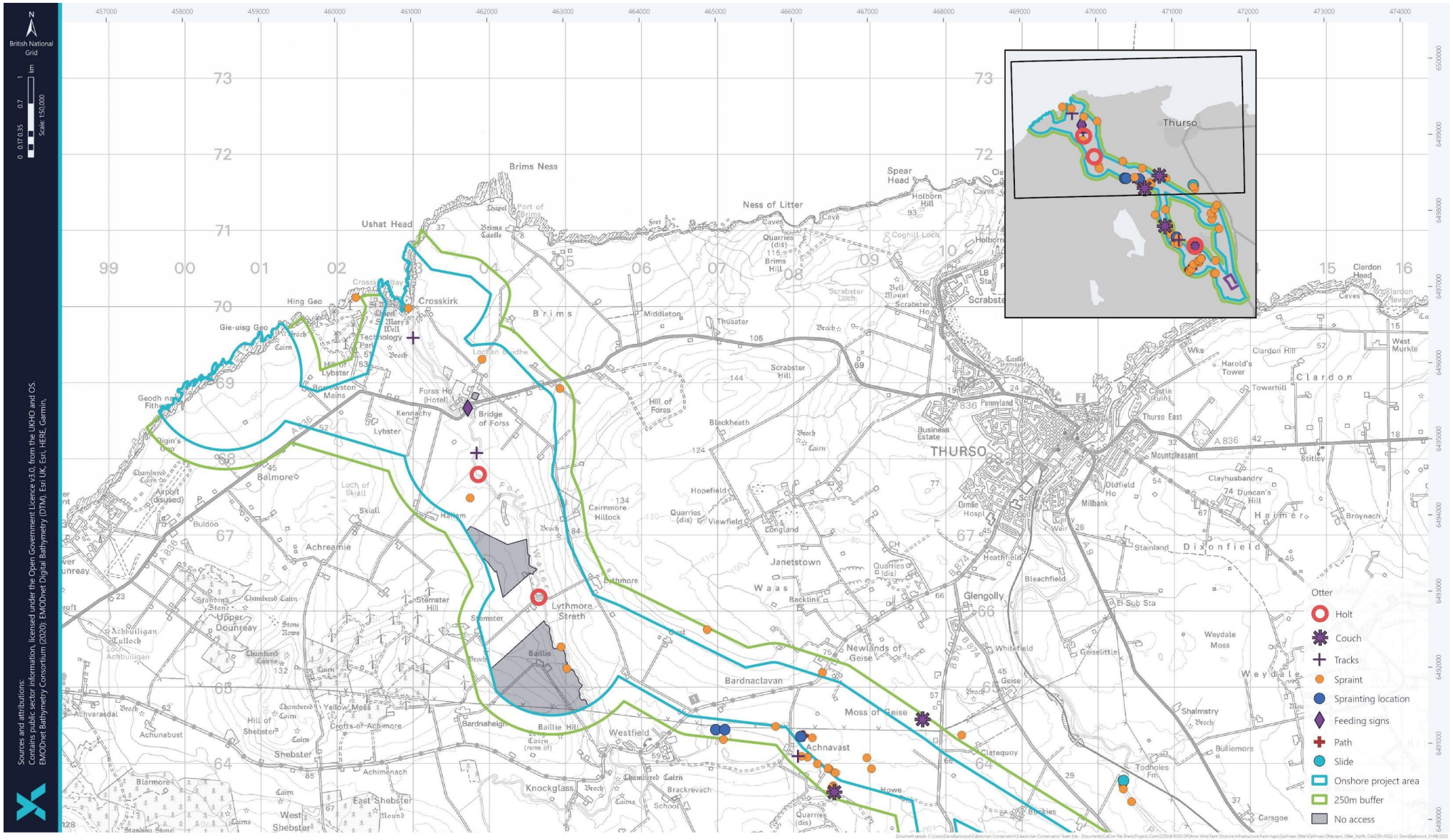

Figure 7-1 Evidence of otter activity within the northern section of the onshore study area

