

EARBA STORAGE

A GILKES ENERGY COMPANY

Earba Pumped Storage Hydro Scheme EIA Report

Chapter 14: Land Use

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14. Land Use

14.1 Executive Summary

This assessment addresses the Proposed Development's impacts on land use. The assessment considers existing land uses which may be directly or indirectly affected by the construction and operation of the Proposed Development except those which are detailed specifically in other chapters.

The Proposed Development would result in temporary and permanent effects to some land uses within the study area. However, for the majority of activities the employment of mitigation measures would ensure that significant effects would not occur. Significant effects have been identified during construction for hydroelectric generation impacting the existing hydro schemes within the estate during filling of the proposed reservoirs. These effects are anticipated to be Moderate and temporary, reducing to Neutral during the operation of the Proposed Development.

Major positive effects on moorland and forestry are predicted based on the biodiversity net gain measures proposed for these habitats presented in **Appendix 8.6 – Outline Biodiversity Enhancement and Management Plan**.

All other effects are anticipated to be not significant and no long-term significant effects to land use are predicted.

14.2 Introduction

14.2.1 This chapter uses publicly available information to assess the likely effects of the Proposed Development on land use within the study area.

14.2.2 The forms of land use known to take place within and around the site of the Proposed Development, and which are considered in this Chapter are as follows:

- Settlement;
- Infrastructure;
- Moorland;
- Forestry and woodland;
- Agriculture;
- Hydroelectric generation;
- Use of the estate grounds and buildings as a film set;
- Telecommunications and aviation interests;
- Lochs and rivers;
- Tourism; and
- Recreation.

- 14.2.3 This Chapter considers the potential effects, including cumulative effects, on land use during construction and operation of the Proposed Development.
- 14.2.4 This Chapter should be read in conjunction with the following chapters:
- **Chapter 8 – Terrestrial Ecology;**
 - **Chapter 9 - Forestry;**
 - **Chapter 11: Aquatic Ecology**
 - **Chapter 12 – Geology soils and Water;**
 - **Chapter 15 – Recreation and Access;**
 - **Chapter 17: Transport and Access; and**
 - **Chapter 19 – Socio-economics and Tourism.**
- 14.2.5 As detailed in **Chapter 2 – The Proposed Development**, with proper maintenance the Proposed Development should remain functional for over a hundred years. If the project were to be decommissioned, it is anticipated that the potential effects on public recreation and access would be less than the construction impacts. As such, a separate assessment of potential decommissioning effects on public recreation and access is not included in this Chapter. Where likely significant effects are predicted during construction and operation, appropriate mitigation measures are proposed, and the significance predicted residual effects are assessed.
- 14.2.6 This assessment has been carried out by Cairneyhill Ltd. A table presenting relevant qualifications and experience of key staff involved in the preparation of this Chapter is included in **Appendix 1.1 – EIA Specialist Team** of this EIA Report.

14.3 Scope of Assessment

Study Area

- 14.3.1 The Study Area comprises Ardverikie Estate, and more specifically the area including and surrounding the Proposed Development, together with the waterbodies and watercourses downstream from the Proposed Development, and settlements adjacent to the boundary of the Proposed Development.

Consultation Responses

- 14.3.2 To inform the scope of the assessment for the Proposed Development, consultation was undertaken with statutory and non-statutory bodies. **Table 14.1** summarises the scoping and consultation responses relevant to the Land Use Assessment and provides information on where and/or how points raised have been addressed in this assessment.
- 14.3.3 Full details on the consultation responses and scoping opinion can be reviewed in **Chapter 4 - Assessment Methodology, Scoping and Consultation**, and its associated appendices.

