August 2025

Glen Earrach Energy Pumped Storage Hydro Development

Additional Information

Glen Earrach Energy Ltd

5a. Statement to Inform HRA Update (Ornithology)
Covering: North Inverness Lochs SPA, Loch Vaa SPA, Loch Ruthven SPA, Loch Knockie and Nearby Lochs SPA, Loch Flemington SPA, Loch Ashie SPA and Moray Firth SPA

Glen Earrach AECOM

Prepared by	Checked by	Verified by	Approved by
Tony Marshall CEcol MCIEEM Technical Director	Nick Dadds MCIEEM Associate Director	James Riley Technical Director	Victoria Deacon MCIEEM Principal Environmental Scientist
Nick Dadds MCIEEM Associate Director	Tony Marshall CEcol MCIEEM Technical Director		
Robbie Watt MCIEEM Associate Director	Pete Cowley MCIEEM Technical Director		
Rachel Cooper Consultant Aquatic Ecologist			

Issue History

Issue	Issue date	Details	Authorised	Name	Position
1	August 2025	Submission	IG	Ian Gillies	Renewables & Energy Transition Practice Lead

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1. Introduction

1.1 Background

1.1.1 In March 2025, Glen Earrach Energy Limited ("the Applicant") submitted an application for consent under Section 36 of the Electricity Act 1989 and deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997 (the "Section 36 Application") to the Energy Consents Unit (ECU) of the Scottish Government.

1.1.2 The Section 36 Application sought consent for the construction and operation of a new pumped storage hydro scheme on the Balmacaan Estate, to be known as the Glen Earrach PSH (the "Proposed Development"). The Proposed Development will have a storage capacity of approximately 34,000 megawatt hours (MWh) subject to the final configuration of the Headpond, Loch nam Breac Dearga. It would have approximately 2,000 megawatts (MW) of installed electrical pumping capacity and 1,800 MW of installed electrical generating capacity (both subject to final pump-turbine selection).

1.1.3 An Environmental Impact Assessment Report (EIAR) was provided with the application, detailing the results of a series of environmental studies undertaken to determine the likely significant effects of the Proposed Development on the environment under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (the "EIA Regulations").

1.1.4 As part of the original EIAR submission **Appendix 7.2: Statement to Inform HRA (Habitat Regulations Assessment) (Volume 5: Appendices)** accompanies **Chapter 7: Terrestrial Ecology, Chapter 8: Ornithology, and Chapter 9: Aquatic & Marine Ecology** of the Environmental Impact Assessment Report (EIAR) (**Volume 2: Main Report**). It describes the assessment of potential effects from the Proposed Development on Special Areas of Conservation (SAC) and Special Protection Areas (SPA) (collectively referred to as 'European sites'). European sites within the zone of influence (ZoI)[1] of the Proposed Development are shown on EIAR **Figure 7.2.1: European Sites Within the Zone of Influence of the Proposed Development**, within **Section 9: Figures**.

1.1.5 On 1 August 2025, following submission of the Section 36 Application, the Applicant received a request from NatureScot regarding the information contained in EIAR **Appendix 7.2**. NatureScot noted that there are a number of designated European Sites discussed in **Appendix 7.2**, and advised that it would assist them to more readily review this if the Applicant could provide a separate standalone document relevant to European sites designated for ornithological interest (particularly Slavonian grebe, however also red-throated diver).

1.1.6 Considering the above post-application consultation request from NatureScot this document provides a response to NatureScot's request by extracting relevant content from the existing EIAR **Appendix 7.2** to provide a standalone Statement to Inform HRA document specifically in relation to ornithological interest (Slavonian grebe and red-throated diver). This document does not supersede the content of the existing EIAR **Appendix 7.2,** it is simply a specific ornithologically focussed version of that document to allow for ease of review.

Associated documents

1.1.7 The following associated documents have been provided as part of the same Additional Information submission as this document:

1.1.8 Addendum to Statement to Inform HRA (Consideration of Ramsar sites); and

1.1.9 Confidential Addendum (Ornithology) Slavonian Grebe Mitigation and Survey Updates.

1.1.10 The description and context of these documents is explained further in the following paragraphs.

1.1.11 In addition to the request from NatureScot to provide a separate ornithological Statement to Inform HRA Update (this document), RSPB Scotland also provided a response to the Section 36 Application on 23 July 2025. In this, RSPB notes an objection to the Application on the grounds of potential impacts of the Proposed Development on Slavonian grebe and concern over adequacy of mitigation measures proposed. RSPB's detailed comments are contained in Confidential Annex 1 attached to their consultation response to the ECU. The Applicant has since had further consultation with RSPB (meeting of 6 August 2025) to discuss the items raised.

1.1.12 In response to the post-application consultation with RSPB, the Applicant has compiled a **Slavonian Grebe Management Plan (SGMP)** which further develops the Pre-Construction and Enabling, Construction and Operational Phase management and mitigation measures already contained in the EIAR. The SGMP provides a more detailed plan in this regard that is to be considered as part of the Bird Protection Plan proposed in the EIAR. It should be noted that the SGMP is a live document and will be subject to updates prior to commencement of the Proposed Development (for example, should further information come from ongoing consultation or monitoring, or due to any additional information or changes in the construction programme of the Proposed Development).

1.1.13 As a result of the updated mitigation and management measures contained in the separate SGMP, an update has been required to the assessment contained in the EIAR in relation to Slavonian grebe. The Applicant has prepared a separate **Confidential Addendum (Ornithology) Slavonian Grebe Mitigation and Survey Updates**. The SGMP is included as Annex A to this Addendum which is amongst a suite of documents (including this document), as **Additional Information - August 2025** for submission to the ECU. The Addendum includes a response to RSPB Scotland's consultation comments received on 23 July 2025, presenting updated 2025 breeding survey results, enhanced mitigation measures with increased disturbance buffers (750m rather than 350m for most breeding lochs), and acknowledging the potential displacement of breeding birds from Allt Glas Mòr Lochan during construction whilst demonstrating that the conclusions of **Chapter 8: Ornithology** and **Appendix 7.2: Statement to Inform HRA** remain valid. The Addendum therefore supersedes **Section 6.3 Specific Mitigation** and **Section 7 Assessment** of this document specifically in relation to Slavonian grebe and should be read in conjunction with this document.

1.1.14 Of further note, at the time of preparing **EIAR Appendix 7.2: Statement to Inform HRA,** the Scottish Government had published a consultation paper seeking views on proposals to treat Wetlands of International Importance (more commonly known as 'Ramsar sites') in the same way as European sites, for the purposes of HRA2. As this proposal was still in the consultation phase, the **Appendix 7.2 Statement to Inform HRA** submitted in the Section 36 Application did not specifically consider Ramsar sites, or the features for which they are designated.

1.1.15 An updated policy position on the protection of Ramsar sites in Scotland was published by Scottish Ministers on 9 July 2025. This instructs that listed Ramsar sites in Scotland should be treated as if they were European sites for the purposes of land use change decision making. Compliance with this policy means that any project which could affect a Ramsar site will involve undertaking a Habitats Regulations Assessment to determine whether the proposal is likely to have a significant effect on the notified natural features of the site.

1.1.16 Considering the policy update is now in effect, **Addendum to Statement to Inform HRA (Consideration of Ramsar sites)** is also included in the suite of documents for submission to the ECU as **Additional Information – August 2025**. The separate statement considers relevant Ramsar sites in the context of HRA and should be read in conjunction with this document. It is noted that there are no Ramsar sites that are not also designated as SACs or SPAs which could be impacted by the Proposed Development. Consequently, the information and assessment provided in this document is considered to be sufficient to enable HRA to be carried out by the Competent Authority.

1.2 Description of the Proposed Development

1.2.1 The Proposed Development is described in **Chapter 2: Project and Site Description** (**Volume 2: Main Report**). In summary, the main components are a large Headpond ringed with Embankments just west of Meall Fuar-mhonaidh, reached by access tracks from the River Coiltie area to the north and with underground power-related infrastructure and tunnels for water and access, and a Tailpond with Lower Control Works (LCW) (controlling water intake and outflow from Loch Ness) at the edge of Loch Ness and connected to the Headpond via further tunnels. Tunnels that pass northwards from the Headpond emerge at portals towards the River Coiltie, where there are several compounds including a large Temporary Workers Accommodation compound.

1.3 Legislative Context

1.3.1 Although presented as an appendix to the EIAR, this Statement to Inform HRA Update addresses separate legislative requirements, which relate solely to European sites. Further information on the legislative context is given below.

1.3.2 Under the Habitats Regulations[1], a network of sites has been designated across Scotland for the purposes of nature conservation. This network comprises sites known as SACs and SPAs. SACs are designated for the

[1] The Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), more commonly referred to as the 'Habitats Regulations'.

protection of habitats and non-avian animal species of conservation concern. SPAs are designated to protect rare or vulnerable species of bird, as well as certain regularly occurring migratory bird species.

1.3.3 Prior to the UK's exit from the European Union (EU), Scotland's SACs and SPAs were part of a wider network of such sites known as the 'Natura 2000' network. They were consequently referred to as 'European sites'. Now that the UK has left the EU, Scotland's SACs and SPAs are no longer part of the Natura 2000 network but form part of a UK-wide network of designated sites referred to as the 'UK site network'. However, it is current Scottish Government policy to retain the term 'European sites' to refer collectively to SACs and SPAs (including any which are designated following the UK's exit from the EU)[2].

1.3.4 The Habitats Regulations or, for reserved matters, the Conservation of Habitats and Species Regulations 2017 (as amended) require that any plan or project, which is not directly connected with or necessary to the conservation of a European site, and which is likely to have a significant effect on such a site, either alone or in-combination with other plans or projects, must be subject to an 'Appropriate Assessment' of the implications for the Conservation Objectives of that site. Generally, such proposals may only be approved if the 'Competent Authority' has ascertained, by means of an Appropriate Assessment, that there will be no adverse effect on the integrity of the European site(s). The procedure to be applied is known as 'Habitats Regulations Appraisal' (HRA)[3].

1.3.5 In addition to fully designated European sites, the Habitats Regulations also apply to those sites in the earlier stages of the designation process, including:

- Sites of Community Interest (SCI);
- Candidate Special Areas of Conservation (cSAC);
- Possible / proposed Special Areas of Conservation (pSAC); and
- Potential / proposed Special Protection Areas (pSPA).

1.3.6 For the remainder of this document, the term 'European site' is used to refer to fully designated SACs, SPAs, and candidate, possible, potential and proposed SACs / SPAs, and SCI.

1.3.7 In the context of the Habitats Regulations, the Proposed Development constitutes a 'project'. Therefore, unless otherwise necessary, for example when considering in-combination effects, no further reference to plans is made.

1.3.8 The Competent Authority responsible for carrying out a HRA is the relevant consenting body for a project – in this case the Scottish Ministers. The Competent Authority is required to apply the Precautionary Principle[4], and can only grant consent once it has been ascertained that there will be no adverse effect on the integrity of the European site(s) concerned. However, the Habitats Regulations provide that, even if adverse effects on European site integrity are predicted, and in the absence of a suitable alternative solution, the project can still be carried forward for imperative reasons of over-riding public interest (IROPI). In such cases, compensatory measures must be implemented, and these should be in place and effective before the negative effect(s) on a European site begins.

1.3.9 Although the UK is no longer part of the EU, a series of prior rulings of the Court of Justice of the European Union (CJEU) are relevant and must be considered when conducting HRA. Some of the rulings which are of relevance, and which have been considered when preparing this Statement to Inform HRA Update, are described in NatureScot guidance[5; 6; 7].

[2] Scottish Government (2020). EU Exit: The Habitats Regulations in Scotland. December 2020. Available from: https://www.gov.scot/publications/eu-exit-habitats-regulations-scotland-2/.

[3] In the past, the term 'Appropriate Assessment' has been used to describe both the overall process and a particular stage of that process. The term 'Habitat Regulations Appraisal' has come into use in order to refer to the process that leads to an Appropriate Assessment, thus avoiding confusion. Throughout this document, HRA is used to refer to the overall procedure required by the Habitats Regulations.

[4] The Precautionary Principle: the "*absence of scientific evidence on the significant negative effects of an action cannot be used as justification for the approval of this action. When applied to Article 6(3) procedure, the Precautionary Principle implies that the absence of a negative effect on European sites has to be demonstrated before a plan or project can be authorised. In other words, if there is a lack of certainty as to whether there will be any negative effects, then the plan or project cannot be approved",* taken from European Commission (2021).

[5] SNH (2014). Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

[6] SNH (2015). Habitats Regulations Appraisal of Plans. Guidance for Plan-making Bodies in Scotland. Version 3 – January 2015. Available from: https://www.nature.scot/habitats-regulations-appraisal-plans-guidance-plan-making-bodies-scotland-jan-2015.

[7] SNH (2019). SNH Guidance Note: The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement. Available from: https://www.nature.scot/habitats-regulations-appraisal-plans-guidance-plan-making-bodies-scotland-jan-2015.

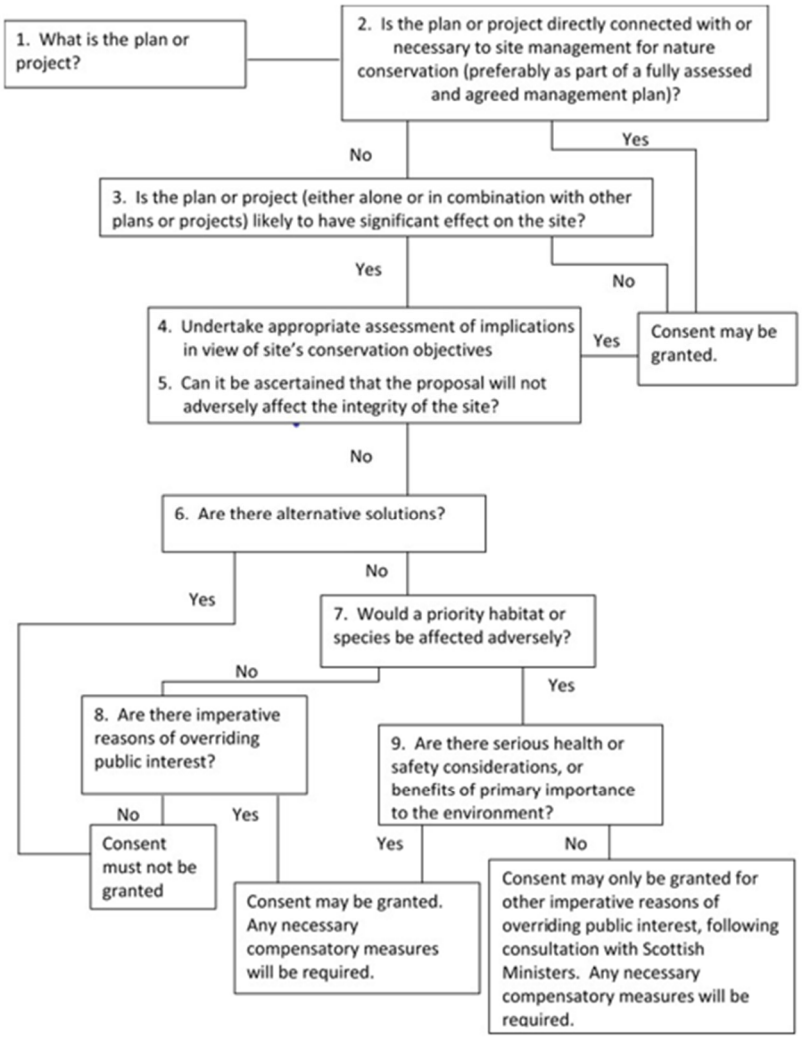
1.3.10 As a consequence of the UK's exit from the EU, it was necessary for various amendments to be made to the Habitats Regulations. These changes were required to ensure that Scotland continues to maintain the same standard of protection afforded to European sites. The Habitats Regulations remain in force, including the general provisions for the protection of European sites and the procedural requirements to undertake HRA. The changes made were only those necessary to ensure that they remain operable following the UK's exit from the EU.

1.4 Overview of HRA Process

1.4.1 The Habitats Regulations set out a step-by-step sequence of statutory procedures to be followed when conducting an HRA. The steps are designed to test the potential effects of a project on a European site and must be followed in the correct and particular order.

1.4.2 NatureScot recommends an approach for HRA of plans or projects, which is outlined as a series of thirteen steps[6]. However, with cognisance of case law clarifying when mitigation can be taken into account in the HRA process[8], this has been revised and a flow chart with nine steps is provided on the NatureScot website, and which is reproduced as **Diagram 1: Stages of the HRA Process**. Further guidance published by NatureScot on HRA also sets out the methods for assessing whether plans or projects will affect a European site[5].

Diagram 1: Stages of the HRA Process (taken from NatureScot online guidance[9])



1.4.3 In accordance with the process recommended by NatureScot, and relevant case law, the methodology for the HRA of a project can comprise four main activities:

[8] People Over Wind and Sweetman v Coillte Teoranta (C-323/17).
[9] https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra.

HRA Activity 1: Screening (including a 'likely significant effect' judgement);

HRA Activity 2: Appropriate Assessment;

HRA Activity 3: Assessment of alternative solutions; and

HRA Activity 4: Assessment of IROPI, where no alternative solutions exist and where adverse effects remain.

1.4.4 Should the HRA Screening stage not rule out the possibility of likely significant effects on the qualifying features of any European site, then the second activity in the HRA process – Appropriate Assessment – is required.

1.4.5 Appropriate Assessment considers in more detail the possibility that the likely significant effects of a project identified at the HRA Screening could result in adverse effects on the integrity of the European sites, in view of the Conservation Objectives of those sites. It introduces to the assessment mitigation measures designed specifically to avoid adverse effects on European sites – the HRA Screening stage must be carried out without consideration of mitigation measures.

1.5 Purpose

1.5.1 Whilst the various steps involved in the assessment process must be carried out by a Competent Authority, consultants may provide the information that the Competent Authority requires to undertake an HRA. This Statement to Inform HRA Update has therefore been written to provide the Scottish Ministers, in their role as Competent Authority, with the information needed to conduct an HRA of the Proposed Development. It has been prepared with regard to best scientific knowledge and an examination of all of the potential impacts of the Proposed Development on European sites.

1.6 Quality Assurance and Statement of Authority

1.6.1 This Statement to Inform HRA Update, and the assessment described within it, has been completed in accordance with the AECOM Integrated Management System (IMS). AECOM's IMS places emphasis on professionalism, technical excellence, quality, as well as covering health, safety, environment and sustainability management. All AECOM staff members are committed to maintaining AECOM's accreditation to those parts of BS EN ISO 9001:2015 and 14001:2015 that are relevant to a consultancy service.

1.6.2 The assessment was carried out by AECOM ecologists with experience in conducting such appraisals. All are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) at the appropriate grade and adhere to their strict Code of Professional Conduct[10].