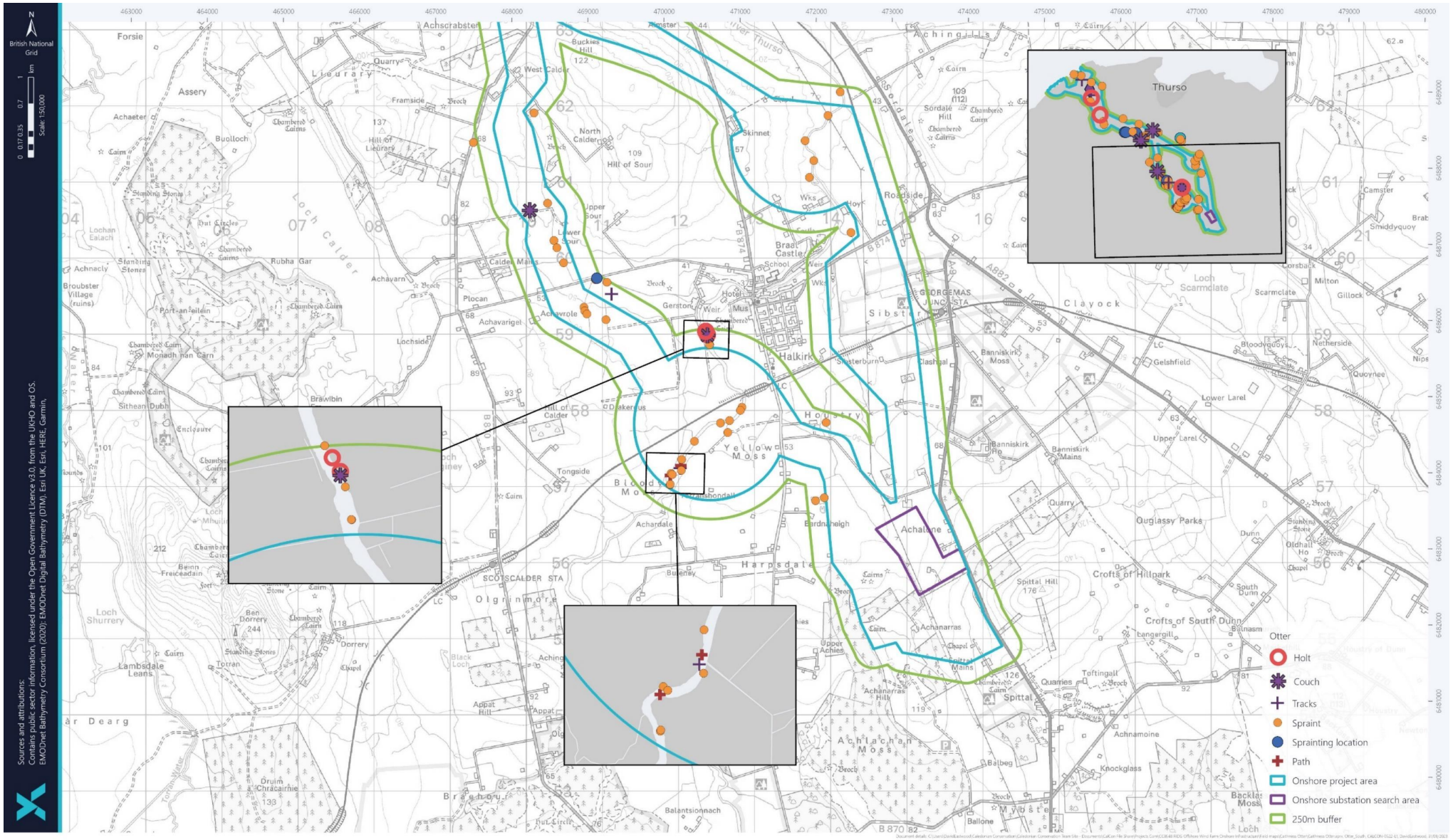

Figure 7-2 Evidence of otter activity within the southern section of the onshore study area

