March 2025

Glen Earrach Pumped Storage Hydro

Environmental Impact Assessment Report

Volume 5: Appendices
Appendix 4.1: Scoping Opinion

Glen Earrach Energy Ltd

Glen Earrach AECOM

Scottish Government
Riaghaltas na h-Alba
gov.scot

The Scottish Government

Energy Consents Unit

Scoping Opinion on Behalf of Scottish Ministers Under The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

Glen Earrach Pumped Storage Hydro

AECOM
On Behalf of Glen Earrach Energy Ltd

December 2024

CONTENTS

1. Introduction

1.1. This scoping opinion is issued by the Scottish Government Energy Consents Unit on behalf of the Scottish Ministers to AECOM on behalf of Glen Earrach Energy Limited a company incorporated under the Companies Act with company number SC777268 ("the Company") and having its registered office at 50 Lothian Road, Festival Square, Edinburgh, Scotland, EH3 9WJ in response to a request dated 26 April 2024 for a scoping opinion under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 in relation to the proposed Glen Earrach Pumped Storage Hydro ("the proposed development"). The request was accompanied by a scoping report.

1.2. The proposed development would be located on the Northwest side of Loch Ness, approximately 9.5 km to the south of Drumnadrochit, and 6.5 km north of Invermoriston within The Highland Council administration region. Headpond NGR - NH 45223 22331, Tailpond NGR - NH 54114 28417.

1.3. The proposed development would consist of a storage capacity of up to 30,000 megawatt hours (MWh) with up to 2,000 MW installed electrical generation capacity (subject to further investigation and feasibility works), with a gross head (vertical distance between upper and lower loch) of close to 500m.

1.4. The principal components of the Proposed Development and ancillary infrastructure would be:

- A headpond at Loch nam Breac Dearga, including embankment(s) or dams, a reservoir with a working volume of water up to 27 Mm;
- inlet / outlet;
- A Tailpond – the lower reservoir, which in this case would be the existing water body of Loch Ness;
- a low-pressure high-level tunnel;
- a low-pressure low-level tunnel;
- a power cavern;
- a cable tunnel;
- an access tunnel;
- a sub / switching station;
- a spillway / spillway channel;
- surge shaft(s);
- access tracks;
- compounds; and
- temporary accommodation.

1.5. The Company indicates the proposed development has an operational lifetime of around 80 years, it is expected that the civil works (tunnels and embankments) will last for up to 100 years. The Company indicates that at the end of its operational life, the development would either be refurbished, or decommissioned.

1.6. The proposed development is solely within the planning authority of the Highland Council.

2. Consultation

2.1. Following the scoping opinion request a list of consultees was agreed between AECOM (acting as the Company's agent) and the Energy Consents Unit. A consultation on the scoping report was undertaken by the Scottish Ministers and this commenced on 15 May 2024. The consultation closed on 06 June 2024. The Scottish Ministers also requested responses from their internal advisor Transport Scotland. All consultation responses received are attached in ***ANNEX B Consultation responses***.

2.2. The purpose of the consultation was to obtain scoping advice from each consultee on environmental matters within their remit. Responses from consultees and advisors, should be read in full for detailed requirements and for comprehensive guidance, advice and, where appropriate, templates for preparation of the Environmental Impact Assessment (EIA) report.

2.3. Unless stated to the contrary in this scoping opinion, Scottish Ministers expect the EIA report to include all matters raised in responses from the consultees and advisors.

2.4. The following organisations were consulted but did not provide a response:

- BEAR Scotland
- Beastie Boats
- Civil Aviation Authority
- Communities Inshore Fisheries Alliance
- Cruise Loch Ness
- Defence Infrastructure Organisation
- Fisheries Management Scotland
- Fort Augustus and Glenmoriston Community Council
- John Muir Trust
- Loch Ness by Jacobite
- Mountaineering Scotland
- National Grid
- Ness and Beauly Fisheries Trust
- Scottish & Southern Electricity Networks (SSE)
- Scottish Canals 2 - Caledonian Canal
- Scottish Canoe Association
- Scottish Fishermen's Federation
- Scottish Fishermen's Organisation
- Scottish Forestry
- Scottish Wild Land Group
- Scottish Wildlife Trust

- The Loch Ness Centre
- Visit Scotland

2.5. With regard to those consultees who did not respond, it is assumed that they have no comment to make on the scoping report, however each would be consulted again in the event that an application for section 36 consent is submitted subsequent to this EIA scoping opinion.

2.6. The Scottish Ministers are satisfied that the requirements for consultation set out in Regulation 12(4) of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 have been met.

3. The Scoping Opinion

3.1. This scoping opinion has been adopted following consultation with the Highland Council, within whose area the proposed development would be situated, NatureScot (previously "SNH"), Scottish Environment Protection Agency and Historic Environment Scotland, all as statutory consultation bodies, and with other bodies which Scottish Ministers consider likely to have an interest in the proposed development by reason of their specific environmental responsibilities or local and regional competencies.

3.2. Scottish Ministers adopt this scoping opinion having taken into account the information provided by the applicant in its request dated 26 April 2024 in respect of the specific characteristics of the proposed development and responses received to the consultation undertaken. In providing this scoping opinion, the Scottish Ministers have had regard to current knowledge and methods of assessment; have taken into account the specific characteristics of the proposed development, the specific characteristics of that type of development and the environmental features likely to be affected.

3.3. A copy of this scoping opinion has been sent to the Highland Council for publication on their website. It has also been published on the Scottish Government energy consents website at www.energyconsents.scot

3.4. Scottish Ministers expect the EIA report which will accompany the application for the proposed development to consider in full all consultation responses attached in Annex B**.**

3.5. Scottish Ministers are satisfied with the scope of the EIA set out by the scoping report.

3.6. In addition to the consultation responses, Ministers wish to provide comments with regards to the scope of the EIA report.

The Company should note and address each of the following matters:

3.7. Scottish Water provided information on whether there are any drinking water

protected areas or Scottish Water assets on which the development could have any significant effect. Scottish Ministers request that the company contacts Scottish Water (via EIA@scottishwater.co.uk) and makes further enquires to confirm whether there any Scottish Water assets which may be affected by the development, and includes details in the EIA report of any relevant mitigation measures to be provided.

3.8. Scottish Ministers request that the Company investigates the presence of any private water supplies which may be impacted by the development. The EIA report should include details of any supplies identified by this investigation, and if any supplies are identified, the Company should provide an assessment of the potential impacts, risks, and any mitigation which would be provided.

3.9. MD-SEDD provide generic scoping guidelines for onshore wind farm and overhead line development https://www2.gov.scot/Topics/marine/Salmon-Trout- Coarse/Freshwater/Research/onshoreren) which outline how fish populations can be impacted during the construction, operation and decommissioning of a wind farm or overhead line development and informs developers as to what should be considered, in relation to freshwater and diadromous fish and fisheries, during the EIA process.

3.10. In addition to identifying the main watercourses and waterbodies within and downstream of the proposed development area, developers should identify and consider, at this early stage, any areas of Special Areas of Conservation where fish are a qualifying feature and proposed felling operations particularly in acid sensitive areas.

3.11. Scottish Ministers consider that where there is a demonstrable requirement for peat landslide hazard and risk assessment (PLHRA), the assessment should be undertaken as part of the EIA process to provide Ministers with a clear understanding of whether the risks are acceptable and capable of being controlled by mitigation measures.

3.12. The Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments (Second Edition), published at http://www.gov.scot/Publications/2017/04/8868, should be followed in the preparation of the EIA report, which should contain such an assessment and details of mitigation measures. Where a PLHRA is not required clear justification for not carrying out such a risk assessment is required.

3.13. The scoping report identified that a landscape and visual impact assessment will be undertaken for the proposed development to identify any potential landscape and visual effects.

3.14. The noise assessment should be carried out in line with relevant legislation and standards as detailed in Chapter 14 of the scoping report.

3.15. Scottish Ministers are aware that further engagement is required between parties regarding the refinement of the design of the proposed development

regarding, among other things, surveys, management plans, peat, radio links, finalisation of viewpoints, cultural heritage, cumulative assessments, and request that they are kept informed of relevant discussions.

4. Mitigation Measures

4.1. The Scottish Ministers are required to make a reasoned conclusion on the significant effects of the proposed development on the environment as identified in the environmental impact assessment. The mitigation measures suggested for any significant environmental impacts identified should be presented as a conclusion to each chapter. Applicants are also asked to provide a consolidated schedule of all mitigation measures proposed in the environmental assessment, provided in tabular form, where that mitigation is relied upon in relation to reported conclusions of likelihood or significance of impacts.

5. Conclusion

5.1. This scoping opinion is based on information contained in the applicant's written request for a scoping opinion and information available at the date of this scoping opinion. The adoption of this scoping opinion by the Scottish Ministers does not preclude the Scottish Ministers from requiring of the applicant information in connection with an EIA report submitted in connection with any application for section 36 consent for the proposed development.

5.2. This scoping opinion will not prevent the Scottish Ministers from seeking additional information at application stage, for example to include cumulative impacts of additional developments which enter the planning process after the date of this opinion.

5.3. Without prejudice to that generality, it is recommended that advice regarding the requirement for an additional scoping opinion be sought from Scottish Ministers in the event that no application has been submitted within 12 months of the date of this opinion.

5.4. It is acknowledged that the environmental impact assessment process is iterative and should inform the final layout and design of proposed developments. Scottish Ministers note that further engagement between relevant parties in relation to the refinement of the design of this proposed development will be required and would request that they are kept informed of on-going discussions in relation to this.

5.5. When finalising the EIA report, applicants are asked to provide a summary in tabular form of where within the EIA report each of the specific matters raised in this scoping opinion has been addressed.

5.6. It should be noted that to facilitate uploading to the Energy Consents portal, the EIA report and its associated documentation should be divided into appropriately named separate files of sizes no more than 10 megabytes (MB).

Carolanne Brown

Energy Consents Unit
December 2024

ANNEX A

Consultation

List of consultees who were consulted

- The Highland Council
- Historic Environment Scotland
- NatureScot
- SEPA
- BEAR Scotland
- Beastie Boats
- BT
- Caley Cruisers
- Civil Aviation Authority
- Communities Inshore Fisheries Alliance
- Crown Estate Scotland
- Cruise Loch Ness
- Defence Infrastructure Organisation
- Fisheries Management Scotland
- Fort Augustus and Glenmoriston Community Council
- Glenurquhart Community Council
- Health and Safety Executive
- Highland and Islands Airports Limited (“HIAL”)
- John Muir Trust
- Joint Radio Company (“JRC”)
- Loch Ness by Jacobite
- Marine Harvest Ltd – MOWI
- Mountaineering Scotland
- National Grid
- NATS Safeguarding
- Ness and Beauly Fisheries Trust
- Ness District Salmon Fisheries Board
- Office for Nuclear Regulation
- Royal Yachting Association (“RYA”)
- RSPB Scotland
- Scottish & Southern Electricity Networks (SSE)
- Scottish Canals
- Scottish Canals 2 - Caledonian Canal
- Scottish Canoe Association
- Scottish Fishermen's Federation
- Scottish Fishermen's Organisation
- Scottish Gas Networks (SGN)
- Scottish Water
- Scottish Wild Land Group
- Scottish Wildlife Trust
- ScotWays
- Stratherrick and Foyers Community Council

- The Loch Ness Centre
- Visit Scotland
- Woodland Trust

Internal advice from areas of the Scottish Government was provided by officials from Transport Scotland.

See Section 2.4 above for a list of organisations that were consulted but did not provide a response.

ANNEX B

Consultee Responses

BT Consultation Response

From:	radionetworkprotection@bt.com
To:	Carolanne Brown
Cc:	radionetworkprotection@bt.com
Subject:	FW: WID13441 - Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121
Date:	05 June 2024 14:33:47
Attachments:	image001.jpg image002.png image003.png image004.jpg

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OUR REF; WID13441

Thank you for your email dated 15/05/2024.

We have studied this Glen Earrach Pumped Storage Hydro scoping proposal with respect to EMC and related problems to BT point-to-point microwave radio links.

We have plotted the central location provided (NH4525522395) and reviewed the infrastructure located inside of the Red Line Boundary. As you can see from the screenshot provided BT Radio Link PORT CLAIR FOREST BT RS to DAVIOT WOOD BT RS is within the vicinity. Due to the proximity to our Radio Link can I please ask that you provide the exact heights and grid references for any structures at height within the Red Line Boundary when this information is available?

Once this information is received, we will be able to access this for you and provide BTs stance on this proposal.

Unit 4, Beta Centre
Stirling University Innovation Park
Stirling, FK9 4NF

E-mail: scotland@buglife.org.uk

By e-mail only: representations@gov.scot

4th June 2024

To whom it may concern,

ECU00005121 Glen Earrach Pumped Storage Hydro Project - Construct a PSH scheme utilising the existing Loch nam Breac Dearga located on the Northwest side of Loch Ness. Glen Earrach PSH will have a storage capacity of up to 30,000 megawatt hours (MWh) with up to 2,000 MW installed electrical generation capacity (subject to further investigation and feasibility works), with a gross head (vertical distance between upper and lower loch) of close to 500m.

Buglife- The Invertebrate Conservation Trust would like to make the following comments on the above application.

Buglife's comments are in response to the Environment Scoping Report written by AECOM, dated April 2024.

Proposed scope of macroinvertebrate surveys to inform Environmental Impact Assessment Report

The Scoping Report has identified 12 named water bodies within the development site, with further unnamed waterbodies within the development boundary. Although the desk study undertaken did not generate any records of notable invertebrate species, it was acknowledged that is this likely to be due to data deficiency, rather than an indication of absence of species of conservation concern. The report identifies Freshwater Pearl Mussel (*Margaritifera margaritifera*) and Northern Damselfly (*Coenagrion hastulatum*) as Scottish Biodiversity List (SBL)[1] species relevant to habitats within the scheme. Local Biodiversity Action Plan species of relevance that have been identified are Upland Summer Mayfly (*Ameletus inopinatus*) and Azure Hawker (*Aeshna caerulea*).

The Report has determined that the Glen Earrach Pumped Storage Hydro Project could result in potentially significant effects to ecological features including permanent habitat loss, habitat degradation, permanent or temporary changes to hydrological conditions and increased risk of invasive species.

For aquatic macroinvertebrates the impacts of drawdown are of particular concern. The invertebrate assemblage of a waterbody is often distinctive, developing to suit conditions at the site such as substrate

[1] Scottish Biodiversity List | NatureScot

composition and degree of water level fluctuations[2]. Pumped Storage Hydro (PSH) schemes typically increase the frequency of fluctuations in water levels and these fluctuations are likely to be more rapid and more frequent than more gradual natural fluctuations[3]. Different invertebrate species have varying degrees of tolerance to water fluctuations making it vital that adequate surveys are undertaken to understand the invertebrate communities that are present to be able to determine the magnitude of impacts.

The Scoping Report states that *"The estimated drawdown in Loch Ness, when at Top Water Level (TWL), is estimated to be around 0.460 m".* Cumulative drawdown figures that account for other PSH schemes on Loch Ness have not been provided but Buglife understands from figures submitted for the Loch Kemp scheme that with the addition of this scheme, a worst-case scenario of a maximum operational drawdown of over 1.0m must be considered.

Buglife have compiled the following table which details the taxa known to be present in Loch Ness and groups them by their sensitivity to water fluctuations.[4]

Table 1: Sensitivity of taxa known from Loch Ness to water fluctuations

Sensitive	**Tolerant**
Alderflies *(Sialidae)*	Diving Beetles *(Dytiscidae)*
Caddisflies *(Trichoptera)*	Mayflies *(Ephemeroptera)*
Flatworms *(Planariidae)*	Shrimps *(Gammaridae)*
Hog-Louse *(Asellidae)*	Backswimmers *(Notonectidae)*
Leeches *(Hirudinea)*	Water Boatmen *(Corixidae)*
Riffle Beetles *(Elmidae)*	Water Fleas *(Cladocera)*
Molluscs *(Mollusca)*	
Stoneflies *(Plecoptera)*	
Worms *(Oligochaeta)*	

Buglife welcomes that further surveys are proposed for macroinvertebrates and highlights these surveys must be comprehensive to ensure a full understanding of impacts. Buglife are concerned that the proposed method for surveying all water features will be based on 'River Invertebrates WHPT UKTAG Method Statement'[5]. This method is designed for assessing invertebrates in rivers in relation to general degradation and is <u>not appropriate</u> for assessing the impacts of the proposals on aquatic invertebrate communities in Loch Ness and Loch nam Breac Dearga.

[2] White, M.S., Xenopoulos, M.A., Hogsden, K., Metcalfe, R.A. and Dillon, P.J. (2008). Natural lake level fluctuation and associated concordance with water quality and aquatic communities within small lakes of the Laurentian Great Lakes region. Hydrobiologia 613: 21-31.

[3] Patocka, F. (2014). Environmental Impacts of Pumped Storage Hydro Power Plants. Norwegian University of Science and Technology.

[4] Carmignani, J.R. and Roy, A.H. (2017). Ecological impacts of winter water level drawdowns on lake littoral zones: a review. Aquat. Sci. 79: 803–824.

[5] Rivers - Invertebrates (General Degradation) | wfd uktag

Some useful references to design appropriate surveys are the 'Handbook of Conservation Methods'[6], 'Freshwater Biology and Ecology Handbook'[7] and 'Organising surveys to determine site quality for invertebrates'.[8] The number of sampling locations should ensure that adequate coverage is achieved of the shorelines of both lochs where drawdown impacts are predicted (e.g shallow bays). Surveys should include spring and autumn sampling as a minimum to ensure they capture seasonal variation to cover the most detectable life stages of species groups such as caddisflies and mayflies. Invertebrates should be identified to species wherever possible.

The Community Conservation Index (CCI)[9] should then be used to determine the conservation value of the affected areas. Buglife recommend that it is key to identify taxa that are intolerant of excessive water fluctuations, as this will be one of the main effects of the scheme.

Terrestrial invertebrate surveys to inform Environmental Impact Assessment Report

Buglife understand that to date only an initial walkover survey has been undertaken in January 2024 and full habitat surveys have not been completed. However, it is concerning that at this early stage, further surveys for invertebrates appear to have been scoped out. The site is located adjacent to the East Inverness-shire Important Invertebrate Area (IIA)[10]. IIAs are nationally or internationally significant places for the conservation of invertebrates and the habitats upon which they rely.

Northern Damselfly has already been identified as a species that could be relevant to the scheme and Buglife are aware of records for the Vulnerable Brilliant Emerald Dragonfly (*Somatochlora metallica*) from the East Inverness-shire IIA. In close proximity to Loch nam Breac Dearga there are a number of records from the NBN Atlas[11] for the Rare cranefly species *Tipula limbata,* which is associated with blanket bog.

Habitats identified within the site boundary include blanket bog, wet and dry heath, montane, standing water and Plantation on Ancient Woodland Site (PAWS). These are habitats that could support SBL species and other notable species of conservation concern. Direct habitat loss and indirect impacts such as fragmentation, changes in humidity and changes to vegetation, all have the potential to adversely affect the invertebrate assemblage. Therefore, surveys should be considered to ensure an adequate impact assessment can be made for terrestrial invertebrates.

Given the range of habitats impacted, Buglife strongly recommends terrestrial invertebrates are considered within the Environmental Impact Assessment, with any necessary invertebrate surveys undertaken, as determined by a suitably qualified entomologist.

Please do not hesitate to contact us if further information is needed on any of the points raised and we request to be kept up to date with the progress of this application.