1.6.3 The document was prepared by:

Tony Marshall, AECOM Technical Director. Tony is a Chartered Ecologist and a full member of CIEEM. He holds a 1st Class BSc (Hons) degree in Biological Sciences (Ecology) from the University of Edinburgh. Tony leads AECOM's ecology team in Scotland, Ireland, Wales and the south-west of England. He has worked for fifteen years as a professional ecologist on projects for private and public sector clients. These have ranged from large-scale infrastructure developments to conservation projects. For example, Tony was the author of the Statement to Inform Habitats Regulations Appraisal for the proposed Balliemeanoch Pumped Storage Hydro Scheme, in Argyll, and provided quality assurance on the HRA documentation for the consented Red John Pumped Storage Hydro Scheme (now known as Loch na Cathrach), on the east side of Loch Ness, near Dores;

Nick Dadds, AECOM Associate Director. A full member of CIEEM with twenty years of professional ecologist experience. Specialising in habitats, he has worked on other pumped storage hydro schemes including Red John (now Loch na Cathrach), and a range of other energy-related projects including wind farms, power stations and overhead lines;

Pete Cowley, AECOM Technical Director. A full member of CIEEM with 25 years experience, 14 as an ecologist. An Aquatic Ecologist specialising in biological water quality, aquatic protected species, and aquatic habitat management and mitigation. Pete has worked on other pumped storage hydro schemes including Red John (now Loch na Cathrach), and a range of large-scale infrastructure projects including water transfer schemes, and energy-related projects including wind farms and solar farms; and

[10] CIEEM (2022). Code of Professional Conduct. February 2022. Chartered Institute of Ecology and Environmental Management, Winchester.

Robbie Watt, AECOM Associate Director. Robbie is an Associate member of CIEEM and holds BSc (Hons) and MRes degrees from the University of Glasgow and University of Lund respectively. Robbie has over ten years experience as a professional ecologist and in that time has authored a number of HRA documents for projects in Scotland including numerous energy infrastructure projects. With respect to HRA, Robbie has attended 'Masterclass' training courses provided by David Tyldesley and Associates, recognised experts in this field.

1.6.4 This Statement to Inform HRA Update was verified by Dr James Riley CEnv MCIEEM. James is a Technical Director and leads AECOM's HRA business across the UK and Ireland. He holds an Honours degree in ecology, a Master's degree in crop protection and a Doctorate in habitat restoration. He has been working on HRA Screening and Appropriate Assessment for 22 years. James is a co-author of Institute of Air Quality Management (IAQM) guidance on air quality assessment of nature conservation sites and is a co-author of CIEEM guidance on the same subject[11]. He has lectured on HRA at Imperial College, London, and is a recognised national expert on the subject. Projects include Nationally Significant Infrastructure Projects for National Highways, Luton Airport, National Grid, BP and Boom Power.

[11] CIEEM (2023). Advisory Note: Ecological Assessment of Air Quality Impacts. Version 2 – October 2023. Chartered Institute of Ecology and Environmental Management, Winchester.

2. Methodology

2.1 Sources of Guidance and Data

2.1.1 This Statement to Inform HRA Update has been prepared with cognisance of the following guidance published by the European Commission (EC) and NatureScot:

- NatureScot webpage on HRA[12]
- Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC[13];
- Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC[14];
- Natura Casework Guidance: How to consider plans and projects affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)[5];
- Habitats Regulations Appraisal of Plans. Guidance for Plan-making bodies in Scotland[6]; and
- SNH Guidance Note. The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement[7].

2.1.2 Information on relevant European sites, including qualifying features, the latest assessed condition of those features, and the Conservation Objectives for each site was obtained from the NatureScot SiteLink website[15].

2.1.3 Plans and projects (where relevant to in-combination assessment) were searched for via The Highland Council (THC) website[16] and planning portal and ECU website[17].

2.2 Desk Study and Field Survey

2.2.1 Desk study and targeted field surveys were carried out to determine the baseline ecological conditions potentially relevant to this Statement to Inform HRA Update. A description of the relevant methods is given under the following sub-headings, and the results which have been used to inform the assessment in this document are provided in the Baseline Conditions section (Section 4), further below.

Desk Study

2.2.2 A desk study was carried out to identify records of the qualifying species of potentially relevant European sites, and other information pertaining to such sites. The desk study was carried out using the data sources detailed in **Table 2-1 Desk Study Data Sources**.

Table 2-1 Desk Study Data Sources

Data Source	Date Last Accessed	Data Obtained
The Highland Council website (https://www.highland.gov.uk/)	20 January 2025	• Information on planning applications for cumulative assessment. • Local Development Plan policies relevant to nature conservation
ECU website (https://www.energyconsents.scot/ApplicationSearch.aspx)	20 January 2025	• Information on applications for consent relevant to cumulative assessment.
NatureScot SiteLink website (https://sitelink.nature.scot/home)	14 October 2024	• Information on international and national statutory designations within the ZoI of the Proposed Development.

[12] https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra.
[13] European Commission (2021). Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Available from: https://ec.europa.eu/environment/nature/natura2000/management/pdf/methodological-guidance_2021-10/EN.pdf.
[14] European Commission (2019). Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats Directive' 92/43/EEC. Available from: https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/EN_art_6_guide_jun_2019.pdf.
[15] https://sitelink.nature.scot/home.
[16] https://www.highland.gov.uk/info/180/planning_-_applications_warrants_and_certificates/143/planning_permission/4.
[17] https://www.energyconsents.scot/ApplicationSearch.aspx.

Data Source	Date Last Accessed	Data Obtained
Royal Society for the Protection of Birds (RSPB)	24 February 2025	• Information on the breeding locations of Slavonian grebe.
Black-throated diver national surveys in Scotland (available from NBN Atlas Scotland; data provided by the RSPB)	17 October 2024	• Data on the locations of black-throated diver *Gavia arctica* breeding sites, found by the national surveys carried out in Scotland in 1985, 1994 and 2006.

Field Survey

2.2.3 A range of ecological and ornithological field surveys were carried out for the Proposed Development. Relevant to this HRA Report were breeding Slavonian grebe and red-throated diver surveys, with further information relating to the selection of these species found in the application.

2.2.4 The survey areas adopted were derived from an earlier design iteration of the Proposed Development, as presented at Environmental Impact Assessment (EIA) Scoping stage, in April 2024. Subsequently, the design of the Proposed Development evolved such that the survey areas do not exactly correspond to even buffers around the proposed layout of infrastructure. The largest change in this regard is the route of the permanent access tracks. At EIA Scoping stage, the design of access tracks was to connect the Headpond from the east, whereas the final design is to construct a track from Glen Coiltie in the north, with Glen Coiltie to be reached from Balnain via an existing large commercial forestry track.

2.2.5 While the breeding diver and Slavonian grebe survey did not encompass the full 2 km survey buffer from the final design the closest waterbody not surveyed is approximately 1.2 km west of the Proposed Development Site, northwest of Glas-bheinn Mhòr . At this distance this waterbody is unlikely to be directly affected by the Proposed Development.

2.2.6 A description of all other ecological field surveys carried out for the Proposed Development, but which are not directly relevant to this Statement to Inform HRA Update, is provided in **Chapter 7: Terrestrial Ecology**, **Chapter 8: Ornithology**, and **Chapter 9: Aquatic & Marine Ecology** of the EIAR (**Volume 2: Main Report**).

Slavonian Grebe and Red-throated Diver

2.2.7 Targeted searches were conducted for breeding Slavonian grebe and red-throated diver, which are qualifying species of the SPAs within the possible ZoI of the Proposed Development (see Section 3.3.3). The surveys were designed following the species-specific guidelines in Gilbert et al (1998)[18]. Two survey visits were made, one in late-May 2024 and one in July 2024, as detailed in **Table 2-2 Breeding Slavonian Grebe and Red-throated Diver Survey Visit Details**.

Table 2-2 Breeding Slavonian Grebe and Red-throated Diver Survey Visit Details

Date	Survey Visit	Start Time – End Time	Surveyor	Weather
27/05/2024	1	08:00 – 09:10	TM	Dry, excellent visibility and moderate southwesterly breeze.
28/05/2024	1	08:30 – 13:30	TM	Dry and bright, mild, with moderate winds.
29/05/2024	1	09:00 – 11:30	TM	Dry, overcast and mild. Light winds.
16/07/2024	2	09:30 – 17:20	SJ	Cloud cover 8-4, gentle southwesterly breeze, dry, excellent visibility.
22/07/2024	2	10:05 – 12:10	BW	Cloud cover 6-7, light northerly breeze, dry, excellent visibility.
23/07/2024	2	08:45 – 15:55	BW	Cloud cover 7-5, light westerly breeze, dry, excellent visibility.

2.2.8 All waterbodies within approximately 2 km of the Proposed Development Site were searched for the presence of Slavonian grebe and red-throated diver (see **Figure 7.2.2: Breeding Diver and Grebe Surveyed Waterbodies (Section 9: Figures**). Viewing was initially done from a distance using telescope and binoculars to scan the surface of the water and shoreline of the waterbodies. In instances where no birds were observed on a waterbody, surveyors slowly approached and once satisfied that grebes and divers were absent, walked the entire perimeter to look for signs that birds may have attempted to breed but had failed (for example, broken eggshells or dead

[18] Gilbert, G., Gibbons, D.W. and Evans, J. (1998). Bird Monitoring Methods. The Royal Society for the Protection of Birds, Sandy.

chicks). Any other notes of relevance, including the presence of disturbance sources and/or evidence of predators, such as otter and grey heron *Ardea cinerea*, were also recorded.

2.2.9 Additionally, each waterbody surveyed was evaluated with respect to their suitability to support breeding divers and Slavonian grebe. This was undertaken qualitatively based on breeding site suitability detailed in literature (e.g. Gilbert et al (1998)) and professional judgment. Surveyed waterbodies were assigned a ranking of either unsuitable, low suitability or suitable.

2.2.10 If any Slavonian grebe or red-throated diver were detected on a waterbody, their behaviour was observed, taking particular note of evidence that breeding may be taking place, such as birds displaying, copulating or investigating areas of suitable nesting habitat.

2.3 Limitations

2.3.1 The aim of the desk study was to help characterise the baseline context of the Proposed Development and provide valuable background information that may not be captured by field survey alone. Information obtained during the desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for particular species does not necessarily mean they do not occur in the study area. Likewise, the presence of records for a particular species does not automatically mean that this species still occurs within the area of interest or is relevant to the Proposed Development.

2.3.2 While the breeding diver and Slavonian grebe survey did not encompass the full standard 2 km survey buffer normally employed for these species around the entirety of the final design of the Proposed Development (owing to changes in the design after the surveys were undertaken, principally by access being taken from the north rather than the east), the closest waterbody not surveyed is approximately 1.2 km west of the Proposed Development Site, northwest of Glas-bheinn Mhòr. At this distance, this waterbody is unlikely to be directly affected by the Proposed Development.

2.3.3 There were no other limitations to the desk study, field survey or subsequent analysis, which could affect the reliability of this assessment.

3. Establishing the Zone of Influence

3.1 Approach

3.1.1 There is no pre-defined guidance on the physical scope of a HRA in all circumstances. When seeking to identify relevant European sites, consideration was therefore given primarily to potential impact pathways and the source-pathway-receptor approach, rather than adopting a purely 'zones'-based approach. The source-pathway-receptor model is a standard tool in environmental assessment. In order for an impact to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism means there is no possibility for an effect to occur. Furthermore, even where an impact is predicted to occur, it may not result in significant effects. It is also important to distinguish between an 'impact' and an 'effect'. An impact is defined as an action resulting in changes to an ecological feature, while an effect is the outcome to an ecological feature arising from an impact[19]. For example, an impact may be the disturbance of a roost of wintering waders, as a result of construction activities; the effect would be how the population or conservation status of the species disturbed by the works changes as a consequence.

3.1.2 The ZoI of a project is the geographic extent over which ecological features may be affected by biophysical changes, as a result of a project.The ZoI of a project will vary depending on the specifics of a particular proposal and must be determined on a case-by-case basis with reference to a variety of criteria, including:

- The nature, size / scale and location of the project;
- The connectivity between the project and European sites, for example through hydrological connections or because of the natural movement of qualifying species;
- The sensitivity of ecological features under consideration; and
- The potential for in-combination effects.

3.1.3 There is no geographical limit beyond which European sites need not be considered by HRA of a project.

3.1.4 NatureScot, in their response to the Request for Scoping Opinion for the Proposed Development (dated 25 June 2024), advised that the key European sites, which would require consideration as part of the HRA, are River Moriston SAC, Urquhart Bay Wood SAC, Moray Firth SAC, and North Inverness Lochs SPA. Although no specific impacts were referenced, NatureScot highlighted the presence of North Inverness Lochs SPA in proximity to the Proposed Development. As noted in 3.3.3, this document relates only to the listed SPAs.

3.1.5 The process of determining which (if any) European sites are within the ZoI of the Proposed Development was therefore a progressive appraisal of the potential for each impact source, which could arise from its construction and operation[20] to affect the qualifying features of such sites. This process is set out in **Table 3-1 Establishing the Zone of Influence of the Proposed Development** and was conducted with cognisance of all of the impact sources (described below), and the advice provided by NatureScot, summarised above.

3.2 Potential Sources of Impact from the Proposed Development

3.2.1 A number of impacts could arise from the Pre-Construction and Enabling, Construction and Operation of the Proposed Development. A summarised description of each impact, and their potential relevance to the qualifying features of European sites, is given under the following sub-headings.

3.2.2 Decommissioning has been scoped out of assessment as the decommissioning of large-scale pumped storage hydro projects is extremely rare due to the long operational lifespan of such facilities. Potential decommissioning effects are therefore considered to be similar to and associated with the components described in the construction project phase, and are not separately assessed.

[19] CIEEM (2024). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.3 – updated September 2024. Chartered Institute of Ecology and Environmental Management, Winchester.
[20] Decommissioning has been scoped out of assessment as the decommissioning of large-scale pumped storage hydro projects is extremely rare due to the long operational lifespan of the facility. Potential decommissioning effects are therefore considered to be similar to and associated with the components described in the construction project phase and are not separately assessed.

3.2.3 The impacts which could arise during the Pre-Construction and Enabling and Construction Phases are consistent, and these two phases are therefore considered together, rather than individually.

Direct Loss of or Damage to Habitat Within a European Site

3.2.4 Construction works which take place within or adjacent to the boundary of a European site could result in the damage or loss of habitat. SPA habitat which is damaged or lost could be essential to supporting the qualifying species, or to the normal functioning of the site.

Loss of Habitat Outside of a European Site Which Supports Qualifying Species

3.2.5 Habitat outside of the boundary of a European site, but which supports the qualifying species of such a site, is defined as being 'functionally-linked' to it. The ruling in the Holohan and Others v An Bord Pleanála case (C-461/17) concluded that the loss of functionally-linked habitat could result in significant effects on the qualifying features of a European site, if this prevented the site from meeting its Conservation Objectives.

3.2.6 To determine whether habitat may be functionally-linked to a European site requires some level of detailed study, often including targeted field survey. However, this impact can only occur on mobile animal species which can occur outside of the European site for which they are designated.

3.2.7 For several bird species in Scotland, NatureScot has published guidance on the distances up to which qualifying species may use functionally-linked habitat outside of European sites[21]. The distances given in this guidance were used when searching for SPAs designated for birds which may be within the ZoI of the Proposed Development. Accordingly, a search radius of 6 km from the Proposed Development Site was used when searching for SPAs designated for breeding bird species, this being the 'core range' which encompasses the majority of species listed in the guidance (the search distance was extended to 10 km from the Proposed Development for diver species and osprey *Pandion haliaetus*). For SPAs designated for non-breeding birds, a search distance of 20 km from the Proposed Development was used, as this is given as the largest core foraging range for any species (non-breeding pink-footed goose *Anser brachyrhynchus* and greylag goose *Anser anser*).

Disturbance and Displacement of Qualifying Species

3.2.8 Construction and operational activities have the potential to cause disturbance of qualifying animal species. Disturbance can be caused visually (for example by the presence of personnel and plant, or as a result of artificial illumination of habitats) and / or by the noise and vibration generated by works. This could impact qualifying species when inside the boundary of a European site, or outside of a European site when using functionally-linked habitat.

3.2.9 The potential for disturbance to be caused will depend on the location and nature of construction / operational activities, the distribution of the qualifying or supporting species, and the sensitivity of the species to noise and visual disturbance from human activities. However, where disturbance is caused, it can have multiple adverse effects on species, including increased energy expenditure, reduced feeding time, behavioural changes, and displacement.

3.2.10 Based on the published guidance referenced below, the following distances were used when considering how far construction and operational activities may disturb relevant qualifying / supporting species:

- Non-breeding waterbirds – the Waterbird Disturbance Mitigation Toolkit[22] provides species-specific information on the sensitivity of several bird species which are qualifying features of SPAs. However, it suggests that, in general, disturbance of non-breeding waterbirds can occur up to distances of around 300 m from construction works; and

[21] SNH (2016). Assessing Connectivity with Special Protection Areas (SPAs). Version 3 – June 2016. Available from: https://www.nature.scot/doc/assessing-connectivity-special-protection-areas.
[22] Cutts, N., Hemingway, K. and Spencer, J. (2013). Waterbird Disturbance Mitigation Toolkit: Informing Estuarine Planning & Construction Projects. Produced by the Institute of Estuarine & Coastal Studies (IECS) University of Hull. Available from: https://www.tide-toolbox.eu/tidetools/waterbird_disturbance_mitigation_toolkit/.

- Breeding birds – 1 km, this being the maximum distance at which NatureScot guidance suggests that which disturbance could occur on the most sensitive species for which SPAs are designated[23].

Direct Injury or Mortality of Qualifying Species

3.2.11 The direct injury or mortality of qualifying species could occur where construction works take place within the boundary of a European site, or where the species in question may be using functionally-linked habitat outside of a European site boundary.

3.2.12 Except where nesting, birds are not considered to be vulnerable to injury or mortality as a result of construction works as they are readily able to move away from works activities. There is no realistic possibility of mortality of bird species for which SPAs are designated during operation.

Prevention of Migratory Movements of Qualifying Species

3.2.13 There is no mechanism by which the Proposed Development could prevent the regular movements, including migration, of qualifying species other than fish. Therefore this impact is not considered further.

Changes to Surface Water or Groundwater Hydrology

3.2.14 Changes to surface water hydrology can occur as a result of engineering activities during the Construction Phase. For example, the construction of water crossings can change hydrological conditions within a watercourse. Abstraction of water (e.g. for use in dust suppression or other construction works) can also reduce water levels, as can changes to the existing flows of surface water to a watercourse. These impacts can occur either within a European site or can impact the qualifying species of a European site if they pass through or occur within the relevant part of the watercourse. Any European site with direct freshwater hydrological connectivity (i.e. not including marine sites) could be impacted by changes to surface water hydrology.

3.2.15 Changes in water levels of Loch Ness during the Operational Phase were not considered further in relation to SPAs as Slavonian grebe are not known to nest on Loch Ness.

3.2.16 Changes to groundwater conditions can occur as a result of excavations or the installation of piled structures (for example by interrupting groundwater flows). Guidance published by the Scottish Environment Protection Agency (SEPA) suggests that such activities could impact on groundwater dependent terrestrial ecosystems (GWDTE) up to 100 m from excavations less than 1 m in depth, extending up to 250 m for deeper excavations[24]. Therefore, any European site within 250 m of the Proposed Development Site was considered to be within the potential ZoI of this impact.