A.5 Caithness and Sutherland Peatlands SAC and Ramsar site

A.5.1 Site details and qualifying interests

The Caithness and Sutherland Peatlands SAC was first classified in January 1996 and is located 5.4 km south-west from the onshore Project area. The SAC is an extensive site covering over 143,000 ha of land in Northern Scotland. Its general site character includes inland waterbodies, bogs, marshes, fens, water-fringed vegetation, heath, scrub and dry grassland. It has been designated for a number of Annex I habitats and Annex II species; including otter. The site contains numerous lochs, lochans and extensive areas of headwaters of burns and rivers. There is extensive habitat suitable for otter and this is reflected in the presence of a good population, representative of the northern mainland of Scotland (NatureScot, 2022).

Following a consultation response from NatureScot on the Onshore HRA Screening Report (OWPL, 2023), the only qualifying feature of the Caithness and Sutherland Peatlands SAC and Ramsar site which has been screened into this RIAA is otter. The feature condition and broader conservation status of this qualifying interest are summarised in Table 7-4.

Table 7-4 Qualifying interests and conditions of the Caithness and Sutherland Peatlands SAC

QUALIFYING INTEREST	FEATURE CONDITION	ASSESSMENT DATE	BROADER CONSERVATION STATUS
Otter	Unfavourable Declining	9th September 2011	Historically, otters occurred over most of the UK. However, persecution, habitat loss and, more recently, the impact of toxic organochlorine insecticides caused a marked reduction in the range of this species. At present, the majority of the otter population in Great Britain occurs in Scotland, with a significant portion of this number being found in the north and west of the country. In Europe, populations declined sharply during the 1960s and 1970s due to pollution. This decline was exacerbated by hunting and habitat loss. Currently, otter is scarce to extinct over most of continental western Europe, whilst it has a discontinuous distribution over eastern Europe, with strong populations in Greece, Spain and Portugal.

A.5.2 Conservation objectives for otter in the Caithness and Sutherland Peatlands SAC

Otter, a qualifying feature of the Caithness and Sutherland Peatlands SAC[4], are currently assessed as 'unfavourable declining' (NatureScot, 2022).

The conservation objective is considered to be met if the conditions for the species' long-term existence are in place (NatureScot, 2022). These include:

- Avoiding effects that could lead to a permanent reduction in the otter population through mortality, injury, or impacts caused by disturbance or displacement. This includes for example the effects caused by development, river engineering, water pollution, roads without adequate crossing provision for otters or suitable culverts, or entanglement in fishing gear;
- Maintaining the species' ability to use areas of importance within the site;
- Maintaining access to, and availability of, undisturbed resting places; and
- Maintaining access to, and availability of, supporting habitats and prey.

Predicted impacts from the onshore Project alone and in-combination have the potential to affect the conservation objective to ensure the population of otter, as a viable component of the site, in the long term.

A.5.3 Assessment of adverse effects from the onshore Project alone

Construction and decommissioning impacts

Direct loss or fragmentation of suitable otter foraging and commuting habitat due to land-take

The construction of the onshore Project will result in the direct loss or fragmentation of suitable otter foraging and commuting habitat due to land-take. Whilst the majority of the habitats will be reinstated after the installation of the onshore export cables, as per the embedded mitigation measures set out in Table 7-3, small areas will be permanently lost. The largest of these comprises 6.25 ha of heavily grazed pasture grassland at the onshore substation. However, these modified grassland habitats are suboptimal for otter foraging or shelter, and no evidence of otter activity was recorded in the vicinity of the onshore substation during site surveys (as shown Figure 7-2).