Table 14.1 Consultation Responses

Consultee	Issue Raised	Response
The Highland Council – Scoping Opinion – 27 April 2023	The EIAR should recognise the existing land uses affected by the development having particular regard for THC's Development Plan inclusive of all statutorily adopted Supplementary Guidance (SG).	Addressed in this chapter.
The Highland Council – Scoping Opinion – 27 April 2023	The Council's Environmental Health Service have stated that the applicant will be required to carry out an investigation to identify any private water supplies, including pipework, which may be adversely affected by the development and to submit details of the measures proposed to prevent contamination or physical disruption.	Covered in Chapter 12 – Soils, Geology and Water
The Highland Council – Scoping Opinion – 27 April 2023	A Biodiversity Enhancement and Management Plan will be required and must demonstrate that the development will significantly enhance the biodiversity of the site, from its pre-development state.	Covered in Chapter 8 – Terrestrial Ecology
The Highland Council – Scoping Opinion – 27 April 2023	If trees are to be removed, compliance with the Scottish Government's Control of Woodland Removal Policy must be demonstrated.	Covered in Chapter 9 - Forestry
The Highland Council – Scoping Opinion – 27 April 2023	THC Transport Planning will require any application for planning permission associated with this proposal to submit a Construction Traffic Management Plan (CTMP) for the approval of the Planning Authority.	Covered in Chapter 17 – Transport and Access
The Highland Council – Scoping Opinion – 27 April 2023	The EIAR should estimate who may be affected by the development, in all or in part, which may require individual households to be identified, local communities or a wider socio-economic grouping such as tourists and tourist related businesses, recreational groups, economically active, etc.	Covered in Chapter 19 – Socioeconomics and Tourism
The Highland Council – Scoping Opinion – 27 April 2023	The Council's Access Officer has stated that without mitigation this proposal will have a significant detrimental impact on outdoor access during the construction phase and possibly during the operational phase.	Covered in Chapter 15 – Recreation and Access
The Highland Council – Scoping Opinion – 27 April 2023	The EIAR needs to recognise community assets that are currently in operation for example internet coverage, TV, radio, blue light telecommunications, aviation interests including radar, MOD safeguards, etc. In this regard the applicant, when submitting a future application, will need to demonstrate what interests they have identified and the outcomes of any consultations with relevant authorities such as Ofcom, NATS, BAA, CAA, MOD, Highlands and Islands Airports Ltd, etc. through the provision of written evidence of concluded discussions / agreed outcomes. The Council consider the results of these surveys should be contained within the EIAR to determine whether any suspensive conditions are	

Consultee	Issue Raised	Response
	required in relation to such issues. If there are no predicted effects on communication links as a result of the development, the EIAR should still address this matter by explaining how this conclusion was reached.	
SEPA – Scoping Opinion – 27 April 2023	Excavations and other construction works can disrupt groundwater flow and impact on existing groundwater abstractions. The submission must include a map demonstrating that all 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.	Covered in Chapter 12 – Soils, Geology and Water
NatureScot - Scoping Opinion – 27 April 2023	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.	Covered in Chapter 8 – Terrestrial Ecology
Scottish Forestry - Scoping Opinion – 27 April 2023	In line with Scottish Government's wider objective to protect and expand Scotland's woodland cover, applicants are expected to develop their proposal with minimal woodland removal. Woodland removal should be allowed only where it would achieve significant and clearly defined additional public benefits.	Covered in Chapter 9 - Forestry
Mountaineering Scotland - Scoping Opinion – 27 April 2023	We expect the applicant to make clear in an Access Management Plan the generally accepted principle that any constraints on access would be of minimal extent and minimal duration to achieve the work safely, and that it is accepted that these parameters may change location during the different phases of construction.	Covered in Chapter 15 – Recreation and Access
Scottish Government Energy Consents Unit - Scoping Opinion – 27 April 2023	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.	Covered in Chapter 12 – Soils, Geology and Water
Energy Consents Unit - Scoping Opinion – 27 April 2023	Scottish Ministers request that the Company investigates the presence of any private water supplies which may be impacted by the development.	Covered in Chapter 12 – Soils, Geology and Water
Marine Scotland - Scoping Opinion – 27 April 2023	The Marine Directorate advise that the potential cumulative impact on the fish populations of Loch Laggan as a result of the proposed Earba hydroelectric scheme and other developments (consented and operational) within hydrological connectivity e.g. the Ardverikie and Pattack hydroelectric schemes should be considered as	Covered in Chapter 11 – Aquatic Ecology

Consultee	Issue Raised	Response
	should the resilience of the fish populations to all potential impacts.	