Waterborne Pollution

3.2.17 Construction and operational activities have the potential to pollute watercourses and / or waterbodies. These could themselves represent qualifying features of a European site, may be within a European site and support the qualifying features , or may be outside of a European site but be functionally-linked to such a site if used by the qualifying animals. Waterborne pollution may arise through spillages of fuels, oils, chemicals or other pollutants, or from the uncontrolled released of sediment.

3.2.18 Waterborne pollution can degrade habitats and can lead to the direct mortality of qualifying species or supporting prey species. The distance over which such impacts could have effects would depend on the severity of the pollution. However, any European site which has a direct hydrological connection to the Proposed Development but not including estuarine or marine designations (where a huge dilution effect on any pollution would occur from the massive volume of the sea), has the potential to be within the ZoI of this impact.

[23] Goodship, N.M. and Furness, R.W. (2022). NatureScot Research Report 1283 – Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. Available from: https://www.nature.scot/doc/naturescot-research-report-1283-disturbance-distances-review-updated-literature-review-disturbance.

[24] SEPA (2017). Land Use Planning System SEPA Guidance Note 31: Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems. Version 3. Available from: https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions-and-groundwater-dependent-terrestrial-ecosystems.pdf.

Airborne Pollution

3.2.19 Airborne pollution could occur during the Construction Phase of the Proposed Development. During operation, emissions to air will be very minor, and limited to the small number of vehicles involved in the running of the Proposed Development. Airborne pollution could impact on qualifying plant species and / or habitats, and functionally-linked habitats.

3.2.20 Dust generated during construction activities can directly impact vegetation or aquatic environments and can indirectly impact animal species (for example where these habitats are used by them for foraging). During extended periods of dry weather, dust can cover plant foliage and adversely affect photosynthesis or other biological functions. Rainfall can then remove deposited dust and rapidly leach chemicals into the soil. Guidance published by the Institute of Air Quality Management (IAQM) advises that the impacts of dust are likely to be 'low' beyond a distance of 50 m[25]. Any European site within 50 m of the Proposed Development Site was therefore considered to be within the ZoI for dust-related air quality impacts.

3.2.21 Vehicles and plant which operate via internal combustion engines emit airborne pollutants. The most important of these for European sites are oxides of nitrogen (NOx). At close distances to source, NOx can have a directly toxic effect on vegetation at very high concentrations. However, likely to be of greater concern is the contribution NOx makes to the deposition of nitrogen to soils. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This can have adverse effects on community composition and quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats[26; 27; 28]. Both the IAQM[29] and the Design Manual for Roads and Bridges (DMRB)[30] advise that such impacts are only likely to extend to a maximum of 200 m from a road (or works area), and that air pollution levels fall sharply within the first few tens of metres. Consequently, a ZoI extending to 200 m from the Proposed Development was used for air quality impacts arising from emissions from construction vehicles and machinery.

Spread of Invasive Non-native Species

3.2.22 INNS can have detrimental effects on native flora and fauna. Construction activities have the potential to cause the spread of INNS. Where works take place near to a European site, this could introduce such species to the site and have impacts on habitats and species. It has been assumed that the spread of INNS could occur where construction works take place up to a distance of 50 m from a European site, or where there is otherwise a direct hydrological connection between the Proposed Development and a European site (not including marine sites).

Other Indirect Impacts

3.2.23 As described in Section 4, a substantial proportion of the known Scottish population of breeding Slavonian grebe was recorded by field surveys carried out in 2024, within approximately 2 km of the Proposed Development. On account of this, and the possibility that birds breeding in this area (or any young that they fledge) could theoretically move to other locations to breed in future years, it was considered, on a precautionary basis, that any reduction in the breeding success of Slavonian grebe (as might result from disturbance caused by the Proposed Development during the breeding season) could impact any of the SPAs designated for this species in Scotland (where designated as a breeding species, because birds using these lochans arguably all contribute to the breeding success at the SPAs).

3.2.24 Loch Ashie SPA is designated for supporting a population of non-breeding Slavonian grebe which gather on the waterbody in autumn to moult, before moving to wintering locations elsewhere. Impacts on Slavonian grebe (within and outside of SPAs designated for this species) could have indirect effects on Loch Ashie SPA. For example, if the Slavonian grebe breeding success was to be adversely affected by the Proposed Development, this could reduce the non-breeding population associated with Loch Ashie SPA. Any impacts on Slavonian grebe caused by the Proposed Development, at construction or operation, could therefore affect Loch Ashie SPA.

[25] IAQM (2024). Guidance on the assessment of dust from demolition and construction. Version 2.2 – January 2024. Institute of Air Quality Management, London.
[26] Wolseley, P.A., James, P.W., Theobald, M.R. and Sutton, M.A. (2006). Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* **38**, pp 161-176.
[27] Dijk, N. (2011). Dry deposition of ammonia gas drives species change faster than wet depositions of ammonium ions: evidence from a long-term field manipulation. *Global Change Biology* **17**, pp 3589-3607.
[28] https://www.apis.ac.uk/search-pollutant-impacts.
[29] IAQM (2019). A guide to the assessment of air quality impacts on designated nature conservation sites. Institute of Air Quality Management, London.
[30] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure (2019). Design Manual for Roads and Bridges. Sustainability and Environment Appraisal. LA 105: Air quality.

3.2.25 Similarly, Moray Firth SPA is designated for non-breeding Slavonian grebe and red-throated diver. Birds of either species which breed near to the Proposed Development could over-winter in this SPA. For the same reason as described for Loch Ashie SPA, any reduction in breeding success caused by the Proposed Development could, in theory, reduce the non-breeding population of Slavonian grebe and / or red-throated diver within Moray Firth SPA.

3.2.26 The Scottish non-breeding population of Slavonian grebe is estimated at 300-500 birds[31], with the UK wintering population estimated as comprising 995 birds[32]. This is made up of birds which breed within and birds which breed outside of Scotland. Therefore, unlike when considering Slavonian grebe as a breeding species, impacts on the small population within approximately 2 km of the Proposed Development would have a proportionately much smaller impact on the Scottish / UK non-breeding population. Consequently, only Moray Firth SPA, as the closest site designated for wintering Slavonian grebe, was considered to be within the ZoI for impacts on this species as a non-breeding qualifying feature.

3.2.27 No other possible indirect impacts on other European sites were considered to exist.

3.3 European Sites within the Zone of Influence

3.3.1 With cognisance of the impact sources described above, the ZoI for the Proposed Development, and all of the European sites within it, was determined. This is set out in **Table 3-1 Establishing the Zone of Influence of the Proposed Development**. This step in the appraisal did not seek to determine the magnitude of any impact nor the potential significance of any effect and was focussed solely on identifying where a source-pathway-receptor linkage may exist.

3.3.2 Not all impacts will have pathways for effects on the qualifying features of all European sites within the ZoI. Consequently, some sites may be within the ZoI for certain impacts, but not for others.

3.3.3 A total of seven European sites with Slavonian grebe and red-throated diver qualifying features were determined to be within the ZoI of the Proposed Development (listed below in order of increasing distance from the Proposed Development Site):

- North Inverness Lochs SPA;
- Loch Knockie and nearby Lochs SPA;
- Loch Ruthven SPA;
- Loch Ashie SPA;
- Moray Firth SPA;
- Loch Flemington SPA; and
- Loch Vaa SPA.

3.3.4 The locations of these sites are shown on **Figure 7.2.1: European Sites Within the Zone of Influence of the Proposed Development (Section 9)**. Further details on each European site, including their qualifying features and Conservation Objectives, are given in **Annex A** of this document.

3.3.5 As stated in Paragraph 3.1.1, simply because a European site was identified to be within the potential ZoI of the Proposed Development does not necessarily mean that it would be subject to impacts which are sufficient to give rise to likely significant effects. However, establishing the ZoI in this way allowed for those European sites, which needed to be included in the HRA, to be robustly identified.

[31] Forrester, R.W., Andrews, I.J., McInerny, C.J., Murray, R., McGowan, R.Y., Zonfrillo, B., Betts, M.W., Jardine, D.C. and Grundy, D. (2007). The Birds of Scotland. Scottish Ornithologists' Club, Aberlady.
[32] https://www.bto.org/understanding-birds/birdfacts/slavonian-grebe.

Table 3-1 Establishing the Zone of Influence of the Proposed Development

Impact Source	Pathway(s) to European Site(s)	European Sites Within the Zone of Influence
Pre-Construction and Enabling Phase and Construction Phase		
Direct loss of or damage to habitat within a European site	The direct loss of or damage to habitat within the boundary of a European site is only possible where the Proposed Development passes through, over or immediately adjacent to an SAC or SPA. On a precautionary basis, any European site within 50 m of the Proposed Development Site was considered to be sufficiently close that there is a risk of direct damage or loss of habitat. A small part of North Inverness Lochs SPA extends approximately 25 m inside the Proposed Development Site. There are no other European sites within 50 m of the Proposed Development Site. The potential for other impacts, notably changes to surface and / or groundwater hydrology, to result in the indirect loss of habitat from within a European site, is considered elsewhere in this table.	• North Inverness Lochs SPA
Loss of functionally-linked habitat	On a precautionary basis, and in accordance with NatureScot guidance[21], an initial worst-case ZoI of 6 km from the Proposed Development Site was used when searching for SPAs designated for breeding birds (this being extended to 10 km for diver species and osprey) when considering the loss of functionally-linked habitat. A search distance of 20 km was used when searching for SPAs designated for non-breeding waterbirds.	• North Inverness Lochs SPA • Loch Knockie and nearby Lochs SPA • Moray Firth SPA
Disturbance and displacement of qualifying species	Disturbance of qualifying animal species could arise when they occur within the boundary of a European site, or when using functionally-linked habitat outside the of the boundary of a European site. The potential ZoI for this impact was therefore considered to be the same as for the loss of functionally-linked habitat, above.	• North Inverness Lochs SPA • Loch Knockie and nearby Lochs SPA • Moray Firth SPA
Injury or mortality of qualifying species	The qualifying bird species of SPAs are not considered to be vulnerable to injury or mortality except where nesting. Part of the North Inverness Lochs SPA, which is designated for breeding Slavonian grebe, lies just within the Proposed Development Site.	• North Inverness Lochs SPA
Changes to predator/prey interactions	There is no mechanism by which construction activities could lead to changes in predator / prey interactions which affect the qualifying species of any European site.	None.
Changes to surface water or groundwater hydrology	During the Construction Phase, any site crossed by, adjacent to (i.e. within 50 m) or with a direct hydrological connection to the Proposed Development could be impacted by changes to surface water hydrology. Any terrestrial European site within 250 m of the Proposed Development Site could be impacted by changes to groundwater conditions.	• North Inverness Lochs SPA
Waterborne pollution	Any European site directly crossed by or adjacent to (taken to mean within 50 m of) the Proposed Development has the potential to be impacted by waterborne pollution. Any other site which has a direct downstream hydrological connection to the Proposed Development (but not including estuarine or marine sites) could also be impacted by pollution affecting habitats or aquatic species.	• North Inverness Lochs SPA

Impact Source	Pathway(s) to European Site(s)	European Sites Within the Zone of Influence
Airborne pollution	All European sites (with the exception of estuarine and marine sites which are not vulnerable to airborne pollution[33]) within 200 m of the Proposed Development Site were considered at this stage to be within the potential ZoI of this impact.	• North Inverness Lochs SPA
Spread of INNS	The spread of INNS plants could occur where construction works take place up to a distance of 50 m from a European site, or where there is otherwise a direct hydrological connection between the Proposed Development and a European site (not including entirely marine sites, which are not vulnerable to this impact). European sites which are connected to the Proposed Development via Loch Ness are not considered to be vulnerable to this impact, as any plant fragments would not be able to travel upstream against the flow of watercourses which run through them. Construction activities do not have the potential to cause the spread of INNS animals.	• North Inverness Lochs SPA
Other indirect impacts	As set out in Section 4 due to the substantial proportion of the known Scottish breeding population of Slavonian grebe present within approximately 2 km of the Proposed Development, any SPA designated for breeding Slavonian grebe located anywhere in Scotland could be indirectly impacted should there be a reduction in breeding success of this species caused by the Proposed Development. Similarly, impacts on Slavonian grebe (both those within and outside of SPAs designated for their protection) could indirectly affect Loch Ashie SPA, which is designated for supporting an aggregation of non-breeding birds during the autumn moult. Moray Firth SPA is also designated for non-breeding Slavonian grebe and non-breeding red-throated diver. Consequently, impacts from the Proposed Development on these species could indirectly affect the qualifying population of Moray Firth SPA.	• North Inverness Lochs SPA • Loch Knockie and nearby Lochs SPA • Loch Ruthven SPA • Loch Ashie SPA • Moray Firth SPA • Loch Flemington SPA • Loch Vaa SPA
Operational Phase		
Direct loss of or damage to habitat within a European site	There is no mechanism by which operation of the Proposed Development could result in the direct loss of or damage to habitat within the boundary of a European site.	None.
Loss of functionally-linked habitat	There is no mechanism by which operation of the Proposed Development could result in a loss of or damage to functionally-linked habitat outside of the boundary of a European site.	None.
Disturbance and displacement of qualifying species	The intensity of activities during the Operational Phase of the Proposed Development will be considerably lower than during the Construction Phase. However, the presence of personnel and vehicles has the potential to cause disturbance of qualifying bird species, especially when breeding (at which time birds are generally considered to be more sensitive to human disturbance). Consequently, the ZoI of this impact is considered to extend up to 6 km from the Proposed Development Site (or to 10 km for divers and osprey). For non-breeding birds and the qualifying animals of SACs, the ZoI for disturbance is also considered to be the same as for the Construction Phase, described above.	• North Inverness Lochs SPA • Loch Knockie and nearby Lochs SPA • Moray Firth SPA
Injury or mortality of qualifying species	There is no mechanism by which operational activities could result in injury or mortality of any of the qualifying species of European sites considered in this HRA Report.	None
Prevention of migratory movements of qualifying species	There is no mechanism by which operational activities could prevent the migratory movements of any of the qualifying species of European sites considered in this HRA Report.	None
Changes to predator/prey interactions	There is no mechanism by which operational activities could result in changes to the predator/prey interactions of any of the qualifying species of European sites considered in this HRA Report.	None

[33] https://www.apis.ac.uk/node/968.

Impact Source	Pathway(s) to European Site(s)	European Sites Within the Zone of Influence
Changes to surface water or groundwater hydrology	Changes in water level during the Operational Phase could have a range of impacts on the qualifying features of European sites, or on ecological features upon which they rely. Therefore, as for the Construction Phase, any European site with a direct freshwater hydrological connection to the Proposed Development was considered to be within the ZoI for this impact.	• North Inverness Lochs SPA
Waterborne pollution	The likelihood of operational activities resulting in pollution of surface water is much reduced compared to construction. However, for the purposes of setting the ZoI, it is considered that this will be the same as for the Construction Phase.	• North Inverness Lochs SPA
Airborne pollution	Operation of the Proposed Development will generate negligible emissions to air and there is no possibility of this having impacts on qualifying or supporting habitats of any European site.	None.
Spread of INNS	During operation of the Proposed Development, water transfer between the Headpond and Tailpond is predominant, with a compensatory flow between the Headpond (currently Loch nam Breac Dearga) and the connected watercourse. As this watercourse, Allt Saigh, is already connected to Loch Ness, there is a minimal risk of aquatic INNS being spread to or between surface water systems that may affect the River Moriston SAC, and INNS that may be transferred from Loch Ness are unlikely to become established in that watercourse. The River Moriston is already connected to Loch Ness directly, and therefore a pathway for INNS exists that could not be exacerbated by the Proposed Development. There is also no mechanism by which the operation of the Proposed Development could cause the spread of plant INNS outside of the catchment.	None.
Other indirect impacts	As described for the Construction Phase.	• North Inverness Lochs SPA • Loch Knockie and nearby Lochs SPA • Loch Ruthven SPA • Loch Ashie SPA • Moray Firth SPA • Loch Flemington SPA • Loch Vaa SPA

4. Baseline Conditions

4.1 Slavonian Grebe

4.1.1 The RSPB provided data from 2013 to 2024 inclusive from the Slavonian Grebe Annual Monitoring program. Data were provided for all waterbodies within 2 km of the Proposed Development Site with data points provided for every year of survey. Across the survey period, 2013 to 2024, breeding was confirmed or suspected at six waterbodies within 2 km of the Proposed Development Site. Breeding was confirmed or suspected at a maximum of four waterbodies during any one survey year with four confirmed or suspected breeding sites in 2024. Non-breeding individuals or pairs, including those of unconfirmed breeding status, were recorded at a further eight waterbodies during the 2023 to 2024 survey period. In line with NatureScot guidance on the presentation of data relating to sensitive bird species, further details are provided in **Confidential Appendix 8.1: Sensitive Ornithology Assessment (Volume 6: Confidential Appendices)**.

4.1.2 A total of 32 waterbodies were surveyed for breeding Slavonian grebe. A brief description of the suitability of these waterbodies for these species is given in **Table B1, Annex B** of this document, and their locations are shown on **Figure 7.2.2: Breeding Diver and Grebe Surveyed Waterbodies (Section 9: Figures)**. Indicative photographs of each waterbody are presented in **Annex D** of **Appendix 8.1: Ornithology (Volume 5: Appendices)**. Of the 32 waterbodies surveyed, eight were considered to have suitability to potentially support breeding Slavonian grebe (several others were assessed as having very low suitability, but the probability of these being used by this species is so low that they are not included in this total).

4.1.3 Slavonian grebes were recorded on a total of ten waterbodies within the survey area between April and July 2024, including one of the waterbodies within North Inverness Lochs SPA. It is considered that seven of these waterbodies were occupied by breeding pairs based on observations of incubating birds, nest building and / or other territorial behaviour observed in suitable breeding habitat. Further details are provided in **Confidential Appendix 8.1: Sensitive Ornithology Assessment** (**Volume 6: Confidential Appendices**).

4.1.4 No evidence of successful breeding was recorded at any of the waterbodies found to support Slavonian grebe pairs in 2024, despite repeated checks and incidental observation of these waterbodies during the course of other ornithological field survey. It is therefore concluded that, although seven pairs of Slavonian grebe were present within approximately 2 km of the Proposed Development Site in 2024, and nesting almost certainly took place, there was no successful fledging of any young.

4.2 Red-throated Diver

4.2.1 No desk study records of red-throated diver were identified.

4.2.2 As set out in **Table B1, Annex B**, of the 32 waterbodies surveyed, five were considered to have suitability to potentially support breeding red-throated diver (several others were assessed as having very low suitability, but the probability of these being used by this species is so low that they are not included in this total).

4.2.3 One red-throated diver nest site was found within the survey area, details of which are provided in **Confidential Appendix 8.1: Sensitive Ornithology Assessment** (**Volume 6: Confidential Appendices**).

4.2.4 In addition to observations associated with the breeding lochan, nine records of red-throated diver were made associated with Loch nam Breac Dearga (the Headpond; foraging, loafing or in flight to / from the breeding lochan). Three of these records comprised a pair of birds, with a maximum of two birds observed at any one time. Three records of red-throated diver, including a pair of birds, were recorded on Dubh (Sron Dubh) (Waterbody 3) in April 2024, with no further occupation or evidence of breeding.