Works may also result in the temporary severance of otter foraging and commuting habitats. However, due to the temporary and short-term nature of the construction activities, and the fact that watercourse crossings (including smaller tributaries) and the impact of these crossings will be minimised through appropriate methods of work, such as HDD or other trenchless methods, where possible, any impacts will be transient in nature. Given the embedded mitigation measures detailed in Table 7-3, the potential impact of direct loss or fragmentation of suitable otter

[4]The Caithness and Sutherland Peatlands SAC is also a Ramsar site. Ramsar sites do not have specific conservation objectives and as discussed in the Onshore RIAA are not considered separately if they overlap with SACs and/or SPAs.

foraging and commuting habitat during the construction and decommissioning of the Project upon otter is not expected to cause an adverse effect on site integrity.

Should the cables need to be removed during decommissioning, the worst case scenario will be the same as for construction. Therefore, the impact of this stage of the works upon otter is also considered to be of negligible magnitude, with no significant adverse effect predicted.

Given the above and the transient nature of the onshore Project upon suitable otter foraging and commuting habitat due to land-take during construction and decommissioning, there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct loss, damage or disturbance to otter holts during works

Surveys identified evidence of otter activity along named watercourses and drains throughout the onshore study area, with higher levels of activity recorded along the River Thurso and Forss Water. Four holts were identified, two of which were located within the onshore Project area, as shown in Figure 7-1 and Figure 7-2.

In the absence of appropriate mitigation, construction activities could result in the direct loss, damage or disturbance of these protected structures. However, the embedded mitigation measures, including the use of HDD or other trenchless techniques at watercourse crossings (as well as others detailed in Table 7-3), will reduce the likelihood of any impacts during construction and decommissioning, with appropriate methods of works followed and exclusion zones (up to 200 m) implemented around any holts and shelters, where possible. These measures will be detailed within the SHPP and will be overseen by an appropriately qualified ECoW. Any loss, damage or disturbance of protected sites will only be undertaken under a NatureScot otter derogation (EPS) licence, with appropriate mitigation and compensation measures implemented to ensure that otter populations are maintained at a favourable conservation status.

Given the implementation of the embedded mitigation measures detailed in Table 7-3, in the unlikely worst case scenario where a single otter shelter is affected, any impacts upon otter are considered to be of low magnitude. However, it is more likely that no otter shelters will be affected. Should the onshore export cables need to be removed during decommissioning, the worst case scenario will be the same as for construction.

Given the above, there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct injury or mortality to otter through the movement of plant and other site vehicles through the site and due to deep excavations and uncapped piping

The presence of otter within the onshore Project area has been confirmed, with holts, couch sites, paths, tracks and feeding signs identified during the survey visits, as shown in Figure 7-1 and Figure 7-2. Therefore, in the absence of appropriate mitigation, there is the potential for works to result in direct injury or mortality to otter through the movement of plant and other site vehicles, or as a result of otter becoming trapped within excavations or uncapped piping. However, the implementation of the embedded mitigation measures detailed in Table 7-3 including specific measures recommended within the SHPP, will reduce this impact to that of a negligible magnitude, with no significant adverse effects upon otter predicted.

Should the cables need to be removed during decommissioning, the worst case scenario will be the same as for construction, with the exception that the habitat will be restored.

Given the above and implementation of the embedded mitigation measures detailed in Table 7-3, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC.

Direct disturbance to commuting or foraging otter

There is the potential for direct disturbance to commuting or foraging otter as a result of construction activities causing vibration, noise and lighting disturbance. However, the implementation of the embedded mitigation listed in Table 7-3 including appropriate methods of work and exclusion zones as required, will reduce this impact to that of a negligible magnitude, with no significant adverse effects upon commuting or foraging otter predicted.

Should the cables need to be removed during decommissioning, the worst case scenario will be the same as for construction, with the exception that the habitat will be restored.

Given the above and the implementation of the embedded mitigation measures detailed in Table 7-3, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC.