Issues Scoped out of Assessment

14.3.4 None.

14.4 Legislation, Policy and Guidance

14.4.1 This assessment has taken account of national, regional and local legislation, policy and guidance relating to land use which is relevant to the proposal. Detailed information on planning policy is contained within **Chapter 5: Planning Policy Context** and the **Planning Statement** accompanying the planning application for The Proposed Development. The following provides a summary with respect to land use.

Legislative and Policy Context

14.4.2 The following legislation and policy has been considered in the assessment:

National

- o The Fourth National Planning Framework for Scotland (NPF4) (2023); and
- o Scottish Planning Policy (SPP) (2014);
- o Scottish Land Use Strategy 2021 – 2026 (LUS3); and
- o Scotland's Forestry Strategy 2019 - 2029.

Regional

- o The Highland-wide Local Development Plan (HwLDP), 2012; and
- o The West Highland and Islands Local Development Plan 2019 (WestPlan).

14.5 Methodology

Desk Study

14.5.1 A desk study to identify the key components of land use in the local area has been undertaken to establish the existing conditions. This is based primarily on information provided by Ardverikie Estate.

Field Study

14.5.2 There has been no field study in support of this assessment.

Assessment Methodology

14.5.3 There are few published guidelines for assessing development effects upon recreational activities. The method adopted in this assessment is one of determining the baseline through desk-based analysis and consultation. Potential

effects are identified and the scale of changes they may cause to the baseline are then determined and assessed for their significance in respect of the sensitivity of the affected feature. Mitigation measures are then identified where relevant, before an assessment of the significance of any residual effects.

14.5.4 The assessment has involved the following key tasks:

- Consultation with Ardverikie Estate and other organisations and landowners concerned with land use in the area;
- Reference to relevant Local Development Plans and other literature to obtain baseline information; and
- Evaluation of impacts based on land take, severance and disruption during construction.

14.5.5 The establishment of the degree of effect is based on the evaluation of sensitivity of the land use which may be affected, and the potential magnitude of change which may occur as a result of The Proposed Development.

Sensitivity

14.5.6 Sensitivity concerns the potential for land use to be affected by the Proposed Development. Land uses have been evaluated for their sensitivity based on a four-point scale as follows:

- High: land used for a unique purpose, important in the local context, which would be very difficult to relocate;
- Medium: land important to its current use which would be possible, but difficult to maintain elsewhere;
- Low: a relatively common land use within the local context which is not closely linked to the location and would be able to relocate within the local area; or
- Negligible: a common land use in the local area which is not directly linked to the location and could easily be maintained elsewhere.

Magnitude

14.5.7 Magnitude of effect concerns the degree of change which would be expected to take place to existing land uses. Magnitude has been measured on a four point scale as follows:

- High: land take resulting in complete loss of an area of land which relates to a single land use;
- Medium: land take leading to notable loss of an area of land which is important for a particular land use;
- Low: land take leading to a small scale loss of an area of land used for a particular land use; or
- Negligible: land take which does not affect the ability of existing land use to continue.

Significance of Effect

- 14.5.8 The degree of effect significance is calculated by comparison of the magnitude of impact to land use in relation to its sensitivity. Effect significance is assessed using the following criteria:
- Major: where the Proposed Development would prevent an existing land use or activity from continuing, or the loss of amenity would result in that land use or activity being deterred;
 - Moderate: where the Proposed Development would lead to a notable disruption to an existing land use, preclude its continuation for a protracted period of time, but would not prevent the land use from continuing to take place in the longer term;
 - Minor: where the Proposed Development may compromise an existing land use but would not affect its ability to continue to take place; or
 - Neutral: where the Proposed Development would have no discernible influence on existing or intended land use activities.
- 14.5.9 For the purposes of this assessment impacts of Major or Moderate are considered to be significant.
- 14.5.10 The assessment considers the potential effects of the Proposed Development on land use during both the construction phase and the longer-term operation.

Assumptions and Limitations

- 14.5.11 Whilst every effort has been made to ensure that the information on land use from the desk study, consultation and fieldwork described above is comprehensive, it is possible that other less well-known land uses may have been overlooked and have not been considered in this assessment.