Yours sincerely,

REDACT

[6] https://www.cambridge.org/core/books/handbook-of-biodiversity-methods/1E36DB3ACDCC032AAB0B6B0B01FCC8BB
[7] https://www.fba.org.uk/shop/p/freshwater-biology-and-ecology-handbook
[8] https://www.fba.org.uk/shop/p/freshwater-biology-and-ecology-handbook
[9] Chadd, R. & Extence, C. 2004. The conservation of freshwater macroinvertebrate populations: A community-based classification scheme. Aquatic Conservation: Marine and Freshwater Ecosystems 14: 597–624 (2004).
[10] Important Invertebrate Areas - Buglife
[11] NBN Atlas - UK's largest collection of biodiversity information

Caley Cruisers Ltd Consultation Response

Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121

I am contacting you on behalf of Caley Cruisers Ltd and Loch Ness Harbour Company. We own and operate 30 boats on Loch Ness and the Caledonian Canal and also manage Urquhart Bay Harbour – one of the few safe havens for boats transiting Loch Ness.

While we are not objecting we have growing concerns due to the number of proposed schemes and the potential combined effect. We have concerns about the operability of the canal, its moorings, lochs and overall navigability. In particular, we have concerns to the water level needed for access into Urquhart Bay Harbour and the exposed steel work (without fendering) when the water levels drop lower than 'normal'.

In the particular low water due to natural causes last year there was a few issues that came about:

1. Sand banks visible either side of the channel on entry to Urquhart Bay.
2. The lifeboat were struggling with access to their slip which is located just at the entrance of Urquhart Harbour.
3. We had to dredge the entrance of the harbour along with a couple of places were sediment had built up to ensure boats didn't run aground.
4. The wooden fendering doesn't go that low and damaged was caused to a couple of the boats.

On the other side the water level was that high at points it was over the harbour wall and flooded the harbour.

If the level of the loch was to move over a 24 hour period significantly bathing platforms could be caught under the harbour and snap off/boats could be grounded. It has happened in the yard on an occasion where Scottish Canals significantly changed the level overnight – bathing platforms were snapped off and boats were left sitting on their keels.

As I say we don't object but have a few concerns.

Kindest regards

Lindsey Randall

Cruiser Division Manager

E: lindsey@caleycruisers.com

T: REDACT

Crown Estate Scotland Consultation Response

From: REDACT
To: Carolanne Brown
Subject: 20240531 - Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121 - CES interests not affected
Date: 31 May 2024 07:47:25

Good morning Carolanne

I write to confirm that the assets of Crown Estate Scotland will not be affected by this proposal.

Kind regards

Joan.

Joan McGrogan (She/Her)
Portfolio Co-ordinator

Crown Estate Scotland

t: 0131 376 1569 / 07391 407753

Glen Urquhart Community Council Scoping Response

Applicant: **Glen Earrach Energy Ltd**

Project: **Glen Earrach Pumped Storage Hydro Project (ECU000005121)**

The Glen Urquhart Community Council requests that any Environmental Impact Assessment Report (EIAR) in support of an application for a pump storage development at Glen Earrach consider the comments noted below.

Description of the Development

The following should be included:

- a full description of the physical characteristics of the whole development and the full land-use requirements during the operational, construction and decommissioning phases. These should include requirements for borrow pits, local road improvements, infrastructure connections (i.e. connections to the national grid), off site conservation measures, etc.
  Full description of project required to enable full assessment of project.
- a plan with eight figure OS Grid co-ordinates for all main elements of the proposal should be supplied;
- a description of the main characteristics of the production processes, e.g. nature and quantity of materials used;
- a full description of the project construction phases – including mobilization, construction, testing, commissioning and de-mobilization phases. Description to include overview of activities and impact of each phase.
- a Materials management plan
- the risk of accidents, particularly re substances or technologies used;
- an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise vibration, light/flicker, heat etc) resulting from the construction phase and operation of the development; and
- an estimate of the cumulative impact of the project in combination with other consented or operational developments

Alternatives

A statement that outlines the main development alternatives considered by the applicant and an indication of the main reasons for the final project choice is required and should include the following:

- the location criteria and economic parameters used in the site selection.
- options for access.
- design and locational options for all elements of the proposed development, including grid connection; and
- the environmental effects of the different options examined.

Such an assessment should also highlight sustainable development attributes e.g. assessment of carbon emissions.

Environmental Elements Affected

The EIAR must provide a description of all aspects of the environment likely to be significantly affected by the development. There are a number of other large scale developments in the area and within The Highland Council jurisdiction and these and their cumulative effects should be taken into account in the assessment of the development. This is to ensure that the information provided is relevant and robust.

National Planning Framework 4 must be taken into account along with the Highland-wide Local Development Plan, and guidance taken from the Highland Renewable Energy Strategy and Planning Guidelines.

A Sustainable Design Statement should be included, taking reference from the Council's Sustainable Design Guide.

Landscape and Visual

The EIAR should consider both the landscape and the visual impact of the development. This should include the expected impact of borrow pits, ponds, embankments, tracks, cable routes, construction/mobilization staging areas and infrastructure connections.

Visualizations to be provided in form of virtual tour over study area – rather than flat photo montages from representative viewpoints. Visualisations to be provided for all phases of development.

Visual Impact assessment to outline considered and potential mitigation measures noted during design.

Ecology, Terrestrial and Aquatic, and Ornithology.

There should be full surveys completed of all habitats, particularly rare and threatened habitats and include upper and lower plants, breeding birds, including migrating birds, and animals, including mammals, reptiles and amphibians. It should be established which species are present on site and their location before any application is submitted.

Habitat enhancement and mitigation measures should be detailed along with any priority species within the Highland Nature Biodiversity Action Plan.

Habitat assessment to confirm Habitats Regulation Appraisal completed as required.

Geology and Ground Conditions

There should be a full assessment on the impact of the development on peat which should be in line with NPF4, policy 5.

A description of the likely effects, both direct and indirect, of the development on the local geology including borrow pits, earthworks, site restoration and the soil in general should also be included.

Water Environment, Flood Risk and Water Resources

The nature of the hydrology and hydrogeology of the land must be addressed, along with an assessment of the potential impacts on water courses, water supplies

particularly private supplies, groundwater, water quality and quantity and on aquatic flora and fauna.

Measures to prevent erosion, sedimentation or discolouration will be required along with monitoring and contingency plans.

Cultural Heritage

All designated and non-designated sites that could be affected by the development, directly or indirectly, must be identified.

Access, Traffic and Transport

A construction traffic management plan will be required. This should include impacts on carriageway, other road users, adjacent communities, road safety measures etc

It is noted that the proposed access route will follow the lines of some existing tracks. To clarify the presence of existing and the extent to which tracks are being upgraded or newly constructed, the following should be taken into account:

Indicate which sections of the proposed access track are to be made from existing tracks that are to be upgraded and which will be newly constructed;

Which sections of the proposed access track would permanent and which would be temporary.

Noise and Vibration

A detailed construction and operation noise assessment will be required along with an assessment of vibration, from construction and operation works, affecting adjacent communities and buildings.

Air quality

The EIAR should include impact on air quality during all project phases.

Socio-Economics, Recreation and Tourism

The EIAR should estimate who may be affected by the development, e.g. individual households, local communities or a wider socio-economic group such as tourists and tourist related businesses, recreational groups etc. The application should include relevant economic information connected with the project, including the potential number of jobs and the economic activity, both regional and local, associated with the procurement, construction, operation and decommissioning of the development.

EIAR should outline community engagement process including establishment of community liaison group and process for communication to community on all aspects of project. Developer should outline process of partnership with community and impacted groups.

HISTORIC ENVIRONMENT SCOTLAND | ÀRAINNEACHD EACHDRAIDHEIL ALBA

By email to: Econsents_Admin@gov.scot

Carolanne Brown
Case Officer
Energy Consents Unit
Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change
Scottish Government

Longmore House
Salisbury Place
Edinburgh
EH9 1SH

Enquiry Line: 0131-668-8716
HMConsultations@hes.scot

Our case ID: 300073206
Your ref: ECU00005121

06 June 2024

Dear Carolanne Brown

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Glen Earrach Pumped Storage Hydro
Scoping Report

Thank you for your consultation which we received on 15 May 2024 about the above scoping report. We have reviewed the details in terms of our historic environment interests. This covers world heritage sites, scheduled monuments and their settings, category A-listed buildings and their settings, inventory gardens and designed landscapes, inventory battlefields and historic marine protected areas (HMPAs).

The Highland Council's archaeological and cultural heritage advisors will also be able to offer advice on the scope of the cultural heritage assessment. This may include heritage assets not covered by our interests, such as unscheduled archaeology, and category B- and C-listed buildings.

Proposed Development

We understand that the proposed development comprises a pumped storage hydro (PSH) scheme with an indicative installed electrical generation capacity of up to 2,000MW on the north-western side of Loch Ness. Key components of the proposed development include:

- the Headpond Reservoir and Embankment, with Embankment 1 having a height of 72m (i.e. 523m AOD);
- access tracks, including three options identified for site access, which would involve upgrading of existing track and construction of new track;
- 13 construction compounds, including 9 compounds which would be retained for the full operational period of the proposed development for housing several infrastructures;
- the Power Cavern; and
- tunnels and waterways.

We note that the grid connection would be subject to a separate consenting arrangement.

Scope of assessment

We welcome that cultural heritage issues are considered in Chapter 12, and that a cultural heritage assessment will be completed as part of the EIA. We note from Section 2.7 that a Rochdale Envelope approach identifying maximum worst-case parameters for structures to allow a degree of flexibility to address uncertainty, will be taken for all built features. We understand that the dimensions of the components indicated are subject to refinement through the EIA process and final dimensions will be as detailed in the EIA Report. We would be happy to provide further advice on the scope of assessment as the design of the development progresses.

Potential physical impacts

We do not agree with the applicant's proposal to scope out the potential physical impacts on all the designated assets within our remit.

While we can confirm that there are no category A-listed buildings, inventory battlefields, gardens and designed landscapes or world heritage sites within the boundary of the proposed development, we note that a scheduled monument, *Dun Scriben, fort* (SM6220), falls within the red line boundary, with the proposed improvements to an existing access track locating c. 100m to the east. Further details are required regarding the potential creation of this access track and the potential for direct and/or indirect physical impacts to arise from its formation on this scheduled monument.

Significant further consideration will also be required in order to determine the likely extent of indirect physical impacts on *Cherry Island crannog, Inchnacardoch Bay, Loch Ness* (SM9762) and *Urquhart Castle* (SM90309) from the potential fluctuation in water levels in Loch Ness caused by the proposed development.

Potential setting impacts

We welcome that potential temporary impacts on the setting of designated assets within our remit resulting from construction, as well as the potential permanent impacts from the proposed development on the setting of assets within our remit due to the introduction of new above ground infrastructure, are scoped in. We are content that the wider study area of 3km is sufficient for assessing setting impacts on designated assets within our remit. We also welcome that assets beyond this distance may also be considered where elements of their setting extend within the 3km study area.

From the information currently available, the proposed development has the potential to adversely impact the settings of *Dun Scriben, fort* (SM6220) and *Dun Deardail, Forts 410m and 520m ENE of Fasnagruig* (SM11884). However, we consider that a bare-earth Zone of Theoretical Visibility (ZTV) taking into account all built elements of the proposed development should be produced. The list of assets highlighted above is therefore not considered to be exhaustive. It is possible that once a ZTV which covers all elements of

the proposed development has been prepared by the applicant, additional assets in our remit may fall within the ZTV.

Our detailed comments are in the Annex to this letter.

Further information

Guidance about national policy can be found in our 'Managing Change in the Historic Environment' series available online at www.historicenvironment.scot/advice-and-support/planning-and-guidance/legislation-and-guidance/managing-change-in-the-historic-environment-guidance-notes. Technical advice is available on our Technical Conservation website at https://www.engineshed.scot/.

We hope this is helpful. Please contact us if you have any questions about this response. The officer managing this case is Adrian Lee and they can be contacted by phone on 07500 579626 or by email on adrian.lee@hes.scot.

Yours faithfully

Historic Environment Scotland

Annex

Detailed Comments on the Scoping Report

We welcome that cultural heritage issues are considered in Chapter 12, and that a cultural heritage assessment will be completed as part of the EIA.

We welcome that the applicant has referred to our Managing Change in the Historic Environment: Setting guidance note for assessments of impacts on setting of historic environment assets. We would also recommend that the undertaking of a cultural heritage assessment should reflect the best practice guidance given in the EIA Handbook, which has included an appendix on Cultural Heritage Impact Assessment.

We notice that Table 12.2 has identified the different magnitudes of changes to the setting of the heritage asset, affecting the significance and resulting in changes in the ability to understand and appreciate the value of the asset. We wish to refer to the Managing Change in the Historic Environment: Setting guidance note, which states that "setting can be important to the way in which historic structures or places are understood, appreciated *and experienced*. *It can often be integral to a historic asset's cultural significance*". We therefore consider that setting change includes not only our ability to understand and appreciate, but also our ability to experience the asset.

We note that the applicant has proposed to scope in the potential temporary impacts on the setting of designated assets resulting from construction, and the potential permanent impacts from the development on the setting of assets due to the introduction of new above ground infrastructure (Section 12.6 refers), but scope out physical impacts on designated assets (Section 12.4.5 refers). We also note from Section 2.7 that a Rochdale Envelope approach identifying maximum worst-case parameters for structures to allow a degree of flexibility to address uncertainty, will be taken for all built features, and we understand that the dimensions of the components indicated are subject to refinement through the EIA process and final dimensions will be as detailed in the EIA Report. Our detailed comments on the proposed scope are as follows:

Potential physical impacts

We do not agree with the applicant's proposal to scope out the potential physical impacts on all the designated assets within our remit.

We note that the proposed improvements to an existing access track under one of the three options are located c. 100m to the east of *Dun Scriben, fort* (SM6220). From Table 2.2 we understand that the proposed site access will have a running width of 10m at maximum. We require further details regarding the potential creation of this access track and the potential for direct and/or indirect physical impacts to arise from its formation on this scheduled monument, for instance, would the formation of this track require slope stabilisation works which may have impacts beyond the 10m width of the track?

We notice that the scoping report has not discussed indirect physical impacts clearly. As detailed in the cultural heritage appendix of the EIA Handbook (page 182), indirect physical impacts occur where the fabric is lost or preserved as a result of the proposal even though the asset lies at a remove from the proposal. An example is the degradation of waterlogged deposits as a result of dewatering and changes in currents resulting in increased/decreased erosion. We do not agree that potential indirect physical impacts on all designated assets within our remit should be scoped out, until the potential impacts on two scheduled monuments, *Cherry Island crannog, Inchnacardoch Bay, Loch Ness* (SM9762) and *Urquhart Castle* (SM90309), caused by fluctuating water levels have been adequately assessed.

Cherry Island crannog, Inchnacardoch Bay, Loch Ness (SM9762)

This scheduled monument comprises the remains of a crannog, a late prehistoric dwelling constructed on a partly or wholly artificial island and includes the submerged remains of what may be a medieval castle. The monument is situated in a shallow bay on the west side of Loch Ness, just to the north of Fort Augustus. Its structure is likely to depend on the support of the surrounding water and it is likely to contain significant well preserved, water-logged deposits related to its construction and use. The survival of water-logged deposits depends on continued submersion under water and would be placed at risk if exposed to drying out and especially intermittent submersion and exposure.

Urquhart Castle (SM90309)

This scheduled monument comprises the remains of a complex medieval castle on a promontory on the northern shore of Loch Ness, Strone Point. Excavation has shown that an earlier fort dating to the first millennium AD was situated at the south end of the castle. Water-logged deposits associated with the fort and castle's construction and use survive around the loch edge. These will also be vulnerable to exposure through changing water levels.

We notice that Section 11.6.2 has indicated that "*the discharge of water from the headpond into Loch Ness during both normal operation and during flood events will result in a significant volume of additional water being discharged into Loch Ness, resulting in an increase in loch level*", and "d*uring periods of normal flows or drought, abstraction of water from Loch Ness to the headpond will reduce water levels in Loch Ness*". Section 11.5.3 has also indicated that "*an assessment of low flows from the contributing areas will be made for both the area local to the Development and at the main receiving water bodies. In the event that the impacts are found to be significant a further assessment will be undertaken including the impact on water levels in Loch Ness*".

Fluctuating water levels in Loch Ness could place the survival of Cherry Island and significant and sensitive remains at both scheduled monuments at substantial risk, from the drying out of water-logged deposits, structural supports and scour. Significant further consideration will be required in order to determine the likely extent of indirect physical impacts on both scheduled monuments. This assessment should include study of the

cumulative impacts of this scheme and other existing and proposed pumped storage hydro schemes on water levels in Loch Ness to assess the likelihood of potential fluctuations in the water level in Loch Ness.

Works affecting water levels around scheduled monuments also legally require Scheduled Monument Consent (SMC), obtained through Historic Environment Scotland, beforehand. SMC is in addition to planning or other consents and the obtaining of one does not preclude the granting of another. It is unlikely that we would recommend consent be granted for these proposals if impacts can be demonstrated.

We are content that the potential for indirect physical impacts on the scheduled monument of *Crusader, remains of speedboat in Loch Ness (SM11070)* near Achnahhanet can be discounted, on the basis that the wreckage of the boat lies in deep water at a sufficient distance from the outfall area.

Potential setting impacts

We welcome that potential temporary impacts on the setting of designated assets within our remit resulting from construction, as well as the potential permanent impacts from the proposed development on the setting of assets within our remit due to the introduction of new above ground infrastructure, are scoped in. We are content that the wider study area of 3km is sufficient for assessing settings impacts on designated assets within our remit. We also welcome that assets beyond this distance may also be considered where elements of their setting extend within the 3km study area.

From the information currently available, the proposed development has the potential to adversely impact the settings of *Dun Scriben, fort* (SM6220) and *Dun Deardail, Forts 410m and 520m ENE of Fasnagruig* (SM11884). However, we notice that not all elements of the proposed development have been accounted for in the initial Zone of Theoretical Visibility (ZTV), such as the access tracks, buildings within compounds or tunnel portal structures. We therefore consider that a bare-earth ZTV taking into account all built elements of the proposed development should be produced. The list of assets highlighted herewith is therefore not considered to be exhaustive. It is possible that once a ZTV which covers all elements of the proposed development has been prepared by the applicant, additional assets in our remit may fall within the ZTV.

Dun Scriben, fort (SM6220)

This scheduled monument consists of a prehistoric fort located on a flat-topped knoll. The fort is oval on plan and is defined by the tumbled remains of a drystone wall. Situated upon a high point, the fort would have been positioned to take advantage of commanding views to the northeast and southwest along Loch Ness as well as along the high but shallow valley of the Grotaig burn between the hills of Meall Fuar Mhonaidh and Creag Dhearg, an area whose use as a natural routeway from southwest to northeast along the Great Glen is implied by the place name Loch a' Bhealaich (loch of the pass). Views from the monument to the southwest are therefore key to understanding the purpose and function of the monument.

The proposals could appear in these outward views from the monument and in views to and from the monument from closer by. Visualisations are required to demonstrate the potential impact of new access tracks and any other above-ground infrastructure in views from the monument toward Meall Fuar-Mhonaidh. A bare-earth wireframe may be the most appropriate visualisation to demonstrate this given the currently wooded nature of *Dun Scriben, fort* (SM6220). However, once further information has been provided it is possible that a photomontage may be required. Further visualisations demonstrating the potential setting impact from tracks, compounds, and buildings and tunnel portal structures within them are required where these are planned in proximity to the monument. Such a compound is depicted close to the monument in Figure 10-1 of the scoping report.

Dun Deardail, Forts 410m and 520m ENE of Fasnagruig (SM11884)

This scheduling applies to two Iron Age forts and associated outworks overlooking Inverfarigaig Bridge and Loch Ness. One fort occupies the true summit while another, 835m to the southwest, occupies a second peak. The northeast fort is sub-rectangular on plan while the southwest fort is sub-circular on plan. Both are of roughly equal size and appear to have been entered from the south-southeast and east respectively. They were deliberately positioned to take advantage of views to the southwest and northeast along Loch Ness and potentially to control movement from Loch Ness to the east through the Pass of Inverfarigaig. The monuments are intervisible with *Dun Scriben, fort* (SM6220), as well as *Urquhart Castle* (SM90309), on Strone Point, which was preceded by an earlier fort dating to at least the 1st millennium AD.