Indirect impacts to otter and their foraging and commuting habitats

Accidental release (including silt, concrete leachate, fuel and dust) could impact water quality, with potential indirect effects upon otter due to a reduction in the availability and quality of fish prey species. However, the implementation of pollution prevention control measures (as outlined in OMP 1: Outline CEMP of the Onshore EIA Report), including following SEPA's Pollution Prevention Guidelines, will reduce the risk of accidental release. In the unlikely case that an accidental release occurs, this will be managed through the application of appropriate emergency procedures to ensure that any resulting impact is small-scale and temporary.

Such measures will include the use of SuDS such as settlement ponds, swales, filter strips, check dams / berms, sumps and silt fences / straw bales and the use of oil separators, or provision of a self-contained drainage network for areas of potential spills and leaks, as detailed in the outline Drainage Strategy presented in SS3: Flood Risk and Drainage Assessment.

Given the embedded mitigation measures proposed, any indirect impacts to otter and their foraging and commuting habitats during construction will be of a negligible magnitude, with no adverse effects predicted.

Should the cables need to be removed during decommissioning, the worst case scenario will be the same as for construction, with the exception that the habitat will be restored. Therefore, any indirect impacts of the decommissioning work upon otter are also expected to of a negligible magnitude, with no adverse effects predicted.

Given the above, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC.

Operation and maintenance impacts

Direct loss or fragmentation of suitable otter foraging and commuting habitat through operation and maintenance activities

No further habitat loss or fragmentation is predicted during the routine operation and maintenance of the onshore Project. However, during more significant non-routine maintenance works, habitat loss as a result of excavation to assess and repair any faults along the onshore export cable may occur.

The magnitude of such impacts will be dependent on the scale, magnitude and location of the works. While it is difficult to determine the precise effects on otter due to the unpredictable nature of the requirement for non-routine maintenance works, it is expected that such activities would be infrequent and small scale, resulting in disturbance effects of a lower magnitude than those during construction.

Given the above and with the implementation of the embedded mitigation listed in Table 7-3, there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct loss, damage or disturbance to otter holts during operation and maintenance works

Due to the unpredictable nature of the requirement for maintenance works, it is difficult to determine precise effects on otter. However, during more significant maintenance works; where excavation to assess and repair any faults along the onshore export cable corridor may occur, the potential for direct loss, damage or disturbance to otter holts may be predicted. The magnitude of such impacts will be dependent on the scale, magnitude and location of the works. Works in close proximity to watercourses and any confirmed or potential holt sites are likely to result in a greater impact upon otter. Nevertheless, it is considered likely that the potential for adverse effects to occur during maintenance works is significantly lower than that during construction.

With the implementation of the embedded mitigation listed in section A.3, including the need for pre-works surveys prior to any works commencing within 200 m of a watercourse and the use of appropriate exclusion zones if required, any impacts upon otter holts are likely to be of a negligible magnitude, with no adverse effect predicted.

In the unlikely worst case scenario where a single otter holt is affected, the loss or disturbance of the protected site will only be carried out under a NatureScot otter derogation (EPS) licence, with appropriate mitigation and compensation measures implemented. As such, there will be no adverse effects on the site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct injury or mortality to otter through the movement of maintenance vehicles through the site during the operation and routine maintenance of the site

It is estimated that there will be a limited amount of traffic to and from the onshore substation for general operation and maintenance purposes (around one vehicle per week unless there are any unexpected faults). As there was no evidence of otter activity in the vicinity of the onshore substation search area, as highlighted in Figure 7-2, and the highest-quality habitats for otter in the onshore Project area (the River Thurso and Forss Water) are over 2 km north-west of the onshore substation search area, the potential for direct injury or mortality to otter from vehicular traffic during the routine operation and maintenance of the onshore substation is low.