5. Test of Likely Significant Effects

5.1 Overview

5.1.1 This section assesses the potential for the identified Construction and Operational Phase impacts, for which pathways to European sites exist, to have likely significant effects on those sites. NatureScot summarises case law on the meaning of likely significant effects, as follows:

> An effect is 'likely' if it "*cannot be excluded on the basis of objective information*";
>
> An effect is 'significant' if it "**is likely to undermine the conservation objectives**" of a European site.

5.1.2 While use of the Precautionary Principle, as defined by the European Commission[4], sets the threshold for 'likely' to be quite low, the CJEU ruled in the Boggis judgement that there should be "*credible evidence that there was a real, rather than hypothetical risk*"[34].

5.1.3 The significance of effects should be determined in relation to the specific features and environmental conditions of the European site concerned, taking particular account of the site's Conservation Objectives and ecological characteristics.[14]The nature of the likely interactions between the Proposed Development and the integrity of a European site will depend upon: the sensitivity of the European site's qualifying features to potential impacts arising from the project; the current conservation status of the European site and its qualifying features; and, any likely changes to key environmental indicators (e.g. water quality) that underpin the conservation status of European sites and their qualifying features, in combination with other plans and projects.

5.1.4 The purpose of HRA Screening is to determine those elements of a project regarding which it can be stated, without detailed appraisal, that significant effects on a European site are unlikely. In line with case law[8], consideration cannot be given at this stage to specific mitigation measures designed to avoid significant effects on a European site. However, NatureScot has published guidance on the handling of mitigation when carrying out HRA[6]. NatureScot advises that, although mitigation designed specifically to avoid significant effects on the qualifying features of a European site cannot be referred to at the HRA Screening stage, it is reasonable to consider the 'intrinsic elements' of a development, including those which can be regarded as 'good practice' or 'best practice' for development of that type.

5.1.5 Standard good practice works methods which would be adopted by the Proposed Development, regardless of the presence of European sites, would include the implementation of pollution prevention measures following SEPA Guidance on Pollution Prevention (GPP) and Pollution Prevention Guidelines (PPG). Furthermore, under the Wildlife and Countryside Act 1981 (the 'WCA'), as amended by the Wildlife and Natural Environment (Scotland) Act 2011, it is an offence in Scotland to cause any animal or plant to spread or grow in the wild outside of its native range. Appropriate biosecurity measures will therefore also be implemented during works carried out during the Construction and Operational Phases to prevent the spread of INNS. Such measures would be set out in a Biosecurity Management Plan, Construction Environmental Management Plan and / or other similar document(s).

5.1.6 The test of likely significant effects in this section is necessarily a high-level appraisal, with a precautionary approach adopted when reaching a conclusion. For those impacts for which likely significant effects cannot be 'screened out', further appraisal at the Appropriate Assessment stage of the HRA of the Proposed Development is required (Section 7 of this document).

5.2 Impacts Excluded from Appraisal

5.2.1 On the basis of the initial assessment described in **Table 4: Establishing the Zone of Influence of the Proposed Development**, and considering NatureScot's guidance on the handling of mitigation in HRA, the following possible impacts have been excluded from further appraisal because there is clearly no potential for them to occur:

> During the Construction Phase:
>
> – Changes to predator / prey interactions;
>
> During the Operational Phase:

[34] Court of Appeal case C1/2009/0041/QBACF Citation No [2009] EWCA Civ. 1061.

- Direct Loss of or damage to habitat within a European site;
- Loss of functionally-linked habitat;
- Airborne pollution;
- Spread of INNS.

5.3 Screening Assessment

5.3.1 For each European site, the Construction and / or Operational Phase impacts for which that site was determined to be within the ZoI of the Proposed Development are examined in **Table 5-1** to **Table 5-7** for their potential to result in likely significant effects on the qualifying features.

5.3.2 Information on each European site relevant to the test of likely significant effects, including the list of qualifying features, Conservation Objectives, and known existing threats or pressures, was obtained from NatureScot SiteLink website. A summary of this information for each European site is presented in **Annex A**.

Table 5-1 HRA Screening Assessment for North Inverness Lochs SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling Phase and Construction Phase		
Direct loss of or damage to habitat within a European site	North Inverness Lochs SPA extends approximately 25 m into the northern part of the Proposed Development Site. No infrastructure is proposed in this area, with the nearest being the access track and crossing point of the River Coiltie, approximately 800 m south of the SPA. Construction will therefore not take place in proximity to the designated site and there will be no direct loss of habitat in North Inverness Lochs SPA from these works. The north side of Glen Coiltie within or near the existing (not completely effective) deer enclosure has been identified as an area for habitat enhancement to be delivered by the Proposed Development. This will include tree planting (of native species). No planting will take place within the boundary of North Inverness Lochs SPA; however, it is possible that natural regeneration of tree species may occur in this area, as herbivore grazing pressure will be reduced through the installation of deer fencing in the wider landscape. Slavonian grebe occasionally nest in the branches of trees around lochans[18], and native tree planting has been carried out around Loch Ruthven (which is an RSPB reserve and designated as an SPA for Slavonian grebe); approximately half of the shore of Loch Ruthven is fringed by native woodland[35]. The presence of native woodland in the area around North Inverness Lochs SPA would therefore not adversely impact Slavonian grebe or act in such a way as to effectively lead to a loss of otherwise suitable habitat.	No
Loss of functionally-linked habitat	The only waterbodies that will be lost to the Proposed Development are Loch nam Breac Dearga (Waterbody ID 16, see **Annex B** of this document), Loch nam Breac Dearga Lochan (Waterbody ID 15) and Glas-bheinn Mhòr Southern Swamp (Waterbody ID 14), which lie within the footprint of the Headpond. No observations of Slavonian grebe were recorded on any of these waterbodies during AECOM surveys in 2024 and none were suitable to support breeding. No waterbody which was found to be used by Slavonian grebe will be lost to the Proposed Development.	No
Disturbance and displacement of qualifying species	As stated above, although a small part of North Inverness Lochs SPA lies just within the Proposed Development Site, construction works will take place approximately 800 m from the nearest waterbodies encompassed by the designation. NatureScot guidance suggests that the maximum distance at which disturbance of breeding Slavonian grebe can occur is between 150 m to 350 m[23]. The two waterbodies within the component part of North Inverness Lochs SPA closest to the Proposed Development are therefore well beyond that distance and are also visually screened from the closest works areas by topography (they are situated at higher elevation than the northern access track) and forestry. It is concluded that there will be no disturbance of Slavonian grebe breeding within the boundary of North Inverness Lochs SPA. Birds which breed within the SPA boundary are expected to remain on the nesting lochan(s) and not make use of any habitat outside of the designated site while nesting. Disturbance of these birds outside of the SPA is therefore not considered to be possible. The possibility of non-SPA birds being disturbed / displaced, and this having indirect effects on the SPA population (for example through reduced recruitment to the SPA population in future years) is considered under 'Other indirect impacts', further below.	No
Injury or mortality of qualifying species	Slavonian grebe predominantly nest in areas of emergent vegetation[31], although nesting in loch-side bushes and overhanging branches has also been recorded[18]. As is typical for the species, within the survey area for the Proposed Development, all nesting is believed to have been within areas of emergent sedge, which were often not dense. There are no trees or bushes around any of the surveyed waterbodies and so nesting in such features within approximately 2 km of the Proposed Development is impossible.	No

[35] NatureScot (2010). Loch Ruthven Site of Special Scientific Interest Site Management Statement. Available from: https://sitelink.nature.scot/site/1047.

Impact Source	Potential Effects	Potential for Likely Significant Effects?
	These birds are only vulnerable to injury or mortality when nesting. As all nesting within approximately 2 km of the Proposed Development took place within emergent vegetation in waterbodies that will not be lost to the Proposed Development, there is no potential for injury or mortality of any Slavonian grebe.	
Changes to surface water or groundwater hydrology	The two waterbodies within the nearest part of North Inverness Lochs SPA are situated up-gradient of proposed infrastructure. There is consequently no possibility of there being impacts on the surface water hydrology of these waterbodies. Similarly, and at approximately 750 m from the nearest construction works, there is no possibility of there being impacts on groundwater conditions within the SPA (based on SEPA guidance[24]). As far as possible, watercourse crossings will be constructed as clear-span structures and the natural bed and channel of watercourses retained, as per SEPA guidance[36], so as to maintain surface water flows. There is consequently no possibility of surface water changes affecting other waterbodies, outside of the SPA boundary, which may be used by Slavonian grebe for nesting. The geology underlying the Proposed Development and majority of Slavonian grebe lochans comprises essentially impermeable strata with minor fracture flow with negligible impacts predicted on groundwater quantity or quality (see **Chapter 10: Water Environment (Volume 2: Main Report)**); two lie upon Old Red Sandstone but are over 1.5 km south of the Proposed Development on the opposite side of Meall Fuar-mhonaidh, with no likelihood of a significant effect.	No
Waterborne pollution	During the Construction Phase, the Proposed Development will be legally required to implement pollution prevention measures to ensure no pollution of the water environment. North Inverness Lochs SPA is up-gradient of construction works areas, so there is no possibility of direct pollution of the SPA. Furthermore, with the implementation of standard pollution prevention measures (which constitutes embedded mitigation and can be considered at this HRA Screening stage), there will be no pollution of other waterbodies used by Slavonian grebe for breeding.	No
Airborne pollution	Although North Inverness Lochs SPA is located just within the boundary of the Proposed Development Site, it is approximately 750 m from the nearest construction works. According to IAQM guidance[25] [29], there is consequently no possibility of there being air quality impacts on this site. No breeding waterbodies for Slavonian grebe were recorded within 50 m of the Proposed Development Site during the 2024 AECOM surveys or were recorded provided by the RSPB between 2013 and 2024. As such there is negligible potential for dust to impact these waterbodies and therefore affect breeding success. One breeding waterbody was recorded within 200 m of the Proposed Development site and therefore could theoretically be affected by air quality impacts from construction traffic. The Design Manual for Roads and Bridges (DMRB) advises that air quality impacts only need to be assessed where a project would increase annual average daily traffic (AADT) of light vehicles (e.g. cars) by more than 1,000 movements and / or heavy duty vehicles (HDV) by more than 200 movements[37] [29]. Even allowing for worst case scenario assumptions the number of HDV movements during enabling and construction is not expected to exceed 200 per day (See **Chapter 7: Terrestrial Ecology (Volume 2: Main Report)**). As such there is no potential for deductions in air quality to affect Slavonian grebe breeding waterbodies.	No
Spread of INNS	North Inverness Lochs SPA is up-gradient of construction works and there is consequently no possibility of INNS plants being spread by water transfer. The SPA is also, at closest, approximately 750 m from the Proposed Development, so construction works are not likely to spread INNS plants to the designated site. Biosecurity measures will be implemented by the Proposed Development as standard good practice. There is consequently no likely significant effect from the spread of INNS.	No
Other indirect impacts	Although likely significant effects on birds occurring within the boundary of North Inverness Lochs SPA are not considered to be possible (as described in the rows above), the disturbance of Slavonian grebe nesting on other waterbodies, outside of the designated site boundary, could lead to indirect effects on the designation.	**Yes**

[36] SEPA (2010). *Engineering in the water environment: good practice guide – River crossings.* 2nd edition. SEPA.
[37] Highways England, Transport Scotland, Welsh Government and Department for Infrastructure (2019). Design Manual for Roads and Bridges. Sustainability & Environment Appraisal LA 105 Air quality. (online) Available at: https://www.standardsforhighways.co.uk/tses/attachments/10191621-07df-44a3-892e-c1d5c7a28d90?inline=true.

Impact Source	Potential Effects	Potential for Likely Significant Effects?
	For example, maintenance of the SPA population may be reliant, even if only in certain years, on recruitment from breeding pairs occurring in the wider area. Consequently, any reduction in breeding success of Slavonian grebe on nearby waterbodies caused by disturbance from the Proposed Development could have likely significant effects on North Inverness Lochs SPA. Based on the appraisal in the rows above, the only mechanism by which the breeding success of pairs outside of the European site boundary could be caused is through disturbance / displacement impacts.	
Operational Phase		
Disturbance and displacement of qualifying species	For the reasons set out in relation to the Construction Phase, there is no possibility of operational activities disturbing Slavonian grebe breeding within North Inverness Lochs SPA.	No
Changes to surface water or groundwater hydrology	Operation of the Proposed Development will have no impacts on the surface water or groundwater hydrological conditions of the upland waterbodies which could be used by Slavonian grebe for breeding. Loch Ness, which is the only standing waterbody that will be subject to hydrological changes, is not suitable for use by Slavonian grebe for breeding.	No
Waterborne pollution	As described for the Construction Phase, the Proposed Development will not lead to waterborne pollution of the waterbodies within North Inverness Lochs SPA, or of any other waterbody which could be used by Slavonian grebe for breeding.	No
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of North Inverness Lochs SPA could arise. As described in relation to the Construction Phase, this could indirectly affect North Inverness Lochs SPA.	**Yes**

Table 5-2 HRA Screening Assessment for Loch Knockie and nearby Lochs SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Loss of functionally-linked habitat	The only waterbodies that will be lost to the Proposed Development are Loch nam Breac Dearga (Waterbody ID 16), Loch nam Breac Dearga Lochan (Waterbody ID 15) and Glas-bheinn Mhòr Southern Swamp (Waterbody ID 14), which lie within the footprint of the Headpond. No observations of Slavonian grebe were recorded on any of these waterbodies during the 2024 AECOM surveys and none were suitable to support breeding. No other waterbody which was found to be used by Slavonian grebe will be lost to the Proposed Development. There is no possibility of a loss of functionally-linked habitat which could be used by Slavonian grebe associated with Loch Knockie and nearby Lochs SPA.	No
Disturbance and displacement of qualifying species	Loch Knockie and nearby Lochs SPA is more than 4 km from the Proposed Development. NatureScot guidance suggests that disturbance of Slavonian grebe can occur at distances of between 150 m to 350 m[23]. There is consequently no possibility of construction activities disturbing birds when present within the SPA boundary. As set out in **Table 5-1 HRA Screening Assessment for North Inverness Lochs SPA**, birds which breed within the SPA boundary are expected to remain on the nesting lochan(s) and not make use of any habitat outside of the designated site while nesting. Disturbance of these birds outside of the SPA is therefore not considered to be possible. The possibility of non-SPA birds being disturbed / displaced, and this having indirect effects on the SPA population (for example through reduced recruitment to the SPA population in future years) is considered under 'Other indirect impacts', further below.	No
Other indirect impacts	The disturbance of Slavonian grebe nesting on other waterbodies, outside of the designated site boundary, could indirectly affect Loch Knockie and nearby Lochs SPA. For example, maintenance of the SPA population may be reliant, even if only in certain years, on recruitment from breeding pairs occurring in the wider area. Consequently, any reduction in breeding success of Slavonian grebe on nearby waterbodies caused by disturbance from the Proposed Development could have likely significant effects on Loch Knockie and nearby Lochs SPA.	**Yes**
Operational Phase		
Disturbance and displacement of qualifying species	For the reasons set out in relation to the Construction Phase, there is no possibility of operational activities disturbing Slavonian grebe breeding within Loch Knockie and nearby Lochs SPA.	No
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of Loch Knockie and nearby Lochs SPA could arise. As described in relation to the Construction Phase, this could indirectly affect Loch Knockie and nearby Lochs SPA.	**Yes**

Table 5-3 HRA Screening Assessment for Loch Ruthven SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Other indirect impacts	Loch Ruthven SPA is designated for breeding Slavonian grebe. The disturbance of Slavonian grebe nesting on other waterbodies, outside of the designated site boundary, could indirectly affect Loch Ruthven SPA. For example, maintenance of the SPA population may be reliant, even if only in certain years, on recruitment from breeding pairs occurring in the wider area. Consequently, any reduction in breeding success of Slavonian grebe on nearby waterbodies caused by disturbance from the Proposed Development could have likely significant effects on Loch Ruthven SPA.	**Yes**
Operational Phase		
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of Loch Ruthven SPA could arise. As described in relation to the Construction Phase, this could indirectly affect Loch Ruthven SPA.	**Yes**

Table 5-4 HRA Screening Assessment for Loch Ashie SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Other indirect impacts	Loch Ashie SPA is designated for supporting a non-breeding aggregation of Slavonian grebe, which gather on the waterbody in the autumn to moult, post-breeding, before migrating to wintering habitats elsewhere. The qualifying population of Slavonian grebe is assessed as being in 'Unfavourable Declining' condition, suggesting that numbers have been reducing, however, according to the SPA citation, the site supports up to 60 birds. The loss of only one bird could therefore represent a potentially significant (greater than 1%) decline. Any impacts from the Proposed Development which contribute to fewer Slavonian grebe visiting Loch Ashie to moult could therefore represent a significant effect. Further appraisal is consequently required at the Appropriate Assessment stage.	**Yes**
Operational Phase		
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of Loch Ashie SPA could arise. As described in relation to the Construction Phase, this could indirectly affect Loch Ashie SPA.	**Yes**

Table 5-5 HRA Screening Assessment for Moray Firth SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Loss of functionally-linked habitat	Moray Firth SPA is designated for breeding shag *Phalacrocorax aristotelis* and a range of non-breeding waterbirds, including Slavonian grebe and red-throated diver. Shag is an exclusively marine species during the breeding season, and there is no possibility of occurrence of this species within the Proposed Development Site. There is consequently no possibility of a loss of functionally-linked habitat for shag. The other non-breeding waterbirds are also largely or entirely restricted to the marine environment during the non-breeding season. The Proposed Development Site, which is located at altitudes of up to around 500 m above sea level, contains no suitable habitat which could be used by any of the non-breeding birds associated with Moray Firth SPA during the non-breeding season. There is consequently no possibility of a loss of functionally-linked habitat for these species.	No
Disturbance and displacement of qualifying species	Moray Firth SPA is located approximately 18.2 km from the Proposed Development Site, and there is no possibility of construction activities causing disturbance of birds when inside the SPA boundary. As described above, there is no functionally-linked habitat for any of the qualifying species of Moray Firth SPA within the Proposed Development Site. On this basis, no birds associated with the SPA are likely to occur on site, and there is no likely significant effect from disturbance / displacement of qualifying birds.	No
Other indirect impacts	Moray Firth SPA is designated for supporting several non-breeding waterbirds, including Slavonian grebe and red-throated diver. Both species were recorded (unsuccessfully) breeding on the Proposed Development Site by targeted field surveys carried out in 2024. The population of Slavonian grebe is stated in the SPA citation as having a mean annual peak of 43 individuals during the years 2001/02-2005/06. The population of red-throated diver for the SPA is quoted as having a mean annual peak of 324 individuals between 2001/02-2006/07. In relation to Slavonian grebe, the loss of only one bird could therefore represent a potentially significant (greater than 1%) decline in the non-breeding population of Moray Firth SPA. Consequently, any impacts from the Proposed Development which contribute to fewer Slavonian grebe wintering within the SPA (e.g. reduced breeding success due to disturbance), could represent a significant effect. Further appraisal is therefore required at the Appropriate Assessment stage. One pair of red-throated divers was recorded breeding within approximately 2 km of the Proposed Development in 2024. With an SPA population quoted as being 324 individuals, any impacts on this species from the Proposed Development (e.g. from reduced breeding success) would be highly unlikely to affect 1% of the SPA population, and likely significant effects on this qualifying feature are therefore not considered to be possible[38].	**Yes**
Operational Phase		
Disturbance and displacement of qualifying species	As described for the Construction Phase, above.	No

[38] Regardless of this assessment, there are legal requirements to ensure the protection of breeding red-throated diver. The Proposed Development will still implement measures, where required, to ensure compliance with relevant legislation.