14.6 Baseline Conditions

Existing Baseline

Settlement

- 14.6.1 Settlement within the study area is primarily comprised of scattered individual and small groups of properties and farms along the A86. To the northeast of the Proposed Development the nearest village is Laggan, some 10km from the site boundary. To the southwest the settlement of Fersit is some 8.5km from the site boundary. Most of the properties around Loch Laggan are owned by Ardverikie Estate, although there are some other private homes and the NatureScot establishment at Creag Meagaidh.

Infrastructure

- 14.6.2 The main transport route through the study area is the A86, which connects the A82 at Spean Bridge with the A9 at Kingussie and also at Dalwhinnie (via the A889). All of these routes are trunk roads.
- 14.6.3 The Beaully Denny transmission line passes through Kinloch Laggan to the northeast of the Proposed Development.

Moorland

- 14.6.4 Much of Ardverikie Estate comprises open moorland up to over 900m in altitude. These areas are used for deer stalking. There are no sheep kept on the moorland. The mountains within this Estate, which include the Munros Beinn a Chlachair, Geal Charh and Creag Pitridh, and the Grahams Binnein Shuas and Binnein Shios, are popular with hillwalkers.

Forestry and woodland

- 14.6.5 There is significant forestry and woodland within Ardverikie Estate, most of this being commercial plantation forestry. Within the site of the Proposed Development however, there is no commercial forestry and very little woodland (7.4ha). There is a 5ha area within the Ancient Woodland Inventory within the site of the Proposed Development, although it contains less than 100 trees. The vast majority of forest and woodland within Ardverikie Estate is currently coniferous.
- 14.6.6 More detail of the woodland and forest resource within the study area is provided in Chapter 9: Forestry.

Agriculture

- 14.6.7 There is almost no agricultural land within Ardverikie Estate, with only a few of the fields used for hay or silage near to Kinloch Laggan, well away from the site of the Proposed Development.

Hydroelectric generation

- 14.6.8 Ardverikie Estate contains two existing hydroelectric schemes both incorporating reservoirs.
- 14.6.9 The Ardverikie Estate 1MW hydro scheme was built in the mid-1980s and uses the Earba Lochs for storage, with both of these waterbodies controlled by dams.
- 14.6.10 The Pattack 5MW hydro scheme uses the catchment of the River Pattack, impounding water at two dams both of which are located to the north of and within 3km of Loch Pattack.
- 14.6.11 Both hydro schemes discharge to Loch Laggan.

Use of the Estate Grounds and Buildings as a Film Set

- 14.6.12 Ardverikie Castle and areas within the estate grounds have been used as a film set location for a number of prominent films and TV series. This activity makes a significant contribution to the income of the estate, as well as raising its profile as a holiday destination.

Telecommunications and aviation interests

- 14.6.13 The following telecommunication, aviation and military interests have been consulted with in connection with the Proposed Development:
- BT;
 - The Civil Aviation Authority;
 - The Defence Infrastructure Organisation;

- The Joint Radio Company;
- NATS Safeguarding;
- Highlands and Islands Airports; and
- Badenoch Broadband and Communications (CIC).

Lochs and rivers

- 14.6.14 Ardverikie Estate contains a number of sizeable Lochs including Loch Laggan, Lochan na h' Earba, Loch a Bealaich Leamhain and Loch Pattack, as well as a number of smaller lochans, including the amenity reservoir Loch Ardrughe which lies to the West of Lochan na h' Earba.
- 14.6.15 The principal watercourses are the River Pattack and its feeder watercourses and the River Spean, the outflow from Loch Laggan, which was canalised as part of the Lochaber hydroelectric scheme. Lochan na h'Earba is connected to Loch Laggan by the Allt Labhrach, which is depleted by the Ardverikie hydroelectric scheme with no hands off flow release. There are numerous other smaller watercourses within Ardverikie Estate.
- 14.6.16 There are no Scottish Water facilities but there are a number of private water supplies within the study area. These are discussed in **Chapter 12: Geology, Soils and Water**, so are not considered in this Chapter.

Tourism

- 14.6.17 There are tourist attractions and tourist accommodation within the area. Information on tourism as a socio-economic activity is provided in **Chapter 19: Socio-economics and Tourism**.