During more significant non-routine maintenance works, where excavation to assess and repair any faults along the onshore export cable corridor may occur, more significant impacts upon otter may be predicted. The magnitude of such impacts would be dependent on the scale and location of the works. Works in close proximity to watercourses and any confirmed or potential holt sites are likely to result in a greater impact upon otter, with more potential for direct injury or mortality of otter due to the movement of site vehicles and plant, and the potential for otter to become trapped within deep excavations and uncapped piping. However, it is considered likely that the potential for direct effects to occur during maintenance works is significantly lower than that during construction. Furthermore, with the implementation of the embedded mitigation listed in Table 7-3, including the need for pre-works surveys prior to any works commencing within 200 m of a watercourse, followed by the implementation of appropriate exclusion zones if required, the potential for otter to be injured or killed during the operation and maintenance of the onshore Project is considered to be extremely unlikely.

Given the above, there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Direct disturbance to commuting or foraging otter

It is estimated that there will be a limited amount of traffic to and from the onshore substation for general operation and maintenance purposes (around one vehicle per week unless there are any unexpected faults). As there was no evidence of otter activity in the vicinity of the onshore substation (as shown in Figure 7-2), and the highest-quality habitats for otter in the onshore Project area (the River Thurso and Forss Water) are over 2 km northwest of the onshore substation, any direct disturbance effects to commuting or foraging otter as a result of the operation and maintenance to the onshore substation is considered unlikely.

The potential for disturbance as a result of visual inspection of the onshore export cables and maintenance works (as required) is likely to be greater than at the onshore substation, particularly for any works in close proximity to watercourses. However, the potential for direct disturbance to commuting or foraging otter is significantly lower than that during construction.

Additionally, as otter are likely to forage or commute through the onshore Project area, they may be more vulnerable to disturbance through additional light pollution during the onshore substation's operational life. However, the use of external lighting around the onshore substation buildings will be intermittent, only used when people are on site. PIR sensor lighting may be provided around the external perimeter of the buildings. Therefore, considering the current levels of lighting and disturbance within the onshore Project area, and the lack of evidence of otter activity in the vicinity of the onshore substation, any disturbance impacts upon otter are likely to of negligible magnitude, with no adverse effects predicted.

Given the above and with the implementation of the embedded mitigation listed in Table 7-3, there will be no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Indirect impacts to otter and their foraging and commuting habitats

Accidental release (including silt, concrete leachate, fuel and dust) could result in a reduction in water quality, with direct effects on the availability and quality of fish prey species. However, the potential for indirect effects to occur during the operation and maintenance of the onshore Project is considered to be significantly lower than that during construction. Furthermore, the implementation of the embedded mitigation listed in Table 7-3 will reduce the risk of

accidental release and, in the unlikely case that an accidental release occurs, this will be managed through the application of appropriate emergency procedures to ensure that any resulting impact is temporary, of negligible magnitude, with no adverse effects predicted.

Given the above and with the implementation of the embedded mitigation measures detailed in Table 7-3, there will be **no adverse effects on site integrity** of the Caithness and Sutherland Peatlands SAC.

A.5.4 Assessment of adverse in-combination effects

As detailed above, the following developments listed in Table 7-5 have been screened in for the assessment of in-combination effects. The assessment with the onshore Project in combination with these developments is presented in the following sub-sections.

Table 7-5 Developments screened in for in-combination assessment for Annex II otters

DEVELOPMENT NAME (*PLANNING REF*)	DEVELOPMENT TYPE	STATUS	DISTANCE TO ONSHORE PROJECT AREA (KM)	DATA CONFIDENCE
Forss Wind Farm Extension *(20/04455/FUL)*	Onshore Wind Farm	Application	0.51	Low
Limekiln Extension (20/01905/S36)	Onshore Wind Farm	Consented	5.53	Medium
Corsback Hill Wind Farm *(22/00790/SCO)*	Onshore Wind Farm	Pre-application	6.2	Low
Loch Toftinghall Wind Farm *(19/02384/SCOP)*	Onshore Wind Farm	Pre-application	3.28	Low
Tormsdale Wind Farm *(21/04984/S36)*	Onshore Wind Farm	Application	4.75	Low
Watten Wind Farm (22/02644/SCOP)	Onshore Wind Farm	Pre-application	5	Low
SHET Dounreay West Substation *(19/01092/FUL)*	Transmission infrastructure – Substation Plant	Consented	2.3	Medium
Pentland Floating Offshore Wind Farm Onshore Substation *(22/04722/PIP)*	Transmission infrastructure – Substation Plant	Consented	2.35	Medium
ESB Asset Development Synchronous Compensator*(20/05118/FUL)*	Transmission infrastructure – Substation Plant	Application	0	Low