A photomontage visualisation is required to demonstrate the potential setting impact on the monuments from any tailrace / outfall infrastructure on the northwest shore of Loch Ness as well as the potential setting impact from other above-ground infrastructure, including access tracks, compounds and buildings within them, and tunnel portal structures, which may appear in views toward and in the background of *Dun Scriben, fort* (SM6220) from the two forts.

Textual Comments

We welcome that the applicant has mentioned in Section 12.2.2 that Historic Environment Scotland released "Our Past, Our Future" in June 2023. We would like to add that this new strategy for Scotland's historic environment has also been adopted in June 2023 in lieu of "Our Place in Time (2014)" (first paragraph of Section 12.2 refers).

There are a couple of inconsistencies across paragraphs in the scoping report: Section 12.4 has stated that some assets beyond the distance of 3km may also be considered for assessment of changes to the setting of designated assets where elements of their setting extend within the 1km study area, rather than the 3km study area as stated in Section 12.5.1; and the first paragraph of Section 3.4.1.5 has proposed to consider projects which are still going through the planning process as part of the cumulative assessment, while projects approved or under construction would be considered as part

of the baseline, but Table 3.6 has also included approved and constructed projects (other than hydro schemes in the area where the rationale for inclusion has been set out in the third paragraph of Section 3.4.1.5) as cumulative developments. It would be helpful if the applicant can clarify the above criteria for assessment for a clearer methodology.

It would also be helpful if the applicant could rectify “Registered battlefields” in Table 12.1 as “Inventory battlefields”.

Historic Environment Scotland
6 June 2024

From: LUP enquiries <LUPenquiries@hse.gov.uk>
Sent: 21 May 2024 16:22
To: Econsents Admin
Subject: Re: Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121

Dear Ms Brown,

Thank you for your consultation of 15th May 2024 sent to HSE's email address HazSubConsent.CEMHD5@hse.gov.uk regarding the request for a scoping opinion from the Scottish Ministers for the proposed section 36 application for the Glen Earrach Pumped Storage Hydro.

HSE's interest in applications for consent to construct and operate electrical generating stations such as the Glen Earrach Pumped Storage Hydro is very limited. Health and safety issues are mainly dealt with under health and safety law.

HSE has an interest in proposals where developments will be located in HSE zones.

HSE's Planning Advice web app https://www.hse.gov.uk/landuseplanning/index.htm is available for anyone to use (registration is required first) to check if a development area is within HSE zones.

A check of our land use planning consultation zones shows the route is not within any explosive safeguarding zones.

The Glen Earrach Pumped Storage Hydro is not located within any HSE zones.

HSE also has an interest in proposed developments that would have hazardous substances present at or above threshold quantities [see the Town and Country Planning (Hazardous Substances) (Scotland) Regulations 2015]. However, Glen Earrach Pumped Storage Hydro does not appear to be of this type.

Therefore, HSE's Land Use Planning team have no further comments.

Kind regards,
Berdine Clews

HSE's Land Use Planning Support Team
Chemicals, Explosives and Microbiological Division 5
HSE, Harpur Hill, Buxton, Derbyshire, SK17 9JN

Scoping - Joint Radio Company ("JRC") Consultation Response

From:	JRC Windfarm Coordinations Old
To:	Carolanne Brown
Cc:	Econsents Admin; Wind SSE
Subject:	Glen Earrach Pumped Storage Hydro - ECU00005121 -Scoping Request [WF252175]
Date:	27 May 2024 13:03:29

Dear carolanne,

A Windfarms Team member has replied to your co-ordination request, reference **WF252175** with the following response:

If any details of this proposal change, particularly the disposition or scale of any turbine(s), this clearance will be void and re-evaluation of the proposal will be necessary.

Please do not reply to this email - the responses are not monitored.
If you need us to investigate further, then please use the link at the end of this response or login to your account for access to your co-ordination requests and responses.

Dear Carolanne

***Site Name**: Glen Earrach Pumped Storage Hydro*

ECU: ECU00005121

***Site Centres at NGR**:*

- *Headpond - NH 45223 22331 - (no height given)*
- *Tailpond Inlet/Outlet NH 47946 21564 (Loch Ness) - (max Height 10m)*
- *Switching Station NH 48447 25914 - (no height given)*

*This proposal is ***cleared*** with respect to radio link infrastructure operated by the local energy networks.*

JRC analyses proposals for developments on behalf of the UK Fuel & Power Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

*In the case of this proposed energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. **However, if any details of the development change, particularly the disposition or scale of any structures, it will be necessary to re-evaluate the proposal**. Please note that due to the large number of adjacent radio links in this vicinity, which have been taken into account, clearance is given specifically for a location within the declared grid reference (quoted above).*

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately

predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, you are advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assigned between your enquiry and the finalisation of your project.

JRC offers a range of radio planning and analysis services. If you require any assistance, please contact us by phone or email.

Regards

Wind Farm Team

Friars House
Manor House Drive
Coventry CV1 2TE
United Kingdom

Office: 02476 932 185

We hope this response has sufficiently answered your query.
If not, please **do not send another email** as you will go back to the end of the mail queue, which is not what you or we need. Instead, **reply to this email by clicking on the link below or login to your account** for access to your co-ordination requests and responses.

https://breeze.jrc.co.uk/tickets/view.php?id=33331

Carolanne Brown,
Case Officer,
Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change
Scottish Government
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

06 June 2024

GLEN EARRACH PUMPED STORAGE HYDRO SCHEME
ENVIRONMENTAL SCOPING REPORT

I would refer to your consultation on the Environmental Scoping Report for the above development. Thank you for the opportunity to comment and recognising our interest in this development as an existing user of the Loch Ness water resource.

Mowi Scotland operates a long-established freshwater pen fish farm in Loch Ness, near to the village of Dores for the production of Atlantic salmon smolts. The presence of the fish farm is recognised within the scoping report however it is surprising that this is limited to two brief references. As a food producer operating within Loch Ness, that is dependent on the waterbody achieving and maintaining high environmental condition, the absence of consideration of effects on the fish farm is a concern.

While the Scoping report identifies generically the environmental effects which may arise during the construction and operation of the facility, and which will be addressed in more detail as part of the EIAR, no specific assessments on the potential effects on the operation of our Loch Ness fish farm are proposed to be scoped for inclusion in the EIAR. **We would consider that this is a material omission.**

The farmed salmon sector contributes more than £760 million to the Scottish economy every year through direct, supply chain and employment impacts. The sector generates more than £1.2 billion worth of Scottish salmon at farm gate providing direct employment for over 2,500 people in farming and a further 10,000 across Scotland. Freshwater lochs are an important part of the farming cycle for bout Rainbow trout and Atlantic salmon, approximately 50% of salmon smolts are produced in freshwater lochs in Scotland. It is surprising there is no reference to the economic importance of fish farming in the Socio-economic chapter of the Scoping report given the presence of the Loch Ness fish farm**.**

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As a food producer within Loch Ness, which would be subject to permanent hydrological modification by this proposed development, **the potential effects of the development on the operation of the Loch Ness fish farm requires to be scoped into the EIAR.** We would request that the Water Environment and Water Resource Assessments outlined in the Scoping Report be expanded to examine the specific risk to the fish farm and, if required identification of appropriate mitigation measures and actions. In terms of Sections 10 and 11 of the Scoping Report **we do not consider that the proposed assessments are sufficient.** We would request the following issues that require to be examined in detail within the EIAR.

Construction Phase Impacts

An assessment should be carried out to examine the risk of connectivity of any potential catchment water quality impacts from construction phase pollution with the Loch Ness fish farm. We would be especially concerned **with elevated suspended solids and liberation of metals from soil and rock excavations.** Although the fish farm location is some distance from the main development site, potential construction run-of release points to Loch Ness should be examined and identified.

Increased concentrations of suspended solids can impact both native fish and farmed salmon behaviour and health through gill irritation and stress responses, including altered swim behaviour and reduced appetite. It is necessary for the assessment of effects to define the particle sizes that the suspended material will comprise, in order to then also assess their potential dispersion and transport. Small particulates which remain in suspension for a significant period could have the potential to travel significant distances within Loch Ness via wind-driven surface currents, and this warrants examination within the EIAR.

The liberation and release into the water environment of concentrations of metals from soil / rock excavations is also of potential concern for wildlife and both native and farmed salmon, due to their persistency and potential for adverse effects. Impacts to fish (native and farm raised) can include oxidative stress, weakened immune systems, tissue and organ damage, and growth defects, with the ultimate potential to impact survival. Metal pollutants have the potential to cause toxicity effects to fish even at low levels. The EIAR should examine the potential impacts from the release of metals from soil / rock excavations with a specific assessment on potential impacts on farmed fish health.

The Scoping Report identifies the potential for direct and indirect water quality and hydromorphological effects during the construction operation. We would stress the importance of maintaining water quality throughout the catchment during the construction phase, especially for Loch Ness in respect of the health and welfare of both native and farm raised fish. There should not be an inference that water quality impacts are inevitable and

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robust, effective mitigation measures supported by continuous water quality monitoring, with independent oversight are required. The Scoping Report in discussing construction phase impacts references that there is a significant buffering potential (within Loch Ness) due to the size and volume of the waterbody. The size and scale of Loch Ness should not be considered as a mitigating factor for construction phase pollution.

Operational Phase Impacts

A key concern for the continued viable operation of the Loch Ness fish farm is **the potential impacts through changes to water levels within Loch Ness, both high water and low water levels.** Mowi operates freshwater fish farms in a number of loch waterbodies which are also subject to storage hydro operations. Fluctuations in water levels outside of normal waterbody changes have the potential to significantly impact the operation of our Loch Ness fish farm and we have direct experiences of this elsewhere. We would consider that Loch Ness is particularly sensitive to further changes in water levels given PSH pressures from operational schemes and the additional schemes that are in various stages of planning.

The Scoping Report correctly identifies the range of existing hydro operations within the Loch Ness catchment and proposed schemes in planning stage. All of these current and proposed schemes will influence and change current water level management in Loch Ness. **It is essential that effects of changes in water levels in Loch Ness and the potential for impacts to the operation of the fish farm is scoped into the EIAR.** This assessment should include a **cumulative assessment** of water level effects from the existing pumped storage hydro schemes utilising Loch Ness as a `tail pond` and the proposed PSH schemes at the various stages of planning (as outlined in Section 2.4 of the Scoping Report).

The EIAR should include the following:

- An assessment of water level changes on the mooring systems and containment of stock at the Loch Ness fish farm.
- An assessment of water level changes to shoreside farm infrastructure such as slipways and vessel pontoons. Year-round access to the Loch Ness fish farm is required especially for key in-year timings around sensitive operation such as fish transfers in and out of the fish farm. High water or low water changes may render facilities such as slipways and pontoons unusable for periods of time.
- The above assessments should also consider the changes in the frequency of when high and low water levels will occur. An increase in the frequency of water level extremes has the potential to impact our operational flexibility to mitigate especially for key in-year operations associated with fish transfers.

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We would welcome further direct consultation from the developer on these concerns including site visits as required to support an accurate and detailed assessment of effects and identification of mitigation measures, if required.

Your sincerely,

REDACT

Stephen MacIntyre
Head of Environment, Mowi Scotland

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From:	NATS Safeguarding
To:	Carolanne Brown
Cc:	Econsents Admin
Subject:	RE: Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121 [SG37467]
Date:	16 May 2024 09:16:09
Attachments:	image001.png image002.png image003.png image004.png image005.png image006.png

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Our Ref: SG37467

Dear Sir/Madam

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

Yours faithfully

NATS Safeguarding

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
www.nats.co.uk

NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba
Econsents_Admin@gov.scot

FAO Carolanne Brown

25 June 2024
Our ref: CEA175492
Your ref: ECU00005121

Dear Carolanne
ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO
Thank you for your consultation requesting our opinion on the scope of the EIA for the above pumped storage hydro scheme and thank you for allowing us an extended deadline to provide our comments.

1. Background
We provided pre-application advice to the consultants at a meeting on the 5 February 2024. We advised on the challenges of taking this project forward in relation to the impacts on European sites and the potentially limited possibilities for mitigating some of these impacts.

Our consideration of the scoping report is in relation to the following sections within our remit:
Chapter 2 Project Description
Chapter 3 Scope of the Environmental Impact Assessment
Chapter 5 Landscape and Visual Amenity
Chapter 6 Terrestrial Ecology
Chapter 7 Aquatic Ecology, Including Marine Ecology
Chapter 8 Ornithology
Chapter 9 Geology and Ground Conditions

2. Key issues
The key issues relevant to our interests which need to be addressed in the Environmental Impact Assessment Report (EIAR) are:
- The impacts on the qualifying interests of River Moriston SAC
- The impacts on the qualifying interests of Urquhart Bay Woods SAC
- The impacts on the qualifying interests of the Moray Firth SAC
- The impacts on North Inverness Lochs SPA

The results of these assessments will be critical to any subsequent advice we give and the position we take should this proposal progress to a formal application. However, from the information provided at pre-application and in the scoping report, we advise at this stage that the scheme is likely to result in impacts on River Moriston SAC. These impacts **have the potential to be of a scale and nature that could make it unlikely that ECU would be able to ascertain that there will be no adverse effect on the integrity of the site. As this has consequences for the potential for the proposal to comply with the Habitats Regulations, we would be happy to explore possible ways forward with ECU and the applicant.**

3. Our comments on the Scoping Report

We broadly agree with the proposed scope of surveys and assessments to be included in the EIAR; these generally meet the requirements we set out in our pre-application advice. However, we advise that extra information is included in the EIAR should this scheme progress to full application. We have detailed the extra information required in Annexes to this letter. We provide general comments in **Annex A.** Comments and advice to inform a full EIAR is in **Annex B**.

We ask that you save each chapter of the EIAR to a separate pdf file of no greater than 10 MB in order to make them compatible with our corporate filing system, with file names that relate to the content of each chapter.

Please note that while we are supportive of the principle of renewable energy, our advice is given without prejudice to a full and detailed consideration of the impacts of the proposal if submitted for formal consultation as part of the EIA or planning process.

Should you have any queries about this letter please contact me at the email below.

The advice in this letter is provided by NatureScot, the operating name of Scottish Natural Heritage.

Yours sincerely

Corrina Mertens
Operations Officer, Lochaber
South Highland
Corrina.mertens@nature.scot

Copied to: SEPA, Highland Council

Annex A – General Comments

1. The Proposed Development

The proposal is located approximately 9.5 km to the south of Drumnadrochit and 6.5 km north of Invermoriston, within the area administered by The Highland Council. The headpond location at Loch nam Breac Dearga sits at approximately 485 m above ordnance datum (AOD). The Development is predominantly located within the catchment of the Allt Saigh watercourse.

Glen Earrach PSH will have a storage capacity of up to 30,000 megawatt hours (MWh) with up to 2,000 MW installed electrical generation capacity (subject to further investigation and feasibility works), with a gross head (vertical distance between upper and lower loch) of close to 500m.

2. Planning Policy Context

The Fourth National Planning Framework (NPF4)

- **NPF4 Policy 3** sets out new requirements for biodiversity enhancement. Policy 3 requires that large-scale development proposals such as this demonstrate that '*the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention'*. Scottish Government is currently developing guidance for National, major and EIA applications. But in the meantime advice is available on our Planning and development: Enhancing biodiversity page.

- **NPF4 Policy 4** Provides protection for existing or proposed European site. Development proposals that are likely to have a significant effect on an existing or proposed European site (Special Area of Conservation or Special Protection Areas) and are not directly connected with or necessary to their conservation management are required to be subject to an "appropriate assessment" of the implications for the conservation objectives.

- **NPF4 Policy 5** (Soils) provides protection for carbon-rich soils and peatlands. Policy 5c) indicates that development proposals on peatland, carbon-rich soils and priority peatland habitat will only be supported for:
    - Essential infrastructure and there is a specific locational need and no other suitable site including; Renewable energy generation
    - Proposals must meet specific requirements including for assessment, project design, mitigation, production of a peat management plan and other appropriate plans required for restoring and/ or enhancing the site into a functioning peatland system capable of achieving carbon sequestration.

Annex B - Comments and advice on the scoping report.

1. Landscape

The proposal will not affect any nationally important landscape and we agree with the proposed scope of the LVIA and suggested range of visualisations.

2. Terrestrial Ecology

2.1 Urquhart Bay Woods SAC

Urquhart Bay Woods SAC is designated for alder woodland on floodplains. This habitat of riverine woods often comprises narrow strips or lines of trees due to clearance of woodland along rivers that has removed most of the true alluvial forests, leaving just fragments. Urquhart Bay Woods is one of very few intact floodplain woodlands remaining in the UK. This woodland type typically occurs on moderately base-rich, eutrophic soils subject to periodic inundation. Therefore, any changes in local and catchment hydrology could have significant effects on the site.

There is potential connectivity to the SAC from the Glen Earrach scheme because its operation will result in changes to the water level regime in Loch Ness. However, it does not appear from the information provided in the Scoping Report that impacts on Urquhart Bay Wood SAC will be considered. **We advise that the applicant provides sufficient information to enable an assessment of potential effects on the conservation objectives of the site and to demonstrate whether it can be ascertained that there is no Adverse Effect on Site Integrity (AESI).**

The assessment should include modelling water levels in Loch Ness for various scenarios of generation and pumping (abstraction) using the most realistic worst-case scenarios. This should be set against the current baseline which includes Foyers PSH and the Caledonian Canal. In addition, modelling and assessment should, separately, consider the effects of the proposal in combination with other proposed developments that could affect water levels, including Red John and Kemp pump storage hydro schemes.

Questions asked by the applicant in the scoping report:

- *Do you agree that the scope of desk study and ecological field survey described in this Section is sufficient to inform the Ecological Impact Assessment element of the EIA? Please advise if there are any further studies of surveys which you consider to be necessary. We consider it unnecessary to conduct surveys of bat activity, as the development Site is likely to be of low importance to bats, and the operation of the development will have no effect on bats. –*
  We refer the applicant to our standing advice on our website;
  https://www.nature.scot/professional-advice/planning-and-development/planning-and-development-advice/planning-and-development-protected-species
- *In the interests of identifying opportunities for the Development to deliver biodiversity enhancements, are there any suggestions that you may make as to how this may be best achieved in this case? Are you aware of any local projects to which the Development could contribute, for example? -*
  We defer to the Highland Council to provide comment on biodiversity enhancement opportunities.

3. Aquatic Ecology, Including Marine Ecology

We generally agree with the scope of the desk study and ecological field survey described but have the following advice for the applicant in regard to River Moriston SAC and Moray Firth SAC.

3.1 River Moriston SAC

The River Moriston SAC is designated for Freshwater pearl mussel (FWPM) and Atlantic salmon. Atlantic salmon are also a critical component of FWPM life cycle as host fish. Therefore, impacts on salmon will also have indirect impacts on FWPM and this link needs to be considered in any assessment.

Freshwater mussel populations are vulnerable to changes to water quality (including pollution), hydrological alterations, habitat degradation of riverbeds and banks, illegal pearl fishing and availability of host species.

Atlantic salmon live in both freshwater and marine environments as part of their lifecycle. They hatch and live in freshwater as juveniles and then migrate to sea as adults. After one year or more at sea the adults return to their natal river to spawn. This homing behaviour has resulted in the development of genetically distinct populations of Atlantic salmon between Scottish rivers and several populations may exist within the same river.