Recreation

- 14.6.18 Ardverikie Estate is a popular destination for walkers, runners, rock climbers, cyclists and other recreational users. These are covered in **Chapter 15: Recreation and Access**.

Future Baseline

- 14.6.19 There is no indication from the information acquired that the baseline is in the process of any significant transition that will affect this assessment.
- 14.6.20 A search was undertaken to identify any planning applications made within the last two years which have the potential to be affected by the Proposed Development. This search identified no relevant applications.

Information Gaps

- 14.6.21 It is not considered that any information gap affects the validity of this assessment.

14.7 Mitigation by Design

- 14.7.1 Design features and embedded mitigation measures have been incorporated into the design and construction of the Proposed Development to prevent, avoid or minimise significant adverse environmental effects and to enhance beneficial effects.

14.7.2 The following design principles have been applied to minimise the effect of the Proposed Development on land use:

- o The footprint of the Proposed Development has been minimised as far as is compatible with its proposed function;
- o Wherever practicable, infrastructure would be underground;
- o Where infrastructure is required to be above ground, this would be designed to minimise both the land take and impact on the landscape as far as practicable.

14.8 Potential Significant Effects

14.8.1 This section considers the potential effect of the Proposed Development on land in the area.

Construction Effects

Settlement

14.8.2 There is likely to be some disturbance to amenity of properties along the A86 as a result of construction vehicle movements to the site of the Proposed Development. This is covered in **Chapter 17: Transport and Access**.

Infrastructure

14.8.3 The key construction impact on infrastructure would be that on the A86 trunk road. This is covered in **Chapter 17: Transport and Access**.

Moorland

14.8.4 There would be temporary and permanent loss of areas of moorland, during the construction of the Proposed Development associated with construction of the permanent infrastructure, the reservoir inundations, and areas used for temporary construction facilities outside of the inundation areas. These would affect approximately 310 ha of moorland. Within the context of the overall extent of Ardverikie Estate which includes over 10,000 ha of moorland, the loss is not considered to have a material effect on the use of that area, which is primarily used for deer stalking.

14.8.5 Sensitivity for moorland land use is considered to be **Negligible** and the magnitude of effect is assessed as **Low**. The effect on moorland land use is therefore considered to be **Minor** during construction.

Forestry and Woodland

14.8.6 The vast majority of forestry and woodland, including all of the commercial forestry, would be unaffected by construction of the Proposed Development. For the areas which will be displaced by the Shios Dam and Earba Reservoir, significantly larger areas would be planted elsewhere within the estate as compensation and for biodiversity net gain. The details of this are covered in Chapter 9: Forestry and Chapter 13: Biodiversity Net Gain.

14.8.7 Sensitivity for forestry is considered to be **Low** and the magnitude of effect is assessed as **Low**. The effect on forestry is therefore considered to be **Minor** during construction.

Agriculture

- 14.8.8 There is very little agricultural land within Ardverikie Estate and none of it is located anywhere close to the Proposed Development, nor would it be impacted by it during construction.
- 14.8.9 Sensitivity for agriculture is considered to be **Negligible** and the magnitude of effect is assessed as **Negligible**. The effect on agriculture is therefore considered to be **Neutral** during construction.

Hydroelectric Generation

- 14.8.10 During construction, specifically during filling of the reservoirs, which may take between 2 and 5 years, water flows to the Ardverikie hydroelectric scheme would be temporarily reduced. It is proposed to prioritise filling the lower reservoir during periods when the Laggan Dam is more likely to be spilling, thus minimising the impact on the storage or utilisation of water by the Lochaber hydro scheme.
- 14.8.11 Sensitivity for hydroelectric generation is considered to be **High** and the magnitude of effect is assessed as **Medium**. The effect on hydroelectric generation is therefore considered to be **Moderate** and significant during construction.

Use of the Estate Grounds and Buildings as a Film Set

- 14.8.12 Whilst filming has taken place in the area around Loch Earba, the primary filming locations within the estate are located elsewhere, focussed mainly on Ardverikie Castle and its immediate environs. As such, the attractiveness of the estate as a film location is considered to be only marginally impacted by the construction of the Proposed Development.
- 14.8.13 Sensitivity for land use as a film set is considered to be **Low** and the magnitude of effect is assessed as **Medium**. The effect on land use as a film set is therefore considered to be **Minor** during construction.