DEVELOPMENT NAME (*PLANNING REF*)	DEVELOPMENT TYPE	STATUS	DISTANCE TO ONSHORE PROJECT AREA (KM)	DATA CONFIDENCE
High Voltage underground Spittal Synchronous Compensator Grid Connection *(22/00016/FUL)*	Transmission infrastructure - Cables	Consented	0	Medium

In-combination construction and decommissioning impacts

Introduction

Ecology information, including for otter, was available for the following developments: ESB Asset Development Synchronous Compensator (TNEI Services Ltd, 2020), Pentland Floating Offshore Wind Farm Onshore Substation and Onshore Cable (Caledonian Conservation Ltd, 2022), and Construction of new 132kV / 33kV Gas Insulated Switchgear (Scottish and Southern Energy Power Distribution, 2015). None of these identified otter shelters during their associated ecological surveys and no measurable loss of valuable otter foraging habitat was identified. As for this Project, all of these developments are committed to follow equivalent best practice measures.

Although full ecology information is not available for SHET Dounreay West Substation, THC documents indicate that with mitigation in place, no impacts on otters were predicted.

No mention is made of otter in the documents accompanying approval for the other developments.

Direct loss or fragmentation of suitable otter foraging and commuting habitat due to land-take

The onshore Project is predicted to result in the temporary loss of largely sub-optimal foraging habitat, and permanent loss of a small area (the largest being 6.25 ha of habitat with sub-optimal habitat for otter, located at the onshore substation) which might be used for foraging by otters associated with the Caithness and Sutherland Peatlands SAC.

As embedded mitigations will result in the majority of the habitats impacted being reinstated following the installation of the onshore export cables, such impacts are transient and of negligible magnitude, with no adverse effects predicted. Therefore, any impacts would be extremely small and, if considered cumulatively with other developments in the area where otter have been identified as an important ecological feature, would not result in a measurable increase in potential effects upon this protected species within the local area; assuming the other developments also follow best practice in terms of mitigation.

Consequently, the effect of in-combination construction and decommissioning impacts upon otter and the ecological integrity and conservation status of the Caithness and Sutherland Peatlands SAC as a result of direct fragmentation of suitable otter foraging and commuting habitat due to land-take will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct loss, damage or disturbance to otter holts during works

The onshore Project aims to avoid direct or indirect impacts on otter holts through embedded mitigation measures including pre-works surveys, as required, and with the implementation of appropriate exclusion zones (see Table 7-3). As a result, if considered cumulatively with other developments in the area where otter have been identified as an important ecological feature, there would be no in-combination effect of this nature.

However, in the unlikely event that the onshore Project cannot be sited to avoid the disturbance, modification or destruction of an otter holt, works would only be carried out under a NatureScot otter Derogation (EPS) Licence, with appropriate mitigation and compensation measures implemented to ensure that otter are maintained at a favourable conservation status within the onshore Project area and wider areas. Assuming other developments also follow best practice and licensing where required, no measurable effect upon the integrity of otter populations at any level, including Caithness and Sutherland Peatlands SAC, is predicted.