As Atlantic salmon migrate up and down stream, any barriers to fish passage on any part of their route, could have significant negative effects. Facilitating the access of Atlantic salmon to all areas of the catchment (including outside the boundary of the SAC) where they could expect to occur naturally is a key objective of the site.

Both qualifying interests are currently in 'unfavourable' condition, with Atlantic salmon known to face significant mortalities both at sea, and during downstream migration including in Loch Ness.

At this stage we advise there is a risk that the impacts of this proposal will not allow the conservation objectives for the features of River Moriston SAC to be met. We advise that the applicant provide sufficient information to assess the effects from all possible impact pathways which include, but are not limited to, the following, which should also be used to inform the assessment of impacts on FWPM:

- Lower water levels in Loch Ness and subsequently in the mouth of River Moriston while the scheme is abstracting water, which may impact FWPM populations in the mouth of the River.
- Salmon may become impinged on the intake screen during periods of abstraction
- Intake flow attracting downstream migrating salmon smolts
- Outlet flow attracting adult migrating salmon
- Increased sedimentation / turbidity (non-toxic) in areas of Loch Ness adjacent to the construction site affecting salmon during the construction phase
- Risk of toxic contamination in Loch Ness from fuel / chemical leakage/ and concrete spills affecting salmon during the construction phase
- Risk of noise disturbance to salmon in Loch Ness from heavy machinery, sediment movement, and/or any temporary cofferdam
- Reduction of water levels in Loch Ness impeding downstream smolt migration

- Reduced productivity of the littoral zone as a consequence of changes to the water level regime in Loch Ness affecting salmon food supply

We advise that the applicant provides sufficient information to enable an assessment of potential effects of all impact pathways, including any not listed above, on the conservation objectives of both qualifying interests and to demonstrate whether it can be ascertained that there will be no AESI. Assessments should be based on realistic worse case scenarios and include the effects of the scheme (a) alone in the context of the current baseline which includes Foyers PSH and the Caledonian Canal, and, separately, (b) in combination with other proposed developments, including Red John and Kemp pump storage hydro schemes. Any mitigation measures proposed should also be assessed against the conservation objectives.

We would be happy to advise on draft proposals for the surveys, modelling and assessment approaches that will be required, and also **on a draft shadow Habitats Regulations Appraisal (HRA) for the River Moriston SAC prior to submission.** As little is known about how smolts move within Loch Ness, or key locations and causes of mortality, surveys of the movement of smolts from the River Moriston SAC through Loch Ness may be required.

We consider that this proposal **has potential to adversely affect the integrity of the River Moriston SAC**. If so, Energy Consents Unit would need to consider whether the tests in Regulations 49 and 53 of the Habitats Regulations can be met. NatureScot has no statutory role in advising on whether these further tests are met, but we are happy to advise on sources of guidance, the impacts of alternative solutions on European sites, and any proposed compensation measures. Further information on these legislative requirements for SACs can be found here https://www.nature.scot/professional-advice/planning-and-development/environmental-assessment/habitats-regulations-appraisal-hra/habitats-regulations-appraisal-hra

3.2 Moray Firth SAC

In the Moray Firth, bottlenose dolphin presence in the summer months coincides with the seasonal migrations of salmonids (Atlantic salmon *Salmo salar* and sea trout *Salmo trutta*). Salmonids are known to be important prey for bottlenose dolphins, based on the analysis of stomach contents and direct observations of foraging events. Chanonry Point, downstream from the mouth of the River Ness, is a well-known and monitored foraging area for bottlenose dolphin. Here there have been visual observations of foraging (mainly on salmon) and also passive acoustic monitoring which has recorded foraging buzzes and 'brays'. Bottlenose dolphins can eat a wide range of prey but salmon provide an important component of their diet when they are available. The passive acoustic monitoring in this area identified a large number of bray calls which, to date, have only been associated with salmonid prey. Salmon are a preferred prey because they have a high nutritional and calorific value.

The Glen Earrach pumped storage scheme therefore has the potential to impact on the bottlenose dolphin feature through impacts on the numbers of migrating salmon exiting the Ness catchment and also potentially reducing the numbers of returning fish.

Any assessment should consider the same impact pathways for Atlantic salmon as discussed above, given the importance of Atlantic salmon to the bottle-nosed dolphin qualifying interest

of the Moray Firth SAC. We will be happy to comment on the applicant's draft HRA for Moray Firth SAC, prior to submission.

Questions asked by the applicant in the Scoping report -

- *Do you agree that the scope of desk study and ecological field survey described in this Section is sufficient to inform the Ecological Impact Assessment element of the EIA? Please advise if there are any further studies of surveys which you consider to be necessary?*
  Please see the comments above. We also advise however, that any mitigation, particularly if it includes raising water levels in Loch Ness will need to consider wider and additional impacts on designated sites such as Urquhart Bay Woods and Ness Woods SAC.
- *Are you aware of any other sources of data on aquatic species or habitats that may be helpful to our assessment and which we may be able to access?*
  No
- *In the interests of identifying opportunities for the Development to deliver biodiversity enhancements, are there any suggestions that you may make as to how this may be best achieved in this case? Are you aware of any local projects to which the Development could contribute, for example?*
  We defer to the Highland Council to provide comment on biodiversity enhancement opportunities.

4. Ornithology

The development will be located around 4km from North Inverness Lochs Special Protection Area (SPA), selected for Slavonian Grebe. **We will be happy to comment on the applicants draft HRA for the SPA, prior to submission.**

Questions asked by the applicant in the Scoping report –

- *Do you agree that the scope of desk study and ecological field survey described in this Section is sufficient to inform the Ecological Impact Assessment element of the EIA? Please advise if there are any further studies of surveys which you consider to be necessary.* – **We agree that the desk study and ecological field study should be sufficient. However, please note we have recently become aware that Slavonian grebe are nesting in other non-designated lochs across the area and we have also recently become aware that Golden Eagle may be nesting on crags near to the proposed upper reservoir.**
- *Please confirm that you agree that ornithological survey covering one year will be sufficient to inform the EcIA, and that two years of bird survey will not be necessary.* - **Although we agree that a survey covering one year may be sufficient, it will depend on the results, which we will be happy to advise on. Therefore, the applicant should schedule enough time into the survey programme to allow for a second year of surveys, should they be required.**
- *Are you aware of any other sources of data on bird species that may be helpful to our assessment and which we may be able to access?* – **Please contact us directly to discuss**
- *In the interests of identifying opportunities for the Development to deliver biodiversity enhancements, are there any suggestions that you may make as to how this may be best achieved in this case? Are you aware of any local projects to which the Development could*

contribute, for example? – **we defer to the Highland Council to provide comment on biodiversity enhancement opportunities.**

5. Geology and Ground Conditions

We know from other schemes of this nature that spoil from tunnel operations can have the potential to raise further impacts. Therefore, we advise that detail of spoil management is fully detailed in any application going forward.

We advise that the applicant follows our detailed guidance on peatland, carbon-rich soils and priority peatland habitats: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management

We will be happy to comment on any Peatland Restoration Plan if required

6. Mitigation and restoration plans

We advise that a schedule of mitigation is provided which clearly details all measures required to minimise the impacts of the scheme. And which considers potential impacts the mitigation measures may also cause other designated sites and species.

ELECTRICITY ACT 1989

ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO – Response from Ness District Salmon Fishery Board

The Ness District Salmon Fishery Board (Ness DSFB) is a statutory body responsible for the protection and enhancement of migratory salmonid (salmon and sea trout) populations in the Ness catchment, which includes the waterbodies affected by the proposed Glen Earrach pump storage hydro scheme.

Ness DSFB would like to make the following comments and observations on the Glen Earrach Pump storage hydro (PSH) Scoping Report.

Overview

Glen Earrach PSH will utilise Loch Ness as the lower reservoir. As noted in Chp. 7 of the Scoping documents "*migratory species Atlantic salmon and brown/sea trout have the propensity to be within the vicinity of the Development during their migrations as both adult and juveniles. As such, there is a potential direct impact pathway to these species once the Development is operational*". This reason, and many others, highlights the unsuitability of Loch Ness for the current proliferation of PSH proposals. There is global interest in PSH, but elsewhere sensitive receptors, such as Loch Ness, are protected from harmful developments of this nature.

In response to the proliferation of PSH schemes proposed for Loch Ness, Ness DSDB commissioned the Norwegian Institute for Nature Research (NINA) to investigate the impact of pump storage hydro generally, and specifically on Loch Ness. The report found that "*Overall, we found a lack of knowledge about how Atlantic salmon migrate through the loch, which is imperative for understanding how closely they will encounter the proposed projects. We also found a lack of knowledge about how the new PSH schemes might impact the flow patterns and temperature regimes in Loch Ness, which will have implications for migrating salmonids and the broader aquatic community in the loch*". These concerns remain outstanding. The NINA report is available to download here.

The potential for harm arising from the Glen Earrach is exacerbated by the cumulative impact of what could be four PSH schemes all utilising Loch Ness as the lower reservoir (Foyers/Red John/Kemp/Glen Earrach). The potential daily drawdown if all four schemes were operating on the same cycle is in the order of 1m, potentially up to 1.2m, if the worst-case scenario figures illustrated in the Loch Kemp EIA are used.

The main concerns of Ness DSFB regarding the cumulative impact of existing, consented and proposed PSH on Loch Ness, and associated watercourses include:

- Potential for delay and enhanced predation of Atlantic salmon smolts in the vicinity of PSH inlet/discharge structures. This could apply to all salmon smolts migrating through Loch Ness, but in particular those originating from the River Moriston SAC, which is located a few

kilometres to the south west of the proposed Glen Earrach inlet/discharge structure. Any negative impacts on salmon smolts will affect Atlantic salmon at a population level, impact rod-catches, and adversely affect all associated predator species, such as the Moray Firth Bottle-nose dolphins.

- PSH schemes have the potential to affect water temperatures in both the upper and lower reservoirs (Bonalumi, et,.al, 2012, Harby et al,. 2013). PSH has the potential to influence water temperatures through frictional losses during generation and pumping, and by solar radiation transfer e.g. when an empty upper reservoir is filling on a sunny day, and to disrupt thermocline formation and stability. Thermal changes could occur in the opposite direction when upper reservoirs are filled during cold weather. These impacts are acknowledged in 10.7.2 of the Scoping document. If all current and proposed PSH schemes were operational at full capacity on Loch Ness the volume of water turned over in a 24hour period could be as high as 58Mm3, which is equivalent to greater than 1m of water across the entire loch. Under summer time stratified conditions, this could result in the water above the thermocline being overturned in less than 20 days. The implications of such a high level of PSH activity on the temperature regime and stability of loch stratification are potentially profound.
- Daily drawdowns in the region of 1m will be highly detrimental to the shoreline ecology of Loch Ness. Rapid and frequent drawdowns are known to be highly damaging to shoreline invertebrates and would result in impoverished littoral invertebrate populations. This will result in knock-on impacts on species dependent on the invertebrate population including Atlantic salmon, brown trout, eel, and shoreline bird species such as Sandpiper.
- The impact of such large loch level fluctuations on flows in the River Ness will be transformative. When Foyers PSH was built in the 1970s water gates were constructed on Dochfour Weir, for the purpose of smoothing out the fluctuations caused by the operation of Foyers PSH on the River Ness. These gates were built to mitigate the impact of a single, relatively small PSH scheme, although in reality, the operation of these gates has struggled to fulfil that single purpose. Quite how impacts of Loch Ness drawdowns in the order of 1m will be mitigated remains to be seen.
- The interests of Ness DSFB are primarily centred on the ecology of the Ness catchment, but it is clear from discussions with other organisations, and businesses, operating on the loch that low loch levels already cause problems. The minimum level of Loch Ness is protected, to an extent, by the agreement between SSE and Scottish Canals regarding safe navigation, although the level did drop below the minimum in May 2023. Given the potential competition for water resources in Loch Ness it is certain that minimum water levels will become much more frequent (a daily occurrence.
- Under National Planning Framework 4 developments such as PSH will only be supported '*where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention'*. This remains the most significant challenge for PSH on Loch Ness.
- The Scoping document provides an indicative location for the substation, but says nothing about the grid connection infrastructure nor route. It was clear at the "public engagement" event staged by Glen Earrach in Drumnadrochit that this issue was of great significance for local residents, many of whom were frustrated by the lack of information.

Potential Impacts of Proposal

Cumulative water movements

The volumes of water moved during pumping and generation for the Glen Earrach scheme have not yet been published but given the 27Mm^3 headwater storage and 15hours duration quoted in the scoping document the flow rate during generation must be in the order of 500m^3/s. Combining this with published figures for the other three existing, or consented schemes on Loch Ness, the cumulative volume of water moved by the four schemes, during generation, would be in the order of 1300m^3/s. The combined rate of abstraction during pumping will be in the order of 1100m^3/s. To put that into context, the mean flow in the River Ness is 90m3/s and the highest flow recorded was 800m3/s in February 1989. The 1989 flood was the highest flow recorded in modern times and resulted in significant damage including the loss of the railway bridge across the lower River Ness. The combined pumping capacity of the four PSH schemes, existing and proposed, would be greater than the highest flow recorded in the River Ness. Pumping that volume of water could occur on a daily basis in Loch Ness.

The implications from such large water movements on the thermal profile and stability of natural processes, such as stratification, in Loch Ness are not understood, but are likely to be profound.

Salmon smolt migration

All salmon smolts emigrating from tributaries of Loch Ness will have to pass within close proximity to one or more of the pump storage hydro schemes. Ness DSFB are not aware of any research examining the interaction between migrating salmon smolts and PSH intakes, during pumping or generation. Our concern is that salmon smolts will be attracted to intakes during pumping (when they will act as a proxy efferent river) where they will be subject to delay and likely enhanced predation.

We know from earlier tagging studies that salmon smolts experience difficulty in exiting lochs, including Loch Ness. Loch Ness smolts are subject to additional challenges due to the presence of the Caledonian Canal, with a varying proportion of the smolts known to enter the canal at the Dochgarroch bifurcation, with subsequent poor survival rates. Smolts emanating from the River Garry face further canal associated risks before they enter Loch Ness. At Cullochy Locks, and at Laggan, smolts are attracted into the canal, with some leaving the Ness catchment to enter the Lochy.

Shoreline ecology

Rapid and frequent drawdown/inundation cycles is extremely damaging to the littoral ecology. Smith et al. (1987) found that the richest littoral invertebrate communities were found in lochs with annual water level fluctuations (AWLF) of less than 5 metres and weekly water level fluctuations (WWLF) of less than 0.5 metres. Where the AWLF is greater than 5 metres, or the WWLF is greater than 0.5 the invertebrate community was impoverished. The scale of PSH operation planned for Loch Ness will degrade the littoral invertebrate from its current good status to impoverished.

Downstream flows

When Foyers was built the potential to impact flows on the River Ness was recognised. This impact was mitigated by the construction of water gates on the right bank of Dochfour Weir. The Glen

Earrach scoping document proposes no new mitigation to counteract what will be huge variations in River Ness flows as a result of large and frequent fluctuations in the level of Loch Ness. The implication in section 11.6.2 is that the existing gates would be adequate mitigation to cope with the impact of the Glen Earrach scheme. Foyers PSH typically alters the level of Loch Ness by 0.09m. The cumulative variation in Loch Ness **is very likely to be as** high as ten times that arising from Foyers PSH operation. This means that water could go from spilling over the entire 500m long crest of Dochfour Weir, **to merely passing down the fish pass alone**, within a matter of hours. The range in flow variation that could occur in the River Ness will be increased greatly above the existing situation, and potentially well beyond what the Dochfour gates could mitigate. Neither the Glen Earrach scoping, nor the Loch Kemp planning documents address this issue.

Comments on the Scoping document

Clause 1.3: The Applicant claims that the Glen Earrach site "*might be one of the most important PSH sites in Europe, because of its location in relation to the grid, its topology, hydrology and geology*". Given the head available the Glen Earrach site may well have some advantages from a generation perspective (financial) but this claim needs to be challenged as for every other metric it appears to be one of the least suitable sites. The biodiversity, environmental and social issues arising from the development of Glen Earrach would be considerable, as would the impacts on indigenous businesses and the local service and tourism economy. Universal concerns regarding pump storage hydro mean that, globally, sensitive locations such as Loch Ness would be protected from harmful developments such as these, including in the UK (SQW, 2011) and internationally off-stream, or closed-loop schemes are prioritised (Stantec, 2023., and National Hydropower Association, 2021).

The focus on drawdown per GWh avoids drawing attention to the actual drawdown. Readers have to wait until Section 2.7.4.5 for that information.

Clause 2.5: This quote highlights a key design parameter i.e., that the scheme was conceived to run for a full 15hours '*and capacity required to achieve a single continuous generating/pumping cycle of 30 GWh'*. This would result in a change in the level of Loch Ness by at least 42cm, potentially as high as 48cm, given the storage capacity of the upper reservoir. This design parameter statement contradicts claims made elsewhere that it is "*unlikely that the scheme will fully empty then immediately fill*" (Clause 2.7.4.5).

Table 2.2: The working volume of the upper reservoir is stated as 27Mm^3. As the surface area of Loch Ness is 56.4km2, the release of the full working volume from the upper Reservoir would increase the level of Loch Ness by 47.8cm, or deplete by the same amount during pumping.

Clause 2.7.4.5: This quote '*A management/water use agreement will need to be confirmed with other water users in the Ness catchment to ensure there is sufficient water resource for all parties*', is interesting as previous CAR licences for Foyers and the Red John scheme (now Loch na Cathrach) implied that SEPA were taking a tiered approach to issuing CAR licences, including stop-generation water levels. For example, the CAR licence for Foyers permits the operator to pump until the loch level reaches 15.27m AOD. However, the equivalent CAR licence stop-generation figure for Red John is 15.33m. If the same approach is taken for Loch Kemp, and any subsequent PSH schemes, each

successive scheme will be constrained to an even greater extent. Our own analysis for the Loch Kemp scheme concluded that it would be constrained for much of the year, and that there was simply no water left for any additional schemes. We request that a full water resource model is produced by Glen Earrach, looking at the cumulative impacts of multiple schemes sharing the same lower reservoir, and that the extent of potential constraints on the operation of each scheme can be understood by all.

The estimated drawdown in Loch Ness is stated at 46cm, which is lower to the calculated value above (Table 2.2 section).

Clause 4.2.2: Figures from Aurora Energy are quoted for the National requirements for long-duration electricity storage. We have seen many differing claims regarding the requirement for storage, which must be constantly changing given the rapid rise in battery energy storage systems. NPF4 creates a presumption in favour of PSH, without providing any guidance regarding the quantity or location. Hence, we now face the situation where developers compete to pump the last available water in Loch Ness dry.

Clause 6.4.2: What will happen to peat/blanket bog within the inundated area of the upper reservoir? It would be unacceptable for soils and peat to be inundated. This would result in erosion, fragmentation, liquification, and ultimately transfer into Loch Ness where it would cause discolouration, of an otherwise relatively clear loch, and settlement on the loch bed, with deleterious impacts for its fauna.

Clause 7.2.4: We note that Bottle nosed dolphins are recognised as being potentially at risk. We have argued previously that any diminution in the Ness salmon population will have wider ecosystem effects, most notably on the frequency and abundance of dolphins at natural narrowings (where migrating salmon are concentrated) such as Chanonry Point. Being highly efficient topline predators, dolphins will likely take a certain number of salmon annually. If numbers of emigrating smolts are depleted due to the proliferation of PSH, then the number of adults returning from their ocean migration and reaching the River Ness (after running the dolphin gauntlet) may be compromised to the extent that egg deposition is severely impacted, thus triggering a downward population spiral, with trophic level impacts on the Moray Firth dolphin population. The sight of dolphins feeding on returning adult Atlantic salmon, within metres of the shoreline, at Chanonry, is arguably the greatest wildlife spectacle in the Highlands and an irreplaceable biodiversity highlight.

