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Energy Consents Unit  
The Scottish Government  
Energy Consents Unit planning reference: ECU00005062  
Sent by email: Econsents\_Admin@gov.scot

12 April 2024

Dear Case Officer,

**Objection: Earba Pumped Storage scheme**

It is with regret that we note our objection to the Section 36 application submitted by Earba Ltd seeking approval and deemed planning permission for the construction and operation of the Earba Pumped Storage Hydro scheme (Energy Consents Unit reference: ECU00005062) (the 'Proposed Development').

We are a conservation charity that supports the Scottish Government's net zero emissions target. We also support the continued protection of Scotland's wild land as a finite national asset that contributes to the health and wellbeing of present and future generations. Wild places don't have a voice, so they rely on people, and organisations such as the John Muir Trust, to say that they're valuable and worth protecting.

We have engaged with both Gilkes Energy Ltd (on behalf of the Applicant, Earba Ltd) and Ardverikie Estate and acknowledge them for listening to and discussing our concerns. We recognise both parties have designed the project to attempt to mitigate some of the impacts. The Mitigation Schedule, Outline Biodiversity Enhancement and Management Plan ('OBMP'), Tree Planting Plan and the design plans show the developer is aware of the serious impacts on the natural environment and has sought to reduce these.

That being said, from past experience with planning applications, we have no way of knowing whether these mitigations, even if required in planning conditions, would be met. Local authorities are under-resourced and over-stretched in terms of monitoring planning conditions and in many cases the progress of implementation of planning conditions is unavailable to third parties. There is little transparency or accountability. For that reason, while the intention of these mitigations may be well meaning, we have no means of knowing whether they will happen.

We understand that energy storage is part of the solution to achieving our net zero targets. However, we remain concerned about the absence of national land use planning for achieving 'net zero'. The UK Climate Change Committee reported in March 2024 that *'There is no comprehensive strategy for Scotland to decarbonise towards Net Zero.'*<sup>1</sup> Scotland has yet to publish its Energy Strategy and Just Transition Plan (a draft plan has been the subject of public consultation). In the absence of a strategy, large-scale 'net zero' developments, such as the Proposed Development, are being proposed in sensitive wild areas.

We are aware that there are differing expert views on the quantity of Pumped Hydro Storage (PHS) needed to decarbonise the electricity grid. Scotland's Fourth National Planning Framework ('NPF4') accepts the need for PHS in principle. The application documents cite the Scottish Government's target for 15GW, towards which this development would be counted. However, according to the National Grid ESO, depending on the Future Energy Scenario used (excluding Falling Short), the required electricity storage capacity from PHS in the UK by 2050 ranges from 4.12 – 6.3GW.<sup>2</sup> From figures provided by the developer the installed capacity of PHS developments which are operational, consented, and in the planning process amount to 11.38GW.

With differing targets and the absence of a national energy strategy it is very difficult for us to determine the 'need' for this specific application. Yet the need is what is used to justify irreparable damage of this unique wild place.

We therefore are objecting to this application principally because of the inappropriate location and the subsequent adverse impact on nationally important wild land.

### **Special qualities of this wild land**

The site of the Proposed Development is a particularly valuable area of wild land because it has retained a feeling of remoteness whilst being reasonably accessible. The area attracts many walkers, cyclists, campers and climbers who enjoy spending time in wild places.

From elevated views the wild character of the Rannoch - Nevis - Mamores - Alder Wild Land Area ('WLA') is amplified by the fact that it seems to extend far into the distance and into other Wild Land Areas. This increases the sense of remoteness, sanctuary, challenge and risk (key qualities of the WLA).

In the opening paragraph of the description of the North region in NPF4, the Highlands are noted for their *'world renowned... stunning landscapes, rich biodiversity and cultural heritage.'*<sup>3</sup> Ardverikie Estate fits this description well and may be known to many who haven't ever visited the area as the much-loved estate of the T.V. show 'Monarch of the Glen'. The quality of the landscape is demonstrated by its inclusion within the Ben Alder, Laggan and Glan Banchor Special Landscape Area.