Other indirect impacts	As described for the Construction Phase, above.	**Yes**

Table 5-6 HRA Screening Assessment for Loch Flemington SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Other indirect impacts	Loch Flemington SPA is designated for breeding Slavonian grebe. The disturbance of Slavonian grebe nesting on other waterbodies, outside of the designated site boundary, could indirectly affect Loch Flemington SPA. For example, maintenance of the SPA population may be reliant, even if only in certain years, on recruitment from breeding pairs occurring in the wider area. Consequently, any reduction in breeding success of Slavonian grebe on nearby waterbodies caused by disturbance from the Proposed Development could have likely significant effects on Loch Flemington SPA.	**Yes**
Operational Phase		
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of Loch Flemington SPA could arise. As described in relation to the Construction Phase, this could indirectly affect Loch Flemington SPA.	**Yes**

Table 5-7 HRA Screening Assessment for Loch Vaa SPA

Impact Source	Potential Effects	Potential for Likely Significant Effects?
Pre-Construction and Enabling and Construction Phase		
Other indirect impacts	Loch Vaa SPA is designated for breeding Slavonian grebe. The disturbance of Slavonian grebe nesting on other waterbodies, outside of the designated site boundary, could indirectly affect Loch Vaa SPA. For example, maintenance of the SPA population may be reliant, even if only in certain years, on recruitment from breeding pairs occurring in the wider area. Consequently, any reduction in breeding success of Slavonian grebe on nearby waterbodies caused by disturbance from the Proposed Development could have likely significant effects on Loch Vaa SPA.	**Yes**
Operational Phase		
Other indirect impacts	Although routine operational works will be considerably less intensive than those during the Construction Phase, it is still possible that disturbance of Slavonian grebe breeding on waterbodies outside of the boundary of Loch Vaa SPA could arise. As described in relation to the Construction Phase, this could indirectly affect Loch Vaa SPA.	**Yes**

5.4 In-combination Assessment

5.4.1 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location[19].

5.4.2 The potential for the Proposed Development, in isolation, to give rise to likely significant effects on the non-breeding red-throated diver population of Moray Firth SPA has been excluded. The basis for this was that the Proposed Development could only realistically reduce the breeding success of a single pair of red-throated divers, and that this could reduce the SPA population by, at most, a single bird in each year (for example, studies of red-throated diver in Shetland found productivity to be between 0.36 to 0.51 chicks fledged per breeding pair per year[39]). In relation to the quoted SPA population, this would represent less than 1% and would not be significant. However, if a number of other projects or plans in the area were all to have similar impacts on this species, this could cumulatively contribute to a reduction in the SPA population of more than 1%. Consequently, the potential for likely significant effects on the non-breeding red-throated diver population of Moray Firth SPA due to the in-combination impacts of the Proposed Development with other projects and plans has been screened into Appropriate Assessment.

5.4.3 For all other impacts and species / European sites for which likely significant effects have not been excluded, assessment of in-combination effects has been carried out as part of the Appropriate Assessment and is reported in Section 7 of this document.

5.5 HRA Screening Conclusion

5.5.1 Likely significant effects on Slavonian grebe and red-throated diver qualifying features of seven European sites were identified, when considering the Proposed Development in isolation and / or in-combination with other plans / projects.

5.5.2 The seven European sites taken forward to Appropriate Assessment were therefore:

North Inverness Lochs SPA;

Loch Knockie and nearby Lochs SPA;

Loch Ruthven SPA;

Loch Ashie SPA;

Moray Firth SPA;

Loch Flemington SPA; and

Loch Vaa SPA.

[39] Gomersall, C.H. (2006). Breeding performance of the Red-throated Diver *Gavia stellata* in Shetland. *Ecography* **9(4)**, pp 277-284.

6. Mitigation

6.1 Embedded Mitigation

6.1.1 Unlike specific mitigation measures (for which see below), embedded mitigation measures (also known as 'design') can and have been taken into account during the HRA Screening stage. This is consistent with NatureScot guidance on the interpretation of relevant case law which advises that such measures include the design, location, or layout of the project, or other measures which are routinely implemented as standard good practice[7]. Embedded design measures which will help to avoid significant effects on the qualifying features of European sites include:

The Proposed Development components have been sited to avoid water features where possible, although for large spatial components such as the Headpond, this is not possible. As per advice from SEPA, all water features have had a 30 m buffer applied to them to ensure that, wherever possible, new permanent infrastructure or temporary compounds are set back. This will help to mitigate the risk from Construction and Operational Phase run-off, as well as avoid physical impacts;

The access route to the Headpond from the north has been designed to maximise the distance between it and waterbodies found to support breeding Slavonian grebe and red-throated diver. The saddle dams at the northern side of the Headpond were also designed so as to maximise the distance to the same waterbodies;

The design includes compensation flow discharge from the Headpond, via permanent compound PC12 into the Allt Loch an t-Sionnaich and by extension Allt Saigh, to maintain its typical hydrological regime, which will minimise impact on associated terrestrial riparian habitats. The discharge rate will be agreed with SEPA; and

Water will be drawn from Loch Ness to the Headpond and returned to Loch Ness via the tunnels and spillway pipes. However, a compensation flow will remain from the Headpond to Allt Saigh and connected watercourses. Therefore, the risk of water spilling into adjacent water bodies will be negligible. Loch nam Breac Dearga (the Headpond location) is already connected to Loch Ness via Allt Saigh, and therefore a pathway for the spread of INNS already exists, which will not be significantly increased.

6.2 General Mitigation

6.2.1 In addition to embedded mitigation, there is a range of general mitigation measures that will also be implemented by the Proposed Development. These measures would be used to comply with other relevant legislation (for example legislation protecting breeding birds, or legislation protecting the water environment), and / or as good practice. However, their implementation may also incidentally provide some degree of avoidance or minimisation of impacts on the qualifying features of European sites[40]. These measures include:

6.2.2 All personnel involved in the construction and operation of the Proposed Development will be made aware of the ecological features within the ZoI and the mitigation measures and working procedures that must be adopted. This will be achieved as part of the induction process and through the delivery of Ecological Toolbox Talks, where required;

- An ECoW will be employed for the duration of the construction of the Proposed Development. The remit of the ECoW will include, but may not be limited to:
    - Carrying out pre-construction surveys for protected species, including otter;
    - Carrying out pre-works checks for important bird species and nesting birds;
    - Advising on exact infrastructure placement within micro-siting tolerances;
    - Monitoring of, and advising on, storage of overburden to minimise habitat damage;

[40] General mitigation measures which are adopted to comply with other environmental legislation, but which do not have the primary function of avoiding significant effects on the qualifying features of European sites can be considered at the HRA Screening stage. Consequently, standard pollution prevention mitigation (not including measures required during the course of works within Loch Ness) and measures to avoid the spread of invasive non-native species were considered at the HRA Screening stage of this appraisal, but they are described here to provide further detail on the measures to be adopted.

- Monitoring of any peat / vegetated turves that may be stored for later reinstatement;
- Advising on habitat reinstatement; and

– Monitoring of pollution control measures and advising on placement of ditches, settlement ponds, etc. to minimise habitat damage.;

- A CEMP will be prepared and submitted for approval by THC, in consultation with SEPA and NatureScot, where necessary, prior to commencement of construction. The CEMP will set out all environmental management measures and the roles and responsibilities of construction personnel;
- During all Phases of the Proposed Development, pollution prevention measures will be adopted, following SEPA Pollution Prevention Guidelines (PPG) and Guidance on Pollution Prevention (GPP), including the following:
  - The Proposed Development will, to comply with environmental protection legislation, implement standard pollution prevention measures during the Construction Phase. This will ensure no pollution of the water environment;
  - Controls and contingency measures will be provided to manage run-off from construction areas and to manage sediment;
  - All oils, lubricants or other chemicals will be stored in an appropriate secure container in a suitable storage area, with spill kits provided at the storage location and at places across the Proposed Development Site;
  - In order to avoid pollution impacts to soils, vegetation and watercourses / waterbodies during construction, all refuelling and servicing of vehicles and plant will be carried out in a designated area which is bunded and has an impermeable base. This will be situated at least 50 m away from any watercourse; and
  - Any artificial lighting required for construction works would be directional to avoid or minimise light spill beyond immediate works areas, and away from water bodies, and would be turned off when not required.; and
- Biosecurity protocols would be implemented to prevent the spread of INNS both within and off-site, including vehicle washing facilities, washing and disinfection stations for plant, equipment and PPE, and briefing of construction staff of the risks of INNS transfer, especially in high-risk areas.

6.2.3 In the breeding season prior to commencement of construction and in the breeding seasons throughout the Construction Phase, the ECoW or another suitably experienced ornithologist will be responsible for carrying out a full programme of survey for sensitive bird species, including Slavonian grebe and red-throated diver. These surveys will follow good practice guidelines as adopted during the fieldwork completed to inform this Statement to Inform HRA Update and the wider EIA for the Proposed Development. The purpose of these surveys will be to determine if and where sensitive bird species, including Slavonian grebe and red-throated diver, may establish nest sites, and to therefore allow for appropriate avoidance and / or mitigation measures to be implemented to avoid or minimise impacts upon them. Full details of the pre- and during-construction ornithological monitoring programme will be set out in a Bird Protection Plan (BPP) for the Proposed Development, to be submitted to THC and NatureScot in advance of the commencement of construction.

6.3 Specific Mitigation

6.3.1 Additional mitigation which is not part of the design of the Proposed Development, or which is not standard good practice and / or implemented to comply with other environmental protection legislation, and which can therefore only be considered for HRA purposes during the Appropriate Assessment stage, is referred to in this Statement to Inform HRA Update as ‘specific mitigation’.

6.3.2 A description of all of the specific mitigation measures to be implemented by the Proposed Development is given under the following sub-headings. These measures have been taken into account in the Appropriate Assessment section of this Statement to Inform HRA Update (Section 7).

Construction Phase

6.3.3 Displacement of nesting Slavonian grebe and red-throated diver from potential breeding waterbodies during construction will be avoided through the implementation of works exclusion zones. Works exclusion zones will be

implemented over and above those measures already included as part of the Bird Protection Plan to safeguard breeding birds, including those, like Slavonian grebe and red-throated diver, protected from disturbance under the Wildlife and Countryside Act (1981). These embedded measures also include Pre-Construction and Enabling and Construction Phase breeding bird surveys and monitoring. The Bird Protection Plan will also include the measures detailed below.

6.3.4 Slavonian grebes were identified breeding on seven waterbodies, and red-throated diver on one waterbody, within approximately 2 km of the Proposed Development Site in 2024. On a precautionary basis, and to reduce the risk that on-going works prevent birds from prospecting waterbodies, works exclusion zones will be established around all of the lochans which were found to be used by breeding Slavonian grebe and red-throated diver in 2024. Works exclusion zones will also be established around any additional breeding waterbodies identified during subsequent Pre-Construction and Enabling works and Construction Phase monitoring surveys. The following works exclusion zones will apply for all works, except for above ground blasting, based on NatureScot guidance[41]:

6.3.5 No works will be permitted within 350 m of the seven waterbodies used by breeding Slavonian grebe in 2024 (with the exception of blasting works, which are dealt with separately below), unless otherwise agreed with the ECOW or NatureScot; and

- No works will be permitted within 750 m of the single waterbody on which red-throated divers nested in 2024 (with the exception of blasting works, which are dealt with separately below) unless otherwise agreed with the ECOW or NatureScot;

6.3.6 The above works exclusion zones are default distances, which will be applied with respect to all works activities unless and until agreed in advance with the ECoW. Due to the nature of the proposed works it is likely that the exclusion zones will apply to the majority of works activities. The ECoW will be empowered to permit low impact / magnitude works judged to have a low likelihood of resulting in displacement or disturbance. These works exclusion zones will be implemented from 01 April to 15 September (inclusive) each year of the Construction Phase of the Proposed Development, or until such a time that the ECoW / ornithologist is confident that no breeding by the species is taking place. However, the earliest date on which a works exclusion zone could be lifted would be the 30 June – by this date, if no evidence of breeding has been recorded by the ECoW / ornithologist, it is reasonable to assume that no breeding attempts will commence this late in the season. The extents of these initial works exclusion zones are shown in **Confidential Figure 8.1.5: Slavonian Grebe and Red-Throated Diver Works Exclusion Zones (Confidential Appendix 8.1: Sensitive Ornithology Assessment) (Volume 6: Confidential Appendix).**

6.3.7 Certain other waterbodies, including Loch nam Breac Dearga, can be used by red-throated divers for foraging. However, this and other waterbodies are unsuitable for nesting by red-throated divers, and a works exclusion zone will not be implemented around these.

6.3.8 In summary, works exclusion zones of 350 m for Slavonian grebe and 750 m for red-throated diver will be established around all relevant waterbodies found to be used by these species for breeding in 2024, as well as any other waterbodies found to be used by these species during Pre-Construction and Enabling works and Construction Phase ornithology surveys. The works exclusion zones will be implemented between 01 April and 15 September each year, with the possibility of being removed after 30 June, but only once the ECoW or ornithologist is confident that no breeding is taking place at that waterbody. A works exclusion zone, once implemented, will not be lifted before the 30 June.

Blasting Specific Restrictions

6.3.9 Where possible, all above ground blasting activities should be undertaken during the non-breeding season, which would be October to March inclusive with respect to the range of species potentially affected. If not possible the measures detailed below will apply.

6.3.10 Due to the uncertainty with respect to the ZoI for blasting activities, and the number of sensitive and specially protected birds recorded, restrictions on above ground blasting activities during the breeding season will be implemented until an appropriate blasting exclusion zone can be determined. No above ground blasting will be permitted on site between April and September inclusive, unless and until an appropriate ZoI is demonstrated by the Construction Contractor specific to the blasting methodology that will be employed. A project specific Blasting Plan will be produced by the Construction Contractor, supported by appointed ECoW, for review and approval by

[41] Goodship, N.M. and Furness, R.W. (MacArthur Green) (2022). Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species. NatureScot Research Report 1283.

THC in consultation with NatureScot (the Blasting Plan could be appended onto the Bird Protection Plan). It is anticipated that the Blasting Plan would be informed by the following:

- A literature review on the responses of breeding birds to blasting activities to determine a potential ZoI from blasting sites with respect to noise and vibration; and
- A program of initial or 'test blasting', undertaken with the supervision of the ECoW, to monitor baseline noise and vibration levels at specific distance bands from blasting locations and / or sensitive sites (e.g. Slavonian grebe breeding sites). If trial blasting is carried out in the breeding season (i.e. between 01 April and 15 September), then this will be done at minimum distance of 1.5 km from the nearest waterbody found by surveys in 2024 to be occupied by Slavonian grebe or red-throated diver, or any additional waterbody found pre-works to be used by these species.

6.3.11 Based on the results of the above two activities a breeding season blasting exclusion zone will be implemented for Slavonian grebe and red-throated diver with temporal restrictions as detailed above under 'Works Exclusion Zones'.

Operational Phase

6.3.12 The potential for disturbance and displacement of Slavonian grebe and red-throated diver will be significantly lower during the Operational Phase than during the Construction Phase. Above ground operational activities will be limited to routine monitoring and surveillance of structures including the Dams, UCW and Access Tracks. The potential for disturbance / displacement of Slavonian grebe and red-throated diver will be further reduced by the following measures, implemented between 01 April and 15 September within the works exclusion zones at specified times shown in **Confidential Figure 8.1.5: Slavonian Grebe and Red-Throated Diver Works Exclusion Zones (Confidential Appendix 8.1: Sensitive Ornithology Assessment) (Volume 6: Confidential Appendix).**

- No stopping on access tracks except for access / egress to Dams, Compounds or other structures; and
- No flashing lights on vehicles.

6.3.13 Monitoring will be required to identify the presence of breeding Slavonian grebe and red-throated diver, and any other Schedule 1 birds, which may be disturbed by operational maintenance activities and is likely to be required annually throughout the Proposed Development's operational lifespan. The scope of the monitoring programme will be developed in consultation with NatureScot and further operational restrictions may be required if breeding is recorded within the ZoI of operational activities.

7. Appropriate Assessment

7.1 Overview

7.1.1 This section describes the Appropriate Assessment stage.

7.1.2 The HRA Screening stage described in Section 5 could not exclude the potential for likely significant effects on the qualifying features of eleven European sites, as a result of the construction and / or operation of the Proposed Development. Therefore, the potential for there to be adverse effects on the integrity of these sites was 'screened in' for detailed Appropriate Assessment.

7.1.3 **Table 7-1 Impacts Screened into Appropriate Assessment for Each European Site** summarises the findings of the HRA Screening, setting out which Construction and / or Operational Phase impacts could lead to likely significant effects, and which therefore require further appraisal in the Appropriate Assessment, with cognisance of the Conservation Objectives for each European site.

7.1.4 The assessment accounts for the mitigation in Section 6 and is informed by the data collected through desk study and field survey, described in Section 4. Each European site is considered in turn, with assessment of the potential for the Construction and / or Operational Phase impacts screened into assessment to have adverse effects on the integrity of the site.

7.1.5 Summarised information on the qualifying features is provided for each European site. However, further information, including Conservation Objectives and existing threats, pressures and activities with impacts on the sites can be found in **Annex A**, and on NatureScot's SiteLink website[15].

Table 7-1 Impacts Screened into Appropriate Assessment for Each European Site

European Site	Impacts Screened into Appropriate Assessment for Having Likely Significant Effects										
	Direct Loss of Habitat Within a European Site	Loss of Functionally-linked Habitat	Disturbance and Displacement of Qualifying Species	Injury or Mortality of Qualifying Species	Prevention of Migratory Movements of Qualifying Species	Changes to Predator / Prey Interactions	Changes to Surface Water or Groundwater Hydrology	Waterborne Pollution	Airborne Pollution	Spread of INNS	Other Indirect Impacts
North Inverness Lochs SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Loch Knockie and nearby Lochs SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Loch Ruthven SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Loch Ashie SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Moray Firth SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Loch Flemington SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o
Loch Vaa SPA	X	X	X	X	X	X	X	X	X	X	✓ c, o

X – no likely significant effects on the qualifying feature(s) of European site from this impact source.
✓ – likely significant effects on qualifying feature(s) of European site from this impact source could not be ruled out at HRA Screening stage.
c – applicable during the Construction Phase.
o – applicable during the Operational Phase.