Clause 7.3: We ask for clarity regarding this statement '*The potential impact on salmon smolts will be considered against existing data '*.

Clause 7.4.2: 'Loch nam Breac Dearga (Translated as 'Lake of the Red Trout' – arctic char)'. We have heard alternative translations e.g., Loch of the red speckled Trout. Maitland & Campbell, 1992, record that Breac is the Scottish gaelic for brown trout, with Tarragan cited as gaelic for Charr. We are aware of anecdotal reports of Arctic charr in Loch nam Breac Dearga, but this would need to be confirmed.

Clause 7.5.3.2: The proposal to use eDNA to establish the fish population of nam Breac Dearga is welcomed. The Centre of Expertise for Water (CREW) recently organised a workshop on

Methodologies for Sampling Fish Populations in Scottish Freshwater Lochs. The report from this workshop is available here. This report should guide the fish population assessment and monitoring requirements for the Glen Earrach PSH in Loch nam Breac Dearga and Loch Ness.

Clause 7.5.3.3: Given the extent of the potential drawdown on the entire littoral zone of Loch Ness, invertebrate sampling in Loch Ness should be comprehensive, and cover a range of habitats, including shallow bays, and beaches, where the impact of drawdown would be much greater than on steep rocky shorelines, as occur in the vicinity of the proposed intake structure.

Clause 7.6: To the list of Potential Significant Effects on Atlantic salmon we would add the potential for delay and enhanced mortality of migrating smolts attracted to the vicinity of PSH intakes during pumping. Otherwise, the list of potential scheme effects is comprehensive.

Clause 10.7.2: We note that the scoping document recognises that there may be impacts on Loch Ness water temperature, and thermal stratification (local). In order to address these concerns, we request that the developers commission a study to report on potential impacts of the Glen Earrach scheme on the water temperature profile of Loch Ness and its potential impact on natural limnological processes such as thermal stratification.

Clause 11.4.11: We note the mantra '*Unusually for an oligotrophic water body, water clarity is very poor due to the presence of humic acids leached from the peat rich soils in the surrounding catchment'* is quoted. The River Ness is known for the clarity of its water and compared to many similar Scottish lochs water clarity is relatively clear. We regard Loch Ness as being a relatively clear loch.

Clause 11.5.1: We expect the cumulative water resources assessment to be comprehensive and to take into consideration all potential uses of water in Loch Ness. This assessment should detail the water resource availability and allocation for existing and prospective PSH schemes, potential stop-generation levels and implications for scheme curtailment.

Clause 11.6.2: We disagree strongly with paragraph 3 in this clause. Mitigation of flows in the River Ness due to variations in the level of Loch Ness is the elephant in the room as far as PSH developers on Loch Ness are concerned. Anyone with knowledge of Dochfour Weir, a very large water level regulating structure, on flows in the River Ness, will understand that small variations in the level of Loch Ness can result in large changes in river flows. The range in loch level variations and the rapidity with which they could occur if all proposed PSH schemes are built will mean that the River Ness would be transformed from a very stable flow regime into a hydro-peaking river, with all the detrimental impacts that will entail. In our response to the Loch Kemp planning application, we documented the previously stated aspiration of its developers to increase the height of Dochfour Weir so that additional water could be stored in Loch Ness to improve the viability of that scheme. That aspiration was not mentioned in the Loch Kemp planning application, but it is likely to follow in subsequent applications. The question whether Glen Earrach intended to submit an application to raise the height of Dochfour Weir was put directly to Roderick Macleod, Glen Earrach Director, at a roundtable discussion (Drumossie Hotel, 23rd May 2024). The answer was not at present, or words to that effect.

Clause 11.7.2: We note that the wording regarding mitigation, in the eventuality that, *'existing downstream abstraction arrangements are found to be significant*' is vague. The development of operational rules to manage water conflicts, especially with pre-existing operators, will be challenging for new entrants to PSH in Loch Ness.

Table 16.1: The baseline data shown in Table 16.1 focusses on air temperature and precipitation. The scope for baseline data needs to be extended to include water temperatures in Loch Ness and the River Ness.

Table 16.3: Climate change associated changes in precipitation are likely to result in drier summers, placing greater pressure on water resources in Loch Ness. For example, in May 2023, Loch Ness experienced a record low level, an event that appears to be associated with abstraction at Foyers PSH. This is an example of the impact of one, relatively small PSH scheme on Loch Ness, encountering water resource limitations. We ask that Glen Earrach developers produce a water resource model, including all existing and proposed water demands. This model needs to factor in climate change driven precipitation predictions.

Closing remarks

The points raised in this scoping response reflect our current understanding of the issues arising from the proposed Glen Earrach pump hydro scheme. Given the degree of interest in pump storage hydro in Loch Ness we reserve the right to submit further comments if new issues arise, or further pump storage proposals for Loch Ness emerge.

It is not possible to separate our previously expressed concern regarding the proliferation of pump storage hydro on Loch Ness from this scoping response but we hope that our response has been constructive where required and clear when further studies and work have been identified.

Pleased do not hesitate to get back in touch if clarification is required.

Brian Shaw

Director, Ness District Salmon Fishery Board

6th June 2024

References

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The Scottish Government
Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Network Rail
Town Planning
151 St Vincent Street
Glasgow
G2 5NW

Martin Henderson
Town Planning Technician

Planning reference: ECU00005121
Case Officer: Carolanne Brown

E-Mail:
TownPlanningScotland@networkrail.co.uk

Network Rail ref: 147 2024
29/05/2024

Dear Ms Brown,

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO

Thank you for consulting Network Rail regarding the above development.

We would strongly suggest that reference to the issues below are included in the Scoping Opinion to ensure that potential impacts of both the construction and completed development on the current and future safe and efficient operation of the railway are assessed:

- A Traffic Assessment should be included to assess the effects of construction traffic on existing traffic flows and the public road network. Preferred construction traffic routes should be indicated. This will enable Network Rail to assess the possible impacts where/if the traffic crosses over/under our infrastructure and the suitability of these crossings.

Yours sincerely

REDACT

Town Planning Technician

From: ONR Land Use Planning
To: Econsents Admin
Subject: ONR Land Use Planning - Application ECU00005121
Date: 15 May 2024 15:44:26

Dear Sir/Madam,

With regard to planning application ECU00005121, ONR makes no comment on this proposed development as it does not lie within a consultation zone around a GB nuclear site.

You can find information concerning our Land Use Planning consultation process here: (http://www.onr.org.uk/land-use-planning.htm).

Kind regards,

Land Use Planning
Office for Nuclear Regulation
ONR-Land.Use-planning@onr.gov.uk

----Original Message----
From: Carolanne.Brown@gov.scot <carolanne.brown@gov.scot >
To:
Cc:
Sent: 15/05/2024 11:58
Subject: Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121

Dear Consultee,

ELECTRICITY ACT 1989
THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO

On **26 April 2024**, AECOM on behalf of Glen Earrach Energy Ltd (the Applicant) submitted a request for a scoping opinion from the Scottish Ministers for the proposed section **36** application for the **Glen Earrach Pumped Storage Hydro**. The proposed development is for a PSH scheme utilising the existing Loch nam Breac Dearga located on the Northwest side of Loch Ness, approximately 9.5 km to the south of Drumnadrochit, and 6.5 km north of Invermoriston within **The Highland Council administration region**, in line with regulation 12 of The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

Under regulation 12, Scottish Ministers are required to provide a scoping opinion outlining the information they consider should be included in the EIA report. Ministers are also required to consult the relevant consultation bodies and any other interested party which is likely to have an interest in the proposed development by reason of its specific environmental responsibilities or local and regional competencies.

The scoping report and supporting information can be viewed at the Scottish Government's

Energy Consents Unit website www.energyconsents.scot by:

- clicking on ***Search*** tab; then,
- clicking on ***Simple Search*** tab; then,
- typing **Glen Earrach Pumped Storage Hydro** into ***Search by Project Name*** box then clicking on ***Go***;
- then clicking on **ECU00005121** and then click on ***Documents*** tab.

To allow Scottish Ministers to provide a comprehensive scoping opinion, we ask that you review the scoping report and advise on the scope of the environmental impact assessment for this proposal. Please advise if there are any further matters you would like Ministers to highlight for consideration and inclusion in the assessment, particularly site-specific information.

I would be grateful for your comments by **06 June 2024.** Please note that reminders will not be issued, therefore if we have not received any comments from you, nor a request for an extension to this date, we will assume that you have no comments to make.

Please send your response (in PDF format if possible) to Econsents_Admin@gov.scot. (please note the underscore _ between Econsents and Admin).

Kind regards

Carolanne Brown

Carolanne Brown, Case Officer, Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change | Scottish Government | 5 Atlantic Quay, 150 Broomielaw, Glasgow G2 8LU
e-mail: carolanne.brown@gov.scot

Please note I am currently working from home but I am contactable via Microsoft Teams
My working Hours are Monday to Thursday 07:00 – 14:50 and Fridays 07:00 – 12:00

Advanced Notice of annual leave:

24 May 2024 - 27 May 2024

RYA SCOTLAND

Caledonia House
1 Redheughs Rigg
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Edinburgh, EH12 9DQ

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22 May 2024

Carolanne Brown,
Case Officer, Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change
Scottish Government
5 Atlantic Quay,
150 Broomielaw,
Glasgow G2 8LU

carolanne.brown@gov.scot

Dear Ms Brown,

Glen Earrach Pumped Storage Hydro

I have read the scoping report on behalf of RYA Scotland. Although Loch Ness forms part of the important and well used route for recreational and other craft between the Moray Firth and Loch Linnhe using the Caledonian Canal, the proposed scheme is not expected to have a significant impact on them. Recreational boating can thus be scoped out of the EIA.

Yours sincerely,

REDACT

Dr G. Russell FCIEEM(retd) FRMetS
Planning and Environment Officer, RYA Scotland

Carolanne Brown
Onshore Electricity, Strategy and Consents
Scottish Government

By email to: Econsents_Admin@gov.scot

30 May 2024

Dear Carolanne

ELECTRICITY ACT 1989 THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017 REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE.

Thank you for consulting RSPB Scotland on the EIA scoping for the above proposal. RSPB Scotland is supportive of renewable energy and acknowledges the need for energy storage solutions, but developments must be carefully sited to avoid negative impacts on sites, habitats and species. The highly linked nature of the climate and nature crises further underscores the importance of nature positive development.

If pumped storage is to play a role in tackling climate crisis a strategic approach is required that will enable a balanced appraisal of the most appropriate locations for these developments that will have the least environmental impact.

The proposed development area is adjacent to the North Inverness Lochs Special Protection Area (SPA), designated for its population of breeding Slavonian Grebe. Due to the nature of the development and its location, it the would have likely significant effects on the SPA and has potential to impact on other critically important Slavonian grebe breeding lochs in the area which are linked to the SPA population.

Scottish Government, as competent authority, is required by Habitat Regulations to undertake an Appropriate Assessment of the effects of the proposal on the SPA and its species in light of the site's conservation objectives.

The EIA Report must include sufficient information to inform the Appropriate Assessments. If the potential impacts of the proposal cannot be sufficiently mitigated and there could be adverse impacts on the integrity of European sites it is unlikely that the proposal could be supported.

Further details are provided in Annex 1 along with advice on data sources, survey methods and mitigation.

Yours Sincerely

REDACT

Alison Phillip
Conservation Officer – South Highland

RSPB North Scotland
Inverness Office
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Annex 1 – RSPB Scotland Further comment

North Inverness Lochs SPA

The Dubh Lochs are part of the North Inverness Lochs SPA and Dubh Lochs Site of Special Scientific Interest (SSSI), both designated for breeding Slavonian Grebe.

Slavonian Grebe is a rare, red listed breeding bird, and in the UK are confined as a breeding species to an area within 30 miles of Inverness. Only 15 pairs were recorded in 2023, with numbers having declined from a high of over 80 pairs in the 1980's. Every remaining breeding loch is now critical to sustaining the population. Slavonian Grebes can move between sites in March/April before settling on a loch to breed, and also move between lochs during the breeding season, with most movements taking place at night using unknown routes. As such, there is likely ecological connectivity between the Dubh Lochs (which are within the SPA) and lochs in the surrounding area. Sufficient information must be gathered to inform the EIA and a Habitats Regulations Appraisal.

Given the scale of the proposal, long-term nature of the impacts and importance of this area for Slavonian grebes **we strongly recommend a minimum of two years of waterfowl surveys**, paying particular attention to any areas of bottle sedge and willow on lochan edges in May/June where Slavonian grebes may nest. As well as considering potential for disturbance, and habitat loss, any assessment undertaken must consider the impacts that any changes in hydrology may have on Slavonian grebe as the qualifying feature of the SPA.

Given the importance of this area for this species we would expect any application to identify and include appropriate mitigation and significant enhancement measures that would benefit the species and suggest this takes the form of a Slavonian Grebe Conservation Plan.

Slavonian Grebe are present on other non-designated lochs within the proposed development area. **RSPB Scotland holds the Slavonian grebe dataset, which includes records for North Inverness Lochs SPA, as well as other breeding lochs within the proposal area. The data can be supplied via a data request and we are of the opinion that this will be vital to inform an assessment.**

Birds of Conservation Concern

The proposed Application site and the surrounding area is used by a number of other Schedule 1 of the Wildlife and Countryside Act and/or Annex 1 of the EU Birds Directive species as well as other species that are red or amber listed as being of conservation concern and impacts on these species should be fully assessed.

Given the scale of the development, and the presence of priority species such as raptors, divers and black grouse we strongly recommend that two years of survey work is undertaken to ensure that appropriate data is available to inform the assessment.

Biodiversity Enhancement

We believe that development should leave nature in a better state than before it took place. We welcome NPF4's commitment to deliver positive effects for biodiversity through development. Policy 3 states that, 'Development proposals for national or major development or for development that

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requires an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve and enhance biodiversity, including nature networks so they are in a demonstrably better state than without intervention'.

It goes on to list a number of criteria which applicants must demonstrate they have met, including 'significant biodiversity enhancements are provided, **in addition to** any proposed mitigation'.

Early consideration of how positive effects for biodiversity will be delivered is encouraged. Any mitigation, compensation and enhancement measures should be clearly and separately identified within the EIA. NatureScot guidance[4] recommends 'that restoration to achieve offsetting (i.e. compensation rather than biodiversity enhancement) would be in the order of 1:10 (lost: restored)' plus 'an additional 10% of the baseline assessment of the extent of priority peatland habitat for biodiversity enhancement'.

An Outline Biodiversity Enhancement Management Plan (OBEMP) (or similar) should be presented as part of the EIA. We recommend that as much detail as possible is provided at the application stage and that what is proposed as enhancement measures (as separate from any required mitigation and compensation) are clearly set out.

We would recommend consideration of actions such as maximising bog restoration to increase biodiversity and climate benefits, deer control to enable natural regeneration of native woodland, diver rafts, and a species-specific management plan for Slavonian grebe.

The OBEMP should include a comprehensive monitoring programme for any habitat improvements, breeding birds on the site and SPA-featured species.

Additional Comments

We note that the construction period is anticipated to last for 8 years and workers will need to be accommodated on or near the site. The impact of any such accommodation, alone and in-combination with the main PSH scheme need to be considered as part of the EIA.

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www.scottishcanals.co.uk

Tel: 0141 332 6936

John Paterson
Chief Executive

Energy Consents Unit
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

17 06 2024

Your Ref: ECU00005121

Dear Energy Consents Unit

RE: Glen Earrach Pumped Storage Hydro - ECU00005121

ELECTRICITY ACT 1989 THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017
REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO

Thank you for the opportunity to comment on the above application. Scottish Canals (SC) has reviewed the Environmental Scoping Report for the proposed development and has the following comments.

SC supports and endorses Scotland's net zero ambitions. We recognise the opportunity that pumped hydro schemes present to contribute to achievement of these ambitions and are keen to play our part, working with scheme operators where possible.

The hydro schemes will form part of the same water cycle, which is inextricably linked to the Caledonian Canal, a scheduled ancient monument subject to the Ancient Monuments and Archaeological Areas Act 1979. This national monument is an operational asset which is protected by scheduled monument status and all potential or planned impacts upon it require careful consideration. Loch Ness itself is a key element of the route for the Caledonian Canal for which SC has a statutory navigation duty.

SC is aware that the proposed Glen Earrach scheme is one of four such schemes and given the shared access to the same water cycle, especially that which could affect the water levels in Loch Ness and River Ness. For this reason, the design parameters and associated mitigation associated Glen Earrach scheme must be fully considered with regard to those associated with the other proposed schemes, so that each of their cumulative effects on the water system, environmental impacts and impacts on the Caledonian canal and its stakeholders can be fully appraised as completely linked entities (i.e. assessed by the regulatory regime as interlinked and unavoidably combined proposed developments).

Statutory context

Please note the following SC's statutory duties and powers in relation to the Proposed Development.

Scottish Ministers are responsible for the oversight of the canal maintenance obligations of Scotland's canal network. The British Waterways Board operating as Scottish Canals ("Scottish Canals") as a Non Departmental Public Body manages Scotland's canal network on behalf of the Scottish Ministers.

Statutory Duties and Powers

Following the transfer of the functions of the British Waterways Board in England and Wales to the Canals and River Trust in July 2012 the statutory legal framework has been adapted for application in Scotland only.

Scottish Canals' core statutory duties are set out in:

The Transport Act 1962

Under section 10(1) of the 1962 Act, SC has general duties:

"to provide to such extent as they may think expedient

(a) services and facilities on the inland waterways owned or managed by them, and

(b) port facilities at any harbour owned or managed by them,

and to have due regard to efficiency, economy and safety of operation as respects the services and facilities provided by them."

The Transport Act 1968

The Transport Act 1968 recognised the changing role of canals at a time when their use for freight distribution was in decline and the waterways leisure industry was in its infancy. Section 104 of the 1968 Act provides that the inland waterways comprised in the undertakings of Scottish Canals "shall" be divided into the categories of (1)

commercial waterways; (2) cruising waterways and (3) the remainder, with different levels of maintenance obligations for each category.

The Caledonian Canal was classified as a commercial waterway.
The obligations relating to commercial waterways are set out under Section 105(1)(a), which provides:
"(1) With a view to securing the general availability of the commercial … waterways for public use, it shall be the duty of Scottish Canals
(a) to maintain the commercial waterways in a suitable condition for use by commercial freight carrying vessels.
A serious and persistent failure to discharge this maintenance duty enables any person to make an application to the Court of Session to require remedy of that failure.

Scheduled Monument Status
The Caledonian Canal is a scheduled ancient monument and subject to the Ancient Monuments and Archaeological Areas Act 1979.

It is an offence to carry out works to scheduled ancient monuments without scheduled monument consent. It is also open to Historic Environment Scotland and the Scottish Ministers to take enforcement action against a person who executes such works without consent.

It is also an offence to destroy or damage a protected monument without reasonable excuse (section 28 Ancient Monuments and Archaeological Areas Act 1979).

Scoping report general comments
We note that SC, which has an important statutory role in the management of Loch Ness as both a water supply for the Caledonian Canal and has a navigation authority on Loch Ness, has not been consulted in the preparation of the scoping report. We therefore request that SC is consulted fully during the preparation of the Environmental Impact Assessment (EIA).

SC welcomes that the Caledonian Canal is referred to on four occasions in the scoping report regarding transportation of large items of equipment during the construction phase, the impacts on fish passage at Ness Weir at the northern end of Loch Ness and the water level fluctuations in Loch Ness and water supply to the Caledonian Canal (Sections 2.7.2.2, 7.7, 10.7.1 and 11.4.1.1 respectively).