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<sup>1</sup> <https://www.theccc.org.uk/2024/03/20/scotlands-2030-climate-goals-are-no-longer-credible/>

<sup>2</sup> Future Energy Scenarios include: Consumer Transformation, System Transformation, Leading the way and Falling short - <https://www.nationalgrideso.com/future-energy/future-energy-scenarios-fes>

<sup>3</sup> Page 25, National Planning Framework 4

## Impact on wild land

The impact of the Proposed Development is unique in its scale. If it is approved and constructed, it would become the largest PHS long duration energy storage scheme in the UK.

We believe that the Proposed Development would impact all five of the physical attributes of the WLA which create the perceptual attributes of wildness, these are:

- a high degree of perceived naturalness in the setting, especially in its vegetation cover and wildlife, and in the natural processes affecting the land;
- the lack of any modern artefacts or structures;
- little evidence of contemporary human uses of the land;
- landform which is rugged, or otherwise physically challenging; and
- remoteness and/or inaccessibility.

The high degree of perceived naturalness will be lost during the construction phase with the imposition of construction compounds and associated noise and traffic, permanent access tracks, lighting, blasting and quarrying for materials, disruption and loss of the natural river course and the creation of dams and a powerhouse at Lochan na h-Earba (the 'Lower Loch'), and the creation of dams at Loch a' Bhealaich Leamhain (the 'Upper Loch').

There will no longer be a lack of modern artefacts or structures. The area would be turned into a building site for the three years anticipated for construction. Thereafter new permanent structures will be present indefinitely.

There will no longer be little evidence of contemporary human uses of the land. During construction there are predicated to be 600 people on site at peak construction. That's equivalent to the population of a new village. Associated with construction works are the creation of a new amenity space (including a football pitch), overnight accommodation and a two-storey canteen. Once operational, the number of people won't be in the hundreds (estimates suggest 10-15 people will be needed at the site), but the Proposed Development would be manned 24 hours a day. Regular visits would be made to inspect and maintain the scheme components.<sup>4</sup> The constant presence, and the associated traffic, lighting and noise, around the site would destroy the '*sense of sanctuary*' after the construction phase, completely altering a former natural '*gateway*' to the '*extensive and remote mountain and peatland interior*'<sup>5</sup> of this WLA.

The rugged landform will change with the appearance of drawdown scars at the Lower Loch as well as the Upper Loch. The Proposed Development requires the construction of three new dams, one at the Upper Loch, and two more on the Lower Loch. Two dams are required on the Lower Loch because it is relatively small, which means it cannot absorb an increase in volume without a dramatic fluctuation in the water level. It is expected that the fluctuations of the water level in the Lower Loch will result in a 21m vertical drawdown scar. In this way

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<sup>4</sup> Section 1.3.37, Non-technical summary

<sup>5</sup> WLA 14. Rannoch - Nevis - Mamores - Alder description

the landscape impacts of the drawdown scars at the Proposed Development are particularly significant when compared to other developments of a similar size.

There will be a dramatic fluctuation in the water level in the Upper Loch from a maximum of 376m AOD and a minimum of 355m AOD, creating a maximum vertical drawdown extent of 70m. The plant life extending around all sides of the loch will die off and the soils are likely to become eroded.

The feelings of remoteness and inaccessibility will disappear from this wild place with the construction of new access tracks alone. One track, from the main road to the powerhouse, will be 8m wide for its entire length, seven other tracks outlined in the application will each be 6m wide. These will significantly impact the character of the area which, due to the landform, and lack of visible human artefacts, has a feeling of naturalness and remoteness. These qualities are particularly valuable in an area, like the proposed site, which is a popular area for walkers, runners, climbers and cyclists.