7.2 North Inverness Lochs SPA

Overview

7.2.1 North Inverness Lochs SPA encompasses five lochans in two discrete areas. One of the component areas, containing three of the five lochans, is located approximately 2.4 km from the Proposed Development Site to the north of Milton. The other area, which encompasses two lochans, is located just within the boundary of the Proposed Development Site. However, the closest edge of the SPA boundary is approximately 800 m from the nearest infrastructure associated with the Proposed Development.

7.2.2 According to the SPA citation, the SPA regularly supported a population of seven breeding pairs of Slavonian grebe between 1991 and 1995. This species is the sole qualifying feature of the site, and the latest assessed condition for the feature is Favourable Maintained.

7.2.3 According to the citation for Dubh Lochs SSSI, which underlies the SPA in the component area nearest to the Proposed Development, the site and current management are considered to be suitable for maintaining the feature interest. Factors which could affect the condition of the site, and its ability to support breeding Slavonian grebes include:

- Long-term encroachment of vegetation into areas of open water;
- Changes in water quality or level;
- Increases in the number of recreational visitors (including anglers and birdwatchers); and
- The introduction of pike *Esox lucius* or other fish species (including stocking the lochs with trout *Trutta)*.

Other Indirect Impacts During the Construction Phase

7.2.4 NatureScot guidance[23] suggests that Slavonian grebe have 'medium' sensitivity to disturbance, and that buffer zones of between 150-350m be adopted during the breeding season to avoid disturbing breeding birds. The two waterbodies within the component part of North Inverness Lochs SPA closest to the Proposed Development are approximately 800 m from the nearest planned infrastructure. This is well beyond the maximum extent of the suggested buffer zone, and it is considered very unlikely that birds within the SPA boundary will be subject to disturbance / displacement from the Proposed Development.

7.2.5 Scotland holds the entire UK breeding population of Slavonian grebe, with the British Trust for Ornithology (BTO) stating that the population between 2013-2017 comprised 28 pairs[32], and *The Birds of Scotland* estimating a population of between 30-80 pairs[31]. However, it is widely recognised that the breeding population has suffered significant declines in recent years[42] and, according to the RSPB in their Response to the Request for Scoping Opinion for the Proposed Development (dated 30 May 2024), in 2023, fifteen pairs were recorded.

7.2.6 Slavonian grebe pairs were recorded on a total of seven waterbodies within approximately 2 km of the Proposed Development in 2024, only one of which was within the boundary of North Inverness Lochs SPA. Although no chicks were ever observed, and thus successful breeding is not believed to have occurred, these lochans may be used in future years, and fledging of chicks may occur.

7.2.7 The seven pairs within approximately 2 km of the Proposed Development could therefore represent in the region of 25% of the current Scottish (and UK) population (based on the BTO estimate from 2013-2017).

7.2.8 In a study of site faithfulness by breeding Slavonian grebe in Norway[43], for sites that maintained breeding pairs in different years, it was not clear whether persistence was maintained by site faithfulness by the same individuals returning in successive breeding seasons, or by replacement of individuals at these sites via source-sink dynamics (because the study did not follow individuals). However, the authors refer to evidence from other studies[44] which suggests that recruitment from within the regional population may well play a role in site population persistence.

[42] e.g. https://rbbp.org.uk/2023/12/31/60-years-of-slavonian-grebe-monitoring/.
[43] Stien, J., Strann, K.B., Jepsen, J.U., Frivoll, V. and Ims, R.A. (2015). Breeding persistence of Slavonian Grebe (*Podiceps auritus*) at long-term monitoring sites: predictors of a steep decline at the northern European range limit. *Journal of Ornithology* **157**, pp 75-84.
[44] Ferguson, R.S. (1981). Territorial attachment and mate fidelity by horned grebes. *Wilson Bulletin* **93**, pp 560-561.

7.2.9 It is therefore possible that birds breeding outside of North Inverness Lochs SPA are important to maintaining the population of the designation by providing a pool of recruits. For this reason, and with a significant proportion of the national population present in the area surrounding the Proposed Development, any disturbance / displacement of Slavonian grebes breeding on waterbodies outside of North Inverness Lochs SPA could still have effects on the population of this European site.

7.2.10 Two of the six waterbodies found to support Slavonian grebe pairs, and which were not within the boundary of North Inverness Lochs SPA, are within 350 m of any proposed construction works areas (see **Confidential Appendix 8.1: Sensitive Ornithology Assessment** (**Volume 6: Confidential Appendices**) for more details). All other waterbodies which supported pairs of Slavonian grebes in 2024 were more than 400 m from any proposed infrastructure / construction areas, and three were beyond 800 m. No additional breeding waterbodies within 400 m of the Proposed Development Site were identified by the RSPB from surveys undertaken since 2013.

7.2.11 According to the NatureScot guidance[23] on bird disturbance referred to at the beginning of this section, therefore, only two pairs of Slavonian grebe occupied a waterbody within the distance at which disturbance, and possibly displacement, is expected to occur (in the absence of mitigation). As a precaution it is assumed that above ground blasting activities associated with the Borrow Pit, UCW and Tunnel Portals would have a greater ZoI than detailed in NatureScot guidance, potentially encompassing all identified breeding waterbodies.

7.2.12 Consequently, to avoid adverse effects on breeding Slavonian grebe, and to comply with the requirements of Schedule 1 of the WCA, a works exclusion zone will be established around the waterbodies occupied by pairs of Slavonian grebes in 2024 which were within 350 m of the Proposed Development (and all other waterbodies found to be occupied by breeding Slavonian grebe in 2024, even those are beyond 350 m from works areas, on a precautionary basis). This exclusion zone will be extended as required following the establishment of a blasting specific ZoI. As described in Section 6, the works exclusion zone will be implemented from 01 April to 15 September, inclusive, each year during the Construction Phase of the Proposed Development. The works exclusion zone will remain in place until at least 30 June and would only then be lifted if the ECoW / ornithologist was confident that no breeding by Slavonian grebe was taking place. The works exclusion zone would apply to all works activities by default with works only permitted within the exclusion zone if agreed in advance with the ECoW / ornithologist.

7.2.13 A programme of pre- and during-construction bird surveys will also be carried out, including targeted surveys of waterbodies for breeding Slavonian grebes. If any other waterbody with suitability for Slavonian grebe breeding is found to be occupied by this species, then an exclusion zone will be implemented around it immediately. As described earlier in this document, there are no other impacts beyond the potential for disturbance / displacement which could act on Slavonian grebe breeding outside of North Inverness Lochs SPA boundary. For example, there will be no direct loss of habitat, no pollution (either waterborne or airborne) or the habitat supporting the species, and no changes to the water levels in any breeding lochan.

7.2.14 With the implementation of the works exclusion zones described above, disturbance / displacement of Slavonian grebe breeding outside of North Inverness Lochs SPA during the Construction Phase will be avoided. The breeding success of these birds will therefore not be adversely affected, and the potential for these birds to act a source of recruits to North Inverness Lochs SPA population will be maintained.

7.2.15 There will consequently be no change to the population or distribution of Slavonian grebe within the European site, or significant disturbance of the species. With specific reference to these Conservation Objectives, it is therefore concluded that there will be no adverse effect on the integrity of North Inverness Lochs SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.2.16 Works during the Operational Phase of the Proposed Development will be substantially reduced compared to the Construction Phase. However, maintenance and other activities still have the potential to cause disturbance of Slavonian grebe, if they take place sufficiently close to a nesting waterbody.

7.2.17 As for the Construction Phase, two waterbodies found to support breeding Slavonian grebe in 2024 lie within 350 m of the Proposed Development. Operational activities would be restricted to the occasional passage of vehicles along Access Tracks with personal on foot required to access Dams and the UCW. Mitigation is proposed that would reduce the likelihood of disturbance and displacement of Slavonian grebe and ornithological monitoring will continue during the Operational Phase.

7.2.18 As for the Construction Phase, therefore, it is concluded that there will be no adverse effect on the integrity of North Inverness Lochs SPA from indirect impacts on birds breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.3 Loch Knockie and nearby Lochs SPA

Overview

7.3.1 Loch Knockie and nearby Lochs SPA comprises two separate areas, encompassing a number of lochs to the east and south-east of Loch Ness. The sole qualifying feature of the site is breeding Slavonian grebe, with the SPA population quoted in the citation as being up to six pairs, between 1992 and 1995. However, the latest assessed condition of the feature is Unfavourable No change, although according to the Site Management Statement for Knockie Lochs SSSI (which underlies the northern component of the SPA), the reason for the reduction in the breeding population is unknown, as habitats and conditions within the site have remained unchanged.

7.3.2 Loch Knockie and nearby Lochs SPA is approximately 4.4 km from the Proposed Development Site.

Other Indirect Impacts During the Construction Phase

7.3.3 The assessment for North Inverness Lochs SPA is applicable to Loch Knockie and nearby Lochs SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Knockie and nearby Lochs SPA population through reduced recruitment in subsequent years.

7.3.4 However, with the implementation of work exclusion zones around any waterbodies used by Slavonian grebes for breeding, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.3.5 There will consequently be no change to the population or distribution of Slavonian grebe within the European site, or significant disturbance of the species. With specific reference to these Conservation Objectives, it is therefore concluded that there will be no adverse effect on the integrity of Loch Knockie and nearby Lochs SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.3.6 The assessment for North Inverness Lochs SPA is applicable to Loch Knockie and nearby Lochs SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Knockie and nearby Lochs SPA population through reduced recruitment in subsequent years.

7.3.7 However, with the implementation of additional mitigation, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.3.8 As for the Construction Phase, therefore, it is concluded that there will be no adverse effect on the integrity of Loch Knockie and nearby Lochs SPA from indirect impacts on birds breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.4 Loch Ruthven SPA

Overview

7.4.1 Loch Ruthven SPA comprises a single large loch to the east of Loch Ness. The sole qualifying feature of the site is breeding Slavonian grebe, with the SPA population quoted in the citation as being up to 14 pairs, between 1988 and 1992. However, the latest assessed condition of the feature is Unfavourable Declining, based on an assessment undertaken in 2023.

7.4.2 Loch Ruthven SPA is approximately 9.9 km from the Proposed Development Site.

Other Indirect Impacts During the Construction Phase

7.4.3 The assessment for North Inverness Lochs SPA is applicable to Loch Ruthven SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Ruthven SPA population through reduced recruitment in subsequent years.

7.4.4 However, with the implementation of work exclusion zones around any waterbodies used by Slavonian grebes for breeding, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.4.5 There will consequently be no change to the population or distribution of Slavonian grebe within the European site, or significant disturbance of the species. With specific reference to these Conservation Objectives, it is therefore concluded that there will be no adverse effect on the integrity of Loch Ruthven SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.4.6 The assessment for North Inverness Lochs SPA is applicable to Loch Ruthven. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Ruthven SPA population through reduced recruitment in subsequent years.

7.4.7 However, with the implementation of additional mitigation, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.4.8 As for the Construction Phase, therefore, it is concluded that there will be no adverse effect on the integrity of Loch Ruthven SPA from indirect impacts on birds breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.5 Loch Ashie SPA

Overview

7.5.1 Loch Ashie is a large waterbody to the east of Loch Ness. It is designated for supporting a non-breeding population of Slavonian grebe, which gather in the autumn to moult, before departing to wintering grounds elsewhere. The SPA population is quoted in the citation document as comprising up to 60 individuals. However, the qualifying feature is in Unfavourable Declining condition and, according to the Site Management Statement for the underlying Loch Ashie SSSI, the mean number of gathering Slavonian grebes between 1999-2002 (when the site was last monitored) was 39 birds.

Other Indirect Impacts During the Construction Phase

7.5.2 Loch Ashie is designated for non-breeding Slavonian grebe. It is approximately 14.8 km from the Proposed Development Site, and there is no possibility of direct disturbance of the qualifying birds, as they become flightless when moulting and would be restricted to Loch Ashie.

7.5.3 However, any impacts from the Proposed Development which caused a reduction in the population of Slavonian grebe which use Loch Ashie, would have indirect effects on this site. The only impact which has been identified through this Statement to Inform HRA Update as having the potential to act upon Slavonian grebe breeding outside of a European site boundary is disturbance / displacement from works activities.

7.5.4 However, as described in relation to North Inverness Lochs SPA, works exclusion zones will be implemented to avoid disturbance / displacement of Slavonian grebe which may breed in proximity to the Proposed Development. There will consequently be no impacts from disturbance / development, which could indirectly affect the Slavonian grebe population of Loch Ashie SPA. With no other possible impacts from the Proposed Development on this species, it is therefore concluded that there will be no adverse effect on the integrity of Loch Ashie SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.5.5 The assessment for North Inverness Lochs SPA is applicable to Loch Ashie SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Ashie SPA population through reduced recruitment in subsequent years.

7.5.6 However, with the implementation of additional mitigation, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.5.7 It is therefore concluded that there will be no adverse effect on the integrity of Loch Ashie SPA from indirect impacts on birds breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.6 Moray Firth SPA

Overview

7.6.1 The Moray Firth SPA is a large, marine site. It is approximately 18.2 km from the Proposed Development Site at the nearest point.

7.6.2 This site was screened into Appropriate Assessment due to the potential for the Proposed Development, in isolation, to have indirect impacts on the qualifying population of non-breeding Slavonian grebe. In addition, it was also screened in due to the potential for the Proposed Development to act in-combination with other plans or projects to adversely affect the qualifying population of non-breeding red-throated diver.

7.6.3 Both the Slavonian grebe and red-throated diver qualifying features were last assessed as being in Favourable Maintained condition. According to the SPA citation, the non-breeding population of Slavonian grebe had a mean annual peak of 43 individuals between 2001/02-2005/06. The non-breeding population of red-throated diver for the SPA is quoted as having a mean annual peak of 324 individuals between 2001/02-2006/07.

Other Indirect Impacts During the Construction Phase

7.6.4 It is unknown whether birds which breed in proximity to the Proposed Development over-winter in the Moray Firth SPA. Although it is likely that the majority of overwintering birds originate from breeding populations outside Scotland[45], on a precautionary basis this is assumed to be the case. Any impacts from the Proposed Development which reduce the number of birds using the SPA would have indirect effects on Moray Firth SPA. The only Construction Phase impact which has been identified through this Statement to Inform HRA Update as having the potential to act upon Slavonian grebe is disturbance / displacement of birds breeding outside of the boundary of European sites as a result of works.

7.6.5 Two Slavonian grebe breeding lochans were found to be within 350 m of proposed works areas, this being the distance at which disturbance / displacement is expected to be possible for all works with the exception of blasting. Blasting activities could extend this ZoI to other more distant waterbodies.

7.6.6 However, as described in relation to North Inverness Lochs SPA, works exclusion zones will be implemented to avoid disturbance / displacement of Slavonian grebe which may breed in proximity to the Proposed Development. There will consequently be no impacts from disturbance/displacement, which could indirectly affect the non-breeding Slavonian grebe population of Moray Firth SPA.

7.6.7 A single pair of red-throated diver bred within approximately 2 km of the Proposed Development Site in 2024. NatureScot guidance[23] advises that a buffer zone of up to 750 m may be required to avoid disturbance of breeding red-throated diver. The nest lochan was located well within this distance of proposed infrastructure (see **Confidential Appendix 8.1: Sensitive Assessment** (**Volume 6: Confidential Appendices**) for further detail). However, as for Slavonian grebe, and as described in Section 6, a works exclusion zone of 750 m radius will be implemented around this lochan between 01 April and 15 September, inclusive, each year during the Construction Phase of the Proposed Development. The works exclusion zone will remain in place until at least 30 June and would only then be lifted if the ECoW / ornithologist was confident that no breeding by red-throated diver was taking place. The works exclusion zone would apply to all works activities by default with works only permitted

[45] Benn, S., Harvey, M and Ewing, S (2023). A history of breeding Slavonian grebes in Britain. British Birds, 116, 308-318.

within the exclusion zone if agreed in advance with the ECoW / ornithologist. Blasting activities would be subject to a bespoke exclusion zone following the establishment of blasting specific ZoI.

7.6.8 A programme of pre- and during-construction bird surveys will also be carried out, including targeted surveys of waterbodies for breeding red-throated diver. If any other waterbody with suitability for red-throated diver breeding is found to be occupied by this species, then a 750 m works exclusion zone will be implemented around it immediately.

7.6.9 There are no other impacts beyond the potential for disturbance / displacement which could act on Slavonian grebe or red-throated diver. For example, there will be no direct loss of habitat, no pollution (either waterborne or airborne) or the habitat supporting the species, and no changes to the water levels in any breeding lochan.

7.6.10 With no other possible impacts from the Proposed Development on these species, it is therefore concluded that there will be no adverse effect on the integrity of Moray Firth SPA from indirect impacts on Slavonian grebe and / or red-throated diver breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.6.11 As for the Construction Phase, disturbance / displacement of breeding Slavonian grebe or red-throated diver during the Operational Phase could give rise to reductions in the qualifying populations of these species in Moray Firth SPA, either from the Proposed Development alone, or in-combination with other plans or projects.

7.6.12 As for the Construction Phase, two waterbodies found to support breeding Slavonian grebe and one for red-throated diver in 2024 lie within 350 m and 750 m of the Proposed Development respectively. Operational activities would be restricted to the occasional passage of vehicles along Access Tracks with personnel on foot required to access Dams and the UCW. Mitigation is proposed that would reduce the likelihood of disturbance and displacement of Slavonian grebe and red-throated diver and ornithological monitoring will continue during the Operational Phase.

7.6.13 It is therefore concluded that there will be no adverse effect on the integrity of Moray Firth SPA from indirect impacts on Slavonian grebe and/or red-throated diver breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.7 Loch Flemington SPA

Overview

7.7.1 Loch Flemington is a small waterbody located southeast of Inverness Airport, approximately 38 km from the Proposed Development Site. According to the citation document, between 1991 and 1995, an average of six pairs of Slavonian grebe bred within Loch Flemington SPA.

Other Indirect Impacts During the Construction Phase

7.7.2 The assessment for North Inverness Lochs SPA is applicable to Loch Flemington SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Flemington SPA population through reduced recruitment in subsequent years.

7.7.3 However, with the implementation of works exclusion zones around any waterbodies used by Slavonian grebes for breeding, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.7.4 There will consequently be no change to the population or distribution of Slavonian grebe within the European site, or significant disturbance of the species. With specific reference to these Conservation Objectives, it is therefore concluded that there will be no adverse effect on the integrity of Loch Flemington SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.7.5 The assessment for North Inverness Lochs SPA is applicable to Loch Flemington SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the

disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Flemington SPA population through reduced recruitment in subsequent years.

7.7.6 However, with the implementation of additional mitigation, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.7.7 As for the Construction Phase, therefore, it is concluded that there will be no adverse effect on the integrity of Loch Flemington SPA from indirect impacts on birds breeding outside of the European site boundary during the Operational Phase of the Proposed Development.

7.8 Loch Vaa SPA

Overview

7.8.1 Loch Vaa is a small lochan located north of Aviemore, approximately 40 km from the Proposed Development Site. According to the SPA citation, Loch Vaa regularly supports a population of up to seven pairs of Slavonian grebe. However, in certain years, Slavonian grebe do not breed at Loch Vaa, and this can occur irrespective of the management or condition of the site.