Telecommunications and Aviation Interests

- 14.8.14 Consultation with the following organisations has established that there would be no negative impact on their operation or provision of services. The correspondence supporting this is attached at **Appendix 14.1 – Telecommunications and Aviation Interests**.
- BT;
 - The Civil Aviation Authority;
 - The Defence Infrastructure Organisation;
 - The Joint Radio Company;
 - NATS Safeguarding;
 - Highlands and Islands Airports; and
 - Badenoch Broadband and Communications (CIC).
- 14.8.15 Sensitivity for telecommunications and aviation interests is considered to be **Medium** and the magnitude of effect is assessed as **Negligible**. The effect on telecommunications and aviation interests is therefore considered to be **Neutral** during construction.

Lochs and rivers:

14.8.16 The impacts on lochs and rivers are covered in the following chapters:

- **Chapter 6: Hydrology and Water Management;**
- **Chapter 11: Aquatic Ecology;**
- **Chapter 12: Geology , Soils and Water; and**
- **Chapter 15: Recreation and Access.**

Tourism

14.8.17 Tourism impacts are covered in **Chapter 19: Socio-economics and Tourism.**

Recreation

14.8.18 Ardverikie Estate is a popular destination for walkers, runners, rock climbers, cyclists and other recreational users. Construction impacts on this land use are covered in **Chapter 15: Recreation and Access.**

Operational Effects

Settlement

14.8.19 Operational traffic on the A86 to the site of the Proposed Development is covered in **Chapter:17 Transport and Access.**

Infrastructure

14.8.20 The key operational impact on infrastructure would be that on the A86 trunk road. This is covered in **Chapter 17: Transport and Access.**

Moorland

14.8.21 There would be permanent loss of areas of moorland during the operation of the Proposed Development associated with the permanent infrastructure and reservoir inundations. These would affect approximately 310 ha of moorland. Within the context of the overall extent of Ardverikie Estate which includes over 10,000 ha of moorland, the loss is not considered to have a material effect on the use of that area, which is primarily used for deer stalking. Significant peatland and other moorland habitat restoration is proposed in mitigation and as biodiversity net gain for the areas lost. This is covered in Chapter 13: Biodiversity Net Gain.

14.8.22 Sensitivity for moorland land use is considered to be **Negligible** and the magnitude of effect is assessed as **Low**. The effect on moorland land use is therefore considered to be **Minor** and beneficial during operation.

Forestry and Woodland

14.8.23 The vast majority of forestry and woodland, including all of the commercial forestry, would be unaffected by operation of the Proposed Development. For the areas which will be displaced by the Shios Dam and Earba Reservoir, significantly larger areas would be planted elsewhere within the estate as compensation and for biodiversity net gain. The details of this are covered in **Chapter 8 – Terrestrial Ecology** and **Chapter 9: Forestry.**

- 14.8.24 Sensitivity for forestry is considered to be **Low** and the magnitude of effect is assessed as **Low**. The effect on forestry is therefore considered to be **Minor** and beneficial during operation.

Agriculture

- 14.8.25 There is very little agricultural land within Ardverikie Estate and none of it is located anywhere close to the Proposed Development, nor would it be impacted by it during operation.
- 14.8.26 Sensitivity for agriculture is considered to be **Negligible** and the magnitude of effect is assessed as **Negligible**. The effect on agriculture is therefore considered to be **Neutral** during operation.

Hydroelectric Generation

- 14.8.27 During operation, water use by the Proposed Development would be managed so as to have no negative effects on either the Ardverikie or the Pattack hydroelectric schemes.
- 14.8.28 Sensitivity hydroelectric generation is considered to be **Negligible** and the magnitude of effect is assessed as **Negligible**. The effect on hydroelectric generation is therefore considered to be **Neutral** during operation.