Scoping report chapter comments

7. Aquatic Ecology, including marine ecology
Section 7.7
SC welcomes the recognition that potential solutions to mitigate impact to fish passage on Loch Ness, Ness Weir and the Caledonian Canal would need to be future proofed to take into account cumulative effects and the potential impacts of climate change thereby delivering the National Planning Framework Policy Principles to ensure that Blue Green infrastructure delivers multiple environmental functions and associated benefits.

SC requests that water level fluctuations as well as changes to water flow patterns in combination with greater variation in level changes around the Caledonian Canal assets are considered in the EIA.
Preliminary doppler surveys by the Scottish Environment Protection Agency indicate that the flow patterns at Ness Weir and the approaches to Dochgarroch Lock change with varying Loch Ness levels.

SC requests that the significance of potentially altered water flow patterns, due to the Proposed Development in combination with other pumped storage hydro schemes, on the upstream and downstream migration of salmonids and other migratory fish including eels and lamprey species in the Ness Weir and Dochgarroch areas, is reviewed and mitigation proposed as required.

Currently Scottish Canals has a smolt sluice adjacent to the Dochgarroch Lock which must be fully operational between 1st April to 1 July annually to facilitate for the movement of salmon smolts from the entrance of the canal at Loch Dochfour back to the River Ness. The assessment should consider the impact of fluctuating water levels on the efficacy of the smolt sluice and the fish pass within the Ness Weir.

9. Geology and ground conditions
Section 9.3
Scottish Canals requests that the potential impact of fluctuating water levels on Caledonian Canal operations with regard to the available navigable depth is included in the EIA. Sediment deposition from non controlled river discharges create deltas within the canal approaches near Dochgarroch. The Dochfour Burn in particular, creates a hazard to navigation during normal water levels. Fluctuating water levels on Loch Dochfour may make the requirement to dredge the outfall of Dochfour Burn more frequent and urgent, as shallower water pushes deeper drafted vessels across the channel, compromising the ability for vessels to pass in this area. The creation of a stilling basin on the Dochfour Burn upstream of the discharge point to the canal should

be assessed as a possible solution in dealing with the sediment delta deposited in the canal, at low water levels.

10. Water Environment
Section 10.7.1
SC welcomes the consideration of potential for adverse impacts on the water environment because of construction of a temporary dock in Loch Ness to facilitate the use of the Caledonian Canal as a transport route for larger items during the construction phase. Please also note the comments on chapter 13 below

11. Flood risk and water resources
11.4.1.1 Loch Ness
SC notes that Loch Ness is identified in the scoping report as a water source for the northern section of the Caledonian Canal.

The provision of sufficient water resources is fundamental to the safe operation of the Caledonian Canal and preservation of the scheduled heritage assets.

Any proposed reduction (under provision compared to historic flows) of water to the canal is likely to serious compromise the ability to maintain navigable status as required by statute. Any alterations from the developments which may result in over provision of water presents risks to the several aging engineered assets and levels to which engineered assets are designed.

The developments could potentially impact by resulting in water levels on Loch Ness and adjacent canal, which could exceed canal design parameters, presenting risks of infrastructure failure and /or overtopping and flooding.

It is therefore imperative that the projected impacts of climate change are included in the hydrological modelling for all proposed and current pumped storage schemes on Loch Ness and that this considers the navigation function, recreational value, and potential asset fatigue of the Caledonian Canal where it interfaces with Loch Ness at Fort Augustus, Ness Weir, and Dochgarroch Lock.

We also request that the impact of licensed water use at Dochgarroch Lock is considered in the EIA. SC will be able to provide flow information relating to Dochgarroch loch for inclusion in the hydrological modelling for the proposed development.

In response to Section 7.8 regarding additional studies in support of the EIA, SC requires further information on the impact of the scheme not only on Loch Ness water levels, but

also, the water flow regimes in the vicinity of our operational assets and reservoirs and any potential increased asset fatigue now, and in the future, based on UK projected climate change impacts.

In addition, the impacts of fluctuating water levels on lock operations by both operational and non SC staff needs to be considered.

12. Cultural heritage

SC requests that the scope of the EIA includes the potential impact on the Caledonian Canal's operational assets at Fort Augustus, Ness Weir, and Dochgarroch Lock.

SC requests that if the scope of the development extends to include changes to the operation and/or structure of canal assets that this is included in any updates to the cultural heritage impact assessment following full consultation with SC and Historic Environment Scotland.

The assessment should include details of how the developer will ensure that the historic, protected canal structures affected by the Proposed Development are resilient, now and in the future, to projected climate change impacts.

SC also wishes to advise that there is a process for any third party works to our structures. If required, all interfaces with the canal, including construction methodologies adjacent to the canal structure, will require Scottish Canals Third Party Works (TPW) approval. https://www.scottishcanals.co.uk/business_governance/business_opportunities_and_how_to_work_with_us/third_party_works

13. Access, Traffic and Transport

SC recognises the significant opportunity for the proposed development to use the Caledonian Canal for a variety of freight purposes.

Scottish Canals supported trial passages of water based freight in relation to the Coire Glas pumped storage hydro scheme development on Loch Lochy in late 2022.
Use of the canal to support hydro related transport can significantly reduce the number of abnormal indivisible loads on the already congested A82 and wider highland road network.

We note that the use of water borne freight has the potential to reduce the transport carbon emissions during the construction phase of the Proposed Development and request that this is included in the carbon balance assessment.

A Canal Management Plan should be also produced in collaboration with SC and other stakeholders to ensure that the operation does not adversely affect existing leisure and commercial canal traffic.

Significant investment in canal infrastructure and associated facilities will be required to ensure that the Caledonian Canal plays a full role in the hydro schemes in the Great Glen.

15. Socio-economics, Recreation and Tourism

SC requests that the potential impact of access to existing Caledonian Canal leisure and commercial moorings, including jetties and wharves around Loch Ness is included in the EIA.

SC requests that hydrological assessments, which take account of projected climate change impacts, assess the potential impacts of the Proposed Development on the use of existing Caledonian Canal operations, boat access and egress and infrastructure. This should pay particular attention to the requirements to ensure that vessels can be securely and safely tied to fixed berths and left unattended if Loch Ness levels fluctuate regularly without notice.

SC requests the assessment of the potential conflict of the proposed development construction canal traffic with those engaged in water based recreational activities on Loch Ness and the Caledonian Canal and requests that a Canal Management Plan to be developed to manage any potential issues.

The Caledonian Canal plays a significant role in the highland economy, not just as one of the most popular tourist attractions, but as a crucial element supporting the operation of numerous businesses and communities alongside and across the canal's geography. It is imperative that adequate focus is given to assessing the potential negative impact that this and other schemes may have on tourism businesses and the local communities whose prosperity relies on them.

If you wish to discuss Scottish Canals' response, please feel free to contact us via email at hydro.schemes@scottishcanals.co.uk.

Yours sincerely
REDACT

Dr Olivia Lassiere
Environment Manger

Scottish Gas Networks Consultation Response

From: Young, Bryan
To: Econsents Admin
Subject: Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121
Date: 15 May 2024 12:19:58
Attachments: image001.jpg

Classified as Internal

Good afternoon,

SGN do not have any High Pressure assets within the vicinity of the above and as such would have no objection/comment.

Kind regards

Bryan Young
Pipeline Officer
Bryan.young@sgn.co.uk
Axis House Edinburgh
sgn.co.uk
Find us on Facebook and follow us on Twitter: @SGNgas

Smell gas? Call 0800 111 999
Find out how to protect your home from carbon monoxide

Wednesday, 29 May 2024

Local Planner
Energy Consents Unit
5 Atlantic Quay
Glasgow
G2 8LU

Development Operations
The Bridge
Buchanan Gate Business Park
Cumbernauld Road
Stepps
Glasgow
G33 6FB

Development Operations
Freephone Number - 0800 3890379
E-Mail - DevelopmentOperations@scottishwater.co.uk
www.scottishwater.co.uk
Follow Us

Dear Customer,

Glen Earrach Pumped Storage Hydro, Loch nam Breac Dearga Northwest side of, Loch Ness, IV63 7YD
Planning Ref: ECU00005121
Our Ref: DSCAS-0110154-L44
Proposal: Construct a PSH scheme utilising the existing Loch nam Breac Dearga located on the Northwest side of Loch Ness, approximately 9.5 km to the south of Drumnadrochit, and 6.5 km north of Invermoriston within The Highland Council administration region. Headpond NGR - NH 45257 22370, Tailpond NGR - NH 47633 21197. Glen Earrach PSH will have a storage capacity of up to 30,000 megawatt hours (MWh) with up to 2,000 MW installed electrical generation capacity (subject to further investigation and feasibility works), with a gross head (vertical distance between upper and lower loch) of close to 500m.

Please quote our reference in all future correspondence

Audit of Proposal

Scottish Water has no objection to this planning application; however, the applicant should be aware that this does not confirm that the proposed development can currently be serviced. Please read the following carefully as there may be further action required. Scottish Water would advise the following:

Please Note

- The applicant should be aware that we are unable to reserve capacity at our water and/or waste water treatment works for their proposed development. Once a formal connection application is submitted to Scottish Water after full planning permission

has been granted, we will review the availability of capacity at that time and advise the applicant accordingly.

Drinking Water Protected Areas

A review of our records indicates that the proposed activity falls within a drinking water catchment where a Scottish Water abstraction is located. Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) under Article 7 of the Water Framework Directive. Loch Ness supplies Invermoriston Water Treatment Works (WTW) and it is essential that water quality and water quantity in the area are protected. In the event of an incident occurring that could affect Scottish Water we should be notified immediately using the Customer Helpline number **0800 0778 778**.

Loch Ness has a very large catchment (1781km^2). The outflow/ intake of development is located between Drumnadrochit and Invermoriston on the northern side of Loch Ness. The proposed development has a lower approximate rate of change per GWh on Loch Ness than other commissioned and consented schemes (including Foyers and Red John). Although the storage capacity of the proposed Glen Earrach PSH is greater than other Loch Ness hydro schemes. The operation of Glen Earrach PSH must not reduce loch levels such that forward flow over the Ness weir is impeded or that the head of water over the Invermoriston RWI is negatively impacted. Assuming that the aforementioned statements are followed, this development will have a low impact on the yield of the Loch Ness catchment (which is in surplus); and would therefore be rated as a low-impact development with regards to water resources (quantity).

The activity could present a risk to water quality and therefore the appropriate mitigations for pollution prevention must be in place.

Scottish Water have produced a list of precautions for a range of activities. This details protection measures to be taken within a DWPA, the wider drinking water catchment and if there are assets in the area. Please note that site specific risks and mitigation measures will require to be assessed and implemented. These documents and other supporting information can be found on the activities within our catchments page of our website at www.scottishwater.co.uk/slm

We welcome receipt of this notification about the proposed activity within a drinking water catchments where Scottish Water abstractions are located.

The fact that this area is located within a drinking water catchment should be noted in future documentation. Also anyone working on site should be made aware of this during site inductions.

We would also appreciate further consultation as this development progresses and further details about the project should be sent to protectdwsources@scottishwater.co.uk

It would be useful to know the anticipated start date for the development if this gets planning consent so we can make our operational teams aware, given that there are similar activities taking place in this catchment which could present and aggregate of issues.

Surface Water

For reasons of sustainability and to protect our customers from potential future sewer flooding, Scottish Water will not accept any surface water connections into our combined sewer system.

There may be limited exceptional circumstances where we would allow such a connection for brownfield sites only, however this will require significant justification from the customer taking account of various factors including legal, physical, and technical challenges.

In order to avoid costs and delays where a surface water discharge to our combined sewer system is anticipated, the developer should contact Scottish Water at the earliest opportunity with strong evidence to support the intended drainage plan prior to making a connection request. We will assess this evidence in a robust manner and provide a decision that reflects the best option from environmental and customer perspectives.

General notes:

- Scottish Water asset plans can be obtained from our appointed asset plan providers:
    - Site Investigation Services (UK) Ltd
    - Tel: 0333 123 1223
    - Email: sw@sisplan.co.uk
    - www.sisplan.co.uk
- Scottish Water's current minimum level of service for water pressure is 1.0 bar or 10m head at the customer's boundary internal outlet. Any property which cannot be adequately serviced from the available pressure may require private pumping arrangements to be installed, subject to compliance with Water Byelaws. If the developer wishes to enquire about Scottish Water's procedure for checking the water pressure in the area, then they should write to the Customer Connections department at the above address.
- If the connection to the public sewer and/or water main requires to be laid through land out-with public ownership, the developer must provide evidence of formal approval from the affected landowner(s) by way of a deed of servitude.
- Scottish Water may only vest new water or waste water infrastructure which is to be laid through land out with public ownership where a Deed of Servitude has been obtained in our favour by the developer.
- The developer should also be aware that Scottish Water requires land title to the area of land where a pumping station and/or SUDS proposed to vest in Scottish Water is constructed.
- Please find information on how to submit application to Scottish Water at our Customer Portal.

Next Steps:

All Proposed Developments

All proposed developments require to submit a Pre-Development Enquiry (PDE) Form to be submitted directly to Scottish Water via our Customer Portal prior to any formal Technical Application being submitted. This will allow us to fully appraise the proposals.

Where it is confirmed through the PDE process that mitigation works are necessary to support a development, the cost of these works is to be met by the developer, which Scottish Water can contribute towards through Reasonable Cost Contribution regulations.

Non Domestic/Commercial Property:

Since the introduction of the Water Services (Scotland) Act 2005 in April 2008 the water industry in Scotland has opened to market competition for non-domestic customers. All Non-domestic Household customers now require a Licensed Provider to act on their behalf for new water and waste water connections. Further details can be obtained at www.scotlandontap.gov.uk

Trade Effluent Discharge from Non-Domestic Property:

- Certain discharges from non-domestic premises may constitute a trade effluent in terms of the Sewerage (Scotland) Act 1968. Trade effluent arises from activities including; manufacturing, production and engineering; vehicle, plant and equipment washing, waste and leachate management. It covers both large and small premises, including activities such as car washing and launderettes. Activities not covered include hotels, caravan sites or restaurants.
- If you are in any doubt as to whether the discharge from your premises is likely to be trade effluent, please contact us on 0800 778 0778 or email TEQ@scottishwater.co.uk using the subject “Is this Trade Effluent?". Discharges that are deemed to be trade effluent need to apply separately for permission to discharge to the sewerage system. The forms and application guidance notes can be found here.
- Trade effluent must never be discharged into surface water drainage systems as these are solely for draining rainfall run off.
- For food services establishments, Scottish Water recommends a suitably sized grease trap is fitted within the food preparation areas, so the development complies with Standard 3.7 a) of the Building Standards Technical Handbook and for best management and housekeeping practices to be followed which prevent food waste, fat oil and grease from being disposed into sinks and drains.
- The Waste (Scotland) Regulations which require all non-rural food businesses, producing more than 5kg of food waste per week, to segregate that waste for separate collection. The regulations also ban the use of food

waste disposal units that dispose of food waste to the public sewer. Further information can be found at www.resourceefficientscotland.com

I trust the above is acceptable however if you require any further information regarding this matter please contact me on **0800 389 0379** or via the e-mail address below or at planningconsultations@scottishwater.co.uk.

Yours sincerely,

Ruth Kerr.
Development Services Analyst
developmentoperations@scottishwater.co.uk

Scottish Water Disclaimer:

"It is important to note that the information on any such plan provided on Scottish Water's infrastructure, is for indicative purposes only and its accuracy cannot be relied upon. When the exact location and the nature of the infrastructure on the plan is a material requirement then you should undertake an appropriate site investigation to confirm its actual position in the ground and to determine if it is suitable for its intended purpose. By using the plan you agree that Scottish Water will not be liable for any loss, damage or costs caused by relying upon it or from carrying out any such site investigation."

ScotWays
Upholding public access

Econsents_Admin@gov.scot

Carolanne Brown
Case Officer
Onshore Electricity, Strategy and Consents
Directorate for Energy and Climate Change
The Scottish Government

Our Ref: 10295
12/06/2024

Dear Ms Brown,

ECU ref: ECU00005121

ELECTRICITY ACT 1989

THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO

Thank you for your email of 15 May 2024 seeking comments on the scoping report for the above proposal. We gratefully acknowledge the additional time allowed for our response.

ScotWays records

The enclosed map shows that rights of way HI48, HI49 and HI67 as recorded in the National Catalogue of Rights of Way (CROW) cross or are close to the application site as shown on Figure 1-1 *Site Location Plan*.

The enclosed map shows other paths HI52, HI53 and HI63 as recorded in the National Catalogue of Rights of Way (CROW) cross or are close to the application site as shown on Figure 1-1 *Site Location Plan*.

In searching our records at this scoping stage, we have focussed solely on the immediate area of the proposed application. If required by the applicant to inform their Environmental Impact Assessment (EIA), maps of a wider search area are available from ScotWays, alongside a more detailed response.

Other Access to Land

You should be aware that other forms of public access to land may affect the planning application site. More detail about these other types of access is set out in the enclosed Catalogue of Rights of Way Guidance Notes. The applicant is no doubt aware that two long distance routes sit within the application site: the *Affric Kintail Way* which sits along part of the proposed northern access route and the Great Glen Way, a long distance route which is used by walkers, runners and cyclists. This route is promoted by NatureScot (formerly Scottish Natural Heritage) as one of Scotland's Great Trails.

Recreational Amenity

As well as direct impacts of development upon public access, ScotWays has an interest in impacts on recreational amenity, so this includes the impact of developments on the wider landscape. We anticipate that the applicant will take into account both recreational amenity and landscape impacts in developing their proposals for this site. We will consider these issues further should this scoping stage lead to a planning application.

Comment

At this scoping stage the recreational baseline is incomplete: the applicant still needs to assess the effect of this proposed development on routes across the application site.

Figure 5-4 *Representative Viewpoints and Key Routes* shows core paths and long distance routes within the 15km study area however there has been no consideration of either the right of way network or further recreational routes which do not fall within those fore-mentioned designations. It therefore, incorrectly, appears that there are no routes directly affected by either the application site, the proposed northern access route or other access routes within the site.

As shown on our map HI52 crosses the application site and lies in close proximity to Loch nam Breac Dearga. From Figure 1-2 *Above Ground Infrastructure* it appears that this route may be lost under the Headpond: we do note that there are proposed new access tracks in the vicinity of the headpond however the effect on this route clearly needs assessed.

Along with the omissions noted above a route on Figure 5-4 is incorrectly shown. On Figure 1-2 *Above Ground Infrastructure*, and on Figure 1-3 *Below Ground Infrastructure* it can be seen that the *Affric Kintail Way* is followed by part of the access route from Balnain, indeed it is shown on many of the other Figures within Appendix A. On **Figure 5-4** however the green dashed line for this route is incorrectly placed and sits to the south of the access route. We note that the Great Glen Way is shown on Fig 5-4 however from the scale of the mapping on this it is difficult to tell if this route is correctly shown.

In addressing mitigation measures for the site, 15.9 *Potential Mitigation Measures,* the applicant states '*The CEMP will be supported by a Recreation and Access plan, this will likely aim to mitigate any access disruption or impacts on amenity caused to the Core Paths and other notable walking routes caused by closure and other construction or operation related disruption.*'
Various access tracks, either to or within the site, use parts of recorded rights of way HI48 and HI49 and other routes HI52, HI53 and HI63. At present these have not been considered by the applicant so the effects of the proposed development on these routes will need to be assessed for all stages of the development. We would expect that the applicant consult with the access team at The Highland Council when drawing up their Recreation and Access Plan.

The applicant is no doubt aware that under section 3 of the Land Reform (Scotland) Act 2003, there is a duty upon landowners to use and manage land responsibly in a way which respects public access rights. Under section 14 of the same Act, access authorities have a duty to uphold access rights. Accordingly, we suggest that the applicant may wish to approach the relevant authority's access team for their input when drawing up their Access Management Plan for their proposed development.

I hope the information provided is useful to you. Please do not hesitate to contact us if you have any further queries.