As stated above, the quality of the WLA is especially apparent from elevated views which permit expansive views into neighbouring WLAs. As detailed in Chapter 7 Landscape and Visual Assessment visibility of the proposed infrastructure would be mainly from *'elevated summits, ridgelines and facing slopes'*<sup>6</sup>.

Many of the impacts listed above cannot be mitigated. The result would be the effective loss of some of our finest examples of wild land. Wildness is a vital resource that is increasingly under threat and in danger of becoming scarce.

The effects of biodiversity which we believe cannot be mitigated are detailed in the 'Biodiversity' section of this response.

### **Wild Land Policy**

The intention of Policy 4 of NPF4, is to *'protect, restore and enhance natural assets making best use of nature-based solutions'*. This has been identified as a priority to address the twin global climate and nature crisis. The policy goes on to state that *'development proposals which by virtue of type, location or scale will have an unacceptable impact on the natural environment, will not be supported'*<sup>7</sup>.

Development proposals within Wild Land Areas are governed by Policy 4(g), which states that development within WLAs will only be supported where it *'(i) will support meeting Scotland's renewable energy targets; or (ii) is a small scale development directly linked to a rural business or croft.'* The Proposed Development would support the decarbonisation of the electricity grid by storing electricity produced by renewables, but it would not increase the production of renewable energy. Although the need for electricity storage as part of a decarbonised energy grid is recognised in NPF4, the support does not extend to developments within WLAs. We note that no community benefit, as best practice for renewable energy developments, seems to be attached to the Proposed Development.

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<sup>6</sup> Section 7.7.1, Volume 1, Chapter 7 Landscape and Visual

<sup>7</sup> Policy 4(a), National Planning Framework 4

All development proposals within a WLA must be accompanied by a Wild Land Impact Assessment which sets out how design, siting, or other mitigation measures have been and *'will be used to minimise significant impacts on the qualities of the wild land'*<sup>8</sup>. No indication is provided in the policy as to what level of significant effect is considered unacceptable. As stated above, the Proposed Development will result in the loss of wild land. In our view this significant impact is unacceptable and cannot be mitigated.

We believe that in the absence of a strategic approach to investment and planning for renewable energy development and energy capacity in Scotland, development in sensitive areas such as the proposed site should not be approved. **Every other alternative should be explored before large-scale developments are considered within our finest wild places.**

### **Biodiversity**

The Proposed Development must be considered against Policy 1 of NPF4: *'When considering all development proposals significant weight will be given to the global climate and nature crises.'*

The site's conservation value is evident in the range of protected species recorded in the Shadow Habitats Regulation Assessment. Protected species on the site include mammals, birds, fish and insects: bat species, pine marten, red squirrel, water vole, otter and suitable habitat for common reptile species were all recorded.<sup>9</sup> In addition, a total of *'of 49 bird species were recorded within the Project Site'*<sup>10</sup>, these included black-throated diver, red-throated diver, golden eagle, black grouse, red grouse. Aquatic surveys identified Arctic charr, brown trout, *'Eurasian Minnow Phoxinus phoxinus, a range of macrophytes of low conservation value, and a nationally important macroinvertebrate Psidium conventus within the Site.'*<sup>11</sup> These protected species are at risk of disturbance from noise generated from the construction works, habitat loss, displacement and possible mortality.

The Proposed Development would destroy habitat which is a key factor in the loss of biodiversity and has a direct bearing on the nature crisis. The maximum permanent development footprint of the Proposed Development would be approximately 310ha. This is 310ha of lost habitat.<sup>12</sup> Habitats that will be lost as a result of the development include: moorland habitat; 5.35ha of woodland categorised as ancient lost due to flooding (loss categorised as significant at the local level)<sup>13</sup>; and habitat mosaics and scrub woodland (categorised as nationally important habitat) lost due to flooding and the construction of access tracks (loss of this habitat has been evaluated as *'significant at a national level'*<sup>14</sup>).