Other Indirect Impacts During the Construction Phase

7.8.2 The assessment for North Inverness Lochs SPA is applicable to Loch Vaa SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Vaa SPA population through reduced recruitment in subsequent years.

7.8.3 However, with the implementation of work exclusion zones around any waterbodies used by Slavonian grebes for breeding, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.8.4 There will consequently be no change to the population or distribution of Slavonian grebe within the European site, or significant disturbance of the species. With specific reference to these Conservation Objectives, it is therefore concluded that there will be no adverse effect on the integrity of Loch Vaa SPA from indirect impacts on birds breeding outside of the European site boundary during the construction of the Proposed Development.

Other Indirect Impacts During the Operational Phase

7.8.5 The assessment for North Inverness Lochs SPA is applicable to Loch Vaa SPA. Specifically, while there is no possibility of disturbance / displacement of Slavonian grebes occurring within the SPA boundary, the disturbance / displacement of birds breeding outside of the European site could indirectly affect the Loch Vaa SPA population through reduced recruitment in subsequent years.

7.8.6 However, with the implementation of additional mitigation, disturbance / displacement impacts, and any such indirect effects, will be avoided.

7.8.7 As for the Construction Phase, therefore, it is concluded that there will be no adverse effect on the integrity of Loch Vaa SPA from indirect impacts on birds breeding outside of the European site boundary during the Operation Phase of the Proposed Development.

7.9 In-combination Assessment

7.9.1 Cumulative effects can result from individually insignificant but collectively significant actions taking place over a period of time or concentrated in a location[19].

SPAs with qualifying Slavonian grebe and red-throated diver

7.9.2 With regard to potential impacts on breeding Slavonian grebe and red throated diver and associated SPAs, disturbance and displacement will be avoided by the implementation of additional mitigation detailed in Section 4. As such there would be no residual effects on these species which could act in-combination with those of other plans and projects. Therefore, in-combination effects are not considered further for the potential impact of disturbance and displacement of breeding Slavonian grebe and red-throated diver.

8. Conclusion

8.1.1 Seven European sites with Slavonian grebe or red-throated diver qualifying features were determined to be within the potential zone of influence of the Proposed Development:

- North Inverness Lochs SPA;
- Loch Knockie and nearby Lochs SPA
- Loch Ruthven SPA;
- Loch Ashie SPA;
- Moray Firth SPA;
- Loch Flemington SPA; and
- Loch Vaa SPA.

8.1.2 However, adverse effects on site integrity for all of the sites has been ruled out during Appropriate Assessment, taking account of mitigation including restrictions during construction to address otherwise possible adverse effects on qualifying bird species

8.1.3 Significant cumulative effects have been excluded for SPAs with qualifying Slavonian grebe and red-throated diver by implementation of appropriate mitigation.

8.1.4 This Statement to Inform HRA Update therefore concludes that, the Pre-Construction and Enabling, Construction and the Operation of the Proposed Development will not result in adverse effects on the integrity of any of the above European sites, either alone or in-combination with other projects or plans.

9. Figures

Revision: 0 Drawn: WC Checked: AR Approved: ND Date: 2025-03-28

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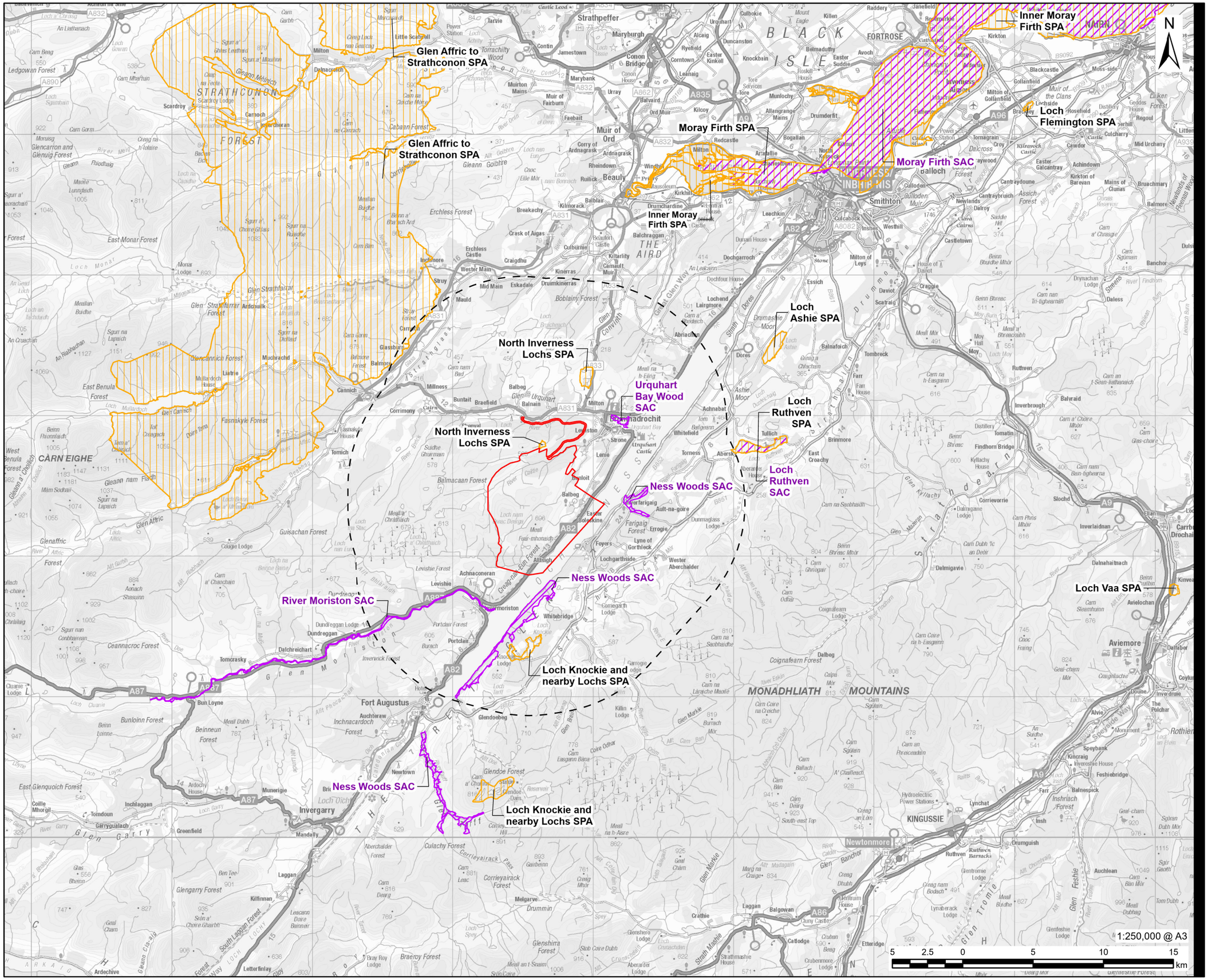

AECOM

PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

Glen Earrach Energy Ltd.

CONSULTANT

AECOM Limited
177 Bothwell Street
Glasgow
G2 7ER
www.aecom.com

LEGEND

- Red Line Boundary
- 10 km Study Area
- Special Areas of Conservation
- Special Protection Areas

NOTES

Special Protected Areas (SPA's) are relevant to birds only and are therefore addressed in the ornithology chapter and associated figures.

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

European Sites Within the Zone of Influence of the Proposed Development

FIGURE NUMBER

Figure.7.2.1

Revision: 4 Drawn: MH Checked: AR Approved: TM Date: 2025-03-27

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2 - North Inverness Lochs SPA and Dubh Lochs SSSI)

1 - Dubh Lochs SSSI (south)

6 - Loch nan Eun (West)

5 - Loch nan Eun (East)

3 - Loch Dubh (Sron Dubh)

4 - Sron Dubh un-named Lochan

7 - Glas-bheinn Bheag Un-named Lochan

10 - Allt Glas Mòr Swamp

11 - Allt Glas Mòr Lochan

8 - Glas-bheinn Bheag Un-named Swamp

12 - Glas-bheinn Mhòr Northern Swamp

13 - Glas-bheinn Mhòr Lochan

14 - Glas-bheinn Mhòr Southern Swamp

9 - Glas-bheinn Bheag Diver Lochan

15 - Loch nam Breac Dearga Lochan

16 - Loch nam Breac Dearga

17 - Meall Fuar-mhonaidh Lochan

19 - Creag Dhearg Loch

18 - Loch a'Bhealaich

20 - Loch an t-Sionnaich

22 - Carn Loch t-Sionnaich Lochan (East)

23 - Carn Loch t-Sionnaich Swamp

21 - Allt Carn na Fiacail Lochan

24 - Carn Loch t-Sionnaich Lochan (West)

25 - Loch na Faoileige

26 - Carn na Fiacail Lochan (North)

27 - Carn na Fiacail Swamp (North)

29 - Carn na Fiacail Swamp (South)

28 - Carn na Fiacail Lochan (South)

30 - Carn na Caorach Lochan

31 - Carn na Caorach Loch

32 - Carn na Caorach Swamp

0.5 0.25 0 0.5 1 1.5 km

1:30,000 @ A3

AECOM

PROJECT

Glen Earrach Pumped Storage Hydro

CLIENT

Glen Earrach Energy Ltd.

CONSULTANT

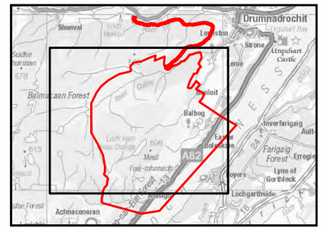
AECOM Limited
1 Tanfield, Inverleith Row
Edinburgh
EH3 5DA
www.aecom.com

LEGEND

- Red Line Boundary
- Access Tracks
- Lower Control Works
- Compounds
- Embankments & Spillway
- Headpond
- Secondary Bund
- Diver and Grebe Survey Area

Waterbody Suitability

- Both Species
- Only Slavonian Grebe
- Only Red-Throated Diver
- Other Surveyed Waterbody



NOTES

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60719875

FIGURE TITLE

Breeding Diver and Grebe Surveyed Waterbodies

FIGURE NUMBER

Appendix 7.2.2

Annex A Information on European Sites Within the Zone of Influence of the Development

This annex provides information on all European sites identified within the zone of influence of the Proposed Development. The sites included were determined through the zone of influence assessment detailed in Section 3, which applied specific search distances based on potential impact pathways and the ecology of qualifying species (e.g. 6-10 km for breeding birds, 20 km for non-breeding birds). Whilst all sites within the zone of influence are described below for completeness, only those sites with ornithological qualifying features that could potentially be affected by the Proposed Development (those designated for Slavonian grebe and red-throated diver) have been carried forward for detailed assessment in the HRA Screening (Section 5) and, where necessary, Appropriate Assessment (Section 7). The rationale for screening sites into or out of further assessment is provided in Table 3.1 and the subsequent screening tables in Section 5.

A.1 North Inverness Lochs SPA

North Inverness Lochs SPA encompasses five lochans which each have extensive sedge beds and are surrounded by mire, moorland and semi-natural broadleaved woodland dominated by birch.

The sole qualifying feature of the SPA is breeding Slavonian grebe, with the site supporting a population of seven pairs between 1991 to 1995. The latest assessed condition of the Slavonian grebe qualifying feature is Favourable Maintained, with recreation / disturbance being identified as a negative pressure.

The Conservation Objectives for North Inverness Lochs SPA are:

- To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.
- To ensure for the qualifying species that the following are maintained in the long term:
    - Population of the species as a viable component of the site;
    - Distribution of the species within the site;
    - Distribution and extent of habitats supporting the species;
    - Structure, function and supporting processes of habitats supporting the species;
    - No significant disturbance of the species.

A.2 Ness Woods SAC

Ness Woods SAC is a multi-part site comprising three distinct areas, all on the east side of Loch Ness. The ravine woodland at Glen Tarff represents one of the best and most extensive examples of this habitat type in Scotland, with further examples occurring along the north-facing shores of Loch Ness. The canopy is a mixture of alder *Alnus glutinosa*, ash *Fraxinus excelsior* and wych elm *Ulmus glabra*, with a locally abundant hazel *Corylus avellana* shrub layer. The ground flora is rich in ferns, mosses and herbaceous plants, and the woods support a diverse epiphytic flora of lichens, liverworts and mosses.

- The qualifying features [and latest assessed condition] of Ness Woods SAC are:
    - Mixed woodland on base-rich soils associated with rocky slopes [Unfavourable No change];
    - Western acidic oak woodland [Unfavourable No change];
    - Otter [Unfavourable Declining].

Mixed woodland on base-rich soils associated with rocky slopes is a priority habitat of the Habitats Directive. Priority habitats of the Habitats Directive are those which are in risk of disappearance and for which there is a particular responsibility to conserve. When carrying out HRA, where a priority habitat could be affected, IROPI are limited to those reasons outlined in regulation 49 of the Habitats Regulations. These must relate to human

health, public safety, beneficial consequences of primary importance to the environment, or any other imperative reason of overriding public interest subject to the opinion of the Scottish Ministers.

The woodland habitats for which this site is designated are in unfavourable condition due to grazing pressures, poorly developed under-storey and canopy cover, and limited woodland regeneration. The presence of INNS plants such as rhododendron *Rhododendron ponticum* is also identified as a negative pressure.

Although otter is assessed as being in Unfavourable Declining condition, the Conservation Advice Package for Ness Woods SAC states that there is a low level of confidence in the survey results which formed the basis for the assessment.

The Conservation Objectives for the qualifying woodland habitats of Ness Woods SAC are:

1. To ensure that the qualifying features are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Ness Woods SAC is restored by meeting Objectives 2a, 2b and 2c for each qualifying feature. These are set out in **Table A1: Conservation Objectives 2a, 2b and 2c for the Qualifying Habitats of Ness Woods SAC**

Table A1: Conservation Objectives 2a, 2b and 2c for the Qualifying Habitats of Ness Woods SAC

Qualifying Habitat	Conservation Objective 2a	Conservation Objective 2b	Conservation Objective 2c
Mixed woodland on base-rich soils associated with rocky slopes	Restore the extent and distribution of the habitat within the site	Restore the structure, function and supporting processes of the habitat	Restore the distribution and viability of typical species of the habitat
Western acidic oak woodland	Maintain the extent and distribution of the habitat within the site	Restore the structure, function and supporting processes of the habitat	Maintain the distribution and viability of typical species of the habitat

The Conservation Objectives for otter are:

1. To ensure that the qualifying features are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Ness Woods SAC is restored by meeting Objectives 2a, 2b and 2c for the qualifying feature:
    a. Maintain the population of the species as a viable component of the site.
    b. Maintain the distribution of the species throughout the site.
    c. Maintain the habitats supporting the species within the site and availability of food.

Information on Conservation Objectives 2a, 2b and 2c for the qualifying features can be found in the Conservation Advice Package for Ness Woods SAC[46].

A.3 Urquhart Bay Wood SAC

Urquhart Bay Wood is located at the edge of the village of Drumnadrochit, on the west side of Loch Ness, at the confluence of the River Enrick and River Coiltie. According to the SSSI citation for this site, alder dominates the wetter ground, with transitions on gradually rising land to stands of ash, gean (wild cherry) *Prunus avium*, rowan *Sorbus aucuparia*, wych elm, white willow *Salix alba* and bird cherry *Prunus padus*. The ground flora is typical of northern wet woodland and there are characteristic transitions to swamp and open freshwater.

Frequent inundation by floods, changes in channel, and accumulations of woody debris are key to the functioning of the site.

The sole qualifying feature of Urquhart Bay Wood SAC is Alder woodland on floodplains. The latest assessed condition of the qualifying feature is Unfavourable No change, with identified negative pressures being invasive species, over-grazing and water management.

The Conservation Objectives of Urquhart Bay Wood SAC are:

[46] Available from: https://sitelink.nature.scot/site/8337.

1. To ensure that the qualifying feature is in favourable condition and makes an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of the site is restored by meeting Objectives 2a, 2b and 2c for the qualifying feature:
    a. Maintain the extent and distribution of the habitat within the site.
    b. Restore the structure, function and supporting processes of the habitat.
    c. Restore the distribution and viability of the typical species of the habitat.

Information on Conservation Objectives 2a, 2b and 2c for the qualifying habitat can be found in the Conservation Advice Package for Urquhart Bay Wood SAC[47].

A.4 River Moriston SAC

River Moriston flows from Loch Cluanie, in the west, to Loch Ness, at its eastern end. The qualifying features [and latest assessed condition] of River Moriston SAC are:

FWPM [Unfavourable No change];

Atlantic salmon [Unfavourable No change].

According to the Conservation Advice Package, FWPM is in unfavourable condition in River Moriston SAC due to poor recruitment and the small size and aged status of the population, especially in the upper reaches of the river. A range of negative pressures can influence salmon conservation status, but NatureScot states in the Conservation Advice Package that, within River Moriston SAC, the feature is in unfavourable condition due to their being low numbers of juveniles.

The overarching Conservation Objectives for both qualifying features of River Moriston SAC are:

1. To ensure that the qualifying features of the site are in favourable condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of the River Moriston SAC is restored by meeting Objectives 2a, 2b, 2c for each qualifying feature (and 2d for FWPM). These are set out in **Table A2: Conservation Objectives 2a, 2b, 2c and 2d for the Qualifying Species of River Moriston SAC**

Table A2: Conservation Objectives 2a, 2b, 2c and 2d for the Qualifying Species of River Moriston SAC

Qualifying Species	Conservation Objective 2a	Conservation Objective 2b	Conservation Objective 2c	Objective 2d
FWPM	Restore the population of FWPM as a viable component of the site	Restore the distribution of FWPM throughout the site	Restore the habitats supporting the FWPM within the site and availability of food	Restore the distribution and viability of FWPM host species and their supporting habitats
Atlantic salmon	Restore the population of Atlantic salmon, including range of genetic types, as a viable component of the site	Restore the distribution of Atlantic salmon throughout the site	Restore the habitats supporting Atlantic salmon within the site and availability of food	N/A

Information on Conservation Objectives 2a, 2b, 2c and 2d for the qualifying features can be found in the Conservation Advice Package for River Moriston SAC[48].

A.5 Loch Knockie and nearby Lochs SPA

Loch Knockie and nearby Lochs SPA comprises a group of lochs near the south-eastern end of Loch Ness. The undisturbed aquatic plant communities within the waterbodies include extensive sedge beds, and the lochs are surrounded by mire, heath, mixed woodland and agricultural land.

[47] Available from: https://sitelink.nature.scot/site/8406.
[48] Available from: https://sitelink.nature.scot/site/8361.

The sole qualifying feature of Loch Knockie and nearby Lochs SPA is breeding Slavonian grebe. According to the citation document, the SPA supported a population of up to six pairs between 1992 and 1995. The latest assessed condition of the qualifying feature is Unfavourable No change. It is unclear why the population within the site has declined, as the habitats have remained largely unchanged.

The Conservation Objectives for Loch Knockie and nearby Lochs SPA are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

A.6 Loch Ruthven SAC

Loch Ruthven is a medium-large freshwater body of moderate nutrient status, largely unaffected by modification to catchment area, shoreline and water level fluctuations. Much of the shoreline is rocky and is surrounded by semi-natural birchwood, but there are pockets of bottle sedge *Carex rostrata* swamp along much of the edge, at the western end showing a transition from open water, through swamp and fen vegetation to sedge-rich wet acidic grassland.