Therefore, the effect of the in-combination construction and decommissioning impacts upon otter as a result of direct loss, damage or disturbance to otter holts will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Potential for direct injury or mortality to otter through the movement of plant and other site vehicles through the site and due to deep excavations and uncapped piping

The onshore Project aims to avoid direct injury or mortality to otter through embedded mitigation listed in Table 7-3, with a negligible magnitude impact predicted and no adverse effect predicted. Therefore, assuming other developments also follow best practice guidance and implement similar mitigation measures where necessary, the effect of in-combination construction and decommissioning impacts as a result of direct injury or mortality to otter will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

Indirect impacts to otter and their foraging and commuting habitats

The onshore Project aims to reduce the potential for indirect impacts to otter and their foraging and commuting habitats through the implementation of the embedded mitigation listed in Table 7-3, with no adverse effects predicted. Therefore, assuming other developments also follow best practice guidance and implement similar mitigation measures where necessary, no measurable increase in potential effects upon this protected species is predicted. Consequently, the effect of in-combination construction and decommissioning impacts as a result of indirect disturbance to otter will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

In-combination operation and maintenance impacts

All operation and maintenance impacts of the onshore Project alone have been assessed as being negligible in magnitude, with no adverse effects predicted. Therefore, assuming other developments also follow best practice guidance and implement similar mitigation measures where necessary, no measurable increase in potential effects upon this protected species is predicted. Consequently, the effect of in-combination operation and maintenance impacts as a result of direct disturbance to commuting or foraging otter will result in no adverse effects on site integrity of the Caithness and Sutherland Peatlands SAC.

A.5.5 Assessment summary and conclusions

The assessment can objectively conclude that there is no adverse effect on site integrity of the Caithness and Peatlands SAC and Ramsar site as outlined in Table 7-6.

Table 7-6 Summary of assessment conclusions

PROTECTED SITE	QUALIFYING FEATURE	ONSHORE PROJECT STAGE	POTENTIAL EFFECT	CONCLUSION
Caithness and Peatlands SAC and Ramsar site	Otter	Construction and decommissioning	Direct loss or fragmentation of suitable otter foraging and commuting habitat due to land-take.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			Potential for direct loss, damage or disturbance to otter holts during construction works.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			Potential for direct injury or mortality to otter through the movement of plant and other site vehicles through the site and due to deep excavations and uncapped piping.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			Direct disturbance to commuting or foraging otter.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			Indirect impacts to otter and their foraging and commuting habitats.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
		Operation and maintenance	Direct loss or fragmentation of suitable otter foraging and commuting habitat through operation and maintenance activities.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.

PROTECTED SITE	QUALIFYING FEATURE	ONSHORE PROJECT STAGE	POTENTIAL EFFECT	CONCLUSION
			Potential for direct loss, damage or disturbance to otter holts during operation and maintenance works.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			Direct disturbance to commuting or foraging otter.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.
			In-direct impacts to otter and their foraging and commuting habitats.	No adverse effects on site integrity from the onshore Project alone and in-combination with other reasonably foreseeable plans and projects.

A.6 Summary of mitigation and monitoring

As discussed in section A.3 (Table 7-3), an SHPP will be created and implemented to prevent harm to otter (and other protected species). The implementation of the SHPP will include pre-construction surveys for protected mammals (such as otter) as well as potentially notable habitats. These surveys will be undertaken to identify any otter making use of the onshore Project area ahead of works, allowing specific mitigation and compensation measures to be developed in consultation with NatureScot. Where necessary, a NatureScot Derogation (EPS) Licence will be obtained prior to works commencing.

The following monitoring measures are proposed during construction, subject to review on finalisation of the onshore Project design at post-consent:

- Targeted monitoring will be put in place to provide a check on the identified sensitive habitats identified within pre-construction surveys, and to ensure that mitigation and protection measures are in place and effective. This will be implemented via the HMP;
- Surface water monitoring will be established within the existing watercourse network. Details are provided in Supporting Study 3: Flood Risk and Drainage Assessment of the Onshore EIA Report; and
- All areas of sensitive habitat will be visited and assessed by the ECoW prior to the commencement of any construction works. Assessment will include collection of representative photographs of the areas which are most likely to be affected by the works. Regular assessment visits will be undertaken throughout the construction period and for a minimum of 12 months after reinstatement to ensure that habitat protection is effective, and any restoration and recovery works become established.