Terrestrial habitats which would be lost and for which the loss has been evaluated as *'significant at county level'* include montane woodland, montane heath, different types of bog

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<sup>8</sup> Policy 4(g), National Planning Framework 4

<sup>9</sup> Page 18, Shadow Habitats Regulations Appraisal Report (Stage 1 & 2): Ben Alder and Aonach Beag SAC

<sup>10</sup> Page 18, Shadow Habitats Regulations Appraisal Report (Stage 1 & 2): Ben Alder and Aonach Beag SAC

<sup>11</sup> Page 18, Shadow Habitats Regulations Appraisal Report (Stage 1 & 2): Ben Alder and Aonach Beag SAC

<sup>12</sup> Section 1.3.32, Non-Technical Summary EIA

<sup>13</sup> EIA Report: Volume 1 (Main Report) Chapter 8: Terrestrial Ecology, page 85

communities, basic flush, acid flush, upland species-rich ledges, Marsh/marshy grassland and communities of Calcareous grassland.<sup>15</sup> The Peat Management plan describes the attempts that have been made to avoid areas of deep peat as per the mitigation hierarchy in Policy 3(b)(iii) of NPF4; these include moving the main site compounds SC1 and SC2, moving Dam 1 at Shuas and designing access tracks to avoid areas of Class 1 peat. However, avoidance has not always been possible. The dam on the Upper Loch is to be constructed on Class 1 peat and the Shuas dam on the Lower Loch is also to be constructed on Class 1 peat.<sup>16</sup>

Under Policy 3 of NPF4, applicants of *'Development proposals for national or major development'* need to demonstrate that *'the proposal will conserve, restore and (significantly) enhance biodiversity'*. Meeting criteria under Policy 3(b) requires that *'significant biodiversity enhancements are provided, in addition to any proposed mitigation'*. The advice from NatureScot is that a ratio of 1:10 (loss:restoration) is required to offset the loss of priority peatland restoration. To provide biodiversity enhancements (as required by NPF4), NatureScot recommend that a further 10% of restoration above the baseline assessment of the extent of priority peatland habitat should also be delivered.

As part of the Proposed Development, 625ha of bog restoration is proposed, this achieves a loss to restoration ratio of 1:8.4<sup>17</sup>. The OBMP acknowledges that the proposed restoration is below NatureScot's recommended ratio for priority peatland habitats. The Plan does not explain whether or how an additional 10% of the baseline extent of priority peatland will be restored to deliver enhancements. The proposals are justified on the basis that restoration efforts are being targeted at areas where there is good deliverability and high chance of restoration success. The OBMP explains that 1,031ha were identified within the site as suitable bog restoration areas. We are not sure why just over half of this area is being proposed for restoration. We acknowledge that beyond the peatland restoration, other biodiversity enhancements are proposed through woodland and other habitat restoration measures within a 1,496ha deer enclosure area.

The Aquatic Ecology Report identifies a significant effect on Arctic charr<sup>18</sup>, which is a vulnerable UKBAP Priority species and of national importance, during the construction and operational phase of the Proposed Development. The population of Arctic charr is currently considered to be in an unfavourable condition and the assumed loss of access to spawning areas in the Upper Loch, cannot be mitigated against.

We note the loss of spawning areas for Arctic charr and brown trout as a result of the flooding of the Lower Loch and the fluctuations in water level once the scheme becomes operational. Prior to mitigation these impacts are predicted as being significant.<sup>19</sup> We also note permanent loss of access to spawning areas for Arctic charr and brown trout as a result of damming the Upper Loch: *'Access between Loch Leamhain and the Allt Loch a' Bhealaich Leamhain will be*

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<sup>15</sup> EIA Report: Volume 1 (Main Report) Chapter 8: Terrestrial Ecology, Table 8.10 Summary of Habitat Loss by Phase 1 / NVC Community Type (for Habitats of Local or Greater Value)