Use of the Estate Grounds and Buildings as a Film Set

- 14.8.29 The impact on land use as a film location during operation of the Proposed Development would be less than during construction.
- 14.8.30 Sensitivity for land use as a film set is considered to be **Low** and the magnitude of effect is assessed as **Medium**. The effect on land use as a film set is therefore considered to be **Minor** during operation.

Telecommunications and Aviation Interests

- 14.8.31 As for construction, sensitivity for telecommunications and aviation interests is considered to be **Medium** and the magnitude of effect is assessed as **Negligible**. The effect telecommunications and aviation interests is therefore considered to be **Neutral** during operation.

Lochs and rivers

- 14.8.32 The impacts on lochs and rivers are covered in the following chapters:

- **Chapter 6: Hydrology and Water Management;**
- **Chapter 11: Aquatic Ecology;**
- **Chapter 12: Geology , Soils and Water; and**
- **Chapter 15: Recreation and Access.**

Tourism

- 14.8.33 Tourism impacts are covered in **Chapter 19: Socioeconomics and Tourism**.

Recreation

- 14.8.34 Ardverikie Estate is a popular destination for walkers, runners, rock climbers, cyclists and other recreational users. Operational impacts on this land use are covered in Chapter 15: Recreation and Access.

Cumulative Effects

- 14.8.35 There is another pumped storage hydro scheme in the early stages of the planning process (Scoping Opinion issued) at Corrievarkie, to the south of the eastern end of Loch Ericht. No cumulative land use issues are foreseen relating to this development.

14.9 Mitigation and Enhancement

Mitigation and Enhancement During Construction

- 14.9.1 Mitigation and enhancement during construction is as outlined in sections 14.7 and 14.8 above.

Mitigation and Enhancement During Operation

- 14.9.2 Mitigation and enhancement during operation is as outlined in sections 14.7 and 14.8 above.

14.10 Residual Effects

- 14.10.1 Potential residual effects and associated effect significance of the construction and operation of the Proposed Development following the implementation of mitigation measures are outlined in paragraph 14.8 above.
- 14.10.2 A summary of the proposed scheme's residual effects is provided in Table 14.1.

Table 14.1

Effect	Type of Effect	Sensitivity of Receptor	Magnitude of Effect	Significance
Construction				
Settlement	Refer to Chapter 17.			
Infrastructure	Refer to Chapter 17.			
Moorland	Negative	Negligible	Low	Minor
Forestry	Negative	Low	Low	Minor
Agriculture	Negative	Negligible	Negligible	Neutral
Hydro generation	Negative	High	Medium	Moderate
Film set	Negative	Low	Medium	Minor
Telecom & aviation	Negative	Medium	Negligible	Neutral
Lochs and rivers	Refer to Chapters 6, 11, 12 and 15.			

Effect	Type of Effect	Sensitivity of Receptor	Magnitude of Effect	Significance
Tourism	Refer to Chapter 19.			
Recreation	Refer to Chapter 15.			
Operation				
Settlement	Refer to Chapter 17.			
Infrastructure	Refer to Chapter 17.			
Moorland	Positive	Negligible	Low	Minor
Forestry	Positive	Low	Low	Minor
Agriculture	Neutral	Negligible	Negligible	Neutral
Hydro generation	Neutral	Negligible	Negligible	Neutral
Film set	Negative	Low	Medium	Minor
Telecom & aviation	Neutral	Medium	Negligible	Neutral
Lochs and rivers	Refer to Chapters 6, 11, 12 and 15.			
Tourism	Refer to Chapter 19.			
Recreation	Refer to Chapter 15.			

14.11 Conclusion

- 14.11.1 The Proposed Development would result in temporary and permanent effects to some land uses within the study area. However, for the majority of activities the employment of mitigation measures would ensure that significant effects would not occur. Significant effects have been identified during construction for hydroelectric generation impacting the existing hydro schemes within the estate during filling of the proposed lower reservoir. These effects are anticipated to be Moderate and temporary, reducing to Neutral during the operation of The Proposed Development.
- 14.11.2 Major positive effects on moorland and forestry are predicted based on the biodiversity net gain measures proposed for these habitats.
- 14.11.3 All other effects are anticipated to be not significant and no long-term significant effects to land use are predicted.