Yours sincerely,

REDACT

Lynda Grant
Access Officer

Catalogue of Rights of Way Planning Comment Guidance Notes

These notes explain what is shown on the maps provided with planning application comments and provide information about the public right of access to land in Scotland. All maps are provided on a 1:50,000 scale base.

What is the Catalogue of Rights of Way (CROW)?

CROW was created by ScotWays in the early 1990s with the help of Scottish Natural Heritage (now NatureScot) and local authorities and is an amalgamation of rights of way information from a number of different sources. Mapped at 1:50,000 scale, the catalogue does not include all rights of way – many of these are known only to local people and come to ScotWays' notice only when a problem arises.

CROW is continually updated to take account of new information as it comes to ScotWays' attention.

What is a Recorded Right of Way?

Any right of way that we record in the Catalogue of Rights of Way.

Where any Recorded Rights of Way pass through or close to the application site a map will be provided showing them.

What is an Other Route?

Any path that we record in the Catalogue of Rights of Way that does not appear to meet the criteria to be a right of way.

Where any Other Routes pass through or close to the application site a map will be provided showing them.

What is a Heritage Path?

These are historic routes that form part of the transport heritage of Scotland. They reflect our cultural and social development and include drove roads, military roads, Roman roads, pilgrim routes and trade routes.

These routes may or may not be rights of way, core paths or carry some other type of designation.

Find out more about the Heritage Paths project at http://www.heritagepaths.co.uk

Where any Heritage Paths pass through or close to the application site a map will be provided showing them.

What is a Scottish Hill Track?

First published in 1924, our book *Scottish Hill Tracks* is a record of the network of paths, old roads and rights of way which criss-cross Scotland's hill country, from the Borders to Caithness.

These publicised routes may or may not be rights of way, core paths or carry some other type of designation.

Copies of our book *Scottish Hill Tracks* can be purchased from the ScotWays webshop: https://www.scotways.com/shop

Where any *Scottish Hill Tracks* routes pass through or close to the application site a map will be provided showing these.

Disclaimer

*The routes shown on the **CROW** maps provided have been prepared from information contained in the records of ScotWays, local authorities, judicial and other records. The inclusion of a route in CROW is not in itself definitive of its legal status.*

Other Public Access Information

You should be aware that other forms of public access to land may affect your site of interest.

Unrecorded Rights of Way

Our records only show the rights of way that we are aware of. Scots law does not require a right of way to be recorded in a specific document. Any route that meets the following criteria will be a right of way. This could include any paths, tracks or desire lines within your area of interest. A right of way:

1. Connects public places.
2. Has been used for at least 20 years.
3. Follows a more or less defined route.
4. Has been used by the public without judicial interruption or the landowner's permission.

Core Paths

The Land Reform (Scotland) Act 2003 requires all access authorities to create a system of routes within their area. These are known as core paths and are recorded in the authority's core paths plan. It is anticipated that planners will have consulted their access authority's core paths plan to check whether any core paths cross or are close to the application site, and will also have consulted the authority's access team.

The General Right of Access

Irrespective of the presence or absence of rights of way and core paths, the land in question may be subject to the access rights created by Section 1 of the Land Reform (Scotland) Act 2003. Unless the land falls into one of the excluded categories in Section 6 of this Act, the public has a right of access to the land, and land owners/managers have a duty under the Act's Section 3 to consider this in any decisions made about the use/management of the land.

Other Promoted Routes

There may be a promoted route running through or close to any planning application site. Such routes will usually be clearly marked with signposts or waymarking and may feature in guidebooks, leaflets, on local information boards and on websites. The two main types of nationally promoted routes are:

Scotland's Great Trails: https://www.scotlandsgreattrails.com
National Cycle Network: https://www.sustrans.org.uk/map-ncn

Public and Private Roads

The Roads (Scotland) Act 1984 created the terms 'public road' and 'private road'. Public roads are those roads which are on the List of Public Roads and which, importantly, the roads authority is required to manage and maintain. Private roads are those roads which are not on the List of Public Roads and thus there is no duty on the roads authority to manage or maintain them. There is a public right of passage over these roads and the owner(s) of a private road may not restrict or prevent the public's right of passage over the road.

If required, the local roads authority should be contacted for more information on public and private roads that may cross or pass close to the application site.

More Information on Outdoor Access Law

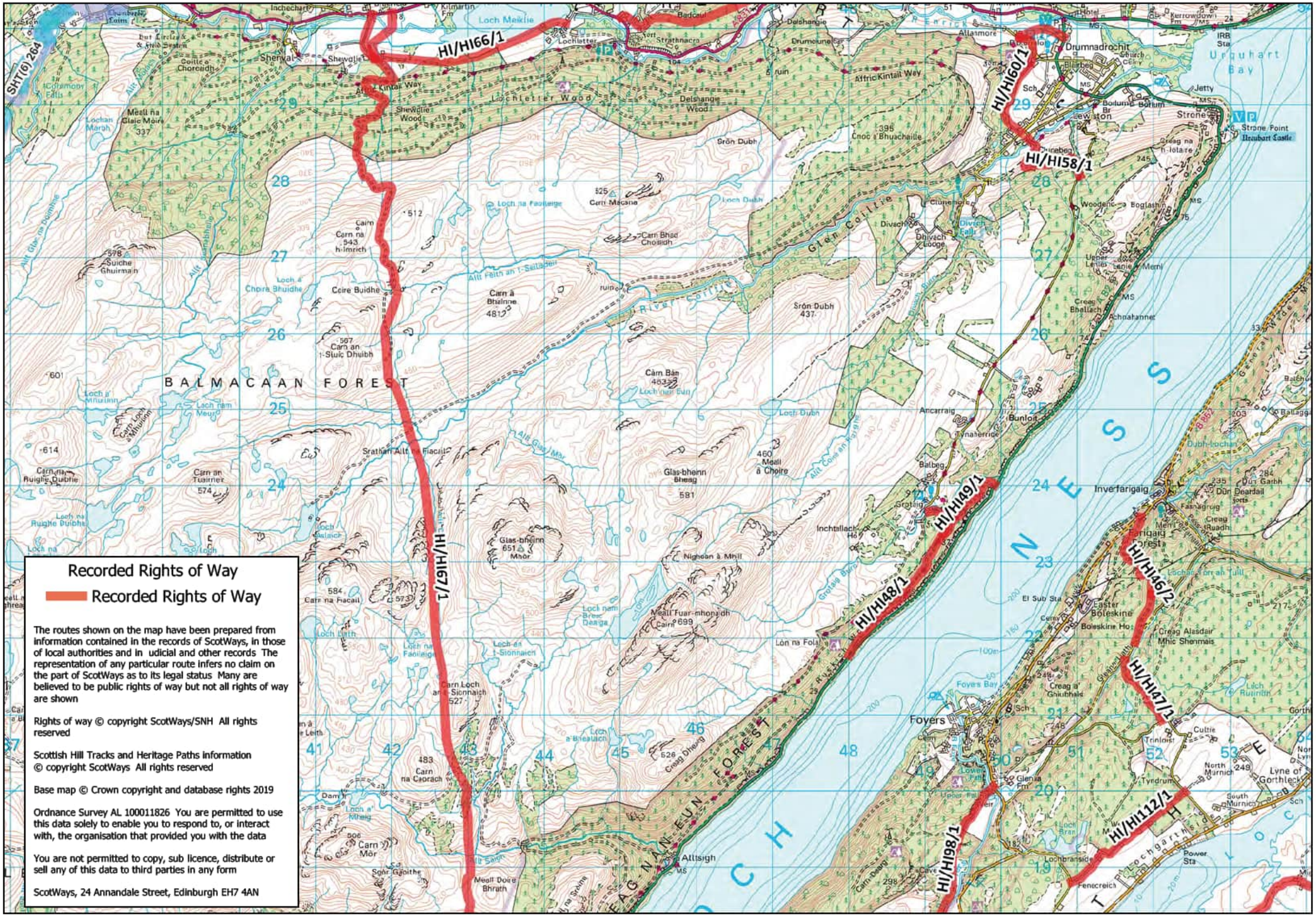
If you would like to know more about outdoor access law, why not visit our website (https://scotways.com/outdoor-access/) or get a copy of our book "*The ScotWays Guide to the Law of Access to Land in Scotland"* by Malcolm Combe (https://www.scotways.com/shop)?

Development and Planning Applications

When proposing to develop a site, it is advisable that the applicant reviews the current amount and type of public access across it and presents this as an access management plan as part of their planning application. This should include rights of way, core paths, other paths and tracks, and take account of how the statutory right of access currently affects the site.

The plan should then consider the effect that the proposed works, during construction and upon completion, would have on any patterns of public access identified. Any good practice guidance associated with the proposed type of development should be considered, e.g. for windfarms the NatureScot "*Good Practice during Wind Farm Construction, Part 8 Recreation and Access"* and *"Siting and Designing Wind Farms in the Landscape"*, and the policies contained within any local statutory plans.

Depending upon the proposals there may be specific legal processes that must be followed to divert any paths or tracks either temporarily or permanently. These will be in addition to getting planning permission for the proposal. We recommend that applicants contact the access team at the relevant access authority for advice in this regard.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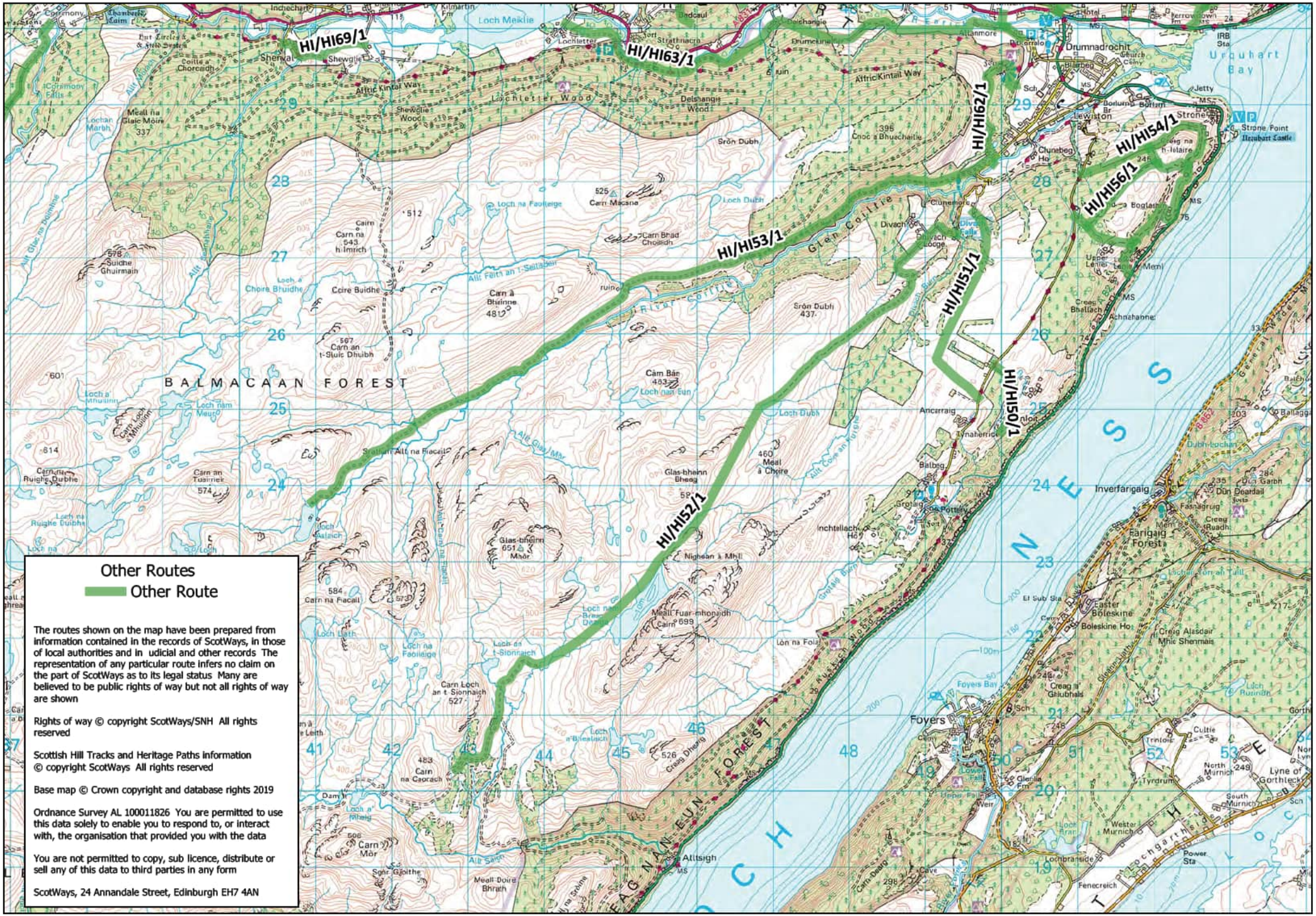
HI/HI112/1
HI/HI98/1
BALMACAAN FOREST
Recorded Rights of Way
Recorded Rights of Way
The routes shown on the map have been prepared from information contained in the records of ScotWays, in those of local authorities and in udicial and other records The representation of any particular route infers no claim on the part of ScotWays as to its legal status Many are believed to be public rights of way but not all rights of way are shown
Rights of way © copyright ScotWays/SNH All rights reserved
Scottish Hill Tracks and Heritage Paths information © copyright ScotWays All rights reserved
Base map © Crown copyright and database rights 2019
Ordnance Survey AL 100011826 You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data
You are not permitted to copy, sub licence, distribute or sell any of this data to third parties in any form
ScotWays, 24 Annandale Street, Edinburgh EH7 4AN



The routes shown on the map have been prepared from information contained in the records of ScotWays, in those of local authorities and in udicial and other records The representation of any particular route infers no claim on the part of ScotWays as to its legal status Many are believed to be public rights of way but not all rights of way are shown

ScotWays, 24 Annandale Street, Edinburgh EH7 4AN

Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

Our Ref: PCS-20001611
Your Ref: ECU00005121

Carolanne Brown
ECU

SEPA Email Contact:
planning.north@sepa.org.uk

5 July 2024

By email only to Econsents_Admin@gov.scot

Dear Carolanne Brown

The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017
Glen Earrach Pumped Storage Hydro
Scoping consultation

Thank you for your consultation which was received by SEPA on 15 May 2024 in relation to EIA scoping of the above application; I apologise for the delay in this response.

Advice for the determining authority

Our generic scoping and pre-application advice is provided in the appendix to this letter with some site-specific advice below. We haven't had any pre-application CAR engagement with the developer and encourage them to contact our Water Permitting Team to instigate these discussions as soon as possible. We also strongly recommend the twin-tracking of the CAR and Section 36 applications.

As usually we would also very much welcome further planning engagement as the project develops, and in this regards we welcome the developers proposal to make use of The Highland Councils Major Preapplications Service. From a planning perspective we will be especially interested in spoil and peat management which will be very significant issues for the project.

1. Site specific pre-application and scoping advice

1.1 In relation to section 1 of the attached Appendix (site layout):

- For a development of this scale it is especially important to ensure that detailed layout plans submitted at the application stage are provided for all elements of the development. The plans submitted with the application must detail all the temporary or ancillary works such as laydown areas, rock and peat storage areas and site compounds, which we presume will be extensive for a development of this size. They should show the area of site effected by the development (ie including cut and fill), not just the final footprint. The application submission should also include plans which show above and below ground infrastructure separately.
- The final layout should make as much use as possible of existing infrastructure such as existing tracks, and minimise the length of new tracks needed to facilitate the development. If there are other proposed developments in the vicinity support facilities could be shared.

1.2 In relation to section 2 of the attached Appendix (CAR requirements) and section 3 of the scoping report there is a need to fully assess the potential cumulative impacts on Loch Ness. Discussions direct with our Water Permitting team will reveal what other elements of assessment are likely to be of most significant.

1.3 In relation to section 4 of the attached Appendix (peat):

- We can confirm that a Peat Management Plan will be required for this development. Ensure that suitable probing information is collected to inform the layout.

- Disturbance of peat should be minimised and the final submission should include a plan showing the extent of disturbed area. The area of peatland disturbed (including due in maximum inundation and the effects of inundation due to erosion on the surrounding peat) should be confirmed. Information should be provided on how areas of disturbed and undisturbed peat within the inundation area will be managed so that carbon loss is reduced.
- Note the requirement in section 4 for information on peatland condition.
- Please also note we are streamlining our approach to consultations concerning peat and carbon rich soils. We will focus our planning advice on the avoidance, minimisation, and use of peat in areas disturbed by construction activities. We will no longer provide advice on peatland restoration. Developers should refer to NatureScot guidance on restoration.

1.4 In relation to section 2 of the scoping report and rock and overburden excavation generally:

- We welcome the proposal for a Materials Management Appraisal. This should include information in relation to the type and volumes of material that will be excavated on site accompanied by clear information on temporary storage (which is likely to require an extensive area), reuse on site and use or disposal elsewhere. Any material that cannot be appropriately used within the site works will be considered waste and waste management legislation would apply. Any storage of material for more than three years is a landfill and will require a PPC Part A Permit.

- In view of the extensive volume of excavated material being produced we do not expect the development to include additional borrow pits unless it is subsequently demonstrated that there is a clear need for additional material.

1.5 In relation to section 6 (forest waste) of the attached Appendix then in addition ensure that any new planting proposals are in line with Briefing Note 18: Publication of GWDTE Practice Guide (forestry.gov.scot)

1.6 In relation to section 7 (pollution) of the attached Appendix we can confirm that from

our perspective an outline Construction Environmental Management Plan (CEMP) need not be provided with the application. This is on the understanding that (1) the proposed Materials Management Appraisal will address all aspects of spoil management (minimisation, handling, processing, reuse on site, reuse off site and if required disposal) and any related waste management, (2) peat management is covered by a Peat Management Plan, (3) detailed site plans are submitted which demonstrate how impacts on the environment have been minimised through design and (4) all mitigation is detailed within a suitably robust schedule of mitigation. This approach will hopefully help streamline the overall information and assessment requirements.

Advice for the applicant

Details of general regulatory requirements and good practice advice, for example in relation to private drainage, can be found on the regulations section of our website.

Pre-application CAR discussions should be instigated with SEPA as soon as possible via Waterpermitting@sepa.org.uk.

Please also see our website for further information about the Reservoirs Act 2011.

If you have queries relating to this letter, please contact planning.north@sepa.org.uk including our reference number in the email subject.

Yours sincerely

Susan Haslam
Senior Planning Officer
Planning Service

Ecopy to: Siobhan.Wolverson@aecom.com; Carolanne.Brown@gov.scot; Roderick.Dowell@highland.gov.uk; Corrina.Mertens@nature.scot

Disclaimer This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at this time. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning or similar application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application or similar application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that there is no impact associated with that issue. For planning applications, if you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found on our website planning pages - www.sepa.org.uk/environment/land/planning/.

Appendix 1: Detailed scoping requirements

This appendix sets out our generic scoping information requirements for large scale projects like this. There may be opportunities to scope out some of the issues below depending on the site. Evidence must be provided in the submission to support why an issue is not relevant for this site in order to avoid delay and potential objection.

If there is a delay between scoping and the submission of the application then please refer to our website for our latest information requirements as they are regularly updated; current best practice must be followed. We would welcome the opportunity to comment on the draft submission. As we can process files of a maximum size of only 25MB the submission must be divided into appropriately named sections of less than 25MB each.

1. Site layout

1.1 Each of the drawings below must detail all proposed upgraded, temporary and permanent site infrastructure. This includes all tracks, excavations, buildings, borrow pits, pipelines, cabling, site compounds, laydown areas, storage areas and any other built elements. All drawings must be based on an adequate scale with which to assess the information.