The qualifying features [and latest assessed condition] of Loch Ruthven SAC are:

Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels ([Favourable Maintained];

Otter [Favourable Maintained].

Although both features are assessed as being in favourable conservation status, identified negative pressures acting on the loch habitat include agricultural operations and game / fisheries management. In relation to the former, agricultural run-off has been found to be increasing phosphorous levels in the loch, and poaching by grazing stock is also an issue.

The Conservation Objectives for the loch habitat at Loch Ruthven SAC are:

1. To ensure that the qualifying feature of the site is in favourable condition and makes an appropriate contribution to achieving favourable conservation status.

2. To ensure that the integrity of Loch Ruthven SAC is maintained by meeting objectives 2a, 2b and 2c for the clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels habitat:

a. Maintain the extent and distribution of the qualifying habitat within the site.

b. Maintain the structure, function and supporting processes of the qualifying habitat.

c. Maintain the distribution and viability of typical species of the qualifying habitat.

The Conservation Objectives for otter at Loch Ruthven SAC are:

1. To ensure that the qualifying feature of the site is in favourable condition and makes an appropriate contribution to achieving favourable conservation status.

2. To ensure that the integrity of Loch Ruthven SAC is maintained by meeting objectives 2a, 2b and 2c for otter:

a. Maintain the population of otter as a viable component of the site.

b. Maintain the distribution of otter throughout the site.

c. Maintain the habitats supporting otter within the site and availability of food.

Information on Conservation Objectives 2a, 2b and 2c for the qualifying features can be found in the Conservation Advice Package for Loch Ruthven SAC[49].

A.7 Loch Ruthven SPA

The sole qualifying feature of Loch Ruthven SPA is breeding Slavonian grebe, which has a latest assessed condition of Unfavourable Declining. The reasons for this status include recreational pressure and associated disturbance. According to the SPA citation document, Loch Ruthven supported a population of fourteen pairs of Slavonian grebe between 1988 and 1992.

The Conservation Objectives of Loch Ruthven SPA are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

A.8 Loch Ashie SPA

Loch Ashie is a large mesotrophic loch on the east side of Loch Ness. It is designated as an SPA as it supports an internationally important population of non-breeding Slavonian grebe, with up to 60 individuals gathering on the loch to moult during the autumn.

The latest assessed condition of the qualifying feature is Unfavourable Declining.

The Conservation Objectives for Loch Ashie SPA are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

A.9 Inner Moray Firth SPA

Inner Moray Firth SPA is a multi-part site, covering large extents of the shore and intertidal area along the north and south sides of the Moray Firth. The qualifying features of the site [and latest assessed condition] are:

Bar-tailed godwit *Limosa lapponica* (non-breeding) [Favourable Maintained]

Common tern *Sterna hirundo* (breeding) [Unfavourable No change];

Cormorant *Phalacrocorax carbo* (non-breeding) [Unfavourable No change];

Curlew *Numenius arquata* (non-breeding) [Favourable Maintained];

Goldeneye *Bucephala clangula* (non-breeding) [Favourable Maintained];

Goosander *Mergus merganser* (non-breeding) [Unfavourable No change];

[49] Available from: https://sitelink.nature.scot/site/8306.

Greylag goose (non-breeding) [Favourable Maintained];

Osprey (breeding) [Favourable Maintained];

Oystercatcher *Haematopus ostralegus* (non-breeding) [Favourable Maintained];

Red-breasted merganser *Mergus serrator* (non-breeding) [Unfavourable No change];

Redshank *Tringa totanus* (non-breeding) [Favourable Maintained];

Scaup *Aythya marila* (non-breeding) [Favourable Maintained];

Teal *Anas crecca* (non-breeding) [Favourable Maintained];

Waterfowl assemblage (non-breeding) [Favourable Maintained];

Wigeon *Anas penelope* (non-breeding) [Favourable Maintained].

The Conservation Objectives of Inner Moray Firth SPA are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

A.10 Moray Firth SPA

The Moray Firth SPA is a funnel-shaped body of sea on the north-east mainland coast of Scotland. Most of the firth is shallow water (less than 20 m) over a sandy substrate, apart from a 50 m deep channel running east-west through muddy substrate. Tidal flows are relatively weak, with a maximum tidal range of 3 m, and the firth is relatively sheltered, at least in comparison to the exposure of the Atlantic west coasts. The Moray Firth is an important spawning ground and nursery area for a number of fish species, which together with abundant bivalve molluscs, are important prey species for marine waterbirds.

The qualifying features of the site [and latest assessed condition] are:

Common scoter *Melanitta nigra* (non-breeding) [Favourable Maintained];

Eider *Somateria mollissima* (non-breeding) [Favourable Declining];

Goldeneye (non-breeding) [Unfavourable Declining];

Great northern diver (non-breeding) [Favourable Maintained];

Long-tailed duck *Clangula hyemalis* (non-breeding) [Favourable Declining];

Red-breasted merganser (non-breeding) [Favourable Maintained];

Red-throated diver (non-breeding) [Favourable Maintained];

Scaup (non-breeding) [Unfavourable Declining];

Shag (breeding) [Favourable Maintained];

Shag (non-breeding) [Favourable Maintained];

Slavonian grebe (non-breeding) [Favourable Maintained];

Velvet scoter *Melanitta fusca* (non-breeding) [Unfavourable Declining].

The Conservation Objectives of Moray Firth SPA are:

1. To ensure that the qualifying features of the site are in favourable condition and makes an appropriate contribution to achieving favourable conservation status.

2. To ensure that the integrity of Moray Firth SPA is maintained by meeting objectives 2a, 2b and 2c for each qualifying feature:
    a. The populations of qualifying features are viable components of the site.
    b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.
    c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Moray Firth SPA.

Information on Conservation Objectives 2a, 2b and 2c for the qualifying features can be found in the Conservation and Management Advice document for Moray Firth SPA[50].

A.11 Moray Firth SAC

Moray Firth SAC has two qualifying features, as follows [the latest assessed condition of each is also given]:

Bottlenose dolphin [Favourable Maintained];

Subtidal sandbanks [Favourable Maintained].

The Conservation Objectives of Moray Firth SAC in relation to the qualifying bottlenose dolphin are:

1. To ensure that the qualifying features of the site are in favourable conservation condition and make an appropriate contribution to achieving favourable conservation status.
2. To ensure that the integrity of Moray Firth SAC is maintained or restored in the context of environmental changes by meeting Objectives 2a, 2b and 2c for each qualifying feature:

    Bottlenose dolphin

    a. The population of bottlenose dolphin is a viable component of the site.
    b. The distribution of bottlenose dolphin throughout the site is maintained by avoiding significant disturbance.
    c. The supporting habitats and processes relevant to bottlenose dolphin and the availability of prey for bottlenose dolphin are maintained.

    Subtidal sandbanks

    a. Extent and distribution of the habitat within the site.
    b. Structure and function of the habitat and the supporting environment on which it relies.
    c. Distribution and viability of typical species of the habitat.

Information on Conservation Objectives 2a, 2b, 2c and 2d for the qualifying features can be found in the Conservation and Management Advice document for Moray Firth SAC[51].

A.12 Loch Flemington SPA

Loch Flemington SPA is located just south of the A96 road, near Inverness Airport. It is a small, shallow, eutrophic loch. The sole qualifying feature of the site is breeding Slavonian grebe, which is in Unfavourable No change condition. Negative pressures acting on the qualifying feature include the presence of invasive plant species and impacts of septic tank discharges and diffuse pollution from agricultural run-off. According to the citation document, between 1991 and 1995, an average of six pairs of Slavonian grebe bred within Loch Flemington SPA.

The Conservation Objectives for the site are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

[50] Available from: https://sitelink.nature.scot/site/10490.
[51] Available from: https://sitelink.nature.scot/site/8327.

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

A.13 Loch Vaa SPA

Loch Vaa is a small, irregularly shaped, nutrient-poor loch surrounded by birch woodland and mixed age Scots pine *Pinus sylvestris* plantation. The loch has no outflow or inflow and is fed by springs and ground water. The indented shoreline forms a series of small bays and Slavonian grebe, the sole qualifying feature of the site, nest in sedge beds, reed beds and flooded willows at the water's edge.

The latest assessed condition of the qualifying feature is Unfavourable No change. In certain years, Slavonian grebe do not breed at Loch Vaa, and this can occur irrespective of the management or condition of the site. However, in recent years, the water level at Loch Vaa has been significantly below average in spring and early summer, resulting in a wide expanse of shingle beach between the water surface and the bank vegetation. The low water levels are probably one factor contributing to the poor breeding performance of Slavonian grebe at the site in recent years.

According to the SPA citation, Loch Vaa regularly supports a population of up to seven pairs of Slavonian grebe.

The Conservation Objectives of the SPA are:

To avoid deterioration of the habitats of the qualifying species or significant disturbance of the qualifying species, thus ensuring that the integrity of the site is maintained.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species;
- No significant disturbance of the species.

Annex B Suitability of Waterbodies Within Approximately 2 km of the Proposed Development for Breeding Divers and Slavonian Grebe

Table B1: Waterbody Descriptions summarises the suitability of the 32 waterbodies surveyed for the presence of breeding red-throated diver and/or Slavonian grebe. Waterbodies 1 (Dubh Lochs SSSI (south)) and 2 (Dubh Lochs SSSI (north)) are part of the North Inverness Lochs SPA.

Table B1: Waterbody Descriptions

Waterbody ID	Waterbody Name	Approximate Size of Waterbody (ha)	Relationship to the Proposed Development Above Ground Construction Areas	Description	Suitability for Breeding Red-throated Divers and Slavonian Grebe
1	Dubh Lochs SSSI (South)	1.35	Approximately 800 m north	Medium-sized lochan with a reasonably extensive area of quaking mire/sedges at southern end. Very suitable in that area for nesting by red-throated diver/Slavonian grebe. All other sides of the waterbody are very steep and rocky/peaty/heathery and unsuitable for nesting by these species.	Red-throated diver – Suitable Slavonian grebe – Suitable
2	Dubh Lochs SSSI (North)	2.14	Approximately 800 m north	Large lochan with extensive area of swamp/quaking mire/sedges at south-east and south-western ends. Excellent suitability for red-throated diver and Slavonian grebe, as well as waders.	Red-throated diver – Suitable Slavonian grebe – Suitable
3	Loch Dubh (Sron Dubh)	3.37	Approximately 700 m east	Medium-sized lochan. South and east sides are reasonably gently sloping but there is very little vegetative cover for red-throated diver nesting. Considered to have low suitability for red-throated divers and no suitability for Slavonian grebe.	Red-throated diver – Low Suitability Slavonian grebe – Unsuitable
4	Sron Dubh un-named Lochan	0.26	Approximately 50 m west	A very small lochan with a couple of small ‘islands’ of vegetation at southern end. However, small size makes it unsuitable for divers and Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
5	Loch nan Eun (East)	1.78	Approximately 250 m north	Medium-sized lochan with an island on the west side, although it is quite close to the shore and has little vegetation. The sides of the waterbody are generally rather steep and heathery, with sub-optimal vegetation. Considered to have low suitability for red-throated diver and very low suitability for Slavonian grebe.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability

Waterbody ID	Waterbody Name	Approximate Size of Waterbody (ha)	Relationship to the Proposed Development Above Ground Construction Areas	Description	Suitability for Breeding Red-throated Divers and Slavonian Grebe
6	Loch nan Eun (West)	2.43	Approximately 400 m north	An excellent waterbody with extensive areas of quaking mire/sedge in addition to a small island of what looks to be unstable quaking-type vegetation at the south-west side and multiple other islands in the middle.	Red-throated diver – Suitable Slavonian grebe – Suitable
7	Glas-bheinn Bheag Un-named Lochan (North)	0.43	Approximately 100 m west	Very small and apparently shallow with much bogbean *Menyanthes trifoliata* and sedge throughout. Given size and apparent shallow depth, this waterbody is considered to be unsuitable for divers and Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
8	Glas-bheinn Bheag Un-named Swamp	0.35	Approximately 150 m north	Very similar to Waterbody 7, above, but even smaller. Considered to be unsuitable for divers and Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
9	Glas-bheinn Bheag Un-named Lochan (South)	0.66	Approximately 25 m north	An elevated and exposed waterbody with a large island in the centre.	Red-throated diver – Suitable Slavonian grebe – Unsuitable
10	Allt Glas Mòr Swamp	0.16	Approximately 50 m north	A narrow and shallow pool with lots of emergent vegetation and no suitability for divers or Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
11	Allt Glas Mòr Lochan	1.5	Approximately 150 m north	A large waterbody with an area of emergent bogbean and sedge at the southern end.	Red-throated diver – Suitable Slavonian grebe – Suitable
12	Glas-bheinn Mhòr Northern Swamp	0.05	Approximately 25 m west	An area of swamp with almost no open water. No suitability for divers or Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
13	Glas-bheinn Mhòr Lochan	1.78	Approximately 50 m west	Medium- to large-sized waterbody but with no features or optimal vegetation for nesting by divers or Slavonian grebe. Very low suitability for these species.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability
14	Glas-bheinn Mhòr Southern Swamp	0.14	Overlaps	An area of swamp with almost no open water. No suitability for divers or Slavonian grebe.	Divers – Unsuitable Slavonian Grebe – Unsuitable
15	Loch nam Breac Dearga Lochan	0.27	Overlaps	A small waterbody with very low suitability for red-throated diver and Slavonian grebe. A small length of the bank may have very limited suitability for red-throated diver, and emergent vegetation is extremely sparse, such that it provides very low potential for Slavonian grebe.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability
16	Loch nam Breac Dearga	24.04	Overlaps	Very large loch which is too large to be suitable for red-throated diver nesting. There is no emergent vegetation suitable for Slavonian grebe. There is a single small island, comprising almost bare rock with very little vegetation, near the south-western end. This is unsuitable for nesting by divers.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
17	Meall Fuar-mhonaidh Lochan	0.64	Approximately 350 m south	Medium-sized waterbody but rather featureless. Steep-sided and/or with unsuitable vegetation around edges for red-throated diver nesting.	Red-throated diver – Low Suitability

Waterbody ID	Waterbody Name	Approximate Size of Waterbody (ha)	Relationship to the Proposed Development Above Ground Construction Areas	Description	Suitability for Breeding Red-throated Divers and Slavonian Grebe
				Considered to have very low suitability for red-throated diver and Slavonian grebe.	Slavonian grebe – Low Suitability
18	Loch a'Bhealaich	2.55	Approximately 800 m south	Large, exceptionally good waterbody with a big well-vegetated island in the centre and patches of emergent bogbean and sedge throughout. Suitable for Slavonian grebe and red-throated diver.	Red-throated diver – Suitable Slavonian grebe – Suitable
19	Creag Dhearg Loch	4.05	Approximately 900 m south	Large waterbody but with less emergent vegetation than Loch a'Bhealaich (Waterbody 18). However, there is an area of emergent vegetation in the very southern part of the waterbody which appears to be very suitable for Slavonian grebe and potentially red-throated diver.	Red-throated diver – Low Suitability Slavonian grebe – Suitable
20	Loch an t-Sionnaich	2.54	Approximately 125 m west	Medium/large waterbody with some small patches of emergent sedge on the northern side which have some suitability for Slavonian grebe. The edges are rather featureless, but many are shallow and not steep. There is considered to be limited suitability for red-throated diver and Slavonian grebe, but no birds present.	Red-throated diver – Suitable Slavonian grebe – Suitable
21	Allt Carn na Fiacail Lochan	0.29	Approximately 725 m west	Small and shallow lochan with emergent vegetation along the west side and bogbean through the middle. Given the small size and apparent shallowness, this waterbody is considered to be unsuitable for divers and Slavonian grebe.	Divers – Unsuitable Slavonian Grebe – Unsuitable
22	Carn Loch t-Sionnaich Lochan (East)	1.02	Approximately 950 m west	Medium-sized waterbody but lacks features for nesting by divers or Slavonian grebe. There is a very small patch of grassy/sedge vegetation in south-west corner that has very limited suitability for red-throated diver nesting. This waterbody is considered to have very low suitability for divers and Slavonian grebe.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability
23	Carn Loch t-Sionnaich Swamp	0.05	Approximately 1.1 km west	A swamp with no suitability for divers or Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
24	Carn Loch t-Sionnaich Lochan (West)	0.85	Approximately 1.1 km west	This waterbody has largely transitioned to swamp, with only small areas of open water around some of the edges. It is not suitable for divers and has low suitability for Slavonian grebe due to lack of open water. However, it is excellent for waders.	Red-throated diver – Unsuitable Slavonian grebe – Low Suitability
25	Loch na Faoileige	1.98	Approximately 1.2 km west	Large waterbody with very little emergent vegetation. There is an island near the northern side, but it is very rocky and steep at the base and appears to be unsuitable for divers. It is considered that Loch na Faoileige has very low suitability for Slavonian grebe and low suitability for divers.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability
26	Carn na Fiacail Lochan (North)	0.33	Approximately 1.6 km west	Small and shallow with abundant emergent sedge. Due to size and shallowness, this waterbody is unsuitable for divers and Slavonian grebe. However, it is excellent for waders.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable

Waterbody ID	Waterbody Name	Approximate Size of Waterbody (ha)	Relationship to the Proposed Development Above Ground Construction Areas	Description	Suitability for Breeding Red-throated Divers and Slavonian Grebe
27	Carn na Fiacail Swamp (North)	0.16	Approximately 1.4 km west	There was almost no open water at the time of survey and was largely mud and swamp. It has no suitability for divers or Slavonian grebe but provides good habitat for waders.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
28	Carn na Fiacail Lochan (South)	0.11	Approximately 1.6 km west	Very small, shallow waterbody with abundant cottongrass *Eriophorum* sp.. There is no suitability for divers or Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
29	Carn na Fiacail Swamp (South)	0.43	Approximately 1.5 km west	Small in size, but predominantly open water, rather than swamp. However, it still appears to be shallow, and it is considered to have very low suitability for divers and Slavonian grebe.	Red-throated diver – Low Suitability Slavonian grebe – Low Suitability
30	Carn na Caorach Lochan	0.54	Approximately 1.9 km west	Medium-sized but appears to be very shallow, with a lot of sparse emergent vegetation. This does not seem to be dense enough for Slavonian grebe nesting. A small island exists at the north end with a willow *Salix* sp. bush on, but this would be very accessible to predators. Due to the shallowness of this waterbody, it is considered to be unsuitable for divers and Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable
31	Carn na Caorach Loch	1.03	Approximately 1.7 km west	Medium-sized waterbody with a patch of emergent sedge in the middle. Very suitable for Slavonian grebe, but low potential for red-throated diver.	Red-throated diver – Low Suitability Slavonian grebe – Suitable
32	Carn na Caorach Swamp	0.19	Approximately 1.5 km west	An area of swamp that is beginning to transition to scrub. Totally unsuitable for divers and Slavonian grebe.	Red-throated diver – Unsuitable Slavonian grebe – Unsuitable

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