<sup>16</sup> Volume 2 Figure 12.3 Carbon and Peatland 2016 map

<sup>17</sup> Page 22, Outline Biodiversity Enhancement Plan

<sup>18</sup> Page 2, Volume 1, Chapter 11 Aquatic Ecology

<sup>19</sup> Chapter 11: Aquatic Ecology report, p.37

*permanently fragmented for Arctic charr and brown trout. The dam footprint is predicted to cover some existing suitable spawning substrate. This will permanently prevent loch dwelling Arctic charr and brown trout from reaching riverine spawning areas.*<sup>20</sup>

The proposed mitigation measure seems to accept the high likelihood that the resident population will suffer, to the extent that the Upper Loch won't be able to sustain a viable population of Arctic charr and a 'refuge population' will need to be created. The Aquatic Ecology Report explains, as mitigation, *'that a portion of the Arctic charr population be removed, in the form of fertilised eggs, and be translocated to an identified suitable receptor site to act as a refuge population. This is to act as a safeguard to the existing population within Loch Leamhain in the case of depletion or extinction of Arctic charr presence, and to preserve a likely genetically distinct population.'*<sup>21</sup>

It is unfortunate that it was not possible to conduct gillnetting at the Upper Loch due to 'site-specific constraints'. Lochs at such a high altitude are rare in Scotland and information on the population of Arctic charr in the loch would have provided another indicator of the unique and sensitive quality of the area, the information would also have been useful to inform mitigation measures. However, we agree with the approach taken that, as per the precautionary principle, the Applicant has assumed that there is a population of Arctic charr in the Upper Loch because of the presence of fry in the Allt Loch a' Bhealaich Leamhain.<sup>22</sup>

We note the proposals in the OBMP to improve habitats at the site and offset the habitat loss associated with the Proposed Development. Although it may be possible to regenerate these habitats in the future, doing so is difficult at these high elevations and there is a lengthy time-lag in which biodiversity will be impacted.

### **Carbon emissions**

We welcome the developer's inclusion of a carbon calculator assessment to give an indication of the carbon balance of the Proposed Development. We have raised concerns with the Scottish Government about the accuracy of the carbon calculator's predictions for emissions from peatland. The Scottish Government Carbon Calculator is currently under contract to be revised. Estimates of the extent of drainage of peatlands can be under-estimated, which means the emissions associated with the drainage of peatlands at a development site are also underestimated. Another limitation of the carbon calculator is that it does not provide a full carbon audit for the development (which should consider in more detail emissions produced through the supply chain and the estimated amount of energy consumed on site to power machines, vehicles, tools and welfare services during the construction period). With these limitations in mind, we suggest the Planning Authority treat the carbon calculator assessment as indicative only. Indeed, we suggest that consideration of the carbon impact be delayed until the revised carbon calculator is available.

### **Mitigation measures are legal binding and financially secured.**

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<sup>20</sup> Chapter 11: Aquatic Ecology report, p.38

<sup>21</sup> Chapter 11: Aquatic Ecology report, p.46

<sup>22</sup> Page 23, Volume 1, Chapter 11 Aquatic Ecology

If the Proposed Development were to be consented, we would ask the developer to commit to full transparency around the discharge of planning conditions and mitigation measures for example by publishing reports from the Ecological Clerk of Works.

### **Conclusion**

The John Muir Trust aims to be a voice for wild places and the nature they support. Our charitable aims include protecting them so that nature, people and communities can thrive. We recognise the need for PHS as part of the solution to achieving our net zero targets and the efforts that both the landowner and the developer have made to design the Proposed Development sensitively to reduce the severe negative impacts.

However, we have concluded we are unable to support this Proposed Development, given its location in a special, highly valued wild place. Through our planning casework we have identified substantial issues around the effectiveness of planning conditions as environmental safeguards and therefore cannot be certain that the Proposed Development would not have an unacceptable impact on a much-loved wild place; one of the nation's finest examples of wildness. We remain unconvinced that the sacrifice of this wild place is necessary.

Yours sincerely,

The John Muir Trust