1.2 The layout should be designed to minimise the extent of new works on previously undisturbed ground. For example, a layout which makes use of lots of spur tracks or loops is unlikely to be acceptable, cabling must be laid in ground already disturbed such as verges, and existing built infrastructure must be re-used or upgraded where possible.

1.3 A comparison of the environmental effects of alternative locations of infrastructure elements may be required.

2. Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR)

2.1 The proposed hydro scheme will require an authorisation from us under CAR. It is likely that the CAR application will be subject to a derogation (exemption under the Water Framework Directive) assessment and third party consultation which could result in amendments to the scheme. **We therefore strongly encourage applicants to twin-track applications for consent under planning and CAR to ensure that CAR requirements can be accommodated more easily when proposals are at their most fluid.**

2.2 Should the applicant choose not to twin-track their applications then the following

details must be included in the planning submission to allow us to provide an indication of the potential consentability of the proposal under CAR:

a) The location and design of the intakes and outfalls and their impact upon the morphology of the water environment.

b) Compensation flow.

c) Fish passages.

d) Other relevant CAR or planning applications or consents for abstractions/hydro schemes.

e) Sensitive water uses, water dependent species (including bryophytes) and ecosystems.

2.3 See Planning guidance on hydropower developments to assist in meeting these information requirements. More detailed guidance on CAR can be found on our hydropower web page.

3. Other impacts on the water environment

3.1 Other elements of the scheme must be designed to avoid impacts upon the water environment. Where activities such as watercourse crossings, watercourse diversions or other engineering activities in or impacting on the water environment cannot be avoided then the submission must include justification of this and a map showing:

a) All proposed temporary or permanent infrastructure overlain with all lochs and watercourses;

b) A minimum buffer of 50m around each loch or watercourse. If this minimum buffer cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse and drawings of what is proposed in terms of engineering works;

c) A map showing the location, size, depths and dimensions of all borrow pits overlain with all lochs and watercourses within 250m and showing a site-specific buffer around each loch or watercourse proportionate to the depth of excavations. The information provided needs to demonstrate that a site specific proportionate buffer can be achieved.

3.3 Further advice and our best practice guidance are available within the water engineering section of our website. Guidance on the design of water crossings can be found in our Construction of River Crossings Good Practice Guide.

3.4 Watercourse crossings must be designed to accommodate the 0.5% Annual Exceedance Probability (AEP) flows, or information provided to justify smaller structures. If it is thought that the development could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment must be submitted in support of the planning application. Our Technical flood risk guidance for stakeholders outlines the information we require to be submitted as part of a Flood Risk Assessment. Please also refer to Controlled Activities Regulations (CAR) Flood Risk Standing Advice for Engineering, Discharge and Impoundment Activities.

4. Disturbance and re-use of excavated peat and other carbon rich soils

4.1 Where proposals are on peatland or carbon rich soils (CRS), the following should be submitted to address SEPA's requirements in relation to NPF4 Policy 5 to protect CRS and the ecosystem services they provide (including water and carbon storage). Peatland in near natural condition generally experiences low greenhouse gas emissions, is accumulating and may be sequestering carbon, has high value for supporting biodiversity, helps to protect water quality and contributes to natural flood management, irrespective of whether that peatland is designated for nature conservation purposes or not.

4.2 It should be clearly demonstrated that the assessment has informed careful project design and ensured, in accordance with relevant guidance and the mitigation hierarchy in NPF4, that adverse impacts are first avoided and then minimised through best practice.

4.3 The submission should include a series of layout drawings at a usable scale showing all permanent and temporary infrastructure, with extent of excavation required. These plans should be overlaid on the following:

a) Peat depth survey showing peat probe locations, colour coded using distinct colours for each depth category. This must include adequate peat probing information to inform the site layout in accordance with the mitigation hierarchy in NPF4, which may be more than that outlined in the Peatland Survey – Guidance on Developments on Peatland (2017);

b) Peat depth survey showing interpolated peat depths;

c) Peatland condition mapping – the Peatland Condition Assessment photographic guide lists the criteria for each condition category and illustrates how to identify each condition category.

4.4 The detailed series of layout drawings above should clearly demonstrate that development proposals avoid any near natural peatland and that all proposed excavation is on peat less than 1m deep.

4.5 The layout drawings should also demonstrate that peat excavation has been avoided on sites where this is possible. On other sites where complete avoidance of peat and carbon rich soils is not possible then it should be clearly demonstrated that the deepest areas of peat have been avoided and the volumes of peat excavated have been reduced as much as possible, first through layout and then by design making use of techniques such as floating tracks.

4.6 The Outline Peat Management Plan (PMP) must include:

a) A table setting out the volumes of acrotelmic, catotelmic and amorphous peat to be excavated. These should include a contingency factor to consider variables such as bulking and uncertainties in the estimation of peat volumes;

b) A table clearly setting out the volumes of acrotelmic, catotelmic and amorphous excavated peat: (1) used in making good site specific areas disturbed by development, including borrow pits (quantities used in making good areas disturbed by development must be the minimum required to achieve the intended environmental benefit and materials must be suitable for the proposed use), (2) used in on and off site peatland restoration, and (3) disposed of, and the proposed means of disposal (if deemed unavoidable after all other uses of excavated peat have been explored and reviewed);

c) Details of proposals for temporary storage and handling of peat - Good Practice during Wind Farm Construction outlines the approach to good practice when addressing issues of peat management on site and minimising carbon loss;

d) Suitable evidence that the use of peat in making good areas disturbed by development, including borrow pits, is genuine and not a waste disposal operation, including evidence on the suitability of the peat and evidence that the quantity used matches and does not exceed the requirement of the proposed use. If peat is to be used in borrow pits on site, SEPA will require sections and plans including the phasing, profiles, depths and types of material to be used;

4.7 Use of excavated peat in areas not disturbed by the development itself is now not a

matter SEPA provides planning advice on. Please refer to Advising on peatland, carbon-rich soils and priority peatland habitats in development management | NatureScot 2023, and the Peatland ACTION – Technical Compendium which provides more detailed advice on peatland restoration techniques. Unless the excavated peat is certain to be used for construction purposes in its natural state on the site from where it is excavated, it will be subject to regulatory control. The use of excavated peat off-site, including for peatland restoration, will require the appropriate level of environmental authorisation. Excavated peat will be waste if it is discarded, or the holder intends to or is required to discard it. These proposals should be clearly outlined so that SEPA can identify any regulatory implications of the proposed activities. This will allow the developer and their contractors to tailor their planning and designs to accommodate any regulatory requirements. Further guidance on this may be found in the document Is it waste - Understanding the definition of waste.

5. Disruption to Groundwater Dependent Terrestrial Ecosystems (GWDTE) and existing groundwater abstractions

5.1 Groundwater Dependent Terrestrial Ecosystems (GWDTE) are protected under the Water Framework Directive. Excavations and other construction works can disrupt groundwater flow and impact on GWDTE and existing groundwater abstractions. The layout and design of the development must avoid impacts on such areas.

5.2 A National Vegetation Classification (NVC) survey should be submitted which includes the following information:

a) A set of drawings demonstrating all GWDTE and existing groundwater abstractions are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater abstractions. The survey needs to extend beyond the site boundary where the distances require it.

b) If the minimum buffers cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. Please refer to Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems for further advice and the minimum information we require to be submitted.

5.3 Please note that due to discrepancies in habitat definition and ambiguity in correspondence with NVC types we do not accept the use of The UK Habitat Classification System (UKHab) as an alternative to NVC.

6. Forest removal and forest waste

6.1 If tree felling is proposed the submission must include a map with the boundaries of where felling will take place and a description of what is proposed for this timber in accordance with Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS.

7. Pollution prevention and environmental management

7.1 The submission must include a schedule of mitigation, which includes reference to best practice pollution prevention and construction techniques (for example, limiting the maximum area to be stripped of soils and peat at any one time) and regulatory requirements. Please refer to the Guidance for Pollution Prevention (GPPs) and our water run-off from construction sites webpage for more information.

To - Carolanne Brown, Onshore Electricity, Strategy and Consents, Energy Consents Unit

From - Chair of Stratherrick and Foyers Community Council

Glen Earrach Pumped Storage Hydro - ECU00005121

Dear Carolanne,

We are writing to you today to give our comments on the above mentioned scoping application. Our comments are as follows –

1. The lack of consultation with the community is very concerning. Despite stating on the developers website *'We are committed to seeking the community's views on how best to integrate the project into the environment and the community.'* The only consultation took place in Drumnadrochit, which is 31 miles away by road and would take about an hour to get there from the Village of Foyers which will be one of the most affected areas and is under 1 mile from the scheme. It was also held during working hours.
2. Noise and dust; concern about the noise and dust levels in Foyers and Inverfarigaig as they are directly across the Loch from the site and under 1 mile away from it. An assessment of the impact of dust has been scoped out. This must be included in the EIA. Boleskine, Inverfarigaig and Dores should be added as sites for consideration of the impacts of noise, vibration and dust.
3. Visual impact will be huge, especially during the many years of construction for the South side of Loch Ness. At 15.4.2 under socio-economics it states: *Loch Ness Shores Camping and Caravanning Club site is located 1.6 km east of the Development on the opposite side of Loch Ness, along with several holiday rental properties.* But makes no mention at all, and completely downplays the impact on the Falls of Foyers, Boleskine House, Foyers Lodge, Sealladh an Loch, Foyers Bay Country House, The Craigdarroch Inn, Foyers House/Roost, Foyers Bay Lodges, The Lodges on Loch Ness, the Waterfall cafe and The Beastie Boats/Foyers Pier, all of which are closer than any businesses in Glenmoriston or Drumnadrochit and look out directly on to the potential development about a mile away. Not to mention all the residential properties. Diagram 5.4 shows what looks like there will be visualisations from Upper and Lower Foyers. Hard to tell exactly where they will be done from as map is blurry when you zoom in but if visualisations from Boleskine and Inverfarigaig can also be added to that list.
4. Access off the A82; this will have a huge impact on transport on this major trunk road which could also affect the B862 as local people travelling from Inverness to Fort Augustus or Fort

William will use that side of the loch to avoid any delays on the A82. Turning on and off the A82 will also be hazardous.

5. Cumulative effect on Loch Ness; with Foyers PSH, that was passed in the 70's, when we knew a lot less about potential environmental damage, Loch Na Cathrach (prev Red John) consented and Loch Kemp in planning, at what point will the cumulative effect on Loch Ness be considered. There is very concerning reports about what effect PSH will have on aquatic life in Loch Ness and there is also the fact that it is arguably the most famous Loch in the world and a scheduled monument. Turning the whole of the loch into a construction site will have an impact on tourism and have a negative effect on the economy.
6. Effect on water levels; Visualisations should include views which show Loch Ness at its lowest permissible level with the cumulative 1m to 1.2m impoverished littoral zone above it that would be created by all the proposed and consented schemes operating simultaneously.
7. Figure 11.2 shows the whole of Inverness as a vulnerable area; is this for potential flooding? Also to note on that drawing, Red John PSH is now named Loch Na Cathrach PSH.
8. Effect on the Great Glen Way; this is a very popular walking route linking Inverness to Fort William and then joining the West Highland Way or the Loch Ness 360. The proposed site goes right through this path.
9. Given the recent discovery of SSSI-quality habitats nearby, the ecological desktop studies require augmentation with lichen (both terrestrial and fresh-water) and bryophyte field surveys to establish whether such habitats are present within the development and inform the content of the EIA.
10. Ensure consideration of Stratherrick and Foyers Local Place Plan.

Regards
Mark Hindley,
Chair,
Stratherrick and Foyers Community Council

Development Management and Strategic Road Safety
Roads Directorate

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george.smith@transport.gov.scot

TRANSPORT SCOTLAND
CÒMHDHAIL ALBA

Carolanne Brown
Energy Consents Unit
The Scottish Government
5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Econsents_Admin@gov.scot

Your ref:
ECU00005121

Our ref:
GB01T19K05

Date:
06/06/2024

Dear Sirs,

ELECTRICITY ACT 1989

THE ELECTRICITY (APPLICATIONS FOR CONSENT) REGULATIONS 2017

REQUEST FOR SCOPING OPINION FOR PROPOSED SECTION 36 APPLICATION FOR GLEN EARRACH PUMPED STORAGE HYDRO

With reference to your recent correspondence on the above development, we acknowledge receipt of the Scoping Report (SR) prepared by Aecom in support of the above development.

This information has been passed to SYSTRA Limited for review in their capacity as Term Consultants to Transport Scotland – Roads Directorate. Based on the review undertaken, Transport Scotland would provide the following comments.

Proposed Development

The proposed Glen Earrach Pumped Storage Hydro (PSH) will be located on the northwest side of Loch Ness, approximately 9.5km to the south of Drumnadrochit and 6.5km north of Invermoriston. The PSH will have a storage capacity of up to 30,000 MWh with up to 2,000 MW installed electrical generation capacity.

The nearest trunk road to the site is the A82(T), with the possibility of two points of access being taken from the A82(T) and one from the A831. While we note that one of the potential A82(T) access points has been used to route forestry / tree felling traffic to and from the A82(T), Transport Scotland would state that any proposed changes to the trunk road network must be discussed and approved (via a technical approval process) by the appropriate Area Manager. In addition, we would advise that 1:500 scale plans of any new or modified access from the trunk road should be submitted with the application along with visibility splay plans. This will allow the standard of the proposed access junctions to be assessed.

Assessment of Environmental Impacts

Chapter 13 of the SR presents the proposed methodology for the assessment of the potential effects of Access, Traffic and Transport. This states that the assessment will be based upon the Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement, July 2023. Transport Scotland is satisfied with this approach.

We note that construction of the PSH will require temporary traffic management measures on the A82(T) which are likely to be required for a significant period of time and also will very likely require a significant temporary re-alignment of the current A82(T), consequently, pre-scoping discussions with Transport Scotland were carried out in January 2024. The results of these discussions have been identified within the SR, and are as follows:

- Two-way traffic on the A82 should be maintained at all times. Only very short closures or one-way working periods could be considered.
- Temporary reductions in A82 speed limits in the vicinity of works could be considered. Typically speed reduction measures are implemented for periods up to 18-months. Use of temporary traffic lights should be avoided in order to maintain two-way traffic flow and capacity on the A82.
- Temporary re-alignment of the A82 to the west would be challenging due to topography and geology (rock). The feasibility of temporarily re-aligning the A82 to the east on the Loch Ness side could be investigated.
- Construction techniques for inlet / outlet tunnels passing under the A82. No preference from Transport Scotland at this pre-scoping consultation stage. Works could encompass placing the A82 on fill or structure above inlet / outlet tunnels if required. Transport Scotland noted the scenic nature of the road so the visual impact of any inlet / outlet structure should be taken into account. The eventual construction methodology should ensure disruption to the safe and efficient operation of the A82 is minimised.

The study area for the assessment has been identified as the A82(T) and the A831. Chapter 13 states that a "limited number of junction turning counts would be carried out where construction traffic passes or turns through A-road junctions on the A82(T) trunk road network". In addition, base traffic data "may include Transport Scotland and The Highland Council." We would state that a suitable source of traffic data is Traffic Scotland's National Traffic Data System. Should Department for Transport (DfT) traffic data be utilised, we would ask that "estimated" data from the DfT site be avoided.

We would also request that National Road Traffic Forecast (NRTF) Low Traffic Growth assumptions be used to provide a common future year baseline to coincide with the expected construction traffic peak.

Abnormal Loads Assessment

Port of Entry options (PoE) for Abnormal Indivisible Load deliveries include Corpach/ Fort William to the south, and Inverness / Invergordon / Nigg to the north. Chapter 13 states that an initial abnormal load route review will be prepared and included in the Technical Appendix to the forthcoming Environmental Impact Assessment Report (EIAR).

This is considered appropriate, and we would add that Transport Scotland will require to be satisfied that the size of loads proposed can negotiate the selected route and that their transportation will not have any detrimental effect on structures within the trunk road route path.

The Abnormal Loads Assessment report should identify key pinch points on the trunk road network. Swept path analysis should be undertaken and details provided with regard to any required changes to street furniture or structures along the route.

I trust that the above is satisfactory, but should you wish to discuss any issues raised in greater detail, please do not hesitate to contact me or alternatively, Alan DeVenny at SYSTRA's Glasgow Office can assist on 0141 343 9636.

Yours faithfully

REDACT

George Smith

Transport Scotland
Roads Directorate

cc Alan DeVenny – SYSTRA Ltd.

Woodland Trust Consultation Response

From: campaigning@woodlandtrust.org.uk
To: Carolanne Brown
Subject: Automatic reply: Scoping Request for Glen Earrach Pumped Storage Hydro - ECU00005121
Date: 15 May 2024 14:16:21

Hello,

Thank you for contacting the Campaigning Team at the Woodland Trust.

At present, our Campaigning Team receives over 1,000 enquiries a year relating to a wide variety of issues, with only a small team of people able to respond. As such, we employ a level or triaging and prioritisation for enquiries, primarily focusing on those concerning ancient woods and ancient and veteran trees.

It is unlikely that we will be able to respond to cases involving other woods and trees at the present time. We want to assure you that we very much care and are interested in your enquiry, but we are facing particular difficulties with staff vacancies and must prioritise those cases where our impact is most needed.

In the interests of making sure that you have the help and guidance necessary to answer your enquiry, we ask that you consider the information below:

Threats to woods and trees

In the vast majority of cases, your local Council / Planning Authority should be the first point of contact where local woods and trees are threatened – ancient, veteran or otherwise. We would always suggest urgently contacting them first about a threat to woods and trees in your locality. They may be able to help you secure a Tree Preservation Order (TPO) or address any urgent threats.

***Ancient woods or veteran trees** – where your concern involves a threat to ancient woodland or veteran trees, we ask that you please use the Report a Threat form on our website so we have the information to help you:* Report a threat (woodlandtrust.org.uk)

***Individual or garden tree felling** – if you are concerned that there may be an imminent threat to trees from unauthorised felling, please contact the Council's Planning Enforcement team and their Tree/Arboricultural Officer. Our guidance on tree felling rules provides more information:* Cutting Down Trees: Law & Legislation - Woodland Trust

***Woodland felling** – if you are concerned that unauthorised felling might be taking place, please contact the Council's Planning Enforcement team and their Tree/Arboricultural Officer. If the felling is on a large scale, you can find out from the Forestry Commission (in England), Natural*

Resources Wales, Scottish Forestry or the Northern Ireland Forest Service whether a felling licence is in place. Our guidance on tree felling rules provides more information: Cutting Down Trees: Law & Legislation - Woodland Trust

***Planning applications** – if you are concerned about a planning application that does not impact ancient woodland, veteran trees or a Woodland Trust wood, but could still affect other important habitats, you may want to use our online resources or consider contacting another local nature conservation charity, such as your local Wildlife Trust or CPRE.*

***Planning permission granted** – if you are concerned about works taking place after planning permission has been granted, please contact the Council's Planning Enforcement team and their Tree/Arboricultural Officer.*

Woodland Trust sites

If you have urgent concerns about activities taking place in a Woodland Trust wood, please email operations@woodlandtrust.org.uk.

Campaigning in your community

We have a host of resources on our website that you can access, including information on writing objections and setting up a community group: https://www.woodlandtrust.org.uk/protecting-trees-and-woods/campaign-with-us/campaign-in-your-community/.

Legal matters

If your enquiry relates to a matter that might require some legal involvement, then we'd encourage you to contact either the Environmental Law Foundation (http://elflaw.org/get-help/) or Lawyers for Nature (enquiries@lawyersfornature.com / https://www.lawyersfornature.com/). These organisations will be best placed to provide legal advice.

We kindly thank you for your patience and understanding at this particularly strained time for our team. We can only apologise if we do not respond to your enquiry and want you to know that we do care and can only respond to a limited number. We hope the information we have provided is helpful.

Thank you for supporting our woods and trees.

Glen Earrach AECOM